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1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

OF VOLUME XXVIII.

ORIGINAL ARTICLES.

| | PAGE. |
|--|------------------------------------|
| Albuminuria, notes on, Cluness..... | 1 |
| Aluminum in Diphtheria, Sullivan..... | 612 |
| Arsenic in Malarial Fevers, Parkinson..... | 474 |
| Blood Letting and Transfusion, Whittell..... | 340 |
| Board of Examiners Rep., Plummer..... | 484 |
| Catarrh, notes on Nasal, Pharyngeal, Hoff..... | 520 |
| Chemical Constitution, Blake..... | 665 |
| Chicago Gynecological Soc. Trans..... | 418 |
| Children in Los Angeles, Lindley..... | 70 |
| Cocaine Chloride, Barkan..... | 18 |
| Cocaine, Steele..... | 898 |
| Collar Button in Trachea, Prevost..... | 206 |
| Comma Bacillus..... | 122 |
| Contraction with Twins, Hour Glass, Giberson..... | 657 |
| Cyst, Rem'l of Endogenous, Smith..... | 211 |
| Graduating Exercises, Report..... | 548 |
| Gynecology, Report on, Wagner..... | 643 |
| Heart, Cases Fatty, Kerr..... | 218 |
| Hygiene, Rep. on Public, Chipman..... | 381 |
| Insane in Cal., Their Needs, Mays..... | 265 |
| Leprosy, Fitch..... | 526 |
| Licentiatees Cal. Board Examiners 224, 355, 417, 561, 627, 687 | |
| Litholapaxy, Report of Cases, Chismore..... | 159 |
| Lithotomy Case, Robertson..... | 209 |
| Lithotritist, Anatomical Point for the, Chismore..... | 664 |
| Mania, Transitory, Ayer..... | 573 |
| Medical Education, Rep. on, Nixon..... | 451 |
| Medical Legislation, Laine..... | 653 |
| Med. Legislat'n, Proposed, Whittell..... | 545 |
| Meu. Topography, Meteorology, etc., Report, Robertson..... | 445 |
| Medicine, Report on Practical, Oatman..... | 253 |
| Memoriam, Henry Gibbons, M. D., Lane..... | 49 |
| Microscopy and Histology, Report, Kerr..... | 509 |
| Neuralgia, Heredity of, Kerr..... | 207 |
| Ophthalmic Clinic, Cooper College, Cases from, Gunn..... | 66 |
| Ophthalmology, Report on, Wilder..... | 456 |
| Ovariectomy Case, Hammond..... | 111 |
| Pelvic Abscess, five cases, Cushing..... | 97 |
| Radial, Torsion and Hemorrhage of, Giberson..... | 346 |
| Sacramento Soc. Med. Improvement, Proceedings..... | 177, 285, 354, 416, 560, 618, 683, |
| San Francisco Co. Med. Soc., Proceedings..... | 72 |
| 113, 174, 219, 282, 351, 418, 488, 555, 614, 677 | |
| San Francisco Co. Med. Report..... | 20, 78 |
| State Medical Soc. Proceedings..... | 273 |
| Surgery, Notes on Antiseptic, Huntington..... | 145 |
| Surgery, Report on, Thorne..... | 317 |
| Surgery, Sup. Report on, Stuart..... | 335 |
| Tracheotomy in Diphtheritic Croup, Pratt..... | 345 |
| Trocar for Opening Pelvic Abscesses, Cushing..... | 643 |
| Tumors, Laryngeal, Arnold..... | 166 |
| University of Cal., Academic Senate..... | 286 |
| Uterus Rupture of, Shipsey..... | 24 |
| Vagina, Prolapse of, Cushing..... | 638 |
| Xanthelasma, Thorne..... | 71 |

CLINIC NOTES.

| | |
|--|-----|
| Acid Sulphuricum Dil..... | 225 |
| Agave..... | 228 |
| Aloes..... | 227 |
| Alveoloz in Cancer..... | 185 |
| Ammonii Chloridum..... | 295 |
| Amyl. Nitrite in Opium Poisoning..... | 294 |
| Antipyrin..... | 297 |
| Antiseptic Solution..... | 298 |
| Arsenic in Domestic Article..... | 185 |
| Asthma, Iodine in..... | 126 |
| Atropine in Chloroform Anesthesia..... | 295 |

| | PAGE. |
|---|--------------------|
| Bacillus Tuberculosis..... | 186 |
| Baths, Warm..... | 293 |
| Bladder, Growths in, Surg. Clinic N. 83 | |
| Borax as Internal Disinfectant..... | 227 |
| Boric Acid in Alopecia..... | 188 |
| Burns, Scalds..... | 296 |
| Caecum, Excision of..... | 85 |
| Caffeine as Heart Tonic..... | 123 |
| Calcium Sulphide of..... | 229 |
| Cannabis Indica..... | 188, 226 |
| Carbolic Acid in Ague..... | 229 |
| Carbolic Acid in Malaria..... | 185 |
| Carbolic A. in Purulent Ophthalmia..... | 295 |
| Carbon, Bisulphide of..... | 296 |
| Carcinoma, Statistics of..... | 189 |
| Cholera, Treatment of..... | 87 |
| Chloroform Externally in Labor..... | 124 |
| Chloral Hydrate in Gonorrhoea..... | 294 |
| Chologogues..... | 230 |
| Chrysarobium in Eczema..... | 226 |
| Cocaine in Alcoholism, etc..... | 227 |
| Cocaine in Irritation of Bladder..... | 226 |
| Cold in Sciatica..... | 227 |
| Color Blindness..... | 235 |
| Contusions, Valerian in..... | 126 |
| Convallaria Majalis, Value of..... | 184 |
| Copper in Obstetrics..... | 123 |
| Corrosive Subl. in Joint Disease..... | 295 |
| Digitalis in Cardiac Valvular Dis..... | 226 |
| Disinfectants, Popular..... | 187 |
| Douching in Fevers..... | 227 |
| Ergot..... | 184, 187, 228, 293 |
| Ergotin, Ergotin and Sclerotinic Acid..... | 187 |
| Eserius..... | 185, 294 |
| Ether..... | 184, 188, 293 |
| Eucalyptus in Bronchitis..... | 184 |
| Eyelids Restored..... | 234 |
| Germicides..... | 124 |
| Glycerine in Nasal Catarrh..... | 124 |
| Hot Air in Foul Wounds..... | 296 |
| Hot Water in Spinal Irritability..... | 227 |
| Human Blood Hypodermically..... | 294 |
| Hydrarg. Bi-Chloride, Antiseptic..... | 125 |
| Hyocine Hydrobromate..... | 125 |
| Ileus, Treatment of..... | 190 |
| Iodine in Cholera..... | 293 |
| Iodoform..... | 124, 190, 228 |
| Iron..... | 87, 186 |
| Jamaica Dogwood..... | 296 |
| Keratin Coated Pills..... | 229 |
| Lung Abscess..... | 231 |
| Mercury in Syphilis, Contra Indications..... | 226 |
| Morphine in Pregnancy..... | 298 |
| Nasal Catarrh, Salva Officialis in..... | 126 |
| Nerves, Saturing of Cut..... | 82 |
| Nickel in Epilepsy, Bromide of..... | 293 |
| Nitrate of Silver in Ophthalmic Neanatorum..... | 189 |
| Oatmeal in Scarlatina..... | 295 |
| Omentum, Prolapse of..... | 232 |
| Ophthalmia Neonatorum Labusquiere..... | 359, 423 |
| Ophthalmic Notes..... | 129 |
| Opium in Cholera, Action of..... | 230 |
| Osmic Acid in Sciatica..... | 293 |
| Ovariotomy, Youngest..... | 303 |
| Oxygen in Cholera..... | 187 |
| Pancreatin in Diphtheria..... | 124, 225 |
| Paraldehyde..... | 126, 185 |
| Pepsin in Clotted Blood in Bladder..... | 226 |
| Pharyngotomia Subhyoidea..... | 128 |
| Phenol in Dysentery, Iodized..... | 293 |
| Phosphorus..... | 126 |
| Picric Acid, Use of..... | 88 |
| Pilocarpus..... | 188, 295 |
| Post Partum Hemorrhage, Iron-alum in..... | 88 |
| Potassium..... | 86, 188, 227 |
| Puerperal Eclampsia, Hot Bath in..... | 184 |
| Pyrethrum in Globus Hystericus..... | 227 |
| Quinine, Hydrobromate of..... | 225 |
| Quebracho as Antipyretics - Alkaloids of..... | 188 |
| Rectum, Malignant Affections of..... | 84 |
| Refraction, Errors of..... | 234 |
| Salicylic Acid in Lupus..... | 189 |
| Senega in Rhus Poisoning..... | 228 |
| Sulphate of Soda for Ascarides..... | 189 |
| Sulphur in Tinea Capitis..... | 226 |

| | PAGE. |
|---|-------|
| Surgery Plastic..... | 127 |
| Surgical Notes, Bowle..... | 684 |
| Sweats, Night..... | 363 |
| Tannic Acid in Cholera..... | 189 |
| Tartar Emetic Hypodermically..... | 295 |
| Thalline..... | 297 |
| Thermal Center in Cerebrum..... | 283 |
| Tracheotomy for Croup..... | 86 |
| Turpentine in Superficial Pains..... | 230 |
| Uterine Hemorrhages, Hot and Cold
Injections in..... | 294 |
| Viburnum and Hydrastis in Dys-
menorrhœa..... | 29 |

BOOK NOTICES.

| | |
|--|----------|
| Amer. Ophthal'ogical Soc. Trans..... | 247 |
| Arnold, Nervous Diseases..... | 200, 373 |
| Ashburst, Surgery..... | 244 |
| Beale, Urinary and Renal Disorders..... | 500 |
| Black, Ten Laws of Health..... | 433 |
| Board of Health, San Francisco Rep. 41 | |
| Bramwell, Diseases of Heart..... | 93 |
| Brown, Medical Diagnosis..... | 43 |
| Brunton, Pharmacology..... | 628 |
| Bryant, Surgery..... | 243, 433 |
| Buck, Ref. Handbook Med. Sciences..... | 691 |
| Buckley, Specialties..... | 306 |
| Burnett, The Ear..... | 38 |
| Carter, Elements of Prac. Medicine..... | 305 |
| Cathell, The Physician Himself..... | 246 |
| Channing, Causes of Insanity..... | 44 |
| Cincinnati Hospital, Annual Rep..... | 307 |
| Clowes, Prac. and Analytical Chem..... | 501 |
| Comstock, Genital Reflexes..... | 141 |
| Connor, Mumps Cause of Deafness..... | 45 |
| Connor, Study of Syphilis of Eye..... | 45 |
| Connor, Treatment Trachoma by
Jequirity..... | 45 |
| Davis, Lec. on Prin. and Prac. of
Medicine..... | 41 |
| DeLafield and Prudden, Pathologi-
cal Anatomy..... | 199 |
| Directory of U. S., Med. and Surg..... | 304 |
| Disinfection, Am. Pub. Health Ass.
Report..... | 307 |
| Donaldson, Lung Retractibility in
Pleurisy..... | 44 |
| Dubring, Dermatitis Herpetiformis..... | 45 |
| Edwards, Therapeutics of Dis. of
Children..... | 374 |
| Eggerl, Uterine Displacements..... | 94 |
| Emmett, Gynecology..... | 248 |
| Erichsen, London Medical Student..... | 246 |
| Eulenburg, Ein Fall von Tabes
Dorsalis..... | 306 |
| Eulenburg, Methodik der Sensibil-
itätsprüfungen..... | 306 |
| Flint, N. Y. St. Med. Ass. Trans..... | 431 |
| Fothergill, Dis. Sedentary Life..... | 692 |
| Galentin, Chloral in Diphtheria
and Croup..... | 562 |
| Garratt, Myths in Medicine and Old
Time Doctors..... | 44 |
| Gaston, Diseases of Nerve Centers..... | 45 |
| Gay, The Plaster..... | 306 |
| Gay, Tracheotomy in Croup..... | 309 |
| Goodhart, Diseases of Children..... | 374 |
| Hamilton, Fractures and Disloca-
tions..... | 246 |
| Holden, Dissection of Human Body..... | 244 |
| Holden & Shuter, Human Osteology..... | 244 |
| Hunter, Fifty Cases Abdominal Sec-
tion..... | 307 |
| Hunter, Ovariectomy..... | 307 |
| Hughes, Insanity and Divorce..... | 307 |
| Hughes, Psycho. Sensory..... | 306 |
| International Med. Congress Rep..... | 142 |
| Intrathoracic Aneurism, Galvano
Puncture in..... | 105 |
| Jaccoud, Pulmonary Phthisis..... | 439 |
| Jacobi, Catalepsy in Child three
years old..... | 307 |
| Jacobi, Diphtheria Spread by Ad-
ults..... | 45 |
| Johnson, Med Botany in N. America..... | 201 |
| Jules, Handbook of Ophthalmic Sci-
ence..... | 198 |
| Kirke, Handbook of Physiology..... | 374 |
| Kitchen, Diaphragm..... | 245 |
| Kitchen, Consumption..... | 301 |
| Klein, Jewish Hygiene..... | 45 |
| Klein, Medical Jurisprudence in
Divorce..... | 307 |
| Knapp, Cocaine..... | 200 |

| | PAGE. |
|---|-------------------|
| Landau, Gynakologischer Spezial-
Jamus..... | 45 |
| Lea Bros, Year Book of Treatment..... | 499 |
| Lee, Diseases of the Hip Joint..... | 247 |
| Lee, Massage..... | 247 |
| Lefferts, Dis. of the Larynx and
Pharynx..... | 42 |
| Lefferts, Nasal Catarrh..... | 200 |
| Leonard, Manual of Bandaging..... | 95 |
| Licentiates, Cal. State Board of Ex-
aminers..... | 23, 79, 181 |
| Lundy, Treatment Inflammation of
Middle Ear..... | 45 |
| Lusk, Midwifery..... | 692 |
| Maisch, Organic Materia Medica..... | 199 |
| Marcy, Relation Micro-Organisms
to Surgical Lesions..... | 45 |
| Mattison, Opium Addiction..... | 437 |
| McKee, Membrana Virginatilis..... | 46 |
| McKee, Irregular Contraction of
Uterus..... | 46 |
| Milne, Midwifery..... | 44 |
| Mineralogist, Report of State..... | 46 |
| Miner, Phys. Mem. Book and Visi-
ing List..... | 45 |
| Mitchell, Dis. of Nervous System..... | 306 |
| Mollenhauer, Case of Vertebral Dis-
ease..... | 44 |
| Munde, Surgical Gynecology..... | 690 |
| Murrell, What to do in Cases of Pois-
oning..... | 304 |
| Musser, Ideopathic Anaemia..... | 307 |
| Neale, Treatise on Abdominal Pal-
pation..... | 304 |
| Palmer, Palatable Prescribing..... | 246 |
| Parker, Cancer..... | 433 |
| Pepper, Practical Medicine..... | 42, 202, 436, 690 |
| Playfair, Midwifery..... | 435 |
| Psycho, Sensory, Insanity..... | 306 |
| Pyrexia, Ice Locally in..... | 125 |
| Register, Cal. Phys. and Surgeons,
Official..... | 307 |
| Reese, Med. Jurisprudence and Tox-
icology..... | 43 |
| Reeves, Bodily Deformities..... | 202 |
| Rindfleisch, Elements of Pathology..... | 564 |
| Roberts, Spinal Arthropathies..... | 246 |
| Roberts, Surgical Delusions..... | 94 |
| Roberts, Urinary and Renal Dis-
eases..... | 565 |
| Robertson, Physiological Physics..... | 43 |
| Robinson, Nasal Catarrh..... | 498 |
| Rohe, Hygiene..... | 95 |
| Roosa, Dis. of the Ear..... | 435 |
| Sajou, Hay Fever..... | 694 |
| Schafer, Histology..... | 693 |
| Searcy, Hyperaesthesia..... | 46 |
| Sci J. Kwai, Supplem. to Trans. of..... | 307 |
| Senn, Branchial Cysts of Neck..... | 45 |
| Seyler, Development of Physiologi-
cal Chem..... | 44 |
| Shoemaker, Jequirity..... | 96 |
| Shoemaker, Oleates..... | 305 |
| Smith, Disease in Children..... | 498 |
| Stille, Cholera..... | 437 |
| Stille, National Dispensary..... | 140 |
| St. Luke's Home, Utica, Reports..... | 46 |
| Stoddard, Trip to the Hawaii..... | 246 |
| Storror, Phys. Day Book, etc..... | 632 |
| swanzy, Diseases of the Eye..... | 96 |
| Texas Med. Ass. Trans..... | 46 |
| Theobald, Preventable Blindness..... | 44 |
| Thomas, Medical Dictionary..... | 681 |
| Thompson, Surgery of the Urinary
Organs..... | 139 |
| Trembly, Meteorology..... | 307 |
| Uitzmann, Pyuria..... | 94 |
| Van Buren, Lect. on Prin. of Surgery..... | 40 |
| Von Arlt, Clinical Studies, Dis. of
the Eye..... | 631 |
| Wagner, Diseases of the Nose..... | 35 |
| Wallian, Oxygen as Remedial Agt..... | 95 |
| Watson, Amputations of Extremi-
ties..... | 486 |
| Welch, Many Drugs, Few Remedies..... | 307 |
| Wells, Abdominal Tumors..... | 438 |
| Wells, The Analectic..... | 307 |
| Willard, Club-Foot..... | 44 |
| Wormley, Micro-Chemistry of Pois-
ons..... | 375 |
| Wright, Diseases of the Rectum..... | 45 |
| Ziegler, Treatment Diphtheria, Ty-
phoid Fever, etc..... | 563 |
| Ziemssen, Diseases of the Skin..... | 413 |

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No. 1.

Original Articles.

NOTES ON ALBUMINURIA.

By W. R. CLUNESS, M. D., Sacramento.

Having had, in my capacity as Medical Director of the Pacific Mutual Life Insurance Company of California for the past fifteen years, my attention attracted to the subject of albuminuria in connection with applications for insurance, and having rejected several whose urine had been reported by the Medical Examiners to contain albumen, three at least of whom are still living and in the enjoyment of good health, although several years have elapsed since their rejection, it has occurred to me that it might not prove uninteresting or unprofitable to briefly narrate their histories, and thus invite the attention of the members of this Society to the importance of the subject. Cases have also been reported to me in which albumen could be detected in the urine by one observer, while another, equally competent and painstaking, would fail to find any trace thereof. And in two or three instances, the same observer has reported the finding of considerable albumen during one examination, while at another, under similar circumstances and by the same reagents, he has failed to find the slightest evidence of its existence.

Brief histories of two interesting cases which have come under

my own observation professionally will also be reported ; in one of which the albumen is found to be intermittent, at times being present in considerable quantities, and at others entirely absent ; while in the other, it can, at all times be detected in moderate quantities.

These varied conditions in which albumen has been found to exist without any apparent deviation from the normal standard of health, have naturally induced inquiry with the view of determining, if possible, what conditions existed which were likely to be associated to a greater or less extent with this important product, and how far, and under what circumstances, it should influence the acceptance or rejection of an otherwise good risk.

The observation made by Dr. Simmons at our meeting in May last (which I confess was new to me), to the effect that he had been much surprised at finding albumen present in the urine of quite a percentage of youths whose urine he had examined recently, also played its part in the role of inquiry. For these reasons, and because of the practical importance of the subject, it has been deemed worthy of a second evening's discussion ; especially as the literary and scientific aspect of the subject is still fresh in your memories, as so ably presented by Dr. Voeller at the meeting of our Society already alluded to.

As intimated, my remarks will be as practical as possible, and with that view brief histories of the cases referred to will be narrated. It may be stated, however, that they are not selected farther than that they are the only ones whose complete histories can be verified, all others that have come under my care and knowledge having passed beyond the pale of observation. Cases, also, which presented unmistakable evidences of disease of the kidneys as manifested by other concomitant symptoms, and have terminated in death, are not taken into consideration ; the special object of this paper being to demonstrate that the mere existence of albumen alone is not always sufficient cause for giving an unfavorable prognosis, nor for the exclusion from the benefits of life insurance of an applicant who is in all other respects a desirable risk.

CASE I. J. C. M., æt. 44, an American by birth, and a resident of California for eleven years, is 5 ft. 9 inches in height ; weighs 164 lbs. ; measures around the chest during forced inspiration and expiration, 38 and 35½ inches, respectively. Father died of pneumonia at 40 ; mother living and enjoying good health at 68 ; one

brother died at 25 of enteritis, two others younger than applicant are living and healthy so far as can be ascertained; two sisters, 46 and 48 years of age, respectively, are living and in good health "when last heard from." Uncles and aunts on both sides have reached old age; no tendency to the development of hereditary or transmissible disease of any kind in either branch of the family. Applicant applies for an insurance of ten thousand dollars upon his life on the ordinary life plan.

It being a requisite of the Company that when a policy for the amount specified is applied for, an analysis of the urine shall be made, and the report thereof accompany the application, the rule was complied with as follows:

"Urine voided this P. M., in my presence."

"Color, light straw, rather paler than normal."

"Specific gravity, 1.020."

"No blood or tube-casts, and no pus, but a slight trace of albumen, by heat or nitric acid, or by both combined."

In a private note, our Medical Examiner further says: "I am at a loss to determine the cause of this man's albuminuria, as he is one of our most exemplary and healthy looking citizens; never drinks nor smokes; is one of the hardest workers I ever knew, and is now so busy in arranging his business, preparatory to going East tomorrow, that it was with much difficulty I could persuade him to submit to an examination. But there is albumen in his urine, as you can readily determine for yourself by examining the specimen I send you today by express.

"What action do you usually take in such cases? Reject them, I presume; although if ever a man appeared to be healthy and yet was almost certainly in a very critical condition, I believe this applicant to be that man."

The specimen reached me at the hands of our agent, who was so anxious regarding the result (lest he might lose his commission) that he would not entrust it in the hands of the Express Co., but brought and delivered it in person, loudly denouncing the Medical Examiner for having even hesitated about recommending the risk. Albumen, however, in considerable quantities, having been found by several methods of examination, no policy was issued.

CASE II. W. H. J., Stock Broker: A native of Wales, but a resident of California since 1862; age, 31 years; weight, 157 lbs.; height, 5 feet, 10 inches; has a full round chest which measures 37 and 34 inches respectively, on forced inspiration and expira-

tion; has always enjoyed good health; applies for the same amount of insurance as in the previous case; family history good, with the exception of a brother who died of consumption at 36 after a long and distressing illness; otherwise it is exceptionally good, for if the report be correct, all of his grandparents reached extreme old age, two of them having been centenarians. His uncles and aunts also lived to be quite old. His personal history is also good, although not without defects. He is reported to "smoke and drink in great moderation, excepting at very rare intervals, after an unusually exciting day in the Board, or upon an occasion of conviviality, which might occur once or twice a year, on which occasion he may indulge a little too freely, but never to intoxication." Heart and lungs healthy in every respect. Never has been sick enough to require the services of a physician, excepting on two or three occasions; and then only for trivial ailments which yielded readily to slight medication, supplemented by rest and good nursing.

Examination of his urine, however, disclosed the existence of albumen in considerable quantities, and he was accordingly rejected.

CASE III. J. H. A., æt 38, a native of Germany, and a civil engineer by profession, has lived in the State of Nevada for twelve years, and has always enjoyed excellent health; is 5 feet, 8 inches in height, and weighs 176 pounds; is stout and muscular; has a full, round chest of unusual capacity and measurement; heart, lungs, and other viscera healthy; father died in his natal country at 40, of pneumonia; mother died at applicant's present age, of consumption; one sister also died at 19 of consumption; two brothers older than applicant, living and in good health; uncles and aunts on both paternal and maternal sides reached old age, several of them being still alive.

A very careful physical examination disclosed no evidence of disease anywhere, and the medical report was completed with the recommendation that a policy be issued of the kind and in the amount applied for, viz: ten thousand dollars.

When, however, the urine was analyzed, which in this instance would appear to have been regarded as of secondary importance, for it was not made until the opinion of the examiners as to the insurability of the applicant had been certified to, the following observations were appended:

"Urine voided in my presence."

“Color, light straw.”

“Specific gravity, 1.020.”

“Microscopic examination not made.”

“Traces of albumen are found by nitric acid and heat.”

In a private note, it is stated that applicant had been working hard, surveying one of the deep mines on the Comstock lode, at Virginia City, and was probably suffering from congestion of the kidneys, which would probably develop into Bright's disease; and although he had recommended him as a first-class risk, he nevertheless had no hesitation in advising his rejection. It is probably hardly necessary to observe that this advice was promptly acted upon, for much significance is attached by all life insurance companies to albuminuria, especially during the past few years; all such applicants being declined, even upon the most favorable plans of insurance.

The next two cases to which it is proposed to invite your attention, came under my observation in the ordinary course of practice, and are reported more especially because of their similarity in many respects to those just narrated, and because they are still under observation—one of them being well known, to most of you, at least.

CASE I. Mr. M., of Battle Mountain, Nev., forty years of age, six feet in height, and weighing 190 pounds, a teamster by occupation, consulted me during the summer of 1870, because of a disposition to micturate more frequently than natural, being obliged to void his urine once or twice each night. He informed me that he had enjoyed uniform good health from infancy up, and was then in excellent health, the difficulty already stated being his only complaint. He had never had venereal disease of any kind; had no evidences of disease of the bladders or kidneys, as manifested by pain, head-ache, vertigo, or cardiac symptoms; in fact, he regarded himself as being a healthy man, and only suffered from the annoyance of being obliged to evacuate his bladder with abnormal frequency.

On examination, his urine appeared to be healthy, had a slightly acid reaction, and its specific gravity was 1.020. Upon the application of heat and nitric acid, however, it gave unmistakable evidence of the presence therein of considerable quantities of albumen. On being interrogated, he informed me that whatever his disease might be, it had existed four or five years, and was caused by great exposure while teaming in the mountainous regions of Nevada.

He never drank alcoholic liquors to excess, but used tobacco freely. His family history was exceptionally good. After the expiration of about a week, during which time his urine was examined daily, sometimes after each meal, he returned to his home in Nevada, and for about two years continued to send me at intervals of two or three months specimens of his urine for examination, each of which contained albumen, varying in quantity from ten to thirty per cent; also, at times, broken down tube casts. He then ceased to write or further pursue the treatment, but I was much pleased on meeting him on J street, in this city, about four years ago, apparently in as good health as ever, and although he still suffered at intervals from his old trouble; yet he had ceased to regard it as being of special significance, and did not propose to subject himself to further treatment. Examination of his urine, however, demonstrated the existence of albumen in about the same quantities as before, and I am able to say that the same condition exists to-day, for he is now a resident of Sacramento, and in the enjoyment of good health. In this case, as well as in the succeeding one, there can be no doubt of the origin of the albumen, for there is no cystitis, nor has there been; nor is there any villous growth in the bladder or other source than the kidneys from which it could be derived, or if so, the most careful inquiry and examination have failed to detect it.

CASE II. J. H. McK., one of the most prominent attorneys of this city, consulted me between three and four years ago, with the request that I should examine his urine because of certain abnormal physical qualities which he suspected it to possess. In appearance it was paler than normal, slightly turbid, was voided without pain or uneasiness of any kind, and could be retained for the usual length of time without producing any discomfort; specific gravity, 1.018; reaction, slightly acid. Examination with heat and nitric acid gave evidence of albumen in moderate quantities, and the microscope showed tube casts. Several different specimens, which had been furnished me from time to time, having manifested considerable variation in the amount of albumen contained, as well as in the physical properties of the urine, careful inquiry was instituted with the view of determining the cause of the discrepancy, but no satisfactory conclusion could be reached.

Having much confidence in the efficacy of the muriated tincture of iron and quinine, he was accordingly placed upon it. Some general directions regarding diet were also enjoined; but my pa-

tient being more skeptical than myself regarding the value of drugs, concluded that he would "throw physic to the dogs," and that a rigid course of diet, together with the observance of general hygienic rules, offered the most rational course of treatment. The significance of albuminuria, and the almost necessarily fatal result which must soon follow if unchecked, were fully explained to him, but to no purpose.

He had read much upon albuminuria; had known many who had been afflicted with it, and was confident that physicians generally entertained erroneous ideas regarding its pathology and treatment.

Inasmuch as I met him almost daily, and usually took occasion to observe his general appearance, I was not a little surprised to note that instead of gradually becoming pale and anæmic, and manifesting the usual evidences of that deterioration of the blood which follows albuminuria, he became ruddy in appearance, stout and robust in person, and in every respect evidenced better health than he had enjoyed for a quarter of a century. From 133 pounds, his usual weight for a great many years, and that which he weighed when he consulted me, nearly four years ago, his avoirdupois is now 165 pounds; he is now 65 years of age, is as actively engaged in his professional duties as he has ever been, is as full of life and energy as a man of 30, and enjoys the society of young folks as most people do at that age; and reads all ordinary print without the aid of glasses. His mother, whom he resembles closely, is still living at 93, in the enjoyment of all of her faculties, and is exceedingly active.

In this case albumen, varying considerably in quantity, can still be found at times, although at others it is entirely wanting.

Several other cases, similar in many respects to those just narrated, have come under my observation during the past few years; but, inasmuch as they have passed from observation by reason of change of residence, or have died, they are not now reported.

Since I notified the Society, three weeks ago, of my intention to introduce the subject of albuminuria for discussion this evening, I have taken the trouble to correspond with the physicians who made the examinations of the applicants for insurance whose cases I have briefly reported, and have had replies from each of them to the effect that albumen can still be detected in each case, especially after violent exercise of any kind.

The question naturally arises, What is the cause of the albumin-

uria, and to what extent should these applicants be debarred from the benefits of life insurance?

In Case No. 1, it has been ascertained that, during an attack of scarlatina which occurred at the age of sixteen, he passed through the early stages of the disease without the aid of a physician; but evidences of general dropsy having supervened, medical attendance became necessary, and although an unfavorable prognosis was given, he nevertheless speedily recovered, and as far as he knows, has been a well man ever since.

In the case of Nos. 2 and 3, similar histories have been obtained, excepting that, in each instance, recovery was more protracted, especially in the case of No. 2, who remained under the continual observation and treatment of a physician for about a year, and was regarded as being delicate until he had reached the age of puberty. In each of these cases, the scarlatina attack occurred at the ages of three and seven respectively. In the first case of the second series there is no history of scarlatina, although he feels confident he must have had the disease.

Case No. 1 came under observation in 1879, No. 2 in 1869, and No. 3 in 1871; while Mr. M. and Mr. McK applied for treatment in 1870 and 1880 respectively.

All cases occurring intermediately and subsequently, I regret my inability to trace and report accurately, although I still entertain hopes of being able to do so, in part at least. In neither of the first three cases has there been irritability of the bladder at any time, or other objective evidence of disease; in each instance the urine was normal in quantity, appearance, and specific gravity, and there had not at any time been complaint of pain or uneasiness in the regions of the kidneys or bladder, or constitutional disturbances of any kind whatever. In each case the possibility of the existence of eczema, villous tumor, and venous congestion of the bladder have been taken into account at my suggestion, as being likely to determine the non-renal origin of the albumen; but in each instance I am assured such condition may be safely excluded from the calculation.

In the case of Mr. M. only, was there a desire to micturate too frequently; and inasmuch as this man acknowledged partaking of alcoholic stimulants occasionally, it may be fairly assumed that it formed an important factor in the causation of his diseased condition, especially, when considered in conjunction with his occupation, which predisposes to the excessive use of that article in all who are not total abstainers.

It may not be out of place, also, in this connection to say, that while in attendance upon the proprietor of the saloon on the corner of 20th and H streets in this city, within a fortnight, I observed this man to drink alcoholic liquor at the bar as early as eight o'clock in the morning.

These cases have at all times evoked much interest, for although there is but little doubt in my mind that the existence of even the smallest quantity of albumen in the urine is always a pathological, and never a physiological condition, yet, in view of our present comparatively limited knowledge thereof, we are unable to determine accurately its full significance, and to say definitely to what extent it is incompatible with health. Such cases, therefore, as those whose histories have been briefly narrated are of much interest; and should it be practicable to follow them up to the end, a ray of light may thereby be thrown upon the pathology of this important subject.

According to my own views and observations, all such cases are likely to terminate prematurely; but although the time at which fatal degeneration of the kidneys, with its usual concomitants, must of necessity be very variable, yet there can be but little doubt that it will occur considerably within the period of their life expectancy, however good their family history may be, and however much inherited tendency to longevity may account for the protraction of the fatal result. It will be a subject of much interest to watch all such cases closely, in the hope that by the aid of collective investigation we may be enabled to determine how much such lives may have been shortened, and upon what plan of insurance, properly selected, applicants afflicted with albuminuria may be accepted with safety.

Various theories, more or less plausible, have been advanced to account for albuminuria in cases similar to those reported tonight, but inasmuch as you are all as familiar with them as I am, and as my paper is already of considerable length, they will not be even referred to on this occasion. There is much still to be learned in connection with albuminuria. For my own part, however, I do not believe it can be caused by arterial tension alone, but rather that it results from the inflammatory process, acute or chronic, and that its amount depends upon the degree of the inflammation. But it is said that post mortem examinations have been made in which no acute or chronic interstitial nephritis could be detected, notwithstanding the fact that albumen in con-

siderable quantities could be detected in the urine during life. How to account for the albumen in such cases I must confess to be impossible, unless it be an error, and that peptones were mistaken for albumen.

But apart from the existence of albumen as a consequence of nephritis, it is known that it may result from the presence of lead in the system, from the poisonous effect upon the blood of cantharides, from the acute infectious diseases, from gout, rheumatism, syphilis, pregnancy, and from alcohol. In all such cases, however, the albuminuria is consequent upon the interference with the nutrition and functional activity of the renal epithelium by the fever poison, and the effete products circulating in the blood.

From what has been said, and from all the evidence at our command, it appears probable that the kidneys are liable to trivial ailments as well as any other organ of the body; and that from many of them they may recover, so far as the ordinary means of determining the existence of any pathological changes are concerned; but so far as my observation and experience are of value, all of the cases whose complete histories can be traced, indicate, in my opinion, the existence of pathological changes in the kidneys. While, therefore, the presence of albumen in the urine of an individual is certainly not the alarming evidence of disease which it was considered to be a few years ago; and while, as observed in the history of the few cases narrated, albumen may exist in the urine of apparently healthy persons for a considerable number of years without giving rise to the slightest objective evidences of disease, yet we cannot safely regard the condition as being physiological, and conclude that such individuals will probably reach their period of life expectancy without the development of progressive degeneration of the kidneys and consequent premature death. On the contrary, it appears more reasonable to regard the persistent, or even the intermittent, presence of albumen as evidence of pathological changes which, sooner or later, will develop into active and fatal disease.

DISCUSSION.

DR. NIXON did not think that he had anything additional to offer as criticism or otherwise. When a physician meets with albumen in the urine of a patient, he has a bad case to deal with. Al-

buminuria depends on three renal conditions. 1st. The inflammatory. 2d. Waxy degeneration. 3d. Fatty degeneration. These two pathological conditions are apt to merge into each other and are incurable. In Life Insurance much might depend on the diagnosis of the pathological condition on which the albuminuria depends. If from inflammation cure may take place.

The doctor mentioned a case occurring in his practice some years ago, where, with convulsions and ascites, the urine on boiling showed abundance of albumen. Treatment adopted was cathartics, the bi-tartrate of potash and milk diet. In about two months all traces had disappeared, with no subsequent relapse.

DR. SIMMONS. During my earlier years of practice, in common with the reader of the evening, I had been in the habit of attaching great importance to the presence of even a trace of albumen in the urine. A longer experience, however, and a watching of some cases with this symptom for eight, ten, and twelve years, and where the general health remained good, led me to modify my opinion, and to recognize the fact, that without other symptoms, albuminous urine does not, in all cases, indicate grave disease. It is certain the urine of adolescents frequently contains albumen, and the proportion may be sensibly increased by an albuminous diet. Some recent experiments also have come to my notice, where nearly one-third the students in a Physiological Laboratory, who were preparing for a lengthy examination, were found to have traces of the same substance present in their urine.

DR. SNIDER. Have for some years been led to regard the presence of albumen as not a positive evidence of renal disease. It may be taken in connection with other symptoms, but must not be relied on as positive evidence. Remember a case in which some ten years ago the urine was loaded with albumen, where now no trace exists. Have noticed cases, where, after scarlatina the albumen persists for many months.

DR. NICHOLS, while believing that the existence of albumen is ordinarily an alarming symptom, thought that it was often unnecessarily exaggerated. It frequently depended more on some functional derangement, as congestion, than on organic disease.

DR. W. E. BRIGGS thought that perhaps many of these cases in which albumen was supposed to have been present, and which subsequently recovered, might have been cases of myxuria and not albuminuria. Nitric acid will often give a precipitate when mucus is present. Was of the opinion that the new picric acid test was much more delicate.

DR. LAINE remembered a case in the Sacramento County Hospital some four years ago, when, in intermittent fever, dropsy appearing, an examination of the urine showed large quantities of albumen. The case subsequently completely recovered. Having carefully observed several cases since then, was of the opinion with [members who had spoken, that albumen will often occur from temporary congestion. These cases are of course perfectly distinct from amyloid or atrophoid kidney, where, as the disease is incurable, would only consider the case capable of temporary improvement. A small quantity of albumen with a large quantity of water would be much more significant than a large quantity with a normal amount of secretion.

DR. HUNTINGTON believed that the prognosis to any case where albumen was present depended largely on the density of the urine, and also the presence of abnormal constituents, as tube casts revealed by the microscope. Examination by this method was the only reliable test; this examination must be made more than once, as particularly in waxy kidney the casts may not be uniformly present.

DR. CLUNESS. A peculiarity in many of the cases reported tonight is that the albumen has continued for 15 years. One patient came to me about 2 years ago on account of some abnormal appearance in his urine, and on examination I found albumen present. He took little or no medicine, and albumen is still present from time to time. Have ascertained that it is manifested generally after a great mental effort. Regarding diet, do not think that egg albumen can pass through vessels and renal tubes to be excreted. This patient often takes as many as 5 or 6 eggs daily, but without any influence on the amount of albumen. In connection with tests, find that that mentioned by Dr. W. E. Briggs is not the most delicate. Millard, in the New York Medical Record, May 31st, 1884, advises 3.37 grains Potassium Iodide with 1.27 grains Hydrargyrum Perchloride, which produces a double Iodide of potash and mercury. Have tried this test and find it very delicate.

DR. OATMAN understood that the specific gravity of the urine was 1.020 in the cases mentioned. Thought that was a point of importance. In his experience, 1.006 to 1.010 was usual in severe cases. Many cases of albuminuria, in his belief, are produced by congestion of the kidneys due to "malarial influence," cold, dampness, etc., by exosmosis. Such cases are usually curable if proper-

ly treated in season. Had seen many cases during previous years in verification of the fact. In one case, in a boy six or seven years old, after scarlatina, the renal secretion was nearly all albumen. He recovered.

DR. VOELLER. At first to answer Dr. Cluness' paper in regard to traces of albumen, which frequently are met with in the urine, it can be said that such are of little importance. They have been observed often enough after protracted over-exertion of mind or body, and have quickly disappeared. A satisfactory explanation is still wanting. We might suppose that imperfect innervation produces a greater permeability of tissue, and consequently allows the albumen to transude. Albumen is not held in solution by the blood, but exists in that fluid in a molecular form.

There is another form of transient albuminuria called alimentary albuminuria, in which the urine is temporarily rendered albuminous by the use of highly albuminous food, as when a large quantity of white of egg, or egg-albumen, has been swallowed after fasting. It has been assumed that raw white of egg, or egg-albumen, can be absorbed directly and unchanged from the stomach, and be excreted again at once by the kidneys; while coagulated albumen can only reach the blood vessels after previous digestion and conversion into peptone. The case referred to by Dr. Cluness may be explained by both causes—over-exertion of brain and use of highly albuminous food at the same time. Light traces of albumen appear, according to Senator, of Berlin, in the urine of healthy individuals very frequently, and the only reason we did not detect them before depended on the imperfection of our methods. Consequently, traces of albumen do not, *per se*, justify rejection of an applicant for Life Insurance, but demand further observation before recommending its acceptance.

The transudation of albumen depends mainly on four causes, two or more of which may act simultaneously. 1st, Great departure of blood pressure from the normal; particularly venous congestion. 2d, Hydræmia. 3d, Diseases of the kidney, where the amount of albumen in the urine depends far more on the extent of the disease than its intensity. (Brueke, of Vienna) 4th, Disease of brain. (Meynert, of Vienna.) 5th, Changes of composition of blood, which is not considered of great importance. (Wagner, of Leipzig.) Of these causes, venous congestion and hydræmia are the most frequent. They are often united, one producing the other; indeed, the experiments of the School of Dor-

pat (Otto and Bidder) prove that one alone is incapable of causation. How often even considerable quantities of albumen may appear in the urine for a longer or shorter space of time, without causing any apprehension of danger to life, is well known to every practical physician, especially in this valley. Protracted cases of malarial disease produce anæmia and diminish the heart's action; and both united may cause albuminuria, and later, dropsy. In many cases after scarlatina similar conditions exist; and that form of dropsy which frequently follows it and disappears without treatment, should not be confounded with another and entirely different form in the same disease, which depends on an alteration of the renal tissue.

As long as the constituents of the urine—water and solids—are excreted in normal quantities, and as long as we do not find products of an abnormal organic or inorganic origin (ammonia, peptone, casts, etc.), the appearance of albumen in the urine is not of great importance as regards danger to life. The simplest instrument for the practitioner to ascertain the proportion of water and solids in the urine, is the urinometer. If the specific gravity is considerably above the normal, and the daily quantity of the urine equal or less than the normal, we may anticipate that water will be retained in the body, and produce its consequences. (Mechanical Uræmia—Traube's theory.)

If the specific gravity decreases daily, the excretion becomes by and by nearly water, the depuratory function of the kidney is lost, the solid constituents are retained in the blood, and by their decomposition produce blood-poisoning. (Tonic Uræmia—Frerich's theory.)

Of all tests for albumen, those by heat or nitric acid are still amongst the best. Another very exact method is that with yellow prussiate of potash and acetic acid. To facilitate its application, Tavy succeeded in converting them into a dry form, which makes it more portable. The acetic acid was replaced without any disadvantage by citric acid and the potash by the soda-salt. From these he had pellets prepared by Mr. Cooper. All that is necessary is to crush one and drop the powder in the urine. On agitation a precipitate forms in an instant, if albumen is present. Mucus will not interfere with this test; on the contrary, any turbidity caused by mucus disappears with the shaking. Phosphates do not interfere. It also succeeds well in acid urine. Should urates be present, the urine must first be heated.

The pellets can be obtained from Mr. Cooper, 58 Oxford Street, London.

The President, DR. W. A. BRIGGS, recently read in "Archives de Physiologie" an article by Prof. Semmola, of Naples, and would like to present his conclusions to the Society. He divides albuminuria into 1, Nephrogenic. 2, Hæmatogenic. The former includes all cases of albuminuria dependent on local causes, such as stasis occurring in heart disease, etc.; the latter includes morbus Brightii, the so-called physiological albuminuria, and also that form of albuminuria dependent on profound alteration of the blood occurring in such diseases as diphtheria, scarlatina, typhoid fever, etc. In support of this classification, he states that

1. In morbus Brightii, albumen is found not only in the urine, but also in the bile, sweat and saliva; while in albuminuria due to heart disease and kindred causes, it is found in the urine only.

2. The albumen excreted in morbus Brightii is more diffusible than that excreted in the course of heart disease, etc.

3. The blood serum of a patient suffering from Bright's disease, if injected into the blood of a healthy animal, will produce albuminuria; while that of a healthy individual, or of one albuminuric either from cardiac disease or from excess of albuminoid food, will not.

4. In old cases of morbus Brightii there is degeneration of the skin, and it is oftentimes impossible to produce a sweat even by pilocorpine. This is to be ascribed to that vice of nutrition upon which are dependent not only the albuminous urine, the albuminous bile, sweat and saliva, but also those secondary changes in the structure of the kidney itself.

5. Albuminuria is often produced by an excess of albuminoid food, and in albuminuric patients is always increased after a meal.

By digestion the albuminoids are rendered diffusible. When they enter the circulation they should be assimilated, *i. e.*, rendered indiffusible; otherwise they are dialysed through the kidneys, liver, skin, etc.

In glycosuria, formerly considered a kidney disease, we have an analogous case, for if the soluble diffusible sugars are not changed by the liver into insoluble, indiffusible glycogen they escape in the same way.

As to cases of long-standing albuminuria, in which the functions of life are not seriously impaired, several explanations are open to us. 1, They may be physiological; *i. e.*, caused by an excess of

albuminoid food. 2, They may be due to slight disturbances of assimilation. 3, They may be due to lesions implicating only one kidney, or a part of one or both kidneys.

Regarding prognosis, I agree with Drs. Huntington and Voeller—the presence of tube-casts in a chronic case determining the ultimate prognosis, the quantity of urea excreted more distinctly affecting the immediate. As long as urea is present in nearly normal quantity, the processes of nutrition are fairly performed and there is no danger; if greatly diminished, the outlook is grave.

COCAINE CHLORIDE.

By ADOLPH BARKAN, M. D.

Professor of Ophthalmology and Otology in the Cooper Medical College.

[Read before the S. F. County Medical Society, Dec. 9th, 1884.]

Cocaine is the alkaloid of the leaves of the *Erythroxyton Coca*, a native plant of South America, now extensively cultivated. Cocaine was first extracted from the leaves in 1855, by Gadecke. In 1862 Prof. Schroff, of Vienna, made mention of the anæsthetic qualities of the drug, when applied to the mucous membrane of the tongue; it was likewise known that cocaine produced a contracting effect upon the peripheric arteries, when introduced into the blood, and that it would dilate the pupil, by local application as well as through the blood.

To Dr. Koller, of Vienna, belongs the credit of having first successfully tried its anæsthetic effect upon the eye. His first communication on this topic was made before the Heidelberg Ophthalmological Congress, in September last, and Dr. Noyes, who was present on that occasion, introduced it in New York on his return. Since then, as you are aware, the drug has been extensively tried by a host of physicians, more especially by eye surgeons, and as every number of every medical journal in this country contains a contribution on this topic, I will here merely briefly mention that the drug has been principally used as a local anæsthetic in various operations on the eye, with, taken all in all, eminent success. One or more drops of a 2-4 or 8 per cent. solution of the muriate of cocaine, used with intervals of one or more minutes, will produce complete anæsthesia of conjunctiva and

cornea within a few minutes. The anæsthesia lasts from ten to fifteen minutes after it has become complete, and passes gradually away. Application of a pure aqueous solution of this drug produces no pain. Added to its effect as a local anæsthetic, it produces a medium dilatation of the pupil in about twenty-five to thirty minutes; unlike the mydriatic effect of atropia, however, the pupil though dilated, continues to react promptly to light, and on converging the eyeballs—thus doing away with the very disagreeable sensation of being blinded, so often experienced by atropised eyes. Besides this, *no* paresis of the muscle accommodation occurs, as when atropia is used. The patient, therefore, is not deprived for several days of the power of reading or writing, nor of seeing near objects; the cocainized eye can be used all the time with perfect comfort—the near point being removed from sight only in a trifling degree. The dilation of the pupil is complete in one hour, and passes away in twenty-four hours. Soon after the drug has been applied a slight protrusion of the eyeball may be noticed, and the lid aperture is wider open than usual.

Another very remarkable action of cocaine was first observed by Dr. Bosworth, of New York, and communicated to the N. Y. Medical Record. He observed that when using it for anæsthetic purposes, on the mucous membrane in the nasal cavity, there ensued in about half a minute a very noticeable contraction of the venous sinuses underlying the part which it reaches. These sinuses become so rigidly contracted that all the blood which they may have contained is absolutely expelled, and the membrane clings closely to the bony structures, which then become visible in absolute outline. Bosworth summarizes his interesting observations by remarking:

“While we have in the cocaine a local anesthetic of very great value, we also have a therapeutic agent of inestimable importance, and which we have every reason to believe will be efficient.

“1st. To control the exacerbation of hay fever.

“2d. To relieve the most distressing symptoms of acute coryza and curtail its duration.

“3d. To control the painful and distressing reaction which results from the use of caustics or instruments in the nasal cavity.

“4th. To completely empty the venous sinuses of the nasal mucous membrane, and thereby afford a thorough ocular inspection of the cavities.

“5th. To largely eliminate from our minor operations in the

nasal cavities for instance, removal of polypus, the troublesome hemorrhage which so often occurs, and to control epistaxis from whatever cause."

Reports are commencing to reach us of the very beneficial effect of cocaine in laryngological practice, facilitating examination with the mirror, removal of tumors, relieving distressing dysphagia in cases of laryngeal phthisis. Polk, in New York, has applied it with advantage in his operations on the cervix uteri; also in very painful tympanic neuralgia; several small tumors have been painlessly removed, the parts having been rendered anæsthetic by injection into and under the skin, and felons opened without pain after the finger had been held for awhile in a solution of cocaine.

On the 29th of Nov. I made my first experiment. A 2 per cent. solution of Merck's preparation was dropped by my assistant into my dog's eye and into my own, with most satisfactory results.

Nov. 30th, I performed iridectomy in the presence of several confreres at the county hospital. The case was an excellent test case, as the patient, a man 65 years of age, had suffered severe pain whilst undergoing a similar operation on the other eye a few months before, without any anæsthetic at all, and he stated that he would be unable to bear another operation without the aid of ether or chloroform. Four drops of a 4 per cent. solution were used; the operation was performed at the end of the fourth minute. The patient seemed as much surprised and delighted as ourselves. Fixation of eyeball with toothed forceps, opening of anterior chamber with iridectomy lance, and excision of iris produced no pain. The patient remarked: "The operation is simply nothing—it is wonderful." No reaction followed.

The second case, Dec. 2d, was that of a man forty years of age; traumatic injury of the eyeball; a piece of rock had penetrated the cornea; severe Irido-choroiditis and total loss of sight supervened. The eye was very painful, and there was considerable conjunctival and ciliary injection. The patient accepted promptly my advice for removal of the eyeball, and chose cocaine in preference to ether. Several drops of the 4 per cent. solution were applied in quick succession.

Conjunctival incisions and severing the tendons of the inner, upper and lower recti produced the sensation "as if somebody was probing a wound." Whilst I was operating my assistant applied several drops of cocaine into the socket; but on account of the bleeding and a fainting spell which overcame the patient, we could not wait for the drops to take effect, nor had we enough to produce anæsthe-

sia of the rear ocular surface or optic nerve. The operation was therefore quickly brought to an end, "the pulling of the hind chords" being, as the patient stated, "painful." The patient left my office half an hour afterwards in excellent spirits, and rather satisfied with his choice of anæsthetics. This is the first enucleation, so far as the literature at my command shows, performed under the influence of cocaine; to a great extent painful, it is true, but I entertain no doubt that with more experience and a sufficient supply of the drug at our service, the days of the etherization for removal of the eyeball, even, are numbered. The patient has been doing remarkably well.

Case 3d, Dec. 2d: Exhibited piece of iron in the cornea; removed it without fixing the bulb, and absolutely without pain; experience of patient had been very different on a former occasion.

Cases 4th and 5th were both those of young men. They underwent the operation for convergent strabismus; of these cases, case four was absolutely painless from beginning to end, anæsthesia being complete. The other case had been operated upon twice before in New York, ten and fifteen years ago. There was no loose conjunctiva, only cycatricial tissue adhering closely to the eyeball. The muscle had to be drawn forward from its excessive back position in the rear of the bulb. The operation would certainly have been a very painful one without the anæsthetic; as it was, the patient could not say it was painful "except a couple of strokes."

Case 6th: That of a girl nine years old; strabismus convergens; three drops of four per cent. sol. were applied. During the operation, which proceeded very well, the timid little patient vomited; "from fright," she stated, "not from pain." After a short interruption the operation was completed. Patient experienced no pain.

My last case, number seven, was one that fairly made my heart leap with joy. The patient, a boy six years of age, was brought to my office yesterday, exhibiting a soft cataract from a fall several months since. The pupil was well dilated with atropia; fourteen drops of four per cent solution were used in quick succession. A wire speculum was introduced, the cornea fixed, the cataract needle passed through the cornea and anterior chamber; the capsule opened, the needle was withdrawn, and the operation ended without the little man saying a word or moving a muscle. Nothing could be more satisfactory.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

The regular meeting of the Society took place Nov. 25th, 1884, Dr. Jewell in the chair.

The meeting having been called to order by the President, and the minutes of the previous meeting read and approved, Dr. Chipman, chairman of the committee appointed by the Society to prepare resolutions on the death of Dr. Gibbons, presented his report, which was accepted by the Society, and ordered to be spread upon the Records of their Proceedings. Dr. Maas then presented to the Society a communication relative to a gunshot wound of the cranium, which had come under his notice. Having had his attention called to the subject of recovery from gunshot wounds of the brain with retention of the foreign body, he thought the following case might be of interest to the Society. The patient is at present in the German Hospital, under the care of Dr. Wilhelm; is 60 years of age, of good constitution, and by employment a bar-keeper in this city. He was admitted to the hospital suffering from a gunshot wound of the head, produced by the bullet from a 42 calibre revolver. The ball entered the head above and in front of the zygoma, about three-quarters of an inch behind the outer margin of the right orbital cavity, passed upwards and backwards for about three inches, and buried itself in the substance of the right cerebral hemisphere, where it was allowed to remain undisturbed. At no time was there escape of brain substance nor paralysis of any part of the body. During the first 48 hours the temperature rose to 101 degrees F. the maximum temperature reached—and a semicomatose condition supervened for a few days, to be followed by moderate delirium which lasted for two weeks. In about two and a half weeks the wound had completely closed, and at the end of eleven weeks he was discharged, apparently in perfect health. It should be noticed that during his convalescence the patient was subject to hallucinations, and also to occasional morbid sensations in his head. Five months afterwards he was returned to the hospital with another gunshot wound of the head, this time self-inflicted. The bullet had pierced the old cicatrix, and passed downwards, lodging in the ethmoidal bone or contiguous parts, and producing considerable hemorrhage through the nose. Since then the right eye has atrophied, the wound has closed, the discharges from the nose have ceased, the patient is

perfectly rational, and does not appear to suffer any inconvenience from the presence of two bullets in his brain. Probably both bullets have become encysted, and will not produce any further trouble.

Dr. Morse remarked that he had, in consultation, seen the case referred to by Dr. Maas, and had passed a probe in a straight direction into the cranium for a distance of three inches, so that the bullet must have entered the brain. Some years ago he had a case at the City and County Hospital, where a man was injured by the bullet from an air gun. The brain oozed out from the wound in the head, and although for a time there was wild delirium, there was no paralysis, and the patient made a complete recovery. The bullet was not found.

Dr. De Witt related a case where the bullet could be felt by a probe passed four and a half inches into the cranium. The patient recovered, with the exception of a slight strabismus, which is not always present.

The Secretary then read a letter from Miss Dickinson, of Bidwell, Modoc Co., requesting information concerning the professional standing of Dr. A. I. Lawrence. On motion of Dr. Simpson the matter was referred to the Board of Examiners.

Dr. Dennis re-opened his case under the head of new business, and expressed a desire that the Society should at once investigate and settle it. He did not see why the Society should not exonerate him, since the Committee on Medical Ethics had not brought any charges against him. He complained that the Society had censured him, and then referred his case for future investigation to the Committee on Ethics.

Dr. Kenyon replied that By-law xiv. had reference to the settlement of private grievances between medical men, and not to public violations of the Code, such as appeared to have taken place.

Dr. Morse, Chairman of the Committee on Ethics, said that his report pointed to a violation of that part of the Code which forbids advertising in the daily press, or allowing such advertisements to be made.

Dr. Simpson said that the Society did not bring charges against Dr. Dennis personally; it was the unprofessional and improper way in which the Receiving Hospital was conducted that they denounced, and they could not do otherwise without rejecting

the Code of Ethics, which they are pledged to support. There was no use denying that the articles in the Code referring to advertising had been transgressed, for the daily press proved only too conclusively that they had. We might next ask the question, Was this a wilful violation of the Code? Dr. Dennis answered that it was not. He was willing to take Dr. Dennis's word for it, but must call attention to what appeared to be somewhat at variance with this statement. At a previous meeting Dr. Dennis stated that at the commencement of his career as Police Surgeon he "made no objection to the publications in the daily papers; but that when he perceived that they were distasteful to the other members of the profession he endeavored to suppress them, but was unsuccessful in his attempt." Again, although for months back the papers had been full of technical articles, referring to the cases treated in the Receiving Hospital, not one had appeared during the last two weeks. The charges brought against Dr. Dennis did not refer to publications made at any particular time; they applied to any time during his term of office as Police Surgeon; and he has said that he permitted them during the first months of that period. But let us accept his word, that afterwards he did his best to suppress them, and rest content with having called his attention to the matter.

Dr. Baldwin urged that peace should be preserved in the Society, and that Dr. Dennis be exonerated.

Dr. Chipman suggested that a motion might be introduced, calling attention to the fact that the Code had been infringed, but declaring the belief of the Society that Dr. Dennis had not latterly been a party thereto.

Dr. Simpson introduced the following motion: That while we recognize the Code of Medical Ethics to have been violated by the publication of technical articles in the daily press, yet from the statements of Dr. Dennis and the evidence before us, it seems to have been beyond his control.

Dr. Plummer seconded this motion.

Dr. Dennis said that when he entered upon his public duties he did not object to the newspaper notices, because he believed them to be legitimate and beyond his control. When some of his brother practitioners called his attention to them, he asked the reporters to refrain from publishing items containing his name, and his request was complied with for only a short time. Upon this matter being brought up a second time, he wrote to all the

daily papers repeating his former request, and calling attention to the injury they were doing him by persisting in their course after his first remonstrance. For these reasons the obnoxious items have ceased to appear during the last four weeks.

The motion of Dr. Simpson was then laid before the Society, and unanimously carried.

The report of the Committee on Revision of By-laws was called for, and Dr. Simpson said that the late Dr. Gibbons, who was chairman of the Committee, had told him of some proposed alterations drawn up by him, and requested one month's extension of time, for the purpose of discovering whether the notes above referred to might not be found among the deceased member's papers. He also moved that the Committee be increased to five; and in compliance with this motion the following members were appointed: Drs. Simpson, Plummer, Kenyon, Hart, Kerr.

Dr. Plummer called attention to the fee-bill, saying that it should be revised before the publication of the new Medical Directory. The President referred this matter to the Committee on Revision of By-Laws. The Society then adjourned.

Licentiates of the California State Board of Examiners.

At the regular meeting of the Board of Examiners, held Dec. 3, 1884, the following physicians, having fulfilled the requirements of the law and this Board, were granted certificates to practice medicine and surgery in this State.

JAS. S. GLEAVES, M. D., Anderson; North-western Medical Col. of St. Joseph, Mo., Feb. 26, 1884.

WM. D. MCCARTHY, M. D., San Francisco; Cooper Medical College, Cal., Nov., 1882.

LUKE ROBINSON, M. D., San Francisco; Toland Med. Col., Cal., Oct. 10, 1867; Med. Dept. University of California, Cal., 1874; Member Royal Col. of Physicians, Eng., Apr. 24, 1884.

ELIZABETH S. SENTER, M. D., San Jose; Med. Dept. Univ. Cal., Cal., Nov. 10, 1882.

The certificate of Platt B. Myers, of Los Angeles, was revoked on the ground of unprofessional conduct.

Portions of the new Official Register of Physicians and Surgeons of this State are now in the hands of the printer, and it is

expected that the book will be ready for distribution early in January. Copies can be procured by applying to the secretary of the Board.

652 Mission St.

R. H. PLUMMER,

Secretary.

Correspondence.

RUPTURE OF UTERUS, OR EXTRA-UTERINE FCETATION.

SAN DIEGO, Cal., Nov. 25th, 1884.

To the Editor :

SIR: Whilst staying in Jolon, Monterey Co., in Nov., 1883, I had a strange experience in Midwifery. A lady practitioner called me in consultation to an obstetric case. I saw the patient about noon on Nov. 10th. She was in her third accouchement—the previous ones having been quite natural. She said that she did not carry this child as she had the others; that at times she suffered from great pain in the left side, and altogether did not feel nearly so well. She was taken in labor about 9 o'clock the previous night, when the physician was called in. The doctor told me she had given the patient ergot, (a teaspoonful and a half of ext. liq.) and that she had etherized her at 5 o'clock that morning, with a view to turning the child, which she did not succeed in doing, as "the head was too firm in the pelvis." She also said the child was alive.

I had the patient put into the usual obstetric position. Whilst this was being done, she complained very much of pain, which she referred to the left side. On proceeding to make my examination, I noticed that the condition of the bed clothes indicated a large loss of blood. Palpation revealed the position of the fœtus more distinctly than I liked. I could not reach the os with my finger. I then had her anesthetised, and having introduced my hand into the uterus without difficulty, I found it empty, and of the usual size after expulsion of its contents at full term. Rupture of the womb immediately suggested itself to my mind, so I searched most carefully but failed to discover any rupture. The fœtus was outside the uterus, whether free or encysted I could not say. It lay across the abdomen, with the breech in the left iliac fossa,

dorsum towards the mother's stomach, and the head in the right lumbar region. I did not subsequently make any examination.

I then informed the friends of the serious nature of the case, and also told them that if they called in a doctor, (a man) I would come next day and render any assistance I could. In the meantime I directed that the patient be kept quiet, that she be well supplied with nourishment, and kept under the influence of opium.

On the following day, 11th, Dr. Laird of Soledad arrived. In consultation we decided to deliver by extracting the child through the abdominal wall, as being the best method, if the fœtus were by any chance encysted.

The patient having been encased in flannels, was anesthetised, and placed on a table which answered every purpose very well. I then made an incision from the spine of the left pubes parallel with Poupart's ligament, and above it, to a little beyond the spine of the ilium; and carefully divided the parts on a director till the peritoneum was exposed. This membrane looked quite gangrenous. On pushing the fœtus towards the wound, I saw that it was in the peritoneal cavity. I next divided the peritoneum the whole length of the wound; and whilst extracting the child I found that I had to enlarge the opening, which was done by carrying the incision upwards from the spine of the ilium. The child was full grown, and in such a state of decomposition that the cuticle peeled off wherever I laid hold of it. The placenta was free, and also in a state of decomposition. The abdominal bandage, which had been placed in position before the operation, was then tightened up, and a large quantity of foul-smelling fluid came away. This was all drained off, and the wound was being dressed when symptoms of collapse set in, though the anesthetic had been discontinued after the delivery of the child. The patient never rallied, notwithstanding that every effort was made at restoration.

I was much disappointed that I could not get permission to make a post mortem examination. It would be very interesting to know positively whether the case were one of extra-uterine fœtation or rupture of the uterus. I opine strongly towards the rupture.

Yours, etc.,

J. T. SHIPSEY, L.M., K.Q.C.P.I.

Editorial.

Action of the S. F. Co. Medical Society in regard to the Police Surgeon.

Considerable interest was created in the recent meetings of the San Francisco County Medical Society, by the discussion of a question of Medical Ethics, for the particulars of which we refer our readers to the minutes of the Society, published in this number of the journal. Almost every day for the last eighteen months paragraphs have appeared in the newspapers, describing in technical terms the operations performed at the City Receiving Hospital by the Police Surgeon, Dr. Dennis, and in many instances the accounts were so exaggerated that it was impossible to draw any distinction between them and the advertisements of irregular practitioners. When charges were preferred against him, Dr. Dennis said that the censure was unmerited, as he had used every means in his power to prevent the publication of the articles referred to, and he therefore desired to be exonerated from all blame. The Society, after considerable debate, decided that whilst the Code of Ethics had been violated by the publication of the paragraphs above mentioned, there was not evidence before them to prove that Mr. Dennis was responsible for their production.

Although concurring in the verdict of the Society, that it was impossible to hold Dr. Dennis directly responsible for the actions of the newspaper reporters, we would append to the statement that he "did everything in his power" to control them the admirable caution "*capiat cum grano salis.*" Did it never occur to Dr. Dennis, that when the reporters defied his wishes and persisted in coupling his name with their items, that it was in his power to punish such insolence by excluding them from all operations, or if need be, from the hospital itself?

It is surprising that this line of action did not suggest itself to Dr. Dennis many months ago, for had he adopted it, much discussion and publicity that must have been very disagreeable to him might have been avoided. He may have feared that such a peremptory act might be looked upon as an abuse of his power, or dreaded lest he should wound the fine susceptibilities of some modest newspaper reporter; anyhow, he meekly endured the

wrongs inflicted upon him, and does not appear to have contemplated a measure which would have been most effective and immediate in its results.

Every medical man knows that the chances of successful results are greatly increased by excluding all but assistants from the operation, as nothing can be more annoying to a surgeon than the talking and movements of spectators who are crowding round him and asking questions, at a time when his whole attention should be devoted to the work before him; his mind is distracted by these petty interruptions, and that concentration of purpose, which is so necessary a qualification in a successful operation, is destroyed by the criticisms and opinions of lookers-on.

If the Police Surgeon has not the power to lay down rules for the restraint of importunate visitors to the Receiving Hospital, the civic authorities have, and they could not refuse to grant an order which would be so eminently beneficial to the sufferers. Let us not be understood to insinuate that Dr. Dennis encouraged the public to visit the Receiving Hospital, merely for the purpose of witnessing his surgical skill; we sincerely believe that this indiscretion sprang from a mistaken conviction that the citizens are entitled to have free access to all institutions which their money assists to maintain. But things that are lawful are not always expedient, and there is no more reason for the Receiving Hospital becoming a resort for the citizens of San Francisco, than there is for the Industrial School or Magdalen Asylum becoming recreation grounds for their sons and daughters.

It is eminently proper that the names of persons taken to the Receiving Hospital should appear in the public papers, but it is as highly objectionable that reporters should be allowed to obtain the minute descriptions of operations which can only shock the feelings of the refined, and pander to the tastes of the depraved.

In justice to Dr. Dennis, we would make it known that none of the objectionable paragraphs have appeared since the Medical Society called his attention to them.

There are too many medical men in the employment of the municipality, and in our opinion it would be much better to combine two or three of these offices under one man, who would receive a liberal salary, and be debarred from engaging in private practice during his term of office. A similar experiment has been tried in the Stockton and Napa Asylums, and has succeeded admirably.

We believe that such regulations would render useless the newspaper paragraphing, as all attendance by city physicians or surgeons at the Receiving Hospital or at the patient's residence, if he chose to follow him there, would be gratuitous.

The salary attached to the combined offices would not increase the expense to the city, and, at the same time, the inducement would be greater for men of established reputation to compete for the position. We are aware that it is almost impossible to diminish the number of political offices, but we throw out this suggestion in the hope that it may be of service to some politician who has an ulterior end to serve in their abolition.

Annual Report of the Health Officer.

We are in receipt of the Annual Report of the Health Officer of the city, Dr. J. L. Meares, which also includes reports from the City and Assistant City Physicians, the Quarantine and other officers.

From Dr. Meares' report, we learn that during the past year there have been from all causes 5,000 deaths in the city, or an increase of only 12 over the number of the year before. There were 907 deaths from phthisis, or over 18 per cent. of the entire number. This is much larger than one would be led to expect, and it is explained by the fact that over 500 of these deaths were among the Chinese, who appear to be especially prone to this disease.

There were three cases of yellow fever which were imported. In the opinion of Dr. Meares, yellow fever can never rage as an epidemic in this city, on account of the temperature being too low for the development and propagation of the germs. There were also three cases of imported small-pox, which were immediately removed to the Twenty-sixth Street Hospital. There is no fear of an epidemic of this disease as long as the people continue to appreciate the necessity of thorough vaccination.

It seems almost unnecessary, at this late day, to make statements as to the protective value of vaccination, but as there are still some misguided men who do all they can to decry vaccination and to picture the horrible results which follow, Dr. Meares wisely reiterates the statement which he made several years ago, that no case,

even of varioloid, has occurred in this city where the patient had been successfully vaccinated with animal virus before the period of incubation of small-pox ; and that when the period of incubation had been going on for several days, the disease has been so modified by vaccination in every case as to make it harmless. This statement is made after an experience of more than eight years in the use of animal virus, during which time he has personally vaccinated thousands of cases exposed to the disease. Opposition to vaccination can only arise, it seems to us, among those who are ignorant of the dire results of the unmitigated scourge, which destroyed its thousands and hundreds of thousands, and left survivors defaced for life ; they forget that small pox attacked, sooner or later, nearly every one, so that it is less of a rarity nowadays to meet one who is deeply pitted, than in former days to meet one who was unscarred.

Leprosy is next mentioned, and the importance of isolation is considered self-evident. It is suggested that the State certainly should give aid in supporting the lazaretto ; for, even if cases of leprosy are carefully excluded from entering our ports, still a certain number of cases are sure to continue developing among the 100,000 Mongolians who are already on this coast.

Dr. Meares then compliments the Board of Supervisors and the Superintendent of Streets on having accomplished more to abate nuisances and to improve the sanitary condition of the city than all their predecessors, since he has held office under the city government. They have abated the North Beach, Bryant Avenue, and Solano Street nuisances ; the Powell Street sewer has been extended through the sea-wall ; the Fifth, Fourteenth, Fifteenth, and Eighteenth Streets and their important sewers have been reconstructed. These improvements have materially increased the comfort and health of a densely populated portion of the city, and thereby caused a very material decrease in the death rate ; so that now San Francisco may be rightly considered one of the healthiest of the large cities of the world.

Dr. Foye, in his report, states that there were twenty-one cases of leprosy treated in the Chinese building of the Twenty-sixth Street hospital.

The Quarantine Officer, Dr. McAllister, states that during the year four steamers were quarantined on account of having yellow fever aboard. Fifteen people were treated, and of these three died. One steamer was detained on account of small-pox. There was one case only, and this developed *en route* for this port.

The City Physician, in his report, very rightly urges upon the Board of Supervisors the impropriety of having the Receiving Hospital within the prison-walls, and suggests that a Receiving or Accident Hospital be established in a central part of the city. To this should be attached a Public Dispensary, where those who cannot enter the hospital might receive appropriate treatment. Dr. Blach also strongly advises, for many cogent reasons, the establishment of a public morgue. This has been urged before, and by none more vigorously than by the coroner-elect, Dr. C. C. O'Donnell. We sincerely hope that he will not let the matter drop until it is an accomplished fact, and the city of San Francisco has a morgue of her own, and no longer uses the back room of an undertaker's establishment, where the work can neither be properly nor efficiently done.

Neither should the city, says Dr. Blach, require the autopsies to be made by the Police Surgeons. It should not be required, but absolutely forbidden, for it is criminal, with our present knowledge of the infection of wounds, to allow one and the same person, on the same day, to make autopsies and to dress the wounds of those who are admitted to the Receiving Hospital.

New York Tenements.

A committee was appointed by the New York Legislature to investigate the condition of the tenement houses in New York city. They found them in a frightful condition, one infinitely worse than could ever be possible in Chinatown; for in Chinatown there is only an adult male population, while in the tenements of New York men, women, and children are huddled together. Mr. Booth, Inspector of the New York Association for the improvement of the condition of the poor, says:

“The most overcrowded tenement houses in the city were on Mott street, immediately facing the rooms of the Board of Health. The condition of these houses was shocking in the extreme. The water-closets were objects of horror in a sanitary sense. They were ten feet below the level of the street, the proper carrying off of the sewage being thus placed beyond the bound of possibility. There was no water in these houses, the tenants obtaining what water they needed from the street hydrants. In the rear of these overcrowded Mott street tenements was another row of equally

ill-smelling, ill-ventilated, over-crowded hives. The space between the row of houses in the front and the row in the rear was only five feet six inches. A house on Essex street had sixteen rooms, and in these sixteen rooms lived two hundred persons. The rental of a room was from \$1 to \$8 per month. A measurement of the rooms in this house showed that there were ninety-eight cubic feet to each inhabitant. The lowest space exacted by the regulations of the Board of Health was six hundred cubic feet per person."

Without desiring to defend the condition of Chinatown, we do not like to have it shown off to visitors and to strangers in the city as the filthiest and most disease-breeding spot on the face of the globe. No matter in how crowded a manner the Chinamen may live, their degradation, the amount of vice which exists among them, the injury inflicted on the community at large cannot compare with that of a promiscuous crowd of men, women, and children herded together on the average of sixteen to the room, in buildings unprovided with any of the most necessary sanitary conveniences.

Hydrochloride of Cocaine.

No drug in the Pharmacopœia ever sprang into such sudden prominence as the Chloride of Cocaine; yesterday, useless and almost unknown; today, one of the best known and most useful, with its range of applicability reaching further each day. So comparatively unknown was the drug, that even its proper name is uncertain, it being called most commonly the Hydrochlorate of Cocaine; but as Dr. Shute of Washington suggests, from its combining with hydrochloric acid to form a binary compound, it should, according to the latest chemical nomenclature, be named either the Hydrochloride or Chloride of Cocaine. A mistake has also been made in spelling Cocaine, Cocoaïne as if it came from the cocoa plant, rather than from the *Erythoxylon Coca*.

Its peculiar action as a local anæsthetic was discovered by Dr. Koller, who is studying in Vienna, and at his request Dr. Brittauer of Trieste exhibited its wonderful effect upon the mucous membrane of the eye, at the Ophthalmic Congress at Heidelberg. Within a few minutes of the application of a two to four per cent. solution the eye can be handled, and even struck a perceptible blow, without pain being felt; and the pain experienced during an op-

eration for strabismus or cataract of even enucleation is so slight as to hardly cause wincing by the patient; in fact, so steadily can he hold his eye that it is unnecessary to even fix it with the forceps, the patient turning the eyeball to the right or to the left at the request of the operator.

Although the effect is most evident, and the advantages gained are probably greater in ophthalmic surgery than in any other branch, still, workers in other fields are not going to let a drug with such valuable properties go by, without giving it an extended trial. Already it has been used in minor surgery, in venereal surgery, and even in gynecological operations.

In operations about the eye the value of this drug lies not alone in its anæsthetic effect, for this would prove valueless did it leave any after irritation. Happily, it appears to cause not the slightest annoyance, and even its mydriatic effect upon the pupil passes off rapidly.

It is a little curious that its anæsthetic properties have not been discovered before, since several investigations have been made as to its physiological action and therapeutic effects, and it has even been dropped into the eye that its mydriatic action might be studied. Still, as with so many other important discoveries, a number had it almost within their grasp, and yet failed to take the last step which would have disclosed to them a fact of so great importance, and have given them such world-wide fame.

Dr. R. Beverly Cole has been on a short trip to the southern part of the State. While at Los Angeles the county society tendered him a dinner, which was an exceedingly pleasant affair. Dr. Cole responded to the toast, "The State Medical Society." Many other toasts were offered, and happy responses made. Among those present were Drs. Orme, Kurtz, Widney, Cochrane, Maynard, Laster, Lathrop, De Szigethy, Folsom, Perceval, Wills, Hagan, Seymour, Rhea, Bicknell, Baker, and Lindley.

Owing to the vacancies occasioned by the deaths of Dr. Gibbons and Dr. Hatch, and by the expiration of the term for which Dr. Rowell was elected, Governor Stoneman has appointed Drs. R. Beverly Cole and Jas. Simpson of San Francisco, and Dr. G. G. Tyrrell of Sacramento, upon the State Board of Health.

**PREAMBLE AND RESOLUTIONS IN MEMORY OF THE
DEATH OF HENRY GIBBONS, SR., M. D.**

WHEREAS, The Faculty of the Cooper Medical College has learned of the death of Prof. Henry Gibbons, Sr., one of its most valued and honored members; a chairman of the California State Board of Health; an able and accomplished sanitarian and physician, whose distinguished career and valuable services have shed lustre on the profession of which he was a member, and for whose death a profound regret will be shared alike by his immediate friends and the profession at large:

WHEREAS, The members of this Faculty having held intimate personal and professional relations with the deceased through many years, have come to respect his judgment, and to admire him for his singular honesty and his unceasing vigilance in the discharge of his many and complex duties:

Therefore, be it

Resolved, That in the death of Prof. Henry Gibbons, Sr., the City of San Francisco and the State of California have lost a valuable citizen, and that this College is deprived of the services of a gifted and successful teacher; that the cause of medical science is bereft of one of its most steadfast workers and most illustrious exponents.

Resolved, That we, the individual members of this Faculty, deplore the demise of our friend and co-worker and brother member, and do hereby direct that a page in the book of the minutes of this Faculty be inscribed with the initials of H. G., Sr.; that these resolutions be spread thereunder; and that a suitable engrossed copy of the same, signed by the Faculty, be transmitted to his family.

W. A. DOUGLASS, M. D.

C. N. ELLINWOOD, M. D.

CLINTON CUSHING, M. D.

[At a meeting of the Board of Directors of Cooper Medical College, the following resolution was introduced by Dr. L. C. Lane, and unanimously adopted.]

Resolved, that in the death of Dr. Henry Gibbons, Professor of the Theory and Practice of Medicine in Cooper Medical College, the institution has suffered a great loss. The Directors besides tendering to the family of the deceased their heart-felt sympathy,

as a slight tribute to his memory, unite in saying that in the death of Dr. Henry Gibbons they have lost a man of unusual mental ability and one in whose character were united the highest elements of a noble human nature; and that among these his intense love of truth, great kindness of heart, his spirit of universal benevolence, will ever remain to them as high examples of human excellence, to which, as yet more worthy of enduring admiration, he added the crowning virtue of spotless purity of personal character.

**A TRIBUTE OF FRATERNAL LOVE AND VENERATION
FROM DR. HIRAM S. BALDWIN TO THE MEMORY OF
THE LATE DR. HENRY GIBBONS.**

“Death loves a shining mark.” And never within my recollection has the grim tyrant laid low a nobler spirit or a kinder heart than the subject of this notice. From his childhood his ambition had been to be greatly wise, to know all that Science had taught, or Physics had elucidated. Possessing a mind of great original compass, he was determined, that if to deserve was to insure success, he would guide the currents of medical learning, and sway the minds of medical men; and as long as the Pacific Coast shall have a medical history, so long will its pages be adorned and illuminated with the bright emanations from his brain and pen. But alas! the sound of that voice, that fell upon the listening ear like the melody of far-off music, is now silent in the grave—that imagination that could toy with the sublimest things of earth and heaven, whose images were the creations of light and glory, now wanders and expatiates amid the boundless wonders of eternity. As a friend, brother, and father, he was all the heart could desire; as a Christian, he revered his God; and without forgetting the duties of active life, he remembered he was an accountable being. He had passed the milestone which marked the highest point, and travelling down the declining slope, he came at last to the golden sunset, which sent back its luminous rays to gild the mountain tops he had passed. The duties of life had all been nobly done. The day had been long, the road weary, and he lay down at the wayside inn, where all must sleep at last, and where the only salutation is “Good night.”

Notices of Books, Pamphlets, &c.

Diseases of the Nose. By CLINTON WAGNER, M. D., Professor of Diseases of the Nose and Throat in the New York Post Graduate Medical School, etc., etc. pp. 247, 8vo. New York: Bermingham & Co. A. L. Bancroft & Co., San Francisco.

The first twenty-four pages of the work treat of the anatomy of the Nose; the next succeeding fifteen pages treat of its physiology, and the following sixteen pages to the instruments useful to the Rhinoscopist. The illustrations are all good, and are said to be taken from actual cases. The anatomical and physiological descriptions leave nothing to be desired. The diseases of the Nose are classified by the author as follows:

Rhinitis Catarrhalis Acuta, Rhinitis Catarrhalis Chronica, Rhinitis Catarrhalis Chronica Hypertrophica, and Rhinitis Chronica Ulcerosa.

The remainder consists of a description of the various tumors and abnormal growths affecting the structures of the nose, which, however, are common to any of the other mucous membranes.

As a multiplication of names and terms is always undesirable, it would have been better to have confined the description of the diseases affecting the mucous membrane of the nose to the simple term Rhinitis Catarrhalis, and its various stages. An acute catarrhal Rhinitis (to use the term Rhinitis without the qualifying *catarrhal*, as the author does, is misleading, when only applied to a diseased condition of the mucous lining of the nose) Coryza, or "cold in the head" is described, quoting from Woakes' Naso-Pharyngeal Catarrh as "vessel distension, occasional swelling, dryness of the epithelial covering, then effusion of serum, which carries with it the mucus also found in excess in the follicular structure of the membrane, and later, also the discarded epithelium from the different strata, in varying stages of growth and degeneration. This constitutes the flux of an ordinary Catarrh, which, under favorable circumstances, rapidly ends in resolution, that is, in the restoration of *vessel tonus* and consequent cessation of symptoms.

The treatment recommended offers nothing original, and is that commonly employed by the profession, *i. e.*, Dover's Powder on retiring, saline cathartics, snuffs composed of morphine, bismuth, starch, oxide of zinc, etc., etc, confinement in a warm room for a day or two, etc.

Such a treatment is wholly inappropriate to such cases, and has no tendency to cure the disease, or even to abate the symptoms. The disease will run its course in every case, and end in the usual way. The symptoms will gradually subside, and the mucous membrane be left more or less tumefied, congested and hypersensitive, and ready at the least provocation for another attack.

There is no mention of the best and promptest means at our command, of restoring the "*tonus*" of the vessels, which is admitted to be the direct cause of the symptoms, *i. e.*, electricity, which, in the writer's experience, will abort many an acute catarrhal Rhinitis in its first stage, if conjoined with a frugal diet, a cool temperature, free ventilation from out of doors of pure cold air, and, within reasonable limits, the colder the better.

The introduction of remedies in the shape of powders into the nasal cavities is pernicious. If they are soluble they would be far more effective, and their influence be more evenly distributed if applied in solution. If they are insoluble, they are necessarily inert, and can act in no other way than as mechanical irritants, like any other dust particles, of which we have already an abundance.

The solutions which are recommended in the chronic forms of Rhinitis (catarrhalis) are too strong. The mucous membrane, whose functions are already permanently impaired (and this will apply to the mucous membrane in any portion of the anatomy), cannot react favorably after an application of zinc chloride, ten grains in one ounce of distilled water, or of chloride of iron sixty grains, or of zinc sulphate twenty grains, or of copper sulphate sixty grains. The result of such applications is, that the vitality of that portion of the mucous membrane which is brought in contact with the solution is destroyed, the superficial layer being each time thrown off with the result of hastening the final stage of atrophy.

In chronic inflammations of any mucous membrane the remedial applications should be exceedingly mild, and proportioned in strength to the amount of healthy reaction which the part is capable of, which will depend upon the physical condition and age of the patient, and the length of time the part has been diseased. Even in the early acute stages very strong applications are to be deprecated, although they may be with benefit five or six times stronger than for chronic forms, but rarely more.

In operations within the nose, the introduction of sounds, probes,

etc., frequently gives rise to violent paroxysms of coughing. McKenzie of Baltimore, observing this, instituted a series of experiments upon a number of persons, by which he has been enabled to locate definitely what he terms the "sensitive area," upon the posterior portion of the inferior turbinated bones and the portion of the septum immediately opposite. The result of experiment has led to the following conclusions :

1. That in cases where reflex cough exists, these are the portions chiefly if not solely involved.

2. That the act may be produced here at will by artificial stimulation of the parts invaded by the morbid process.

3. That foreign bodies, such as pins, lodging in this area sometimes give rise to cough, which latter is not observed when they become impacted in other parts of the nose.

4. That polypi give rise to phenomena only when they arise from, or infringe upon, the sensitive portions of the area.

5. That it may be dissipated (the cough) by local applications to, or removal of, the membrane covering the diseased surface.

6. That where complete atrophy of the turbinated structures exists, as, for example, in ozæna, reflex cough is not present, nor can it be induced by artificial stimulation.

Of those who have the pernicious habit of breathing exclusively through the mouth, the author says :

"The habitual mouth-breather can be at once recognized; there is no mistaking them, as the practice stamps itself indelibly upon the physiognomy. The retracted lips, open mouth, receding gums, protruding teeth, especially the upper ones, shrunken alae, diminished size of the orifice of the nostrils, the wrinkles at the outer angles of the eyes, and the lines extending from the alae of the nose to the angles of the mouth, give the wearer an idiotic and silly expression. Hearing is impaired, arising from direct exposure of the orifices of the eustachian tube, or from the congestion which may extend into them. There is elevation of the voice, this becoming nasal in character, and there is sometimes a difficulty in the enunciation of certain consonants, for instance, p, b, d, t, k. Meyer lays great stress upon the peculiar *dead* character of the speech, differing from the dull and thick speech of enlarged tonsils."

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In the year 1865, there was published by a member of the medical profession a little book intended for popular reading, and entitled, "Shut your Mouth." The ills consequent upon the vicious

practice of breathing through the mouth, especially at night, were vividly depicted, and the remedy, where no mechanical obstruction existed, was at once simple and efficacious, and consisted simply in bandaging up the lower jaw on retiring at night. The habit is acquired during childhood through the jaw falling, owing to the relaxation of the muscles during sleep, the air finding a shorter and freer passage to the lungs through the mouth than through the nose; and if not corrected, eventually becomes habitual, even during waking hours.

A. P. W.

The Ear: Its Anatomy, Physiology, and Diseases. A practical Treatise for the use of Medical Students and Practitioners. By CHARLES H. BURNETT, A.M., M.D., Professor of Otology in the Philadelphia Polyclinic and College for graduates in medicine, etc., etc. With one hundred and seven illustrations. Second edition, pp. 583. For sale by A. L. Bancroft & Co.

For a comprehensive and complete "résumé of Otology to the present day, we can recommend this work, which has been compiled with a view to including everything which relates to the subject worth including. The illustrations are excellent, and the most of them original. As an example of the thoroughness with which the subject is handled, we quote from the Index, "Chapter I. The Auricle. Anatomy. Embryology, Cartilage, Muscles, extrinsic and intrinsic, Ligaments, Blood-Vessels and Lymphatics, Nerves, Integuments, Glands and Hairs.—Physiology—Function of the Muscles, Voluntary and Involuntary Movements, Significance of Size and Shape of Auricle, Comparative Functions, Resonant Functions, Temperature of the Auditory Canal, etc., etc."

Each division of the subject is treated with the same regard to detail and thoroughness.

Books upon special branches of practice are often of more use to the general practitioner in reminding him of what he should *not* do, than of what he should do in certain cases. To illustrate: "It is shown that in an incomplete development of the integumental part of the apparatus, the auricle and outer part of the meatus, there is usually absence of the tympanic ring, and consequently of the bony part of the meatus; that there is also a defective state of the cavity of the tympanum and chain of small bones, and occasional irregularity or deficiency in the development of the malar, palatal, and maxillary portions of the face and mouth.

"Gruber has stated that in deformities of such a high grade he has never found a normal auditory canal. Usually there is not a trace of one present, or at best it is a narrow and short blind

passage connected with the auricle. The latter usually does not occupy a position to that of a normal auricle, but is either nearer the cheek or pushed downwards toward the throat, and is movable in all directions with the neighboring skin. This is an important fact to bear in mind, if there is any disposition to make an artificial auditory canal."

It applies still more forcibly to the removal of foreign bodies which have lodged in the external auditory canal, because of its greater frequency. Every practitioner of medicine should know that nineteen out of every twenty foreign bodies in the canal may be removed by simply syringing the ear with warm water. It should be persevered in for a long time. Although the author does not mention it, a continuous stream is far more efficacious than an intermittent one for dislodging foreign bodies, such as that which may be produced by the ear-pump used in Hinton's clinic at Guy's Hospital.

This pump may be fastened to the table by a clamp, and the lever operated by one hand, while the other directs the nozzle. An air chamber in the body of the pump serves to make the stream continuous, and subject to very slight changes of force. The *modus operandi* of dislodgement of the object, especially if it is well impacted, is doubtless due to small quantities of water being, little by little, forced past the foreign body, and having no outlet, owing to the *membrana tympani* on one side and the foreign body on the other, and the small inlet for the water being continually pressed against by the *non-intermittent* stream from the pump, the body of water behind the object gradually increases, the warmth and moisture relax, the water distending the canal; there being no resistance outward to the escape of the water or the foreign body, the latter is slowly forced outward, and finally gently expelled.

We cannot recommend that a solution of nitrate of silver containing 480 grains to the ounce of distilled water should ever be *dropped* into the auditory canal when perforation of the *membrana tympani* exists, as the author describes on pp. 326 and 327. Milder solutions (never over 20 grains to the ounce) will accomplish better results, if persevered with a sufficient length of time.

If the pedicle of a polypus cannot be seen, it were better to inject the substance of the polypus before its removal, in the hopes of destroying its vitality in that way, than to run the risk of causing dangerous inflammation to the middle, and perhaps internal, ear, by the introduction—*by dropping*—of escharotics.

We also object to the use of any form of lead salts in the ear, owing to the facility with which it forms and deposits insoluble carbonates.

On the subject of cold bathing, the author says: "The exposure of the ear to cold water in diving, sea bathing, and the like seems to be a very common cause of acute inflammation in the middle ear. While it cannot be denied that sea bathing applied to the general cutaneous surface may be very beneficial, the contact with the membrana tympani is always fraught with danger to the ear. Therefore, all forms of cold water bathing must be so conducted as to preclude this dangerous contact of cold water with the drum membrane. This can be done only by keeping the head above water, or by stopping up the external ear. This may seem an extreme view, and it may be said that thousands bathe without incurring acute inflammation in the ear. Such may be the case, but while acute processes may be avoided, it is equally certain that the frequent contact of cold water with the membrana tympani lays the foundation of *chronic* deafness of a catarrhal variety. In the latter case, the conservative force of nature thickens the drum membrane, in order to resist the frequent assaults of the cold water. It is noteworthy, that no mammal but man goes voluntarily under water, without being provided with a means of preventing the water from running into the ears. It is a fact well known to many, that hunting dogs *taught* to dive become deaf.

A. P. W.

Lectures on the Principles of Surgery. Delivered at Bellevue Hospital Medical College by W. H. VAN BUREN, M. D., LL. D. (Yalen). Edited by Lewis A. Stimson, M. D., New York. D. Appleton & Co. New York. 1884.

All graduates of the University of New York and Bellevue Medical College who were fortunate enough to hear Dr. Van Buren—and there were many of them, for he taught for five and thirty years—will greet with pleasure the publication of his lectures upon Surgery, which have been carefully collected and arranged by the editor, Dr. Stimson. Nor will these alone find delight in perusing this work, but likewise all who can enjoy a thoroughly interesting and practical book. The editor tells us how careful Dr. Van Buren was in the preparation of his lectures, and that he often wrote them out in full before delivering them to the class. The book is not a systematic treatise upon surgery, but a series of lectures, familiar talks, upon general subjects, such

as Hemorrhage, Tetanus, Shock, Wounds of different kinds, Abscess, etc. They contain many valuable hints, and are placed before the public in such a way that they are not likely to be forgotten. We believe that all who buy will read them.

Lectures on the Principles and Practice of Medicine. Delivered in the Chicago Medical College, Medical Department, Northwestern University, by NATHAN S. DAVIS, A. M., M. D., LL. D. Dean of Faculty and Professor Principles and Practice of Medicine and Clinical Medicine, Chicago Medical College; Senior Physician to Mercy Hospital, Chicago; member and ex-President American Medical Association; Illinois Medical Society, and Chicago Medical Society, etc., etc. 8 vo., cloth, pp. 896. Jansen, McClurg & Co., Publishers, Chicago. 1884.

A very valuable Practice of Medicine has appeared, the author of which is Dr. N. S. Davis, of Chicago, who is so well and favorably known to the profession of the whole country. Dr. Davis, like Dr. Van Buren, has taught for the past thirty-five years, and now, amidst a vast amount of other literary and professional work, gives the profession the results of his fifty years of experience. His lectures were delivered extemporaneously, and were reported by stenographers. There are ninety-two lectures in all, which form a volume of between eight and nine hundred pages of closely-written matter. These lectures are divided into parts, the first of which consists of "Elementary Considerations or Principles of Medicine"; part second, of the "Consideration of Individual Diseases, or Practice of Medicine," which occupies but one chapter of the book. General Diseases are treated of under the next division, and "Local Diseases" under the last. Dr. Davis lays much stress upon the importance of the metric system, writes all his formulas by this system, but gives, at the same time, for the benefit of those who are not familiar with it, the quantities in apothecaries' weights. The work is valuable as an exponent of the American practice at the present date. It is well to know and to read foreign works, but at the same time, the different courses which diseases are apt to take under the different conditions of climate, make it important for the physician to be familiar with the works of men who are writing from actual experience with disease in our own country. The work cannot fail of having a large sale, and becoming very popular among both students and professional men.

Annual Health Report of J. L. MEARES, M. D., Health Officer of the City and County of San Francisco for the fiscal year ending June 30th, 1884.

A Pharmacopœia for the Treatment of Diseases of the Larynx, Pharynx and Nasal Passages. By GEORGE MOREWOOD LEFFERTS, A. M., M. D., Clinical Professor of Laryngoscopy and Diseases of the Throat, College of Physicians and Surgeons, New York, etc., etc. Second Edition, pp. 100. For sale by A. L. Bancroft & Co.

A neat little volume, well illustrated, with wood-cuts of inhalers, atomizers, and the various devices for making applications of the numerous Pigmenta, Collimaria, Aqua Medicatæ, Collyria, Pulveres, Buginaria, Gossypia, Inhalations, Gargarismæ, Trochisci, Caustica, et variæ.

Such books may supply to those who do not exercise their own judgment in making up prescriptions what they need, but as a rule we deprecate such books. Nothing tends more to induce *routine* practice, than that of using published prescription formulæ. A practitioner, whether a specialist or not, should be so conversant with the *Materia Medica* that he may at once prescribe the remedy he considers appropriate to each case, the simpler the better; and let the vehicle or solvent be water only, whenever practicable. Let him not turn to his "hand-book" or "compendium" or published "memoranda," and copy

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|------------------------------|-------------|
| R. Iodi..... | gr. ii. |
| Potassii Iodidi..... | gr. iv. |
| Zinci Iodidi..... | |
| Zinci Sulpho-Carbolatis..... | aa. gr. x. |
| Glycerinæ..... | |
| Aquæ..... | aa. dr. ss. |

simply because some eminent specialist has made use of it.

A. P. W

The American System of Practical Medicine. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of the Theory and Practice of Medicine, and of Clinical Medicine in the University of Pennsylvania. Assisted by LOUIS STARR, M. D., Instructor in Diseases of Children at the University of Pennsylvania. Henry C. Lea's Son & Co., Philadelphia.

After active preparation for the past three years, the above is now so nearly ready that the first volume will appear early in February. The work will consist of five imperial octavo volumes of about 1,000 pages each, with illustrations; the other volumes will follow at intervals of about four months. The work will be thoroughly American, and the contributors come from all parts of the United States, and each has written on the subject for which he is perfectly well fitted by education and by experience. Its

scope is broad, and includes the whole domain of medicine, if we exclude obstetrics and matters which are strictly surgical. It may, in fact, be regarded as a perfect Library of Practical Medicine. Each volume will contain a copious index. The prices will be, cloth, \$5.00; leather, \$6.00; half Russia, \$7.00

Medical Diagnosis. By I. GRAHAM BROWN, M.D., F.R.C.S.E., late Senior President of the Royal Medical Society of Edinburgh. Second edition, illustrated, pp. 285. Price, \$1.50. Published by Birmingham & Co., 28 Union Square, N. Y.

We have now before us what is probably one of the most complete and concise works upon medical diagnosis. The author takes up each system consecutively, and considers every part of it in detail; he points out in each case the manner in which the normal physical signs are produced, and also mentions the chief causes which lead to a modification or change in these signs.

To our student readers we would especially recommend the chapter that describes the various kinds of "pulse," and attaches to each of them its specific value, as this is a subject which is very often neglected by lecturers in medicine. The chapters on the nervous system will also be found of use in elucidating many of the intricate points connected with the diagnosis of its diseases.

Physiological Physics. By J. M'GREGOR ROBERTSON, M.A., M.B., C.M., Ass't Prof. of Physiol. University of Glasgow. Pp. 514. Lea & Co., Philadelphia.

This is one of the "Student's Manual" series, and is well calculated to maintain the reputation which has been gained by former numbers. It contains in a compact, yet readable and intelligible form, all those facts in physics without a knowledge of which it is impossible for the student to understand modern physiological investigation, or to make an intelligent use of some of the most potent agents in the practice of the healing art. We give this little volume our most hearty endorsement.

Text-Book of Medical Jurisprudence and Toxicology. By JOHN S. REESE, M. D. Philadelphia, P. Blakiston, Sons & Co. 1884.

We cannot help thinking that the author has erred on the side of undue brevity in the preparation of this work. It treats the subject of "Toxicology" with commendable fullness, but "Medical Jurisprudence" is passed by in a series of scattered suggestions. The book will be rather of value for one desirous of ob-

taining a bird's-eye-view of its subjects, than for the careful student. It shows no lack of knowledge, but rather too much desire to compress.

Myths in Medicine and Old Time Doctors. By A. C. GARRATT, M. D.
New York: G. P. Putnam's Sons. 1884.

Dr. Garratt has very pleasantly collected many interesting facts as to old-time practice, or what was dignified by that name. The scope of the work is set forth by the author in his introduction: "These chapters record medical history, and the successive medical schools and sects; also the medical improvements along the ages." * * *

The work is of interest as well to the general public as to the profession.

On the Development of Physiological Chemistry and its Significance for Medicine. By Professor FELIX HUPPE SEYLER. Translated by T. Wesley Mills, M. A., M. D., Demonstrator of Physiology, McGill University, Montreal, Canada. Reprinted from the New York Medical Journal for August 16 and 23, 1884.

Principles and Practice of Midwifery, with some of the Diseases of Women. By ALEX. MILNE, M. D., ex-Vice-President Edinburgh Obstetrical Society, Memb. Gynecol. Soc. of Berlin, Boston, etc. Second edition, pp. 371. Price, \$2.00 Published by Bermingham & Co., 28 Union Square, N. Y.

The Influence of Lung Retractility in Pleurisy and Pneumo-Thorax. By F. DONALDSON, M. D. Reprint from *Translations of the Medical and Chirurgical Faculty of Maryland*, 1884. Baltimore: Journal Publishing Company Print. 1884.

A Consideration of the Causes of Insanity. By WALTER CHANNING, M. D. Reprinted from the Fifth Annual Report of the Massachusetts Board of Health, Lunacy, and Charity. Boston: Wright & Potter Printing Co. 1884.

Club-Foot.—Is Excision of the Tarsus Necessary in Children? By DE FOREST WILLARD, M. D. Extracted from the *Transactions of the Medical Society of the State of Pennsylvania* for 1884. Philadelphia, 1884.

Preventable Blindness. By SAMUEL THEOBALD, M. D., Chairman. Reprint from *Transactions of the Medical and Chirurgical Faculty of Maryland*, 1884. Baltimore: Journal Publishing Company Print, No. 35 Park Avenue, 1884.

Singular Case of Vertebral Disease, associated with a Tumor in the Abdominal Cavity, Multiple Hemorrhagic and other Foci in the Liver and Kidneys, and Complicated by Compression Myelitis. By RICHARD MÖLLENHAUER, M. D.

- Miner's Physicians' Memorandum Book and Visiting List.** Sixth Improved Edition, with Clinical Columns for important cases, and Ledger Sheets for all transient and petty accounts, or for all other accounts when preferred. Ann Arbor, Mich. Joel A. Miner, Publisher. Price, \$1.25.
- The Dry Treatment of Chronic Suppurative Inflammation of the Middle Ear.** By CHARLES J. LUNDY, A. M., M. D. Reprinted from the Transactions of the Michigan State Medical Society.
- Muriate of Cocaine in Ophthalmic Surgery.** By C. J. LUNDY, A. M., M. D. Reprinted from the November (1884) number of The Physician and Surgeon, Ann Arbor, Michigan.
- Birmingham's Medical Library—Diseases of the Rectum.** By I. WILKINSON WRIGHT, M. D., Prof. of Surgery Univ. of New York. Pp. 170. Price, \$1.25. Published by Birmingham & Co., 28 Union Square, N. Y.
- On Branchial Cysts of the Neck.** By N. SENN, M. D., Milwaukee, Wis. Reprinted from the Journal of the American Medical Association, August 23, 1884. Chicago, 1884.
- Notes on the Treatment of Trachoma by Jequirity.** By LEARTUS CONNOR, A. M., M. D., Ophthalmic Surgeon to Harper Hospital. Reprint from the Detroit Lancet, September, 1884.
- A Clinical Study of Syphilis of the Eye and its Appendages.** By LAERTUS CONNOR, A. M., M. D., of Detroit, Michigan. From The American Journal of the Medical Sciences, April, 1883.
- Mumps as a Cause of Sudden Deafness.** By LEARTUS CONNOR, A. M., M. D., Detroit, Michigan. From the American Journal of the Medical Sciences, October, 1884.
- Gynakologischer Spezialismus.** Von DR. LEOPOLD LANDAU, Dozent an der Universität Berlin. Berlin, 1884. Verlag der Deutschen Medizinal-Zeitung. Eugen Grosser.
- Explanation of the Pathology and Therapeutics of the Diseases of the Nerve Centers, especially Epilepsy.** By J. MCF. GASTON, M. D., Atlanta, Georgia.
- The Relation of Micro-Organisms to Surgical Lesions.** By HENRY O. MARCY, A. M., M. D., of Boston. Reprinted from the Journal of the American Medical Association, November 1, 1884. Chicago, 1884.
- Jewish Hygiene and Diet, the Talmud and Various Other Jewish Writings Heretofore Untranslated.** By CARL H. VON KLEIN, A. M. M. D.
- Dermatitis Herpetiformis.** By LOUIS A. DUHRING, M. D., of Philadelphia, Pa. Reprinted from the Journal of the American Medical Association, August 30, 1884. Chicago: A. G. Newell, printer. 1884.
- Diphtheria Spread by Adults.** By A. JACOBI, M. D. Reprinted from The New York Medical Journal for September 27, 1884.

Hyperæsthesia, a paper read before the Medical Association of the State of Alabama. By JAMES T. SEARCY, M. D., of Tuscaloosa. Reprint from the Volume of Transactions of the Association. Montgomery, Ala. 1884.

Irregular Contraction of the Uterus. By E. S. M'KEE, M. D, Cincinnati, Ohio.

Membrana Virginitatis. By E. S. MCKEE, M. D. Reprint from Nashville Journal of Medicine and Surgery, November, 1884.

Fourth Annual Report of the State Mineralogist for the year ending May 15th, 1884

Reports of St. Luke's Home for year ending Oct. 1st, 1884, Utica, New York.

Transactions of the Texas State Medical Association. Sixteenth Annual Session, held at Belton, Texas, April, 1884.

The "Pharmacist and Chemist," which for some time has been under the management of Mr. Robert H. Cowdrey, will, be in future under the control of the Chicago College of Pharmacy, and under the editorial management of Dr. Oscar Oldberg. It will appear on the 1st of each month, and be in magazine form. Its contents will relate to Pharmacy, Chemistry, Pharmacognosy and Microscopy. There will also be selections from current literature, notes, news, and notices of new books. Its earnings will be devoted exclusively to the benefit of pharmaceutical education and progress.

The price has been reduced to one dollar, payable in advance.

All communications should be addressed to "The Pharmacist," College Building, 465 and 467 State St., Chicago, Ill.

Abstracts and Extracts.

Dentistry in the United States.

There are now about seventeen thousand dentists in the United States, and they pack into the teeth of the American people about a ton of pure gold, and five times that amount of less precious metals (tin, silver, platinum, etc.) annually. Now, these metals are worth a million dollars, and it will take only about three hundred and fifty years to bury all the coin in the United States in the graveyards (another feather in favor of cremation).

There are about four millions of artificial teeth made in the United States yearly, yet only one-third of the people avail themselves of this blessing.

Perfect teeth are to be found in the mouths of only one American in eighty, the dental organs of seventy-nine being more or less affected.

This state of affairs will never improve until mothers are taught to bear children with perfect teeth, and preserve them intact until the offspring is twenty years of age.—*Scientific Californian*.

Vienna Surgery.

I recently saw a case of "Vienna" or "bold" surgery (which generally means an operation done for the benefit of the surgeon instead of the patient). A woman was brought in, suffering from strangulated femoral hernia of three days' standing. Although taxis failed to reduce it, there were no very urgent symptoms as yet present. The operation, (which was done at 11 o'clock at night) was accomplished successfully, and *secundum artem*, as far as the division of the constricting band. The gut slipped back just as soon as the constriction was divided, and *before* it was seen whether the strangulated part was gangrenous or not. The consultant immediately decided that an *abdominal section* should be made *to see if the gut was gangrenous or not!* The operator and most of those present objected, but the consultant decided otherwise, and an abdominal section was made, and the gut found all right. The *operation* was a success, but the woman died promptly (in fifty hours).

Annals of Surgery.

At present there is no journal in the English language devoted to Surgery alone. The Annals of Anatomy and Surgery published in Brooklyn for four years was the first attempt at such a journal. It is now proposed to publish a monthly journal of the Annals of Surgery simultaneously in America and Great Britain, which will carry out, only in a more perfect way, the aspirations of the Annals of Anatomy and Surgery. It will contain original Memoirs, Editorial Articles, which will be made a special feature of the journal, Society Proceedings, Index of Surgical Progress, Reviews of Books, which will be characterized by full synopses and impartial criticism. The last department will consist of minor contributions, under which head will be included Reports of Cases, Hospital Notes, Descriptions of New Instruments, etc.

The publishers are J. H. Chambers & Co., St. Louis, and Smith, Elder & Co., London. The subscription price will be \$5 in advance.

Reference Handbook of Medical Sciences.

Messrs. Wm. Wood & Co. make the announcement that in a short time a Reference Handbook of the Medical Sciences, will be issued which is to consist of a collection of concisely written essays by writers who are experts in their respective departments. There are to be from six to eight royal octavo volumes, each illustrated, of about eight hundred pages each ; the prices will vary according to the binding, from six to eight dollars per volume. The editor is to be Dr. Albert H. Buck ; the contributors are innumerable, from all parts of the country, and a very useful and valuable work is promised by the publishers.

NOTICE TO SUBSCRIBERS.

All subscriptions paid before July 1st, 1885, will be \$2.50 for the year. After that the price will be raised to \$3.00, and all bills sent after June 30th will be made out at that rate.

WANTED

By a European physician, to enter into partnership with, or to buy the good will and office of, a well-established allopathic practitioner. Address, P. O. Box 16, Centreville, Alameda Co., Cal.

MR. G. H. MALLARD is introducing a new automatic lounge for gynecological and surgical purposes. He claims that it is perfectly adapted for office practice, and that it is ornamental as well. The price is reasonable. They can be seen at his rooms, 905 Post Street, between the hours of nine and twelve.

During the month of November, there were forty deaths in Oakland ; of these, seven were from consumption, and five from accident. The rest were scattering, showing that there was no epidemic prevailing.

PACIFIC
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FEBRUARY, 1885.

No. 2.

Original Articles.

[First of the popular course of lectures of 1885, delivered at Cooper Medical College, BY PROF. L. C. LANE.]

DR. HENRY GIBBONS.

In Memoriam.

Ladies and Gentlemen: The Directors and Faculty of Cooper Medical College having desired to give some public expression of the great loss they have sustained in the death of Dr. Henry Gibbons, the following address has been prepared for that purpose, and more especially is it an offering on my part, to the memory of one to whom I have been joined in friendship for many years.

Upon the highway of life, along which we are passing, a fellow traveler has fallen; ere the wheels of time carry us onward, it becomes us to pause and turn our eyes to our fallen companion, and, as we take leave of him, to recall the great points of his character, in order that these may serve as guides in the moral struggles of our own lives; such guiding lessons, besides giving cheer to those who survive, rescue from oblivion the better part of him who has ceased to live, and realize for him the hope which all good men have, that they "shall not altogether die." As the Roman bard quoted, looked forward and saw his precious thoughts, the children of his mind, yet sur-

living him and clad in the vesture of immortality, so the good of all ages have wandered in anticipation beyond the limited circle of their own lives, and caught some echoes of the tribute which the coming years would bring them; and as their fancies have wandered into the future, and caught glimpses of their own renown in the many colored years, they have, in some degree, shared in the victory that crowns a well spent life. We trust that such hopes and such visions delighted the mind of our dead friend, as his feet neared the bounds of life, and the long shadows told him that his setting sun would soon be followed by the night in which he should rest forever from his toils. To sketch a life at this near period, when the sun though sunken, has yet left some of its evening purple on the mountain tops, and a halo of light on the last steps of the dead, is not always an easy task, for affection sways the friend toward exaggerated eulogy, and too much resentment yet lurks in the heart of an enemy to permit him to be impartial. In unfolding the scroll of my friend's life, it will be my aim to shun the errors here alluded to, into which friendship usually falls.

In human history it has often occurred that even cotemporaries have been puzzled in the interpretation of the motives and actions of the men of their times; in fact, certain well known historic characters yet remain unsolved enigmas, one generation perhaps, quite reversing the opinion of its predecessors. As in the ancient classics the text is often obscure, and the meaning of a page often hangs on the sense of a line or even a word, so in deciphering the life-volume, the biographic translator has often encountered similar difficulties. No such trouble, however, besets the present undertaking, for the acts of his life stand in a bold, unmistakable handwriting; each utterance there, is clear and manifest, direct and outspoken.

Henry Gibbons was born in 1808, in Wilmington, Delaware, that little State of three counties, so small that more than twenty such States might be included in the county of San Diego, in California. As is known, this little State is one of the oldest of our Union, and was originally peopled by a hardy race of men, whose ancestors of giant stature and wonderful courage struggled for life among the mountains and chilling floods of Scandinavia, and sang there the wild chants of the Edda, the epic of the North, in which are promiscuously sung courage, virtue, war, storm, wind, the eagle and the raven—the raven as a seer rejoicing in the

birth of heroes who are to strew battle-fields with dead heroes, for his food—such were the Swedes and Finns who peopled Delaware, among the descendants of whom the early life of Dr. Gibbons was spent. But along with these people, who as soldiers had fought under Gustavus Adolphus in the thirty years' war, came a no less bold and determined band of men, who, though their fathers had fought for toleration and freedom of thought, themselves announced a new faith, viz., that of universal peace. This innovation and revolt against the established church of England had as leaders three men of very different rank in life, viz., George Fox, William Penn and Robert Barclay; the first was a peasant, uncouth, unlettered and untaught in everything except his Bible which he knew well; the second was from a family of rank and high social position in England, his father an Admiral, whose services had won for his sovereign the island of Jamaica; the third, Robert Barclay, whose knowledge of the Bible in the original tongues gave to his pen weight, and to his tongue skill, as a religious controversialist. These men whose guides in duty and practical life, were the inner light, intellectual independence and the promptings of conscience, soon gathered a large number of adherents among the low, the humble and the deeply religious men and women whose social position and relations with society offered no barrier to their boldly announcing their convictions. Such men, though subjected to fine, stocks and imprisonment, were rarely reached by the former, as they seldom had property, and as for punishment and imprisonment, these but added to the fervor of their religious enthusiasm; so that when Fox was released, he quickly found his way to the Steeple-houses as he mockingly christened the churches, and again, more fiercely than ever, denounced the hypocrisy and empty forms and usages of the established church.

Penn, whose life was rendered especially miserable, through the alienation of his family and aristocratic associates, longed for a home where he and his friends could find rest, and peacefully worship as their consciences directed them. For this purpose, he sought and obtained a grant of land in the New World, on the banks of the Delaware river. In this grant was included the future state of Pennsylvania, as well as that of Delaware. The English ancestors of Dr. Gibbons were among the early followers of Penn and Fox, and as soon as the grant was confirmed to the proprietary, as Penn was named, John Gibbons, the founder

of the family, crossed the Atlantic and purchased of Penn a large tract of land in what is now Chester County, Pennsylvania. At a subsequent period, the father of Dr. Gibbons moved to Delaware, and became one of the early settlers of Wilmington. From traditions as well as from published accounts which have reached us, it is evident, that the members of the original family had a full share of those traits of inflexible purpose, purity of life and simplicity of manners, which stamped and made a distinct individuality of every follower of William Penn. Of all the colonists who left the old world and sought the new, as a refuge from religious persecution, no people were more quaint and peculiar than the Quakers. They carried to the extreme of feeling their hatred of the false, the crooked and the unreal; and their external humanity in its abhorrence of pretence, disguise and fashion, adopted as cardinal rules of life "plainness in dress, address, deportment and apparel." The names of the months and the days of the week on which a shadow of idolatry was thought to lurk, were shunned, and ornament without some use was reckoned an abomination. In fact, their religion was simplicity itself, reduced to a small number of self-evident truths, which a child could comprehend, or a Socrates marvel at. Indeed, the inner light which directed the Quaker's conscience was but the reappearance of the demon that sojourned with Socrates, and the Athenian philosopher whose wisdom was treasured up by Xenophon and Plato on the steps of the Parthenon, was one in spirit with the simple people that worshiped in the wild forests of the New World, and the serenity with which the former quaffed the fatal cup of hemlock, was equally the characteristic of the latter in every event of fortune.

The early Quakers were almost without exception, poor farmers and poor mechanics, and as such, were men of strong, robust bodies, which had received none of the enervating legacies of weakness and disease which a profligate aristocracy often bequeaths to its descendants. Persecution and struggles with adversity gradually developed in them a strong mentality, so that the descendants of the race are both physically and intellectually strong, and possess a character which has enabled them to take a high position in both England and America, and to number in their lists, such men as Bright and Whittier. From such blood Dr. Gibbons derived his lineage, and his intellectual personality was the outgrowth of accumulated ancestral tendency.

which both paternal and maternal hands moulded according to the highest models of excellence; example leading precept in the work. His childhood had also the fortunate privilege of being the member of a large family of children, each one like himself endowed with a strong nature, obstinate, self-asserting and self-reliant. In such a family, the events of each member's daily experience are but the rehearsals of life when its sphere of action is transferred to the broader domain of mature manhood.

Both the grandfather and father of Dr. Gibbons were highly educated, being unusually well instructed in the ancient and modern languages, and in natural science. He received careful training in the same directions, in which there was that union of classic and natural science which ever gives the highest type of scholarship. For as an old Sanscrit physician compares the medical man who is trained in medicine or surgery singly to a bird with one wing, so the modern tendency to drill the student in natural science only, is equally imperfect. Dr. Gibbons was wont to recount conversations with his father, in which the latter often quoted from his favorite Horace, drawing from the poet some of those choice gems of satire, that so often are found in his verse. From the character of these quotations, one readily sees that in the solid marble of the old man's rugged nature there ran a rich vein of that humor which was so striking a feature of the son.

In natural science, Dr. Gibbons early showed a strong bias toward Botany and Meteorology, and for these in after life, he ever cherished a lively interest. In a conversation with him, I well remember the enthusiasm with which he recalled the cloud-forms of cirrus, cumulus and stratus, which in panoramic glory delight the naturalist's eye in the older States, but which are so rarely seen in the formless vapors which becloud our sky. For many years he faithfully chronicled every prominent point concerning our San Francisco climate, such work, finally, becoming almost an intuition or unconscious act in his daily routine. The record of these observations is now in the Smithsonian Institute. An unusual phenomenon, as an eclipse, made the night to him one of sleepless vigil; and on one such occasion, thinking to give a friend a treat of witnessing one of Nature's great plays in the form of a meteoric shower, he called and rang through error a stranger's bell, whose only thanks was a grunt of disgust at being roused from his sleep.

An equally strong taste was his love of plants, in the knowledge of which, at one time, he was so proficient that the Flora of Delaware was very familiar to him. In a conversation with him a few months ago, he acknowledged his indebtedness to this knowledge, for much pleasure in life. For he had found, as every Botanist finds, that whether in the well planned garden, in the field, the shadowy nook, or the mountain solitude, these gentle children of Nature's first essays in life, delight, cheer and instruct the trained eye, that knows them. For many years past, it was the habit of Dr. Gibbons to make a visit, once a week to the rural home of a daughter, where he could indulge his taste for natural scenery; there amidst green trees, where no month gives the rose rest from blooming, surrounded by the "eternally new, and the eternally beautiful," as Virchow says of Goethe, he sought and found new energy and new life. Such diversion often turns over a page in life's volume, and thus hides its tiresome memories.

The father of Dr. Gibbons was a physician, having studied and graduated in Medicine, at the University of Pennsylvania. At that time, but few of those practicing had graduated, an allusion to which is contained in the language of the diploma itself, viz., that it "separated the holder from the literary rabble." Our medical ancestor confessed that in his studies for the degree this clause was a strong incentive. This medical school in Philadelphia was founded in the latter part of the last century, and, for a long period, held precedence in this department of learning. In its corps of teachers were Rush, Physick, Hartshorne, Hare, Chapman, Horner, and Hood, names which have become venerable in American Medicine.

In this case as often happens, the father's profession became that of his son; the latter likewise studied and graduated in the University of Pennsylvania. He enjoyed the rare privilege of instruction from most of the famous teachers before mentioned. From the lips of these men, each an oracle in his department, the young man received his first lessons in the healing art. If it be a favor to have such men as teachers, the latter enjoy an equal honor in having such material as our young man, for disciples, for the thought-germs sown by the former, often return manifold fruit. On this occasion the student acquitted himself so successfully, that his inaugural dissertation written upon vaccination was selected for publication. Certain points in this paper

illustrated the careful thought and sagacity of the writer, for though contrary to received opinion, the future verified their correctness. The great truth of the prevention of small-pox through vaccination which the young man defended, remained, in after years, one of his most earnest convictions, as accumulated observations united to confirm it, and for such obstinacy as continues to close its eyes against the united findings of experience, he had no patience, but often launched against it a keen shaft of satire.

For some years, the son was associated with his father in the practice of medicine, in Wilmington. At this period, began his first essays as a popular lecturer, in which he soon acquired that readiness which distinguished him in after life. He frequently delivered addresses upon scientific and moral topics, in which his aim was to instruct, and impart useful information. To those who have been witnesses of his ready ease in speaking, it will be a matter of surprise to learn that, in the beginning, he labored under extreme embarrassment; his first address, though carefully written, cost him a great effort in its delivery; at times, he could hardly see the lines he was reading. In his early years, he was in the habit of submitting his written addresses to his father for criticism, and on one occasion thinking he had composed something very remarkable, the main feature of which was a profusion of rhetorical flowers, the father ruthlessly stripped the composition of all its ornament, with the chilling consolation, that these were faults which he would avoid as he grew older.

The talent for speaking which this early training fostered and matured, soon found ample room and scope for work in warfare against the use of alcoholic drinks. The followers of Fox and Penn in their complete code of morals, included abstinence from ardent spirits as a cardinal rule of conduct. Not content with making this a rule of his own life, Dr. Gibbons soon became the public champion of the cause of temperance, and, with ready pen and fluent speech, he became an enthusiastic propagandist of the same. A friend of his who knew him in those early days, told me that in his earnestness in this work, he outstripped all others; in fact, that in his crusade against intemperance, he overturned the State of Delaware. In his case, different from what often occurs, the matter did not vanish as an ebullition of youth, but seemed to grow in intensity, with advancing years.

From Wilmington, where he practiced fifteen years, he moved to Philadelphia, whose broader field, gave ample occupation for

his varied talents. In a small town, the relations of men differ materially from those existing in a large city; in the former, each man knows the exact measure and worth of his neighbor; every one becomes a coin of well known value, and if flaws and defects exist in him, rigid scrutiny has long since detected them, and no one is more sharply tested than the young physician; each patient lost is well known, and the death is referred to the inexperience of the youthful doctor. Having passed through such a furnace of trial, and which in his case was unusually severe, as he was ever the object of comparison with his father, he next became a member of the medical profession in a large city, where social life and professional life moved in their most spacious orbits. The experience which he had gained in his smaller sphere, greatly aided him in his new one; the lance which had been trained and disciplined in the old one, did good work in the new. The competitors who met him at the threshold and disputed his admission, early discovered his merits and soon acknowledged him their peer. For in that primary tournament, they found no gaps in his moral and professional equipments; he was no weakling whom the merciless spectators consigned to destruction, or ignominious exile.

In Philadelphia he soon secured a large medical practice, from which he derived a remunerative income, and one from which a man of close business habits might have become wealthy. Had financial thrift been the leading incentive in him to work, as his business increased, he would have neglected his poor patients; yet here, the humane side of his nature was ever prominent, for his feet never forgot to walk among the lowly and worthy poor. In addition to his duties as a physician, he found time, here, for the exercise of his gifts as a writer, public speaker and debater. In this, both his pen and voice were ever active in defense of public and private morality. This latter work was done quite regardlessly of pecuniary profit; indeed, it was often detrimental to his interests, as his outspoken manner provoked hostility toward him. Where truth or right was in jeopardy, no man ever stepped more fearlessly into the breach in their defense.

At this period, an eventful one in the history of our country, from the sunset side of our Continent, there came rumors of the discovery of a new Hesperian garden, where not one tree alone, but every one was laden with golden fruit. Ambition, with a voice more commanding than that of Juno to Hercules, bade the

daring and adventurous of our land go thither, and share in the possession of the prize. Yet to enter the gates of that garden was no easy task, for they were guarded more securely than if a flaming sword turned in every way before them; infinite toil, danger, disease and death lay in the way of the traveler, and only those who scoffed at such obstacles dared the essay, and of those who dared, fortune smiled only on the fearless and the stout-hearted, for instead of wealth, some found a grave now unmarked beneath the waves, or an unepitaphed resting-place in the tangled woods of the Tropics.

Dr. Gibbons was then forty-two years old, a period in life when the cooler accents of conservative prudence usually hush the voice of ambition when it whispers of schemes attended with toil and danger. Not so with him as he decided to cast his lot with those who were seeking homes in the farthest West. Probably, his love of nature and taste for natural science turned the scales on the side of departure, as he weighed the ease and comforts of home, with the toil and privations of the contemplated change. The heart of the Northern naturalist is never content until he has seen the gorgeous Flora of the Tropics; he who has only seen the palm, the passion flower, the musa and the orchis, in the stunted form which they assume as exiled exotics, longs to behold them in their wonted luxuriance in their native land. Such realization of long cherished wish, Dr. Gibbons enjoyed in his transit across the Isthmus of Panama, in which he was delayed some time, owing to the irregular connection of the ocean steamers. His written account of this transit, reveals the same exaggerated emotions of astonishment and wonder, which took possession of Humboldt when he first opened his eyes on Tropical America, and caused the great traveler to indulge in a rhapsody of feeling, for which he begs an excuse from the reader.

The journey finished, he appeared in San Francisco, where he engaged in the practice of medicine. Among the many hardy adventurers who came here to seek a fortune, no one was better adapted both by previous training and native character, to calmly meet and conquer the difficulties which all new comers here encountered. His previous experience in a small as well as a large city, had invested him with a panoply that enabled him in his new home to fearlessly enter the ranks of professional competition. He opened an office in the lower part of this city, and more fortunate than most beginners, but a short time elapsed ere he

had a call from a miner whose dissolute habits made it necessary for him to seek medical aid, and as requital for the same, he dropped an ounce of gold dust on the doctor's table. He at once realized that he was in a new land where gold was given as lavishly as it was found.

Soon after his arrival here, an invasion of cholera gave active employment to those physicians who were not afraid to meet this pestilence. Having already seen the disease in the East, Dr. Gibbons was not afraid of it, and offered his services to a hospital which the authorities of San Francisco had extemporized for the reception of patients, the subjects of the epidemic. His fearlessness of cholera was shown in the fact that he resided in the hospital, and to some extent, personally cared for the victims of the epidemic. From this period, Dr. Gibbons was engaged in medical practice, in which he enjoyed more than the average share of public favor. And in this work, no one was ever more free from mercenary purposes, as many a nameless sufferer could bear witness to. The sufferer not only received relief from his skill, but he bore away with him the precious memory of having met a heart full of sympathy and pity, and if the patient were one of the devil's poor—whose knock is not an unfrequent one at the physician's door, besides gratuitous remedies for his physical ills, he received kindly words for his moral healing, so that the morally oblique never failed to leave him somewhat straightened in character and purer in heart and purpose.

In 1856, there appeared here, in the ranks of medicine, a bold, adventurous and original spirit, Dr. Elias S. Cooper, whose strong and tireless hand essayed the task of shaping the heterogeneous and discordant elements of the medical profession on the Pacific Coast, into a definite organization. Through his agency, an affinity was established between these elements, and the result was the California Medical Society, the foundation of the present prosperous State Association. In this work, Cooper was ably seconded by Dr. Gibbons, who in 1857, was honored with the presidency of the society, a distinction with which again he was honored, in 1871. His long experience in public assemblies, admirably fitted him for such a position. Though medical associations are organized for the consideration of matters wholly peaceful in nature, yet such assemblages, have often been the scene of fierce individual strife. On such occasions, Dr. Gibbons,

as presiding officer, by address and impartial rulings, soon conciliated the tumult, and restored order, and both as presiding officer and individual member, when from a thoughtless or hasty course, the association in his opinion, was doing injustice to any one, he was always found in the small minority, whose prudent hands stay the wheels of precipitate action.

Cooper, to whose efforts was due the State Medical Organization soon after his arrival, three years later planned and laid the foundation of the first medical school on the Pacific Coast. The establishment of such an institution was a plan of Cooper's long before he came to California; in 1851, he repeatedly conversed with me on the matter, in terms of enthusiasm that showed that his heart and mind were wholly in the matter. Eight years later, his hope found realization, in the foundation of the Medical Department of the University of the Pacific. Here, again, he was early seconded by Dr. Gibbons, who took the chair of *Materia Medica* and Therapeutics, in 1861, in which position he was an interesting and instructive lecturer. The students who heard this course, still remember the teacher's careful instructions, in which the value and action of remedies were carefully explained, with constant illustrations drawn from the teacher's own practice. Soon afterward he passed to the chair of the Theory and Practice of Medicine, for which his extensive reading eminently qualified him. His lectures were characterized by clearness of thought, and directness of expression, which left no doubt or indistinctness in the minds of his hearers. Either from early discipline or from innate mental constitution, his mind never became involved in those webs of obscurity which occasionally becloud the thoughts of most men in public speaking. As in all matters, whether public or private, he took a stand where he believed truth to be, so his utterances as a teacher, besides being clear and logical, ever bore the stamp of honest and earnest conviction, and these as well-proven verities, which a truthful heart had tried and proven, carried belief also to his youthful disciples, with whom they remained as enduring rules for future action, and whilst he was infusing technical knowledge into the minds of the students, he never forgot, as occasion offered, to drop a moral precept into their hearts. This moral training has borne excellent fruit in the classes which have graduated in this school, who almost without exception are models of sobriety and correct habits, and that his work had thus been fertile in good was to

him a source of great satisfaction, and occasional allusions to the same on his part was a vanity which few would not pardon him. Though his didactic lectures were patterns of simplicity, where facts were linked together by common sense, and in which tawdry ornament and false embellishment were carefully avoided, yet to fix the facts in the minds of his hearers, or to awaken attention when the matter was tedious, no one had an ampler fund of humor to draw upon. At such times the lecturer had but to recur to his ample magazine of anecdotes, where an apt illustration was found, and in such illustrative story or anecdote, there lurked no double-meaning word or obscene allusion, which long after the fact sought to be taught had been forgotten, is wont to remain as an indelible filth-spot in the memory of the listener: for as the accusation has often been justly made that Juvenal, in scourging vice by his indecent allusions, also taught it, so many a famous medical teacher has left a name beclouded with similar fault.

The facility of Dr. Gibbons as a medical lecturer was more than equaled by his readiness as an extemporaneous speaker in public assemblies. Any utterance there, contrary to his convictions, never failed to call from him a prompt reply. At such times he was apparently a careless hearer; his manner seemed to betoken almost a studied indifference as to what he was listening to; yet no sooner had the speaker concluded than he was on the floor, and, singling out each fallacy and inconclusive statement which had been made, rapidly controverted them. Such skill and readiness in controversy often tempt their possessor to abuse his talent; yet no one who knew Dr. Gibbons ever accused him of such misapplication; his intensely sincere nature ever saved him from falling on such a rock.

In 1864, he began his career as one of the prominent medical journalists of our country, in assuming the editorship of the *Medical Press*, a periodical that had been established by Dr. Cooper. This periodical was soon afterward fused with the *Pacific Medical and Surgical Journal*, and issued as a monthly, under the name of the latter. During the last twenty years of his life, with some aid from his son, he published this paper, giving much labor to the same. This work was nearly always done at night, and often reached well into the hours of the morning, and that, too, after a day busily spent in professional visits. It was rare that a patient desiring a night visit must arouse him, as the doc-

tor was nearly always found in his toiling vigils, reading, writing and selecting for the coming issue of his paper, and the action is still more meritorious, when it is told that the work was wholly one of love, for as a financial enterprise, the journal never half paid for the work given to it; the readers, in fact, were much more benefited than the editor, since the periodical rendered them familiar with what was being done in the profession, both at home and abroad. But the charming part of the journal was the editorial department, where the reader never failed to find a treat of varied composition in which were commingled racy wit, deep humor, piquant criticism and fine satire. He was specially happy on those occasions, where, as unfortunately sometimes happens, medical opinion or practice was straying from the broad road of common sense: at such times his pen was not content with gentle rebukes, but often indulged in a cutting sweep of piercing sarcasm. In a pithy, biting, unanswerable epigram, the fallacies of a book were exposed, scourged and turned into ridicule. Whenever in morals or medical practice, common sense was outraged, it provoked an attack from his pen, of severe indignation; for in his nature there was none of that apathy, sometimes called philosophic serenity, which without emotion quietly contemplates evil, as a normal component of human action. In defending what he believed to be right, and in chastising injustice, he reminds one of those determined and fearless combatants among the followers of Cromwell, who were ever foremost in the assault, and whose swords won those victories announced by the protector in the brief dispatches in which he said, "we have met the enemy and many thousand of the ungodly are slain."

On the organization of the California State Board of Health, Dr. Gibbons was appointed a member of the same, which position he held during the remainder of his life. As President of the Board, he was a most active laborer in the cause of public health. The published proceedings of this organization contain numerous contributions from his pen, which attest his thoughtful industry, as well as personal work in journeys through the state, to gather information respecting the climate and sanitary advantages of different sections. The reports of his observations, contained in the biennial reports of the State Board of Health, the proceedings of the California Medical Society, and the Pacific Medical and Surgical Journal, have contributed largely to diffusing correct knowledge concerning these subjects. As co-laborers in

this work were Drs. Logan and Hatch, to whose industrious pens also our state is much indebted, for the diffusion of information concerning the excellence of its climate. While traveling once in Scotland, a gentleman told me that the writings of Sir Walter Scott had enhanced the value of real estate there forty per cent. The quiet and unostentatious work of our State Board of Health has done even more for certain sections of California, and yet, a few years ago, a short-sighted Legislature proposed to abolish this Board, the aggregate expenses of which do not exceed thirty five hundred dollars, annually. Thanks to the energetic efforts of Logan and Gibbons, a step backward was averted, and the Board remains as one of the most valuable of our state institutions.

As we have seen Dr. Gibbons a strong partisan in the cause of Temperance in the East, so we find him here equally active in every movement looking to the advancement of this cause. Among the Good Templars, Sons of Temperance and similar organizations, he was a prominent leader. He assisted in the foundation of the Home for Inebriates, as well as in the organization of the Dashaway Association, likewise established in the interests of the Temperance cause. Whether in the lists of controversy, on the rostrum, or at the editorial desk, this subject was ever most dear to him. He espoused it with ardor in early youth, and the fire of enthusiasm then kindled in his heart only expired with its last pulsation. Though with one hand he was ever dealing such telling blows against intemperance, yet he was equally ready to extend the other with kindly tenderness to the erring victims of excess, and his busy life was robbed of many a precious hour, and his purse of its earnings, by the demands made upon him by those who were trying to break the shackles of drunkenness.

Few men ever stop to consider how much we are indebted to the lower animals, which having been domesticated, have become such important factors in human civilization. To none is man more indebted than to the horse, and no debt has been so little recognized. Instead of gratitude, this noble animal is too often the victim of ill treatment or extreme cruelty. The call with which nature has enabled the dog to beg for mercy when illy used, has been denied the horse. In unanswering silence the latter bears outrage and abuse. To correct such abuse, the humane of our city, a few years ago, organized a Society for the

Prevention of Cruelty to Animals. In this association Dr. Gibbons was an active worker, and several times during professional visiting he stopped his carriage and stayed some brutal hand that was beating a beast of burden.

He was for several years a member of the State Prison Commission. No man ever more radically hated vice or detested crime, yet when brought face to face with its victims in their penance, the sight touched him with pity, and placed him in the ranks of those who implore executive clemency. In fact, if we be allowed to record his failings, we must include as a prominent one among them his readiness to forgive offenders—a trait rarely found in one of such inflexible temper. The same marked his personal relations with men in private life; for whilst his pronounced opinions, utter detestation of wrong, unshrinking denunciation of the same and natural love of controversy, often awakened enmity towards him, yet no one was more ready to extend the hand of reconciliation, and as he did so, he forgave and he forgot.

On the reorganization of the Medical College of the Pacific, under the name of Cooper, Dr. Gibbons continued in the chair he had formerly occupied, and though in poor health, he listened with impatience to any suggestion of lessening work. He always took extreme interest in the course of popular lectures established in connection with this institution, and, as you remember, during the last two years delivered each year a lecture. Though these lectures were full of thought, energy and humor, yet one caught in them touches of that sadness which is seldom wanting in the mental efforts of age.

He was an active worker in the establishment of the Mercantile Library of this city, although his early teaching against "prize goods and lotteries" prevented him, at a later period, from participating in the huge game of chance evoked to aid this institution in its financial difficulties.

In reference to the use of tobacco, most medical men are in accord as to its ill effects on health. To counteract the habit which is so general, societies have been formed and essays and disquisitions written. Even King James of England did not deem it beneath his royal position to write on this subject, and in his "Counterblast against Tobacco" he compares the fumes involving the smoker to the "smoke of the pit which is bottomless." As a writer, Dr. Gibbons gave his testimony against the

habit in an essay which was selected from about fifty manuscripts for the prize of the Methodist Tract Society.

In connection with his profession he held the position of Visiting Physician to St. Mary's Hospital, in this city. The sick of that institution received daily the gratuitous ministrations of his humane hand for eight years. For a still longer period he was one of the Visiting Physicians to the public hospital of San Francisco. In this work he was generally accompanied by a class of medical students whom he instructed in Clinical Medicine.

Dr. Gibbons was always an active member of the San Francisco Medical Society, and from its first organization no member can present a record of more punctual attendance. He always shared in its discussions, and occasionally read papers on current medical topics, and his last communication was upon Cholera, which he read before the Society some four months ago, just before he started East for his health. (This Society, as well as others to which he belonged, have passed fitting resolutions announcing the great loss they have sustained by his death.

He was also a member of the Academy of Science of our city, and for many years was a regular attendant and participant in the deliberations of that learned body, occasionally presenting and discoursing on some object of natural history which he had found in his travels.

Some years ago an eminent political writer of our country proposed to some of his aged literary friends that each should gather up the select thoughts from their writing, and publish the same in compendious book form; that unless they did so, death would leave scarcely a vestige of their lives to which posterity could point. As is often the case, the proposal of the great journalist died as an unfinished plan. So in regard to Dr. Gibbons, it will soon be a difficult task to form a correct estimate of him as a writer, for though his pen was an industrious one, its productions in the form of essays, criticisms and lectures were so scattered in the ocean of periodical and fugitive literature, that already much that he wrote is disappearing from view, for if printing embalms thought, it often buries it too, so profuse is the mass of published material in this age.

As I was once walking through Père la Chaise cemetery. I was suddenly surprised by coming upon the monument of La Fontaine, bearing on it the forms of the fox, lion, eagle and

other animals which the great fabulist has made figure in his moral lessons. If such a monument were reared over Henry Gibbons, what a variety of objects might it not bear, were his various services to the world emblematically represented, and yet in all this work, one hardly finds a trace of selfishness; in fact, his life was consumed in doing for others, leaving the ending half of the golden rule quite out of the question.

Eight years ago, his health began to fail, and from that period until the time of his death, he was frequently ill. His affliction had no well defined character; at times it caused him to suffer greatly from violent pains of a seemingly neuralgic nature. His disease was doubtless due to over-work of body and mind, for age found in him no disposition to abate the exacting duties which had been the accustomed task of earlier years. In his busy career, upon his ear fell unheeded the whisperings of time that the sixth age had come, when men should shift into the penultimate act of repose, for one saw him still, more dead than alive, pale, feeble and suffering, pushing his course among the crowding throng of our city.

At length exhausted nature clamored so loudly for rest, that for once he listened to it, and, consulting with his friends, it was decided that he must make a journey for his health. But whither should he go? As the dying Greek of old, remembered and longed to see his native Argos, so he longed to revisit the home of his youth. Early last autumn he repaired thither, and enjoyed the warm greetings of many old friends; met and addressed those kindred to him in faith in the meeting-house where his father had worshipped. That scene of silent worshippers, or rapt listeners to the aged speaker, as he told again the old story of simply piety and plain virtue, would have been a fit subject for the pencil of the Quaker artist, Benjamin West.

The season of the year was eminently suited for such a visit, for the frosts of October had already clad the poplars and maples in their mantles of yellow and purple, and thrown over the woods their many-colored robes of transient beauty, and if his feet were tempted to stroll along the paths which in olden times had been witnesses of his botanic excursions, his eyes were again gladdened at the sight of purple aster, blue gentian, and other plants which had been the objects of his study fifty years before. The fields with their well-known Flora, the skies with familiar cloud-forms, no doubt awakened in his heart many an emotion of mute

rapture, but it was in the home of his father that the sight of old-remembered objects awakened the deepest feelings. Amidst such surroundings, where every object opened a volume of recollections, and the hall of memory was lighted with the recollections of childhood's innocence, there stood before him, as of old, father, mother, sister, brother; once again he drank from the fountains of his youth, and with renewed sense and revived faculty he again gazed upon vanished faces, and heard familiar voices. As the old man beheld these visions with which kind nature is often wont to irradiate the closing act of dissolving life, he fell asleep, and was visited by two messengers; one, that of Death, who having touched his heart gently and painlessly, gave it rest, and hasted away; the other, that of Peace, who, having placed upon his brow a chaplet of the white flowers of purity, remains by his side forever.

**CASES FROM THE OPHTHALMIC CLINIC, HELD AT
AT THE COOPER MEDICAL COLLEGE.**

Reported by MR. J. W. GUNN. Assistant.

A large group of cases coming to the clinic are afflicted with phlyctenular conjunctivitis and cornitis. A majority of these are strumous, and require constitutional as well as local remedies. Some are very amenable to treatment; others defy a cure, getting better, but relapsing at short intervals. Two or three obstinately chronic cases have blepharophimosis, and I imagine canthoplasty would remove the pressure of the lids upon the ball, and tend to prevent recurrence of phlyctenulæ. As before stated, many are amenable to proper treatment. Astringents and caustics are to be avoided; while the eyes are irritable, and patient complains of photophobia, atropine must be diligently used. When symptoms of irritation are allayed, mild irritants, as insufflations of hydrarg. chlor. mitis may be used, or ung. hydrarg. oxflav (gr. ii to vaseline $\bar{5}$ i) applied to the ball by means of systematic massage.

Three sisters, aged from 17 to 21, came to the clinic, all similarly affected, and all gave a similar history: eyes began to trouble them when children; ocular conjunctiva injected most marked around the cornea, limbus thickened and encroaching up-

on cornea to considerable extent; no pain, and no interference with sight; symptoms remittent, worse in hot weather; eyeballs large and prominent. Diagnosis of hypertrophic ocular conjunctivitis, in two cases, combined with other affections of the eye. These cases are rare, and very obstinate to treat.

An interesting case of parenchymatous keratitis in a boy of 15 years, came to us at inception of disease, and we had the opportunity of seeing it in all its stages. First, the cloudiness of the cornea, from a slight haziness to a dense opacity; no loss of tissue; soon fine rows of vessels began to march towards center of cornea, becoming more and more numerous; then the vessels began to recede, getting fewer and fewer, till finally but a slight nebula remained, and last time the boy came, about four or five months from the commencement of the disease, his eye was almost as good as ever. The treatment was atropine, and later *mig. hydrarg., ox. flav.* and massage, and also constitutional treatment.

A little French girl presented evidence of syphilis, or, more properly, some constitutional taint. She was small for her age, and possessed of the so-called Hutchinson's teeth; Eyes had troubled her since birth, and when she came to the clinic she could not see small objects lying upon the floor. Subcutaneous injections of strychnia were made twice a week, and she was given potassium iodide. After a few days she made some improvement, but after two weeks' treatment failed to return. The diagnosis of atrophy of the optic nerves was made with the ophthalmoscope; the discs were very white, and the retinal blood-vessels very small.

In two cases of amblyopia, amounting to almost amaurosis, brought about by excessive use of alcohol and tobacco, hypodermic injections of strychnia were given, and the constant current was applied to the eyes and forehead, and the use of stimulants enjoined. One of the men who came regularly and gave up the use of the pipe and bottle, soon regained his sight fully. The other patient, who probably enjoyed his "weed and toddy" better than electricity, soon ceased to come, though he had improved under treatment. From the benefit derived from this mode of treatment, in several cases of incipient atrophy of the optic nerve, I think that if a patient could have the injections and electricity three or four times a week, the progress of the disease could in many cases be checked.

A rare case lately came under notice. A female patient, 30

years of age, subject to epileptic attacks since she was 14 years years old. At that age she was exposed to heat of the sun, after a protracted bath, and upon lying down had her first attack. Attacks have gradually become more frequent. Four years ago noticed disturbance of vision. Examination showed homonymous hemiopia, the left visual field being absent in both eyes.

Three cases of detachment of the retina, following blunt traumatism; in two there were opacities in the vitreous; the other case was uncomplicated, and was produced by a champagne cork flying against the eye. Rest was advised, and prognosis made decidedly unfavorable.

One case of specific iritis is worthy of note, on account of the rapid progress to recovery under treatment. Patient, a girl of 15, had given birth to a still-born child, and shortly afterwards began to experience pain in left eye, and photophobia. She presented herself for treatment a fortnight after the trouble began. The eye was painful; upper lid swollen; conjunctival hyperaemia and pericorneal injection; cornea slightly dull; anterior chamber normal; iris a dirty-green color; pupil irregular, small and immovable; pupillary field dull; vision $\frac{10}{50}$. Energetic applications of atropine were made to the eye, and inunctions of mercury ordered. In ten days improvement was very marked, only one adhesion of iris remaining, and inflammatory symptoms had subsided. Potassium iodide was then given, and patient, three weeks after undergoing treatment, was apparently well. She was advised to continue the constitutional treatment.

In nearly all cases of iritis we are enabled to elicit a history of syphilis.

The following is important as showing the value of the ophthalmoscope:

An Englishman, aged 68, began to lose eyesight five years ago; consulted several physicians, who were unable to make out the existing condition, but all agreed they could do nothing for him. His sight rapidly failed him, and on examination, when he came to the clinic for advice, was unable to detect presence of a strong light within two feet of him. Conjunctival vessels injected, and tortuous. Pupils dilated and would not react to light, but on convergence reaction was evident. Tension increased; grayish green reflex emanated from interior of eye.

On examining by ophthalmoscope retinal arteries were seen faintly pulsating; veins large and tortuous; total excavation of

optic disc, surrounding which was a ring of atrophic choroid. Vessels were seen in the bottom of the excavation, and again where they spread out in the retina, so they appeared interrupted or broken. Diagnosis, simple, chronic, absolute glaucoma. Of course, at this late day nothing was to be done. The proper treatment in the incipient stage would have been a large iridectomy. The result in this case, as in most others of a non-inflammatory type of glaucoma, would probably have been nil, but as it gives the patient a meager hope for restoration of sight, it should never be neglected.

The importance of recognizing the disease early, is evident in order to properly meet the indications. And one can only be absolutely sure of the disease after an ophthalmoscopic examination.

It is curious to hear patients describe the subjective noises they experience in dry catarrh of the middle ear. Roaring like the sea, singing of tea-kettles, buzzing of saws, humming of bees, hammering of boilers, puffing, rattling, ringing like bells, like waterfalls, artillery, murmuring like a sea-shell, singing, etc. Sometimes the noises are unilateral, usually bilateral; in some cases intermittent, in most, however, constant.

Noises are often more disagreeable to the patient than deafness, and those who have dry catarrh often seek relief from the incessant sounds, saying they do not mind the deafness, if you can only rid them of the noise.

These cases offer a very unfavorable prognosis; the most that can usually be done is to stay the further progress of the disease by frequent direct catheterization for a few weeks, then intermit a short time, and resume as before. In many instances no benefit is afforded. The conductive apparatus appears to be at fault; probably ankylosis of the ossicles of hearing, and atrophic changes of the soft parts of the middle ear. The drumhead often appears normal, sometimes thin, or opaque, or drawn inwards. One Eustachian tube always permeable.

Perforations of the drum head, as seen at clinic, are usually the result of purulent otitis. In one case where a blow had been received on the ear, the result was an extensive clean-cut rupture and effusion of blood into the external ear-duct. Three perforations occurred from diving, either by direct rupture or from water penetrating the ear through the Eustachian tube, and setting up a purulent inflammation. Observed one case of a boy

with a double perforation of one ear-drum—rim of drum and the segment between perforations quite normal; rather a unique case.

Good success has attended the use of boric acid powder, in purulent catarrh of the middle ear. First cleanse the ear thoroughly with pledgets of cotton, or a warm solution of boric acid; then blow a little powder into the ear and fill the ear-duct full of it, tamping it in; cover with cotton, and renew as often as the cotton shows signs of discharge. This acts as an antiseptic, excludes air and germs, and acts mechanically as a support, and diminishes congestion. For small polypi and vegetations, absolute alcohol may be poured into the ear; this will frequently cause a shrinkage of the granulations.

There were two cases of myringitis, caused by pouring substances into the ear. One of these had dry catarrh of the middle ear, and poured the renowned St. Jacob's Oil in the ear! The other, hearing the diagnosis of catarrh, gave the ear a dose of Sandford's Catarrh Remedy! Both of these may be good in their place, but the place is evidently not in the ear.

CHILDREN IN LOS ANGELES.

By WALTER LINDLEY, M.D.,

Physician to the Los Angeles County Hospital, and Physician to the Los Angeles Orphans' Home.

A short time since, at the request of the editor of the Los Angeles *Daily Times*, I prepared a brief article, in regard to the mortality of children, for Eastern circulation, and in collating the statistics I was surprised to find the death-rate among children so small. From the vital statistics, which have been faithfully kept by the various health officers, I prepared the following table, showing the number of deaths in Los Angeles during the last seven years, from diphtheria, scarlet fever, and cholera infantum:

| | 1878 | 1879 | 1880 | 1881 | 1882 | 1883 | 1884 | Tot. |
|-----------------------|------|------|------|------|------|------|------|------|
| Cholera Infantum..... | 2 | 0 | 2 | 4 | 5 | 7 | 1 | 22 |
| Scarlet Fever..... | 0 | 1 | 0 | 2 | 0 | 2 | 2 | 7 |
| Diphtheria..... | 19 | 5 | 2 | 4 | 4 | 12 | 8 | 54 |
| Total..... | 21 | 6 | 4 | 10 | 9 | 21 | 11 | 83 |

The last school census reports 7,460 children under 17 years of

age in Los Angeles. In other words, the combined death rate from the three principal diseases of childhood has been during the last seven years less than one per month. It is true the population of Los Angeles has increased, but a glance at the table will show that the death-rate has not increased. The reasons for this light mortality among children in Los Angeles are: 1. The diurnal breeze from the ocean, which constantly purifies the atmosphere; 2. The constant ripening of fruits—oranges and lemons in the winter; apricots, nectarines, peaches, and berries in the spring; apples, pears and grapes during the summer and autumn, and strawberries all the year round; 3. Every variety of vegetables fresh each month in the year; 4. The great number of clear days which, in the language of my friend, Dr. J. P. Widney, “renders possible an out-door life almost every day of the year.”

XANTHELASMA.

By W. S. THORNE, M. D., San Jose.

This somewhat rare affection of the skin, was first described by Monsieur Rayer of Paris, under the name of *Plaques Jaunâtres des paupières*. Willian, and after him, Addison and Gull describe this affection under the nomenclature of Vitiligo. Most writers ascribe to it an apparent relationship to some liver affection, or to diabetes. In four autopsies of xanthoinic patients reported by Murchison, Moxon, Fogge and Pye Smith, hepatic disease was found in all: I have recently had the opportunity of observing for two years or more a patient suffering with this unpleasant deformity, in whom no trace of hepatic or any other disease is manifest. The patient, a female, is 38 years of age. The spots began upon both superior lids seven years ago simultaneously, as small yellow maculæ. They now involve nearly the entire surface of the lids. There are a few detached patches upon the lower lids, and at the outer canthus of each eye. The spots are elevated, slightly tuberculated and in color that of a clean, new chamois skin (Naples Yellow). There is no unusual sensation in them, save an occasional itching; their area is slowly increasing. The minute anatomy of this morbid growth reveals hypertrophy of the connective tissue with localized fatty deposits. The connective tissue corpuscles are greatly increased

and are of a yellow color. As my patient is extremely fair and the skin otherwise free from maculæ of any kind it would seem that the affection of the lids is fairly attributable to perverted local nutrition, and not to hepatic derangement. It is perhaps due to that peculiar habit of body wherein the method of *forming* and *nourishing* tissues is faulty, the only visible evidence in this patient of *Struma*.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, DEC. 16, 1884.

The meeting having been called to order by the President, the following members responded to the roll-call: Drs. Jewell, Baldwin, Plummer, Long, Whitwell, Kenyon, DeWitt, Hart, Hirschfelder, Barkan, Abrams, Dennis, Thayer, Cachot, Chipman, Perry, Kerr, Frisbie, Weber, Arnold, Lonigo, Wanzer, Dorr, Mulligan, Guzman, Willcox, Simpson.

The minutes of the former meeting having been read and approved, the following gentlemen were proposed for membership: Dr. A. P. Whittell, graduate of University of California, 1873; proposed by Drs. Whitwell and Kerr. Dr. Basil Norris, U.S.A., graduate of University of Maryland, 1849; proposed by Drs. Plummer and Kerr. The names were referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of Dr. Willcox, and the Society, by a unanimous ballot, elected him to membership.

Dr. Abrams read a communication upon "Chlorosis," with special reference to the pathology of the disease as shown in some specimens demonstrated by him to the Society. The patient had been a girl, aged 26, who never menstruated, but who had hysterical symptoms, with hyper-emesis every month, and occasional hæmatemesis.

The body, and especially the mammæ, were poorly developed, her skin was pale, there was slight oedema of the lower extremities, and abundance of subcutaneous fat.

In the thoracic cavity were pleuritic adhesions, with cicatrices and calcareous deposit in the parenchyma of the apex of the right lung.

The heart weighed $5\frac{1}{2}$ ounces, was of small size, with thin, attenuated walls and fatty changes in the myocardium. The pulmonary artery and aorta were of small calibre, with attenuated walls. The uterus was almost infantile.

Virchow has attributed Chlorosis to his hypoplasia of the circulatory and generative organs, and the balance of scientific opinion is in his favor. The peculiar greenish palor of the skin is not an absolute diagnostic of Chlorosis, for we have Chlorosis Rubra, in which the complexion is florid from dilatation of the subcutaneous facial vessels, and Chlorotic girls will often blush very easily from a hyperæsthetic condition of the excito-motor nerves.

Other two theories have been advanced. One attributing the disease to a neurosis, and the other tracing it to deficiency of hæmoglobine in the red corpuscles; but both of these are rather consequences than causes of the disease.

In criticising the case before us we need not be surprised at the absence of menstruation, for menstrual irregularities are so frequent in this disease that earlier physicians regarded them as its cause.

Neuralgic and gastralgic pains are very common in these cases, and the latter may be beneficially treated by placing the positive pole of a galvanic battery on the epigastrium and the negative on the spinal column. If no relief is obtained by this form of treatment, we may conjecture the presence of a gastric ulcer. In the existence of perverted appetites this disease resembles tropical Chlorosis, which is a form of anæmia, endemic to some countries.

There is no satisfactory evidence to prove that the phthisical manifestations in this case were induced by the Chlorosis.

Dr. Barkan read a paper on the therapeutic properties of the muriate of cocaine, with special reference to its anæsthetic influence upon the eye and nasal mucous membrane. Anæsthesia is produced by dropping a 2% or 4% aqueous solution of the alkaloid into the eye, and is complete within a few minutes. It produces loss of sensation and dilatation of the pupil, without paralysis of the muscle of accommodation. When applied to the nasal mucous membrane a contraction of the venous sinuses ensues, together with loss of sensation, as already seen in the conjuncture. It has also been found very useful in permitting painless operations in the larynx, and cervix uteri, while a hypodermic

injection into the part has made it possible to perform minor surgical operations, such as the opening of felons or removal of small subcutaneous tumors, without inflicting pain upon the patient.

The Doctor related several cases in which he had used it with the most gratifying results; these included operations for foreign bodies in the eye, cataract, excision of orbit and strabismus, and finally gave the Society a demonstration of its effects.

Dr. Whitwell moved that any visitors to the Society should be asked to relate their experience in the use of the drug. In compliance with a request from the chair, Dr. Whittell stated that in the treatment of a case of severe coryza he had applied three drops of a 5% solution of cocaine to the nasal mucous membrane by means of an atomizer, with most encouraging results.

Dr. Southard, of Oakland, said that he could simply endorse the statements made by Dr. Barkan. He had observed the action of cocaine upon the pupil, and found that the results were inconstant, and as an illustration of this he related to the Society that a 2% solution had produced dilatation of his own pupil in five minutes, but that 15 drops of the same solution had failed to produce any similar effect upon the pupil of a patient. Another patient told him that she could not see to read for 24 hours after an application of cocaine—a circumstance that, with other symptoms, seemed to point to paralysis of the muscle of accommodation; whilst his own eye recovered in about two hours. There was one class of operations in which he deemed it especially valuable, namely, those upon the lachrymal sac. In an operation of this kind he introduced, by means of a hypodermic syringe, two drops of the solution into the puncture, waited for about ten minutes, and was then able to cut down to the lachrymal sac without the patient suffering any pain; but as he complained during the evacuation of the sac, three more drops of the solution were introduced, and then, after waiting eight minutes, he was able to pass a probe forcibly through the canal without producing any pain. This is a drug of especial value to ophthalmologists, as it allows them to operate slowly and with deliberation upon patients who object to general anæsthetics.

Dr. Kenyon asked whether any injurious effects were produced by excessive doses.

Dr. Barkan replied that as many as eighteen injections of six min. of a 4% solution had only produced slight toxic effects.

Dr. Arnold reported an operation on a child ten years of age,

for almost complete atresia narium, in which he had used a 4% solution of cocaine as an anæsthetic for the nasal mucous membrane. He had also tried it in coryza, but found that the improvement resulting from its use was very temporary; he deemed it of much greater value as an anæsthetic for the mucous membrane of the larynx.

Dr. Hirschfelder had used it in hyperæsthesia of the rectum, and by introducing a few drops of a 2% solution through a speculum had relieved his patient from pain for more than eight hours.

He said that Dr. Ott had experimented upon himself, and found that chewing ten grms. of coca, equivalent to one-third of a grain of cocaine, produced symptoms of intoxication, incoordination of movement, sleeplessness, and other feelings of distress, that lasted for two days.

Dr. Simpson then reported the changes suggested by the Committee on Revision of By-Laws and Fee Bill, and on the motion of Dr. Hart and Dr. Kenyon the report was accepted by the Society.

Dr. Simpson moved that the Secretary be instructed to print 250 copies of the By-Laws, as amended, with a complete list of the members. This motion was carried.

The Society then adjourned until the fourth Tuesday in December.

SAN FRANCISCO, Dec. 30, 1884.

The minutes of the former meeting having been read and approved, Drs. R. Beverly Cole and Geo. Chismore submitted as a candidate for membership the name of Jules Simon, M.D., University of California, 1875, and Faculty of Medicine, Paris, 1883, which was referred to the Committee on Admissions.

The Committee on Admissions reported favorably upon the credentials of Dr. A. P. Whittell, University of California, 1873, and also upon those of Dr. Basil Norris, University of Maryland, 1849, who were forthwith elected members of this Society by a favorable ballot.

The Secretary then reported that during the prolonged absence of Dr. Geo. Chismore, the name of the latter gentleman had been dropped from the roll of members, under the belief that he had permanently left the city; he therefore moved that the error be corrected, Dr. Chismore be reinstated, and his dues up to present date be remitted. This motion was seconded by Dr. Whitwell, and unanimously carried by the Society.

The Secretary also reported that owing to the sickness of Dr. Max Richter, he was not able to address the Society, as had been expected.

Dr. Whitwell, in re-opening the discussion on the muriate of cocaine, said that since last meeting he had been fortunate enough to see it used in an operation for cataract. A few drops of a 4% solution were dropped into the eye, and four minutes afterwards the operation was proceeded with. The patient said that there was no pain, although the cataract was a large one, and only removed with considerable difficulty and pressure. He did not feel even the iridectomy, although this generally produces some degree of suffering.

Dr. Chismore, having seen it used in operations upon the eye, thought that it might be used upon all mucous membranes, and, prompted by this idea, he applied a 4% solution to some prolapsed hemorrhoids, but did not succeed in producing any anæsthetic effect. It next occurred to him that the sensibility might only be retained in the deeper tissues; but the slightest touch of the mucous membrane, insufficient to draw blood, was felt by the patient.

A similar want of success was met with in a case of adherent prepuce, to which a 4% solution was applied, thoroughly and repeatedly. It had been suggested that these failures were due to the drug being of American preparation; nevertheless, the same solution readily affected the eye.

Dr. Lonigo said that he had used this drug in a case of acute sciatica, where the patient was so lame that he could hardly walk. He first applied the interrupted current, and then injected hypodermically ten drops of a 2% solution of cocaine directly over the nerve, with the result that the pain disappeared in less than ten minutes. It is an open question whether the result was due to the current or the drug. Next day the patient experienced some numbness of the limb, but no pain, and at the end of six days he was completely cured.

Dr. Simpson had no experience with the drug, as he was now too far advanced in life to conduct clinical experiments, and was therefore contented to avail himself of the experience of others in dealing with such matters as that now before the Society. In his opinion it took from two to five years to establish the therapeutic or clinical value of any new remedy. Thus we had seen chloral hydrate highly esteemed as an anodyne, and its claims in

this respect advanced above those of opium, until, after years of clinical observation, it had been definitely placed in the class of hypnotics. Similarly, sulphuric ether and other agents, such as rhigolene, were loudly vaunted as local anæsthetics; but have now been almost rejected, as they retard the healing process. Cocaine appeared better suited to the domain of the ophthalmologist than to the wide sphere of the general practitioner. It was a mistake for the general practitioner, especially the younger men, to run after new remedies to the exclusion of old ones, until the therapeutic value of the former had been fully determined by professional pharmacologists and skilled clinical observers. We were very much surprised when an old remedy failed to produce its usual effects, but when a new one does exactly the same thing as the first, we declare it in public and vaunt it to the skies. The next few years will determine the place of cocaine among our therapeutic agents, and then it will be a more reliable and satisfactory remedy in the hands of the medical man.

Dr. Long, in reply to a question from Dr. LeFevre relative to the value of cocaine in dentistry, said that the "Dental Cosmos" stated the results from its use in dental surgery to be very discouraging.

Dr. Morse asked whether it was not possible for the Society to open a Reading Room, where members might receive some benefit from its library.

Dr. Simpson said that this was the only way in which the Society could be made a success. The expense, including janitor's salary, would not be more than \$50 or \$75 per month. There were now \$3,000 in the bank, and no better use than the one now suggested could be made of this money. He advised that the experiment be made for one year, and if it failed we could return to our present condition. We might also ascertain if members would not be willing to pay a dollar per month extra; or we might draw \$100 per month for a year.

Dr. Whitwell also spoke in favor of the scheme, and moved that a committee should be appointed to look at rooms and discover how far the scheme was practicable.

The motion was seconded by Dr. Chismore.

Before putting the motion the President stated that the expense would be very great, as we must have a room where the Society could meet, and advised that the matter be delayed for a fuller meeting.

The motion was carried, and the following committee appointed: Drs. Whitwell, Simpson, and Morse.

The Society then adjourned.

San Francisco Medical Benevolent Society.

The San Francisco Medical Benevolent Society held its annual meeting at 317 Powell Street, on December 22nd, 1884, Dr. Geo. H. Powers in the chair.

The following officers were elected for the ensuing year: Dr. I. Rivas, President; Dr. A. M. Wilder, Secretary; Dr. L. Pawlicki, Treasurer.

It was voted to dispense with the customary annual dinner.

A very handsome gift of valuable books were received from Dr. A. F. Sawyer, for the Library of the Society, and the thanks of the Society were voted to the donor.

Dr. Powers then read a paper on the use of hydrochlorate of cocaine, which was a report of cases and operations in which he and Dr. Wilder had availed themselves of the local anæsthetic properties of the drug. In the first three cases a single drop of a 2% solution was found sufficient to relieve the photophobia that prevented examination of the eye for foreign body and corneal ulcerations respectively. In the fourth, it was used to facilitate further treatment in a case of chronic disease of the middle ear, accompanied by exquisite sensitiveness. The fifth case was one of double glaucoma, where, from instillations of the same solution at intervals of about one minute, it produced such complete anæsthesia of the conjunctiva and sclero that the speculum, fixation forceps and sclero-corneal incisions were borne without complaint. The grasping of the iris produced considerable pain, but there were no endeavors to close the lids or move the globe, so that fixation of the latter was unnecessary. The sixth was one of convergent strabismus, in which after the application of cocaine the conjunctiva and tendon were divided without producing pain. Before cutting the tendon a drop of the solution was put into the wound in the conjunctiva.

The seventh case was one of senile mature cataract, where the introduction of one drop of the solution into the anterior chamber of the corneal section allowed a painless iridectomy to be

performed, and the operation completed without any suffering on the part of the patient.

The particular merits of this drug are that it produces anæsthesia without depriving the operator of the patient's assistance, and is unaccompanied by the loss of time and sickness at stomach consequent upon the inhalation of chloroform or ether.

Dr. Chismore having a 4% solution of the drug, illustrated its effects by an experiment on the eye of one of the members; anæsthesia was produced, followed by dilatation of the pupil, without loss of accommodation.

Licentiates of the California State Board of Examiners.

At the regular meeting of the Board of Examiners held Dec. 16, 1884, the following physicians, having complied with the law and the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

Edward Aiken, M.D., Los Angeles; Toronto University, Canada, June 15, 1866.

Winslow Anderson, M.D., San Francisco; Med. Dept. Univ. California, Cal., Nov. 11, 1884.

C. C. Bailey, M.D., San Jacinto; Med. Dept. Western Reserve Univ., O. Mar. 14, 1882.

B. H. Baumeister, M.D., San Francisco; Med. Dept. Univ. California, Cal., Nov. 10, 1882.

Wm. M. S. Beede, M.D., San Francisco; Med. Dept. Univ. California, Cal., Nov. 11, 1884.

Jasper Blackwell, M.D., San Jose; College of Physicians and Surgeons of Joplin, Mo., Mar. 9, 1882.

Frank E. Buck, M.D., Mayfield; Med. Dept. Western Reserve Univ., O. Mar. 5, 1879.

Charles W. Card, M.D., San Gabriel; Cooper Med. Col., Cal., Nov. 1, 1884.

William D. Clark, M.D., San Francisco; Med. Dept. Univ. California, Cal., Nov. 11, 1884.

Benjamin D. Collins, M.D., San Bernardino; Med. Dept. Univ. of New York City, N. Y. Mar. 8, 1881; Med. Dept. Univ. of Buffalo, N. Y. Feb. 25, 1880.

Thomas E. Connolly, M.D., Vallejo; Med. Dept. Univ. California, Cal., Nov. 11, 1884.

Arnold A. D'Ancona, M.D., San Francisco; Med. Dept. Univ. California, Cal., Nov. 11, 1884.

John G. Day, M.D., San Francisco; Med. Dept. Univ. California, Cal., Nov. 11, 1884.

- Xaver Dodel, M.D., San Francisco ; University of Ludovici, Bavaria, Feb. 18, 1882.
- Henry W. Dodge, M.D., San Francisco ; Med. Dept. Univ. of California, Cal., Nov. 11, 1884.
- William C. Eidemiller, M.D., Germantown ; Med. Dept. Univ. City of New York, N. Y. Mar. 11, 1884 ; Testimonials from Univ. of Giessen, Germany, Sept. — 1874.
- Charles M. Errsight, M.D., San Francisco ; Med. Dept. Univ. of California, Cal., Nov. 11, 1884.
- S. G. Forrester, M.D., San Diego ; Missouri Med. Col., Mo., Mar. 4, 1875.
- J. McCormick Frace, M.D., Rio Vista ; Med. Dept. Univ. of Pennsylvania, Penn., Mar. 12, 1877.
- Frank H. Gates, M.D., San Francisco ; Med. Dept. Univ. of California, Cal., Nov. 11, 1884.
- Francis D. Gilbert, M.D., San Francisco ; the Col. of Phys. and Surg. of Lower Canada, Feb. 15, 1847 ; Royal Col. of Surgeons, England, May, 29, 1841.
- Malinda Goldson, M.D., Oakland ; Med. Dept. Willamette Univ., Oreg. Apr. 21, 1884.
- Isaac W. Hazlett, M.D., San Bernardino ; Jefferson Med. Col., Penn., Mar. 12, 1879.
- Joseph W. Healy, M.D., San Francisco ; Cooper Med. Col., Cal., Nov. 1, 1884.
- J. L. Howell, M.D., Tulare ; Med. Dept. Univ. of Louisville, Ky., Mar. 1, 1877.
- Naomi E. Hoy, M.D., San Francisco ; Cooper Med. Col., Cal., Nov. 1, 1884.
- Peter A. Kearney, M.D., San Francisco ; Cooper Med. Col., Cal., Nov. 1, 1884.
- William F Keating, M.D., Oakland ; Bellevue Hosp. Med. Col., N. Y. Feb. 21, 1876 ; Licentiate Royal Col. of Physicians, Edinburgh, Scot. — 1876.
- Abraham L. Lengfeld, M.D., San Francisco ; Med. Dept. Univ. of Pacific, Cal., Nov. 7, 1871 ; Cooper Med. Col., Cal., Nov. 4, 1882.
- Robert Mackintosh, M.D., San Francisco ; Univ. of St. Andrews, Scot., Aug. 7, 1838 ; Royal Col. of Surgeons, Ed., Scot., Mar. 5, 1839.
- Juan W. McCoy, M.D., San Francisco ; Med. Dept. Univ. of California, Cal., Nov. 11, 1884.
- John McMahon, M.D., San Francisco ; Jefferson Med. Col., Penn., Mar. 12, 1881.
- Henry L. Muentner, M.D., Stockton ; Med. Dept. Univ. of California, Cal., Nov. 10, 1882 ; Jefferson Med. Col., Penn., Mar. 29, 1884.
- Francis J. Nelson, M.D., Santa Barbara ; the Southern Med. Col., Ga., Mar. 1, 1884.
- Alexander C. Orr, M.D., Los Angeles ; Central Col. of Phys. and Surg. Ind., Mar. 1, 1884.
- Thomas P. Patterson, M.D., Visalia ; Med. Dept. Univ. of California, Cal., Nov. 10, 1882.

- J. Graves Priestley, M.D., Lockford; Missouri Med. Col., Mo., Mar. 4, 1880.
- E. J. Prothrow, M.D., Hydesville; Missouri Med. Col., Mo., Mar. 5, 1879.
- Clarence E. Reed, M.D., Placerville; Med. Dept. Univ. of California, Cal., Nov. 13, 1883.
- Jahiel S. Riley, M.D., Port Costa; Med. Dept. Univ. of California, Cal., Nov. 13, 1883.
- Albert L. Scholl, M.D., San Francisco; Med. Dept. Univ. of California, Cal., Nov. 11, 1884.
- Eleonora S. Sherman, M.D., San Francisco; Med. Dept. Univ. of California, Cal., Nov. 11, 1884.
- William G. Smith, M.D., San Francisco; the Col. of Phys. and Surg. of New York, N. Y. Sept. 30, 1884.
- Absalom B. Stuart, M.D., Santa Rosa; Berkshire Med. Col. Mass., Nov. 24, 1856; Bellevue Hospital Med. Col., N. Y., Mar. 1, 1866.
- F. P. Troxell, M.D., Colton; Med. Dept. Univ. of Pennsylvania, Penn., July 3, 1865.
- Leander Van Orden, Jr., M.D., San Francisco; Med. Col. of the Pacific, Cal., Oct. 20, 1880.
- C. W. Weaver, M.D., Healdsburg; Med. Col. of Ohio, O., Feb. 28, 1879.

On the evening of Jan. 3rd, 1885, a special meeting was held, at which the following were granted:

- Jos. U. Hall, M.D., New Almaden; Jefferson Med. Col., Penn., Mar.—1859.
- James F. T. Jenkins, M.D., Riverside; Med. Dept. Univ. of Louisville, Ky., Feb. 28, 1878; University Bishops Col., Canada, Apr. 16, 1879; Col. of Phys. and Surg., Quebec, Canada, May 16, 1879.
- Herman Partsch, M.D., San Francisco; Med. Dept. Univ. of California, Cal., Nov. 11, 1884.
- John M. Pirtle, M.D., Fulton Wells; Kentucky School of Medicine, Ky., Mar. 1, 1852.
- Marshall F. Price, M.D., Colton; Chicago Med. Col., Ill., Mar. 16, 1875.
- James W. Priestley, M.D., Clements; Missouri Med. Col., Mo., Mar. 6, 1883.
- Francis A. Seymour, M.D., Los Angeles; Kentucky School of Medicine, Ky., June 17, 1864; Med. Dept. Univ. of Louisville, Ky., Feb. 8, 1867.
- Ransom C. Sivan, M.D., Santa Maria; Med. Dept. Univ. of Buffalo, N. Y., Feb. 24, 1869.

At the regular monthly meeting of the Board, held Jan. 7th. 1885, a duplicate certificate was granted to

- Jacob Regensburger, M.D., San Francisco; Testimonials from University of Merzburg, Ger., Nov. 20, 1845; Testimonials from University of Munich, Ger., Aug. 1, 1850.

And on Jan. 14th., 1885, at a special meeting of the Board, the following certificates were granted:

H. C. Hastings, M.D., Valley Centre; Chicago Med. Col., Ill., Mar. 12, 1872.

James H. Tebbetts, M.D., Middletown; Med. Dept. Dartmouth Col., N. H. Nov. 15, 1880.

William A. Weldon, M.D., Los Angeles; Med. Dept. Boudoin Col., Me., July 6, 1884.

R. H. PLUMMER,
Secretary.

Clinic of the Month.

SURGICAL NOTES.

Suturing of Cut Nerves and Tendons.

Dr. Læbker of Greiswald reports the following interesting operation: A man was struck on the arm with a porcelain pitcher, and the soft parts on the volar side of arm three inches above the wrist joint was cut through. The wound healed, but the man's hand remained paralyzed as well as partially insensible. He was anæsthetized and the scar which had been left from the wound, was excised. It was found that the palmaris longus, flexor sublimis digitorum, flexor profundus digitorum, and policis longus, with the median and ulnar nerves and ulnar artery had been severed. Both peripheral and central ends were greatly retracted and grown together in a solid mass of cicatricial tissue. After two hours dissection they were all separated, but it was found impossible to approximate them, so that it was decided to remove a portion of both⁴ bones of the forearm. On account of the weak condition of the patient, it was postponed until the following day. The wound was kept open, covered with an antiseptic dressing. A piece of bone measuring five c. m. was removed from each bone, and the cut tendons and nerves united. At the end of 4 or 5 weeks the wound was healed. Massage and electricity soon served to bring about active motion in both hand and fingers, but as the resected bones were still movable, the arm was put up in a fixed apparatus, where it remained for 17 days; at the end of which time perfect union had taken place. The fingers can now be flexed to a right-angle, the interosseous spaces in the hand are filled out again, with the exception of the first.

Sensibility is not perfect, but the patient can localize well, with closed eyes, in the region supplied by the ulnar nerve.

Dr. GLUCK reports to the Medical Society of Berlin two cases in which he had perfectly restored the function of the hand, after sloughing of the flexor tendons. One of the cases was a man, 76 years of age. He interposes a band of braided catgut threads between the cut ends. The catgut is not immediately absorbed, but sets up an inflammatory action with the result that the catgut is gradually substituted by a band of new connective tissue, which acts as a tendon.—*Centralblatt für Chirurgie, No. 50, 1884.*

Growths in the Bladder.

KUESTER submits to the same society an interesting article on new growths of the bladder and their treatment. In 8,233 patients, he has come across 11 tumors of the bladder. A proportion of one patient in 750. Carcinoma is rare, and affects men more frequently than women. There are 118 cases of primary carcinoma reported, 88 men and 30 women; it thus occurs three times oftener in men than women.

Papillomas are generally multiple in men, solitary in women, and in the latter, may grow to a very great size. The principal symptom is the occasional passage of bright red blood, normal urine being passed in the intervals. Pain with carcinoma primarily, with other tumors only, when a catarrh has developed itself. Papillary tumors are recognized by the occasional appearance of fragments in the urine. Pedunculated tumors sometimes act as valves to the internal opening of urethra, preventing the passage of urine. Kuester has seen one case of a tumor growing between the openings of the ureters, blocking them up and causing death by uræmia. There are three methods of examination. 1. Bimanual palpation, one hand in vagina or rectum, the other over the symphysis pubis. 2. Instruments: an ordinary catheter is of no use whatever; better is a catheter with a large opening on its convex surface with which it is always possible to remove a fragment of the growth. 3. Exploration with the finger; in the female after rapid dilatation of the urethra, in the male after incision of the pars membranacea urethræ. Operations for cure are kolpocystotomy, after Simon, in women; in men *sectio alta* is always preferable.—*Berliner Klinische Wochenschrift, 51, 1884.*

In the same journal Langenbuch commences an article on section of the gall-bladder for stone. J. L. Petit made the first operation in 1743, after him Morand and Blocks report cases. Richter and Thudichum advised it and Sims did it in 1878. Since then it has been done by Kocher, Keen, Lawson Tait and others. Tait has operated thirteen times, ten times with immediate good result. Langenbuch has done it four times. His operation differs from the others in that he makes a liberal abdominal incision and removes the entire gall-bladder, doing away with the fistula and the risk of leaving a highly diseased bladder behind, and the risk of tearing away of the gall-bladder from its attachment to the abdominal walls by the movements of the liver in respiration, vomiting, sneezing, coughing, etc.

Operative Treatment of Malignant Affections of the Rectum.

At the recent meeting of the International Medical Congress, held at Copenhagen, Prof. Esmarch read a paper on the above subject, in which he laid down the following propositions:— 1, In the treatment of cancer of the rectum, the same principles hold good as in the treatment of cancer of other parts of the body. 2, Extirpation should be as early and as complete as possible. 3, The more the surrounding healthy parts are removed with the diseased, the greater reason there is for hoping that recurrence will not take place at all, or will be long delayed. 4, Experience teaches that early and thorough removal may be followed by permanent recovery. 5, As, in cancer of the rectum, the lymphatic glands are secondarily affected at a comparatively late period, operation may be followed by permanent success when the disease has lasted some time, and has become extensive. 6, The prognosis in regard to the return of the disease is good, in proportion to the slow development of the new growth, the delay and the appearance of distressing symptoms, and the completeness of the operation. 7, The simple cylinder-celled cancers, which proceed from the more superficial layers of the mucous membrane, generally give a better prognosis than the forms with small alveoli and the gelatinous forms, which more rapidly enter the deep submucous layers. The greater the disposition to the deposition of gelatinous degeneration, the more malignant the case. 8, Extirpation of a cancerous nodule from the wall of the rectum is sufficient only when the nodule is well circumscribed and movable, and when only a part of the wall of the rectum or anus is implicated. 9, In all other cases, amputa-

tion of the rectum beyond the points of growth is indicated. 10, The entire rectum, as far as the sigmoid flexure, may be removed with good results. 11, The principal dangers of the operation are—*a*, hemorrhages; *b*, acute, purulent and ichorous inflammation of the connective tissue. 12, These dangers are to be combatted (*a*) by very careful hemostasis during the operation; (*b*) by very careful primary disinfection and provision for the free escape of the secretions of the wound (by drainage and the avoidance of cavities). 13, In amputation of the rectum high up, opening of the peritoneum is unavoidable, but peritonitis does not generally follow if the opening be at once closed by suture under strict antiseptic precautions. Drainage of the peritoneal cavity is indicated only in exceptional cases. 14, The progress of operative skill has essentially diminished the dangers of the operation, the death-rate having fallen from 50 to 20 per cent., and even lower. 15, The functional disturbance following amputation of the rectum is slight in comparison with the distress caused by the cancer. Incontinence of fæces is not complete, especially when the external sphincter has not been removed. Systematic cleanliness and the use of a suitable apparatus for closure commonly relieve the difficulty. 16, Resection of a portion of the intestinal tube in its whole circumference, followed by suture of the two ends of the intestine, is not to be recommended, since the lower portion of the intestine generally sloughs. It is better to preserve the external sphincter and fasten the end of the amputated rectum to the lower edge of the wound. 17, Extirpation of cancer of the rectum is, in all cases, rendered easier by dividing the posterior wall of the gut as far as the coccyx. Removal of the coccyx is generally unnecessary.—*Canada Medical and Surgical Journal*.

Excision of Cæcum.

Mr. Walter Whitehead recently excised, at the Manchester Infirmary, the cæcum and colon of a man suffering from a carcinomatous growth encircling a large extent of the bowel. After excision, the ileum was attached to the skin below and the transverse colon in the skin above, in the primary incision made through the abdominal wall, just outside the rectus. The operation was very tedious and difficult, occupying nearly two hours. It was conducted on Listerian principles. Four days after the operation the patient was free from any untoward symptom.—*Brit. Med. Jour.*, Nov. 8, 1884.

Tracheotomy for Croup.

Dr. Cocks (*Archives of Pediatrics*, Vol. I, No. 1) of New York relates his experience of 15 cases, which were all performed at the patients' houses, with no more skilled nursing than was afforded by patients' relatives. Eight of the 15 cases recovered. Two died on the first day, two on the second, two on the third, and one on the fourth day. Dr. Cocks or his assistant remained with the patient from three to six hours after the operation, and during that time instructed the amateur nurse in the conduct of the case. The room temperature was maintained at 80° F., a warm sponge was kept over the tube, and steam spray was kept constantly going. The nurse was directed to take out the inner tube every 15 minutes, soak it in hot water, and pass a muslin rag through it. A feather is used to clear the outer tube. After the third day the tube was taken out twice daily and cleaned. The tube was finally removed, on the sixth to the tenth day.—*Lond. Med. Record*, Aug., '84.

THERAPEUTIC NOTES.

Permanganate of Potassium.

PROFESSOR ROBERT BARTHLOW, in the *Medical News*, points out most distinctly the cause of often reported failures in the use of permanganate of potassium. The therapeutic effects produced by its use are due to the presence of active oxygen or ozone, and as the salt is most readily decomposed, yielding up this constituent to any organic matter which it comes in contact with, great care is necessary in its administration.

Bartholow recommends that it be given dissolved in pure water, or in the form of tablets, as manufactured by Wyeth of Philadelphia; as they contain no excipient they are "entirely free from objection."

In reply to the statement that the salt must be decomposed by the organic matter in the stomach and its mucous membrane, he relies on its rapid diffusibility and the undoubted results obtained. "A small dose repeated at short intervals, say a grain or two every half hour until four or six grains have been taken, is preferable to the exhibition of this amount at one dose. Given in this way, and commencing the administration of the remedy in about four hours after meals, the diffusion of the salt into the

blood is probably secured." The solution should be well diluted, and if the pellets are used sufficient water should be taken after them.

In amenorrhœa it has been proved to be almost a specific. "Given in doses of two to five grains three times a day, for several days preceding the menstrual period this agent is quite sure to start the flow." The cases best suited for its administration are those characterized by torpor, anæmia, or deficient activity of the menstrual apparatus; it is contra-indicated where acute congestion or a general sthenic condition exists. From personal observation the Professor recommends it as a most effective remedy for obesity, its curative action being manifested without any aid from change of diet or exercise.

Tincture of Citro-chloride of Iron.

("Tasteless Tincture of Iron.") Solution of chloride of iron (U. S. Ph.), 4 fluid ounces; citric acid, 2,100 grains; bicarbonate of sodium, 2,270 grains; alcohol, 4 fluid ounces; water, enough to make 16 ounces. Dissolve the citric acid in four (4) fluid ounces of water, heat the solution to the boiling point, and gradually add the bicarbonate of sodium. When effervescence has ceased, add the solution of chloride of iron, and cool the mixture. Then add enough water to make it measure (12) fluid ounces, and finally add the alcohol.

Each fluid dram contains about 7.5 grains of dry ferric chloride.

Note. This tincture is approximately of the same strength, in metallic iron, as the officinal *tinctura ferri chloridi*.

Treatment of Cholera.

THE following treatment was generally adopted in the Paris hospitals during the late cholera epidemic: The patient was rubbed with pure alcohol or camphorated spirits; bichloride of mercury, bismuth and paregoric being administered internally according to the gravity of the disease. Morphia hypodermically, with or without atropia, was also employed to relieve the cramps and retching. Professor HAYEM recommends transfusion, using a solution of sodium chloride five grammes, sodium sulphate ten grammes, distilled water one litre, to be injected into the vein at a temperature of 38° C., and repeated according to circumstances. The average quantity injected was from 2 to 2½ litres for each patient, the operation being performed slowly in from twelve to fifteen minutes, by means of an "aspirating syringe." The Professor states that out of 200 cases under his

care, 100 not operated on died, 75 succumbed in spite of operation, and 25 recovered.—*Paris Letter, Journal Am. Med. Assn.*

Use of Picric Acid.

WITH regard to errors arising in the use of picric acid as a test for sugar in the urine, Dr. JOHNSTONE, the author of the method, writes: "All normal urines contain a material which has the same reducing influence both on picric acid with potash and on alkaline copper solution as glucose. If this material were glucose the proportion indicated by the picric acid color test would vary from 0.5 to 0.7 grain per ounce. The ammoniacupric method indicates as much as from 0.7 to 0.9 per ounce, the excess being due to the reducing influence of uric acid on the oxide of copper, while picric acid is not influenced by uric acid.

A definite proportion of Fehling's solution is decomposed and decolorized by boiling with normal urine, but the small amount of the resulting sub-oxide of copper, being kept in solution by some of the ammoniacal salts of the urine, is not precipitated. The ordinary ready qualitative method of testing urine for sugar by the picric acid process is to add to about one drachm of urine an equal volume of a saturated solution of picric acid and half a drachm of liquor potassa. If after boiling the mixture for about thirty seconds any red color is visible through the column of liquid in the test-tube, the urine contains less than two grains of glucose per ounce; or two grains to the ounce of aqueous solution of glucose heated in the same manner results in so dark a liquid that no red color is transmitted. In estimating the color which results from boiling undiluted urine with picric acid and potash, any turbidity resulting from precipitated phosphates should be removed by subsidence or by filtration. As I have elsewhere stated, so constant is the shade of color when normal urine is boiled with picric acid and potash in the proportions above mentioned, that it might be used as an approximately accurate quarter grain to the ounce standard for making a quantitative analysis of a saccharine liquid.

Iron-alum in Post Partum Hemorrhage.

MR. R. RICHARDSON, in a paper read before the British Medical Association, recommends iron-alum in the treatment of post partum hemorrhage. He uses the drug in the form of crystals tied up in a piece of muslin, leaving the ends of the string out-

side the vulva, so as to be readily removed the next day. The advantages claimed for this method are that it does not require any apparatus for its use, and that it is sufficient to place and leave the bag of crystals in the vagina close to the os uteri.

PAPAIN—is superior to pepsin in that its digestive power is not impaired by Alkalies, alcohol, acids, neutral solutions or pancreatine. Hence papain continues its action in the small intestine and in all other conditions where pepsin fails. It does not injure the gastric mucous membrane. It dissolves the mucus and effectually cleans the stomach and it also increases the appetite. Dose gr. I to IVp in the form of a powder, alone or mixed with sodii bicarbonas. Papain in a 4 to 12% watery solution, or “mixed with water until it appears as a muddy liquid,” and combined with salicylic acid if desired, will dissolve the membranes of croup and diphtheria, in from 6 to 24 hours when applied hourly or five times daily. As the solution freely propagates bacteria, it is advised to prepare it fresh every 3 hours. Prof. Rossback of Jena and Prof. Finkler of Bonn. *Therapeutic Gazette*, 1884, p. 380.—*Pharmaceutical Record*, 1884, p. 495.

PANCREATINE being itself digested by an acid solution of pepsin, can be of no value when administered separately. Its only utility exists in the digestion of albumen, starch and fats, before their administration as food. In the artificial digestion of milk, the amount of pancreatine usually advised is sufficient, but not that (gr. 15) of bicarbonate of sodium, since in the digestion of cream, fatty acids are liberated which soon form the required acid solution ($\frac{1}{2}$ part per 1000) which immediately checks peptonization. By occasionally testing the milk with litmus paper, this acid change can be readily detected, and gr. 5 of bicarbonate of soda added to restore alkalinity. Thus 30 or 60 grains, according to the amount of cream present, will be required to complete the peptonization of a pint of milk.—*A. Tsheppe in Pharmaceutical Record*, 1884, p. 492.

WASHING OUT.—Lavage of the Stomach is advised when there is Gastric dilatation, (which may be due to pyloric obstruction—chronic gastritis, or functional causes, as in hysteria,) or erosion of the mucous membrane. In ulcer rotundum, indicated by large hæmatemeses, lavations are not advised. Solutions employed; bicarbonate of sodium ʒ to the quart.—Sulphate of sodium ʒ 1½ p to the quart, where constipation exists.—

Resorcini 1% sol., but from danger of poisonous absorption, inferior to 1% sol., of boric acid, as a disinfectant.—Belloc's charcoal powder, two to four tablespoonfuls to the quart in putrid dyspepsia.—Liq. ferri chloridi zij p. to a quart of water in hemorrhage.—In cases of severe gastric pains, subnitrate of bismuth two tablespoonfuls to a pint of water, or sat. aqueous solution of chloroform (1 to 200) two tablespoonfuls to one quart of water, or sat. watery sol. of bisulphide of carbon (1 to 1000) one-third and two-thirds of pure water. In all cases the solutions should not be cold, and should be introduced once daily when the stomach is empty.—*Dr. Dujardin-Beaumetz, in Therapeutic Gazette of Dec. 15, 1884.*

FERRI SUBCARBONAS FOR ULCER OF THE LEG—applied freely and covered with a potato starch poultice, which is retained by a roller bandage. Healing is complete in from 10 to 40 days. *Dr. Vidal in L'Union Medical, Oct. 12, 1884.*

Editorial.

Electric Incandescent Lamps.

There is to a limited extent already in use by the medical profession an electric incandescence lamp for illuminating the cavities of the nose, pharynx, and larynx. The illumination thus obtained is far greater than by any system of reflectors in use, as the source of light may be placed very close to the part under examination, and the lamp itself be screened from the observer's eyes by means of a metallic hood; or the lamp itself may be placed beyond the part under examination, as with the velum palati, which will then be rendered transparent.

The lamp itself is identical with the Edison carbon filament lamp, but in miniature; consisting of a carbon filament within a small globe from which the air has been withdrawn by means of the mercury air pump. The apparatus resembles very much the ordinary galvanic cautery, in general appearance, as well as arrangement of the conductors, binding screws, switch, etc. The handle itself is a rheostat composed of a spiral coil of German-silver wire, over which a metallic ring may be moved, in contact with the spirals, thus adding to or decreasing the number of turns of the wire in the main circuit, and causing an increase or de-

crease of the resistance, and a corresponding diminution or increase of the light. The current is supplied by four Bunsen's cells, or any other battery of equal electro-motive force, which with care after each using, may be made to last a long time.

These lamps may be made to illuminate every cavity of the human body which is accessible. They may be dropped through the œsophagus into the stomach, or introduced into the rectum to the sygmoid flexure, etc. As the lamps are now made, it is impossible to keep them illuminated for more than a few seconds, as the heat radiated from the carbon film is considerable and penetrates the glass globe. The glass globe might readily be made double and a film of water be made to circulate between the two plates, by means of a proper appliance and a weak hydrostatic pressure. The water jacket would carry off all the heat and enable prolonged illumination to be made without danger, and at the same time not diminish in the least the power of the light, nor increase by more than one-eighth of an inch the diameter of the globe.

Electric lamps for internal illumination were first made by M. Frouvé, of Paris, who has displayed remarkable ingenuity in the application of electricity to many uses. It is noteworthy, in connection with the fact that M. Frouvé began life as a watchmaker in Switzerland, that almost all of his electrical apparatus is on a diminutive scale. What others do upon a large scale, he reproduces in miniature. The incandescence lamp was invented for the purpose of lighting the interior of buildings. M. Frouvé applies it to lighting the cavities of the human body, to illuminating imitation jewels upon the head-dresses of stage actresses, etc., etc. His pocket induction coil apparatus are marvels of compactness and efficiency, and at one time small scarf-pins of various devices, such as birds with fluttering wings, skulls with moveable jaws, etc., etc., all operated at will by a small battery carried in the vest pocket, and made by the same indefatigable inventor, were considered a great curiosity.

Clinical Thermometers.

Good work continues to be done by Dr. Waldo at the Yale Observatory, in respect to testing the accuracy of clinical meteorological and chemical thermometers. Some years ago the physician had no convenient means of finding out the accuracy of his thermometers, and, no doubt many a remarkable temperature could be explained by the great inaccuracy of the instruments used.

By continual observation it has been found that from the unstable

nature of glass, that the bulb of the thermometer constantly varies. This variation for the first year and a half or two years, may be very considerable; so much so, as to render the instrument utterly unreliable. Dr. Waldo says that there is reason to believe that the majority of thermometers are put into the market when less than six months old. Thermometers intended for accurate measurement should be stored at least for a year and a half before they are graduated, and at present the observatory receives from makers, tubes numbered and named, and places them under seal, and then issues with each a certificate stating how long a time has elapsed between the sealing and the certifying. A physician who doubts the accuracy of his thermometer can send it, properly packed, to Dr. Waldo, who will return it within three days of its receipt, with certificate, stating the variations from the scientific standard, at intervals of five degrees, from 90° to 110°. The sender takes the risk of breakage, but as this amounts to only one in one thousand in course of manipulation, and one in about four hundred in transportation, when ordinary care is used in the packing, he is not liable to suffer very heavy loss.

The easiest way, however, is to buy only such instruments as have sufficient age and but slight variation from the standard, as shown by the certificate. By refusing to buy any thermometers which had not been properly tested, the unreliable instruments will soon be driven out of the market.

Dr. Henry Gibbons, Sr.

The following resolutions of respect to the memory of Henry Gibbons, Sr., M.D., of San Francisco, Cal., were adopted by the San Joaquin County Medical Society :

WHEREAS, The death is announced of one who has long reflected honor on the profession on the Pacific Coast—DR. HENRY GIBBONS,

Resolved: That it is eminently proper and correct for us at the termination of so notable a public career, to place on record our appreciation of his work and skill and our sense of loss. For not only in his removal have the large majority of physicians of this State been bereft of a valued counselor and friend, but we feel that in view of the eminence he had attained as an author and teacher, American medicine has been deprived of one of its brightest examples.

Resolved: That his rare intellectual and social endowments, his unswerving fidelity to the course of medical education, his zeal in matters pertaining to public health, and his invaluable contributions to medical literature, there has been taken from us, one who might truly be pronounced the representative of all that is best and noblest in our calling and whose memory and influence will long linger amongst us.

R. K. REID, M. D.
J. L. SARGENT, M. D. } Committee.
W. H. MAVS, M. D.

Notices of Books, Pamphlets, Etc.

DISEASES OF THE HEART AND THORACIC AORTA. By BYRON BRAMWELL, M.D., F.R.C.P.E., Lecturer on the Principles and Practice of Medicine Extra-Academical School of Medicine, Edinburgh; Pathologist to the Royal Infirmary, Edinburgh, etc. Three hundred and seventeen illustrations. Pp. 783. New York: Appleton & Co. 1884.

We can recommend this volume to our readers as the most complete modern treatise on cardiac diseases in the English language. It is the work of one who as a pathologist, clinical teacher and student, has availed himself of every opportunity to become thoroughly conversant with the subject he discusses. The first part of the book is taken up with a brief resumé of the most important anatomical and physiological facts relating to the heart, many of which, such as the recent researches into its muscular and nervous mechanism, must be new to most readers. The numerous, and in many cases really good illustrations which increase the value of the work, afford evidence that the morbid anatomy of the organ has received due attention. The only tedious part of the whole volume are those pages which are devoted to a description of the various forms and uses of the sphygmograph, a fault that might have been avoided by referring the reader, who is desirous of information regarding the mechanism of these instruments, to some standard work on physiology, where he would find them discussed in a more exhaustive and satisfactory manner.

In treating of the diseases of the heart, Dr. Bramwell uses the phrase "Pathological Physiology" to describe the results of morbid anatomical lesions upon other parts of the organ and the system generally. This is unfortunate, as it increases the medical nomenclature unnecessarily. Pathology, according to all the standard authorities, is defined as the "physiology of diseases," whereas the term "morbid anatomy" is used to denote the mere anatomical lesion. We are a little surprised at this profusion of terms on the part of the author, as the school from which he graduated, and in which he is now a teacher, does not regard the two as synonymous, but issues its cards for the "Class of Pathology and Morbid Anatomy."

These are not matters of paramount importance, but they are

faults which should not be found in a work that in all other respects must occupy a foremost place among the authoritative treatises upon diseases of the heart and circulatory system.

The systematic, exhaustive, and yet concise manner in which the symptoms and treatment of the different diseases are discussed, leave little more to be desired on the part of the reader. Speaking of the valvular lesions, Dr. Bramwell advocates non-medicinal treatment so long as compensation is complete. Although he regards digitalis as the remedy *par excellence*, he calls attention to the great benefits that may be derived from the administration of arsenic, especially where there is anæmia, or where hypertrophy is giving place to dilatation, and compensation is beginning to fail. On account of its cumulative properties, digitalis should be given more frequently and in small quantities, until the tonic effects upon the organ begin to show themselves, when the dose may be diminished, or the administration of the drug stopped for short intervals.

The chapter on thoracic aneurisms is one of the best in the book, and the remarks upon the diagnosis and treatment of this disease are so good that we cannot help regretting their brevity.

We can confidently recommend this volume to our brothers in the profession.

THE TREATMENT OF UTERINE DISPLACEMENTS. By W. EGGERT, M.D. Second edition, illustrated. Chicago: Duncan Brothers.

The author advises that prolapse of the uterus can be best and also most successfully treated by drugs given in the 200th potency. The dose of the drug selected is given once a day, and the author advises that plenty of time be given for it to act.

SURGICAL DELUSIONS AND FOLLIES. By JOHN B. ROBERTS, A.M., M.D. Philadelphia: P. Blackiston, Son & Co. 1884. San Francisco: A. L. Bancroft & Co.

This is an excellent address, which Dr. Roberts delivered before the Medical Society of the State of Pennsylvania. It contains also a number of articles which have appeared in the *Polytechnic* from time to time.

PYURIA, OR PUS IN THE URINE, AND ITS TREATMENT. Comprising the Diagnosis of Acute and Chronic Urethritis, Prostatitis, Cystitis, and Pyelitis, with special reference to their Local Treatment. By DR. ROBERT ULTMANN, Professor of Genito-Urinary Diseases in the Vienna Polyclinic. Translated (by permission) by DR. WALTER B. PLATT, F.R.C.S. New York: D. Appleton & Co. 1884.

This is a little book of one hundred pages, and as it contains

much valuable information its size should be a great recommendation to those physicians who think that they have no time for reading. It contains a number of clinical lectures delivered by Prof. Ultzmann at Vienna, during the winter semester of 1882-83. Pyuria is first considered, and then the diseases which may cause pyuria. Much stress is laid upon local treatment, and the author's success should cause the reader to give his methods the attention which in consequence they deserve.

A MANUAL OF BANDAGING. Adapted for self-instruction. By C. HENRI LEONARD, A.M., M.D. With one hundred and thirty-nine engravings. Second Edition, Revised and Enlarged. Published by the Illustrated Medical Journal Co., Detroit. Price \$1.50, post paid.

This is by far the best work extant upon the subject upon which it treats. The cuts are admirable, and their use and mode of application can be seen at a glance; but for the student a very clear explanation is given of every cut. The first edition was good, and was favorably received by the profession, but it has been very considerably enlarged and thoroughly revised. We believe that even the surgeon who is most skillful in bandaging might from the perusal of this book gain some very useful hints.

A TEXT-BOOK OF HYGIENE. A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By GEORGE H. ROHE, M.D., Professor of Hygiene, College of Physicians and Surgeons, Baltimore, etc. Baltimore: Thomas & Evans. 1885.

We wish that we had the space for a review of this interesting and valuable book upon Hygiene. It does not pretend to be an extensive work upon the subject, but it is full of useful knowledge, and reference is often made where the subject may be found more fully discussed. The book is dedicated to Dr. Henry I. Bowditch, whom the author truly calls the pioneer in the field of Preventive Medicine in America.

The author has succeeded in his aim of placing in the hands of the student a guide which contains the essential facts in regard to preserving the health. Some of the subjects contained in the table of contents are as follows: Air, Water, Soil, Removal of Sewage, Construction of Schools, etc., Baths, Clothing, Disposal of the Dead, Contagion and Infection, Quarantine, etc.

The author hopes that although there may not be much that is new, still that there is nothing in the work which is untrue.

ON OXYGEN AS A REMEDIAL AGENT. By SAMUEL L. WALLIAN, M.D.
Reprint from Medical Record.

A HANDBOOK OF DISEASES OF THE EYE AND THEIR TREATMENT. By H. R. SWANZY, A.M., M.B., and F.R.C.S.I.; Surgeon to the National Eye and Ear Infirmary, Dublin, etc., etc. With illustrations. Pp. 437. New York: D. Appleton & Co. San Francisco: A. L. Bancroft & Co.

For the practitioner who wishes to obtain that "dangerous thing," a "little knowledge," this work is well adapted. It gives very briefly the diagnosis and treatment of the diseases of the eye and its appendages. There is nothing particularly new contained in it, but would be a useful addition to a library not already containing a more elaborate work upon the same subject.

JEQUIRITY; ITS USES IN DISEASES OF THE SKIN. By JOHN V. SHOEMAKER, A.M., M.D. Extracted from the Transactions of the Medical Society of the State of Pennsylvania for 1884.

Messrs. Putnam's Sons announce that the Archives of Medicine will no longer be continued, but beg leave to call attention to the *Analectic*, which is published monthly, and to the quarterly journals, viz: "*Journal of Nervous and Mental Disease*," "*Archives of Ophthalmology*," and "*Archives of Otology*."

G. P. Putnam's Sons will publish early in the new year a monograph on the new anæsthetics, entitled, "*Cocaine and its Use in Ophthalmic and General Surgery*," by Dr. H. KNAPP; also, a treatise entitled "*Acue and its Treatment*," by Dr. L. B. BULKLEY; a practical treatise based on the study of over 1,500 cases of diseases of the sebaceous glands.

The following named gentlemen have been chosen officers of the International Medical Congress of 1887:

Dr. Austin Flint, Sr., of New York, President; Dr. Alfred Stille, of Philadelphia, Dr. Henry I. Bowditch, of Boston, and Dr. R. P. Howard, of Montreal, Canada, Vice-Presidents; Dr. John S. Billings, of the Army, Secretary General; Dr. J. M. Browne, of the Navy, Treasurer; and Dr. I. Minis Hays, of Philadelphia, Dr. A. Jacobi, of New York, Dr. Christopher Johnston, of Baltimore, and Dr. S. C. Busey, of Washington, members of the Executive Committee.

DR. WALTER LINDLEY was recently appointed county Physician of Los Angeles County. The County Hospital in the city of Los Angeles now contains seventy-five patients.

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REPORT OF FIVE CASES OF PELVIC ABSCESS.

By CLINTON CUSHING, M.D., Professor of Gynecology, Cooper Medical College.

During the past year there have come under my observation several cases of pelvic abscess, which seem to me worthy of being reported and discussed.

While I am not aware of any statistics that show the frequency of purulent collections in the cavity of the pelvis, I doubt not they occur oftener than professional men are aware. The reason for this opinion is that I have several times met gentlemen of experience in consultation, where the patient was suffering from a collection of pus in the region of the uterus, and where it was easily demonstrable, without it having attracted their attention.

While it is true that a fatal result is not common in pelvic abscess, it is also true that life is always in jeopardy while a purulent collection exists in any part of the body, unless an outlet is provided either by the surgeon or by natural processes; and it is true, moreover, that the larger the pus cavity and the longer the pus remains in the body, the more disastrous the effect upon the constitution of the patient, the greater the injury to the adjacent tissues and organs, and the greater the time requisite to restore the patient to health.

CASE 1.—April 6th, 1884, I was asked to meet Dr. William Bolton, of Martinez, regarding a young lady 18 years of age, who was suffering from some form of pelvic disease. The previous history was that for several months she had been suffering from pain in the region of the ovaries, for which local treatment in San Francisco had been instituted.

Supervening upon this came an attack of pelvic inflammation, attended with high fever, great pain in pelvis, the formation of a pelvic tumor, disturbance of the function of the bladder and rectum, rigors, profuse perspiration and emaciation.

Upon examination the pelvic cavity was found nearly filled with a dense mass, involving the uterus and surrounding structures, and rendering every organ in the pelvis immovable. The examination was attended with much suffering. On the right of the cervix was a spot where indistinct fluctuation was detected. A diagnosis was made of pelvic abscess following cellulitis, and an operation advised.

After being etherized she was placed upon a table before a window, and turned upon her side, and a Sims speculum introduced. With the assistance of Dr. Bolton, the following procedure was carried out: An aspirator needle was passed through the roof of the vagina an inch to the right of the cervix, to the depth of two inches. Upon exhausting the receiver it was at once partially filled with a purulent fluid containing curd-like fragments.

The receiver was now detached, leaving the needle in situ. With a pair of long-handled, sharp-pointed scissors the dense vaginal tissue was cut through by the side of the needle. Now, seizing the cervix with a small vulsellum, so as to steady it, I passed my dilating trocar through the opening made by the scissors along the side of the needle, into the pus cavity. Then by closing the handles, the blades of the trocar were widely separated, the connective tissue torn and stretched, and a free and patulous opening made, sufficiently large to admit the finger, and this accomplished without risk to the uterine artery or to the ureter.

The needle was then withdrawn and the pus cavity thoroughly washed out with warm carbolyzed water, by means of a Davidson's syringe. There was slight venous hemorrhage, but not sufficient to cause concern. A self-retaining drainage-tube was introduced into the opening.

She was put to bed and marked improvement took place in her condition for several weeks, the discharge growing steadily less, when bad symptoms again supervened. Chills, fever, and high temperature again occurred, followed by profuse discharge of pus from the vagina.

June 8th, just two months from the date of the operation, I was again asked to see her. I found her general condition somewhat worse than when I first saw her. The infiltration about the uterus was still extensive, and the mass in the region of the left ovary seemed increased in size. She was again etherized and put upon the table, and a careful examination made.

Upon introducing a uterine sound into the opening made two months before, it could be carried across the pelvis, behind the uterus, so that the end of the instrument could be felt through the abdominal wall in the region of the left ovary.

It was now evident that a second abscess had formed in the left broad ligament, and had emptied into the cavity drained by the original opening. The drainage of the second abscess was so imperfect that it would partially refill and then discharge, this recurring at intervals of three or four days.

With the concurrence of Dr. Bolton it was decided to drain the second abscess directly into the vagina. The same plan, substantially, was pursued as in the first case, the aspirator and the dilating trocar being used as before; but instead of the drainage-tube used in the original operation, by means of a long curved dressing forceps I was enabled to pass a piece of rubber tubing entirely through, behind the uterus, from one opening to the other, and then fastening the ends together, I was thus able guarantee perfect drainage. Upon passing my finger into the original pus cavity I found the wall covered with soft granular masses, which broke down easily under the finger-nail.

Believing that in this condition I should have great difficulty in getting a healthy surface, I painted the whole cavity over with Churchill's tincture of iodine. From this time onward the progress towards recovery was satisfactory, and I have learned recently that she has gained thirty pounds in weight, and spends a good portion of her time in the open air. Her physician writes me that there is still a slight discharge from the vagina, but without odor. There is no attempt at menstruation as yet; probably the ovaries were destroyed by the disease.

In this instance the condition was about as bad as it could well

be, and the patient hold on to life ; relief had to come soon if at all, and I believe that the interference saved the life. The possession of the dilating trocar gave me a confidence in undertaking this operation that I could never have had without it.

CASE 2.—In October last I went to the country near Stockton to meet some gentlemen in consultation regarding an abdominal tumor in an unmarried woman, aged 34. The previous history was, that there had existed for a year or more a small fibroid tumor growing from the anterior wall of the uterus. This, however, had caused but little uneasiness, and it was only about two months before I saw her that any serious symptoms occurred.

About two months previously she began to have severe pain in the region of the left ovary, attended with exacerbations of fever, and preceded by chills. The fever and chills were supposed to be due to malaria, this opinion being apparently confirmed by the control, at least partially, of the symptoms by full doses of quinine. She was at last for several weeks confined to her bed, with increasing suffering and weakness.

During this time there was an elastic growth or tumor, forming and gradually enlarging, in the region of the left ovary. The functions of the bladder and rectum were seriously interfered with, urination and defecation being attended with much pain. Upon examination the following facts were developed :

Patient almost moribund ; pulse scarcely perceptible ; could articulate only in a whisper ; skin bathed in a profuse perspiration ; emaciation of body marked ; temperature in vagina 104. An elastic tumor occupied the lower and left side of the abdominal cavity, as near as could be estimated the size of a child's head. The uterus was crowded downwards and backwards against the sacrum, and the roof of the vagina was fixed and unyielding. A diagnosis was made of pelvic abscess, and an operation advised, as soon as daylight would allow us to proceed. Before the morning came the woman was dead, and a post mortem examination, made within six hours afterwards, disclosed the following condition, the description of which, and the interesting pathological conditions found, furnish the reasons for the report of this case :

Immediately upon opening the abdomen in the middle line there was a discharge of over a half-gallon of very bad-smelling pus. After extending the incision to the umbilicus, and then transversely to the crest of the ilium, and after washing out the pus

cavity thoroughly with a large quantity of water, the walls of the abscess were clearly made out. The uterus was crowded downwards and backwards against the rectum and anterior wall of the sacrum, and firmly adherent in its abnormal position; the ovaries were also pushed backwards and enclosed in a mass of lymph, and their tissue so disorganized that to make them out was a matter of difficulty.

The bladder was contracted, and its expansion limited by a thick covering of organized lymph. The wall of the abscess was composed superiorly of the small intestines agglutinated together by adhesive lymph.

Just above the pubis and attached to the anterior wall of the abdomen, upon its peritoneal surface, was a dark-colored, sloughy-looking mass, which was supposed to be the remnants of the uterine fibroid, which had been destroyed by the severe peritoneal inflammation, a portion of which had remained adherent to the abdominal wall. Several similar but smaller fragments were found floating in the pus that escaped.

Judging from these conditions, as found post mortem, the case was clearly one of intra-peritoneal pelvic abscess, following a localized peritonitis, with walls so thick and dense as to prevent escape of the contents, and as a consequence, absorption of the poisonous fluids, sepsis and death.

CASE 3.—In the latter part of the summer of 1884 I was asked by Dr. Hund, of this city, to see one of his patients who was suffering from some form of pelvic disease. The woman, æt. about 25, had been losing an excessive amount of blood from the uterus for ten days, and was suffering from much pain in the pelvis, with a sense of fullness in the lower part of the abdomen, and a feeling of pressure upon the bladder and rectum. For several days before I saw her, she had rigors at intervals, followed by temperature of 104 and 105.

Dr. Hund had diagnosed pelvic hæmatocele and pelvic peritonitis. A digital examination discovered an elastic tumor in Douglas's *cul de sac*, a partial fixation of the uterus, and great tenderness of all the pelvic tissues. The diagnosis was a purulent collection in Douglas's pouch.

The woman, lying upon her side with the Sims speculum introduced, the aspirator needle was introduced, and several ounces of bad-smelling, grumous blood was withdrawn, confirming the diagnosis of hæmatocele; then the dilating trocar was intro-

duced, a free opening made, the sac washed out, and a self-retaining drainage-tube introduced, as in the first case read. The sac was washed out through the tube for a few days once daily, when the tube was removed, and the patient made an uninterrupted recovery, excepting a slight bleeding from the cavity, which was not severe enough to demand interference.

CASE 4.—In November, 1884, I was asked by Dr. Bayley, U.S.A., to see one of his patients who was in a critical condition. The lady, æt. about 34, was suddenly taken with a moderately free uterine hemorrhage, followed immediately by the most profound collapse. I found her pulseless, with the heart acting feebly and rapidly, sighing respiration, unable to speak, and the face as pale as a sheet; in short, the symptoms of shock, in the most marked degree.

Upon inquiry it was found that the uterine hemorrhage had not been sufficient to account for the grave symptoms. An examination per vaginam showed the uterus somewhat enlarged and less movable than it should be. The diagnosis was made of pelvic hæmatocele. Brandy and ice were given by the mouth, and suppositories of opium and belladonna given by the rectum to secure quiet. It was fully forty-eight hours before reaction was established, and the pulse did not return at the wrist for over a week. Considerable pain was developed in the pelvis, and the uterus became more immovable.

For two weeks the condition gradually improved, when the temperature began to rise, and at the end of three days had reached 105 in the evening. The conclusion was arrived at that probably the hæmatocele was breaking down, and pus was forming. An examination now showed a symmetrical tumor about the size of the uterus at the fourth month of gestation, occupying the position of the uterus.

By the bi-manual examination, the cervix and what appeared to be the fundus of the uterus, moved synchronously, and as the patient was supposed at the beginning of the sickness to be several months pregnant, it was thought that the pregnant uterus was pushed forward and upward by the hæmatocele, which could now be felt surrounding the uterus and filling Douglas's *cul de sac*. It was determined to aspirate the mass behind the uterus, when the temperature came down to 102, and in view of the supposed pregnancy it was deemed best to wait a few days and watch the result. On the twentieth day from the onset of the

attack, a profuse discharge of grumous, dark-colored and bad-smelling blood took place from the rectum, the supposed enlargement of the uterus disappeared, and at the end of another week convalescence was fully established. Within the past few days menstruation has appeared, showing that pregnancy did not exist.

CASE 5.—In December, 1884, I was requested to meet Dr. Bruner in consultation regarding a lady who had been suffering for many months from troubles peculiar to her sex. She was aged 45, and was suffering from intense pain in the region of the uterus and left ovary. There was a history of ovaritis and pelvic cellulitis, which had gradually become worse, and a week previously there had been a discharge of matter from the rectum. An examination showed that a hard mass occupied the space behind and to the left of the uterus, which was extremely tender to the touch. The uterus was pushed well forward and to the right, and was firmly fixed; obstinate constipation existed, and any attempt to obtain a movement of the bowels was attended with much suffering. The pulse was rapid and weak, and the temperature 103. Chills had occurred frequently for the preceding ten days. The case was diagnosed as one of pelvic abscess.

With the concurrence of Dr. Bruner the patient was placed upon a table and etherized, an aspirator needle introduced, and a few ounces of pus withdrawn from the mass behind the uterus. The dilating trocar was then used, as in the first case reported, and the drainage-tube introduced. The discharge had nearly ceased at the end of a week, when the tube was withdrawn. Convalescence was uninterrupted, the patient being now able to walk about her room with but little pain.

The report of these cases is made to illustrate some of the varying phases of purulent collections in the pelvis, as well as to call attention to the methods pursued in their treatment. In at least two of these cases the cause was clearly the formation of a pelvic hæmatocele; in the others the cause was pelvic peritonitis or cellulitis.

While we may have a purulent collection in the pelvis from the existence and the breaking down of tubercular deposits in the pelvic tissues, or from the occurrence of a purulent fluid in an ovarian cyst, or a collection of matter arising from disease of the vermiform appendix, or from disease of the lumbar vertebræ the pus gravitating into the pelvis, the large proportion of pelvic abscesses arise from attacks of pelvic peritonitis or cellulitis.

After pus has once formed, unless an outlet is secured, the amount of fluid gradually augments, the tissues are crowded in every direction to make room, and the system becomes poisoned by the absorption of septic matter.

The pus, if left to the efforts of nature, may escape through the anterior wall of the abdomen, usually in the region of the inguinal ring, rarely through the ischiatic notch upon the buttock, sometimes into the bladder, occasionally into the peritoneal cavity, quite frequently into the rectum, and often into the vagina. The opening into the peritoneal cavity is the most disastrous; the opening into the vagina the most favorable. If the outlet for the pus is too small, or the canal through which the matter escapes be too tortuous, in a certain proportion of cases the abscess is but partially emptied, the opening closes, the pus again accumulates, and the same or another opening is formed for the escape of the subsequent accumulation; especially is this likely to be the case where the opening is into the bladder or rectum.

When the failure to end in recovery is due to imperfect drainage, if the pus cavity can be found by an exploration with the aspirator needle through the roof of the vagina, a cure may be effected by making use of the dilating trocar and the self-retaining drainage-tube, as detailed in the foregoing cases.

The advantage of the dilating trocar, is that a free opening can be made through the roof of the vagina at any point, without risk of injuring the ureter or provoking serious hemorrhage, for the tissues are torn and stretched, and thus a patulous opening guaranteed; and by means of the self-retaining drainage-tube the pus cavity can be washed out when thought necessary, and the drainage made certain as long as desired.

It has been asked how long after the accumulation of pus takes place it should be evacuated, and also whether it is not better to leave it to nature's efforts, instead of resorting to operation.

If we are enabled to evacuate the pus without adding to the danger, I believe an outlet should be made as soon as the diagnosis can be verified by the use of the aspirator needle. We have nothing to lose, and much to gain by promptly opening an abscess here, precisely as we do in any other part of the body. There is less destruction of the adjacent tissues, less danger of blood-poisoning, less danger of rupture into the peritoneal cavity, and an outlet provided that will remain open until the abscess cavity heals.

Galvano-Puncture in the Treatment of Intrathoracic Aneurism, with Report of Cases.

Read before the San Francisco Medical Society by DR. C. M. RICHTER.

Galvano-puncture for the treatment of aneurisms was introduced into England by Benjamin Phillips, in 1829, as an improvement on Everard Home's idea of coagulating the blood of an aneurism by means of heated needles. It was principally carried out and perfected by Ciniselli since 1846. In his latest statistics he enumerates twenty-nine cases of intrathoracic aneurisms treated by this method, with the following result: Of the 29 cases, in eleven the relative improvement had lasted four years, 37, 33, 21, 17, 16, 7, 7.6, 4, and 1 months. In seven others it had lasted 28, 16, 12, 8, 6, 3, and 3 months, and still continued. In eleven there had been no improvement. In 1880, Petit published 114 cases of aortic aneurism treated by galvanism; however, 111 of these were treated with the interrupted current. Of 114 cases, 60 showed improvement, 38 died without apparent change, and the remaining 7 were doubtful in result. A perfect cure was reported in two only of these cases. The latest statistics are given by Richard Barwell in the "International Encyclopædia of Surgery," in 1883. He reports eight cases since 1877, four of which died under treatment, one was not improved two were benefited but not cured, and one was greatly benefited Chambers, in the "American Journal of Medical Sciences," 1883, gives 33.1% of death to ligation, and 12.9% to galvanism, in the treatment of aneurisms; this includes the bad success of Ciniselli.

Galvano-puncture is pursued by Ciniselli and his followers in this manner: The battery must have a goodly number of small elements, as Stohrer's or Foveaux batteries. There should be, as Barwell says, either several—from four to six—very thin needles arranged in a lash on a subdivided conducting cord, or one steel needle on a single or on both poles; in either case, the needles must be well insulated down to a short distance from the point.

Some galvanists prefer to insert the negative, some the positive, and some both poles. If but one pole is inserted the other ought to be applied to the skin, but not over the sac, by means of a wet sponge. Barwell, prefers to employ both poles. Robin in 1880, and Chambers in 1883, insisted that only the positive pole should be inserted.

Chambers experimented on an imitation aneurism, and came with Robin to the same conclusion, that no clot is formed by the negative needle, whilst that of the positive is solid, resistant and adherent. Both etherize the patient, insert several needles at the same seance, and let a strong galvanic current pass through them for from five to eight minutes per needle; they insist that the needle should be insulated, for instance, by collodion, and that about three centimeters of the polished steel of the needle should be exposed in the tumor.

I have used galvano-puncture so far three times in the treatment of aneurism; once in a case of intrathoracic aneurism, with the appearance of a perfect cure; once in a case of a traumatic diffused aneurism of the forearm, with the effect of forming a perfect coagulum, and yet not curing the aneurism; and the third time in an immense aneurism of the arch of the aorta, with apparent perfect cure of the aneurism but loss of the patient one month after the first operation. My mode of proceeding is as follows: I use a 20-cell Flemming battery, of Philadelphia, which in my estimation is superior to any other for this operation. I insert into the current a rheostat, by which the intensity of the current can be gradually raised or lowered, and always have a galvanometer on hand to be sure about the current. The needle which I use is of finely-polished steel, about nine centimeters long, mounted with a wooden head, which is of use in forcing the needle into the tumor. The size is No. 1, French scale; it is round in shape, with a very fine point—not spear-headed. It is nowhere insulated. The metal attachment of the cord of the positive pole I split sufficiently to receive and to hold the needle. The needle is disinfected in 10% carbolvaseline before using. The patient is not etherized, and may remain in a sitting posture during the operation. The one needle connected with the positive pole is inserted with a slow but strong rotatory movement, to the depth of from two to five centimeters, into that part of the tumor which seems to be least resistant to the touch; the cord is now connected to the battery, the sponge attached to the negative pole, and placed to the skin near the tumor. The current is then gradually increased from the first to the twentieth element inside of from one to two minutes. The current is now further increased by means of the rheostat until the patient complains of severe pain. This strength is maintained for eight minutes, when it is gradually reduced during about one

minute. I remove the needle with the same rotatory movement, and have a piece of plaster ready to cover the wound the moment the needle is withdrawn. I find it necessary to insert only one needle during one *seance*—at least if the first needle after removal shows sufficiently the effect of the current upon it. Some of my needles, as you see, have lost their exposed steel, and every one used looks black, rough and thin. During the operation I notice that the skin, where touched by the needle, becomes slightly escharotic, and the neighboring skin becomes red, as is that touched by the sponge.

Hemorrhage from the little wound is easily controlled by a few minutes' finger pressure. Small abscesses of the subcutaneous tissue followed several punctures, but healed readily. Invariably the pulsation of the tumor is greatly diminished after the first operation, and is felt to be more distant. The tumor becomes harder and is smaller according to measurement before and after operation. Barwell says that the next thing after galvano-puncture is that these apparently favorable signs nearly always disappear. He says, cynically, that "the clot, if any, which is formed by the galvanic current, is usually as evanescent as the will-o'-the-wisp;" but I join Chambers in saying that if the positive pole alone be introduced, the statistics shall be wonderful as regards cures.

My cases are as follows:

The first, Mr. C. H., was born in 1848; is a civil engineer; has never suffered from any sickness, syphilitic or otherwise; was building a railroad in the Sandwich Islands in the spring of 1882, when, after severe physical exertion in lifting heavy weights, he first in May of that year felt pain in his chest, got short of breath, was obliged to rest after exertion, coughed, but continued his work and surveying for a short time until he came to San Francisco, a few months later. Here he consulted several physicians, who called it nervous prostration, and one of them pneumonia. One physician sent him to Santa Cruz to recuperate and to go sea bathing. In September he returned to Honolulu, not improved, and there a physician told him—that is now a little more than two years ago—that he had an aneurism of the pulmonary artery. He prescribed iodide of potassa, of which the patient had to take twenty grains a day. In the meantime he had returned to San Francisco, where he continued this treatment until the end of February, 1883; however, not feeling in the least benefited. The pain in the chest had increased a great deal; in

fact, when he consulted me in March, '83, I then made the diagnosis of aneurism of the aorta ascendens, and advised perfect rest in a horizontal position for some months. He remained in bed until the end of May, and during these three months I made every other day hypodermic injections of Wyeth's fluid extract of ergot, "eight minims each," over the aneurism. After this he felt much relieved, so that he was able to attend to office work until the end of October.

On October 1st, I for the first time noticed the aneurism protrude outward in the second intercostal space, at the right side of the sternum. He then took iodide again, increasing the dose until it was an ounce a day, which quantity he took daily for more than a week without apparent discomfort or injury, and without any visible benefit. In fact, the pulsating tumor increased so rapidly that in a consultation, November 12th, 1883, with Drs. Lane and De Vecchi, the death of the patient was considered probable within of one or two months. Galvano-puncture was advised as the last resource, and the great danger attending this operation, according to our belief at the time, explained to the patient. Mr. H. and his wife assumed the responsibility of the operation, and so I made the first puncture November 14th, 1883, in the manner and with the result before described. December 2nd, I repeated the puncture; then again December 11th, January 11th, '84, February 9th, and finally May 11th. The first operation relieved the pain entirely, which has never since returned. The succeeding operations were made more from fear of danger than from real necessity. He was so much benefited that by the end of March he could again endure the hardships of surveying in the country without suffering any physical inconvenience whatever; and a few weeks ago he was actively engaged in an engineering scheme in a hydraulic mine in Calaveras county. The tumor is to-day about half the size it was before the operation, the pulsation is more distant, there is no difficulty in breathing while walking or moving about, he has gained about fifteen pounds, and appears to be in perfect health.

The second case was that of a robust, healthy porter in a wholesale house, a Mr. W., who by accident had pierced the forearm in its middle third with his penknife, November, 1883, and who had since had a pulsating tumor, which constantly increased in size, in the region of the wound. When consulted by him, Jan. 15th, '84, I found a diffused aneurism apparently belonging to the

middle third of the radial artery. I made the galvano-puncture on that day and repeated it January 22nd. Although the pulsation was greatly diminished, yet it continued, and therefore, on January 31st, the radical operation was performed. Esmarch's bandage was applied, the aneurism incised, and a firm clot, the size of a small orange, removed. The radial artery was found divided to the extent of half of its circumference and a third of an inch in length. Its coat was thickened and could be detached only with difficulty from the surrounding tissue and ligated. Thus the galvano-puncture formed a good clot, and equal in character to the one in the third case, which I shall presently describe; but the clot not being within the wall of an artery, the blood continued to flow, thus preventing a cure by galvano-puncture.

The third case is that of a man nearly 60 years old, who first consulted me July 15th, 1884. He knew that he had an aneurism of the aorta, and he had known it for six years; he knew that he must die from it, and he expected his end very soon. A very large tumor, as you will see in this specimen, was protruding above the sternum, and was still increasing almost daily. He was very emaciated, showing the effects of morphinism; had a weak, hoarse voice; could not lie down, but was obliged to sit day and night in such a position and with such appliances to his head and shoulders, that his head by its weight could not move half an inch downward lest he choked. Although the skin and the wall of the tumor appeared so thin, and at the same time the counter-pressure of the tumor so intense that the insertion of the needle seemed to imply certain rupture of the sac, still I performed the galvano-puncture with perfect safety and great success, July 23rd. The dimensions of the sac were 10-14 centimeters before the operation, and 9-12½ after the operation. Great relief was given; the patient could sleep now for four hours at a time, where before a half an hour's sleep had been a blessing. I repeated the puncture July 31st and August 14th. The patient, however, continued to grow weaker and weaker, and on August 22nd slowly died from exhaustion. The tumor on the day before his death measured only 8¾-10¼ centimeters. The autopsy had to be confined to the aneurism, and the result I now lay before the Society. The aorta ascendens is cut through just above the heart, and the aorta descendens just at its beginning. The manubrium sterni is in contact with the tumor, which

rises above it to the height of seven centimeters. The right clavicle is nude of the capsule and the *extremitas sternalis* is denuded of its cartilagenous surface. By separating the tumor from the inner part of the manubrium sterni, the upper half of which was adherent to it, the bone is found to be void of the periosteum and to be very much thinned.

The aorta itself is in an exquisite state of atheroma with ossifications—its lumen is of normal size throughout its ascending and descending portion. The lumina of the three large vessels of the arch are clear and intact. Into the lumen of the arch of the aorta protrudes to the extent of nearly two-thirds of its circumference and nearly opposite the *innominata*, a rather loose layer of fresh blood coagulum, which is, however, adherent to some extent to the inner surface of an apparently homogeneous hard mass. This hard mass can be entirely peeled out of a sac which proves to be the widened coat of the aorta. This aneurismal sac is found to be extremely thin, almost like tissue paper, at the front part of it, whilst, where it has been perforated by the needles the sac is thickened and hardened. The mass measures five centimeters from the front backwards and eight centimeters at its base. The contents of the sac consist of innumerable concentric layers of fibrin coagulations. Some of the layers have a darker color than others, but as a whole, it has a whitish appearance. It is hard to the touch. The trachea is cut through about half an inch below the larynx, and is there nine centimeters distant from the outer skin. Where cut, its diameter is one-half a centimeter, while an inch lower the diameter widens until it is three centimeters, and so remains down to the bifurcation. Thus with the most unfavorable circumstances; with the highest degree of atheroma; with the sac as thin as tissue paper, where the needles were inserted; with an aneurism of such dimensions; and all this on a decrepit individual—an entire cure of the aneurism—and a perfect solidification of the sac was obtained by electrolysis.

REPORT OF A CASE OF OVARIOTOMY.

Read before the Santa Clara County Medical Society, Nov. 6, 1883, by W. H. HAMMOND, M.D., San Jose, Cal.

Miss R., the subject of this paper, a single lady, aged 23 years, and a teacher by occupation, first consulted her physician about two months ago. At puberty she had all the symptoms of menstruation except the discharge. Examination revealed an imperforate hymen; this incised, gave vent to about a pint of retained menstrual fluids. After this she was quite well until the middle of the present year. About that time she noticed that her abdomen was increasing in size, but attributed it to an increase of adipose tissue.

She suffered no inconvenience at this time, except a dull pain when in a stooping posture. As the tumor increased in size the enlargement attracted the attention of her sister and some of her intimate friends, who prevailed upon her to seek medical advice. After a careful examination her physician diagnosed a tumor, which he believed to be ovarian. A few days later another physician confirmed the diagnosis.

The patient was informed of the character of her trouble, and that nothing but an operation for its removal would give permanent relief. After a consultation with Dr. J. H. Wythe, of San Francisco, the operation was decided upon, and was set for Oct. 15th. The preparatory treatment was begun a few days before the operation, and consisted in rest, warm baths, laxatives, fluid food, and a mixture of iron and quinia.

The last menstruation previous to the operation was four or five days later than usual, and during that time and until the flow began, the patient suffered considerable pain. For the last two weeks before the operation the patient suffered pain in the region of the tumor, and it was feared that adhesions had already begun.

At 10:40 A. M., on Monday, October 15th, everything being in readiness, the patient, cheerful and happy, was placed upon the table and the inhalation of ether begun. The pulse at this time was 100; temp. 99° F.

The operation began at 11 A. M. It was entirely antiseptic, including the spray, and was performed by Dr. J. H. Wythe, assisted by Dr. J. S. Potts, of this city, while the administration of the anæsthetic was entrusted to the writer.

An incision about four or five inches in length was made in the median line. Considerable subcutaneous and subperitoneal adipose tissue was present. The tumor, a multilocular cyst of the left ovary, quite as large as a man's head, was attached only by the left broad ligament of the uterus. The cyst was tapped in three separate places with a Spencer Wells trocar, and eleven pints of fluid removed. The pedicle was transfixed by a strong silk ligature in two places, and severed between them. The toilet of the peritoneum was made with the utmost care, and the stump dropped into the abdominal cavity.

The wound was closed by four deep silver-wire sutures and several superficial ones, a portion of the latter being of silk. By this time the patient had regained partial consciousness, and was placed in bed. The pulse at this time, 12:15 P. M., was 100, and of good quality. The operation proper, *i. e.*, from the first incision to the severing of the pedicle, occupied about thirty-five minutes, while an equal amount of time was consumed in making the toilet of the peritoneum, inserting the sutures and dressing the wound.

At 12:35 P. M., thirty drops of McMunn's elixir of opium were given, and crushed ice in small quantities allowed every fifteen minutes.

At 2 P. M. the pulse was 94, temperature 99° and twenty minutes later the urine was drawn, as the patient was not able to pass it voluntarily. I might here remark that for a week or more before the operation there had been irritability of the bladder, due no doubt to the presence of the tumor.

As it would become monotonous to give in detail the record of pulse and temperature, I shall condense by saying that during the first four days these were taken every two or three hours; that both pulse and temperature reached their maximum within twenty-four hours after the operation, being, pulse 138, temperature $102\frac{5}{8}^{\circ}$; that the pulse, during the first forty-eight hours following the operation, was entirely out of proportion to the temperature, and was no doubt due to shock. The bladder was relieved as often as necessary. McMunn's elixir of opium in thirty-drop doses was given every four hours at first, then every six hours, and on the 16th the administration of quinia, grs. iii. every three hours, was begun.

This was continued for twelve hours with very little variation in pulse or temperature, when it was discontinued on account of

the nausea it occasioned. The next day quinia was resumed, in hollow suppositories, per rectum. This was continued for twenty-four hours, without any perceptible benefit, and as it was an annoyance to the patient, it also was discontinued. No nourishment was taken until thirty-six hours after the operation, when the patient was allowed a little beef-tea. Tympanites showed itself within twelve hours after the operation, and continued to the close of the fourth day.

On Tuesday evening, thirty hours after the operation, the wound was first dressed. It looked well, union by *first intention* having established itself in the upper three-fourths of the incision, while in the lower one-fourth there was some suppuration. It was not dressed again till Thursday evening, forty-eight hours later, when the sutures were all removed. Nourishment was sparingly allowed until the evening of the 19th, after which the patient ate freely.

Rapid improvement now took place, and to-day, twenty-two days after the operation, the patient is up and able to walk about her room.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, JAN. 13, 1885.

The Society was called to order by the President. The minutes of the former meeting having been read and approved, the name of Benjamin Marshall, M.D., graduate of the College of Physicians and Surgeons, New York, 1852, was submitted for membership by Drs. Dorr and Kerr, and referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials and professional standing of Jules Simon, M.D., University of California, 1875, and Fac. Med., Paris, 1883, who was forthwith elected to membership.

The Secretary, in the absence of the Curator and Librarian, Dr. Kenyon, presented the bill for the medical journals subscribed for by the Society during 1885, which was referred to the Auditing Committee.

Dr. Max Richter then read a paper entitled "Galvano-Puncture in the Treatment of Intrathoracic Aneurisms."

[This paper is reported in another part of the Journal.]

In the discussion that followed, Dr. Whitwell said that he saw the first case referred to by Dr. Richter a year before the patient was taken sick, also at the operation, and lastly about three hours before coming to this meeting, when he appeared to be in a perfect state of health. He corroborated Dr. Richter's statement that the aneurismal swelling is now much smaller than before the operation. He considered it a remarkable operation, one that required considerable courage on the part of the patient and operator, and even on the part of the spectator; for it was no every-day occurrence to see a needle passed into the cavity of the heart. He also saw the third case, and from its nature was not surprised at the result.

At the request of some members of the Society Dr. Marshall exhibited a gynecological lounge which he had invented. When not in use it had the appearance of an ordinary lounge, but by simply raising each end it was converted into a substantial and firm full-sized surgical operating table. The advantages claimed for it by the inventor are (1) that it does away with the unsightly operating tables and iron chains which disfigure a doctor's office and are hardly a proper spectacle for young people requiring his services; (2) Its cheapness, the price being \$35 for a lounge of black walnut, finished in enameled leather.

The report of the Committee on a Medical Reading Room was then called for by the President.

Dr. Whitwell, chairman of the committee, reported that rooms large enough for the Society's meetings, museum and library, together with janitor's salary, would cost not less than \$100 per month. This amount could only be raised by increasing the dues to one dollar per month.

Dr. Simpson said that unless the Society could raise the sum mentioned by Dr. Whitwell, they need not think of having a Reading Room. He did not think that the Society would lose any members by raising the dues to one dollar per month, as they were some years ago. In addition to this, \$500 should be voted from the general fund for the purpose of furnishing the rooms and making them comfortable.

Dr. Soule hoped that we would remain at our present place of meeting, as the scheme at present under discussion was imprac-

licable. It would have been better if the book-case containing the journals had been in the room when we held our meetings, but a Reading Room would not be visited by half of our members.

Dr. Baldwin concurred with Dr. Soule, and did not approve of raising the dues, as it would be paying too dearly for any additional privileges that might accrue therefrom.

Dr. O. V. Thayer was surprised that in this Society, where there were so many physicians, there was no Medical Reading Room. He had no doubt that if the young men would qualify themselves for their profession they would rise in it, and have no difficulty in meeting the little extra expense necessary for the promotion of this scheme. In his opinion the busy practitioner gained more useful information from a perusal of the standard journals than from reading text books. The profession in this town was far away behind the times in not having a Reading Room and Library for its members.

Dr. Chipman said that the late Dr. Gibbons had always cherished the hope that we might some day have a Medical Reading Room and Library, but had advocated our arriving at the goal by gradually building the Society up. In his own opinion the members would feel that in a scheme like the present one they were not getting a fair equivalent for their money; for even our present Library is hardly ever visited. The rich members of the Society can afford to purchase journals for themselves, and the poorer ones cannot afford to leave their business to frequent a Reading Room.

Dr. Arnold did not think that the younger men would object to the proposed increase in the dues. This whole discussion resolved itself into the question, "Is it desirable to have a Reading Room, with the advantage of seeing many journals at a much cheaper rate than that at which each member could purchase them for himself?"

Dr. Perry opposed any increase in the dues, on the grounds that the additional six dollars per annum paid by each member would buy several additional journals for each member's private library. It would be better to have a room containing the books, to which each member might have a key, and the expense of a janitor's salary would thus be dispensed with.

Dr. Morse submitted an amendment to Section 16 of the By-Laws, by striking out one half-dollar and inserting one dollar.

Dr. Whitwell: I know several gentlemen who would contribute books to the library.

Dr. Soule would be glad to support this movement if he thought the result would be a permanent one. He thought that we might get a room in the Academy of Sciences when that body builds, as it intends to do, and probably it would be possible to attain this end by combining with some other scientific body.

Dr. Chipman supported the views of the previous speaker.

Dr. Simpson said that we were to lose our present place of meeting at no very distant date. It was strange to see so much opposition to this scheme on the part of the elder members. In his own opinion the establishment of a room would attract public attention to the Society, and increase its chances of receiving public donations. A good library would be an additional attraction to bring new members into the Society.

The Society then adjourned until January 27.

SAN FRANCISCO, January 27, 1885.

The meeting having been called to order by the President, and the minutes of the former meeting read and approved, the following propositions for membership were read by the Secretary: Eleonora Sherman, M.D., graduate of University of California, 1884; proposed by Drs. Wanzer and Kerr. And P. H. Flood, M.D., graduate of Georgetown Med. Coll., 1874; proposed by Drs. Plummer and Kerr. Both of which were referred to the Committee on Admissions.

Dr. Clinton Cushing then read a paper entitled "A Report of Five Cases of Pelvic Abscess."

[Paper will be found in another part of the Journal.]

In the subsequent discussion, Dr. Blake-Brown regretted that she did not possess Dr. Cushing's trocar six months ago, as she had at that time wounded the uterine artery with the aspirating needle, while operating. The hemorrhage was controlled, but the patient died four or five weeks afterwards, from impaction of the bowels, and the autopsy revealed the abscess situated too high up to be reached by the ordinary instrument.

Dr. Chismore thought that there was no difficulty in arriving at the conclusion that it was right to open an abscess as soon as the presence of pus was indicated. He admired the vaginal operation of Dr. Cushing, and thought that the cases reported would influence many in their choice between this method and

the abdominal section practiced by Lawson Tait, and as the former more closely resembled nature's method, it was more likely to be adopted. There had come under his notice a case of pelvic abscess, following the intra-uterine injection of iodine by an irregular practitioner, that opened in the tenth intercostal space, and also through the inguinal ring, permitting the passage of a probe from the one opening to the other. The patient recovered.

Dr. Kenyon said that three cases of pelvic abscess had recently come under his notice. The first of these he opened through the vaginal roof with a bistoury, and dilated with his finger; the second he dilated with Sims' uterine dilator; and the third opened of its own accord in the right inguinal region, destroying the patient by prolonged suppuration. He believed that life would have been saved had an opening been made earlier in the course of the disease.

Dr. Perry had always found that the chief difficulty was to drain the abscess through the small opening made in the vaginal roof by the aspirator, but believed that this could be overcome by the use of the trocar, which would be the instrument to operate with, while the aspirator is used more for diagnostic purposes.

Dr. Rivas believed in opening such abscesses freely and early, and using a disinfectant wash.

Dr. Simpson said after pelvic inflammation had lasted for some time, and there were constitutional symptoms sufficient to make the physician suspicious of the formation of pus, it was often very difficult to make sure of it by vaginal touch alone. If pus were present no one acquainted with the anatomy of the part should hesitate about the propriety of operating; but in a doubtful case, a correct diagnosis could only be arrived at by means of the aspirator, and he would therefore like to ask Dr. Cushing whether any bad consequences were likely to follow the introduction of a needle when no pus was found. He had received much pleasure from listening to the paper, and regarded it as one of the most instructive articles presented to the Society for some time.

Dr. Cushing in his reply said that pelvic cellulitis was much more common than was generally believed. An eminent French pathologist had discovered traces of it at more than fifty per cent. of the autopsies conducted on female patients dying from

different diseases. When we remembered the monthly congestion of the ovary and uterus, followed by rupture of the ovisac and escape of ova, and hemorrhage into the Fallopian tube, and very often into the pouch of Douglas; when there was added to this the exposure to damp and cold, and the exertions, such as dancing, which few girls avoided at such a time, we need not be surprised at the prevalence of this disease. Among the symptoms indicating the presence of pus, the rigor may be a very slight one, almost simulating malaria; but in addition to the constitutional symptoms we have local pain at the seat of the lesion, and other disturbance of the organs, revealed by a bi-manual examination. Before aspirating, disinfect or cleanse the canal and instrument by means of a disinfecting solution, and it is not at all probable that bad results will follow introduction of the aspirator.

Dr. Kenyon said that in exploring with the aspirator for pelvic abscess in one case he only obtained serum, but no bad result ensued.

On the motion of Dr. Chismore, the thanks of the Society were tendered to Dr. Cushing for the paper which he had read.

Dr. Blake-Brown then presented a report on the autopsy in a case of hydronephrosis of the right kidney, with cystic degeneration in the left, occurring in a child aged fifteen months. At birth the abdomen was so prominent as to call forth remarks on the part of the nurse and physician, and it continued to enlarge as the child grew older, but as it was a hand-fed baby this increase was attributed to digestive disorders and intestinal accumulations. The child matured well, had ten teeth, and could walk and talk at the time of its death. About two months before the fatal termination, the abdomen increased in size rapidly, but it was impossible to make a careful physical diagnosis, although the low specific gravity (1010) of the urine and the excess of epithelium contained in it, appeared to indicate some renal affection, and this opinion was strengthened by the fact that suppression of urine occurred two days before the death of the patient. Autopsy: The abdomen was greatly distended; the veins prominent, and fluctuation could be detected, on palpation. On abdominal section the vermiform appendix appeared in the incision above the umbilicus, and a large matted mass, consisting of cæcum, ileum, mesentery, and what afterwards proved to be the right kidney, lay in the median line and above the umbilicus.

The right kidney had its ureter slightly dilated, and the pelvis and calices, to a very great extent, so as to leave a small, thinned piece at the upper part of the organ as the only trace of normal tissue. The blood-vessels were enlarged and prominent, and the whole kidney was estimated to weigh about eight pounds. The left kidney was normal in size, white in color, and entirely made up of a mass of small, thin-walled cysts containing fluid, so that it closely resembled a cystic ovary. Ziemssen attributes these abnormalities to imperfect development of the organs, and generally finds them associated with such malformations as hare-lip and club-foot; but in this case all the other organs were perfect. The child was well shaped and mentally precocious. The case is interesting; 1. Because it is difficult to explain how renal secretion was possible so long; 2. On account of the difficulty in diagnosis. Had the child been a female the case would certainly have been regarded as one of cystic ovarian disease.

Under the head of New Business, Dr. Morse moved "to amend Article 16 of the By-laws, by striking out one-half dollar and inserting one dollar." This was seconded by Dr. James Simpson.

Dr. Chismore suggested that in voting this increase in the monthly dues, it should be stipulated that the additional income thus accruing to the Society should be used exclusively for the establishment and maintenance of a Medical Reading Room.

Dr. Simpson said that the question for the Society to decide was, "Shall we establish this Reading Room and Library, and increase the dues to meet the additional expense?" Our income at present was considerably in excess of our expenditure, so that we were in a position to lay by money which had been accumulating in the bank for some time. He thought that the Society might make a better use of the surplus by expending it in the manner suggested, and this, with an additional fifty cents per month, would give them warm, comfortable rooms, where their members could meet socially and also to peruse the best journals of the day. All this could be got for the small additional sum of fifty cents per month, so trifling that in one week any member could save that amount from some less necessary expenditure.

Dr. Perry would like to ask Dr. Simpson if it would not be better for the members to practice the economy he advised, but instead of spending the money in a Reading Room, to buy two

additional good medical journals per month, and enjoy them at his own fireside and in his own home, where he could be found when patients sought his services?

Dr. Soule strongly opposed the adoption of this amendment, on the grounds that our present income was quite sufficient for our expenditure. It was true that the institution of a Reading Room would necessitate a raising of the dues; but no feasible plan for accomplishing this had been laid before the Society, as that reported at our last meeting did not show how anything of a permanent nature could be established. He must therefore oppose the present motion as premature.

Dr. Plummer thought that the last speaker's point was well taken. It should be positively decided to establish a Reading Room, and then vote the funds to maintain it. This had long been a favorite scheme with the Society, and the late Dr. J. F. Morse had contributed \$50 as a nest-egg for a building fund to procure a house for its members when the proper time should come to do so; but that time had not yet arrived, although we might expect that with our present prosperity it was not very far distant, and that at an early date we should be able to build one for ourselves or combine for this purpose with some other scientific body. There were three classes of practitioners: 1. Those who were too busy to frequent a Reading Room; 2. Those whose pecuniary circumstances were such that they could not afford to risk losing a call by being absent from home; 3. Those in easy circumstances, who had attained a competency, and had time to frequent such a place. This last class was the one that would benefit by the Reading Room; the others who cared to read would take the books home with them, and this could be done under our present arrangement. Personally this motion made no material difference, but he did not think that this scheme was for the good of the Society.

Dr. Chismore replied that all this opposition was based on the grounds that the increased dues would be felt as a burden by the younger men; he was certain that these members could in many ways save the additional fifty cents, and use it for the furtherance of the present scheme, with greater profit to themselves. All the gentlemen who had spoken seemed to favor the institution of a Reading Room, but grudged the necessary expense.

Dr. Arnold said that the Committee on the Reading Room reported \$100 per month to be necessary for them to carry out

this project. Dr. Morse's motion was therefore the proper one to bring before the Society at this time, as it was impossible to make any further arrangements until they knew whether the Society was willing to raise the necessary funds.

Dr. Chipman said that the purposes for which the Society was founded did not demand a Reading Room, and thought that it would not yield sufficient recompense for the money spent in maintaining it. The object of this Society was the discussion of medical subjects, together with the mutual improvement and protection of its members, and not the formation of a Library. The surplus funds might be expended in giving the Secretary a salary of \$200 per annum and combining his duties with those of the Librarian and Curator. Let him place one of the rooms in his office at the disposal of the members as a Library, to be attended by himself during his office hours, and by a boy provided by him at other times. They might also expend some money in providing demonstrations in electricity and other scientific subjects for the Society; all this might be done on our present income; but without doubt any increased dues would diminish the present membership.

Dr. Kenyon would be willing to relinquish his office as Librarian in favor of any feasible plan that would ensure its better administration; but he was decidedly opposed to this idea of a Reading Room, as it seemed to be born of a desire for change, rather than of the exigencies of the Society. He did not think that such a room would be frequented by the members after the novelty had passed away; no man would care to advertise his idleness by being seen there. He did not object to the dues being raised, but he would like to see the money put to a better use.

Dr. Hart expressed his opinion that the Library would not be frequented to any greater extent under the proposed conditions than it was at present. If the dues were increased they might establish a building fund, to which members could contribute, and buy a lot, where they could build a house for themselves.

Dr. Morse wished to know what the members would do with this home which so many members were anxious to save money for, if they did not use it for a Library, Museum, and Reading Room?

Dr. Simpson said the report presented to the last meeting by the Reading-Room Committee had been attacked by several speakers, and as a member of that committee he would state

that they could not do any more than report the probable cost, as they had no power to make further arrangements, having been appointed only to see in what way the scheme could be carried out. They reported that this could only be done by the Society paying \$100 per month, and this amount could only be raised by restoring the dues to the original figure of one dollar per month. He noticed that the older members who had spoken laid the onus of the opposition on the younger men! They pitied them! They had sympathy for them in their poverty! They had been young men themselves, and knew the difficulties that young men had to fight against! Their anxiety for the younger members might be a cause for the opposition, but the older members seemed much more willing to save the extra fifty cents. It was the increased dues that constituted the real obstacle. In seventeen years this Society had accumulated \$3,000, less than \$200 per annum. When would it at this rate accumulate enough to buy the lot and build the house to which almost every member who had opposed this motion had referred? If they opposed the institution of a Reading Room, they could still consistently vote to raise the dues, as that was all the motion before the house called for, and by thus increasing the annual surplus attain to the home they so avowedly desire. If this motion were lost, it would be because the extra fifty cents would beat it.

The motion was put before the house, and a standing vote showed: Ayes, 16; Noes, 17.

Dr. Simpson desired to change his vote to the majority, which was done, and then gave notice that he would move for re-consideration at the next meeting.

There being no further business, the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

Comma Bacillus.

UNOFFICIAL reports from Drs. KLEIN and GIBBES, the commission appointed by the British government to investigate the subject of cholera in India, continue to show conclusions unfavorable to those deduced by KOCH as to the comma bacillus. They have examined the water furnished to some of the houses in which there have been severe outbreaks of cholera, and they find it free from comma bacilli; on the other hand, in tanks supplying houses in which there have been no cases of cholera, comma bacilli were found to be swarming.

Clinic of the Month.

THERAPEUTIC NOTES.

Caffeine as a Heart Tonic.

WHEN caffeine is given in doses of from 10 to 30 grains in twenty-four hours, it produces an effect similar and in many conditions superior to digitalis. Prof. F. Riegel has lately formulated the results of his experiments, and attributes to the drug the powers of regulating the heart of increasing arterial blood pressure, and the force of the heart, of slowing the pulse (although according to Mendelsohn, of Berlin, it does not reduce the pulse so effectively as digitalis), and of increasing the excretion of urine (even when the kidneys are badly damaged.—*Dujardin-Beaumetz*). Its action is more rapid than digitalis, while it is also free from the latter's so-called cumulative effects. It is particularly well adapted to the last stages of cardiac disease, and even in cases where all other cardiac tonics have been exhausted, signal success will attend the administration of caffeine. Besides its favorable results in valvular disease, myocarditis, fatty heart and Gubler's "cardioplegia," it will be found invaluable in nephritis, pleurisy with effusion, and in the pneumonia of the aged. To obtain an effectual solution of the drug it should be combined with salicylate of soda or benzoate of soda to form a double salt. As R.—Caffeine, sodii benzoatis aa grains 48, aquae $\frac{3}{4}$. One tablespoon contains 8 grains of the combination, 61% of which, equal to 4.8-10 grains, is caffeine. It is better given in small and frequently repeated doses, and never in conjunction with narcotics.—*Therapeutic Gazette*.

Copper in Obstetrics.

SOLUTIONS of sulphate of copper (1 to 100) are recommended in obstetrics as an antiseptic (it being antifermentative in a sol. of 1 to 1,082—*Miquel, Med. Rec., p. 70.*), as a hæmostatic equal to the perchloride of iron, and as a local stimulant in suppurating wounds. The solution may be used at a temperature of 100° F. as intra-vaginal or intra-uterine injection several times daily with perfect safety.—*Dr. Charpentier, of Paris, in Medical Record*.

Pancreatin in Diphtheria.

DR. H. D. CHAPIN, of New York, found that trypsin in warm solution digested the membrane in fifteen hours when applied continuously in the form of a spray. Dr. J. Lewis Smith asserts that he "has never seen pseudo-membranes disappear more rapidly from the fauces than when the following is used:" R.—Extracti pancreatis ʒ ʒ, sodii bi-carbonatis ʒ ʒ M, add one heaped teaspoonful to six teaspoonfuls of tepid water, and apply by a large camel's hair pencil every half hour to the fauces.

Chloroform Externally in Labor.

RIGIDITY of the os may be relieved in from five to twenty minutes by flannel saturated with chloroform and olive oil (1 to 1 or 2 to 1), and applied to the hypogastrium.—*Dr. A. Svanberg. Medical Record.*

Germicides.

FROM experiments of Dr. Miquel, the following solutions will prevent fermentation in sterilized beef broth: Biniiodide of mercury 1 to 40,000, iodide of silver 1 to 32,000, peroxide of hydrogen, 1 to 19,000, bi-chloride of mercury 1 to 14,000, chlorine 1 to 3,880, iodine 1 to 3,880, bromine 1 to 1,610, iodoform 1 to 1,610, carbolic acid 1 to 400, permanganate of potassium 1 to 300, boric acid 1 to 143. According to Wynter Blyth, of Edinburgh, drugs fail to effect the germs of certain diseases, as anthrax spores. Dr. Sternberg affirms that a 10 % sol. of carbolic acid will not kill bacteria in putrid fluids, and is useless when dissolved in alcohol or oil. Sulphate of copper destroys the germs of septicaemic blood 1 to 400. Sulphate of iron has no effect on any germs. Four per cent. of tincture of chloride of iron fails to kill bacteria. Hyposulphite of sodium or sulphite of sodium destroys only the yeast plant.—*Medical Record.*

Glycerine in Acute Nasal Catarrh.

COTTON saturated with glycerine and introduced into the nares relieves the congestion in a few minutes.—*N. Y. Med. Jour.*

Iodoform in Diphtheria.

DR. KORACH, of Cologne, claims a mortality of only 7 % by penciling the membranes with a solution of m 45 of balsam of tolu, m 380 of ether (filtered), to which 38 grains of iodoform have been added. The drug may also be used in the form of a powder by insufflation.—*Therapeutic Gazette.*

Hydrarg. Bi-Chloride—Antiseptic.

It being known that the white of one egg will precipitate 4 grains of corrosive sublimate, in the form of an albuminate, but that an excess of albumen will again form a soluble double albuminate, Sir Joseph Lister asserts that the bi-chloride is generally ineffectual as an antiseptic when applied to wounds, since, in combination with the exuding serum of the blood, an insoluble albuminate is formed. To obviate this, he previously prepares a soluble double albuminate by combining the corrosive sublimate with blood serum in the proportion of 1 to 100 (1 to 50 being found too irritating); with this the dressing is soaked and dried before used. This, he claims, is a thoroughly antiseptic dressing, which can be applied dry without any of the usual protective coverings.—*London Lancet.*

Hyocine Hydrobromate.

PHYSIOLOGICAL action. In cold-blooded animals it is a motor spinal depressant, decreasing, and when fatal, arresting respiration. In mammals it acts as a spinal depressant, producing paralysis, a centric respiratory depressant, causing death by asphyxia, and, in enormous doses, a paralyzer of the vaso-motor system. In man, in doses of from 1-160 to 1-90 of a grain, it produces vertigo (in 10 minutes), some loss and incoordination of muscular power, dryness of the throat, (after one half hour) restlessness, followed in one hour by great sleepiness, with flushed face, and when awakened, mental confusion. Pulse and respiration are slightly reduced. The sleep lasts from four to eleven hours, and is followed by no disturbance of secretions or unpleasant effects.

Therapeutics. It is used to produce narcosis and spinal sedation in all forms of maniacal excitement with insomnia—in doses of 1-100 to 1-19 of a grain, hypodermically or by the mouth, every four or more hours, according to its effects. It was used without effect in facial neuralgia, although Prof. Edleszen reports favorable results in enteralgia, pertussis, and asthma.—*Therapeutic Gazette.*

Ice Locally in Pyrexia.

In pyrexia, ice is applied in bags to the supra-clavicular region, where there are many large superficial veins, to reduce temperature.—*N. Y. Med. Jour.*

Iodine in Asthma.

CHURCHILL'S tincture (R.—Iodini grain 1, potassii iodidi grains 2, aquae, alcohol diluti each two minims), painted over the course of the pneumogastric nerve in the neck, removes bronchial spasm, when combined with other measures for the relief of the underlying morbid conditions.—*R. B. Faulkner, Pittsburg, Penn., Med. Record.*

Paraldehyde.

PARALDEHYDE acts like chloral, but more rapidly and safely, in doses of $\bar{3}$ 1 to $\bar{5}$ 1½. R.—Paraldehyde $\bar{3}$ 1½, oil of peppermint m 10 olive oil $\bar{3}$ 30.

Phosphorus.

PHOSPHORUS is said to be curative in tubercular meningitis, in doses of grains 1-16 in oil every four hours.

PILOCARPIN MUR., in facial erysipelas, grains $\frac{1}{4}$ — $\frac{1}{6}$ hypodermically—abortive.

Salvia Officinalis in Nasal Catarrh.

PROF. D. H. AGNEW strongly recommends douches of sage tea in chronic catarrhal rhinitis, when uncomplicated, by hypertrophy.

Valerian in Contusions.

M. ARRAGON asserts that the pain of contusions is immediately relieved by continued applications of compresses saturated with a decoction prepared by boiling one ounce of valerian root in one quart of water for half an hour.

Dr. E. T. Williams in the *Boston Medical and Surgical Journal* says:

“The earliest announcement of Liebig's method of preparing infant's food was received with the warmest enthusiasm by the profession and the public. The idea of using malt as an artificial digestive for starch was certainly a brilliant one, and seemed to promise an infallible cure for every form of starchy dyspepsia, both in children and adults. The notion of a manufactured Liebig's food prepared to hand and ready for use was a natural conception and has much in its favor. This does away with the trouble of cooking, and secures a perfectly uniform product. One of Liebig's sons, with the ‘help and approval’ of his father, as he states, is or was concerned in the manufacture of such an article

under the name of an extract of Liebig's food. Similar preparations have been sold in England and America. They are made or should be made by digesting malt and water in the form of a 'mash,' as brewers do, till the starch changes to glucose, and then evaporating to dryness in a vacuum. They are nothing more than Leibig's food ready made and evaporated down for convenience of keeping and dispensing. The popular Mellin's and Horlick's foods are articles of this sort. They consist mainly of grape sugar with the nitrogenous and mineral elements of grain. A half-pound bottle of Mellin's food costs seventy-five cents; a one pound can of Horlick's food sells for the same price. They are good foods and suit children extremely well.

Liebig recommends the food as a nutritious drink for adults as well as children. Its suitability for invalids and convalescents, for nursing mothers, and starchy dyspeptics goes without saying. Liebig recommends it in coffee in the place of cream. I have found it very good in chocolate. With coffee especially, in the style of *café au lait*, I have found it a capital breakfast drink. I think that both coffee and chocolate *a la Liebig*, if they could be made fashionable, would make a most useful addition to our dietary."

SURGICAL NOTES.

Plastic Surgery.

Prof. H. Maas, of Wurzburg, reports a number of successful cases of plastic surgery in Volume 31, No. 3, of Langenbeck's Archive.

Before making his report he reviews the field most thoroughly, and speaks of a number of like operations made by other surgeons. His object in making these operations is to cover up large chronic ulcerations. After freshening up the ulcers by removing the edges and granulations which cover it, flaps are dissected up from the neighboring parts and attached to the edges of the ulcer, and the limbs are then encased in gypsum bandages until union has taken place, when they are removed and the bridge of the flap is cut through. He submits the following rules to be deducted from a perusal of the cases he has reported:

1. The part from which a fresh skin-flap is to be transplanted, is to be maintained as immovable as possible, best done by means of gypsum bandages extending to the immediate neighborhood

of the defect. In doing this, especially in those cases where a flap is transplanted from one limb to another, the most bearable position for the patient is to be discovered by repeated experimentation before the operation is made and the bandages applied.

2. In converting the ulceration into a fresh wound, especial care must be taken that the superficial, soft tissue, which is permeated by numerous perpendicular vessels and constitutes the granulation layer proper, be carefully dissected off.

3. The flaps which are to be transplanted must be cut out as much in the direction of the course of the vessels as possible, even if great tension of the flap is thereby necessitated in adapting it to the defect.

4. The flaps must be most accurately fastened to the borders of the defect by means of sutures.

5. It is of great importance to protect the free and wounded portion of the flap, as well as the freshened surface of the ulcers, from drying and consequent necrosis; also from septic poisoning.

6. As regards the bridge, it will be safest to wait from ten to fourteen days before separating it. The bridge should be then completely cut through.

Pharyngotomia Subhyoidea.

In the same journal there is an article by Dr. Iversen on this subject. He adds nine cases (three of Prof. Studgaard and six of his own), increasing the statistics to eighteen cases.

The operation was made eleven times for the removal of tumors of the pharynx, four times for the removal of laryngeal nerve growths, once for the removal of a foreign body in the œsophagus; once in order to operate on the epiglottis. Of these cases six recovered permanently, and a number of others were relieved temporarily. Four of Iversen's cases were successful. He adds the following:

"If we consider the bad results to be found in the literature, no great desire will be aroused to undertake the operation, not even in consideration of the horrible suffering to which the patient is subjected in the advanced stages of such disease—carcinoma of the pharynx. If, by means of tracheotomy and gastrotomy, we are able to afford them palliation, we should, according to my opinion, first attempt direct extirpation and introduce the treatment of these cases with a pharyngotomia subhyoidea, by means of which it is not only possible to make a positive diag-

nosis, but the operation may be used as well for a preparatory cut to other procedures."

In order to demonstrate the comparative order for which the operation is most frequently indicated, Iversen enumerates some 24 cases he was able to collect from the literature of the subject. They were all observed in Germany, with the exception of two cases seen in London and one in Wales.

OPHTHALMIC NOTES.

The use of a five per cent. solution of carbolic acid is strongly recommended by Dr. G. H. Burnham, for treating gonorrhœal ophthalmia, as well as all cases where the cornea becomes infiltrated, whether due to ulcers or when the external surface is unabrased.

The results in gonorrhœal ophthalmia are, he claims, always good, and the remedy is a true specific. Under its use, excava-tions of the cornea heal quickly and do not progress to perforation.

The course pursued in the treatment of a case of gonorrhœal ophthalmia is as follows: The patient is ordered to bed, a large basin of cold water containing a piece of ice is always within reach of the patient, who must apply cloths dipped in the cold water to the eye. The lotion, of a strength of 1 to 20, is to be thoroughly applied every hour, night and day. The pain and smarting lasts but a few seconds, and are succeeded by a feeling of comfort and relief. As the discharge becomes thinner the 5 per cent. solution is to be used every second hour, and during the intervening hours a 2½ per cent. solution is to be applied. As the virulence of the affection goes on diminishing, the 1 in 40 may be used altogether.

The remedy has, in Dr. Burnham's practice, been very successful in treating purulent infiltration of the cornea subsequent to cataract extraction, with the result of obtaining a perfectly clear cornea with unimpaired sight. It is very necessary to use a very pure carbolic acid, otherwise it may give rise to much needless pain and irritation, which not only seriously interferes with its proper application but materially lessens its curative properties.

At the meeting of the Heidelberg Ophthalmological Society, in

September, 1884, the discussion of the treatment of diphtheritic ophthalmia elicited the opinion that there is no better treatment known for this formidable affection than iodoform, and when this is properly done the prognosis is favorable.

Dr. G. M. Smith, of Bloomington, reports a case of corutopia in a young woman of twenty-five. The eccentric displacement of the pupils was very marked, and the same in both eyes, and was situated near the temporal part of the corneo scleral margin. The range of accommodation was eight inches; the irides were tremulous; hypermetropia was 6 D.

Glasses ground with their centers corresponding to the centers of the pupils, which were $2\frac{2}{3}$ inches apart, enabled the patient to read with both eyes at the same time, which was impossible without them.

Dr. H. Culbertson, of Zanesville, O., describes a case of iridocyclitis (sympathetic) in a previously healthy eye, due to wearing a badly fitting artificial eye in the other orbit from which the eye had been removed by enucleation.

The patient had broken the artificial eye fitted by Dr. C. and had procured another himself, which did not fit him, from a person who did not understand how to adapt such eyes. This eye was too broad at the base vertically, and as a result the lower segment of the eye pressed firmly down into the inferior cul de sac, causing the margin of the lower lid to turn inwards, and as a result producing an elevated ridge running across the lower region of the base of the orbit. This ridge was red and tender to pressure, while the balance of the orbital cavity was pale and free from tenderness. There was no tenderness on firm pressure in the region of the divided optic nerve. Vision in the remaining eye was reduced to "counting fingers." The artificial eye was removed, and under appropriate treatment useful vision was restored, with some permanent impairment of accommodation.—*American Journal of Ophthalmology.*

An unusually observing person suggests in a late *Harper's*, chewing gum as a remedy for dyspepsia. He claims that the Maine lumbermen do not suffer from dyspepsia, and he attributes it to their habit of chewing the gum of the spruce tree. If he were to add to his suggestion, of chewing gum, that of becoming a lumberman, the remedy would be very effective.

Editorial.

Infection and Contagion.

In many of the recent debates upon the transmissibility of cholera, small-pox, yellow fever, and kindred diseases, much confusion and unnecessary discussion has been caused by the uncertain meaning of the foregoing terms. Every writer upon these diseases has to state what he understands by infection and contagion. One author says that the terms are synonymous; another expresses his belief that *contagion* denotes transmission by actual contact with a person suffering from the disease, while *infection* refers to communication through any other medium; and so in this way definitions are multiplied until we have as many meanings as we have writers. Can anything be more obstructive to the progress of hygienic measures and preventive medicine than this ambiguity of the terms which are absolutely necessary to a proper description of those diseases against which the efforts of boards of health and quarantine officers are chiefly directed? The Medical Congress at its next meeting in Washington could not do better service to the profession which it represents than by giving a precise meaning to those and many other words included in our medical nomenclature: a medical dictionary, compiled under the supervision of a committee appointed by this supreme council, would constitute a standard authority for the guidance of both teacher and student.

The most complete classification of those diseases generally characterized as "infectious" is that proposed by Dr. Loomis, in his new work upon Practical Medicine. Nearly all others are illogical inasmuch as they are founded on different bases, and are therefore cross classifications.

As the subject is likely to remain *sub judice* for some time, the following remarks are offered, in the hope that they may be of some service in unraveling this tangled web. The terms employed are those suggested by Dr. Loomis, but their significations differ in some degree.

Infection should be used as a general term, to designate those diseases which are produced only through the agency of a special poison introduced into the system. It affirms nothing regarding

the nature of the poison, whether it be chemical or germinal, nor of the manner in which it is communicated, whether it be through inhalation, imbibition, inoculation, or contact; it simply states that in each case the disease is produced by its own special morbid agent.

These diseases may be still further divided into contagious, miasmatic, and miasmatic contagions, the process being conducted upon what we may call the life histories of the different poisons, and therefore to say that a disease is contagious, miasmatic, or miasmatic-contagious, is to affirm not only that it is infectious, but that it is infectious plus the additional qualities that go to make up the particular sub-class to which it belongs.

We shall now consider in detail the distinctive qualities of each subdivision founded on this basis.

In contagious diseases the poison is multiplied within the bodies of the affected and passes directly from the sick in a condition fit to produce the same disease in the bodies of the healthy.

In miasmatic diseases the poison is developed only in decomposing vegetable matter, and is therefore non-communicable from the sick to the healthy. The distinction between these two classes is very evident when we compare small-pox or scarlet fever with intermittent or remittent fever, and study the different sources from which people are attacked by these diseases.

The third class is the miasmatic-contagious, and embraces all those infectious diseases whose poison multiplies within the system, but is unable to reproduce the disease in the healthy until it has been exposed to unfavorable external influences.

This is not to be regarded as a miscellaneous subdivision, in which the physician may include all those infectious diseases of whose etiology he is uncertain, just as a merchant groups half a dozen unimportant items as sundries at the end of his expense account. Its characteristics are as distinct as those of either of the purely contagious or miasmatic class, and it includes several of the most common and fatal maladies, such as typhoid fever, yellow fever, and cholera.

It is generally accepted as a fact that the typhoid poison is contained in the stools of the patient, but in their fresh condition they appear to be innocuous, and it is only after exposure to the air that their virulent qualities are developed. In like manner it is comparatively rare for attendants upon cholera patients to

be attacked by the disease, although their clothing is frequently soiled by the choleraic dejections, the outbreaks being more frequently traced to wells or soils polluted by the discharges. So strong is the evidence in favor of both the contagious and miasmatic character of the cholera poison that Niemeyer, in his Text Book of Medicine, says that in India, when the disease is endemic, it is probably the result of miasm, but that this is not true of any other localities.

Our present knowledge leads us to believe:

1. That the poisons of all the contagious miasmatic diseases can only attain maturity after exposure to atmospheric or telluric influences.

2. That all of them multiply within the human organism.

3. That only some of them are reproduced external to that organism.

In studying these diseases the question naturally suggests itself, "Did the poison primarily originate in a living being or in the soil?" This may appear to be an unimportant question, but a correct answer will be of much benefit in directing us to adopt the best preventive measures.

It must be very evident even to the most superficial thinker that the diseases whose poisons can only originate or multiply in a living being, and are only brought to maturity by atmospheric or telluric influences, are much more under our control than those which are reproduced *de novo* both internal and external to that being; and that it is therefore of the utmost importance to ascertain whether the contagious or miasmatic element predominates.

Of the three fevers already cited as examples of this sub-class, yellow fever is that which is most closely allied to a miasm. It is endemic in certain localities, such as the Antilles, and breaks out in vessels whose crews have been healthy previous to their arrival at these ports, and who have held no communication with the shore, but have been exposed to a land breeze. A moist atmosphere and an average temperature of more than 70° Fahr. are necessary to the development of the poison, which is destroyed by frost. In these respects yellow fever resembles the simple miasmatic or malarial diseases; but it differs from the latter inasmuch as it can be conveyed to uninfected regions by families and merchandise, where it spreads as rapidly as in its native habitat. The poison is not communicated directly from the sick

to the healthy, but requires exposure to external influences, and hence, as in cholera, the persons most liable to infection are not those in immediate attendance upon the sick, but those who are engaged in handling the infected clothing or cargo.

Cholera poison possesses similar properties, but is more contagious, as its spread is not so limited by degrees of cold and moisture.

In typhoid fever, on the other hand, the contagious element prevails. It is almost unknown in new territories, where malaria is the bugbear of the pioneers who break the virgin soil; but as the land is brought under cultivation and the population increases, malaria gradually disappears and typhoid fever takes its place. The fact that the disease is very rare except in settled communities is a strong argument in favor of the generally-accepted theory that the presence of decomposing animal matter is essential to its existence. The fact that it is proportionally more common in country towns, where sanitation is neglected, than in cities where this is closely studied, clearly indicates that we have the remedy in our own hands, and that the disease will decline as our systems of drainage, disinfection and ventilation improve. Improved sanitation will aid us in our fight against cholera and yellow fever; but as these poisons are continuously produced in the soils to which they are endemic, their reproduction or development is not so entirely under our control, and nothing but an effectual quarantine will guard us against their ravages.

W. W. K.

Bogus Doctors.

The following appeared in the editorial department of the San Francisco *Chronicle* of February 6, under the above heading:

“The Journal of the American Medical Association draws public attention to the growing evil of the indiscriminate practice of medicine and surgery by incompetent men. Under the law as it stands, six or seven doctors in almost every State can incorporate themselves together as a college, under the general law, and can issue diplomas to any one who will pay for them, and the bearers of these diplomas can go forth to the uttermost limits of the world, dealing death and destruction among the sick. Philadelphia used to enjoy a pre-eminence in this branch of business, but latterly Louisville, Kansas City and San Francisco have become equally prominent; * * * and in San Francisco, we are told, two months' time is sufficient to secure a diploma, even

when the applicant is a farm hand, ignorant not only of Latin and Greek, but of the orthography of his own language. An Englishman, ambitious to practice medicine in England and unable or unwilling to go through the English schools, is said to have left England in March for San Francisco, and to have returned in July, a full-fledged doctor."

No class of persons could be more jealous of the dignity and standing of medical practitioners than the members of the profession in this City and State. Laws have been enacted which provide the granting of licenses only to those who have graduated from regular medical colleges in "good standing," and such licensed physicians are the only practitioners recognized by the medical profession in California. It is to be regretted that the courts and the people at large refuse to acquiesce in this recognition. The physicians have done their part, and it only remains for the people to inflict the legalized punishment upon the hundreds of unlicensed and incompetent pretenders who are "dealing death and destruction among the sick" of this city. And yet it is a notorious fact that juries will not convict such offenders, even though they be the lowest Chinese charlatans.

The Medical Society of the State of California has always displayed profound interest in the Medical Colleges in this city, and in its last published transactions clearly states its approval of the advanced medical education as conducted in the "Cooper Medical College" and in the "Medical Department of the University of California." In these two colleges the standard of education and the requirements for graduation are superior and more rigid than in the most noted medical colleges of New York or Philadelphia—the acknowledged centres of medical learning. In these Eastern colleges no preliminary examinations are required, and diplomas are granted to students who are able to pass the ten minutes' examinations upon the five months' course of lectures which they have heard repeated in two successive years.

In the two regular colleges in this city diplomas from colleges or high schools, or examinations which include Latin, are required before the candidate is allowed to consider himself a medical student; and he is permitted to graduate only after he has attended three graded courses of lectures, extending over a period of thirty-six months, and passed three written and oral examinations in the twelve departments of instruction. It is the aim of the medical institutions of this city to advance the standard of education, and to honestly en-

deavor to provide physicians who are competent to hold life and death in their hands; and the standing of their graduates in the medical profession of the Pacific Coast is a sufficient evidence of the thoroughness with which these colleges have accomplished their task. Whether diplomas to practice medicine are fraudulently obtained from other sources in *this city*, we are unable to say; we know, however, that certainly none such have yet come to the knowledge of the Board of Medical Examiners.

We have been unable to find the article in the Journal of the American Medical Association, referred to by the *Chronicle*, but trust that if it did appear, that the editor will take the pains to contradict a statement so unfair to the schools of this City, and one, which, if allowed to pass unnoticed, may reflect much undeserved discredit upon San Francisco.

Shall the Medical Society have a Reading Room?

The renewed vitality which has been imparted to the San Francisco County Medical Society is abundantly evidenced, not only by the large attendance at the meetings and the excellence of the papers presented, but by the vigorous discussions on topics relative to the welfare of the Society and the profession at large. We have seen them assisting in an almost vain endeavor to protect and save an ungrateful populace from the ravages of quackery; at another time they could be heard stimulating their lagging office-bearers to renewed exertions, or pointing out the path of duty to some erring member. But the matter that now engrosses their attention is the question: "Shall the Society have a Museum, Library, and Reading Room of its own?"

This has long been a pet scheme with the Society, and many members have become so accustomed to contemplate it surrounded with all the dreamy magnificence of a far distant future, that they are loath to change the dream for the reality; they have associated its realization with the approach of the millennium, and the voices of its advocates sound in their ears like the first notes from the trump of the archangel Gabriel. All agree that such an institution would be a good thing for the Society but they prefer to remain as they are at present. Heaven is undeniably a happy place, but most men prefer this mundane sphere.

It has been almost universally admitted that the Society should

have some permanent meeting place with which it may be identified, but opinion is divided as to the best way in which this may be accomplished. There are, however, some sticklers who refuse to face the question, and who night after night bore their audience by returning to some of its phases that have already been discussed *ad nauseam*, and settled by a vote of the Society. We are reminded of a Scotch minister who had to deal with a similar disposition in one of his church members. There had been an election of elders in his congregation, and one of the members, a man of good and upright character, but totally unfitted to fill the position he coveted, expressed disappointment at not being selected to fill one of the vacancies. The minister called upon him to explain matters, and the following conversation occurred :

Minister—"Now, John, do you think that you are able to perform the duties of an elder in the church? Could you, for example, visit the sick and talk or pray with them?"

John—"Weel, no, sir; I dinna think I could."

Minister—"Well, then, could you lead the congregation in prayer at a church meeting?"

John—"No, no, sir; I could na' dae that."

Minister—"Well, what could you do?"

John (*slowly and thoughtfully*)—"I could object at the meetings."

So it is with more than one of our members; they are useful men in some respects, but they were born to object. They can discover and raise up fifty difficulties, but they cannot suggest a way of overcoming one. The only objections that have been raised—and we refer our readers to the published proceedings of the Society for confirmation of our statement—are:

1st. The extra expenditure.

2d. That the present Library is not consulted.

3d. That the present Library is not worth consulting.

We shall consider the two last statements, and shall do so by admitting at the very outset that they are indisputably and undeniably true. But it is to remedy this very evil, to remove this very dishonor from the reputations of the medical men in San Francisco that we urge the furtherance of this scheme. Is the fact that the Medical Society, despite its one hundred and ten members, does not own one standard work on medicine or one pathological specimen, to be accepted as a valid excuse for it

remaining in this condition? Is it possible that any intelligent being can have reached the irrational conclusion that what is, must be? Yet this is their style of reasoning—the Library is not consulted at present, nor is it worth consulting, therefore it never will be consulted nor be worth consulting—a form of reasoning the frequency of whose repetition makes it seem to be very convincing and satisfying to its supporters, but whose logical relation of premise and conclusion we fail to discover.

The present scheme favors the purchase of such standard works as the International Encyclopædia of Surgery, Pepper's American System of Preventive Medicine, and similar books, that are too expensive for the average practitioner to buy for himself, but from which he can obtain the best and most reliable information on matters that are of paramount importance to him when treating some more than ordinary difficult case.

It also contemplates the formation of a pathological museum for the collection and preservation of those specimens which are at present little better than so much rubbish in the offices of their owners.

With regard to the money consideration, we will admit that this is a question which touches the hearts of all of us. The schemes suggested for raising the necessary funds are three in number:

1st. That of Dr. Morse, who moved that the dues be increased to one dollar per month. This motion was defeated by one vote.

2d. That of Dr. Hart, who proposed that the members subscribe to a building fund, which might be invested so that the interest accruing therefrom, together with the surplus from the present dues, might yield an income sufficient to meet the additional expenditure of renting suitable apartments. This is the best suggestion, as it does not involve the Society in any risk, and does not require such a large sum as would be necessary for the erection of a building.

3d. Dr. Plummer suggested that the members subscribe liberally enough to raise the funds of the Society to \$8,000, and with this money buy a lot in a central locality. The lot might then be mortgaged for a sufficient sum to build a hall, part of which the Society could retain for itself and let the remainder to other societies at rents sufficient to pay interest on the mortgage. This is impracticable. It is impossible to obtain a lot north of

Market Street and east of Taylor, in a central locality, and measuring forty feet front, at such a low price as \$200 per front foot. But even admitting that it were possible, it will cost at least \$500 per front foot to erect and furnish a building of three floors, so that this adds an additional \$20,000, bringing the total value of lot and building to \$28,000, which is too large an expenditure for the Society. Moreover, there are so many halls in the vicinity that an additional one would almost certainly be a failure.

Since this matter has been agitated in the society, we hope that it will not be permitted to rest until the desired end has been attained. We believe that the adoption of some theme similar to that suggested by Dr. Hart would provide the society with a library and museum, which are so very necessary to the successful prosecution of scientific research on this coast, without adding very much to the annual expenditure.

Notices of Books, Pamphlets, Etc.

LECTURES ON SOME IMPORTANT POINTS CONNECTED WITH THE SURGERY OF THE URINARY ORGANS. Delivered in the Royal College of Surgeons, London. By Sir HENRY THOMPSON, F.R.C.S., M.B. London, etc.: P. Blakiston & Co. San Francisco: A. L. Bancroft & Co. Price \$1.25.

The introductory lecture is devoted to the treatment of stricture of the urethra by internal urethrotomy, and contains an interesting retrospect of the various measures advocated in the past, contrasting the results obtained with those achieved by internal urethrotomy, a procedure whose general adoption by the profession is mainly due to the teachings of the distinguished author.

Lecture II. treats of the systematic diagnosis of urinary disease, and gives the results of the author's new method of digital exploration through a perineal incision. This portion of the work will be eagerly read by those who devote much attention to urinary complaints.

In Lecture III. will be found a clear and instructive series of cases of tumors of the bladder, with detailed descriptions of the measures adopted for their removal or relief. This lecture is full of original research, and establishes beyond question the

author's title to a leading position in the annals of surgery of the urinary organs. It is not too much to predict that many cases hitherto regarded as incurable will be restored to health by the means devised, practiced and given to the world by Sir Henry Thompson.

Lecture IV contains many valuable hints on the treatment of impaired vesical function.

Lecture V., on the progress of operative surgery for stone in the bladder in the present century, with the most recent improvements in lithotrixy, seem to be open to the objection of according most scanty credit to a cotemporary in the same field of labor. To characterize litholopaxy as a "further advance" in litholtity made by Dr. Bigelow, when a subsequent lecture shows that this "advance" has so modified his own views that after the publication of Prof. Bigelow's paper on Litholopaxy in 1878, he had occasion to perform lithotomy in only 15 out of 211 cases, is, to say the least, "putting it very mildly."

The broad fact remains that until Dr. Bigelow clearly set forth his principles and method of operating, the idea of removing a stone at one sitting by crushing and washing out the debris, was not recognized as a legitimate operation; and since that period, such was the weight of his influence and the merit of his proceeding, that his method has come into almost universal use in the United States and England. That Heurteloup grasped the idea fully is undoubted; but he did not work it out to a successful termination, nor did any of those who followed him, including Sir Henry Thompson, succeed in making it the chief method of their own or of the practice of others, although several came very near its accomplishment.

The concluding lecture, devoted to the statistics of lithotomy and lithotrixy in Great Britain during the present century, is of general interest. In conclusion, we can assure our readers that the entire book will form a useful addition to the library of any practitioner who treats diseases of the urinary organs.

THE NATIONAL DISPENSATORY. By ALFRED STILLE, M.D., LL.D., Professor Emeritus of the Theory and Practice of Medicine in the University of Pennsylvania; and JOHN M. MAISCH, Ph.D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Third Edition, thoroughly revised, with numerous additions. With 311 illustrations. Imp. Svo. Pp. 1755. Philadelphia: Henry C. Lea's Son & Co. 1884.

This Encyclopædia of Pharmacology is so well known and

appreciated as to require no special introduction or commendation. The fact that three editions of this valuable work have been demanded by the profession of medicine and pharmacy within five years, is a sufficient indication of the esteem which the public have of it. The reader will find its arrangement well adapted to quick reference; he will find that new and less known drugs are fully treated among the more important drugs which they resemble in their therapeutic uses; a most convenient method for the student; that it is adapted to the recent Pharmacopœias of the United States, Germany and France, and includes all the latest drugs and discoveries, which have been incorporated in no other treatise, and that dates of investigations are uniformly published with the text, as well as full references to authorities, whenever expedient. The work is not encumbered with useless theories of a purely pharmaceutical nature, while the sections devoted to Physiological action and Therapeutics are in accordance with the latest opinions. While, as is necessary in such a work, the fullest information is concisely given regarding the less important drugs, yet decided individual opinions are expressed as to the slight benefits that are to be expected from their use—an invaluable feature to the student, and one which is rarely found in modern text-books upon Therapeutics. In the present overflowing tide of medical literature, it affords us great pleasure to be able to recommend this edition as a thoroughly reliable and complete standard of the subject of which it treats.

A few days since we received a call from Mr. F. H. Scribner of New York, representing the well-known medical publishers Messrs. Wm. Wood & Co. Mr. Scribner informs us that his house having severed their business relations heretofore existing with A. L. Bancroft & Co., he intends to make a complete canvass of the Pacific Coast, paying particular attention to "The Reference Hand-Book of the Medical Sciences," about to be issued in from six to eight volumes. We have examined the prospectus carefully, and are happy to state that the work promises to be great practical value. It takes up all branches of medicine and surgery, treats each subject in a concise yet thorough manner, and will be an invaluable work of reference to the general practitioner.

GENITAL REFLEXES, the Result of an Abnormal Physical Condition of the Genital Organs known as Phimosis. By T. GRISWOLD COMSTOCK, M.D.

Miscellaneous.

Ninth International Medical Congress.

The Committee on Organization of the Ninth International Medical Congress, to be held in the United States in 1887; met in Washington, D. C., on November 29, 1884, for the determination of the general plan of the Congress, the election of Officers of the Committee, who will be nominated to fill the same offices in the Congress, and the consideration of questions of finance.

The following rules were adopted :

1. The Congress will be composed of members of the regular medical profession who shall have inscribed their names on the Register of the Congress, and shall have taken out their tickets of admission. As regards foreign members, the above conditions are the only ones which it seems, at present, expedient to impose.

The American members of the Congress shall be appointed by the American Medical Association, by regularly organized State and local medical societies, and also by such general organizations relating to special departments and purposes, as the American Academy of Medicine, the American Surgical Association, the American Gynæcological, Ophthalmological, Otological, Laryngological, Neurological, and Dermatological Societies, and the American Public Health Association; each of the foregoing Societies being entitled to appoint one delegate for every ten of their membership.

The members of all special and subordinate Committees, appointed by the General Committee, shall also be entitled to membership in the Congress, together with such other persons as may be specially designated by the Executive Committee.

All Societies entitled to representation are requested to elect their Delegates at their last regular meeting preceding the meeting of the Congress, and to furnish the Secretary-General with a certified list of the Delegates so appointed.

2. The work of the Congress is divided into eighteen Sections, as follows, viz :

1. Medical Education, Legislation and Registration, including methods of teaching and buildings, apparatus, etc., connected therewith.

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| 2. Anatomy. | 12. Nervous diseases and Psychiatry. |
| 3. Physiology, | 13. Laryngology. |
| 4. Pathology. | 14. Public and International Hygiene. |
| 5. Medicine. | 15. Collective Investigation, Nomenclature, and Vital Statistics. |
| 6. Surgery. | 16. Military and Naval Surgery and Medicine. |
| 7. Obstetrics. | 17. Experimental Therapeutics and Pharmacology. |
| 8. Gynæcology. | 18. Diseases of Children. |
| 9. Ophthalmology. | |
| 10. Otology. | |
| 11. Dermatology and Syphilis. | |

3. The General Meetings will be reserved for the transaction of the General business of the Congress and for addresses or communications of scientific interest more general than those given in the Sections.

4. Questions which have been agreed upon for discussion in the Sections shall be introduced by members previously nominated by the Officers of the Section. The members who open discussions shall present a statement of the conclusions which they have formed as a basis for debate.

5. Notices of papers to be read in any one of the Sections, together with abstracts of the same, must be sent to the Secretary of that Section before April 30, 1887. These abstracts will be regarded as strictly confidential communications, and will not be published until the meeting of the Congress. Papers relating to questions not included in the list of subjects suggested by the officers of the various Sections will be received. Any member after April 30, wishing to bring forward a subject not upon the programme, must give notice of his intention to the Secretary-General at least twenty-one days before the opening of the Congress. The Officers of each Section shall decide as to the acceptance of any communication offered to their Section, and shall fix the time of its presentation. No communication will be received which has been already published, or read before a Society.

6. All addresses and papers, read either at General Meetings or in the Sections, are to be immediately handed to the Secretaries. The Executive Committee, after the conclusion of the Congress, shall proceed with the publication of the Transactions, and shall have full power to decide which papers shall be published, and whether in whole or in part.

7. The official languages are English, French, and German.

No speaker shall be allowed more than ten minutes, with the exception of readers of papers and those who introduce debates, who may occupy twenty minutes.

8. The Rules, Programmes, and Abstracts of Papers will be published in English, French, and German.

Each paper or address will appear in the Transactions in the language in which it was delivered by the Author. The debates will be printed in English.

9. The Officers of the General Committee on Organization are a President, three (3) Vice-Presidents, a Secretary-General, and a Treasurer, and those elected to these positions will be nominated by the General Committee to hold the same offices in the Congress. All vacancies in these offices shall be filled by election.

10. There shall be an Executive Committee, to be composed of the President, Secretary-General, and Treasurer of the General Committee, and of four other members, to be elected by the General Committee. The duties of the Executive Committee shall be to carry out the directions of the General Committee; to authorize such expenditures as may be necessary, and to act for the General Committee during the intervals of its sessions, reporting such action at the next meeting of the General Committee.

11. There shall be a Standing Committee on Finance, composed of five members, to be appointed by the President, subject to the approval of the Executive Committee.

12. Those who are elected as Chairman of the several Sections shall be thereby constituted members of the General Committee.

The Officers elected are as follows:

President.—Dr. Austin Flint, Sr., of New York.

Vice-Presidents.—Dr. Alfred Stille, of Philadelphia; Dr. Henry I. Bowditch, of Boston; Dr. R. P. Howard, of Montreal, Canada.

Secretary-General.—Dr. J. S. Billings, U. S. Army.

Treasurer.—Dr. J. M. Browne, U. S. Navy.

Members of the Executive Committee, (in addition to the President, Secretary-General, and Treasurer)—Dr. I. Minis Hays, of Philadelphia; Dr. A. Jacobi, of New York; Dr. Christopher Johnston, of Baltimore; Dr. S. C. Busey, of Washington.

The Executive Committee will proceed at once to complete the work of organization.

J. S. BILLINGS, Secretary-General.

Washington, D. C., Dec. 1, 1884.

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Original Articles.

NOTES ON ANTISEPTIC SURGERY.

With Report of Cases Treated at the C. P. R. R. Hospital.

By THOS. W. HUNTINGTON, M. D., Assistant Surgeon, C. P. R. R. Hospital, Sacramento.*

Nearly two years ago I had the honor of presenting to this Society a brief epitome of the literature bearing upon antiseptics as applied to the surgical art. I say "epitome," for without personal experience or experiment, with no ocular proof or demonstration, I had become a convert to the theory which has lent new inspiration to surgery, and has ushered in a brighter era for sufferer and attendant alike. I then held that the antiseptic method of dealing with open wounds could no longer be regarded as experimental; and that the wonderful achievements of its discoverer had been verified by his legion of disciples.

To-night I return to the same subject, feeling assured that enough of interest has developed through a brief practical experience to warrant a continuance of the discussion.

During the past two years there are to be noted some apparent differences in materials employed and methods of procedure; but these differences relate only to details, the underlying prin-

* Read before the Sacramento Society for Medical Improvement, Nov. 18, 1884.

ciples being as rigidly adhered to now as when the famous Scotchman first announced that *in the maintenance of a permanently aseptic wound resides the true genius of the healer's art.*

The bitter and uncompromising hostility once manifested by the opponents of this doctrine has gradually faded out. The testimony and the statistics of the greatest operators have in the main silenced the batteries of its assailants. While an obscure^d dissenting voice is now and then heard, it is but a parting shot from the enemy, and Lister's axiom, that "a strict adherence to antiseptis effects a conversion of serious risk into absolute safety," is now enrolled among the aphorisms of modern surgery.

This statement forms a common bond of union between those who derive their inspiration from the tenets and the teachings of Sir Joseph, and those who draw an imaginary and unimportant line between "aseptic" and "antiseptic" surgery.

Believing that in the realm of surgery a high degree of excellence can be attained only by adding to the acquired some part of the world's acquisitions of the hour, I shall occupy no time in reviewing the theories that underlie the position I have assumed. My aim has rather been to call attention to the methods employed, lessons learned and results reached in wound treatment through an experience of a trifle less than one year.

The materials for dressing as employed at the Central Pacific Railroad Hospital are briefly:

| | |
|-------------------------|--------------------|
| An antiseptic solution, | Cat-gut ligatures, |
| Drainage tubing, | Antiseptic gauze, |
| Absorbent material, | Protective. |

To the exclusion of all other substances we have employed mercuric bichloride in solution for irrigation. Its strength has been varied from one in one thousand to one in five thousand.

A convenient standard solution can be made as follows: Mercuric bichloride and sodic chloride, of each forty grains; glycerine one ounce. This added to a gallon of water gives a solution of about one to fifteen hundred. The addition of a little table salt as above prevents the decomposition of the bichloride and the formation of calomel.

In the main this has superseded carbolic acid, and in fact for a general dressing solution, all other agents. Iodoform has numerous warm adherents. It is used in form of powder or in ethereal solution for atomization. In selected cases, such as chronic ulcers of whatever origin, we have found it a valuable

adjuvant. Its present standing among antiseptic agents, especially in gynæcology, will undoubtedly be maintained. Naphthaline has of late come prominently into notice, and is highly recommended. But the success which has uniformly attended our employment of the sublimate solution has made us loth to abandon it, even temporarily, for any of the solutions specially advocated. A two per cent. solution of chloral hydrate is a valuable acquisition in oral surgery. It ranks among the best germicides, is an excellent deodorizer, and is practically harmless if swallowed.

The process of bringing the solution in contact with a given surface is of vital importance, and merits brief notice. It can be satisfactorily and effectively accomplished only by the aid of an irrigator. This very modest and simple contrivance is an essential feature of a surgeon's outfit. Without it one can never be assured of having thoroughly accomplished his mission, and the skillful management of cavities becomes an absolute impossibility. Complete immersion of the part is effective, but even this is inferior to irrigation. The syringe is an imperfect substitute, and should only be called into requisition as a last resort. During an operation, as at subsequent dressings, the irrigator has of late supplanted the spray of Lister. The uninterrupted flow of the solution over a freshly-cut surface obviates the necessity of constant sponging, and reveals clearly to the eye of the operator the anatomical structure of the part. We employ a three quart tin bucket, with tubing, cut-off, and nozzle attached. A portable apparatus for private practice can be readily constructed from a piece of rubber tubing of required length. One end should be provided with a pipette and cut-off; the other end is to be held in a pitcher of the solution by a weight temporarily attached. When required for use, immerse the entire tube in the pitcher sufficiently elevated. Then close the cut-off and carry the pipette end to the bed-side, when on opening the faucet the fluid will be siphoned from its receptacle.

The advantages of cat-gut over silk for ligatures are self-evident. By its use we escape tedious delay in union of the interior surfaces of a wound, and avoid establishing a channel of communication between the cavity and the external air. We have used cat-gut only in a single case, but were so well pleased with the result of our experiment that we expect to adhere closely to it in future.

The proper drainage of a closed wound or suppurating cavity cannot with safety be forgotten or neglected. In the first instance, if the coagulum resulting from capillary hemorrhage be allowed to remain between the flaps or beneath the covering of a wound, perfect union of what should be contiguous surfaces is rendered an impossibility, untold agony from distension is a consequence, and the safety, if not the life, of the sufferer is openly menaced.

But it is perhaps in the treatment of chronic suppurating cavities that the greatest usefulness of the drainage-tube is realized. Having first thoroughly cleansed the cavity by irrigation, and having insured uninterrupted evacuation by the tube, the distal end of which is buried in a permanent dressing, we may fairly trust nature to come to the rescue and effect a cure through the agency of collapsed and granulating walls. For this purpose we resort most frequently to small rubber tubing, perforated at frequent intervals by an ordinary harness punch. For narrow sinuses and fistulous openings, however, we have found a few strands of horse-hair an available substitute; and a supply of it is always kept at hand, preserved in an antiseptic solution. This can be painlessly insinuated into attenuated openings, and is worn without the slightest discomfort to the patient.

The antiseptic gauze of Lister is now an accredited article of commerce, and is carried in stock by most pharmacists. As an additional guaranty of perfect asepticity, we first immerse it over night in a one-in-five-hundred sublimate solution. Then it is dried and ready for use. The result is a soft, pliable, yielding, almost silky material, pleasing to the eye, grateful to the touch, and in every respect filling the requirements of its office. For absorbent purposes there have been suggested a score or more of textures, having each its sponsor, and perhaps all are equally valuable. We have generally given the preference to oakum, specially prepared for surgeons' use. It comes to us strongly impregnated with carbolic acid, but this, like the gauze, is treated with the sublimate solution before being pressed into actual service. Acting upon the suggestion of a recent writer, our dresser not long ago provided us with some pillows of sublimated sawdust. From a limited experience in their use we incline to the belief that they are an economic, convenient and efficient substitute for oakum. Tarred jute, as prepared by Seabury & Johnson, is a most delicate and elegant fabric, but practically possesses no superiority over cheaper material.

As an outer envelope or protective we have found nothing that in adaptability or safety compares at all favorably with rubber mackintosh. In the absence of this, however, oil silk is a fair substitute. A generous piece of either material laid over a dressing can be secured firmly by a gauze bandage, and through their imperviousness give additional security to the patient.

It has been urged that the outlay involved by this detail is unwarranted, and that it gives little additional guaranty of safety. As to the expense, I am sure it is more than covered by the increased period that a wound can be comfortably and without risk left under a given dressing. I am equally certain that on account of putrefactive changes a dressing without an impervious covering would not be safe hours, where with it, it may remain undisturbed for days, or beyond the period of danger.

Approaching the second division of this discussion, while I would refrain from any assumption of censorship, I must without hesitation express my profound conviction that in the conduct of open wounds, there no longer remains for the surgeon any middle ground. No desultory, indifferent or imperfect effort at asepsis will be accepted as an evidence of good faith. The line must be sharply drawn, the policy defined and positive, and adherence to the minutiae of details must be unswerving.

If there be those who will not cordially endorse these statements, persisting in methods long since obsolete if not disreputable, they will but prolong the era of sloughing, malodorous, infected wounds, until such time as a longsuffering public shall irrevocably demand that measure of relief from pain and immunity from danger which modern scientific research has happily awarded it.

In our efforts at compliance with these requirements we were not long in discovering that there is neither necessity for inflammatory complications in wounds receiving immediate attention, nor the slightest apology for the presence of inflammatory products. This statement involves more by implication than is at first apparent, and includes all cases where there are serious integumentary lesions. Formerly it was believed that in operative wounds only, such as simple incisions, amputations, excisions and the like, were antiseptics the surgeon's strongest ally. But their sphere has been gradually broadened, until it includes extensive lacerations of soft tissues of whatever description, not excepting the exposure of large articular surfaces; compound

fractures, where the integrity of the vascular structure is preserved ; extensive burns and scalds ; ulcers, recent and chronic ; buboes, venereal and non-venereal ; carbuncles and abscesses.

The employment of antiseptics has annulled the usefulness of all surgical traditions and statistics antedating the last decade, in so far as they pertain to results and death-rates in this department of the art.

Formerly, under various methods and in the most skillful hands, from thirty to forty per cent. of major amputations were fatal ; there was a fatality of from forty to sixty per cent. in major compound fractures ; and in knee-joint excisions the fatality ranged from twenty-five to sixty per cent. In this latter estimate no attention is paid to a large percentage of subsequent amputations.

Under antiseptic management the mortality has fallen to five, six, and seven per cent. in major amputations. In compound fractures it is about the same ; and Neuber records forty-nine cases of knee-joint excision, thirty-six of which went on to complete recovery under a single dressing. He mentions no death, and we are led to infer that all terminated favorably. For these figures Dr. Robert F. Weir, of New York, is mainly responsible, and all are authentic.

One of the most delightful features of this plan is the almost entire absence of pain which it entails. Under the old *regime* we dressed all wounds once, and the more important ones twice or three times, daily. The dressings were many times stiffened and glued firmly to the skin by inspissated pus ; lint fibre became incorporated in granulating surfaces, and large poultices weighed heavily upon throbbing, sensitive areas. Each and all were torn from their moorings with a refinement of torture that would have delighted the demons of an inquisition. How different now ! Where once in a given case we witnessed from fifteen to thirty repetitions of the foregoing scenes in a fortnight, we now renew our dressings once or twice.

The gauze is found to be always moist and pliable, the paraffine with which it is impregnated being a safeguard against adhesions, and the deepest layer falls from a bright, healthy surface, painlessly, almost by its own weight. If I except a single case, I have heard in our nine months' experience fewer agonized expressions evoked by the manipulations of the dresser, than I have repeatedly heard during a single half-hour of torment under the old plan.

Again, where we once sought refuge in opium and its derivatives to insure relief and rest during the intervals of dressing, our patient, now enjoying almost absolute immunity from pain without narcotism, sleeps naturally, eats with appetite unimpaired, while his digestive organs perform their function without coercion.

What remains to be said regarding the absence of suppuration in wounds treated antiseptically, has been mainly anticipated in the foregoing. I should but multiply words in affirming that without the inflammatory process, its most important product will cease to complicate wound treatment. Where, owing to untoward circumstances, there has been exposure to infection for a longer or shorter period, superficial inflammation and suppuration may, and often does, result, even after careful irrigation and under the most perfect dressing. But the attendant drainage is received and rendered innocuous by the sublimated gauze and oakum. A second dressing renders the wound aseptic, and subsequent repair is certain and rapid. Including this latter class of cases, I shall not be guilty of exaggeration in asserting that, other things being equal, we do not now see ounces where we were once confronted by gallons of pus. The importance of this fact in our service is most appreciated in the graver lesions, such as excisions, compound fractures and dislocations, and extensive lacerations with destruction of tissues. Instead of a limb enormously swollen and distended, and in response to stimulating lotions or oft-repeated poultices, discharging a constant stream of offensive, fetid pus, the injured member is now reduced approximately to its normal condition, and the patient lies, quietly and comfortably, waiting for nature to complete her work in the compound as in the simple fracture.

The entire absence of localized septic manifestations is also worthy of note in this connection. I refer especially to adjacent cellulitis and secondary abscesses, either of which were formerly frequent, and through their effects, such as permanently impaired joints, and tendons tied down by adhesions, were a source of constant annoyance and chagrin to the surgeon. I cannot more appropriately conclude this portion of my task than by a modest endorsement of words used on a similar occasion by Dr. R. F. Weir, of New York: "The saving of life thus indicated, occurring as it now does, or ought to do, throughout the whole world, should entitle the name of Sir Joseph Lister to outrank in medi-

cine all of his century, not excepting the discoverer of anæsthesia."

From something over one hundred cases which we have treated antiseptically, of which I have notes, I have selected a few which can be reported briefly. They have been chosen specially because of their variety, and in no other respect are they selected cases. In no single instance where we have been able to carry out the prescribed details have we been disappointed. Our experience has been one of delightful surprises. And to him who is for the first time about to follow in the footsteps of *the most illustrious teacher of his age*, as to his most fortunate patient, we offer our hearty congratulations.

For the following excellent compilation and report I am indebted to my friend and assistant, Mr. H. N. Miner, who is with us this evening; and I take pleasure also in acknowledging our obligation to him for numerous hints and suggestions as to details, with which he had become familiarized before his term of service began with us:

E. C. Champion, March 3d, 1884; carpenter, æt. 36. face and scalp wound. Was thrown violently upon a steel rail, striking upon the head; wound dressed immediately by a local surgeon. On admission to hospital patient presented a ragged wound, extending irregularly from a point one inch external to outer cantus of left eye, across superciliary ridge and frontal bone, one and a half inches from junction of coronal and sagittal sutures. Entire length of wound, seven and a half inches. Lips of wound were held together by sutures. Integument was considerably separated from skull, and there was marked fluctuation beneath. The most anterior suture was removed, the scalp shaved, and antiseptic dressing applied.

March 5th.—Dressing slightly soiled; another suture removed, and about two ounces of serum and coagulum discharged; no odor; cavity irrigated and drainage-tube inserted, and re-dressed as before. From this date to the 16th, thirteen days after admission, several dressings were made, and the wound was healed. There was never any pus nor fetor, and the cicatrix was barely noticeable.

M. Neuberg, February 11, 1884; cabinet-maker, æt. 40. Had an incised wound of left hand, extending from metacarpo-phalangeal articulation of middle finger across palm, ending at little finger and extending up ring-finger to second joint. After irri-

gation an antiseptic dressing was applied. Patient then went to his home in the city. Six days later he returned. There was union throughout by first intention. Not a drop of pus had formed.

F. O'Neil, January 31, 1884; laborer, æt. 38. Was in hospital six weeks ago for indurated inguinal glands, at which time they were poulticed and laid open by free incision, discharging freely. After three weeks' treatment, though not entirely well, and with considerable induration remaining, he was discharged. On re-admission to hospital, January 31, 1884, there were two tumors in it, growing above Poupart's ligament, divided by a fibrous septum; inflamed and painful fluctuation perceptible. Each was about the size of a small egg. Both were laid open and discharged freely. After careful irrigation an antiseptic dressing was adjusted. Re-dressed four days later, and the tube omitted. Not a drop of pus in either cavity, and the induration rapidly disappearing. Seven days after admission patient was well, and induration entirely gone.

R. S. McClure, March 14, 1884; saw-mill hand, æt. 39; amputation of fingers and lacerations; injury sustained by having left hand caught in circular saw. Little, ring, and middle fingers and ball of thumb badly lacerated. Palm also torn in shreds. The following amputations were made: Little and middle fingers at middle joint; ring finger at carpo-metacarpal articulation. Palmar integument brought together by several silver sutures. Wounds dressed by the antiseptic method. Re-dressed four days later; no odor nor sign of septic infection. At the end of eleven days, March 25th, the third dressing was applied. Gauze was scarcely soiled, and union throughout perfect. Patient discharged. In this case there was never sufficient pain to require a single opiate.

R. P. Pearson, June 15, 1884; laborer, aged 47. carbuncle; Patient extremely emaciated; has a generally broken-down appearance. A tumor, size of an inverted tea-saucer (an enormous carbuncle), is present in right gluteal region. Apex abraded and giving exit to a considerable quantity of pus. Under ether a crucial incision was made throughout entire mass. Cut surfaces showed tissues infiltrated with pus. Strands of horse-hair were introduced for drainage. After careful irrigation a permanent dressing was adjusted. Five days later several masses of gangrenous tissue were removed, leaving a healthy, odorless, gran-

ulating base. The dressing was renewed at varying intervals, progress being noted on each occasion, until on July 19th, twenty-four days after admission, the patient was discharged well.

Note.—This case becomes not a little important when we consider the mal-nutrition of the subject and the great size of the suppurating surface. His general nutrition kept pace with the process of repair. I may add that this is the first case of carbuncle I ever saw treated without repeated poulticing. No pain.

W. H. McClure, April 21, 1884; ischio-rectal abscess; grader, aged 52. Trouble began six days ago, and followed closely upon being twice immersed in water. Pain and tumefaction developed in left ischio-rectal region, both symptoms now being very urgent. A free incision evacuated about three ounces of pus. After irrigation a drainage-tube was inserted, and a full antiseptic dressing applied. Nine days after entrance the cavity was wholly obliterated, external opening healed; bowels moved without pain, and patient discharged.

J. C. Cady, May 12, 1884; carpenter, aged 38; compound fracture of fingers. Left hand caught in a circular saw, causing extensive laceration of the ball of thumb, index, middle and ring fingers, with fractures of the first phalanges of the two latter into the middle joints. From each there was chipped off a piece of bone, irregular in shape, about the size of a white bean. These fragments were removed, the wounds dressed antiseptically, and the hand laid upon a palmar splint. At the end of fifteen days, and with three dressings, the external wounds were well, without a sign of suppuration, and without ever having taken an opiate.

Note.—We now dress similar wounds less often than at first, having found that no advantage is to be gained by frequent manipulation; whereas a certain amount of risk always attends exposure to the air.

P. Murphy, June 3d, 1884; compound fracture of tibia; laborer, aged 35. Left leg struck by a cake of ice, causing a compound fracture of tibia (near the spine), at junction of middle and lower thirds. The external wound was quite small, but the probe dropped readily down between fragments. Wound dressed antiseptically after irrigation; limb supported by Day's side splints and suspended.

Subsequently there was no complaint, no febrile disturbance or pain. Nineteen days later the dressing was removed for the first time. The gauze was slightly soiled over wound. No pus

nor odor, only a small superficial ulcer, size of a dime, remained at seat of wound. No further effort at asepsis, and limb dressed in the usual manner. At the end of one month from injury patient was allowed to go about with crutches.

J. J. Dolan, June 5, 1884; compound fracture of tibia into knee joint; brakeman, æt. 19. Dr. Gardner associated in treatment. General appearance and habits good. While making a coupling fell between the cars. Right leg was struck by a wheel, causing a lacerated wound five and a half inches in length along inner aspect of knee. Lower part of this wound lead down to a nearly transverse fracture of tibia, through which synovial fluid flowed freely. The upper fragment was wedge-shaped, base of wedge being in front, the line of fracture evidently extending to articular surface above. This fragment also projected in front. This deformity was corrected with some difficulty. There was also an extensive abrasion on outer surface of thigh. The main wound was a laceration extending down as a sort of *cul de sac*, almost to the popliteal space.

After thorough irrigation a drainage-tube was inserted, and an elaborate dressing of gauze and oakum applied. The limb was then laid in a posterior trough splint of binders' board, and suspended.

June 14th.—Re-dressed; gauze considerably soiled with a sanious discharge. Abrasions on outer side of thigh showed superficial sloughs of integument; drainage-tube shortened.

June 20th.—Re-dressed; considerable serous drainage, but no pus nor fetor; drainage-tube again shortened.

July 1st.—Re-dressed; wound clean and bright; no odor, nor pus; drainage-tube removed.

July 21st.—(Forty-fifth day, fifth dressing.) Limb in excellent condition; main wound reduced to a superficial ulcer, and the compound to a simple fracture. Knee-joint admits of painless motion. Patient allowed to sit up.

Aug. 2d.—(Fifty-seventh day.) Ulcers nearly well; leg easily flexed; light dressing; allowed to go about on crutches.

On three occasions only did the temperature rise to 102° ; first on the evening of the injury, and subsequently after dressings. After the twentieth day the pulse-rate and temperature were normal. Interest attaches to this case because of the wound leading down to a fracture communicating with a joint. At no time was there severe pain, nor was there evidence of inflamma-

tion about the parts involved. There were six dressings in fifty-seven days, when the patient was able to walk, entire integrity of the joint being preserved. Patient resumed work in two days less than three months from date of injury.

Richard Fisk, May 1, 1884; apprentice in boiler shop, aged 13. Right wrist caught by a rapidly-revolving drill. Radius fractured, one and a half inches from wrist, the upper fragment being denuded of its periosteum two and a half inches. This section of bone was also fractured longitudinally. Ulna separated from epiphysis. Both proximal ends protruded through integument. The wound in the integument nearly encircled the arm, taking a spiral course. Less than an inch of healthy tissue intervening between the extremities of the laceration. The soft parts beneath were badly lacerated, but both the main arteries were fortunately intact.

Assisted by Dr. H. W. Nelson, I performed a non-symmetrical resection of both bones, removing two and three-eighths inches of each. The divided ends of radius were approximated imperfectly, but not wired together, the external wound being closed by silver sutures, after careful irrigation and the introduction of a rubber drainage-tube. The dressing was made to include the hand, forearm and arm to axilla. The forearm was then laid in a binders' board splint for support. On the fifth day patient complained of pain in the little finger, and there was slight constitutional disturbance, temperature that noon marking 102° . The dressings were removed, and union had taken place throughout by first intention. No pus, redness, or swelling.

On the eleventh day the dressings were removed for the purpose of correcting a slight displacement of the hand. Sutures removed and drainage-tube shortened.

Re-dressed on the 17th, and on the 23d the drainage-tube was removed; union perfect; parts in good line; one inch shortening. June 2d, antiseptic measures abandoned, and an ordinary fracture dressing applied. From this date patient went on to perfect recovery. Discharged August 28th.

September 26th, splints removed; three days later fell, striking forearm violently on edge of a box, causing re-fracture of radius at seat of re-section. This was dressed as a simple fracture, and re-union secured.

The highest temperature registered in this case was 102° , on the fifth day, and this was probably attributable to cramped po-

sition of fingers, and a possible complication of the ulnar nerve. There were five dressings, extending over twenty-three days; but complete union of integument, save at points of exit of drainage-tube, had occurred on the fifth day.

Robert Jones, admitted January 22, 1884; carpener, æt. 31. While working on a pile-driver patient fell about twelve feet, and sustained a compound dislocation of tibia and a fracture of fibula of right leg. Tibia projected about two inches through skin. The end of inner malleolus removed. Dislocation reduced and the parts put at rest upon a posterior McIntyre splint. Extension made by means of plaster straps and a weight. Water dressings were applied, with lint for drainage.

Jan. 23d.—Complained of considerable pain; re-dressed.

Jan. 25th.—Re-dressed; drainage not very good; chill last night; temperature, evening, 103.9°.

Jan. 27th.—Slightly delirious; discharge from wound profuse, and odor offensive.

Jan. 28th.—Low delirium continues; iodoform and flax-seed meal poultices to wound.

Jan. 29th.—Delirium violent; profuse discharge of very offensive pus.

Jan. 31st.—Counter opening made over external malleolus, and wound syringed out with sol hydrg. bi-chl. 1-1000; discharge very fetid.

Feb. 1st.—Mind inactive and dull; wound again washed with sublimate solution.

Feb. 2d.—Discharge from wound still profuse and fetid; ward in which patient lies, vacated on account of fetor.

Feb. 4th.—Two inches of denuded bone protrudes; general condition unfavorable; ankle in a bad shape.

Feb. 5th.—Under ether, leg amputated at middle; antero-posterior flap. Soft parts of stump give evidence of having been involved in inflammation, and integrity considerably impaired. Careful antiseptic precautions observed during the operation and subsequent dressings.

Feb. 9th.—Four days after operation re-dressed; drainage-tube removed; parts in good condition; no suppuration.

Feb. 13th.—Re-dressed; about an ounce of pus, which was slightly offensive, dammed up in flaps; anterior flap somewhat red. The temperature after this dressing fell two degrees. Drainage-tube reinserted.

Feb. 15th.—Ten days after amputation, re-dressed ; union has taken place, except at extremities of wound ; two sutures and drainage-tube removed.

Feb. 20th.—Re-dressed ; no pus nor fetor.

Feb. 23d.—Re-dressed ; remaining drainage-tube removed ; complete union, save where drainage-tube emerged.

Feb. 28th.—Twenty-three days after amputation, patient allowed to go about ward on crutches.

Note.—The rapidity with which the stump healed is phenomenal, when we consider that the system was saturated with the results of decomposition at the time the amputation was made. This is shown by the ammoniacal urine which prevailed several days after the operation ; by the rigors, and the temperature, which oscillated between 100° and 103.9° . These symptoms subsided when the sources of infection were cut off. Five dressings were applied after the amputation, and in twenty-three days the patient was given the privilege of the ward.

E. M. Bennett, admitted October 29, 1884 ; brakeman, *æ*t. 35. Car-wheel passed over right foot. Bones of foot and ankle comminuted, and soft parts extensively lacerated ; amputation at middle of leg ; antero-posterior flap ; hemorrhage slight. Three vessels ligated with chromitized cat-gut. Amputation made under a 1-1000 solution hg. bi-chl. Careful antiseptic dressing. The shock from injury and operation was profound.

Oct. 30th.—Fourteen hours after operation dressings were soiled with blood. These were removed and wound opened ; a small muscular artery ligated. Wound closed, and a light dressing of gauze applied.

Oct. 31st.—Removed gauze, and put on a more elaborate dressing.

Nov. 3d.—Re-dressed. There is union, except where tube emerges.

Nov. 8th.—Re-dressed. One-half of drainage-tube and all sutures removed.

Nov. 11th.—One and a half inches of drainage-tube removed through an incision in dressing.

Nov. 13th.—All of tube removed.

Nov. 14th.—Re-dressed. Union throughout.

Thus far there have been five dressings made, including the one after secondary hemorrhage occurred. Union had taken place, except at points of entrance and exit of drainage-tube, on

the fifth day, and complete union on the 16th day. The highest temperature, 102.6° F., was attained on the sixth day, and then after a slight malarial chill. Under antimalarial treatment the temperature fell the next day to 99.8° F., and there has been no elevation since, nor increase in the pulse-rate.

LITHOLAPAXY AND REPORT OF CASES.

By GEORGE CHISMORE, M. D.

[Read before the San Francisco County Medical Society.]

When in January, 1878, Professor Bigelow, of Boston, gave to the world through the pages of the *American Journal of the Medical Sciences* his operation of Litholapaxy, such was the weight of his influence and merit of his method that it was speedily adopted, both in the United States and England, by leading surgeons, in diseases of the urinary organs, with so much success that it is to-day the chief reliance for removing vesical calculi.

Some thirty years ago Heurteloup had grasped the same idea, but he did not present it in such a shape as to gain general acceptance. Others at various times made progress in the right direction. Old instruments were improved and new ones invented; the proportion of cases of lithotripsy increased—notably in the hands of Sir Henry Thompson; but until the admirable paper of Dr. Bigelow was published, lithotomy was resorted to in the great majority of cases, and the removal of a stone at a single sitting was a kind of happy accident instead of the result of a deliberate plan.

His distinct enunciation of the principle that the operation should be prolonged until all the calculus was removed, the excellent instruments of his design, the minute detail of his method of using them, and the clear report of his cases, made his paper a model worthy of the highest praise.

The times were ripe for the discovery; anæsthesia had smoothed the way; the new standard of the capacity of the normal urethra, announced and demonstrated by Prof. Otis, of New York, disposed of one of the most formidable obstacles that had hitherto confronted the lithotrotist; still, the achievement was a brilliant one, and though many pages have been written to prove that but small credit is due to Prof. Bigelow, he will always be remem-

bered as the author of the greatest advance of modern time in the treatment of stone, and his name will lend a luster to the annals of American surgery.

The operation has now been on trial six years, and the increasing mass of statistics in its favor make it reasonable to predict that it will in the future displace lithotomy in almost all cases where the urethra is or can be made large enough to admit the necessary instruments.

The mode of operating is as follows: Anæsthesia is required in all but the easiest cases. Place the patient on the operating table in the lithotomy position; the bladder should be moderately full; if the urine bears much pus or mucus it is better to draw it; wash out with a warm solution of bi-borate of soda, and then inject from four to six ounces; the lithotrite, warmed and well anointed with vaseline, is passed gently. When the beak is well within the bladder, search is made for the stone; when felt, the jaws are carefully opened and then turned towards it; slowly closing, the stone is groped for until it is within the grasp. Holding it lightly, the operator moves it to and fro until he is sure that no portion of the bladder is included; he then carries it to the center of the viscus and applies the screw. After the first crushing, search is made for fragments, which are treated in the same manner. During this process redoubled care is needed to avoid pinching the soft parts. When a piece is found, others should be sought for in the same locality, as they are all apt to gravitate to one point. Most fragments can be crushed without the screw, and by doing so time is saved, and a surer touch secured. If the manipulations provoke contraction of the bladder, a narrow, thin, rubber bandage around the penis will prevent the urine from being expelled alongside of the lithotrite. When pieces can no longer readily be found, the instrument is withdrawn and a catheter as large as will pass inserted. The aspirator, filled with a solution of bi-borate of soda, of proper temperature, is then attached; the operator compresses and relaxes the bulb, at the same time moving the point of the catheter in the bladder until he finds a place which yields debris freely. When no more can be obtained the tube is withdrawn, search made, and crushing and pumping repeated until no stone can be detected.

Changing the position of the thighs, raising or lowering the hips by means of folded blankets, will often facilitate the collect-

ing of fragments. Diminishing or increasing the amount of fluid in the bladder may cause the aspirator to work better. The stethoscope will sometimes aid in detecting "last pieces."

After the operation the patient should be put to bed, and hot applications made to the hypogastrium, and an opiate given if needed. He should be kept in bed until pain, soreness and febrile movement are gone.

It is surprising how quickly all symptoms disappear if the bladder be quite cleared, and how small a piece will retard relief. If within a few days the urine becomes frequent, shows considerable pus or mucous, and the patient believes he "feels a piece," a search will be almost sure to find one, which should be removed with as little delay as possible.

The operation is by no means a brilliant one to witness. It is a tedious groping in the dark. It makes large demands on the surgeon's patience, but if he keeps his head, has a gentle hand, a good sense of touch, and some mechanical tact, he may hope to be rewarded with a very gratifying success. The percentage of mortality is not yet established, varying greatly with different operators. Sir Henry Thompson lost four in his last reported 121 cases. It is safe to assert that taken as a whole it falls far below that of lithotomy.

Experience has led to many improvements in instruments, particularly in aspirators. One of the latest, Prof. Otis' of New York, will be shown you to-night. The slight modification in the shape of his catheters makes them far easier to pass than Dr. Bigelow's. The pump works with great ease, and is much less painful to the patient. In a letter recently received from Prof. J. D. Bryant, of New York, a most valuable implement is foreshadowed—an aspirating tube and crusher combined. When it has taken shape, it can hardly fail to be of great assistance to the operator in the most difficult work of removing the last pieces.

Early in 1881 I had the honor of presenting to this Society the first case, so far as I am informed, of litholapaxy performed upon the Pacific Coast. Up to this date I have made the operation in eight cases, at eighteen sittings, seven of which were in the first case, as formerly reported. In no instance has there been a fatal result, nor have any consequences of an untoward nature (attributable to the operation) followed.

It has been suggested that a selection of typical cases might

not be without interest. Three will be presented, the first as grave as can well be imagined, the second as simple as is likely to be met, and the third an average one, interesting mainly on account of its complications:

CASE I.

J. C., æt. 68, American; gunmaker; habits good; has been suffering frightfully for several years; lost the power to pass water three years ago, and has depended on the catheter entirely since. About that time he underwent an operation for hemorrhoids, and not finding his vesical distress relieved, has steadily refused to be examined, and has taken all the nostrums that he could procure. Has been confined to the house nearly three years, and has had a nurse day and night for the last year and a half. Was unconscious twenty-seven hours a week ago from urinic poisoning. Present condition: emaciated to the last degree; feet and ankles enormously swollen; skin stretched like parchment over the face, neck, and upper extremities; lies in a partly delirious state, from which he can be roused so as to answer intelligently. Every twenty minutes by the clock, which he has placed near his bed, he, with the assistance of the nurse, rises to his feet and passes the velvet catheter, drawing about an ounce of horribly putrid urine. He screams with agony while it is flowing, and nearly always passes a small squirt of fecal matter from the bowels. He then falls into an uneasy slumber for a few minutes, awakening to repeat the process, day and night. He is very childish, very loth to have an examination, and altogether presents the most pitiful example of human suffering it has ever been my lot to witness. I saw him for the first time professionally on the evening of September 10, 1881, and in despite of his opposition, made an examination and came upon a large stone.

On the morning of the 11th he was placed under ether, and Bigelow's operation made. Dr. Jas. Rasbach and Dr. Sutter were present and gave me their valuable assistance. The operation was a tedious one, owing to the size of the stone—nearly 1,000 grains, dry—and occupied two hours and forty minutes. He bore the ether well, notwithstanding marked aortic valvular deficiency was present, and the kidney evidently very badly involved. He rallied without delay, and was delighted to see the cause of his long suffering.

There was singularly little shock or febrile movement from the operation, and the greater part of his sufferings were abated. He never recovered the ability to empty the bladder without a catheter, but the urine became clear, of normal odor, and the proportion of albumen became quite small. Ten days after the operation a careful search failed to detect a fragment, nor did he pass a single grain of sand. He could retain the water from two to three hours, but if he saw the clock the old habit of passing the catheter at his usual time would take hold of him. He could do it while lying in bed, however, and the bowels no longer moved except in a natural manner and at proper intervals.

Although the necessity of daily washing the bladder was impressed upon him, he gradually neglected it after his nurse was discharged.

He gained weight and strength, was up and about, and enjoyed life fairly. After the lapse of a year vesical irritation again set in, and Dr. Rasbach found and removed a small phosphatic calculus, and at the end of another year he again discovered and removed another, the two weighing 130 grains, dry.

In view of careful search having failed to detect a fragment ten days after the operation, and that by reason of the diseased state of the bladder, absolute dependence on the catheter, and failure to wash out the viscus regularly, the conditions were exceedingly favorable to the formation of stone, the opinion is advanced that the calculi subsequently removed by Dr. Rasbach were new deposits. After the last operation a further improvement was noted; he attained a weight he had never reached before, and expressed himself as confident that his malady was cured.

In January, 1884, he caught a cold, which was followed by acute nephritis, with suppression of the urine, and he succumbed to uremic poisoning after a few days' illness.

CASE 2.

D. H. W., æt. 45; American; merchant; came under my care in September, 1883; had been subject to severe attacks of pain in the bowels for years; noticed a few drops of blood in the urine after severe exercise; micturation rather frequent. Had been under treatment for dyspepsia and stricture, and it was in regard to the latter that he sought my advice. On examination could not detect any abnormal narrowing of the urethra, but

easily made out a stone. No preparatory treatment being needed, on the 24th of September, 1883, with the assistance of Drs. C. E. Blake, John Wagner, and W. S. Whitwell, the stone was removed by the Bigelow operation. No ether was given. The operation lasted about forty minutes. The calculus was a pure oxalate of lime, and weighed about seventy grains, dry.

Most of the fragments were washed out by Bigelow's catheter attached to a reservoir by a three-cock way-cock, the water entering by gravity and being expelled by the contractile force of the bladder. No trouble followed, and the patient was at his business on the fifth day.

A search was made on December 6th, 1883, and a small fragment weighing eleven grains, dry, was found, crushed and removed without an assistant.

I have heard from the patient from time to time to date, and he remains free from any cystic difficulty.

CASE 3.

G. M. S., æt. 55, American; accountant; habits good; twenty years ago he had a small mulberry calculus removed from the urethra by forceps, after it had been impacted for a month or more. He soon regained his usual perfect health. Some three years since he began to suffer from frequent micturation, and an eruption of Psoriasis Areata made its appearance on the inside of the thighs, from which it gradually spread until it involved the greater part of the abdomen, thighs and legs. His sufferings increasing, he consulted a number of surgeons without relief. He came under my care about eighteen months since, and though suspecting stone, a search—imperfect, on account of extreme tenderness—failed to detect one. A traumatic stricture in the pendulous urethra at the point where the calculus was formerly impacted, was found, admitting a No. 10 Van Buren. This was dilated to fourteen by the gradual method, when so much irritability occurred that treatment was temporarily omitted. After the irritation subsided he was so much better that he ceased attendance.

On my return last August he came to me in a worse condition than ever. He had had the stricture divulsed by a surgeon of this city, and after the operation had suffered more than before, so that "life became a burden."

After a few days' preparatory treatment a thorough search was

made, and a stone found. Gradual dilatation of the stricture, which was resentful and resilient, to No. 15 Van Buren, was made, and the patient put on the Bartlett Springs water, which I have found serviceable in similar cases. On November 12th, 1884, the patient was put under ether by Dr. W. S. Whitwell, and litholapaxy made. Drs. L. O. Rodgers, H. H. Gardiner, G. H. Nuttall and N. J. Martinache were present, and lent me their valuable assistance. The stone was easily caught and crushed, but owing to the small size of the aspirating tubes that would pass the stricture, the removal of the debris was tedious. The bulb of the aspirator (Bigelow's) split during the operation, but by holding the edges together I managed to remove in all 630 grains, dry, of a phosphatic calculus. The operation lasted two hours, and the patient rallied without an untoward symptom. There was slight febrile movement the next day, temperature rising to 100°, but the second and third he was so free from distress that on the fourth day he resumed his business.

After a week or so he began to feel distress once more, and on December 6th search revealed a fragment, which was crushed and aspirated without ether or an assistant. The piece weighed twenty-eight grains. On the 17th he passed several fragments, weighing in all seventeen grains, and on the 20th of December I found, crushed and removed forty grains more. On the 29th of January he was etherized, a small fragment crushed and washed out with Dr. Otis' aspirator. Since then he has lost all feeling of distress in the bladder, passes urine once during the night, and holds it three or four hours during the day without discomfort. The Psoriasis is fading rapidly, and the general health is excellent.

DR. HERMAN KNAPP, the well-known oculist of New York city, has lately paid a visit to this coast. On March 19th, he delivered a very interesting lecture at the Cooper Medical College on the relation of eye disease to general medicine, which was listened to by a large number of the medical profession of the city. During Dr. Knapp's stay, a dinner was given in his honor by the Society of German Physicians.

SOME FORMS OF LARYNGEAL TUMORS.

By DR. J. D. ARNOLD.

[Read before the San Francisco County Medical Society.]

As a prelude, allow me to amend slightly the title of this paper as announced on the notices. It should read, "Some Forms of Laryngeal Tumors," since it is my intention only in so far to touch upon the broad, general subject of tumors of the larynx as may serve to introduce several interesting cases that I am to present to your notice this evening.

Before the introduction of the laryngoscope into medical practice, the diagnosis of intra-laryngeal growths was of necessity largely a matter of guess-work. Thanks, however, to the mechanical ingenuity of Garcia, and to the patient investigations of Tuerck and Czermak, who share the honor of bringing the instrument to its present state of usefulness, the living larynx has become readily accessible to visual examination and to instrumental treatment. To Bruns is due the credit of having first recognized and removed with the aid of this contrivance, a laryngeal tumor per *vias naturales*; and in the comparatively short time that has elapsed since the first practical demonstration of the instrument, there has arisen a voluminous literature on surgical diseases of the throat. What the ophthalmoscope did for diseases of the eye, has been done by the laryngoscope for diseases of the air passages.

Of all adventitious growths which make their appearance in the larynx, by far the greater number belong to the order of connective tissue neoplasms, and are developed from the connective tissue of the mucus membrane and sub-mucosa. Of these the most common variety is the papilloma, formed from the superficial layers of sub-epithelial connective tissue, and accompanied by hyperplastic growth of the epithelium itself. Fauvel states that of 343 cases of growths observed by him, 61 % were papillomata. Mackenzie found among 100 cases of benign growths, 67 of this character. The tables of Oertel, Klebs, Bruns and others agree substantially with those of the above-mentioned authors. The peculiar warty, fibrillated appearance of the papilloma, its reddish-white color, and loose, pliant attachment, make it easy of recognition and removal. Its favorite seat

is upon the vocal cords in the vicinity of the anterior commissure. Its histological character is exceedingly simple and constant. An excrescence of the connective tissue, consisting principally of prolonged papilli, surrounded by new formed capillary network, covered by hypertrophied epithelia. Papillomata evince a disposition to spread superficially over contiguous structures, and unless radically removed have a strong tendency to recur in very short time. Lipoma of the larynx is seldom observed. I have once removed from the edge of the epiglottis a growth which from its laryngoscopic appearance seemed to be a simple retention cyst, but upon careful examination it proved to be largely composed of fat globules held in a trabeculum of fibrous tissue. Sarcomata occur somewhat more frequently. In the above-mentioned table of Mackenzie three cases of this character are recorded. Foulis reports the excision of a large papilloma which soon after the operation recurred as a spindle-celled sarcoma.

It has often been denied that adenomata are ever met with in the larynx, but Mackenzie and Maudl both state that they repeatedly found evidence of glandular structure in papillomata removed from the ventricular bands.

Retention cysts are very common, and have their seat oftenest upon the false cords or project from the ventricles, both of which structures are very rich in muciparous glands. They have usually a very thin covering of mucous membrane, and are often evacuated spontaneously.

The true polypus—namely, a circumscribed hyperplasia of the mucous membrane and submucosa, in which all the elements of these tissues take part—is not common, although they form a large proportion of the cases reported by German writers, who for the most part include under this category all growths with a narrow pedicle.

Carcinoma may originate in the larynx, but more frequently invades this organ by extension of the disease, either from the cervical glands, the pharynx, or œsophagus. Both epithelial and medullary carcinoma are observed, but Waldeyer is of the opinion that the epithelial is the primary form in this region, and that the medullary cancer is developed from it through degenerative changes. The inter-arytenoid space and the ary-epiglottic folds are its points of election. The disease is first recognized as a hard, nodulated swelling, with ill-defined margin and covered

by highly hyperæmic mucous membrane. The tumor seldom breaks down until quite a large track is involved in its growth, and then only superficially. Such ulceration is distinguishable from a like destruction in syphilis and tuberculosis by the slowness of its advance and the character of the slough. As to the comparative frequency of cancer in the throat, in Fauvel's 343 cases, fourteen were of this nature.

The etiology of throat tumors is a very obscure subject, and the impression that specific cachexiæ favor their development is not borne out by general experience. Certain it is, however, that papillomata and polypi are, almost without exception, preceded by oft-recurring catarrhal inflammation of the laryngeal mucus membrane. The symptoms presented by growths in this organ are of course referable to the disturbance of the important functions which it has to perform. Dysphonia, as is to be expected, constitutes the most frequent common symptom, and, as will be seen from the cases about to be detailed, it is usually for the relief of this annoyance that the patient first seeks medical assistance :

CASE I.

Mrs. S., aged 32, came to me May 24th, 1884, with the following history: About four months ago she had found herself growing hoarse, and attributed it to the continued strain of voice in talking to her cook, who is very deaf. The cook was discharged, but her voice became gradually worse, until now it is a not very musical baritone. She finally went to her physician, who sent her to me for a laryngeal examination. The mirror disclosed a papilloma about the size of a large pea, upon the upper surface of the left cord. The growth had the characteristic warty appearance and seemed very white in comparison with the deep purple of the congested vocal bands. The patient was informed of the nature of her trouble, and expressed herself as ready for an operation. Her larynx was practiced for a few days with the metal probe, and the growth removed with Voltolini's ramonneur. Fortunately it proved very friable, and only two introductions were necessary to clear the cord. The former seat of the tumor was touched every other day with fused chromic acid, and on June 14th patient was discharged with a clear and normal voice. To the date of this writing there is no evidence of recurrence.

CASE 2.

Mrs. D., a very stout, middle-aged woman, consulted me on May 16th. Patient speaks only in a faint whisper, and has a peculiar sighing respiration. She says for many years her voice had been harsh and like a man's, but since the latter part of February she has lost her voice altogether. She acknowledges having had syphilis at the age of 18, at which time her throat was affected; had gone through a thorough course of treatment in a hospital in France, but thought her present trouble was due to some recurrence of the original disease. On examination I found the whole pharynx covered with stellate cicatrices; the larynx was normal in color, but the vibrating edge of the left cord was deeply serrated, and near the anterior commissure there floated a small pediculated polypus, which disappeared below the glottis at each inspiration, and was thrown forcibly upward at each expiration. An operation was advised. Patient declared herself unequal to it unless chloroform might be given. At all events, she wished to first consult her husband, who was absent from the city. Pending the family consultation I prescribed the proto-iodide, one and a half grains daily, and advised her to see me frequently, that she might become accustomed to the introduction of instruments into the larynx. She finally consented to an operation, but still insisted on having chloroform. I explained that it was impossible to give a general anæsthetic, and determined to use Schrötter's method of local anæsthesia.

On June 2d this method was carried out in the following manner: In the morning at ten o'clock the larynx was pencilled with chloroform twelve times, at intervals of three minutes; then a 16 % solution of muriate of morphia was used with the brush five times at fifteen minute intervals. At three o'clock in the afternoon the applications of chloroform and morphia were repeated, and in a half-hour thereafter the throat was almost completely anæsthetic. The tumor was removed in two pieces with Schrötter's forceps, and its base thoroughly cauterized with fused nitrate of silver. On the next morning, when the anæsthesia had completely worn off, the patient's voice returned as if by magic; it was of a gruff character, however, because of the loss of substance on the edges of the vocal chord—an effect of former specific disease. To effectually guard against recurrence, patient was kept under observation for six weeks, a 12 % silver nitrate solution being used twice a week.

CASE 3.

Mr. B., aged 62, sent to me by Dr. Mouser; seen first Aug. 3d. Patient relates the following: More than a year ago was first troubled with a feeling of stiffness in the throat, which became very pronounced at every attempt to swallow. After awhile both swallowing and speaking became painful. Took various patent medicines without relief; and on the advice of a druggist made a voyage to the Sandwich Islands. Derived no benefit from the sea voyage, and before his return a sloughing sore made its appearance on the base of his tongue. Noticed also at this time that the glands under his jaw had become hard and painful to the touch. Went again to the druggist, who after exhausting his armamentarium, finally sent him to a physician. The patient's voice was hoarse, articulation labored and indistinct, and his breath very offensive. Frequently during his narrative he had occasion to spit up a thick, frothy mucus, profusely streaked with blood. The laryngoscope showed the whole right side of the larynx occupied by a nodulated sloughing tumor, which involved the arytenoid, the ary-epiglottic fold, the right hyoid fossa, and nearly one-half of the base of the tongue. The growth was hard to the touch, and its manipulation with the sound brought on copious bleeding. The throat was sprayed with a solution of tannic acid, and iodoform freely insufflated upon the sloughing surface. I told the patient's wife that the tumor was cancerous, and the only procedure that offered any promise of benefit was excision of the larynx. After explaining fully the great danger of this operation, they decided to let nature take its course. A few weeks after the last consultation I learned that nature had taken her course, under the kindly guidance of a magnetic healer.

CASE 4.

Mr. P., æt. 26; June 4th. Has been gradually losing his voice since the last Christmas holidays, at which time he had a slight attack of bronchitis. His voice is now very indistinct, and he has frequent paroxysms of suffocative cough. For four months had been under the treatment of a specialist, who diagnosed chronic laryngitis; treatment, steam inhalations. Upon examining his throat with the mirror, the larynx, save some slight hyperæmia, seemed normal; but when phonation was at-

tempted, there appeared in the chink of the glottis a pear-shaped polypus, as large as a small marble. The growth had its attachment just below the rima glottidis, in the fissure of the thyroid cartilage, and only made its entrance into the larynx upon forced expiration. The situation and pendulous insertion of the polyp explained the occasional suffocative attacks, which happened whenever the growth became engaged between the edges of the vocal cords. Mr. P was delighted to learn that the cause of his trouble was removable, and on the 7th of June I abscised the bulk of the tumor with the tube forceps. A small portion of its neck was left behind, and this was removed by a second operation two days later. Fused chromic acid was employed to destroy its base, and on June 28th patient was discharged entirely well.

CASE 5.

Mr. M., German laborer, aged 30. Has been hoarse—almost voiceless—for many months; breathing loud and asthmatic. Never had medical treatment, but he used inhalations of Friar's Balsam. November 23d the whole lumen of the larynx appeared filled out with broad papillomata; no view of the cords possible. Patient's throat is very sensitive, and the mirror can only be used with difficulty. After five or six days' practice with the sound, the tumor was discovered to consist of three distinct growths, springing respectively from the right and left vocal band and the cushion of the epiglottis. The patient was very nervous and sensitive, and in spite of a free use of astringent sprays, no attempt could be made to remove the growth with forceps. The ramoneur was used frequently, with the effect of getting away many small fragments, which, however, were rapidly regenerated. The reports of the use of cocaine as an anæsthetic about this time determined me to try it in this case. In December I was fortunate enough to get an ounce of the 4 % solution. After using nearly a half drachm of the solution, I was enabled to put an instrument into the larynx without producing spasm of the constrictors. This being my first experience with the drug I was afraid to use a larger quantity, and therefore did not get so complete an anæsthesia as was desirable. Two large masses of the growth were removed with Mackenzie's forceps. On the next day a third piece was excised with the same instrument. The attachment of the growth proved so broad that it was found impossible entirely

to clear the cords. It continued to show a strong tendency to recur, in spite of frequent employment of the ramonneur and chromic acid. The patient's voice is, however, much improved, and he declines further treatment.

I wish to say just a few words concerning the different modes of operating. Much stress was laid at one time upon the dangers of operations in the larynx, from hemorrhage into the bronchi, and from reflex spasms of the constrictors. These dangers a wider experience has demonstrated to be almost wholly chimerical. Tumors in this organ are never very vascular, and the bleeding from wounds in it is always too insignificant to be taken into account. The reflex spasm is an accident almost exclusively confined to hysterical woman, and can always be overcome by draughts of cold water, or in extreme cases by the laryngeal catheter. In operating in the larynx it must be borne in mind that it contains an area of reflex action whose irritation produces powerful excitement all along the course of the vagi. This region is situated at the inter-arytenoid space. Due caution being given to the inversion of the laryngeal image in the mirror, this spot is to be especially avoided; the practiced hand, in fact, finds no difficulty in guiding the instrument so as not to touch any part of the larynx save just that point which is to be the object of attack. All instruments must be warmed before introduction, because the air passages tolerate them much better in that condition. The employment of *fixateurs* for the epiglottitis, so warmly advocated by some writers, is absolutely unnecessary. In all cases except very sensitive subjects a few days' practice with a whalebone sound will be found of much greater assistance.

The question whether the removal of large growths should be attempted through the natural passages rather than through a division of the thyroid, must be answered emphatically in the affirmative, for all cases except carcinoma; and in carcinoma it is unfortunately not only the tumor which is to be removed, but the tumor plus all that portion of the larynx involved in the malignant disease. As Bruns has well said: "The removal of a growth by thyrotomy is never justifiable until an expert laryngologist has attempted and failed to remove it *per vias naturales*." Such occasions will be found very few indeed.

As to the instruments which various surgeons have devised for intra-laryngeal operations, their name is legion. Covered knives,

guillotines, ecraseurs, forceps, etc., of infinite pattern. The strong, crushing forceps of Mackenzie, the tube forceps of Schrötter, and Voltolini's ramonneur furnish an armamentarium equal to all emergencies. Of these, for reasons that become obvious on comparing the instruments, Schrötter's forceps is perhaps to be chosen for the greatest number of cases.

In dealing with malignant growth in the larynx, one is opposed by exactly the same unfortunate state of affairs as accompany this dread disease in other organs. We have not to deal with a circumscribed tumor, but rather with a diffuse cancerous infiltration with foci rather widely separated. The formidable operation of excision of the larynx has been adjudged unjustifiable, from the appallingly small percentage of recoveries. The whole literature of this operation has lately been reviewed by Cohen and Von Burow, and they both declare that it may not be classed amongst legitimate surgical procedures. What remains, therefore, to be done, in such cases? The continuous pain is to be met by morphia, liberally given; if dyspnoea becomes pronounced, a tracheotomy may be done; and if, as often happens in the closing scenes, death becomes imminent from starvation, a gastric fistula may be established; and thus, with these miserable make-shifts for the natural operations of life, medical art does its utmost to spin out for the dying wretch his moiety of suffering existence.

THE WORD "MICROBE."—In a paper read by M. Charles Sédillot, of Strasburg, in February, 1878, on the application of M. Pasteur's discoveries to surgery, the word was used for the first time. He suggested *microbe* (from *mikros* and *bios*). In replying to M. Sédillot, M. Pasteur used the new word twice; and the day afterwards it had been adopted by scientific men, then taken up by the general public. M. de Parville, writing on the subject in the *Journal des Debats*, says he was present at the birth of the word, and that it came into existence "in the hall of the Academy of Sciences, one Monday in February, at half-past four in the afternoon, just as it was getting dark."—*San. News*.

DR. G. A. WHITE, County Physician, and who has charge of the hospital, and Dr. J. H. Parkinson, City Physician, in charge of the Dispensary, at Sacramento, have both been reappointed for a term of two years.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, Feb. 10, 1885.

The meeting having been called to order by the President, and the minutes of the former meeting read and approved, the Committee on Admissions reported favorably upon the credentials of P. H. Flood, M.D., Georgetown College, D. C., 1874; B. Marshall, M.D., College of Physicians and Surgeons, New York, 1860; Eleonora S. Sherman, M.D., University of California, 1884, who were forthwith elected to membership.

Dr. Chismore then read a paper on Litholapaxy.

[Reported in another part of this journal.]

At the conclusion of his paper Dr. Chismore exhibited the different instruments used in the operation, and expressed his preference for the aspirator and catheter of Otis over those of Bigelow, as the fragments are apt to be retained in the rubber bulb of the latter instrument and carried back into the bladder, whilst the mucous membrane is occasionally sucked into the eye of the catheter. Great difficulty was very often experienced in passing Bigelow's straight catheters, but this has been overcome by the adoption of well-filled obturators, as suggested by Dr. Chismore some time ago, as well as by an important modification of the beak, which still practically leaves the instrument a straight one, as the curve is beyond the eyelet.

On the motion of Dr. Morse the thanks of the Society were given to Dr. Chismore for his interesting paper.

Dr. Frisbie reported a case of fracture of the skull in a boy aged eight years, who had been run over by a four-horse truck, that inflicted a scalp wound on each side of the head, and a depressed fracture of the left parietal bone. There was considerable separation of the scalp and periosteum from the bone, as the child had been dragged for some distance. After removing a three-quarter inch button by means of the trephine, the remaining portion of the bone regained its proper level, and the dura mater was found to be intact. The wounds were cleaned with a weak carbolic solution, the edges held in apposition by silver sutures, and dressed with compresses of absorbent cotton and a

hypnotic administered. Drainage was established by means of a small teat at the point of trephining. The patient was kept on a low diet, chiefly milk; the bowels were kept regular; and he recovered without a bad symptom, five weeks after infliction of the injury.

The Secretary next reported that the following members had failed to sign the Constitution within four weeks of their admission into the Society, and had therefore forfeited their membership: C. Blach, A. Barkan, Jas. W. Blake, W. A. Douglas, Jas. Keeney, R. A. McLean, Wm. F. McNutt, R. W. Murphy, M. A. McLaughlin, J. F. Morse, M. Regensburger, J. Rivas, A. G. Soule, Benj. Swan, J. Wagner, Jas. D. Whitney, K. P. Van Norden.

As all these members were otherwise in good standing, he moved that they be now allowed to sign the Constitution, and date their signatures from the time of their admission into the Society.

Dr. Kenyon seconded the motion, which was passed by the Society.

The Secretary asked permission to have the names printed on the certificates of membership at the expense of the Society, which was granted.

As Dr. Simpson was not present to move for re-consideration of the motion changing Article 16 of the By-laws, the matter was dropped.

Dr. Plummer then suggested a scheme, to take the place of all others, for the establishment of permanent apartments for the Society. He advised that the Society increase their present bank account to \$8,000 by contributions, and with this buy a lot in a central locality. The lot might then be mortgaged for sufficient money to erect a building, part of which would be used by the Society, and the remainder rented to other organizations. He offered to subscribe \$185 towards the project.

This was supported by Drs. Whitwell, Jewell, Kenyon and Morse, while Drs. Cole, Cachot and Soule opposed it, on the grounds that it was too large a project for the Society to entertain without endangering its own welfare.

SAN FRANCISCO, Feb. 24, 1885.

The meeting having been called to order by the President, and the minutes of the former meeting read and approved, Dr.

Harry M. Sherman, graduate College of Surg. and Phys., New York, was proposed for membership by Drs. Whitwell and Kerr.

The name was referred to the Committee on Admissions.

Dr. Arnold read a paper entitled "Some Tumors of the Larynx," for which he received the thanks of the Society.

Dr. W W Kerr reported a case of secondary hemorrhage occurring on the fifth day after excision of the tonsil. The child had not shown any other traces of hemorrhagic diathesis, but this existed in two aunts on the father's side. It was arrested by the application of Monsell's salts, the use of a styptic gargle, and keeping the patient in bed.

Dr. Arnold said that the case was a very unique one, as he only knew of other five recorded cases. He had no doubt that the cause lay in the hemorrhagic diathesis of the patient.

Dr. Soule did not think that the diathesis had anything to do with it, but that the cause existed in the diseased condition of the tissue, as Dr. Kerr reported that the excised tonsil had on more than one occasion been the seat of abscess formation.

Dr. Arnold replied that there was no doubt that a hemorrhagic diathesis existed, and referred to the record of a case in which a Jewish family obtained dispensation from the rite of circumcision, as three or four of its members had nearly died from hemorrhage following this operation.

Dr. Simpson had seen two cases of hemorrhage following excision of the tonsils on the third day, which was controlled more by reducing the force of the heart's action than by styptics. He was a thorough believer in the existence of a hemorrhagic diathesis, and that it is hereditary. He knew three members of one family who always bled excessively after the extraction of a tooth. In one instance this went on for five days, and was only arrested by an application of the actual cautery. If no hereditary tendency existed, why had we so many members of the same family thus affected?

Dr. Soule replied that he did not mean to express any doubt in the existence of this diathesis, but he thought that in this case the low vitality afforded a sufficient explanation. He believed that habits rather than heredity had to do with the formation of the different constitutions.

Dr. Jewell could not agree with Dr. Soule when he stated that heredity played such an unimportant part. His experience in the treatment of patients addicted to alcoholism proved the op-

posite. He instanced the case of a child, now four years old, whose father and grandfather had both been victims of intemperance, and the child from its earliest years had shown an inclination for alcoholic drinks; so much so that it had been known to drink yeast when carrying it home to its mother.

Dr. Barkan said that night-blindness had occurred in a Parisian family in the sixteenth century, and that 126 of the descendants had been afflicted by the same disease.

There being no further business the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

Sacramento Society for Medical Improvement.

Sacramento Society for Medical Improvement met in regular session November 18th, 1884, the President, Dr. W. A. Briggs, in the chair. Present: The President, Drs. Simmons, Cluness, Tyrrell, White, Snider, Nixon, W. S. Briggs, Huntington, Væller, Nichols, Laine, Brune and Parkinson; and Drs. Nelson, Magill, Harkness and Handy, with Messrs. Hartley and Miner by invitation.

The minutes of the previous meeting having been approved, the President introduced Dr. Magill, who exhibited a case of "Myxœdema" following erysipelas, and gave the history of the attack.

Members present expressed their opinions on the case, the general sense being that the condition depended on phlebitis and lymphangitis, set up by the erysipelas.

DISCUSSION ON DR. HUNTINGTON'S PAPER.

Dr. Tyrrell thought that the Society was under obligations to the doctor for his valuable and interesting paper, as well as for his demonstrations of methods.

Dr. Harkness agreed with Dr. Tyrrell.

Dr. White, with those who had spoken, must express his allegiance to Listerism; was very glad that Dr. Huntington had reviewed the subject.

Dr. Cluness would express his belief in Listerism, and would say that while the question was still *sub judice*, he had unqualified confidence in it. He did not think that Lawson Tait, with

Savage and others, were justified in maintaining that cleanliness alone would attain the same results as a germicide.

Dr. Brune believed in the methods of Lister, and thought that many of the objections urged against Listerism in its incipiency had now been removed.

Dr. Simmons, though believing in antiseptic surgery, yet while the doctor was reading remembered case after case in the pre-antiseptic days where like success obtained. These results were attained in California, and were truly remarkable. Had been in the habit of using alcohol, and had found even in the past year that this, coupled with cleanliness, had allowed severe wounds to heal without an untoward symptom. Did not mention this as opposing Listerism, as he believed in it, particularly in hospitals; but in private practice it was not so easy to carry it out.

Dr. Laine fully agreed with the principles of antiseptic surgery. With Dr. Simmons, could also recall cases where amputations of limbs and organs had been followed by uninterrupted recovery. Thought that the paper was a most valuable contribution.

Dr. W. E. Briggs thought that the practical results as shown by Dr. Huntington's report were truly admirable, and when contrasted with those which obtained in former years were still more remarkable. Was not a "convert," as since he had known anything of surgery had believed in Listerism. Was of opinion that as the method became better known and was more carefully carried out its adoption would be general.

Dr. Nixon, from personal experience, was a full convert to Listerism. Having had the C. P. R. R. Hospital for fourteen years, had had ample opportunity of seeing its effect in lacerated wounds. If the dressing was carried out with antiseptic precautions and irrigation, instead of the quantities of true laudable pus formerly observed, none was discharged. Irrigation during the progress of the operation was of great benefit, as well as the effectual cleansing of the parts before and after. The most skeptical could not fail to be convinced if they tried it. Under the old treatment of alcohol and water, no doubt many cases recovered. Could recollect amputations of shoulder and thigh in which union by first intention followed. That was not, as in Listerism, the universal rule, but the exception, and the absence of inflammatory action was also an important point.

Dr. Nelson thought that Listerism was the system of modern

surgery. Had seen two of the cases reported by the author. Had been struck first by the absence of inflammatory symptoms, and next the non-appearance of pus. Though previously skeptical, had seen such good results that he had adopted it, and found it succeeded most satisfactorily, particularly in lacerated wounds.

The President—It seems a very unfortunate fact in the history of antiseptic surgery that a single antiseptic has at one time been so much in vogue. It is important to draw a distinction between antiseptic and aseptic surgery. A wound may be kept in a state of asepticism by preventing the entrance of germs; but antiseptic surgery went one step further, and prevented their existing in the atmosphere, which was the great danger. If we are cleanly in our first dressings, using antiseptics with them, we have done all that can be expected. Different antiseptics are suitable to different cases. In amputations, excisions and contused wounds, the bi-chloride is indicated, and is to be preferred. In dealing with the abdominal cavity, and in obstetrical cases, great risks are run in its use. Have seen several cases of poisoning verified by post mortems reported in the journals, where the peritoneum, or other large absorbing surface, had been exposed. In such we should be very careful. In gynæcological practice, iodine, nitrate of silver, and sulphate of copper, which have half the power of the bi-chloride, are to be preferred.

Dr. Huntington—It is in some respects a misfortune that antiseptic wound treatment was the legitimate outgrowth of scientific investigation. Had Sir Joseph Lister, through some fortunate accident, discovered that results bordering on the miraculous were to be attained through the use of impervious dressings, supplemented by one or another of the various agents now recognized as germicides; had he announced his method as based simply on experience rather than in accordance with the theories of scientists, it can hardly be doubted that it would have encountered fewer adverse criticisms, such as in many instances have fallen little short of harsh personalities and bitter invective. Referring to the idea of becoming "wedded to special methods," to which an objection was raised by Dr. Laine, attention was called to the fact that Lister himself deprecated the drawing of a distinct line and erecting the placard, "Thus far shalt thou go, and no farther." He had clearly stated that were all antiseptic agents to be stricken out of existence save iodine, Mr. Bryant's

favorite, he would not be in the least disconcerted. He only strenuously contended for the carrying out of the principle, not for adherence to any special agent or routine. The preservation of perfect asepticity by cleanliness, as set forth by Lawson Tait, or the use of such solutions as the carbolic or sublimate are each alike but a fulfillment of this requirement. Reference was made to the unfairness of opponents of antiseptic surgery in instancing individual cases in which remarkable recoveries are reported under one or another of the old plans, for the purpose of verifying their own and throwing discredit upon the views of others. What the surgeon has until recently sought for, what the sufferer and society in general demand, is a method that will insure certain and rapid repair, not in exceptional or sporadic cases, but with an unvarying accuracy, that strikes from the range of possibilities those disasters once frequent, but rarely recorded.

There being no further business the Society adjourned.

SACRAMENTO, March 17th.

The Society was called to order by the President, Dr. W. A. Briggs. The minutes of the former meeting having been read and approved, the Secretary reported that Drs. S. D. Howard, of Elk Grove, and M. J. Magill, of Sacramento, newly-elected members, had signed the roll.

It being the annual meeting, the retiring President read his address.

On motion a vote of thanks was tendered the President for his able and dignified conduct in the chair during the past year.

The report of the Secretary and Treasurer was read, and on motion adopted.

The Society then went into the election of officers, the result of the ballot being for the ensuing term: President, Dr. H. L. Nichols; Directors, Dr. W. A. Briggs, Dr. G. L. Simmons, and Dr. W. R. Cluness; Secretary and Treasurer, Dr. J. H. Parkinson.

There being no further routine business, Dr. Nichols read a paper on the water supply of Sacramento. The author traced the various systems which had been employed in the city from early days to the establishment of the present pumping apparatus, which draws its supply directly from the Sacramento River. A long discussion ensued, in which members present were unan-

imously in favor of some plan which would ensure the delivery of an abundant supply of clear and pure water.

Owing to the meeting of the State Medical Society occurring on the 15th of April, the Society adjourned to meet on the fourth Tuesday in that month.

JAMES H. PARKINSON, Secretary.

Licentlates of the California State Board of Examiners.

At the regular meeting of the Board of Examiners of the Medical Society of the State of California, held Feb. 4th, 1885, the following physicians, having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State :

THOMAS M. BURNS, Haywards; Bellevue Hosp. Med. Coll., N. Y., Mar. 1, 1873.

HENRY F. FRISIUS, Sonora; Med. Coll. of Ohio, O., Mar. 2, 1876.

JOSEPH W. MOREY, Santa Rosa; Rush Med. Coll., Ill., Jan. 25, 1867.

ORMOND P. PAULDING, Arroyo Grande; Med. Dept. Univ. Michigan, Mich., Mar. 24, 1875.

CARRIE L. ROE, Monterey; New York Free Med. Coll. for Women, N. Y., Apr. 1, 1874.

Frequent inquiries are made at this office as to what constitutes unprofessional conduct under the law, for which certificates may be refused or revoked; also as to what colleges are recognized by the Board as being in good standing.

The following preamble and rules appertaining thereto have been adopted by the Board, and are herewith published for the benefit of the readers of the Journal and Lancet.

The Board of Examiners of the Medical Society of the State of California consider it due to all future applicants for certificates to practice medicine and surgery in this State, as well as to those who now hold its certificates, to announce that the following acts will be considered by the Board unprofessional in their character, and that certificates will be refused or revoked, as the case may be, when any one of the following acts shall have been established by clear and convincing proof :

1. Procuring, or aiding or abetting in procuring, a criminal abortion.

2. Employing what are popularly known as "cappers," or "steerers."

3. Obtaining any fee on the assurance that a manifestly incurable disease can be permanently cured.

4. Willfully betraying a professional secret.
5. All advertising of one's medical business, whether in newspapers, circulars, hand-bills, or cards, in which statements are made that are known to be false.
6. All advertising of any medicines, or of any means, whereby the monthly periods of women can be regulated, or the menses re-established if suppressed.

MINIMUM REQUIREMENTS FOR A COURSE OF
MEDICAL INSTRUCTION.

The College shall require of all its applicants for graduation :

1. Credible certificates of good moral character.
2. Evidence, by diploma, certificate, or thorough examination, of a good English education.
3. Three full years of medical study, including two full courses of lectures not delivered within the same year.
4. The regular lecture terms shall not be less than five months each; and not less than two lectures per week shall be delivered by each of the instructors in the seven branches enumerated below.
5. Not less than one practical course of Anatomy in the dissecting room, and two terms of clinical and hospital instruction.
6. The College shall show that it has a sufficient and competent corps of instructors and the necessary facilities for teaching.
7. The lecture course shall include lectures upon anatomy, physiology, chemistry, materia medica and therapeutics, theory and practice of medicine, surgery and obstetrics.

At the regular meeting of the Board of Examiners, held in this city March 4, 1885, the following physicians having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State :

ELIZABETH W. EWING, Sacramento; Woman's Hosp. Med. Coll. of Chicago, Ill., April 22, 1884.

CHAS. H. GRIMM, San Francisco; Harvard Med. Coll., Mass., June 27, 1883.

MARTIN HAGAN, Los Angeles; Starling Med. Coll., O., March 1, 1859, and Coll. of Phys. and Surg., N. Y., March 12, 1867.

CALEB V. JONES, JR., Mountain View; Indiana Med. Coll., Ind., Feb. 28, 1879.

A. H. MORRIS, Citrus; Ind. Med. Coll., Ind., March 3, 1881.

THOS. B. REARDAN, San Francisco ; Med. Dept. Univ. Cal., Cal., Nov. 10, 1882.

CHAS. H. ROSENTHAL, San Francisco ; Med. Coll. of the Pacific, Cal., Nov. 8, 1881, and University of Leipzig, Germany, Nov. 15, 1884.

HARRY M. SHERMAN, San Francisco ; Coll. of Phys. and Surg., N. Y., March 12, 1880.

Since the report of our last meeting, the application of Frank E. Buck, of Mayfield, has been completed, and a certificate to practice medicine and surgery in this State issued to him.

The official register of physicians and surgeons for 1885 is now ready for distribution, and can be procured by applying to the Secretary. It contains a complete list of all legal practitioners in this State, with their corrected address; the laws regulating the practice of medicine in this State; decisions of the Supreme Court; the causes for which certificates shall be refused or revoked; the street, number, and office hours of all the licentiates of this Board residing in the city and county of San Francisco; the code of medical ethics, fee bills, directory of medical colleges, hospitals, dispensaries, medical societies, asylums, and boards of health; besides a number of advertisements of interest to the profession. Last, but not least, will be found a complete list of illegal practitioners, commonly called quacks, who are violating the laws of the State by practicing medicine without having a certificate, as required by law. There may be a few errors in this list. It was meant to contain the names of *all persons* practicing medicine in this State *without a license*. It may include the names of some who are graduated physicians, but who have retired from practice, though still known as doctor. It is difficult to procure the details of such information over such a vast territory as the State of California; and we relied upon the accuracy of our correspondents. We believe none of them would knowingly misrepresent the facts. The list was carefully read over many times by different members of the Board, and liberally pruned to the extent of our knowledge—would that we could have “pruned it to the ground.” But the one thing of which we are sure, is, that the name of no legal practitioner in this State will be found in its columns. Any other error, such as indicated above, is trivial, susceptible of satisfactory explanation, and reflects no discredit upon the parties.

It is desired that every public library in this State shall have a complimentary copy of the book, which will be furnished upon application to the Secretary.

R. H. PLUMMER, Secretary.

Clinic of the Month.

THERAPEUTIC NOTES.

Value of Convallaria Majalis.

THE glitter of novelty is wearing away, and after two or three years of universal praise we find that Lily of the Valley is exciting some doubts as to its medical value. Leubascher affirms that grains 1-7 of convallarin produces paralysis and loss of reflex activity in frogs, and in animals a progressive fall of arterial pressure, with slowing of the pulse and final diastolic arrest of the heart. Pel, Leyden, and Stiller agree with Leubascher in finding no therapeutic utility in its employment. Prof. E. T. Bruen, in our own country, says that it can be employed with reasonable confidence in functional cardiac disorders and in mitral obstruction, and that, in comparison with digitalis, it acts more as a cardiac regulator, but much less as a cardiac stimulant.—*Therapeutic Gazette.*

Hot Bath in Puerperal Eclampsia.

DR. C. BRENS has obtained very favorable results by immersing the patient in a bath of 100°, and then raising the temperature of the water as high as can be tolerated. After half an hour the patient is placed in bed and wrapped in warm blankets for three hours. The immediate effects are profuse diaphoresis and sleep.—*Jour de Medicine.*

Ergot in Acne.

ERGOT in doses of 15 to 30 grains daily, and washing morning and evening with warm water containing a little spirits of camphor, or even cologne water, are often more effectual in relieving the unsightly simple acne than harsher measures.—*Dr. Broca, in Therapeutic Gazette.*

Ether and Opium in Small-pox.

EACH papule injected twice daily with a small quantity of a mixture of extract of opium, grains 2 or 3, and ether $\frac{5}{12}$, with the result of aborting the pustules and shortening the fever.—*Tenneson, Paris, in N. Y. Med. Jour.*

Arsenic in Domestic Articles.

ARSENIC is not limited to green colors, but is found in wall-paper, in blue, red, and white, as well as green, in the proportion of grains $\frac{1}{2}$ to $40\frac{1}{2}$ per square yard; also in glazed and plated papers, to the extent of from grains 1 to 40 to each square foot, in green tarlatin, Foulard cambric red, magenta and brown stockings, green and maroon flannel, various colored cretonnes, lambrequins, chintz, and in paper collars. However, wall-papers are the most frequent cause of poisoning, the symptoms of which may be mild, as catarrhal inflammation, headaches, malaise, and nervous prostration; or severe, as violent enteralgia, diarrhoea, vomiting, chills, and great prostration.—*Prof. E. S. Wood, Massachusetts State Board of Health.*

Paraldehyde in Tetanus.

CASES of rheumatic tetanus are reported as cured in ten days, under the daily administration of $\bar{3}$ $1\frac{1}{2}$ to $\bar{3}$ $1\frac{2}{3}$ of paraldehyde in two doses, with two hours' interval. This drug produces death through paralysis of the respiratory centre, and the disappearance of tendon reflex is invariably a sign of danger.—*Bull. Gen. de Ther.*

Oil of Eucalyptus in Bronchitis.

PROF. H. C. WOOD reports that the oil of eucalyptus in ten minims doses (in two gelatine capsules) four times daily, has in his hands, replaced all stimulant expectorants in chronic or obstinate subacute bronchitis.—*Therapeutic Gazette.*

Eserine in Tetanus.

G. H. BRANDT (*Practitioner, Oct., 1884.*) reports a cure of traumatic tetanus in an adult from the administration $\frac{1}{2}$ of a grain of eserine every hour.

Carbolic Acid in Malaria.

DR. DIEULAFY cured a case of tertian fever with hypodermic injections of carbolic acid, each grains $\frac{1}{2}$ to 1 in 100 parts of water, in seventeen days. In which time grains 13 of the acid were used and without symptoms of poisoning.—*Lancet.*

Alveloz in Cancer.

THE natives of Brazil are now applying the juice of a plant called Alveloz, family Euphorbiaceae, to epitheliomas with asserted success.—*Medical Record, 1885.*

Iron Assimilation.

Prof. G. Bunge states that iron is absorbed and assimilated only in an organized condition, and not as a salt or albuminate. That the utility of the iron salt when administered in chlorosis is due solely to its preventing the organic iron compounds from being decomposed by the abnormal fermentations in the stomach and intestines. In the animal or vegetable protoplasm, the organized iron exists in a very complex chemical combination (as in the yolk of the egg, $C_{42.11} H_{6.08} N_{14.73} S_{0.55} D_{5.19} Fe_{0.29} O_{31.05}$, which, compared with hæmoglobin, displays less C. H. and N., one-third more O. and Fe., and about seven times as much P.). This might be called hæmaglobinogen, which is decomposed into hæmatoglobin, and that out of the latter hæmoglobin is formed. Hæmatoglobin is decomposed by alkaline sulphates, which exist in the fermentations of the stomach. The administration of inorganic iron salts may prevent this decomposition by substitution. Hydrochloric acid is a protector of food iron, and in chlorosis Zander affirms this acid will alone cure the disease. The undisputed value of the tincture of chloride of iron may be due to the above theory.—*Medical Record.*

Bacillus Tuberculosis.

THE *British Medical Journal*, commenting on an observation of Sir ANDREW CLARK'S, that the occurrence of the bacillus tuberculosis in the lesions of two diseases so essentially dissimilar in their clinical history as caseous pneumonia and typical tubercular phthisis showed that the influence of the bacillus was not great in either case, says: "The importance and weight of this argument will be evident to all, but the matter may be looked at from another point of view. The life history of phthisis or tuberculosis is the resultant of the action of several factors; certain classes or types of people are prone to certain types of disease; this proneness, it may be assumed, is due to various, generally hereditary, peculiarities in the structure and functions of the tissues. Assuming for a moment the importance of the pathogenic properties of the bacillus tuberculosis, would it not be reasonable to expect, *a priori*, very great differences in the life-history of the disease produced by it in the various types of organization?"

Atropine in Otitis.

DR. MIOT advises 1-640 of a grain for children and 1-320 for adults of atropine to abort acute rhinitis and otitis.—*Journ. de Med. et de Churg.*

Popular Disinfectants.

The Committee on Disinfectants of the American Public Health Association have determined the value of various popular disinfectants. Experiments were tried with beef-tea containing the spores of bacillus subtilis and bacillus anthracis, with the following results :

| | Per cent.
Active. | Per cent.
Failed. |
|--|----------------------|----------------------|
| Little's soluble Phenyle..... | 2 | 1 |
| Labarraque's Solution..... | 7 | 5 |
| Liquor Zinci Chloride (Squibb's)..... | 10 | 7 |
| Fenchtwagner's Disinfectant..... | 10 | 8 |
| Phenol Sodique..... | 15 | 10 |
| Platt's Chlorides..... | 20 | 15 |
| Girondin Disinfectant | 25 | 15 |
| Williamson's Sanitary Fluid | 25 | 20 |
| Bromo-chloralum..... | 25 | 20 |
| Blackman's Disinfectant..... | 30 | 20 |
| Squibb's solution of impure Carbolic Acid..... | 00 | 50 |
| Burchardt's Disinfectant..... | 00 | 50 |
| Listerine..... | 00 | 50 |

Ergotin, Ergotinin, and Sclerotinic Acid in Uterine Hemorrhages.

Ergotin, according to a late paper of Dr. Markwald, of Berlin, produces a considerable fall, followed by a long-continued, gradual rise of arterial blood pressure. Its hypodermic injection produces in a few seconds powerful, constant contractions of the uterus, due to excitation of the motor-centers in the uterus. To avoid irritation in hypodermic injections it should be diluted with a weak solution of chloride of sodium.

Sclerotinic acid differs from ergotin only in its power of retarding the blood current. It is therefore a superior hæmostatic, but unfortunately is not suited for hypodermic use.

Ergotinin slightly retards respiration, increases cardiac pressure, and has no influence whatever upon uterine contractions.

Ergot in Pulmonary Diseases.

According to the *London Medical Record*, ergot is of advantage in congestions of the lungs, as in pneumonia and acute bronchitis, relieving the hemorrhagic sputa, difficult expectoration, dyspnoea, fever and delirium.

Oxygen in Cholera.

IN cholera, oxygen diminishes the retching and vomiting when all else fails. The same inhalation relieves the persistent vomiting of pregnancy.—*Prof. Hayem, Hospital St. Antoine.*

Atropine in Electric Shock.

Wm. G. Eggleston, of Philadelphia, observes that the extreme cardiac and respiratory depression occasioned by the shock of lightning-stroke, or from the dynamo-electric machine, may be effectually remedied by hypodermic injections of gr. $\frac{1}{100}$ to $\frac{1}{80}$ of atropine, at intervals according to improvement, conjoined with brandy and ammonia.

Boric Acid in Alopecia.

Dr. Pincus, of Berlin, claims success from R Acidi Lactici (Sive Acidi Citrici) $\frac{1}{2}$ to 1 part, acidi borici 2 to 5 parts, spir. vini rectific. 30 to 40 parts, aquæ dest. 220 parts. One tablespoonful to be rubbed in for three minutes twice daily. After three weeks substitute for one week R sodii carb. $\frac{3}{4}$ to 2 parts, adipis 25 parts, olei olivæ 5 parts m, and so continue for one year.

Cannabis Indica as Local Anæsthetic.

Dr. A. Aaronson recommends diluted tincture of Cannabis Indica as a local anæsthetic in dentistry. It is mixed with three or five parts of water and frequently applied to the gums and cavities during the operation.

Ether Spray to the Spine.

Dr. Bouteillier has successfully treated tetanus with ether spray to the spine for five minutes every hour, and chorea by similar applications night and morning.

Pilocarpus in Urticaria.

Obstinate urticaria is reported by M. Guineau de Mussy to be cured by R pulv. pilocarpi, ext. guaiaci a a gr. 2, lithii benzoatis gr. 3, m. ft. pil. Two pills, gradually increased to four pills, are administered daily, combined with sulphur baths.

Chlorate of Potassium.

In consideration of the well-known poisonous properties of potassium chlorate, especially when administered in fevers, Prof. J. von Mering gives the following as the maximum safe doses during twenty-four hours: 5 2 to adults, gr. 30 to 45 to children aged one to ten years, and gr. 15 for infants—always given in divided doses.

Alkaloids of Quebracho as Antipyretics.

Drs. Huchard and Eloy, of Blois, affirm that the six alkaloids of Quebracho reduce temperature in fevers even more effectually than quinine. Such a result is obtained in typhoid by the hypodermic injection of gr. $1\frac{1}{2}$ to 3 of muriate of aspidospermine.

Nitrate of Silver in Ophthalmia Neonatorum.

Prof. Credé, of Leipzig, has successfully prevented infantile ophthalmia by washing the infant's eyes with filtered water immediately after birth, and then dropping into each eye one drop of a 2% solution of nitrate of silver with a rounded glass rod. The subsequent redness and swelling soon disappears. The "Credé Method" has been adopted in the Maternities of Berlin, Vienna and Paris.

Sulphate of Soda for Ascarides.

Henry B. Millard, M.D., advises the administration per orem of sulphate of soda, or the natural spring waters containing them, as Pullna and Marienbad, to destroy the mucus in which ascarides vermiculares have their nidus.

Tannic Acid in Cholera.

Professor Cantani, and other physicians in Naples, employed a tannin-opium enema as an abortive in cholera, with a mortality of only 17 $\frac{1}{10}$ %. The formula in adults was ℞ tannic acid ʒ 2, pulv. acaciæ ʒ 7, tinct. opii gtt 40, infus anthesis O₃ m. In advanced stages subcutaneous injections (thorax or abdomen) of a solution of chloride of sodium ʒ 2, sub-carbonate of sodium gr. 45, warm water O₂, were practiced.

Salicylic Acid in Lupus.

Dr. Marshall affirms that rapid healing, with a flexible and smooth cicatrix, follows the application of an ointment containing ʒ 1 of salicylic acid to ʒ 1 of vaseline.

CORRECTION.—In March number, page 125, ninth line from the bottom, read 1-90 for 1-19 of a grain, and in the heading read hyoscine for hyocine. While the dose of this drug has been cautiously increased to 1-48 of a grain in intractable mania, 1-60 of a grain, as an initial dose, has produced sufficient cyanosis to render artificial respiration necessary.

SURGICAL NOTES.**Statistics of Carcinoma.**

No. 6 of the "Centralblatt für Chirurgie," 1885, brings an extremely interesting review of a report made by C. Partzch on the cases of carcinoma of the lips and genitals occurring at the clinic of Breslau. It is to be followed by a monograph on carcinoma of all portions of the body, comprising 570 cases.

Ninety-eight cases of carcinoma of the lips were observed, eighty-eight times in the male and ten times in the female. Only twice did the carcinoma originate from the upper lip. The age

of the patients averaged 57.3 years. The trouble had existed generally from six months to a year. It generally commenced between the fiftieth and fifty-fifth year; more rarely between the ages of sixty and eighty; only twice between twenty-five and thirty years. Seventy-three per cent. of the men were exposed to wind and weather, carrying out Thiersch's idea of the causation of the trouble. Tobacco smokers presented a very small number of those affected. In 12.2 % of the cases the trouble dated from an injury to the lip; it often followed a suppurating wound. In one instance the disease followed an injury to the lip received in the extraction of a tooth.

Of those operated upon four died immediately after the operation, 8.3 % later from intercurrent diseases, and 32.2 % from relapses. Metastasis to internal organs was not observed.

The first relapse developed itself generally within two years; if it was again operated upon another relapse took place within a few months; a third relapse recurring immediately after the last operation. In the cases of relapse, 4.1 % were alive in March, 1884. In the rest of the cases death occurred 17.1 months after operation, and in those cases entering the clinic with relapse, 13.6 months after operation. The malady had thus lasted, on an average, 3.72 years. 35.4 % remained without relapse; in five of these extirpation was followed by extensive plastic operations. Six cases remained free from relapse five and six years; eight cases seven and nine years, etc., etc.

The review is too long for the space allotted, but reference to it in the original will repay perusal.

Iodoform in Surgery.

Prof. Billroth prefers iodoform to all other surgical antiseptic dressings. When properly used it is less liable to induce systemic poisoning than the now popular mercuric chloride. He uses a gauze containing from 10 to 20 % of iodoform, an emulsion with glycerine containing about 20 %, to be used as an injection into suppurating cavities, and iodoform vaseline of from 20 to 40 %. The gauze is applied under absorbent cotton and the ordinary bandages, and is to be removed within twenty-four hours after the operation. The second dressing is to remain unchanged from eight to fourteen days.

Treatment of Ileus.

The "Berliner Klinische Wochenschrift," Nos. 42 and 43, 1884, reviewed in the *Centralblatt für Chirurgie*, No. 7, 1885, gives an excellent article on the treatment of ileus by washing out the

stomach. The procedure is introduced by A. Cuhn, and has been followed by marked success. The chief object attained in the procedure is the production of regular and quiet peristalsis, by which the abnormal conditions are done away with. By the removal of the fecal masses and gas above the impenetrable point, the diminution in space and the abnormal tension and dilatation of the intestines is obviated, by means of which a possibility of change in the position of the confined gut is possible. About the same thing is attained as by a regularly carried out enterotomy. Kussmaul, in whose clinic the cases occurred, is of opinion that this method should supplant laparotomics, as it is often extremely difficult, even after death, to find and relieve the constriction.

Editorial.

State Medical Society.

Again the time comes round for our shaking the hand of many a brother practitioner whom we have not seen for a twelve-month; again the gathering takes place which should advance good-fellowship among members of the profession, and give each one of us many pleasant remembrances to carry in our hearts for the coming year; old friends met, new friends made; old medical subjects revived, and new ones discussed.

As each year should render the meetings of the State Society more valuable to its members, so we hope that the coming one may prove an even greater success, and be even more interesting than any which have preceded it.

As in former years the time appointed was too short for all papers to be read and sufficiently discussed, it was thought wise to extend the session to three days, and thereby give time to all, and especially to those who might wish to present voluntary papers on any subject. This year, then, let these men come forward and bring their papers, without fear of the allotted time being too short.

We hope that this change may prove beneficial, but fear that in many cases it may be rather a severe tax on our brethren from the country, and that they may believe that they are hardly justified in giving their patients so long a vacation. It is to be hoped, however, that members will flock in from far and wide to

hear the opening address of the President, and that they may be able to remain with us at least until the doors close on the evening of the third day. After this, as ever before, the doors of our homes will stand open to our friends and fellow members.

Then once more let us urge that every one make up his mind to come, unless unavoidably detained, and add to the pleasure of this annual meeting, if not by some valuable paper, at least by entering heartily into the discussions evoked by the papers of others.

Sacramento Medical Society.

During the past month we had the pleasure of attending a meeting of the Sacramento Medical Improvement Society, and of greeting quite a number of its members. It happened to be the annual meeting, and after the routine business and the election of officers for the ensuing year, Dr. W. A. Briggs, the retiring President, delivered an address which contained a number of excellent suggestions in regard to the furtherance of higher medical education. As we hope to have the opportunity of publishing it, no further comment will be made at present.

Dr. Nichols, who was unanimously elected President for the coming year, perhaps on account of the merit of his paper, then read a communication on the water supply of Sacramento, reviewing in order the different systems which had been employed since the founding of the city. In the discussion which followed, and which was maintained by every member present in a most animated and interesting manner, the conclusion was arrived at that something should be done to give the citizens a better and purer supply. Certainly the water at present provided by the city fathers is hardly inviting, and we can easily understand how much in earnest the stranger must have been who on an extremely hot and sultry evening, on entering a revival meeting, remarked to his companion that it was the first time that in such a place and on such an occasion he had ever seen punch thus freely dispensed.

Impure water may cause a number of diseases, but it would be especially interesting to know how far the malarious reputation of the city of Sacramento is due to the use of the river water by its citizens for drinking and household purposes. This at first might seem a difficult question to determine, but its solution was hinted at by one of the members of the Society, who stated that

he had noticed that the Chinamen of Sacramento were ever free from malarial disease. On inquiry he was told that they never drank water, but always tea, which necessarily was made from water that had been boiled. It could not be said that the Chinese as a race were not susceptible to malaria, for the one case of this disease which he remembered, the patient had partaken freely of the river water, and rapidly contracted the disease. Another telling fact was that the Chinaman himself attributed his sickness to drinking the raw water.

It seems to us that this is an important leader, which if properly followed might produce brilliant results and bring honor to the patient investigator. Should it prove true that malaria, like cholera, is best transmitted by means of the drinking water, and that it may be avoided by simple boiling, it will not be the first time that the Chinaman has given the white man a lesson in prophylaxis. In the quicksilver mines a case of salivation among the Chinese laborers is unknown, while among the whites it is the rule. This is easily explained when we are told that before each meal the Chinaman washes his hands carefully, and thereby avoids the transmission of the minute particles of cinnabar to the mouth, which in a short time by aggregation, produce in the less cleanly, ptyalism.

As a matter of local interest, and one of much importance to the public, the paper of Dr. Nichols and the discussion thereon was published in one of the daily papers. It is to be hoped that good results may follow, and that Sacramentonians may in the near future drink of the clear mountain spring, which neither the sewage from the Folsom prison, nor the miasmatic flats of the river, corrupteth.

The New Medical Register.

It is with pleasure that we acknowledge receipt of the second edition of the "Official Register of Physicians and Surgeons in the State of California." The work is more complete than in the first edition as to the list of legal practitioners of all schools. There has been added the code of ethics, the fee bills of different societies, and a list of illegal practitioners. The profession is indebted to the indomitable energy of Dr. Plummer for the production of this work, which, despite a few errors, is invaluable to all medical men in this State.

Unfortunately there appear in the list of illegal practitioners

the names of several gentlemen holding diplomas who are not entitled to this unenviable distinction, as they are merely resident in this State, but not engaged in active practice, and therefore have not applied for license. Notably among them is that of E. S. Carr, M.D., Pasadena, who has filled the chair of chemistry in some of our Eastern colleges, such as Albany, and of Agricultural Chemistry in the University of California. The Postmasters of the different towns were requested to forward to the Secretary of the Board the names of all medical practitioners in their district, and the result was a list of all those who had even the most remote relations with the progeny of Esculapius, from the full-fledged M.D. with a perfect galaxy of titles, to the youngest apprentice in the village drug-store; in short, whomsoever the bucolic populace honored with the euphonious title "Doc!" It will be readily seen that the Board had much trouble in correcting these lists, and that it was almost impossible to prevent all mistakes. We would advise all those who have been the victims of such an error to communicate at once with Dr. Plummer, who will make the necessary correction.

Foreign Medical Appropriations.

It may be of interest to our readers to peruse the last page of No. 5 of the "Berliner Klinische Wochenschrift," 1885, and learn what the Prussian government does for the medical and scientific departments of her universities:

For the year 1885-86, for the general benefit of various departments, for the institution of professorships, assistantships, etc., etc., an appropriation was made of 195,410 marks.

Besides this, for single and extraordinary expenditures, the following amount is appropriated: 1,725,505 marks, making a total of 1,920,915 marks, nearly half a million dollars. The greatest amount of this money is expended for the use of the medical faculty; as for example: Breslau, 480,000 marks for the purchase of land for the enlargement of the clinics; Berlin, for the alteration and enlargement of the anatomical department, 120,000 marks, to which is added 18,000 marks for the purchase of instruments and specimens, and to improve the autopsy-room, etc.

Compare this with the (to use a common expression) measly policy of the United States, which subtracts \$10,000 from the niggardly appropriation to the only medical monument we possess, the Library at Washington.

Transactions of the State Medical Society.

This year, at the meeting of the State Medical Society, the question as to the desirability of publishing the transactions of the Society in this journal, rather than as a volume as heretofore, will be brought forward. Although if this plan were adopted the increase in the work would be very considerable, and the pecuniary advantage, if any, small, we should be much pleased if a satisfactory arrangement were effected, as it would give an opportunity of increasing the size of the journal, which is really too small at present, there not being space for much of the interesting matter which has come to hand for publication.

By this enlargement of the journal and the making it the journal of the Society, we believe that its position as a medium for the expression of the medical work performed upon this coast will be strengthened, and with this aim before us we are willing and desirous of shouldering the extra work, which will follow as a natural consequence.

In considering the question, the members of the Society may in part be influenced by the effect it may have upon medical journalism, but chiefly are they likely to consider whether or no their own "interests" will be advanced. We believe that the advantages to them will be manifold, not only as members but as individuals. Out of nearly thirteen hundred regular licensed practitioners in the State, less than one-sixth of that number belong to the Society. This is a small number, and is partially due to the fact that many are practicing in such distant parts of the State that they find it impossible to attend the meetings, and they feel that the honor is scarcely sufficient to cover the annual dues. If, however, as is proposed, the dues are made to cover the subscription for the journal, and every member is then not only furnished with the transactions but with the journal besides, we think—although we may flatter ourselves—that there would be an additional inducement to join the Society, since every one, whether he attended the meetings or not, would feel as though he were getting an adequate return for his money.

Again, those who are already subscribers to the journal will be induced to add their names to the roll, when they find that they may become members by merely paying a small additional sum. For those who are both subscribers and members no argument is necessary, since the direct saving to their pockets is self-evident.

Still another advantage, well worth considering, is the fact that while the transactions and papers read are at present circulated only among the members, under the proposed arrangement they will have the entire circulation of the journal, and thus be brought much more effectually before the profession. It is hoped that the matter may receive the favorable consideration of those who may attend the coming meeting of the State Society.

Spray in Ovariectomy.

Dr. Emmet, in his recent edition of the Principles and Practice of Gynecology, says that he does not know of a prominent operator in the country who now employs the carbolic spray. It seems to us that he has forgotten at least one prominent operator—Dr. John Homans—unless, being a New Yorker, he cannot allow that Boston has any such—a surgeon who has removed one hundred and eighty-three cystic tumors of the ovaries, and who has often stated that he would be very loth to give up a detail in the operation which he considers contributes so much to the safety of the patient. The majority of his operations have been reported in the "Boston Medical and Surgical Journal," and we find that of one hundred and eighty-three operations, he has lost but twenty-one patients, and in the last hundred but ten. Also, in the last hundred he had thirty-eight consecutive recoveries. These results at least show that in the hands of one operator the alleged damaging effects of carbolic spray have not been noticed. From the first use of the spray to the present time Dr. Homans has not been able to fairly attribute a fatal result to its use; but on the contrary, if we remember rightly, some of his earlier failures were ascribed to the absence of the spray.

We have for a long time held the opinion that while Tait and Keith and a few others would perhaps obtain better results without the spray, that the majority of operators who discarded it were discarding that which, properly used, would have been of the very greatest aid to them, and would have saved for them many a patient. The less skilful the operator the more the spray is needed, for those details which in the hands of the great operators take the place of the spray and become to them almost a second nature, the one who operates less often cannot possibly attain to, and in lieu of them should not fail to accept the spray.

Approach of the Cholera.

In view of the fact that there is a liability of the cholera reaching our shores during the coming summer, the Philadelphia Protective League have issued a call to all good citizens to join in the work of placing the city in as good a sanitary condition as possible, and thus to be prepared at an early date to ward off the disease, or if unsuccessful in this, to fight it from the best possible vantage ground. It proposes to advance the health of the city :

1. By sustaining and stimulating the health authorities in their work.

2. By improving the sanitary condition of their own houses.

3. By looking out for the safety of employees and dependents.

4. By a system of free lectures to the poor.

This is a most laudable object at any time, but now it is almost imperative, and if the League accomplishes only a small part of the work it has laid out, it will do a very great deal of good, by saving many lives and an incalculable amount of money; for if the cholera should gain a foothold, business would suffer immensely. Similar organizations have been established in other cities, both at home and abroad, and we hope that for the good name of San Francisco she may not be the last to follow the example set.

But not San Francisco alone should put her house in order, for from the experience of the last epidemic in 1852 we learned that the disease raged still more fiercely in the inland towns. We trust, then, that before it is too late there may be a general awakening to the menaced danger, and that even in the smaller towns of the State preparation may be made, so that when the ugly fact that the cholera is amongst us is made evident, it may be promptly and efficiently met, not only by the health authorities, but by our citizens, one and all.

Continuance of the "Index Medicus."

Many were the expressions of regret at the discontinuance of the "Index Medicus," the value of which publication could hardly be estimated, and now we are sure that the profession will be glad to learn that it is to be continued. Mr. George S. Davis, of Detroit, the well known medical publisher, has undertaken the task, and it is to be earnestly hoped that he will be

heartily supported. A few more subscriptions only were needed to put the enterprise on a self-sustaining basis, and these certainly ought to be obtained without much trouble.

On account of the delay occasioned by the change, it is announced that the first number of the journal for the current year will comprise the literature of January, February and of March, after which it will appear as a monthly as usual. At the end of the year, in addition to the usual annual index of names, subscribers will be furnished with an index of subjects to the volume.

Mr. Davis has the cordial support of Drs. John S. Billings and Robert Fletcher, and we feel confident that the enterprise which he has shown will be amply rewarded.

Notices of Books, Pamphlets, Etc.

A HANDBOOK OF OPHTHALMIC SCIENCE. By HENRY E. JULES, F.R.C.S. Formerly Clinical Assistant at the Royal London Ophthalmic Hospital, Moorfields, London, etc., etc., etc. With one hundred and twenty-five illustrations. Pp. 460. Philadelphia: Henry C. Lea's Son & Co. For sale by A. L. Bancroft, San Francisco.

We take pleasure in commending this work, which at once takes rank with the very best treatises now extant by the various authors upon the diseases of the eye and its appendages. The printing, the paper, and the plates, leave nothing to be desired. The experience which the author gained while assistant at the Moorfields Hospital, and the vast number of patients treated there, gave him a rich field in which to harvest the material for his admirable work. We need not dwell upon any chapter in particular, as no very original departure is apparent from the methods in use by the best authorities of the day; but each subject is treated alike, with the same care and thoroughness displayed in all. Illustration is made free use of, which where operative measures are concerned, can hardly be overdone, as a single glance at a good illustration will often convey more of the author's intent than two pages of print, and fix it indelibly in the reader's mind. The subject of refraction is carefully treated, and a new astigmatism test, *i. e.*, Dr. Oliver's, of New York, added to the already numerous tests described.

We have no hesitation in saying that the publishers *can* confidently hope that this work will be found to meet fully the re-

quirements of all those who desire to possess a reliable guide in this branch of the science of medicine," as they express themselves in their short prefatory note.

ORGANIC MATERIA MEDICA. By JOHN M. MAISCH, Phar. D., Professor of Materia Medica in the Philadelphia College of Pharmacy. Second Edition. Lea Brothers & Co.

The author, also one of the editors of the "National Dispensary," presented the first edition of this work three years ago, as a concise statement of the principal points relating purely to the materia medica of nearly all the known drugs of animal and vegetable origin.

In this edition many new drugs and illustrations, showing the structure of plants, have been added. The students of pharmacy, druggists, and the mass of physicians, who, from lack of time and the usual prolixity of publications upon this subject, display a lamentable ignorance of the tools they are employing, will find the brevity of this work particularly adapted to their wants. The name of the author and the large demand for the former edition, are a sufficient guaranty for the completeness and correctness of this publication. The various drugs are presented in an extremely condensed style, under the headings of Origin, Habitat, Description, Structure, Constituents, and Properties, and without any attempt to impart information regarding their therapeutical uses.

A HANDBOOK OF PATHOLOGICAL ANATOMY AND HISTOLOGY, with an Introductory Section on Post-Mortem Examinations and Methods of Preserving and Examining Diseased Tissues. By FRANCIS DELAFIELD, M.D., Professor of Pathology and Practical Medicine, College of Physicians and Surgeons, New York; and T. MITCHELL PRUDDEN, M.D., Director of the Physiological and Pathological Laboratory of the Alumni Association of the College of Physicians and Surgeons, New York. New York: Wm. Wood & Co. 1885. San Francisco: A. L. Bancroft & Co.

Dr. Delafield, by associating himself with Dr. T. M. Prudden, has been able to increase the scope of this excellent book very considerably. We cannot explain better the plan of the work than by quoting from the preface. Dr. Delafield says:

"The work comprises instruction in the methods of making post-mortem examinations, of preserving diseased tissues, and of preparing them for microscopical examination, and preparing and examining bacteria; an account of such general processes as inflammation and degeneration; a description of tumors, of the

lesions of all the different parts of the body, of the general diseases, of violent deaths, and of deaths from poisoning.”

The work is profusely illustrated, all the drawings having been made by the authors from actual specimens. It would be difficult to recommend a better work, or one which was more thorough relating to the subject of which this one treats.

COCAINE AND ITS USE IN OPHTHALMIC AND GENERAL SURGERY. By H. KNAPP, M.D., Professor of Ophthalmology in the Medical Department of the University of New York. With Contributions by Drs. F. H. BOSWORTH, R. J. HALL, E. L. KEYES and W. M. POLK. G. P. Putnam's Sons, New York and London. 1885. For sale by A. L. Bancroft & Co., San Francisco.

This little work of eighty-seven pages contains the record of a large number of experiments with the local anæsthetic, Muriate of Cocaine, covering a wide range of its application, to wit: in ophthalmology, otology, upper air passages, general surgery, genito-urinary and minor surgery, gynæcology and obstetrics.

The record is compiled with the same care which characterizes all of Dr. Knapp's work, and the field of usefulness of cocaine is pretty clearly defined.

THE DIAGNOSIS AND TREATMENT OF CHRONIC NASAL CATARRH. Three Clinical Lectures, delivered at the College of Physicians and Surgeons, New York, by GEO. M. LEFFERTS, A.M., M.D. St. Louis: Lambert & Co. 1884. San Francisco: A. L. Bancroft & Co. Pp. 50. 8vo.

This neat little volume will well repay the two or three hours' study which it will require, and the suggestions as to treatment will be better retained than if placed before the reader in a less terse form. Much stress is laid upon the necessity of persevering steadily in the treatment until decided amelioration of the symptoms. Particular objection is made to the use of sodium chloride in any of the cleansing solutions. The use of mild solutions of this salt cannot be out of place or harmful to the lining of the nose, to which it has constant access, in solution in the tears, through the nasal duct.

MANUAL OF NERVOUS DISEASES, and an Introduction to Medical Electricity. By A. B. ARNOLD, M.D.

This little work of 170 pages is admirably adapted to the wants of the student who has not the time to study the more extensive works upon this interesting subject. The book is written in an interesting manner, and contains a great deal of information in a small space. It is amply illustrated by well-executed woodcuts.

A MANUAL OF THE MEDICAL BOTANY OF NORTH AMERICA. By Lawrence Johnson, A.M., M.D. New York : Wm. Wood & Co. San Francisco : A. L. Bancroft & Co.

Dr. Belfield, in his "Diseases of the Male Sexual Organs," besides giving a résumé of present knowledge of these diseases, endeavors to impress upon the physician the very great importance of not only treating the symptoms, but carefully studying out the cause of the primary morbid condition which produces these symptoms. By this means alone can one do justice to his patient, and in many instances can he only by this method obtain success. The space devoted to showing the student how this can best be done constitutes the chief value of the work.

We open the book of which Dr. James is the author and gain a very favorable impression from the very first sentence that we stumble upon, viz: "Medicines do not maintain nutrition; sometimes they interfere with it." For it is a fact which we are obliged to often impress upon those who are caring for the sick.

Although called the "Therapeutics of the Respiratory Passages," we think that the reader will wonder why the title should have been so much restricted. The book is full of hints on general therapeutics, and is written in a most charming and interesting manner. It deals with nutrition in relation to therapeutics; with food and diet; with the preparation of the food stuffs. A chapter is devoted to iron, its physiological action and forms of administration. The following chapter deals in like manner with phosphorus and its compounds. Many of the chapters are upon general subjects, viz: Exercise and Rest, Beverages, Denutrients, etc. It is certainly one of the most interesting of the series for 1884.

CONSUMPTION, ITS NATURE, CAUSES, PREVENTION AND CURE. By J. M. W. Kitchen, M. D., Assistant Surgeon to the Bellevue Chest Class, etc. G. P. Putnam's Sons, New York, 1885. A. L. Bancroft & Co., San Francisco.

Dr. Kitchen has written for the laity a number of books which have all received the praises of the press. This little book on Consumption is no exception to the rule, and will no doubt gain equal popularity with the others, for it is pleasantly written, and treats the subject in an intelligent and common-sense way. It will well repay all who may spend the short time which is necessary to peruse it.

A SYSTEM OF PRACTICAL MEDICINE. By American Authors. Edited by WILLIAM PEPPER, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. Assisted by LOUIS STARR, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Volume I. Pathology and General Diseases. Philadelphia: Lea Brothers & Co. 1885.

We have already called the attention of our readers to this extensive work, which has been in active preparation for the past three years, and which is to consist of five imperial octavo volumes, containing, with illustrations, about 1,000 pages each. Again we wish, on the appearance of this, the first volume, to call to their mind this important work, which is written entirely by American authors, and therefore presenting the domain of medicine as taught and practiced in the United States by those holding a high place in the professional ranks. Among the various branches included, is Gynecology, which is presented in a series of excellent articles. The articles on Ophthalmology, Otology, etc., present these subjects not from the specialist's standpoint, but from that which is of great interest to the general practitioner, viz: the relations diseases of these special organs have to the general economy. In the present volume, under the head of General Pathology and Sanitary Science, the authors have considered "General Morbid Processes," "General Etiology, Medical Diagnosis and Prognosis," "Hygiene" and "Drainage and Sewerage in their Hygienic Relations." The consideration of General Diseases follows, including Typhoid Fever, Diphtheria, Malarial Fevers, Yellow Fever, etc. We know the work to be of great value, and one that, as a standard American authority, should be often consulted.

BODILY DEFORMITIES AND THEIR TREATMENT. A hand-book of practical orthopædics. By Henry Albert Reeves, F. R. C. S. E., Surgeon to the Royal Orthopædic Hospital, etc., with 228 illustrations. Philadelphia: P. Blakiston, Son and Co., 1885. Price \$2.25.

This is the first book that we have seen which deals with orthopædics and that alone, and the author has filled a long-noticed gap in medical literature, and has filled it right well, for he has given the profession a most practical and valuable book.

It is the result of long experience at the Royal Orthopædic Hospital, and as such, should be accepted as authoritative. It is amply illustrated by cuts which have been taken from actual cases. We can recommend most earnestly the work to all who are interested in the deformities of children, for we believe that they cannot help benefiting by it.

Miscellaneous.

Axioms from Dr. George M. Beard's "Sexual Neurasthenia."

"The *sensitive* frame conducts nerve vibrations so rapidly that they cannot remain localized, but must thrill through the whole system; the *non-sensitive* frame conducts nerve vibrations so slowly that, unable to overcome the resistance, they turn on themselves and expend their force on or near their point of departure."

"Nervous exhaustion vaccinates the system against febrile and inflammatory diseases."

"Disease itself is the most powerful of doctors."

"Syphilis is undoubtedly growing milder with civilization."

"What patients confidently expect to happen will be very likely to happen."

"'Every man is a rascal as soon as he is sick'—so Dr. Johnson remarks."

"Sick headache, some suppose, is related to epilepsy; but experience shows that it saves from epilepsy, just as it saves us from many other diseases; it is a safety-valve, through which, if confined, might result epilepsy, paralysis, insanity, or some other disease more fatal, if not more distressing, than sick-headache itself."

"Lithæmia or uricæmia, like the terms phosphuria or oxalæmia, express incidents rather than causes."

"It is not to be understood that (these) drugs, when they enter the system intelligently, avoid every other part of the body and rush directly to the — — — —."

"There is indeed no specific, or any approach to a specific, for sexual neurasthenia, any more than for the other varieties; it is not by any one remedy or by any prescription, simple or compound, that we attain the result."

"There is no form of neurasthenia, and no form of disease, nervous or inflammatory, where mental therapeutics, under the vague, elastic and unfortunate phrase, 'moral treatment,' is so often tossed off as a prescription as in sexual neurasthenia."

"The science of diet, the philosophy of food, is certainly needed, if anything is needed. Food is medicine; for the cure of curable diseases of a chronic nature, we can do more with food without medicine than by all other remedies without food."

"Tell me what thou eatest and I will tell thee what thou art."

“Living beings feed on that which is below them in the scale of development.”

“The best food for man is that which is just below him, or nearest to him in the scale of development.”

“Food is difficult of assimilation for man in proportion to its distance below man in the scale of development.”

“The earth feeds on gases, fruits and cereals feed on the earth, the lower animals feed on fruits and cereals and on other animals; man therefore should feed mainly on the lower animals, with a small proportion of fruits and cereals.”

“In proportion as man grows sensitive through civilization or through disease, he should diminish the quantity of fruits and cereals, which are far below him in the scale of evolution, and increase the quantity of animal food, which is nearly related to him in the scale of evolution, and therefore more easily assimilated.”

“Why is not man good food for man? and why should not cannibals be healthy and strong? The answer is that man is good food for man, and cannibals are the strongest and healthiest of savages.”

“Savages who feed on poor food are poor savages, and intellectually far inferior to the beef-eaters of any race.”

“If a man must restrict himself to one kind of food, that should be fresh meat of some kind; and on this alone it is possible to maintain not only health but high working capacity for brain-workers and muscle-workers.”

“As the human constitution increases in sensitiveness through civilization, or acquires sensitiveness through disease, the diet should correspond, or be restricted mainly to that form of food which is nearest to man in development, the lower or distant forms being dropped off or diminished.”

The next meeting of the San Francisco County Medical Society will be held on the 14th of April, at St. Andrew's Hall, 218 Post Street, at 8 o'clock. The subject of discussion will be Diphtheria, and one or two papers upon this subject have been promised. All members of the State Society are cordially invited to attend. As the meeting of the State Society opens on the day following, it is to be hoped that quite a large number of our visitors may honor the Society with their presence.

PRACTICE FOR SALE.

A physician in good practice wishes to sell his place, which consists of six acres of land, all under cultivation, buildings, etc. Reason for selling: change of climate, on account of health. Price \$4,000. For further particulars, apply to editor.

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Original Articles.

A COLLAR-BUTTON IN THE TRACHEA.

By A. L. PREVOST, M.D., San Jose, Cal.

On Saturday night, September 24th, 1881, as Charles Mc.G., aged 16 years, was undressing himself and arranging a supply of under-clothing for the next day, he put a bone collar-button between his teeth, to be held there for a few moments. Some joke uttered by his brother caused him to laugh, when the button fell into his throat, and a gasping breath caused it to engage in his larynx. He became purple-faced and choked. Involuntarily he put his fingers down his throat and pushed the foreign body into the trachea. Immediately cough and dyspnea ensued. I was called the next morning at an early hour. An uneasy sensation was referred to by the patient to the left bronchus. Examination with the stethoscope gave negative results. I had the patient inverted and strongly percussed, which produced much coughing and strangling, and some movement of the button, but it was not expelled. Tracheotomy was recommended, but declined. Thirty-nine hours from the time of the accident, pneumonia set in, in the left side. The left lung became collapsed and solid throughout. On October 3d, nine days after the primary accident, tracheotomy was performed.

Chloroform was the anæsthetic used. Pulse, 100; temperature, $99\frac{2}{3}^{\circ}$. The operation was performed with much difficulty, owing to the depth of the tissues in front of the trachea. When the trachea was opened, imminent danger of suffocation ensued. Severe coughing came on, but the foreign body was not expelled. A cautious search was made in the trachea and bronchi with slender forceps, without success. The wound was then left open and lightly covered with gauze wetted with carbolized water. The next day after the operation, pulse 100; temperature 100° . The wound in the trachea was closed up, and the external cut slowly healed by granulation. For the following sixteen days the pulse and temperature varied from day to day. The external wound being healed and the patient feeling comfortable, he was discharged from active observation on October 22d, 1881. The patient continued weak for several months, and unable to take active exercise. He gradually improved under the use of tonics and cod-liver oil, and was able to do light work. His voice remained weak and squeaky. Left lung entirely solid.

A period of three years and five months now elapsed, without incident. At 11 P. M., February 15th, 1885, the patient awoke from slumber suffocating. He went with some difficulty, gasping and purple-faced, to his father's room, where they thumped him on the back until the loosened button fell into a better place, and the boy was relieved. I saw him early the next morning. Pulse, 123; respiration, 27; temperature not taken. The next day, pulse 144; respiration 39; temperature $102\frac{2}{3}^{\circ}$. The patient called our attention to a crackling felt in his neck the evening before, for the first time. On examination, emphysema was found in each side of the neck and in each axilla. The patient was inverted and percussed, without success. The third day: Pulse, 130; respiration, 32. The emphysema less in axilla, but same in the neck. The fourth day: Pulse, 113; respiration, 28; temperature, $100\frac{2}{3}^{\circ}$; emphysema marked in right side of neck and supra clavicular fossa, and right axilla; none in left axilla. The fifth day: Pulse, 101; respiration, 21; temperature normal. Emphysema much less—almost gone. An interval again ensued of six weeks, when on Monday night, March 30th, 1885, our patient awoke with a fit of coughing, and expelled the foreign body from his internal economy. *Deo gratias!*

April 5th, 1885.

Present state: Pulse, 94; temperature, normal; weight, 116

lbs. ; weight before last illness, 130 lbs. ; right lung, normal ; left lung, percussion dull, respiratory sound absent.

The button lies before me. It is half an inch wide at the base, one quarter of an inch at the apex, three-eighths of an inch high, and its weight nine grains. It has a slight yellow tinge, but is otherwise unchanged.

THE HEREDITY OF NEURALGIA.

By JOHN G. KERR, Pasadena, Cal.

Probably no disease is treated more frequently by physicians in general practice than neuralgia in its various forms, and, without exception, no disease is allowed to pass with so little consideration. It has pain for its specific symptom, and, as soon as this is relieved, the physician, carelessly or thoughtlessly dismisses his patient, and is satisfied with a result which he knows is simply a temporary "stand off." The patient on the other hand, through ignorance of the nature of his disease, lives on with the hope that it may finally wear itself out; a hope which is seldom realized, especially if he has reached middle age. It is a disease having a family history like scrofula or phthisis in the majority of cases, and deserves, like these diseases, a prolonged course of treatment.

During the past three years, I have had the privilege of seeing many cases of neuralgia, and concluded, on account of the monotonous history given by all neurotics, to make special observations concerning its heredity, and to record each individual history, and that of the family as well.

Below are the first twenty cases recorded without a single rejection. They are thoroughly reliable, and most of them are well known to me.

1st. Neuralgia of the first and second divisions of the fifth, in a man aged 60. No family history given. The patient himself suicided.

2d. Neuralgia of the trigeminal and migraine in a married lady aged 50. Father, brother and sister bordering on insanity, and all troubled with facial neuralgia.

3d. Migraine very severe in a lady aged 50. Father very eccentric, and finally insane. Aunt (paternal) insane; a sister also insane.

4th. Migraine in a married lady. Father eccentric; cousin bordering on insanity.

5th. Neuralgia of the facial in a young man aged 24. Father has sciatica, family scrofulous; patient himself has tuberculosis.

6th. Neuralgia of the fifth and of the cervico occipital, in a young man; also phthisis. No history of neuralgia.

7th. Neuralgia of the first and second divisions of the fifth, in a young man aged 34. Mother and two sisters sufferers from migraine.

8th. Neuralgia of the fifth in a lady past middle age, who gives no neurotic history. She is the mother of twelve children.

9th. Lumbo-Abdominal neuralgia in a man aged 50. Family neurotic and rheumatis.

10th. Neuralgia of the fifth in a young physician aged 26. Whole family afflicted in same way and all very eccentric.

11th. Neuralgia of the cervico occipital, and of the fifth, in a physician aged 35. Family history not given. Patient suicided.

12th. Migraine, severe, in a man aged 50. Father affected with neuralgia of the fifth.

13th. Neuralgia of the cervico-occipital in a young man aged 26. Mother affected same way. Phthisical history also.

14th. Migraine in a lady (married) aged 50. Family neurotic. Son died insane.

15th. Neuralgia of the fifth in a young man; very eccentric. Grandfather and two uncles insane.

16th. Neuralgia of the cervico-occipital and first division of the fifth. No history of neuralgia given. Patient a hard mental worker; died from an attack of angina.

17th. Neuralgia of the fifth in a man aged 40. Mother and two sisters have migraine.

18th. Migraine in a young lady. Mother and two sisters affected in same way.

19th. Neuralgia of the fifth in a young man. Father also has neuralgia of the fifth.

20th. Neuralgia of the cervico-occipital in a lady aged 50. Father and sister both have neuralgia of the fifth. Neurotic family.

I have many more cases recorded, and all tell the same story as those already mentioned above. It will therefore be observed that the percentage of hereditary cases of neuralgia is as great

as that of scrofula or tuberculosis. Several of these cases have, by constant treatment, recovered entirely, so that they have not been troubled for over a year. Some have been benefited greatly, and others have received no benefit whatever.

April 20, 1885.

REPORT OF A CASE OF LITHOTOMY.

By Dr. E. B. ROBERTSON, Jackson, Cal.

On the 3d of September, 1882, I was requested by J— P—, of Sutter Creek, to visit his son, E— P—, which I did, with Dr. J. L. Mayon. The patient said that he was twenty years of age, and had suffered more or less with his urinary apparatus ever since his earliest recollection, but more particularly for the last seven years. I also learned from his mother that he was an extremely cross baby in his infancy, sleeping but little, and crying nearly all the time during his waking hours.

Upon examination, an organic stricture was found of the urethra at the bulb—he denied ever having had gonorrhœa—which was very hard and unyielding, permeable only to a number two or three catheter. The stricture was incised with Charière's urethrotome, and the canal dilated to its full capacity with bougies until the 13th, when the bladder was sounded for stone. Upon the first introduction of a steel sound the stone was struck, and believed to be very large, but we could not determine *how* large, not having the necessary instruments.

Had I known the size of the stone before the operation, I should have resorted to the supra-pubic method, as I did successfully in a case in Mokelumne Hill in 1865. I will here digress to say that so far as I know, I was the first, if not the only surgeon, to perform successfully the supra-pubic operation for stone on the Pacific Coast. When I say successfully, I mean that my patient got well and lived to die from another cause, some years afterwards.

Being unable to determine the size of the stone, the infra-pubic operation was decided upon, and executed on the 24th of September, 1882, as I will now endeavor to describe:

The patient being placed on an ordinary dining-table, with his head and shoulders moderately raised by pillows, and the buttocks near the end of the table, he was caused to grasp the

ankles with his hands, which were then fastened by a few turns of a roller.

It is scarcely necessary to say that the bowels were well emptied by a saline aperient, preceding the operation.

Everything being in readiness, the operation was proceeded with, in the presence and with the assistance of Jackson Dennis, druggist at Sutter Creek (who administered the anæsthetic), Drs. J. L. Mayon and C. Y. Brown. An incision commenced in the raphe of the perinæum, something more than an inch anterior to the anus, and carried obliquely downwards, outwards, and to the left, to a point midway between the outer border of the anus and the tuber ischii, and to the bottom of the perinæum. This incision was cautiously deepened until the groove in the staff could be felt through the membraneous portion of the urethra, which was opened with the scalpel. Then the probe-pointed lithotomy knife was introduced and thrust along the groove in the staff, its edge turned towards the left, in a similar direction as that of the external incision, nicking the prostate in depth corresponding to the width of the blade, less the depth of the groove in the staff, when the knife and staff were withdrawn, and the index-finger of the left hand passed into the bladder and brought in contact with the stone. Upon examination it was found that the stone was too large to be extracted through the opening as above described. I placed the knife flat on the fore-finger of the left hand and passed them together through the neck of the bladder, when by turning the edge of the blade against the prostate at the right side, by a sawing motion the gland was incised the full depth of the width of the blade, guided by the finger, which divided the prostate on that side to the capsule, if not through it. The stone was siezed with curved lithotomy forceps, guided by the finger, in such a way as to bring its smallest diameter to the opening, through which it was extracted by a to-and-fro movement, with considerable difficulty. The stone weighed two ounces, four drachms and two scruples. It measured six inches in circumference, in relation to its largest diameter, and four and one-half inches transversely, with rough external surface.

After the operation the patient was placed on his left side, on a bed protected with oil-cloth, and two attendants required to remain beside him and not to allow him to change his position for forty-eight hours. This position was maintained with the

most zealous care, for the following reasons: Robert Druitt, 1844, under the head of "General Maxims," says: "Above all, not to cut completely through the prostate, beyond its fibrous envelope, otherwise the urine will find a ready passage into the loose cellular tissue of the pelvis, and the patient will almost surely die." In this case the right side of the prostate was cut through to make room for the extraction of the stone; but by placing and keeping the patient on the left side, the urine would flow out by its own gravity over that side, where the gland was only nicked, thereby avoiding infiltration for forty-eight hours, during which coagulable lymph would be deposited around the wound on the right side, after which the danger from infiltration of urine would be not imminent, if even at all possible.

In the course of the following night there was a very considerable secondary hemorrhage took place, which ceased upon the removal of the accumulated clot, together with the use of styptics by Dr. Mayon, I being absent at the time.

This patient recovered in due time, and is now employed in Knight & Co's foundry at Sutter Creek. Even now, two years after the operation, the patient is affected more or less seriously by partial incontinence of urine, the result of the extensive incision, stretching, and perhaps laceration of the muscular fibres surrounding the neck of the bladder.

The history of this case leads me to believe that this calculus existed in childhood, at least, if it was not congenital.

REMOVAL OF ENDOGENOUS CYST OF MORE THAN TWENTY POUNDS.

By H. W. SMITH, M.D., of Placerville, Cal.

I was called on October 2d, 1884, to see Mrs. M---, aged 44, married twenty-five years, mother of one child. Found her suffering great distension of the abdomen with severe pain. After a careful examination I diagnosed ovarian cyst, with ascites. Breathing very difficult. I recommended tapping, and on October 4th, two days after my first visit, I aspirated the cyst, drawing off twenty-three pints of clear, straw-colored fluid, after which she rapidly recuperated, and in one week was able to be up and around the house, with a good appetite.

Upon examination of the fluid, I found it devoid of paralbumen, metalbumen, and mucin. Owing to the absence of sedimentary deposits, it was difficult to discern any morphological elements.

Although I filtered it with a view to get sufficient sediment for a microscopical examination, I failed. It contained lymphoid corpuscles, fat cells and detritus. Granulated cells were in abundance. These cells, also called Drysdale cells, were looked upon as an invariable criterion in diagnosing an ovarian cyst; but their presence in other cystic new formations renders this hypothesis untenable.

The reaction was slightly alkaline; specific gravity 1014. All went well for one month; then the cyst commenced to fill again, and by the 29th of November, 1884, the date of the operation, I made the following measurements: From the umbilicus to the right superior process of the ilium, thirteen inches; from umbilicus to same part left side, eleven inches; from the umbilicus to the right costal cartilage, nine inches; from the umbilicus to the same part on left side, seven inches. I neglected to take the measurement of circumference of body at any time. Judging by the rule that the difference in the measurement of fixed points means adhesions of the cyst to the abdomen and its contents, I expected to find extensive adhesions.

At 10 A. M. on the above date, W W Stone, D.D.S., administered ether, assisted by Eliza Cook, M.D. I made an incision $5\frac{1}{2}$ inches long in the median line, dissected down to the peritoneum. After all bleeding had ceased I opened the peritoneum; found the cyst with but few adhesions, and they were very slight. On using the trocar (one devised), the tubing became detached, and part of the cystic contents, with ascitic fluid, was absorbed by the blankets around the patient. The cyst and what was caught in the bucket weighed twenty pounds. It was the left ovary, with very thick, short pedicle, hardly one inch long. It was composed of nine cysts, from the size of a pullet's egg to that of a gallon jug. Ligated the pedicle with two silken cords, cut them short, and seared the pedicle with actual cautery, and dropped it back into the abdomen. Closed the abdominal wound with silver wire. The other ovary was normal. Time of operation, forty minutes. The temperature never reached 100° and convalescence was rapid, the patient being able to be up and dressed on the fifteenth day after operation. Since the operation the patient has visited my office twice, riding in three miles from the country.

January 3, 1885.

CASES OF FATTY HEART.

Reported by WM. WATT KERR, M.A., M.B.C.M.

Mr. President, and Members of San Francisco County Medical Society:

In reporting the following cases of fatty heart, I do so, not so much on account of any particular features in them, as to provoke discussion and bring to the recollection of other members similar cases in their own practice.

The subject is chosen because it is one that is very much neglected clinically, and yet is of the utmost importance to medical examiners for insurance companies and benefit societies; and the cases have been selected, for the reason that they occurred in patients under thirty years of age, a time of life when we would not be so ready to look for these morbid changes. There are two forms of this disease: 1st. Fatty infiltration. 2d. Fatty degeneration. As the prognosis in each is different, it is necessary to remember the distinction.

Fatty infiltration consists of an increase in the amount of sub-pericardial fat that is normally present after the sixth year, and is found in the sulci, around the ventricular margins, and at the apex. It is an infiltration of the connective tissue with oil globules, is most frequently associated with general obesity, and is of little importance when confined to the sub-pericardial layer. But the process does not always stop here; it very often extends to the connective tissue that links together the different fasciculi of muscular fibres in the myo-cardium, and establishes a condition that may be attended with serious results. The interpolation of these bands of fat between the fibres constitutes weak parts in the cardiac wall. They are an inferior and foreign substance, possessing neither the contractile nor resisting power of the healthy tissue, the force of whose contractions are consequently diminished and the organ rendered more liable to dilatation. Furthermore, the presence of this fat between the muscular fascicula obstructs their nutrition and compresses them so that many of the fibrillæ undergo a true fatty degeneration.

In fatty degeneration, the sarcous substance itself is transformed into oil globules and fat granules. This change is most

common after middle life, but occurs at all ages, and may be found even in the fœtus. It is ascribed to imperfect oxidation of the nitrogenous constituents of the muscular fibre produced by general debilitating causes, such as anæmia, wasting diseases, high temperatures, the poisons of different fevers, especially those of small-pox, erysipelas, and the puerperal state; the use of phosphorus or arsenic; prolonged mental exertion. There are also local causes, among which the more common are obstruction of the coronary vessels, and the results of fatty infiltration. The diagnosis is in all cases rather obscure, and is arrived at more by combining the symptoms with the hereditary history, habits of the patient, and excluding other possible diseases, than by accepting any one physical sign or symptom.

The usual indications are præcordial pain, irregular pulse, dyspnœa, attacks of syncope, which sometimes simulate apoplexy, and the other results of cardiac weakness. As already stated, the physical signs are not absolutely diagnostic. There is no change in the area of cardiac dulness, but the cardiac impulse and sounds are very weak or entirely lost, and sometimes we can detect a murmur or impure sound in the mitral area.

Although the disease is thus obscure, it is important that it should be recognized by the physician, especially when he is examining candidates for life insurance or benefit societies. One such case occurred in my practice a few days ago, where the applicant was a man aged thirty years, and a waiter by profession. He was of medium stature, inclined to obesity, claimed to be of temperate habits, and was a member of some benefit societies.

My suspicions were first aroused by the marked irregularity of the pulse and the greasy, unctuous condition of his skin. The apex beat could not be felt on palpation, the sounds were very weak, and a murmur was heard in the mitral area, which, after some exertion on the part of the patient, gave place to an impurè first sound. The area of cardiac dulness appeared to be normal, but the hepatic area was very much increased. The application was rejected. The patient's occupation of saloon-waiter, the unctuous skin, the tendency to obesity, the irregular pulse, the weak cardiac sounds and impulse, and the enlarged liver, all appeared to indicate the existence of fatty heart.

As an example of the suddenness with which this disease

may terminate fatally without any previous indication of its existence, I shall now mention another case, in which the patient was under my continual observation, although I was not his medical attendant. He was twenty-four years of age, an engineer by profession, a very hard student, and noted for the regularity of his every day life. He never had experienced any sickness of importance, and was in perfect health and able to attend to business until the day preceding his death, which took place upon a Tuesday evening. Upon the Sunday evening he felt a little out of sorts, and as he was no better next morning, he remained in bed and sent for the family physician, who regarded his case as some trifling indisposition. The patient was in good spirits, and spent the Monday evening in his bed-room, talking with some friends, but upon the Tuesday morning he awoke tired and unrefreshed, a condition which he ascribed to the excitement of too much company on the previous night. During the day he had a slight fainting spell, but his illness was still regarded so trifling that his parents entertained company in the evening. About 9 P. M. he told his mother that he felt his end was near, and the physician was sent for, but he regarded the case so trivial that, although an intimate family friend, he told the messenger to administer another dose of the medicine and he would call in the morning. The messenger went home, but sent the carriage back for the doctor, who answered this second call, but arrived too late to be of any service. A post mortem examination revealed fatty degeneration of the cardiac muscle.

The third case is that of a woman aged twenty-nine years, married and with one child, who was in perfect health until three years previous to my seeing her, when she had a severe attack of small-pox, and from that time suffered from palpitation, pain over the præcordia, dyspnœa, and periods of unconsciousness. I first saw the patient during one of these seizures. She was lying on her back unconscious, with her eyes open, staring, and the pupils widely dilated. The radial pulse was slow, irregular and poorly filled. The first cardiac sound could not be heard, and the second was of a low, flapping character. At times the breathing apparently ceased, and then there was a long, deep respiratory movement. The diagnosis was cerebral anæmia, arising from cardiac failure. The condition was relieved by hanging the body over the bed from the hips up-

wards, administering stimulants and a dose of digitalis. During the decumbent position the pupils gradually contracted, and in less than two minutes the patient had recovered consciousness. Under tonic and dietetic treatment she remained free of these attacks for some months, until during the excitement caused by the death of her mother, she was again attacked. On this occasion I saw her at an earlier stage of the attack, and watched it with considerable interest. The patient was quite unconscious, and at short intervals the muscles of the body would contract, the breathing become harder, and the pupils dilate until a climax was reached, when the dilatation was extreme and the breathing seemed to be arrested during full inspiration: then the iris gradually contracted and the breathing became normal. These spasms were shortened in duration, but went on to their maximum intensity, notwithstanding lowering the head, as on the first occasion, showing an active contraction of the arterioles in the brain. Nitrite of amyl at once relieved her condition.

The pseudo-apoplectic attacks which formed such a prominent feature in this last case, have been ascribed by one or two authors to cerebral congestion, but Stokes finds their cause in cerebral anæmia, and my experience corroborates this latter view, inasmuch as (1) hanging the upper part of the body, from the hips upwards, always relieved the intensity of the spasm and restored the patient to a semi-conscious condition. (2) As the pupils dilated the unconsciousness became deeper, as they contracted it became less. (3) The nitrite of amyl, which dilates the cerebral blood-vessels, produced an instantaneous and permanent return to consciousness. It should be mentioned that these attacks lasted for some hours, unless means were taken to increase the amount of blood in the brain. The patient was always unconscious through the whole attack, and the pupils were dilated, but at intervals they would dilate still farther until the iris was visible only as a thin ring, and simultaneous with this, the lips would tighten, respiration be arrested, and the patient raise the trunk so that she rested on her buttocks and shoulders. Mere exacerbations were invariably curtailed by lowering the head.

Treatment.—In such attacks as above, nitrite of amyl and a position that favors cerebral congestion are clearly indicated, I endeavored to obtain some sodium nitrite, which has been so

ably recommended by Prof. Matthew Hays for this purpose, but could not find any specimen that was chemically pure, indeed, the best specimen only contained thirty-three per cent. of the nitrite, the remainder being nitrate.

The hygienic treatment is the same as that for most other forms of heart disease, and the diet should be one that will favor tissue change and renewal, but not produce fat.

Medicinal Treatment.—The use of digitalis has been condemned as likely to produce rupture of the heart by increasing the strain upon its weakened walls, but clinical experience shows this to be more imaginary than real, and that for every one that is injured by the additional strain, fifty are benefited by the strengthening of the remaining healthy fibres and the improved nutrition of the whole organ.

Arsenic is the most valuable cardiac and general tonic in this disease, and this is all the more remarkable since arsenical poisoning produces fatty degeneration of the heart and other viscera. This is partly due to the improved condition of the blood producing increased oxidation of the tissue, but in addition to this, the drug has some direct influence upon nutrition. We are not in a position with our present knowledge to say what this is, as some experiments show that arsenic diminishes the excretion of urea, others that it does not affect it, and yet more recent investigations have actually found an increase. It must be remembered that during the last year it has been shown that our usual methods for investigating the amount of urea in the urine have been liable to grave fallacies.

The action of arsenic on the circulatory system is to reduce the force and frequency of the heart's contractions and cause vaso-motor paralysis. It therefore acts in the opposite way from digitalis.

Belladonna in Incontinence of Urine.

Belladonna is more effectual in that form which occurs at night, but when persisting during the day there is indicated a paresis of the sphincter which may be relieved by strychnine, perhaps combined with ergot. Acidity of the urine should be corrected by potash salts; anæmia by iodide of iron; vesical spasm by bromides; while the various causes, as ascarides, phymosis, late suppers, etc., must not be neglected.

Correspondence.

TO THE EDITOR :—Reading in the JOURNAL of April, this year, Dr. Arnold's interesting article, "Some Forms of Laryngeal Tumors," I noticed one rather important error, to which it might be well to direct attention. The Doctor (page 172) says: "Due caution being given to the *inversion* of the laryngeal image in the mirror," etc. Now the laryngeal image as seen in the mirror is never inverted, no matter how the mirror is held, or at whatever angle the image is formed. The image of the larynx and adjacent structures, as seen in the mirror, are in a *reversed* position, but not an *inverted* one; that is to say, the structures which are posterior in reality, are anterior in the image, and what is really in front looks as if it were behind, the relative positions of right and left being unchanged.

M. C. O'TOOLE, M.D.

[Dr. O'Toole evidently misapprehends the true meaning of the word INVERSION. "*To invert*" means "to place in a contrary order," "to give a contrary direction," etc., which meanings also belong to the verb "*to reverse*." In ordinary speech the two words are synonymous, and Webster notes this fact.

It is perfectly well known that the throat mirror, being plane, produces a displacement of the laryngeal image only in the antero-posterior direction. Now it is equally proper to speak of this displacement as an *inversion* or a *reversion*; but we believe that the use of the word *reversion* in this case would be more likely to convey the impression of a *lateral displacement*, which really does not obtain. This opinion is justified by the practice of most English writers on the subject, as the appended quotations will show: "Practical Guide to Diseases of the Throat, by Lennox Browne," English edition, page 10: "It is important to remember that this reflected image is laterally symmetrical of the object, AND NOT REVERSED." "The only INVERSION which takes place," etc., etc. "Diseases of the Pharynx, Larynx, and Trachea, by Morell Mackenzie," American edition, page 168: "The only INVERSION which takes place is in the antero-posterior direction," etc., etc. We would conclude, therefore, that the term used in the article of Dr. Arnold, and objected to by Dr. O'Toole, is certainly best calculated to express the true statement of the case.—EDITOR.]

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, March 10, 1885.

The meeting having been called to order by the President, Dr. Jewell, the minutes of the former meeting were read and approved.

Dr. Donnelly then applied for reinstatement into the Society, as during his absence from the city his name had been dropped from the roll. The request was complied with.

Dr. W. W. Kerr then reported some cases of fatty heart.

In the discussion that followed, Dr. Abrams said that it was impossible to distinguish between fatty degeneration and infiltration. He could not indorse the statement made by Dr. Kerr, that the area of cardiac dulness was not necessarily increased, as there was always enlargement of that organ. He mentioned a case of fatty heart following diphtheria, which was evidently due to nerve paralysis, and in which digitalis proved to be inert.

Dr. Donnelly spoke of the frequency with which alcohol and want of oxygen were causes of this disease.

Dr. Perry said that although you cannot definitely distinguish infiltration from degeneration by physical diagnosis, it could be done by taking into consideration the accompanying conditions of the patient. He thought that degeneration generally followed hypertrophy of the cardiac muscle, or obstruction of the coronary arteries, whilst infiltration was an accompaniment of general obesity. Fatty infiltration tended to produce atrophy of the muscular fibres, but was very amenable to treatment in the earlier stages, especially by reducing and regulating the diet; the use of tonics should be avoided in such cases. The most frequent causes were alcohol and want of exercise.

Dr. Norris doubted if we were entitled to call this change a degeneration. He believed that all muscular tissue is, so to speak, "tender," and that in this condition the individual fibres and whole organ are liable to dilatation.

Dr. Kerr said that while he recognized the fact that there is generally an increased size of the heart in fatty infiltration or degeneration, he still adhered to his former statement that per-

cussion did not usually reveal any increase in the area of cardiac dullness, owing to the amount of mediastinal and subcutaneous fat.

Dr. Perry said that it was merely a question between percussing a thin or obese person.

Dr. Abrams then exhibited the following pathological specimens :

1. Sub-phrenic abscess. This is described by Leyden as "pyo-pneumothorax subphrenicus," and by Cossy as "faux pneumothorax." The diaphragm was much attenuated by pressure of the abscess, and coexisting with it was a high degree interstitial hepatitis, resulting from malaria. The cause of the abscess is unknown.

2. Furrows on the surface of the liver. This is a frequent condition, supposed by Zahn to be due to an hypertrophied diaphragm, the result of a difficulty in inspiration. Probably Liebermeister is more correct, when he ascribes them to a difficulty in expiration, during which the lower ribs are drawn inwards by the abdominal muscles. These two are known as the diaphragmatic and costal theory respectively.

Dr. Plummer reported that the Board of Examiners had completed the new Medical Register, which would be distributed gratuitously to all members of the profession.

A motion to adjourn was then in order.

Members present : Jewell, Plummer, Long, Whitwell, Wilcox, Chase, W. E. Fifield, Ellen Fifield, Abrams, Kerr, Wickman, Marshall, Norris, Guzman, C. E. Blake, Chismore, Perry, Hart, Fitzgibbon, Ellinwood, Whittell, Lonigo.

SAN FRANCISCO, March 24, 1885.

The meeting having been called to order by the President, Dr. Jewell, and the minutes of the former meeting read and approved, the following names were submitted for membership: Dr. Nickerson; Dr. Winslow Anderson, University of California, 1884; Dr. W. B. Lewitt, Detroit Medical College, 1877, and College of Physicians and Surgeons, New York, 1878. They were referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the application of Harry Mitchell Sherman, M.D., who was forthwith elected to membership.

Dr. Morse then reported a case in which he had removed a tumor from the pharynx, and preceded the operation by ligation of the carotid.

Mr. O., aged 35, entered the German Hospital with a growth proceeding from the posterior wall of the pharynx, involving the right tonsil so as to push the uvula and left palatal arch to their own side, and almost completely filling the buccal cavity. The tumor was readily definable in every direction, a small opening between it and the base of the tongue admitting of the passage of a finger. It was found to be hard or firm in consistency, with a smooth surface, ulcerated on its upper part.

Two months before admission, the patient noticed a lump in the back of his throat, but as no inconvenience was experienced, he did not pay any attention to it until it had attained its present condition. Removal was decided upon, but a dread of hemorrhage made it advisable to precede the operation by ligation of the right common carotid, and to dispense with the use of general anæsthetics. Further preliminaries consisted in the subcutaneous injection of $\frac{3}{4}$ grs. of cocaine and $\frac{1}{4}$ grs. of morphine over the site of the carotid artery, which was then ligated beneath the omo-hyoid muscle.

During this procedure the patient was repeatedly asked whether he felt any pain, and he replied in the negative. The ligation having been completed, an attempt was made to remove the growth by means of the platinum wire of the galvano-cautery; but this was found to be impossible, and consequently the whole mass was scooped out by means of the sharp spoon, and the surface cauterized with Paquelin's cautery. Not a teaspoonful of blood was lost during the operation.

The patient showed no symptoms of brain trouble consequent upon the ligation, and is now, one week from the time of operating, doing well.

The microscope proved the tumor to be a round-celled sarcoma, as the rapidity of its growth had led us to expect.

[Since this report was made to the Society, Dr. Morse has informed us that the wounds in the pharynx and neck have healed perfectly, and the patient has been sent home cured.]

Dr. Norris congratulated Dr. Morse upon his success in such an operation, which was admittedly a difficult one. He had seen the operation performed, both by aid of the snare and the scoop, and the excessive hemorrhage made him believe that ligation of

the carotid was a wise precaution. He had ligatured the carotid for aneurism, and his experience was that after the skin and fascia had been divided, the fore-finger was the best director.

Dr. Arnold did not think sarcoma of the pharynx a common disease; more usually these tumors are fibromata. There is also an accessory lobule of the thyroid glands which is often mistaken for retro-pharyngeal abscess. He thought the operation a bold one. Most men would have made exploratory incisions; but probably in this case the hard feeling and quick growth were sufficiently diagnostic. It was important to remember the possibility of an enlarged lobule when a swelling was seen in the pharynx, as he himself had on two occasions passed a trocar into it, in mistake for an abscess.

Dr. Taylor congratulated Dr. Morse, and expressed his belief that the tumor was a true sarcoma, and would in all probability return. He thought the previous ligature of the carotid to be a very wise procedure, for three reasons: 1. It controlled primary hemorrhage; 2. It diminished the chances of secondary hemorrhage; 3. The diminished supply of blood to the part lessened the chances of recurrence.

Dr. Morse said that according to some authorities sarcoma of the pharynx are not uncommon, but they are rare in the tonsils. Carcinomata of the pharynx are rare. He thought the ligature of the carotid a necessary precedent, as there was great danger of the patient choking from hemorrhage. The chief danger of the ligature was paralysis from diminished blood supply to the brain, and curiously enough this was more frequent after ligature of one than of both carotids.

Dr. Whittell wished to know if a ligature might not have been placed beneath the artery and only tightened, if necessary?

Dr. Morse said that this might be done, and he would try it at the next opportunity.

The President then appointed the following committee to make arrangements for the banquet to visiting members of the State Medical Society: Drs. Hart, Plummer, Kenyon, Fitzgibbon and Kerr. On the motion of Dr. Kerr, the President was added to that committee and appointed its chairman.

Diphtheria was then suggested as a subject for discussion.

Dr. Washington Ayer had the most satisfactory results from the administration of iron in large doses every hour.

Dr. Flood had treated quite a number of cases, and never

found a drug that give him any confidence, so that always, from the first, he gave an unfavorable prognosis in a serious case. This happened to him, notwithstanding the use of such remedies and applications as Dr. Ayer had suggested. He believed that many cases of follicular tonsilitis were mistaken for diphtheria, treated as such, and recovered ; but that most cases of real diphtheria died.

Dr. Baldwin had seen many cases of undoubted diphtheria which he had treated and cured ; but when the exudation extended beyond the tonsils over the arch of the palate and uvula, nineteen from every twenty died. He believed quinine to be useful in these cases, and the application of solid nitrate of silver with *Mel Boracis* gargle.

Dr. Taylor called the attention of the Society to the treatment of diphtheria by large doses of calomel, frequently repeated. The theory on which this treatment was based was a belief that in this disease there is an increase in the amount of fibrin in the blood. He knew of a case with marked laryngeal symptoms in which two and a half grains of calomel every hour produced complete relief within twelve hours. He believed diphtheria to be a constitutional poison, and the exudation only a symptom or consequence.

Dr. Van Orden had obtained good results from local application of two grains of calomel to the tonsils every hour.

Dr. Cole believed that this disease was due to a state of the blood, and that the value of the many salts of chlorine used in this disease lay in the chlorine which they contained maintaining a fluid condition of the blood. The throat symptoms were not to be regarded as important unless the larynx was affected. Treatment should be to keep the throat clear, and support strength with iron, but in ordinary (not large) doses. Quinine was also a valuable agent, and calomel might be given as one dose of twenty grains, for any larger amount would probably be excreted unchanged.

The Society then adjourned.

Members present : Drs. Jewell, Hart, Baldwin, W. E. Taylor, Whitwell, Morse, Kerr, Ayer, Maas, Long, Chipman, Whittell, LeFevre, Fifield, Arnold, Sherman, Wanzer, Norris, Flood, Chase, Guzman, Frisbie, Van Orden, Lonigo, Cole.

Licentiates of the California State Board of Examiners.

SAN FRANCISCO, April 3, 1885.

At the regular meeting of the Board of Examiners, held on the 1st of April, 1885, the following physicians having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

- J. H. BULLARD, Anaheim; Harvard Med. College, Mass., June 29, 1881.
 WM. R. CLEVELAND, Nelson; Dartmouth Med. College, N. H., October 30, 1868.
 CHAS. A. DAVIS, Chico; Medical Department Vanderbilt Univ., Tenn., March 1, 1881.
 WM. J. KEARNEY, Mariposa; McGill University, Canada, March 31, 1875.
 DAVID O. LEWIS, San Francisco; Med. Department University of Pennsylvania, Penn., March 12, 1874.
 W. J. NICKERSON, San Francisco; Med. Department Bowdoin College, Me., July 15, 1870.
 GUSTAV SCHLESSINGER, San Jose; St. Louis College of Physicians and Surgeons, Mo., March 7, 1885.
 J. R. SUTTON, Maxwell; College of Physicians and Surgeons, Keokuk, Ia., Feb. 26, 1884.
 D. W. WEBSTER, San Jose; Med. Department Univ., Wooster, Ohio, Feb. 27, 1873.

In consequence of erroneous information furnished our correspondents, the names of J. C. DALE, M.D., of Snelling; W. J. CHANNING, M.D.; and E. S. CARR, M.D., of Pasadena, were reported at this office as practicing medicine, and, being without a license, their names appear in the illegal list of practitioners in the new Register. We are now informed that Dr. Dale retired from practice some years ago. Dr. Channing has never practiced in this State, having removed here for the health of his family, after retiring from practice; and Dr. Carr, though a graduate in medicine, never did practice. A few such errors may reasonably be expected in a work of this kind, in the first issue, as there is no record of facts by which to be governed, as in the list of licentiates, and it is almost impracticable to investigate each individual case. All such errors will be promptly corrected upon receipt of the proper information.

R. H. PLUMMER, Sec.

Clinic of the Month.

THERAPEUTIC NOTES.

Pancreatin in Diphtheria.

Dr. Henry D. Chapin, of New York, has met with success in attempting to digest the false membrane of diphtheria or croup, by \mathbb{R} ext. pancreatis (Fairchild's), gr. 15; soda bicarb., gr. 3; glycerinæ, \mathfrak{z} i, ag. dest. \mathfrak{z} 7 applied by a brush or spray to the pharynx, or through the canula after tracheotomy.

Prof. W. Kuhne, of Heidelberg, prepares pancreas for a trypsin solution thus: "One day old ox pancreas is hashed fine and mixed with four or five volumes of absolute alcohol; stand for five or six days, then drain off the alcohol and add two volumes of fresh absolute alcohol; let this stand for three days; drain again and extract the substance with ether; the pancreas can then be quickly dried in the air. To \mathfrak{z} i gr. 15 of this pancreas add \mathfrak{z} i \mathfrak{z} 5 of 0.1% salicylic acid solution; let it digest in a water bath four hours at 100° F.; filter and add $\frac{1}{4}$ of bicarbonate of sodium, and 1% thymol, to prevent putrefaction."

Hydrobromate of Quinine.

This drug, according to Dr. Tumas, in *London Medical Record*, arrests alcoholic fermentation and blood putrefaction. Subcutaneous or intravenous injection from gr. $\frac{1}{2}$ to gr. 1 per kilogramme (2 $\frac{7}{10}$ lbs.) of animal's weight produces fall of blood pressure, due to paresis of the vaso-constrictor and stimulation of the vaso-dilator nerves, in proportion to the strength of the patient. Small doses produce a short increase in the frequency of the pulse; large doses retard it. The same is true in relation to the respirations—fatal doses arresting respiration in the stage of expiration. It produces paresis of the motor centers. Chronic poisoning produces loss of weight, general sluggishness, permanent slight decrease of temperature, diminution of electric sensibility, and motor excitability.

Acid Sulphuricum Dil.

Applied locally or given internally in m. x., valuable in allaying the distressing itching, formication and [tingling] of lichen, prurigo and chronic urticaria.—*Medical Record*, 1885.

Digitalis in Cardiac Valvular Disease.

Nothnagel observes that no treatment is indicated until disturbances of compensation become apparent. Then secure rest by confining the patient to bed, and strengthen the weakened muscles by digitalis (none of the four alkaloids or their combinations, except as found in the plant, will answer), gr. $\frac{1}{2}$ of the powder every three hours for five or six days; then stop for five or six days, and repeat as before. If no relief, increase the dose to gr. 1 every two hours. The poisonous symptoms occur suddenly and commence with vomiting, and a rapid pulse of small tension. It may be combined, though rarely, with quinine, gr. $\frac{1}{2}$ -2 $\frac{1}{2}$. Where digitalis fails, caffeine, in doses of gr. $\frac{1}{2}$, may be substituted.

Cocaine in Irritation of the Bladder.

Dr. Sarah E. Post affirms that a 2 % solution of cocaine will relieve the irritation of the bladder when very distressing, by injecting with an intra-uterine syringe from ten to fifteen drops.

Chrysarobinum in Eczema.

Dr. Strequart reports in *Jour. de Med.*, cures of acute and chronic eczema in twelve days, from daily doses of gr. $\frac{1}{3}$ to $\frac{1}{2}$ of chrysarobinum, regardless of age.

Sulphur in Tinea Capitis.

Dr. Robert Lee, of London, advises mixing into a thick, creamy paste, precipitated sulphur $\bar{3}$ $\frac{1}{2}$, olive oil $\bar{3}$ 1, and carbolic acid m 36, to be well rubbed in twice daily, after thorough washing with soap and hot water.

Cannabis Indica.

Fronmuller asserts that no alkaloid possessing the action of the plant has yet been discovered. Merck has obtained a glucoside, cannabin, which is made stable by being combined with tannin, hence called cannabin tannic. It acts a soporific, without any bad effects, in doses of gr. 1 $\frac{2}{3}$ to gr. 3.

Contra-indications to Mercury in Syphilis.

1st. In phthisis, except when very slight; 2d. In nephritis, except when due to syphilis; 3d. In severe scrofulous symptoms; 4th. In profound non-specific anæmia; 5th. In sloughing and phagedena. Avoid alcohol and tobacco; enjoin exercise and fresh air (except when any eruption appears), and cleanliness.—*A. Cooper, F.R.C.S.*

Pepsin in Clotted Blood in the Bladder.

One scruple of Jensen's crystal pepsin in an ounce of warm water will relieve the patient in a short time—*Analectic*, '85.

Borax as an Internal Disinfectant.

Dr. E. Cyon, of St. Petersburg, has for the past seven years employed borax as a safe and effectual internal antiseptic, in daily doses of gr. 75 to 90, in all diseases due to the presence of bacilli in the intestines, or even in the blood. Thus it may be used as a prophylactic or as a curative.

Warm Douching of the Head and Neck in Continued Fevers.

In continued or eruptive fevers, when the patient is sleepless, the temperature high, and pulse rapid and feeble, with jactitation, brown, dry tongue, and sordes on the teeth, nothing will afford such prompt relief and so quickly induce refreshing sleep, according to the opinion of Dr. A. J. Campbell, in the *British Medical Journal*, as, after wrapping a patient's shoulders in a sheet, and plugging his ears with cotton, to pour a small stream of warm water over his head and neck from an elevation of eighteen inches, for three or four minutes. The head and neck may be supported over a vessel at the side of the bed.

Cold in Sciatica.

Dr. Debove often obtains rapid cures of sciatica by applying a spray of chloride of methyl along the course of the nerve. This will reduce the temperature to 20° below zero F.—*London Medical Times*.

Aloes.

High temperature decomposes aloin, which forms 50 to 80 % of aloes. Potassa assists the solution of the resin. \mathcal{R} . Tincture aloes soc. \mathfrak{z} i ol. anisi gtt. x., liquor potassæ \mathfrak{z} 2, aquæ anisi \mathfrak{z} 2½ m; dose \mathfrak{z} 1-4.—*Medical Record*, 1885.

Cocaine in Alcoholism, Morphinism and Allied Habits.

Cocaine in gr. ¼ to ½ hypodermically, will correct the habit in ten days, according to Dr. Fleisch, of Vienna. Later authorities, though, affirm that it is of no benefit.

Hot Water in Spinal Irritability.

Dr. S. J. Gee recommends a douche of hot water to the spine in cases of spinal irritability.

Pyrethrum in Globus Hystericus.

Dr. Roth gives from ten to twenty drops of the tincture four times daily, with satisfactory results.

Potassium Bromide in Laryngismus Stridulus.

Professor Widerhofer obtains the best of results from gr. 4 to gr. 8 twice daily, in this obstinate complication of rickets.

Ergot.

According to a late paper by R. Kobert, of Strasburg, sclerotinic acid owes its chief activity to ergotin acid, which lowers the blood pressure, does not contract the blood-vessels, and has no effect on the uterus. He believes, with C. M. Seltzer and H. Munk, contrary to Dragendorff, Nothnagel and Rossbach, Niti-kin and Marckwald, that sclerotinic acid has no ecbo-lic action.

Sphacelin acid, a non-nitrogenous acid, soluble in alcohol, he believes to be the cause of gangrenous ergotism and the other toxic effects of the crude drug. It stimulates the vaso-motor center, but does not excite convulsions. It probably produces tetanic uterine contractions.

Cornutin stimulates the vaso-motor centers and raises blood pressure more strongly than sphacelin acid. It causes convulsions and irregular peristaltic uterine contractions.

He believes that the ergotin, ergotin and sclerotinic acid, upon which Marckwald experimented, are impure mixtures, and not fixed chemical compounds.

Potass. Permanganas in Cholera.

F. E. McFarland, in the *Dublin Journal of Medical Science*, prescribes gr. i one to aq. dest. $\frac{3}{4}$ m. sig. $\bar{3}$ 1, every ten minutes until reaction is established, which may occur in from two to nine hours.

Agave.

M. Marcano observes that the fresh sap of agave will peptonize meat when added to it in water and kept at a temperature of from $102\frac{1}{2}^{\circ}$ to 104° F for thirty-six hours.

Iodoform for Scabies.

A. K. Grigorieff says that iodoform relieves the itching at once, and does not irritate the skin. He prescribes iodoform $\bar{5}$ i. one, cerati simplicis $\bar{5}$ i. olei. oliv. q. s. ut fiat unguentum. Cure after seven inunctions in about five days.

Senega in Rhus Poisoning.

Mr. Weigand recommends the fluid extract of senega, applied on cloths in cases of rhus poisoning, the drug effecting a cure in three applications.

Ergot in Exophthalmic Goltre.

James Stewart, of McGill University, Canada, advises the fluid extract of ergot in $\bar{5}$ i. taken daily for three months, as relieving all the symptoms.

Keratin-Coated Pills.

Dr. Unna, of Hamburg, has discovered a method of coating pills which will enable them to resist the action of the gastric juice, while they dissolve freely in the intestine. This he has accomplished by the use of keratin, a derivative from shavings of ox or buffalo horn. The shavings are first digested by artificial gastric juice (pepsine solution, with 1 % hydrochloric acid), and are then macerated for weeks in ammonia. When the ammonia is driven off a gummy solution of keratin is left, from which by drying it is obtained in the form of shining bright yellow flakes. The pill requires to be prepared in a special manner. The ingredients are well rubbed up with cocoa butter, or tallow, an excipient being used if required. The pills are then covered with cocoa butter, so as to prevent any of the medicine being on the surface. When hard, it receives two or three coatings of the keratin solution. If the ingredients are incompatible with ammonia, glacial acetic acid may be used as a solvent. These pills have a special value in cases where medicines which have an irritating effect on the gastric mucus membrane are to be administered for any length of time, as arsenic, copaiva and creosote. They are also useful where the drugs used may become altered by digestion forming insoluble precipitates with pepsin and peptones, as tannin, alum; acetate of lead, nitrate of silver, and bichloride of mercury; again, where it is desired that medicines should enter the intestine in the most concentrated form.

Carbolic Acid Hypodermically in Ague.

Dr. Diculapy recently communicated to the Société Médicale des Hopitaux of Paris, a case of tertian ague which, failing to yield to quinine, was cured by carbolic acid administered subcutaneously. On the first day the Doctor injected $2\frac{1}{2}$ centigrammes of the acid dissolved in 100 parts of water. The quantity was increased on the following days to 5 centigrammes, and to 7 on the days of apyrexia. Recovery was complete at the end of seventeen days. The patient had then absorbed 84 centigrammes of carbolic acid, without exhibiting any toxic symptoms.

Sulphide of Calcium.

R. T. Benham, in a paper read before the West London Medico-Chirurgical Society on the use of sulphide of calcium

in arresting and preventing suppuration, ascribes its frequent failure to the smallness of the quantity administered. He regards the appropriate dose as 1 gr. in pill "ter die;" but if after a week no marked improvement had taken place, he increased the amount 1 gr. "per diem," or every few days, till 8 grs. daily was reached. He did not find that this produced toxic symptoms. Mr. Benham maintains that the action of the drug is not due to the formation of H_2S , but rather to its direct absorption. He recommends it in phthisis, typhoid and small-pox.—*Dub. Med. Press and Cir.*

Action of Opium in Cholera.

Dr. Kespert, in "El Genio Medico-Chirurgico," suggests the following explanation for the beneficial action of opium in choleraic diarrhœa, based on the hypothesis that the disease is due to the presence of a bacillus:

1. Since opium cannot possibly have any direct action on the cholera bacillus, it may, by arresting peristalsis and exudation, produce such a modification of the intestinal contents that the bacilli are deprived of the conditions necessary to their development and vitality.

2. Koch has shown that the coruma bacillus cannot exist in putrifying fluids containing the products of metatolæsia of other—especially putrefactive—bacteria. The arrest of the normal intestinal transudation by opium probably favors the development of putrefactive organisms, which thereby tend to exclude or destroy the coruma bacilli.

Chologogues.

Dr. Baldi, in the Archives Italiennes de Biologie, gives a series of experiments with reputed chologogues. The Doctor is not in accordance with either Rohrig or Rutherford. Rohrig found that colocynth was the most active chologogue, and then jalap, aloes, senna, and rhubarb. Rutherford believed the order to be, podophyllin, rhubarb, aloes, colocynth, and senna. Baldi experimented with podophyllin, rhubarb, jalap, sodium, pilocarpine, and Carlsbad water; and from his results is inclined to doubt the chologogue value of all these agents.

Turpentine in Superficial Pains.

Dr. Constantin Paul advises a flannel wrung out of turpentine, and applied for less than an hour, to prevent vesication, for the relief of lumbago, pleurodynia, intercostal neuralgia, torticollis, etc.

SURGICAL NOTES.

Abscess of Lung Treated by Incision and Drainage.

Dr. Teale, of Leeds, England, reports (*Lancet*) a case of abscess of the right lung which was successfully treated by incision and drainage. The case had been seen by several medical men, including Clifford Allbrett, and diagnosed as one of empyema. Paracentesis was performed, the puncture being made low down on the right side, but with the assistance of the aspirator only a small quantity of serous fluid was obtained. Another puncture being made higher up, about a pint of fetid, greenish pus was withdrawn. Constitutional symptoms becoming grave, it was decided that the thorax should be opened and drained, the case being still regarded as an empyema. An incision was made at a point a little below and in front of the angle of the scapula, ninth intercostal space, opening the pleural cavity; but no pus was found. On introducing the finger the pleural surfaces were rough, with numerous adhesions; the lung was in close proximity to the chest wall, and felt dense and boggy, instead of being crepitant and elastic. On puncturing the lung with a trocar, pus appeared, and when the puncture had been enlarged, two pints of most fetid pus were evacuated. A drainage-tube six inches long was introduced, the cavity syringed out with weak carbolic solution, and the chest encased in carbolized tow. The after progress of the case was tedious, the patient suffering from well-marked septicæmia, large quantities of pus were discharged through the incision, and occasionally some was expectorated. The drainage-tube was gradually shortened, and finally withdrawn, and nine months after operation the patient had resumed the active duties of his profession as a lawyer.

Mr. C. G. Wheelhouse gives a case in which a large abscess cavity existed at the back of the left lung. The subject had suffered from hectic fever and incessant cough, accompanied by profuse purulent expectoration. The case was operated on in a similar manner to that reported by Mr. Teale, with the result that perfect relief from all the symptoms was obtained.

In connection with the foregoing, it is interesting to note Sir Spencer Wells' observations at the opening of the Midland Medical Society, Birmingham, England: "I should speak hopefully of pulmonary surgery, of the drainage of cavities in the lungs, of

incising gangrenous lung, of resection of portions of ribs to obtain contraction and closure of the pleural cavity; and of the excision of parts of the lungs, or of an entire lung; even of the surgical treatment of purulent pericarditis;—but these are subjects to which I can barely allude as proofs that we do not yet know how far we may go with rational surgery, or what may be in store hereafter for surgical enterprise."—*B. M. J.*, Jan. 3, '85.

Prolapse of Omentum.

Dr. Domenico Morisani, in *Revista Internadi Med. e Chir.*, reports a peculiar case of a woman, aged 39 years, in which prolapse of the omentum through the rectum occurred. Her attention was first directed to the fact by noticing that after going to stool something had come down into the anus. About a month later she had an attack of intestinal catarrh, of a dysenteric form, and after severe straining she noticed that something had been expelled from the rectum, the protrusion increasing after each effort at defecation.

On examination it was seen that the anal orifice was greatly dilated, and that from it was a projection about twelve inches in length. It was rigid, and described in a certain degree the arc of a circle. Its surface was knotty, and formed of a series of lumps resembling the configuration of the transverse portion of the colon. The external surface was epithelial. On straining it could be made to project somewhat further. It was found that a recto-vaginal fistula had formed, and most of the fecal was being evacuated through the vulva.

The following operation was performed, under strict antiseptic precautions: The tumor was pulled down, and it was observed that there was a fold of mucus membrane closely united to it. On attempting to insert a tent between the fold and the tumor, the tent passed into a cavity. It was then drawn out, and the blade of a probe-pointed bistoury inserted; the blade was then turned vertically against the fold of mucus membrane so as to nick it in several places. Traction was again performed, and the drawn-out portion was at once thought to be a part of the great omentum. The finger was then introduced along the tumor and found to be in the abdominal cavity. It was also ascertained that the tumor had come down from the abdominal cavity by perforating the intestines. Being convinced that the tumor should be removed, Morisani drew down from the abdomen the other portion of the omentum. Four points of the Spencer

Wells chain suture were then placed in the part drawn out, and afterwards tightened by crossing it in the omental tissue. About three-fifths of an inch below this ligature the tumor was cut off, the pedicle dressed with iodoform and returned to the abdominal cavity. The opening in the intestine was plugged with an antiseptic sponge, its edges freshened and stitched to the rectal mucus membrane. A second set of vertical sutures was then put in, and the whole wound dressed antiseptically. The patient died of septic peritonitis on the sixth day.

The autopsy, made thirty hours after death, showed a collection of pus in the pelvis, a small opening in the intestine through which feces had extravasated, and the contents of the abdominal cavity agglutinated. There was considerable lengthening of the transverse mesocolon. The stomach was in its normal position, but the transverse colon was dislocated, being curved so as to form a sort of angle, the apex of which was in the pelvic cavity. The epiloria magna had entered an opening in the wall of the prolapsed colon, and had gradually passed out per anum. There was nothing to show clearly how the perforation was caused.

A Thermal Centre in the Cerebrum.

Herr Aronsohn has presented a report of experiments to the Physiological Society of Berlin, which he instituted in conjunction with Herr Sachs, and which had led to the discovery he maintained of a thermal centre in the cerebrum. Starting with the idea that in consequence of a diabetic prick of the medulla oblongata, an increase of temperature would manifest itself in the liver, and finding by experiment no confirmation of this conjecture, Herr Aronsohn pushed his investigations for other thermal centres in the brain; and in the course of these researches came upon a spot where, in wounding it with a needle, a very considerable rise of temperature quickly set in. The author was not able to specify more exactly the spot at which it was necessary to make the prick in order to produce this effect. It was at all events certain that it was rather limited, and should be determined by more minute anatomical observations of a number of brains of animals preserved in chromic acid after being operated on. Equally deep pricks made at every other spot of the cerebrum had either produced no effect on the temperature of the body, or had lowered it somewhat. In all the successful cases

the corpus striatum was pierced by the needle; in all the unsuccessful cases the corpus striatum remained untouched. There was yet, however, no warrant from this circumstance to conclude where the exact site of the thermal centre was situated.—*Br. Med. Jour.*, Jan. 17.

OPHTHALMIC NOTES.

(From the Transactions of the American Ophthalmological Society, 1884)

Restored Eyelids.

Three cases are reported, of transplantation of flap, without leaving a pedicle, for restoration of the eyelids. The parts were covered with iodoform gauze in one case, and with gold-beater's skin in the other two. Union took place in all three cases by first intention. It was, however, a noticeable fact that what little suppuration there was, took place *at the points of suture*, which were invariably the last to heal; hence the number of sutures should be reduced to the fewest necessary to keep the flap in position.

Errors of Refraction.

An interesting case is reported by Dr. Risley, calling attention to the necessity of correcting small degrees of error of refraction. In the case reported a train of nervous symptoms accompanied the hypermetropia and astigmatism, which disappeared under the use of proper glasses. The glasses required were only $\frac{1}{6}$ s \ominus $\frac{1}{6}$ c ax. 90° .

Six years subsequently the hypermetropia was supplanted by myopia. The nervous symptoms existed as before, but in a less marked degree, owing to much improved general health. It was now necessary to prescribe — 25 s \ominus — 50 c ax. hor., which gave complete relief.

“The conclusion seems justifiable that at least the head symptoms from which this young woman suffered, and the inability to use the eyes, were the consequence of a low grade of choroiditis, resulting in a disturbance of the nutrition of the sclerotica, and gradual distension of this ordinarily unyielding membrane. It is an important inquiry whether, if the original correcting glasses had been faithfully worn, these years of suffering and interruption of the educational process might not have been prevented.”

Color Blindness.

In the report of the examiners of the employés of the Pennsylvania Railroad Company, as to color sense and hearing, they find that four per cent. are color-blind, and ten per cent. defective in vision; these have been removed or transferred to other duties where they can do no injury. The report says: "I am frequently asked by prominent officers of other railways, and government officials, to give an opinion as to the practical usefulness of our system of examination, and it affords me much pleasure to emphatically commend it, in all its details; and I feel that we have good reason to be satisfied with this, the first successful attempt to bring the entire body of men engaged in signaling upon a large railway under control by the practical application under scientific facts. Having eliminated these dangerous persons from our present force, we propose to keep it free from them in future by a steady application of our present system."

The Pennsylvania Railroad Company employs about fifty thousand persons, and operates five thousand miles of track. In a suit for damages against the company for injuries sustained by an accident on the rail, it cannot, in future, be claimed that the Pennsylvania Railroad Company is liable for having neglected to avail themselves of skilled medical aid in the elimination of so great and constant source of danger as even a partial color-blindness leads to, in persons upon whom rests the responsibility of readily distinguishing the colors of signals destined to guard the safety of thousands of human lives. The percentage of color-blind is comparatively large. Four per cent. of fifty thousand is two thousand, and if we add the ten per cent. defective in vision—assuming that it includes the four per cent. color-blind—we have the astonishing number of five thousand persons who have been occupying positions which constantly menaced the lives and property trusted to them.

Professor Da Costa reports a case in which an attack of facial erysipelas was cut short by the hypodermic injection of one-third gr. muriate of pilocarpine. Twelve hours after the appearance of symptoms the injection was administered, profuse diaphoresis ensued, and in less than twenty-four hours tumefaction had subsided. The disease did not return, and under appropriate constitutional treatment the patient became rapidly convalescent.

Editorial.

State Medical Society.

The meeting of the State Society, which took place on the 15th, 16th and 17th of last month, was an especially successful one, and this success was in a great measure due to its presiding officer, Dr. R. Beverly Cole, whose rulings throughout were characterized by decision and fairness.

Owing to the lengthened time allotted to the meeting no hurry was experienced, and all the necessary work of the Association accomplished; many more papers than is usual were read, and time for their full discussion allowed, and the interest in the meeting never flagged. The President's address was listened to with marked attention, and it contained many valuable suggestions regarding the future welfare of the Society. Although an unwritten address, it is to be hoped that it will be put in such a form that it can be published.

The fullest attendance was secured on the afternoon of the second day, when the election of officers for the ensuing year took place. For the office of President two candidates were presented, whose nominations were seconded by such eloquence that many present felt as though it were a true hardship that they could cast but one vote, and this feeling was evidently so strong that the President felt it incumbent on himself to hold up as terrorizing examples the fate of those who had at the last municipal election voted twice. The tellers did their work amidst breathless silence, which if possible increased as the end drew nigh, and all present appreciated that a tie might result. Silence was broken by the Secretary announcing that Dr. W. S. Thorne, of San Jose, had received twenty-nine votes, and Dr. Wm. P. Gibbons, of Alameda, thirty votes, and that the latter was consequently elected. Dr. Thorne immediately arose and moved that the election be made unanimous. This motion was carried.

During the meeting some fifteen new members joined the Society, and of all applicants but one was rejected, and he for unprofessional conduct. A number of others would have joined had it not been for the difficulty in bringing their credentials.

(On a suggestion made by the President in his address, action

is to be taken in this matter, so that in many cases the actual presence of the diploma may be rendered unnecessary. Surely, if for instance the State Board of Examiners, who are appointed by the Society, issue a license to a physician to practice, the Society should be willing to admit him without question, as otherwise they would show but little faith in a Board of their own creating. As is well known, any physician who can obtain a certificate of good standing from the President and Secretary of the local County Society, can become a member on application of the American Medical Association. So with our own State Society, its membership should be greatly increased by worthy men, who would be glad to join, but find it impossible to attend the yearly meetings.

Shortly before the close of the session, the President elect was conducted to the chair by Drs. Orme and Ayer, and introduced to the Society by Dr. Cole, who then retired from the position he had so ably filled. In a short and earnest speech, Dr. Gibbons spoke of the able men who had preceded him, and expressed himself feelingly in regard to the honor which the Society had conferred in selecting him to preside over them at their next annual meeting.

The members were then invited to attend the dinner at the Baldwin Hotel, which had been tendered them by the medical profession of San Francisco. This proved to be a very enjoyable gathering, nearly ninety sitting down at the handsomely decorated tables.

After a plenteous repast, toasts were in order, and these were happily responded to by many of those present. At a late hour the festivities ended, and the feeling was unanimous that the annual meeting of the State Society had been an immense success.

Health Reports for San Francisco and District of Columbia.

The deaths in San Francisco for the month of March number 502, an increase of 88 over the same month for the preceding year. Of these, 40 were due to croup and diphtheria, and all occurred in children under ten years of age. Phthisis claimed 68 deaths, and of these but five were Chinese. Four cases were due to aneurism of the aorta, 11 to apoplexy, 22 to bronchitis, 14 to meningitis, 41 to heart disease, and 55 to pneumonia.

Calculating that the population is now equal to 250,000, the death rate for March was 20 per thousand.

We have received the Health Report for February for the

District of Columbia, which has a population of 200,000. There were 445 deaths from all causes, which made the death rate 29 per thousand. From croup and diphtheria there were 15; from phthisis, 78; heart disease claimed 28; bronchitis, 22; pneumonia, 64. This death rate is higher than it has been for the same month for eleven years, and if we compare this with San Francisco, we must also remember that among the white population the death rate was only 23, while among the large negro population it was 40.

The causes of death are divided into: 1. Zymotic; 2. Constitutional; 3. Local; 4. Developmental Diseases; 5. Violence; and 6. Unknown. In looking over the diseases placed under these heads, we appreciate the difficulty of classification which is sometimes encountered; but are a little surprised to learn that in Washington "inanition" is considered a zymotic disease. It appears also hardly fair to the doctors of that locality to place Oophorectomy under the head of deaths from violence.

On comparing the two reports, it is to be noticed that in this city attempt is made at greater accuracy. Whether this is gained seems to be an open question; and again, whether the gain compensates for the resulting loss in conciseness. Is it better to place under one head, "Deaths from Heart Disease," or to state the different affections of the heart and then finally to place the greater majority under the head of "Undefined?" In theory it would be of much interest to have the diseases accurately defined, but in practice few are careful enough in their diagnosis to make such classification useful. Look at the present report. The deaths from endocarditis are placed at 2; hypertrophy, 1; fatty degeneration, 2; valvular disease, 10. That is, 15 in all, while under the head of "Undefined" there are 26. For statistical purposes the above is of no possible use, and the general classification under "Heart Disease" answers as well. The higher aim is, however, praiseworthy, and we would urge every physician, when he is unfortunate enough to be obliged to sign a death certificate, to fill it out to the best of his ability, that statistics may be as full and correct as possible.

The report from the District of Columbia is not merely a statement of the deaths—it contains also a table of the daily mortality; also one of the social relations of those who have died; one of the marriages, births, and still-births; deaths in public institutions; and finally, one showing the location of the deaths

according to the sanitary divisions of the District. The report ends with a recapitulation and remarks, which gives its substance in a readable form.

With the two reports lying before us, we are led to consider whether the one of our own city might not be rendered more useful, and at the same time be prepared with less labor. Is it of any practical importance to know just how many deaths take place in each ward? Would not more be gained if the city were divided by well-known boundaries into four to six sanitary districts, and thus give a better idea which part of the city is the most healthy? Wards are numerous, and their boundaries are not known. Would it not be better to place diseases under a more general head, and so gain space and (we believe) greater accuracy?

In its present form the report is clumsy, and is neither easily read nor easily filed; nor are the general results to be obtained without considerable study. Statistics are dry at best, but much may be done to eliminate this dryness if they are put in a readable form—one from which conclusions can be drawn at a glance.

Publication of the State Society Proceedings.

The question of publication of the Proceedings of the State Society came up for discussion before that body, but was referred to the Committee on Publication. This committee accepted our offer to print the transactions, and hereafter each member of the society will receive a copy of the journal, the price of which is included in the annual dues. By this manner of publication it is expected that, instead of there being no official report of the transactions received by members before August or September, that these will be published immediately after the meeting and be distributed within a couple of weeks of adjournment. Each month one or more of the papers that the committee decide to publish will be inserted, thus assuring not only a greater number of readers among members of the society than was the case when the papers were all issued at the same time, but also a larger number of readers among the professional men of this and of other States, on account of the wide circulation of the journal. It is hoped that the present arrangement will induce many, who have not yet joined, to become members of the State Society.

It is to be regretted that a bound volume of the transactions cannot now be furnished to those who have a complete file up to date, but to a limited number we believe we shall be able to furnish a file of the JOURNAL from which the proceedings can be taken and separately bound, if so desired.

Owing to the increased work attendant on this plan of publication, we have associated with ourselves Dr. William Watt Kerr, whose previous work upon these pages has already been recognized by a number of our readers. From him we feel confident that we shall receive much assistance, and that our subscribers will be correspondingly benefited.

With the desire to increase the scope of the JOURNAL, and that it may be still more closely identified with the State Society, we take pleasure in placing upon the cover the names of Dr. R. Beverly Cole, the retiring President, and of Dr. Wallace A. Briggs, the Secretary of the Association, as collaborators. From these gentlemen we also hope for valuable assistance.

In order that our other subscribers may not be forgotten, and that they also may rejoice at the change, at least twelve extra pages will be added to the usual issue, so that there will be sixty pages of reading matter, instead of forty-eight as heretofore.

Although the JOURNAL has been delayed for ten days, no matter has been received from the Committee on Publications, and in consequence the Proceedings cannot appear until the June issue. This is much to be regretted, as every day's delay after adjournment decreases the interest in the minutes, and the one great advantage in the present arrangement is lost. We do not intend that this plan shall fail through any fault of our own; but it certainly will not succeed unless care is exercised to avoid delay, which may render the publication of all the proceedings before next April an impossibility.

Owing to the delay necessitated by expected copy not being received, we have deemed it wise not to enlarge the JOURNAL this month.

Dr. James H. Parkinson has been reappointed City Physician of Sacramento.

Death from Chloroform.

Another death from chloroform has come under our notice. So far as we can ascertain, the amount given in this case was small, since it was the intention of the physician to avail himself of the rapid action of chloroform in producing anæsthesia, and to maintain this condition throughout the operation by the administration of ether.

It is a mistake to imagine that time can be gained in this way without exposing the patient to very considerable danger. In administering chloroform it must always be remembered that the drug, when concentrated, has a paralyzing influence on the intra-cardiac ganglia, and for this reason must always be largely diluted with air; it never should be "crowded," nor given in a cone. Its influence is prolonged when compared with that of ether.

Ether, on the other hand, has not this paralyzing influence, and is so light that after the stage of laryngeal irritation has been passed it must be given in a concentrated form to produce anæsthesia sufficiently deep to admit of major operations. When ether is substituted for chloroform during an operation, as was intended in the case referred to, there will always be a partial return to consciousness induced by the stimulating properties of the former drug, and also because under such circumstances it must be given gradually at the commencement. If at such a time the mouth and nose of the patient be covered with the cone the patient will inhale not only the ether but also the chloroform which he exhaled at each previous expiration; and as both poisons, together with the products of respiration, are thus retained in the system, disagreeable symptoms are apt to supervene. These may be avoided by removing the cone from the face during each expiration.

We do not intend to enter into the controversy regarding the comparative merits of the above two anæsthetics, because it is now generally admitted that so far as safety is concerned, ether is to be preferred, except when there is a very irritable larynx, or for relieving frequently-recurring spasm, or when operating by artificial light. In all other cases the operator must choose between the more agreeable sensations, the rapidly obtained yet lasting effects of chloroform, with its liability to produce dangerous symptoms, which can only be avoided by the most careful watching from the commencement of administration

until the return of consciousness, and the more tardy, evanescent, but safer anæsthetic influence of ether. During the last ten years we have selected chloroform on an average of nineteen times out of every twenty cases in which an anæsthetic was used, without meeting with any fatal results; so that our opinion of its relative danger is given in spite of personal preferences and the prejudices of early training. We still prefer this drug, and, while admitting its danger, contend that in the hands of one who understands its administration and will give his undivided attention to it throughout the operation, no bad results are likely to follow; but the administrator must bear in mind that he cannot take the liberties with chloroform that he can with ether.

As has been already noticed, this anæsthetic must be abundantly mixed with air. We are aware that more than one prominent surgeon neglects this precaution and urges his assistants to push the anæsthetic, on the theory that there is more danger from saturating the tissues than from the concentrated action of a small dose. Unfortunately, both clinical and laboratory statistics are against such an opinion, and tend to show that the chloroform vapor, which is immediately absorbed into the pulmonary circulation and carried to the heart, does, when in a concentrated form, paralyze the cardiac motor ganglia. We have repeatedly seen alarming symptoms developed from this cause, and in one case nearly lost a patient by neglecting this rule. He was a strong man, about thirty years of age, and applied to have an old-standing dislocation reduced, but dreaded the operation so much that all his courage forsook him, and he kicked and fought, worse than a child. During his struggles the napkin got down over his face for a few seconds, and a sudden cessation of the respiratory movements which ensued was only relieved by prolonged artificial respiration. The second guide is the condition of the pupil. There is a short primary dilatation, followed by contraction, which is an indication for the operator to proceed carefully until the pupil is slightly smaller than normal, when the patient will be ready for operation. Dr. Wood does not put much confidence in this guide, but our experience is to the contrary, as we never have found any trouble when only a slight contraction of the pupil was maintained. If the anæsthetic be pushed beyond this, the contraction is followed by a rapid dilatation, which is almost a certain precursor of syncope. An ignorance of this second dilatation nearly caused the death of our second patient;

for, seeing the pupil dilate, we re-applied the anæsthetic, which caused the iris to appear as a narrow, thread-like band, and, to our horror, the breathing stopped, only to be resumed after resorting to artificial respiration, slapping the face with wet towels, and other remedies applicable to such cases. Apart from all other considerations, it is better to use chloroform only in cases where there are special indications for preferring it, because there always will be some deaths, no matter which anæsthetic is administered; and the unfortunate physician is sure to be haunted with the uncomfortable thought that it might have been otherwise had he but chosen ether.

Notices of Books, Pamphlets, Etc.

HAND-BOOK OF DISEASES OF THE SKIN. Edited by H. V. ZIEMSSSEN, M.D., Professor of Clinical Medicine in Munich. Illustrated with eighty wood engravings and color-prints. New York: Wm. Wood & Co. 1885.

At the time of the issuing of "Ziemssen's Cyclopædia of the Practice of Medicine," the chapters on Diseases of the Skin were omitted. To make good this deficiency, although the publishers had already furnished matter to the amount of over seven volumes more than they had promised, immediately on the publication of "Ziemssen's Hand-Book of Diseases of the Skin," they had it translated, and are now sending it to all original subscribers who completed their set of the Cyclopædia. It is a generous gift, and will be without doubt appreciated by all their patrons. The contributors to this hand-book are all men of note, and the work of the translators is excellent. The volume comprises 646 pages, and is a most comprehensive and exhaustive work, and of great value to all who are especially interested in this branch of medicine. The publishers will esteem it a favor if all subscribers to Ziemssen's Cyclopædia will send to them their present address, together with their address at the time they subscribed.

A MANUAL FOR THE PRACTICE OF SURGERY. By THOMAS BRYANT, F.R.C.S., Senior Surgeon to Guy's Hospital, etc. With 727 illustrations. Fourth edition, thoroughly revised. Philadelphia: Henry C. Lea's Son & Co. 1885. San Francisco: A. L. Bancroft & Co.

HUMAN OSTEOLOGY: Comprising a Description of the Bones, with Delineations of the Attachments of the Muscles, the General and Microscopic Structure of Bone and its Development. By LUTHER HOLDEN, assisted by JAMES SHUTER, F.R.C.S., M.A. With numerous illustrations. Sixth edition. New York: Wm. Wood & Co. San Francisco: A. L. Bancroft & Co.

This is the first number of the year of Wood's Standard Medical Library, which has now been so successfully maintained for a number of years. Mr. Holden is well known as an eminent anatomist, and this work of his which has reached the sixth edition, has an international reputation. The book is in the usual style of the library, and is profusely illustrated. The student can supply himself with no better work upon this subject.

A MANUAL OF DISSECTION OF THE HUMAN BODY. By LUTHER HOLDEN, late President of the Royal College of Surgeons of England; Consulting Surgeon to St. Bartholomew's and the Foundling Hospitals. Fifth edition. Edited by JOHN LANGTON. With over 200 illustrations. Philadelphia: P. Blakiston, Son & Co. 1885.

This work of Mr. Holden's is as well known as his work upon Osteology, and has reached already the fifth edition. A careful description of all parts of the body is given, with the exception of the bones, and explicit directions are laid down as to the best methods of dissecting. In issuing this edition much care has been exercised in giving careful revision to the entire work. A few changes have been made and considerable new matter has been introduced. As a guide to dissection it is a standard work, and every student at least should be supplied with a copy.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY: A Systematic Treatise on the Theory and Practice of Surgery by Authors of various Nations. Edited by JOHN ASHHURST, JR., M.D. Illustrated with chromo-lithographs and woodcuts. In six volumes. Vol. V New York: Wm. Wood & Co. San Francisco: A. L. Bancroft & Co.

In former issues of the JOURNAL we have noticed the earlier volumes of this extensive work. The present one continues the discussion of surgical affections arranged according to the regions of the body. The chapter on "Injuries and Diseases of the Ear" is written by Albert H. Buck; that on "Injuries and Diseases of the Air-passages," by J. Solis-Cohen; on "Diseases of the Breast," by Thomas Annadale. The editor mourns the loss

of several able and enthusiastic workers, viz : Dr. Samuel D. Gross, Dr. J. Marion Sims, and Dr. Charles T. Hunter. All these have died since the issuing of the fourth volume. Dr. Fisher, of Sing Sing, New York, has been appointed to continue Dr. Gross' work, and Dr. Munde, of New York, will write the article on "Ovarian Tumors." The editor is to be congratulated on the work being sustained at so high a standard, for the present volume shows no falling away from that attained by the former volumes.

THE DIAPHRAGM AND ITS FUNCTIONS: Considered Specially in its Relations to Respiration and the Production of Voice. By J. M. W. KITCHEN, M. D. *The Voice* First Prize Essay. Edgar S. Werner, Publisher, Albany, N. Y. Flexible cloth, \$1.00 net, post-paid.

To this treatise was awarded the first prize offered by *The Voice*, competition being open to all writers, foreign as well as American. Without doubt, it is the best work on this organ, in any language. The anatomical division of the subject treats of the diaphragm's location, general shape, gross composite parts, origin, openings, tendon and muscular fibres, minute anatomy, blood-supply, lymphatic and nervous supply, relations, embryology and history of development, comparative anatomy and important co-operative structures. The physiological part discusses the function of respiration generally, the movements and varieties of respiration, the action of the respiratory muscles, respiratory action and change of shape and respiratory rhythm of the diaphragm, control of the diaphragm's action, incidental functions of the diaphragm, change of shape in the trunk during respiration, differences in male and female breathing, certain natural phenomena that occur synchronously with the action of the diaphragm, relation of the circulation of the blood to the action of the diaphragm, actions of the diaphragm resulting from extraordinary causes, the comparative physiology of the diaphragm, and functional development of the organ. Under the hygienic heading is considered the diseased conditions to which the diaphragm is subject, the conditions essential to its nurture and healthy action, corset and waist construction, special exercise of the diaphragm, how to breathe, etc. An appendix, written a year subsequent to the essay itself, gives practical conclusions and advice. The book is valuable, both for the medical and the vocal professions.

THE PHYSICIAN HIMSELF: And what he should add to his Scientific Acquirements in order to secure Success. By D. W. CATHELL, M.D., late Professor of Pathology, College of Physicians and Surgeons, Baltimore, Md. Fourth edition.

A handsomely bound octavo volume, 284 pages, pica type, which can be obtained from almost any bookseller in the United States, or it will be sent by mail to any address on receipt of two dollars by the publishers, Cushings & Bailey, 262 West Baltimore street, Baltimore, Md.

THE LONDON MEDICAL STUDENT, AND OTHER COMICALITIES. Selected and compiled by HUGO ERICHSEN, M.D. Published by Dr. H. Erichsen, 11 Farmer Street, Detroit, Mich. Price \$2.00.

Those who have read the original edition of this work, as it appeared in some papers collected from *Punch* nearly fifty years ago, will welcome this reproduction of a book that had become very scarce, and was almost unknown to the younger members of the profession.

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Dr. Benjamin Lee, of Philadelphia, is about to issue a number of tracts upon massage, the titles of which will be: "The Art of Massage," "The Physiological Effects of Massage," "The Employment of Massage in General Practice," "The Employment of Massage in Surgery, Obstetrics, and in Gynecology and Ophthalmology." The price will be twenty-five cents each. Orders should be addressed to Benjamin Lee, M.D., 313 South Fifteenth Street, Philadelphia.

R. L. Polk & Co., of Detroit, Mich., propose to issue a Medical and Surgical Directory of all the States. If it is made reliable, it will be of the greatest convenience to all medical publishers.

The wonderful popularity of "The Physician Himself," by Dr. D. Webster Cathell, has already exhausted a large third edition, and we learn from the energetic author that a fourth, greatly enlarged and improved, will soon be issued.

There will be issued, by the New England Publishing Co., during the month of May, a book entitled, "Berlin as a Medical Centre," by Horatio R. Bigelow, M.D., of Washington, D.C. This book will be a complete and accurate medical guide to Berlin, giving instructions in reference to board, clinics, lectures, expenses, etc., and all information that will be necessary for the medical student abroad. The price will be \$2.00.

MASSAGE; THE LATEST HANDMAID OF MEDICINE. By BENJAMIN LEE, A.M., M.D., Ph.D. Philadelphia.

A CLINICAL ILLUSTRATION of the Value of Combining Motion with Extension in the Treatment of Diseases of the Hip Joint. By BENJ. LEE, M.D.

TRANSACTIONS OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY. Twentieth Annual Meeting, Catskill Mountains. 1884. Published by the Society. Pp., 620 to 763.

Copies of the Transactions can be procured of the Secretary, 139 Boylston St., Boston.

Dr. Nelson, formerly of the *Planet*, is now co-editor of the *Eastern Medical Journal*, Worcester, Mass., of which Dr. Marston is chief editor.

Abstracts and Extracts.

Total Extirpation of the Uterus.

TAUFFER (Prof. W.), Budapest. "On Total Extirpation of the Carcinomatous Uterus."—*Archiv f. Gynäkologie*, B. XXIII., H. 3.

This paper gives the experience of the author, founded on five cases (one death, four recoveries), and his views on the best methods of procedure. He considers that he has improved on the method adopted in his first case, which ended fatally, and that although his subsequent method of operation may be open to improvement, it is fundamentally and in most of its details satisfactory. The operator, in estimating the *pros* and *cons* for operating in a given case should consider it from this point of view; total extirpation of the uterus is a highly dangerous operation, and should only be undertaken where the disease is circumscribed, and, as far as can be ascertained, local; and, further, where the patient, should she recover, may anticipate a prolonged or even complete freedom from the disease. From this point of view the operation is perfectly justifiable. Estimated in this way probably not one-half of the cases already operated on would have been interfered with. The early cases, so to say, tentative operations, were many of them in an advanced stage of carcinomatous infiltration, and therefore gave unsatisfactory results.

The *lower* limit as to the operation should be extended to all those cases in which cervical carcinoma is recognizable. For there is no evidence by which it can be proved whether the first seeds of the disease may not already have taken root in the uterus itself, although still small and movable. Contrariwise, it is certain that at the time when cervical carcinoma is demonstrable, a period has passed during which, before the uterus became enlarged or hard, the infection was extending without being detectable.

To fix the *upper* limit of cases, viz: those in which the operation is still possible and suitable is still more difficult. Some have gone so far as to include every case in which removal of a portion of the ureter is unavoidable, as if under the desperate circumstances it were advisable to give the patient even the smallest

chance of recovery, the alternative being a speedy relief from her misery. This, however, is not the right stand-point. Total extirpation of the uterus should be resorted to only when permanent cure may be hoped for, should the patient recover from the operation. The more carefully the cases are selected, the more patients will be saved.

Preparation for the Operation—Experience shows that the preliminary steps have been insufficiently attended to, so far as concerns the dangers arising from contact-infection during the operation. Contact of the peritoneum with the infected parts is unavoidable in the usual method of operating. No amount of disinfection or irrigation will exclude the infection, which is rendered unavoidable almost at every step. Hence the necessity for introducing a preliminary palliative operation: the most suitable means for the removal of the infected parts, before the actual operation and opening of the peritoneal cavity are undertaken, being amputation of the cervix, the sharp spoon, actual cautery; or, among caustics, chromic acid and chloride of zinc. The ten or twelve days required by this preliminary treatment allow of invigorating the patient and perfecting diagnosis. The avoidance of the risk of contact-infection during the operation is a cardinal point. The vagina must be irrigated twice daily, and all the parts, including the cavity of the uterus, must be disinfected with five per cent. solution of carbolic acid before the operation is commenced.

The Operation.—The Veit-Schroeder operating table is to be recommended, as it saves manual labor in controlling the legs. With it two assistants suffice. A speculum shorter, flatter, and broader than Sims' is required, but is only needed until the incision of the vaginal attachments has been completed. Forcible drawing down of the uterus is to be avoided, as it may lead to fatal hemorrhage, as in Schroder's case. It is best to complete the vaginal incision at once, as the separation of the uterine attachments is thus facilitated. Too great anxiety to keep away from the bladder may cause detachment of portions of uterine muscle and other tissues. The vesical attachment sometimes extends very much farther than is anticipated, a knowledge of which fact may prevent perplexity. Posteriorly peritoneal fold is to be opened with the scissors close behind the uterus. Up to this point little hemorrhage occurs. After separation of the attachments to the cervix and the opening of Douglas' space,

and before the uterus is drawn down, it is advisable first to introduce one or two firm ligatures into the base of the broad ligaments on both sides, and then to separate these parts from the cervix with the scissors. This is especially advisable if the uterus is enlarged. The ligamenta lata et rotunda are next to be tied in two or three portions, and afterwards the uterus must be excised with short cuts of the scissors, no hemorrhage being likely. The simultaneous removal of the ovaries is not essential, and as a rule they may be left without any disadvantage.

The stumps of the broad ligaments should be treated extra-peritoneally, the upper edge being drawn downwards by the end of the attached ligature.

Should the peritoneal cavity be closed, or not? This is still an open question, but its closure is perhaps to be preferred. No better material can be used for plugging the vagina than ten per cent. iodoform gauze torn into strips; these should be fastened together endwise to facilitate removal. After the operation every kind of fluid is withheld for twenty-four hours, except when special circumstances (collapse, anæmia, etc.) call for stimulants. Every four to six hours the urine is to be drawn with a catheter. On the third day, the tampon is to be removed, and disinfectant irrigation used. On the fifth to the seventh day the bowels should be opened by clyster, and on the tenth the patient may be placed on her side. The ligatures may be removed on the 21st to 22d day, and soon afterwards the patient may get out of bed. At this date the vaginal wound will be represented by a granulating surface, which will soon acquire an epithelial covering, and about the fourth or fifth week only a transverse cicatrix will be observable. It is probable that the total closure of the peritoneal wound by ligature will ultimately be adopted as the general method.—*Med. Chron.* (Eng.), Feb., '85.

Gastritis Favosa—A New Disease.

At the meeting of the Vienna Imperial and Royal Society of Physicians, on the 28th of November, Professor Kundrat exhibited specimens of a unique kind. The case was one of favus universalis, which had given rise to an abscess of the thigh, and had terminated fatally from severe gastro-intestinal disorder, marked by an uncontrollable diarrhœa. Numerous erosions mingled with diphtheritic swellings were found in the mucous membrane of the stomach, and the intestines con-

tained some foul putrescent masses and much mucus. Professor Kundrat at once declared the diphtheritic swellings to be due to the favus fungus, a view which was confirmed on microscopic examination. This is the first recorded instance in which the mucorineæ have been the cause of death, as it is the first of favus of the stomach and intestines. Indeed, the naked-eye appearance of the tumors in the stomach closely resembled the favus cups on the skin, and the fact that but little of the fungus was found in the intestine was explained by Professor Kaposi by their having undergone putrefaction in the bowel. The patient had previously been shown to the Society by Professor Kaposi as a rare instance of favus, which covered the entire body, affecting even the finger-nails (attributed to his habit of scratching himself constantly). Favus of the stomach is as unknown a condition in animals as it is in man; at any rate, Professor Csoker, of the Vienna Hospital for Animals, stated that it never occurred in cats, although these animals frequently eat rats infested with the fungus. Professor Bamberger suggested that in this case the gastric mucosa was in an unhealthy condition at the time of infection, thereby affording a favorable nidus for the growth of the fungus. It must be borne in mind that the mucorineæ, unlike the schizomycetes, can thrive in acid liquids, and may therefore grow with impunity in the stomach. The case is of great importance, as showing that if they do gain access to the interior of the body, these fungi may be a source of danger and lead to a fatal result, thereby disproving the usually accepted notion of their harmless character.—*Lancet*, Dec. 6, 1884.

Dr. J. C. Hutchinson, of Brooklyn, New York, adds two cases to the record of ligation of the common carotid for trigeminal neuralgia. One case was successful, and the other a failure, so far as relieving the pain was concerned. The successful case had had all his teeth extracted, the alveolar processes of the maxillar removed (Cross' operation), and the inferior maxillary nerve exsected (by a California surgeon), the operations following each other at intervals of about three years, and each being temporarily successful. Ligation of the carotid gave relief for three years and eight months, when the pain returned, the occasion of its return being exposure in damp places in the mines. The unsuccessful case was finally relieved by a second operation on the infraorbital nerve.—*N. Y. Med. Jour.*, April 11, 1883.

Miscellaneous.**Dentistry in Japan.**

At a recent meeting of the Odontological Society of Great Britain, Dr. St. George Elliott exhibited some curious and interesting specimens of Japanese artificial teeth. The Japanese, he said, were the only nation outside the limits of western civilization who understood the fitting of artificial teeth. They had derived most of their scientific and technical knowledge from the Chinese; but in this matter they were in advance of their teachers, for the Chinese had no idea of fitting an artificial denture. They could carve a row of incisors and fasten them to the teeth on each side; but these were intended for ornament, not use; while those of Japanese manufacture were thoroughly efficient. Thus a Japanese physician who came to Dr. Elliott for a set of teeth, remarked that though the foreign teeth were more natural in appearance, those of home manufacture were quite as good from a practical point of view; in proof of which he crushed a piece of hard rock candy between his false teeth. These dentures were made on wooden bases; the front teeth were made from quartz pebbles, ground down, but the process of mastication was performed by copper nails, which occupied the place of the molars. It was an interesting fact also that the fixing of dentures by means of suction had been known to the Japanese for at least two hundred years. The base plates were carved by hand, the process being as follows: An impression of the mouth was taken in wax, and from this a model was made, also in wax. The model was then coated over with red pigment, and the plate, after being roughly shaped, was placed on the model thus colored. The red patches on the under surface of the plate were then carefully cut away, until at last it fitted the model exactly. It was then tried in the mouth in the same way, the gums being covered with the pigment, and any inaccuracy readily detected. One of the dentures exhibited had been in use for fifteen years.

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A Physician retiring from practice on account of ill health, wishes to dispose of some of his instruments, of which the following are a partial list: 1 Day's set of Splints; 1 Pocket Case with Sand's needle holder; 1 Sim's Modified Speculum; Cylindrical Specula; 1 Tobald's Laryngoscope Case with mirrors and reflectors; 1 Tobald's Lancet for scarifying tonsils; 1 Circumcision Forceps; 1 Small Dissecting Case; 1 Camman's Stethoscope; 1 Trivalve Nasal Speculum; 1 Articulated Head. For further particulars address.

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Original Articles.

REPORT ON PRACTICAL MEDICINE.

By IRA E. OATMAN, M.D., Chairman.

Mr. President, Ladies and Gentlemen, of the Medical Society of the State of California:

Confronted with the demise of him who graced the position one year ago, which I have the honor to occupy on this occasion, I shrink, with misgivings, at the inception of the duties before me. In his last report, as Chairman of your Committee on Practical Medicine, the sentiments so well expressed by Henry Gibbons, are exalted—his teachings, his writings, oracular. Endowed by nature above his fellows, expanded and chastened by education, ripened and skilled by experience, as a citizen, a philosopher and as a philanthropist, he was one of America's noble sons, of world-wide renown, of whom she may be justly proud. His statue, of finest marble, sculptured in the best style of the art, would adorn a choice niche in the grandest temple of philanthropic fame.

I have the honor to invite your attention to the germ theory in the causation of disease. For many years the subject has had increasing importance in the profession, engaging the

earnest and untiring energies of able philosophers and histologists, the results of whose labors have not only shaken existing theories in etiology, but have reached the public mind in all enlightened nations, and so impressed their ruling authorities that they have sent commissions to examine the asserted germ cause of yellow fever in the tropical and semi-tropical regions, where the disease prevails, and also to Africa and to India, to determine the etiological relations of specific germs to cholera. In its individual and associated capacities the medical profession has lost no time in vigorously prosecuting the same investigations, not only in regard to yellow fever and cholera, but to the no less important affection of tuberculosis and other general and pathological conditions.

The importance of such investigations justifies all that has been done or may be required to fully elucidate the subject and to establish the facts in relation thereto. Should specific varieties of micro-organisms be established as the predisposing or exciting causes of typhoid fever, erysipelas, diphtheria, yellow fever, cholera, etc., in sporadic, endemic or epidemic form, it would overthrow all other theories of their causation—the results of scientific observations for a thousand years. It would be progress in etiology unparalleled in importance and rapidity. Its influence on sanitary science in preventing disease would change the established methods and usages therefor. It would revolutionize the principals of treatment, whilst it gives promise of making it more simple and far more effective, even though it might include methods now in popular use. The results herein contemplated are desiderata earnestly and devoutly sought by the scientist and histological pathologist, and would be welcomed with avidity by every votary of the medical sciences. It would span a valley hitherto imperfectly explored in etiology so broad and so deep as to challenge the admiration of this age throughout the civilized world. Dependent wholly upon others for the scientific experiments and observations in regard to the germ theory, I leave to them and its votaries to preserve its history and the methods of its procedure in its investigation.

The acceptable limits of this report forbid more than a very brief and imperfect epitome of the views and criticisms in relation to the discoveries made and the theory evolved therefrom; neither can I give names, dates or places in all cases.

Salisbury gave great prominence to the germ theory, in causing malarial diseases, which he endeavored to sustain by experiment, observations and conclusions. His theory had many advocates for years, yet in the milder and more malignant forms of those diseases the treatment was not more successful nor their prevention less difficult. Other histologists showed that the palmella of Salisbury was found on the snow heights in the Alps, and almost everywhere; that where such diseases prevail their presence was coincident with, but not causative of those diseases. Subsequently, Klebs and Tomasi Crudeli, with great force of demonstration and logical reasoning, urged the claims of another organism, the bacillus malariae, as the cause. Their theory was accepted, and I believe is still held by a large proportion of the profession. Yet, after extensive experiment, by inoculation and otherwise, the theory is rejected by able scientific histologists. The above claims to a solution of the long sought desideratum, as to the nature of so-called malaria, supported by numbers, experiment and great philosophic strength, have never overthrown nor shaken another theory in which I have believed, and which has governed my practice for more than thirty years. I beg to allude to this old theory, for it is better to believe in, be governed by, and practice according to an old theory, if true, than to invent, advocate and be governed by a new theory, until it can be demonstrated to be also true, and superior to the old in its results in practice. For every true scientific principle is, or may be, susceptible of demonstration. "Truth is mighty and will prevail." The old theory more nearly explains everything pertaining to the malarial influence, in my belief, than any other.

About thirty years ago I wrote papers for the medical press, designed to elucidate the etiology of so-called mountain fevers, by showing that they are produced by the same condition of the blood and the whole system which produces malarial diseases. Briefly stated, the theory is, that the malarial influence or poison is an accumulation in the whole system, chiefly in the blood, of the effete elements of the body, resulting from its increasing disintegration, whilst the supply of oxygen by inspiration is inadequate to the oxydation of the utilized or effete elements of the blood, by which change alone they are eliminated from the system through the lungs, liver, kidneys, etc. Toxæmia is thus produced by accumulation of carbon in blood. The first

noticeable effects in a typical case, are through the brain and nervous system, viz: languor, coldness, rigors, numbness, cyanosis, aching and internal congestions, followed by reaction, high temperature, acute pains in the head, and delirium, which are relieved by relaxation and profuse perspiration, to be repeatedly followed by the same routine of symptoms. The toxic effects of this accumulation of carbon, this blood poison upon the brain, the nerves and upon the whole system, logically, physiologically and pathologically, explain the phenomena of a typical case of malarial fever. Extremes follow each other. Reaction is the order of nature, the extreme nervous and blood tension of a paroxysm is relieved by thorough relaxation and perspiration. The arrested capillary circulation in the skin, liver, kidneys, lungs, etc., is restored by the reaction sufficiently to eliminate some portion of the effete elements, but not enough to prevent another attack after a definite time, unless elimination can be continued through the agency of the treatment in quantities reducing the aggregate below that which can produce the toxic effect. This very brief digression is to show a philosophic explanation of malarial disease, without the aid of micro-organisms. It is so brief, however, that I fear its import is not clearly comprehensible.

Arduous and protracted were the labors of the distinguished Koch, in the discovery of the so-called bacillus tuberculosis. When announced to the public, the profession was ripe for its acceptance, in the hope that it would lead to successful prophylaxis, and probably treatment, of consumption and all other forms of tubercular disease, a desideratum co-extensive with the history of medicine itself, for in its results in saving human life it would be second in importance to no other discovery ever made in the medical sciences. Villemin and Tappeiner discovered that tuberculosis could be produced in animals, and by inhalation. The contagion of tuberculosis by inoculation, etc., was claimed before Koch's discovery, and that it could only be propagated at will by tubercular matter, the most active of which is freshly excised scrofulous gland from the neck and from tubercle in its most active state. The theory of Koch, after almost unlimited experiments, observations and literature on the subject, presents itself to my mind at this time as follows, viz: That genuine tubercular consumption and all other

tubercular disease, are produced (according to the theories and observations of the votaries of the germ theory) by a very minute vegetable organism, the bacillus tuberculosis; and may be found in the local manifestations, and in all its stages, although it has been asserted that, in the caseous state of the tubercle and in its advanced stages of ulceration it cannot be found, except in rare instances. That it is transmitted from one person to another by inhaling the dust from dried sputa on the handkerchief or other places, that it can be transmitted to certain kinds of animals by inoculation, and pass through numerous generations in them, or in artificial cultures, and retain its etiological power unimpaired. Also, that is found in all genuine cases of tuberculosis in men and animals, although it is claimed that it could not be found in rare cases. It is also said to be found in the secretions, blood and other tissues in persons and animals infected, and that the disease is active and the microbes in immense numbers in the tubercles of the lungs and glands of the body. But when the disease is stationary or receding, they are very scarce. They are said to be found chiefly in the epithelial cells constituting the tubercle, and especially in the giant cells, which are said to be sometimes filled with them. They die "and disintegrate, so that in old caseous degeneration, if found at all, they are very scarce, their spores being left, as demonstrated by the infectious property of the remaining cheesy material. They have no power of mobility, being carried through the system in the white corpuscles of the blood. Koch has seen them perforating the small blood-vessels." The one point particularly emphasized by Koch is, "that where the incipient stage of the tubercular process can be studied, there the bacillary invasion of the healthy tissues invariably precedes the tubercular infection." They diminish in numbers with the destruction of caseous deposit, and when completely broken down into abscess they can no longer be found. Also, "that in extensive examinations of healthy and morbid, but non-tubercular tissues, these bacilli were never found." Of "five hundred animals of different species inoculated with the specific bacilli, in every instance of disease thus produced, the characteristic bacilli reappeared in the lesions." "During the time of these experiments several hundred other animals, serving other purposes, were inoculated with bacteria, or non-tubercular disease products, without contracting tuberculosis in a single instance."

Koch's conclusions seem fully justified "that the bacilli of tuberculosis are limited to a parasitic mode of life in animals, and cannot grow outside of the body under the conditions found in nature." It is also asserted that the acuteness of the attack of tubercular disease "depends on the quantity of bacilli used for infection, and that they never lost their pathogenic properties by growing on artificial soil for over one year, in some instances. Taken from genuine parent stock, the results were the same from whatever disease they were taken."

The Imperial Health Officer of Berlin, Dr. Struck, in his official report, says: "The inevitable conclusion is, that all these morbid processes are due to the same virus, the character of the pathological lesion depending on the number and localization of the bacilli and on the power of resistance of the tissues of the patient." It is also stated in effect that, up to July, 1884, Koch had seen but one failure from inoculation with genuine bacilli. The dog was sick and had the usual symptoms, but recovered, but died of tuberculosis from a subsequent inoculation. Rabbits, guinea-pigs, rats and mice exposed to the spray for half an hour for three successive days, of water containing bacilli, all contracted tuberculosis of the lungs and other parts, verified by post-mortem examinations. Koch teaches "that the sputum of every phthisical patient nearly always contains characteristic bacilli, and is infectious," but not when moist, except combined with water and inhaled in form of spray, and that its activity is not lost when dried for many months, the dust from which, by inhalation, may be a fruitful source of consumption. In the same report Dr. Hesse contributes a paper on the quantitative determination of organism in the air.

The foregoing statements, in support of the germinal origin of tuberculosis, are taken from almost unlimited experiments, observation and conclusions of numerous authors, including some of the most distinguished histologists.

The end of this investigation is scarcely foreshadowed, whilst it is devoutly hoped by every votary of science that it will continue until the facts involved are made plain by the immutable principles of science. The germ theory is accepted, believed in, and regarded as established by a large proportion of the profession. A less number, perhaps, including very high authority, reject the theory *in toto*, or in the main, in the causation

of tuberculosis and most other diseases, recently attributed to the same origin. A brief allusion to some of the opposition to the theory will more fully acquaint us with the progress made in its investigation and in its acceptance. It is stated by other experimental histologists that the bacillus tuberculosis is not found in the blood, the glands, nor other tissue of the healthy body, nor in tubercle itself, until it softens, and that whilst most numerous during the greatest activity of the disease, the bacilli gradually disappear with the destruction of the tubercle until none can be found in its stead. The logical conclusion from this fact is, that if bacilli cause the tubercle, they would be in and around it before it softens, or how could they cause its deposit or produce its softening? Also, that in caseous pneumonia the bacillus is only found in a portion of the cases.

The clinical history of tubercular diseases of the lungs and of caseous pneumonia is so different that the presence of the tubercle bacillus in both, would weaken the claims of being the sole cause of either. It remains to be shown that tubercles are of two varieties, at least—the one affording a pabulum and a nidus for the specific bacillus; the other having no such property. While tubercle produces (or seems to produce) tubercle by inoculation, it does not follow that consumption is contagious, except by actual contact of the infective property, the bacilli or their spores; or, more probably, the effete ptomanes, the cadaveric poisons left by the bacilli, after they have appropriated and consumed as sustenance all the nutrient elements of the tubercle. Inoculation of mice with filtered fluid from tubercle bacilli in their pabulum, produces tubercle and characteristic bacilli of the same variety, showing the same toxical power in the filtered fluid which is claimed for the bacilli themselves, or their sporules. Hence, it is apparent that whilst the bacilli are not present at the deposit of the caseous tubercle, their presence promotes its softening. They combine with the softening caseous matter, or with other ptomanes, and by catalysis, or their own decomposition, the combination generates a cadaveric poison in solution, separable by filtration, by which the disease is extended. It follows that caseous tubercle must first be deposited before the softening, decomposition and re-combination can take place, which forms the nidus and pabulum for the proliferation and sustenance of the bacilli and their spores.

The same combination may take place between the bacilli and

the effete matter, or ptomanes in the lungs, in the glands of the body, or in wounds or ulcers, or wherever bacilli or bacteria may be found. This would seem to rob the micro-organisms of their pathogenetic power and fame.

As we enter the field of observation and conclusion, however, its limits recede, and, like the mirage on the desert, they expand and elude our observations. Its bounds at present are inapproachable. In my research of the subject, I am surprised at the number of eminent scientists who either reject the germ theory in the whole, or fail to appreciate a thing so marvelous. Koch has taught that successful constitutional treatment by germicides, especially carbolic acid, is confirmatory of the theory; whilst others reject the theory because the constitutional use of germicides fails to be of any notable benefit. Their use in external lesions, or lesions opening externally, are obviously of great benefit. Whether on the principle of germicides, or from their astringent, their stimulant and their so-called alterative power to promote the supply of plastic lymph, and utterly to prevent the formation of pus, leaving no nidus, no pabulum, for the proliferation and sustenance of the micrococci, bacteria or bacilli, does not yet fully appear. It is stated by Ernst, concurred in by other histologists, that "control inoculation experiments, under as trying conditions as could have been devised, with the absence of any results, side by side with the successes with the culture, are especially striking." It has been stated by certain experimenters that inoculation into certain parts of the body of finely-powdered inorganic matter, produces tubercle and specific bacilli. The indefatigable Sternberg, however, has apparently shown by recent experiments that the caseous nodules resulting from such inoculation are not genuine tubercles, but are of the non-contagious variety—justifying distinctive varieties, as "nailers' consumption" of Wheeling, etc. In a lecture last year, Formad said: "To-day, while the bacillus is acknowledged as a common morphological concomitant of tubercle, the pathogenetic properties are denied it by the best pathologists and clinicians, on account of a want of sufficient confirmation of the evidence thus far offered." Dr. Hurd's views are (*Boston Med. and Surg. Jour.*), that "the constitutional diathesis which allows of the growth of the bacillus, is the primary factor," and declares emphatically that if this be suitable there is no direct medication known to science that will prevent the development, growth and multiplication of the parasite.

Lest prolixity in this broad field of literature become tedious, I will reserve brief criticisms on the etiological properties of the so-called bacillus tuberculosis until after a brief allusion to the comma-shaped bacillus of cholera, etc. In his official report on cholera in Egypt, as chief of the German Scientific Expedition, Dr. Koch says: "No organized infectious matter could be traced in the blood, or in those organs which in other infectious diseases are generally the seat of micro-parasites; as, for instance, in the lungs, the spleen, the kidneys or the liver." Micro-organisms in great abundance and of different kinds were found in the contents of the intestines and in the excreta of the cholera patients. No one kind was present in great predominance over the others * * with the exception of one case, in which a certain kind of bacteria was found in the coatings of the intestines. These bacteria are statiform, and belong, therefore, to the bacilli." He also states that "the bacilli had penetrated into the utricular glands of the mucus membranes of the intestines, and had caused there a considerable irritation, as the dilation of the openings of the glands and the collection of granular circular cells in the interior of the gland showed. In many cases the bacilli had found their way between the epitheliæ of the gland, and had multiplied between the epithelia and the glandular membrane. The bacilli had also settled in large numbers on the surface of the villi of the intestines, and had often penetrated into their tissue. In several cases, which terminated in bloody infiltration of the mucus membrane of the intestines, the bacilli were found in very large numbers, and they did not then confine themselves to the invasion of the utricular glands, but passed into the surrounding tissues, into the lower layers of the mucus membrane, and in some places right to the muscular skin of the intestine. The intestinal villi were also in such cases penetrated by bacilli." Also, that "in every case examined, but one, the bacilli were found; whilst in all cases of other diseases examined, they were not found." Therefore, "there can be no doubt that they stand in some relation to the operation of cholera," etc. He made experiments on rabbits, guinea-pigs, dogs, cats, monkeys, pigs, rats, mice and poultry, without results. He believes that the cholera infection is strong in the excreta of cholera patients. He also thinks that if his experiments had been made near the beginning of the epidemic, when the cause is more active and the subject more susceptible than at its close, when his experiments were made,

that the results might have been different. He hoped that in India, where he was soon to go, his experiments and observations would be more satisfactory, for or against the theory.

Klein and Gibbes (England), after closing their investigations, state in their report that "Koch's comma bacilli are not peculiar to cholera, but occur in other intestinal diseases; their behavior is not unlike that of other putrefactive organisms, and that their inoculation, or that of cholera dejecta, produces no effect."

I need not refer to other authors to show that the comma bacillus is not demonstrated to be the cause of cholera; nor is it so claimed, positively, by Koch or others, to my knowledge. Before the Academy of Medicine in Paris, Dr. Prout's conclusions of the medical reports upon the last epidemic of cholera, said: "1st. Cholera was imported into many of the cities and towns mentioned in the reports; 2d. Water has played an important part in the transmission of the disease; 3d. The intensity of the epidemic has been in direct relation with the unsanitary condition of the contaminated localities; 4th. Cessation of the epidemic in infected regions can, in great part, be attributed to hygienic precautions and to disinfection." These conclusions seem to ignore the germ theory in cholera, in one of the great centers of medical science.

Acceptable limits of this report do not admit the evidences for and against the germ theory in the causation of typhoid fever, erysipelas, diphtheria, or any other of the numerous diseases of which it is claimed to be the origin. The brief summary given above of the vast amount of evidence accumulated in favor of the theory is sufficient to establish the facts, as instance in tubercular consumption, that the bacillus is found in tubercle, in its stages of softening and breaking down of tissue, but not usually in its forming stage, nor in the last stages of its diffuence; that it is not found in the blood (except by Koch), nor in the glands, nor other tissues of the body. Also that the bacillus can be cultivated, and that its culture, inoculated in animals, after many generations reproduces the parent bacillus found in tubercular deposit, with the same pathogenetic properties as the original. Precisely the same results follow inoculation of tubercular gland, tubercle and consumptive sputa; also by inhaling spray from water with which infected sputa are combined; and also of dust from dried sputa. Also, that inoculation of sputa from other diseases of the lungs, or other micro-organ-

isms, fails to produce genuine tubercular disease in nearly all the tests made. The germ theory thus demonstrated, not only carries conviction to its votaries, but to a large proportion of the profession. This conviction is acceptable in response to an universal desire, no other theory of such causation being scientifically established. The above scientific experiments and their results admit the philosophic conclusions that in consumption, constitutional susceptibility must first exist, hereditary or superinduced, scrofulous or tubercular in its nature or tendencies, being a diathesis prolific of tubercular deposits. When formed, mature and ready to soften, tubercle is, and becomes, the legitimate pabulum for the bacilli and the nidus for their proliferation. Their presence and propagation being sustained by the elements of the specific, caseous, softening tubercle, the tubercle breaks down, becomes diffuent, and is exhausted of its sustaining power, when the bacilli disappears from necessity. Contiguous and remote tubercles become similarly affected, and pass through the same destructive changes.

This view, in opposition to the germ theory, is intended to substitute another, more philosophic and plausible etiology or origin, of tubercular disease; fully appreciating the influence of the microbes in promoting the dissolution of the tubercle and hastening the ravages of the disease upon the system. This adverse view to the germ theory is supported, if not sustained, by analogy, in regard to organic life, vegetable and animal, from the microbes under consideration, to the largest organisms. The Big Trees of Calaveras (*sequoia gigantea*) obtained their enormous proportions because the air, the temperature, the humidity, the soil and the high altitude in that locality, produced them in their perfection. The same principles are involved in regard to the aggregation of all vegetable substances in their nativity, from the depths of the ocean to the arid heights of the mountains, as deep and as high as vegetation is produced. Like the micro-organisms, they may be cultivated, and after many generations still reproduce the original species; yet neither species can produce, nor reproduce, the soil necessary to its perfection.

The same general law governs the animal kingdom, from the infusoria to the most gigantic animals, in their nativity. Survival of the fittest determines their habitat, from the stagnant pool to the tropical jungles. Like the micro-organisms, they have no agency whatever in creating or forming the locality of

their favorite abode. Neither by culture nor by removal from their native habitat is the species changed or hybridized. The surroundings agreeable, where the food of their choice and best nutrition is most abundant, they are found in the greatest numbers and perfection. A forcible illustration is in the detestable food of the carrion crow, the wolf, and the jackal; "For wheresoever the carcase is, there will the eagles be gathered together."

The theme of this report involves, but its present limits forbid, an elaborate consideration of germicides. The untiring experiments of Sternberg and others in this country and Europe, are establishing their relative value and influence in general and local septicaemia. So far as I have observed, for the destruction of micro-organisms in the blood, the glands and other tissues of the body not opening externally, the strength required would be inconsistent with the healthful integrity of the system. But as antiseptics, correcting toxæmia not caused by microbes, their former reputation or power is increased by recent experiments. In the greater number of external lesions, or internal opening externally, judiciously employed, their action is delightfully wonderful. Whether this is from the destruction of micro-organisms, thus sparing the tender lesions their irritation and toxic influence; or do they act chemically and mechanically in constringing the pus-producing diseased surfaces, and yet promoting the exudation of plastic lymph, thus hastening the union and repair of the lesion with the least possible irritation, and in the shortest possible time, invites farther experiment and decisive demonstration.

It is easy to float on the placid stream, though precipitated adown the cataract; whilst to stem the current and gain the shore above may require our best efforts and skill. I devoutly hope, however, that the germ theory may be established in the causation of many diseases, the causes of which admit, at this time, of other and logical explanations. I need not say to this Society that the corrosive chloride of mercury stands first in the list of germicides, antiseptics and disinfectants. It may generally be used for external, traumatic or other lesions, or lesions opening externally, in the strength of 1 to 1,000 or 2,000, or even 3,000 parts of soft water, with the most satisfactory results. In medical practice, however, its internal use, in safe therapeutic doses, so far as I am advised, fails to meet the expectations of the votaries of the germ theory. Holding the most

conspicuous position at this time in scientific investigation, and claimed by its votaries as being already established, we anticipate farther developments in regard to the germ theory, with increasing interest and anxiety. For, the establishment upon immutable principles, of improved prophylaxis and treatment of the diseases involved, remains the great desideratum.

THE INSANE OF CALIFORNIA AND THEIR NEEDS.

By W. H. MAVS, M. D.

Assistant Physician of State Asylum for Insane, Stockton, Cal.

In approaching my subject I have something pleasant to say. True, my statement may conflict with what I believe to be the generally received opinion, not of the public alone, but of many of the medical profession who have never looked up the subject. It is, that insanity is largely on the decline in California. There has been a steady decrease, during the last nine years, in the annual number of persons consigned to the asylums. From a file of the biennial reports of the two institutions, Stockton and Napa, it will be found that the number of persons committed as insane has remained, since 1876, almost at a standstill, although the population of the State is increasing, according to accepted estimates, at the rate of 100,000 every three years. In 1876, with a population of, in round numbers, 700,000, the commitments aggregated 735. Three years later, in 1879, with a population augmented to 800,000, the commitments were 721. In 1882, with a population of 900,000, there were but 722 commitments, and in 1884, last year, when our numbers had reached nearly a million, the commitments were only 764. In 1876, 735; in 1884, 764. Notwithstanding the addition to our population of nearly a quarter of a million, the actual number of persons attacked with insanity was scarcely any greater last year than it was nine years ago. Taking the ratio according to population, we find that in 1876, one person in every 950 was seized with insanity; in 1879, one in every 1,100; in 1882, one in every 1,250; in 1884, one in every 1,300.

With these figures before us, how shall we account for the prevalence of the belief that mind disorders preponderate on this coast? It may be said in explanation that many things have contributed to foster the misconception. Particularly may be mentioned the undue publicity that is given to insanity commitments. It is the custom to publish in the daily newspapers

the names of persons examined by the Insanity Commissioners, and the salient features of each case. Not only are the names of these individuals paraded in public print, but the circumstances which led to their examination, their perverted acts and sayings, and the peculiar delusions they may have exhibited, are often recounted in detail. Consider the flagrant wrong that may be done here. A large proportion of those sent to the asylum are only temporarily afflicted; they are soon to be restored to their homes and to society. But we know that to him who has once been shut within those walls a stigma attaches in the eyes of the world—deplorable that this should be, but it is so—and that stigma remains through life, and may so militate against his success as to drive him to despair and back to mental ruin again. Yet in the face of this it seems that the utmost pains are taken whereby, if the patient be restored to reason, his ignominy and shame shall be the greater. Surely the first impulse of all concerned should be to shield these unfortunates from exposure as far as possible, to cover their irresponsible acts with the mantle of charity. I can conceive of no adequate reason why the world must necessarily be told the names of those stricken with mind disease, still less why the morbid imaginings of frenzied patients should be held up to public gaze.

Again, the agitation of the matter of the overcrowding of our asylums, and the need for further provision for the insane, has engendered in some minds the erroneous idea that insanity is making rapid headway among us. But because the growth of the State has rendered such additional provision necessary, it is a little thoughtless and illogical to draw an inference therefrom unfavorable to the mental stability of the inhabitants. As long as our people continue to increase and multiply, as long as our land continues to attract new-comers, so long shall we be called upon to add to our asylum capacities every few years. One person in every four hundred is a lunatic, the world over, and it must needs be that as a community increases in numbers its insane population must necessarily increase too. The cry for new or larger receptacles for the insane can be heard in every State that is prosperous and growing. It may sound odd, but it is true, that the demand for additional asylums is really a proof of the prosperity of a State. When a people has reached its limit of expansion, those it possesses will be found to suffice, but not till then.

There is another cause for the perpetual repletion of asylums that is sometimes overlooked. It is the remarkable longevity of the chronic insane.* Sixty years ago, Esquirol, in his well-known work, commented on this fact. The demented and imbecile class, "stationary" cases, who form so large a proportion of the inmates of our asylums, often lead a purely automatic existence. Their being is ruled over by the sympathetic nerve-system, the brain having long since abdicated, or become *functus officio*. They eat, they bask in the sun, they sleep, they rise to eat again, and so their days go on. Free from care or worry, they lead a vegetative life, with a minimum expenditure of the vital forces. At Stockton may be found many such, some of them hale octogenarians, committed back in the fifties, representatives of a former day and generation. Lingering on after all who once knew them have long departed, it would seem that even death had overlooked them, or thought them hardly worth the expenditure of a dart. These it is who by their accumulation cumber our wards to the hindrance of curable patients. The proposal, however, to gather these chronic cases into an institution exclusively for them does not accord with the opinion of the best alienists, some of whom have had the opportunity of studying such an arrangement practically. It is condemned as neither wise, nor humane, nor economical.† The plan which most commends itself is that of a main building for the acute or curable; and, on the same grounds, another, separate,

* "The large annual addition to the number of insane persons under care has produced the impression that insanity itself is much on the increase. On examination, however, it will be found that the increase is almost entirely due to accumulation of chronic cases of the pauper class; so that the community at large does not appear more liable than formerly to be attacked with insanity."—*Report of Commissioners on Lunacy for Great Britain, 1884.*

† "No physician can say with accuracy what class of patients are curable and what are not. We cannot say to which class at least one-third belong. We still indulge in hope of their restoration, but will probably be disappointed in the majority of cases; yet the hope we entertain, and which encourages us in our efforts to restore and cure them, would be destroyed by sending them to an incurable institution. No possible good could arise from such institutions, except that they might be managed at less expense; but even this is doubtful if they have proper officers and physicians."—*Dr. Brigham, Supt. of Somerville Asylum, Mass.*

though adjacent, for the chronic and incurable, built on a somewhat different and cheaper scale.

The extreme rarity of idiocy in our State is a matter the importance of which deserves wider appreciation. It is not perhaps generally known that the proportion of idiots to population here is so small as to be almost unprecedented. It is true that California was for some time a frontier State, replenished largely by men without families, and that during that period the rate of childbirth was low. This may at one time have explained the fact under consideration, but not now. California so long ago emerged from the frontier condition, it has for so many years been a land of settled homes and families, that to ascribe our present immunity from idiocy to a low birth-rate is manifestly incorrect. No one can doubt that for the past fifteen or twenty years the number of births has proportionately equalled that of any other State. The last census gives California 507 idiots. Compare this, for instance, with the State of Maine. Our birth-rate has unquestionably, during the last decade and a half, been the greater; yet Maine, with one-fourth less population, returns 1,325 idiots, or two and a half times as many as California. And, to make the inequality the more marked, Maine is far behind us in the number of families it possesses, the proportion there being one family to every twenty-one inhabitants, against one family to five inhabitants in California. In Iowa idiocy is over twice as frequent, proportionately, as with us, while at the same time Iowa has a smaller percentage of families than we have. Tennessee, with a little less than twice our population, has 3,533 idiots, or seven times as many. Michigan, with double our population, has 2,181 idiots; Indiana has 4,725; Maryland, 1,319; and so on.

Now, without claiming too much for these statistics, they certainly mean something. The difference in our favor in the matter of idiocy is no mere wavering of the balance below the average line, it is a disparity so wide as to entitle it to careful deliberation. Congenital idiocy is the sign and the outcome of ancestral taint. Tuberculosis in the parent may produce it, so may scrofula, or drunkenness, or a long course of semi-starvation. But more often the idiot is but the culminating point of a bad neurotic heredity that has been gathering strength for generations. Coupling, then, the two facts that I have established, the infrequency of idiocy and the progressive

decrease of new cases of insanity amongst us, the inference is as satisfactory as it is incontestible.

For the people of whom such statistics are true, may fairly be predicated a share of mental recuperative energy beyond the average in activity and potency. There is nothing Utopian in such an assumption on behalf of our people, even were the evidence before us less clear and emphatic. There is a tendency everywhere, and in all things that live, towards a better and healthier type, when the environing conditions are not adverse. All through nature the tendency to the normal is stronger than the tendency to the abnormal. No law is more universal or irrepressible. Given a conjunction of favorable conditions, climatic, hygienic and industrial, and the material betterment of the people subjected to those conditions must follow as surely as effect ever follows cause. To what extent such a conjunction of natural and other advantages is realized in this State I shall not attempt to determine. This, however, I hold to be proven from the facts adduced—that the conditions of life here tend demonstrably to a strengthening of mental fibre, a weakening of the tyranny of a bad inheritance.

Glancing further afield, the outlook for insanity everywhere favors those who have faith in the steady progress of humanity. Throughout the civilized world at large, forces are at work tending to lessen the outlying causes of mind-disease. One of the chief ameliorating factors is the striking change that is taking place in the condition of the working classes. For, let it be remembered that it is mainly the poorer and more ignorant who fill our asylums. The higher wages paid to working men, the shorter hours of labor, the greater amount of leisure they enjoy, the better education they receive, leading them to put that leisure to more intelligent use, the better houses they live in, above all, the better food they eat, supplying the proper nutrition of body and brain; all give us hope that, as years and generations go by, insanity will become less and less the formidable thing it is.

The Legislature of the State having wisely and by no means too soon provided for the erection of another asylum for the insane, a few words on the external construction of asylums may not be out of place.

Fashion, which rules everything, has even in times past brought this subject under its imperious sway. The fashion regarding asylum exteriors has changed notably in the last seven years.

The period before that was characterized by the erection of a costly class of buildings, pretentious in design and imposing in all the pomp of tower and turret, pinnacle and battlement. All of them would not of course come under this category, but the majority would. As late as 1878, the celebrated alienist, Dr. Isaac Ray, writing on this subject, maintained that \$1,000 or \$1,200 per patient accommodated was not any too much. The State Asylum at Warren, Pa., finished in 1878, cost \$1,500 per patient. That at Danvers, Mass., built eight or nine years ago, cost the monstrous sum of \$3,600 per patient; a monument to future ages of the submissiveness of tax-payers. Our own State Asylum at Napa was built in the hey-day of this era of extravagance, having cost close to a million and a half; or, with a capacity of 1,000 patients, for which it was intended, \$1,500 per patient.

Such palatial structures are no longer held necessary for the care and cure of the insane. The class of buildings most approved of late years is solid and substantial, without being prison-like, and of moderate cost; the comfort and home-like surroundings of the inmates being the first requirement. The taste for architectural display has given way to a striving after a truer form of beauty—utility. State pride in its public buildings is a sentiment highly commendable in its place, but the piling up of superfluous ornamentation on the outside of a mad-house has always struck me as something grossly inappropriate.

I will briefly call your attention to two instances of the later and more economical spirit in asylum construction, namely, the Illinois Eastern Asylum, at Kankakee, and our own new asylum building at Stockton.

The Kankakee asylum, finished last year, is on a plan somewhat experimental. There are, under the one management, separate and detached buildings for the different classes of the insane; the acute, the chronic, the violent, the filthy, the suicidal, the epileptic, each having their distinct quarters, adapted to the varying requirements of their care and treatment. The system is found to work well. The total cost of construction, necessarily enhanced by the broken-up and detached style of building, was \$664 per capita. The asylum accommodates 1,500 patients.

The new edifice recently built at Stockton was designed to take the place of some of the older buildings which had become

unfit for habitation. It was opened for use at the beginning of the present year. It is not an imitation of a baronial castle, but a plain brick building with stone facings. In general appearance it impresses the observer as eminently suited for its purpose. It has, however, other claims for admiration; its simple yet stately outlines, its compact symmetry, its architectural and technical truth, to say nothing of its modest cost, render it as creditable a public building as will be found anywhere. It has a capacity of 500 patients, and cost \$225,000, or \$450 per patient. Being built on State grounds, there was no land to pay for, making the per capita less than it would otherwise have been, but only slightly less. As long as such structures as the Kankakee Asylum at \$664 per patient, and the Stockton building at \$450 per patient can be reduplicated, the question of hospital construction need no longer be considered a vexed one.

Before concluding, there is a matter of central importance to which I desire to call the attention of the Society as a whole, and more especially the active promoters of medical education on this coast, of whom our honored President has long been recognized as one of the foremost. It is, the want of facilities for the clinical study of mental disease. The efficiency of the California medical schools is conceded on all hands. In the comprehensiveness of their respective courses of study, the rigor of their examinations, the zeal of their tutorial corps, they are up to the standard of the oldest and best. In but one feature do they fall short, the teaching of mind disease, as it can only be taught—clinically. The modern graduate must have something more than a smattering of knowledge on insanity. It is estimated that one person in every 400 has mind disorder in some form. Is typhoid fever relatively more frequent? Yet what student would be held worthy a diploma who had never studied clinically a case of typhoid? Is pneumonia more prevalent than once in 400 inhabitants, or syphilis, or tuberculosis? Yet how necessary is held the familiarizing the undergraduate with the aspect of these disorders. But when disease attacking the brain affects the mind, his knowledge of this class of ailments may be rudimentary in the extreme, as there is no way provided for the proper study of them. That asylums are provided for the reception of the insane is no reason why the general practitioner shall not require an intimacy with the phases of mental pathology. Many cases have to be treated at home; many cases need not be sent

to the asylum at all. Not only this, but, as Dr. Clouston points out, the early recognition of mental disorder, the detection of its forerunning symptoms, and their treatment, the mental hygiene of those with a neuropathic history and the question of a career in life, the capacity for making a will, the responsibility for a criminal act, and, lastly, the examination of those charged with insanity, which often falls to the lot of the country practitioner, involving the serious question of depriving a fellow citizen of his personal liberty—these are matters that a physician should be made fully competent in before he can be said to have had a proper medical education. And this is not to be reached without systematic clinical teaching.

Two prerequisites are called for: First, an asylum within reasonable proximity to the medical schools; and second, a department therein to be set aside as a field for clinical teaching. The Legislature, at its last session, devoted considerable time to insanity matters, and if the friends of medical education had made concerted representation of the urgent need of facilities for this branch of study, I am sure they would have met with a favorable hearing. Every large city should have its insane asylum close by, the convenience and economy of such an arrangement being obvious. As the location of the new asylum is still undetermined, I hope an effort will yet be made to secure its erection somewhere within an hour's ride of the metropolis.

One word more. That a State should honor its great men may be set down as an axiom of civic morality. That a Society representing the medical learning and attainment of that State should sedulously cherish its gifted members, may equally be regarded as beyond cavil or dissent. It has been said proverbially that Republics are ungrateful; one of those idle phrases that so often serve to hand down a falsehood rather than perpetuate a truth. The benefits conferred on the people at large by the life-long toils of one of the members of this Society, one who for more than twenty years has been closely identified with the management of the insane, and who is now resting after his labors in honorable retirement, are not forgotten, though they can never receive their full meed of appreciation. I need hardly say, Mr. President, that I refer to the distinguished gentleman who a few years since filled with dignity the chair now occupied by yourself—Dr. G. A. Shurtleff. I will attempt no eulogy of such a man, for none is wanted; his virtues are too vivid in the

minds of the people to need it. Such was his large-hearted sympathy for the unfortunates under his charge, his zeal, his skill, that there is not a town or hamlet from the centre of the State to its furthestmost recesses, where his name is not known and revered.

The State of New York, mindful of the similar services of one of her talented physicians, showed her gratitude by naming in perpetuity one of the stateliest hospitals of which the State can boast, the Willard Asylum for the Insane. A new asylum is soon to rise in our midst, and I feel that I am but echoing the feeling of all of us in saying that no fitter name could be found for it than that of the Shurtleff Asylum for the Insane. A movement to that effect would come with peculiar grace from this body; and there can be no doubt that when forwarded to the proper quarter, the proposal thus to recognize the services of so eminent a public benefactor, will be welcomed with acclamation.

Proceedings of Societies.

The State Medical Society.

The Medical Society of the State of California met in fifteenth annual session at B'nai B'rith Hall, San Francisco, April 15, 1885, and was called to order at 11:15 A. M., by the Chairman of the Committee of Arrangements, Dr. Washington Ayer, who delivered the following

ADDRESS OF WELCOME.

Mr. President, Ladies and Gentlemen :

After a brief period of separation—a period which forms an important epoch in the cycle of time—we have again assembled in this convention, to renew our labors and discuss the best methods of giving relief to the sufferings of our fellow men.

On behalf of the Committee of Arrangements, and the medical gentlemen of San Francisco, I extend to all, and more especially to our brethren from a distance, a cordial greeting, and offer the often-repeated assurance of our fraternal esteem; and your committee hope this meeting will prove to be one of the pleasantest and most profitable gatherings this Society has ever enjoyed.

While to-day we are deprived of the presence of two of our most prominent and esteemed members, whose voices will no more be heard in the halls of our deliberations, we still have reason to be thankful that so large a number have been favored

with health, and are able to meet and fraternize on this occasion. The sad partings which annually swell our reports on *Necrology*, remind us of the uncertain tenure of life, the brevity of the period of our labors, and the importance of adopting for our future guidance the motto, *carpe diem*; and now may we endeavor to emulate that love and devotion to the profession of medicine which characterized the lives of those for whom this Society feels its bereavement on this occasion.

You will remember, at the last session of this convention it was unanimously voted to extend our labors to three days. The object of this increase of time was to give the members an opportunity to engage in a free and exhaustive discussion of such questions as should come before us, as it was believed this course would make our meetings much more interesting and profitable. On former occasions many valuable papers have been read by title and referred to the Committee on Publication, without any one except the author knowing what they contained. This was not the proper course to pursue for mutual benefit, and it is hoped the changes will be fruitful with good results, and that sufficient interest will be taken on this and all future occasions to insure a fuller attendance and greater attention to all matters brought before the Society.

It is hardly a reasonable compensation for time and money expended, especially to those who live remote from the city, to witness only the transaction of such business as relates to the management of the Society, and I trust the President in his address will urge upon you the importance of adopting another course during this session.

The members of the Colleges of Pharmacy and Dentistry, at their annual meetings, enjoy seasons of mental recreation, and spend much of their time in discussions upon topics connected with their special branches of learning, and we should not feel satisfied to be less intellectually entertained at our meetings.

I now take this occasion to say that the San Francisco County Medical Society has informed your committee that a banquet will be given to this Society at the Baldwin Hotel, on Friday evening, immediately after the completion of our labors, to which you are cordially invited. Tickets will be furnished by the Committee on Entertainment.

Referred to Committee on Publication.

Dr. Ayer then introduced the President, Dr. R. Beverly Cole,

who delivered the annual address, which, on motion, he was requested to furnish the Committee on Publication.

The Board of Censors reported favorably on the credentials of the following applicants for membership: Dr. W. S. Whitwell, of San Francisco, graduate of Harvard, 1872; Barton Dozier, of Ukiah, University of Pennsylvania, 1876; Winslow Anderson, San Francisco, University of California, 1884; E. J. Overend, Paso Robles, Jefferson Medical College, 1884; F. K. Saxe, Santa Clara, Bellevue Hospital Medical College, 1883.

On motion they were duly elected.

On recommendation of Dr. Geo. H. Powers, Dr. J. Van R. Hoff, Surgeon U. S. A., and on motion of Dr. R. H. Plummer, Dr. C. B. Bishop, were elected to honorary membership.

AFTERNOON SESSION, April 15, 1885.

Invitation to visit the Pacific Dispensary Hospital received with thanks of the Society.

On motion, the delinquent dues of Drs. E. B. Robertson, St. George L. Hopkins, and C. M. Blake, were remitted.

On motion of Dr. R. H. Plummer, a committee, consisting of Drs. Stuart, Ayer and Chipman, was appointed to report amendments to Article ij., Section 4, and Article iij., Section 4, of the Constitution.

Reports of Secretary and of Treasurer received, and referred to Auditing Committee, consisting of Drs. Kenyon, Blake and Kerr.

Dr. G. G. Tyrrell introduced the following preamble and resolution, which were adopted :

WHEREAS, The Transactions of this Society as at present issued have a very limited circulation;

Resolved, That a committee of five be appointed to consider and report on the advisability of publishing the proceedings in the PACIFIC MEDICAL AND SURGICAL JOURNAL AND WESTERN LANCET, thereby securing a larger circulation for the Transactions, and a more general interest in the welfare of the Society than can possibly be secured by the present mode of publication.

Report of the State Board of Examiners was submitted by its Secretary, Dr. Plummer, and referred to Committee on Publication.

Report of Treasurer of Board of Examiners submitted and referred to Auditing Committee, consisting of Drs. Mays, C. B. Brown and Dawson.

Dr. W. H. Mays, chairman, presented report of Committee on Mental Diseases. Referred to Committee on Publication.

Dr. Ayer introduced the following resolution, which, on motion was adopted :

In view of the eminent services rendered by Dr. Shurtleff to the insane of the State of California, be it

Resolved, That it is the sentiment of this Society that the name of "The Shurtleff Insane Asylum" be given to the institution about to be erected, and that we give public expression of this feeling to the gentlemen who have the matter in charge.

On motion, a committee, consisting of Drs. McNutt, Lane, O'Toole and Cole, was appointed to confer with the legislative committee and secure the location of the new hospital for the insane in the neighborhood of San Francisco.

Dr. Plummer introduced the following resolution, which was adopted :

Resolved, That all members of this Society engaged in active practice in this State be and hereby are required to possess a certificate from the Board of Examiners of the Medical Society of the State of California; and the Secretary of this Society is hereby authorized and directed to eliminate from the roll of membership the names of all persons who do not hold such certificate on or before the 15th day of June, 1885.

Report of committee appointed to be present at final examinations of medical schools, read by Dr. Washington Ayer, and referred to Committee on Publication.

The Board of Censors reported favorably on the credentials of the following gentlemen, who on motion were duly elected :

Henry F Adams, Colton, Missouri Med. Col., 1874; Thomas W. Huntington, Sacramento, Harvard, 1876; John K. France, Oakland, Jefferson Med. Col., 1868; Mary J. Magill, Sacramento, Woman's Hospital Med. Col., 1884; Zachary T. Magill, Nicolaus, Col. Physicians and Surgeons, Iowa, 1876.

Auditing Committee reported the accounts of the Secretary and Treasurer correct.

Minutes read and approved.

EVENING SESSION, April 15, 1885.

As the committee to report on the subject matter of Dr. Tyrrell's resolution, the President appointed Drs. Tyrrell, Kenyon, Hirschfelder, W. P. Gibbons and Swan.

Report of Committee on Amendments to Constitution presented and referred back.

Report of Committee on Practical Medicine and Medical Literature read by the chairman, Dr. Ira E. Oatman, and, after discussion, referred to Committee on Publication.

Minutes read and approved.

MORNING SESSION, April 16, 1885.

In behalf of Dr. Wilder, the Secretary presented the following amendment to the Constitution:

“ART. V., Sec. 15.—The section of Ophthalmology shall include as sub-sections the subjects of Otology, Laryngology and Rhinoscopy; the chairman of the section of Ophthalmology shall be also chairman of the sub-sections, with power to assign to his associates the various subdivisions of this section for report thereon.”

Dr. Clinton Cushing described a dilating trocar, for opening deep pelvic abscess, and a self-retaining drainage-tube. He then read a paper on Prolapse of the Vagina. Referred to Committee on Publication.

The following applicants were elected on recommendation of the Board of Censors:

Lawrence M. Agard, Auburn, Cooper Med. Col., 1883; N. B. Coffinan, Healdsburg, Miami Med. Col., 1883.

In the absence of Dr. David Powell, Dr. W. E. Briggs was elected assistant Secretary *pro tem*.

Report of Committee on Medical Education read by its chairman, Dr. A. B. Nixon, and referred to the Committee on Publication.

On motion of Dr. Oatman, the following resolution was adopted:

Resolved, That a committee of five be appointed for the present year, to attend the final examinations of applicants for the degree of Doctor of Medicine, in the regular medical colleges of the State of California.

Dr. Oatman also proposed that Section 10, Art. V. of the Constitution, be so amended as to read as follows:

“It shall be the duty of the Committee on Medical Education to be present at the final examinations of the regular medical schools of this State, and to report on the education imparted and required by these institutions as compared with that imparted and required by other States of the Union and of Europe, and on such other matters as they may deem worthy of consideration in reference to medical education.”

Dr. M. M. Chipman, chairman, read report of Committee on Public Hygiene. Referred to Committee on Publication.

AFTERNOON SESSION, April 16, 1885.

First Vice-President Thorne in the chair.

Dr. Tucker introduced the following resolution, which was adopted:

Resolved, That the delegates from this Society to the American Medical Association are hereby instructed to invite the latter to hold its next session on the Pacific Coast, and that our delegation is hereby instructed to use all honorable means to secure this object.

On motion of Dr. Ayer, the following resolution was adopted:

Resolved, That it is the sense of this Society that its members, and all the licentiates of its Board of Examiners, be requested to enter complaint against and to aid in the prosecution of all illegal practitioners of medicine.

In accordance with the recommendation of the Board of Censors, the following applicants were elected to membership:

Douglass Luce, Valley Springs, Starling Med. Col., 1854; Martin Regensberger, San Francisco, University of Munich, 1875; Henry S. Welch, Nevada City, Bellevue Hospital Med. Col., 1872; S. D. Howard, Elk Grove, Missouri Med. Col., 1876.

The report of the Committee on Surgery was read by its chairman, Dr. W. S. Thorne, and referred to Committee on Publication.

On motion of Dr. Simpson, the Society proceeded to the election of officers, with the following result:

President—W. P. Gibbons, of Alameda.

Vice-Presidents—R. H. Plummer, C. G. Kenyon, San Francisco; W. E. Briggs, Sacramento; W. H. Hammond, San Jose.

Permanent Secretary—Wallace A. Briggs.

Assistant Secretaries—J. H. Parkinson, L. M. F. Wanzer.

Treasurer—Gerrard G. Tyrrell.

Board of Censors—W. W. Kerr, T. B. DeWitt, A. G. Anthony, H. S. Orme, G. G. Tyrrell.

Board of Examiners—James Simpson, W. F. McNutt, Chas. H. Steele, C. E. Blake, C. G. Kenyon, R. H. Plummer, J. G. Jewell.

Alternates—G. W. Davis, T. B. DeWitt, W. S. Whitwell.

On recommendation of the Board of Censors, the following applicants were elected to membership:

Thos. E. Connolly, Vallejo, University of California, 1884;
Jules A. Simon, San Francisco, University of California, 1875.

The Auditing Committee reported the accounts of the Secretary and Treasurer of the Board of Examiners correct. Report received and adopted.

The appointment of A. S. von Mansfelde as the legal representative of this Society in the Nebraska State Medical Society was confirmed.

The Special Committee on Constitution and By-Laws reported as follows :

Mr. President—Your committee begs leave to submit the following amendments: To Art. ij., sec. 4, by striking out the words, "by the exhibition of his diploma;" to Art. iij., sec. 7, by adding after the word "election:" "In the absence or loss of applicant's diploma, the Board of Censors may accept satisfactory proof that the diploma has been presented to the State Board of Examiners of this Society, and a license to practice issued thereon. It shall be the further duty of the Board of Censors to examine into the present professional standing of the applicants."

Minutes read and approved.

EVENING SESSION, April 16, 1885.

Special Committee on Publication reported in favor of accepting the proposition of Dr. W. S. Whitwell, and against the monthly publication of the proceedings by the Society itself.

By vote, the consideration of this report was deferred until 3 P. M. of the 17th inst.

The Committee on Prize Essays submitted the following report:

In the absence of the Chairman, the Committee on Prize Essays beg leave to report that but one essay has been submitted to them, entitled "Motion in the Etiology of Sea-sickness." This essay, in the opinion of the Committee, without committing themselves to the theories advanced therein, contains evidence of considerable study, research and ingenuity, and would be deserving the prize offered if, in the opinion of this Society, its author, who is not a member of the Society, is eligible to competition.

The chair decided the essayist as ineligible; the report was

received, and the essay ordered returned to its author, with thanks of the Society.

Report of Committee on Medical Topography, read by its chairman, Dr. J. W. Robertson, and referred to Committee on Publication.

Minutes read and approved.

MORNING SESSION, April 17, 1885.

Dr. J. H. Parkinson read a paper on "Arsenic in Malarial Fever," which was referred to Committee on Publication.

Report on Gynecology, read by Dr. John Wagner, and referred to Committee on Publication.

The following applicants were elected to membership, on recommendation of the Board of Censors:

E. Warren King, Ukiah, University of California, 1863; Jonathan I. McDonald, Livermore, Cooper Medical College, 1884; James H. Johnson, Calico, College of Physicians and Surgeons, 1878; Edward Donnelly, San Francisco, College of Medicine, 1854; Exeter P. Vaux, Santa Cruz, University of Louisville, 1875.

Voluntary paper on "Transitory Mania," read by Dr. Washington Ayer, and referred to Committee on Prize Essays.

Dr. Ainsworth, of Arizona, was introduced to the Society, and invited to participate in its proceedings.

On motion of Dr. Chipman, the President and Secretary were authorized to issue the legal number of certificates as delegates to the American Medical Association, to members of this Society in good standing in the order of their application.

Supplemental Report on Surgery, by Dr. A. B. Stuart, read by title, and referred to Committee on Publication.

On motion of Dr. Plummer, San Francisco was selected as the place of the next annual meeting.

AFTERNOON SESSION, April 17, 1885.

Report on Otology, by Dr. W. E. Briggs, read by title, and referred to Committee on Publication.

On motion, Dr. J. H. Carothers was transferred from active to honorary membership.

On motion of Dr. Wanzer, the delinquent dues of Dr. C. A. Kirkpatrick were remitted.

On motion of the Secretary, a Committee on Transportation, consisting of Drs. Tucker, Woolsey and Nixon, was appointed to secure a reduction in railroad fare for gentlemen attending the future sessions, either of this Society or of the American Medical Association.

On motion of Dr. R. H. Plummer, the Committee on Publication was ordered to publish 300 extra copies of Dr. Ayer's paper on "Transitory Mania."

After considerable discussion, the question of publishing the transactions in the PACIFIC MEDICAL AND SURGICAL JOURNAL, was referred to the Committee on Publication, with full power to act.

In the absence of Dr. Wilder, on account of sickness, his report as Chairman of the Committee on Ophthalmology was read by Dr. J. Van R. Hoff, and referred to Committee on Publication.

On motion, the dues of the secretaries were remitted.

Dr. J. R. Laine read a paper on the "Law Regulating the Practice of Medicine and Surgery in California." Referred to Committee on Publication.

On motion of Dr. Plummer, the motion to elect Edward Donnelly was reconsidered, and his name referred back to the Board of Censors.

Dr. J. V. R. Hoff read, by title, a paper on the "Rhynoscope," which was referred to the Committee on Publication.

On motion of Dr. Plummer, Dr. W. P. Gibbons was requested to act as Chairman of the Committee on Indigenous Botany for the ensuing year.

A new lever, with tractor blade, was exhibited by Dr. Luke Robinson.

Dr. E. B. Robertson submitted a paper on "Lithotomy," which was read by title, and referred to Committee on Publication.

Minutes read and approved.

EVENING SESSION, April 17, 1885.

On motion of Dr. Jewell, the consideration of amendment proposed last year to Art. II, Sec. 1 of the Constitution, was indefinitely postponed.

In vacating the chair, Dr. Cole, the retiring President, made some very fitting remarks, and appointed Drs. Ayer and Orme

to induct the President-elect, Dr. William P. Gibbons, into the duties of his office.

On recommendation of the Board of Censors, Robert G. Reynolds, Upper Lake, St. Louis Medical College, 1876, was duly elected.

In the case of Edward Donnelly, the Board of Censors reported as follows:

We, your Board of Censors, to whom was referred the case of Dr. Edward Donnelly, beg leave to report that, from certain evidence of unprofessional conduct brought before us, we are unanimously of the opinion that his admission would not be for the best interests of the Society, and therefore we cannot recommend it.

G. W. DAVIS,
H. S. ORME,
G. G. TYRRELL,
A. G. ANTHONY.

The report was received and adopted.

On motion, the thanks of the Society were tendered to all the officers who served it during the past year.

Minutes read and approved.

WALLACE A. BRIGGS,
Permanent Secretary.

San Francisco County Medical Society.

SAN FRANCISCO, April 14, 1885.

The meeting having been called to order by the President, Dr. Jewell, and the minutes of the former meeting read and approved, the following gentlemen were proposed for membership: Dr. Bettencourt, Dr. McMahon, Dr. Rosenthal, Dr. Van Orden, Dr. Ancona. The propositions were referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of Winslow Anderson, M.D., Univ. of Cal., 1884; W. J. Nickerson, M.D., Bowdoin College, 1870; W. B. Lewitt, M.D., Detroit Med. Col., 1877, and Coll. Phys. and Surg., N. Y., 1878. Drs. Anderson and Lewitt were then elected to membership, but as Dr. Nickerson was undecided about remaining in this city, his name was allowed to lie over indefinitely.

The following gentlemen were then proposed and elected to honorary membership: Dr. W. P. Gibbons, M.D., Alameda;

E. R. Taylor, M.D., San Francisco; C. B. Bishop, M.D., San Francisco.

The Banquet Committee reported that they had made arrangements for entertaining the visiting members of the State Medical Society at the Baldwin Hotel.

Cases of diphtheria were reported by Drs. Perry and Chismore. Dr. Perry's case tended to show that the diphtheretic poison remained in the secretions of the patient for at least twelve days during convalescence. A child five years old was attacked by diphtheria and recovered in five days. Twelve days after this she was attacked by measles, and during this disease a diphtheretic membrane formed in the trachea, producing such obstruction as to necessitate tracheotomy, which, however, did not succeed in preventing a fatal termination.

Dr. K. P. Van Orden read a paper which contained many valuable points bearing on the etiology, pathology and treatment of diphtheria, culled from the leading authorities and her own clinical experience.

Dr. Chismore communicated a case in a boy aged five years, whom he treated with twenty minims of tinct. fer. chlor. every hour, with the result that the temperature, pulse and other bad symptoms gradually declined after the first dose, and he was practically out of danger by the sixth day. The hourly administration was continued for ten days, when it was reduced to every two hours, and then to three times daily. Dr. Chismore said that until the 1st of May, 1876, all his cases of diphtheria died, but since then he has adopted the iron treatment, and has not lost a case except one where he was called in consultation. A great deal depended on the regularity and mode of administration, the proper practice being to give twenty minims every hour, during both day and night, and to repeat the dose if it happened to be rejected. He never had seen any but the best results from this mode of practice. At the commencement the patient cannot eat, and therefore should not be troubled by food.

Dr. Anderson reported six cases of tracheotomy in cases where the membrane had extended to the trachea, and the death of five of them from a farther extension to the bronchi. In the sixth he used a spray of pancreatine and bicarbonate of soda over the tube to dissolve the membrane, and met with a favorable result. In his experience a common sore throat appeared to afford protection against diphtheria, and not to favor it, as was the general opinion.

Dr. Perry had used pancreatine without receiving the slightest benefit.

Dr. Arnold said that any one listening to the different reports presented to the Society would come to the conclusion that all one man's cases get well, and all another man's die. This seemed to be rather strange, as printed statistics placed the average mortality at over fifty per cent. Iron was not a new drug in the treatment of diphtheria; it was as old in this country as the disease itself. If it were the specific that some men claimed it to be, the mortality from this disease would diminish; but during the last epidemic it was just as high as ever. Probably many cases of follicular tonsillitis and membranous sore throat were mistaken for diphtheria, and he believed in a distinction between croup and diphtheria. It was the exception for patients to die from extension to the larynx; death was rather due to some affection of the heart.

Dr. Chismore replied that he did not claim novelty for the iron treatment. Granting that he had made a wrong diagnosis, was it at all likely that he could do so every time in nine years? The form of treatment he advocated was told him by Dr. Bennett as an old Scotch custom more than twenty years ago.

Dr. Flood said that since the last meeting he had tried the iron treatment without deriving the slightest benefit from its use.

After some remarks from the visiting members the Society adjourned.

Present: Drs. Plummer, Jewell, Hart, Taylor, Day, Frisbie, Flood, Arnold, Anderson, Chipman, Whittell, Guzman, Norris, Chase, Fifield, Donelly, Perry, Rivas, Chismore, Thayer, Baldwin, Van Norden, Field, LeFevre, Fitzgibbon, Lonigo, McNutt.

SAN FRANCISCO, April 28, 1885.

The meeting having been called to order by the President, Dr. Jewell, the minutes of the former meeting were read and approved.

The name of Dr. De Puy, Univ. of Cal., 1881, which was submitted for membership into the Society by Drs. Long and LeFevre, was referred to the Committee on Admissions.

The Committee on Admissions reported favorably on the credentials of A. O. D'Ancona, M.D., Univ. of Cal., 1884; L. Van Orden, M.D., Med. Coll. of Pacific, 1880; J. De S. Bettencourt, M.D., Med. Coll. of Pacific, 1877; C. H. Rosenthal, Med. Coll.

of Pacific, 1881, Univ. of Leipzig, 1884; and the Secretary was instructed to call a ballot for their election into the Society. The ballot was favorable.

As Dr. J. A. Anderson was not present, his cases of diphtheria were not reported.

Dr. Whittell read an article which recently appeared in the *Denver Tribune*, describing some surprising experiments by two gentlemen of that city, one of them a surgeon, in resuscitating dead animals by injecting warm "live" blood into them, after periods ranging from four to eighteen hours after the animals had been bled to death. Doubting the authenticity of the statements made in the article referred to, Dr. W. communicated with the author of the experiments, and received in reply a letter which he read, and which corroborated fully the results of the experiments described in the papers, and stating that a full report of the proceedings had been forwarded to the Academy of Medicine in Paris, where the writer modestly hoped it would receive some attention. At the conclusion of the reading, some of the members present expressed doubts as to the veracity of the surprising statements made, owing to the source whence they were derived.

There being no further business, the Society adjourned.

Members present: Drs. Jewell, Whitney, Whittell, Le Tourneux, Chismore, Sherman, Wanzer, Chase, Arnold, W. E. Fifield, Guzman, Rivas, Kerr.

WM. WATT KERR, Rec. Sec'y.

Sacramento Society for Medical Improvement.

SACRAMENTO, April 28, 1885.

The Society met in regular session, Dr. H. S. Nichols, President, in the chair.

Dr. Nixon introduced "Cancer" as the subject for the discussion of the evening, remarking that amongst the various topics of professional interest which had been brought up at their meetings, he could not find that malignant disease had ever been discussed.

A long and interesting debate ensued, the majority being in favor of early operation, and non-interference when the disease had become well established, with the development of constitutional symptoms.

The Society adjourned at a late hour, to meet on the fourth Tuesday in May.

JAMES H. PARKINSON, Secretary.

Academic Senate, University of California.

[Extract from the Minutes of date May 6, 1885.]

Prof. W. F. McNutt presented the following:

A Memorial and Resolutions upon the late Frederick Winslow Hatch, M.D., Professor of Hygiene, Medical Department, University of California.

Mr. President, and Members of the Academic Senate of the University of California.

Your Committee have the honor and sad duty to present to you their report upon the late Dr. F. W. Hatch. We find that this makes the first break in the ranks of this organization. It is therefore with the utmost propriety that this body should express and record its appreciation of the loss it has sustained. Only those who had been more intimately associated with him and knew him as friend, citizen and teacher, can appreciate the real character and worth of Frederick Winslow Hatch. He was born in Charlottesville, Virginia, March 2, 1822. Most of his boyhood was passed in Washington, D. C., where his father, a clergyman, was Chaplain of the United States Senate for twelve years. He was educated at Union College, Schenectady, New York, and graduated with honors from that institution at the early age of seventeen. He received his medical education in New York City, graduating as an M.D. in 1844. Lured by the extravagant reports of California, which at that time reached the Eastern States, he abandoned an already lucrative practice and arrived in Sacramento in 1851, where he remained to the time of his death. Always interested in the subject of education, and being possessed of scholarly attainments, he was elected and served for many successive years both as Superintendent of Public Schools and as a member of the Board of Education of the City and County of Sacramento. He did much to promote the educational interests of that county; was always earnest in his endeavors to assist, encourage and stimulate the teachers over whom he was elected to preside. He was elected Secretary of the State Board of Health in 1876, which position he held until the time of his death. In this capacity he exhibited great ability as well as untiring energy and zeal. It was however his connection with the Medical Department of the University of California as teacher that makes his loss so deeply felt by this organization. For several years he occupied

the chair of Theory and Practice of Medicine, and for the past six or eight years was Professor of Hygiene. The students who listened to his instruction will never forget "the chasteness of language and the soul-stirring earnestness in which the lessons of truth and wisdom fell from his hallowed lips."

Resolved, That in the death of Professor Frederick Winslow Hatch, this organization recognize the loss of one who always directed his energies and attainments with the sole object of forwarding the interests and promoting the usefulness of the University of California.

Resolved, That we shall ever gratefully remember his kindness of manner, his earnestness of purpose, and the faithfulness with which he performed the duties that were imposed upon him by the relations which he sustained to this University.

W. F. McNUTT,

Chairman of Committee on Resolutions.

On motion, the report and resolutions were adopted as the sentiments of the Academic Senate, and the Secretary was directed to send a copy to the family of the deceased, and also to the PACIFIC MEDICAL JOURNAL AND WESTERN LANCET.

Attest: J. H. C. BONTE,

Secretary.

Dr. Geo. B. Shattuck reports (*Boston Med. and Surg. Jour.*, April 9, 1885) probably the largest false aneurism on record. This filled the whole lumbar region on the left side, and extended down into the groin. The transversalis muscle formed the anterior wall of the sac; the posterior was formed by the inner surface of the ileum, which was exposed and eroded, and also by the tissues lying beneath the origin of the quadratus lumborum. A second cavity, equally large, and situated in the upper part of the thigh, communicated with the first through the femoral canal. Both contained clotted and fluid blood. There was a true aneurism of the abdominal aorta, as large as a closed fist, situated just below the diaphragm. This had eroded the last dorsal and first lumbar vertebræ; and just to the left of the vertebræ there was an opening, slit-like, and large enough to admit four fingers. By this opening the true aneurism communicated with the false. The case dates back two years to the first sensation of pain, but the patient worked up to three months of his death. Death was due to exhaustion, the patient refusing food. It is not surprising that the true nature of this case was not made out until the autopsy disclosed it.

Correspondence.

DENVER, COLORADO, March 23, 1885.

TO THE EDITOR OF THE PACIFIC MEDICAL JOURNAL:

DEAR SIR:—On my return to this place, after a two weeks' absence, I found yours of March 2d, as well as several other letters, appertaining to the same subject, awaiting me. I have received letters from all parts of the United States in regard to this subject of resuscitating dead animals, which show the interest taken in this investigation. One even from a minister in New York, which implores me not to extend my experiments to the human race, as they might lead to a revelation of facts that would tend to *undermine religion*. To such "crank" notions I pay no attention. I inclose you the original article, as published in the *Denver Daily News*, and written by my assistant, Mr. Finch. I do this because the prelude gives my theories in regard to life—that it must of necessity occupy any organization that is complete and fitted for it. You inquire in regard to the amount of blood extracted and the amount injected. The investigation was not conducted with such particularity or scientific exactness that I could state—a matter that I regret, and that I shall remove in future experiments. I labored under quite disadvantageous conditions in prosecuting my work. I can only say that we bled the animals in each case as long as they could bleed, and what any one would say, "to death;" and in revitalizing them, we only ceased injecting blood when the animal seemed to be fully restored. Of course, every precaution was taken to secure success. The blood to be injected was carefully surrounded by a water-bath that maintained it at life heat, and was injected as soon after being drawn as possible. The greatest care has to be exercised in injecting, to prevent air-bubbles from entering the circulation. I should add, as it was, we lost two dogs. We failed to restore the dog that was frozen, and in one case of a small dog that was bled to death and left for three hours before further operations, life did not return—I believe, owing to some defect in our manipulations. In three letters I have received, inquiries have been made if I employed electricity in the restoration. *In no case*. I was rather opposed to its use, and believed if the animal was properly warmed

up and fresh life—or rather “live” blood—could be got into it and the circulation once established, the animal would revive. This was all I sought at first, and this I have *demonstrated*. I yet have great faith that, in cases of freezing, life can be restored—at least, in some instances. I suppose you are familiar with the fact that a fish can be frozen until as hard as a stone, and be placed in fresh water and come to life, without any apparent change in itself, *except* that it is thereafter blind. I have frozen fish to forty degrees below zero, and so kept them for forty hours, and then restored them to life, and this without injecting of fresh blood. Now every one knows that fish have some blood, although of a low order of organization, and the freezing in their case does not appear to be sufficiently destructive of their physical tissue as to prevent life restoration. In the case of a warm-blooded animal that is frozen—if it is not frozen too badly—*i. e.*, so as to expand and rupture the heart or any of the vital organs, I do not see why, if we can restore the circulation and get fresh live blood into it, the animal will not live again. I have always had the strongest faith that I could have restored Miss Weldon's life, the New England heiress, who last fall perished on Pike's Peak. She was not badly frozen, perishing more from exhaustion than otherwise. Of course, in the face of present prejudices, I would not have been permitted to make the trial. I feel confident that in cases of drowning, life can be restored several hours afterward. It should not be forgotten, however, that I insist that the body must be fit to sustain life. If any decomposition has set in, the attempt to restore life will, in any case, be fruitless. Of course, it must be understood that only the blood of the species can be successfully employed. Nothing could be accomplished by attempting to restore a dog's life with a calf's blood.

Numerous questions have been put to me in regard to cases of life restoration on the human subject after several hours of death interval, as to what would become of the soul in the meantime. Such speculations do not occur to me, and I am as incompetent to answer them as any one else. I shall not likely make any more experiments here. Some interfering busybodies have threatened to give me trouble by arresting and prosecuting me for “cruelty to animals.” If I could obtain an opportunity to practice *on them*, I would see if they could not be improved by having their own brains substituted by those of

good healthy calves. I have transmitted a full account of our work to the Paris Academy of Surgeons, where, I hope, it will receive some attention.

Before closing, I wish to call your attention to a note on the 120th page of the May number of the *Popular Science Monthly* for 1882. I had not seen this before I began my experiments; it was brought to my notice since. It relates to an experiment by Dr. Brown-Sequard, and is more extraordinary than any of my own work.

"Dr. Brown-Sequard, according to Dr. Lugo, once injected the head of a dog, when separated from the trunk, with defibrinated and oxygenated blood; and at the moment when the injection of this blood had recalled manifestations of life, he called the dog by his name. The eyes of the head turned toward him as if the voice of the master had still been heard and recognized."

You may use such portion of this communication as you may see proper, and I should be pleased to have a copy of your journal containing your notice. I have not written this as a communication for print, and have, therefore, violated the canon of only writing on one side of the sheet. I may add, that my acquaintance here is limited, and that I do not know by sight more than two physicians in Denver.

I remain,

Very truly yours,

G. A. ARMITAGE.

To the Editor of the PACIFIC MEDICAL JOURNAL:

DEAR SIR:—Under the head of "Death from Chloroform," in the May number of the JOURNAL, some statements are made that I do not wish to see remain unchallenged. Taking them collectively, they may be said to weaken the general tone of the article, which is undoubtedly in favor of ether.

Regarding the quantity of chloroform administered, the amount in this case was supposed to be small. The quantity of chloroform used bears no relation whatever to the result. Referring to Lyman's statistics, the most complete of any published, we find several cases which show this very plainly. From ten to thirty drops only have been placed on the inhaler, and yet death has ensued within the first dozen inspirations, when we may certainly assume that not one-third of the anæsthetic vapor has been respired.

The article further asserts that "dangerous symptoms can

only be avoided by the most careful watching;" and later, "In the hands of one who understands its administration and will give his undivided attention to it, throughout the operation, no bad results are likely to follow." The mere fact that Simpson, Snow, and Clover all record deaths, while a host of competent, though less celebrated, men add their quota to the list of mortality, would seem to be sufficient refutation of the statement. It is not so much this, as the recorded experience that death has frequently ensued without any previous warning, or even cause for apprehension, that makes chloroform so deservedly dreaded an agent. Here, ether and chloroform stand in striking contrast, for there is no case on record where serious symptoms have arisen during ether administration, without ample warning. The majority of deaths reported from ether inhalation are directly traceable to some accident; or have arisen from causes which should have been taken as contra-indicating its use.

As to the agreeable or disagreeable sensations experienced, these depend largely on idiosyncrasy and individual taste; and many of the objections to ether will disappear under the hands of a competent anæsthetist.

Finally, I would take up the "tardy, evanescent, but safe anæsthetic influence of ether."

Assuming the position that the only rational method of administering ether is by approved mechanical apparatus, I wish to see, or even hear, of the anæsthetist who proposes to reduce the time required to procure insensibility in this manner, by chloroform inhalation. In order to bring the question to the level of argument, it is necessary to state the space absorbed by the "rapidly obtained effects of chloroform."

With Ormsby's ether inhaler, I have often produced complete anæsthesia in less than two minutes; and can safely say that my average of several hundred administrations will not exceed that time. The point is not whether anæsthesia can be procured with chloroform in two minutes or less, but rather, is such an attempt justifiable, and will it not materially increase the risk?

In the light of modern experience it seems to me that the question is prejudiced when the choice is supposed to lie between a rapid, effective and agreeable, if slightly dangerous agent, and a tardy, uncertain and disagreeable drug. There can be no such choice. It is a decision—all other things being granted as equal—between extreme fatality and dire uncertainty on the

one hand, and practically absolute immunity on the other. I sincerely trust that the day is not far distant when the surgeon who errs in his selection, where no special indication can be shown, will be held culpable by his professional brethren.

JAMES H. PARKINSON, L.R.C.S.I.

[It was stated in the editorial referred to by Dr. Parkinson that our purpose was to call attention to a dangerous and comparatively useless method of combining chloroform with ether, and not to enter into a controversy regarding the respective merits of these drugs. If our correspondent will refer to the article he criticises he will discover that we are in almost perfect accord with him, and that his challenged points are more imaginary than real. It is there stated that the sudden deaths are due to the degree of concentration of the drug, and may be produced by very small quantities. We then went on to speak of the dangerous symptoms that arise when the anæsthetic is not administered in proper dilution, three or four per cent., and said that under these circumstances, and with proper care on the part of the anæsthetist, bad results were not likely to ensue. In all such cases the premonitory warning is very brief, but is always present. We are aware that Simpson and many other chloroformists, both great and small, had fatal cases; yet it was from the experience thus acquired that those rules relative to concentration, mode of administration, and dangerous symptoms, were derived, that make chloroforming a justifiable proceeding, even under special conditions.

The only other point Dr. Parkinson contends is the relative time necessary to produce anæsthesia. We are aware that with improved mechanical apparatus, such as that of Muller, the time required for etherization has been very much reduced, even to about seventy-four seconds; but our remarks—and we mentioned this fact—referred to the cone method, which is the one adopted by more than ninety-five per cent. of the practitioners in California; and it is generally admitted that this requires an average of seven minutes to produce anæsthesia sufficiently deep for major operations.—EDITOR.]

Dr. Weber, of Darmstadt, has used apomorphine in gr. $\frac{1}{12}$ gradually increased to gr. $\frac{1}{3}$, three times daily, in the permanent cure of asthma. The drug is also serviceable in cases of rigid os, during parturition.

Clinic of the Month.

THERAPEUTIC NOTES.

Iodized Phenol in Dysentery.

Dr. L. Rosenfeld advises enemata three or four times daily of gr. $\frac{1}{2}$ of iodine, gr. 1 carbolic acid, $\bar{3}$ 1 of glycerine, $\bar{5}$ 2 of water for adults and $\bar{5}$ 5 for children.—*London Med. Record.*

Iodine in Cholera.

Among the varied cures for cholera, iodine occupies a somewhat important place. Maurice finds that a 1 per cent. solution destroys the comma bacilli. Dr. Renzi checks the vomiting with gtt. 1 doses of the tincture, and Dr. Senise, of Naples, considers the same dose with gtt. 2 to 4 of laudanum three times daily, a certain prophylactic.—*Chicago Med. Jour. and Exam.*

Ergot in Typhoid Fever.

Dr. A. Grilliere, in *Un. Medicale*, asserts that ergot in typhoid fever diminishes the temperature, frequency of the pulse, and diarrhoea, regulates the circulation and relieves the nervous symptoms.

Antiseptic Solution.

Dr. Sternberg advises gr. 30 each of bichloride of mercury and permanganate of potassium in a quart of water as a universal antiseptic and deodorizer.

Bromide of Nickel in Epilepsy.

In obstinate cases of epilepsy, Prof. De Costa has used gr. 5 to 10 doses of bromide of nickel three times daily with success.

Osmic Acid in Sciatica.

Dr. James Mercus obtains relief by deep injections along the course of the nerve of m. 3 to 5 of a 1 % solution of osmic acid.

Ether in Obstinate Vomiting.

Dr. Galceran has immediately checked the vomiting of pregnancy by applying an ether spray to the epigastrium.

Warm Baths.

Daily baths of a uniform temperature of 70°–85°, from three to eight hours, have aided Dr. Danchez in successfully treating acute mania, hysterical vomiting, surgical injuries, psoriasis, and prurigo.

Hot and Cold Injections in Uterine Hemorrhage.

Drs. Schwarz and Graefe have determined that hot water (T. 120° F.) stimulates muscular contraction and produces œdematous swelling of the tissues; but, when not effectual in completely checking the hemorrhage, should be immediately followed by cold water, which continues and strengthens the uterine contractions without interfering with the swelling of the tissues, which constitutes the second factor in controlling the hemorrhage.

Human Blood Hypodermically.

Prof. Von Ziemssen, of Munich, claims that subcutaneous injections of human blood are surprisingly beneficial in anæmia, while the blood of other animals is destitute of any remedial properties. The blood is obtained from the veins, defibrinated in a warm vessel antiseptically, injected toward the heart, and at the same time absorption assisted by active massage with oiled hands. The quantity used is from 3 7 to fourteen, and is to be repeated only a few times at intervals of two or three days, according to improvement.

Prof. S. Fubini, of Palermo, has obtained almost instantaneous improvement in similar cases from repeated inhalations of a spray of twenty parts of defibrinated beef's blood, and eighty parts of a three-fourths per cent. solution of common salt.

Viburnum and Hydrastis in Dysmenorrhœa.

Dr. Huchard, of Paris, uses a combination of the fluid extracts of viburnum prunifolium (which owes its activity to valerianic acid, a bitter principle, and tannic acid), and hydrastis Canadensis (whose alkaloids, hydrastine and berberine, are, according to Rostock and Schatz, both antispasmodic and anticatarrhal), in doses of gtt 10 every two hours in dysmenorrhœa and menorrhagia.—*Jour. de Med.*

Chloral Hydrate in Gonorrhœa.

This drug has been used by Dr. Rodriquez, of Brazil, in gr. 7½-10 to ̄ 1 solution, as an injection three times daily.—*Med. Age.*

Eserine in Corneal Ulcers.

Instillation twice daily of a solution of gr. 2 to ̄ 1 of water.—*Analectic.*

Amyl Nitrite in Opium Poisoning.

Inhalation is said to have revived an apparently hopeless case:—*L' Union Med.*

Oatmeal in Scarlatina.

In consideration of the fact that contagion in scarlet fever is due to dissemination of the almost imperceptible scales of desquamation, Mr. George Smith, of Somerset, England, proposes to bathe the body daily with a tepid solution, prepared by mixing one ounce of oatmeal to a pint of boiling water, made fresh daily, with the object of sticking the scales together with gluten, and thus to allow their removal in mass. Furthermore, the gluten protects the fresh skin from the air, and thus lessens the risk of dropsy.—*Bristol Med. Jour.*

Plilocarpus in Cutaneous Inflammations.

Equal parts of fluid ext. jaborandi and tinct. opii has been painted over the part every two hours by Dr. W. W. Claybaugh, to relieve various forms of inflammations of the skin.—*Med. and Surg. Report.*

Corrosive Sublimate in Joint Disease.

Vogt injects m. 45 to 75 in different parts of the joint every four days of R hydrarg. chl. corros. gr. $1\frac{1}{2}$, sodii chloridi gr. 15, water ʒ 12.—*Med. Bulletin*, Feb.

Atropine in Chloroform Anæsthesia.

M. Columbel administers atropine gr. $\frac{1}{60}$, and morphine gr. $\frac{1}{2}$, hypodermically, twenty minutes before the chloroform, to lower the irritability of the pneumogastric and prevent the inhibitory effect of the chloroform on the heart.—*Lyon Med.*

Carbolic Acid in Purulent Ophthalmia.

Mr. G. H. Burnham reports in the February number of the *Canada Lancet*, that he successfully treats purulent and gonorrhœal ophthalmia with hourly lotions of a 5 % solution of carbolic acid, applied freely and thoroughly, besides the usual applications of cold.

Ammonii Chloridum.

This drug is accredited by the *New York Medical Record* with having the tendency to melt all sclerotic and cirrhotic tissues, whether about a nerve, causing neuralgia, or of the liver, lungs, brain, spinal cord, stricture of the urethra and the thickened tissues in chronic bronchitis.

Tartar Emetic Hypodermically.

Dr. William H. Richter, of Kansas, states that gr. $\frac{1}{2}$ hypodermically will produce vomiting in fifteen seconds. An abscess will result from the injection.—*Atlantic Jour. of Med.*

Bisulphide of Carbon.

The presence of micro-organisms, cadaveric alkaloids, and various putrescent substances in the intestinal canal, must certainly modify unfavorably the course of many diseases. It has been the object of medicine from earliest history to destroy this infective matter, but so far without any positive hopes of success. Among the many substances proposed for this purpose, Dr. Dujardin-Beaumetz, of Paris, speaks in the highest praise of the carbon bisulphide, thus prepared: \mathcal{R} carbonei bisulphide ζ 6, water one pint, spirits peppermint gtt. 30 M.; shake in a flask and let the mixture settle. From five to ten tablespoonfuls (probably equal to gtt. $1\frac{1}{2}$ to 3 of the drug) are administered in a glass of wine and water, or of milk, during the day. The water in the flask is replaced as fast as it disappears by use. Thus administered, it is unobjectionable to taste, perfectly safe, effectual in disinfecting the stools, destroying the germs they may contain, and relieving the diarrhœas of infectious diseases, as of typhoid.—*Therapeutic Gazette.*

Hot Air in Foul Wounds.

Rapid healing of obstinate varicose, syphilitic and other ulcers, has been reported in the London *Lancet* as following a two hours' immersion of the affected limb, twice daily, in a wooden box with a zinc bottom, the air of which is heated as much as the patient can bear, by spirit-lamps beneath the zinc. In specific cases calomel, and in others one ounce of terebene, is sprinkled upon the floor of the box.

Jamaica Dogwood.

Dr. C. P. McNab asserts that this drug, in hourly doses of the fluid extract, is effectual in relieving neuralgia of the fifth nerve, but is liable to induce uterine hemorrhage when such a tendency exists.—*Therapeutic Gazette.*

Burns and Scalds.

Richardson, in the April London *Lancet*, recommends the following solution for burns and scalds: \mathcal{R} spermaceti, camphor, aa ζ i, rhigolene ζ ii; solve. To be applied to the affected part by means of brush, and cover with prepared cotton. The rhigolene evaporates, leaving a thin film over the burnt surface, whereby the air is excluded, and the patient experiences almost immediate relief.

Thalline.

A new antipyretic of the chinoline group, discovered by Dr. v. Jarksch and Skraup. Its chemical name is tetrahydroparachinazinol. It forms salts, as an acetate, sulphate and chloride, all easily soluble in water, of an acid reaction, and of an intensely bitter, aromatic taste. They produce a green color in combination with chloride of iron. Thalline is a powerful antifermentative. The sulphate was used in the dose of gr. 3, which rapidly reduces the temperature in various diseases attended with fever. Doses of gr. 4 to 12½ have also been given. Four grains reduce the temperature for at most only four, and usually only for two or three, hours. A continued lowering of temperature may be produced by doses repeated every two or four hours, or when the temperature again commences to rise. The pulse-rate is usually lowered, but never in proportion to the fall of temperature. No unpleasant cardiac symptoms have been noticed. Perspiration usually attends the fall of temperature. Thalline has been tried successfully for simply reducing the temperature in typhoid, rheumatism, erysipelas, measles, puerperal fever, pneumonia, and tuberculosis.

Antipyrin.

This drug has been used in pneumonia in the New York Hospital, given in powder, gr. 30; at the end of an hour, gr. 15, and if required, gr. 15 at the end of the third hour. The temperature fell one to three degrees, and so remained from one to eight hours. It occasionally produced sweating and slight cardiac depression (not so much so as large doses of quinine in this disease), but there was no gastric disturbance.

Dr. L. Weber, of New York, has treated fifteen cases of pneumonia, bronchitis, and scarlet fever, with such success in reducing unnaturally high temperature as to cause him to speak of the drug in terms of the highest commendation. He gave it in solution with syrup and oil of peppermint, or in wafer, in doses of gr. 15 to 20 for adults, and 10 for children, repeated every hour or two, according to the fall of temperature. In some cases it was administered in these doses continuously every three hours.

Dr. W. H. Draper has employed the drug in twenty cases of typhoid fever in the New York Hospital, with a mortality of 25 per cent. It does not modify the course of the disease, but is, in his opinion, superior to all other methods in reducing high temperature. He found no cardiac depression following its use, but

the tongue became moist and clean, intelligence became clearer and restlessness was allayed. An erythematous rash appeared for a few days in six of the cases, but did not oppose the continued administration of the drug. Dr. Kinnicutt affirms that it diminishes the fever of phthisis without increasing the sweating, and used it with equal success in reducing the fever of inflammatory rheumatism and facial erysipelas; while Dr. M. McLean found it superior to all antipyretics in doses of gr. 60 daily in one case of puerperal septicæmia. In a case of puerperal fever, in the Leed's Female Hospital, under the care of Dr. Barrs, an initial dose of gr. 35, followed in three hours by gr. 17, produced a subnormal fall of temperature, rapid pulse and collapse, which continued for thirty-six hours and terminated in death.

Morphine in Extra Uterine Pregnancy.

Dr. Rennert, of Frankfort-on-the-Main, destroys the fifth-month foetus by injecting with a hypodermic syringe gr. $\frac{1}{2}$ of morphine into the foetal head, through the abdominal wall of the mother.

A correspondent of the *N. Y. Med. Jour.*, Jan. 31st, mentions that the U. S. Consul at Pernambuco, has forwarded to the State Department a sample of alveloz, a South American plant, with the statement that several cases of alleged cancer had been cured by its application. Unlike cundurango—an alleged specific for cancer and syphilis when taken internally—alveloz is a local remedy. Its effect resembles that of jequirity, profuse suppuration following its application to a granulating surface. On receipt of the drug it was handed to the Marine Hospital Bureau for trial, and was applied by Dr. Smith Townsend in a case of lupus of the nose, near the angle of the eye. The case was of nearly forty years' standing, and had resisted all previous treatment. The ulcer was cured within a few days, and the patient was exhibited by Dr. Hamilton at a recent meeting of the Medical Society. The Doctor stated that he had under observation an undoubted case of epithelioma of the face, and promised to report the result at a future meeting.

Dr. Walter Lindley delivered an address before the Protestant Preachers' Association at Los Angeles, on April 6th, on the necessity of a Protestant Hospital. An association has already been organized, and it is hoped that before long a hospital will be opened.

Editorial.

State Board of Examiners and Illegal Practitioners.

To any one who has not interested himself especially in the prosecution of illegal practitioners by the State Board of Examiners, it no doubt seems that but little has been accomplished, and that the time and money spent have been worse than thrown away, for they have apparently only shown the impossibility of regulating the practice of medicine by law. To the closer observer, who has watched the work of the Board, and become cognizant of the many obstacles which are continually appearing in their path, progress is very evident, and great hopes of the future are entertained.

Before prosecutions can be made, it must be known who are practicing illegally, and now, thanks to the "Medical Register" which has lately been issued, this can be readily ascertained. This "Register," which has been distributed all over the State, and can be consulted by any one, has already caused more than one physician to take out his license, that he might not be classed among the irregulars, and we believe that it will prevent many an irregular from settling in the State, if only physicians will take the necessary steps to prevent it. If illegal practitioners are to be forced to leave the State, the Board of Examiners must have the earnest co-operation of its licentiates. How, then, can this co-operation best be obtained? The most practical plan which we have heard suggested, is that of forming medical societies all over the State, whose membership shall include all licentiates of the Board, and whose avowed purpose shall be, not only for mutual improvement, but also for self-protection against the inroads made by the irregulars and itinerant quacks.

This scheme has already been begun, and within the past few weeks a number of societies have been formed, whose proceedings we expect to have the pleasure of reporting in the JOURNAL. With the hope that others may be induced to take like action, we report what has been accomplished at Woodland, Yolo county. All licentiates of the Board in Woodland were invited to meet for the purpose of forming a Medical Society. Six physicians answered the call, who, after nominating a tempor-

ary Chairman and Secretary, appointed a Committee on Permanent Organization, to formulate a Constitution for the new Society. Letters were then sent to every licentiate of the county, asking them to be present at the next meeting and become charter members of the Association. All were requested to reply, so that, if they desired, they still might be counted among the original members. Permanent organization having been accomplished, a Committee on Prosecutions was appointed, who were instructed to prosecute all practitioners of the county who were practicing illegally.

A like Society has been formed at Red Bluff, under the name of the Northern District Medical Society; another at Chico, under the name of the Butte County Medical Society; and still another at Marysville, called the Marysville District Society.

In order to secure conviction, it is necessary to prove that the person accused did, on a certain day and at a certain place, practice medicine, and that he does so habitually. It should not be required to prove that he has no license. The defendant should be required to show his license, as is required in every other case where it is a question of license. For further instructions in this matter, we would advise that the several societies communicate with the State Board of Examiners; they having had experience in these matters, will be able to give them some useful hints.

We trust that these associations will accomplish good in various ways:

- 1st. That they will bind the profession more closely together.
- 2d. That at their meetings much mutual improvement will result, and that papers of practical importance will be written which will be of interest to the profession at large.
- 3d. That they will give strength to the State Society, by adding to its numbers and giving it support by their example; and,
- 4th. That by united action many who are now practicing illegally, to the detriment of the people and to the profession, may be driven from the State.

We are informed that a new medical school is to be established at Los Angeles. This action may benefit a few practitioners, but by thus dividing forces in a sparsely settled State, the student will surely suffer.

The Legislature and the State Board of Health.

The present issue contains the circular prepared by the State Board of Health for the purpose of instructing the public in the best prophylactic measures against the spread of cholera. It was their intention to distribute this gratuitously throughout California, but the recent curtailing of their appropriation by the Legislature has so crippled the Board that this idea had to be given up, and the courtesy of the press solicited in its place. The profession is doubtless aware that the attitude assumed towards the State Board of Health by the Legislature during its recent session was decidedly inimical to the interests of the Pacific Coast; and, as many garbled statements regarding this matter have been made by some of the more speculative daily papers, whose object is apparently to fill their columns, rather than to inform the public, we avail ourselves of this opportunity to correct any erroneous conclusions that may have been drawn from an imperfect knowledge of the facts.

Our State Board of Health recognizing the unsatisfactory condition of the present protective hygienic system in California, convinced of their inability to cope with any severe epidemic that might occur in our midst, and stimulated by the warnings of the National and Eastern Boards, deemed it their duty as the sanitary advisers of our local government and the health guardians of the Pacific Coast, to inform the Legislature of the necessity for some additional precautions against the possible, we might say probable, arrival of cholera in this country. An appropriation of \$50,000 was asked as a contingent fund to be drawn upon only in the event of cholera breaking out in our vicinity, not for the purchase of quarantine grounds, as was stated in some of the daily prints. This was refused, and consequently California must depend upon a pittance from the National Board of Health and the munificence of private individuals for protection against any epidemic that may occur within the next two years.

The parsimonious economy of our rulers did not stop here, it even went so far as to cut down by one-fifth the appropriation that has been made to the Board by every Legislature during the last fifteen years, for the purpose of defraying its current expenses. When the Board was formed in 1870, the population of California was 560,000; but since that time this has been very nearly, if not actually, doubled. In the same space

of time mining has declined, and there has been a greater tendency for the people to congregate in the larger cities; competition is keener, wages are smaller, and the struggle for existence harder. To the selfish or superficial observer these facts may not appear to be of any consequence, but in them the hygienist sees poverty accompanied by lowered vitality and increased susceptibility to diseases, with every facility provided for its spread and propagation. It is in relation to large communities that the more difficult problems of sanitary science must be wrought out, because in them exist the most favorable conditions for the spread and propagation of disease. The denser a population is, the more difficult is it to obtain a perfect system of sanitation.

We thought that the men who have been elected to watch over the prosperity of our State were endowed with sufficient wisdom and integrity to recognize these dangers and provide against them, but it is painfully evident that we expected too much from them, that we mistook the avarice of the plunderer for the ability of the financier, and the bluster of the political sycophant for the shout of the patriot.

Syphilis Bacillus.

Dr. Sigmund Lustgarten has, by a process of his own, which consists in obtaining and bleaching a section of a syphilitic deposit, introduced to us a syphilis bacillus. The key to the process lies in the fact that the bacilli of syphilis, tuberculosis and leprosy do not bleach by the re-agents used, while all other bacilli do so. Again, hydrochloric and nitric acids will bleach the syphilis bacillus, but not those of leprosy and tuberculosis. The section hardened in alcohol is stained in gentian violet, and then bathed alternately in a one-and-one-half per cent. solution of potassium permanganate and an aqueous solution of sulphurous acid. After three or four repetitions of these baths, it is mounted in Canada balsam. By a high power there is seen in the section, usually in the interior of lymphoid cells, which are either situated in the lesion or else in the lymphatic ducts, bacilli, of red nature, straight or curved, sometimes uniformly smooth and sometimes with bulbous swellings, and containing, when seen under the highest powers, two to four bright colorless spores. Microscopically, these bacilli very closely resemble those of leprosy and tuberculosis. Clinically, they have, as

yet, been found only in known syphilitic lesions, but culture, experiments and inoculations with them have not yet been reported. They have not been found in two cases of chancroid, and this is considered as confirmatory of the generally accepted duality of the lesions. The facts thus far adduced are in perfect accord with the generally accepted theories of syphilis, and especially with that of Otis, and are so far acceptable; but we doubt very much if it will ever be considered necessary to discover the presence of the bacillus before stating definitely the presence of syphilis. But this is claimed by Dr. Lustgarten. In a doubtful case the proof of their presence may be of value; but even this will not be a favorite test, so long as the clinical test of the administration of potassium iodide is so much easier than the complicated method of the microscopist. Here, too, is a field for experiment, for it would be most interesting to know the effect of the two drugs, mercury and potassium iodide, on the live bacillus and its culture progeny. Can it be that the usually accepted explanation of their working is a mistake, and that they are merely antiseptics? It is too early to pronounce judgment upon this particular bacillus, and will, we think, always be too early, so long as the methods employed for its exhibition are so complicated that the bacillus itself would be excusable for doubting its identity after subjection to the process.

Health Report for April.

There were in all 458 deaths in San Francisco during the month of April, which was an increase of 73 over the number for April of 1884. Diphtheria has been very prevalent and malignant, and caused 32 deaths, all of which occurred under the age of fifteen. There were 10 deaths from typhoid fever. From phthisis there were 75 deaths; from apoplexy, 11; from pneumonia, 34; and from heart disease, 18; from accident, 16; suicides, 10; homicides, 3.

A mountain explorer just returned from Asia states that during a four months' residence at a height of more than 15,000 feet above the sea, his pulse, normally sixty-three beats per minute, seldom fell below one hundred beats per minute, and his respirations were often twice as numerous as at ordinary levels.

Notices of Books, Pamphlets, Etc.

A TREATISE ON ABDOMINAL PALPATION: As Applied to Obstetrics and Version by External Manipulation. By A. PINARD, Associate Professor in the Faculty of Medicine of Paris, etc. With 29 wood-cuts inserted in the text. Paris. 1878. Translated by L. E. NEALE, M.D. New York: J. H. Vail & Co. 1885.

This is the only work on the subject which has appeared in English, which is very surprising, considering its great importance in the diagnosis of pregnancy. Although the method has been in vogue for years, and was so generally known in Germany, that it was not thought necessary to incorporate it in the text-books. Teachers of obstetrics have, in this country, lectured for years with hardly a mention of it. Of late years articles have appeared in the journals, and more attention has been paid to it, but by very few indeed, is it properly understood and practiced? By following the clear instructions contained in this work, a very fair proficiency may be attained. It is a subject which should interest all general practitioners, and careful study of it would save many a physician from a false diagnosis.

WHAT TO DO IN CASES OF POISONING. By WILLIAM MURRELL, M.D., F.R.C.P. Fourth edition. London: H. K. Lewis, 136 Gower street, W. C. 1884.

This is a small pocket edition, which, in a few words, gives the essentials in the treatment of cases of poisoning. As the author says, nothing can be more distressing than being called to a case of poisoning and not know what to do. Again, if you know what to do, it is still essential that you should have the remedies at hand, and therefore, he advises every practitioner to have his accident-bag in readiness. We are very favorably impressed with the book, which treats of so practical a subject, and feel sure that all who read it will be equally pleased.

MEDICAL AND SURGICAL DIRECTORY OF THE UNITED STATES.

This work is now in active preparation, and will contain complete lists of physicians and surgeons in each State and Territory in the Union, with school practiced, and when obtainable, the college and year of graduation, and post-office address; also, all medical societies, national, State and local medical colleges,

hospitals, sanitariums, asylums and all other medical institutions; boards of health, laws of registration and other enactments relating to the profession in each State and Territory; medical journals, medical publishers, and much other useful information. Price, \$5. R. L. Polk & Co., publishers, *Tribune Building*, Detroit, Mich. Offices: *Ledger Building*, Philadelphia, Pa.; *Press Building*, Indianapolis, Ind.; 150 Dearborn street, Chicago, Ill.; 22 North Fourth street, St. Louis, Mo.; corner Third and Robert streets, St. Paul, Minn.; corner St. Clair and Jefferson streets, Toledo, Ohio; 122 Front street, Portland, Oregon; Victoria Chambers, Toronto, Ontario.

ELEMENTS OF PRACTICAL MEDICINE. By ALFRED A. CARTER, M.D., London, Member of the Royal College of Physicians, London, Physician to the Queen's Hospital, Birmingham, etc. Third edition. New York: D. Appleton & Co. 1885.

That within a year another edition of this work should be called for, certainly speaks well for its excellence, and the author evidently has been appreciated not only by that class of readers for whom he thinks too little sympathy is usually expressed, viz: those who are not disposed to read the large and complete works of medicine, but also of many others. We cannot agree with the author in this particular, for in this country, at least, in our opinion, too much sympathy is expressed for the busy practitioner, judging by the mass of books which deal merely with the essentials. This book, however, is agreeably and instructively written, and answers the purpose of refreshing one's knowledge on subjects which do not come up every day in practice, and which a physician is not so likely to do if he is obliged to read a long article. At the end of the work the author has placed a Therapeutical Index, which provides examples of prescriptions, which have been found useful, and he suggests that these be read over in connection with the articles in the text.

THE OLEATES: An Investigation into their Nature and Action. By JOHN V. SHOEMAKER, A.M., M.D., Lecturer on Dermatology at the Jefferson Medical College. Publisher: F. A. Davis, Attorney, Philadelphia. 121 pages.

The author justly states that oleates have very little action physiologically, other than that the fatty vehicles pass through porous substances undecomposed, and thus enter the orifices of

cutaneous glands and follicles. It is not proved that they are absorbed into the general circulation, and thus produce systemic toxic effects. In fact, experiments upon animals prove the contrary. Animal fats form the best vehicles for the oleates, which should, with few exceptions, be used only as ointments. Oleates are, with a single exception, intended solely for topical remedies in various skin diseases. The exception is that of mercurous oleate, which is more readily absorbed than the old-fashioned blue ointment, and less irritating. That veratrine, morphine, aconitine and quinine, in the form of oleates, can have any constitutional effect, is emphatically denied. Nor can much benefit be expected from their local action. Even the new cocaine oleate is considered to be destitute of any but the feeblest local anæsthetic effect. This opinion has been expressed by Dr. Squibb, the originator of this oleate.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM: Especially in Women. By S. WEIR MITCHELL, M.D. Second edition, revised and enlarged. With five plates. Philadelphia: Lea Brothers & Co. 1885.

We are glad to announce the second edition of this valuable book, which treats of diseases which are so difficult to manage. Dr. Weir Mitchell's teachings have encouraged others to undertake the cure of certain forms of nervous disease which before had been the despair of the medical profession. His example has been followed not only in this country, but also abroad. The former edition has been considerably enlarged, the order of the chapters changed somewhat and new ones added, making the book one of great value to the general practitioner, who may at any moment meet with one of these troublesome cases.

A CASE OF PSYCHO-SENSORY (Affective or Moral) INSANITY.
By C. H. HUGHES, M.D., St. Louis, Mo. Reprint from
"The Alienist and Neurologist."

ZUR METHODIK DER SENSIBILITÄTSPRÜFUNGEN, besonders der Temperatursinnsprüfung. Von PROF. A. EULENBURG.

EIN FALL VON TABES DORSALIS; Complicirt mit Progressiver Muskel-Atrophie. Von PROF. A. EULENBURG.

THE PLASTER: Portenor's Splint in Treatment of Fractures of the Leg. By GEO. W. GAY, M.D., of Boston.

SPECIALTIES and their Relation to the Medical Profession.
By L. DUNCAN BUCKLEY, A.M., M.D.

- INSANITY AND DIVORCE:** The Neuropathic Conditions and Treatment of Cancer; Mysomania. By C. H. HUGHES, M.D., St. Louis, Mo.
- DISINFECTION AND DISINFECTANTS:** Preliminary Report made by the Committee on Disinfectants, of the American Public Health Association.
- ON IDIOPATHIC ANÆMIA:** A Report of Three Cases, with remarks; and an analysis of the cases hitherto published in America. By J. H. MUSSER, M.D.
- SUPPLEMENT TO THE TRANSACTIONS OF THE SEI I KWAI,** or Society for the Advancement of Medical Science in Japan. Transactions 36 and 37.
- THE ANALECTIC.** A Monthly Periscope Summary of the Progress of Medical Science. Edited by WALTER S. WELLS, M.D. Vol. I. New York: G. A. Putnam's Sons. 1884.
- OFFICIAL REGISTER OF PHYSICIANS AND SURGEONS** in the State of California, January 31st, 1885. Second edition.
- MEDICAL JURISPRUDENCE IN DIVORCE.** By CARL H. VON KLEIN, A.M., M.D., Dayton, Ohio.
- METEOROLOGY,** Oakland, Cal., for 1882-3 and 1883-4. By J. B. TREMBLEY, M.D.
- FIFTY CASES OF ABDOMINAL SECTION:** With Remarks on Laparotomy. By JAMES B. HUNTER, M.D.
- CATALEPSY** in a Child Three Years Old. By A. JACOBI, M.D.
- TWENTY-FOURTH ANNUAL REPORT** of the Cincinnati Hospital.
- MANY DRUGS: Few Remedies.** By GEO. T. WELCH, M.D.
- TRACHEOTOMY IN CROUP.** By GEO. W. GAY, M.D.
- OVARIOTOMY.** By JAMES B. HUNTER, M.D.

A Novel Cure for Hiccough.

A young Eastonian, while sitting in a restaurant, was seized with a violent attack of hiccoughs, which resisted all the remedies his friends could think of, when the proprietor went out into the bar-room and tapped a glass of beer and got a large carving-knife, and came in with the knife concealed behind him. He held the beer up to the man's mouth, and suddenly drew out the knife and jammed it down in front of his face into the beer and ordered the sufferer to drink. The unusual proceeding on the part of the landlord so frightened the fellow that he could not at first drink, but he finally drained the glass, leaving nothing in it but the carving-knife, and it had the effect of entirely curing him of his hiccoughs.—*Easton (Penn.) Express.*

Abstracts and Extracts.

Restored to Life.

[From the *Denver News.*]

The facts I am about to detail are so astounding as to appear to transcend credibility, and to have their origin only in the revels of speculative imagination. But they can be substantiated and verified, and the experiments upon which they are based will no doubt be soon successfully repeated by the scientific investigators of this country and Europe. It is not a matter of much importance where a discovery is made or by whom, if the stock of knowledge is increased; and we are more frequently—as in this case—indebted to some obscure individual for new and surprising facts, than to those who are high in station or proudly entrenched by position and influence.

These experiments have been secretly in progress for several months, but by special request of the bold operator conducting them, the results attained have been reserved until now. During the while I have been the assistant of Mr. G. A. Armitage in his work. He was also aided by one of Denver's ablest surgeons, who desires for the present to withhold his name, but who will in a short time publish a minute account of the different experiments in one of our American science journals. Mr. Armitage, although a devoted student of science, is quite a recluse, and probably known to but few of the people of Denver. Very reserved and independent, he thinks more of truth and of conferring a benefit upon mankind than of working for applause or fame. As his experiments show, he is a man of original thought, and he has achieved results that will make his name familiar as long as knowledge lasts. His work will stimulate inquiry on the problem of life, and will likely unseat some of the opinions that now obtain relative to the question of conscious existence.

The grounds upon which Mr. Armitage based his experiments are these, as detailed by himself: "What we call life, as any one can observe, exists under many varied and complex relations, and its modified endowments and intensities extend through a wide range of action. If you have all the conditions in any case for life, life must necessarily be present, and it will be that kind of life that conforms to the conditions. Just as, if you bring

into active operation all the conditions for the generation of electricity, the electricity will never be wanting. But all the essentials must be supplied and arranged in their proper relation. None of the higher order of animals can possibly live without a heart or a liver; because these organs are requisite parts of the scheme to carry forward the functions of life, and if they are wholly removed or seriously impaired, life will cease. But suppose we have a case in which all these organs are present and perfect, but owing to some cause, cease to operate; then animation or life will be suspended, but it is not impossible that it can be renewed if proper means be resorted to. For instance, in Paris there was a case of a drowned person being resuscitated after being unconscious for forty minutes. If the proper means had not been resorted to, death would certainly have ensued. But suppose instead of forty minutes the person had been dead or unconscious for four hours or six hours, might he not then have been revived if efficient means had been applied? Or we may inquire, When is a body dead? As long as an engine is fitted to perform its office it will run if you will supply the force or adjust its valves in such a manner that it may by its own work appropriate the force present; but if some part is worn out or inefficient, then it will not run, even if the force be present. I hold that the same is true of the body, and the results of my experiments prove the correctness of my view. It is a question yet how long an animal may be dead, so long as none of its organs are impaired or a general decomposition of its substance has not set in, and we may not restore it to life. Consider those instances where reptiles have been shut up in rock or imprisoned in clay for indefinite periods, and which come to life again when released. There are often literally true scientific statements made in the Bible that are unheeded. It declares that 'the blood is the life.' A man may be in perfect health, but if by any means you stop the circulation of his blood, or if you draw the blood away from him, his life goes out. But you leave a body behind that is unimpaired—that is fit to live in, or is competent to support life. If you restore him blood and once more set in operation the organs of his body, he will live again; or at least life will again take up a residence in that body. Sensation will return to the nerves, and the life will manifest itself in accordance with the demands of the peculiar organization that it occupies; for life has the same relation to organism that force has to matter. Whether in

every case you would recall back the same life, or what you may choose to term the organized spirit, to inhabit the same body, or whether you would revivify the structure with a new life, I am not prepared to determine; nor does that feature of the subject particularly engage me at this time. What I seek to establish is, that wherever all the conditions for life exist and are put in operation, life will always be present. A few years ago a Paris surgeon took an amputated limb, and by maintaining a current of warm fresh blood circulating through it—which he accomplished by gently forcing the blood through the arteries and allowing it to escape through the veins—he sustained an appearance of life in the limb for several hours after it had been severed from the body. It retained its color, flexibility and warmth. If the body could live independent of the limb, why should not the limb without the body, as long as it was supplied with proper nourishment? The restoring of depleted patients by the transfusion of blood from some stronger person has been frequently and successfully resorted to. Their store of life was replenished from an exterior source.

“A few years ago it was common to cure beef in New York, and I believe the practice is yet in operation, under a patent granted by the United States, that was founded on Harvey's theory of the circulation of the blood. As soon as the animal was killed its chest was cut open and the aorta of the heart was severed, to which a rubber tube connected to a force-pump was applied, and warm brine injected into the circulatory system, until, having made the entire circuit of the animal's body, it returned again to the heart, and thus the flesh of the ox was thoroughly salted and cured before it had cooled. From this practice I derived a hint that has been valuable in the prosecution of our work.”

The first important experiment on killing and then restoring life to animals was begun in this city on the 5th of November last. The subject operated upon was a medium-sized terrier dog. It was securely tied and an incision made in an artery in his neck, by which the animal was bled to death. He certainly passed through all the symptoms of dying, and soon after the last blood issued from the wound his frame became fixed and rigid, and his eyes showed the senseless glare of death. The room was kept at a temperature of 70° Fahrenheit, while the dog lay for three hours dead. By this time he had become very stiff and cold:

He was now placed in a warm-water bath that was constantly maintained at a temperature of 105°, and was continually and thoroughly rubbed, and as he became pliant his limbs were gently worked about and his whole body rendered supple. A half-pint of hot water was now passed into his stomach through a hard rubber tube that was forced down his œsophagus. When this was accomplished the mouth of a rubber tube attached to a bellows was introduced into his wind-pipe, and as the bellows were provided with a double valve by which the air could be withdrawn as well as inhaled, the dog's nose was securely fastened up. A large and powerful Newfoundland dog that had been obtained for the purpose, had been tied near by, and was now bled, while the attending surgeon proceeded to adjust the transfusing apparatus and began to slowly inject the live dog's blood into the dead one. Simultaneously Mr. Armitage began slowly working the respiratory bellows, while I kept rubbing the animal and bending his limbs and body to facilitate circulation. We could not have been more anxious about the issue of our efforts if they had been made on a human being instead of a dumb brute. When a pint of fresh blood had been injected I could see some change about the eyes of the dog. But no one spoke. One thought was common to all—would life come back? In a few moments more there was certainly a convulsive tremor noticeable in the body. Mr. Armitage, in undisguised excitement, said to the surgeon, "Press the blood." In a minute or two more the dog gasps and soon attempts to eject the respiratory tube, which was accordingly withdrawn. This was followed by gasps and a catching of the breath, while the eyes grew brighter and more natural. The rubbing and blood injecting were yet applied, and the dog was struggling as if in a fit. But his efforts soon became less violent, and he began a low whine. A compress was now placed on artery, and in twenty-two minutes after the first blood was injected, he sits up, after having been dead three hours and twenty minutes. The dog then drank a broth that had been prepared for him in case of his revival, and soon got up and walked about. He was furnished a comfortable bed near the stove, and from this time forward his recovery was so rapid that in two days he was turned out to run the streets. He is now a rugged character in good health, with seemingly no bad remembrances of his resurrection.

Preparations were made and the second case tested on the

second day of December. The subject selected was a calf six weeks old. The details of treatment were similar to the foregoing, except for greater convenience a hot vapor bath was substituted for the warm water immersion. The calf, after being bled to death, was left for twelve hours before its resuscitation was undertaken, as it was desirable to see if a longer death interval could be successfully passed over. The fresh blood injected into its circulatory system was drawn from a yearling steer. It required thirty-five minutes to restore the calf to life after the transfusion of the first blood. The calf then drank some warm milk, and has since grown and thriven without perceptible interruption or ailment.

The next experiment was of a different character, and was made with a view to see if a drowned animal could be restored to life. A small dog was forced under water and drowned. He was then taken out and lain with his head inclined downward to drain his lungs of water, and left for four hours in a warm room. It will be noticed that this was quite a different and more hopeless case than the preceding, as the dog had all his own blood yet in his veins. After an hour in the warm bath and constant rubbing and working, his veins were opened at three different points to admit of the escape of any blood that might issue from them, and the injecting apparatus was vigorously applied to the arterial system. After fifty minutes of anxious labor, signs of revivication were observable. The poor beast whined piteously as life was being once more enthroned within him. Notwithstanding great care was taken of him, he remained weak for several days, but seems now to be in good condition.

A fourth case recently tried by Armitage, in which the subject was a dog that was strangled and afterwards frozen—as he could not be frozen without strangling—was unsuccessful. After four hours of labor no signs of returning life were noticeable. It is believed, however, that this experiment may yet succeed, and the life of a frozen animal be restored.

It is proper to add that in the first cases, after the blood ceased to flow from the wound, measures were taken to prevent air entering the circulatory system as the animal cooled, and in all the cases the respiratory apparatus was nicely adjusted to the capacity of the animal. If the lungs in any case had been ruptured or overstrained, hemorrhage would have subsequently ensued.

The first dog operated upon is now in the possession of Mr. George Woodside, No. 831 Champa street, and the calf is in the stock lot of Mr. Boyd, west of the Platte, near the Thirtieth-street bridge. Any one having the curiosity to see animals that have once been dead and afterwards scientifically restored to life can do so by calling at these places.

The far-reaching consequences of these experiments can readily be seen. They demonstrate that human life can be restored in many cases where it has previously been regarded as hopeless. That the experiments will be repeated, and that they may result in many cases in extraordinary phenomena, there can be little doubt.

JAMES L. FINCH.

Miscellaneous.

Circular of the State Board of Health, for April.

Reports from fifty-five localities have been received for April, and from them we learn that the mortality for the past month, outside of San Francisco, has been surprisingly small, considering that April, with its varying temperature and usually unsettled weather, has hitherto contributed to make that month one of much sickness and increased mortality. It is also worthy of note that considering the extensive prevalence of scarlet fever, measles, diarrhœa, and dysentery, few deaths have been caused by the zymotic diseases. In San Francisco diphtheria has been almost epidemic, and caused thirty-two deaths, but no deaths from scarlet fever, and only three from measles, which has been epidemic. Diphtheria in that city seems to have been confined to children, if we may judge from the mortality report, there being only one death over ten years of age; the greatest mortality being among children between five and ten years of age, of whom fourteen died, with eleven deaths between the ages of two and five. In the fifty-four localities outside of San Francisco, diphtheria caused only eight deaths: two in Bakersfield, two in Los Angeles, two in Oakland, and one in Santa Barbara and Santa Cruz.

Measles, although extensively prevalent, caused but six deaths—three in San Francisco and three in Marin county.

Scarlet fever caused no deaths.

Croup was fatal in four cases—a decrease of nine from last month.

Typho malarial fever gives a mortality of five.

Remittent and intermittent fevers, no deaths.

Typhoid fever shows a slight increase in the death rate, there being twelve deaths from this cause outside of San Francisco, against five recorded last month. San Francisco had ten deaths from typhoid fever, an increase of one.

Diseases of the respiratory organs continue to show a marked decrease with the advent of settled weather.

Pneumonia caused but fourteen deaths outside of San Francisco, in a population of over 250,000. San Francisco reports thirty-four deaths from this cause—a marked decrease from last month, when fifty-five deaths were recorded.

Acute bronchitis shows a like favorable decrease of sixteen from March report; in fact there were only four deaths from bronchitis outside of San Francisco, and it only records nine deaths from this very prevalent disease, so fatal to the aged.

Consumption occupies a large space in our mortality returns, being credited with one hundred and sixteen deaths; even this is a decrease from last month, when the deaths from this cause numbered one hundred and twenty-six.

Constitutional diseases: Cancer, among these diseases, caused nineteen deaths, the same number as in March.

Heart disease is credited with thirty-three deaths.

Alcoholism, fourteen deaths.

From the reports of "Prevailing Diseases" we learn that diphtheria, besides being almost epidemic in San Francisco, is reported in Point Arenas, Santa Clara, Santa Rosa, Bakersfield, Wheatland, Los Angeles and Ukiah, but in none of these localities is it epidemic or very fatal, as before remarked.

Measles is epidemic in San Francisco, Sacramento, Santa Rosa, Travers, Berkeley, Santa Clara, and several other localities; the type is mild, and with very limited mortality.

Scarlet fever is reported in Santa Clara, St. Helena, Shasta county, Tehama county, and Mendocino county, but happily without any deaths, which shows disease of a mild type.

Typhoid fever is reported as sporadic in Santa Ana, Vallejo, Arbuckle, Santa Rosa, Nevada City, and Santa Barbara. It is not reported as epidemic anywhere.

Typho-malarial fever prevails to a very limited extent.

Dysentery and diarrhœa are reported as prevailing in Modesto, Sacramento, Ukiah, Santa Ana, Castroville, Travers, Hill's

Ferry, Willits, Vallejo, Red Bluff, Millville, Cottonwood, Bakersfield, Chico, and generally throughout the State. This is not unusual with the advent of the fruit season, and does not prevail so generally later in the year. It has, however, been remarked by competent observers, that a tendency to diarrhœa exists months previous to the advent of cholera, and that this irritability of the bowels is one of the strongest predisposing causes to the absorption of the cholera microbe when it comes in contact with the alimentary canal. It would be well, therefore, for medical men in their respective vicinities to call their patrons' attention to the fact, and warn them against allowing diarrhœa to pursue its course unchecked, as what may then appear harmless to the patient may suddenly develop into the most alarming attack of cholera morbus, with its characteristic vomiting, cramps, and watery diarrhœa. It does not require to be imported from Asia to kill, as what is known as English cholera, although perhaps wanting in the malignancy and epidemic tendency of its Asiatic brother, is often, when neglected, quite as fatal as the foreign disease, although much more amenable to prompt and well-directed treatment when employed.

Sacramento,

G. G. TYRRELL, M.D.,

May 10, 1885.

Permanent Sec'y State Board of Health.

Dulce Est Desipere in Loco.

We are indebted to the New York *Medical Record* for the following delicately ironical account of the "Great National Congress of Scientific Animals:—"

"It happened that the beasts of the forest of Ouden, who were learned and skillful in relieving their fellow creatures, determined to have a general congress for mutual talk. They met at the time named, and the Lion presided with great ease and dignity. In making his opening speech the learned president said that this was a most noble profession. He recounted the great progress which it had made, but believed that sanitary science was the thing in which the most glorious triumphs would be gotten. He touched upon the wonderful achievements of anæsthesia and vaccination; also upon Harvey and the circulation of the blood. He referred to Hippocrates, Galen, the immortality of the soul and the value of animal congresses, ending with a loud roar, which was well received. The Cinnamon Bear moved a vote of thanks for this unusually eloquent and perfectly original address. Thereupon, business beginning, the Goose arose and

moved that the fox be expelled from the assembly, as he had been seen consulting with the Duck, who was known to be no better than a quack. In the Section on Neurology the Rabbit related the outcome of his special studies on the 'Tendon Reflex in the Hind Extremities of Irritable Mules, and showed several flattened skulls to illustrate the effects and beauty of this phenomenon. In the Section on Orthopedic Surgery the Lamb read a paper of great originality upon the 'Development of the Hump on the Camel,' and showed an apparatus which, if worn constantly for seventeen years, relieved the deformity in a large number of cases. In the Section on Diseases of Women and Obstetrics, the Goat opened a debate upon the question, 'Whether the Physician should Support the Perineum or the Perineum should Support the Physician,' which was well maintained. Professor Guilielmus Capricornicus read a paper contending that pessaries were a great national blessing, and that all animals should wear them. Professor Sius Ferus reported two thousand operations for sewing up the cervix uteri, with fifteen successful results, upon which he was warmly congratulated. In the Section on Surgery the Ring-tailed Ape described his new operation for the treatment of intestinal wounds. This consisted of opening the abdomen, removing the whole abdominal contents, and substituting carbolized cotton; thus making the individual thoroughly aseptic. The Sacred Ox of Burmah read a report upon plastic surgery. He described a case in which he had successfully attached the hide of a rhinoceros to the back of a horse, thus rendering a saddle unnecessary. He had also transplanted the skin of a hen to the head of the Bald-headed Eagle, which had much relieved that animal from the effects of extreme heat and cold. In the Section on Diseases of the Throat and Nose the Giraffe gave his experiences with sore throat, which were too long to be reported here. The congress then adjourned to a grand banquet, and having visited the insane asylum, two shoe factories and an orphan home, broke up to meet in the same place next year."—*Columbus Medical Journal*.

If members of the State Society who desire a volume of Transactions for 1885, will send in their names, the Editor may be able to supply them with a copy. It is of great importance that names should be sent in before the next number is issued.

Subscribers are requested to note the change in the price of the JOURNAL after July 1st, from \$2.10 to \$3.00.

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Original Articles.

REPORT ON SURGERY.

Delivered Before the Medical Society of California,
April 16, 1885.

By W. S. THORNE, M.D., Chairman of the Committee.

Mr. President and Members of the Society:—

As we pause to-day at that particular point in our journey that marks a rest upon our way, between the road we have already traversed and that which stretches unknown and illimitably before us, we are impressed with the force and application of the poetic aphorism, that "life is short and art is long." As we behold the ever-increasing mysteries of our environment, we humbly admit the paucity of our knowledge; and whilst seeking to increase it by a familiarity with Nature, we learn that she has no secrets which accident or design will not at some time, or in some place, reveal to those who labor and watch with her. Hence did the great Harvey enjoin upon his followers the philosophic command to work out the secrets of nature by observation and experiment; and herein was promulgated by that unparalleled observer a true scientific method, that has since been, and must ever remain the guiding principle of medical progress. We have learned from Harvey that in science as in art, the workman is subordinate to the work. The workman dies, but his labor is imperishable. The absence of familiar faces from this gathering to-day suggests the operation of this natural law, while our reason teaches that there is no finality in science, for the work is as infinite as nature itself. Whilst thus admitting our present

humble position in science, there is reason to believe that at no period since the discoveries of Marshall Hall, or Sir Charles Bell, has there been an era of such substantial progress, of such inestimable benefits, or of such hopeful auguries, as are presented in the history of medicine during the last decade. Particularly is this true as applied to surgery. Heretofore this branch of medicine had been considered too much as an art, and too little as a science. Within the memory of men yet living, surgery was relegated to a class of practitioners inferior in education, and of lower professional rank, than the physician. Surgery was only an art; for its successful practice a knowledge of the relation of parts, or regional anatomy, was thought adequate. The surgeon was adjunct to the physician, something added to, but not essentially a part of the medical function. The surgeon operated in obedience to the instructions and according to the judgment of the physician. With the lapse of time it became apparent that a certain share of surgical skill was indispensable to the successful management of the sick. And thus it came to pass that the medical function gradually encroached upon and finally absorbed the special function of the surgeon. To-day it is imperative that the surgeon should be as thoroughly versed in the laws governing vital processes as the physician himself. It is only within the last decade that conservative surgery has become a part of the professional mind, and the principles and methods underlying its wonderful results have been clearly formulated. The introduction of a wise conservatism in surgery was preceded by the discovery that all the forces in nature are in their ultimate effect constructive. And thus, by a more intimate study of vital phenomena, we have increased our faith in the resources of nature to work out unaided its reparative and morbid processes. A little more than a decade has passed since an ardent and enthusiastic Scotch physician gave to the profession his explanation of the causes of mortality following surgical operations, and his peculiar method of wound treatment devised in accordance with his theory. The surprising immunity from septic catastrophies following operations after the new method, notably those of the abdominal cavity, attracted the attention of surgeons throughout the civilized world. No innovation since the discovery of Jenner had excited more wide-spread comment, more acrimonious dissension, or been subjected to more searching tests.

Observation and discussion still go on. The profession as a

body is not unanimous as to the necessity of certain details of the new method; nor is it united as to the scientific pretensions of the method itself. But this method, true or false, has revolutionized certain branches of surgery. Its effect has been to render operations upon the large joints and the great cavities both safe and practicable, that hitherto were regarded as formidable and dangerous. Antiseptic methods have elevated surgery to the rank of the latest experimental science, and the principles of antiseptic treatment of wounds, whatever they may ultimately be determined in their essence to be, will never be abandoned as long as the whole of our knowledge is not lost, no matter how our art, or the points of attack may change. All honor to the earnest student, the matchless observer, the philosopher and savan, of King's College Hospital, Sir Joseph Lister!

It might well be questioned, in an address of this kind, and in this place, whether it were not better to choose a definite subject than to attempt a summary of the new ideas and novel experiences of the various observers in different lands. I shall assume that the purview of a report on surgery contemplates a broader range of experience and research than is possible or common to one individual. With the great Harvey, we believe that facts in nature easily recognizable by the senses, wait upon no opinion and bow to no authority; that every intelligent and conscientious observer is an authority to the measure of his opportunities. But at this, our annual gathering, it is profitable to review the labors of workers in fields other than our own, that we may avail ourselves of the net result of all observation and experience everywhere.

SURGERY OF THE KIDNEY.

The time when it could be said that "the kidney is fortunately beyond the reach of the surgeon" is past. There are at the present day four well recognized operations performed upon the kidney, and these do not include puncture with the trocar or aspirator. Nephrotomy is performed in cases of hydronephrosis, wherein the cysts having been evacuated by puncture, rapidly refill; or where a pyoniphrosis cannot be evacuated through a small tube. The incision in this operation is precisely similar to that in lumbar colotomy, save that since the kidney is situated nearer the median line than the colon, the deep part of the wound should be kept posterior to that of colotomy. When the

kidney is reached the cysts should be opened, and its cut edges stitched to the skin, a drainage-tube inserted, and the wound left to close by granulation. "The dangers of nephrotomy are not in the operation, but depend entirely upon the condition of the kidney for which the operation is made." Nephrolithotomy is undertaken for the express purpose of removing calculi from the kidney prior to the disorganization of the renal tissue and its conversion into cysts. The structures divided are the same as in the operation of nephrotomy. The presence of stone in the kidney is determined by the exploring finger, aided if need be by a fine needle passed into the renal substance, which should be made to enter in succession the several calyces of the kidney. The stone is removed by an incision, a drainage-tube inserted, and the wound closed by sutures. The urine ceases, as a rule, to be discharged through the loin in three or four weeks. This operation, thus far, appears to have been uniformly successful. No fatal cases have been reported. Several cases of successful removal of calculi are recorded the past year, wherein the stone has been removed through an aperture in the duct, without encroachment on the renal parenchyma. For this operation the name of pyelo-lithotomy has been proposed. Nephrorraphy is an operation undertaken for the purpose of fixing a wandering kidney. The kidney is exposed by an incision through the loin, similar to that in nephrotomy, a strong catgut suture is passed through the renal capsule and the edge of the parietal wound. The external wound is stuffed with carbolized or boracic lint, and left to heal by granulation. This operation has been attended thus far by almost uniform success.

The operation of nephrectomy was first performed as an *anticipated* operation on the human subject by Gustav Simon, of Heidelberg, in 1869. The operation had been previously performed by other surgeons, as early as 1861, '67, and '68, two of which were done in this country. All of these operations were done by the ventral method, and all the patients died. Simon's operation was the first lumbar operation, as it was also the first recovery. This operation has been performed many times since Simon's operation in 1869, by different operators, with varying success. The cases in which it is applicable are disorganized kidney beyond hope of repair, *urethral* urinary fistulae, ruptured or badly wounded kidney, in which blood clots are forced into the ureter, causing urinary extravasation into the loin, and to

cystic tumors and medium-sized solid tumors. The advantages of the lumbar operation for nephrectomy are insisted upon for two reasons. First, the peritoneum is not opened; second, the wound admits of excellent drainage. Langenbeck and other continental surgeons advocate, upon the other hand, the abdominal section, as the easier and safer, owing to the greater facility of ligating blood vessels and in extracting the kidney. In nephrectomy the kidney is exposed by a transverse incision half an inch below the twelfth rib, about five inches in length, to which a vertical one may be conjoined to facilitate extraction of the kidney. The surrounding structures are carefully separated from the diseased organ, the ureter and vessels are securely ligated and the kidney removed. This often difficult step of the operation is said to be greatly facilitated by dragging the lower ribs forcibly upwards with the fingers of the left hand dipped into the wound. The pedicle is cut short and dropped into the wound; drainage is established and the wound is closed. The history of this operation up to the beginning of the past year, according to the tables of Dr. Harris, is one hundred cases, of which forty-nine have recovered, forty-five have died, with six still under treatment. This operation demonstrates that in man, as in the lower animals, one healthy kidney suffices to carry on the renal function, without impairment to health. Monsieur Boekel, of Strasburg, reports a successful case of nephrectomy following a total extirpation of the uterus. In performing hysterectomy a ureter was accidentally wounded, for which the corresponding kidney was removed, and this kidney was found healthy. The patient was discharged from hospital at the end of three weeks.

RADICAL CURE OF HERNIA.

It is with gratification that we note some advances made towards a radical treatment of hernia, based upon upwards of one hundred cases. The operation is applicable to reducible as well as irreducible hernia. The operation consists in dissecting out the sack, clear, ligating its neck with (preferably) sulphurous-chromic catgut, cutting it off and drawing the pillars of the ring together with silver wire. The advantages claimed for the operation are, the cutting off of the peritoneal cavity from the wound by ligature at the neck of the sack. This operation has been successful in the hands of Regnald, Harrison, Dr. Hamilton,

Banks, and Parker, of England, and, with some slight modifications, it has been adopted by Stokes, Barton, Stoker, and Frank, of Dublin.

THE TREATMENT OF HERNIA WITHOUT OPERATION.

The treatment of irreducible hernia without operation by a simple method, whereby an operation dangerous to life can be avoided, is worthy of careful consideration. Mr. Thos. Bryant, of Guy's Hospital, maintains that so long as herniæ have not been the seat of some antecedent strangulation, incarceration, or obstruction, their final reduction is possible. The means recommended are the recumbent position, the use of saline purgatives, and the application of cold by ice bags or Leiter's coils. Mr. Bryant has treated hernia thus persistently for days and weeks, and had met with success and failures—the latter, he believes, from want of confidence in the result of such treatment. In hernia which had been down for from five to twelve weeks, he has kept up the treatment as long as *nine* weeks. These means do not endanger life. Guided by these suggestions I have restored a hernia, irreducible for the first time, at the end of two weeks.

Can incarcerated or strangulated omentum cause symptoms of intestinal obstruction? This interesting question has been the subject of lengthy discussions before the clinical societies of London the past year. The negative has been clearly established, and the idea of a reflex nervous influence as the causative effect of bowel symptoms as clearly disproven. The only real effect of strangulated omentum upon the bowel was shown to be a mechanical one, viz., that of dragging upon the colon, and peritonitis, whether resulting from the inflamed omentum or otherwise.

SURGERY OF THE CHEST.

The domain of the surgeon is one that is ever widening, and it extends mostly in the direction of the three great cavities of the body. In the abdomen there is hardly an organ that has not been surgically dealt with. In the cranial cavity the revival of trephining and its application on sounder principles to cases of cerebral abscess, has extended surgical resources in this direction. In the thoracic cavity our operations have until recently been limited to the serous sacks, and their diseases. But now the question arises, under what conditions is it practicable to

deal with diseases of the lung itself? Within the past few years, incision and evacuation of lung cavities have been advocated and practiced by surgeons here and elsewhere, with varying success. The conditions of lung in which surgical interference is advisable are, basic cavities, the result of chronic pneumonia, or bronchiectasis, wherein the difficulties of complete evacuation by the patient are insuperable; and where the accumulated secretion becomes putrescent and is liable to set up secondary lobular inflammation and suppuration. It must be understood of course that the cases most favorable for operation are those of non-tubercular origin, viz., bronchiectasis, cavities from chronic pneumonia, and pulmonary fibrosis. In operating for pulmonary cavities it is desirable that the pleuræ be adherent, but the physical signs are yet insufficient to establish a diagnosis, and it has been practically demonstrated that adhesion of the pleuræ is not a vital prerequisite. The still bolder step of removing portions of phthisical lungs has been taken the past year. The greater portions of one lung was extirpated in two cases. Dr. Kronlein, of Zurich, removed a sarcomatous tumor from the sixth rib of a young patient, and afterwards resected three and a half inches of the rib. On removing a recurrent growth, occupying the gap between the fifth and the sixth ribs, a few months subsequent to the first operation, it was observed that a nodule of morbid tissue projected from the lung itself. This was cut off, and the hemorrhage arrested with catgut ligature. The pleural cavity was washed out antiseptically, drainage established, and the outer wound closed. At the end of three weeks cicatrization was complete, and the collapsed lung had unfolded, and the signs of pneumo-thorax disappeared. These cases, exceptional though they are, indicate probable advances upon new lines of surgical work.

GASTROSTOMY.

The first gastrostomy was performed by Sédillot, of Strasburg, in 1849, for cancerous stricture of the œsophagus. Between the first named period and 1876 the history of the operation is an unbroken series of failures. The operation was repeated about twenty-five times, and most of the patients died within the first ten days; one lived about a month. The first successful case of gastrostomy was reported by Verneuil, of Paris, in 1876. The patient survived the operation seventeen months. Since 1876 the number of gastrostomies have extended into the hundreds.

The most elaborate tables of this operation are those reported by Blum, in which an analysis of 131 cases are given. Of this number 85 died before the twelfth day, in consequence of the operation—a mortality of 65 per cent.; while 38 survived from a few months to two years or more. The most favorable results are obtained by dividing this operation into two stages, separated by an interval of five or six days. The first stage includes the exposure of the stomach and the stitching of its peritoneal and muscular coats to the margins of the skin incision. The second stage is completed when adhesion has taken place, by making a small opening into the stomach through which a small tube may be inserted into the viscus. The most gratifying results of the operation are obtained in those cases of non-malignant stricture; but even in cancerous cases, where the operation has been resorted to early, success may be looked for. Fatal accidents have apparently resulted from the introduction of a pint of cold fluid at one time into the stomach, after gastrotomy.

LAPAROTOMY,

In gun-shot wound of the stomach, has resulted successfully the past year in the hands of Professor Kocher, of Berne, Switzerland. The wound in the stomach was an inch in diameter. It was situated at the greater curvature, near the fundus. It was closed by catgut sutures and silk, in such manner as to invert the serous coats around the wound. A large quantity of blood was removed from the abdominal cavity, and the patient recovered.

In view of the extreme fatality of gun-shot wounds of the stomach, it is advised to perform laparotomy whenever this injury is suspected. Laparotomy for intestinal occlusion is gaining ground in its percentage of recoveries. The past ten years the mortality has fallen from 73 to 58 per cent. This result is still far from satisfactory, but when it is remembered that the operation is usually performed in *extremis*—as a measure of last resort—we may reasonably hope that an earlier resort to operative measures, with improved *technique* will yet further reduce the present mortality. In view, however, of the extreme uncertainty in diagnosing the character and seat of intestinal obstruction, and the great mortality that hitherto has attended operations undertaken for its relief, it is difficult to see how early operations can be made a rule of practice. Laparotomy, therefore, should not be contemplated in these cases until

after opium, belladonna, position, a greatly restricted diet, from which all solids and even milk are excluded, shall have failed to benefit the complaint. Many cases recover spontaneously, cases are operated upon which in any event are fatal in their nature, and as these facts cannot be predicted upon any obtainable data, the conclusion is inevitable that the patient's period of endurance should be extended by medicinal resources to the limits of prudence, before opening the abdomen.

RESECTION OF THE SMALL INTESTINE.

Several successful cases of resection of the small intestine have been reported the past year. The continuous catgut suture is recommended, care being taken not to include any of the mucus membrane between the edges of the cut surfaces. The advisability of abdominal section for purposes of diagnosis is gaining ground in the opinion of surgeons. The fallacy underlying elaborate diagnosis of abdominal and intra-pelvic diseases need not be pointed out; and there is a growing belief in the minds of surgeons that in doubtful [cases of intestinal obstruction, and in diseases of the pelvic viscera, exploratory operations should be made.

CHOLECYSTOMY.

In reviewing the history of operations for the relief of biliary calculi in the human subject, there is reason for much encouragement. The number of reported cases since 1870 are thirty-five, with but ten deaths. The autopsies which were obtained upon fatal cases showed that the liver had undergone degenerative changes that were incompatible with life, conditions which were present before the operation. It is advisable, therefore, to operate, if at all, before structural changes have taken place. Mr. Lawson Tait advises exploratory incision (laparotomy) in doubtful cases, to establish the diagnosis; assuring us that he has never lost a patient from such an operation. The technique of the operation as first distinctly formulated by Sims is, with slight variation, still observed. The majority of operators favor the establishment of a biliary fistula, by stitching the edges of the gall-bladder to the abdominal wound. This measure is understood as precautionary against a subsequent obstruction from undiscovered calculi. If none exist the fistula closes spontaneously. Dr. Harley proposes a method of exploring the gall-bladder for impacted calculi, which he has put into practice. He

explores the cyst with a long, slender trocar. He concludes that the presence of bile in the peritoneal cavity is harmless.

SPINAL CARIES.

The direct treatment of spinal caries by operation has been proposed and practiced the past year by Mr. Frederick Treves, of London. The gravity of spinal caries depends not so much upon any special pathological feature of the process, as upon the depth at which the disease is situated, and its inaccessibility to the usual operative procedures, applied to caries elsewhere. Diseased bone cannot be removed from the vertebral bodies, and the morbid products having to travel a great distance in order to be evacuated, are apt to induce immense purulent collections, and these collections are usually opened at a great distance from the usual seat of the disease. In this operation proposed by the author, the anterior surface of the bodies of *all* the lumbar vertebræ, and with some reservation the last dorsal vertebra, can be reached from the loin. A vertical incision is made near the erector spinæ; the sheath of that muscle and the quadratus lumborum are cut through; the psoas muscle is incised and the vertebræ reached by continuing the operation along the deep aspect of that structure. By means of this operation the vertebræ can be reached and examined, carious bone removed, and a ready and direct exit can be given to all morbid products. An abscess situated in the lumbar region or psoas muscle can be thus evacuated at the point of origin, and at a spot that in the recumbent posture corresponds to its most dependent part. Mr. Treves has recently evacuated by his method an abscess at its point of origin, and removed a large sequestrum from the body of the first lumbar vertebra.

SURGERY OF JOINTS.

Next, perhaps, to laparotomy in boldness of execution and impunity to surgical interference come operations upon joints. Like operations involving section of the peritoneum, we have heretofore regarded the opening of the large joints, whether by accident or design, as a proceeding fraught with the gravest consequences. The President of the Hunterian Society the past year says in relation to this subject: "In no single class of cases have the advantages conferred by Lister's antiseptic system been more strikingly exemplified than in affections which render it

necessary to cut into the knee joint. Formerly the removal of a loose cartilage was often an anxious and even a hazardous operation, whether it was performed by direct or by subcutaneous incision. It matters little whose statistics you take, you will find a considerable proportion of deaths, ranging from one in eight to one in five, and in addition to the deaths a great many failures. Even the surgeons who in the pre-Listerian epoch were most successful, speak in a timid, hesitating tone about the operation, and contemplate the necessity of abandoning the operation without removing the cartilage. Antisepticism has changed all this. Not that there is not the same need of prudence, care, and caution; not that operations are to be lightly undertaken, or that they may not occasionally lead to a fatal issue, even when the most rigid precautions appear to have been adopted. Mr. Barker assumes that the opening of joints must still be regarded as dangerous, and that from time to time, with all antiseptic precautions, joints are destroyed. Danger there is, minimise it as we may. But there are some strong facts on record which point to the conclusion that in operating upon joints, Lister's method has given us as near an approach to safety and certainty as the imperfection of human agency and human prevision will permit. Professor Volkmann says in relation to this subject: "The opening of joints seems a most innocent performance. Hips and knees are cut open in order, in a case of luxation, to search for the obstacle which opposes itself to reduction; in order to suture the ruptured tissues, and in obscure cases to clear up the diagnosis *in vivo* by means of autopsy. More than two hundred times I alone, without in one instance bad results following, have incised, drained, and washed out diseased knee joints, without exciting suppuration." These are facts, explain them how you please, on the theory of mere cleanliness and drainage or any other theory, possible or impossible.

SUTURING FRACTURED PATELLÆ.

Prof. Meulen, of Utrecht, proposes to suture fractured patellæ without opening the knee joint. He holds that this is practicable in a majority of recent cases. He finds that after the limb has been confined at rest upon a back splint for a few days, on exposing the fragments of the patella a blood clot occupies the cleft between them. On carefully removing this clot, a thin membrane is found separating the space between the fragments and

the cavity of the joint. This he believes to be a young tissue formation, which in time would proceed until the entire clot became organized. This process is held to be strictly analogous to the organization of the thrombus after ligation of blood vessels. The operation is completed by passing platinum wire through holes drilled obliquely at corresponding points of the separated fragments, drawing them together and depressing the cut ends of the wire into the soft tissues in front of the patella, and fixing the limb upon a back splint. He thinks all operations involving the opening of joints should be performed with strict antiseptic precautions.

EXCISION OF THE KNEE.

Excision of the knee joint in selected cases, in preference to amputation, receives wide-spread approval. Up to a comparatively recent period excision of the knee joint has been attended by a mortality so great as to render the thigh operation a matter of duty rather than one of selection. Prior to 1882 the rate of mortality may be roughly estimated at eighty per cent.; while the thigh operation in such cases, viz., osteo-arthritis, suppurative fungus arthritis, comminuted fracture, gun-shot injury of the joint, and ankylosis in a bad position, was about forty per cent. Through the introduction of improved surgical methods and technique the mortality of this operation has steadily declined, until at the present time it is estimated at fourteen per cent. In performing resection of the knee joint it is desirable to preserve the periosteal-capsular sheath of the joint in its entirety, where possible. The sub-periosteal resection is advised as the best guarantee of osseous union. The lateral ligaments are preserved together with the patella, if the latter is not diseased. Free drainage is secured by small lateral incisions for the introduction of tubes, and the sawn bone surfaces are brought together and fixed by wire sutures. The continuity of the quadriceps is established by suturing the ligamentum patellæ. In a very interesting report of this operation, presented by Professor Ollier, of Lyons, he says: "Antiseptic dressings have completely changed the indications and prognosis of resection of the knee. The gravity of the operation at the present day is not greater than amputation through the thigh." Prof. Ollier advises resection (partial or complete) rather than amputation, in all cases except tubercular arthritis, in which case amputation is the proper

operation. Dr. Albrecht, of Zurich, gives an analytical report of 325 cases of articular disease treated by Professor Rose in the past thirteen years. It appears from this report that joint disease occurs in connection with scrofula in about one-third of all cases; as a result of injury in one-sixth; and in one-half as a result of causes remote and uncertain, and among these are reckoned acute rheumatism, scarlatina, etc. In the first group the mortality from operations was fifty-five per cent.; in the traumatic cases there was a loss of thirty-three per cent.; and in the third and fourth groups taken together the mortality was about thirty-three per cent. The tables show that scrofulosis contraindicates operative measures in the treatment of joint disease. The mortality after resection of the upper extremities was twenty-four to twenty-six per cent.; while that for the lower was 47.2, or nearly double. Amyloid degeneration of the abdominal viscera and exhaustion from prolonged and obstinate suppuration of the ankle, knee, and hip, occurs more frequently than in like affections of the upper extremities.

In considering the diseases of the different joints with regard to the question, When ought the surgeon to resect, and how long may he persevere in conservative effort? Dr. Albrecht states in the upper extremity conservative treatment should be continued as long as possible, and that resection should be preferred to amputation; resection of the wrist presents poor chances for recovery. With the lower extremities the conditions are different. Albrecht's tables show that fungus disease of the ankle joint is extremely dangerous to life. In caries of the ankle primary amputation is to be preferred. Resections of the hip and knee are very serious operations, and the latter is often unsatisfactory even when successful. In young subjects the shortening is excessive, and Albrecht holds that the prospect of complete healing after resection of the knee are small. Resection does not prevent the risks of tuberculosis, as is shown by the frequency of the general disease in subjects who before the operation had not presented any indication of tubercle, or subjects who had not presented any indications of the disease before the operation. Prof. Albrecht holds that there are yet greater objections to resection in disease of the hip. This operation should only be performed as a last resource in desperate cases, experience teaching, it is stated, that fistulæ in connection with a diseased hip or knee are just as likely to close by expectant treat-

ment as after resection ; and the surgeon is urged to rely upon expectant treatment.

SECONDARY NERVE SUTURE.

Dr. Weissenstein, of Tübingen, has collected the data of thirty-three cases of secondary nerve suturing. Of this number the injured nerve was the musculo-spiral in ten, the ulna in nine, in seven the median, in ten the sciatic, and in one a branch of the musculo-spiral. The shortest interval between the date of injury and the operation was twelve days, and the longest nine years. In twenty-four of these cases decided success has resulted, there having been with respect to the paralysis either partial improvement or complete cure. In seven cases there was perfect recovery, with restoration of the natural functions of the limb. In six cases no good resulted. In successful cases of secondary nerve suture the sensibility is speedily restored, whilst the restoration of motor power is retarded in consequence of atrophy of the paralyzed muscles. In operating for secondary nerve suture, the strictest antiseptic precautions are enjoined. The suture is applied in accordance to one of two methods. In one the nerve substance is traversed by the thread ; in the other only the perineurium and the paraneurotic connective tissue. The former method is the more secure of the two. Two superficial sutures, penetrating the nerve sheath only, and running as far as possible parallel to the long axis of the nerve fibers, are recommended. Neuromæ, or connective tissue masses between the ends of the divided nerve, must be excised. As little as possible of the nerve ends should be cut away. Langenbeck considers it unnecessary to cut away until nerve tubules can be recognized on the cut surfaces. Catgut is the best material for the suture ; it is the least irritating, does not interfere with primary union, and is completely absorbed. The limb must be kept at perfect rest, in a position of the least possible tension of the nerve.

SURGERY OF THE SKULL.

Wounding of the superior longitudinal sinus by accident or design has been reported the past year. The dread of fatal, uncontrollable hemorrhage from this accident is, in the light of recent events, imaginary. In every instance of wounding of the cerebral sinus I find recorded, simple pressure with dry lint or charpie has been found sufficient to arrest permanently the most

abundant hemorrhage. The soundness of trephining the skull in cases of traumatic epilepsy has been confirmed by a large number of published cases during the past year. Out of eighty-two cases, forty-eight were completely cured, and thirteen relieved. The conclusions reached from recent experience may be summarized as follows :

When there is a clear history of an injury, a well-marked cicatrix or sinus leading to dead bone, and the epilepsy has as clearly followed the injury, there can be no doubt of the propriety of trephining. It is further advised in traumatic epilepsy to trephine when the only local indications are a sensitive, painful, or even a tender spot, without any evidence of depression, or inequality of bone, the operation, *per se*, being attended with slight danger. The removal of a tumor from the brain of a patient at the Regent's Park Hospital, London, in November last, under the auspices of Dr. Hughes Bennett, is, so far as I am aware, unique in medical history. A young man twenty-five years of age, complained of paralysis of the left arm. Four years before he had received a blow on the head from a piece of timber. With the exception of occasional headaches he remained well for a year, at which time he had a fit. Since that time he had suffered from daily-recurring twitchings of the left side of the face, without loss of consciousness; but with general convulsive seizures, with loss of consciousness, occurring once a month. Six months before he came into hospital there had been spasmodic twitchings of the left hand and arm, alternating with twitchings of the face. The general convulsive seizures had ceased, but the left arm and leg became so weak as to render walking difficult and labor impossible. On admission to the hospital the patient was found in excellent general health, but he suffered from frequent and violent pains in the head, diffused over the vertex. There were no scars upon the scalp, but firm pressure over the upper parietal region, a little to the right of the median line, gave pain. The movements of the eye-balls and pupils were normal, but there was well-marked double optic neuritis, while vision was normal. The left side of the face a little less mobile than the right; tongue when protruded pointed slightly to the left; complete paralysis of the fingers and left wrist; movements of the left elbow and shoulder joints greatly limited. The mechanical irritability of the muscles, the knee jerk, and the ankle clonus were most marked on the left side. The patient, while under obser-

vation, suffered from intense lancinating pains in the head. There was vomiting, often uncontrollable, and continuing for days together. There was often-recurring rhythmical twitchings, beginning in the left hand and extending to the left arm and leg, without loss of consciousness. From these symptoms Dr. Bennett was led to the following diagnosis: First, that there was a tumor in the brain; second, that the growth involved the cortical substance; third, that it was of limited size, as it had only destroyed the centers presiding over the hand, and causing irritation without paralysis of the centers of the leg, face and eye-lids, which surround it; and fourth, that it was situated in the neighborhood of the upper third of the Fissure of Rolando. The diagnosis having been made, the skull was trephined, the bone removed, the dura-mater slit up and the cortex of the brain exposed, but no tumor was visible. The ascending frontal convolution seemed to be somewhat distended. An incision an inch long was made in the gray matter, in the direction of the blood vessels. A quarter of an inch below the surface the morbid growth was found and removed. It proved to be a hard glioma, the size of a walnut. The superficial part was distinct from the brain substance, and was easily enucleated. The hemorrhage was arrested by the galvano-cautery. The result of this operation was a speedy amelioration of the worst symptoms for three weeks, when he suddenly succumbed. The case, aside from its great interest in a physiological point of view, is of the highest clinical importance as evincing a bold but carefully considered step towards the surgical relief of a class of cases that hitherto have been considered beyond the resources of art; and its interest is further enhanced by the hope that with increasing knowledge of cerebral localization, and through improved methods in surgical details, our range of usefulness in this uncertain field of practice will be greatly extended.

Dr. MacEwen, of Glasgow, recently operated upon a syphilitic patient with left hemiplegia, with whom medical treatment failed to do any good. The skull was trephined over the middle of the ascending frontal and parietal convolution. The skull was found thickened and roughened upon the inner surface. Beneath the dura-mater a thin, false membrane was found; an incision was made into the brain at this point, and two drachms of grumus, red-colored fluid escaped. The patient, who had been unable to walk up to this time, was soon able to do domestic duty about

the ward, and the paralytic symptoms steadily decreased, and the intelligence became brighter. These operations indicate at least the advances that have been made in cerebral localization, which in time must bear fruit in the direction of sound surgical progress.

SURGERY OF THE BLADDER.

An analysis of twenty operations for tumors of the bladder was presented to the Royal College of Surgeons this year, by Sir Henry Thompson. His method of operating is by perineal section, through the membranous portion of the urethra, whereby a complete digital exploration of the bladder may be obtained. the left hand of the operator pressing strongly over the hypogastrium, while the left finger explores the bladder. The tumors for the most part were benign independent growths, springing from the vesical walls. Numerically they were about equally divided between the sessile and the pediculated. The vesical growths were classified as mucous polypi, and the papilomata, the malignant group consisting of epithelioma, and perhaps sarcoma. Pediculated growths are removed by small serrated forceps, or with the small ecraseur armed with catgut ligature. The broadly sessile tumors intimately blended with the vesicle coats cannot be removed, but it is advised to crush any salient portion of such tumors, if it can be done without injury to the bladder, as subsequent cicatrization greatly modifies their further development. The supra-pubic operation of the French is a more formidable operation than the boutonniere of Sir Henry Thompson, and offers no increased facilities for operations upon the bladder. Of the twenty cases included in the report already referred to, six died from the direct effect of the operation, within a few days; five from malignant disease developed elsewhere, and from other causes not traceable to the operation. The difficulties in the way of diagnosis of vesical tumors appear well nigh insuperable, though frequently it is practicable to obtain organic debris by repeated washings that confirm their presence.

CYSTOTOMY

Is confidently recommended by Sir Henry Thompson in those inveterate cases of prostatic disease requiring the constant use of the catheter, in painful chronic cystitis, and in painful and frequent micturition, in which the urine remains clear or contains blood; cases where the most careful exploration fails to discover any evidence of organic change. This operation suspends for a

time the function of the tormented bladder and urethra, and the patent often entirely recovers.

OPERATION FOR STONE.

An analysis of 812 operations for stone made upon 782 male adults, gives a total mortality of 82, or $10\frac{1}{2}$ per cent. One hundred and ten of these were by lithotomy, with 39 deaths, or 35 per cent.; while 672 were by lithotrity, with 43 deaths, or $6\frac{1}{2}$ per cent. In connection with this subject, Thompson remarks that "it is not possible to make any comparison as to the relative value of lithotomy and lithotrity. The position of the two operations towards each other is no longer one to invite comparison, but it is that of complimentary relation. Each accomplishes a part for which the other is less competent. When the stone is exceptionally large, the supra-pubic operation is advised, with the modification as suggested by Prof. Petersen, of Kiel. This improvement consists in raising the bladder above the pubic symphysis, by first filling the bladder with a warm boracic solution and retaining it there by a ligature thrown around the penis. A pear-shaped bag is then carried into the rectum and distended with air; this pushes the bladder upwards and forwards until its outline is clearly visible above the pubes. Prof. Petersen claims a greater facility in opening the bladder and in the extracting of a stone by the procedure.

CHANCRE.

The rapid cure of simple non-infecting chancre has attracted much experimental inquiry among specialists. Ricord gives preference to a fifteen grain solution of nitrite of silver in water. Fournier endorses Ricord's silver solution, and recommends ferric potassic tartrate, ten parts to one hundred of water and iodoform. Von Hebra, of Vienna, successfully treats chancre in four or five days by the topical use of salicylic acid. The method consists in cleansing the parts thoroughly with tepid water and soap, especially where lead, zinc, or silver has been employed, covering the sore with salicylic acid powder, and retaining it in place with adhesive strap. These dressings are renewed once or twice a day as occasion requires. The advantages claimed for this method are the prevention of chancrous buboes.

CHART FOR URETHRAL MEASUREMENTS.

A chart for recording urethral measurements has been recently devised by Dr. Geo. Herschell, of London. Its object is to preserve diagrammatically a more distinct idea of the entire totality

of the urethral canal than any written description could possibly do. The chart consists of a series of vertical and horizontal lines crossing one another at right angles. The horizontal lines denote the circumference of the urethra in millimetres, while the vertical lines are numbered in centimetres. The French scale is adopted, since the French instruments proceed by increments of one millimetre in circumference. By measuring a sufficient number of consecutive planes in the urethra by the exploring bulb, or by the urethra-tome, marking these points off upon the chart and then joining them, a diagrammatic representation of the urethra will be obtained. It is suggested by Dr. Herschell that the ready means afforded by these charts of recording urethral data will assist in the solution of some unsettled points in the physiology and surgery of the urethral canal.

SUPPLEMENTAL REPORT ON SURGERY.

Report of Two Interesting Cases.

By A. B. STUART, M.D., Santa Rosa, Cal.

CASE I.—GUNSHOT WOUND OF THE BRAIN—RECOVERY.

Joseph Elliott, aged about 25 years, American born, of German extraction, farmer by occupation, while engaged in conversation with a friend at a railroad station, waiting for the incoming train, was accidentally shot, the pistol, a 32 caliber, being in the hands of a physician deeply under the influence of liquor. How or why the pistol was discharged, no one knows; but that it was unintentional on the part of the doctor, every one present believed. The ball struck the left parietal bone, about midway between the temporal and occipital bones, and three inches from the lower portion of the mastoid process of the same side, passing through the skull, and taking a slightly upward course in the direction of the center of the upper border of the temporal bone on the opposite side. About an inch and a half from the external wound I detected, with a probe, what I supposed to be the bullet, but when removed it proved to be only a thin, ring-like portion, such as you would expect to see from forcing a leaden ball through a hard metal tube, rather small to admit it. Believing that the greater portion of the bullet yet remained in the brain, I again introduced my probe, which passed easily and unobstructedly four inches from the external surface, where it met with a slight resistance, but not occasioned by the ball, or

any other hard foreign substance; and fearing that I might do unjustifiable injury to the brain, I withdrew the probe and discontinued further manual examination. Having no drainage-tube, a tent was substituted, passing it in just far enough to give vent to a slight bloody discharge then present, applied cloths wet in carbolized water externally, and recommended the attending surgeon to open the bowels with a saline cathartic, and put the patient upon opium, bromide of potassium and aconite.

The patient had rallied from the shock by the time I saw him, a few days after the accident, and although in a semi-stupid condition, answered rationally when spoken to, yet when left to himself lay as though asleep; breathing slightly labored and pulse frequent.

I am told that the tent was removed and discontinued next day; external wound soon healed, and our man had a speedy getting up, but was never again his former self, either in mind or body. Mentally he was dull, easily confused in thought, but as moral and upright in character as before the injury, which was deservedly noticeable. Physically he could not endure as much labor. I saw him a year afterwards working in a wheat elevator, attending to the horse as it walked its circuit, and tallying the wagon-loads of grain as they came in, and he appeared to succeed reasonably well when the engagement of his mind was not too continuous, but could not tolerate momentary interruptions. He is now dead, having died of typhoid fever about two years after the injury just reported. I saw him early in his last sickness. He was in what might be called a rational condition of mind, yet stupid; appeared to neither fear nor court death. No diagnostic symptoms of softening of the brain. No post mortem granted.

Remarks.—The foregoing is a case of unusual interest, in consequence of its rarity in the annals of surgery. “The Medical and Surgical History of the War of the Rebellion” gives the “results of four thousand three hundred and fifty cases of gunshot injuries of the cranium,” and there is not a single case as grave in its character that resulted as well. The course of the ball must have been near the fourth ventricle, yet there was no marked evidence of special injury done that part of the brain. Whether the ball stopped in its course and became encysted in the substance of the brain, as spoken of by Larrey, or passed through the brain and became encysted on the opposite side from

which it entered, I know not, but am inclined to the latter opinion. As to the splitting of the bullet, I have simply stated the fact as presented at the time, both portions having evidently entered the substance of the brain.

CASE 2.—GUNSHOT WOUND OF LEFT AXILLARY ARTERY AND NERVE, CAUSING PARALYSIS OF ARM, AND SECONDARY DIFFUSED ANEURISM IN THE AXILLA—DEATH.

Notes on a case of gunshot wound in the person of William Webster, visited by me in company with the attending surgeon, M. F. McTaggart, M.D., at Sonoma, Cal., Dec. 18, 1883.

Ball entered, as shown by wound, now closed, about midway between the clavicle and nipple on left side, and was cut out higher up and anterior to the scapula, showing that it had taken a course upward, backward, and outward, passing through the axillary space, escaping (or at least not opening) the axillary or brachial artery, as shown by a reasonably full radial pulse, as good as it was in the other arm, and no indications of an aneurism, such as pulsation, thrill, or tumefaction; but either directly or indirectly affecting the brachial nerve, as shown by complete paralysis of the arm. The shoulder and arm were very much swollen, and every movement giving great pain, in consequence of which I could not make as thorough an examination as desired in reference to the exact course and execution of the ball; but I do not think the humerus was fractured; no crepitus, and moved with the fulcrum in the joint. No croupus pneumonia, but slight dullness on percussion over the posterior portion of both lungs, more on the wounded side than the other, supposed to be due to static congestion. No distinct tubular breathing on either side. The ball did no violence to the ribs, but Dr. McTaggart thinks it was deflected in its course by striking the third rib, as he was unable to pass his probe beyond a certain point on said rib. Finding no tumefaction, throbbing or pulsation, or aneurismal thrill in the artery in or near the course of the ball, and a reasonable radial pulse, I am unable to account for the unusually swollen condition of the shoulder and entire arm, but think it is due to the injury done the nerve, and a stroke with a club he is said to have received across or over the upper and back part of the shoulder, the skin being very much discolored. Pulse ranging from 90 to 94 per minute, reasonably full, and no intermission; temperature 99.5°, taken in the right axilla.

Hot water dressings being in use, and being acceptable to the patient, I recommended their continuance for the present; bowels to be kept moderately open, and if a tumor forms, to ascertain its contents with an aspirating needle, and if it proves to be an abscess, to lay it open freely; to anticipate the debility of excessive suppuration by giving good diet, quinine and iron. As he has been accustomed to the frequent use of liquor prior to his injury, it is continued, and to be increased as required. Recommended the use of opium for the purpose of allaying pain, inducing sleep, supporting the nervous system, and retarding disintegration of tissue.

Although it is a dangerous case, and he may die under the best of care and attention, if he escapes pyemia I think he will recover.

The foregoing was my opinion, based upon as careful an examination of the case as the condition of the patient would permit, eleven days after the injury, and about four weeks previous to his death.

The following is a brief history of the case lately furnished me by Dr. M. F. McTaggart, of Sonoma, in answer to a letter I wrote him upon the subject:

"I was called, December 7th, 1883, to see William Webster, of Sonoma, Cal., a native of Canada, aged 31 years; height about 5 feet 9 inches, weight 160 pounds, and by occupation a laborer. He enjoyed remarkably good health, notwithstanding an occasional spell of heavy drinking, in one of which he received a fatal shot at the hands of a saloon keeper. Found him bleeding from a wound made by a ball fired from a pistol, caliber about No. 38. Was lying down, could not stand; was rational, complained of severe pain in left arm and unable to use it. External wound a little above left nipple, about an inch to the left of sternum. Explored for bullet with Nelaton's probe, but failed to find it. December 8th, while exploring with an aspirating needle, over the course I supposed the ball had taken, found it a few lines external to the glenoid cavity; and, making an incision in the opposite direction from which the ball had taken, removed it with a pair of bullet forceps. No effort was made to keep the external wounds open, and they healed kindly and readily. Had patient under treatment up to December 27th, 1883, when he passed into other hands. At no time during my attention did the temperature exceed 99.5°, generally 99°; pulse ranged from

84 to 105 per minute. Arm paralyzed, swollen and painful. By the 20th there was a perceptible reduction in the size of arm, but an increased swelling of the shoulder; and within a week, or about the time the case passed from under my care, the scapula was considerably displaced. Patient died about three weeks after my charge of him ceased.

"I was present at the post mortem, twenty-four hours after death. The ball entered the soft parts near the junction of the third rib with its sternal cartilage, and, glancing on the rib, took almost a direct course to the locality from which it was removed, a little below and external to the glenoid cavity, wounding both artery and nerve. The opening in the artery was not the direct execution of the ball, but due to a slough, the result of the wound, followed by an aneurism, the sack of which contained about three pounds of blood clot. The aneurism was diffused, and yet circumscribed by the muscles and connective tissue. Slight inflammatory effusion in left lung. Shoulder greatly deformed from tumefaction. Cadaver greatly emaciated."

Remarks.—The foregoing case presents a few points of interest. First, was it possible at the time I saw the case, eleven days after the injury, to have made a correct diagnosis in respect to the injury done the artery, or at any subsequent time during the care of Dr. McTaggart? and if so, what would have been the course of surgical treatment? The opening through the coats of the axillary artery being due to a slough, the aneurism would not be likely to give diagnostic symptoms previous to the sloughing, which seldom takes place before the fourteenth or fifteenth days; and after the slough has taken place and diffused aneurism is the result, there are but two procedures usually known to surgery, arterial ligation and amputation at the shoulder joint. The ligation of the subclavian here is not a success, two in three dying, and the third saved only by amputation at the shoulder joint, as reported by Erichsen; and to have amputated in the condition I found the patient, would have been but little short of homicide. Yet in true circumscribed aneurism of this artery we have an efficient remedy in the ligature applied to the subclavian, as shown by statistics.

Judging from Dr. McTaggart's report, I think that about the time the case passed out of his hands a correct diagnosis would have been possible, and an amputation at the shoulder joint justifiable; but at no time do I believe that a ligature applied to

the subclavian, either above or below the clavical, would have saved the man. In a diffused aneurism of the axillary artery, such as the case under consideration, amputation at the shoulder joint offers the only hope, and that must be primary, as regards the wound, or fully secondary, to in the least justify it.

BLOOD-LETTING AND TRANSFUSION.

By A. P. WHITTELL, M.D.

Read before the San Francisco County Medical Society.

When the reaction took place against the practice of "blood-letting," which, until little more than a generation since was so universally in vogue in the treatment of most forms of acute disease, it is a matter for wonder that the transfusion of blood, which is the antithesis of blood-letting, did not, to a certain extent at least, attract more notice from the profession, or take the place of the declining art of venesection. A practice which has long been in favor, if about to be abandoned, usually gives way to a better or more approved method of procedure; but, in the case of blood-letting, it was simply dropped and wholly condemned, except in the rarest instances, and no substitute has filled the place it so long occupied.

Blood-letting, to have become so universally practiced by an intelligent profession, could not have been devoid of great virtue as a therapeutic measure, and perhaps those who practiced it "builed better than they knew." The ultimate consequences of the abstraction of blood were lost sight of in the temporary but immediate benefits following the operation; and it was to this immediate result that venesection owed the favor in which it was so long held. The prolonged convalescence and recovery, if recovery took place, were attributed to the virulence of the attack, but never to the anæmia and reduced vital powers consequent upon and proportioned to the removal from the body of a greater or less quantity of blood. It was recognized in the so-called "buffy coat" that its physical properties differed from those of healthy bloods. No device was proposed by which the benefits of venesection could be obtained without the accompanying subsequent greater evils; and in consequence the practice, as it then was, fell into the disrepute it fully deserved.

In the present stage of our knowledge it is impossible to state with scientific accuracy that any certain disease, whose manifestations may be either localized or general, corresponds to a certain unvarying change in the composition of the blood ; and it is equally impossible to say that such is *not* the case. Investigation points strongly to the specific character of all diseases, and discovery has already proved it in many.

That the change, within the body, takes place primarily in the blood, is most probable, and the tissue alteration resulting therefrom, reacting upon the blood, must of necessity produce secondary changes in the latter. The condition of the blood as a fluid, renders it peculiarly susceptible to (rapid) changes, and supplies the requisite physical properties for the propagation of disease germs, which solid tissues do not. It therefore acts as a reservoir from which all the tissues derive not only their nourishment, but also whatever morbid principles it may contain.

It must be apparent, then, that in blood-letting, a certain amount of this something which has found lodgment in the blood is removed from the body ; but in removing it, to produce a marked effect, it became necessary to remove a comparatively large amount ; the evil effects following the loss of the same overbalanced the benefits of the abstraction of a corresponding proportion of the morbid element.

The benefits of blood-letting might be obtained, and the evil consequences following it averted, if after the removal of the blood from the body it could be changed to the condition of healthy blood, and then returned into the circulation whence it was drawn. This is obviously impossible, but the same result may be accomplished *by substituting for the blood extracted an equal amount of blood known (or believed) to be healthy*. The only limit as to quantity will be the entire contents of the blood-vessels in the one case, and the capacity of the same in the other.

No greater precaution is necessary in transfusion than is required in the many other of the minor operations of surgery. It is perfectly safe as to any danger arising from the immediate effects of the operation itself, if properly done. In view of this, it is a matter of surprise that it has not been resorted to as a common, "every-day" remedy—at least in those cases wherein it is clearly indicated and experience has long ago demonstrated its almost certain aid in preserving human life. I allude to hem-

orrhages, from whatever cause, uncomplicated with serious injury to vital organs.

Why, too, should not its field of usefulness be extended to the treatment of the many forms of chronic diseases which run a shorter or longer course, and ultimately, either directly or as the result of their presence, lead to a fatal issue?

The infusion of the blood of another into the veins of a moribund from epistaxis has in several instances indefinitely prolonged life, where death seemed inevitable. Is this escape from apparently certain death due simply to the, say twenty ounces of blood transfused? It cannot be owing to the *quantity*, as already several times the amount had escaped by hemorrhage. Is it not then owing to a something, some vital principle, which the foreign or giver's blood contained, which was deficient in the escaped blood? Or, perhaps, to the presence in the latter of some element which is foreign to healthy blood, and which that injected did not contain? Else, why did not the newly introduced blood escape as the other had done? and why did the hemorrhage cease? Could not the blood, as it flowed from the patient, have been returned to his own veins? In all human probability, would it not have followed the course which it had before taken?

The use of transfusion in epistaxis alone demonstrates the *local** effect of healthy blood when brought in contact with the source of the nasal hemorrhage, in inducing a change whereby the hemorrhage almost immediately ceases. This being so, it is perfectly safe to assume that the cause (whether primary or otherwise) of the epistaxis resides in the blood, and that being in great part removed and the remainder largely diluted by healthy blood, or at least blood not containing the element favorable to epistaxis, the latter ceases.

A most important question will naturally arise when transfusion shall have taken rank as one of the foremost therapeutic measures at our command, *i. e.*, the source whence healthy blood shall be drawn?

The number of men and women willing and able to part with a considerable portion of their blood, will be small compared to the amount needed; aside from this, the too often presence of

* Locally, either to the vessels yielding the blood, or to the vaso-motor branch governing that particular portion, or the point of origin of these special nerve filaments.

inherited or specific disease would make many objectionable. A better and unfailing source of supply must be sought. This we have in our domestic animals, which being absolutely under our control, can be maintained at a universal standard of health, and may be forced at any time to yield up theirs to save a human life.

Chemically and microscopically the blood of many mammals so closely resembles human blood that it is only with much difficulty they can be identified ; it therefore only remains to select blood whose corpuscles are within the limits of size of human blood corpuscles. Transfusion of human blood has already demonstrated that the blood is not, *per se*, an inalienable part of a living body, and may be readily adopted by another. The oft-tried injection of saline solutions (which are a poor apology for blood), and of milk in considerable quantities, and hypodermic injections, which frequently are forced directly into a superficial vein, all bear witness to the tolerance of the blood* and blood-vessels to the presence of foreign substances introduced directly into them.

A striking analogy to the appropriation by man of the blood of other mammalia to his own circulation, exists in the practice of the horticulturist forcing a grafting of one kind of fruit-tree to obtain its sustenance from the stock of another and sometimes widely different species, often with the effect of a great improvement in the growth and product of the grafted cutting.

The adaptability by man of the more solid tissues of the so-called inferior animals, is exemplified in the often successful practice of supplying deficient conjunctiva in cases of severe symblepharon, by transplantation of the corresponding membrane taken from the eyes of rabbits. The lining membrane of freshly-laid eggs has also been successfully used for the same purpose ; even entire muscles are transplanted, perfectly retaining their functions in their new position. This fertile and promising field of therapeutics has been singularly neglected, considering the truly remarkable results obtained by the few who have had the temerity to test some of its capabilities. The names of those identified with transfusion, either experimentally or practically, may be counted upon one's fingers, and the literature upon the subject is so restricted that it may be almost said there is none. In one of the best recent publications upon the modern practice of medicine, the subject of transfusion occupies but twenty-one lines in a

total of something over five thousand pages. The latest work upon modern surgical practice treats the subject of transfusion in four and a half pages, in five large quarto volumes, which are principally occupied by a description of the necessary apparatus and methods by which transfusion may be successfully performed. Of the latter, that by hydrostatic pressure is, beyond all question, the best, simplest and safest.

Of what has already been accomplished by transfusion, I need not mention the numberless cases of hemorrhage in which it has been successfully used. In leucocythemia it has been tried, in a small way, followed by diminution in the size of the spleen and symptoms of marked improvement; but, as the quantity injected did not exceed, in any one case, more than six ounces, and the operation was not repeated, it is not to be wondered at that the improvement proved only temporary. Recent experiments with transfusion in phthisis pulmonalis have been followed by most encouraging results. Sheep's blood has been used, and with apparently no noticeable difference from the effect produced by injecting human blood. The experiments of Mr. G. A. Armitage, of Denver, Colorado, in resuscitating animals apparently dead for periods ranging from four to eighteen hours, encourage the medical profession to make use of this mode of resuscitation upon mankind, when life has been suddenly suspended, leaving the body still in a viable condition.

The removal of an amount of blood equal to the quantity about to be injected, is, however, one of the first requirements in the practice of transfusion. Over distension of the blood-vessels, and the tendency to syncope which follows the introduction of even a few ounces of fluid into the already full vessels, is avoided; but that which is of far greater import is the removal of a less or greater part of the vitiated blood—to the extent, at one time, of one-half, or even more—from the body, in diseased conditions, thus reducing at once the most active cause of the continuance of the diseased state, and may, when a certain point of dilution shall have been attained, by the repeated introduction of healthy blood, enable the innate power of resistance to disease to once more regain ascendancy over, and spontaneously eliminate from the body the elements inimical to health.

A CASE OF TRACHEOTOMY IN DIPHThERITIC CROUP.

By A. H. PRATT, M.D., Oakland.

During January of this year I was called to attend Nellie B., aged about six years. I found her sick with a mild attack of inflammatory rheumatism. A slight cough caused me to examine the chest. Besides a mild bronchitis I found a valvular systolic murmur. I subsequently learned that another physician had some time previously diagnosed a valvular trouble. Her attack proved to be easily amenable to treatment, and in a few days she was around as well as usual.

On a Sunday in April I was again called, and found her with diphtheritic croup. The membrane covered the posterior pharynx, tonsils, pillars and uvula. The faucial opening was in fact a ring of diphtheritic exudation. Without detailing treatment, I will simply say that it was tonic, with the bichloride of mercury internally every two hours, and the same in form of spray, one to one thousand, every hour.

On Monday all the symptoms were aggravated. Dr. Wheeler saw her in the afternoon, and concurred with me in diagnosis and treatment. Tracheotomy was spoken of to the father, and its possible necessity and result explained.

Early Tuesday morning the uncle came for me, saying the father wished the operation done quickly. Assisted by Drs. Geo. Auger and L. S. Burchard, I performed the operation and had the tube in place by half-past eight o'clock. She breathed easily afterwards, but coughed very much for about twelve hours. The case progressed favorably, but with some ups and downs, until the tenth day after the operation, when her condition admitted of the removal of the tube. No effort was made for two days to close the trachea, but on the fifteenth day it was drawn completely together by means of adhesive straps. The child then breathed with perfect ease through her natural passage, and was comfortable all day, playing most of the time in her bed.

About eleven o'clock that night she suddenly grew distressed, and when I reached her she was very restless, tossing to and fro in bed. There was no pulse at the wrist; in fact she was in a state of collapse, and died at half-past one a. m.

I have purposely given an abbreviated history of the case, as it

conforms so well with the literature of the disease, so frequently described, that it seems like needless repetition to do so here. But my chief aim was to call attention to tracheotomy in diphtheritic croup. The disease is not an infrequent one, and the general impression is that the operation is useless. Hence I think a successful one should be reported. But was mine successful? Surely, if all the causes leading to the operation are, after its performance, caused totally to disappear, be the measure of its success, then was my case a decided success, for of them there was not one left. What, then, caused her death? It may have been heart clot; it may have been cardiac paralysis; it may have been cardiac exhaustion, caused by the diphtheritic poison acting on a previously weakened and weakening heart; and neither of these considerations are to be noticed where the operation is at issue. Am I, then, not justified in claiming the case as a successful tracheotomy in diphtheritic croup?

**Torsion of Upper, and Hemorrhage of Lower Extremity
of Radial, after Section of Wrist.**

By N. S. GIBERSON, M.D., Eureka, Cal.

J. S., German, aged 45, while working at a shingle machine, caught his hand in the saw. The saw was a circular, twenty inches in diameter, revolving horizontally at the rate of 1500 revolutions per minute. The saw entered the left wrist on its dorsal aspect, and with the exception of the flexor tendons, completely comminuted it. I saw him half an hour after the receipt of the injury, and the wound presented an indistinguishable mass of mangled muscle, bone, and tendon. When the clots were cleared away, the hand was found to be held to the wrist only by the flexor tendons, and the ulnar artery. Every bone of the wrist except the pisiform, had been destroyed—literally crushed and torn to pieces. The cuneiform bone had been split into two irregular fragments, the lower of which I removed with the forceps; the upper was still firmly adherent to the superior cartilages and was left in its place. The frightful track had ploughed its way through the sinuous line of the central articulations of the carpus, cutting a swath fully five-eighths of an inch in width, leaving in their normal positions but scanty fragments of the unciform, the os magnum, and the trapezoid; while the semi-

lunar and the scaphoid had contributed nearly all but their superior articulating surfaces to swell the sum total of ruin. The trapezium was split, and the first metacarpal bone of the thumb was slotted for three fourths of its length, but neither of them was crushed or shattered. I can account for the little damage done these bones, only on the theory that the hand had instinctively recoiled from the shock, and the extremities of the teeth of the saw only came in contact with the base of the thumb. As before stated, the ulnar artery was intact, but it was not possible to find the radial. A few minutes with forceps, scalpel and scissors, removed the detritus, and, on a sudden, I observed a little jet of arterial blood spouting out from the distal extremity of the wound, in the midst of the extensor tendons of the thumb. Upon a careful examination I ascertained that it undoubtedly was the distal extremity of the radial, whose anastomosis with the deep branch of the ulnar artery had already begun to restore that equilibrium, which is constantly reminding us of the perfection of Nature's machinery in providing for just such exigencies, and which finds its most perfect development in the Circle of Willis. It is food meet for reflection, that every outpost of the human organization is thus guarded against any accident which may demoralize the ordinary machinery, and render helpless for the time being the self-defensive powers of Nature.

A few months since, I was called to see a poor fellow who had received the blade of an axe, diagonally across the ankle joint, completely severing the tendo-achillis, and cutting every branch of the anterior tibial. It was a frightful wound, and laid the ankle joint fairly open. I asked several of the fraternity to see the case, and the unanimous conclusion was that the member would die from simple cutting off of the blood supply, even if the patient were not carried off by profuse suppuration, or some other of the numerous complications which cluster so thickly around the grave injuries of large joints. But nothing of the kind happened; the wound was closed with cat-gut, after bringing the several edges of the tendon together, and taking up the bleeding vessels, and the subsequent treatment was a rude Listerism, except that a warm carbolized application was kept around the outside dressings, for the purpose of supplementing the natural warmth of the part. At the end of ten days the dressings were removed, and lo! the wound had healed by first

intention. The circulation was completely restored, and not one untoward symptom retarded his rapid recovery. It does seem that we are strangely oblivious at times of the recuperative powers of nature, of whose efficient and well-timed efforts we have daily demonstration. The late Professor Gross, in one of his vindictive blasts against homœopathy, used to trace the rise of that school of attenuations to the classic days of Galen, who, according to the old Doctor's idea, being of an experimental turn of mind, determined to test for his own satisfaction the efficacy of the therapeutics of his day, as distinct from the accessories of hygienic conditions and proper nursing and food. The experiment resulted—so at least the Doctor had it—in a complete and overwhelming victory for the physicless plan. And therein lay the whimsical side of the good Doctor's assault upon the new school; for he referred us back, and selected the very pages for our perusal, the reading of which would have strengthened the cause of the opposition. But consistency is no more an attribute of great men than of small; we appreciate them, not for their absence of questionable attributes, but for their preponderance of great ones. It was but a dyspeptic sentiment which inspired the Bard to that illnatured statement:

* * * "The evil men do, lives after them;
The good is often interred with their bones."

Having satisfied myself of the identity of the artery in question, and having taken it up, I then turned my attention to the discovery of the peripheral extremity of the vessel, and after much patient search, I found it among the lacerated tendons on the back of the radius. Fully an inch of the vessel was exposed, and it presented a perfect specimen of torsion. As a precautionary measure the twisted vessel was ligated; but during the whole time that the wound was being dressed there was no bleeding from that end of the radial. The case looked desperate in the extreme, but a success of the year previous in a wound analogous in character, determined me to make a conservative but desperate effort to save the hand. I removed every loose particle of bone, and retrenched every tendon, and when all the clots had been washed out I swabbed the entire surface thoroughly with a five per cent. solution of carbolic acid. Four deep sutures of silver wire approximated the edges nicely, and with the ligature points brought out, I laid the hand and fore-arm upon a

carved and padded splint, and applied the dressings in a manner as thoroughly Listerian as possible, with my limited facilities for that kind of work. Then I went home and was soon deep in the mysteries of all the dog-eared authorities in my possession, on the subjects of collateral circulation, anastomosis, and kindred topics. His temperature rose next morning to 102, and his pulse to 120; he passed a wretched night, but could not be induced to take a narcotic. I now ordered half a grain of opium and one grain of quinine every three hours, which was continued for 48 hours, when his temperature fell to normal, and his pulse to 95. At the end of seven days he complained so bitterly of the agony which his hand was causing him, that I removed the dressings and found the wound looking as fresh as when the dressing was first applied. At the points where the sutures came out there was slight evidence of suppuration, but it was by no means general in character, and I felt no apprehension on that score. The wound was now dressed with a two per cent. solution of carbolized oil, and, as circulation and temperature had remained at normal for several days, I discontinued all internal medication, and contented myself with frequently changing the dressings, and keeping a sharp lookout generally. With no contra-indications, the same treatment was observed for three weeks, at the end of which the wound had entirely healed, without a single point of suppuration. Could the edges of the wound have been approximated by plaster instead of suture, I am firmly convinced that there would have been no suppuration whatever; the case would have been one of union by first intention, absurd as that may seem. Many will say that this result was entirely due to the Listerian plan of treatment, which was followed. But while I, in company with the majority of the unknown in the rank and file of the profession, listen respectfully to the fulminations "of the foremost in the files of time," I would yet record it as my conscientious belief, that the brilliant result obtained in this case was purely accidental, and could have been obtained by any of the improved methods of treatment, just as easily as it was in this case.

In this case, the patient was in superb physical health, and had never suffered either injury or sickness, and was perfectly amenable to treatment; indeed, he was feverishly anxious to co-operate with me. His home was comfortable, well drained, and free from the disease germs which infect the neighborhood of a large

hospital. The force of all these favoring influences may well be said to be incalculable. Prof. Frank Hamilton epitomizes the rational belief upon this most interesting subject to the student of surgery, in these words: "The reputation enjoyed by Mr. Lister, and the distinguished names to-day reckoned among his disciples, afford a guarantee, that, as against certain other methods, it ought to have a preference, and that its actual claim to a superiority over all other methods is entitled to respectful consideration. Nevertheless, while I admit its excellence, I am far from being convinced, that in the case of compound fractures or of other wounds, it is capable of doing all that is claimed for it. I do not believe—indeed from actual experience, I know—that the knee joint cannot be freely laid open under the Lister treatment with the certainty that no danger will follow. Nor have I seen compound fractures treated any more satisfactorily or successfully by this method than by methods employed by myself and others. Only very recently a compound fracture of the leg, in one of our best metropolitan hospitals, was progressing from bad to worse under this plan; the limb becoming more and more inflamed and swollen, and being threatened with gangrene, when the hot water dressing being substituted, the inflammation speedily subsided, and the limb was saved. It is impossible to exclude atmospheric germs from wounds which have been long exposed to the air before they are placed under antiseptic treatment, and it can easily be shown that absolute exclusion of air does not prevent, necessarily, suppuration and decomposition in those cases, nor insure against the presence of bacteria. That carbolic acid and many other antiseptics do this to some extent is true, but this is all that can be justly claimed for any of the antiseptics; and this is no more than surgeons have understood for a long time. In short, if the method of Mr. Lister has any advantages, and it no doubt has, these advantages consist in the continuous application of a mild stimulating lotion, in the exercise of great care and tenderness in the removal and re-application of the dressings, in the absolute rest imposed, in the occasional use of the drainage tube, and the antiseptic properties of the carbolic acid, and not as has been taught by some surgeons, exclusively, or even mainly, in the employment of an antiseptic."

In the field of conservative surgery, the present generation of investigators and operators stands pre-eminent. Wonders have

been accomplished ; but among that galaxy of brilliant contributions, none shines brighter than the brave dogma, that every investigator is welcome to his own views, however insignificant, in that field, which is not rendered inaccessible by reason of royalty, copy-right, or patent.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, May 12, 1885.

The meeting having been called to order by the President, Dr. Jewell, and the minutes of the former meeting read and approved, Dr. Jewell, as Chairman of the Banquet Committee, reported that the banquet to the State Medical Society had been a success, both socially and financially, so that there was a balance of about \$143 remaining in the hands of Dr. Plummer. It was thought that this sum should be retained by the Society as a nucleus fund for similar purposes. The report was accepted and the committee discharged.

Dr. Whittell then read a paper on "Blood-letting and Transfusion." [See page 340.]

In the discussion that followed, Dr. Hirschfelder said that he never had performed the operation of transfusion, and had only witnessed it once, but as the patient was moribund and the apparatus imperfect, it was not successful. In regard to blood-letting he could speak more authoritatively. It seemed that a reaction towards a more moderate form of this old practice was taking place, and he had repeatedly relieved the cyanosis and dyspnoea of aortic regurgitation by abstracting eight ounces of blood from the venous system. In one case this was practiced every few months, according to the severity of the symptoms, and each time with immediate benefit. There was no doubt that the patient's life was prolonged by the operation.

Dr. Max Richter thought that the literature of transfusion was not so scanty as Dr. Whittell had stated ; for recently Jenner, of London, and Jesillius, had written at considerable length upon the subject. He had performed the operation five times in this city. The first case was one of profound inanition consequent upon cancer of the stomach. He first used the blood of a lamb,

but as this would not flow satisfactorily he obtained some from a wether, and the result was eminently successful, as the patient lived for some weeks, although he had been expected to die in a day or two. The second case was one of cachectic anæmia. At this time Italian surgeons had adopted the practice of injecting the blood into the abdominal cavity through a fine trocar. Following this precedent, he injected two ounces of blood into the interstices of the recti muscle, but as the peritoneum was not pierced and the blood remained in the muscle, he at the same sitting injected other four ounces into the peritoneal cavity. The lady recovered, but died soon afterwards, and at the autopsy it was found that the blood beneath the skin, and also in the peritoneal cavity, had disappeared, the only traces of it being a slight ligamentary discoloration of the intestinal wall. In the third case the patient was weak and pulseless from hemorrhages during an operation, and in the space of one and a half hours, one quart of a six per thousand solution of salt at 102° F was injected into the circulation. After the first five minutes the pulse could be felt, and at the end of the process the patient had regained consciousness, and the pulse was 104 per minute. Unfortunately, two days later she died from pyæmia, attributable to other causes. The fourth case was one of anæmia from inanition consequent upon stricture of the pylorus. About eight ounces of defibrinated blood were injected into the arm or thigh of the patient, with considerable benefit, but he ultimately died from Bright's disease. The fifth and last case is one of pernicious anæmia, accompanied by intermittent fever, which is now under treatment as described in the previous case.

Dr. W E. Taylor thought that most of the cases that recovered after transfusion would have done so without it. The legitimate field for transfusion was in cases of hemorrhage during operations or accidents; but in phthisis its effects were more likely to be injurious than beneficial, because the diseased organ could not play its part in aerating the blood, and was likely to suffer from overcrowding the circulation. He believed that a mixture of ammonia, water, digitalis and whiskey would make a good solution for this purpose.

Dr. Whittell said he did not wish to be understood as having stated that the few pages referred to in his paper were the only literature upon the subject of transfusion; but, as compared to medical literature in general, there is very little upon this subject.

Although he had not seen the works referred to by Dr. Richter, he had noted extracts from them. The London Obstetrical Society has published numerous articles upon transfusion, mostly bearing upon the subject in connection with parturition and its attendant dangers from hemorrhage. Dr. W. did not advocate blood-letting except as preliminary to transfusion.

The Secretary reported that several members were in arrears with their dues, and liable to have their names removed from the roll. It was resolved to give them until the second Tuesday in June to put themselves in good standing.

There being no further business, the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

SAN FRANCISCO, May 26, 1885.

The meeting having been called to order by the President, Dr. Jewell, the minutes of the former meeting were read and approved.

The Committee on Admissions reported favorably upon the credentials of John McMahon, M.D., Jefferson Medical College, 1881; also of A. A. De Puy, M.D., University of California, 1881, who were forthwith elected to membership.

Dr. Albert Chase then read a paper upon Resuscitation. The Doctor made special reference to revival from coal-gas poisoning, by means of artificial respiration, and urged its continuance for some time after the respiratory and cardiac movements had ceased. In carrying out this process he lays the patient on the back, and then flexes and extends the trunk upon the thighs to the fullest extent, so that the change in position of the abdominal contents alters the capacity of the thorax, and the pressure of the knees upon the viscera stimulates the circulation. He advised the posting of instructions upon resuscitation in all hotels, tug-boats, water front and other public places.

Dr. Thayer recommended perseverance in the treatment of such cases, and expressed an opinion that the inhalation of oxygen might be found to be a useful adjuvant.

Dr. Arnold said that the method described by Dr. Chase was similar to one where the thighs are flexed upon the trunk, and

he deemed the latter preferable, as it permitted the water to run from the body in cases of drowning.

Dr. Flood mentioned a case where the respiratory movements were delayed in a child for one hour after its birth, and only commenced after artificial means had been kept up for this space of time. After resuscitation the child was very drowsy, and the Doctor suggested that the trouble might have been due to chloroform inhaled by the mother during labor.

Dr. Jewell reported a case where a man had apparently died from alcoholism. The battery was applied for some time without yielding any beneficial results, and even the undertaker believed the man to be dead, until one electrode was applied to the Pomum Adami, when the patient gasped, took a long breath, and soon recovered.

There being no further business the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

Sacramento Society for Medical Improvement.

SACRAMENTO, May 26, 1885.

The Society met in regular session, Dr. H. S. Nichols, President, in the chair.

Dr. Oatman introduced pyæmia as the subject for the discussion of the evening. The Doctor related two cases of this disease occurring in his practice, in one of which an abscess of the lung opened into a collection of pus in the parietes of the chest. Communication existed with the esophagus, and ingested fluids frequently passed by external openings on the thorax.

Dr. White had seen a case very similar to that mentioned, though suppuration was not so extensive. A pulmonary cavity communicated with an abscess in the chest wall, opening externally. The case recovered; practical salivation of the system with chlorine was the treatment adopted.

Dr. Simmons thought that alcohol in full doses was the most promising method of treatment.

Dr. Huntington believed that pyæmia, or septic disease, formed a chain of circumstances in the history of a case. Accepting the germ origin of these affections, it became hard to draw the line between septicæmia and pyæmia. Pyæmia, while always liable to occur, was now more likely to arise in the practice of the physician than of the surgeon.

In discussing the terms septicæmia and pyæmia, Dr. W. A. Briggs thought that with metastatic abscesses infection might occur through vessels or lymphatics. In the latter case general systemic infection was less likely to follow.

After a long debate, principally on the exact nomenclature of the diseases, and the distinction between pyæmia and septicæmia, the Society adjourned at 11 p. m., to meet on the third Tuesday in June; subject for the discussion of the evening, "Hypodermatic Medication."

JAMES H. PARKINSON, Secretary.

Licentiates of the California State Board of Examiners.

Since the last report from the Board of Examiners, the following persons, having complied with the law and the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

WM. T. ANGELO, Visalia; Coll. of Phys. and Surg., at Keokuk, Ia., March 2, 1880.

W. F. BAILEY, Orange; Starling Med. Coll., Ohio, March 5, 1885.

ROBERT B. CLARK, San Jose; Univ. Victoria Coll., Canada, May 2, 1866.

CHAS. S. COWAN, Fort Jones; Miami Med. Coll., Ohio, March 1, 1880.

E. M. GEBHART, Traver [Duplicate]; Miami Med. Coll., Ohio, March 4, 1878.

MAY C. E. GYDISON, Salinas; Woman's Hospital Med. Coll., Chicago, Ill., April 22, 1884.

ADOLPHUS W. KIMBALL, Williams; Med. Dept. Univ. City of New York, N. Y., March 13, 1883.

EMILE C. MERVY, San Francisco; Med. Dept. Univ. California, Cal., November 13, 1883.

ROSWELL O. P. PHILLIPS, Lemoore; Chicago Med. Coll., Ill., March 12, 1872.

GEO. B. RICHMOND, JR., Salinas City; Med. Dept. Univ. City of New York, N. Y., March 12, 1879.

JAMES L. ROBBERTSON, Pomona; Bellevue Hospital Med. Coll., N. Y., March 1, 1868.

MILTON M. ROWLEY, Fall River Mills; Chicago Med. Coll., Ill., March 5, 1878.

JOHN M. STUART, San Francisco; Med. Dept. Univ. California, Cal., November 10, 1882.

JOHN A. STURGES, Encenitos; Chicago Med. Coll., Ill., March 16, 1875.

FRANK BROCKWAY, Los Angeles; Med. Dept. Univ. of Buffalo, N. Y., February 25, 1880.

C. C. FIRTH, Brown's Valley; Med. Coll. of Ohio, O., March 1, 1881.

MARCIA GILMORE, Pomona; Med. Dept. Univ. of Michigan, Mich., June 26, 1884.

FREDERICK C. GRESHAM, Sierra Madre; Royal Coll. of Surg., England, July 21, 1874; Queen's Univ., Dublin, Ireland, October 15, 1875.

MARY E. LITTLE, Nevada City; Med. Dept. Univ. of Michigan, Mich., March 26, 1873.

ARCHIBALD MITCHELL, Los Angeles; Med. Dept. Univ. of Michigan, Mich., March 27, 1872.

GEO. C. PARDEE, Oakland; Univ. of Leipzig, Saxony, Feb. 28, 1885.

ELLEN J. SMITH, San Jose; Med. Dept. Willamette Univ., Oregon, March 26, 1883.

WM. H. VANCE, San Diego; Indiana Med. Coll., Ind., Feb. 28, 1870.

To carry out the wishes of the State Society as expressed in a resolution adopted at its recent session in this city, the Board has sent out circular letters to medical gentlemen in every part of the State, urging the formation of local societies, with the view to prosecuting illegal practitioners, in addition to the ordinary objects in the organization of such societies.

We are pleased to say that several societies have been so formed, and we hope that many others will follow immediately, in order that there may be concerted action upon the subject, throughout the State.

R. H. PLUMMER, Sec'y.

Simple Means of Obtaining Local Anæsthesia.

Dr. Cheize, in the *Glasgow Medical Journal*, writes that, wishing to remove an ingrowing toe-nail, and being without a spray-producer, he covered the toe with a pledget the size of a crown piece, poured ether on it, and evaporated this by means of a pair of bellows; in five minutes anæsthesia was complete, and lasted while the nail was removed and the matrix seared with the actual cautery.

Ringworm.

R. Thymol, ʒj. to ij.; chloroform, ʒj.; olive oil, ʒ ij. M. The thymol destroys the fungus, the oil prevents irritation and rapid evaporation, while the chloroform facilitates the absorption of the active ingredients by acting on the sebaceous glands.—*Med. World*.

Abscess Emptied Without Cicatrix.

To cure an abscess without a cicatrix. Dr. Quinlan (*Medical and Surgical Reporter*) uses a silver wire passed through the abscess, before it has reached the skin, and retained there. It acts as a drain, he says, and has never failed in his hands.

Fiat Justitia.

TO THE EDITOR:—In the last issue of the JOURNAL, the published proceedings of the California State Medical Society record the fact that Dr. Edward Donnelly was refused admission to membership. This was a great surprise to the doctor's old friends, who had always known him as an honorable gentleman, a surgeon of unusual ability, of rare scientific attainments and unsullied moral character.

It may be interesting to the members to know what kind of material has been rejected by the society, for the doctor has been an earnest worker in the ranks of science for nearly half a century, and has almost a national reputation, though he is too unassuming to assert his claims.

He began his professional career in 1843, when he graduated in chemistry, materia medica, etc., at the Philadelphia College of Pharmacy, and was immediately appointed chemist and assistant naturalist by the Academy of Natural Sciences of Philadelphia, to assist Lieutenant Strain, of the U. S. Navy, in an expedition (in the U. S. S. *Levant*) to explore the interior of Brazil for new facts in geology, ornithology, and other branches of natural history. Returning, after several years, he graduated with honor from the Philadelphia Medical College in 1854, and practiced his profession in that city till the beginning of the civil war, continuing his connection with the college as teacher, together with his life-long friend Dr. Atkinson, now permanent secretary of the Pennsylvania State Medical Society.

At the beginning of the civil war he was appointed surgeon of the Second Pennsylvania Regiment, remaining in active service three years, till the regiment was mustered out, when he was appointed surgeon of the Second Pennsylvania Cavalry, and placed in charge of the U. S. Cavalry Hospital near Alexandria, which position he occupied for several months after the war.

Surgeon Donnelly was in every great battle of the army of the Potomac, was taken prisoner while in charge of 300 wounded, to Libby prison, and was honorably promoted to be Lieutenant-Colonel for valuable services in the field, his commission being signed by President Johnson. He was considered the most expert operator in the army of the Potomac, and during those years he doubtless performed more capital operations in one

week, than would fall to the lot of most surgeons in civil practice in a lifetime. He was the first to suggest the idea of a national museum of surgical specimens, and his surgical cases are copiously reported in the medical and surgical history of the war.

After the war he located at Pittsburgh, where he practiced surgery for sixteen years, during which time he was a member of the Alleghany County Medical Society and of the Pennsylvania State Medical Society.

His contributions to medical and scientific literature during the last 43 years would fill several volumes, but space only permits reference to a few. His essay on *Phytolacca Decandra* was quoted by the authors of the U. S. Dispensary in 1843, and is referred to in every edition from that date to the present time. It is also quoted in the New National Dispensatory and in Parrish's *Materia Medica*. He wrote and read before the American Pharmaceutical Society at their meeting in 1858, a history of the Brazil-nut tree (*Bertholletica Excelsa*), with illustrations, and in 1860 a history of the cocoa tree and fruit (*Theobroma Cocoa*), all of which were published with plates in their transactions. He also wrote a history of that remarkable disease, Beri-beri, the history of a case of a spiculum of bone, in the dura mater, of eleven years standing, trephining and cure, besides contributions on many other subjects, too numerous to mention.

At the last meeting of the California State Medical Society, Dr. Donnelly having received a printed invitation to become a member, and being duly qualified, sent in his credentials, and learned the next day from the public newspapers that he was rejected. Upon inquiry it was found that a medical gentleman having a grievance against the doctor, on account of a misunderstanding about a case (and we have all had those experiences), caused the doctor's rejection.

Upon this ex-parte evidence, and without sending for Dr. Donnelly to give his statement of the facts, which would have completely justified his action in the premises, he was ungraciously refused admission.

Was this Star-chamber proceeding fair—was it just—was it honorable?

Just such men as the doctor are needed in the society, and we, younger practitioners can learn much from them.

J. F. S.

OPHTHALMIC NOTES.

Ophthalmia Neonatorum.

PATHOLOGY AND TREATMENT.

By Dr. R. LABUSQUIERE.

Translated from the French, by C. H. Rosenthal, M.D.

The clinical writings which deal with the great *puerperal epidemics* of the past are perhaps subjects of great surprise to the young practitioner. He is no doubt greatly astonished to learn that at one time our most eminent authorities were, so to speak, totally powerless in the presence of puerperal poison. Yes, even assisted in their own defeat by believing, like veritable fatalists, that the disease only terminated with the number of their victims.

The young practitioner must have recourse to the classical literature on the subject in order to obtain a just idea of *what has been* in obstetrics, of the errors, difficulties and discouragements which those men who consecrated their existence to the profession had to meet and overcome; and above all, to appreciate the grand progress which this specialty has made. And if he care to follow up the matter, he will certainly see the reciprocal relation of this progress to certain scientific events, and will assuredly appreciate from whence the greatest good has come; he will comprehend whose great mind, in the midst of a life of indefatigable research, gave birth to that grand and luminous idea which has been the point of departure for innumerable researches and so many efficacious reforms; an idea which has taken unto itself both spirit and life, and constitutes in obstetrics, as in surgery, the *doctrine of bacteria*, or, better still, the *doctrine of results*. Thanks to a prophylaxis and therapeutics in harmony with the ideas of Pasteur, we have the right to affirm that puerperal affections can now be reckoned as among those classes of disease whose action we can control and limit to a very great extent. Yes, even to hope that they may, sometime in the near future, be banished from existence.

Marching at the side of these affections, or, so to speak, embraced within them, there exists one almost vanquished, but

which at one time raged with extreme violence. I refer to the subject of this writing—to ophthalmia of the new-born. This affection, always parallel with puerperal affections in general, has yielded to the same methods of prophylaxis and therapeutics, and been so greatly enfeebled as to already be, as we shall soon see, on the point of almost complete disappearance from the puerperal period.

HISTORY.

The fact that the disease presented itself in certain cases in a mild form, showing every tendency to recovery, and on the contrary in other cases, notwithstanding all treatment, the tendency was to a fatal termination, deterred our clinicians from seeking for a *single cause* for a disease so variable in its appearance as in its consequences. Cannot the very same be said of puerperal fever? In other words, is there a single clinician who at one time or another has not remarked the astonishing differences between various epidemics, respectively various cases of this dreaded disease of childbed?

Has it not occurred to these same gentlemen that during certain epidemics they have met with invariable success, and at other times to be absolutely obliged to close the hospital as the only means to limit its progress? The most wide-spread of modern ideas on the subject is, that ophthalmia neonatorum is an infectious disease, which develops itself under some specific cause, and which does not acquire all of its virulence until it is favored by an *ensemble* of special circumstances which constitute a medium for its predilection. One could reply that this theory is not based on absolutely proven facts; also that *the primary cause*, the specific organism, has until now never been discovered and is in reality still a matter of conjecture.

But the modern mind accepts the *doctrine of results* as the best criterion. The marvelous results obtained from the employment of prophylactic and curative methods suggested by modern ideas on the nature of the subject, is proof sufficient of the correctness of the theory. We think that no better argument is needed; still, it may not be out of place to here present the experience of Zweifel to our readers.

The task which this author proposed to himself was to prove whether the blepharo-blennorrhœa of the new-born was invariably due to a specific coccus, the diplococcus or gonorrhœic coccus of Neisser, or if the simple vaginal catarrhal secretions or the normal lochial discharges could determine this ophthalmia.

Encouraged by the experience of Guille on four blind-born infants, and of Pivinger on twenty-nine infants afflicted with pannus, Zweifel, in conjunction with his colleague, Stattler, ventured to experiment on infants whose eyes were perfectly healthy. Taking by means of a pipette some of the lochial discharge from the vagina of perfectly healthy women, he examined the same under the microscope, and found it to be free of any coccus, nor could a trace of the gonococcus be found. Zweifel had the courage and audacity to place some of this lochial secretion into the cul de sac of the eyes of six infants. In no case was an ophthalmia blennorrhagica set up. He repeated the experiment, using the lochia of the third and fourth day of the puerperium; that is to say, sanguineous serous, and even purulent discharges, with the same negative result. Never were any of these experiments followed by inflammation or suppuration. Two of the women had formerly leucorrhœa.

As a result of his experiments he arrived at the conclusion that this form of inflammation is due to the transportation and propagation of gonorrhœa through the diplococcus, the gonorrhœa coccus of Neisser and Stattler.

ETIOLOGY.

As was to be expected of a disease so variable in its symptoms and severity, it did not fail to produce theories explanatory of the same, and under the head of etiology have appeared all those causes which have figured in the innumerable affections whose *essential cause* is unknown, at one time or another.

Nevertheless, the new ideas on the subject are far from removing from a certain number of circumstances all responsibility in the pathology of the disease. If we do believe that the development of the malady, with all its dire consequences, is due to the presence of some specific poison or agent, we must still bear in mind, and it will bear constant repetition, that this agent itself has need of certain favorable circumstances in order to acquire all its virulence and intensity of action. Without being desirous of forcing analogies on the reader, or of affirming that the facts necessarily exist in the subject under discussion, can we not pertinently state in the present state of our science that

First. According to the means of culture adopted, certain poisons will become attenuated, or on the contrary acquire increased septic qualities? Have not the striking experiments of Pasteur shown us how sometimes even a simple change of tem-

perature in the animal would either completely annihilate or favor the effects of the poison?

Second. On the other hand, has not Dr. Miguel, in his recent researches *on the living organisms of the atmosphere*, demonstrated that the number of these organisms, whether inoffensive bacteria or organisms causing fermentation, increase or diminish in varying proportions under the influence of atmospheric changes, whether the air be moist or dry, etc., etc.?

Third, and lastly—Can we close our eyes to those phenomena of spontaneous origin, but evidently due to some contamination, either anterior to or at the time of its appearance, or to some hereditary or personal cause; phenomena which present themselves, as for instance, in an eruption on the skin or mucous surfaces of the new-born? A new-born may have an erythema, an eczema, a pseudo-varicella, or an acne, profuse or discreet, etc. And cannot the conjunctiva be the seat of an exanthema as well as the integument? This doctrine, medical though it be, is not only not weakened by the bacterian theory, but is, on the contrary, strengthened thereby. In admitting the possibility of internal causes for conjunctivitis we do not thereby deny the probability of external causes producing the same anatomical lesion.

The question of ophthalmia appears to us a very complex one. The new microbial theories have caused us to neglect other essential causes for disease, and we to-day, to a more or less extent, neglect those accessory and important conditions which at one time were perhaps over-estimated. In order to present the matter more clearly to the reader, we thought it best to classify the different causes as follows:

A. *General causes*.—(1.) They embrace those vague yet still well recognized and generally admitted unhygienic conditions, both *subjective* and objective, which though they cannot be said to be of themselves a direct contagious influence, are still in this regard capable elements of infection. (2.) Those predisposing causes which favor the action of the contagious principle.

B. *Internal causes*.—Exanthema of the conjunctiva.

C. *Specific causes of external origin*.—(1.) Contamination of the lids of the infant with the secretions of the mother. (2.) Infection of different or same origin after birth of child.

A. *General causes*.—Under this head we again repeat as of primary importance the sudden changes of the physical qualities of the atmosphere. "Ophthalmia," says Guessant, "arises some-

times under the influence of peculiar conditions of the atmosphere." The influence of the seasons, the heat of an over-heated stove exerted on eyes opening for the first time, exposure for too long a time to a bright light [Sonemayer, Scarpa, Vidal de Cassis and Mackenzie], the ceremony of baptism, cold or damp air of certain countries, as also draughts of air on the eye, etc., etc.,—all clinicians will have noted in their practice various cases of conjunctivitis arising from any one or more of the above causes; and one should bear in mind that the conjunctiva is an exposed mucous membrane susceptible (in the case of the new-born excessively so) to external influences, and in danger of injury from a great number of agents, both physical and chemical, and consequently under these varying influences it may submit to alterations more or less profound, and thereby not only favor the action of the contagious principle but create as it were a port of entry for the same.

[To be Continued.]

Youngest Ovariectomy.

Dr. Roemer, of Berlin, reports in the *German Medical Weekly* an ovariectomy in a child twenty months old. At birth a peculiar distension of the abdomen was noticed; nine months later a tumor, easily movable, fluctuating, but containing resisting portions, was found extended upwards from the pelvis; at the time it was supposed to be an ovarian cyst. When the child was twenty months old laparotomy was performed, and a tumor larger than a child's head removed from the right ovary. The wound healed by first intention, and the child recovered rapidly without a bad symptom.

Dr. Israel, after microscopical examination, pronounced the tumor a teratoma, which consisted chiefly of connective tissue with hyaline cartilage, in which he discovered osteoid tissues, and even perfect bones containing marrow cavities. The tumor was composed of one large and several smaller cysts.

Night-Sweats.

Prof. DaCosta says that in the treatment of the night-sweats of phthisis ergot is preferable to atropine, being more permanent in its effects, and has the additional merit of not producing the dryness of the throat which so frequently follows the administration of atropine. He would give gr. ij. of ergotin ter die, the last dose given at bed-time.—*College and Clinical Record*.

Editorial.**The Grand Jury's Report Upon the City and County Hospital.**

In its last report, the Grand Jury expressed disapprobation of the manner in which the physicians visiting the City and County Hospital discharged their duties, and suggested, as an improvement thereto, a line of conduct which may be summarised as follows: First, the time of the visiting physicians will be more profitably spent "in prescribing for the patients," than in lecturing to the students. Second, all physical examinations in the presence of students are objectionable. Third, the connection between the Hospital and the Medical Schools should be severed. This recommendation, coming from such a source, was calculated to surprise all the members of the profession, except such as have grown old in public service, and become so accustomed to abuse and misrepresentation, that they regard them as a bitter tonic to be taken regularly, morning, noon and night. Had this attack emanated from Coroner O'Donnell and his minions of the sand lot, it would have caused no wonder, but, since it came from a body that must have contained in its ranks many intelligent and impartial men, we can only conclude that a one-sided, distorted aspect of the matter had been presented to their view.

We do not for one moment dispute the power of the citizens to manage the hospital in the way they believe to be most conducive to their own interests, but we would have them pause before adopting the extreme measures urged by the Grand Jury in its report, and consider whether these would be for the benefit of that institution and its inmates. Furthermore, the above remarks upon the Medical Staff distinctly charge them with neglect of duty, and with sacrificing the welfare of the patients to the interests of the students. We know from our own frequent visits to the hospital that this is not the case, and the ab-

surdity of such statements will be patent to all who reflect, that in this small hospital there are four interne junior physicians, and other two resident physicians, in addition to the visiting members of the staff. The wards are equally divided between the Medical Department of the University and the Cooper College; and as the clinical professors from each school only lecture at the hospital two days in the week, there remain five days, during which each ward is not visited by students. It is therefore very evident that with such a numerous medical staff, and with only two days in seven devoted to teaching, the patients cannot be neglected.

The second impression, that the welfare of the patient is sacrificed for the benefit of the students is equally erroneous, since the lecture so loudly condemned by the Grand Jury is exactly the same examination to which all men are subjected, both in public and private practice before they are put under a course of treatment, with the exception that the students are on-lookers during the process, and listen while the Professor explains the symptoms in the case, and prescribes for the patient before he leaves the bedside. Moreover, the object of these lectures is to teach the student by example how to cure disease, and this could never be accomplished by maltreating the patient.

The strongest argument in favor of our plea is that the best and most effective public hospitals all over the world, are those in connection with the medical schools; the welfare of the one is wrapt up in that of the other, and the benefits are mutual.

We therefore trust that the recommendations of the Grand Jury will not be acted upon, and that these gentlemen themselves will recognize that they have arrived at a somewhat hasty conclusion.

Bound Volume of the Transactions.

For a second and last time, we ask for the names of those who desire a bound volume of Transactions at the end of the year. One answer has thus far been received to the request made last month. Unless more names are obtained, we shall not feel justified in going to the extra expense of seventy-five dollars. If issued, the price will be nominal to those whose names are received in time.

American Medical Association.

The thirty-sixth annual meeting of the American Medical Association was held at New Orleans during the days of April 28, 29, 30, and May 1st, 1885. Dr. Logan, in behalf of the profession and citizens of New Orleans, delivered a cordial address of welcome. Dr. Henry F. Campbell, of Georgia, the President elect, then delivered an address, which contained suggestions of great importance to the profession at large. He spoke of the "Doctor in the Courts," and called attention to the three principal attitudes in which, as professional men, we stand in courts of law, viz. : First, as the medical witness; secondly, as the medical expert; and thirdly, as the defendant in suits of malpractice. In all of these the medical man labors under disadvantages which it should be the duty of the Association to free him from.

As an expert, his testimony is dealt with in open court at whatever cost to the witness, so that it may be made to subserve the interest of one side or the other; as a witness, he is often forced either to reveal secrets imparted to him in confidence, or to suffer fine and imprisonment for contempt of court; as a medical defendant, whether justly or falsely accused, he is obliged to appear and defend himself against accusations of malpractice at the expense of time, money, and professional reputation.

The President concluded his address by recommending, therefore, that a committee be appointed to consider the expediency of organizing a section of forensic medicine, for the discussion of papers upon the important, but little understood relations of medical men to the tribunals of law.

Through the effort of the committee to secure a Congressional appropriation for a fire-proof building for the Army Medical Museum and Library, Congress had, at its last session, granted the requisite appropriation, and the work is to be commenced at once. It is to be located on the Smithsonian ground, and will be near the National Museum.

Dr. Billings stated, in behalf of Dr. Flint, that the invitation

for the next International Congress to hold its meeting at Washington in 1887, had been accepted, and that a full programme would be presented at the next meeting of the Association.

The address on Medicine was delivered by Dr. Henry D. Didama, of Syracuse, N. Y. He spoke of the hydrochlorate of cocaine, and of the cordial, enthusiastic and universal acknowledgment of its merits, as refuting the charge that the medical profession is hampered by a blind conservatism; then of the brilliant discovery of the comma bacillus, the practical use of which, although we cannot see at present, we must be willing to patiently wait, until, as has happened so many times before, the apparently unimportant, has by some further discovery become to be of the greatest importance.

This he well illustrated by the patience of Fraunhofer, who discovered, but could not decipher, the solar spectrum, but who nevertheless faithfully recorded five hundred and seventy-six apparently meaningless lines, which forty years after were translated by Kirchoff. So mycology may yet in some way aid in preventing and curing disease.

The address on Obstetrics was delivered by Dr. R. Stanbury Sutton, of Pittsburg, and a very interesting address it is, as it reviews the growth of McDowell's operation, performed at Danville, Kentucky, in 1809. He shows how nearly perfect was the parent operation, notwithstanding the many changes that have been attempted since.

- 1st. The patient was refused operation in her own house.
- 2d. She was operated upon in Dr. McDowell's own house.
- 3d. History mentions but one assistant present at the operation.
- 4th. The patient had never been tapped.
- 5th. The room contained but little furniture or upholstery.
- 6th. The room was well ventilated by an open fire-place.
- 7th. The atmosphere was that of a healthy border town.
- 8th. No sponges were introduced into the abdomen.
- 9th. He ligated the pedicle and dropped it in.

In what way could the operator of to-day have improved the

environment, or even the operation, except by cutting off short the ligatures which were left hanging out of the abdomen. Three quarters of a century, and the operation is just where McDowell left it, with this solitary exception!

Dr. Sutton then reviewed the history of the pedicle, and related how almost every conceivable thing had been done to it. The use of the carbolic spray is still a matter of dispute; but as far as Dr. Sutton could learn, the best statistics yet obtained by operators in the United States belong to Dr. Bentley, of Georgia, and Dr. John Homans, of Massachusetts, both of whom use the spray. He does not use the spray himself, but he considers that "cleanliness and Listerism can never be separated, for Listerism is the gospel of cleanliness; without the latter you cannot have the former." He concluded by speaking of the "great, the good, the pure, the noble, the generous Marion-Sims," who, like McDowell, "possessed a genius for origination, and will share with him the plaudits of future generations."

An unfortunate misunderstanding occurred in regard to the power of the Committee of Organization of the United Session of the International Medical Congress. The committee certainly seemed justified in its belief that it had full power to act, by the resolutions which were passed last year. These resolutions read, that the committee should elect its own officers, and proceed to act as an executive committee, with full power to fix time and make all necessary arrangements for such meeting; and further, that it should have power to add to its own membership. The Association has disowned the subsequent work of the committee, and it is feared that some embarrassment will be caused, for the action of the committee has been widely published, both in this country and in Europe. It appears to us that the Association has acted unwisely, and that it will be difficult for the additional committee of forty members to proceed with that unity of action which would characterize that of a smaller committee, especially since the original committee of seven are such able men. The work of the original Committee should have

been accepted, with the proviso that the "new code" men be withdrawn. It is to be hoped, however, that all will now go smoothly, and that no further dissensions will arise, which would be likely to create a bad impression abroad.

The address on Surgery was delivered by Dr. Duncan Eve, who reviewed many points in the history of surgery up to the present time, and then closed with an eloquent eulogy upon the late Dr. Gross.

The Treasurer's report exhibited an increase in receipts over last year of \$320.

The provisions made last year for increase of membership have added one hundred and twenty-five names to the roll.

The Committee on Publication placed on record their high appreciation of the services of Dr. Davis. They stated that the *Journal* was free from debt; that the number of members entitled to receive it was 3,050; the number of subscribers 850; and that the total number issued was 4,200. The income from dues was \$21,000, while the expenses, outside of the editorial office, was \$12,000. The committee decided to retain the publication of the *Journal* at Chicago, and unanimously requested Dr. Davis to continue as editor. Dr. Davis then spoke of the difficulties of conducting the *Journal*, but believed in its ultimate success, and that in a few years it would stand in advance of all others.

Dr. Roberts, of Philadelphia, from the Section on State Medicine, introduced an important resolution recommending the appointment in each State of an examining board, whose certificate should be a license to practice.

The Nominating Committee then presented the list of officers for the ensuing year, offering the name of William Brodie, M.D., of Michigan, for President. Dr. J. H. Rauch, of Illinois, was given the place of Chairman of the Section of State Medicine.

The next meeting of the Society will be held at St. Louis, on the first Tuesday in May, 1886.

International Medical Congress.

At the annual meeting held at Washington, in 1884, the American Medical Association passed the following resolutions :

Resolved, 1. That a committee of seven, of which Dr. Austin Flint, the President of this Association, shall be a member, shall be appointed by the President.

2. It shall be the duty of this Committee to extend in behalf of the medical profession of the United States to the International Medical Congress, about to meet at Copenhagen, a cordial invitation to have the next International Medical Congress meet at Washington, D. C., in 1887.

3. That the Committee shall elect its own officers, and that, in case the invitation is accepted, it shall proceed to act as an Executive Committee, with full power to fix the time and to make all the necessary and suitable arrangements for the meeting of such Congress, and to solicit funds for this purpose.

4. That the Committee shall have power to add to its membership, to perfect its organization, and that to meet the preliminary expenses of printing, postage, etc., the chairman of this Committee is authorized to draw upon the Treasurer of this Association for an amount not exceeding four hundred dollars.

The invitation was accepted, and the committee of seven, after adding to their number, proceeded in good faith to "make all necessary and suitable arrangements," and believing that time was precious, and that the power had been granted them, they appointed the officers for the Congress and issued circulars, which were spread broadcast over this country and Europe, giving the profession notice of the general schedule which had been arranged.

On handing in their report at the last meeting at New Orleans, much dissatisfaction was expressed, and finally the report was rejected. This has caused much discussion, and the expression of very different views upon the subject by the medical press. We will proceed to consider some of the debatable points.

1st. Had the Association the right to reject the report of its committee? Without doubt it had, for an association may at any time reject the report of any committee appointed by itself.

Whether it was wise in so doing is another question, as it may well be doubted whether it is wisdom to show to our guests any signs of internal dissensions which may mar the pleasure of the Congress.

Again, it has been contended that the committee exceeded their authority. To this we cannot agree, for the resolutions passed gave them full power to act as an executive committee, and unlimited authority, and they had perfect right, in our opinion, to consider it necessary to appoint officers for the Congress, and to make suitable arrangements concerning the different sections. After reading the resolutions carefully, we find nothing to restrict the committee in anything they might deem right to do for the good of the Congress.

Time was precious, and the success of the meeting depended largely on the promptness with which the details were attended to ; and if the committee had failed to make the appointments, they surely would have been severely censured for neglect of duty, and been referred to the resolutions of 1884 as evidence of full power having been granted them.

If the appointments made were not satisfactory to the Association, then they were right in rejecting them, but no charge can justly be made that the committee exceeded the authority granted them.

But why was the dissatisfaction so general? Was there any good reason for it? It was objected that most of the appointments were given to men in the Eastern States, and that the great West and South were ignored. While there may appear to be injustice in this, still we can easily understand that the men with the widest reputations abroad, and those who are most likely to do honor to the profession, come from the Eastern States. Many circumstances tend to make this a fact, with all due deference to the talents of Southern and Western practitioners. This may also have been a wise move for convenience sake, and for the insuring a full attendance at the Congress, of those who were to take part in the proceedings. Much, how-

ever, may be said on the other side, and it is certainly an open question, and we cannot wonder at the dissatisfaction expressed.

The greatest cause for discontent, and one which certainly justified the decided stand taken, was that the committee had appointed to places of honor, men who are not recognized by the Association as being in good standing. The American Medical Association is a representative body of the profession of the United States, and after their very decided action at St. Paul, concerning the "new code" men, it would be an insult to the Congress to allow any one of them a post of honor in that assembly.

Being dissatisfied with the action of its committee, the Association enlarged the committee by the addition of one member from each State and Territory, from the Army and Navy, and the Marine Hospital service, and from the District of Columbia. The committee thus enlarged, met at Chicago on the 24th of June, "to review, alter and amend the action of the present committee, as they deem best."

We are glad to learn that Dr. R. Beverly Cole is Chairman of this Committee, and we have great hopes that he will be able to settle all difficulties that have arisen, and that hereafter the many wheels may run smoothly on to a most successful meeting, and that a reception may be given our guests worthy of the medical profession of a great country.

THE COMBINED ADMINISTRATION OF BELLADONA AND IODIDE OF POTASSIUM.—Aubert ("Lyon med.") affirms that the headache and coryza experienced after taking large doses of iodide of potassium may be entirely prevented by the judicious use of belladonna. In the case reported, eighty grains of iodide were given daily, one grain of the extract belladonna being administered in the evening. After a few days, the writer states, it is possible suspend the use of the latter drug without any danger of a recurrence of the idism.

Notices of Books, Pamphlets, Etc.

MANUAL OF NERVOUS DISEASES. By A. B. ARNOLD, M.D., Professor of Diseases of the Nervous System and Clinical Medicine, College of Physicians and Surgeons, Baltimore. Pp. 170. New York: Vail & Co.

An increased knowledge of the physiology of the nervous system has opened up what might almost be regarded as a new field for clinical observation. The differentiation of the various nervous diseases, and the necessarily more elaborate methods of diagnosis are so different from those to which physicians have been accustomed, that many general practitioners have found it absolutely impossible to spare time from their every-day duties for the purpose of keeping up with the advances that have been made in so intricate a study, and the great *physical* weight of many of the text-books treating of the subject have reduced him to a condition of compulsory ignorance regarding it. A remedy for this evil will be found in the small volume which has just been issued, as the terse and concise statements will give the reader the information he desires, without putting him to the trouble of hunting for it through thirty or forty pages, and the short yet complete chapters will enable him to finish each subject in the short intervals of leisure that are at the disposal of a medical man engaged in general practice.

There are, however, imperfections, some of which will doubtless be remedied in subsequent editions. A more liberal use of diagrams would be a great improvement, especially in describing the anatomy and pathology of the spinal cord, since a comparison of these illustrations would lead to a better comprehension of the different lesions in each disease, that can be attained only by extensive reading. That the physiology, which is so important and necessary a part of this work, is altogether too scanty, is evidenced by the fact that no reference is made to the distribution of nerve fibres in the internal capsule.

Dr. Arnold repeatedly in the text refers to the interparietal sulcus as the *introparietal*, while the former term is used on the plates. We do not remember having met this word before, and even should it be correct, it must be so very rare in English text-books that the usual term (interparietal) is decidedly to be preferred. The pages devoted to a consideration of neuralgia and

the different varieties of headache, although few in number, constitute one of the most satisfactory treatises we have met with upon this common ailment; the hints upon treatment in each case are exceptionally good, and will be found of great practical value. The book is one which we can unhesitatingly recommend.

A GUIDE TO THE DISEASES OF CHILDREN. By JAMES FREDERICK GOODHART, M.D., F.R.C.P., Assistant Physician Guy's Hospital, etc. Revised and Edited by LOUIS STARR, M.D., Philadelphia. Pp. 738. Philadelphia: Blakiston, Son & Co. San Francisco: Bancroft & Co.

This work was written to fill the gap between the large and smaller text-books upon the subject, and ably serves its purpose. The eminence of the author and American editor, *a priori*, leads the reader to expect something better than usual, and we can assure him that his expectations are likely to be gratified. He will find himself possessed of a book that presents each case to him clinically; that tells him not of an abstract disease, but of a suffering child; and that gives a reason for every form of treatment recommended. The volume also contains an interesting chapter upon the diet of children in health, and an appendix of useful formulæ.

MODERN THERAPEUTICS OF THE DISEASES OF CHILDREN. By J. F. EDWARDS, M.D., Editor of the *Annals of Hygiene*, etc. Pp. 346. Philadelphia: D. G. Brinton.

This is one of the Modern Therapeutic series, after the style of Naphey's Therapeutics. It contains many useful formulæ, and will be found to be a convenient, ready reference book, as it is fully up to date.

KIRKE'S HANDBOOK OF PHYSIOLOGY. Edited by W. M. BAKER, F.R.C.S., Surgeon and Lecturer on Physiology at St. Bartholomew's Hospital, London, etc., and VINCENT DORMER HARRIS, M.D., London, Demonstrator of Physiology at St. Bartholomew's Hospital. Eleventh edition, in two volumes, with nearly 500 illustrations. New York: Wood & Co.

This work forms the February and March volumes of Wood's Library. It is not necessary for us to say anything in its praise, as the mere fact that it has now reached the eleventh edition is a more valuable testimonial to its popularity and usefulness than the remarks of any reviewer. The editors have brought the present edition up to the date of the advanced stage of physiologi-

cal investigation, and have added many illustrations, which have in many instances suffered at the hands of the American re-printers. The division into two volumes may be an improvement so far as the publishers are concerned, but it does not make the book so convenient to the reader.

MICRO-CHEMISTRY OF POISONS, including their Physiological, Pathological, and Legal Relations; with an Appendix on the Detection and Microscopic Discrimination of Blood; adapted to the use of the Medical Jurist, Physician, and General Chemist. By THEODORE G. WORMLEY, M.D., Ph.D., LL.D., Professor of Chemistry and Toxicology in the Medical Department of the University of Pennsylvania. With ninety-six illustrations upon steel. Second edition. Philadelphia: Lippincott & Co. San Francisco: J. A. Hofmann. Price \$7.50.

In issuing this second edition, Dr. Wormley has not spared either labor or expense to make it a reliable companion to the student of Toxicology. It must not be imagined from the title that he treats merely of the microscopical examination of the different poisons; on the contrary, a full description of the chemical tests is given, together with the symptoms produced by them, and a report of many illustrative cases. Attention is called to the idiosyncracies, habit and conditions of the system, which so frequently modify the actions of poisons, notably opium and arsenic, by producing either a tolerance or increased susceptibility to the drug—facts which are only too frequently overlooked by physicians when prescribing. The English weights have been retained in preference to the metric system, as these are more familiar to members of both the legal and medical professions, for whom the work is intended; and to this edition there has been appended a new treatise on the nature, detection, and microscopic discrimination of blood. This volume will meet with that appreciation and encouragement from the profession which it so richly deserves.

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DR. O. G. DARLING, of Brooklyn, N. Y., in the *Ther. Gaz.*, claims that mur. of ammonia in half drachm doses, every half hour, if necessary, until three or four doses have been taken, is a specific for facial neuralgia. He is in the habit of continuing the remedy in smaller doses, say ten grains, three or four times a day for a day or two after the neuralgia subsides. It is also valuable for toothache.

Miscellaneous.

Facts for the People Regarding Cholera.

The Legislature of the State of California, during its last session, 1885, having, with the utmost indifference to the sanitary welfare of the people, in utter disregard of the suggestions offered by his Excellency Governor Stoneman, in his biennial message, and equally regardless of the importunities of the State Board of Health, refused to appropriate a single dollar to protect the State from the invasion of infectious or contagious diseases; therefore, in view of the possibility, or rather the probability, of *cholera* extending its ravages to the Pacific Coast this summer, the State Board of Health deem it prudent to offer to the public a few words of warning as to the necessity of the early employment of sanitary measures, to arrest the development of disease or mitigate its virulence if, unfortunately, it should appear among us.

Cholera being essentially a *preventable* disease, all questions concerning its cause, diffusion and prevention, must interest the people of this coast just now, when Europe is again the theatre of its manifestations; and as all preventive measures are based upon the assumption that the virus or germ of the disease is a living organism capable of transmission through water, food, clothing, or personal contact, and like all living matter, is itself susceptible of death, the prevention of its dissemination, or the means of its speedy destruction, are the desiderata to be sought.

Cholera upon these shores is a foreigner, and has never yet visited us, except by importation, and then only after ample warning. Last year the warning came to us from France and Italy; this year it comes from Spain and the shores of the Mediterranean. How soon it may reach New York or other seaports upon the Atlantic border is a question of time. It is sure to come along the highway of travel, and once landed on our shores will make its way across the continent quite speedily. Had the question of quarantine, efficiently exercised, been entertained by the last Legislature, and provision made for its maintenance, we believe we could have kept cholera, yellow fever, and small pox out of California. The highway is now open, and we must expect to reap the fruits of the criminal negligence, ignorance, and stupidity of our law-makers.

What can be done in the way of prevention locally? Much may be done if the officers of health, or the properly constituted authorities, do their duty. Cholera, as was said before, is a preventable disease; its habitat is among a crowd; it revels in filth and decomposing organisms; but failing to find suitable conditions for its growth and maintenance it, dies out. Consequently, the very first thing to be done is for each individual to see that *his* house, outhouse, and yard is put into a good sanitary condition. Do not wait for any health officer; see to it *yourself*. Have your drains cleaned out and flushed with water; your privy or cess-pool emptied and disinfected immediately. See that your cellar is cleared of all decaying substances; have it thoroughly white-washed, and all filth, rags, etc., burned. If you have a well, see that the water thereof is not contaminated by drainage from the house or outhouses. If you have the slightest suspicion that it is, boil the water before using, or, better still, shut up that well and dig another away from all chance of such contamination. If you use river water, which is always more or less polluted, see that it is boiled before drinking it, and you will save your health for the trouble. Avoid crowding in sleeping-rooms. See that each room is properly ventilated, nothing being so conducive to disease as an over-crowded and ill-ventilated apartment. Plenty of fresh pure air, pure water, and wholesome food, with household and personal cleanliness, will do more to prevent the access of cholera to your dwelling than all the supplications of the credulous, or the nostrums of the charlatan. While there is danger of cholera, or, indeed, any epidemic disease, developing in your midst, it is an act of prudence to avoid excessive fatigue from any source, as the system when tired or exhausted is much more liable to infection and less able to resist it than in other conditions. It is also indispensable that the stomach and bowels be kept in a healthy state by avoiding all unripe fruit, decaying vegetables, fish, flesh, or any food that is not perfectly sweet and fresh. Temperance in all things should be enjoined, and especially in alcoholic beverages, as it is found by experience that the intemperate, or those addicted to drinking intoxicating fluids habitually, are the first to die in an epidemic of cholera. Nature knows no mercy in dealing with the violators of Nature's laws; if her laws are transgressed, the punishment is swift and certain. Food should not be kept in the same room with the sick from any infectious disease; neither should that unconsumed by the sick be

used by others, but either burned or disposed of in some other equally safe way.

If cholera should appear in your dwelling, the first thing to do is to isolate the patient, put him in a comfortable room without carpets and with as little furniture as is consistent with comfort, disinfect immediately all discharges from the body, and either burn or bury them; do not throw them into either privy or cess-pool to poison your family or your neighbors; see that the patient has medical attendance promptly; do not wait ten or twelve hours to see if he will get better—delay in cholera means death. Cholera always gives warning of its approach by premonitory diarrhœa; this is the favorable opportunity to arrest the disease, the attack is then under the control of medicine judiciously chosen and administered; a few hours' delay and it will have passed from comparative safety into extreme danger, perhaps beyond the power of remedies to save. Act, then, promptly and intelligently, and a valuable life may be rescued from a fatal illness.

If there is no medical man within easy call, and a person be attacked with premonitory diarrhœa, place him in bed at once, apply warmth to the feet, a mustard poultice over the abdomen, and give a teaspoonful of paregoric (which is to be found in every family) every hour until your medical attendant arrives. Do not give indiscriminately, stimulants—brandy, red pepper, camphor, ginger, etc., advised by busybodies; wait for skilled medical advice—more people are killed by quackery and meddlesome trifling than by disease.

If traveling, avoid as much as possible using urinals or water-closets at railway stations; they are constant sources of infection, if not properly taken care of and daily disinfected.

Remember that cholera is always, in this country, imported; it seeks crowds, and follows, as a rule, the line of travel. Railway companies and lines of transportation generally, should see that all urinals, water-closets, and baggage-rooms belonging to the company, or about their premises, are daily cleansed, purified, and disinfected.

DISINFECTION AND DISINFECTANTS.

Disinfection is the destruction of the poisons of infectious or contagious diseases. *Deodorizers*, or substances which destroy smells, are not necessarily disinfectants, and disinfectants do not necessarily have an odor. Disinfection cannot compensate for want of cleanliness or of ventilation.

DISINFECTANTS TO BE EMPLOYED.

Roll Sulphur (brimstone), for fumigation; this is a cheap and efficient substance for fumigating rooms; it is positively destructive to disease germs, when efficiently used.

Sulphate of Iron (copperas), dissolved in the proportion of one and a half pounds to the gallon of water, is a cheap and reliable deodorizer and antiseptic for privies, cesspools, sewers, etc.

Sulphate of Zinc, in the proportion of four ounces of sulphate and two ounces of common salt to the gallon of water, is efficient and harmless for clothing, bed linen, blankets, etc. It should be used boiling hot, and the articles to be disinfected plunged into it and thoroughly boiled.

Corrosive Sublimate, in the proportion of a quarter of an ounce to the gallon, is an unsurpassed germicide and disinfectant, but has the disadvantage of being excessively poisonous, and therefore dangerous for general use.

Carbolic Acid is of uncertain strength, is expensive, and experience has shown that it must be employed in comparatively large quantities to be of any use. It is also liable, by its strong odor, to give a false sense of security.

HOW TO USE DISINFECTANTS.

I. *In the sick room.* The most available agents are fresh air and cleanliness. The clothing, towels, bed linen, etc., should, on removal from the patient, be placed in a tub of the zinc solution, boiling hot if possible. All discharges from the patient should either be received in vessels containing the copperas or corrosive sublimate solution, or if this is impracticable, should be covered with the solution. Unnecessary furniture, especially that which is stuffed, carpets and hangings, should be removed from the room at the outset, if possible, otherwise they should remain for fumigation and treatment.

II. *Fumigation* with sulphur is the only practicable method of disinfecting the house. For this purpose the rooms to be disinfected must be vacated. Heavy clothing, blankets, bedding, and other articles which cannot be treated with the zinc solution, should be opened and exposed during fumigation, as directed below: Close the rooms as tightly as possible, stopping up every crevice and keyhole; place the sulphur in iron pans supported upon bricks placed in washtubs containing a little water, set it on fire with alcohol or kerosene sprinkled upon it, and allow the room to remain closed twenty-four hours. For a

room ten feet square, at least two pounds of sulphur will be required; for larger rooms proportionately larger quantities will be necessary.

III. *Premises*, cellars, yards, stables, gutters, privies, cess-pools, water-closets, sewers, drains, should be liberally treated with the copperas solution; it is cheap and effective, and may save your life. The copperas solution may be easily prepared by hanging a basket containing about sixty pounds of copperas in a barrel of water.

IV. *Body and bed-clothing*. It is best to burn all articles which have been in contact with persons sick of infectious or contagious diseases. Articles too valuable to be destroyed should be treated as follows: Cotton, linen, flannels, blankets, etc., should be treated with the boiling-hot zinc solution; introduce piece by piece; secure thorough wetting, and boil for half an hour. Furs, silks, heavy woolen clothing, bed-covers, and beds, which cannot be thus treated with the zinc solution, should be hung in the room during fumigation, their surfaces fully exposed, and their pockets turned inside out; afterwards they should be hung in the open air, beaten and shaken. Pillows, beds, stuffed mattresses, upholstered furniture, etc., should be cut open, the contents spread out, and thoroughly fumigated. Carpets are best fumigated on the floor, but should afterwards be removed to the open air and thoroughly shaken and beaten.

V.-*Corpses* should be washed thoroughly with the zinc or corrosive sublimate solution, then wrapped in a sheet wet with the solution, and buried at once. Metallic or metal-lined coffins should be used when possible, and *always* when the body is to be transported for any considerable distance.

If these notes of warning and guides to action are heeded, and fear does not usurp the place of common sense, we have little to dread from cholera personally. It is the unthinking multitude, the selfish egotist, the "wait until it comes" people, that we have to fear. "An ounce of prevention is worth a pound of cure," and there is no disease to which this aphorism so aptly applies as cholera.

By order of the Board.

GERRARD G. TYRRELL, M.D.,
Permanent Secretary State Board of Health.

SACRAMENTO, April 24, 1885.

N.B.—Copies of this circular for free distribution can be had on application to the Secretary.

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No. 8.

Original Articles.

**REPORT OF THE COMMITTEE ON PUBLIC
HYGIENE, Etc.**

By M. M. CHIPMAN, M.D., Chairman.

Mr. President, and Members of the State Medical Society:

During the past year the health of the State has been exceptionally good, none of the greater epidemic diseases having visited us; and although there have been local epidemics in some of the interior towns, of those zymotic diseases which are, at times, liable to assume epidemic form, yet these have been limited in extent and not attended with great mortality. And on the whole the deaths from that class of diseases have not been in excess of the average of previous years; and the death rate from all causes, according to the reports of the San Francisco and State Boards of Health, has been less than for the two preceding years, although quite recently there has developed an unusual prevalence of diphtheria in this city.

During the summer of 1884 yellow fever prevailed in several Mexican towns, with which we have pretty direct communications, and for a time there was apprehension that the disease would be brought to this State; but by quarantine measures, instituted by the State Board of Health, it was prevented. As yellow fever is continuously endemic in some of the Mexican cities, and as there is always a liability of its becoming epidemic, during the hot season, and spreading to other parts, our direct railroad communication with that country will henceforth subject us to more frequent seasons of exposure and anxiety than on account of epidemic from any other source, and from which no

relief can be foreseen, except the distant prospect that by emigration thither, and progress, the sanitary arrangements of the country may eventually become improved.

CHOLERA PREVENTION.

During the past season there was some apparent apprehension of an invasion of cholera, and a renewal of the discussion of that disease in medical circles, on account of the epidemic, at the time, in southern Europe. A disease, supposed to have been the same as the present Asiatic cholera, existed in the region of the mouths of the Ganges and Brahmaputra, before the Christian era, but its prevalence was less extensive and its visitations less frequent at that early period than in after centuries, it having gradually increased in those respects with the progress of time; but it was as late as the year 1756, according to the data of epidemiologists, which marks the commencement of the periodically recurring epidemics in India. There are accounts which indicate that cholera had formerly been in London and in some of the other maritime cities of Europe, but without spreading to create any extended epidemic; and the invasion which commenced in 1830 by the land approach, up the valley of the Volga and through the mountain passes into European Russia, was the first general experience, on that continent, of the disease, which subsequently became world-famous and terrible.

The only visit of Asiatic cholera to California occurred in the fall of 1850. The disease was brought to San Francisco from Panama, on about the first of October, and by Christmas, at which time it had subsided, it had caused 250 deaths. On October 18th cholera appeared at Sacramento, having been brought in by the overland emigration. It spread rapidly, causing great consternation among the inhabitants, and out of a population of 8,000 more than half fled the city, and of the remainder there were over 1,000 deaths before December, at which time it had subsided. The unsettled condition of the population, and the want of home comforts and care, must have greatly increased the mortality, and it does not now appear possible, should the disease ever visit this State again, that as great fatality would attend it as on that occasion.

Since 1850 cholera has been many times in Europe, during several seasons extensive and destructive epidemics having prevailed there; and the disease continued in the United States, at

one or more points at a time, for the four years succeeding 1850, and was again in this country in the years 1865, 1866 and 1867, being especially severe in some of the western cities; and for the last time in the United States it prevailed in the Mississippi valley during the summer of 1873. And as in all that time it has not once reached California, the chances of the disease coming to this State, on account of its presence in Europe, or even in the eastern part of this country, with proper measures taken to guard against it, appear to be much in our favor. The people of India had proved incapable of combatting this terrible enemy successfully, and on its first invasion of Europe it was a strange and unknown disease. The educated physician soon came to understand the *rationale* of treatment, from the conditions of those attacked; but, not understanding its origin, and knowing nothing of its methods of propagation, no power or course appeared capable of arresting its migratory progress; and it was not until 1854, during the third general epidemic, that the first discovery was made, which on being followed up, has led to successful preventive measures. Professor Austin Flint, in a communication to the *Medical News*, under date of April 14th, 1885, states: "In 1866 and 1867 epidemic cholera, in the city of New York, was effectually stamped out by disinfecting and other measures employed to prevent the diffusion of the disease." The investigations of the epidemic of 1873, in the Mississippi valley, by Dr. John M. Woodworth, Supervising Surgeon of the U. S. Marine Hospital Service, and Surgeon Ely McClellan, of the army, acting under a resolution of Congress, ascertained that the disease had been present in several States, and in a large number of towns and villages; that there were reported 7,356 cases and 3,800 deaths. This great fatality, being over fifty per cent. of the number attacked, shows the disease to have been as virulent as at any former period; and Dr. McClellan's report fully exhibits that the reason of the small number of cases, as compared with the extent of territory over which the disease was scattered, was because of the completeness of the methods of isolation adopted by the attending physicians, and the intelligent and thorough manner of applying disinfectants, which had prevented it attacking a larger proportion of the population; and there can be no doubt but that it was owing to these measures that a general epidemic was averted. Neither is there any reasonable supposition to the contrary, but that the epidemic in

Europe, of 1884, was limited to Southern France and parts of Italy by the similar preventive measures which were there pursued, from the breaking out of the disease until its subsidence.

Quarantine measures have not always resisted the insidious approach of cholera, and yet quarantine has been an important factor in warding off its invasions, as notable instances of which I will refer to the epidemic in Egypt in 1883, which was prevented spreading out from that country by the strict British military quarantine; and for the last twelve years the inspection and quarantine, when necessary, at the ports of the Mediterranean, through which the Mahommedan pilgrims return from Mecca, has prevented their bringing the disease across into Europe; and the Russian military *cordon sanitaire*, across the routes of travel from the eastward, has arrested its approach thither direct from Asia. Cholera has been brought to Detroit, to Chicago and other localities by emigrants from infected districts in Europe, without infecting the vessels in which they crossed the ocean, or the port of arrival on the Atlantic sea-board, the germs of the disease having been packed up with infected clothing, before setting out on the journey, which became active when the clothing was unpacked by its owners on arriving at their destination, and brought into use again. This was the history of the introduction of cholera into the Mississippi valley in 1873, the germs of the disease having been brought by four different parties to as many localities, the emigrants themselves being the first victims, and the location of each outbreak becoming a nidus of infection, whence the disease spread; and it is suggested that in case of the inauguration of a system of direct emigration at times of prevalence of cholera in Europe, the chances of importing the disease to this State would be largely increased. By the measures hereinbefore indicated, with the requisite municipal, domicile, and personal cleanliness and care, the migrations of this formerly uncontrollable disease have been checked, and its prevalence and destructive power to a great extent limited.

San Francisco, with a death rate of less than twenty per thousand, still maintains its reputation as a healthy city; but this is owing less to adequate legal provisions for thorough police and supervision of its health and sanitary affairs than to its naturally healthy location and salubrious climate. Bounded on three sides by large bodies of ebbing and flowing tide-water, with most favorable opportunities of drainage, and during the

summer season with an almost constant breeze from off the broad Pacific, if with adequate municipal arrangements in matters of sewerage, house drainage and house and tenement inspection, certain classes of zymotic disease which now figure in the mortuary reports would be almost unknown in the city. There is safety and true economy only in the adoption of certain radical principles, in reference to these matters, and in the application and enforcement of rules which will carry out those principles to their ultimate results. In pointing out some of the most obvious deficiencies, I shall suggest that a competent officer of the city government should be held directly responsible for frequent inspection of all sewer work; to see that the materials used and the labor being performed are as per specifications; and to see that all inhabited buildings, within a certain reasonable distance of sewers, are provided with suitable pipes, properly laid and connected with the sewers, so that the excrement and slops shall at once be carried off. And on construction of new buildings it should be the duty of the owners or parties in charge to give due notice, so that the said officer may see that the drainage, sewerage connections, etc., shall be properly arranged, and are of a reasonably substantial character; and the owners of buildings should be held responsible for the maintenance of the arrangements and apparatus in perfect order; and tenants should be held responsible to their landlords for reasonably prudent management and care; and the responsibility of all parties should be enforced by frequent and thorough inspection; and in no case should occupancy of a building be allowed when those arrangements are not in good order. There is, and with cause, great complaint of the extreme filthiness of the Chinese quarter. To the extent which the buildings occupied by Chinese tenants are and have been deficient in the means of conveying the excrement and slops to the sewers, to that extent those tenants should not be held responsible for the present condition; but, without essaying to affix or apportion the responsibility, there is no doubt but that the accumulations of filth in certain blocks are such that they should be declared uninhabitable, and condemned as a nuisance, to be abated by the destruction of the buildings, where necessary, and cleaning and disinfecting the ground; and then if due regard shall be paid to sanitary arrangements in the reconstruction, and enforced thereafter in the management, a very salutary change will have been effected.

RESIDENCE ACCUMULATIONS.

In early civilization very little was known of the evil consequences resulting from the accumulation and presence of residence detritus. In nomadic life, with the open tent and frequent changes of location, there is less exposure to the exhalations inherent from the aggregation of animal life; but with the construction of substantial dwellings and continued residence in a permanent location, this became one of the chief dangers of human existence; and in the history of the past it would appear that the ignorance and negligence, in this respect, must have been a special generating cause of the epidemic diseases which have been so destructive of life. When in modern times the removal of city detritus came to be generally accepted as a necessity, and sewerage systems were adopted for that purpose by the cities of the civilized world, these systems frequently proved inadequate to the requirements, involving many changes of plans of construction, enlargements and extensions; and as soil saturation progressed, and the receptacles of discharge became contaminated, these added new sources of trouble, and the disposal of sewage and city detritus has been for many years one of the most constant and perplexing problems of engineering skill and of municipal management, and of taxation, and a frequent source of annoyance and apprehension to the populations concerned. Dr. Henry J. Barnes, in a paper recently read before the Suffolk District Medical Society, of Massachusetts, stated that the city of London, after having expended immense sums on its sewerage system, had failed to satisfactorily dispose of its sewage, as, although discharging it into the maritime Thames at some distance below the city, the sewage is neither carried out to sea or diluted to an extent to render it innocuous, but is deposited by the tides above and below the mouth of the main sewer, in quantities which cause a great nuisance to the people living along the river banks; and like difficulty has been experienced by many other cities draining into estuaries of the sea, and even by some discharging directly into the sea itself. A large number of English cities have so polluted the rivers, their former effluents of drainage, as to have been enjoined by the courts from making the streams the receptacles of sewage.

SEWAGE IRRIGATION.

Until recently no system had been devised which appeared to give promise of relief; but about a decade since, the necessities

of the situation incited to renewed activity of study and invention, and in several places to the appropriation of money for experiments. In England, experiments were conducted with the view of purifying the sewage before discharging into the streams, by different methods of filterage, and by treatment with chemicals, and also for devising a system of utilizing by irrigation and agriculture. Filterage proved a failure, and chemical treatment unsatisfactory; but in irrigation, although at first not giving satisfactory results, as experience developed better methods of application, the prospects gradually improved, until success became pronounced, since which the system has been adopted by many cities of Great Britain; there being at this time two hundred cities and towns, in England alone, disposing of their sewage by irrigation and agriculture. Dantzic, situated three miles from the Baltic, being troubled with the pollution of its harbor, at the mouth of the Vistula, constructed a sewer to discharge on a barren island, which, as a result, has become exceeding fertile, and the lands are now rented out at high rates for farming purposes. Berlin, having failed in epuration with chemicals, after trying irrigation on a small scale for eighteen months, became satisfied to enlarge to a grand system, and that city has now two farms, aggregating 3,853 acres, devoted to that object. Paris, after a long period of complaint and litigation on account of pollution of the Seine with its output of sewage and failure in attempts at epuration, in 1867 commenced an experiment, on a few acres, in irrigation. The experiments at first were conducted at a disadvantage, but the results were sufficient to encourage farther appropriation, and the acreage was increased from year to year, the prospects becoming brighter as experience developed improved application, until, in 1882, 1,200 acres were in use, and the city has more recently made a purchase of 2,500 acres. The experience at Paris and in other parts of Europe demonstrates that the natural soil is the most perfect epurator of sewage; that the residuary water coming from the subsoil drains is of remarkable purity, and does not suggest, either by aspect or composition, the sewage from which it proceeds; that by this method of application the fertilizing properties of sewage are transformed in the soil, and peculiarly adapted to plant life; and the extraordinary results in increased fertility and productiveness have been most gratifying, the rental value of the Paris farm at Gennevilliers having increased from six dollars per acre to thirty dollars

per acre; and the products of vegetables to the tenants having increased from a small amount to the value of over \$250 per acre. From a sanitary standpoint the results have not been less satisfactory. Were stagnant pools permitted, putrefaction would result, but with correct engineering and accurate levelling the sewage is all conveyed directly from its source of collection to the field; and with frequent and regular application, and not in excess of the soil capacity, there is no opportunity for the development of paludal influences or noxious effluvia. In those localities where longest practiced, vegetation has never ceased to be vigorous and healthy, and the inhabitants have never suffered evil effects in consequence of irrigation. On the sewage farms at Edinburgh are located beautiful nurseries for the children of the city; and the sewage farm at Croydon is surrounded by elegant villas, it being a fashionable resort, and the land which twenty years ago sold for \$300 per acre is now worth from \$2,000 to \$5,000 per acre. The eminent sanitary engineer, Col. George E. Waring, in a paper read before the Sanitary Council of Maryland, in September last, agrees substantially in regard to sewage irrigation with the preceding statements; but Dr. C. W. Chancellor, Secretary of the State Board of Health of Maryland, in an article published in a recent number of the *Sanitarian*, takes issue with Colonel Waring, and asserts that the advocates of sewage irrigation have overdrawn the degree of success attained thereby, and expresses the opinion that the system is not adapted to such large cities as Berlin and Paris, on account of the great area of land required; but, however, even Dr. Chandler admits the practicability of sewage irrigation for small towns, which is the point of greatest interest to the people of California. The State Engineer, Wm. H. Hall, in an article published in the Eighth Biennial Report of the State Board of Health, says that on account of the peculiar adaptability of the climate, and the topography and surroundings of the greater number of the interior towns, this is to be a country for a full development of sewage irrigation; and several towns are mentioned as having no other economical alternative, to disposal of their sewage by that system.

DIRECT REMOVAL OF DETRITUS.

It is stated by authority deemed worthy of credit, that in all the large cities of China the detritus is carried into the suburbs in hand buckets, and deposited on the land for the benefit of

vegetation, and with general favorable results, in evidence of which Dr. Williams' work, entitled, "The Middle Kingdom," does not include typhus, typhoid, scarlet fever or diphtheria in a list of the prevalent diseases of China. A primitive practice, with the advantage of modern facilities, may sometimes be developed into a useful system, and in this Chinese custom are presented ideas which invite examination for beneficial results. Some of the farmers have adopted the plan of using strong oblong boxes for privy vaults, which at intervals of a month or more are hitched on to and hauled out into a field and dumped. This is an improvement over the use of vaults, which are not as frequently cleaned out, provided the supposed immunity on account of the monthly emptyings does not induce the location of the privy too near the dwelling; but the period of a month is more than ample time for the development of disease germs, and the practice, unless with more frequent cleaning out of the boxes, is not as good as the Chinese method, as carried out under the direction of their city authorities. I propose, instead of the wooden box, two sheet-iron vessels, of suitable form and dimensions, with granite or other smooth and non-corroding lining, to be used alternately, and a wheelbarrow or hand-cart, by which the twenty-four hours' accumulation shall be conveyed every morning to a compost-heap or to a vegetable lot near at hand, in which a patch shall be prepared as required by being plowed and left in ridges, and the excrement there dumped into a furrow and lightly covered with earth, and the vessel then cleansed and returned to its place. This would add another to the daily chores of the household, but the product of the fertilizer, thus husbanded, would of itself more than compensate the extra labor; and it would be safe to arrange a privy of that kind as close to the living apartments as convenience might require, and the increased cleanliness and sweetness of the premises, and the lessened chances of sickness, would many times repay the outlay. A system of this kind would be especially adapted in connection with hotels in small towns in which there is no sewerage; and there are many public houses that are fairly well kept, with the exception that the closet contents are left to accumulate, and those necessary appendages become so foul and unwholesome as to be a source of apprehension and of great discomfort to the house patrons. In small towns, were these matters understood as they should be, with the proper arrangements for each house-

hold, the detritus could be carted off every morning by the vegetable producers of the neighborhood; and such an arrangement would greatly add to the comfort of the citizens, the healthfulness of the place and the profits of the farmers. And I believe that with the modern improvements for collecting, handling and transportation of all classes of material, a system founded on these same general principles could be carried out on a much larger scale, with benefit and profit.

In Amsterdam the pneumatic system of Liernur is used for a limited number of the inhabitants, in which, by the use of air-tight sewer-pipes and the application of air-pumps, the contents of the closets are drawn to the mouths of the sewers, in section after section of the city, once a day, and thence carried away in barrels and deposited on the land. But the system is too expensive for use where any other system is practicable.

Sewerage for the drainage and disposal of the detritus of cities was in vogue long before the construction of railroads, and whilst this invention, and mechanical power in different forms have been applied to the transportation and handling of almost all kinds of bulky substances, yet, as if the civilized world were bound up with the impression that transportation of city detritus were not possible except by water, no attempts have ever been made to utilize these modern facilities in its removal; and I believe that by their application a system might be devised by which the accumulations could be removed daily, without the intervention of air-tight pipes and air-pumps, and at less expense. The following is an outline of arrangement and appliances which would be adapted to such a system:

Each family to be supplied with the suitable closet vessels, one of which, with the twenty-four hours' accumulations, to be conveyed, before the family retires, to a place provided, outside of the locked apartments, where it would be accessible to the night workmen. The work to be performed between midnight and six A. M., during which time the street cars are but little used, and these could then be utilized for train cars, to be propelled within the city limits by the power best adapted to the circumstances; and these train cars to be provided with suitable tanks, having smooth and impervious inside finish. On streets having railroad tracks, the closet vessels to be carried by hand, or on barrows or hand trucks, and contents transferred to the tanks on the cars; and on streets without tracks, wagon trucks could be

used for hauling the tanks from and back to the cars. Arrived at the country destination, the train loads of tanks could be dumped from side tracks on to compost piles, or hauled directly to the fields, as experience should prove most practicable and profitable. A little exercise of ingenuity would contrive means of expeditiously changing the tanks from car to truck and from truck to car again; and the whole operation, except the first collecting, could be performed by mechanical means, even to the cleansing of the tanks preparatory to the following morning's work; and with systematic organization on a scale commensurate with the most extensive requirements. All solid substances, with such a system, could be kept out of the sewers, and nothing but slops and wash water allowed to enter them from the dwellings; trouble from sewer obstructions would be materially lessened, and but little water for flushing would be required, these being factors of saving in expense. The night work would not compel the payment of a high rate of wages as compared with cesspool cleaning and the removing of sewer obstructions, it would not be an unpleasant or unhealthy occupation. As an offset to the expenditures, I will refer to the fact that at San Francisco all the stable manure is hauled away, over the hills to the vegetable gardens, from five to ten miles distant. On the Atlantic sea-board it is carried away from the cities on vessels to the farm landings; and it is a very prevalent practice, if not universal, for the farmers to transport all the accumulations of the cities, of this coarse fertilizer, to their lands; and in some countries these accumulations have acquired a value which compels the farmer to pay for them at the stable, in addition to the expense of transportation; and as closet detritus is much richer in fertilizing properties, with systematic, cheap methods of handling, its application would certainly be more profitable. And it is therefore reasonable to suppose that after the system had become established, and the farmers of the neighborhood of a city had become acquainted with its comparative value, that they would readily contract to receive the detritus, on delivery, at such prices as would reimburse all of the expenses, both of collecting and transportation. But established custom and long-entrenched prejudice are more difficult to overcome than, with modern engineering, is the removal of mountains; and for centuries has the world moved on with a constant consciousness of uncleanness in its centres of population, and an impure atmosphere pervading

a great part of its habitations and their surroundings, because of the non-removal or imperfect removal of the cast-off residuum; and all that time the earth has been suffering deterioration and impoverishment, and its inhabitants a lessening prospect of food resource, from the constant consumption of its bounteous products, with only a partial restoration of that which was designed should be returned, in resuscitation of the loss sustained by the yearly cropping of the husbandman, a great proportion—the richest and least bulky of handling—having been wantonly run to waste, or left to become an instrument of retributive justice and a medium of lessons of duty, to compensate with discomfort and plague with disease those who through ignorance and neglect have failed in performing their part in completing the never-ending cycle of the living and dying processes of nature. But now, having attained that degree of progress in which the delinquencies of the past, in that respect, have become apparent, we may reasonably hope that more energy and thoroughness will be exhibited in the future; and that the time is not distant when the accumulation of putrescible substances will not be permitted; when all city sewers will be kept so fresh that poisonous gases will not be evolved; when epidemic diseases will create less dread, and those zymotic diseases which are generated by stagnant filth will cease to be prevalent; and that the hitherto cast-off detritus, the value of which has now been so abundantly demonstrated, will itself be generally utilized in an offsetting of expenditures, and, as it should be, applied to the recuperation of the soil.

PATENT MEDICINES AND MEDICAL ADVERTISING.

In examining into the subject of medical advertising, I have collected copies of 244 different newspapers published in California, and in other States and Territories of this coast. There is no other industry which is as extensively and universally advertised in this country as that of patent medicines; and none other, having the same standing before the law and in the moral estimation of the public, in which there is as much misrepresentation persistently practiced. The newspapers are liberally patronized, these nostrums being the leading subjects, judging from the space occupied, of many of the country journals; signs and placards are made conspicuously prevalent; fences and vacant walls utilized, and circulars and hand-bills in endless variety dis-

tributed in private, and posted and distributed in all public places, wherever people are in the habit of dwelling, passing or sojourning. The style of these advertisements is too well known to require comment; the ingenuity displayed to attract attention being only equalled by the extravagant virtues and healing power attributed to each special compound. That this unlimited prevalence of patent medicines is a great evil, there can be no doubt; by promoting a too frequent resort to medication by the class who use them for every little indisposition which arises; by using medicines of which, because of their secret character, the therapeutic properties are unknown, and their application uncertain; by inducing the use of strong medicines where the constitutional conditions are such that only mild remedies can be borne, or where the alimentary condition is such that they prove irritating, and result in serious and permanent injury; and frequently when the patient, not understanding his condition and not knowing what is required, but having a hope, from the wide advertised application of patent remedies, that his case can be hit by something, doses away with one after another, thereby aggravating the disease from which he is suffering, and perhaps brings on other diseased conditions.

The following sample exhibits the character of the business of certain card publishers:

A CARD.—To all who are suffering from errors and indiscretions of youth, nervous weakness, early decay, loss of manhood, etc., I will send a recipe that will cure you, *free of charge*. This great remedy was discovered by a missionary in South America. Send self-addressed envelope to Rev. Joseph T. Inman, Station D, New York.

The above is constantly inserted in over one hundred newspapers of the Pacific Coast alone. The credulous sufferer addresses the Rev. Joseph T. Inman, and in due time receives the recipe, accompanied with a circular containing a plausible fiction of extraordinary suffering on account of his own criminal errors; of missionary labors rendered inefficient because of his weakened condition; and of the discovery, in the valley of the Amazon, of the great remedy, "Corrassa Compound," by which he was restored to health; and of his devotion since to the sacred duty of sending the recipe to sufferers from like complaints. And the circular adds: "If you can't get the medicine put up to your satisfaction by your druggist, I will send it to you at cost, which is just three dollars and thirty-six cents, and the postage fourteen

cents, making three dollars and a half for the package." It is not intended that any druggist shall put up the compound, as the names given are not in the Dispensatory, or the articles of which it is composed kept under those names in the drug stores; and usually this cute advertiser will be able to lure on his victim until pay for several packages has been obtained, and perhaps until he has palmed off on to him something else besides. And when the unfortunate discovers that he has been humbugged, the private nature of his troubles seals his mouth against exposing the imposture; and thus secure from publicity, the game of this pretended reverend continues to flourish. I have evidence that this same trick, worked under different forms and names, is being made the means of extensive business by several parties who are engaged in it.

MAGNETIC HEALERS.

Of the score or more of magnetic healers always holding forth in San Francisco, there has usually been one who by his extensive advertising and marvellous pretensions, has assumed the leading position, for the time being. Aborn formerly held that conspicuous position for some three or four years, during which time he occupied extensive parlors on Kearny street, and the papers were made to abound with the self-published fame of his wonderful performances; and for awhile, it is said, he was remitting money to an Eastern city for investment. But gradually the field became worked out, the gullible element had been surfeited, and the great magician quietly left the city, and soon after the State.

After Aborn, the powerful McLennan seized the magnetic sceptre, and great was his exhibit in the newspapers, and his gaudy signs, representing the corruscations of magnetic force, displayed on Stockton and Geary streets, were doubtless captivating to the ignorant and weak-minded. For eight years this man carried on the magnetic business in San Francisco, during which time, according to his own statements, he centred the healing force upon his willing subjects a hundred thousand times—enough, had the miraculous emanations equalled the advertisements, to have restored to health every man, woman and child within the precincts of the city. But, as in the case of his predecessor, his demonstrations ceased to draw, and he was compelled to leave the scene of his past successes.

In McLennan's successors, the self-styled Drs. Darrin, the gauzy mantle appears to have fallen on worthy shoulders, the line of whose career has been very much like the preceding. The same grasping method of exacting pay in advance; long columns of self-laudation, and blasphemous assumption of miraculous power; and apparently the same evanescent effects, begetting an after consciousness in the minds of their subjects of having paid their money and received no equivalent therefor; until the accumulations of the darkening negative results, weakening the force of the brilliant representations, these actors too will probably soon disappear, leaving nothing realistic of the whole comedy but the depleted purses of their victims and the accumulations of their satisfied beneficiaries, the printers and press owners.

Los Angeles at present has its full share of medical advertisers and magnetic healers. One M. Hilton Williams occupies a half column in which to proclaim his skill and insert certificates of cure. P. B. Myers makes use of a double half column. His proclamation commences with, "I bring glad tidings. Health restored and life prolonged to suffering humanity by the most wonderful agents ever discovered." One Kellogg, in a full column, gives out that he is the wonder, the world-renowned magnetic healer.

In San Francisco there are five non-licentiates who claim to practice medicine, who greatly outstrip their brethren of the order in the immensity of their advertising enterprises. These men distribute their audacious and ridiculous claims of personal expertness and skill, and the infallible properties of their nostrums, by circulars and pamphlets and in newspaper advertisements, in the most considerable towns throughout the several States and Territories comprising the Pacific Coast region, extending from British Columbia to Mexico, and from the Pacific ocean to the Rocky Mountains. As to the newspaper patronage of this quintet, I have clipped out of and hold in possession their peculiar effusions, from the following number for each, respectively: Dr. G. P. Allen advertises in 92 different sheets, published in eight States and Territories; Dr. A. E. Mintie in 123 different papers; C. D. Salsfield in 107 papers; the men who assume the name of the deceased chemist, Liebig, in 102; and the so-called Dr. Spinney in 64 only, the latter making up for the deficiency, in that respect, by the employment of men and boys in street distribution of circulars. Dr. P. B. McNulty bids

for the private disease practice, in the style of his class, in 14 dailies, weeklies and theatre programmes. Dr. McNulty's Hahnemann College diploma, being dated in 1882, does not accord with the assertion of a life-time devoted to the study of those diseases. Dr. J. F. Gibbon, a licentiate of the Eclectic Board of Examiners, has several effusive, self-laudatory advertisements, mostly inserted in country papers, which are clearly in violation of the code, and very different from the simple and concise card announcements generally—and I might say everywhere, with exceptions noted—used by licentiates of medicine in this State.

The second paragraph of Article II. of the Code of Medical Ethics reads as follows: "The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive." It is a fact that there is a numerous class of people who would not employ a man as an artisan or mechanic, or in any of the trades in which experience and skill are required, without first being satisfied that the applicant possesses a fair knowledge of the business proposed, who will, nevertheless, accept the services of a wandering charlatan or an advertising quack, without authentic evidence as to qualifications. And in the other professions, no one is allowed to practice in the courts of law, or occupy the pulpit as a minister, without first, in an examination by the constituted authorities, having given evidence of the required learning, ability and moral character.

The reason of the exceptional and illogical attitude of so many, as towards the medical profession, is to be found in the great lack of knowledge of the matters pertaining thereto. In the arts and literature of two thousand years ago, there is much which has been transmitted, and in some respects still serves as models for the present time; but the facts of material science were later in development, and especially has medical science been relatively in the back ground as compared with its utility and importance, the principal phenomena of physiology not having been discovered until within the last three centuries; and preventive medicine has advanced to receive public recognition only during the present generation. During the past two decades the science of

medicine in the medical colleges and among the profession has advanced rapidly, and yet the advancement has been confined almost entirely to the profession, the diffusion among the people of those branches which should be fairly understood by every well-informed person, as affecting the every-day life, having still received but little impetus. In order to a good understanding of physiology it is necessary that a knowledge of anatomy, especially of the internal organism, should be acquired; and whilst the dissection of the human cadaver, outside of the medical colleges, would be impracticable, the study of comparative anatomy would furnish the means of obtaining all the knowledge of the subject which would be necessary for those not intending to engage in surgery or medical practice; and this might be pursued without impediment or hindrance, to any extent. At present, the only institution in the United States in which comparative anatomy is systematically taught, is Cornell University, at Ithaca, New York; whereas, there should be provisions for learning that branch of science in connection with physiology and hygienic and sanitary instruction, in every college in the country. No person having a knowledge of the delicate organism of the human body, and of the complicated character of its functions, will venture to trust himself or his dependents in the hands of unauthorized physicians; and those who have acquired that much of the science can be depended upon as friends and advocates of legitimate medicine, and valuable allies of the regular physician against the pretensions of quackery, as possessing a test of knowledge in matters of which the quack is almost invariably lacking, being dependent for success on his assumption, his picked-up smattering of practice and pharmacy, and cunning to conceal his ignorance. It is in this direction in which lies the only effective remedy against quackery and the excessive consumption of patent medicines. When the proportion of those who have been educated in this species of most useful knowledge shall have largely increased, their instructions and influence will help bring about a condition of public sentiment in which misleading medical advertisements will fail to meet with response, and wholesome medical laws will obtain respect and universal acquiescence. And with a constituency thus educated, physicians and sanitarians would find no difficulty in carrying out measures in the interest of the public health, and to guard against the introduction of epidemic disease; and Legislatures would not fail to respond with appropriations for any reasonable demand in that direction.

COCAINE.

Lecture by C. H. STEELE, Professor of Materia Medica and Therapeutics, in
Cooper Medical College.

History.

Discovered by F. Gardeke, in 1855. First experimented with by Albert Niemann, of Goslar, in 1859. That it produced local anæsthesia when applied to the tongue, was first noticed by Prof. Schroff, in 1862. It was proposed as a local anæsthetic by Moreno y Maiz, in 1868; also by Charles Fouval, of Paris, in 1877, to relieve painful angina; and by Von Anrep, of Wurzburg, in 1880. It was first made practical by Carl Koller, a medical student of Vienna, on September 15, 1884.

Origin.

Cocaine is the alkaloid of Erythroxyton (U. S. P., 1880), and is obtained in the proportion of .34 % from green, and .27 % from old leaves. Thus, 1,500 grains of erythroxyton yields either three or four grains of the alkaloid; and six drachms to one ounce of the fluid extract represents one grain of cocaine. (Squibb.)

Preparation.

The following is an epitome of the process of extraction as practiced and published by Dr. Squibb, in the *Ephemeris* for May, 1885: Dissolve out the alkaloids from the coca leaves, reduced to a No. 60 powder, in alcohol, acidulated with sulphuric acid, thus forming sulphate salts, which are not so readily decomposed by the heat required by distillation, which is the next step in the process.

The chlorophyl and resinous extractive are now dissolved out with stronger ether, which does not affect the alkaloid salts. These are washed out with acidulated water, and separated from the ethereal extractive. The watery solution is frequently shaken with fresh portions of ether, until the latter comes off nearly colorless. More ether is then added, with excess of carbonate of sodium. This precipitates the alkaloids from the watery solution of their salts, and the alkaloids are then dissolved at once in the ether by agitation. The ether now holds the free alkaloids and some coloring matter in solution. The alkaloids are now changed into hydrochlorate salts by agitation with a ten per cent. watery solution of hydrochloric acid, which also dis-

solves them out of the ether. The watery solution of crude hydrochlorate of cocaine is then percolated through bone-back, and again precipitated by carbonate of sodium in the presence of ether, and separated. If a small quantity of strong hydrochloric acid is now added to the ether, it separates the yellow and inert alkaloid, called hygrine, leaving the almost pure cocaine in the ether, from which it is obtained by evaporation at a low heat.

Properties.

COCAINE— $C_{17}H_{21}NO_4$ —occurs in colorless four or six-sided monoclinic prisms. Hydrated cocaine exists in light, white, spongy fragments, or amorphous powder. It is soluble in 704 parts of cold water, but very soluble in ether, and to a less extent in alcohol. It melts near $198^{\circ}F.$, and is decomposed by concentrated acids or heat into benzoic acid, methyl alcohol, and a new alkaloid, ecgonin, $C_9H_{15}NO_3$. It combines with diluted acids to form salts.

COCAINUM HYDROCHLORICUM— $C_{17}H_{21}NO_4 \cdot HCl$ —occurs as small transparent prismatic crystals. It has a weak acid reaction and slightly bitter taste, which produces a characteristic transient anæsthesia of the nerves of the tongue. It is soluble with turbidity in its own weight of cold water, easily so in alcohol, but not in ether. It is likewise dissolved, without change in color, by nitric, hydrochloric, and sulphuric acids, the latter causing a frothing. It contains 88.78 % of the alkaloid and 11.22 of the acid.

Merck's hydrochlorate is an amorphous granular powder of a rather dusky white color, and ethereal odor. It is not so readily soluble in water, all solutions over five per cent. requiring the addition of alcohol. A ten per cent. solution of Merck's cocaine requires twenty per cent. of alcohol, and a twenty per cent. solution forty per cent. of alcohol. This salt contains only three-fourths of cocaine.

Reactions.

Watery solutions up to fifty per cent. strength have a slight greenish tint, and neutral reaction. When tested with solution of chloride of barium, they give only the faintest cloud (limit of sulphates), and no precipitate with oxalate of ammonium (absence of lime). A solution of iodine produces in its aqueous solution a brownish red, and picric acid a yellow precipitate. The caustic alkalies throw down a white crystalline precipitate

of cocaine. Incinerated on platinum foil, the salt should leave no residue (limit of inorganic matter).

Administration.

The hydrochlorate is the preferable preparation, on account of its greater solubility in water. The dose varies from one-sixth to two grains—average, three-fourths of a grain—and may be given in solution or pill form, avoiding strong acids, alkalis, and heat. Locally, it is generally used in the strength of a four per cent. watery solution. Such solutions are impaired by microscopic plants which grow rapidly, after six or seven days, and at the expense of the alkaloid. The most practicable protective is a one-half of one per cent. solution of boric acid (Squibb). An ointment may be made with vaseline, or the oleate of cocaine may be combined with any unguent in the strength of five or ten per cent. However locally used, it is important that the drug should remain for the required time in contact with the part. This may be accomplished by applying it to the thoroughly dried surface on absorbent cotton or old linen.

Physiological Action.

NERVOUS SYSTEM.—*Brain.*—In experiments upon dogs, B. von Anrep obtained the following results, which have been confirmed by M. J. Rossbach: Moderate doses, one-sixth of a grain to three pounds of animal weight, produce trembling, howling, and twitching of a few muscles. The dog remains in the same spot, swinging his head from side to side like a pendulum. After fifteen minutes there follow voluntary movements, expressing joy and exhilaration. After fifteen minutes more the dog commences to jump wildly around the observer, as if enchanted, and so continues for three or four hours, until the effects of the drug pass off. The animal then falls asleep, and after a few hours awakes completely recovered. Toxic doses, one-third of a grain to three pounds of animal weight, intensify the above symptoms. The dog displays restlessness, anxiety and terror, and after twenty minutes, signs of joy. After a few minutes there occur weakness, inco-ordination, rythmical movements, pendulum-like swaying of the head, disturbances of equilibration, continuous tetanic spasms, and then narcosis, with subsequent recovery. The pendulum movements and loss of equilibrium are due to functional changes in the semi-circular canals. The nerve cells in the gray substance of the cerebrum and cerebellum are

influenced directly, and not through changes in the blood circulation. Similar changes also take place in the Medulla oblongata and spinal cord.

In human beings the evidences of exhilaration from small doses and depression from large doses are much less pronounced. After doses of from one-sixth to one grain, increased mental activity has been observed (Schroff). When surreptitiously administered to fatigued soldiers, the drug "invariably removed the feeling of lassitude, and the men could go on for hours without feeling hunger or thirst" (Aschenbrandt, of Wurzburg), while two grains produced "wakefulness, lasting nearly all the night," with agreeable hallucinations only when the eyes were closed (N. J. Hepburn, of New York). In larger doses—up to five grains—there have been noticed somnolence and vertigo (Fronmuller, Schroff, Ploss), delirium and tinnitus aurium (Fronmuller), slight deafness and disturbance of memory (Schroff).

Sensation.—Small doses increase irritability of the sensory fibres in frogs (Gubb). Large doses first increase and afterwards paralyze these nerves in all animals (Gubb, Nikolsby, Ott, von Anrep). The anæsthesia extends over the entire skin and affects the mucous membrane of the nose, but not that of the eye. It is most marked in the posterior extremity, and may continue for forty-eight hours after the injection. It is moreover apparent that irritability of the motor tract and paralysis of the sensitive nerves are simultaneous. ("Laborde attributes the anæsthesia to the dulling of the perceptive faculties of the cerebrum.") The central nerves are the first affected (von Anrep, Ott), and the paralysis of sensation occurs before that of motion (Ott).

In man, local paralysis of the sensory nerves results from a continuous application of the drug to the mucous membrane. Three-fifths of a grain hypodermically injected near the trunk of a cutaneous sensory nerve produces, in twenty minutes, analgesia of all the parts supplied by that nerve (Da Costa and others). A similar effect was obtained in a frog by Moreno y Maiz in 1868. Hypodermic injections of one sixth of a grain every five minutes, two grains in all, diminished cutaneous sensibility, producing a "feeling as if walking on cushions, and a sensation, on grasping an object, as though a spongy substance were interposed" (N. J. Hepburn).

Motion.—Small doses do not affect motor irritability (Gubb). Medium doses increase reflex activity, even to convulsions and tetanic rigidity, due entirely to spinal influences (Mays). Dannini affirms that this irritability continues until death. Other observers find that paralysis, commencing in the lower extremities, follows the exaltation (Nikolsby, Hood), while Laborde reports that in the guinea-pig convulsions may also follow the paralysis. Moreno y Maiz considers that the subsequent deficiency of motor irritability results from paralysis of sensation. Large doses, from the first (Hermann M. Biggs), lower and finally suspend reflex action (Anrep. Denied by Laborde. He even advises its therapeutic use to stimulate the pathologically depressed motor nerves.) Strong electrical currents are required to excite even feeble clonic muscular contractions, and after a time electric stimulation entirely disappears (Gubb). Furthermore, when a frog is immersed in a solution of cocaine, motor irritability is increased for a few seconds, but completely destroyed when the immersion is prolonged (Gubb). These effects have been found most pronounced in cold-blooded animals, next in rabbits, and least—that is, with simply exalted reflex activity and slight paralysis—in dogs (Dannini, von Anrep). Cocaine acts directly upon the medulla, spinal cord and the peripheral motor nerves. When locally applied, the drug depresses the motor and sympathetic nerves and the muscular elements (Laborde).

In man there has been noticed only slight interference with locomotion (Hepburn).

Pneumogastric Nerves.—When locally applied to the nerve trunks, there follow irritability, depression and finally paralysis (Gubb). Internally, small doses produce no effect. Medium and large doses paralyze the inhibitory fibres without any previous stage of excitement (Biggs, von Anrep, Gubb; denied by Ott and Nikolsby).

MUSCLES.—The voluntary muscles display prolonged contraction during the stage of excitement (Ott, Buchleim, Eisenmeuger). During the stage of depression the muscles become more extensible, due to loss of muscular tonus through paralysis of the peripheral nerve endings (Rossbach, von Anrep, Biggs).

CIRCULATION.—*Heart.*—In frogs, cocaine in small doses produces stronger pulsations and increases the nervous irritability (Thomas J. Mays), in large doses depresses and paralyzes the heart. After a dose of one-half a grain the pulsations become

less frequent, irregular and intermittent. There are noticed a loss of rhythm in the action of the auricles and ventricles, and long pauses between the contractions of the ventricles, which are finally arrested in diastole before the auricles (Gubb, von Anrep, Nikolsky). When a four per cent. solution is applied to the heart, it is arrested in systole (Gubb).

In mammals small doses have no effect. Medium doses, three-fourths of a grain, render the pulse more frequent but not weaker (Weiss, Rossbach). No such effect occurs in rabbits (Anrep). The pulse becomes exceedingly slow after large doses (Rossbach), due to irritability of the pneumogastric (Laborde), but in dogs increases in rapidity just before death (Ott).

The heart, however, continues to beat long after general death. Paresis, and finally paralysis of the cardiac branches of the sympathetic are produced by small and large doses; hence the rapid pulse must be attributed to another cause, as in atropine poisoning, to paralysis of the vagus (Rossbach).

In man one grain hypodermically, causes the pulse to become more rapid, fuller and stronger, the ascending line in the sphygmographic tracing being twice as high as normal (Jurist).

Blood Pressure is raised by medium doses, due to narrowing of the peripheral arterioles from stimulation of the vaso-motor center in the medulla (Dannini, Ott). Large doses produce a rapid fall of blood pressure with relaxation of the arterioles. Locally, upon mucous membranes, ischaemia is induced by rigid contraction of the unstripped muscular fibres (Bosworth).

RESPIRATORY SYSTEM.—*Nose*.—Locally applied, it destroys the sense of smell for thirty minutes, and by exciting contraction of the venous sinuses and blood-vessels, through its action on the unstripped muscular fibres, it produces for twelve hours complete collapse of the mucus membrane. Secretions are also diminished (F H. Bosworth).

Lungs.—The drug at first stimulates the respiratory center, increasing the frequency of respirations in all animals. In man, doses from three-quarters to one grain increase the respirations up to twenty-eight or thirty (N. J. Hepburn, Weiss). Following this, or occurring at once after large doses, the respirations in frogs and mammals become slow, irregular, shallow and labored, with prolonged pauses (Gubb, Wood). There has been noticed a peculiar form of respiration, marked by a cessation of breathing for a short time, followed by deep and slow respirations,

which gradually become "quicker and more superficial, until at last, after great difficulty, stoppage of respiration again ensues" (Rossbach). After this depression paralysis takes place, with cessation of breathing after a full inspiration (Gubb, Anrep). In the last stages of poisoning the respiration is again accelerated and deep (Laborde). Death from cocaine poisoning is due to respiratory paralysis (Rossbach), and consequent asphyxia.

DIGESTIVE APPARATUS.—*Mouth.*—When placed upon the tongue and pharynx, the drug produces temporary anæsthesia and destruction of the sense of taste at the point of application (Anrep, Knapp). When given internally it induces dryness of the mouth by decreasing the secretion of saliva and mucus (Rossbach; denied by Laborde). The submaxillary saliva, however, is said to be increased (Vulpian).

Stomach.—The desire for food is diminished, or, if ingested, the relish for it is destroyed. This is probably due to anæsthesia and anæmia of the gastric mucous membrane from actual contact of the drug (Martius, Frankl, Topig, Tschudi, M. R. Vedder).

Intestines.—Moderate doses increase peristalsis (Anrep) and produce anæmia of the mucous membrane. There then follow, or occur directly from large doses, paresis and paralysis of peristalsis, with venous congestion of the intestinal walls (Anrep, Rossbach).

EYE.—When applied locally or given internally, cocaine dilates the pupil, but not completely, as does atropine. According to Nikolsky this does not result [from irritation of the sympathetic, since the pupil is still dilated after section of this nerve. As in the action of atropine, the cause of dilatation of the pupil will remain a problem for future solution. When locally applied, the pupil commences to dilate in from ten to twenty minutes, reaches its height in from thirty to forty minutes, remains stationary for thirty to sixty minutes, and disappears within twenty-four hours (Little, Knapp). During all this period the iris slowly responds to light and eserine. Five drops of a four per cent. solution applied locally, first induces a slight burning sensation, soon followed by a feeling of dryness, but without irritation. After three minutes, anæsthesia of the cornea and conjunctiva commences, increases for ten to twenty minutes, and disappears in about half an hour. A four per cent. solution instilled every five or ten minutes for three applications intensifies

and prolongs the anæsthesia, while the iris also becomes somewhat insensible from the penetration of some of the solution into the anterior chamber. Instilled every five minutes for one half hour, diminished sensibility of the deeper parts of the globe is produced (Koller). The eye is not, however, rendered insensible to heat and cold (Donaldson). Local anæmia plays no part in the production of the anæsthesia, which is entirely due to direct contact of the drug with the sensitive nerve terminations (Arloing).

Tension of the eye is somewhat diminished, causing flattening of the cornea (Weber). The blood-vessels are contracted, and slight paralysis of accommodation occurs, but not sufficient to prevent the patient from reading. The eyelids are separated wider than naturally, and the eye assumes a staring expression (Koller). The normal secretion of the eye is diminished (E. Meyer), and the eye-ball is slightly protruded.

KIDNEYS.—The drug is eliminated in the urine. The quantity of the urine is lessened (Ott, Atherton, B. Mayson), while the amount of urea remains unchanged (Gazeau), or diminished (Ott, Mayson). There have been noticed an increase in the excretion of oxalate of calcium, and, after prolonged convulsions, the presence of sugar and albumen in the urine (Tarchanoff), probably due to asphyxia (Anrep).

TISSUE METAMORPHOSIS is apparently not diminished, since starvation occurs as rapidly with as without the use of the drug (Anrep, Pöppig). Richet has lately determined that cocaine increases chemical changes occurring in the tissues, and consequently a loss in animal weight.

TEMPERATURE.—At first the temperature falls (Rossbach), due to increased heat dissipation (Richet), then rises during the convulsive stage (Anrep), and falls again during the asphyxia just before death (Anrep, Ott, Bennett). Flushing of the face has been noticed after hypodermic injections of three-fourths of a grain.

LOCALLY.—*Mucous Membranes.*—After carefully drying the part and applying the drug in powder or solution, there are produced complete anæsthesia for one half-hour, with dryness, suspension of functional activity, and a blanched appearance, due to contraction of the capillary vessels.

Skin.—No effect is perceptible from its application to the unbroken skin, although, according to Henry B. Millard, thick

coatings of a four per cent. solution produced numbness and coldness, and insensibility to cauterizing heat. When hypodermically introduced, at the same time moving the point of the needle from side to side, anæsthesia extends from eight lines to two inches from the place of injection (Hall, Hallstead, Hepburn), and to the depth of one inch (J. W. Stickler).

Toxicology.

In man, twenty-two grains produced sleep for several hours, followed by abdominal cramps, and recovery. There were experienced dryness of the mouth, vomiting, prostration, vertigo, and suppression of urine for twenty-four hours, but no disturbance of the mind or heart (von Ploss). In another case, twenty-four grains induced no serious results (Fronmuller). On the other hand, there have been reports of vertigo, intense pallor, cold perspiration, nausea, vomiting and thirst, for fifteen minutes, from hypodermic injections of from one-sixth to two and a half grains (R. J. Hall, Knapp), and even from instillations into the eye of one-twelfth of a grain (Hall). Similar symptoms may be excited by other causes in an imaginative individual. Relief is afforded by a recumbent position and inhalation of nitrite of amyl (Hall).

The fatal dose to dogs is from three to five grains (Dannini), to rabbits one and a half grains per kilogramme of animal weight (Anrep), and to guinea-pigs, one-sixth of a grain per kilogramme.

Therapeutic Application.

The extent of the physiological action of cocaine would suggest its usefulness in a variety of morbid conditions. It has, however, been used almost entirely for its local anæsthetic effect, and with success in the great majority of cases. That many failures and disappointments have been reported, is no more than is to be expected from our experience with all valuable drugs, although its action in producing local anæsthesia is as certain as any other well-established fact in therapeutics. We must, however, look to the future to give to cocaine the full rank that it deserves, and for the present simply narrate the results that have been claimed from its employment.

NERVOUS SYSTEM.—The drug has been used with reported success for the purpose of relieving great exhaustion, for overcoming insomnia in aortic disease in hypodermic injections of one-eighth to one-quarter of a grain (I. Swain, of Eng-

land), and for the treatment of alcoholism and the morphine habit. In this last condition, Freud directed to gradually increase the doses of cocaine in proportion as the morphine is diminished; or, when the habit is suddenly checked, to administer one and a half grains hypodermically whenever the craving for opium appears. He claims that he has thus counteracted the physical and mental depression caused by the withdrawal of opium or morphine. These statements have been confirmed by Walle and Richter, of Berlin. It has also been proposed, but without trial, in tetanus and strychnine poisoning (Biggs).

Neuralgias have been reported as relieved by hypodermic injections of one-eighth to one-sixth of a grain near the point of the exit of the nerve (F. P. Kinnicutt, Da Costa), and particularly trifacial neuralgia, by similar injections of one-fourth to one and a half grains into the painful spot (S. A. Popoff, of St. Petersburg).

CIRCULATION.—No use has been made of the drug to stimulate the heart, as in the collapse of various diseases, or in sunstroke or electric shock.

RESPIRATORY SYSTEM.—*Nose*—In acute nasal catarrh, when applied in solution to the inflamed mucous membrane, cocaine dispels all irritation and congestion for from one to twenty-four hours.* Three such applications, at intervals of forty-five minutes, have been found sufficient to abort the attack (Charles E. Sajous). Similar success has attended its use as a snuff in the form of a four per cent. triturate with powdered acacia (Van Allen, of Albany), as a tampon of cotton saturated with a four per cent. solution (W. S. Paget, England), and as a spray, which was also found effectual in hay fever (F. H. Bosworth).

In chronic nasal catarrh, the frequent repetition of the constringing action of the drug has produced absorption of the hypertrophied tissue (Sajous).

In the surgery of the nasal cavity cocaine is a valuable aid, not only by producing anæsthesia (not confirmed by Sajous), but also by diminishing the venous congestion, and thus almost rendering operations bloodless. A small pledget of cotton containing ten minims of a four per cent. solution may be introduced into the nares for five minutes just before and during the operation whenever sensitiveness returns. It has been so used in removing polypi and deviated cartilage and bone (Bosworth, W. C. Jarvis).

Larynx.—Subacute laryngitis, loss of voice and laryngeal phthisis have been relieved by sprays of a four per cent. solution (Geo. M. Lefferts). In operations upon the larynx much stronger solutions have been found necessary, as ten to twenty per cent. (E. Jelinck, Vienna), or twenty-five per cent. (Elsberg), but even these have sometimes excited a reflex laryngeal spasm and a feeling of obstructed respiration, which have rendered difficult the introduction of instruments (Jurasz, Lefferts, Cohen).

Lungs.—In bronchitis, inhalation of a spray of two per cent. solution has diminished cough and secretion, and in asthma relief has been afforded by the same measure, as well as by painting the nasal cavity with a four per cent. solution, whenever the asthma has been found to be dependent upon nasal catarrh (Bosworth).

DIGESTIVE APPARATUS.—*Mouth*.—Dentistry has claimed surprising aid from cocaine. Not only has odontalgia and neuralgia of the jaw been relieved by painting the gums with a four per cent. solution (Da Costa), but removal of the pulp and excavation of dentine have been rendered painless by allowing to remain for thirty minutes, in the dental cavity, cotton saturated with a five per cent. oleate (W. H. Morgan), or ninety per cent. glycerite solution (G. W. Weld). It has not been proved that the drug mitigates the pain caused by extraction of the tooth, but when applied to the gums "the forceps may be painlessly adjusted" (Morgan). Painless extraction of the teeth has, however, been claimed by H. Cartwright, of London, and by J. F. Stevens; while, on the other hand, no anæsthetic effect upon the teeth has been noticed by T. B. Gunning and others. The local application of cocaine solution to the gums *does* permit painless lancing, and relieves the distressing dentition of children (Morgan, J. E. Baker). Injections of eight to ten minims of a four per cent. solution at the mental foramen anæsthetizes the two incisors and the canine, with the corresponding gums and half of the lower lip; at the infra-orbital foramen, the two bicuspid and their gums; at the internal surface of the floor of the ramus, close to the bone, the lateral half of the lower lip and floor of the mouth (R. J. Hall, of New York).

Pharynx.—When used as a spray or solution it diminishes dysphagia in tubercle (Krause) and cancer, lessens sensitiveness in laryngoscopy, and allows the painless removal of the uvula and morbid growths from the vault of the pharynx, but not of

the tonsils (Bosworth). A ten per cent. solution has afforded relief in catarrhal inflammation (S. A. Popoff). It has, however, been reported (Lefferts) that its use has occasioned inability to swallow, "with a feeling as if the throat were filled with cotton."

Stomach.—Vomiting of pregnancy has been relieved by one-third of a grain three times daily (Holtz), or one-twentieth of a grain half-hourly, and after sixteen doses hourly (Weiss, of Prague).

EYE.—Cocaine has been principally used in ophthalmic surgery, and although its anæsthetic effects are not always obtained (cause not known), yet the commendations have been sufficiently numerous and reliable to establish its value in this branch of surgery. It is important that the instillations of a two to five per cent. solution should be made frequently—every five or ten minutes, and three or six times, according to the depth of anæsthesia desired—and that each application be made thoroughly over the entire mucous membrane. Deep anæsthesia may be secured by injecting two drops of a two per cent. solution into the anterior chamber (C. S. Bull, E. Smith), a procedure which had better be left to the judgment of the ophthalmologist.

Such applications have been found useful to relieve photophobia and pain in inflammations of the conjunctiva, cornea, and iris; also neuralgia in and about the eye, blepharospasm, and nystagmus, although in the last condition cocaine is not always effectual in restraining movements. In all these cases instillations must be practiced every two or three hours (Koller, Knapp, A. Alt, and O. F. Wadsworth). The drug is also effectual in aiding the action of atropine in breaking down adhesions (Ad. Weber, of Darmstadt). W. F. Wilson, of Denver, Col., noticed in two cases that, under the daily use of the solution, the cornea became cloudy and rough, but clear again upon discontinuance of the wash.

In ophthalmic surgery advantage is taken of the anæsthesia and ischæmia caused by cocaine, in the following operations: cauterizing the conjunctiva, removal of foreign bodies from the cornea, cauterizing or tattooing corneal ulcers, excision of pterygium, slitting the canaliculus and dilating stricture of the duct. The stronger solutions, repeated during twenty-five minutes, are necessary to produce sufficient anæsthesia in iridectomy (but here some pain may be expected on seizing the iris. Knapp suggests

the instillation of eserine to maintain contraction of the pupil), extraction of cataract and operation for strabismus, though some pain is often experienced in cutting the muscles.

Enucleation of the eye-ball has been performed, although with some pain, after injecting from two to four minims of the solution behind the globe, from the outer commissure near the ciliary nerve (H. Knapp). The lid has been painlessly sutured after six instillations into the eye (E. S. Peck). In fact, almost every operation has been performed upon the eye under the influence of this local anæsthetic, and generally with surprising success.

EAR.—When the character of the tissues in the meatus is considered, very little, if any, anæsthesia will be expected from local applications, unless excoriations exist; although Rossa, Da Costa and Kinnicutt have claimed that a hot four per cent. solution dropped into the external ear will relieve neuralgic and inflammatory earache.

However, polypi are sufficiently anæsthetized for removal; and painless dressings for acute and purulent otitis, as well as paracentesis of the drum-head, may be made after instillations of the four per cent. solution (Knapp, W. A. Dayton and others). Anæsthesia of the middle ear may be easily secured for all operations in that cavity.

GYNÆCOLOGY.—After washing the parts with soap and water and thoroughly drying, wherever practicable, the vaginal surface may be painted over with the solution. Thus sufficient anæsthesia may be obtained to relieve vaginismus (M. Cazin, Alphonse Herrgott), the pains of vaginitis and the irritability occasioned by speculum examinations. Injections of one-sixth to one-fourth of a grain in solution, into the urethra, afford relief in irritability of the bladder (S. E. Post), and allow painless cauterization of caruncles (Polk). In surgical operations, anæsthesia and partial ischæmia can be secured by frequent applications of the solution both before and to the cut surface during the operation, or by injections of from three to five minims into the tissues. Thus painless operations for laceration of the cervix and small vesico vaginal or rectal fissure have been performed (W. H. Polk, W. H. Doughty).

In dysmenorrhœa, injections of one-fifth of a grain into the inguinal region relieved the local pain for five or six hours, but not the pain in the back or the bearing-down sensation (John Forrest).

OBSTETRICS.—The injection of one-sixth of a grain into the anterior and posterior lips of the cervix has reduced the pain in dilatation of the os, but no similar effect is obtained in the perineum (W. M. Polk). Inflammation of the nipples has been reported as cured in two days by painting every ten minutes with a one-half to one per cent. solution. It is better to wash the nipples well before nursing, although it is stated that the drug will rather benefit the irritable and restless child (Una). Solutions of four per cent. have also been successfully used (Polk).

GENITO-URINARY TRACT OF THE MALE.—The urethra may be anæsthetized by injecting up to one ounce of the four per cent. solution and allowing it to remain for ten minutes. The contracting urethral muscles tend to force the fluid into the anterior portion of the canal, where will be found the principal amount of anæsthesia. To prevent this the fluid should be pressed up and down the urethra, or injected through a catheter to the desired locality. An ointment composed of a ten per cent. solution of the oleate in vaseline, and medicated gelatine bougies, are more effectual in limiting the local action. Such applications have been found effectual in preventing the pain and spasm of catheterization and urethrotomy (Keys, Halsted, Blumenfeld and Otis).

Gonorrhœal chordee and dysuria have been relieved by injections of one half a grain dissolved in forty minims of water, four to five times daily.

The local application of the usual solution has rendered the operation for phymosis painless (Cabot, of Boston). The pain and tenesmus of chronic cystitis is said to be relieved for twenty-four hours by injecting into the bladder a solution of one-third of a grain of the drug in four ounces of tepid water, and allowing it to remain for ten minutes (F. F. Graham). Bigelow's lithotripsy has been painlessly performed, in a quarter of an hour, after injection of half an ounce of a four per cent. solution.

ANUS.—Cocaine may be applied in solution, or in hollow rectal suppositories containing three-fifths of a grain in solution (R. J. Hall), to relieve local pains and tenesmus, especially when occasioned by hemorrhoids (Hall). Minor operations may be successfully performed, but in fistula better results will be secured from surrounding hypodermic injections (Halsted). In two cases rigid tonic contraction of the sphincter and longitudinal muscles was apparently occasioned by the use of the drug (J. R. Uhler, Baltimore).

SKIN.—No benefit is to be expected from local applications, although it has been affirmed (Jackson) that the oleate, so used, has lessened the pain occasioned by removing superfluous hairs, and that a felon can be painlessly incised after immersing it in the ordinary solution (Burchard). When the cuticle has been removed, an opportunity is afforded for the absorption of the drug, and it is therefore not surprising that the local application of a two per cent. solution will allay the pain of a burn (A. Weiss, of Vienna), or that all sensibility is destroyed when it is brought in contact with the surface of wounds (W. M. Polk).

Still better results may be obtained from hypodermic injections of from one-sixth to two-thirds of a grain into or under morbid growths, along the course of the supplying sensitive nerve, or surrounding the locality, particularly in the direction of its nerve supplies (Da Costa). There does not seem to be any danger of producing constitutional effects by this procedure, but it is to be remembered that deep injections do not influence the overlying skin (Da Costa). So used, slight operations may be painlessly performed, as opening abscesses (Burke, Polk, F. Pierce), and extirpation of adenoma (Wilson), small sebaceous tumors (Knapp) and of epithelioma (Creston).

Principal authorities consulted :

“Cocaine, and its Use in Ophthalmic and General Surgery,” H. Knapp, M.D. ; “The New Local Anæsthetic,” Laurence Turnbull, M.D. ; “Materia Medica and Therapeutics,” Nothnagel and Rossbach ; “National Dispensatory ;” “Ephemeris ;” “*Therapeutic Gazette* ;” “*New York Medical Record* ;” “*American Druggist* ;” “*New York Medical Abstract*,” etc.

In Washington, recently, a mob of negroes prevented a surgical operation of great delicacy and importance by the cry of “Keep out the night doctors ; dey only wants de body,” and the result was the death of the patient, because of the impossibility of completing the operation.

The superstition of the negroes, even in a city like Washington, against what they term the “night doctors,” is as curious as it is ineradicable ; and in this instance the operation had to be stopped because of the threatening actions of the mob, which broke into the room where the doctors were at work and ordered them to stop.—*Med. and Surg. Rep.*

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, June 9, 1885.

The meeting having been called to order by the President, Dr. Jewell, the minutes of the former meeting were read and approved.

Dr. W E. Taylor reported a case of gastrostomy, in a man who was suffering from obstruction of the œsophagus. For eighteen months the patient had difficulty in swallowing, and was losing weight. Dr. Powers made a laryngeal examination, but could find no visible obstruction in the larynx, and referred the case to Dr. Taylor. The patient did not complain of pain, or cough, only difficulty in swallowing, which had produced extreme emaciation. The obstruction seemed to be at the level of the cricoid cartilage, and was so complete that it was some hours before an Otis guide could be passed. Over this a catheter was slipped, through which the patient was fed with milk and whiskey. This was continued for three weeks, but the stricture became narrower, notwithstanding an attempt to stretch it by means of Otis' urethral dilator, until not even the guide could be passed. An incision was made above the hyoid bone, and a large, apparently osseous, tumor, which could not be removed, discovered pressing upon the œsophagus. An incision was then made in the abdomen, to the left side of the median line, and the stomach drawn up and stitched to the abdominal wall, but no opening was made in the viscus until five days afterwards, when firm adhesion had taken place between the stomach and the abdominal wall, so that no gases could escape into the peritoneal cavity. The patient had so far made a good recovery, but only time would show if the adhesions would seriously interfere with the physiological movements of the organ.

Dr. McNutt then showed seventy-nine gall stones, which he had found in the gall-bladder of a woman who had died from Bright's disease, but never had shown symptoms of hepatic disturbance. He then exhibited a pathological specimen from a case of enteritis, with the following history: The patient was 54 years of age, and enjoyed good health until a few days before his death, with the exception of having occasionally suffered

from colicky pains during the preceding two or three years. After a long ride he was seized by a severe pain low down in his left side, together with irritation of the bladder, but unaccompanied by fever. It was supposed that a renal calculus was low down in the ureter, on its way to the bladder. The next day there was tympanites, which increased at night until the abdomen was extremely distended, showing the transverse colon in its upper part, and another swelling lower down. It was mentioned that the bowels had been moved two or three times upon the previous day. A canula was passed into the colon, which permitted the escape of a large quantity of gangrenous smelling gas. The tube of a stomach-pump was now passed into the sigmoid flexure, and through this there escaped a large quantity of gas and fluid faecal matter. Stimulants were given freely, but the patient died next morning. The autopsy showed no signs of inflammation above the flexure, but this part itself was gangrenous and distended so that it measured thirty-three instead of six inches.

The strange features of the case were the absence of fever and chill; but this is perfectly possible, although rare. As a rule, in cases of enteritis, when all the coats of the intestine are involved, the inflammation does not extend over more than three or four inches. In this case the sharp turn of the flexure upon itself, produced by its distension and increased length, prevented the escape of faecal matter into the rectum.

The treatment consisted in the free administration of opium, stimulants, and warm applications to the abdomen.

Dr. Perry, without wishing to reflect upon the treatment, thought that an earlier introduction of the rectal tube might have relieved the condition and saved the patient. He had seen a pregnant woman in whom the bowel was obstructed by a piece of hardened faeces, and this was relieved by copious injections through the rectal tube.

Dr. Cachot said that he knew of a case, supposed to be one of ovarian tumor, and was to be operated upon, but massage, castor-oil and turpentine, with rectal injections, brought away a large quantity of scybalous mucus, after which the tumor disappeared.

Dr. Simpson wished to ascertain the opinion of the Society regarding the relief of flatus by means of the aspirator. His question was an abstract one, and had no reference to the treat-

ment of the case reported. In his own opinion the aspirator only produced very temporary relief. He did not refer to the obstruction by fæces, but to the tympanites of enteritis.

Dr. McNutt replied that there was no distension of the bowels until shortly before death, and that there was no great accumulation of fæcal matter. He did not think that puncture of the intestine was likely to produce harm, and that in such cases the question was of meeting the indications, as we cannot always tell where or what the obstruction is. He knew of no cause, and the case seemed to be one of idiopathic enteritis, the dilatation being due to paralysis of the part.

Dr. Kenyon asked if the gangrene might not have been caused by injury or disease of the nerves controlling the circulation of the part.

NEW BUSINESS.

The Secretary reported that some new members had failed to sign the constitution, and that therefore their membership was forfeited.

On the motion of Dr. Ellinwood, additional time was granted.

On the motion of Dr. Whitwell, the Secretary was instructed to prepare certificates of honorary membership.

Dr. W. W. Kerr moved that the Society should take a recess until the second Tuesday in August. The motion was carried.

The Secretary reported that the lease of the St. Andrew's Society for their hall had expired, and that therefore the Society would need to obtain another place of meeting. The Executive Committee was instructed to make the necessary arrangements, and also to ascertain if it would be suitable to move the library from its present place.

There being no further business, the Society adjourned until the second Tuesday in August.

WM. WATT KERR, Rec. Sec'y.

The following officers were chosen at the meeting of the Illinois State Medical Society, which met in Springfield, May 19th, 20th and 21st: President, Dr. W. A. Byrd, of Quincy; First Vice-President, Dr. W. T. Kirk, of Atlanta; Second Vice-President, Dr. A. Wetmore, of Waterloo; Permanent Secretary, Dr. S. J. Jones, of Chicago; Assistant Secretary, Dr. Heman Luce, of Bloomington; Treasurer, Dr. Walter Hay, of Chicago.

Sacramento Society for Medical Improvement.

SACRAMENTO, June 16, 1885.

The Society met in regular session, the chair being taken by Dr. I. E. Oatman, in the absence of the President, Dr. H. L. Nichols.

The addition of two itinerant quacks to the local fraternity having been reported, the Secretary was, on motion, directed to make all necessary inquiries as to evidence and counsel, with the view of obtaining a conviction.

Dr. Cluness reported a case, in which he had operated, for what appeared to be strangulated inguinal hernia. There was no intestine engaged; a piece of gangrenous omentum protruded, about two inches from the ring. The patient survived the operation about twelve hours. An autopsy revealed extensive peritonitis, the intestines in several places being matted together. A collection of pus was found along the line of the descending colon, amounting to about one pint. There was no sac traceable.

Dr. Simmons mentioned having seen M——, a young man who had been killed at the works of the Sacramento Electric Light Company, by getting into the circuit between the dynamo and the light-wire. There were no surface markings, nor any injury to tissues. The opinion was expressed that deceased had made a "ground" while touching some portion of the machine not insulated, through which the current was passing. The Doctor had seen the case about two hours after the occurrence, and at the urgent request of relatives tried artificial respiration, stimulant enemata, and friction, with negative results.

Dr. Cluness, who had seen the case ten minutes after the accident, had also tried artificial respiration, but could find no evidence of vitality.

Dr. Parkinson then read a paper on "Hypodermatic Medication."

Dr. Tyrrell agreed with the author as to the value of combining atropia when injecting morphia, and believed that a very small initial dose of atropia was preferable.

Dr. Simmons, commenting on the susceptibility of the system to morphia administered hypodermically, mentioned that he had once, in a case of nephritic colic, injected six grains of morphia within two hours. The system had not previously been made tolerant by frequent administration. This large dose had no ill effect.

After some further discussion, the Society, on motion, adjourned at 11 P. M., to meet as ordered.

JAMES H. PARKINSON, Sec'y.

Licentiates of the California State Board of Examiners.

At the regular meeting of the Board of Examiners, held July 1st, 1885, the following physicians having complied with all the requirements of the law and this Board, were granted certificates to practice medicine and surgery in this State :

•GEO. C. BROWN, Los Angeles ; Jefferson Med. Coll., Penn., March 11, 1874.

•CHAS. E. DRANSFELD, San Francisco ; Coll. of Physicians and Surgeons, St. Louis, Mo., Feb. 28, 1883.

WM. W. GATLIFF, Butte City ; Coll. of Physicians and Surgeons, St. Louis, Mo., March 4, 1884.

JUDSON S. GIBBS, Crystal Springs ; Coll. of Medicine, Syracuse Univ., N. Y., June 22, 1876.

JOHN C. KING, Banning ; Med. Dep. Univ. Nashville, Tenn., March 1, 1874.

DAVID B. TODD, South San Francisco ; Med. Dep. Univ. Michigan, Mich., March 29, 1871.

•CHAS. D. WATSON, Los Angeles ; Rush Med. Coll., Ill., Feb. 22, 1854.

Under the auspices of the efficient committee appointed by the Medical Society in Fresno, one conviction for practicing without a license has been effected.

A similar committee appointed by the Santa Clara County Medical Society has also done efficient work in securing the conviction of an illegal practitioner before the Justice's Court.

We have also received a communication from the Northern District Medical Society at Redding, in reference to prosecutions there.

We have also received a communication from Martinez, announcing the organization of a County Society there, to engage in the laudable work. We are also pleased to announce to the profession that the San Francisco County Medical Society, at a recent meeting, appointed a committee with authority and instruction to act in concert with the proper officers of the law, to the end of enforcing the Medical Practice Act in this city. We again appeal to the profession to unite in forming societies throughout the length and breadth of the State, in accordance with the instructions in the circular letters recently sent out from this office, with the view to continuing the praiseworthy work to the bitter end.

SAN FRANCISCO, July 23, 1885.

At a special meeting of the Board of Examiners, held July 22d, 1885, the following physicians having complied with all the requirements of the law and this Board, were unanimously granted certificates to practice medicine and surgery in this State :

M. O. BALDWIN, Visalia ; Rush Med. Coll., Ill., Feb. 3, 1869.

ALVIN W. BOUCHER, Visalia ; Miami Med. Coll., Ohio, Feb. 28, 1873.

HERMON R. BULSON, Eureka ; Chicago Med. Coll., Ill., March 16, 1875.

WALTER E. FISHER, San Francisco ; Chicago Med. Coll., Ill., Dec. 3, '84.

FRANCIS GINNASI, San Francisco ; Med. Dept. of the Univ. of the City of New York, N. Y., March 11, 1884.

CALVIN L. GREGORY, Yreka ; Cincinnati Coll. of Med. and Surg., Ohio, June 23, 1874.

JOHN T. JOHNSON, Etna Mills ; Washington Univ. School of Med., Md., March 3, 1868.

WM. T. RIDENOUR, Elk Grove ; Med. Coll. of Ohio, O., March 2, 1858.

BENJ. S. SEYMOUR, San Francisco ; National Med. Coll., D.C., March —, 1875.

WM. SETH WATSON, Petrolia ; Bellevue Hosp. Med. Coll., N. Y., March 1, 1870.

STEPHEN A. YOUNG, San Francisco ; Med. Coll. of Indiana, Ind., March 1, 1882.

E. P. Fish, of 26½ Kearny Street, was arrested for practicing medicine without a license, and held in \$500 bonds.

R. H. PLUMMER, Sec'y.

Transactions of the Chicago Gynecological Society.

I. Martin. The Normal Position of the Uterus and its Relation to the Other Pelvic Organs.

Friday evening, 29th May, 1885. Regular Meeting.

The Society was called to order by the President, Dr. H. P. Merriman.

I. An inaugural thesis, entitled, "The Normal Position of the Uterus and its Relation to the Other Pelvic Organs," was presented by Franklin H. Martin, M.D., (Chicago Medical College, 1880), and read by the Secretary, Dr. Edward Warren Sawyer.

The extreme theories of Schultze, Fritsch and Savage were opposed for the following reasons:

I. In extreme anteversion, the wave impulse would strike the posterior broad surface of the body of the uterus, and drive it down upon the bladder and anterior wall of the vagina, while, on the other hand, (the perpendicular theory of Savage), the ante-

rior broad surface of the body would receive the impulse to an equal disadvantage, displacing the uterus backward and driving the cervix downward, while if the uterus occupied the position between these two extremes, the narrow crest of the fundus would receive the impulse in the line of the axis of the uterus, and all the force would become equally distributed through all of its supports. Here, too, the organ would not so directly receive the whole impulse, as it would be equally dispersed upon its sides and the posterior ligaments and anterior supports, and its lateral attachments would receive, to an equal extent, their portion of the impulse.

2. The manner in which the bladder collapses, to our mind, precludes the possibility, or at least the probability, of the uterus occupying normally the position of extreme anteversion. The bladder, when collapsed, or when empty, is a triangular shaped body,—not flat like a plate. The base corresponding to its peritoneal surface, the apex corresponding to the urethra. The posterior or inferior surface corresponds to the anterior wall of the vagina, to which it is intimately attached; the anterior wall corresponds to the symphysis, to which it is loosely attached. It is readily seen, then, that the bladder distends only in the direction of the peritoneum, or its one free surface. According to the extreme anteversion theorists, the free surface of the bladder and the uterus are in apposition. If such be the case, the uterus changes its position constantly, as the bladder normally relaxes or contracts,—this seems to us very improbable. We believe that this space is usually filled with the light coils of the small intestines.

3. The broad ligaments receive their external attachments at a point about equidistant from the center of the sacrum posteriorly, and the pubic junction anteriorly, in such a way as to divide the plane of the brim of the true pelvis into about equal halves. If the body of the uterus occupies a position in the center of the pelvis on a direct line with the ordinary attachments of these ligaments, which it is at least rational to believe is the case, it occupies a position between the perpendicular of Savage, and the extreme anteversion of Fritsch.

4. With extreme anteversion, the cervix, with the fundus occupying a position behind the symphysis would necessarily have to occupy a position far back in the pelvis, within three-fourths of one inch of the sacrum,—with a normal confirmation

of parts, this is impossible without interfering with the rectum.

5. If we take the measurements of Foster and Litzmann into consideration, we can at once demonstrate the impracticability of the position given by Savage,—*i. e.*, the perpendicular. The cervix occupies a position, normally at a distance of one and one-half inches from the sacrum, the rectum intervening. It is impossible for the uterus to assume anything like a perpendicular with the cervix in this position, on account of the anterior curve of the sacrum above, which necessitates an anterior version from the perpendicular of at least fifteen degrees.

DISCUSSION.

Professor W. W. Jaggard was pleased with the selection of the topic, and its mode of treatment, but did not agree with Dr. Martin in all his conclusions.

Bandl had made a correct statement of the diversity of opinion upon this subject, in his essay on "*The Normal Position and the Normal Relationship of the Uterus, and the Pathologico-Anatomical Causes of the Symptom of Ante flexion.*" (*Archiv. fur Gynækologie, Band, XXVI. Heft, 3, 1884.*) read before the Gynecological Section of the *Versammlung deutscher Naturforscher und Aerzte* in Freiburg, September, 1883.

"In the course of time, almost every position of the uterus, with the exception of prolapse, has been accepted as the normal by different anatomists and gynecologists, and particularly by the more eminent ones."

Kollker (1882), from a series of examinations of the cadavers of girls, from ten to eighteen years old, has concluded that the uterus is not bent, nor curved upon itself, but is straight, and that its long axis corresponds with the principal axis of the small pelvis. Its position is variable within certain limits, depending upon the condition of the bladder and rectum. This opinion coincides closely with judgments of Kohlrausch (1854), Le Gendre, (1898), Freund, Carl Braun, (1857,) J. Marion Sims, (1855,) Langer, (1881). Professor Paul F. Munde, in his recent excellent work on "*Minor Surgical Gynecology,*" favors these views to the extent, that he says, "with the woman in the recumbent position, the examining finger is unable to touch the body of the uterus before or behind the cervix, if the uterus is normally situated."

Bandl, in the paper, to which allusion was made, confirms

Kolliker's view. The evidence he furnishes is of a high order. His methods of investigation were:

1. The attentive examination of living women.
2. The examination and observation before and during the operation of laparotomy.
3. The bi-manual examination of the organ in cadavers, before and after abnormal section.
4. The comparative anatomical examination of many *uteri*.

Dr. Philip Adolphus thought, with Emmet, that "there is no common standard by which to determine the proper position for the uterus in all women, but that in each individual there is a point, or plane, in the pelvis which the uterus should occupy when she is in a state of health and not pregnant." He referred in detail to Emmet's "normal or health line," and to the pathological character of displacements above or below this line. It was a matter of relative insignificance whether or no the long axis of the uterus coincided with any particular pelvic axis.

In the concrete case, the sensations of the individual would indicate a normal or abnormal position.

Professor Daniel T. Nelson said the uterus was fixed in a position of unstable equilibrium by the annular and other ligaments. It could move to a certain degree in every direction, and return to its original, normal position. Displacement above or below Emmet's "health line" was productive of symptoms, if the uterus remained fixed in such a position, as was usually the case when violence caused the dislocation. Departure from the principal axis of the pelvis was a comparatively insignificant moment, viewed absolutely. The vagina and perineum are not primary supports of the uterus, and only assume this function, when, as the result of the relaxation of the proper uterine supports, the organ is displaced downwards. This secondary character of the vaginal and perineal support was capable of demonstration by the examination of a woman in the erect attitude. Upon coughing or sneezing the uterus would descend and receive support from vagina and perineum, only to regain its original position when the excitant was removed. This remark applied exclusively to normal organs in normal position.

He wished to emphasize the statement that the rectum was not the normal receptacle for the *fæces*. Anatomy and physi-

ology teach that in the normal condition the gut is empty up to the sigmoid flexure. The sigmoid flexure is a sort of valve to retain feces.

He narrated the history of a case of retention of urine in a puerperal woman, in which the bladder was displaced towards the left iliac fossa, while the uterus was directed towards the right. He would like to ask the Fellows if this displacement, observed in a single case, corresponded with their observations.

Professor Charles Warrington Earle related the history of a case of retention of urine in a puerperal woman, the bladder displacing the uterus upwards and backwards. Upon the introduction of a catheter, four quarts of urine were evacuated and the pelvic viscera returned to their normal relations.

Dr. Edward Warren Sawyer said the uterus had great latitude of movement antero-posteriorly and laterally; elevation above or depression below the normal plane, even to a slight degree, was productive of pain. The introduction of a pessary, which merely elevated the uterus when partially prolapsed, without altering flexion, was sufficient in many cases to afford complete relief.

While a student in the Medical Department of Harvard University, he had taken plaster casts of the vagina. Such casts were of uniform shape, while they differed in size. They were curved, convex posteriorly, concave anteriorly. They were never shaped like an S. The curve did not correspond to that of the anterior surface of the sacrum, but to the floor of the pelvis.

Dr. H. T. Byford thought Dr. Sawyer's experiments were faulty. When plaster of Paris was injected into the vagina, with the rectum empty, the vagina would act exactly as the rectum would under similar conditions.

The President, Dr. H. P. Merriman, complimented the author of the paper on the careful, judicial mode of treatment of his difficult subject.

He agreed with Dr. Adolphus, Dr. Nelson, Dr. Sawyer, that elevation above or depression below a certain horizontal plane was of greater importance, in the production of symptoms, than deviation from the principal pelvic axis antero-posteriorly or laterally.

The normal position of the uterus was as variable as the quantity of blood lost at a menstruation. Every woman was a

law unto herself. He referred in detail to Robert Barnes's theory of uterine support, and concluded by recommending Bozemann's plan of columning the vagina, when a hard rubber pessary could not be borne.

Professor Christian Fenger, M. D. (Copenhagen, 1867), and Franklin H. Martin, M. D. (Chicago Medical College, 1880), were then elected Fellows of the Society.

W. W JAGGARD, M.D., *Editor.*

2330 Indiana Ave., May 29, 1885.

Clinic of the Month.

OPHTHALMIC NOTES.

Ophthalmia Neonatorum.

PATHOLOGY AND TREATMENT.

By Dr. R. LABUSQUIERE.

Translated from the French, by C. H. Rosenthal, M.D.

(Continued from last month.)

A few words as to the causes which can favor the action of the contagion :

1. On the part of the mother : *a*, Being a primipera ; *b*, malformation of the pelvis ; *c*, the duration of the accouchement ; and in a measure all those causes which can vary or modify the interval which ordinarily exists between the rupture of the membranes and the birth of the child.

2. On the part of the infant : Syphilis, scrofula, the sex, the size of the infant, abnormal [vicious] presentation, that of the face in particular ; for it can readily be perceived that in the last instance the eyelids of the infant are in perfect and prolonged contact with the maternal secretions. Carron de Willard noticed that of fifty-five ophthalmia neonatorum cases, thirty-three were difficult accouchements. Finally, the peculiar susceptibility of the new-born entering brusquely into an absolutely new media, together with the physiological superactivity of all the functions on beginning life, on account of the relative great development of the capillary system.

B. *Internal causes.*—These causes are more or less indirect or predisposing, and embrace all those constitutional conditions,

such as eczema, psoriasis, herpes, etc., which, although usually affecting the integument, sometimes implicate the conjunctiva. In infants predisposed to these affections, they can so prepare the conjunctiva as to present a very favorable nidus for the development of ophthalmia.

C. *Specific causes of external origin.* 1st, *Direct contamination of the eyes of the child with the maternal secretions.* A great many medical practitioners, some of whom stand eminent in their profession, have proven that the maternal discharges play an important role in the etiology of ophthalmia. Lately, Dr. Escalais concludes an inaugural thesis on the subject as follows: "We can positively affirm that ophthalmia of the new-born is due to inoculation with virulent vaginal mucus." Otto Haab, Mackenzie, Arlt, Dahlef, Hausmann, Trousseau, Bouchut, Scarpa, Ricord, Dupuytren, Guessant, Galezowski, Credé, and a host of others, also accord a great influence in this regard to the vaginal mucus and discharges; but most of them give as *the cause* the blennorrhagic vaginal discharges of the mother. Some of them ascribe an important role to the micrococcus found in these discharges; others deny the necessity of the presence of the same. We have shown in the beginning of this article how Zweifel and Stattler, through a series of experiments, came to the conclusion that the coccus and the diplococcus blennorrhagiæ described by Neisser, to the complete exclusion of normal vaginal or catarrhal secretions or normal lochial discharges, would determine the infection; in that case the germs which exist in the secretions could be carried about by the instruments, hands, sponges, etc., etc. Hausmann has also made experiments, having in aim the discovery of what organisms can be contained in the maternal secretions. He found a great number: coccus, diplococcus, bacteria, oidium albicans, etc.; but did not establish the point as to which or how many of them played an active role in the pathogenesis of ophthalmia.

2d, *Contagion.* This very important and potent cause for the propagation of ophthalmia enters into play when the disease has already made its appearance; and if not opposed by those rules for disinfection which modern discovery has placed at our command, this cause can act with a most extraordinary intensity. It can take place in many ways:

[a] *Contagion from one eye to the other.* It has been claimed that the movements of the child will cause some of the secretion

of the diseased eye to flow over to the unaffected one, and so infect the second eye; others lay stress on the possibility of sympathetic ophthalmia of the second eye. Ought we not also to admit the probability that in certain cases the same constitutional condition which favored the infection of the one eye, could perhaps be the veritable cause of the same in the second?

[*b*] *Direct contagion from one child to another.* The possibility of this mode of infection is not to be denied, but as it is not a very probable one, nothing more need be said of the same.

[*c*] *Contagion through bedding, clothing, etc., of the patient.* Dequevauvilliers has established, by very conclusive observations, that infants with perfectly healthy eyes have become afflicted with ophthalmia by sleeping in beds which have been occupied by infants having ophthalmia; also by pieces of linen, sponges, etc., which have served to cleanse diseased eyes, and which had become impregnated with virulent matter.

[*d*] *Contagion by direct contact.* Nurses neglectful of the laws of cleanliness, or carelessness on the part of the mother, can transport to the eyes of the infant the germs contained in the lochial discharges. The sero-purulent secretion of an eczema, of fissures of the nipple, of inflammations of the mammæ, or of suppuration existing at any portion of the body at the time, can also be transported in the same way.

[*e*] *Indirect contagion—air as a medium.* Chalvet, of the St. Louis Hospital [Paris], has demonstrated that the air holds in suspension a considerable quantity of epithelial detritus, pus globules, and microscopic vegetation, that could be considered as active agents of the contagion.

Finally, let us add that the influence of contagion has found an irrefutable argument in proof of the same in a number of incontestible cases, and is now an admitted fact.

TREATMENT.

The disease requires for its development an *ensemble* of circumstances, the occurrence of which we can prevent in a considerable number of cases.

And once in existence, it can extend and propagate itself by different means, which means we are also enabled to hinder, or perhaps eradicate. The solution of the problem consists therefore in

[*a*] *Prophylaxis. i. e.,* to oppose and prevent the birth of the disease, and when once in existence to circumscribe it;

[b] *Curative treatment: i. e.*, to eradicate the cause and palliate or combat its manifestation.

PROPHYLAXIS. *

* A number of methods have been omitted in the translation, as having proven less efficacious, or showing poorer results than the following:

Crede's method.—In order that no misunderstanding should occur, the method as carried on in Credé's Lying-in Institute at Leipzig is here given in all its details :

After the cord has been ligated and cut, the child's body is cleansed in the usual way of all smegma, blood, etc.; the child is then placed in a bath; at the same time the eyelids are cleansed by means of absorbent cotton dipped in ordinary clean water, kept in a basin near by for that purpose. The child is then placed on the table, and before it is dressed the eyelids of each eye are slightly separated, and a *single drop of a two per cent. solution of nitrate of silver* is dropped directly upon the cornea, by means of a glass rod; the rod is allowed to almost touch the cornea. *No further attention is paid to the eyes; i. e.*, if any slight redness or swelling, with mucous discharge, make its appearance within the next twenty-four to thirty-six hours, the drops should not be repeated.

The nitrate of silver solution is contained in a dark glass bottle with glass stopper; the mouth of the bottle is one centimetre [two-fifths of an inch] in diameter; the glass rod is fifteen centimetres [six inches] long, three millimetres [$\frac{1}{8}$ inch] thick, and is rounded off at each end. Both bottle and rod are kept locked in a small cleanly-kept drawer of the dressing table in the lying-in room. The solution is changed every six weeks.

This system began to be carried out systematically at each birth on June 1st, 1880. The following statistics include all births from 1874 to 1884, in order to better compare the results of the various methods of treatment:

| Year. | No. of births. | No. of ophthal. neona. | Per cent. |
|----------------------------|----------------|------------------------|--------------|
| 1874 | 323 | 45 | 13.6 |
| 1875 | 287 | 37 | 12.9 |
| 1876 | 367 | 29 | 9.1 |
| 1877 | 360 | 30 | 8.3 |
| 1878 | 353 | 36 | 9.8 |
| 1879 | 389 | 35 | 9.2 |
| 1880 (to May 31st) | 187 | 14 | 7.6 |
| 1880 (balance) | 211 | 0 | 0.0 |
| 1881 | 400 | 0 | 0.0 |
| 1882 | 418 | 1 to 2 | 0.25 to 0.49 |
| 1883 (3 months) | 131 | 0 | 0.0 |
| March 1883 to Mch '84 ab't | 400 | 0 | 0.0 |

CURATIVE TREATMENT.

According to Graefe and Galezowski, the cauterization of the palpebral conjunctiva with a two and a half per cent. solution of nitrate of silver twice a day will be followed by entire recovery.

Editorial.**The International Congress.**

The recent action of the American Medical Association has reduced all the arrangements for the approaching Congress to a state of chaos. In an unguarded moment, it accepted the doctrine that none but members of the Association, or of Societies in affiliation with it, were eligible for seats in the Congress, and consequently refused to endorse the appointments made by Dr. Billings' Committee of Arrangements, who had taken the broad view that delegates should be selected from all regular practitioners. The so-called new code was made to play an important part in the discussion, and consequently such men as Emmett, St. John Roosa, Shrady and Knapp were declared unqualified to become members of the Congress. In consequence of the above-quoted restrictions, the medical profession in Boston, Baltimore and Philadelphia have refused to take any part in the proceedings, so that the American delegates will not be representative of the profession. Without doubt, the American Medical Association is the representative of the profession, and therefore the Congress convenes under its auspices; but it should be borne in mind that this latter body is an assembly of medical men, and not a convention of societies, and is not therefore bound by any code of ethics. The profession in every country has its own rules for the guidance and government of its members, and therefore the code of the American Association cannot be taken as the criterion for the fitness of any man to occupy a seat in the Congress. When this question was first discussed, we denied the prudence of the refusal to endorse the work of the first committee, although we admitted the power to do so; but a further consid-

eration of the above facts, together with the recollection that the invitation was extended in the name of the PROFESSION in America, leads us to believe that every regular practitioner of medicine is eligible for a seat in the Congress. It is utterly absurd to debar men who have in former years occupied an honored place in that body, or those—such as Fordyce Barker, Emmett, Shrady, Loomis and Jacobi—whose names are on the lips of every intelligent practitioner in Europe, merely because they hold somewhat broad views on a question of medical politics. If any one has exceeded its power, it is the American Medical Association, which was entrusted by the profession at large with the honor of making suitable arrangements, but not with the power of making laws which will exclude many of those from whom it will only be too ready to receive subscriptions.

While the American Medical Association is thus caviling and squabbling, it seems to forget that its intended guests are being thoroughly informed of all those curtain lectures, and are not at all likely to leave their practice and cross the Atlantic for the purpose of participating in a party strife. The medical men of Europe promised to meet with those of this country for the purpose of engaging in scientific discussion, and will be amazed to learn that the noblest of America's children, who have followed in the footsteps of Æsculapius, are no longer considered members of the regular profession by their countrymen.

Unless some satisfactory arrangement is arrived at within the next few months, the money necessary for the successful administration of the Congress will not be forthcoming, as the dissatisfaction with the action of the American Medical Association is very widely spread. We are told by the journal of the Association that this is unwarrantable, for the changes made by the new committee were not of any great importance. We differ from our cotemporary in this opinion, but its truth would make the action of the Association even more unpardonable, since only the most serious errors on the part of the old committee could justify the course which has been adopted.

The proceedings of the revised committee which met at Chicago have especial interest for the profession of this State, as a serious change has been made in the *personnel* of those who were to have represented them at the International Congress.

Dr. Levi C. Lane, whose aid in perfecting the arrangements was requested by the original committee of seven, has not only been dropped from the list of Vice-Presidents and from his position on the Surgical Section, but, as the matter now stands, is debarred from even entering the Congress as a delegate, for we learn that he was dropped on the pretext of his being a new code man. When the New York State Medical Society adopted the new code, as it is called, and by so doing violated the tenets of the code of the American Medical Association, that Association very properly denied to their delegates seats in its convention, and we at first thought that there was reason for dissatisfaction when these same men were appointed to take part in the International Congress. Further deliberation has made the difference between the two cases clear, and we believe, since the invitation was given and accepted in the name of the profession, that no regular practitioner should be excluded from a purely scientific meeting because his code differs from that of the American Medical Association.

The committee had the power to make what appointments they chose, and in most instances closely followed their instructions, viz., to have regard for geographical representation, and not to appoint any new code men. If, however, Dr. Lane, who had been in active correspondence with the Committee on Arrangements, and had been giving for the past year much valuable time and hard labor, to the advancement of the arrangements for a successful Congress, was not reappointed because he was of the new code, a sad mistake has been made and a gross injustice has been done.

As far as medical politics are concerned, there are no new code men on this coast, nor in fact anywhere in the United States except New York alone.

At the annual meeting of the California State Medical Society in 1882, the year in which Dr. Lane was elected President, resolutions were introduced to test the feeling of the members. Had these been carried, the action of the New York State Society would have been endorsed, and members have been allowed to consult with all *legally qualified practitioners of medicine*. They were, however, laid upon the table. Since that time no action has been taken, and consequently "new codism" does not exist in this State. Dr. Lane is in good standing in the State Society, and the State Society with the American Medical Association, and therefore to say that he was a "new code" man can only have been used as an excuse to prevent his reappointment.

A removal such as this, for such a reason, will produce an ill feeling among the profession of California, which will only help in preventing the meeting of the Congress upon American soil being an honor to America.

Enforcement of the Medical Law.

At last the public are beginning to recognize the fact that the medical law is designed for their protection, and not for the selfish interests of the regular profession. During the past few months several prosecutions have been successfully undertaken by the medical societies in the country towns throughout the State, and the people are now as willing to assist the enactment of the law as they were to resist it. The consequence of this is, that there has been a great influx of irregulars into San Francisco, where the law has been allowed to slumber for about two years, with the hope that they would there be allowed to pursue their deadly vocation in peace; but the County Medical Society decided that it should be otherwise, and at a special meeting appointed Doctors J. G. Jewell, W. S. Whitwell, and W. Watt Kerr, as a committee to co-operate with the prosecuting attorney in bringing these offenders to justice. They have started to work, and already have a case pending before the courts, which, it is hoped, will soon be followed by many others, until all irregulars are forced to leave the State.

The dissatisfaction with the work of the new committee appears to increase from day to day, and so many of the prominent men of the profession have already declined to hold office, that under the new order of affairs, the success of the Congress is an impossibility. Should the committee endeavor to fill the vacant places, few men would care to accept positions that others had declined, especially when they feel sure that the American Medical Association will at its next meeting find it impossible to accept the report of its committee, and will then probably reinstate the former committee, so that after a year's delay the work of organization will continue as heretofore. The State Societies should take the matter in hand, and see to it that their delegates are pledged to support either one committee or the other, so that their feelings upon the subject may be truly represented.

As another way out of the difficulty, it has been suggested to call a mass meeting of the profession, and in this way take the organization out of the control of the Association. We do not think this will be done, and would rather suggest that a special meeting of the Association be called to consider the report of the committee, so that if any further change is to be made, that both time and labor may not be lost.

Salt Baths in the Treatment of Fever.

Rabinowitsch (*Wratsch., Deut. Med. Zeitung*) reports the results of treatment in the cases of sixteen patients, who received in all one hundred and forty-one baths. He says that not only did the addition of salt to the water cause a greater reduction of the temperature, but the pulse and respiration were improved, and the patients felt much stronger than was the case after the use of fresh water.—*N. Y. Med. Jour.*

At a recent session of the Medical Association of Georgia, the *Atlanta Medical and Surgical Journal* was adopted as the journal of the Association, and the Transactions of the Association will be published henceforth in that journal.

Correspondence.

ALAMEDA, 7th mo., 31, 1885.

To the Editor of the Pacific Medical and Surgical Journal:

Having observed that a charge has recently been made at Chicago against Dr. Levi C. Lane, of being an advocate of what is called the "new code," I deem it proper to state that I know of nothing, nor have I ever heard aught, either publicly or privately, that justifies this implication.

Furthermore, after a personal acquaintance of over twenty years, and an intimate knowledge of his professional career during this time, it affords me pleasure to state a belief which I have long entertained, in common with the mass of physicians on the Pacific Coast, that his labors as a physician and a public teacher have been associated with an untarnished reputation, and that he is deservedly entitled to be placed among the foremost of those who have advanced the science of regular medicine, and aided in building up its superstructure on the western slope of the continent.

W P GIBBONS, M.D.,
President of the Medical Society of the State of California.

SAN FRANCISCO, Cal., July 31, 1885.

To the Editor of the Pacific Medical and Surgical Journal.

In regard to the charge that Dr. Lane was in sympathy with the "new code," I desire to say that I have personally known and held in the highest esteem for many years, Dr. L. C. Lane. For five years I was for some hours daily in his office, and was thus enabled to gain as intimate a knowledge of his professional relations, daily actions and opinions, as one man could have of another. And the knowledge thus gained is, that no man has ever been, or could be, more loyal to regular medicine and the old code of ethics than he. The charge to the contrary recently made against him at Chicago was a painful astonishment to me, as well as to the leading members of the medical profession here, with whom I have conversed freely on this matter.

J. GREY JEWELL, M.D.,
President of the San Francisco County Medical Society.

Notices of Books, Pamphlets, Etc.

A MANUAL FOR THE PRACTICE OF SURGERY. By THOMAS BRYANT, F.R.C.S., Member of the Council and Court of Examiners of the Royal College of Surgeons; Senior Surgeon to, and Lecturer at, Guy's Hospital; Memb. Correspond. de la Société de Chirurgie de Paris. With seven hundred and twenty-seven illustrations. Fourth Edition. Published by Lea & Co., Philadelphia. San Francisco: A. L. Bancroft & Co.

The American edition of this work is a reprint of the latest English one, without any alterations. It is essentially a practical work, in which no more time is spent in discussing the different opinions of surgeons than is absolutely necessary to a description of each one's peculiar method or operation. Mr. Bryant's long and varied experience have given him a decision of character that is well set forth in the authoritative and emphatic style of his teachings, so that his book is well calculated to inspire his readers with confidence in the methods advocated by him.

We would call particular attention to the section on abdominal surgery, which contains reports of several very interesting cases, as well as a description of all the important and recent operations, together with the tabulated statistics of their results.

THE TEN LAWS OF HEALTH; or, How Diseases are Produced and Prevented; and Family Guide to Protection against Epidemic Diseases, and other Dangerous Infections. By J. R. BLACK, M.D. Philadelphia: J. B. Lippincott & Co. 1885. San Francisco: Jos. A. Hoffmann. Price \$2.

If people in general could only realize that if all of the diseases which cause so much sickness, and often cost so many valuable lives were entirely preventable, perhaps then they might be more interested in learning what are some of the laws by which health may be maintained. For ages it has been taught and believed that disease is sent by an angry deity as a punishment for sins committed, a doctrine which accomplishes little towards the stamping out of an epidemic. Gradually, by the slow process of instillation and by the constant endeavors of physicians, who in general take a more practical view of the causes of disease, the world is waking to the fact that to its own ignorance and carelessness is due the presence of disease, in almost all its forms. Under the head of Ten Laws, Dr. Black presents, in forcible and terse language, rules for the maintenance of health—

rules which if observed would certainly obliterate a vast amount of disease. The law is first stated, then the common modes of its violation and the attending results, and finally the mode of observing it. The information given is hard common sense, and is on subjects of every-day importance.

The second part of the book is neither less interesting nor less useful than the first, for plain directions are given for avoiding the spread of any infectious disease which may unfortunately have entered the house. The germ theory of disease has been generally accepted by the profession, and there can be no legitimate doubt in regard to it. All care, then, should be taken to prevent these germs from being scattered far and wide, and the time to do this is when the first cases of disease appear.

The book may be highly recommended by physicians to their patients, as containing much useful knowledge regarding the laws of health and disease.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION for the year 1884. Edited for the Association by AUSTIN FLINT, Jr. M.D. New York : D. Appleton & Co. 1885. San Francisco : W. S. Duncombe.

Owing to the schism in the New York State Society, brought about by the action of the new code men, who, although in a minority, obtained possession of the Society, and thereby caused it to be refused representation by the American Medical Association, it was determined to form a new society. A preliminary meeting was held in February, 1884, and the first annual meeting of the society, under the name of the "New York State Medical Association," was held in November, 1884. Many valuable papers were read, among which was one on Transfusion, by Dr. E. M. Moore, and another by Dr. J. C. Hutchinson. Transfusion is a subject of growing importance, and which will certainly occupy a more prominent position as a means of saving life than it does at present.

The "Duration of Contagiousness" is a subject with which Dr. A. L. Carroll deals, and one which agitates the mind of every physician, it being of such vital importance, and a question involving so much responsibility.

Dr. Austin Flint has a short paper on "Dietetic Treatment of Dyspepsia." A short paper on "The Functions of the Auricles," by Dr. V. C. Lynde, of Erie county, provoked considerable discussion. Dr. T. Gaillard Thomas delivered the address upon Obstetrics and Gynecology.

Most of these papers have appeared in the medical journals, but it is a great convenience and pleasure to have them all collected in one volume, which is at once a valuable and handsome addition to any library.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. PLAYFAIR, M.D., F.R.C.P. Fourth American, from Fifth English Edition. With Notes and Additions by ROBERT P. HARRIS, M.D. With three plates and two hundred and one illustrations. Philadelphia: Lea Brothers & Co. 1885. San Francisco: W. S. Duncombe.

The first edition of this work, which is now so well known, was issued in 1876. The present edition, which is the fourth issued in America, has not only been revised by the author, but that it may serve as a valuable work for the American practitioner, Dr. Robert P. Harris has carefully noted the fact when Dr. Playfair's opinion differed essentially from the opinions taught by the leading American authorities. He has also noticed any additions which have been made to our obstetrical knowledge since the last English edition was published, and has thus been able to bring his work up to the present time. As it stands, this work is one of the leading authorities on obstetrics, and will be found to be a useful and reliable guide.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, INCLUDING A SKETCH OF AURAL ANATOMY AND PHYSIOLOGY. By D. B. ST. JOHN ROOSA, M.D., LL.D., Professor of Diseases of the Eye and Ear in the New York Post-Graduate Medical School, etc. Sixth Edition, Revised and Enlarged. Published by Wm. Wood & Co. 1885. San Francisco: W. S. Duncombe.

Anything from the pen of Dr. Roosa is sure to command the attention of every one who takes any interest in diseases of the ear, and as the present edition of his work has been improved and enlarged in many ways, it will, without doubt, meet with as much, if not more, approbation than its predecessors. Although the general character of the book remains the same, there are several additions both to the text and illustrations. Especially is this noticeable in the sections upon anatomy, and also upon that devoted to the internal ear. Dr. Roosa has given special attention to this latter abstruse and comparatively unknown part of his subject, and in the present edition makes known his conclusions, drawn from the close observation of many cases. It is interesting to learn that he believes the "tinnitus aurium and impairment of hearing following the use of quinine to depend upon congestion of the ultimate fibers of the auditory nerves in

the cochlea, and that the redness of the drum heads is merely an index of the former condition;" and also that the middle ear is probably the seat of disease in deaf mutes. The book is one which cannot fail to meet with a ready sale.

A TREATISE ON AMPUTATIONS OF THE EXTREMITIES, WITH COMPLICATIONS. By B. A. WATSON, A.M., M.D., Surgeon to the Jersey City Charity Hospital, to St. Francis', and to Christ's Hospital at Jersey City, N. J.; Fellow of the American Surgical Association, etc., etc. Illustrated by upwards of two hundred and fifty engravings, and two full-page plates. 8vo. Pp. 750. Philadelphia: Blakiston, Son & Co. San Francisco: Bancroft & Co. 1885. Price \$5.50.

It cannot be said that this work contains much that is new relating to the subject of which it treats, but it is rather a synopsis of the different methods of amputating introduced by surgeons, both of the past and present generations. Indeed, it is in this fact, and also in the excellence of the engravings, that the value of the book lies, as it presents to the prospective operator a number of methods of performing the same operation, from which he may select the one best suited to the individual case under consideration. For these reasons the volume is one which is well worth its place in the library of every surgeon, who will find it convenient not only as a book of reference but as an index to the literature of the subject. The typographical errors are too numerous for a book of this class, and we trust that more care will be taken with the proof-reading of subsequent editions.

A SYSTEM OF PRACTICAL MEDICINE. By American Authors. Edited by WILLIAM PEPPER, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine, in the University of Pennsylvania. Assisted by LOUIS STARR, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Vol. II. Philadelphia: Lea Brothers & Co. San Francisco: Occidental Publishing Co., Ernest Hardt, Agent.

A few months ago we noticed the appearance of the first volume of this work, and now have the pleasure of calling the attention of our readers to the second volume. This contains a continuation of the section of General Diseases, and then takes up the subject of Diseases of the Digestive System. Among the list of distinguished authors we notice the names of Dr. Abraham Jacobi, who has written upon Rachitis, in his usual interesting manner. Dr. Jos. Tyson, the well-known Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, writes upon Diabetes Mellitus. Under Diseases of the Digestive System the first four articles are by Dr. J. Solis Cohen. Dr. W. W. Johnston contributes five articles; Dr. James T.

Whittaker four. Dr. Bartholow contributes the article on Diseases of the Liver, while Dr. Alonzo Clark, whose name is so well known in connection with the opium treatment of peritonitis, writes upon this subject. We have already spoken highly of this work, and see no reason to change our opinion from inspection of the second volume. The articles are all from the pens of men of reputation in the profession, and they are sufficiently full, without being (or pretending to be) exhaustive treatises upon the different subjects. It is a mirror of American medicine, and should be read by every practitioner.

THE TREATMENT OF OPIUM ADDICTION. By J. B. MATTISON, M.D. New York and London: G. P. Putnam's Sons. 1885. San Francisco: A. L. Bancroft & Co.

When a patient afflicted with this unfortunate habit goes to a physician, usually one of two plans is proposed: First, to leave off all use of the drug immediately; or, secondly, to decrease the amount gradually, until the amount taken daily is so small that but slight inconvenience will be felt when denied the patient altogether. Dr. Mattison gives the details of a treatment by the bromide of sodium, which he has practiced for a number of years with success. By full continued doses of the bromide he avoids the torture of immediate withdrawal, and shortens very considerably the time generally required when the doses are diminished gradually. It is a method which we believe will stand the test of experience.

CHOLERA: its Origin, History, Causation, Symptoms, Lesions, Prevention and Treatment. By ALFRED STILLE, M.D., LL.D., Professor Emeritus of the Theory and Practice of Medicine in the University of Pennsylvania. Philadelphia: Lea Brothers & Co. 1885. San Francisco: W. S. Duncombe, 30 Post Street.

This book is of especial interest at the present time, when cholera may be expected at any moment to appear on the Atlantic coast. Professor Stillé says that he wishes particularly to disabuse the medical profession of the erroneous notion that the disease ever originates *de novo*. This is especially important, for if it is believed that it never starts *de novo*, then much greater care will be taken in establishing an efficient quarantine. This is another point which the author wishes to impress on the profession, and shows the necessity of a rigid quarantine, when he states that of fourteen epidemics occurring on Staten Island at the station, that all but four were prevented from reaching the city. The book is concise and very readable, and reviews the whole subject thoroughly.

CANCER. A study of three hundred and ninety-seven cases of Cancer of the Female Breast, with Clinical Observations. By WILLARD PARKER, M.D. New York and London: G. P. Putnam's Sons. 1885. San Francisco: A. L. Bancroft & Co.

For a few years before his death, Dr. Willard Parker occupied himself in gathering and classifying the cases of mammary cancer which had come under his observation. Unable, however, to complete the task, his son now edits the observations made and the conclusions reached. It is published in almost the form in which Dr. Parker left it, with but little revision. It will be read by the profession with interest, both on account of the subject and on account of the author, who was so well and favorably known to the profession at large.

DIAGNOSIS AND SURGICAL TREATMENT OF ABDOMINAL TUMORS. By Sir SPENCER WELLS, Bart. Philadelphia: P. Blakiston, Son & Co. 1885. San Francisco: A. L. Bancroft & Co. Price \$1.50.

Sir Spencer Wells says in the preface that this may be considered the fourth edition of his original work, issued in 1865, although in many respects it is a new work. A second edition was issued in 1872, and a third in 1882. The work is well known to the profession, and all will be desirous of obtaining a copy of this last edition, which has been called for in so short a time. The advance made in abdominal surgery has been so rapid in the last few years, that the need of another edition has been imperative. Many of the details have been omitted, and the work has been brought into a surprisingly small compass, for not only are ovarian tumors discussed, but owing to the spread of abdominal surgery, this edition includes the operative treatment of hepatic, renal, and splenic tumors, which were heretofore hardly mentioned.

Part first treats of ovarian and allied tumors, in a most complete manner, from the diagnosis to the treatment after operative procedure, including accidents and complications which are liable to arise. A chapter is devoted to the rise and progress of ovariectomy; another to the preparation of the patient for the operation, and the duties of the nurse; another to Battey's operation; while the final chapter gives the results and subsequent history after operation.

Part second considers the treatment of uterine tumors, excision of the uterus, extirpation of the spleen, surgery of the kidney, stomach, liver, gall bladder, etc.

The whole work is of vast interest to surgeons, and profitable reading for any professional man.

THE CURABILITY AND TREATMENT OF PULMONARY PHTHISIS. By S. JACCOUD, Professor of Medical Pathology to the Faculty of Paris. Member of the Academy of Medicine, etc. Translated and Edited by MONTAGUE LUBBOCK, M.D. (Lond. and Paris) M. R. C. P. (Eng.) New York: D. Appleton & Co. 1885.

The thanks of the profession are due the translator of this book, for the able manner in which he has done his work, and for bringing such a valuable treatise within the reach of all English-speaking physicians. Monsieur Jaccoud is a distinguished professor of the *Ecole de Medicine* Paris, and is there looked upon as the authority in phtthical disease. He has devoted much time to it, and has visited many of the principal health resorts, as he rightly holds that comparatively little can be learned from meteorological tables. Other conditions enter which can only be determined by personal examination. Upon this personal inspection, and from a long and varied experience, he bases an original method of prophylactic treatment, which certainly has much to recommend it. He first considers the curability of phtthisis, and the influences which affect it. Prophylactic treatment occupies two chapters, and four are devoted to the treatment of the ordinary form of phtthisis. Finally, in three chapters the clinactic treatment of this disease is considered. The book is an exceedingly interesting one, and, coming from so high an authority, should certainly have the respectful consideration of even those who do not agree with the author in all his conclusions.

How Shall the Physician Cleanse His Hands?

Dr. Forster, of Amsterdam, contributes an article on this subject to the "Centralblatt für klinische Medicin." He calls attention to the great importance of physicians thoroughly disinfecting their hands before leaving a case of infectious disease (especially any of the exanthemata), and at the same time he asserts that few of the disinfectants now in use really have the power of destroying those microspores which are recognized as so dangerous an element in modern medicine. After a series of careful experiments in the hygienic institute at Amsterdam, in which every precaution was taken to avoid error, the author decided that a solution of carbolic acid of the strength of two and a half per cent. was not capable of "sterilizing" the finger, but that a solution of corrosive sublimate of the strength of one to two thousand formed a reliable antiseptic wash. He urges that the latter be adopted by all physicians, as well as surgeons.

Abstracts and Extracts.

German Analyses of English and American Meat Extracts.

In view of the large number of meat preparations now in the market, and the merits claimed for them in the treatment of debility and exhausting disease, it cannot fail to interest our readers to know how they bear the test of German scrutiny. A. Stutzer, of Bonn, has published in the *Berliner Med. Wochenschr.*, for April 15th, the results of an examination of nine preparations, including Murdock's liquid food, Valentine's meat juice, Johnson's fluid beef, Bengel's peptonized beef jelly, Savory & Moore's fluid beef, Brand & Co.'s essence of beef, Reed & Carnrick's beef peptonoids, and Kemmerich's and Liebig's beef extracts, the first four being American, the next three English, and the last two German.

He first determined in each the proportion of organic matters, salts, and water, and then further treated the organic substances. In doing the latter he determined how much of the nitrogenous matter belongs to the easily digested albumen and pepton. He lays special stress upon these last, because on them the nutritive value of animal food depends. Two preparations, Carnrick's beef peptonoids and Johnson's fluid beef, contained albuminous substances in the form of fibrin, not soluble in water, of which the value must be determined by artificial digestion, since in this way only can be ascertained what proportion of the fibrin can be digested. He further noted the nitrogen in the shape of flesh bases, creatin, carnin, etc., since these, with the potash and phosphoric acid associated with them, play an important role as food and stimulants for the nervous system.

The flesh extracts of Kemmerich and Liebig are chiefly used for healthy men, but are, nevertheless, recommended to convalescents to improve digestion and stimulate the circulation, results which are accomplished partly through the abundant flesh bases and partly through the phosphate of potash. This is in accordance with Liebig's own view, which did not claim for his extract any active nutritive power, but recommended it simply as a relish. Kemmerich's flesh extract contains a larger proportion of pepton and albumen, namely 22 per cent., and he

claims correctly for it the properties of a true nutriment, as well as a nervous stimulant.

Murdock's liquid food, which is an extract of beef, mutton, and fruits, made in Boston, is claimed to have $13\frac{1}{2}$ per cent. of soluble albumen, which Stutzer has confirmed. The fluid contains 8.3 per cent. of alcohol, and on opening the well-sealed vessel the odor was not pleasant, and there seemed to be a partial decomposition of the contents, a tendency to which characterizes albuminous fluids if long kept, especially if they contain fruit juices prone to fermentation.

Valentine's meat juice, made at Richmond, Va., is also a fluid which contains kreatin, potash, and phosphoric acid along with a small quantity of albumen and pepton, and 59 per cent. of water.

Johnson's fluid beef, made in Canada, belongs, on account of its containing peptons and digestible albumen, to the better extracts, although the proportions of water is large, being fifty per cent. Stutzer found still more water, nearly ninety per cent., in Benger's peptonized beef jelly and Brand's essence of beef, of which the first is made in Manchester, England, the second in London.

The fluid meat—peptonized meat—of Savory & Moore, possesses, according to Stutzer, very different properties. It contains chlorides in considerable amount, and is apparently made with hydrochloric acid in order to peptonize the meat, the acid being neutralized with sodium carbonate. In this method of peptonizing, with the aid of acids, Stutzer considers that the action proceeds too far, and that the pepton resolves itself into substances, the nature of which is not precisely determined, but which probably do not possess the same nutritive value as pepton.

Essentially different from any of the above is the preparation known as beef peptonoids, made by Reed & Carnrick, of New York. It is a very fine, dry powder, made of beef, gluten of wheat, and condensed milk, a mixture, therefore, of nitrogenous matters of animal and vegetable origin, and is easy of digestion. The gluten is carefully separated from other organic matters of wheat, and contains only 1.25 per cent. of starch, and 0.25 per cent. of cellulose.

The determination of the nutritive value of these preparations can best be made by comparing the easily digestible albumen and pepton in the different preparations. In such a mode of

comparison, the most nutritious will be found to be Reed & Carnrick's beef peptonoids, of which 100 parts by weight contained the same amount of albumen and pepton as 178 parts of Johnson's fluid beef, 285 of Kemmerich's flesh extract, 482 of Murdock's liquid food, 745 of Brand & Co.'s essence of beef, 764 of Savory & Moore's fluid meat, 898 of Liebig's flesh extract, 902 of Benger's peptonized beef jelly, and 966 of Valentine's meat juice.

Reed & Carnrick's preparation contains, in addition to the nitrogenous matter, 10.67 per cent. of fat, and 10.02 per cent. of soluble non-nitrogenous matters, in the shape of dextrin and sugar.

In this comparison, says Stutzer, Liebig's extract takes a subordinate position, because it is found to be only an appetizing, and not a nutritious substance. If, on the other hand, the comparison is made as regards the flesh bases contained in them, it is found that 100 parts by weight of Liebig's extract contain the same amount of nitrogen in the form of kreatin and carnin as 126 of Kemmerich's meat extract, 637 of Valentine's meat juice, 558 of Johnson's fluid beef, 1844 of Benger's peptonized beef jelly, 4161 of Murdock's liquid food, 5053 of Brand's essence of beef, and 7782 of Reed & Carnrick's beef peptonoids.

From the above very interesting analysis it will be seen that the different articles of food have a far different value, according as they are regarded as nutritive or appetizing, and the indications in each case should be carefully considered before they are prescribed. If these analyses are correct, and they bear the stamp of reliability, it is very evident that an undue value is claimed by the makers for certain of these preparations, and that physicians who have been basing their use upon the representations of the makers, rather than on actual chemical composition, will find a reason for any disappointment in results which they may have noted.—*Medical News.*

Poisoning by Tinned Food.

Dr. J. G. Johnson, in a paper read before the Medico-Legal Society of New York, comments on six cases of corrosive poisoning from eating "canned" tomatoes. The symptoms were intense gastric and intestinal disturbance, followed in the worst cases by epileptiform convulsions and coma. Dr. Johnson's investigations led him to conclude that the noxious substance

was a combination of muriate of zinc and muriate of tin. From his remarks it appears that in some establishments the tops of preserving tins are soldered on, not with a resin amalgam, but with a saturated solution of zinc in muriatic acid. When this mixture is too freely applied it overflows into the tin and poisons its contents. The danger from this process has been so far recognized that in the State of Maryland there is a law prohibiting the use of "muriate of zinc flux." Dr. Johnson appends to his paper a few useful rules for the detection of unwholesome tinned meats by the appearance or handling of the tins. "If the lid of a tin has two solder holes instead of one (showing that the tin has been exhausted a second time to liberate decomposition gases), the contents are likely to be unwholesome. Press up the bottom of the can. If decomposition is commencing the tin will rattle the same as the bottom of the oiler of your sewing-machine does. If the goods are sound, it will be solid, and there will be no rattle to the tin." Rust round the inside of the head of the tin, produced by the eating away of the tin-plating by a corrosive substance, should also be looked on as suspicious.—*Medico-Legal Journal of New York.*

Dr. A. B. Hirsh (*Med. and Surg. Rep.*) describes the "Hammock Mode of Applying the Plaster Jacket," as he witnessed it done by Professor Nancrede at St. Christopher's Hospital. A poorly-nourished boy, eight years old, had the jacket applied for a posterior dorso-lumbar curvature. A piece of ordinary "ten ounce burlap"—the bagging used to wrap around rolls of carpet—seven feet long and three feet wide, was suspended between the sides of the room. Each end of the canvass had a casing about one and one half inches wide, strongly sewn, and a rope drawn through the space thus made (so as to bunch the end) which was attached to a heavy hook or ring screwed into the wall, with a compound pulley and rope to render taut the swing. The lad, devoid of clothes except a woolen undervest, was placed in this hammock, face downward, and feet and hands extended—the latter grasping the sides of the hammock, so as to exercise some extension—and a hole was cut through the bottom of the swing opposite to the nose and mouth, so as to allow him to breathe easily. The usual abdominal pad was fitted, and the hammock was kept well balanced. The hammock was then cut transversely on a level with and down to the iliac crests; the same

was done at the upper margins of the axillæ. The flaps thus formed were folded around the body, the surplus portion removed, and the whole roughly sewn up, thus forming a second undervest around the woolen. Starting from above, the bandage was carried around the body until the deformity was completely covered, the canvas being included in the turns. After the plaster had set, the patient was taken from the swing by cutting loose the burlap above and below the jacket. At no time was discomfort complained of. Professor Nancrede says that this hammock achieves all the good and obviates all the objectionable features of Sayre's swing. The position in the hammock effaced the curves, and by leverage tended to separate the anterior surfaces of the vertebral bodies. The degree to which the hammock was allowed to "sag" would determine the amount of extension exerted upon the spine. This method is cheap, comfortable, and *always* available, without any special apparatus beyond bagging, ropes, strong screw hooks, staples, or some similar contrivance. The patient may be allowed to swing for hours, until the plaster is perfectly dry, thus obviating the risk of breaking or cracking the jacket, which sometimes happens when the patient is taken down too soon from Sayre's swing on account of fainting, etc. The screaming, struggling, and terror, so common with children, is all done away with.

Mr. Albert Carnegie, the Pennsylvania millionaire, who recently gave fifty thousand dollars for the erection and equipment of a laboratory at Bellevue Medical College, has a special desire that the cholera bacilli, together with vaccination as a preventive, shall be investigated in that institution. Apparatus of the most improved kind have been put in, and genuine cholera virus, upon which to experiment, has been imported. Under the direction of Dr. H. M. Biggs, a professor in Bellevue Medical College, the germs of the expected scourge have been arranged for cultivation, and the best microscopes that can be made are used in studying the changes. The intention is to use Dr. Ferran's method of vaccination.

W. R. Warner & Co. have received the first premium at the World's Exposition, New Orleans, for great uniformity and solubility for their sugar-coated pills. This is the ninth World's Fair prize which attests to their excellence.

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**REPORT ON MEDICAL TOPOGRAPHY, METEOROLOGY,
ENDEMICS, AND EPIDEMICS.**

By J. W. ROBERTSON, M.D.

[Read before the Medical Society of the State of California, April 16, 1885.]

In the reports annually made to the State Medical Society, much space has been given to Southern California as a health resort, more especially for consumptives; and so elaborate have these reports been, and so thoroughly has the altitude, humidity, temperature and climate been discussed, that little can be added. Possibly, so much has been written that other localities, exceedingly favorable to those suffering from other diseases, have been overlooked.

Year after year, invalids, without reference to the peculiar type of their disease, flock to Southern California, forgetful of the fact that our climate is cosmopolitan; that within its borders are to be found the altitude of the Alps, the scenery of Switzerland, the fruits of the tropics, numerous mineral springs, which equal in value and are more healthfully situated than are those of the Eastern United States or Europe, the pure air of the Colorado highlands, and the winter climate of Florida.

There are peculiar characteristics of our climate, in marked contrast with those of the Eastern or Middle United States. That, during the whole year, the temperature is moderate; that there are only two seasons, both, in their way, delightful, is of medical interest, from the fact that it attracts so many invalids from other countries, desirous of escaping the extremes of temperature elsewhere found.

While the climate of California is mainly due to its situation midway the temperate zone, the remarkable uniformity of tem-

perature is due to local causes. The great law that in the northern hemisphere all western coasts are warmer than the eastern, is peculiarly well pronounced when the eastern is compared with the western coast of the United States. The mean isotherm of 50° , which passes through New York, latitude 41° , bears northward as it crosses the continent, touching the Pacific at Vancouver's Island, latitude 49° .

Nature also draws isotherms in her distribution of trees and plants. While, on the eastern coast, 60° is the northern limit of coniferæ, they are found as high as 68° and 70° in regions adjoining the Pacific. It is thus evident that the climate of Northern California is much more temperate than that of the Eastern States which are situated in the same latitude; but this does not hold true of Southern California. Here, the conditions are reversed. San Diego, in the same latitude as Charleston, is 8° cooler. San Francisco and Washington, in the same latitude and having the same mean annual temperature, have climates very dissimilar, owing to the great difference between the mean summer and winter temperatures of Washington, which amounts to 40° , and the small difference in San Francisco, being not over 8° . The mean annual temperature of Santa Barbara is 60° . San Francisco 55° ; nor does it fall below this on the northern coast. In Crescent City, latitude 42° , the temperature is as uniform as in San Francisco, frost and snow being of even rarer occurrence.

That this coast line, stretching through eight degrees of latitude, should have such remarkable uniformity of climate, while phenomenal, is explained by the constant west wind which comes from the warm Kuro Shiwo, or Japan current. These winds bear with them the uniformity of temperature of large masses of water, and render the west coast climate warm in winter and cool in summer.

By reason of being thus circumstanced, isothermal lines, which normally run east and west, are, as they near the Pacific, deflected north and south, and define three distinct climatic belts. These may be named: Coast, Valley, and Mountain; and while they resemble each other in having only two seasons, they are dissimilar in other respects, each presenting peculiar attractions for different classes of invalids. These differences depend upon the topography of the country, and are of degree rather than kind; altitude, distance from the ocean, and situation with reference to mountain chains, giving to each region its charac-

teristic climate. That of the coast extends only a few miles inland, but stretches 600 miles north and south. It is characterized by a mild temperature, which varies little summer or winter, a fresh sea-breeze during the warm part of the day, fog in the summer, and an abundant downpour of rain in winter. Here, perpetual spring is found. The trees, being principally fir, spruce, and redwood, and the grass always green, present, both summer and winter, a pleasing contrast to the vegetation prevailing in the valleys and mountains of the interior. It is proper to include in this a large part of the inhabitable region of Southern California. There, the hills of the coast range being low, offer little resistance to the cool ocean breeze, and the effect is felt for many miles inland. The heat incident to the valleys greatly moderates them, removes all rawness, and the result is a balminess exceedingly grateful to the invalid.

The Valley Belt includes that region lying between the coast range on the west and the Sierras on the east. It has the same mean summer temperature, though in winter the valleys of the extreme north are much colder than the south, because of their greater altitude. In the summer the thermometer ranges higher, at times reaching 120° but this is exceptional. The atmosphere being dry, evaporation is rapid, rendering the nights cool and delightful. There are thermal belts of a few miles in extent where frost and snow are unknown, and certain localities have attained reputation as health resorts. As a whole, it is not salubrious, nor, climatically speaking, attractive. Yet in time it will be our great Sanitarium. The mineral springs which are found here in such profusion present great possibilities. As yet, little scientific research has been bestowed upon them. Their waters contain carbonates of soda, magnesia, lime, and iron; chlorides of potassium, magnesium, and lime, together with sulphuretted hydrogen and carbonic acid gases. Organic matter is present in many. In a few localities mud springs are found. These are composed of vegetable materials impregnated with mineral salts. No two springs are alike; although they may possess very nearly the same constituents, the proportions always vary. Invalids flock to these springs, without reference to the nature of their disease or the composition of the mineral water, and drink from an ounce to a gallon daily, as fancy dictates or capacity of stomach limits. They seldom consult even their family physician. Perhaps this is well, for as a rule physicians

are woefully ignorant of this important subject. Nor can it be otherwise, until some more systematic course is adopted in relation to the proper investigation of this subject. While the proprietor of each spring, by an analysis, attempts to prove its resemblance to some celebrated Eastern or European spa, too often the analyzer is not named, or is a person unequal to the manipulation of such delicate tests and reagents as are essential for both the qualitative and quantitative determination of such complex liquids. The mode of procedure should be uniform. So important is this subject to the physician, so great would be the therapeutic advantages were these springs properly analyzed and classified, that it behoves this Society to take action necessary to the attainment of such a result. The bill passed by the last Legislature, which authorizes the appointment of a Professor of the State University as State Analyst, bears on this subject. W. B. Rising, Professor of Chemistry, has been designated as State Analyst, and he is willing to undertake this work, providing that those who are interested in the springs send him the water to be tested. With accurate data thus acquired, it will be possible for the physician to advise his patient intelligently. Surely these springs, holding such useful drugs in solution, will be of great therapeutic assistance when judiciously employed. At present, it is as absurd to send a patient to a mineral spring to "get well," as it would be, in a case of indigestion, to recommend some patent medicine in place of the judicious symptomatic treatment of an intelligent physician. To every mineral spring used in the treatment of disease, a physician should be attached, and his advice followed, not only as to the amount of water imbibed, but more especially in relation to those various hygienic rules which should govern the habits of life of each individual patient.

The Mountain Belt extends from Lassen's Peak, on the north, to Mount Whitney, in the south. Contrary to the general law, that the temperature varies inversely as the altitude, the temperature sensibly increases up to the first 3,000 feet. The mountain belt can only be said to begin above this point. In addition to altitude, there are many other essentials of a health resort. For six months in the year clear weather is assured. The days are warm, with cool nights. The scenery is grand, the air bracing, and the country offers many attractions to those who care for an outdoor life, both game and fish being abundant.

Thus far it has been attempted briefly to outline the physical characteristics of California, the causes of its equable climate, and the many attractions it offers the invalid tourist. Rightly to judge of the effect climate has on disease, to so classify localities that we can with certainty recommend them as best adapted to certain types of disease, while very essential, is, as yet, vaguely understood by the profession; though certain of its members, who belong to the State Board of Health, have made and are making every effort to obtain more definite information. The majority of the profession are lukewarm, their reports unsatisfactory, and, scientifically, of little value. Yet sufficient is known to justify an attempt in this direction, though its details will be meagre. A few diseases, such as diphtheria, malarial and typhoid fevers, are endemic, and depend, probably, on germs developed in and fostered by impurities of soil and atmosphere. While these endemic diseases are found in all three thermal belts, they are of much more frequent occurrence in the valleys and mountains than on the coast. Here, the atmosphere being purified by the constant ocean breeze, modifies their severity, and, in places not densely populated, is able to overcome and destroy the impurities which the soil exhales.

In Crescent City the drains, as a rule, empty into the street; cesspools are abundant, water-closets are seldom cleaned and never purified, and no sanitary regulations are enforced. Yet, with all these death-traps and germ incubators, there has not, at least in recent years, been a case of intermittent or typhoid fever, diphtheria, or, with the exception of measles, any of the eruptive fevers. Both small-pox and scarlatina have been imported. The former was an ignominious failure; not, however, by reason of sanitary precautions. Scarlatina manifested itself by a light rash, with slight throat and fever symptoms, but never confined the patients to their room.

The fact that a pure atmosphere can obliterate disease, should impress what long experience has taught, viz: That many sporadic diseases can be practically eradicated by due attention to hygiene and a strict observance of the laws of health. Our people, so intelligent in other respects, so careful of the insane, the indigent sick, and the criminal, so prompt to take action regarding all things that concern the public welfare, are criminally careless as to the details of private life; caring little for the unseen dangers which surround and which are liable, at any

moment, to precipitate some death-dealing epidemic. To drain marshes, plant the eucalyptus, enforce, even in the smallest town, a thorough system of drainage and flushing, absolutely to prohibit the placing of a water-closet inside a dwelling, are, confessedly, of so much importance that we, as a body, should demand the passage of stringent laws for their enforcement.

Certain chronic diseases are supposed to be favorably influenced by climate. The most important of these is consumption. Southern California is the Mecca to which all such invalids travel, and they come from Europe as well as the Eastern States, While, on account of its equable coast climate, Southern California can be recommended for a winter residence, life there is surrounded with so many luxuries, and the health resorts are of such easy access, that, except for climate, little benefit is to be derived. On the contrary, during the six summer months, the high Sierras, free from climatic disturbance, has an atmosphere impregnated with the balsamic emanations of the fir and the pine, and a residence there necessitates a certain amount of outdoor life and exercise. These trips should only be recommended when consumption is incipient. In the later stages, change of climate seldom benefits. To send patients away from their homes to die among strangers is not humane, and the majority of us can testify to the sad consequences which so often follow such a change. Dr. Widney, in a paper presented to this Society in 1883, so thoroughly discussed the climate and diseases of Southern California, that nothing can be added. The northern coast climate has never received the meed of praise which rightfully belongs to it.

To those suffering from general malaise, malarial and atonic diseases, this climate should be prescribed. Intermittent fevers never originate here, and when, contracted in the interior, they come within the influence of this climate, they assume first a remittent type, and finally disappear, even when no treatment is given. As previously stated, sporadic and eruptive fevers are either altogether absent or robbed of their virulency. This is more especially true in regard to those places not too thickly inhabited, and which are daily purified by means of the fresh ocean breeze. In those cases of consumption unaccompanied with bronchial lesions, this coast climate is to be recommended because of the tonic properties of the atmosphere. On the other hand, it affects unfavorably those who are afflicted with rheumatism, neuralgia, bronchitis,

and asthma. It is also proper to include among these, diseases of the liver, for not only is this the class for which most frequently medical aid is sought, but all fevers assume a remittent type.

Mineral springs, even with the knowledge we now possess, are available for the external treatment of certain diseases. Rheumatism, neuralgia, skin diseases and syphilitic eruptions are much benefited by bathing in their waters. In rheumatism of the joints and enlargements due to chronic inflammations, baths of mud are supposed to be more efficacious than those of mineral water. It is a mooted question whether this benefit arises from the heat alone, or is the result of the minerals which the water holds in solution.

Regarding the internal use of the water, the scanty knowledge we now possess allows of no generalizations. This is unfortunate, for until the profession is in possession of data sufficient to indicate their use, they will continue to be looked on as of little therapeutic value. Were the analysis of the springs uniform, and their exact constituents known, reasoning and analogy, aided by experience, would soon teach us how to employ them advantageously, and render them a most important therapeutic resource.

REPORT ON MEDICAL EDUCATION.

By A. B. NIXON, M.D., Sacramento, Cal.

[Read before the Medical Society of the State of California, April 16, 1885.]

In regard to medical education, much could with propriety be said, but in this report I design to be very brief. Oral and illustrative teaching in class-rooms I believe to be the best method of imparting to students a practical knowledge of the science of medicine, as there are many branches of science that can only be taught practically in that way—chemistry for example. It would be impossible to express by words alone the different changes of color or of physical character which occur in chemical experiments, and which constitutes the text-book, as it were, of the chemist. A few practical experiments or illustrations soon familiarize the mind of the student with the different appearances, and a little practice will only be required to gain a knowledge of the necessary manipulations, and the consequence is that through the eye, the mind becomes familiar and firmly impressed with facts that could scarcely be learned from books alone.

Oral instruction possesses other advantages, as it keeps the attention awakened to the subject of study. It is very important, however, that well-directed reading should accompany the attendance upon lectures. As the student advances, the advantages of private reading will increase.

There is no branch of medical science in which oral teaching is more useful than it is in surgery. The mind is far better trained by what it hears and sees in the lecture-room than it could possibly be by reading alone. The reason that practical teaching is so requisite to the acquirement of a knowledge of surgery, is simply that surgery is a subject in which the eye must be educated as well as the understanding, and this cannot be done so well by books alone.

The importance of clinical lectures must be very obvious to all, as the symptoms which characterize disease can in no other way be understood with such ease and correctness. Clinical instruction at the bed side makes such an impression upon the mind as cannot be made in any other way. Symptoms are there noted by the careful student that will long be remembered, and a means of correct diagnosis thus acquired will long continue to be of practical use.

There can be no strongly-marked line between the teaching of surgery and medicine, and in point of fact no such distinction can be made, as the two blend with each other and are mutually dependent. A disorder apparently constitutional is frequently cured by the removal of a local source of irritation, and an external disease, on the other hand, is often cured by constitutional remedies; therefore it is clearly necessary that the physician and surgeon should each understand the pathology of both the above conditions, or otherwise they must be in continual consultation. It should be remembered, however, that surgery and medicine are both to be learned only through a knowledge of other branches of science. These, although distinct from each other and embracing subjects quite dissimilar, possess at the same time a close and mutual connection; and, indeed, it is only in the relation of collateral branches of science to each other that a consistent form is given to any science. As the human frame is made up of many parts differing from each other, but being more or less essential to the wellbeing of the whole, the study of anatomy naturally forms the first subject of the student's attention. The study of anatomy necessarily constitutes the ground-

work of the science of medicine, and whatever the superstructure may be, a competent knowledge of anatomy must form the groundwork or foundation.

Anatomy must always be looked upon as a basis of every branch of medicine, and it is to anatomical investigation that physiology and pathology owe their advancement to the prominent position they now occupy. There is no department nor branch of our profession which can claim exemption from the obligations due to anatomy; it is the guiding knowledge of the operating surgeon, and an acquaintance with its principles is of the greatest importance in the estimation of internal and hidden disorders.

The first subject of attention is the condition of the body in a state of health. The anatomy of the body in health is the source of what is known positively in human physiology. Morbid anatomy must be regarded as the most essential element in the study of pathology. With a good knowledge of anatomy, the study of physiology becomes easy and natural, and of late years the knowledge of physiology has become greatly increased, and this has arisen in a great measure from the circumstance that chemistry has been made an adjunct to physiological inquiry. Vitality is made up of a series of ceaseless chemical changes; the elements of food taken into the stomach form new compounds, and are ultimately converted into tissues of the animal frame; and these elements, having performed their office, are again disorganized and pass away as dead excrementitious matter.

Without a knowledge of physiology it is impossible to estimate the disturbances of function, which is generally so indicative of disease. By the study of anatomy and physiology, the way is opened for that of another equally important subject—pathology. Anatomy, the science of healthy organization; physiology, that of healthy function; and pathology, that of disease. A knowledge of morbid anatomy is essential to the proper comprehension of the laws of pathology, and in many cases an acquaintance with the effects produced in the system by alteration of structures, is sufficient in itself to enable the physician to at once form a correct diagnosis. In such diseases as phthisis and albuminuria, the changes of structure are sufficient to account for the constitutional disorder attendant upon them, and here morbid anatomy furnishes the most important data to a correct diagnosis, inasmuch as the urgency of symptoms is gen-

erally in proportion to the extent of abnormal change. There are diseases, however, in which morbid anatomy has signally failed to discover any structural change to which the disorder could be attributed. Hydrophobia and tetanus are examples of violent maladies which are said to leave no trace of organic lesion from which their true character or seat can be deduced. The same may be said of some kinds of fever and rheumatism. The microscope and chemistry have both been great aids in the study of morbid anatomy and pathology.

During the last few years much attention has been given to the "germ" theory of disease, by a large number of scientists, both in this country and in Europe. This line of research, in my opinion, leads to a more specific method in the treatment of disease.

Of late years the local treatment of wounds has undergone a very great change. It is now pretty generally conceded that wounds treated with a solution of bichloride of mercury, of the strength of one to one thousand, the wound being thoroughly irrigated with this solution and then dressed airtight with Lister gauze and McIntosh cloth, it will be found very uniformly that there will be no inflammatory action set up, and no suppuration. This treatment will apply to all classes of wounds, keeping them sweet and free from putrefaction.

To cure disease and ameliorate human suffering is the high and honorable calling of the medical profession.

In regard to sanitary matters, the physician is often called upon for advice, which is always freely given, without money and without price. Cholera is now prevailing in some parts of Europe, and may soon reach this continent; but in my opinion we have a worse pest legalized by the laws of our State, existing all around us. I refer to the retail liquor traffic. The love of alcoholic drinks appears to be almost inherent among the masses of mankind, and it is now estimated that one hundred thousand die annually in the United States from the intemperate use of alcoholic drinks. Alcohol, being such a destroyer of mankind, should never be used as a beverage. When taken into the stomach in sufficient quantity it will kill, from its direct poisonous effects. It paralyzes the nerves and brutalizes the passions. It produces congestion of every organ of the body. It is the instigator and active cause of a large proportion of all crimes committed. It builds our scaffolds and fills our prisons and

asylums. It influences the brutish passions of men, and ruins many of our women. Its shame falls upon many others, not directly its victims. Intemperance is insidious, and its whole method delusive and dangerous. It has various disguises, but no matter what character it assumes, its power is sure and deadly. It respects no class or condition. It invades the sacred precincts of the home, and brings grief to the mother, and destroys the peace and hope of the father. It entails poverty and disgrace. In parlors and hovels, in rags and broadcloth, its victims stumble, fall, and die. It strikes manly strength and beauty with the besom of destruction. No sanction of the moral nature or affections is strong enough to successfully contend against it. It kills self-respect. No pestilence has wrought with more terrible fatality. Medical education, in my opinion, should take cognizance of this great and wide-spread evil, and do something tending towards its suppression. It is not alone a moral question, but a sanitary question as well. It should be met squarely and honestly, and the agitation not be permitted to rest. Medical men, as a class, might do much if they were so disposed, towards the amelioration of intemperance, and I hope to see the day when they will be united. Much can be accomplished by both precept and example. For those engaged in the alcoholic traffic I entertain only feelings of kindness. As long as money can be made out of the traffic, many out of business will be tempted to enter into it. I am an advocate for the speedy removal of the temptation.

In regard to the facilities for obtaining a thorough medical education, they are probably as good in the United States as in any other part of the world, and the two schools of San Francisco—the Cooper and the Toland—are no doubt as good as the best, and they certainly have some advantages in climate over many others. Their classes are necessarily small, as students cannot be expected in any great number from the Atlantic States, and small classes can be much more thoroughly taught than large ones, which is quite an advantage over many of the schools in our large Atlantic cities and in Europe. The members of our State Medical Society should be especially friendly to our local medical schools.

In regard to the PACIFIC MEDICAL AND SURGICAL JOURNAL AND WESTERN LANCET, I wish to suggest that it be adopted by the State Medical Society as its organ, and that the Transac-

tions of the Society be given to it annually for publication, instead of publishing them in a separate volume, as formerly, on its own account; and I also suggest that a certain percentage of the revenues of the State Society be set apart for the benefit of said journal.

REPORT ON OPHTHALMOLOGY.

By A. M. WILDER, M.D., Chairman of the Section.

[Read before the California State Medical Society, at its last annual meeting.]

Mr. President, and Members of the California State Medical Society

At the last annual meeting of the Society, the Committee of Arrangements for the session of 1885, were requested to arrange for three days, instead of the customary two days, which has hitherto been the duration of the session. This action was taken to meet a want which has long been felt, and which has been growing more apparent and pressing with each year, viz., opportunity for the discussion of the various subjects presented by the many able and interesting papers read before the Society, and also, opportunity for the systematic division of the work into the several sections contemplated in Article V., Sec. 14, of the Constitution and By-Laws; and which reads as follows:

“The Standing Committees shall constitute Sections, after the manner of the American Medical Association, to whom all papers shall be referred, upon the first day of the session, and who shall report to the Society those papers that seem of sufficient interest for reference to the Committee on Publication; also, those that seem of sufficient importance to be read before the Society, by title, abstract, or *in extenso*, upon the second day of the meeting.”

In accordance with the provisions of the above section, the Chairman of the Committee on Ophthalmology addressed a communication to the other members of the committee, the first of December last, asking their active co-operation in making this section successful. The chairman took the liberty of including in this section the branches of Otology, Laryngology and Rhinoscopy, they being so nearly connected as to be almost inseparable; and he proposes to introduce at this session a resolution to change the By-Laws, so as to include all these subjects in the one section. Under such a plan, the members of the regular committee could be resolved into heads of sub-committees,

and the entire ground of the section would thus be carefully covered. There are many advantages to be gained by this sectional work, and it is to be hoped that it can be successfully carried out in our Society.

Hitherto it has been the custom for the chairman of the various standing committees to present to the Society, in his individual capacity, nearly, if not quite, all that was submitted on his special topic. This was unjust to all concerned; the other members of the committee felt free to evade their moral obligations to contribute, the chairmen had more required at their hands than was fair; and the Society was deprived of the accumulated experiences of the active workers in the profession.

With the increase in the length of the sessions, we may, and should, look for radical changes in this direction.

I am happy to state that my application to the other members of the committee met with a hearty response from Dr. W. E. Briggs, of Sacramento, and Drs. M. C. O'Toole and A. Barkan, of San Francisco. The latter could not promise to prepare a paper, but would be on hand to take part in the discussion. No response was received from Dr. Martinache, much to my regret.

To Dr. Briggs was assigned the sub-section of Otolology; to Dr. O'Toole, that of Laryngology; Surgeon John Van R. Hoff, U.S.A. (stationed at Black Point), Assistant to the chair of Ophthalmology in the Medical Department of the University of California, was requested to prepare a paper on Rhinoscopy, and Diseases of the Nasal Cavities; and Dr. Geo. H. Powers promised a report on the Clinical Uses of the Muriate of Cocaine, as exemplified in cases occurring in our practice.*

With regard to my part, I have thought that as this is the first year in which this sectional work has been attempted, it would be eminently proper to pass in review some of the great discoveries of the past thirty or forty years, which have been instrumental in raising the subjects of our section to that plane where they are recognized as distinct and special branches of the profession, equally with Gynecology, Genito-Urinary Surgery, etc. This leaves full opportunity for the presentation and discussion of papers on special subjects within the section, which the chairman hopes will be taken advantage of, but which at this writing he has no means of obtaining positive knowledge concerning.

* Owing to the continued illness of the writer, Dr. Powers has been unable to prepare his promised paper.

So rapid and startling have been the advances made in this section during the past forty years, that manifestations of surprise have almost ceased; the question uppermost is, "What next?" That these discoveries have culminated in such rapid succession during this brief period, is due to a number of causes, not the least of which is, a corresponding activity and advancement in other departments of scientific and industrial life.

The developments of steam and electricity have brought the whole world into much closer relations, in these latter days, than the inhabitants of one of our States maintained with each other forty years ago. Any matter of moment or otherwise occurring in London, or on the continent of Europe, may be known in this country—in the computation of exact time—before the occurrence of the fact; as the electricity conveys the message much faster than the earth revolves; so that the proceedings of the late International Medical Congress, held in Copenhagen in August last, were telegraphed to our enterprising medical journals, set up in type, printed and sent out broadcast, to be read by the medical men of America, long before ordinary communications could have reached us, rapid as ocean transit has become.

How difficult it is to realize, as we gaze upon the serene and placid countenance of our worthy President, that at the meeting of the International Medical Association, held in London about four years ago, while waiting with his brain teeming with the pregnant thoughts he was so soon to bring forth, the wonderful power of electricity could produce a more rapid premature delivery than even his own modified Tarnier forceps, and convey to his medical brethren across the Atlantic those ideas that were soon to be presented before the *savants* of that assembly.

This close intercommunication of ideas is undoubtedly the most potent factor in the wonderful developments of the past few years, in every branch of science; and in no department have there been more brilliant discoveries than in the comparatively virginal fields of the special senses, with their complicated mechanical adjuvants.

Periods of great activity and discoveries are usually preceded by much longer stretches of plodding investigation. Prior to 1846, and through the preceding centuries, anatomical studies had been prosecuted here and there, often under great difficulties, but so thoroughly as to leave but little more to discover in the gross construction of the human body.

The discovery of methods of illumination of the various cavities of the human body, and the adaptation of suitable instruments for the utilization of such discovery, opened up an immense new field for scientific research. Especially was this true with reference to the organs of the special senses. Ophthalmology was the first to receive the benefit of the increased activity following these discoveries.

Prior to 1846 but little was known of the interior of the eye—back of the iris and lens—beyond its anatomical structure, and such probable functions as could be deduced from a knowledge of such structure. For ages it had been considered impossible to see into the interior of the eye. All the deeper diseases interfering with proper vision were classed under the generic head of amaurosis. Progressive atrophy of the optic nerve, amblyopia, neuro-retinitis (choked disc), separation of the retina, retinoboroiditis, etc., were totally unknown; glaucoma was a classified disease, but little was known about it; and it was recognized as being absolutely incurable. Refraction and accommodation, with their various errors, were imperfectly understood.

In 1846 the ophthalmoscope, in crude form, was first brought into existence in England. The discovery, however, remained a dead letter, so far as utilization was concerned, until 1851, when Helmholtz, in the pursuit of his optical studies, developed the instrument which bears his name, and which still remains, for certain methods of examination, among the best in use. This instrument he sent to Von Graefe, who, recognizing its possibilities, at once put it to the test of practical application.

Only seven years after the ophthalmoscope was given to Von Graefe, the entire civilized world was electrified by the announcement of his great discovery, *that iridectomy provided a means of cure for the entire group of glaucomatous cases, which had hitherto been recognized as incurable.* The operation was purely empirical, and resulted from the observation that the removal of a large piece of iris relieved the eye tension.

It was left for Wecker, and other investigators, to determine, twenty years later, the etiology of the disease, and the *modus operandi* by which the operation wrought a cure. Von Graefe's operation was immediately accepted by the scientific world, and it has become so firmly fixed as one of the axioms of ophthalmic surgery, that glaucoma being determined, iridectomy, or its later ally, sclerotomy, must follow as a matter of course, and without hesitation or delay.

In view of the fact that as late as 1880, a prominent surgeon of this city advocated and actually performed the heroic operation of ligating the common carotid, for glaucoma, and defended such action by the statement that he "was induced to attempt this proceeding under the belief that no worse results could follow than have followed from the usual modes of treatment, viz., final blindness," and a further statement that "nothing satisfactory has been done for the disease," I quote the following paragraph from Brudenel Carter, the well-known ophthalmic surgeon of London, as an indication of the position Graefe's brilliant discovery occupies in ophthalmic surgery :

"Against glaucoma, in all its forms, and from their commencement to their termination, the resources of the Pharmacopœia are utterly useless. They are even worse than useless, for their employment wastes time and loses opportunity. The only remedy for the disease is the operation of iridectomy. Before 1856, glaucoma was justly regarded as being beyond the reach of any treatment then practiced. But the ophthalmoscope, by showing the excavation of the optic disc, caused the increase of tension to be more regarded than it had been prior to this discovery. Von Graefe, who had observed that the excision of a large piece of iris, in making an artificial pupil, was always followed by marked diminution of tension, determined to try how the same proceeding would affect glaucomatous hardness; and his experimental operations soon convinced him how brilliant was the success which he was destined to achieve. Surgery has won few greater triumphs than the inclusion of the whole glaucomatous class among the maladies which admit of cure by operation."

Since the above was penned, the operation of sclerotomy has, to some extent, taken the place of iridectomy, in certain phases of the disease. In this operation the same tissues are divided, and the same results accomplished, without the sacrifice of a piece of the iris; but its performance requires greater care and skill, and has often to be followed by an iridectomy to complete the case.

The myotics, eserine, and pilocarpine have also proven useful in controlling, and even curing, incipient cases of glaucoma. The action of these drugs is in the same direction as that of the operation, viz., keeping open the iritic angle, by means of which the aqueous humor is enabled to filter through Fontana's spaces; it being now the generally accepted theory, that the etiology of the disease is due to the closure of the iritic angle, thus preventing the escape of the aqueous.

The next great development in ophthalmic science was the

production of the classical work of Donders, of Utrecht, on Accommodation and Refraction; this was published in 1864, by the New Sydenham Society, London, and so complete and perfect was the work that it remains to-day the standard authority. Let any one attempt to follow the text of this book of over six hundred pages, and see how soon he will come to grief, if he has not received the previous training essential to its mastery, and even then he will not find his task any too easy.

From this time forth, ophthalmology began to take rank as a distinct and special branch of medical science. As we have seen, prior to the discovery of the ophthalmoscope, the anatomical structure of the eye was very thoroughly known; comparatively little has been added to the common stock of knowledge in this direction. The ophthalmoscope made it possible to determine great physiological questions, and to solve many problems in pathology that had hitherto been involved in the deepest obscurity. But while the ophthalmoscope has done so much, there is no question but that very much more has been claimed for it than facts will warrant, in the determination of deep-seated lesions of the brain, and pathological changes in other portions of the body. Occasionally, however, a case becomes recognized by its agency, so startling in character as to make one almost ready to impute more than physical powers to this little instrument.

Some three or four years ago a student of the Medical Department of the University of California called at my office upon matters connected with the school; with him was his brother, to all appearance a good specimen of healthy manhood, well developed, strong and active. The student casually remarked: "Professor, I wish you would take a look at my brother's eyes; he occasionally complains of them, and the edges of the lids get red," etc. Superficial examination showed a mild form of blepharitis only; otherwise the outward appearances were normal. His vision was fully up to the standard, both for distant and near objects. More with a view of giving the student opportunity of making an ophthalmoscopic examination than with a thought of finding any pathology, I took the young man into the dark room and examined the fundus of each eye. You may imagine my surprise, to find retinal changes indicative of advanced Bright's disease of the kidneys. Careful questioning of the student elicited the fact that there was no previous history. The

young man had always been well, had scarcely ever been under a physician's care, and was considered to be in perfect health. Professor W. E. Taylor examined the young man's urine at my request. A freshly-passed specimen was boiled in a test-tube, with the result that fully one-half became solidified. In about a year from that date the young man had emaciated to almost a skeleton, and was laid away. Upon two other occasions in my life the ophthalmoscope has given me the first information of the existence of Bright's disease; of course, by reason of the peculiar pathological changes occurring in the retinae, concomitant with that disease. The percentage of Bright's disease presenting these characteristic changes in the retinae is undoubtedly very small; still, this one case shows sufficiently the importance of the general practitioner having practical knowledge of the use of the instrument; principally, however, for diagnostic purposes, for no one in these days, not an expert, can afford to assume the responsibility of treating the deep-seated diseases of the globus-occuli, or of penetrating its substance with cutting instruments.

With the marvellous development in the localization of brain centers that has taken place since 1878, the role played by the organs of special sense has necessarily been very important; but the ophthalmoscope has had little or nothing to do here. In the optic nerve atrophy, so often an accompaniment, or sequela, of locomotor ataxy, the general symptoms of diminished vision, dilated pupils, etc., are a sufficient index to the physician in attendance, of the changes going on; the ophthalmoscope only confirms, and oftentimes the latter fails to reveal any lesion until long after vision has sensibly diminished.

The large majority of the retinal congestions and inflammations are local in origin, course, and termination: this must necessarily be so, since the retinal arteries are but small branches of the ophthalmic, and any brain lesion that would be manifested in the interior of the eye-ball through the circulatory system, should be equally, if not more, manifest through the other and larger branches of the ophthalmic.

In the Journal of the American Medical Association, Jan. 3, 1885, is a synopsis of the results of investigations as to the condition of the fundus oculi in insane individuals, made by Drs. J. Wigglesworth and T. H. Bickerton, at the Rainhill Asylum, extending over a period of two and a half years. There were 313 patients satisfactorily examined; of these, 66 were general

paralytics, and 247 non-paralytics. Among the latter (mania, 82 cases; melancholia, 49; mental stupor, 2; dementia, 61; epilepsy, 48; imbecility without epilepsy, 5) the optic discs and main retinal vessels were perfectly normal in 83 per cent., and among the remaining 17 per cent. the changes were in some cases doubtful, and in some others were clearly due to causes, such as Bright's disease, which had no direct connection with the patient's lunacy. Among the 66 general paralytics, decided changes were present in 23 per cent. They came to the following conclusions:

1. That in insanity proper (including all forms, *other than general paralysis*), changes in the fundus oculi are found in a small minority of cases; but that when allowance is made for changes depending upon associated constitutional conditions, errors of refraction, etc., the number of cases in which a connection between the mental (cerebral) state and the accompanying change in the fundus oculi can be so much as suspected, is very small.

2. As a corollary, that in insanity proper, no connection can be traced between the condition of the fundus oculi and the patient's mental state.

3. That in the majority of cases of general paralysis of the insane, the fundus oculi presents a perfectly healthy appearance.

4. That in a minority of cases, clear and precise lesions are found.

5. That these lesions fall into two main classes, the one tending in the direction of slight neuritis, the other in that of atrophy.

6. That in the former class, the affection declares itself as a hyperæmia of the discs, the edges being softened and indistinct, so that in some cases they can be traced with difficulty, or not at all; and that these conditions tend, if the patient live long enough, to be replaced by atrophy, so that at length the complete disorganization of the nerve may take place. The changes are essentially chronic in their course.

7. That though atrophy of the optic nerves may thus succeed to a slight chronic interstitial neuritis, it is also not unfrequently primary *at the disc*; the atrophy may be complete, the patient becoming quite blind.

8. That the pathological basis underlying the appearance of slight neuritis may be broadly characterized as a tendency to overgrowth in the connective elements of the nerve; the trabeculæ not only getting greatly hypertrophied, but the neuroglia

corpuscles also becoming very large and numerous; these parts thus grow at the expense of the nervous elements, which subsequently atrophy.

9. That in the cases of primary atrophy, the pathological appearances eventually reached, though somewhat similar, may possibly take place in the reverse order *at the disc*; the nerve fibres being the first to dwindle, and the fibrous elements, trabeculæ, etc., subsequently taking on increased growth.

10. That in a considerable proportion of the cases in which atrophy of the optic discs is met with, spinal symptoms are prominent in the disease, these symptoms pointing in the direction of posterior or lateral sclerosis of the chord; but that this connection is by no means invariable.

Among these cases, having an average age of fifty-five years, 13.7 per cent. presented opacities of the lens, slight or considerable, which is a much higher percentage than would be found in the population at large of the same average age, and furnishes an illustration of the general impairment of nutrition, common in the insane.

In the *Boston Medical and Surgical Journal* of Jan. 22d, 1885, Dr. O. F. Wadsworth reports, under the head of "Recent Progress in Ophthalmology," the results of the investigation by Uthoff in the Berlin Society for Psychology and Neurology, of 154 cases of optic nerve atrophy. "Of these there were of spinal origin, thirty per cent.; of cerebral origin, twenty-four per cent.; genuine progressive atrophy, fifteen per cent.; the result of neuritis, twelve per cent.; caused by orbital affections, six per cent.; in paralytic dementia, four and two-tenths per cent. The remainder was made up of cases of misuse of alcohol, and other diseases. Uthoff believes that the constant improvement in means of diagnosis will gradually lessen the number of cases of genuine atrophy, perhaps abolish this form altogether. Already the spinal cases are much better understood."

The determination of brain lesions (tumors, gummata, etc.) affecting vision, is not to be made by the ophthalmoscope alone, but necessitates a careful investigation of the visual field, and acuteness of vision. The recent investigations in the localization of brain centers, previously alluded to, have shown conclusively that the total destruction of the visual center of one side will produce total blindness in the nasal half of the eye of the opposite, and the temporal half of the eye of the affected side. The

same result follows total destruction of an optic tract, anywhere in its course; or pressure from tumors, gummata, etc., sufficient to interfere with function; or abscess in the optic thalamus, corpora geniculata, or corpora quadragesima.

In other words, in a given case, where there is symmetrical loss of vision in the nasal half of one eye, and the temporal half of the other (homonymous hemianopia), and the ophthalmoscope reveals no lesion, it may be positively asserted that there is some brain affection interfering with the visual nerve fibres, of one or the other side, as the case may be, somewhere between the commissure and the visual center in the cortex, or at the latter point.

If there be total loss of vision of one eye, and no impairment of vision in the other, and the ophthalmoscope reveals no lesion, then there is trouble in the optic nerve itself, between the commissure and the globus oculi.

Of course there is infinite variety in the quantity of visual defect, and restriction of the visual field, depending upon amount and character of the lesion; professional sagacity is oftentimes taxed very severely to clear up these cases, and oftentimes hopelessly. Numerous cases illustrative of the above have occurred in our private practice. During the past year two perfectly defined cases occurred in my clinic at the City and County Hospital; in one case there was complete loss of vision in the right half of each eye (homonymous hemianopia), and in the other there was complete loss of vision in one eye alone, its fellow remaining normal. The ophthalmoscope revealed no lesion in either case. There was syphilitic history in both cases, with secondary manifestations; the diagnosis in the one case was a gummy tumor along the right optic tract; and in the other, a similar tumor pressing upon the optic nerve. Full doses of potass. iodidi, combined with small doses of hydrarg. bin. iodidi, were administered in each case, as high as 150 grs. of the former being given in twenty-four hours. Vision was restored in each case.

In the *Boston Medical and Surgical Journal* of May 22d, 1884, appears a very interesting article on homonymous hemianopia, with a report of three cases, by Dr. O. F. Wadsworth.

I have dwelt upon this question of the ophthalmoscope in diagnosis, for the reason that Dr. Hammond, and some others, claim so much for it in their hands. Its possibilities are great, but they are limited, and these limits must be recognized.

The twenty years succeeding the publication of Donder's great work on Refraction and Accommodation, have been mainly devoted to the elucidation and working out of the problems which the discovery of the ophthalmoscope and optical investigations had presented. Among the operations upon the eye itself, modifications in cataract operations have probably been most numerous. Here again the genius of Von Graefe stands forth prominently, as his modified linear extraction is to-day the favorite one with most ophthalmic surgeons.

Iridectomy stands firmly as the principal operation and remedy for glaucoma, although in certain forms sclerotomy is almost obligatory.

During this period the electro-magnet, for the removal of bits of iron and steel from the eye, has been given its due place.

The operation of optico-ciliary-neurectomy, which for a time was received with so much enthusiasm, has also settled into its proper niche. Few ophthalmic surgeons at present rely upon its efficacy, although Schweigger, of Berlin, and some others, continue to practice it.

Nerve stretching has had its fling here, as well as in most other portions of the body; stretching of the nasal branch of the ophthalmic has been attempted and recommended in glaucomatous cases. It is needless to say that this procedure has not as yet displaced other methods.

The development of a better knowledge of refraction and accommodation, by showing that most cases of strabismus are the direct result of imperfect vision in the affected eye, or eyes, has rendered the operations for the same more certain and satisfactory, as the proper fitting of glasses prevents a repetition of the defect. The same knowledge also renders it possible in many cases to dispense with the operation, where formerly it would have been necessary. Operations upon the eyelids, for ectropion, entropion, trichiasis, etc., and upon the lachrymal apparatus for obstruction, abscesses, etc., have been multitudinous in variety and character. All this has resulted in the development of the best methods for obtaining the best results.

The substitution of the conjunctiva of the rabbit has been many times attempted in severe cases of symblepharon, and where the conjunctiva has been destroyed by injuries; but, unfortunately, without that success which could be desired.

Skin grafting has been successfully performed recently, in nu-

merous cases where there have been severe injuries to the lids; and several cases have been reported in the past year, where flaps without a pedicle have been successfully used to repair loss of structure.

While operative procedures upon the eye and its appendages have been thus numerous and varied, fully as much activity has been manifested in the *therapeutics* of eye diseases. It would require a volume to review the various remedies that have been made use of during these twenty years. Of the great mass, but few have attained to a permanent place. The number of medicaments absolutely essential in the daily practice of an oculist having a large clientèle, might almost be counted upon his ten fingers and thumbs. Foremost among these come the midriatics, with atropia at the head; and the myotics, or myositics, with eserine in the lead. The one class produces dilatation of the pupils; the other produces the opposite effect. Without these two classes of remedies, the ophthalmic surgeon might almost retire from business. In the measurement of many cases of refractive defects of the eye, the use of the former is absolutely indispensable. In iritis, and in the purulent ophthalmias of new-born children, and the gonorrhœal cases, the use of atropia is *always* essential. In ophthalmoscopic examinations also, it becomes necessary in many cases to use a mydriatic, for the better illumination of the interior of the eye.

Eserine, the active principle of the Calabar bean (*Physostigma Venenosa*), as we have before mentioned, has of late proved useful in controlling, and in some instances apparently curing, incipient and threatened cases of glaucoma—this being accomplished by keeping the iris pulled away from the iritic angle. Eserine is regarded by some authorities as almost a specific in the treatment of corneal ulcers; although after many and thorough trials it has failed to prove satisfactory in this respect in *our* hands. It is of course very useful in counteracting the effect of atropia and other mydriatics.

Pilocarpine, the active principle of jaborandi, is much less powerful as a myotic than eserine, but has of late been attracting much attention as a remedy in the "separation of the retina," being exhibited by subcutaneous injection about the orbit. This use was suggested by its known power to produce excessive serous exudation from the excretory glands, thereby promoting absorption of effused fluids in the tissues and closed cavities of

the body. In many cases the separation of the retina is caused by the effusion of serum between it and the choroid. The action of pilocarpine has been favorably reported upon in a number of cases, and much is hoped for in the future from its use.

Mercury, in its various forms, is another indispensable. In blepharitis marginalis, phlyctenula conjunctivitis and keratitis, corneal opacities, etc., the oculist would almost be lost without its aid. In iritis, seventy-five per cent. of which cases claim to be of specific origin, the use of mercury has saved hundreds and thousands of eyes that would otherwise have gone on to total destruction. I have seen gummy tumors in the iris melt away under its influence like snow before the sun, and pus globules in the iritic fibres disappear as if by magic.

When we come to the diseases of the conjunctiva, we approach a subject which is of the greatest interest to the general profession, as a large proportion of such cases, especially in the rural districts, must necessarily be treated by the family physician. The scope of this paper will not permit of even a resumé of the subject. It involves the entire phenomena of inflammation. I desire, however, to say, that the statement made by the writer in his paper read before this Society at its last session, entitled "Old and New Codes," to the effect that there is an unalterable law of therapeutics, based upon the *uniform action* of the various drugs in every case, but manifested in the economy by their *primary* or *secondary* effects, according to the quantity exhibited, has no happier illustration than in the treatment of the various conjunctival affections. I venture the assertion that every ophthalmic surgeon will agree that, in the great majority of these affections, applications which in their results pass beyond the primary stimulant, or tonic effect, produce more harm than good, as in every such case nature has to make good the injury inflicted, as well as to maintain resistance to the disease.

There are two classes of these conjunctival affections to which I shall call your attention, as very notable progress has been made in their treatment during the past two or three years. These are the purulent ophthalmia of new-born children (*Ophthalmia Purulenta Neonatorum*), and the entire group of trachomatous affections, including pannus and other chronic affections of the cornea resulting therefrom. The former class has been for all ages a slur and blot upon the good name of the profession. Their occurrence may, in the main, be charged directly to the

negligence or carelessness of the attending physician or midwife ; for here, as in other specific affections, prophylactic measures are the most effective means for combatting the disease ; and it is too often the case that the new-born child is handed over to the nurse to be washed and dressed, without any supervision on the part of, or instruction from the doctor. The disease once established, must run its course, and the utmost care and skill are requisite to conduct the case to a happy conclusion. Fortunately, the principal cause of this affection being specific inoculation during the passage of the child's head through the vagina, these cases are not so frequent in the higher walks of life, or in private practice, as in the lower strata, and in our public institutions.

In the *Quarterly Journal of the Medical Sciences* for October, 1884, is an admirable paper on "Prevention of Ophthalmia Neonatorum," by Henry J. Garrigues, A.M., M.D., Obstetric Surgeon to the New York Maternity Hospital, from which I quote as follows :

"In the year 1879, F. Daumas submitted the following statistics to the Blind Congress meeting in Paris : Of 56,391 eye patients he had treated, 1178 had become incurably blind. In 108 cases, the blindness was due to incurable diseases ; in 1,070 to curable diseases. Of these, 817, or 69 per cent., had become blind by the purulent conjunctivitis of new-born children. Horner states that an average of 33 per cent. (minimum 20, maximum 79) of blind children brought to the institutions for the blind in Germany and Austria, had lost their eyesight by ophthalmia neonatorum. In Credé's clinic in Leipsic, 10 per cent. of the children used to become affected ; in Olshausen's, in Halle, the average reached 12½ per cent."

The former percentage of these cases in Maternity Hospital could only be arrived at approximately, from "a report by the House Surgeon, Dr. S. Pierson, that it had been no uncommon occurrence to have half a dozen cases on hand in a service which only averages thirty-five confinements a month." The paper speaks of the prophylactic treatment of the mothers, by washing out the vaginæ with solutions with carbolic acid before the birth of the child. This not proving effective, attention was directed to the eyes themselves. "Abegg washed them at birth with plain water. Olshausen, advised by A. Graefe, used a one per cent. solution of carbolic acid, and reduced thereby his percentage of cases of ophthalmia neonatorum from twelve and five-tenths (12.5) to six (.06) per cent. But all other results have

been left far behind by those of Credé, who in the year 1880 introduced his treatment, which consisted in *washing the outer surface of the eyelids with plain water, separating them slightly, and letting a single drop of a two per cent. solution of nitrate of silver fall from a glass rod on the cornea.* No after treatment is used. Since Credé introduced this method in his clinic in 1880, until the end of March, 1883, he treated 1,160 children in this way, and only four, *i. e.*, little more than one per cent., were affected, and of these, two, or perhaps even three, must be eliminated on account of particular circumstances, so that in reality the percentage becomes almost none." Dr. Garrigues goes on to state that he introduced this method on the 14th of October, 1882, in Maternity Hospital, and kept it up until he went off duty at the end of March. After that time it was discontinued, but during his next term, from the 1st of October, 1883, until the 31st of March, 1884, he followed the same plan. During this period of his service, there were born at the hospital 352 living children. One of these cases was delivered by an assistant, during the absence of the House Surgeon, and the application being neglected, this child had a purulent conjunctivitis, with opacity of the cornea, and although it was sent to the eye ward for special treatment, the case ended in complete loss of sight in both eyes. As a counterpart to this, he states that "*of the 351 children who were treated as prescribed, not a single one was affected.*" That Dr. Garrigues believes in the bacterial origin of the disease is shown by his statement that, "When we remember that our patients come from the very lowest strata of the population, it may be safely presumed that a large proportion of them shelter in the folds of their vaginas Neissen's gonococcus, which, introduced into the conjunctival sac, produces ophthalmia neonatorum." Of course, so far as the treatment goes, it matters not whether the cause be bacterial or not, provided the results are satisfactory. There is much controversy as to the existence of the gonococcus. Sternberg has utterly failed to find it; and many other observers confirm this view. The similarity of this disease, however, to gonorrhœal ophthalmia, would go very far to indicate the similarity of the causes operating in the two classes of cases. The treatment to be followed when once established, is absolutely the same in each.

That Credé's methods of prophylaxis are considered sound, is well exemplified by their adoption in many other German clinics,

with almost similar results. In Bonn, Credé's treatment was adopted in June, 1881, with the modification that instead of a two per cent. solution of nitrate of silver in water, a vaseline ointment of the same strength was employed. During the six years prior to the adoption of this treatment, ophthalmia occurred in 7.3 per cent. of the children born. From June, 1881, to Nov., 1883, 703 children were delivered, of whom only four have suffered from ophthalmia, or .56 per cent., and in three of these cases it was believed that the infection occurred subsequent to birth, as the disease did not appear until the seventh, eighth, and ninth days respectively.

It does not follow that this treatment becomes necessary in all cases of obstetrics occurring in private practice; at the same time, with our present knowledge of the disease, its serious character, methods of prevention, etc., when a case *does* occur in a physician's practice, he should not consider himself free from the direct responsibility of such occurrence, until a careful investigation relieves him from such imputation. The general charge that it was the fault of the nurse in not properly washing the child, does not shift the burden.

The other class of cases, viz., the trachomatous, has ever been among the most troublesome and intractable, and the number and variety of the remedies directed against these conditions would comprise a large proportion of the articles included in the Pharmacopœia, as well as an infinite number of domestic remedies besides. The most potent remedy in aggravated cases, with thick pannus covering the cornea, etc., that the profession possessed until recently, was the inoculation of gonorrhœal pus; but so dangerous and erratic has this ever been, even in the hands of the most skillful, that its employment is limited to an exceedingly small range of cases, and these selected with the utmost care. Therefore, when, three years ago, Dr. Wecker, of Paris, brought the attention of the profession to the Brazilian plant jequirity (*Abrus Pectorius*) as a substitute for the gonorrhœal pus, and by his experiments proved its comparative safety in a vastly extended range of cases, the whole civilized world hailed the discovery as one of the great boons conferred upon the human race in modern times. The medical journals of the world have been filled with the results following the use of this remedy in the hands of ophthalmic surgeons, and but for the more recent discovery of the most wonderful therapeutic agent

since the introduction of ether and chloroform, the jequirity would to-day be the leading topic in ophthalmic therapeutics. My worthy confrere, Dr. Briggs, at the last session of the Society reported upon the status of the drug at that date, and as I have prepared a paper to be submitted to this section, upon the therapeutic action of jequirity, I shall give the subject no further consideration in this report.*

It is almost with reverence that I approach the next topic in my report. A drug which has been known for years, whose properties were supposed to be thoroughly understood, whose active principles had been extracted, and which had been relegated, after careful and extended trials, to an inferior position in the Pharmacopœia as practically inert and useless, has suddenly and without warning, through the agency of a German medical student, developed a potentiality as a local anæsthetic to mucous membranes, which has caused it to stand forth as a giant, armed cap-a-pie, like the warriors of Cadmus, who sprang up in a single night. Of course I allude to the hydrochlorate, or muriate of cocaine, the active principle of the erythroxyton coca. There is probably not a medical journal in the world that has not contained full reports upon the drug, with comments, cases, etc., etc., so that it is unnecessary to dilate upon it here. One of our recent journals has stated that "the most lonesome doctor in the country is the ophthalmic surgeon who has not written upon cocaine." There are some amusing incidents connected with the first introduction of the remedy in this country, which illustrates the eagerness with which people rush into print, and the desperate efforts made not to be left behind in the strife for notoriety.

Dr. Squibb, in his "Ephemeris" for November, 1884, says :

"On the morning of Tuesday, October 7th, the writer received a letter from Dr. Henry D. Noyes, of New York, dated Kieuznach, Germany, September 19th, saying that a medical student of Vienna, named Köller, had discovered that a solution of hydrochlorate, or muriate of cocaine, of the strength of two per cent., when dropped into the eye in quantities, first of two drops, and then of three drops, with ten minutes interval, gave after ten minutes more, an anæsthetic condition of the cornea and conjunctiva, which continued from ten to twenty minutes, and then passed off gradually. Dr. Noyes asked that Dr. A. Mathew-

* Prolonged illness has prevented the completion of this paper, and consequently it cannot be presented at this meeting of the Society.

son, of Brooklyn, and Dr. Chas. S. Bull, of New York, be at once told of it, that they might investigate the matter."

Dr. Mathewson was out of town, but Dr. Bull applied the remedy on the 8th, and upon reporting to Dr. Squibb that the two per cent. solution had not proven entirely satisfactory, a four per cent. solution was sent to him, which he used between the 13th and 16th, as he wrote Dr. Squibb on the latter date that it had produced "complete anæsthesia in sixteen minutes."

Dr. Noyes sent a communication to the New York *Record*, of the same date as his letter to Dr. Squibb, which appeared in the issue of October 11th, 1884. This communication was a resumé of the Ophthalmological Congress held at Heidelberg, in September, 1884, at which the action of the cocaine was demonstrated, and which created, of course, intense enthusiasm.

The issue of the *Record* of October 18th, 1884, contained reports of cases wherein the cocaine had been used in ophthalmic lesions and operations with *marvellous* results, by Prof. C. R. Agnew, M.D., Wm. Oliver More, M.D., and Jas. L. Minor, M.D.

In the number of the *Record* for October 25th, 1884, the indefatigable Dr. Knapp comes to the front, a little late. He does not content himself with repeating simply the experiments of the previous reporters upon the organs pertaining to his special work, but he proceeds to prospect every mucous cropping he can discover in his own person; and, not content with this, submits other members of his household to the same process. On page 461 he says: "This I used upon myself and four members of my family, watching it a whole afternoon and evening." On page 462 he describes the use of the drug upon his own person, in the eye, nose, mouth, larynx, trachea, urethra and rectum; besides one case, in another person, of an ear affection. Up to the present time the medical journals of the world have been full of the reports of the experiments that have been made with the cocaine upon the human body, in every conceivable shape and form. The results have shown conclusively that its action is local, most effective upon mucous surfaces, and of more especial service in producing anæsthesia of the conjunctiva and cornea; next to which, possibly it may prove of greatest use in affections of the nasal cavities and naso-pharynx.

We have now in this country an American Ophthalmological, Otological and Laryngological Society. Similar organizations

are existent in the principal countries of Europe, and through these agencies, and the close intercommunication of ideas, the friction of incentive ambition is bringing forth a continuous coruscation of brilliant results.

**ARSENIC IN THE TREATMENT OF
MALARIAL FEVERS.**

By JAMES H. PARKINSON, L.R.C.S.
City Physician, Sacramento.

[Read before the California State Medical Society, April 17th, 1885.]

In common with many other practitioners, I have invariably resorted to arsenic in the treatment of obstinate remittent and intermittent fevers, where quinine seemed impotent to prevent the recurrence of pyrexia. As a rule, I prescribed it in combination with the sulphate, considering it supplemental in its action, and not caring to rely on it alone till the appearance of an abstract of Tomasi Crudelli's views on the subject, in the journal of the American Medical Association of June, 1884, induced me to extend its application much further. Since September '84, I have carefully noted a series of suitable cases treated at the City and County Dispensary, Sacramento, and, feeling the results may interest members of the profession, have thought it advisable to bring them before the Society.

I am ready to admit that such a report is eminently unsatisfactory, and may even be deemed unreliable, as a means of estimating given results. In dispensary practice the majority of the applicants are transient; in most cases, through ignorance, vague and indefinite statements of the actual systemic condition only are obtainable; and where it is impossible to keep the subjects under observation, an enquiry of this character is apt at times to become discouraging.

I have, however, learnt enough to impress me most favorably with this method, and warrant its continuance during the coming Summer.

The following tables comprise those cases treated during the months of October, November and December, '84, and January and February, '85, in which arsenic has been at first the only antiperiodic used. The drug has been administered in solution, the preparation usually employed being the liquor arsenici chloridi, U. S. P., with occasionally the liquor potassæ arsenitis, the dose ranging from 1 to 6 Ms. every 3 or 4 hours, but not

TABLE I.

| SEX. | AGE. | SOCIAL CONDI-
TION. | TYPE
OF
DISEASE. | TREATMENT. | PROGRESS. | TOTAL
QUANTITY
OF
SOLUTION. | RESULT. | PREVIOUS
ATTACKS. |
|----------------|---------|------------------------|------------------------|---|---|--------------------------------------|---------|----------------------|
| 1 F... | 44... | S... | Quotidian.... | { Liq. Potass. Arsen. Ms. 4, 3d horis.....
{ Vinum Ferri..... | Gradual abatement of symptoms. | Ms. 65.. | Cured | Yes |
| 2 F..... | | M... | Tertian..... | { Liq. Arsen. Chlor. Ms. 4, 4th horis.....
{ Tr. Ferri. Elix. Calisaya..... | " " | Ms. 65.. | Cured | Yes |
| 3 F.... | 7½..... | | " | { Liq. Arsen. Chlor. Ms. 3, 4th horis.....
{ Vinum Ferri. Elix. Calysaya..... | " " " | Ms. 50.. | Cured | Yes |
| 4 M... 53... | | M... | " | { Liq. Ar. Chlor. Ms. 4, 4th horis.....
{ Tr. Cinchon. Tr. Nuc. Vom..... | " " " | Ms. 65.. | Cured | Yes |
| 5 M... II... | | | Quartan..... | { Liq. Potass. Arsen. Ms. 4, 4th horis....
{ Tr. Ferri. Elix. Calisaya..... | " " " | Ms. 65.. | Cured | Yes |
| 6 M... II... | | | Tertian..... | { Liq. Arsen. Chlor. Ms. 2½, 3d horis....
{ Acid Hydrobrom., Tr. Cinchon..... | " " " | Ms. 40.. | Cured | Yes |
| 7 F.... 8... | | | " | { Liq. Arsen. Chlor. Ms. 3, 4th horis.....
{ Acid Hydrobrom., Tr. Cinchon..... | " " " | Ms. 65.. | Cu ed | Yes |
| 8 M... 32... | | S... | " | { Liq. Arsen. Chlor. Ms. 5, 4th horis.....
{ Tr. Cinchon., Acid Sulph Dil..... | " " " | Ms. 80.. | Cured | Yes |
| 9 M... 22... | | S... | " | { Liq. Arsen. Chlor. Ms. 4, 4th horis.. ..
{ Acid Hydrobrom., Tr. Cinchon..... | { Reports improvement, increased Arsenic to Ms.
6, 4th horis. Reports convalescence, de-
creased Arsenic to Ms. 2, 4th horis. . . . } | Ms. 190.. | Cured | Yes |
| 10 F.... 10... | | | " | { Liq. Arsen. Chlor. Ms. 2½, 4th horis..
{ Tr. Cinchon..... | Gradual abatement of symptoms.. | Ms. 40.. | Cured | |

TABLE I. (Continued.)

| SEX. | AGE. | SOCIAL CON-
DITION. | TYPE
OF
DISEASE. | TREATMENT. | PROGRESS. | TOTAL
QUANTITY
OF
SOLUTION. | RESULT. | PREVIOUS
ATTACKS. |
|-------|------|------------------------|------------------------|--|--|--------------------------------------|---------|----------------------|
| 11 F. | 15 | S. | Tertian. | { Liq. Arsen. Chlor. Ms. 4, 3d horis..... }
{ Tr. Cinchon..... } | Gradual abatement of symptoms. | Ms. 65. | Cured | Yes |
| 12 M. | 40 | M. | | { Liq. Arsen. Chlor. Ms. 4, 4th horis..... }
{ Tr. Cinchon., Acid Mur. dil..... } | { Reports relieved. Repeated }
{ mixture. Reports cured..... } | Ms. 130. | Cured | Yes |
| 13 M. | 16 | | Tertian. | { Liq. Arsen. Chlor. Ms. 4, 4th horis..... }
{ Tr. Cinchon., Acid Sulph., Aromat..... } | Gradual abatement of symptoms. | Ms. 65. | Cured | |
| 14 M. | 3 | | Quotidian | { Liq. Arsen. Chlor. Ms. 3, 4th horis..... }
{ Tr. Cinchon..... } | { Reports relieved. Repeated mixture }
{ with Iron. Reports cured..... } | Ms. 96. | Cured | |
| 15 M. | 44 | M. | Quartan | { Liq. Arsen. Chlor. Ms. 5, 4th horis..... }
{ Tr. Cinchon..... } | { Reports improvement. Repeated }
{ mixture. Reports cured..... } | Ms. 160. | Cured | Yes |
| 16 M. | 61 | M. | Tertian. | { Liq. Arsen. Chlor. Ms. 4, 4th horis..... }
{ Tr. Cinchon., Tr. Nuc Vom..... } | { Became convalescent. Reported in }
{ 12 days, with relapse. Repeated }
{ mixture. Reports cured..... } | Ms. 130. | Cured | Yes |
| 1 F. | 35 | M. | " | { Liq. Potass. Arsen. Ms. 6, 3d horis..... }
{ Acid Mur. dil., Tr. Cinchon..... } | | Ms. 96. | * | Yes |
| 2 F. | 45 | M. | " | Liq. Arsen. Chlor. Ms. 4, 3d horis | | Ms. 48. | † | Yes |
| 3 M. | 45 | M. | " | Liq. Potass. Arsen. Ms. 4, 4th horis. | | Ms. 90. | † | Yes |
| 4 F. | 11 | | | { Liq. Arsen. Chlor. Ms. 4, 4th horis..... }
{ Tr. Cinchon..... } | | Ms. 64. | † | Yes |
| 5 M. | 35 | S. | Tertian. | { Liq. Ar. Chlor. Ms. 4, 4th horis..... }
{ Tr. Cinchon. Acid Hydrobrom..... } | { Reports improved. Repeated }
{ mixture..... } | Ms. 120. | † | Yes |

*Personally reported convalescence.

†Reported convalescent by friends or relatives.

TABLE II.

| SEX. | AGE. | Social Condition | TYPE OF DISEASE. | TREATMENT. | PROGRESS. | QUANTITY OF SOLUTION TAKEN BEFORE CHANGE OF TREATMENT. | SUBSEQUENT TREATMENT. | RESULT. | PREVIOUS ATTACKS. |
|------|------|------------------|------------------|--|--|--|--|---------|-------------------|
| 1 M | 10 | ... | Tertian.. | {
Liq. Ar. Chlor. Ms. 3, 4th horis....
Tr. Fer. Perchlor.....
} | {
Improvement doubtful..
Repeated prescrip-
tion. Relapse.....
} | Ms. 96 | Am. Sulph. grs. 30.
Liq. Ar. Chlor. Ms. 50
Tr. Fer. Perchlor. | Cured | Yes |
| 2 M | 16 | S. | " | {
Liq. Ar. Chlor. Ms. 2, 4th horis.....
Vin. Fer.....
} | Reported cured.
Relapse in 15 days.
Ordered Liq. Ar. Chlor. Ms. 4,
4th horis. Vin. Fer.
Reports no improvement.
Some improvement, but subse-
quent return. | Ms. 95 | Am. Sulph. grs. 30.
Acid Hydrobrom
Tr.
Fer.
Am. Sulph. grs. 30.
Liq. Ar. Chlor. Ms. 60.
Tr. Fer. Perchlor. | Cured | Yes |
| 3 M | 9 | ... | " | {
Liq. Potass. Ar. Ms. 4, 4th horis....
Acid Hydrobrom., Elix. Calisaya....
} | Reports improvement.
Repeated last mixture.
Improvement.
Relapse in 14 days.
Steady improvement.
Symptoms reappear in 16 days. | Ms. 60 | Am. Sulph. grs. 20.
Liq. Ar. Chlor. Ms. 40.
Tr. Fer.
Am. Sulph. grs. 20.
Liq. Ar. Chlor. Ms. 60.
Tr. Fer. | Cured | Yes |
| 4 F. | 5 | ... | " | {
Liq. Ar. Chlor. Ms. 2, 4th horis.....
Vin. Ferri Citrat.....
} | No improvement..... | Ms. 30 | Am. Sulph. grs. 30.
Liq. Ar. Chlor. Ms. 30.
Vin. Ferri. | Cured | No |

Including the foregoing, a total number of 45 cases were treated. Of these 20 are placed under the head of unknown, no reliable report having been received from any one.

exceeding a quantity of 36 Ms. in 24 hours. It has been given in combination with tr. nuc vom. Ms. 3 to 12; vinum ferri. Ms. 5 to 15; tr. cinchon. co. Ms. 5 to 15; tr. ferri. perchlor Ms. 5 to 15. Syrup and glycerine being used as the vehicles, with occasionally the elixirs of taraxacum, gentian and calisaya. These last were more frequently added to produce the moral effect of quinine than for any other purpose, and I do not suppose that their presence, or that of the tincture of cinchona, will be considered to have materially influenced the result.

Reviewing the literature of the subject, one is struck by the absence of that unanimity which personal investigation might be reasonably supposed to inspire.

Neimeyer—Vol. II, page 635, Am. Ed.—says: “The only febrifuge, except Peruvian bark and its preparations, that deserves confidence, is arsenic in the form of Fowler’s solution, (4 to 6 drops three times daily during the apyrexia). In view of the far more certain and safe action of quinine, I consider the use of arsenic as only justifiable in those rare cases where quinine fails even in large doses.” Neimeyer on nosology or pathology is unsurpassed by any modern writer, but as an authority on treatment he will not usually be consulted by the enquiring practitioners.

Roberts—Vol. I, page 217, Ed. 3—briefly dismisses the subject by remarking that of the various substances that have been employed as substitutes for quinine, arsenic is one of the few which are reliable. “It is most decidedly beneficial, has the advantage of being cheap, and is best given in the form of Fowler’s solution, beginning with 4 or 5 Ms. three times a day.”

Wood—Vol. I, page 260, Ed. 4—says: “Of certain remedies which really possess antiperiodic powers, though not comparable to quinine, the one that approaches most nearly to it is arsenic. It was much used before the discovery of quinine. It has the advantage of being almost tasteless, and can often be administered when quinine will not be borne. Its use cannot in general be prolonged with propriety much beyond a week.”

That a remedy which possesses antiperiodic powers almost equaling quinine, can be borne by an irritable stomach, and will be readily taken by children, is a decided gain. With judicious care in administration, and carefully graduated doses, one week is certainly not the limit of its use.

Bristowe’s opinion—page 291, Ed. 2—is much more favorable.

He asserts that "arsenic is equally efficacious with quinine in the treatment of ague, and, indeed, often effects a cure when quinine has failed." He does not set any limit to its administration, and says: "the continuous use of quinine and arsenic, even for many months, does not necessarily eradicate the disease."

Tanner—Vol. II, page 310, Ed. 7—while classifying arsenic as one of the two specifics for ague, can only recommend it on the ground of its cheapness. Accepting Dr. Morehead's calculations that $\frac{1}{2}$ gr. of arsenious acid, or 1 dr. of liquor arsenicalis, is equal to 15 grs. of quinine, he concludes that as such a dose cannot be taken without risk, it is better to prevent the expected paroxysm by quinine, and then obviate a recurrence with arsenic. The combination of the two drugs in moderate doses he considers very efficacious when symptoms have become chronic.

Hertz in Ziemssen's *Cyclopedia*—Vol. II, page 671, Am. Ed.—considers that arsenic, though an important remedy, is less efficacious than quinine, particularly in fresh attacks, while it is of value in cases where quinine fails, and in old inveterate frequently relapsing intermittents.

Bartholow—page 111, Ed. 1—recognizes the importance of arsenic, but believes that it is best used to prevent the recurrence of attack, and that in acute malarial toxæmia it is more useful as an adjunct to quinine than as the sole remedy.

Phillips—Wood's Library, '82, Vol. II, page 46—says: "We cannot doubt that arsenic suitably administered is an effective remedy for ague, but on comparing it with quinine and allowing for a percentage of spontaneous recoveries from mild attacks, we conclude that the latter is still to be preferred for severe and acute cases, and in 'pernicious' or malignant forms; also, it acts better usually in tertian ague."

Ringer—page 287, Ed. 7—says: "With the exception of quinine no drug subdues intermittent like arsenic. Though some count it equal, if not superior, the great majority of observers maintain that cinchona cures the disease more quickly and certainly."

Scoresby-Jackson—page 275, Ed. 3—states that arsenic as an antiperiodic is second only to quinine, unlike which salt it can be administered during the paroxysms of ague.

Sternberg—Wood's Library '84, Vol. page 199—One of the latest and most exhaustive writers on the subject adopts the

same views. He places arsenic next to quinine as an antiperiodic, asserts that it cannot be relied on in pernicious fevers, follows the balance of testimony in agreeing that it is less useful in quotidian than in tertian and quartan types, and finally states that in chronic cases it often succeeds where quinine fails. Most of the foregoing authors while giving Boudin every credit for his efforts in popularizing the use of arsenic, fail to personally advocate his system of treatment.

Trousseau, both in the *Clinical Medicine*—Vol. II, page 703, Ed. 3—and in the *Materia Medica and Therapeutics*—Wood's Library '80, Vol. I, page 169—where he is supported by Pridoux, does not hesitate to fully endorse the methods of his illustrious confrere. In the *Clinical Medicine* he says that "arsenic has been reinstated in its place of honor," and that "his successes have been confirmed by the successes of many other practitioners." Trousseau emphasizes the fact that Boudin did not aim at "substituting arsenic for cinchona, but in carrying out a complex medication in which arsenic sets up an arsenical, in opposition to the paludal diathesis," seconded by the powerful aid of emetics, and abundant alimentation. The *Materia Medica* contains an excellent chapter by Pridoux, in which the whole question is thoroughly treated, and Boudin's methods given in detail. Rules are laid down, and their strict observance insisted on, if "the most advantage possible from febrifuge treatment is to be obtained." If practicable, its administration by the rectum is recommended as preferable, proportionate quantities being more readily borne. The drug is given in divided doses during the apyrexial stage, and great stress is laid on graduating the amount according to the progress of the disease, as the system is much more tolerant at the onset than subsequently. Everything depends on appreciation of this fact, as well as due allowance being made for "the character of the fever, locality, season and individuality." It is as undesirable to give too little as to give too much. Boudin's conclusions are drawn from an experience of 4000 cases, a number which, as it must include subjects of most opposite types, would seem to be amply sufficient.

In arranging the foregoing cases, I have endeavored to tabulate them so that their value can be readily estimated. The division into three groups—cured and benefited, failed, and result unknown—had to be adopted in order to classify the list.

Under the head of cured are those who attended regularly, in whom the progress of the case could be watched, and where after convalescence there was no return of symptoms for two months. Benefited includes such as reported once, stating that prominent symptoms—headache, vomiting, chill or fever, with sweating—had abated, leaving the accompaniments of the malarial diathesis. Also where the patient did not return, but the result was gathered from some relative. Under the head of unknown are the transient applicants, who do not re-appear. In three instances I know that benefit was attained, but desiring as far as possible to eliminate any uncertainty, I have only included cases in which I could be absolutely positive as to the effect of treatment. Reflecting on the opinions of eminent writers, one is struck by the wide divergence between the directions of Roberts or Tanner—three to five drops of arsenical solution three times a day—and the complex system of Boudin. It is not asserting too much to say that his rules could only be successfully carried out in hospital practice. No man would administer the enormous doses he advises unless the patient was under constant observation; and who could trust to the ignorance and stupidity of the average subject by risking his reputation in what we would regard as a rash experiment? Further: I do not believe that even with such brilliant statistics as Boudin reports, the methods of attaining them, where practically applicable, can be advocated, when good results are possible by less objectionable means. Assuming that in the majority of cases quinine and arsenic possess equal anti-periodic powers, some decided points of superiority must be proved, to claim a preference for either. Convenience in administration, and the absence of that undisguisable bitterness which to many makes quinine so nauseous, gives arsenic a decided advantage. Children will take it readily, and their well-known tolerance of the drug makes it the most useful remedy for malarial fevers in early life. With adults, particularly women, this tastelessness is often a matter of importance, and if treatment is successful, the opprobrium attached to so-called “allopathy” is correspondingly diminished. Cheapness is also an element of consideration. The price of a four or six ounce mixture containing one dr. of quinine ranges from \$1 to \$1.25, which is practically equivalent to the daily pay of the ordinary laborer, and as the cost can be reduced at least one-half, the change, equal results being obtained, will be regarded as eminently desirable.

The facts that arsenic is usually more readily borne by an irritable stomach, and will often be retained during the pyrexial stage, when quinine is rejected, are important. In remittent fevers it must be considered the most desirable febrifuge. The objections which are urged against quinine by specialists in the department of aural surgery deserve to be taken into account, and the positive assertions by eminent authorities, drawn from their extended experience, should receive due weight. Patients often assert and maintain with perfect conviction that the beginning of impairment in one or both ears was distinctly traceable to large doses of quinine, or its prolonged use in some obstinate intermittent. Occasionally we come across subjects in whom hearing has been completely lost on one side through organic disease. Such cases are more than ordinarily obstinate to treat. If possessed of any intelligence, they will in the incipiency of the attack avoid the use of cinchona, owing to fear of injuring the remaining organ. Having applied for treatment, the disease will be found to have taken firm hold of the system, requiring vigorous measures to dislodge it. If quinine is used, the despondency of the sufferer is often intense, and will materially delay convalescence. Apart altogether from the exclusive use of arsenic, or rather its employment as the only antiperiodic, there are many cases in which—even more than with pernicious fevers—it may be most advantageously employed as an auxiliary. Instead of increasing the dose of quinine, or shortening the interval, an equivalent of arsenic may be added, or the quantity of the alkaloid may be reduced and the effect maintained or intensified by the mineral solution. For instance, if twenty or twenty-five grains per diem be taken, twelve or fifteen drops of arsenical liquor given with it will be equal to a material increase of the alkaloid, or the arsenic being increased to twenty Ms., the bark may be diminished in equal ratio.

Granting that in the imperfect tables which I have been able to furnish, several of the cases may belong to the "spontaneous recovery" type mentioned by Phillip, or were so mild as to require but little attention, we must still remember that in every instance a quantity of quinine, varying from forty to eighty grs., would have been ordered and taken. Again, the cases where improvement only has been reported, are mainly those in which it was impossible to continue treatment, owing to the patient leaving or being no longer under observation. Finally, several

in whom no benefit was derived, were equally obstinate with quinine till arsenic had been added. My object has been to show that by ordinary means, without any complicated system or objectionable procedure, arsenic may be regarded as a reliable antiperiodic, and that recoveries can be expected without the dreaded bitter sulphate or its unpleasant after effects. This position I consider fully maintained, and I think that those who give the drug a fair trial will unanimously agree with me in the facts.

Reliable statistics of the amount of sickness annually due to malarial infection are, as far as I am aware, unobtainable. The returns of the various Boards of Health only furnish the mortality, their circulars mentioning its prevalence or otherwise. At the City and County Dispensary, Sacramento, during the year ending March 31st, 1885, 1,407 cases applied for treatment, of which number 335 are entered under the head of remittent and intermittent fever. This might furnish some data for the valleys, but malarial fevers are not confined to the lower lands, as we find them just as active and malignant in the foothills. The so-called "mountain fever" is even supposed by many observers to be identical with typical ague.

This universal prevalence compels us to regard as important any method which claims superiority in combatting an affection so "widely ranging."

I had thought when first reflecting on the possibilities to be evolved from persistent use of arsenic in paludal troubles by ordinary means, and in moderate doses, that the results would be practically unsuccessful. A very limited trial convinced me of the many advantages to be obtained.

When my experience was sufficient to warrant me in drawing conclusions, I still hesitated to write anything on a subject which has already and often been so ably handled. Like many remedies fashion has much to do with, the administration of quinine and the desuetude into which other antiperiodics have fallen, may thus in a great measure be accounted for. I have had the curiosity to look over the prescription files of two leading drug stores in this city, and find, judging by the context of the prescription, dose, directions, etc., that from October 1st, 1884, to March 1st, 1885 (the period during which my cases were collected):

| | | |
|---|-----|--------|
| Quinine was ordered for malarial trouble..... | 350 | times. |
| Arsenic " " " | 17 | " " |
| Quinine and arsenic " " | 14 | " " |

With these facts in view, I believe I am justified in endeavoring to awaken some interest on a subject that is of everyday importance to most practicing physicians in this State.

**REPORT OF THE BOARD OF EXAMINERS,
APRIL 15, 1885.**

By R. H. PLUMMER, M.D., Secretary.

Mr. President, and Fellow Members :

The Board of Examiners desire to make but a brief report, in manuscript, on this occasion, completing the same by presenting the official Register of Physicians and Surgeons for 1885, a copy of which has been sent not alone to every member of this Society, but to every licentiate of this Board, whose address is known, in this State.

The number of meetings held during the year, 18; number of original certificates granted, 171; number of duplicate certificates granted, when the original had been lost, 3; total number granted during the year, 174. Number of certificates revoked, 4; of these, three resided in the city of San Francisco, viz.: A. E. Mintie, G. P. Allen, and H. J. Speer. The latter, who advertised under the name of Spinney & Co., has since left for parts unknown; while the fourth, viz., Platt B. Myers, makes his headquarters at Los Angeles, paying occasional visits to sister cities. Total number of certificates refused during the year, 5. Of these, three were refused because of insufficient credentials. These were J. E. Blanc and E. Mazzie, of San Francisco (both of whom have since left), and V. Gilcich, of Los Angeles. The fourth was G. H. Neubeck, of San Francisco, whose certificate was refused because of insufficient evidence of identity. He subsequently left this city, assuring the Board he was going directly to Germany. He was soon after recognized in the city of San Jose, where he held forth for a time under the name of Von Holwig. But his identity being discovered, he left that city for pastures new. The fifth was M. Hilton Williams, of Los Angeles, whose certificate was refused because of unprofessional conduct.

One application is now pending before the Board, where charges of unprofessional conduct have been preferred.

No arrests for illegal practicing in this city have been made during the year, because it was necessary for some one to super-

intend such work ; and the unusual amount of labor involved in issuing the new Medical Register was quite as much as the Board could properly attend to. The magnitude of the difficulties in that undertaking can be fully realized only by those who have engaged in it.

Notwithstanding the extra expense incurred in issuing this book, we are pleased to report to the Society that we come before it with our financial obligations all discharged, as will appear in the report of the Treasurer, and a balance of \$—.— remaining in the treasury to the credit of the Board.

We hope to accomplish, through the publication and wide distribution of this book, a better enforcement of the law throughout the State. The plan proposed and carried out was to procure, through physicians and postmasters, the correct address of every person practicing medicine in this State; then to segregate the legal from the illegal, and the regular from the irregular, publishing each class under its proper heading.

In addition to the extensive distribution among the licentiates of this Board, a limited number of copies have been placed in the hands of the Homœopathic and Eclectic Boards. A copy has been sent to every District or Prosecuting Attorney in the State, and many copies have also been placed in drug stores and public libraries, where known to the Board, with the hope that the contents will reach the public as well as the profession, that they may be enabled to learn the standing of those "who doctor them." Copies have also been sent to every regular medical college in the United States and Canada ; to a number of medical gentlemen and medical journals throughout the East, and a few have been sent across the "briny deep."

We are sorry to say that there are, in the illegal list, the names of a few gentlemen who have honorably earned, and are now enjoying, their retirement from the arduous labors of a life-long practice. Drs. F. C. Dale, of Snelling, and W. F. Channing, of Pasadena, we are now informed, come under this class; while Prof. E. S. Carr, of Pasadena, whose name appears in the list, has never, during his long and useful career, engaged in the practice of medicine. Many of you will doubtless remember him as a former President of the Agricultural Department of our State University, and later as State Superintendent of Public Instruction ; and some may perhaps remember him still better as an honorary member of this Society, and as having read be-

fore it some years ago, a most excellent paper, in a most eloquent manner, upon the subject of anæsthetics in labor.

In this list, too, will be found the names of several persons reported as practicing at Isleton. We are now credibly informed that there has never been a practicing physician at Isleton; that said names were reported by a young man in the post-office department, who thought it would be a "good joke" on the parties named to report them as "doctors." The same "joke" was sought to be perpetrated upon us in two instances in the southern counties; but fortunately we were enabled to correct them before going to press. Whether other errors of like character have occurred, we do not know; but shall take pleasure in correcting them when they come to our knowledge. Being unable to investigate each individual case, and having no records on this subject—no data by which to be guided, save the records of licentiates in this office—we were compelled to rely upon the accuracy of our correspondents, and they, in many instances, labored under the same difficulty. Hence, it would be too much to expect that this part of the work would be entirely free of errors.

A review of the work of the Board during the last five years preceding the present, shows there were granted 438 original certificates, or an average annual issue of about 87. It will appear, therefore, that there have been certificates granted this year to nearly one hundred persons who were previously practicing in defiance of the law. These were by this effort driven into the fold, and will hereafter be supporters of the law. Since the book was issued and sent forth on its mission, seven persons whose names appear in the illegal list have made the necessary application, and have received the proper certificate. These are: J. H. Bullard, Anaheim; Martin Hagan, Los Angeles; C. V. Jones, Mountain View; Wm. J. Kearney, Truckee; David O. Lewis, San Francisco; D. W. Webster, San Jose; and C. A. Davis, Chico. And still they come! Several such are now applicants before the Board. Few days pass that letters are not received from some who, feeling that they have lost their professional identity in the illegal list, ask "What shall we do to be saved?" Soon after the book was issued, a gentleman whose name appears in the illegal list was arrested in Los Angeles county. He pleaded guilty to the charge, and paid his fine of fifty dollars. Being a graduate of Harvard, he made application for, and has since received, the necessary license.

The Board herewith recommend that the Society urge its members throughout all interior towns to energetically co-operate to enforce the law in their respective districts. Let a committee be appointed at the county seat of each county, which committee shall manage the prosecutions. They will see that the prosecuting attorney is both able and willing; otherwise employ assistant counsel, who can be secured in such cases for a very modest fee. Where a jury trial is demanded, see that the sheriff or constable selecting the jury is desirous of enforcing the law. It will also be the duty of the committee to select the party to swear out the warrant of arrest, and secure the necessary testimony. Then, "let no guilty man escape."

In addition to the case previously mentioned, where a party just paid his fine in Los Angeles county, a Mrs. Muirhead, whose name appears in the illegal list, is now held under bonds for practicing without a license. The following dispatches from Los Angeles, bearing upon this subject, are self-explanatory, and we commend the action of that jury to all bodies of like function :

THE CASE OF CONTOO—SINGULAR VERDICT OF A CORONER'S JURY.

LOS ANGELES, April 10.—An inquest on the body of N. Contoo was held to-day. The most important testimony was that of Dr. Wise, who stated that he had been called in by Contoo, and had some conversation with Mrs. Dr. Muirhead, proving her to be a fraud. He told Contoo that he would return, when Mrs. Muirhead objected, and soon after Contoo was taken away. Dr. Wise testified that he was confident that the deceased was not suffering sufficiently at the time he saw him to cause his death within two weeks. Mrs. Cross testified that deceased told her that Mrs. Muirhead had repeatedly put something in his tea which stupefied him, and witness had examined a dark substance in the bottom of his teacup, which smelled strongly of opium. The verdict of the jury, however, was that death was produced by strangulated hernia, chronic cystitis, and uræmic poison, and recommended that the proper officers of this county hereafter make a vigilant prosecution against all persons practicing medicine without proper qualifications. Mrs. Muirhead is still held on a charge of grand larceny, a writ of habeas corpus for her release to-day being denied by Judge Cheney.

MRS. DR. MUIRHEAD HELD FOR TRIAL.

LOS ANGELES, April 11.—The case of Mrs. Dr. Muirhead came up for trial this afternoon. After hearing the evidence she was discharged, as far as the grand larceny charge was concerned, but held for a misdemeanor, in that she had no license to practice medicine.

The necessary machinery has already been set in motion in the town of Fresno, and soon we hope the wires will be flashing the welcome intelligence, "Another victory in behalf of legitimate medicine!—Protection for the Public!" If the battle be thus waged "all along the line," one simultaneous uprising of the profession throughout the length and breadth of the State, the desired result will be inevitable.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, July 7, 1885.

The meeting having been called to order by the President, Dr. Jewell, the minutes of the former meeting were read and approved.

The Executive Committee reported that they recommended the hall in which the Society was now assembled, Western Hall, Shiell's Building, as the one best suited to its requirements. They had examined B'nai B'rith and the Post Street halls, but neither of these were convenient, and as the present apartment could be obtained for ten dollars per month, they recommended that the Society should secure it as a permanent place of meeting.

Dr. J. F. Morse moved that the report of the committee be accepted, and the hall engaged for the second and fourth Tuesdays in each month, commencing from the second Tuesday in August, at ten dollars per month. The motion was carried.

The Secretary read the resignation of Dr. Kate Post Van Orden, which was accepted.

The President then stated that the object of this special meeting was to devise means for the maintenance of the medical law, and suppression of irregular practitioners in this city.

Dr. Plummer gave an account of the formation of Medical Societies at Yolo, Chico, Marysville, and other provincial towns throughout the State, and of the success that was crowning the efforts of these societies to suppress all irregular medical practice. He also cited the recent prosecutions at San Jose as evidence that the public is beginning to realize that they must do something to protect themselves against the mistakes of irregular practitioners, and argued that with the tide of public sympathy at our backs, it was only necessary for us to move in order

to insure success. He had received letters from physicians and others asking why the San Francisco County Medical Society did not take steps in this direction; therefore, in accordance with the principles set forth in the circular issued by the State Medical Society, he advocated, under the auspices of the San Francisco Society, the prosecution of all irregular practitioners, and to facilitate this he submitted the following resolutions for the approval of the Society:

1. *Resolved*, That it is the sense of this Society that all persons who are practicing medicine in the city and county of San Francisco without a certificate to so practice, as provided by law, shall be prosecuted, to the end of causing such illegal practice to cease.

This resolution was seconded by Dr. Kenyon, and adopted by the vote of the Society.

2. *Resolved*, That this Society now appoint a committee of three, consisting of Drs. J. G. Jewell, W. S. Whitwell and Wm. Watt Kerr, who are hereby instructed and authorized to carry out the intent of the aforesaid resolution. It shall be the duty of said committee to lend all needful assistance to the prosecuting attorney to the end of securing the necessary evidence; and, if need be, to employ special or assistant counsel. The Society hereby pledges itself to pay all necessary expenses incurred by said committee.

Seconded by Dr. Kenyon.

Dr. Morse hoped that the Society would not take action in favor of this scheme. Some time ago the same project was laid before the Society, and it was decided that they as a body should have nothing to do with it, as they would be led into endless expense and litigation, without gaining anything. He opposed the resolution, not because he was in favor of quackery, but for the reason that there were many irregulars holding licenses to practice from one or other of the three Examining Boards, and against these we were powerless; hence, the contest would not be between regular and irregular practitioners, but between licentiates and non-licentiates. Furthermore, it was notorious that the sympathy of the people was with the quacks, and would espouse their side in the contest. The people had shown that they did not wish to be protected, and it would be impossible to do so unless they did it themselves. It would cost the Society about three thousand dollars to engage in this fight, and they would come out at the end minus their money and without having done any good.

Dr. Willson concurred with Dr. Morse, as he believed that

the people would employ quacks, and any action of the Society such as that now proposed would only end in lost time and lost labor.

Dr. Simpson said that there was some truth in what the other gentlemen had said; but he believed that they had arrived at wrong conclusions. It was true that to some extent medical legislation had been a failure, but not to the extent represented by these gentlemen, for in Illinois alone the medical act had caused more than eleven hundred irregular practitioners to leave that State. In San Francisco they had also met with considerable success, and compelled several of the more prominent quacks to seek new pastures; but during the last two years the law had been allowed to slumber, with the result that these men were rapidly accumulating again. It required some one to make the complaints before the authorities could take any action, but what was everybody's business was nobody's business, and consequently the law had lapsed into a dead letter. The Society had adopted the first resolution, and now, when the second asked for the means to carry it out, they kicked against it. The Board of Examiners had power from the State Society to take steps for the suppression of irregular medical practice, and consequently that body would be responsible for the necessary expenditure; but the Board did not think it right to take the money contributed by the physicians of Yolo, Chico, Marysville, San Jose and other towns, who were paying for the enforcement of the medical law in their own vicinity, and devote it to defraying the expenses of its enforcement in San Francisco.

Dr. Kenyon said that the law had been dormant for two years in this city, but neighboring towns had secured convictions, and therefore the irregulars were flocking hither, where they are allowed to practice unmolested.

Dr. Le Tourneux thought that homœopathic and eclectic physicians, being recognized by law, would interfere with the Society taking any active steps in prosecuting irregular practitioners.

Dr. Barkan said that it was not a question of the willingness of this Society to bear the expense of the prosecutions, but it was beneath the dignity of this Society, which is convened for scientific purposes, to take notice of these men and become embroiled with them in courts of law.

Dr. Le Fevre called attention to the influence of the local press in this matter, and said that it was hard to get the papers to say anything against quacks, so long as these men are paying for advertising in the same columns. Where there has been an attempt to suppress them they have come out victorious, with much free advertising. If the Society could obtain the support of any leading paper they would do more good than in any other way.

Dr. Plummer replied that the Eclectic and Homœopathic Boards were now doing good work in looking after their licentiates. It was a mistake to say that the quacks had always been victorious, for many of them paid fines and others left the State. It was the duty of the profession to educate the public in this matter, and because success had not been attained at one bound, there was no reason why we should cease to work. The Society was not asked to contribute thousands of dollars, and it can stop the proceedings whenever it wishes to do so.

The resolution was adopted by a majority of fourteen.

The following committee was appointed to serve, in compliance with the above resolutions: Drs. J. G. Jewell, W. S. Whitwell, and W. Watt Kerr.

Dr. Morse moved that the committee be limited in its expenditure to \$500. The motion was carried.

There being no further business, the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

The third annual meeting of the American Rhinological Association will be held at Lexington, Ky., October 6th, 1885. Papers and discussion will be devoted exclusively to the diseases of the nasal passages and their sequences. Officers for 1885: President—P. W. Logan, M.D., Knoxville, Tenn.; First Vice-President—A. D. Vilbiss, M.D., Toledo, Ohio; Second Vice-President—J. A. Stucky, M.D., Lexington, Ky.; Recording Secretary—C. A. Sims, M.D., St. Joseph, Mo.; Librarian—N. R. Gordon, M.D., Springfield, Ill. Council: J. G. Carpenter, M.D., Stanford, Ky.; H. Jerard, M.D., East Lynne, Mo.; H. Christopher, M.D., St. Joseph, Mo.; E. F. Henderson, M.D., Los Angeles, Cal. Information concerning the full programme, membership, papers, attendance, etc., may be learned from any of the above officers of the Association.

Editorial.

Medical Legislation.

Hitherto the efforts made to secure the enforcement of laws regulating the practice of medicine in this State have not met with that success which was anticipated; but it now appears that we may look for some encouragement, as the public are beginning to clamor, and several convictions have been obtained in the provincial towns. We do not exactly know to what this revulsion of public sentiment is to be attributed, for it always has been a notorious fact that popular sympathy inclines towards the quacks. Possibly, during the present depression in trade, times are harder and money scarcer, so that they cannot afford the luxury of being juggled. There is no doubt that people, so long as they are prosperous, like to be humbugged; it pleases them to be surrounded by the mysterious; there is a sort of intoxication in the secret and silent ways of magnetic healers, or the mystic priests of faith and mind cures, that quite loses its charm when its dupes have to face it with an empty pocket and an empty stomach. While there is only a prospect of our being relieved from the irregulars who now exist, matters could be very much improved by preventing any increase in the number of these half-educated physicians, included within our own ranks, whose actions are a continual reproach to us, and who are "dead flies, that cause the ointment of the apothecary to send forth a stinking savor."

This can only be accomplished by having a uniform standard of medical education throughout the United States, both in relation to the number of years and the course of study distributed through them. It is very unjust that a student residing in a State where the course is three or four years, can pass into the adjoining State, study for two years, and return a fully fledged physician, while his former companions are still within the walls of their native alma mater. If this be impracticable, then the

State of California should refuse to grant licenses to any applicants who have not studied for a term equal to that required by her own medical colleges; and any medical men who desire to practice here, but have not completed the necessary curriculum, should be required to do so at our own or some other schools. The permit to practice in America is too easily obtained; in fact, all that is wanted is a diploma. In other countries this is not so. No foreigner is allowed to practice in Germany, even though he should graduate from one of their own universities; in France, unless under the most exceptional circumstances, he must be an M. D. of Paris; and in Great Britain he must have studied the time pointed by national law, *i. e.*, four anni medici, at one of the colleges recognized by the Royal Colleges of Surgeons, and also *satisfy a British Board of his fitness to practice*. Thus graduates of the Toland or Cooper school, when they apply in London for the M.R.C.S., are credited with three years' study, but must complete a fourth in England before appearing for examination, because the British medical law requires four years from British subjects, and certainly cannot be expected to show greater leniency to foreigners. We have a hearty contempt for anything savoring of Anglomania, but we think that in this case there is something in the mother country that is worth imitating, and would strongly urge that in future all new-comers should not only produce diplomas showing that they have complied with the minimum standard required by the schools of California, but should appear personally before the Board of Examiners. Most assuredly, this is not asking too much. We have laws to protect our trade from foreign competition; these laws are so framed that the duty on imports will place foreign goods at a disadvantage in our markets; they operate so that the price of American goods is only about two-thirds the price of the same quality of foreign manufactures; and hence it only pays to import foreign merchandise of extra fine quality. The object of custom-house duties is to encourage and protect home industry; but they also assure us that the imports shall more than equal the average

standard of American manufacture. Why, then, should we throw open our gates to all practitioners of medicine indiscriminately? Why should America be the only nation in the world that offers the same inducements to the half ignorant and the thoroughly educated? We do not seek to further the interests of our own schools, or increase the earnings of our teachers; we simply ask that the foreigner who comes to sojourn in our midst and be entrusted with the health of our citizens, shall undergo the same training and show the same fitness for the task as we demand from our own children.

The next question that arises is with regard to the proper authority to issue practitioners' licenses. Shall the diplomas from colleges recognized by the Board of Examiners entitle the applicant to a license, or shall it only be accepted as evidence of medical education? In other words, shall the Board merely be experts on the authenticity of diplomas, or shall they be judges of the applicant's fitness for the practice of his profession? We take the latter view; *i. e.*, that the Board, from personal examination, should be satisfied of every candidate's capability. The only objection urged against this is that it makes the student undergo two examinations; but that can easily be avoided by the Board appointing an examiner for each department, who shall cooperate with the lecturer at the examination of students for degrees.

At present the Board has a representative at these examinations, but he is a "dummy," and has neither the power to accept nor reject a candidate; nor does he take any active part in ascertaining the knowledge of the students. His duty is to listen to the candidates answering questions propounded by their own teachers, each of whom is certain to have his particular hobby, and then to present a favorable report at the next meeting of the State Medical Society, congratulating the profession upon the advanced condition of medical education in the State of California. Instead of a sinecure representative of the Board, we should like to see one appointed in each department, the term of office

being three years, who shall set every alternate question in the examination paper with the lecturer, examine the students in his presence, and have equal powers with him.

Medical men from other States, where the curriculum is equal to that required in California, desirous of practicing here, might obtain licenses without further examination, upon producing to our Board their diplomas and a license issued by the Board of Examiners in their own State; but when the necessary curriculum has not been complied with, let them complete it, and apply for license like other students.

A scheme like this would prevent students pandering to the hobbies of lecturers; it would enable the Board to control the issue of diplomas without taking the matter entirely from the hands of the schools; and, lastly, it would raise the standard of medical education throughout the entire State.

The International Congress.

The following letter to Dr. Hays shows the condition of foreign opinion regarding the action of the American Medical Association :

I, HAREWOOD PLACE, HANOVER SQUARE, LONDON, JULY 22, 1885.

DEAR DR. HAYS:—I am very sorry to learn from some of your journals, as well as from letters which I have received, that there are serious differences of opinion among the members of our profession in your country as to the arrangements to be made for the International Medical Congress which it is proposed to hold in Washington in 1887. The deep interest which I feel in the Congress makes me venture to write to you in the hope of helping towards a right decision of some of the questions in dispute; and chiefly, by stating what I believe to have been the custom at former meetings.

I believe that a principal question relates to the authority, if any, which was given by the Congress at Copenhagen in 1884 to the gentlemen who conveyed the invitation that the next meeting should be held in the United States of America.

I believe that it has never been considered that the members at one Congress should give any formal authority for any part of the organization of the next. At each meeting some place has been named at which

it was deemed desirable that the next should be held ; and at the same time, or soon afterwards, some persons of high repute in that place have been asked to take such steps as they might deem necessary or most likely to promote a successful meeting.

Thus, after the Congress at Amsterdam, in 1879, the President, Professor Donders, wrote, in the first instance, to Sir Joseph Lister and Sir William Bowman, and by them, and those whom they asked to act with them, the first and all the principal subsequent measures were adopted for the promotion of the meeting in London. Sir Risdon Bennett, the Chairman of the Executive Committee, communicated to Professor Hannover and Professor Panum, of Copenhagen, the desire that the next meeting might be in one of the chief cities of Scandinavia ; and those gentlemen, and others acting with them, began and had the principal part in all the arrangements for the Congress in Copenhagen.

I fully believe that it was understood at Copenhagen that the same course would be pursued in the organization of the Congress to be held at Washington. I was at the General Meeting at which, after some discussion, the majority of the members present expressed the wish that the next Congress should be in the United States ; and I have no doubt that it was expected that the distinguished American gentlemen there present would obtain the coöperation of the most eminent of their professional brethren, and would, with them, make all the arrangements which they should deem best.

Certainly it was not supposed that the Congress would be regulated, with any degree of exclusiveness, by the members of one medical association, however numerous ; and I think it quite as certain that, if this had been thought possible, the proposal that the next meeting should be held in the United States would not have been adopted.

I am sorry, also, to feel sure that if the Congress be not supported by the eminent men who have now declared that they will take no part in it, the members of the profession in this country who will attend it will be very few. And in this opinion, as well as in all that I have written here, I have the concurrence of several of the most influential of the London Congress, with whom, before this writing, I consulted.

Believe me, dear Dr. Hays,

Most truly yours,

JAMES PAGET.

It will be seen from this that the power of making the necessary arrangements has never been put in the hands of the British, Danish, or any other national medical society ; but entrusted

to a few men of established reputation, who co-operated with the Executive Committee of the Congress. Perhaps the American Medical Association will now be convinced that they have meddled in a business over which they had no direct authority; that, in making themselves the instruments of men who have since boasted of the mischief they have done, they have struck a blow at medical culture, the effects of which only the lapse of long years can remove. The *American Medical Journal* has vainly reasoned with and finally abused as obstructionists to the work of organization those men who have refused to acknowledge the supremacy of the Association. Let us hope that its editor will now see that they were right in so doing; that the only men recognized as a committee by the Medical Congress were the American delegates to Copenhagen; that these gentlemen are accountable to the Congress; that it is now their duty to utterly ignore the American Association as an organization, and continue to make the necessary arrangements for the convening of the Congress, which, according to the law of usage, it is their right to do. Should Dr. Billings and his colleagues not recognize the fact that they are the men entrusted by the Congress with making the arrangements, that they are answerable to that body, and that the American Medical Association has absolutely no authority over them in this matter, then the Executive Committee of the last Congress, which still exists, and will not be discharged until the next meeting, should take this matter into its own hands, and arrange to hold the meeting in some other country.

The Board of Visitors of the Military Academy at West Point recommend that lectures on hygiene be delivered by the medical officers to the senior class of cadets. If carried out, this recommendation will certainly result most advantageously to the service. Some practical knowledge in this important department of State medicine, on the part of the combattant officers, will at all times facilitate the efforts of the medical corps to maintain efficient sanitary conditions.

Notices of Books, Pamphlets, Etc.

NASAL CATARRH AND ALLIED DISEASES. By BEVERLY ROBINSON, A.M., M.D., Clinical Professor of Medicine at Bellevue Hospital, New York; Physician to St. Luke's and Charity Hospitals. Second edition, revised and enlarged, with one hundred and fifty-two wood engravings. Pp. 276. New York: Wm. Wood & Co.

The first edition of this work acquired a reputation which made it rank as one of the leading text-books upon the subject, and we are happy to state that its value has been much enhanced in the present issue. The volume has been nearly doubled in size, by the addition of five chapters upon the following subjects: 1. Aural Complications of Catarrhal Inflammations of the Nose; 2. Deflections of the Nasal Septum, and Bony Obstructions of the Nasal Passages; 3. Ulcerous Coryza; 4. Adenoid Vegetations at the Vault of the Pharynx; 5. Mucous Nasal Polypi. The author has evidently endeavored to make each chapter a complete account of the subject treated in it, and hence to the student who reads the book straight through there appears to be a redundancy of style and unnecessary repetition; on the other hand, this very defect makes the book more valuable to the practitioner who wishes to obtain a full account of some particular disease, without being under the necessity of studying more than the pages specially devoted to it. In every way this edition is an improvement upon the first, and is sure to meet with a ready sale.

DISEASE IN CHILDREN. By EUSTACE SMITH, M.D., F.R.C.P., Physician to His Majesty the King of the Belgians; Physician to the East London Children's Hospital, etc. Pp. 844. New York: Wood & Co.

We regret that a review of this work should have been unavoidably delayed, as its high merit entitled it to a notice long before this time. The author is already of world-wide fame, through his little volume on the "Wasting Diseases of Infants and Children," which is now in its fourth edition; so that we have to congratulate the publishers of this new work upon their good fortune in securing a writer so eminently fitted for the task. There will be found in this book a description of many diseases which are not usually included in such treatises, because the author very properly does not regard them as different from

those existing in adults; but rather as the same diseases influencing and at the same time modified by the physiological conditions of early life. It is well written, in a fluent, inviting, but at the same time logical and exact style, although there are one or two parts which appear to have been rather hurried. In his outline of treatment he has been careful to select only the more important and useful remedies, instead of giving a list of all the medicines which sinful man has poured into the stomach of his suffering offspring; and in our opinion Dr. Smith is to be highly commended for so doing, as nothing is more confusing to student or practitioner than the abridged pharmacopœia which is so often substituted for a few lines relating to those drugs whose clinical value has been established by the hard-earned experience of the writer.

It will be new to most American practitioners to learn that arsenic has some claims to be regarded a prophylactic during the prevalence of scarlet fever. It was noticed that children taking arsenic could not be successfully vaccinated, and it was therefore hoped that the drug might have some counteracting influence on other infective matter. Apparently the idea has some good foundation, as Dr. Walford found that in nearly one hundred children exposed to the infection of scarlet fever, and treated with arsenic in doses regulated by the age of the patient, the disease only appeared in two of them.

The large doses of belladonna recommended by Dr. Smith have been commented on by some of our contemporaries; but it should be remembered that the American tincture is nearly three times the strength of the English preparation. American practitioners do not consider that two grains sulphate of quinine three times daily is a very alarming dose to give to a child two years old.

The book is full of reliable information, and will well repay the cost and time spent in its careful perusal.

THE YEAR-BOOK OF TREATMENT FOR 1884. A Critical Review for Practitioners of Medicine and Surgery. Pp. 316. Philadelphia: Lea Brothers.

The object of this book is to give to medical men a summary of all that is new in their profession during the past year. Of such a scheme we cannot speak too highly, as none are better aware than ourselves how utterly impossible it is to keep up with the progress made in all branches of our science, and we hail

with great satisfaction the inauguration of a series of annual volumes which will attract our attention to what is being done in those departments to which our inclinations or class of practice do not specially direct us.

There are twenty-three contributors, and to each of these is assigned a system or group of diseases to be reported on at the end of the year. The high standing of these contributors is sufficient guarantee for the excellence of the work; indeed, we have only to mention a few of them, such as Lander Brunton, Bryant, Malcolm Morris, Knowsley Thornton, Treves, and De Wattleville, in order to assure our readers that it is far above the average order of merit. Every note is accompanied by a complete reference to the journal in which the subject is fully discussed.

The thoroughness of this book, together with its cheapness and convenient size, will render it impossible for men to plead ignorance of medical progress on the ground of want of time or money.

URINARY AND RENAL DISORDERS. By LIONEL S. BEALE, M.D., F.R.S., F.R.C.P., Professor of the Principles and Practice of Medicine in King's College, London, etc. Pp. 359. Price, \$1.75. Philadelphia: Blakiston & Co. San Francisco: Bancroft & Co.

The thorough, practical, and entertaining style of Dr. Beale's books have always made them favorites with the profession, and we venture to say that this latest production will tend to raise him even higher in popular estimation. Probably there is no system which is so imperfectly understood and empirically treated by the great mass of practitioners as the urinary system, since its elucidation depends so much upon the progress of physiological chemistry, which is as yet in its infancy; at the same time there is no class of diseases which so much attracts the attention of patients and makes them apply for treatment, or in despair rush into the open arms of quacks. These reasons alone should be sufficient to arouse interest in any new treatise upon renal and urinary disorders. Dr. Beale's work is essentially adapted to the every-day wants of practitioners, and his remarks upon the chemistry of nutrition are sufficiently clear and concise to show the relation between it and many of the abnormal conditions of the urine, regarding which we are consulted. Attention is called to the value of taking plenty of fluid into the system, by which means the food is more readily absorbed, so that a less quantity is necessary, and at the same time the effete matter is washed

from the interstices of the tissues. To this last factor does he attribute much of the benefit derived from prolonged sojourns at the various mineral springs. The relation between the reaction of the urine and the administration of acids and alkalies is very clearly put. As might be expected from Dr. Beale's reputation as a microscopist, the sections on urinary deposits are very complete. The various theories of albumenuria are discussed, and the subject of diet in diabetic patients is treated at considerable length. Reference is also made to the medical and surgical methods for the removal of urinary calculi.

The book is a valuable addition to medical literature.

PRACTICAL AND ANALYTICAL CHEMISTRY. By FRANK CLOWES, D.Sc., London.; Fellow of the Chemical Societies of London and Berlin; Professor of Chemistry at the University College, Nottingham. Illustrated. Pp. 379. Philadelphia: Lea Brothers.

This is a laboratory companion, and as such is an efficient and intelligible guide to the student in his studies. It commences with a description of the various apparatus and chemical processes, a knowledge of which is essential to the student entering upon a study of the subject, and then passes on step by step to consider the more intricate details. The analytical methods recommended are those verified by Dr. Clowes as a teacher, and by his pupils as students of chemistry. In short, the book evidently has been composed in the laboratory, and is a first-class guide to it.

The leading article for the September number of the *Overland Monthly* will be by Prof. Josiah Royce, of Harvard, late of California, upon "The Sacramento Squatter Riot of 1850." Flora Haines Apponyi will furnish a personal sketch of the late Helen Hunt Jackson, and Ina D. Coolbrith will contribute a Poem. These, with editorial comments upon Mrs. Jackson's literary work, will give this number great value as a memorial of the author of "Ramona." There will be an article from Hon. S. S. Cox, Minister to Turkey, on "The Thirty-fifth and Thirty-sixth Congresses." Dr. Henry DeGroot will furnish a graphic account of the ancient "Mining Camp of You Bet." Capt. Wright, of the Confederate Army, and late lecturer of the California State Grange, will describe "How the Blockade was Run." The most important stories will be: "A Plea before Judge Lynch," written by a well-known pioneer, and, "The Doctor of Leidesdorff Street," a brilliant and exciting story of San Francisco. These are only a few of the attractive and valuable articles to appear in September.

Miscellaneous.

The Results of the Use of Antipyrine at the Boston City Hospital.

Dr. George B. Shattuck, in *The Boston Medical and Surgical Journal*, of July 23, 1885, recounting the results of the use of antipyrine at the Boston City Hospital, says: Antipyrine was administered in several cases of intermittent, without interrupting the chills and without appreciable effect. This failure was anticipated from our previous experiences with kairine. A few instances are reported from Germany, in which the periodicity of the attacks was broken temporarily by large doses; but such instances are exceptional, and no antiperiodic action has been claimed or can be allowed. All these coal-tar derivatives resemble quinine in their antipyretic action, but differ from it in lacking the specific antiperiodic action upon malarial conditions.

The fall in temperature ordinarily begins to declare itself in about an hour after giving antipyrine, reaching its maximum in from three to five hours after the full dose of six grammes, divided in the German fashion, continuing on an average about eight hours, though sometimes lasting twice as long. A fall of from 3° to 5° F. is very easily secured. The change in the pulse is by no means always proportioned to that in the temperature. The urine is somewhat diminished, free from albumen, and but little altered in color—in the last respect offering a contrast to urine after kairine.

We have had no experience with antipyrine in children. Two German observers who used it largely in a children's clinic report that it is well borne by them, and suggest one decigramme for each year of age as a rule for the dose to be given.

As a general result of our experience at the City Hospital, where further trials are still being made, I am able to endorse antipyrine as:

- (a) An efficient and reasonably safe antipyretic, without antiperiodic qualities.
- (b) Whose exhibition in proper doses is, as a rule, unattended by serious discomforts or drawbacks.
- (c) By reducing a high temperature it frequently substitutes calm for excitement, and sleep for restlessness.

(d) Otherwise it does not usually modify the course of disease, and certainly not of typhoid fever.

(e) The quality of the sample used must be carefully watched in these synthetical compounds. A poor article will cause vomiting, chills, and collapse, when a good one will not; or, on the other hand, may be inefficient when the pure drug would have proved effective.

Antipyrine may be employed in a variety of febrile conditions, though its desirability in phthisis is questioned; but typhoid fever is the disease in which it is likely to be most largely and frequently used. When used in typhoid it should be distinctly without expectation of modifying the course of the disease. To emphasize our own experience on this point, I may quote that of Alexander, who reports a severe relapse in typhoid after the administration of fifty-four grammes of antipyrine in divided doses throughout the first attack; and of Dr. Wm. H. Draper, in whose service at the New York Hospital, of five patients *dying* from typhoid fever, one took ten grammes in ten doses during five days; a second twenty-seven grammes in seven doses during six days; a third thirty-four grammes in twenty-one doses during eight days; a fourth forty-eight grammes in ten doses during seven days; a fifth three hundred and twenty-one grammes in sixty-five doses during thirty days.

The dissensions amongst prominent members of the profession on the subject of the International Medical Congress are already bearing fruit. The *British Medical Journal* says: "It seems to be conclusive that the profession in America at this moment is hopelessly divided on the subject. The outlook as the matter now stands is not at all encouraging. One committee has reorganized the work of another up to a point near that of destruction. Moreover, the work of the present committee must be submitted to the American Medical Association in May, 1886, and no one can say to what extent it may also be overturned or modified. Altogether the position is lamentable, and there is much fear that the acceptance of the invitation to meet in the States may be withdrawn, and the next meeting of the International Medical Congress be held in Berlin, or some other great medical centre, pending the settlement of the serious dissension among our brethren of the United States."

The following figures in connection with cholera in Spain from March 4th, the date of its re-appearance, to July 4th, have been taken from the consular reports received by the National Board of Health:

| Province. | Cases. | Deaths. | Per ct. mortality. |
|----------------|--------|---------|--------------------|
| Alicante..... | 1,588 | 646 | 40.6 |
| Castillon..... | 2,617 | 1,277 | 48.8 |
| Cercuca..... | 78 | 40 | 51.3 |
| Madrid..... | 1,700 | 853 | 59.2 |
| Murcia..... | 6,007 | 2,319 | 38.6 |
| Taragona..... | 31 | 19 | 61.2 |
| Teruel..... | 12 | 5 | 41.6 |
| Toledo..... | 455 | 207 | 45.5 |
| Valencia..... | 14,928 | 6,851 | 45.5 |
| Zaragoza..... | 628 | 280 | 44.7 |
| Totals..... | 28,044 | 12,347 | |

Consul Mason, in a recent report to the State Department on the last year's outbreak of cholera at Marseilles and vicinity, states that it is now apparently settled that the cholera of 1884 was kindled in that city by clothing brought in the trunk of a student coming from the Lyceé at Toulon.

In regard to the outbreak at Omaques, in the Department of Basses-Alps, he states that "on the 10th of July, 1884, there arrived at Omaques a servant girl who had been in service at Marseilles. Soon after her arrival she washed some linen which *had been in contact with a cholera patient at Marseilles, in the Jabron, a creek which supplies the village with water.* From that imprudence sprung the contagion which decimated that unfortunate community, and spread death throughout the valley of the Jabron *below* Omaques, while the inhabitants of the same valley above the village escaped."—*N. Y. Med. Jour.*

The committee on the International Medical Congress will meet in special session for the transaction of very urgent business on September 3d, in New York city.

The *Eastern Medical Journal*, of Worcester, Mass., will in future appear fortnightly.

Dr. J. H. Wythe, of Oakland, has declined to serve on the Committee of Physiology at the coming International Congress.

Physical Examination of Weak Chests.

At a meeting of the New York Academy of Medicine, Dr. E. Darwin Hudson, Jr., read a paper on this subject. Amongst other things he called attention to two areas, which were almost wholly passed over by examiners—namely, the high axillary region and the inter-scapular spaces, and which often afforded most important information in suspected phthisis. He spoke also of the great value of simple but accurate inspection. (How many think of noting changes in the individual intercostal spaces?) He thought the little conoidal elevations which often appear on the chest wall after the percussion tap, strongly suggestive of phthisis before much wasting. He regards this as a true cutaneous reflex. Professor Loomis, in the ensuing discussion, remarked that the more he studied thoracic disease the more convinced was he of the value of inspection. In earlier years he had been accustomed to looking principally at the infra-clavicular region, but he was now assured that much more information in suspected phthisis was obtained from the inter-scapular spaces. He regarded the axillary spaces also as of great importance, and the whispered voice as of more value than the spoken voice.

I venture to assert that only a minority of physicians ever diagnose pulmonary phthisis in its early stages, when there exists a possibility of curing it, and that the majority rely on symptoms and coarse physical signs, by which time the disease has made incurable inroads. The fault is in our medical colleges. To be well trained in physical diagnosis of chest diseases, one must have examined many, very many chests under competent instruction. How many students graduate who can truthfully say that they have carefully examined one hundred chests? Not many; and yet he is a bright fellow whom such experience has made a thoroughly competent auscultator. On the other hand, there are many who are so confident of their ability to diagnose, that they do not require to see the whole naked chest, as the distinguished Loomis does, but listen through coat, vest, and shirts. So much care is required in the physical investigation of commencing phthisis, that a conscientious physician, and one who has confidence in his ears, will take advantage of every possible method which our science affords, and let not two inches of the chest wall escape inspection, percussion and auscultation.
—*Boston Med. and Surg. Journal.*

Sublimate Soap.

Sapo hydrargyri chloridi corrosivi, one per cent., was no doubt better known by the former term, as the latter had a bad signification in the minds of many for whom it might be necessary to prescribe it. It was, like carbolic acid, naphthol, and salicylic acid soaps, a valuable antiseptic. In truth, it might be preferred by many who now regarded the corrosive chloride of mercury as a better antiseptic than those already named, and it could be advantageously employed in the same class of affections. Sublimate soap might, however, be objected to for fear of producing salivation; but the risk with so small a quantity of mercury in the soap was extremely slight, and up to the present time he had never seen this effect. It was valuable in animal parasitic diseases, such as phtheiriasis, or lousiness, scabies, or itch, and for destroying insects of all varieties that might infest the body. Freckles, pigmentary deposits, especially chloasma, and yellowish-brown or blackish patches on the skin, were greatly relieved and sometimes removed by its employment. The red and roughened state of the skin that might follow the eruptive fevers, such as small-pox, might be improved by its use. It assisted in overcoming an unhealthy state of the skin, and in producing a clear and brilliant complexion. Sublimate soap was also one of the best agents in all kinds of itching, and might afford the greatest relief sometimes in both pruritus ani and pruritus pudendi. It was, likewise, markedly serviceable in the various syphilitic skin eruptions.

The reports of the Fifty-third Annual Meeting of the British Medical Association, which began on July 28th, at Cardiff, Wales, show the rapid progress which that body has made in professional favor. Thirty years ago the membership was 1,800, while the organization is now 11,000 strong, with an income of \$110,000 per annum. This increase is mainly ascribed to the influence of the Association journal, which in its first year of publication raised the number of members joining from 40 to 500. In addition to this, the business department, under efficient management and extended circulation, brings in an annual return equal to one-half the amount received as dues from members.

That any society which has any standing in the community should publish its proceedings in journal form, either directly under the auspices of the society or else by availing itself of

means already in existence, seems most desirable. The journal of the American Medical Association, while yet in its infancy, shows the inevitable advantages following change in the manner of publishing its proceedings. Prior to the meeting at New Orleans, in April of this year, the membership had increased to 2,500.

Experiments Upon Grafted Bone.

Dr. Ambrogio Ferrari, after a long series of experiments upon the phenomena attending the engrafting of bone, reaches the following conclusions:

1. Pieces of bone engrafted into the shaft of a long bone become completely united and continue to live.

2. They not only continue to live, but also grow.

3. That such results follow without reference to the position in which the engrafted bone is placed.

4. The reunion of grafts occurs by a true vascularization which takes place between the engrafted bone and that into which it is introduced.

5. That a bony callus, periosteum, and medulla are formed in relation with the engrafted bone.

6. That, as in fracture, this callus possesses a temporary vitality.

7. That after a certain time the callus, periosteum, and medulla are absorbed, and the engrafted bone is nourished only by a greater vascularization.

8. That grafting occurs more completely if the inserted bone is in exact adaptation with the margins of the bone receiving it. While this observation is not verified, in a case where the opposite condition existed, a longer time was necessary for union to take place.

9. The most complete and careful antisepsis is required in order that complete union of the engrafted bone may occur.

10. The engrafting of several pieces of bone succeeds completely.

11. That in case of engrafting of several pieces of bone with partial suppuration, union of some of the pieces may take place provided suppuration does not extend to that portion of the engrafted bone in communication with the medulla.

12. Besides antiseptic precautions, compression is required to maintain contact between the medulla and the pieces of bone engrafted in order to obtain a successful result.—*Gazzetta degli Ospitali*, July 22, 1885.

The Incompatibility of Chloral Hydrate in the Presence of Potassium Bromide and Alcohol.

Prof. Geo. F. H. Markoe, in experimenting with solutions of chloral hydrate, finds this drug incompatible with bromide of potash and alcohol. He says: Experiments prove that the alcohol is the cause of the trouble, and the writer thinks that the chloral hydrate is changed into the less soluble chloral alcoholate. The writer found that the addition of potassium bromide, sodium chloride, and magnesium sulphate to strong solutions of chloral hydrate, together with the presence of alcohol, determined a separation of the liquids into two layers. Ammonium chloride, ammonium bromide, potassium nitrate, and calcium bromide, did not disturb the same chloral solutions.

The practical lesson to be learned from this incompatible prescription is that alcoholic preparations should not be prescribed with chloral hydrate, especially not in connection with the bromides of potassium and sodium, because if concentrated solutions are used the chloral will separate as alcoholate, float on the surface, and a great risk will be incurred of giving a large overdose, the patient having received no caution with regard to the necessity of shaking the contents of the bottle before taking a dose.—*Boston Medical and Surgical Journal*, July 23, 1885.

The Boy and the Bone-Setter.

Speaking of bone-setters recalls a good story which occurred in the North of Scotland, where one of them had risen to great fame and no small fortune by his skill. A country lad residing a few miles off had got his leg hurt at one of the local factories, and had been treated for some time by the local medical man without any good result. His mother, who had great faith in the neighboring bone-setter, wanted the lad to go to him, which he declined, preferring, as he said, the "reg'lar faculty." Eventually, however, his mother's persuasions prevailed, and he agreed to allow himself to be taken to see Daniel R——, the bone-setter. A bed for the invalid was extemporized on a cart, and, accompanied by his anxious mother, he was, after a rather painful journey, taken to the town where the bone-setter resided. The leg was duly examined, and it was found necessary to haul it very severely, in order, as the bone-setter said, "to get the bone in." The lad was liberal with his screams while this was going on, but eventually the bone was "got in," and he was told to go home and in a few days he would be all right and fit for his work. He was lifted upon the cart again, and, with his mother seated beside him, set off for home. "Didn't Danny do the thing well?" said the joyous old lady. "Yes, he did, mother," said the lad, "but I was na sic a fool as gie him the sair leg!" The "reg'lar faculty" will, we have no doubt, appreciate the story.—*Whitehall Review Courier of Medicine*.

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REPORT OF COMMITTEE ON MICROSCOPY AND HISTOLOGY.

By W. W. KERR, M.D., Chairman of Committee.

[Read before the California State Medical Society at its last annual meeting.]

Mr. President, and Members of the Medical Society of the State of California:

The Committee on Microscopy and Histology, in presenting their report, would bring under the notice of the Society the work that has been done in the field of micro-pathology; especially would they call your attention to the search for the Cholera and Anthrax Bacilli, as these are matters of pressing interest both to the popular and scientific mind.

The cholera bacillus is described by Koch as "not quite rectilinear, like the other bacilli, but slightly curved, like a comma. The curvature is sometimes sufficient to give the bacillus a semi-circular form. In the artificially propagated specimens from these curved little rods are often produced 'S'-shaped figures, and shorter or longer, slightly wavy lines, of which the first correspond to two individuals, and the second to a greater number of the cholera bacilli which have remained together in the process of continued multiplication. They are moreover possessed of independent movement, which appears to be very active, and may best be observed in a drop of nutrient solution suspended under a cover-glass. In this preparation the bacilli are seen to swim with great rapidity in every direction across the microscopic field of vision."

Their behavior in nutrient gelatine is so characteristic that it is a crucial test between the bacillus of Koch and similar ones

described by other observers. These bacilli, like many bacteria, liquefy the gelatine in which they are cultivated, but they have this peculiarity, that when the nutrient mass is inoculated with them, a bubble or bell rises over the liquefied spot, which is probably produced by evaporation following the liquefaction.

The growth of the bacilli was arrested when reagents were added to the culture fluids in the following proportions :

| | | |
|--------------------------|-------------|---------|
| Alcohol | 10 parts in | 100 |
| Ferrum sulph..... | 2 " | 100 |
| Alum..... | 1 " | 100 |
| Camphor | 1 " | 300 |
| Carbolic acid | 1 " | 400 |
| Oil of Peppermint..... | 1 " | 2,000 |
| Sulph. Copper..... | 1 " | 2,500 |
| Quinine..... | 1 " | 5,000 |
| Corrosive sublimate..... | 1 " | 100,000 |

When the fluid dries up the bacilli die, and no longer take the staining, thereby showing that they have no permanent spores. Freezing temporarily arrests their growth, but does not kill them; neither can they grow in acid solutions.

Such is a description of the comma bacillus as it is seen in the laboratory. What are its relations to Asiatic cholera?

A microbe with this morphology, and answering the above tests, was found by Koch in the ileum and dejections of nearly one hundred cholera patients, and could not be detected by him in any kindred diseases, such as English cholera, infantile diarrhœa, typhoid fever, dysentery, nor in the fœces of animals, nor in putrid nor stagnant water; and from this he concludes that the comma bacillus is invariably present in cholera.

Is its relation one of cause or effect? Does it produce the disease, or is the microbe itself a product? Unfortunately, all Koch's inoculation experiments with cultivated virus failed to yield decisive results, and the old method of conducting these investigations by feeding the dejections of cholera patients to animals is unreliable, because it is almost sure to produce symptoms of septic intoxication, which may be readily confounded with those of cholera. This, together with the fact that cholera is not naturally produced in the lower animals, led him to suppose that they were not susceptible to the disease, a belief which the more recent experiments of Rietsch and Nicati, with the confirmatory ones of Van Ermengem, is very likely to destroy.

Koch therefore endeavored to verify his theory by excluding

other hypotheses, rather than by direct proof. The first suggestion was that the choleraic process simply favored the growth of the bacillus; but this was very properly rejected, as it presupposes the presence of the microbe normally in every healthy person, which is contrary to all experience. A second theory was that the comma bacillus was an ordinary microbe transformed; but it is generally, though not invariably, admitted that even although the physiological and pathogenic action of a bacterium may change, its form remains constant.

Koch therefore accepted the conclusion that the comma bacillus is the cause of cholera; and although even at this stage his theory seemed probable, few men were so ready as its discoverer to accept it as an established fact, but looked for its verification in future research and clinical experience rather than in a process of inductive reasoning.

Within the last few months the experiments of Nicati and Rietsch have afforded some corroborative testimony. They injected a pure cultivation into the duodenum of a dog whose ductus choledochus they had ligatured, under the belief that bile is unfavorable to the growth of the bacillus, with positive results, and repeated them in guinea-pigs, without ligature of bile duct, by introducing dejecta into the stomach. The most marked changes occurred in the duodenum. Although these investigations corroborate Koch's theory by reproducing the disease, still they contradict it in other particulars, *e. g.*: How did injection of the bacilli into the stomach yield positive results, when Koch distinctly states that gastric juice is fatal to them? Moreover, there are discrepancies in the report itself, which deduct from its value; for although they ligatured the bile duct, they state in another part of the report that neither bile nor the pancreatic juice has any influence on a pure cultivation; and in guinea-pigs, when the duct was left open the changes were best marked in the duodenum. These investigations suggested to Van Ermen-gem that rodents were specially adapted for inoculation experiments, and he accordingly injected fifteen drops of a culture of the comma bacillus into the duodenum of the guinea-pig, with the result that there ensued all the clinical symptoms and histological appearances of cholera, including reproduction of the bacilli, which in their turn were used to inoculate other rodents, and yielded positive results. He also injected cultures from which the microbes had been removed by filtration or high

temperatures, and found that large doses resulted in death with choleraic symptoms. These experiments appear to warrant our coming to at least two conclusions on this subject :

First. The comma bacillus has the power of producing Asiatic cholera.

Second. It does so by forming a very active toxic agent, probably of a chemical nature, which retains its infective powers after the bacillus itself has been destroyed.

Our report would be imperfect unless we noticed the work of some of the more eminent observers whose results conflict with those of Koch in one or more particulars. The French commission attributed the disease to the presence of small particles in the blood ; but these were shown to be present in many febrile conditions, and Straus, chief of the commission, afterwards expressed his belief that these consisted of altered hæmoglobine. Straus found a bacillus resembling that of Koch in a leucorrhœal discharge, and Klein found a similar one in a case of diarrhœa ; but neither of these were subjected to the culture tests which Koch has declared to be necessary precursors to any definite conclusions.

Finkler and Prior claimed to have discovered a microbe in cholera nostras identical in morphology and biology with that of Koch ; but independent investigation has shown that these observers were mistaken ; that their bacillus did not reproduce the disease in rodents ; that its action on nutrient gelatine was not identical with that of Koch ; and that their culture fluid was so impure as to contain four distinct forms of micro-organism.

Dr. Rudolf Emmerich, the scientist appointed by the Bavarian government, discovered a new bacillus which he said was the true cholera germ ; but it was shown that his culture methods were inaccurate, and that the same inoculation results could be obtained by using the cadaveric products of any recently deceased body.

The English committee, consisting of Drs. Klein and Gibbes, are at variance with Koch in almost all points, with the exception of the great fact that the comma bacillus is present in all cases of Asiatic cholera ; but, as a detailed account of their experiments would occupy too much of the time allotted us, we shall only notice the points wherein some of their thirteen published conclusions bear directly upon Koch's theory.

1st Conclusion : " Koch's statement as to the constant occur-

rence of comma bacilli in the rice-water stools of cholera patients is correct."

3d Conclusion: "The sooner after death the examination is made, the fewer bacilli are found in the mucous flakes; even in typical rapidly fatal cases, the mucous flakes taken from the ileum and examined soon after death (within an hour and a half), contain the comma bacilli very sparingly indeed." This is contrary to the experience of nearly all other observers, including Straus, who, in his address at Paris, said the spirillum is found abundantly in the "fondryant" cases, but that it is almost impossible to detect it in the sub-acute.

4th Conclusion: "In typical rapidly fatal cases the bacillus is not found in the intestinal walls, and therefore Koch's theory of their lodgment in the mucus membrane and secreting a chemical poison inducing the disease, is not correct. The investigations of both Straus and Klebs are inclined to corroborate those of Klein on this point."

6th Conclusion: "The culture tests are by no means crucial." The comma bacilli "are not killed by acids, and their mode of growth in gelatine mixtures is not more peculiar than that of other putrefactive bacteria;" * * * "the comma bacillus of the mouth shows the same character of growth in gelatine as Koch's bacillus." This is in direct contradiction to Koch's statement, but we should remember that Nicati and Rietsch produced cholera by injecting bacilli into the stomach of guinea-pigs, and that in this instance they were unaffected by the gastric juice.

7th Conclusion: "Koch overlooked the fact that comma bacilli occur in other intestinal diseases, in the mouths of healthy persons, and, as shown recently, even in some common articles of food (by Dr. Deneke in stale cheese)." Although this statement of Dr. Klein's may have been true of Koch when he first announced his discovery of the comma bacillus, it is not fair to this theory as it now stands, for Dr. Deneke, who discovered the microbe in stale cheese, distinctly stated in his report that a differentiation between the microbes of Finkler, Koch, and stale cheese, based merely on form, was extremely difficult, even with the very best lenses, but that it was very much facilitated by culture experiments. He also said that in his experience the inoculation of Finkler's and the cheese bacilli into guinea-pigs was invariably harmless in its results, whilst the inoculation with Koch's bacilli was as uniformly fatal.

13th Conclusion: After his return to London Dr. Klein found that the comma bacillus shows division, both transversely and longitudinally. When growing in agar-agar jelly, some of the bacilli swell up from the formation of vacuoles in their protoplasm, and as these increase in size the bacilli become plano-convex, bi-convex, and finally circular corpuscles, which divide at two opposite points in the circle, and thus form two comma bacilli. This change takes place when the culture in agar-agar jelly goes on at normal temperatures, but at higher temperatures (30° to 34° C.) they multiply by transverse fission only. It is possible that a further study of these different morphological changes will remove many of the discrepancies which at the present time involve the theory.

Dr. Buchner, of Munich, has said that the comma bacillus is diagnostic of Asiatic cholera, but that its relation to the etiology of the disease still requires to be demonstrated, and probably this is just the condition of the question at the present time. Koch, Klein, Buchner, Straus, and numerous other observers agree that the comma bacillus is always present in Asiatic cholera. Upon this point there is little dispute. Most of them go still further, and admit that they are peculiar to this disease, and therefore diagnostic of it; but they claim that its position in the etiology of the disease has not been established; that, moreover, it does not even fulfill the conditions declared by Koch himself to be essential to the acceptance of any microbe as the cause of a disease, namely, "that the bacteria can be invariably detected in such numerical and local distribution as to fully explain the symptoms of the disease in question!"

We have delayed all reference to the notorious protective vaccination scheme conceived by Dr. Ferran, because his experiments were so crude, his methods so primitive, and his apparatus so utterly inadequate to the production of reliable results as to render them quite useless for scientific purposes. Brouardel, at the instance of the French government, went to Valencia for the purpose of examining into the matter, but had to return without fulfilling his mission, as Ferran refused to supply him with vaccine. V. Ermengem, the Belgian commissioner, succeeded in obtaining vaccine which contained comma bacilli, but the symptoms produced in the inoculated persons were those of septicæmia rather than cholera, and at the same time he found Ferran's statistics to be quite unreliable.

It is highly improbable that inoculation with what we know to be a pure choleraic virus would afford protective influence, since patients suffering from cholera itself do not thereby obtain immunity from a second attack; and therefore all such experiments upon human beings should be postponed until we have some more accurate knowledge regarding the etiology of the disease.

BACILLUS ANTHRACIS.

As early as 1855 Pollender recognized in the blood of animals dying from malignant anthrax, stiff rods of various length, which were afterwards called the "bactéridie du charbon." These little rods, resembling the bacillus subtilis in all respects except that they are non-mobile, are now known as the bacillus anthracis, and are recognized as the cause of anthrax in cattle and malignant pustule or woolsorters' disease in man. Koch has shown that these bacilli are present in the blood of all the organs of animals infected by the disease, that "they multiply by fission, and grow in long, homogeneous-looking, straight or twisted filaments, in which after some time, and with free access of air, bright oval spores make their appearance, while the filaments become homogeneous and swollen." These spores when cultivated or injected into the animal, develop into the characteristic bacilli. Spore formation occurs at any temperature between 15° and 45° C.

It should be noted that the presence of oxygen is absolutely necessary to this process, as the bacilli not thus exposed gradually degenerate and leave the culture fluid completely innocuous. The same is true of the bacilli contained in the unopened carcasses of animals dying from anthrax. This is in conflict with Pasteur's statement that the bacilli in animals dead from anthrax do, after burial, develop spores which are carried to the surface by earth-worms, and infect animals grazing on the soil; but repeated observations by Dr. Klein conclusively prove that "the bodies of anthracised animals, when buried or allowed to remain unopened for from five to eight days, become innocuous by degeneration of the bacilli; and Koch has still further disproved it by showing that the spores when buried with earth-worms are not taken up by them. Klein observed another fact that still further demonstrates how necessary oxygen is to the propagation of these bacilli. When the inoculating material is placed on a solid culture medium, or on the surface of a fluid culture, spores are formed, but when it is introduced below the fluid and thus

deprived of its supply of oxygen, the bacilli gradually degenerate without the formation of spores, and thus produce a diminished virulence of the culture. This is a most important matter, as it involves many questions regarding the mode of attenuating virus for the purpose of protective vaccination.

These bacilli can grow outside the body, and as the most extreme cold will not destroy the spores, although it prevents their further development, no hopes can be entertained of the most severe frost cleansing pasture contaminated by the effusions from infected animals. The necessity for providing some means which will protect our cattle from the disease to which they are thus frequently exposed, led to the inoculation experiments of Pasteur, which have created such lively interest in this subject during the last few years.

Pasteur maintained that he had found a method for lowering the virulence of the anthrax poison by cultivating it in chicken broth at 42° to 43° C.; and we regret to say that he kept the exact process private, so that both Koch and Klein had to spend much time and money in discovering it before they could test his results. He claimed that inoculating sheep with a weak virus—*vaccin premier*—and a fortnight afterwards with a stronger one—the *vaccin deuxieme*—would protect them from the virulent anthrax poison, and his results showed that some degree of immunity could be conferred. He ascribes this attenuation of the virus to the action of oxygen in the air; but Klein, as we have seen, has very distinctly shown that oxygen increases the virulence by favoring spore formation, and that Koch's explanation, which attributes it to the action of the products of decomposition in the culture fluid, is probably nearer the truth. Most observers are agreed that the virulent properties of an attenuated virus remain constant through many successive cultivations, and that therefore the production and maintenance of the inoculating virus of uniform strength is perfectly possible.

Koch, Gaffky, Löffler and Klein, all experimented with vaccine obtained from Pasteur's agent, and found that it was neither uniformly virulent nor protective. In some cases the "vaccin premier," or weak vaccine, killed the whole flock of sheep it was to protect, while the "vaccin deuxieme" was found to be inert; and when the animals were affected by the vaccination and survived its effects, the protective influence only lasted for a limited period, probably not more than nine months.

Although there are no reasons for supposing that we never shall obtain a means of protection against this disease, we must admit that so far the inoculating system has failed to yield the desired results, and its adoption as a hygienic measure is to be condemned, because :

1st. When we succeed in procuring immunity it is very temporary in its duration (about nine months).

2d. The vaccine is so uncertain that more sheep may die from the effects of inoculation than from the chances of taking the disease when exposed to it.

3d. During inoculation, bacilli may fall on the wool and spread the disease through formerly healthy pastures.

We will close our report with a brief reference to the relation between pathogenic and septic bacteria, as these are illustrated by Buchner's and Klein's researches on the bacilli of anthrax and hay-infusion.

"Pathogenic bacteria are those which, by their introduction into the blood or tissues of an animal, undergo development there, calling forth certain symptoms of disease, which often end fatally."

The introduction of septic or non-pathogenic bacteria produces no effect, or only a slight, transient, constitutional disturbance ; neither do these bacteria develop within the blood and tissues. Buchner claimed that these two bacilli were identical in morphological structure, and, founding his theory on this basis, he attempted by repeated cultivations to transform the bacillus anthrax into the bacillus subtilis, and vice versa. This he claims to have accomplished ; but the subsequent researches and criticisms of Koch and Klein make his conclusions extremely doubtful.

These bacilli are not morphologically the same, the bacillus anthracis being cubical at its ends, whilst the bacillus subtilis is rounded. When stained, the former is seen to be made up of a row of cubical cells, while the latter consists of cylinders only ; and, as has been already stated, the hay-bacillus possesses mobility, while that of anthrax has none.

The spores of both bacilli are the same in size and appearance. Koch and Klein maintain that Buchner's cultures were impure or became contaminated, and following the general law of these cultivations, which by the way is an illustration of survival of the fittest, the one microbe replaced the other. The law

referred to is to the effect that when two bacilli are grown in the same culture and carried through repeated cultivations, the one for whom the medium is more suitable grows and leads to the destruction of the other.

Buchner grew the hay-bacillus in egg-albumen, which he necessarily could not sterilize, and with this cultivation inoculated defibrinated blood collected from different animals, which is a very unsuitable medium for the growth of the hay-bacillus. Koch's criticism is that in this non-sterilized culture Buchner succeeded in cultivating the bacillus of malignant oedema, which he confounded with that of anthrax.

This subject has also been wrought out in connection with other statements, that the harmless bacillus subtilis may become endowed with the power of producing ophthalmia; and also that aspergillus, or common mould, when placed under certain conditions, assumes very poisonous properties. But the great weight of scientific opinion turns the balance in favor of the opinion that each microbe always retains its own morphological and physiological characteristics.

What is the practical value of these researches in the curative treatment of disease? Has the discovery of the bacilli of phthisis, pneumonia, cholera, anthrax, or any other disease, given us one additional weapon with which we may combat these ailments in the human body? A truthful answer can only be in the negative. We are quite aware that at the present time it is an unpardonable sin to differ from Dr. Koch, and many men will throw it in the face of your committee that it is presumption on their part to hold such opinions, when not one of them can for one moment be compared to him as a microscopist. Mr. President, we are not able to make a coat, but we can tell when it fits; and, while we own our inability to test Koch's results in the laboratory, we must be capable of testing their application to cases at the bed-side, or be unfit to practice our profession.

Now that Dr. Koch has caught his bacillus, what is he going to do with it? Mount it on a slide and keep it in his laboratory? This is all he can do, because no parasiticide can ever be introduced into the intestinal canal sufficiently strong to destroy the microbe without endangering the life of the patient. And more than this, to quote the words of Professor Semmola, of Naples, who, as a practitioner of medicine, stands in the very front rank of the profession: "Even if one could introduce into the jejunum

a sure parasiticide, inoffensive to man, the death of the microbe would constitute but a small portion of the treatment, because the principal phenomena of cholera are undoubtedly due to the chemical principle (ptomaine), which poisons successively the nerve-centres, and which is in the course of formation in the intestine when the diarrhœa advises us that the cholera attack has commenced. I believe that the diarrhœa itself, from its beginning, instead of being an irritating effect due to the microbe, can be looked upon as the first result of the poisoning of the abdominal sympathetic nerve-centres, through their incontestable influence upon the circulation, and the nourishing of the intestine." He goes on to say that even admitting the parasitic commencement of the disease, the poison must be formed by being absorbed into the circulation, and exercise its noxious influence over the different nerve-centres before the presence of the bacilli can be inferred from the disturbance of function thus produced.

"The specific remedy in cholera has not yet been discovered, and never will be by means of laboratory investigation."

"Anti-parasitic treatment, recommended hitherto, is but scientific charlatanism."

We must not forget that although these recent investigations have not contributed anything to the science of curative medicine, they have done much in the field of preventive medicine. An accurate knowledge of the causes of disease and their antidotes—for here germicides can be used in any strength—would assist to prevent the inroads of those pestilences which have lately ravaged the continents of Europe and Asia, and remove from our midst other maladies that annually swell our mortality returns. But so long as California has an unreasoning public that encourages quackery instead of crushing it, and is governed by a Legislature that stints her Board of Health and cuts down its appropriations, that there may be money enough to reward the hirelings who helped them to office, any advances in the science of preventive medicine are of no consequence to her.

NOTES ON NASO-PHARYNGEAL CATARRH.

By JOHN VAN RENNELAER HOFF, A.M., M.D., U. S. Army.

[Read before the California State Medical Society at its last annual meeting.]

Until the introduction of rhinoscopy, barely a quarter of a century ago, diseases of the nasal and naso-pharyngeal cavities, though doubtless then as prevalent as now, were practically unrecognized. Up to the time of this important event, such knowledge as clinical experience had taught, left much to be desired regarding the pathological conditions which actually obtained; and even to-day, with all the advantages of instruments of precision, with closer observation and vastly increased experience, much yet remains to be learned.

I desire to invite attention particularly to naso-pharyngeal catarrh, because of its extensive dissemination in the United States, because of its pathological importance, and finally because, if taken in time, it may be *cured*, which latter fact has not seemed to impress itself as it should.

There can be no question as to the universality of this disease. Morrell Mackenzie (*Esophagus, Nose, and Naso-Pharynx*, Vol. II., page 334) says: "The complaint is so extraordinarily prevalent in America, as compared with any other country, that it may be regarded, with all propriety, as a national affliction," and gives as one of its synonyms, "American Catarrh."

Beverly Robinson (*Nasal Catarrh*) remarks: "In New York, Boston, Philadelphia, in many of our western cities, on the seashore and in the interior—in fact, over widely extended and very different sections of our country, post nasal catarrh prevails to an extent which originates much inquiry and occasions more than passing anxiety to those who have observed its course. Vast numbers of people are already afflicted with it; men, women and children are alike its prey. All ages and professions are subject to its symptoms and complications. Moderate differences or changes of climate only partially affect its growth; for while in individual instances its onward and rapidly progressive march appears to be somewhat delayed, if not completely arrested, by breathing a high, equable and dry atmosphere, or by the respiration of air impregnated with balsamic odors; other and

numerous examples there are (when once the catarrhal affection has become firmly seated) but little influenced for the better by the most rational hygiene, and an ambient medium seemingly the most perfectly adapted to their individual needs. Usually speaking, however, a cold, damp atmosphere, subject to sudden and great changes of temperature, is supposed to be a general and efficient, if not exclusive cause of the production and extension of post nasal catarrh." To which supposition, however, our author takes exception, for he further says: "The more closely I have been able to investigate the subject in its multiple aspects, the more thoroughly am I persuaded that the received opinion is in part erroneous."

It has been my fortune during an army career covering a considerable number of years, to have served in various regions of a country widely different in climate, soil, and elevation; but nowhere have I found a locality free from victims of this all-pervading disease. Whether at the sea-shore or upon the elevated plains of the Rocky Mountain region; whether in the extreme moist heat of southern latitudes, or the dry cold of greatly elevated northern stations; everywhere I found catarrh, and this amidst a class especially selected for healthfulness and bodily vigor. Proving conclusively that "the development of the malady is not much affected by habit or occupation; the strong being equally liable with the weak."

Is it possible that the mucous membrane of the American nose is inherently prone to the catarrhal state? Or is there some universal extraneous cause which lurks within our borders, ever seeking fresh victims?

Eliminating various possible causes, which, being more or less local, fail to account for the wide-spread prevalence of this affection, it has been somewhat ingeniously held that since dust is everywhere, therefore in dust must we look for the *fons et origo* of our national disease. But why American dust should so grievously afflict the American nose, while the dust of other (though no fairer) climes should prove so innocuous, does not appear.

Microscopical examinations of mucous secretions from nasopharynx in cases of acute catarrh, have demonstrated the presence therein of micrococci, which Hueher (*Allgem Chir.*, Leipzig, '73, p. 257) regards as the active cause of the disease. I believe no systematic investigation has yet been made in this direction,

though it offers so wide and interesting a field; but, doubtless, the catarrh germ will ultimately be found. The fact that diseases of the nasal mucous membrane are believed, especially by the Germans, to be contagious, is indicative of its germinal origin. Fraenkel says of coryza (*Cyclopædia Pract. Med.*, Ziemssen, Vol. IV., p. 117): "Indeed, it cannot be denied that there is a great deal of evidence in favor of the theory of contagion," and after citing several circumstances in support of this theory, he concludes as follows: "I have also repeatedly noticed that a bridegroom, who had never had a cold in his head, was seized with one for the first time, during fine weather and without any other perceptible cause than that his bride, who was subject thereto, had coryza." It is possible, however, that the bridegroom's catarrh arose from other cause than contagion, since it has been shown that excessive venery not infrequently causes rhinitis. That sight and hearing are similarly affected, has been known since the time of Aristotle.

The theory of contagion, however, does not meet with universal acceptance. Mackenzie (*Op. cit.*, Vol. II., p. 338) thinks there is very little scientific evidence in its favor, and Robinson (*Op. cit.*) pointedly asks how it is that a disease which is so prevalent in many sections of our country is less known and familiar in England and on the continent? and remarks: "Certainly, if the extensive propagation of this affection is merely a direct consequence of intimate contact, there would be just the same probability of the increase there as here;" the fallacy of which argument lies in the fact that doubtless even if it be contagious, various other conditions besides mere contact enter into the causation of this disease.

It is held that no definite relation exists between acute catarrh (coryza) and chronic naso-pharyngitis, though it is admitted that the former is "without doubt, a predisposing, and at times a proximate and partially efficient cause" of the latter. Possibly a peculiar diathesis is essential to the development of post nasal catarrh; if so, the question is a purely hypothetical one, and admits of no discussion in this paper. The fact, though, that foreigners temporarily sojourning in this country are equally affected with those native to the soil, would point to an extraneous cause, rather than hereditary tendency.

The pathological anatomy of naso-pharyngeal catarrh differs in the three stages into which its progress has been divided, viz.:

The simple inflammatory, the hypertrophic, and the atrophic. The first stage is essentially that of irritability, "which expresses itself in an abnormal excitability of the erectile tissue" (I. W. Mackenzie, *Med. News*, Vol. XLV., p. 370); as the disease progresses to its second stage, it will be observed that the inferior turbinated bones inroach to a greater or less extent upon the nasal passages; that their investing membrane is hypertrophied, gorged with blood, and covered with a viscid secretion, often mixed with pus. Posteriorly this membrane is found thrown into folds and projections, "veritable tumors," occupying the pharyngeal vault, often entirely closing the nares, while raised granulations, varying in size and form, can be seen on the pharyngeal walls. Atrophy follows, all the tissues have been metamorphosed, over-distension is succeeded by loss of contractibility and function, until we have, practically, nothing left but cicatricial tissue. The sense of smell is lost, secretions accumulate and become fetid, and frequently ozena, in all its disgusting details, ends the story.

The symptoms of the disease should be familiar to all. Following repeated attacks of coryza, your patient observes that his "throat," as he would doubtless express it, is becoming irritable, and that he constantly desires to expectorate a scanty, viscid secretion. Not unfrequently there is "a dull, aching feeling in the upper part of the throat, and occasionally weight or pain is complained of in the occipital region" (I wish particularly to emphasize this symptom, which may serve to account for the sub-occipital "headache" so frequently met with). Deafness, "ringing in the ears," etc., due to the extension of the catarrhal process into the eustachian tube, are common symptoms. As the disease progresses, deafness may become profound, because of the occlusion of the eustachian orifice by hypertrophic tissue. A remarkable case of this character came under my observation in the practice of Professor A. M. Wilder, wherein the removal of the hypertrophies resulted in the restoration of practically normal hearing to a woman who had been almost entirely deaf for a number of years. Various other symptoms present themselves *pari passu* with the on-marching disease, dependent in great measure upon involvement of neighboring organs, and the extension into one or another communicating cavity.

The treatment of naso-pharyngeal catarrh must be constitutional as well as local. It matters not if this disease be regarded

as due to some specific contagion, acting alone upon the nasal tissues, or to some peculiar diathesis; we cannot ignore the fact that the success of treatment greatly depends upon the state of the patient's general health. Any apparent diathetic tendency must be combatted by appropriate remedies; alteratives and tonics should be persistently used; hygienic measures rigidly enforced; diet, clothing, habitation, care of person—all must be regulated; and occasionally a change of climate recommended. Authorities are not in accord as to the value of various medicinal agents which are supposed to be specially useful in this disease. Mackenzie and Lefferts assert that there is little evidence in favor of their efficacy; while, on the other hand, Robinson has found benefit from cubebs, sulphur and ammoniacum. Our chief resource lies in local treatment, the systematic use of which being frequently followed by the most brilliant results. It has been well said that "a very essential principle in the local treatment of catarrhal affections of the nasal passages is thorough cleanliness." All secretions should be removed, and the mucous membrane thoroughly cleansed before any attempt at local medication is made. This is best accomplished by the spray apparatus, *not* by the nasal douche. I mention the douche simply to record the fact that authorities, in this country at least, regard its use as harmful.

Various forms of apparatus are easily obtainable, any of which will prove more or less useful, though the best will occasionally have to be supplemented by the posterior nasal syringe, laryngeal brush, or other instruments. Dobell's solution, ℞ boracis ꝑi, glycerine acid carbol. ꝑ ij., sodæ bicarb. ꝑi, aquæ Oss. M., variously modified by the introduction of listerine, highly recommended by Lefferts, or other substances *pro re nata*, makes an effective cleansing application. Chloride of sodium, so frequently prescribed, is contra-indicated, its tendency being rather to increase than diminish congestion.

The second indication for local treatment is in a measure dependent upon etiological conditions. When the disease is not due to any discoverable specific taint, and where there is great congestion of the parts, we have recourse to astringents, either by atomization or such other form as seems indicated. Insufflations of powders, as salicylic acid, catechu, persulphate of iron, or eucalyptus, are often exceedingly beneficial. Churchill's tr. of iodine, Sugol's solution (M v-x-ꝑi, iodide of zinc, grs. v. ꝑi,

sulphate of zinc, grs. v. ʒi, tannic acid, grs. v. ʒss. ʒi), all may be used in form of spray, with satisfactory results, care being taken that the strength of the solution is not sufficient to cause irritation.

In the hyperplastic form of rhinitis, of moderate extent, the systematic pursual of the course already indicated, will generally result in a cure; but if the growth be sufficiently extensive to encroach upon the lumen of the nostril, almost or entirely to its occlusion, more vigorous measures are demanded. Leaving out of consideration the entire class of caustics, all of which have a more or less limited field of application, we turn to the surgical procedures which have given such brilliant results, in many cases practically incurable without them. I refer particularly to the employment of the galvano-cautery and cold wire snare. My own experience is confined to the use of Jarvis's snare, or its modifications. This instrument, a wire *ecraseuré* of simple construction, can be used both anteriorly through the nose, and posteriorly by the pharynx, according to the special indication. Its application is easily learned by anyone, the only difficulty being in the occasional failure to engage the hypertrophied tissue within the loop, which may be overcome by first transfixing the part with a slightly curved needle, under the point of which the wire may be quickly caught. As a rule very little hemorrhage follows the operation, though as a precautionary measure it is well to be deliberate in completing the removal. "This little operation alone," Lefferts remarks (*loc. cit.* p. 494), "if judged by its results, constitutes one of the most marked advances of recent rhinoscopic surgery." Equally satisfactory results have followed the use of the galvanic cautery; but this is so complicated an instrument that its employment will almost necessarily be confined to specialists.

The treatment of the third stage of naso-pharyngeal catarrh is chiefly palliative. Here the hypertrophic gives place to the atrophic form, accompanied by perverted secretion, stinking exhalations, anosmia, a true organic change.

Little can be done but to thoroughly cleanse the parts and keep them clean. We may also endeavor to re-establish function, a forlorn hope when the atrophic process is complete. The first indication is met by cleansing sprays, as heretofore described; the second by topical application of various medicaments, as carbolic acid, creosote, sanguinaria, salicylic acid, etc., by atomization or otherwise. This, combined with appropriate constitutional treatment, proper hygienic surroundings, and

strict dietetic rules, with an occasional course of mineral water, often yields surprisingly satisfactory results.

The picture, crude and unfinished, I have presented for your consideration, is familiar to you all; its every light and shadow, its coloring and perspective, all are so well known that I fear its very familiarity breeds contempt. But, gentlemen, dropping the simile, the day has surely passed when we could prescribe a douche to our patient, and dismiss him without further thought, for such a course would do him no good, and bring deserved contempt upon ourselves.

LEPROSY.

By GEO. L. FITCH, M.D.

Formerly Physician in charge of Government Free Dispensary, Honolulu; Physician in charge of Kukaako Branch Leper Hospital, Honolulu; and also of Kalawao Leper Settlement, Island of Molokai.

In the "Transactions of the Medical Society of the State of California, during the years 1883 and 1884," I find a paper on "Hawaiian Leprosy, by A. W. Saxe, M.D.," containing some statements which I desire to correct, since they appear to have been based upon an imperfect knowledge of the disease as it occurs in our islands, and are therefore liable to mislead those gentlemen who are interested in the subject.

Dr. Saxe says (page 213, Transactions): "The physicians of the Hawaiian Islands, long resident and of first-class abilities and attainments, are nearly unanimous in the opinion that leprosy, is a distinct and separate entity, having no other relation to syphilis than its occasional association with it; that it is contagious; that the mode of contagion is peculiar and unlike that of any other of the contagious diseases."

On page 61 of the *Medical Bulletin*, March number, 1883, published in Philadelphia, may be found the following: "Report of a case of Leprosy in Philadelphia, by John V. Shoemaker, A.M., M.D.:" "I am indebted to Professor Samuel D. Gross for a recent opportunity of seeing and examining a young man suffering from leprosy. The patient was sent from Honolulu to Professor Gross, by Drs. Hagen and Trousseau, gentlemen who are well known on the Sandwich Islands as expert practitioners of medicine. The letter of introduction and the description of the patient's condition stated that they believed the case in question to be one of leprosy; and, as they regarded it non-contagious, they had advised a trip to the States for a change and benefit to his general health, and wished him at the same time to have the best medical advice that this country could give."

From this statement I am constrained to believe that Dr. Saxe is not correctly informed in regard to the views of some at least of the medical gentlemen of the islands, for it is entirely beyond the bounds of credibility that any *respectable* medical man would permit a patient suffering with a disease, believed to be communicable in *any manner*, to travel by public conveyance, to sleep in hotels and on trains, to eat at tables where hundreds eat, to mix promiscuously with the members of a healthy community, or to run even the *slightest* risk of communicating this foulest of foul diseases to any other member of the human family. I am still further strengthened in such belief by the history of Dr. Shoemaker's case, which must have been familiar to Drs. Hagen and Trousseau, and a portion of which I quote from the article in the *Bulletin*, before mentioned :

"H. J., æt. 34; was born in Honolulu, and had resided there since his birth, with an occasional trip to the States; his parents were Americans, who had emigrated from New Hampshire to that island. His occupation was that of a planter, and he had succeeded in saving sufficient means to enable him to live in comparative comfort. He stated that he had led a very dissipated life until he was twenty-four years of age, especially in promiscuous intercourse, but had never had any venereal disease. Eight years ago, having felt poorly for a time, he noticed a dead spot of skin just above the knee. It spread slowly, and was only about twice as large four years after its first appearance. Six months later he married a healthy native woman, and a weak and puny child was born to them within a year, which lived but a short time." * * *

I wish to supplement this history as follows : The wife of H. J. was of white parentage; she was a widow, with one child, at the time of her marriage to H. J., by whom she has had two children, and neither she nor the child by either her first or second husband, have developed leprosy.

I consider this as strong proof that Drs. Hagen and Trousseau were justified in writing to Professor Gross that they regarded leprosy to be non-contagious.

Drs. Trousseau and Brodie enjoy the best practice of any physicians in Hawaii, and have for years been generally considered the leading physicians of the kingdom.

Here let me cite the histories of a few cases, in which some (if not all) of the persons connected therewith have come under my own personal observation :

In A. D. 1851, Mikona, a native leper, married Caroline Green, a half-caste woman. Three children were born to them; the

first and third became lepers ; but the second, Peter Mikona by name, now lives here in Honolulu, non-leprous. In 1866, fifteen years after his marriage, Mikona and his two leper children were sent to Kalawao leper settlement, on the Island of Molokai, where they died years ago. Before Mikona was sent away, his wife, Caroline, had a lover, Kamaiopili by name, who shared her favors turn and turn about with her leprous husband, and after the latter's departure she married this lover, by whom she has had three children, all non-leprous. Kamaiopili died in December, 1884, from pneumonia, as his physician informs me. He was non-leprous, and so is Caroline.

Turning back now to the second child of Mikona, he is married and has three children ; the first non-leprous, the second a leper, the third non-leprous. I received this history from Caroline and Kamaiopili ; it was told me before a number of people ; and I know all the parties who were connected therewith—that is, all who were living at the time.

In A. D. 1860, a man named Nahuaai died from leprosy. His widow, Mele, shortly after began illicit relations with a man called Kalalau, who has a sore on his penis, and whose eye-brows fell out while he lived with her ; but in 1863 he forsook her and married a sister of Nahuaai, by the name of Hoolomakini, from whom I first obtained this history. By 1868 Kalalau was a pronounced leper, and was sent to the leper settlement, his wife accompanying him. There he died from leprosy, and his widow chose for her second husband a nurse who was non-leprous, but who soon died from some dropsical affection. Hoolomakini next married a man, John Lui by name, a leper, who died in March, 1883, from the disease, leaving Hoolomakini (who still remains) non-leprous.

Turning back now to Mele. After Kalalau forsook her, she became a common strumpet, but finally settled down with a man by the name of Kamai, who tells me that he had been a severe sufferer from syphilis before his relations with Mele. By 1878 Kamai became leprous and was sent to Kalawao, where he picked up a woman named Kaahumanu, with whom he still consorts. She is non-leprous. Mele then found her affinity in Oalamahia, but he repeated to me the same story as Kamai, and in 1883 went to Kalawao, leaving Mele to find another who would console her in her misfortunes ; but she has not developed leprosy,

although she has been a mother by Nahuaai, Kamai and Oalamahia.

A native woman, Kalehua, has been a resident of the leper settlement for more than sixteen years. She went there with her leprous husband, by whom she had four children. She tells me that two of her children have the disease, but I never saw them. For the last eleven years this woman has been the laundress for the hospital at the settlement, washing the pus-saturated garments and bedding for the inmates, who are cases in the last stages of the disease. Not only this, but she is a common strumpet for these same inmates, yet has shown no signs of the disease.

A woman, Lilia by name, has been a resident of the settlement for upwards of twelve years. She also accompanied her leprous husband there, and her child by that husband is a bad case of leprosy. After her husband died from the disease, she married leper No. 2, and when he died, from the same cause, she married leper No. 3, Eli Gordon by name. She shows no signs of the disease.

My family cook, an East Indian, has a leprous wife; she has had the disease for more than seven years, and during that time this man has cooked for several white families here; he shows no sign of the disease, but it having become generally known that his wife has it, he could not obtain employment, and therefore I engaged him.

A Spaniard has been a leper for nearly eight years. His native wife had one child by him after he became so, and she died from typhoid fever over five years ago, non-leprous. Very shortly afterwards he married a pretty little widow, a Portuguese woman, who had a child by a former husband, and has had two by her leper husband; but he is the only leprous member of the family, and a most hideous case he has been for a long time.

A white man, a mechanic, began illicit relations with a leprous native woman fourteen years ago, and at the end of three years she was sent to Kalawao. He shows no signs of leprosy.

Counting the two white women whose histories have already been given, thirteen foreigners, exclusive of Chinese, have come under my observation here, who have maintained sexual relations with lepers for a period exceeding three years, and not one of these parties have contracted the disease.

PER CONTRA.

Exclusive of Chinese, there have come under my personal observation twenty-two foreigners suffering from the disease. Of these, one man admitted that he had led a very licentious life, and probably some of his numerous mistresses may have been lepers. Another one informed me that in former years he had a native wife, who was in all probability a leper; and a third said that in looking back over the past he remembered that many years before he became a leper, he was going from one island to another in the South Pacific, and believed the cook of the vessel must have been a leper. In two out of the twenty-two cases I got no history; but excluding these cases just cited, the other seventeen deny ever holding any communication with a leper, and most of them say they never saw a leper, knowingly, until they themselves were declared so.

In an editorial upon leprosy that appeared in a local newspaper, the *Saturday Press*, for May 9th, 1884, there was the following statement: "There were not TEN PER CENT. of lepers among people there, as here." In September, 1884, I made a careful inquiry into the history of the inmates of Kakaako Leper Hospital. There were sixty-seven males in the institution, who were or had been married; of these, one man had a leprous wife, resident in the hospital, and three others had previously lived with leprous consorts. There were thirty-six women in the hospital who were or had been married; of these, one woman had a leprous husband in the hospital, and one other had previously had a leper husband. Therefore, of the married inmates a trifle less than six per cent. had consorted with lepers.

If there were any assurance that the article in the newspaper was based on fact, this showing would make it clearly apparent that it was an actual protective against leprosy to cohabit with a leper.

Upon October 9th, 1884, with the kind assistance of Rev. J. Damien, the Catholic Priest at Kalawao leper settlement, I made a careful census of the number of children who were born there, and where either one or both parents were leprous previous to the time of the birth of the child. The total number was twenty-six, as follows:

MALES.

Both parents lepers.

| Name. | Age. |
|------------------|------|
| Kalaniuli..... | 2 |
| J. Kanaana | 4 |
| Keahonui..... | 9 |
| Joe..... | 8 |

Father only a leper.

| | |
|-----------------|----|
| Mahai *..... | 14 |
| Keoloewa †..... | 11 |
| Kunihi..... | 3 |
| Keoni..... | 9 |
| Opupeli..... | 10 |

* This boy is a leper. † Brothers.

Mother only a leper.

| | |
|---------------|-----------|
| Kalani..... | 8 |
| Kakekili..... | 4 |
| Sanuela..... | 21 months |
| Kahema..... | 21 months |
| Damiana..... | 9 |
| Total..... | 14 |

FEMALES.

Both parents lepers.

| Name. | Age. |
|-------------------|------|
| Kamaka..... | 4 |
| Likapeka..... | 1 |
| Keoho..... | 3 |
| Hoomanawanui..... | 11 |
| Kalua..... | 10½ |
| Leialoha *..... | 9 |

* This girl is a leper.

Father only a leper.

| | |
|---|----|
| Sisters of the boys Mahai and Keoloewa. | |
| Lilia..... | 13 |
| Abikaila..... | 9 |
| Elikapeka..... | 7 |

Mother only a leper.

| | |
|--------------|---|
| Keneki..... | 2 |
| Kahuaka..... | 8 |
| Mary..... | 3 |

Thus it may be seen that only two cases out of twenty-six were lepers, although they all were born of leprous parents, and never were out of leprous society in their lives.

It would be unfair in this connection not to mention the fact that I have never seen a case of leprosy in a child previous to the time when the permanent teeth erupt, although I have had over two thousand cases of the disease in charge during the four years from 1881 to 1884, inclusive.

The following statement tells its own story :

"I knew Paiaina in the year 1857, at Honokalia, Honolulu, Oahu; he was living with the Prince ———, and Paiaina was servant of ——— at that time. I lived with Prince ———, and with the said Paiaina. In the year 1864 I ceased living with the Prince and Paiaina. He was one of the Prince's favorite men, and he chewed awa for the Prince. The servants whom I well knew were Paiaina, Kawa, Kaukau, Kinimaka, Kaka, Kahalewai, Wainee.

"My remembrance is that Paiaina had the leprosy in the year 1863, or 1865, perhaps. I have been there and seen Paiaina living with the Prince ———, and if I remember rightly, it was in the year 1878, perhaps, that he ceased living with the Prince ———. While Paiaina was diseased, he was chewing awa for the Prince, and I have drank, together with the Prince, of the awa chewed by Paiaina and Wainee. From the time when Paiaina got the leprosy, 1863-5, until the year 1878, I knew of his chewing awa for the Prince ——— all that time, and the Prince drank the awa chewed by him, yet the Prince has not contracted the disease, nor have I, nor has Mr. G. P. Wood, a special companion of the Prince.

This is my testimony concerning my knowledge of Paiaina, otherwise called Alapai."

Written this 26th day of May, A. D. 1885, at Leleo, Honolulu, Oahu.
(Signed) G. B. KALAAUKANE, Counsellor.

Witness to signature, FRANK BRINDT.

Hawaaiian Islands, Island of Oahu : Sworn to before me, this 9th day of June, A. D. 1885. Witness my hand and official seal,
(Signed) JOHN H. PATY, Notary Public.

Mr. G. P. Wood says, this statement made by Kalaaokane is the truth, and further, Mr. Wood volunteered the story that he and Paiaina had used the same pipe for several years after Paiaina became a leper. Mr. W. is non-leprous.

In explanation of this statement of Kalaaokane, it has from ages past been the custom among these people for all chiefs to keep one servant to chew awa for them. This man chews the tough, fibrous roots of the awa (*Piper Methysticum*) and spits it into a calabash; the saliva is strained away from the root and drank, to produce intoxication. Kalaaokane is an attorney, admitted to practice in the Supreme Court of the Kingdom; and G. P. Wood, a well-known half-caste here. Besides these men, I can produce plenty of evidence that this statement made by Kalaaokane is correct. The statement was made in native Hawaiian, and translated for me by Rev. A. O. Forbes, a well-known expert in the Hawaiian language.

In 1862, the Royal College of Physicians, of England, at the request of the Secretary of State for the British Colonies, began an investigation into the subject of leprosy, and their report, published in 1867 by the British Government, is before me as I write. The College appointed the following committee: Dr. Budd (Senior Censor), Dr. Owen Rees, Dr. A. Farre, Dr. Gull, Dr. Milroy, and Dr. Greenhow. These gentlemen framed a series of interrogatories, which were sent to various parts of the world where leprosy was known to exist. Interrogatory No. 10 reads as follows:

10. Have you met with instances of the disease appearing to be contagious, in the ordinary sense of the term, *i. e.*, communicated to healthy persons by direct contact with, or close proximity to, diseased persons?

(a) If so, in what stage was the malady in the diseased person? Were there ulcerations, with a discharge?

(b) Please to describe briefly the case or cases of contagious communication which you have seen yourself.

(c) Does the disease seem to be transmissible by sexual intercourse?

The reply of the committee to this question, after their inves-

tigation, is : "The committee having carefully considered the replies already received, are of the opinion that the weight and value of the evidence they furnish is very greatly in favor of the non-contagiousness of leprosy."

They further say : "The committee, therefore, can only repeat the statement made in their former report to the College, that the replies already received contain no evidence which in their opinion justifies any measures for the compulsory segregation of lepers." —Pages 4, 5, 7, "Report on Leprosy, by the Royal College of Physicians."

Dr. Wm. Aitken, in his Handbook of Treatment, 1882, Birmingham Med. Lib. ed., page 238, says: "After receiving this decided opinion, the Duke of Newcastle forthwith issued a circular to the Governors of the Colonies, expressing his opinion 'that any laws affecting the personal liberty of lepers ought to be repealed; and that, in the meantime, if they shall not be repealed, any action of the executive government in enforcement of them, which is merely authorized and not enjoined by the law, ought to cease. There appears no more need (or just about the same) for restricting the liberty of lepers, as for restricting the liberty of those afflicted with gout.'"

On page lxi., Coll. Phys. Report, may be found the following: "Drs. Danielssen and Boeck state that 'among the hundreds of lepers whom we have seen daily, not a single instance has occurred of the disease spreading by contagion. We know many married persons, one of whom is leprous, cohabiting for years without the other becoming affected. At St. George's Hospital, many of the attendants on the inmates have lived there for more than thirty years, and are quite free from any trace of disease.' * * * As the result of our observations, we have only to deny the contagiousness of leprosy.'"

The mere opinion of any man would have little weight with me, but an opinion based on "the hundreds of cases we have seen daily," and the facts cited by Drs. Danielssen and Boeck would seem to be of decided value.

But let us turn to view our subject in another light. Page xliii., Coll. Phys. Report :

"*Barbadoes.*—I have not met with any cases of contagion. None of those in attendance, during the last nine years, upon the inmates of the lazaretto, have contracted the disease; and I, after receiving a wound from a knife moistened with the fluids of an

inmate, have escaped, although the wound was followed by great constitutional irritation and loss of the finger. From what I have heard, I do not believe it communicable by sexual intercourse.—*Dr. Brown.*”

Page xlv., same report :

“*Mytilene.*—It is demonstrably not contagious. Dr. Bargilli practiced inoculation in two instances, but without results.”

“*Mauritius.*—Never. I know two instances where medical men have wounded themselves in dissection, but without any bad results.—*Dr. Powell.*”

Five cases of inoculation fruitless elsewhere. Let us look at results in the same direction here.

Dr. G. Trousseau has often told me how he was bitten by a leper, some ten years ago, until the blood ran, but Dr. T. has not contracted the disease.

Kaauku, mail carrier on Molokai, had the palmar surface of the third finger of his left hand bitten out by a leper, over seven years ago. Kaauku has not contracted the disease.

Dr. E. Arning had a scratch on his finger, and made a post mortem on a body dead from leprosy, in the leper hospital here, His arm within a few days became very badly swollen, and he suffered severe constitutional disturbance, but has not developed the disease. I regret I cannot give the exact date, but it is more than eight months ago.

Keanu, a convicted murderer, had the death penalty pronounced upon him for his crime commuted by the King and Privy Council, to imprisonment for life, on condition that he consent to be inoculated with leprosy, to test the question. More than eight months ago Dr. E. Arning raised a blister on his (Keanu's) arm, and rubbed into the raw surface, matter from a leprosy ulcer taken from the arm of one of my patients at Kakaako Leper Hospital. In addition to this, he cut off a leprosy tubercle and transferred it to Keanu's arm, to which it adhered and grew fast ; but no symptoms of the disease have as yet been developed.

Upon June 29th, 1882, while engaged in making a post mortem examination on the body of a boy who died from leprosy, I scratched my wrist, but was not aware of the fact until the end of the operation, when the smarting sensation attracted my attention, and I found the open wound covered with blood from the leper's body. Besides this, on one of my visits to the leper settlement, I knowingly slept in a bed which had been occupied on

the preceding night by a leper, and for two days ate of the food cooked and prepared by a leper; but, so far as I am aware, I have not contracted the disease. Other five cases of inoculation, making ten in all, and only negative results. These are all the cases of inoculation that I know, or can find any account of.

On page 214, Transactions, Dr. Saxe says: "Leprosy was unknown to the natives until 1848, when it was introduced by the Chinese, and Ahia, a Chinaman, was the first leper identified by the Hawaiian Board of Health."

As a matter of fact, Ahia was a full-blooded native, captain of the body guard of Kamehameha III. Still further, Ahia was a leper as early as 1840; and there is yet a third inaccuracy in this single paragraph of Dr. Saxe's communication, for the first Hawaiian Board of Health was organized in 1856, and the law for the segregation of lepers was not passed until 1866, ten years after Ahia's death. Mr. Harry Swinton, Superintendent of Lunalilo Home for Aged and Indigent Natives, tells me that his aunt was Ahia's wife; that she died in 1860, twenty years after her husband became a leper, non-leprous, although she lived with her husband up to the time of his death. Mr. Swinton further avers that for six months before Ahia died, he (Mr. S.) frequently slept in the same bed with Ahia, but Mr. S. shows no signs of leprosy.

In 1845, George Naara, the father of Queen Dowager Emma, became a leper, and died from the disease in 1854. His wife, Fanny Young, died in October, 1880, non-leprous. She lived with Naara up to the time of his death.

In 1845, a man by the name of Honolulu became a leper, and died from the disease. His widow, Mele, lives here now, and is non-leprous.

In 1838, a woman named Kamuli went from Kilai, Kona, Hawaii, to Koloa, on the island of Kauai, and returned to Hawaii in 1841, a leper. My authority is Mr. George Davis, an intelligent half-caste, an aged man. He says Kamuli was his nurse. Mr. Davis' statement is backed up by other witnesses, whom I can produce at any time.

Rev. A. O. Forbes, born here of missionary parents, says his father had a goat-herd in his employ, who milked the goats for the family supply of milk. The fingers of one hand of this goat-herd were contracted into the palm of the hand, several of the finger joints had dropped off, and her nose was eaten away. He

says he recollects seeing other such cases in his boyhood, previous to 1840. From the description Mr. F. gives me, I have no doubt these were cases of leprosy. Mr. F. was for some years a pastor on Molokai; part of his parish was the leper settlement, and in his visits to the settlement he had to eat the food cooked and prepared by lepers.

Rev. J. D. Paris, of Kaawaloa, Hawaii, says in a letter bearing date of August 16th, 1884: "As near as I can find out, the first one affected with this terrible disease in Kona was a woman by the name of Namainai. * * * The first signs of leprosy, very slight, appeared on this woman's face, it is said, about the year 1846. No one thought anything about leprosy at that time. How this woman was infected with the disease is not known. * * * There was a man living at Kaawaloa in 1841 who was afflicted with the elephantiasis. In 1852, when I came to Kona, this same man was living, the disease had spread, and his feet and limbs were enlarged enormously, and his whole body seemed to be a mass of loathsome disease. I gave him medicine from time to time which gave him relief, but not cure. In 1864, I think, Dr. L. H. Gulick was spending a few days with us, when Keawaheula, the diseased man, came up for medicine. I called the doctor, told him what I had done from time to time, and after he had examined him I inquired, What do you call this disease? He replied: I call it a species of leprosy, of the very worst kind.' Turning to Hooper's Medical Dictionary, I found he said it had been considered by some authors a species of leprosy. Now if this was leprosy, it had existed at the islands long before the introduction of the gospel (1820). * * * The first Chinamen who came to Kona were coolies, brought here by P. Cummings and H. N. Greenwell, in the year 1850 or 1851. There were no lepers, nor has there been a case of leprosy among Chinamen, to my knowledge, until within the last ten years, and these were the children of Chinamen, one the cook of Mr. Greenwell." Mr. Paris was one of the early missionaries here.

Mr. E. Bailey, also a missionary of Wailuku, Maui, writes under date of August 6th, 1884: "But it is not at all certain that it originated with the Chinese. The natives called it from the first 'The Mai Pake' (Chinese sickness), but I never knew a Chinaman to have it. Still, they may have had it for all that. While we lived in Kohala (Hawaii) in 1838 and '39, a native girl had a disorder which in some of its aspects resembled leprosy,

and which resisted our attempts to subdue it, though we used a very heroic treatment. It might have been ecthyma. But it was at Wailuku that I first saw a most undoubted case of leprosy. The subject was a boy of eight or ten years of age, who showed a thickening in spots about the face. These spots steadily increased in size and thickness, becoming of a dark color, and finally the skin broke and discharged, the broken surface constantly enlarging, at the same time that the face became more and more swollen and the spots ran together, making a hideous appearance, till it ended in death." Mr. Bailey went to Wailuku in 1839 or '40.

Mr. G. E. Sherman, of this place, says he knew a man by the name of Kaualoakauhi, some of whose toes dropped off in 1835, and in 1836 his fingers contracted into the palms of his hands; great sores broke out on him, and when leprosy began to be talked about, later on, this man was found to be a leper. This was undoubtedly a case of anæsthetic leprosy. The man died since 1870. As his toes had some of them dropped off in 1835, his disease most probably began as early as 1830.

Page lxx., Coll. Phys. Report: "Drs. Danielssen and Boeck state that 'the average duration of the tubercular form among the patients in the hospital at Bergen, from 1840 to 1847, was between nine and ten years; and of the anæsthetic form among the same was between eighteen and nineteen years. "

Cases are known where the disease begins in childhood, runs its course for a time, and then remains quiescent until old age. Mr. Sherman further says that Kaualoakauhi was a resident of the south side of Hawaii. In the same year—1835—he (Mr. S.) saw a woman by the name of Waiakalono, at Hilo, on the north side of Hawaii, who had large red "lumps" come out on her face; and from what he (Mr. S.) has since seen, he is confident this woman was a leper. He further states that in 1835 he saw several other cases in which toes and fingers had dropped off. Besides these white people, many old natives have assured me that they met with examples of the disease at Lahaina, Maui, previous to 1840, and did not know what to call it; but, as they were told by the Chinese that it was common in China, they (the natives) finally dubbed it "Mai Pake," the Chinese sickness, for want of any other term.

In fact, the exact date when leprosy began here is unknown, although it is commonly believed to be of recent origin; but

there is not a scintilla of evidence to show that the Chinese had anything to do with its introduction. At least, if there be any such evidence, it has escaped the most vigorous search I could make for it.

It is certain that from 1835 to 1850 the disease was known to exist on all the islands of the group, although at first no one knew what to call it. Rumor asserts that the late Mr. Brickwood, formerly Postmaster-General, Sheriff of Oahu county, in 1840 recognized Ahia as a leper, he (Mr. B.) having seen the disease previously in Egypt; and from that time on, as more white men came to the country, the dread word "leprosy" began to be generally used, and the disease commonly recognized.

Dr. Saxe further says (page 214, Transactions): "That leprosy overran all Southern Europe, from the Bosphorus to the Straits of Gibraltar, for hundreds of years, while syphilis was no more active or virulent than at present."

In "The Pathology and Treatment of Venereal Diseases," by Bumsted & Taylor, ed. 1879, page 496, I find this statement: "In all countries where syphilis has existed for many years, its course is much less severe than it was originally, and the disease of to-day is really mild in comparison with what it was when it was first observed in Europe. It is well established that syphilis is especially malignant when appearing for the first time in a community. Numerous instances are recorded of the frightful ravages produced by it under such circumstances. The initial lesions are said to have been phagedenic, and to have been followed by severe secondary symptoms; while necrosis and visceral lesions were almost invariable and precocious. This malignancy gradually diminishes in successive generations, until a comparatively mild form of the disease is established. It seems that a certain protective influence is secured to progeny by the occurrence of syphilis in their ancestors, which, although not conferring absolute immunity: decidedly modifies the course of the disease. Thus our ideas of the nature of syphilis are free from that fear with which our forefathers were accustomed to regard it, and we no longer look upon it as an incurable disease."

Jonathan Hutchinson, F.R.S., in "Reynolds' System of Medicine, edited by Hartshorne," vol. I., page 427, says: "4th. Of yet wider importance is the question as to the *influence of disease in the parent in affording protection, partial or complete, to the offspring*. If we grant, as we must, the two postulates—

first, that syphilis is transmissible to offspring, and second, that it is protective for a certain time against second contagion—then we are obliged to admit that just as the disease itself may be transmitted, so may the immunity which it affords. Here, again, we have as yet very little clinical evidence on which to build, but what we do possess certainly favors the view that those who have suffered severely in infancy from inherited disease are to some extent protected. In the history of congenital syphilis, however, nothing is more common than to meet with cases in which the eldest child of a family suffered severely in infancy, the second slightly, the third still more slightly, and the others not at all. I have at present several families under observation in which this has been the case, and in which all the children have lived, and the intervals between them are but short. The younger members of such families often appear to be in robust health. Now, if in such cases the oldest enjoys immunity, probably the second also does so in some degree, and so on through the whole, the degree of protection diminishing in ratio to the distance from the original taint. Do we not here touch upon a law of the utmost importance, not only in respect to syphilis, but to its congeners also? Is it not probable that a very considerable portion of the community, being the descendants of those who have suffered, enjoy in a certain degree, infinitely slight in many, but powerful in others, immunity from further attacks? The manner in which a slight degree of inherited immunity would become manifested, would probably not be in entire escape from contagion, but in the production of a much milder form of the disease. This is what occurs in cases of small-pox after vaccination, or after a previous attack of the true disease, and indeed in second attacks of any of the specific fevers. It is surely impossible to believe that the constitution of a person who has passed through the stages of any of these diseases ever again returns into precisely the same condition in relation to the virus in question that it occupied before; and it is equally inconceivable but that some share of this peculiarity shall be transmitted to offspring. A child born of parents neither of whom are liable to small-pox or syphilis, as the case may be, must be in a different position, as regards those diseases, from the child of parents both of whom are liable. In like manner a half result ought to be expected where one parent is exempt and the other liable. Now, it is a matter of well-known observation that any specific

disease will be especially severe when imported into a community previously free from it. The ravages of small-pox in a virgin race are something far beyond what is ever known in a community long accustomed to the disease. There are also good reasons for believing that syphilis has become during the last two centuries a milder disease than it was when it first invaded Europe. This amelioration we may most satisfactorily explain by recourse to the hypothesis above suggested."

Let us see what happened when syphilis first invaded Hawaii. New York *Journal of Medicine* for March, 1855; article by L. H. Gulick, M.D., on the "Climate, Diseases and Materia Medica of the Hawaiian Islands:" "Dr. Chapin, in the *American Journal of Medical Sciences*, says: 'With such an introduction the venereal disease has for the past fifty-seven years continued to spread and increase; perpetuated and extended, too, by almost every vessel which touches at the islands, till words fail to express the wretchedness and woe which have been the result. Foul ulcers, of many years' standing, both indolent and phagedenic, everywhere abound; and visages horribly deformed; eyes rendered blind, noses entirely destroyed, mouths monstrously drawn aside from their natural position, ulcerating palates, and almost useless arms and legs, mark most clearly the state and progress of the disease among that injured and helpless people.' Rev. Artemas Bishop remarks: 'Their previous looseness of morals formed a ready conductor for the disease, which was introduced by the first ship which touched here; and from the account given by the natives themselves, the consequences were incalculably more dreadful than had been feared by Capt. Cook and his associates. The deadly virus had a wide and rapid circulation throughout the blood, the bones, and sinews of the nation, and left in its course a train of wretchedness and misery which the very pen blushes to record. In the lapse of a few years, a dreadful mortality, heightened, if not induced, by their unholy intercourses, *swept away one-half the population, leaving the dead unburied for want of those able to perform the rites of sepulture.* (Italics mine.)"

Dr. Saxe further says (page 214, Transactions): "That by segregation of the disease and isolation, with better hygienic conditions, the disease has to a great extent disappeared, while syphilis remains."

Let us examine into this matter, and see just how important a

part segregation plays in the decrease of the disease. Page lx., Coll. Phys. Report :

" *Mauritius*.—The Governor, Sir H. Barkly, in his despatch to the Duke of Newcastle, January 5th, 1864, remarks: It will be seen that no public institution exists, or has ever existed, in Mauritius for the reception of lepers; and it would appear comparatively useless to found one now, unless under far more stringent regulations—even if seclusion therein were not made compulsory—than could be adopted consistently with the present position of the population. In the West Indies the lazarets were everywhere abandoned as soon as emancipation took place. This (the non-increase of leprosy in proportion to the increase of the population) is probably attributable to the greatly improved condition of the Mauritius laborer of late; and it affords ground, I trust, for hoping that with more generous diet, and cleaner personal habits, the disease will gradually die out here, as it has done in modern days throughout Europe. "

Interrogatory No. 11, as propounded by the committee of the Royal College, reads as follows: "Are persons affected with leprosy permitted, in the colony of ——, to communicate freely with the rest of the community? Or is there any restriction imposed, or segregation enforced, in respect of them?"

Interrogatory 14: "Have you any reason, from personal knowledge, to believe that the disease has been of late years—say during the last fifteen or twenty years—on the increase in the colony of ——, or otherwise?"

Answer from Barbadoes to Question 10: "Lepers are not prevented free intercourse with other persons, and are only liable to be sent to the lazaret by magistrates' order, upon proof of their begging in the streets. Five only have been thus committed, during nine years, out of seventy-three admissions."—*Dr. Browne*.

Answer to Question 14: "I think there are fewer cases of leprosy now than there were fifteen or twenty years ago. I should certainly consider that the improved condition of the peasantry in domestic comforts since emancipation, has mainly contributed to this end."—*Dr. Carrington*.

From Grenada—Answer to Question 11: "No restriction is imposed; leprosy persons may communicate freely with the rest of the community."—*Dr. Aquart*.

Answer to Question 14: "From what information I can gather,

I am led to understand that leprosy is on the decrease."—*Dr. McIntyre.*

From Tobago—Answer to Question 10: "There are no restrictions of any sort."—*Dr. Buhot.*

Answer to Question 14: "It has not been on the increase, but positively on the decrease; and this has no doubt been mainly dependent on the circumstance of the lower orders being better housed, fed, and clad, and their comparative immunity from depressing mental causes."—*Dr. Elliot.*

These are a few only of many quotations I might cite. I will turn to Norway, where such unmistakable evidence in this matter may be found as to satisfy the most incredulous.

"In a report given a few days ago by the head physician of Norway, for the cure of leprosy, it is shown that by the end of 1856 there were known in Norway 2,863 cases of leprosy, of which but 235 were treated in hospitals, and 2,628 in their houses. * * * By the end of 1866 there were 2,704 cases, and of these 795 were in hospitals, and 1,909 in their houses—a decrease of 159 cases. By the end of 1876 there were known 2,008 cases, showing a decrease of 696 cases. Since, that time the decrease has been regular. Thus there were known in 1877, 1,923 cases; in 1878, 1,855 cases; in 1879, 1,777 cases; in 1880, 1,582, of whom 617 were in hospitals and 965 in their houses. Thus the decrease of this disease is from 2,863 cases in 1856, to 1,582 cases in 1880; in all, 1,281, or 43 per cent."

This quotation is from a letter written by one of our citizens, Mr. V. Kudsen, which was published in the *Hawaiian Gazette*, under date March 14th, 1883, and agrees with the statements contained in a pamphlet issued by G. A. Hansen, one of the physicians to the leper hospital in Norway, which is now in my possession.

A Norwegian lady, resident here, states that she has frequently visited the leper hospital of Bergen, Norway, and seen the leprous inmates engaged in making socks, gloves, mittens and embroidery, which are freely used by the community at large.

For several years there has been an average of about 20,000 Chinese in this kingdom; at no one time have more than twenty of them been segregated as lepers, or one in a thousand. At no time previous to 1848 were there as many as one hundred Chinese in this country, and there is no evidence that any one of them was a leper. Let us, however, admit that five of them had

the disease. Now, according to Dr. Saxe, all the thousands of cases occurring here since that time have arisen from contagion with these supposed five cases. On the other hand, in Norway, with one in a little less than thirteen cases segregated, the disease begins to disappear, and with over nine hundred cases still at large it has decreased forty-five per cent. in twenty-five years.

I have only drawn upon a little brooklet of facts in the preparation of this paper, while a mighty river, ready to be used, runs directly by me, because the narrow limits of a magazine article necessarily curtail my remarks. Let us now proceed to sum up the evidence.

First. Women conceive in numerous cases by lepers, and neither the women nor their offspring develop the disease.

Second. As we have seen, drinking the saliva of a leper for years, and smoking the same pipe, fail to reproduce the disease.

Third. In ten cases of inoculation, the disease is not communicated to those so inoculated in a single instance.

Fourth. Men married to leprous women, and *vice versa*, are no more likely to contract the disease than are those, here, who hold no known intercourse with lepers.

Fifth. Leprous parentage is no assurance that the child will become a leper.

Sixth. Segregation plays very little part in the decrease of the disease.

In view of these facts, and a multitude of others which I cannot here present, I believe myself to be fully justified in saying that **LEPROSY IS A DISEASE WHICH CANNOT BE COMMUNICATED FROM A LEPER TO ANY OTHER PERSON**, by, through, or under any combination of circumstances, except heredity, and that even this plays but little part in the propagation of the disease we may know from the fact that from 1866, when Kalawao leper settlement was founded, until March 31st, 1884, 2,941 lepers were consigned there, and up to October 9, 1884, only twenty-six children, born in the settlement were alive, where either parent was a leper before the birth of the child. Peter Mikona is the only case, that I have been able to find so far, the parent being a leper previous to the birth of the child, who has lived to mature age and in turn become a parent. Cases where the child is born while the parent is still in the quiescent or even active stage of syphilis, and

parent and child both develop leprosy afterwards, are common enough.

Unfortunately, the fact that the disease is non-contagious does not, so far as this country is concerned, do away with the necessity for segregation; for let a native be ever so loathsome and disgusting an object, that, to his ideas, is no reason why he should not make a public exhibition of himself; and therefore as a measure of public decency, the community must put the leper away from others by process of law.

I cannot in this paper, for lack of space, discuss the etiology of leprosy. To do so at all thoroughly would require a separate work devoted to a general description of the disease in all its phases; and this I hope to shortly put before my professional brethren.

Suffice it to say that I fully believe leprosy to be a fourth stage of syphilis, or a form of scrofula subsequent to syphilis, occurring but rarely except in a virgin race, or contracted from a member of such race; and then only in persons of a broken-down, or cachectic, nervous constitution, and rarely met with among Anglo-Saxon or Celtic races, except in blondes. On November 14th, 1883, I inoculated six lepers with the virus of syphilis, by taking six ivory vaccine points, and scraping off the surface of a mucous patch on the under side of the lower lip of a native woman. The points were then allowed to dry, and in three hours after I transferred the virus to the arms of six leper girls, under twelve years of age. December 14th, following, I repeated the experiment, taking the virus from a hard chancre on the penis of a Portuguese, who came to my office. I saw this same man in March, 1884, three months later, in the office of a brother physician, and found he was suffering severely from secondary syphilis.

The last time I used fourteen points and inoculated fourteen lepers therefrom; but no result followed, in any of the twenty experiments. I should like to hear of others trying experiments in this direction, and the results. I understand that there are a number of lepers in the small-pox hospital at San Francisco, upon whom this could be tried. This idea was first suggested to me by Dr. E. Pontoppidan, of Copenhagen, Denmark.

PROPOSED MEDICAL LEGISLATION.

By A. P. WHITTELL, M.D.

The *protection* afforded to the public and the medical profession by the medical law in operation in this State, has been such only in name, while in reality it has worked incalculable injury to the self-respecting practitioner, that time alone will not eradicate. The entire profession should now unite to bring about a change, and any change must be for the better from the existing state of things. The very means by which protection was sought, was seized upon by some of those against whom it was directed, and converted into a shield for themselves, raising their legal status to a par with the regular profession, and making their position invulnerable from a legal stand-point.

At the time of the passage of the Medical Act, in 1878, it was generally admitted that the bill was the least comprehensive that could be passed. All previous attempts had failed, because the members of the Legislature believed that unjust discrimination was made by the "regular" profession against the "Homœopathic," "Eclectic" and other so-called "schools;" in consequence of which the originators of the bill conceded that it were better to have a poor medical law than none at all, and the result of this is the present unsatisfactory "Act to regulate the practice of medicine in the State of California."

The fact was lost sight of in every State in the Union where medical legislation has been attempted, that the general public and their representatives in legislative assemblies believe the "Eclectic," "Homœopath" and other "paths," as well as the "regular" or "old" school, *all on a par and equally well informed upon all other branches of knowledge which are required in a medical education, and that their only point of difference is in a nice point of theory as to the quantity of a drug to be administered in a given dose.* This is the generally-accepted view, and until this impression shall have been removed, and the *average* "Eclectic" and "Homœopath" shown in his true light, it will be impossible to obtain the legislative relief and protection which the medical profession obtains in all parts of the civilized world,

the United States of America only excepted. It must be shown to the public that the majority of the Eclectic, Homœopathic, Vitapathic, and other than the regularly organized medical schools, mostly afford "short cuts" to a medical degree of its kind, and that the education so obtained, as a rule, does not qualify the graduate for practicing the art of healing under any title whatsoever; and the only manner in which this can be effectually accomplished will be in *only asking for such legislation as shall not require from licentiates under the law aught but that which they all pretend to know, and which the public believes the graduates and practitioners of all "schools" possess, i. e., in its broadest sense, a general medical education, which includes a correct knowledge of anatomy, physiology, medical chemistry, general therapeutics, the properties of drugs and their physiological effects on the human system in appreciable doses, general diseases of adults and children, surgery, and the mechanism of obstetrics.*

By enumerating the above in the body of the bill itself, as the essential requirements of those whom it will license to practice medicine, it at once removes all doubts as to the intentions of the promoters of the bill, and sets at rest, once for all, the question of discrimination in favor of a class of medical practitioners who "arrogantly" call themselves the "regular" profession, and against another class who are supposed only to differ from them as to the precise quantity or kind of medicine to be prescribed at one time, or in any particular case.

The first and most important step toward this desirable end is to obtain a repeal of the present medical law, and the abolition of the *three* Boards of Examiners now in existence. The way will then be clear for the passage of a new bill, which will create a single State Board of Examiners, composed of medical men of undoubted ability and standing; and of two or more representatives from the presidencies or professorships of colleges of learning. The duty of such a Board should consist, first, in examining into the qualifications of each licentiate at present practicing in this State, and where reasonable doubt exists as to the fitness, *under the statute*, of any holder of a license to practice medicine, his license shall be declared forfeited, but shall be reissued to him at any future regular meeting of the Board that he shall have proved himself competent to pass an examination in the branches of medical knowledge enumerated in the bill.

It should also be the duty of the Board to appoint a committee of one or two, to be present at all final examinations for graduation in the medical schools of this State, as suggested in the September number of the PACIFIC MEDICAL JOURNAL AND WESTERN LANCET, and whose signature shall be required upon the diplomas issued by the respective medical colleges, to qualify the graduate for receiving a license to practice medicine in this State. New applicants to the Board shall not only fully establish their identity, but also give satisfactory evidence that they are competent in the branches of medical education, as required. Lastly, and not the least important, the Board should be empowered to retain an attorney at all times, whose duty it shall be to prosecute and bring to punishment all those not possessing its license to practice, who advertise themselves as doctors or physicians, and who publicly offer, by means of cards, signs, handbills, or any other means whatever, to practice medicine in general, or any of its special branches.

It will be observed that there is here a notable difference between the last clause and Section 13 of the present Act. The last-named states: "Any person *practicing* medicine or surgery in this State," etc. There has invariably been a difficulty in proving the fact by proper witnesses that "practice" was actually performed, which has been a stumbling-block in every attempt at prosecution of irregulars. By making the law to reach impostors who *present* themselves before the public as physicians, the evidence of their guilt is readily obtainable in all cases. It is an attempt at obtaining money under false pretenses, which is fully amenable to law.

If, in certain cases, the Board should, for good reasons, be indisposed to cancel a license issued by any previous Board, but would not feel itself justified in granting its own license to the holder thereof, it might, in its discretion, permit the previous license to remain valid, but requiring of its owner to specify as an invariable accompaniment of his name professionally on cards, signs, etc., the title of the Board which granted the license, *i. e.*, "Eclectic" or "Homœopathic." The members of the Board of Examiners should receive proper remuneration for their labors, to insure the prompt performance of the duties required of them.

Naturally, many difficulties and much opposition arise when bringing about any change, and this will be no exception to the

rule, however reasonable it must appear. The main difficulty will be in the appointment of the members of the Board, which, however, is not insurmountable, and may readily be overcome. The license to practice law by attorneys is carefully guarded by courts having jurisdiction over all its licentiates, in this as well as all other States of the Union; and unprofessional conduct is in certain cases punished by a revocation of the culprit's license, which debars him from practicing. Why, then, should a profession which deals with health and life be unrestrictedly open to all comers, to treat or maltreat disease in its thousand forms, without being required to show that they possess even the qualifications which they claim, and which all classes will agree they should have.

To conclude. The duties of a State Board of Medical Examiners can be so clearly defined by the proposed law that there will be no room for any abuse of power or the exercise of any arbitrary authority; and all who are really competent to practice medicine will not meet with any legal obstacle in the pursuit of the profession of their choice, or to qualifying it with any title which their fancy or interest may dictate.

SAN FRANCISCO, Sept. 22, 1885.

**REPORT OF COMMITTEE ON GRADUATING
EXERCISES.**

The undersigned members of a committee appointed by the State Medical Society at its last convocation, to be present during the examination of the students of the Cooper and Toland Medical Colleges, for the degree of Doctor of Medicine, would respectfully report the conclusions arrived at in regard to the functions of said committee and the benefits to be derived by a faithful co-operation with the controlling faculties.

First. We regard the invitation to appoint a committee to be present at the examinations for graduation, to be highly complimentary to the Medical Society of the State of California.

Second. The benefits of this new departure will be two-fold; for a knowledge that such an impartial committee has been appointed to witness and pass upon the relative merits of the examinations, will encourage both the professor and student in their labors, realizing that the profession at large has an interest in the work they are doing; and will also inspire the confidence of the profession in the integrity of the course of instruction and management of the schools.

Confidence is always an important moral factor in the halls of learning and the various fields of usefulness, and its influence upon the actor, as well as those acted upon, secures an advantage to both, and the undergraduate who appreciates this will make the best use of his opportunities.

For these reasons we would recommend to the Society, if so requested, to appoint another committee, that the practical benefits of such a course may be better determined.

It also occurs to the undersigned that a majority of the committee should be selected from the medical gentlemen residing in San Francisco, that a quorum may be readily obtained for the preliminary arrangement for the performance of their duty.

We would also recommend that after the "examination papers" have been passed upon by the professors of the two schools, the committee shall carefully review them and note the marking, that they may better become impartial judges of the merits of each paper and the ability of each student.

The committee being in doubt in regard to the nature of the duties they were expected to perform, did not give that time which the importance of their appointment seemed to require, and were present only at one final "quiz." We, however, made ourselves sufficiently familiar with the questions and some of the papers to say the course pursued was highly gratifying, and to state that some of the graduates evinced great proficiency and familiarity with the subjects upon which they were examined, and gave evidence of a thorough drill by competent teachers.

It is with great pleasure that we report that some of the "clinical records" kept by the students, elaborating observations of microscopy and histology, were entitled to the highest commendations as works of "art," and would become very interesting and instructive to many of our prominent practitioners, if preserved for future reference. Also some of the papers we found to be so carefully prepared, that should they be published as monographs upon the subjects presented, they would compare favorably with the literature of progressive medicine.

In a general way, we would say that the questions submitted were of a practical nature, and prepared in that spirit of fairness which enabled the students to comprehend and answer intelligently.

All of which is respectfully submitted.

WASHINGTON AYER, M.D.,
JAS. SIMPSON, M.D.

Editorial.

Medical Legislation.

We would call the attention of our readers to the article in this number under the above caption, by Dr. A. P. Whittell, as it seems to enunciate the only feasible method of obtaining any satisfactory form of medical legislation. In our last number we endeavored to show that proficiency should be the only grounds on which a license to practice could be granted to members of the regular or old school; and we heartily endorse the above writer's sentiments, when he extends the law still further, and urges the formation of one Board for each State, composed of representatives from the profession at large, whose object will be to secure uniform thoroughness in medical education. As the subject of treatment is intentionally omitted from the list for examination, such a Board is perfectly possible; since the other departments are these, with which every medical man should be thoroughly familiar, no matter to what "school" he belongs.

"In unity there is strength," and the public would then realize that the object of medical legislation is not to favor any particular branch of the profession, but to suppress ignorance, to prevent imposture, and to assure them that the quack has at least some of that knowledge which he professes to possess. With three Examining Boards in one city, it is hard to convict an irregular practitioner, because he is sure to impress a jury with the idea that he is suffering as a martyr for some of the tenets upheld by one of the other Boards than that which is prosecuting him; but with one Board there is no such loop-hole for escape, and instead of posing as a martyr, he can only appear before the public as a rogue or an ignoramus. The greatest drawback to successful legislation has been that the public looked upon these prosecutions

as only a "doctors' squabble," induced by the jealousy and bigotry of less fortunate rivals, and concluded that the merits or demerits of the case were of no importance to them. The recognition of a plurality of licensing Boards by the State has contributed to this confusion; but the narrow-minded, churlish and unscientific conduct of members of our own "school," who have been eager to denounce all others as knaves and charlatans, who have lost no opportunity for vituperation, has done more than anything else to prejudice the people against laws regulating the practice of medicine.

We know several "homœopaths" in this city who are well trained in medicine, as well as honest and upright men in their daily life; the public also sees these men and fails to recognize in them the perjured villains depicted by the regular practitioner. It only recognizes the fact that between them and us there exist some *honest differences* of opinion regarding the treatment of disease. Were the Boards united, this confusion would cease, and the medical examiners, instead of being regarded as cliques of physicians, each endeavoring to further his own ideas, to the detriment of his neighbors, would be recognized as one of the great State institutions, vested with authority and having equal standing with the Board of Health or any other of the State organizations. It may be said that the Board of Examiners is recognized by the Legislature. We can only reply that a Legislature may *enact laws*, but they never will *become laws* until they are *voluntarily accepted by the people*. Our readers must not suppose that we are agitating for any changes in the code of ethics regarding consultation or exchange of courtesy with those outside the old "school"; because that is a matter which has nothing to do with the subject under discussion. We merely advocate a united action in the suppression of ignorance.

The International Congress.

Probably our readers are as sick of this subject as we are, yet it is a matter which effects our national and professional reputation before the world, and, we therefore cannot let it rest. The committee held a special meeting in New York upon September 3rd, and made no attempt to retrieve themselves, beyond a little fiasco at compromise, by allowing representation to the general societies representing special departments in medicine, and then proceeded to fill up the vacancies by men, many of whom are unknown to fame, and utterly incapable to occupy the positions in a manner that will reflect credit upon the profession in America. We cannot give a better idea of the work of the committee than by quoting the editorial remarks of our contemporary, the *Medical Record*, upon the subject :

“The Committee on Organization of the International Medical Congress held its special meeting in this city last week. The meetings were held in secret, and secretiveness seemed to have been the essential feature of the proceedings. Doubtless the gentlemen thought they were acting very wisely ; but they need hardly have taken so much trouble. When members supposed to represent the interests of the profession, meet at a critical time, with mystic rites, refusing all information except to members of their own clique, they at once simply overreach themselves.

“There is but one inference as to last week’s work. The Committee has done a foolish thing, and it prefers to cloak its folly until it can be set forth as wisdom in the gilded rhetoric of the chosen organ.

“The Committee, we have every reason to believe, made no concessions which can be accepted as such. They filled the one hundred and twenty odd vacancies with gentlemen sufficiently unknown to fame to have escaped nomination by them before, and presumably sufficiently poor in spirit to accept belated honors.”

Dr. Hansen-Grut, of Copenhagen, who was President of the section of ophthalmology at the last Congress, says that the question of ethics has never been raised before this time, and that SEVERAL HOMŒOPATHES WERE UNDISPUTED MEMBERS OF THE CONGRESS.

The American Committee had one chance to retrieve itself, but that is passed, for it has ignored the representations of the profession, both in Europe and our own country. Now we shall have no compromise. Those blatant notoriety hunters, with the impudence which has characterized them from the very commencement of their action at New Orleans, have endeavored to carry out their plans in defiance of the wishes of the professional world, and to the disgrace of their own country. They have shown themselves to be utterly regardless of everything but vain-glory. Through a premeditated and carefully arranged plan, suddenly sprung upon the Association, they jumped into a position of power, and that power they have abused until their very names are becoming execrable in the ears of their countrymen.

The profession must either endorse the action of Dr. Billings' committee, or request that the Congress be held in some other country, and we advise our brothers to withhold all subscriptions until one or other of these conclusions has been adopted. In the event of no action being taken in the matter, then let those men play at having a congress, and handle their puppets like any other showmen; but never let the American nation forget itself so far as to countenance such mimicry as a national event.

Triumphs in Abdominal Surgery.

Dr. Lawson Tait, of Birmingham, has just reported a series of one hundred and twelve consecutive operations for ovarian and par-ovarian tumors, without a death. The operations which were performed between January, 1884, and 7th of August, 1885, may be analysed as follows:

Dermoid cyst 1; Cystic sarcoma 1; Abscess of ovary 2; Cystoma of one ovary 49; Cystoma of both ovaries 38; Par-ovarian cysts 21; Total 112.

In operating for par-ovarian cysts, Mr. Tait did not follow the old method of removing a portion of the tumor, and stitching the stump to the wound, in the hope that it would heal by supuration and granulation, but enucleated the entire cyst. Mr.

Tait's opinions on Listerism are so well known, that it is hardly necessary to state that all these operations were performed without the use of any germicide, and he adds, that of the whole series of one hundred and twelve cases, "from the 1st of January, 1884, to the 7th of August, 1885, I have not left incomplete any operation begun for ovarian or par-ovarian cystoma." He attributes this really wonderful and unprecedented success to several causes, of which the following are the chief: 1. Discontinuance of the clamp; 2. The use of drainage tubes; 3. Increased personal experience; 4. Increased attention to details, scrupulous cleanliness and enforcement of discipline. He attributes the improvement in Sir Spencer Wells' practice, under the use of Listerism, to the almost simultaneous adoption of the intra-peritoneal method of dealing with the pedicle, and not to the action of the germicide. We are glad that the report of these cases has appeared so soon after the fourth edition of Sir Spencer Wells' book upon abdominal tumors, because that writer simply ignored all the work that Mr. Tait has done in the same field, where he is a prominent leader, and, consequently, has presented us with only a one-sided view of the question. This action of Sir Spencer Wells has caused considerable regret, because it is unworthy of a man possessing his experience and attainments; he has risen to a position of eminence that lays him open to criticism, and, at the same time, makes his criticism of others valuable to the profession; he should, therefore, have laid aside all personal feeling when he undertook to inform us upon one of the most important subjects in medical science, and have endeavored to lay the matter before us in all its aspects. If Sir Spencer Wells had kept up the same strain of egotism that fills the preface to his book and pages on the history of ovariectomy, he might have ignored all other operators, and entitled his book "The Autobiography of Sir Spencer Wells," but he called it a treatise on "Abdominal Tumors," and, therefore, should have noticed the work of all his leading contemporaries.

Mr. Tait is so well known and esteemed as an operator in this

particular department, that any account of the subject which does not take notice of him is incomplete and unsatisfactory. We do not in any way seek to diminish the reputation of Sir Spencer Wells; it is on account of our high esteem for him that we regret an action which was worthy only of a primary school boy.

It is not always fortunate that when great men die their works live after them, for his book in its present imperfect condition, can never be the standard authority it otherwise would have been, and will testify to a future generation, that even he was willing to sacrifice the progress of science for the gratification of personal animosity.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, August 11, 1885.

The meeting having been called to order by the President, Dr. Jewell, the minutes of the former meeting were read and approved.

The name of G. W. Davis, M.D., who was proposed for membership by Dr. C. E. Blake and Dr. Frisbie, was referred to the Committee on Admissions.

Dr. W. E. Taylor then reported the case of gastrotomy noticed at our former meeting. The patient died from exhaustion some days after the operation, and the tumor was found not to be osseous, but a very hard sarcoma.

In the remarks that followed, Dr. Morse gave a brief history of the operation, and said that the general method of operating was to stitch the muscular and serous coats of the stomach to the abdominal wall, but not the mucous coat, so that the contents of the organ might not escape into the peritoneal cavity through the needle holes. The opening should be a small one.

Dr. Arnold, in referring to the time and method of stitching the organ to the abdominal wall, said that in some experiments upon dogs which he had witnessed, the organ was not opened until twenty-four hours after the first incision, and only in one case did the contents escape.

Dr. Maas reported a case of carcinoma of the left side of the

thorax, which had been removed three times, the last operation having been performed only a year ago, but now it returned and covered the whole anterior surface of the left side of the thorax.

The Doctors Lowry were re-admitted to membership.

Dr. Jewell reported that the committee appointed to cooperate with the prosecuting attorney in enforcing the medical law had set to work, and were waiting the result of a case now in court before making further arrests.

Dr. W. Watt Kerr asked permission to have the certificates of membership printed upon parchment instead of paper, and was authorized to do so.

Dr. W. P. Gibbons addressed the meeting, urging the formation of societies through the State and the cultivation of fraternal feelings, as these were necessary to the progress of science, and free expression of opinion.

SAN FRANCISCO, August 25, 1885.

The meeting having been called to order by the President, Dr. Jewell, and the minutes of the former meeting read and approved, the Committee on Admissions reported favorably on the credentials of G. W. Davis, M.D., graduate of Missouri Medical College, 1870, who was forthwith elected to membership.

Dr. Cushing then reported a case of extra-uterine pregnancy. [This paper will appear in a future number of the JOURNAL.]

Dr. Wagner remarked that absence of menstruation for 12 months contra-indicated simple pregnancy, and, therefore, more weight should have been given to the diagnosis of extra-uterine foetation. He had met with a similar case in which the abdomen continued to enlarge until the eighth month, and then gradually became smaller. Upon examination, the womb was found to be pushed upwards and forwards, and a hard body felt in the posterior cul-de-sac. A short time after the ninth month, the membranes were discharged through the vagina, the abdomen continued to decrease in size, and ten months after this she was restored to perfect health.

Dr. R. W. Murphy said that three years ago he was called to see a young married lady who was in great pain and appeared to be suffering from internal hemorrhage, but despite the efforts of Dr. Henry Gibbons and himself, she expired six hours after he had been called to see her. The patient had been married only a short time, and had only ceased to menstruate for three

months. The autopsy discovered an extra-uterine foetus, which, by its growth, had ruptured one of the maternal blood-vessels, producing death from internal hemorrhage.

Dr. Meyers said that in December, '83, he was called to see a lady 36 years of age who had given birth to a child 19 years previous to this time. The symptoms were those of peritonitis. A swelling was seen in the right iliac region, which, with other symptoms, gave rise to the suspicion of extra-uterine pregnancy. but, as the patient was unmarried, social reasons threw doubt upon this diagnosis. Physical exploration showed that the uterine cavity was normal in size and that there was no foetal pulsation. The patient became emaciated, and after a time, a similar swelling appeared on the left side. She refused to undergo any operation, although an aspirator had been introduced which extracted pus from the left and blood from the right swelling. There was soon a discharge of pus from the rectum, and in six weeks she had recovered so far as to be able to go to the country. Two months after this she brought to Dr. Meyers some bones which he recognized as parts of a foetal skull, spine and other bones. Her story was that when in the country she had on one occasion tried to urinate but could not do so, and had to call in a physician who cut out the bony fragments and sent her back to town. After this she continued from time to time to pass fragments of the foetus through the urethra, vagina and rectum. Ultimately she became affected with cystitis, and as a foreign substance was detected in the bladder, the urethra was dilated under the belief that the body was a small one; but instead of this, a sac was found leading into the right iliac region, and containing a large number of bones, which were removed. The patient died from exhaustion thirty-six hours after the operation. Altogether, there were more than eighty bones passed during her sickness. An autopsy was refused.

Dr. Kane, who had seen the case in consultation, said that profuse hemorrhage, which is so frequent a symptom in such cases, was entirely absent on this occasion.

Dr. C. Blake-Brown referred to a case which she brought before the Society some months ago, in which the foetus was bound down to the anterior surface of the uterus by the omentum, so that the organ elongated with the growth of the foetus, and caused considerable difficulty in diagnosis.

Dr. Cushing, in regard to Dr. Wagner's criticism of the diag-

nosis in his case, said that it must be remembered that the subjective symptoms were only gathered from the patient's statements, and everyone knew how imaginative ladies frequently were regarding the signs of pregnancy, and how much more confidence should be placed in the physical signs, which in this case afforded those of a firm muscular body. With relation to the etiology of such cases, it happened that in nearly every instance the patient was well along in years and had children before; and he therefore believed that pelvic peritonitis, which had bound down an ovary or fallopian tube, or altered in any way the relations between the two organs, might be regarded as a frequent cause, as such a disturbance would permit the ova to fall into the pelvis when they were fertilized.

Dr. Wagner said that while the general statement of the patient might be set aside, surely her statement that she had not menstruated was to be believed, and therefore contra-indicated the first diagnosis of fibroid, as that tumor is nearly always accompanied by hemorrhage.

Dr. Cushing replied that the growth was diagnosed to be a sub-peritoneal fibroid, lying entirely outside the uterus, and therefore unaccompanied by hemorrhage.

Dr. R. W. Murphy said that his case was exceptional, since it occurred in a primipara aged twenty-nine years, and who had been married for only nine months.

Dr. Morse, at the request of the Society, gave a verbal preliminary report of a case where he operated for carcinoma of the cœcum. The patient was a man, thirty-six years of age, who for about two months had suffered pain in the right side, and had rapidly become emaciated. On examination, a lump was found in the right iliac region about the size of a lime, painful to the touch and readily movable. An incision about eight inches in length was made over the swelling, in a direction parallel to Poupart's ligament, which showed that the tumor was bound by adhesions to the anterior abdominal wall, and as these were being separated, about a teaspoonful of feculent matter escaped from the gut, but was caught in an antiseptic sponge and thus prevented from passing into the abdominal cavity. The tumor was then covered with antiseptic cloths, Rydgier's clamp applied, and the cœcum, vermiform appendix with four inches of the colon and two inches of the ileum, removed. The end of the ileum was then sewed into the colon by means of fourteen inner

and fifteen outer prepared silk stitches (Czerny's). The posterior puckering, from the larger calibre of the colon, was tucked inside and strengthened by an extra row of Lembert stitches. The patient died of purulent peritonitis on the third day. At the autopsy the bowel was found to be perfectly united, and water poured into the ileum passed through the stitched portion of the gut without escaping. The operation lasted for nearly three hours, and antiseptic precautions were taken throughout.

Dr. Morse apologized for the crude condition of his report, as he did not come prepared to give it, and had no notes of the case with him.

Dr. Cushing thought that with a history of partial escape of the intestinal contents into the abdominal cavity, it would have been wise to have made some provision for drainage.

Dr. Morse replied that during the operation he was not aware of the escape of any pus into the cavity, and it was only the after results made him infer such to have been the case. In abdominal surgery it was held by many men that drainage tubes should not be introduced unless there was certain evidence that pus had escaped.

Dr. Kenyon called attention to a case of double uvula, mentioned in an Eastern medical journal, and asked if it were so uncommon an occurrence as this writer believed it to be, because during the last three months he had met with two similar cases in his own practice.

Dr. Arnold said that he had seen the article in the *Boston Medical and Surgical Journal*. Double uvulæ, as outgrowths, were comparatively common, while those between which the median raphe of the palate extended, although not so common, could hardly be regarded as rare.

Dr. F. B. Kane had two cases in which the uvula was double right up to its base, and each one was deflected to one side by the muscle of the same side.

Dr. Whittell had met with such cases of true double uvula as described by Dr. Kane, and at present had a patient under his charge in whom the malformation was well marked.

Dr. Jewell, in the name of the Society, conveyed their good wishes to Dr. Cushing for a pleasant time during his trip round the world, and hoped that if he met anything of interest in the medical world he would not fail to communicate it to the Society.

Dr. Cushing thanked the Society for their good wishes, and promised to communicate with them from time to time.

Dr. Parkinson, of Sacramento, was present during the evening, and was introduced to the Society by the President.

There being no further business, the Society adjourned until September 8th.

Sacramento Society for Medical Improvement.

SACRAMENTO, July 28th, 1885.

The Society met in regular session, Dr. H. L. Nichols, President, in the chair.

The Secretary reported that, having conferred with the proper authorities in the matter of prosecuting quacks at present located in the city, he deemed it inexpedient to take any action.

Dr. Cluness exhibited Mr. C—L—, who had suffered from ununited fracture of the tibia, which the Doctor believed was now consolidated. December 29th, 1883, the subject, a locomotive engineer, as the result of an obstruction on the track, was thrown from his engine, sustaining a compound fracture of the (right) fibula, and a multiple fracture of the tibia. Under appropriate treatment, every precaution being observed, it was found, at the end of eight weeks, that no union had taken place in the tibial fracture; though that of the fibula was firmly united. One month later, the two lower fractures of the tibia had knitted. The limb was then placed in an unmovable apparatus. At the end of sixteen weeks, the reparative process being still tardy, he was allowed to move about with the aid of crutches; guarded use of the limb being at the same time permitted. Ten months from the date of the accident, consolidation was perfect.

The only assignable cause for the delay in union was the occurrence of frequent and copious hemorrhage from piles. When the patient had been confined to bed for twelve weeks, they were ligatured. As it was shortly after this that reparative processes began in the upper tibial fracture, there would appear to be a direct connection.

Dr. Simmons read a paper entitled "Old Surgery," illustrated by numerous drawings copied from a Dutch translation of Ambrose Pare's "Chirurgica," dated 1653, in the Doctor's possession. Several of the drawings of surgical instruments and apparatus bore a very close resemblance to many "modern inventions." In the discussion that followed, Dr. Huntington remarked that one of Ambrose Pare's dressings might be taken as a typical ex-

ample of modern antiseptic surgery, but for the fact that no means of drainage had been provided.

Dr. W. A. Briggs believed that such reviews of medicine and surgery were interesting, as tending to lower professional self-opinion. Some years ago he had met with a case of antepartem uterine contraction, and concluded that it was a new and undescribed condition. Subsequent investigation showed that cases had been published in this country and elsewhere.

After some further discussion, the Society, on motion, adjourned, to meet on the third Tuesday in August.

JAMES H. PARKINSON, Sec'y.

Licentiates of the California State Board of Examiners.

SAN FRANCISCO, Sept. 8, 1885.

At the regular meeting of the Board of Examiners, held Sept. 2nd, 1885, the following physicians having complied with the law and the rules of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

DAVID M. ADDINGTON, Oakland; Med. Dept. Univ. California, Cal., Nov. 7, 1879.

CHAS. S. BOSCHOW, Lincoln; Coll. of Phys. and Surg., at Keokuk, Ia., Feb. 26, 1884.

LEROY BROWN, San Francisco; Med. Dept. Univ. Michigan, Mich., June 23, 1885.

VINCENT P. BUCKLEY, San Francisco; Med. Dept. Univ. California, Cal., Nov. 11, 1884.

HARRIET F. PILLSBURY, Auburn; Women's Med. Coll. of New York Infirmary, N. Y., May 27, 1880.

HARLIN H. PILLSBURY, Auburn; Harvard Med. Coll., Massachusetts, Mar. 3, 1859.

JOHN A. PRUETT, Fall Brook; Med. Dept. Univ. California, Cal., Nov. 7, 1878.

EDWARD J. RUDDOCK, Eureka; Harvard Med. Coll., Mass., June 25, 1879.

RALPH G. WILDEY, Fresno; North-Western Med. Coll., at St. Joseph, Mo., Feb. 26, 1884.

R. H. PLUMMER, Sec'y.

THE BRITISH MEDICAL ASSOCIATION AND HOMŒOPATHY.—From the report of the Council of the British Medical Association we learn that the Association has had under consideration the admission of homœopaths. The report is unfavorable to their admission, but is opposed to the expulsion of those who have already been admitted to their ranks.

Notices of Books, Pamphlets, Etc.

CHLORAL IN DIPHTHERIA AND CROUP. By C. B. GALENTIN, M.D.
New York: J. H. Vail & Co. 1884.

On glancing over the title and introductory chapter of this book, the reader will doubtless exclaim, "*Another* specific for diphtheria? What a host of specifics we possess for that scourge, and yet"—and turning to any mortuary table that may be at hand, that of New York City, for instance, reads: "Week ending July 28th (1885)—Diphtheria: Cases, 34; deaths, 21. Week ending August 4th—Cases, 33; deaths, 17." "*Specifics! and yet, alas!*"

It will be discovered, however, on dipping deeper into this monograph, that Dr. Galentin has not, as is the custom, rushed into print with an unsatisfying account of a few cases successfully treated. He tells us that his conviction of the value of chloral hydrate as a specific remedy for diphtheria and croup (the doctor is a dualist) is born of its use for six years, during which time he has employed it in more than five hundred cases, with a mortality of less than two per cent. He recognizes diphtheria as a constitutional disease, to which the exudations in the air passages bears the same resemblance as the rash to the exanthemata. The book is permeated by a spirit of unbelief in the etiological value of the *microsporon diphtheriticum*, etc.; and the authority of Beale and Sanderson is confidently upheld against that of Eberth, Klebs, Eppinger and the German school.

Dr. Galentin employs chloral both topically and internally, and in an appendix gives various formulæ in which this drug is the chief ingredient. The *rationale* of chloral treatment in membranous disease is of course the same as that ascribed to potass. chlorate, iron chlorate, and mercury chlorate; "but," says our author, "chloral hydrate is not merely condensed chlorine gas, although it possesses many qualities common to both it and alcohol, but it is a new substance, having qualities not known to exist in either, or in both combined, in any way." * * "It is one of the few remedies known to possess the property to check the formation of an exudation."

Dr. Galentin does not neglect these adjuncts necessary to any treatment of diphtheria, namely, solvent sprays, alcohol, and sys-

tematic feeding; but his sheet-anchor is chloral, variously administered.

The book is well written, and the subject-matter graphically presented, especially the chapters on symptoms, diagnosis and prognosis. The author has put the works of Mackenzie and Smith under large contribution, but he disarms all criticism on this score by expressly stating that "to set forth the claim of chloral to specific virtue in the treatment of diphtheria, is the main object of this monograph." * * "Only as regards the therapeutics of this disease has the writer anything new or important to contribute."

BASIC PATHOLOGY AND SPECIFIC TREATMENT OF DIPHTHERIA, TYPHOID AND ALLIED DISEASES. By GEO. J. ZIEGLER, M. D., Physician to the Philadelphia Hospital, etc. Philadelphia; Geo. J. Ziegler. 1884. Price \$2.00.

Dr. Ziegler has written a book, and, *mirabile dictu*, has printed it, in which—but we will quote a sentence (!) from his preface: "In the following pages I have tried to show that all the varied and complex diseases classed as scorbutic, necræmic, typhoid, zymotic, septic, infectious, malarial, gangrenous, putrescent, and allied affections, by whatever name designated, from the simplest to the most malignant, are dependent upon or complicated with one common basic, alkaline, pathogenic factor, mostly the volatile organic alkali—ammonia, incidental to all forms of life, and differing only in quantity and the constitutional and local manifestations and complications arising from diverse etiological and pathological conditions, yet underlying and intensifying them all, and thus often complicating and rendering more severe every form of disease, even of the simplest kind, for the successful treatment of which, this primal morbid factor must be decomposed, neutralized, or removed, which can usually be readily effected by acidulous, antalkaline, resolving and counteracting agents, thus simplifying the hygienic and therapeutic problems in general, and giving more definiteness and certainty to sanitation and therapeutics, a both preventive and curative medicine."—Whew!!

In this manner has our author simplified the pathology of fully nine-tenths of the diseases that suffering humanity is heir to. He has discovered a "pathogenic factor common to all morbid conditions," which he calls *super alkalæmia*, and it follows, "as the night the day," that to combat disease successfully, we have only to meet it well armed with "acidulous and antalkaline weapons."

This is pathology and therapeutics made easy with a vengeance.

After saying that ammonia, the prime alkaline poison, may be generated in the body itself, or be introduced from without, he adds: "this ammonæmic condition of the blood and system thus induces an undue solution and fluidity of the liquids, and softening of the solids of the body, with scorbutic, necræmic, toxic, septic, phlogistic, febrile, contagious, adynamic and decomposing conditions, and tendency to serous and albuminous states and defluxions, congestions, hemorrhages, inflammations, eruptions and other local lesions, as well as constitutional disorders of a mixed sthenic and asthenic type, and of a putrescent, infectious, gangrenous, dissolving and disorganizing character, especially manifested in typhus, ship, yellow, conjestive, bilious, enteric, puerperal, and other low fevers, with small-pox, scarlatina, measles, diphtheria, angina maligna, apthæ and gangrene of mouth, throat, lungs, and other parts, anthrax and carbunculoid affections, erysipelas, inflammation and abscess of liver, hæmatemesis, hæmaturia, albuminuria, anasarca, leucorrhœa, diarrhœa, choleraic, suppurative, and other serous, hemorrhagic, lymphoidal, catarrhal and purulent fluxes, with adynamic, febrile, and malignant forms of typhoid, zymotic, septic, contagious, mephitic, and alliquative diseases generally which are specially manifested according to complicating circumstances." And without giving the reader time to breathe, tells him that all this has been "largely demonstrated by observation and experience."

Dr. Ziegler has prepared 225 pages *ut supra* for the patient reader, and all based upon Hufeland's innocent-looking assertion, that ammonia, when present in excess in the blood, favors the disintegration of the red corpuscles. We recommend the book as the source of an hour's hearty amusement; for the author, in all seriousness, manages to be excruciatingly funny. We know nothing in the whole range of literature, medical or otherwise, with which to compare it, except perhaps Fluellan's disquisitions on the "Wars of the Greeks and the Romans."

ELEMENTS OF PATHOLOGY. By EDWARD RINDFLEISCH, M.D., Professor of Pathological Anatomy in the University of Würzburg. Translated by WM. H. MERCUR, M.D., and revised by JAMES TYSON, M.D. Pp. 263. Philadelphia: P. BLAKISTON, SON & Co. San Francisco: Wm. Duncombe.

This work does not aim at being a text-book, but endeavors to assist the student by placing before him in a clear, and, at the

same time, a complete manner, the great principles on which this science is based. The writer has very fairly succeeded in his attempt, but there are several points not free from ambiguity, which must interfere with the pleasure of reading the book. It is very rarely that a translation equals the original in clearness and vigor of style, and it is often impossible for the translator to impart these to his work; nevertheless, the defects in this case are not such as to seriously impair the value of the book.

URINARY AND RENAL DISEASES. Illustrated by numerous cases and engravings. By WM. ROBERTS, M.D., F.R.S., F.R.C.P., Professor of Medicine at the Victoria University; assisted by ROBERT MAGUIRE, M.D., M.R.C.P., Physician to out-patients, St. Mary's Hospital, London. Fourth Edition. Philadelphia: Lea Brothers & Co. San Francisco: Wm. Duncombe.

A new edition of this standard text-book cannot fail to meet with a favorable reception from the profession, with whom it has always been a favorite. Within the last few years, our journals have teemed with new tests for albumen in the urine, until we began to doubt whether we had ever detected that substance by means of heat and nitric acid, or had been laboring under a delusion that had led us to treat patients for imaginary albuminuria, and to reject numerous applications for insurance. It is therefore with feelings of relief that we read Dr. Roberts' statement, that boiling and nitric acid are the only infallible tests for albumen, and that all others, even his own salt brine test, are apt to be misleading.

The works of Cornil, Semmola and other investigators, have rendered it necessary that the whole of the articles on albuminuria should be re-written, so as to bring the book up to date, and, at the same time, point out wherein the theories of these men are deficient. The same has been done with the chapters on micro-organisms.

The book is so well known to every one who has the smallest pretensions to a knowledge of urinary diseases, that it is useless for us to make any commendatory remarks; we can only say that this even excels former editions.

Drs. H. P. Walcott, Charles F. Folsom, and S. W. Abbott, of Massachusetts, have received the honorary diploma of the Society of Hygiene of Paris, for their eminent labors for promoting the public health.

Miscellaneous.

A New Method of Giving a Bath in Typhoid Fever.

As is well known, the great difficulty in the use of the bath in fevers is the trouble which is involved in moving the patient in and out of the bath-tub. The following simple device will in great part remedy this trouble, and also save the necessity of providing a portable bath-tub. The canvas of an ordinary bed-cot is to be made three or four inches wider than it is ordinarily arranged, and a board nailed at each end so as to hold the cot permanently open and project above it several inches in the form of a head-board or foot-board. This cot is then arranged alongside of the bed of the patient, so as to be on a level with the bed, and at the same time firm. Over it is spread an india-rubber cloth, sufficiently large to cover it entirely and to fall above and below, over the head-board and foot-board. The patient, wrapped in a sheet, is then slipped on to the cot; of course, the canvas sags down, and when water is poured over the sheet the man lies half immersed in a pool. If the attendant is provided with two tubs, one containing water and one empty, and also with a large bathing-sponge, the water in this pool, heated by the body, can be removed by means of the sponge, and fresh cold water soused over the body enveloped in the sheet. In this way the water—lying continually between the sheet and the body, as well as saturating the sheet—so envelopes the person that the effect of a cold bath can be achieved, and I have seen very rapid reduction of obstinate high temperatures. If the bed upon which the patient lies be a very wide one, instead of a cot being used the mattress can be so arranged on one side as to sag down sufficiently to form a hollow for the pool, and in this way the bath be given.

I notice that Stephan, of St. Petersburg, affirms that the application of ice-bags over the super-clavicular regions is sufficient to control the temperature in fever, owing to the fact that the cold is brought into close contact with much of the blood of the body by the large superficial veins of the neck. I have had no experience, however, of this method of reducing temperature, but it is worthy of a trial; especially as it seems to be safer to reduce temperature in low fever by external cold than by our at present known depressant antipyretic drugs.—*H. C. Wood, M.D., in Thera. Gazette.*

Shortening of the Round Ligaments.

At a meeting of the British Gynæcological Society, held June 10, 1885, Dr. Alexander (*British Medical Journal*, July 4, 1885) read a paper on the operation of correcting some uterine displacements by shortening the round ligaments. He said the operation had now been performed in nearly all the prominent cities in the world, and by most operators with more uniform success than generally befell any new operation. He never found any difficulty in finding and drawing out the ligaments. An incision was to be made upwards and outwards from the pubic spine, in the direction of the inguinal canal, for one and a half to two or three inches, according to the fatness of the subject. A considerable thickness of subcutaneous fat was then met with, which must be cut through by subsequent incisions, until the pearly glistening tendon of the external oblique muscle was reached. Midway through the fatty tissue an aponeurosis sometimes appeared, so firm and smooth that it might cause the operator to think he was deep enough, but he would find no ligaments at this spot. The first stage of the operation consisted simply in cutting down upon the tendon of the external oblique muscle until it appeared clean and shining at the bottom of the wound. The external ring was then found. The finger passed to the bottom of the wound detected the spine and the ring outside. Having isolated the external wound and tied any little vessels, the next step was to find the end of the ligament. By everting all the structures upwards the round ligament could be seen, generally at the lowest part, and with the white, easily distinguished genital branch of the genito-crural nerve along its anterior surface and close to it. The ligament at this stage was more or less rounded in shape. It was an easily recognized flesh-colored structure. When the ligament was identified, the small nerve on its surface was to be cut through without dividing any of the ligaments. Then gentle traction was to be made, either by the fingers or by broad blunt-pointed forceps. Bands holding it to neighboring structures were cut through with scissors. As soon as it began to peel out, it was left and the opposite side begun. The final stage of the operation consisted in placing the uterus in position by the sound, and pulling out the ligaments until they were felt to control that position. A curved threaded needle, with fine catgut, was used to stitch each ligament to both pillars of the ring, and the external abdominal

ring was closed without strangulating the ligaments as it lay between it. The ends of the ligaments were now cut off, and the remainder stitched into the wound by means of the sutures that close the incision. A fine drainage-tube was inserted, and the wound washed out with carbolic or other lotion before these sutures were tied. The after treatment consisted in rest. The tubes were removed on the second day, when the wound was dressed. The mortality of the operation might be set down as none. Three deaths had occurred, but they were due to preventable causes. As mortality did not seriously enter into any consideration of the results of this operation, the real question at issue was whether it fulfilled the intentions of the operator and satisfied the expectation of the patient. The operation was designed to correct certain uterine displacements, and these alone. Whether the discomfort of the patient would be thereby relieved entirely depended on whether or not the symptoms were due to the displacement. To secure success, the operation must be properly performed, and the after-treatment must be rational, so that no strain might be placed on the ligaments until sound union had taken place.—*Therapeutic Gazette.*

Disinfection.

If infective matter is to be destroyed, whether it be in its quiescent state of readiness to infect, or in its active state of multiplication and extension,—it is found to be most sensitive to agents which, like itself, are in a state of tension and proneness to split up. For example, all chlorides are disinfectant, but those which in reacting with organic matters are reduced from a state of tension to a state of equilibrium or rest, appear to be most active. It seems probable that mercuric chloride, in reacting with infectious material, is reduced to mercurous chloride, both the free chlorine and the reduced salt entering into new combinations with the infection. Hypochlorites of calcium and sodium, and all other hypochlorites, are in a state of tension, and prone to split into chlorides and free or available chlorine. But it is doubtful whether this available chlorine is ever really free. It is merely freed from one base in the act of combining with another, exerting its maximum power in the process of changing bases. Chlorides of iron and zinc are both excellent disinfectants, and both, when in dilute solution, are ready to split into basic and acid combinations in the presence of organic matters with which they

unite. Ferric chloride is especially prone to split in the presence of dilute solutions of organic matter. The effect of this chloride in small proportion upon sewage water is most remarkable, disinfecting and deodorizing it very completely, and leaving neither its iron nor its chlorine in the liquid, unless used in excess. This remarkable effect was noticed many years ago by Dr. B. F. Craig, of the U. S. Army, upon the turbid waters of the Mississippi river, a few drops of moderately strong solution being sufficient to clear a gallon of the water without leaving in it any greater proportion of either chlorine or iron. That is, both elements of the split went down with the precipitate cause or facilitated by the new combinations.

A Substitute for Carbolic Acid.

The extraordinary power of naphthol as an antiseptic and disinfectant has been known for a long time, but its disagreeable smell, and the difficulty of preparing it in a pure state, with the occasional toxic action of the crude naphthol, have hitherto prevented its general adoption as a remedial and antiseptic agent. Justus Wolff, a chemist interested in coal-tar products, has recently succeeded in producing it in a pure and odorless state in well-defined crystals, and he claims its antiseptic action is much greater than that of carbolic acid. Recent research has demonstrated that the toxic effects of crude naphthol were due to the impurities it contained. Dr. Shoemaker, of Philadelphia, in a paper read before the Philadelphia County Medical Society, on the "Medical Use and Value of Naphthol," conclusively proved the non-poisonous character of the purified or odorless naphthol by taking large doses internally. It has no corrosive action on the skin, and will not injure textile fabrics. As a remedial agent it is said to act with greater efficiency than carbolic acid, and if so, the fact of its being absolutely odorless will make it a desirable substitute for the latter. It is expected that it will shortly be manufactured in large quantities and introduced as a substitute for carbolic acid.

The monthly report of the State Board of Health reports 767 deaths in California during the month of August. The prevailing diseases were diarrhoea, scarlet fever, measles, diphtheria, erysipelas, typhoid fever, intermittent and remittent fevers.

The Way to Prepare Surgical Sponges.

The following is Mr. Lawson Tait's method of preparing the sponges, and but one person is trusted to do this: New sponges are first put into a large quantity of water with sufficient muriatic acid to make the water taste disagreeably acid. They remain in this mixture until all effervescence has ceased and all the chalk is removed. For this purpose it may be necessary to renew the acid several times. The sponges are afterward carefully and thoroughly washed, to make them as clean as possible and free from every rough particle. After being used at an operation, they are first washed free from blood, and then put in a deep jar and covered with soda and water (one pound of soda to twelve sponges). They are left in this about twenty-four hours (or longer if the sponges are very dirty), and then they are washed perfectly free from every trace of soda. This takes several hours' hard work, using hot water, squeezing the sponges in and out of the water and changing the water constantly. Leaving them to soak for a few hours in very hot water greatly assists in the cleansing. When quite clean, they are put in a jar of fresh water containing about one per cent. of carbolic acid, and after being in this for twenty-four hours they are squeezed dry and tied up in a white cotton bag, in which they are left hanging from the kitchen ceiling (being the driest place in the house) till they are wanted.—*American Journal of Obstetrics.*

Dr. A. Reeves Jackson, in a paper, read before the American Medical Association, on the subject of Vaginal Hysterectomy for Cancer, comes to the following conclusions:

1. Any operation for cancer which does not completely remove the disease will be followed by recurrence.
2. During life, the diagnosis of the extent of cancerous disease originating in any part of the uterus, is at present impossible; hence, no operative procedure can afford a guarantee of complete removal.
3. In view of this necessary doubt, no operation is justifiable which greatly endangers life, provided other and safer methods of treatment are available.
4. Vaginal hysterectomy has sacrificed the lives of more than one-third of those who have been subjected to it—the mortality of the operation when done by those of greatest skill and experience being over 36 per cent.
5. Other methods of treatment, attended by not more than

one-sixth to one-fourth the mortality of vaginal extirpation, are equally as efficient in ameliorating the symptoms and retarding the progress of the disease; and they have been followed by as good or better ultimate results. Hence, they should be preferred.

6. Vaginal hysterectomy does not avert or lessen suffering; it destroys, and does not save, life. It is, therefore, not a useful but an injurious operation; and being such, it is unjustifiable, and ought to be abandoned.

Quinine in Greece.

The Grecian government has become alarmed at the increase in malarial fevers among the inhabitants of that country, which investigation has shown to be in a measure due to the poor quality and high price of quinine. It has therefore removed the duty from this drug, a measure which has already led to a reduction in its price, and has further determined to withdraw its sale from private hands and confine it entirely to government stores. It will buy only from the best and most reliable makers, and sell at a very slight advance above the manufacturers' price, sufficient to defray the cost of transportation.

Dr. Lallemand reports, in the *Gazette des Hopitaux*, a case of "migration of a foreign body from the external auditory canal into the cavity of the naso-pharynx, through the eustachian tube." The case, a young soldier, after a fall upon a pile of sand, experienced, the next day, a severe pain in the left ear, which increased rapidly. Attempts at extraction produced such pain that fainting followed.

After forty-five days of intense suffering, with discharge of pus from the ear, an attempt to blow the nose was followed by epistaxis, lasting fifteen minutes, and on repeating the blowing through the nose, a small stone, weighing forty-five centigrammes, was ejected, after which recovery from the pain and discharge rapidly took place, but the ear remained totally deaf. A cicatrix in the membrane of the tympanum, extending from the centre, antero-inferiorly, shows the course of the pebble from the auditory canal to the middle ear.

ERRATUM.—July number, page 336, tenth line from the top, for "days," read "hours."

A patient under the observation of M. M. Lépine and Molière, was the subject of an artificial anus, following strangulated hernia. He was suddenly seized with violent delirium, and M. Molière noticed a considerable dilatation of the pupils, the skin was covered with a scarlatini-form rash, but there was neither fever nor angina. Poisoning by belladonna was at first suspected, but after a careful examination, M. Lépine came to the conclusion that the symptoms were due to the absorption by the intestines of ptomaine, acting like atropine and probably similar to that obtained by Ludger and Sonneuschein from putrid substances. After a short time, acute conjunctivitis and fever supervened, and the patient died. At the post-mortem examination, a highly offensive substance was found in the intestine below the artificial anus, so that the possibility of an acute auto-intoxication cannot be disputed. [The history of this case, viewed in the light of modern pathology, would seem to explain those cases of "scarlatina following operation" which Paget describes in his "Clinical Lectures and Essays."—EDITOR].

Dr. Shoemaker, in a paper on the "Treatment of Diseases by the Hypodermatic Injection of Oils," draws the following conclusions:

"The results thus far realized, show that by the hypodermatic injection of oils, certain conditions and diseases can be controlled, relieved or cured. It is an invaluable method in which full dependence can be placed, especially when the alimentary canal can no longer absorb and assimilate food or medicine."—*Journal American Medical Association*.

The Town Council of Exeter, England, has issued a circular to the matrons of that city, giving them general directions on the most approved methods of nutrition and hygiene, as applied to infants. The universal ignorance which prevails on these vital points is to be deplored, yet it is problematic in the extreme, that the novel means of instruction here adopted will do more than show a zealous discharge of duty.

Dr. A. Seibert (*N. Y. Med. Jour.*) reports a case of gastritis in a baby aged four months. The temperature for eighteen consecutive days almost uninterruptedly had been 106°. The child recovered.

The total number of cases occurring during the present cholera epidemic to August 26th, was 197,547; deaths 75,403; giving a mortality slightly over 38%.

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Original Articles.

TRANSITORY MANIA.

A Prize Essay by WASHINGTON AYER, M.D.

[Read before the Medical Society of the State of California, April 17, 1885.]

Mr. President, and Fellows of the Medical Society of the State of California :

“The labor of life is a constant struggle between the acts of conscious volition and the automatic impulses of the emotional regions of our being,” and as we are borne along upon the hurrying breath of time, how much we see to do, and yet how little we accomplish! While we pursue the study of the brain and search for the seat of mental activity, the shadows of ignorance and doubt give way to the fulfillment of prophetic knowledge, whose stream leads on to the “ocean of truth” and “ineffable light.” We live in an age of investigation, an age in which *declaration*, unsupported by demonstrative knowledge, is of no value, and it is the right of every man to differ from his neighbor.

And now, in a spirit which cherishes love for justice, reverence for law, and sympathy for the unfortunate, I invite your attention to the subject of Mania Transitoria, with its medico-legal bearing. Fully conscious of the many difficulties surrounding the intelligent discussion of this question, I shall not confine myself strictly to a synthetic line of argument, but shall call attention to such subjects as occur to me to be of importance to the profession in this connection; such as expert testimony, questions of law and rulings of courts upon questions of *irresistible impulse*, *emotional insanity*, and moral obligations to society, as the subject is of special legal importance, and involves many of the perplexities

of jury trials. I shall also present such reflections as naturally arise as the outgrowth of my argument, without claiming for them original scientific conclusions, hoping to awaken some new thoughts in the mind of the careful student upon this subject.

With the results of the investigations of Brown-Sequard to guide us in our inquiries, as well as many other authors who have written upon the subject of nervous and mental diseases, and the researches of Luys upon the "Functions of the Brain," aided as they have been by experiments in vivisections, there can be no doubt of the localization of nervous disease and mentality within the cerebral hemispheres and medulla oblongata; and the correctness of the theory of the proliferation of brain cells, and that they are the seat of mental activity and repositories of memory and knowledge, can hardly be doubted. With this view of the subject, and our knowledge of the functions of the brain in their control of all physical functions, we are led to conclude that the advantage one has over another in scholarly acquirements lies in his greater *receptivity* as the result of achievements in scholastic learning.

It is frequently asked how it occurs that one in advanced years remembers the things of childhood with more freshness than the things of yesterday. This can be explained upon the theory of the proliferation of brain cells as the seat of mental activity. To make the explanation simple, we will assume that the cells are never separated, but remain intact, and form a pyramid or cone, the base representing youth, and the apex, age. Now, as light falls upon the eye to produce an image upon the retina, or sound comes to the ear, the optic and auditory nerves vibrate and put these spiral columns in motion, and the greatest displacement will be at the base, the largest axis of spherical action, and the point where the first impressions of lisping childhood are made; each lobe and convolution of the brain, with its millions of cells, being assigned for special memories; and where the vibration is greatest the memory will be aroused first and strongest, while the effect upon the apex will be scarcely disturbed and soonest obliterated. Hence, the memory of childhood impressions are soonest brought before us in age.

As we are dealing with physical functions which control and enable us to classify mental activities, the discussion of mental disturbances justifies the introduction of this theory of *thought impressions* upon proliferated brain-cells as a basis of further in-

vestigation, and a means of obtaining experimental knowledge of the psychic laws which make man a responsible being.

Until within the past few years, brain-cells were considered only a "shapeless mass of protoplasm;" but now they are known to be delicately constructed, and possibly contain the realistic germs of life-forces which survive physical decay.

In this connection, as a matter of speculation, we may be justified in saying that within these microscopic cells, *thought impressions* are made, and there remain till interrupted by disease and decay, as impressions of objects are made upon the glass or other polished surfaces within the camera, to be again transferred; or as sound is collected to be reproduced by the phonograph at the will of the operator; and it seems to me possible that men may yet learn that the elastic atmosphere is forever vibrating with vocal strains as an evidence of the realisms awaiting the intellectual enjoyments of etherealized matter, called mind.

In the reverberation of the clouds, in the tumult of the air, in the commotion of waves, in the summer calm, and wherever we turn, we find the expression of a living thought, begetting inspiration and urging man to investigate the causes of the wonders he beholds, and appropriate his knowledge to advance his happiness and comfort, and no obstacle seems too great to be overcome.

In the study of the mind and the effects of physical disturbances upon mental activity, we seem treading in the path of the "unknowable," and grow bewildered as we cautiously attempt to lift the veil that conceals all, to gain a glimpse of primeval causes. Though we cannot paint the dying refrain of summer upon the canvas with the woods and fields, resonant with song and redolent with the perfume of flowers, it will continue to live in the unknown recess of mind, to be reproduced again and again, and add to the pleasures of the future through the memory of the past. But there yet remains much we can learn in the vast fields of discovery, and can accomplish and know, what is now unknown and full of seeming mystery, awaiting the voice of science to be declared to man while he struggles amid the unmeasured forces of life in search of new truths, amazed in the contemplation of the wonderful works of a Creative Intelligence.

But we cannot think and speak much in advance of the times

in which we live without some accusation of heresy being hurled at those who dare oppose the teachings of the present age, whether such teachings be in the line of legitimate medicine or opposed to popular theology, or the ethics and precepts of law ; yet an honest effort cannot be without its ultimate merited reward.

The mind grows weary and unsteady in its volitional manifestations in abeyance to the laws of physical inertia, as a general proposition—exceptions to be noted—and the conscious volition then fails to direct the eliminating forces of intellectuality in the pathway of mental activity and reason, being governed by the same laws which apply to the disordered functions of physical life, dependent upon lesions of the brain and spinal cord, or medulla oblongata, as witnessed in myelitis and the various forms of paralysis ; and whenever the *pons varolli*, *crus cerebri*, *corpora striata*, or any of the nerve centres are over-stimulated or pressed upon, we shall invariably witness either a loss of motion and sensation, and loss of will power upon the parts affected at the same time, or an error of judgment ; and no one can reasonably doubt the intimate and inseparable relations of will and motion as a physiological proposition in all healthy bodies, except such motions as are or may be governed by their own specific ganglia, and those which are from their nature involuntary, as pulsation of the heart, nictation, respiration, paristole, etc.

In all the civil and social relations of life, where there is witnessed refined tastes and polished manners, we must acknowledge the importance of a clear mental capacity to appreciate in the selection of companionship. No question connected with medical science more deeply concerns the best interests of society and social life than that which is known as "*mental disease*;" yet how little is known by a majority of medical gentlemen upon so important a subject.

The literature upon this special department of scientific knowledge seems to be ample as a basis of investigation, to enable the analytical mind to make such delicate and clear distinction between *mens sana*, *aut non*, that, when we are called into criminal courts as experts, the learned members of the bar and the judges upon the bench may be answered intelligently and with credit to the profession we represent.

Works upon medical jurisprudence only partially treat upon this subject, presenting it in its medico-legal bearing, and leave

the important functions of the brain and effects of molecular perturbation on mental forces to be investigated in another department of learning; and intelligent juries now look to the physician to aid them in determining the difference between an involuntary and unconscious action and a voluntary act. As a simple illustration, *winking* may be an involuntary action, while closing the eyes to slumber is a voluntary act. Walking, talking, and singing while asleep are *unconscious* voluntary acts, while the same exercises when awake constitute *conscious* voluntary acts; for in a healthy body the suspension of volition would be followed by a suspension of motion, as witnessed in paralysis. This is axiomatic.

J. H. Belfour Browne is generally considered authority upon forensic medicine, but a careful analysis of some of his statements will show he is not always correct. He says: "Dementia is an exaggerated enfeeblement of age, a more ruinous dotage. It is dependent upon exhaustion and torpor of the mind, that the mental house is in ruins, etc."—Page 276. This, however, is not correct, for dementia is the enfeeblement of the forces of mental activity, dependent upon cerebral disturbances of various kinds. Again he says: "Dementia is the inertia of rest—mania the inertia of motion."—Page 279. Now there is nothing in medicine nor in physics to support these statements, and give them any importance in a court of justice.

As intelligent testimony is the motor power applied to the machinery of law, which weaves facts into every conceivable fabric, and coloring to be presented for judicial inspection, and to juries to enable them to return just verdicts, if the physician would become a valuable witness, and assist criminal courts in the administration of wholesome laws, he should make himself familiar with the medico-legal bearing of mental disease upon criminal acts, before going upon the witness stand to give his testimony.

For the benefit of the younger members of the profession, I would say, we must always be on the *qui vive* while in court, as hypothetical questions are often asked, interwoven with paradoxical theories to test the competency of a witness, rather than to elicit any material facts connected with the subject of insanity.

To obviate the embarrassment that naturally follows upon an evasive or confused answer, a common estimate of the value of symptoms should be *formulated* and agreed upon, as the result of experience, observation and careful investigation.

At the present day a large number of the intelligent people of our country are inclined to look with disfavor upon all medical expert testimony before juries, and a majority seem to regard the proceedings of our criminal courts, in many cases, as farcical dramas brought upon the judicial stage, before the bar of justice in opposition to the spirit of the higher codes of law, which inflicts punishment upon the guilty; and justice stands behind the proscenium taking no part in the proceedings, and leaving the criminal with his weakness and errors to the sympathy of juries, often composed of men incompetent to tell the difference between a hypothetical question and an axiom of law. This is especially the case when the criminal is being tried for homicide, and the defense puts in the plea of irresponsibility, on the ground of transitory or emotional insanity. Who is responsible for the failure to convict in such cases but the medical expert, and those who mis-apply and mis-interpret facts? There are but few eminent writers upon this subject who give unqualified endorsement to the theory of transitory mania, yet the sophistry of learned attorneys and the testimony of pliant medical witnesses, carry conviction to the minds of jurors that the murderer is not responsible under such alleged conditions for his act.

This was illustrated in the suit of the People *vs.* Laura D. Fair, one of the most noted cases that appear upon the records of our criminal courts of the State of California, where the plea for the defendant was transitory or emotional insanity, "and the act was non-volitional." In this case the effect upon the jury of the testimony of the physicians who were called as experts on the first trial, was not such as to receive any favorable comment, as it did not appear to be wholly in accordance with the facts sought to be presented; nor was it free from the appearance of *bias*, a condition of mind most unfortunate for a witness in a court of justice. On the second trial the effect of expert testimony on the part of the physicians was such that it could not be overcome by the eloquence of polished rhetoric, finished oratory, and scholarly argument, and the prisoner was acquitted.

MURDER OF CHAS. DE YOUNG.

Nothing could be more injurious to church ethics, or more insulting to Christian precepts, and more demoralizing to the youth of a populous city, than the example presented by the killing of Mr. Chas. De Young, by Kalloch, a minister of the gospel.

In this case we find the law was made a creature of sympathy by a maudlin sentiment that echoed from the bells upon the church towers along the corridors and through the aisles of the temples of worship, until it reached the ears of the jury and deprived justice of its executive authority; and a greater outrage upon offended law can scarcely be conceived than was witnessed in the result of this trial. Here the expert testimony was much more declamatory than logical, and was in no wise entitled to the position it occupied in the category of evidence for the defendant.

The great effort of prominent members of the bar appears to be to protect the criminal against the law, rather than secure the enforcement of its penalties, and this is the *hoc opus* which tends to make crime rampant and subvert good government. Experience and daily observation teach us that it needs no forensic oratory, no long recitations from Shakespeare, no quotations from Milton's *Paradise Lost*, no quotations from Young's *Night Thoughts*, whose windows of light were forever darkened, or from Cowper, to inform a jury that

"Unnumbered throngs on every side are seen,
Of bodies changed by various forms of spleen,"

and that the prisoner charged with homicide is not guilty, provided *handy* witnesses are secured, and the *right* kind of men are placed in the jury-box.

You may ask, "What have medical gentlemen to do with this?" Let me assure you we have much to do with the conviction of the guilty, by giving testimony, supported by the facts presented by the laws of physiology and psychosis, which dignify and control human action.

The study of nervous diseases and mentality, and inquiries into the forces governing the functions of the brain, by those who have had large opportunities for experimenting upon the lower animals in vivisections, have called in exercise new reflections, and given new encouragement to the investigation of mental diseases. And while mind cannot be examined, only by logical deductions, much that controls its functions can yet be learned, as we learn the nature of imponderable agents, by their effect upon animate and inanimate objects, as reason lifts the veil beneath which volition dwells, and discloses the working of the forces that direct and control the acts of men, and define his responsibility in every individual act.

It is a maxim in common law that "all persons are presumed

to be innocent until proven guilty." Judge S. H. Dwinell, in his charge to the jury in the case of the People *vs.* Laura D. Fair, says: "All the presumptions of law, independent of evidence, are in favor of innocence, and every person is presumed to be innocent of crime until he is proven to be guilty." But the law really does no such thing in its application; if it did, it would not arm its officers with authority to arrest and hold persons *in duress* until such time as they may be brought into court to prove their innocence. Otherwise the rights of individuals would be taken away, without any possible redress at law for inconvenience and hardships endured; for no person can justly be restrained of his liberty unless he is presumed to be guilty or insane—except he be restrained as a witness in the interest of justice—and officers making arrests would be liable to be charged with being governed by an improper influence—*malo animo*—in the discharge of their duties, and this would be a conspicuous error.

In dealing with crime, "Justice *a priori* ascribes responsibility to all who commit it," and consequently must look with suspicion upon all placed under arrest, whether sane or insane, and the condition of the mind in its capability to determine right from wrong must alone decide the responsibility in any individual case, for ignorance of law is no excuse for wrong doing. *Ignorantia legis neminem excusat.*

When the maxim referred to is the ruling of the court, for the purpose of arresting a popular verdict in any case before it has been tried, it is well enough as tending to prevent meddlesome interference with the proceedings of the trial. But we have no dealings with maxims in the abstract which apply to the guilt or innocence of any party; and all the court and jury want us to do is to make a clear statement of facts relating to mental conditions, and nothing more in cases of alleged insanity.

We must not only have ideas, but must have positive facts upon which to base our testimony.

AN IDEA.—An idea is an element or condition of mind as it relates to sanity or insanity, and develops rapidly into various expressions of language and acts, which may be rational or not, according to the varying circumstances upon which it is dependent.

IMPULSE.—Impulse is a sudden feeling different from that which is controlling the action of the individual at the time it occurs; and while it is not voluntary, and cannot be brought into play

by any force of the mind, it is subjective to the will when manifested; and this is in accordance with the experiences of daily life. It differs from an impression in this: An impression is the consciousness of the existence of something, while an impulse relates to an action or desire to act.

Impulse is not the product of thought which springs from or enters into the domain of mind, but is developed by some extraneous or concentric action of the *vital aura*, or surrounding-erethism of the body; while many of the moral feelings are the offsprings of thought, such as sorrow or joy, and sometimes *thought*—very emphatic—is the offspring of pain, as experienced in gout or neuralgia, and this paradoxical condition is dependent upon the flex and reflex nervous action, stimulating certain cerebral nerve centers. But “impulse” is exhausted the moment it is felt, and gives birth to reflection, which urges one on to *uncontrolled* action; but never irresistible in its nature, as reflection is always rational in character, and must be subjective to the will.

Upon this is based all of the theory of transitory mania, which is only a convenient myth—a huge joke on ethics and criminal law—merely a word-structure of defense without a possible reality; and the learned members of the bar do not believe in its existence.

A more ridiculous burlesque upon justice cannot well disgrace the procedure of criminal courts than is witnessed in a trial when the argument for the defense is based alone upon this theory; for it is not within the reach of psychic reasoning, or the logic of presumption, and is little more than nonsense, imbedded in metaphysics, without a ray of intelligent possibility to dignify an argument in its favor, and is far more quixotic than the Rosicrucian philosophy, or the animisms of Stahl.

This theory not only aims to encourage crime, and relieve the criminal from responsibility, but lessens public respect for the Temple of Justice.

And in this we see justice struggling—

“See physic beg the Stagyrites’ defense—
See metaphysics call for aid on sense.”

With this view of the subject, I am conscious of invading the domain of cherished opinions of some of the eminent writers and opposing their theories, yet I do so not in a spirit of hostility,

but with a desire to advance justice and the interests of the profession,

Oh, common sense, divinest child of earth!
 May reason's choral voice thy praise prolong,
 Till nature, wearied, sinks beneath the song.

Judge Hoffman's opinion of emotional sanity and transitory mania.—In the case of Mary Jane Sweeney, the defense begged leniency in consideration of Sweeney's emotional insanity. The Judge replied: "This plea of emotional insanity, or transitory mania, or whatever name the excuse may be given, has become almost ridiculous." "Our experience in California in respect to this subject has led us to regard the present aspect which the insanity plea has assumed, as repulsive to justice and fatal to society."

In further support of the statement that the learned members of the bar have no confidence in the correctness of this theory, I will call your attention to the following remarks of Prosecuting Attorney J. N. E. Wilson, in a case recently tried in one of our Superior Courts, of the *People v. Kennedy*. He says: "Rumor has it that defendant's counsel possesses one of the finest medical libraries on the coast. Rumor also says that the honorable gentleman boxed it up and stowed it away when he commenced this case, because he was fully aware that no such thing as 'emotional insanity' could be found in it. But he goes on with the case, and instead of calling it 'emotional insanity,' gives it the title of 'disordered mental design.'" This satire would probably have been enjoyed by the learned attorney had his position been reversed in this case, as on a former occasion he had evoked an adverse decision from the Supreme Court upon a question involving a similar theory.

In the 62, California Reports, page 123, in the case of the *People vs. T. J. Hein*, Judge McKinstry, in giving his decision, says: "It will be seen that the English courts have refused to recognize the co-existence of an impulse *absolutely* irresistible, with capacity to distinguish between right and wrong with reference to the act. It cannot be said to be irresistible because not resisted. Whatever may be the abstract truth, the law has never recognized an impulse as uncontrollable, which yet leaves the reasoning powers, including the capacity to appreciate the nature and quality of the particular act, unaffected by mental disease. No different rule has been adopted by American courts."

This was concurred in by Morrison, C.-J., Myrick, Sharpstein, Ross, and McKee, J.J., and was a complete answer to a question asked by Judge Darwin pending the trial.

The New York courts hold to the same doctrine, as appears in the New York Reports in the Court of Appeals, page 469, in the case of Mark Flannagan, Plaintiff in Error *v.* the People: "In this case all the judges except one concurred in the opinion of Judge Tindall, C. J., and the case is of the highest authority; and the rule declared in it has been adhered to by the English courts."

IRRESISTIBLE IMPULSE ILLUSTRATED.

When the staging gives way, the irresistible force of gravitation causes the laborer to fall to the ground; and when this force is overcome by inflating a balloon with a much lighter air than that which surrounds the earth, those who leave in the basket prepared for an aerial flight, are *irresistibly* borne far away among the clouds. In one case the irresistible force is a fixed law of nature; the other simply a relative force, subjective to chemistry and mechanics, and is a part of experimental life. But by taking the necessary precaution, the voluntary danger and the involuntary act of falling may both be averted. This simile will apply to the so-called *irresistible* impulsive acts of men, which are no more than *unresisted* acts, which may be avoided. In one case the act is voluntary, in the other involuntary; but if the party falling is injured, he is responsible in the one case by his folly, in the other by his carelessness, and cannot escape responsibility in either; for vigilance and prudence would have enabled him to remain unharmed, since he could not be raised into the basket nor lifted upon the staging by any irresistible force, while knowing the act he was performing (idiots always excepted). If a man is seized with a spasm of anger and kills his brother, he must be held responsible, and should be sent to one of the lunatic asylums for life, for he voluntarily steps into the basket to be borne away by the balloon, inflated with rage; or, his voluntary *involution* causes him to fall.

It would be a dangerous doctrine to establish, to say a person was competent to determine right from wrong in any particular act, and at the same time was impelled by an irresistible foe, unseen and unappreciable, which was urging him on, *vis a tergo*, to commit a crime which he was capable of appreciating, and realizing the consequence of its commission, and yet was not responsible for the act.

No man arms himself with a pistol or knife and visits the house of another party whom he suddenly kills, without knowing what he is doing, and what he intended to do before leaving on his mission of crime, unless he was insane before and remains insane after the act.

Alfred Swain Taylor, in his work on Medical Jurisprudence, says: "The main character of insanity in a legal view, is said to be the existence of a delusion, *i. e.*, that a person should believe something to exist which does not exist, and that he should act upon this belief."

But if the theory of mania transitoria be correct, the party so attacked does not have time to indulge even in a belief of a delusion, but steps out of himself for a moment to give the body an opportunity to act and kill some one, and then steps back again just in time to take the body away in a perfectly healthy condition, uninjured by the sudden transition, from a subjective agent to an independent actor and *vice versa*. Now can anything be more absurd? Yet many intelligent medical gentlemen have been upon the witness stand as experts, and testified before courts and juries to the existence of this mental condition—this *psychic ledgerdemain* which is beyond the reach of mental philosophy to explain.

Such testimony is the *opprobrium medicorum* of the profession, while the atmosphere is redolent with inquisitive objections to such assumptions of learning. The highest medical authority has never undertaken to prove by any known physiological or psychic laws, how such a mental condition can possibly have an existence as transitory mania.

But in a strictly medical view, insanity does not exist in the mind *per se*, for that is not *ipse facto* diseased, but is dependent for its aberrations upon some abnormal condition of the physical man, which may be either organic or functional, and usually found in a change in the structure of the brain and the surrounding tissues. By reflex action the erethism of remote organs may be conveyed to the brain, over-stimulating the whole mass, or certain ganglia corresponding to the seat of nervous activity, which supplies the organs effected with their sentient and motive sensibility, or automatic consciousness. And often the dyscrasia of the party, without any localized morbid change, effects the *vital aura* and periphery of the entire nervous system, producing hyperæmia of the brain, followed by *disordered mental manifestations*.

As before stated, the mind is not, *ipse facto*, diseased. Here, I apprehend, lies much of the error and perplexity experienced by witnesses who attempt to define a disease of something that exists but has no length or breadth, the same as they would define the disease of the atmosphere, which is rendered *toxic* by the introduction of noxious gases during respiration of animals or vegetation, or from the exhalations of forests, or other causes, by which the oxygen is displaced and a new compound formed, that enters the lungs; or by heat, which lessens the volume of oxygen without changing its ratio as the air becomes rarified and expanded. Such a course of logic cannot be maintained, for the elements of mind are not tangible, like the odor of flowers. The difficulty of *understanding* this question and not being *understood*, is in consequence of not recognizing the truth of the adage, *mens sana in corpore sano*.

Cases of insanity following the use of alcohol or opium are always preceded by *delirium*, showing that changes do take place in the brain from over-excitement, until a permanent lesion is formed and becomes localized. The same may be said of insanity arising from cerebro-typhoid fever, supervening upon disappointment and business losses, all of which are the psychic manifestations of physical disease.

After carefully studying the functions of the mind, which render it voluntary or involuntary, I fail to find any evidence to prove the existence of *transitory mania*, beyond the declarations of the criminals themselves.

Such opinions, which have become quite too popular for the public good, and upon which often rest verdicts of juries, appear to have been formed and agreed upon to meet certain cases after deeds of violence had been committed, and are purely *ex post facto*. When there is a temporary suspension of the conscious action of the will, affecting any of the moral sentiments, no harm can possibly be done; for the consciousness of an idea to act is lost. And when the suspension of the will-power, from whatever cause, affects the physical forces, motion is irregular, and seldom in a direct line of action; the motor nerves always manifesting a volitional disturbance, as witnessed in *paralysis agitans*, and it is not possible for the will to be suspended in the middle of an *arc*, being described in the act of a blow and before its completion, and again suddenly regain its full force the moment the act is performed. Such doctrine would be dangerous, and, if

maintained, would render our criminal courts powerless to administer justice, and the physician should be held largely responsible for encouraging it.

In this theory we find all that supports the argument in favor of *transitory mania*, which in a spirit of great generosity should be considered only as *transitory cussedness*, in distinction to other vicious traits, and differing from moral depravity in many of the essentials by which man is recognized as being endowed with a moral and physical nature.

We are told that "charity is kind and of long suffering," and that it is better that "ten guilty persons should go free than that one innocent party should suffer." This, as an expression of a Christian mind, and in accordance with church ethics, is well enough; but when we devise some theory by which the guilty may go unpunished, we encourage the infraction of law and degrade public morals, which is not in accordance with the teachings of the gospel of Christ, or any sentiment of morality.

Whatever theories are advanced in regard to the insane, there must survive a consciousness of some sentiment in the mind of every intelligent person, and a feeling of regret for the wrongs of the aggressor, which leads one to desire to remedy all within human power that is wrong; and to be just, we must remember the offended have rights that must be respected, and we must be prepared to prove the existence of some conscious reality behind every act, as well as that which follows a crime, and *vice versa*.

As we become more familiar with the social influences of life, which shape the course of individual action, the more we are impressed that life itself is a mimicry as related to the daily affairs in which we are most interested; and it is of the most profound importance that we should make ourselves familiar with all the possible details of pathology, that we may become competent judges of the functions of health and disease, and be able to determine their influence over the moral and mental forces which determine the nature of human action. Here is where we can maintain an honorable distinction above the average witness, and render valuable service to an honorable and learned profession in the halls of justice, in the interest of public morals and human safety.

What is involuntary action, and what emotional? Involuntary action is witnessed in respiration, nictation, pulsations of the heart and spasms of tetanus. Emotional action is seen in weep-

ing, sighing, and laughing. The difference is found in the fact that the former acts are without any conscious effort of the will; while the latter acts are dependent upon impressions made upon the mind by surrounding influences, as reading, seeing, or hearing some sad or mirthful story. And while these manifestations cannot be wholly controlled by the will at the moment of occurrence, they are not involuntary, since the volition is active and conveys impressions to the seat of the mind, which arouse reflections of pleasures or pain.

If the prism through which the rays of light pass is defective, there will not be a homogeneity of colors produced, and this condition will confuse and antagonize the science of dioptrics, and of the solar spectrum in the simple multiple rays or factors, which unify the rays of light around us, or separate them into primitive colors; and this theory holds good in the various cognate branches of science, and in mental pathology.

We do not see light, but realize its presence, and recognize distances by the eye; nor do we see mind, but recognize its force by the effect it has upon others in the silent language of invention, and social and political leadership, and realize its changes by the tone of the voice, the laugh, the smile, the tears or sighs; and can read the unwritten law, governing mind by voluntary action, as we judge of heat and magnetism by their effect upon vegetable and animal life. All disorders of the mind are so many evidences of molecular perturbations of physical forces, dependent upon some positive lesions of the anatomical structure of the brain, or of those organs and functions which exercise a strong controlling influence over the same. Hence we may reasonably infer there can be no insanity arising from the mind *per se*, beyond its influence upon some of the physical functions; and all the manifestations of anger, hate, frenzy and impulse, or emotion of whatever nature, are volitional, and subjective to a proper exercise and control of the will, and man is responsible for their consequences.

DUTY OF PHYSICIANS.

It is as much the province of the physician to endeavor to have the criminally insane taken care of, as to advise measures for the care of those who are incapacitated from any of the casualties of life, and I would recommend that the committee of this society on legislation be especially instructed to endeavor to secure the passage of an act, to provide for the care of the

insane criminal in a separate building from the morally insane. I would also recommend that the law of Massachusetts upon this subject shall form the basis of such legislation.

The law reads as follows, viz :

SEC. 20.—“When a person indicted for murder or manslaughter is acquitted by the jury by reason of insanity, the court shall cause such person to be committed to one of the State lunatic hospitals during his natural life.”

SEC. 21.—“Any person committed to a State lunatic hospital under the foregoing section may be discharged therefrom by the Governor, by and with the consent of the Council, when he is satisfied that such person may be discharged without danger to others.”—*General Statutes, chapter 214.*

In kleptomania there can be no real motive to wrong another or acquire the stolen property, for motive must be prompted by an idea of revenge, or some possible advantage, and things are often stolen which can be of no possible benefit to the parties who steal. In pyromania the party applies the torch to the building without a motive to harm another. In the former case the stolen goods are concealed, and in the latter the property is destroyed, and no benefit is to be gained by the commission of crime to either party, nor is there any fixed motive for the crime.

But the absence of a motive to be benefited or to injure another does not make the offense less punishable under common law by placing the parties under restraint.

Then, admitting the theory of transitory mania to be correct, and that homicides are committed without a motive of gain or injury to another, and the absurdity of the law that punishes the former and acquits the latter is readily apparent, and the theory of transitory mania is made to appear ridiculous.

Taylor (page 674) remarks: “It cannot be denied that the doctrine of ‘irresistible impulse’ has been strained in recent times to such a degree as to create a justifiable distrust of medical evidence on these occasions.”

“It is obviously easy to convert this into a plea for the extenuation of all kinds of crime for which motives are not apparent, and thus medical witnesses often expose themselves to severe rebuke. They are certainly not justified in setting up such a defence unless they are prepared to draw a clear and common-sense distinction between impulses which are *unresisted* and those which are *irresistible*.”

This *irresistible* theory would deprive a man of his individu-

ality, and make him a frail instrument in the hands of an unknown foe, and subvert public morals, pervert the purest principles of law, and endanger human life.

Maudsley says: "Many cases of the so-called *transitory mania* are really cases of mental epilepsy," and cites a case of a patient in the French Asylum at Avignon. A similar case is related by Esquirol of a Swabian peasant who killed his mother (page 234).

Falret describes epileptic vertigo as a sort of *petit mal*, or transitory disease, with no pathology: "These peculiar states of epileptic consciousness are not only of great psychological interest, but also of practical consequence in relation to the question of responsibility, for it is obvious that deeds might be done by an individual when in an anomalous state of consciousness, of which he might have no remembrance when in his really normal state, and for which he could not justly be held responsible."—*Maudsley*, page 238.

It seems from the foregoing that the author considers *transitory mania* to be of an epileptic nature entirely. From this view of the question I do not dissent, it being one of the paroxysmal manifestations of a disease known to exist, as delirium is the result of fever and hyper-stimulation of the brain in intoxication, and nothing more.

In all such cases there are prodromata, or physical conditions existing, which affect the normal status of the will, and which antedate acts of violence; and those thus affected do not find their remedy and cure in the act itself, as has been often alleged by those who desire to acquit the homicide upon the plea of transitory mania, and who declare the actor is instantly restored to consciousness after a deed of violence is committed.

J. H. Balfour Browne, page 170, says: "Again, such a disease as transitory mania, mania which suddenly appears and suddenly disappears, is, to our thinking, an impossibility."

Dr. Hammond remarks: "The doctrine that an individual can be entirely sane immediately before and after any particular act, and yet insane at the instant the act was committed, is contrary to every principle of sound psychological science."

Even in the most striking instances of what is called transitory mania or morbid impulse, the evidence of pre-existent and subsequent disease of the brain will be found if looked for with diligence and intelligence.

Dr. Gray, a distinguished authority, says: "I am not going

to deny the existence of transitory paroxysms *in* insanity, either in epilepsy or in the frenzy of melancholia, or in ordinary cases of insanity where paroxysms suddenly arise and suddenly disappear; but until I have seen more than I have yet seen, and until I have read something more authentic than I have yet read, I must fail to see insanity in any case which arises when the premonitory symptoms of the disease run the rapid course of a few minutes, when the person commits a crime and then is well."

E. C. Spitzka, in his work on Insanity, published 1883, page 154, says: "Numerous instances are recorded where persons, previously of sound mental health, have suddenly broken out in a blind fury or *confused delirium*, which, passing away in a few minutes or hours, left the subject deprived of a clear, or any, recollection of the morbid period, and generally concluded with a deep sleep." These conditions are witnessed in cases of concussions of the brain, when a person remains unconscious for a longer or shorter period, and upon being restored to consciousness has no recollection of what has occurred, with the exception that no fury is manifested.

This author says "observers designate this condition as transitory mania." "Others term it transitory melancholia, and others class it among epileptic disorders." But to our thinking it should be classed with hysteria, dependent upon the inhibition of the nerve centres and reflex action.

The same author says, page 155: "But it would have to be considered a remarkable form of epilepsy in which there was but a single epileptic attack." "Transitory mania, or frenzy, is a comparatively rare affection, so rare that many asylum physicians have never seen a case of it; the writer has likewise never had that fortune." According to the same author, "Foville, in his *Annales Medico-Psychologiques* of 1874, declares moral insanity and mania transitory false, absurd, ridiculous, and above all, unworthy of being received by the courts."

Cook, another author, claims that "transitory mania is a cerebral epilepsy."

Kinnon says: "You cannot prove the epilepsy; you can prove the mania, and it is transient;" "and is it not as easy to accept the theory of transitory mania as it is to go wandering after a far-fetched forced explanation?" In reply I would say, it is easier to accept this declaration than to undertake the labor of proving or disproving its correctness; but it is not in accord-

ance with the spirit of fair inquiry to admit anything that is not proven, for no axioms upon these questions are presented for our guidance that have not been tested in the crucible of science. A simple declaration of the existence of anything does not establish a fact, any more than the declaration of an action constitutes an act. We are not prompted by any spasm of curiosity or aggressiveness, but are investigating this subject in a spirit of great kindness and sympathy for the unfortunate, and that we may be better prepared to assist the courts in the just administration of the law when called upon, when the plea of the defence is transitory mania ; for now there seems to be a greater effort to shield the guilty than to protect the innocent.

From our knowledge of the functions of the brain and the media through which psychic and volitional forces pass, we have before us evidence to show that outward manifestations of violence are in consequence of a disturbance of the vaso-motor centres which lie along the floor of the fourth ventricle, and are imbedded in the gray corticle of the spinal cord, and from an over excitation of all or any of the cerebral ganglia, and whatever disturbs the substance of the brain.

The daily panorama of the changing scenes of life is forever making impressions upon the mind for pleasure or pain, as the strong rays of the sun produce photophobia or give pleasure as one gazes upon the scenes of an outspreading landscape. Or the brain may become so acted upon that the mind will lose its power of discriminating judgment of colors, forms, and objects, through the defective medium of sight, occasioned by straining the eye, or in astigmatism, or double dyplopia, when errors of vision become provocative causes of mental alienation, as the optic lobes are falsely stimulated by the imperfect image upon the retina coming through the refractive media of an astigmatic eye.

This effect is not wholly confined to the optic lobes. Stimuli, if sufficiently strong, applied to the afferant nerves, will inhibit, *i. e.*, " will retard or even wholly prevent reflex action " (Pastor, page 419). These facts may be applied to the reflex action of psychic forces which awaken another train of errors in judgment, and can only be overcome by a careful course of reasoning. But an error of judgment, however persistently followed, must not be received as an evidence of insanity.

DELUSION AND HALLUCINATION.

Delusion is a deception as regards the existence of truths. Hallucination is a deception as regards the existence of things. The former relates to abstract, the latter to concrete subjects. For instance, I am told of the existence of a great conflagration, and believe it, but afterwards I find it did not exist and that I was *deluded*; again, I think I see a conflagration and repeat my impressions of its magnitude, but afterwards find it did not occur, and then learn I was laboring under an hallucination.

All that appeals to reason and judgment through mental activity alone, that is not true, is a delusion—all that is presented to the mind through physical senses, that is not true, is hallucination.

Delusions arise frequently from physical causes, as one with an astigmatic eye, which is unassisted by proper lens, regards all round objects or circles as oblong; also, where there is an imperfect formation of the *membrana tympani*, sound awakens an error of judgment as to its intensity and kind. When odoriferous particles fall upon the olfactory epithelium the sensation of smell is produced; but if this membrane be diseased, there will be an error conveyed to the sensorium, the same as occurs when there is a deformity of the retina in the objective sphere of vision.

These are some of the external and concentric causes of error of judgment, and serve to illustrate how disease or over-excitation of the cerebral nerve centres produce insanity or strong emotional feelings, according to the various media through which the vibratory excitement passes, but do not show where responsibility ceases.

Who cannot recall the memory of childhood with its scenes of pleasure or fear of parental discipline. At will, the whole panorama of life, with its daily etchings and embellishments, is brought before us to be with its original thought again compressed amid the subtle forces of an undefined existence; and we search nowhere but the brain for the forces which give character and direction to all the affairs of life, and hold all in reserve for the use of memory.

Physiologists distinguish two kinds of nervous action; one initiatory, the other inhibitory—the one originating, the other controlling. Now, just as the originating centres may be strengthened by indulgence, so may the inhibitory be made stronger by habit; hence, a man in ordinary health may be tempted by some

false inducement to act, but he does not lose his power to resist the action. So a man may be tempted while suffering from disease, by some unreal object, some delusional belief, but it does not thereby follow that he is deprived of the volitional power of control over his acts, and that he is irresponsible for what he does on this account; for the originating thought is the force that controls all subsequent action.

“It is the feelings that reveal the genuine nature of an individual and the nature of his acts; it is from the depths of one’s inner nature that the impulses of action come, while the intellect guides and controls; and accordingly in a perversion of the effective life is revealed a fundamental disorder, which will be exhibited in acts rather than in words.”—*Reynolds*, page 592.

And here we find a ready solution to the problem of psychic forces, which prompt and lead on to *unresisted* criminal action, the will relaxing its hold upon fortitude and right; but not because the *unseen* is an *irresistible* foe that compels the unfortunate to the commission of crime, but by reason of the failure to exercise the moral faculties which *creative energy* has bestowed upon man.

Not an author which I have consulted has attempted to prove the pathology of transitory mania, or given any psychic or physiological reasons for their conclusions; the *ipse dixit* of the individual said to be so affected, is the only evidence given in support of the theory. And certainly this cannot be considered of any value in a court of justice; and it is surprising that any of the eminent writers upon this subject should attach so much importance to the declarations of parties judged to be insane but a moment before and at the time of a criminal act. I do not refer to the spasmodic homicidal impulse of known epileptics, or of the known insane, but have special reference to the *mushroom* development and decay of a *sui generis* type of insanity called transitory mania.

Wharton and Stille, page 710, say: “Mania transitoria is a sudden insane frenzy.” As frenzy disconnected with physical suffering can have no possible pathology, *per se*, it cannot properly be held to be insanity, and should not be offered as an extenuating excuse for crime; for, being considered as a purely mental disturbance, it is only an increased state of *unresisted* passion.

Chitty, Forsyth, and J. T. N. Fontblanque make no mention of transitory mania.

Allan McLane Hamilton, physician to the Insane Asylum of New York, says (page 209): "When a crime is not to be accounted for, and completely inconsistent with the antecedents of one who is not known to be epileptic or insane, and when it is accomplished in a moment of fury, then we should examine whether these are aborted or nocturnal attacks of epilepsy." "*Maniacal* rage of short duration is often epileptic in character, and its true character is often mistaken."

This author does not treat of transitory mania beyond this epileptic form of disease, and is wisely cautious about admitting its possibility, rendering his opinion of doubtful value upon any medico-legal question.

Ray, in his work entitled "Contributions to Medical Pathology," page 259, in the case of Bernard Congley, says: "It must have been a paroxysm of transitory mania, suddenly beginning and as suddenly ending, after the briefest possible duration. The cases of this kind of *mania* on record, though few, certainly are so well attested that we can scarcely deny the existence of the form of insanity which they illustrate. And it is a noticeable feature of most of them that the patient is bent on destroying life."

If bent upon committing murder, that fact implies the exercise of the will to accomplish some specific object; consequently his theory, if analyzed, would scarcely bear the crucial test, so as to be entitled to any more importance to the profession than the declaration of some less learned gentleman.

REPORT OF TRIAL OF SAMUEL M. ANDREWS, BEFORE THE
SUPREME COURT OF MASSACHUSETTS.

Dr. Edward Jarvis (page 173) testified: "Sudden manias vary; sometimes they commence and terminate in a violent outbreak. They may come suddenly and cease as abruptly."

In the same case, page 187, George H. Choate testified: "I have had about 3,600 cases under my charge." "I have never known a case of insanity originating and terminating in a single act of violence. I don't believe such a case exists."

Page 188: "There is a moment when insanity begins. There is a gradual increase of symptoms, and it does not reach unconsciousness without increasing symptoms."

Here we have directly opposite opinions from two eminent medical gentlemen, the one having the greater advantage over the other by his superior opportunities for observation, and he

positively denies the *possible existence* of transitory mania. But, like all other authorities upon insanity, they make no attempt to prove, by any method of reasoning, why this condition may or cannot exist as a sequence of functional or organic disturbances. This is a part of the labor I have undertaken in preparing this paper.

In order to obtain an expression upon this subject from those best qualified to judge, I addressed a "circular letter" to the Superintendents of all the Insane Asylums of our country, and requested them to answer the following interrogatories, viz :

1. How long have you been connected with any institution for the treatment of the insane?
2. Have you ever seen a case of transitory mania that was not dependent upon some form of insanity, and that did not present itself as a manifestation of previously existing disease?
3. Do you consider it possible for transitory mania to occur as an idiopathic disease?
4. How many insane persons have you had under your care?
Remarks.

To these questions I have received the following replies. To avoid repetition I will place the answers in the order of 1, 2, 3 and 4, as the questions were given :

1—Seven years. 2—I do not recollect such a case. 3—Possible ; not probable. 4—650. Remarks: I have been of the opinion that transitory mania may occur, but in very exceptional cases.—*H. Wardner, M.D., Supt. Hospital for the Insane, Anna, Ill.*

1—Eleven years. 2—Not one. 3—Think not. 4—4,946. Remarks: I have also seen 25,000 patients in other asylums, but no case of transitory mania.—*E. T. Wilkins, M.D., Resident Physician of Napa (California) State Asylum for the Insane.*

1—Two years. 2—No. 3—No. 4—3,787.—*W. B. Fletcher, M.D., Insane Asylum, Indianapolis, Ind.*

1—Fifteen years. 2—No. 3—No. 4—2,000.—*Chas. P. MacDonald, Supt. State Asylum for Insane Criminals, Auburn, N. Y.*

1—Seven years. 2—Never. 4—1,500. Remarks: Transitory mania I think is of rare occurrence ; that it does sometimes occur I think there is no doubt.—*C. W. King, M.D., Dayton, Ohio.*

1—Nine years. 2—Have not. 3—Do not. 4—2,000. Remarks: I do not believe mania transitoria exists, *per se*.—*Randolph Parksdale, M.D., Supt. Insane Asylum, Petersburg, Va.*

1—Twelve years. 2—No. 4—Several thousand.—*D. M. Wise, Supt. Willard Asylum for the Insane, N. Y.*

1—Sixteen years. 2—Most assuredly not. 3—No. 4—3,000. Remarks: Such a proposition as transitory mania is irrational, absurd, and opposed to every theory of advanced psychistry.—*E. A. Kilburn, M.D., Med. Supt. Insane Hospital, Elgin, Ill.*

1—Twenty years. 2—Never. 4—7,000. Remarks: To be insane there must be actual disease of the brain, which is not transitory.—*H. A. Gilman, M.D., Supt. Insane Asylum, Mt. Pleasant, Iowa.*

1—Ten years. 2—No. 3—No. 4—200. Remarks: I fully concur with your views on the subject.—*R. C. Chenault, M.D., Med. Supt. E. V. L. Asylum, Lexington, Ky.*

1—Sixteen years. 2—Never. 3—No. 4—3,602.—*John W. Ward, M.D., Trenton, N. J.*

1—Eleven years. 2—No. 3—No. 4—1,297.—*J. W. Jones, Supt. Insane Asylum of Louisiana.*

1—Twenty-five years. 2—No. 4—2,500. Remarks: While my experience, as shown above, is against the existence of what you call mania transitoria, my views of the nature of mind make such a condition scientifically possible.—*P. Bryce, M.D., Tuscalusa, Ala.*

1—Eight years. 2—No. 4—5,000. Remarks: I have no reason to doubt the authenticity of some reported cases of transitory mania. Mania transitoria differs somewhat as treated by different authors, and the name does not sufficiently explain what is meant.—*W. B. Goldsmith, M.D., Danvers, Mass., State Asylum.*

1—Thirty years. 4—Several thousand. Remarks: Transitory mania as an idiopathic disease is not probable, judging from experience. I have never seen a case of so-called transitory mania.—*John B. Chapin, M.D., Supt. Hospital for Insane, Phil.*

1—Seven years. 2—No. 3—No. 4—699. Remarks: Daily average never less than 660. Your position is correct.—*C. A. Miller, M.D., Supt. Insane Asylum, Carthage, Ohio.*

1—Sixteen years. 2—No. 4—7,000.—*R. M. Wigginton, M.D., Supt. State Asylum, Winnebago, Wis.*

1—Eleven years. 2—No. 3—No. 4—2,500. Remarks: I do not believe there is such a condition as transitory mania, and think the use of the term should be abandoned.—*G. H. Hill, M.D., Supt. of Insane Asylum, Independence, Iowa.*

1—Thirteen years. 2—No. 4—2,700. Remarks: My judgment in suspense; no such cases come to asylums.—*Richard Dewey, Kankakee, Ill.*

1—Twenty-seven years. 2—No. 3—No. 4—About 6,000. Remarks: I think it possible that there might be temporary mental aberration; should not call it disease, but functional disturbance.—*C. K. Bartlett, M.D., Supt. Minnesota Hospital for Insane, St. Peters, Minn.*

1—Two years. 2—No. 3—I do not. 4—Some thousands. Remarks: When any well-marked neurosis, particularly epilepsy, can be shown, it would be difficult to disprove transitory mania.—*W. H. Mays, M.D., Assistant Physician State Asylum, Stockton, Cal.*

Remarks: Have never seen a case, and I do not believe in the theory of transitory mania.—*S. H. Talcott, M.D., Middleton, N. Y.*

1—Fifteen years. 2—No. 3—No. 4—Some thousands.—*James D. Moncure, M.D., Supt. Insane Asylum, Williamsburgh, Va.*

1—Thirty years. 2—No. 3—No. 4—5,000. Remarks: Do not consider it possible for transitory mania to exist as an idiopathic disease. Yet I would not deny the possibility of transient maniacal phenomena as a consequence of temporary physical conditions.—*Pliney Earle, M.D., Supt. of the State Lunatic Hospital at Northampton, Mass.*

1—Twelve years. 2—No. 4—About 1,500. Remarks: Cannot say what is or is not possible.—*H. P. Stevens, M.D., Retreat for the Insane, Hartford, Conn.*

1—Forty-two years. 4—8,000.—*H. A. Buttolph, M.D., Morris Plims, New Jersey.*

Accompanying this reply is a highly interesting letter, in which the author doubts the theory of transitory mania, and thinks the term should be dropped and "insane impulse" be used in its place.

1—Twenty-eight years. 2—Have never seen such a case. 3—No. 4—3,000. Remarks: Neither experience nor reading lead me to think it possible. The only cases which have come to my knowledge claimed as transitory mania have been supported by very questionable evidence.—*J. P. Bancroft, M.D., Supt. Insane Asylum, Concord, N. H.*

The gentlemen who have kindly furnished me with the foregoing statistics are highly esteemed by the medical profession for their learning in psychological medicine, and their statements are entitled to the fullest confidence as authority upon the subject; and, in justice to offended law, we must conclude that the theory of *mania transitoria* to the criminal is like the signal of the mariner, far out to sea upon a sinking vessel, with no reasonable help in view; it is the only hope of relief, when human sympathy alone comes to the rescue, powerless to save the innocent from the perils of the wave, yet holds the guilty in the embrace of social life, though he can never be fully restored to the confidence of the people.

In the revised edition of the "Medico-Legal Papers," page 189, Dr. Wm. A. Hammond says: "The sympathetic system of

nerves has a most important office to perform in the organism, and one which in its relations to the subject is of very great moment. It is the organ by which the size of the blood-vessels is regarded." And on page 190, xxi: "Now, what is the condition known as transitory mania? 1. It may be defined as a form of insanity, in which the individual, with or without the exhibition of previous *notable* symptoms, and with or without obvious exciting cause, suddenly loses the control of his will, during which period of non-control he commonly perpetrates a criminal act, and then as suddenly recovers, more or less completely, his power of volition. 2. Attentive examination will always reveal the existence of symptoms precursory to the outbreak which constitutes the culminating act, though they may be so slight as to escape superficial examination. (a) The hypothesis, therefore, that a person may be *perfectly sane one moment, insane the next*, and then again *perfectly sane* in a moment, is contrary to all the experience of psychological medicine."

Page 185: "An essential feature of the definition of insanity is that it depends directly upon a diseased condition of the brain."

"Medico-Legal papers," page 221: "Whatever may be said by the pure psychological school of philosophers, the world is indebted to physicians and physiologists for the only true philosophy of mind, namely, that instead of being a simple entity, an independent source of power and self-sufficient cause of causes, it is dependent on a material organ for all its manifestations."

"Mental power is but an organized result, matured by insensible degrees in the course of life, and as much dependent on the nervous structure as the function of the liver is on the hepatic structure."

Report of Abner Rogers, Jr., indicted for the murder of Charles Lincoln, Jr., tried before the Supreme Court of Massachusetts, page 104.

"And first as to the point of the State's attorney, that the prisoner's offense, if not amounting to murder, may yet constitute manslaughter. That as manslaughter is murder upon provocation, or under sudden excitement, so murder *on insane* or *partially controllable impulse*, may be no more than manslaughter." As there can be no such thing as "partially controllable impulse," no great wisdom is presented in this theory, nor evidence of careful investigation of mental disease, nor does it enlighten the jury.

A great statesman of the old country, Mr. Burke, said that "the soul of government lies in the jury-box." But jurors should be well-informed, and competent to pass upon and determine between questions which relate to facts and those which relate to law; and experts upon questions of insanity should be able to make such clear statements before them that there should be no difficulty in understanding the true import of their meaning. But no one can prove to any jury that *impulse*, or *emotion*, is a disease which only finds a remedy in some criminal act, as homicide, and then is instantly and forever cured.

As a matter of physiological interest connected with this subject, and showing some of the functions of the brain, Luys (page 53) remarks: "Subject, who had been long deprived of an upper limb, in the case of disarticulation of the shoulder, there existed in certain long disused regions of the brain, coincident, very distinctly localized atrophies. I have, moreover, demonstrated that the atrophied regions of the brain are not the same in the case of the amputation of the leg as in that of amputation of the upper limbs."

The researches of Feitsch, Hitzig, Panier, Brown-Sequard, Bartholow, and many others, have shown that by applying electric excitement in the region of the gray cortex motor, reaction in isolated groups of muscles are determined; that at will we may cause the eyes, tongue and neck to move.

The period of incubation of reflex nervous action varies, and the inhibitory force of nervous activity is the only important factor which will or can determine the duration of physical disturbance as it relates to any specific action dependent upon nervous energy. This is often witnessed in cerebral apoplexy, or injuries to the brain from extraneous causes, and shows in the simplest manner the correlation between cause and effect. And when we apply these truths to the inhibition of mental action, we shall be able to prove by physiological facts that spontaneous development of disease is impossible, as it relates to growth and decay at the same moment.

In a work entitled "Plain Talk about Insanity," by T. W. Fisher, M.D., page 86, we find the following, viz: "Epileptics are known to be subject to attacks of frenzy. This knowledge makes physicians careful, in cases of unexplained violence, to search for some trace of epilepsy, vertigo, or *petit mal*, in the previous history of the suspected person, and it is often found."

He states that Dr. Krafft Ebbing "distinguishes seven different groups of conditions, under any of which transitory mania may occur," viz :

1. The state of dreaming.
2. Different kinds of intoxications.
3. Delirium of febrile maladies.
4. Transformation of neuroses.
5. Transitory psychoses.
6. Pathological passion.
7. Transitory intellectual troubles at child-birth.

Alas! *parturiunt mentes*, nothing having been brought forth by his labors but confusion.

This classification and subdivision of the etiology of transitory mania is too vague to secure importance with the careful reader; and if it shows anything, it proves the error of the author's theory and the incorrectness of his conclusions, for a manifestation of frenzy or great mental excitement connected with either of these physical conditions can only be rationally considered as symptoms of some existing malady.

If these conditions collectively have any central meaning, they refer to epilepsy, not to mania transitoria as an idiopathic disease, and the words of the author himself cannot lead one astray from this conclusion, for he states: "All these conditions of transitory disorder may prove very difficult to estimate, because the direct examination of the accused only affords negative results."

Clouston, on "Mental Diseases," page 162, remarks: "I think cases of mania transitoria result from the following causes: Most of them are *epileptiform*, are, in fact, of the nature of mental *epilepsy*. All the symptoms may be seen in the incubation of febrile and inflammatory complaints, such as scarlet fever, typhus and typhoid, local inflammations, etc."

He speaks of visiting a person who was very wakeful, and was laboring under some peculiar mental aberration that came on suddenly, and says, since then, when he has similar cases, he asks himself, "Is it a case of mania transitoria?" and then states he has seen many similar cases in asylums, *especially among epileptics*.

Edward C. Mann, in his recent work on Psychological Medicine, page 122, says: "There are certain cases familiar to all specialists in insanity, which suffer from impulsive insanity,

with a homicidal or suicidal monomania. These patients, without appreciable disorder of the intellect, are impelled by a terrible *vis a tergo*, a morbid, *uncontrollable* impulse to desperate acts of suicide or homicide." He also speaks of a patient under his care "who would voluntarily enter an asylum and remain there until the morbid impulse had passed away."

While it should be remembered that an isolated case is not sufficient evidence to prove an important fact, the case cited shows that the proper exercise of the will was sufficient to control what the author says is an *uncontrollable impulse*, for the patient went away of his own accord and escaped the reality of his dreadful forebodings.

Again, on page 126, he says, as a climax to the discussion of *inebriety*: "In these cases also the mental disorder is of a sudden and *transitory* character, not preceded by any symptoms calculated to excite suspicion of insanity." "It is a *transitory mania*, or *sudden paroxysm*, without antecedent manifestation," the duration of the morbid state being short, and the cessation sudden. Such attacks are transient in proportion to their violence, and transition occurs on the completion of the act of violence." "Clearly allied to this state of which I have been speaking is that peculiar psychological state, the trance state, which also occurs in inebriety."

Trance is an exceedingly rare condition—so rare, indeed, that ten thousand physicians may enjoy a large practice for many years, and not one of them ever witness a typical case.

Alexander Bain, in his work upon the "Intellect" has many valuable thoughts connected with this subject, which are in accordance with the views I have expressed.

When carefully considered, this will be found only to relate to some manifestation or symptom of a disease known to exist, and has no bearing upon the question of transitory mania as an independent or idiopathic disease. Transitory mania as the result of inebriety has nothing in common with trance; trance being unquestionably an idiopathic condition in which the patient remains as if Leothe had breathed over the entire organism a feeling of repose, and left the mind oblivious to its own consciousness to revel in dreams and ecstasies. Here the author is clearly in error, for when he speaks of trance being closely allied to transitory mania in connection with inebriety, he incorrectly classes trance with one of the many phases of epilepsy.

Clouston, in his work on Mental Diseases, discusses the subject of "impulse" in a very fair tone of argument, and favors the theory that it is "irresistible," but says nothing of "transitory mania," and leaves the correctness of his syllogistic reasoning to the same criticism of analysis I have given to Mann; for the latter has not proven that transitory mania is an idiopathic disease, and the former has not shown that "impulse" is uncontrollable.

The theory is easy to accept, but in itself proves nothing. The refractory horse is impulsive, but by careful training becomes submissive; by kind treatment the wild animal obeys the voice of its keeper. All impulses are the result of cerebral excitement, which by the control of psychological forces may be overcome in man as in the animal, and the person who does not attempt to control himself commits a great moral wrong, and the "sin of omission" rests upon him.

"'Tis education forms the common mind," and even where impulse is an "inheritance," the force of moral training and individual discipline can and should hold it in abeyance as far as it relates to criminal action. The mother's love controls her sullen and sulky child until his eye is full of laughter and his cheek dimpled with smiles. Psychopathy controls the turbulent forces of his inhibitory nature, and he is subdued. Man is but a child of "larger growth."

In this connection we may ask what are the bearings of the developmental theory, and the theory of evolution, upon the ethics, morals, health, and law of the present age? A man is either amenable to himself or to some established law, with precepts his guide, but law his rule, and if healthful laws are not administered, crime is either evolved or developed for evolution, and the highest interests of society are sacrificed to caprice and misguided judgment as an unavoidable sequence. It is only through the reasoning by induction, inference and comparison with concrete things and demonstrative principles, we are in anywise able to judge of the subtle, controlling forces of mentality, as witnessed in the agency and effect of electricity, produced by induction or chemical reaction, electrolysis, Farradism, magnetism, etc. By the force of constructive genius applied to mechanical arts, we are able by a simple touch to illuminate cities or sound the alarm of approaching danger. But as this paper is not intended to enter into an exhaustive discussion of this subject, connected with mind, I will leave this train of reasoning to be matured by others.

Mann (page 43) says : " In epilepsy the most internal part of the ascending parietal convolution of the brain has been found to be atrophied and indurated to cartilaginous consistence as far as its embrochure in the fissure of Sylvius." If we state as a pathological fact that it is a disease without a pathology, we shall fail to keep in the path of scientific truth and medical learning ; and the more we investigate this question, the more certain will become our conviction that the plea of transitory mania is a mere subterfuge to enable the criminal to escape legal responsibility.

" Epileptic vertigo, which a person may have had for years without suspicion of its true nature, on the part of himself or his friends, is very fruitful of mental disturbances. The *irritation*, we may call it, may at any time seize the higher centres of the brain, instead of the lower, producing delirium as transient as the vertigo. In this transitory mania—for it is such—an act of violence may be done for which the patient is utterly irresponsible."—*Fisher*, page 27.

This author keeps in the same trodden path of all other writers upon this subject, who never fail to associate transitory mania with epilepsy, where it must for ever rest as a manifestation of disease rather than a disease entitled to independent nosonomy. Motive and volition cannot be separated in any conscious act performed, for there can be no motive without the exercise of the will ; and if it can be ascertained that a motive existed for the commission of a crime prior to its committal, then the act must carry with it the responsibility of the actor.

All the leading authorities upon medical jurisprudence and mental diseases, as Maudsley, Ray, Esquirol, Hamilton, Spitzka, Bucknell, Tuke, Beck, Taylor, Browne, Mann, and Luys upon the " Functions of the Brain," agree upon the legal proposition that any party competent to distinguish right from wrong stands in the presence of the law as sane, and is responsible for his acts.

Luys (page 421) says : " The corticle periphery surrounding the optic thalami becomes intellectualized in some way to serve as exciting material for the activity of the cells of the corticle substance. These are the open gates by which all stimuli from without destined to serve as *pabulum vitæ* for these same corticle cells pass, and the only means of communication by which the regions of psychical activity come into contact with the external world."

From this view of the author, there appears to be no doubt of a cerebral localization of psychic and intellectual activity, and "that the sensory organs have a receptive organ in some way adapted to it in the central regions."

I have stated I had no objection to the theory of transitory mania as a symptom of some existing form of insanity, or as a manifestation of epilepsy; but it would be subject to less objection to consider this erratic condition of mind a *nomadic spasm* of localized forces of the brain; and if it cannot be shown that some lesion of the brain existed prior to the outburst of criminal excitement, then the party must be held responsible for any act of violence he may have committed; for the act would be voluntary, and all voluntary acts can be resisted.

When this view of the question of transitory mania shall become established law, farcical court dramas, where the insane act is played, will no longer be brought before the public, with all the mockery and satire upon justice and rhapsody of polemic pleading in such cases.

Public morals and common decency demand the restitution of common sense of parties interested in court proceedings in all insane criminal actions, that juries may be enlightened, and not confused by too much technical law and uncertain testimony.

If a person commits murder while intoxicated, the law does not hold him guiltless, because he voluntarily placed himself in that condition which rendered him unconscious of the act he was committing. So if one commits murder while laboring under any great impulsive excitement, he becomes and should be held by the law as responsible; for all such persons can control their feelings, and would do so if there was a certainty of punishment before them from which they could not escape. And here is where we see the psychopathic influence as a restraining force in the prevention of crime; for any specific law placed upon the statutes affecting crime, which makes its punishment sure, would become a psychopathic force to restrain criminal action, and more attention should be given to this subject in connection with the study of forensic medicine.

Gen. Grant, in a conversation with Prince Von Otto Bismarck, alluding to the attempted assassination of King William, said: "Although at home there is a strong sentiment against the death penalty in cases of spasmodic insanity, and it is a sentiment which one naturally respects, I am not sure but it should be made more

severe, rather than less severe. Something is due to the offended as well as the offender." "That," replied the Prince, "is entirely my view. My convictions are so strong that I resigned the government of Alsace because I was required to commute the sentences of a capital nature." Let there be a few prompt examples of laws faithfully executed, and the psychopathic effect will be so great that homicidal lawlessness of *cranks* will soon cease.

As objects multiply upon which we reason as we advance in intellectual development, *pari passu*, so a series of new forces spring up, which become factors in determining processes of judgment; hence we find equally well-educated men to differ in their opinions upon questions involved in controversies, and what seems material and pertinent to one is objective to another in its logical sequence and application.

DEFINITIONS OF INSANITY.

The legal definition of insanity is, that it is "a condition of mind which renders any party incapable of judging between right and wrong in any particular act at the time it is committed." A philosophical definition declares, "Insanity is a mental state in which acts of conception, judgment, or reasoning, persistently express themselves as different from the states of feeling and modes of thought usual to the individual in health" (Combe).

Such conditions as these render the patient legally an irresponsible being, and unfit him eventually for the performance of the social and political duties of life, for behind the act remain evidences of disordered intellect. This conclusion is in accordance with the expressed views of Esquirol, Tuke, Winslow and Bucknill.

A pathological definition of insanity is, an aberration and erratic condition of mind, dependent upon a morbid state of the cerebral nerve centres which control mental activities; and it varies in form as the location of nerve centres varies that are affected, and the changes produced in mental manifestation by pressure, over-stimulation, or lack of nourishment of the brain, are often analogous to the different forms of paralysis and aphasia, according to the localized disturbances. Under such a condition molecular forces are interrupted, and mental activity, as the intellectual factor is left struggling through abnormal media to give expression of the disturbance to the outward senses.

["The phenomena of moral responsibility, considered as a

purely physiological synthesis of all nervous activities, consists in a series of regular processes, executed by the organism at its own expense, and resulting from the harmonic consensus of all its parts. Moral sensibility finds also in the intervention of intellectual activity a new power which excites it, makes it active, and maintains it in a perpetual state of erethism."—*Lays, page 109.*

While this parenthesis refers to the social conditions of life, the truths it contains stand at the gateway that leads up to the fundamental truths of the conditions which impose legal responsibility. This also accords with the modern researches of those who have given much careful attention to neurology and the functions of the brain, and is the echo of the voice of science, reverberating through all the avenues of thought and the intricacies of life, arousing the force of mental activity, the *vividu vis animi*, which awaken the consciousness of the errors of judgment manifested in crime.

Ray, in his "Jurisprudence of Insanity," states that "the propensities and sentiments are also integral portions of our mental constitution; and enlightened physiologists cannot doubt that their manifestations are dependent upon the cerebral organization."

As far back as the days of Paracelsus and Democritus, Hypocrates expresses his views of cerebral physiology and of the pathology of insanity as follows, viz: "Men ought to know that from nothing else but thence [referring to the brain] come joys, despondency and lamentations."

Says Aitken: "To consider the subjective phenomena which collectively, in their various manifestations, constitute mind, an immaterial essence, as liable to disease apart from all derangement of the material organ, the instrument with which it is so closely and indissolubly united, is to believe in a most incongruous, unphilosophical, unphysiological doctrine. The more consistent theory is that which is known as the cerebral theory, now entertained by most of the eminent physicians who have made insanity a special study."

Dr. Boyd records the singular fact that almost invariably the weight of the left cerebral hemisphere exceeds that of the right by at least an eighth of an ounce.

The weight of the brain under different forms of insanity has been found as follows, viz: In mania the brain weighs 54 oz.

11½ drams; in monomania, 51 oz. 11¾ drams; in dementia, 50 oz. 5¾ drams; in general paralysis, 49 oz. 12⅘ drams. This tabular statement shows most conclusively that the true pathology of insanity is found in the encephalon. The specific gravity also varies in the white and gray matter.

Aitken alludes to *irresistible* impulse, but thinks *unresisted* a better term.

I introduce these facts to show the difference between insanity as a fact and the theory of insanity in *mania transitoria*, the latter having no pathology; and while the logic in any particular case may be correct, the premises, *a priori*, being false upon which to base a plea, the conclusions must necessarily be wrong, and verdicts will be rendered in favor of the criminal.

Clouston (page 232) says: "Professor Benedick, of Vienna, showed at the International Medical Congress of 1881, in London, a number of brains of habitual criminals, who, he affirmed, had their convolutions arranged in a certain simple form peculiar to the criminal classes, so that on seeing such a brain he could tell the ethical tendencies of the person to whom it belonged, just as one can tell a dog to be a bull-dog by his jaws."

When one is suffering from dementia, the listless, incoherent condition is interrupted by a sudden loud tone of voice, that causes a vibration of certain cerebral nerve centres, which is exhausted in a vocal response, while the party is wholly unconscious of its meaning or of any of the surroundings.

Bucknill and Tuke, in their work upon "Physiological Medicine," page 443, referring to the pathology of insanity to cerebral disturbance, state the following facts: "Greeding, in 216 cases, found the skull unusually thick in 167, the *dura mater* adherent to the cranium in 107 cases, the *pia mater* thickened and opaque in 86 out of 100 cases of mania, and beset with hydatids and spongy bodies in 92 out of 100 cases. The choroid plexus was found healthy in these respects in only 16 cases out of 219. Merkel noticed the increased density of the cerebral substance" in insanity.

Sœmmering and Arnold confirm these observations, and Pascal declares that all mental diseases are the effect of "morbid alterations in the brain and spinal cord." I will also call attention to the views of Virchow, as expressed in his "Cellular Pathology," in support of the same conditions. While his views are not given in connection with any discussion of this subject

directly, they have an important bearing upon the theory that all insanity is dependent upon cerebral changes, which may be slow and progressive in nature, as when melanoid tumors or gliomata press upon the corpus striatum, "that have their origin in the neuroglia of the interstitial connective tissue," and many other forms of change.

It is not logical to say because the song of the bird is not found in its throat, *ergo*, the anatomical structure of the throat has nothing to do with the musical notes; nor would it be reasonable to say because specific lesions were not found, *ergo*, the anatomical changes of the eucephalon had nothing to do with mental diseases.

Most of the late writers agree to this proposition, and daily experience proves its correctness: "We must be careful not to underrate their importance on account of the occasional absence of anatomical changes after death, and to conclude that for this reason such anatomical lesions, when present, may not be the cause of the mental disorder."—*Griesinger, page 291.*

While man does not possess a prescient mind that would enable him to unmask the speculative thought which underlies and controls much of human action, a knowledge of the force of mental activity must be gained through a comparison of the negative with the active life manifested in physical efforts. The General upon the battle-field gives the command, and the force of the law of obedience brings contending armies together in deadly strife, and human life is sacrificed. This is a fair illustration of the force of the law of psychopathy, and will enable us to judge more fairly of the contingent results of daily action, and show how the positive execution of law will tend to lessen criminal action.

The clinical importance of the subject of psychology and biology, as questions of science, seems to have been overlooked by our teachers of medicine, and as yet these branches have not been assigned a place in the college curriculum; and whatever of public attention may have been directed to this department of learning, none but the flippant writers upon the stage of experiments have undertaken the explanation of the curious effects of mind upon mind, until quite recently, notwithstanding Baron Reichenbach's experiments in odic forces and biology nearly thirty years ago.

"I know
That where the spade is deepest driven,
The best fruits grow."

and make the following quotations from the work of Griesinger upon "Mental Pathology:"

"Emotion, when transitory, and occurring in previously healthy organisms, is speedily calmed; when, however, bodily disease is already present, and when the causes are long-continued, there generally arise many complicated disorders of the organic mechanism, which the simple cessation of the emotion cannot as quickly terminate."—Page 40.

"Very much depends upon the duration and intensity of the phenomena, whether we consider the mental state as morbid."—Page 44.

"We frequently see in subjects who, up to that moment, have been in the actual or at least apparent enjoyment of perfect health, just as in some of those cases in which there is developed a suicidal tendency, attacks of most violent anxiety with obscuring of consciousness suddenly show themselves, accompanied with frightful hallucinations, during which the patient, in the blindness of his fury, seeks to slay all who come in his way. These cases, which, judged by their symptoms, appertain more, it is true, to *mania*, but which in their psychological relations represent violent fits of melancholic anxiety, and especially morbid negative emotions, possess, in their want of any moral cause, a great analogy to those sudden fits of profound anxiety and severe mental suffering which have sometimes been witnessed as precursors of epileptic attacks."—Page 184.

Under this head come "those cases in which those homicidal impulses suddenly, and without external motive, arise in persons who have been hitherto of a lively, joyous, and loving disposition, and incessantly intrude themselves upon their thoughts."—Page 185.

Here the author refers to several notable examples of homicidal impulse: "A distinguished chemist, tormented with a homicidal impulse, would often prostrate himself before the altar and implore the Deity to deliver him from the atrocious propensity," etc. Also refers to Catherine Olhaver, to a nurse, and the wife of a shoemaker, who were "seized with an *almost* irresistible impulse."—Page 187.

He also speaks of the "habitual perversion of the feelings with impulsive fits of anger, without any derangement of the intellect," and cites the case of "an only son, brought up under the eyes of a weak and indulgent mother, who early acquired

the habit of *yielding* to all his caprices and to all the impulses of a restless and ardent temperament" (page 190), and on page 208, example xxxv., refers to "paroxysms of fury," and as an illustration relates the story of the Swabian peasant, with which every student of psychological medicine is familiar; but in none of these cases has he shown that the impulse is *irresistible*.

Upon such cases as these is based the testimony in favor of the theory of ephemeral "transitory mania," with which our court calendars are filled; and these cases even do not prove either the conscious or unconscious irresistible nature of the malady; nor does this classical writer claim or attempt to prove that transitory mania exists as an idiopathic disease, and common intelligence forbids such labor, as an effort against justice and moral rectitude.

"The fundamental disorder in mania, the irritation upon the motory side of the soul-life, exhibits itself, first of all, in this sphere, as a high degree of mental excitement, with restlessness, impetuous and violent desires and actions." "The pleasure in loud speaking, in shedding blood, etc., may show itself in those violent and boisterous ways, and these results, fixed or *transitory* conditions which, according to the predominance of this or that desire, are known under the name of kleptomania, homicidal mania, etc."—Page 197.

"Generally, from the commencement of insanity, or at least very soon, the quantitative increase and exaltation of thought are so great that there results a restless and constant succession of isolated ideas which have no intimate relations with each other, and constantly change their combinations, are very *transitory*, or of a very fragmentary nature."—Page 199.

"Whether, and to what extent, certain directions of the will and impulses in the insane, particularly such as lead to criminal acts, are irresistible, is a question which can scarcely be answered with certainty."—Page 55.

"As to the *invasion and course* of mania, it is observed sometimes as a pure and independent form of mental disease, as a stage of development in the successive series of mental disorders; sometimes *transient* attacks of mania, or more correctly of fury, occur in individuals who are already subjects of profound mental disease." "In *epileptics*, also, it is not uncommon to observe attacks of mania which are often characterized by a high degree of blind jury and ferocity. Sometimes they immediately follow the *epileptic* attacks."—Page 203.

The same field of research has been traversed by this learned and classical writer that has so repeatedly been investigated by others, without any apparent effort to prove how such a condition can occur possibly under the laws of psychopathy or psychosis, as understood at the present time; and until some more positive evidence of its existence shall be presented, the duty I owe to society will make it my aim and urge me to oppose the theory of *transitory mania* as an ogre too mythical to be brought before courts and juries. The baneful effects of this theory upon public morals are matters of record and familiar to the judiciary of our country.

In discussing this subject I have endeavored to avoid sacrificing facts to either ethics or rhetoric, holding that the cognate sciences are the factors to be relied upon to explain by comparison and illustrate the phenomena of cause and effect; and have endeavored to show that while the remote causes of insanity multiply with daily experience, pathologists have established the fact that the disease itself is dependent upon cerebral lesions and disturbances of nerve centres of the encephalon, which may be either primary or dependent upon reflex action, as in hysteria, dyspepsia, disease of the heart, spine, liver, and kidneys. "The anatomical changes which indicate insanity—that is, which produce psychological anomalies during life—are naturally sought for within the cranium, in the brain and its membranes."—*Griesinger*, page 290.

Thus, with the preponderance of evidence in our favor, we are forced to conclude that it is impossible for transitory mania to hold a place in medicine, *per se*, and that the theory is surrounded by more empiricism of law and medicine than any other humbug of modern times.

In conclusion, whatever may be thought of our method of life and our efforts in the various walks of a chosen profession, may we never forget to cherish a love for justice, reverence for law, respect for the rights of others and sympathy for the unfortunate in mind; and when our labors shall cease, may we have a consciousness of having performed our duties faithfully and well, without fear or prejudice towards any.

"Whatever creed be taught or land be trod,
Man's conscience is the oracle of God."

SOLUTION OF CHLORIDE OF ALUMINIUM IN THE TREATMENT OF DIPHTHERIA.

By JAMES T. SULLIVAN, M.D.

There is no subject in modern therapeutics upon which medical authorities differ so essentially as in the treatment of diphtheria. This diversity of opinion is chiefly with regard to the local treatment, all agreeing that internal remedies and alimentation should be entirely supportive from the beginning.

The numerous specifics which have been advocated from time to time for its cure prove the futility of all known remedies and the obstinate character of the disease.

From recent investigations by pathological histologists, concerning the nature of the morbid poison in diphtheria, we are justified in forming the following practical conclusions:

1. That in certain peculiar atmospheric conditions, the result of bad drainage, dampness, etc., the air contains the sporules of a parasitic fungus.

2. That, by the inhalation of this poisoned atmosphere, a sufficient quantity of these sporules are lodged upon the mucous surface of the throat to form the nucleus of the disease.

3. That the system being thus inoculated, like the vaccination of the cow-pock, a process of fermentation is set up in the blood which culminates in fever, and all the symptoms of blood-poisoning.

Oertel, the German pathologist, remarks that "the discussion concerning the nature of diphtheria assumed a new phase when the discovery was made, by Heuter and myself, that the diphtheritic membrane, the subjacent tissues, and even the blood, contained great numbers of vegetable organisms, or bacteria," to which they gave the name of micrococci. A series of experiments was instituted whereby different animals were inoculated with the diphtheritic virus, which developed all the local and general symptoms of the disease. By further experiments these pathologists furnished the proof that "*diphtheria begins as a local disease and develops afterward into a general one, and that, moreover, the general infection is kept up by the local one.*" The disease establishes itself first in one spot, the focus of infection, and thence distributes itself throughout the body, until, by general blood-poisoning, it renders the organism incapable of life" (Ziemssen).

These authorities are quoted to emphasize the necessity of *local treatment* and to condemn the practice of complacently treating this fearful disease "on general principles." We must bear in mind that we have a treacherous and dangerous malady to deal with, and should neglect no measures which promise relief, even though their application may not be agreeable to the patient.

A solution of nitrate of silver (one drachm to the ounce) should be applied with a *sponge* probang three times the first twenty-four hours and twice the second. This application will generally cut short the disease in the beginning, and *always* relieves the local symptoms and the general fever.

I am aware that the non-localists will censure this treatment as cruel and severe; but if rightly applied it is not very painful, and the relief it affords is most marked and satisfactory. This application not only destroys the fungus, but acts as a healthy alterative and astringent to the diseased mucous membrane by coagulating the albumen of the subjacent tissues and retarding exudation.

The next most important measure in local treatment is *irrigation of the throat* every half-hour with warm water medicated with the *solution of chloride of aluminium, in the proportion of two tablespoonfuls to the cup. If the patient is old enough to gargle effectively, that will be sufficient, but if not, the throat should be washed out with the solution by means of a Davidson syringe. The chloride of aluminium, by its antiseptic and astringent action, seems to put a new face on diphtheritic surfaces within a few hours. Its effects are surprising, and as it is non-poisonous it may be used very freely. Where the use of nitrate of silver is objected to, this solution could be applied of full strength, either with probang or syringe.

* Having observed the most remarkable and satisfactory effects of this antiseptic solution in numerous cases of true diphtheria, the writer requested Mr. F. C. Keil, of 2000 Market Street, to prepare a supply for dispensing, and ventures to hope it will become official in the next issue of the United States Dispensatory.

In consequence of the prevalence of small-pox in Canada, the postal department at Washington has requested the Secretary of the Treasury to have all mails from Canada to the United States thoroughly disinfected.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, Sept. 8, 1885.

The meeting having been called to order by the President, Dr. Jewell, the minutes of the former meeting were read and approved.

Dr. Arnold then read a paper upon the rational treatment of Otorrhœa.

Dr. Whittell said he thought but little had been left unsaid by Dr. Arnold in his interesting paper upon the treatment of otorrhœa. He was of opinion, however, that the general practitioner of to-day better appreciates the gravity of a discharge from the ear, and is not disposed to neglect it, as formerly. The reproach was true until within a few years, but with few exceptions is undeserved to-day. He wished to take this opportunity to express his condemnation of the practice, as suggested in late paragraphs in several medical journals, of *packing* the auditory canal full of pulverized boracic acid. The practice is recommended as a panacea for all forms of purulent otitis. He considered the treatment inconsistent with that for a similar condition affecting any other portion or cavity of the human body. Of course, it acted as an absorbent to a limited extent, but the powder nearest the seat of discharge soon became saturated with pus and formed a slushy mass, which, being in contact with the mucous lining, macerated it, and did more harm than if the discharge were allowed free vent. That the use of boracic acid is very beneficial he had no doubt, but in place of packing the ear full, it should be only insufflated into the previously cleansed ear, in sufficient quantity to fully cover the exposed parts, and including the membrane of the tympanum, to a depth of one-eighth of an inch, or thereabouts. This will give all the benefit to be derived from the boracic acid. External to this, and with the idea solely of its drainage properties, he places a pledget of dry absorbent cotton, containing bichloride of mercury, from a solution of the strength of one part in two thousand. In cleaning the ear, when treating it by the so-called "dry process," it is recommended to use only absorbent cotton for the purpose. Dr. W was of the opinion that it can only be imperfectly done by this method, and that the syringe is the only thorough means of accomplishing it,

believing that the little water which might remain would be of far less injury than an equal amount of foetid pus. The water should be distilled, and contain twenty-five per cent. of peroxide of hydrogen, which will prevent the possibility of introducing any new infectious matter into the cavity. Whatever dressing is used in the ear, it should *never* be allowed to remain long enough to become saturated with the discharge, and should be changed at least daily. As a substitute for the boracic acid, where it seemed inefficacious, he uses the salicylate of chinoline, which has very similar properties to iodoform, without its unpleasant odor.

Dr. Flood, in referring to Dr. Arnold's statement that many general practitioners neglect their cases of otorrhœa, said that this was sometimes true, yet he knew of many catarrhal conditions of the ear which get well under simple tonic treatment. He believed that the syringe was the most efficient instrument, both for cleansing the ear and for the removal of foreign bodies.

Dr. J. A. Anderson had only to emphasize the statement of Dr. Whittell that it was not prudent to pack the ear with boracic acid, or any other substance, as he had tried it in a case of purulent otorrhœa following scarlet fever, and it only seemed to him that it was damming up the pus.

Dr. Davis agreed with Dr. Arnold in all he had said about the gravity of any aural disease, and urged the practitioner to put such cases at once under competent treatment.

Dr. Carrier, of Detroit, was introduced to the Society, and had its privileges extended to him during his residence in the city. He said that his experience in such cases as those described in the paper was very limited, because he generally sent them to specialists. He recognized the importance of early treatment, as he had seen more than one case of meningitis originate from this very cause.

Dr. Arnold replied that he did not advocate the indiscriminate use of boracic acid as a panacea in all forms and in all stages of the disease. Neither did he pack the ear, but simply injected the acid into it by means of an atomizer. He considered that the great danger of otorrhœa lay in the very fact that some got well without treatment, just as Dr. Flood had said; but others do not, and these get worse every day until appropriate treatment is adopted. The syringe was the proper instrument to use for the removal of cerumen or other foreign bodies from the ear, and no other should be used until that failed.

Under head of new business, the Secretary gave notice that at the next meeting he would introduce a motion to arrange that Mr. Duncombe should take full management of the library. He did not wish to bring the subject up for discussion at present, as it might cost \$20 per month, and he did not know the exact state of the Society's funds.

The President told the Society to consider this, as it would cost them about \$300 per annum.

Dr. Morse moved that the Society should spend \$20 per month towards the establishment of a library. The motion was seconded, but at the request of the Secretary it was allowed to lie over until next meeting, when the financial condition of the Society would be known.

WM. WATT KERR, Rec. Sec'y.

SAN FRANCISCO, Sept. 24, 1885.

The meeting having been called to order by the President, Dr. Jewell, and the minutes of the former meeting read and approved, the name of F. Z. Bazan, M.D., Faculty of Medicine, Paris, 1873, was proposed for membership by Drs. W. S. Whitwell and Wm. Watt Kerr, and referred to the Committee on Admissions.

The Secretary then read a communication upon leprosy by Dr. Fitch, of Honolulu.

[This paper appeared in the October number of the JOURNAL.]

Dr. W. P. Gibbons said that he did not think the paper affected the truth of Dr. Saxe's statements regarding the origin of the disease in the islands. He regretted that Dr. Fitch had not dwelt longer on the etiology of the disease, and hoped he would do so at an early date, as his opinion upon the subject must be of some value.

Dr. Arnold remarked that his experience in leprosy had been confined to examination of the larynx in patients affected by the disease. In former years syphilis was regarded as the offspring of leprosy, but now we have the opinion that leprosy is the progeny of syphilis.

Dr. Morse called attention to the fact that Kleb's discovery of the bacillus in leprosy would appear to be at variance with the clinical experience of Dr. Fitch, which tended to show that leprosy is not contagious.

Dr. Whitwell only wished to make known to the Society the

extraordinary opportunities which Dr. Fitch had for observing this disease. He had been practicing in the islands for nearly ten years, and during that time had made the subject a special study, both among the populace generally and also in the leper asylums.

Dr. Arnold said that he had read an article by a physician who had been superintendent of a lazaretto for twenty years, and who had arrived at the same conclusions as Dr. Fitch.

Dr. Donnelly, in 1844, had a negro boy and girl who had been imported directly from Africa. The boy was a leper, and although kept under treatment for three years, his condition was not in any way improved. The Brazilians were not afraid of him, and another negro boy; who always slept with him, never caught the disease. He could therefore agree with Dr. Fitch as to the non-contagious character of the disease; but he did not believe that it had any relation to syphilis, or we should find it among the Mexican Indians, who were entirely free from the latter disease until it was introduced among them by the Spaniards.

Dr. Jewell referred to a case mentioned at a former meeting, where a healthy child was infected by sticking a pin into his flesh which a leper had been forcing into his own anæsthetic spot.

Dr. Whitwell then exhibited a jacket composed of brown paper, steel supports and bandages, stiffened by means of glue, which might be substituted for that of Dr. Sayre. It is lighter than the plaster jacket, can be removed for purposes of cleansing the patient, and is more durable.

Dr. Kenyon said that the Sayre jacket could be removed in the same way.

Dr. Donnelly believed it to be a marked improvement upon the Sayre jacket.

Dr. Norris moved that the thanks of the Society should be communicated to Dr. Fitch for his interesting paper.

Under the head of unfinished business, Dr. Morse's motion that the Society should expend twenty dollars per month in the purchase of books for the formation of a library, was brought up for consideration.

Dr. Watt Kerr said that the Society had not this amount to spend without drawing from their bank account, and therefore moved as an amendment that the sum of \$150 per annum should be devoted to this object, and the library should be put under

the charge of Mr. W. S. Duncombe, who had volunteered to attend to it gratuitously, provided that the books were not removed from the room. The amendment was seconded by Dr. Wanzer, accepted by Dr. Morse for the original motion, and carried by vote of the Society.

It was explained that Dr. Kenyon would remain as librarian, and Mr. Duncombe as curator; but that Dr. Kenyon's responsibility for the books would cease so soon as they were removed from his custody.

It was next moved and carried that the publication committee should confer with the librarian and submit [for the approval of the Society a list of such works as it might be expedient to purchase.

Dr. Whitwell moved that the Secretary be empowered to receive contributions of books, and also of cash for the formation of a library fund. This motion was carried.

Dr. Rosenthal moved that the thanks of the Society, together with the acceptance of his offer, should be extended to Mr. Duncombe. This motion was also carried.

There being no further business, the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

Sacramento Society for Medical Improvement.

SACRAMENTO, September 29, 1885.

The Society met in regular session, Dr. H. L. Nichols, President, in the chair. On the reading of minutes of the previous meeting, Dr. Huntington stated that, referring to Ambrose Paré's dressing, he had meant to convey that drainage, or absorbent material, not drainage, was wanting.

The Secretary reported that the Society's subscription to the "Index Medicus" had been renewed, and that the volumes were complete to date.

A letter was also read from Dr. Denison, of Denver, Col., stating that after much enquiry he could find no foundation whatever for the "wonderful experiments" alleged to have been performed in that city, notice of which appeared in the *PACIFIC MEDICAL AND SURGICAL JOURNAL*, of June, 1885.

Dr. G. A. White, of the Sacramento County Hospital, read a paper on a case of gunshot injury, exhibiting the patient and specimens. The subject of the injury, C— P—, aged 27,

was engaged at 9 P. M., on the night of the 2d of August, in hunting coons. While on his hands and knees, traversing a patch of brushwood, he discovered the game and turned toward his comrade, who passed the gun (which was cocked) to him, muzzle first. One barrel was discharged, the load of No. 6 shot entering the upper portion of the shoulder, immediately over the acromion process, traversing the parts in a direction downwards, backwards, and inwards, emerging at a point internal to the axillary line, and on a level with the posterior fold of the axilla. Assistance being procured, the injured man was placed in a wagon, and reached the County Hospital at 3 A. M. the following day. On examination, the axillary artery and brachial plexus having apparently escaped, it was decided to make an exploratory incision, remove the injured parts, and, if possible, save the arm. The same morning, with the assistance of Dr. H. W. Nelson, the operation was performed. The knife was introduced through the wound, and a flap, consisting of the deltoid and superficial coverings cut from within, outwards, and reflected. The under surface of the flap being extensively carcerated, was cleaned up with the knife. There was extensive comminution of the bony structures in the vicinity of the wound. The glenoid cavity was intact. What remained of the head of the humerus, with one and a half inches of the shaft, was removed, together with half an inch of the external end of the clavicle, a portion of the coracoid, and all the acromion process of the scapula. Antiseptic precautions were observed throughout, the "bichloride" being used for irrigation. During the first four days there was considerable sloughing all round the margins of the flap. The patient did very well for two weeks, when his temperature rose to 104° F., and the wound began to discharge very freely; for several days previous it had been impossible to preserve an aseptic condition. He was given quinine and iron, with a liberal allowance of stimulants. Under this treatment the temperature fell several degrees. At the end of the third week he had a rigor, and the temperature again reached 104° F. The left inferior extremity became swelled and tense, the calf of the leg was hard, and painful to the touch. There was tenderness on pressure over the line of the vessels, but no marked cord-like feeling. The constitutional treatment was continued, and locally elevation, pressure, and the liquor plumb. sub., with tr. opii, as an application, were used. At the end of the fourth week the

temperature had fallen to 99°. From that time convalescence had been uninterrupted. At date (Sept. 29th) the wound had healed, leaving a small sinus, from which there was still a slight discharge.

Dr. Huntington was disappointed that the bichloride dressing had not been found satisfactory. He would still adhere to the belief that it was the most effective antiseptic the surgeon had at his command. Believing that every precaution had been adopted at the primary dressing, he was of the opinion that the wound must have been irreparably infected before reaching the hospital, or else that foreign bodies had become imbedded in the parts, and there acted as suppurative foci.

After some further discussion the Society adjourned, to meet on the third Tuesday in October.

JAMES H. PARKINSON, Sec'y.

Dr. Paul Koch reports, in the *Annales des Maladies de l'oreille, du Larynx, du Nez et du Pharynx*, a case in which a piece of bone, weighing sixty grammes, nineteen millimetres long, seven mm. wide in one direction by fifteen mm. in another, had lodged in the trachea at its bifurcation, which remained immovably fixed for fifteen days before operative interference was allowed. Tracheotomy was performed, followed by an access of coughing, which ejected the foreign body through the tracheal wound. Krishaber advises against tracheotomy when the foreign body is pointed and immovable; but this case clearly proves his opinion at fault.

The Detroit Lancet says that Dr. J. S. Billings is a wonderful man. He is a surgeon of the U. S. A., edits the *Index Medicus*, prepares the volume of the index catalogue of the library of the Surgeon-General of the U. S. A., lectures at the Johns Hopkins University, fills the chair of hygiene at the Columbia College, New York, and lately has been elected to the chair of sanitary engineering in the same institution. To those who take this course, which is to continue four years, the college will grant the degree of Sanitary Engineer.

According to M. Gillette, iodoform can be rendered inodorous by adding 1 part of sulphate of quinine, and 3 parts of charcoal to 100 parts of iodoform.

EDITORIAL.

The International Congress.

The only important events regarding the Congress that have transpired since our last issue are the publication, in the *American Medical Journal*, of a historical account of all that has been done by the American Medical Association in this matter since the meeting in Washington, in May, 1884, and the declaration of independence by the Executive Committee appointed by the Committee of Arrangements at its session two months ago.

In his historical account, the editor of the *American Medical Journal* argues that as the Committee of Invitation had been appointed by the American Medical Association, therefore the Association was accountable for all acts of the said committee. If we could only agree with him in this one particular point, and be convinced of the validity of the Association's claim to supremacy, he would receive our most hearty co-operation in upholding the action of that body against its assailants. Unfortunately we cannot acknowledge this authority.

The invitation was presented at Copenhagen in the name of the "profession in the United States." We grant it must have been known in Europe that the idea originated in the American Medical Association, and that the initial steps were taken by that body; but this information only reached them indirectly, as the name of the Association was not included in the invitation, and should not therefore appear on the official records of the Congress, which constitute the only laws governing that Assembly. If the Association never extended an invitation, we cannot see what right it has to claim the position of host on this occasion; and if the crime of being a "first cause" is to decide the matter, then the whole responsibility for the shame and disgrace which have accrued to the American medical profession in connection with this subject, must be laid at the door of that unfortunate being who first agitated it among his medical brethren.

Further: According to the custom of the Congress, the gentlemen presenting the invitation for the next place of meeting have been regarded as their committee for making the necessary arrangements, and hence Dr. Billings and his confreres, so soon as their invitation was accepted, ceased to be the ambassadors of the "profession in the United States;" they even, in the eyes of the Congress, laid aside their character as national representatives, and became the servants of that body, entrusted with the duty of making the necessary arrangements for the meeting of 1887, and selected for this purpose only because they were resident in the country where that meeting is (or was) to be held. We have already given the testimony of Sir James Paget and other prominent members of Congress in support of these statements, which prove beyond a doubt that Dr. Billings' committee, after discharging their duty of presenting the invitation entrusted to them by the profession in the United States, became responsible to the Congress alone for their future actions in the matter.

It may be objected that the duties of the committee did not end with presenting the invitation, because they had full powers *from the Association* to make all preliminary arrangements. This is just the point where the American Medical Association overstepped its own authority, and interfered in a matter with which it had no business. The Congress has its own committee for making its arrangements, and the fact that the Association, either through ignorance or presumption, endeavored to control this committee, does not by any means transfer the power from one to the other. This is of much importance, for the point at issue is: Has the Congress the power of making arrangements for its own meetings, or does that power lie in the hands of the American Medical Association? The Arrangement Committee is answerable to either one of these bodies, but not to both; and the one to which it is answerable has full power to approve or disapprove of its action. We have shown that hitherto this power remained in the hands of the Congress. We hoped that the committee would have recognized this fact at its meeting in

September last, and courteously retired from the false position which they now hold. It is no disgrace for anyone to admit that he has made a mistake, and this certainly would have brought "peace with honor."

We have given this historical account of the working of the Congress to show our readers that these triennial medical conventions antedate the meeting of the American Medical Association at New Orleans in 1884, and has, therefore, some laws and precedents to regulate its actions.

Probably the most startling event in the whole history of this miserably-bungled affair is the following resolution, passed by the Executive Committee appointed by the Committee of Arrangements two months ago :

" *Resolved*, That this Executive Committee enters upon the management of the affairs of the Ninth International Congress with the understanding that, in accordance with Rule No. 10, its powers are not restricted, except by the rules and regulations adopted September 3, 1885, by the Committee of Arrangements appointed by the American Medical Association, in April, 1885; and that the actions of this Executive Committee are final, not being subject to revision, amendment or alteration, by either the Committee of Arrangements or the American Medical Association."

We certainly admire this bold piece of policy on the part of the Executive Committee, but hardly find it consistent with the opinion which the American Medical Association obtained from Ex-Speaker Randall, and with which they sought to justify their action at New Orleans: "* * The theory that a select committee, created by a body with certain defined powers and duties, gives any *vested rights*, so to speak, which places it above or beyond the power of the creating body to review or regulate, is one not only without precedent in parliamentary law, but is untenable on any ground of parliamentary principle."

We have always been in accord with the sentiments expressed in Mr. Randall's opinion, and never imagined that Dr. Billings and his associates constituted an irresponsible committee; we only held that they were answerable to the Congress, and not to

the National Association, and that any instructions regarding the arrangements issued by the Association were invalid, as the Congress has always made its arrangements through its own committee. But here we have a committee declaring itself to be irresponsible, a servant without a master. This combination calmly asserts that it is going to do the work, and that the Congress and profession generally will accept and approve of that work, whether they like it or not. Out in California we have had some experience of Vigilance Committees in troublous times, who were invested by the citizens with full powers to use all means to quell the disturbance, and this is the only irresponsible committee known in this State. Possibly this Executive Committee is of that nature, and has been appointed to carry out the purposes of Dr. King, of Missouri, who, when Dr. Billings' report was up for discussion at New Orleans, so eloquently advocated that "the specialists of the new code persuasion should be taken by the top of the head, and their throats cut at once." We write in the greatest trepidation, lest from New York the wail of widows and orphans confirm our worst suspicions.

Winters vs. Graves, a Suit for Malpractice.

It is our misfortune to publish this case, which is without parallel in the history of California. In April, 1884, Dr. Graves, of Petaluma, was called to see Mrs. Winters, the wife of a laborer, whose family he had attended gratuitously for nearly sixteen years. He found that the woman, who was fifty-eight years of age, had fallen from a height, and injured her ankle. The limb was very much swollen, so as to interfere with examination, but no crepitus could be elicited, neither was there any displacement or shortening, and as the swelling continued, the limb was placed in position and wrapped loosely in cloths saturated with anodyne lotions. The patient received every attention from Dr. Graves, but there was some stiffening of the joint and a very slight inversion of the foot. No complaints were made until a new doctor arrived in the town, who told the patient that the

limb had been badly treated, and advised her to sue for malpractice. The case was examined by ten of the chief surgeons in the State, including Drs. Lane, McLean, Morse, and Dennis, all of whom said that there might have been a sprain or an incomplete fracture of the external malleolus, but that the ends of the bone were in perfect apposition and never had been separated, and that the stiffening was probably due to inflammatory adhesions.

Two other doctors, one of them being he who advised the suit, testified that there was shortening of the limb, and that the lower fragment of the tibia had been driven up and behind the fibula. One of these would-be surgeons, Dr. Wells, is nearly eighty years of age, and had not read a work upon surgery for thirty years; the other, Dr. Ivancovich, confessed that he had no special experience in surgery. Their incompetence may be judged from the way they measured the patient's limb *in court*. This was done by taking a carpenter's rigid rectangular rule, and measuring the limb as she maintained the upright position.

The result was, that in the opinion of nine jurymen the testimony of two unknown, inexperienced general practitioners outweighed that of ten specialists in surgery, all of whom are well known throughout the State, and some of whom possess a national reputation, so that a verdict was returned in favor of the plaintiff, awarding her \$8,000 damages.

In bringing this before the medical profession of the United States, we need not dwell upon the disastrous effects of such an iniquitous decision, which are only too evident. Under such conditions a medical man can only take charge of charity cases, at the risk of his worldly possessions (which fortunately are generally *nil*) and his professional reputation, which is his whole capital in trade; moreover, such a verdict forms a precedent for the encouragement of those hunters after blood-money who are only too numerous in all our large cities.

There was no evidence in this case to show wherein the treatment was bad; the jury only saw that the limb was not as good

as it had been previous to the accident, and blamed the doctor for it, although it was shown conclusively that the result was all that could be expected from the nature of the injury and the constitution of the patient. We have found that it is impossible to make men understand, especially when they do not wish to do so, that in suits for malpractice it is to be proved that the treatment is at fault, not that the limb is less useful than before the injury; in other words, the subject resolves itself into the question—Is the resulting deformity due to negligence on the part of the practitioner, or is it due to the nature of the injury, constitution, conduct, and circumstances of the patient? The presence of deformity is thus by no means an indication of malpractice, for the part that the surgeon plays in the work of repair is a very secondary one; indeed, in nine cases out of ten there is as much justice in blaming a surgeon for the deformity as there is in censuring a farmer for short crops in a bad season. The verdict in this case reminds us more of the ignorant Indian chief who beheads his unfortunate medicine-man, than of the intelligent action which *hitherto* has characterised the white man.

Dr. Bauer, of St. Louis, in a paper read before the Mississippi Valley Medical Society, describes a case in which the patient had acquired the "cucaine habit." The drug had originally been administered hypodermically for alcoholism. The patient, finding its effects most satisfactory, had resorted to personal administration, until he could tolerate a dose of ten grains. The effects produced are noted at length, the point of most immediate interest being the decided aversion for alcoholic liquors, exhibited from the time that large doses of the alkaloid were first used.—*Jour. Am. Med. Association.*

M. Lépine, in a memoir presented to the Academie des Sciences, states that intra-pulmonary injection of bichloride of mercury in pneumonia arrests the progress of the disease and suppresses the ronchi almost instantaneously. Dr. Truck, a pupil of M. Lépine, has obtained important results by treating cases of pulmonary tuberculosis by this method.—*Brit. Med. Jour.*

Licentiates of the California State Board of Examiners.

SAN FRANCISCO, October 17, 1885.

At the regular meeting of the Board of Examiners, held Oct. 7, 1885, the following physicians having complied with the law and all the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State:

THOMAS E. ANNIS, National City; Rush Med. Coll., Ill., Jan. 24, 1866.

FRANK B. CARPENTER, San Francisco; Coll. of Phys. and Surg. of the City of New York, N. Y., May 15, 1883.

ROBT. C. COTTINGHAM, Tomales; Coll. of Med. of the Univ. of the State of Missouri, Mo., June 7, 1883.

JOHN F. ESHER, San Diego; Kentucky School of Med., Ky., July 1, 1878.

JOHN T. KITCHINGS, San Francisco; Med. Dept. Vanderbilt Univ., Tenn., March 1, 1885.

FRANK A. LEWITT, Eureka; Med. Dept. Univ. California, Cal., Nov. 7, 1878.

RICHARD H. LULL, San Francisco; Rush Med. Coll., Ill., Feb. 20, 1883.

JOHN MONTGOMERY, San Francisco; Missouri Med. Coll., Mo., June 14, 1862.

GEMEL B. H. RUTHERFORD, San Francisco; Med. Dept. Howard Univ., D. C., March 6, 1880.

JAMES K. SECORD, San Jose; Rush Med. Coll., Ill., Jan. 25, 1867.

JOHN L. SHIBLEY, Los Angeles; McGill Univ., Canada, Mar. 30, 1885.

JOSEPH P. WELCH, Millville; Texas Med. Coll. and Hospital, Texas, March 15, 1875.

A letter was received from Dr. Miller, of Redding, stating that the Chinese "Dr. Men Look" had been tried before the Superior Court of Shasta County, and convicted of practicing without a license, and fined \$75, or seventy-five days in jail.

R. H. PLUMMER, Sec'y.

On the 20th October, E. P. Fish, San Francisco, and M. D. Kellog, San Bernardino, were convicted of practicing without a license. The latter was fined three hundred dollars.—[EDITOR.]

Dr. Chautemesse, in a paper read before the Académie de Médecine, gives the results of a microscopic examination of Ferran's inoculation fluid. The fluid is variable in its composition. Sometimes it is a cultivation of impure comma bacilli; at others it contains masses of micro-organisms, the comma bacilli being barely present. In either case hypodermic injections of this fluid is not a prophylactic against cultivated comma bacilli administered intestinally. In all the experiments performed, Ferran's fluid failed to excite symptoms of cholera.

Notices of Books, Pamphlets, Etc.

A TEXT-BOOK OF PHARMACOLOGY, THERAPEUTICS AND MATERIA MEDICA. By T. LAUDER BRUNTON, M.D., D.Sc., F.R.S., etc. Adapted to the United States Pharmacopœia, by FRANCIS H. WILIAMS, M.D. 1885. Pp. 1,035. Philadelphia: Lea Brothers & Co.

This long-expected work of Dr. Brunton has at last made its appearance consecutively in England and America. The latter edition displays the usual care of the well-known publishers in typography. The illustrations are profuse and creditable. The book is divided into three main parts; the first, comprising over 400 pages, is devoted to general pharmacology and therapeutics; the second, of only thirty-five pages, to general pharmacy; and the remainder of the work to inorganic and organic materia medica, arranged according to their chemical and botanical sources.

We learn from the preface that the author has devoted over fifteen years to the preparation of this work, and knowing his world-wide reputation as an investigator and teacher, we are led to expect something different from the ordinary line of text-books upon this subject, and are not disappointed. It is not many years since a manual of materia medica devoted twenty-one pages to the botany, cultivation, chemistry and pharmacy of opium, and only half a page to its action and uses. It is not surprising that the disciple of Esculapius who attempted to slake his thirst at such a fountain of knowledge turned away with disgust, and pronounced therapeutics a delusion.

We often come in contact with the same freely-expressed opinion among the older and even younger members of the profession who have derived their valuation of drugs from various theories deduced from so-called clinical experience. Even within the month we have read in an oracle of medicine that "experience is the mother of therapeutics." It was experience that for a hundred years consigned mercury to oblivion and vaunted sarsaparilla as the only specific for syphilis. It was experience that taught the ignorant African to diagnose witchcraft by the aid of the Calabar bean. And it is the same experience by which the intelligent physician of to-day retains his therapeutic superstitions. Clinical teaching cannot be ignored, but who can remain satisfied with its questionable and unscientific origin? Or

who is to determine how many centuries are required to establish its truthfulness? It is no wonder that the more studious of the profession sought for science in diagnosis and pathological anatomy, and were content to predict death and to describe the changes produced by disease, while they considered of secondary importance what humanity most desired, the relief or cure of its sufferings.

Therapeutics is now entering a new era. It is building for itself a new foundation, based upon the hard rock of inductive philosophy. True, the structure of therapeutics is not and may never be completed, but he who reads the masterly article on general pharmacology in Dr. Brunton's book will not fail to comprehend that the study of medicines is now based upon scientific propositions, and to recognize the importance of the fact that a thorough knowledge of the physiological action of drugs upon lower animals and man is the only true road, steep and rugged though it is, to the study of the influence which medicines have upon disease. The increasing demands upon the physician are in proportion to the increasing knowledge at his disposal. It is his duty to investigate for himself, and from a comprehensive acquaintance with the methods and results of physiological research, as he will find them lucidly stated in the book in question, he is to add his share, small though it may be, to that which therapeutics demands, the physiological action of medicines upon the fluids and tissues when influenced by disease. This is the second factor in the science of therapeutics, and can only be attained by a united effort on the part of the medical profession at large, *after* a thorough acquaintance with some such work as that of Dr. Brunton.

The author has treated his subject most comprehensively from a physiological standpoint. Each function of the human body is discussed separately; first with reference to its physiology, and second regarding the influences which drugs have upon it, with full details as to the methods of investigation. It is thus a book for the laboratory, and therefore adapted to the demands of every intelligent and conscientious physician. In the sections on materia medica an abstract is given of the physiological action and therapeutic uses of drugs, necessarily a repetition of much that has gone before, but arranged for quick reference. Dr. Brunton justly ignores much of the "clinical experience" which belongs to the traditions of by-gone days, and—also

justly—consigns matters pertaining to pharmacy to the manufacturing chemists. He devotes more than usual space to that portion of chemistry which helps to explain the action of inorganic compounds upon the animal frame, but affirms that the student has enough to remember in this stage of pharmacological investigation without encumbering his mind with the botany of plants or the strength of pharmaceutical preparations.

As the work is adapted to both the British and United States Pharmacopœias, we think an improvement might have been made in this last feature. As an example, readers of English books will be surprised at the enormous doses of tincture of belladonna frequently advised. In Dr. Brunton's book the dose of the United States tincture is stated to be from eight to thirty, and of the British from five to thirty minims. The reader would appreciate the matter much more fully if it were stated that the strength of the former is one grain in every seven, and of the latter, one grain in twenty-one and nine-tenths minims. It is furthermore to be noticed that the unimportant misprints of the English edition have been perpetuated; *e. g.*, the formula for nitrite of amyl on page 664.

The work is not intended for the "busy practitioner" who has not the time to cultivate his intellectual faculties, and thinks more of his fees than his patients; for although there are three copious indices at his disposal, yet the multiplicity of references is somewhat bewildering. But to the *student* in medicine, whether he is old in his profession or standing upon its threshold, Dr. Brunton's work will be found invaluable.

There are also some inaccuracies in his references to the work of former investigators, *e. g.* page 49: "As long ago as 1841, Blake thought that the toxic action of inorganic substances increase in proportion to their atomic weight, and this idea was again advanced by Rabuteau." The facts are that from the first Blake maintained that this was only true of isomorphic groups; while Rabuteau extended it regardless of isomorphism, but was corrected by Blake, who showed that thus indefinitely applied the rule did not hold in more than ninety per cent. of the substances examined. We have no doubt that Dr. Blake will take an early opportunity of stating his position with regard to these investigations.

CLINICAL STUDIES ON DISEASES OF THE EYE; including those of the Conjunctiva, Cornea, Sclerotic, Iris, and Ciliary Body. By DR. FERDINAND RITTER VON ARLT. Translated by LYMAN WARE, M.D., Surgeon to the Illinois Charitable Eye and Ear Infirmary, etc., etc. Philadelphia: P. Blakiston & Co. For sale by A. L. Bancroft & Co.

The title of this work might aptly be called, "Clinical Studies of the Diseases of the Anterior Portion of the Eye," as it comprises only the parts anterior to the equator of the organ. These parts are so intimately related that an affection of any portion will, to a greater or less extent, affect the remainder, and the same may be said of the retina, choroid and optic nerve, in that portion of the eye posterior to the equator; hence, there are two distinct groups of parts which have a sharp line of demarcation as to their influence one upon the other, and it is of the anterior group that the present work treats.

Anything from the pen of one of the pioneers of ophthalmology cannot but take rank at once among the best writing upon the subject of which it treats; and this work, embracing as it does the result of nearly fifty years of experience in one of the largest hospital clinics in the world, renders it of particular value to the general practitioner, the specialist, and the student. The author, in his preface, says: "My object in publishing this work was primarily to give the physicians engaged in general practice a book of reference, which they could consult regarding the common and most frequent diseases of the eye; I also hoped that I could induce them to reflect more upon the various morbid processes, and to inquire into their exciting causes. To determine the etiological relation for each individual case is no less important for the practicing physician than to find out in which part of the organ the disease is located, what anatomical changes have taken place, and what changes are still likely to occur," etc.

The translator has done his part well, and it is much to his credit that he has not taken the usual liberties of translators, in interpolating into the body of the text much that is foreign to the original.

W.

THOMAS'S MEDICAL DICTIONARY. By JOSEPH THOMAS, M.D., LL.D. Pp. 844. Philadelphia: Lippincott Company. San Francisco: W. S. Duncombe.

There has not been a new edition of Dunglison's Medical Dictionary since 1873, hence a work such as the present one is absolutely necessary to keep up with the progress in the medical world. Dr. Thomas has spared no pains to make his book a

standard authority. In addition to scrupulous care in obtaining the correct etymology and pronunciation of each word, a detailed and full account of many of the more modern researches in medicine is given. We would call special attention to the remarks on "Pathogenesis," which are the best synopsis of the subject it has been our fortune to meet.

THE PHYSICIAN'S DAY-BOOK, CASH-BOOK, LEDGER AND BILL-HEAD combined. Published by L. W. STORROR, 400 Golden Gate Avenue, San Francisco.

It gives us much pleasure to call the attention of our professional brethren to this book. Each page is composed of a bill-head, which is divided by horizontal and vertical lines into a visiting list, with cash column at the margin, so that a detailed account can be sent to each patient. On the stub is a smaller duplicate of the bill-head, which the physician retains for his own reference.

The advantages of this style of book are evident, as there is in reality only one book to keep, and this is complete when the physician marks his daily visit; at the same time, it is the best and simplest way of rendering a detailed account. We heartily recommend it to the attention of our brethren at the beginning of the year.

THE "OVERLAND" FOR NOVEMBER.

According to advance notes, the November issue of the *Overland Monthly* will contain many attractive features, prominent among which will be an article by Dr. Chismore, of San Francisco, entitled "From the Nass to the Skeena." In this he describes his explorations in British Columbia, along the "Old Grease Trail," an ancient Indian highway of inter-tribal commerce.

Hon. Theodore Hittell's second paper upon "Juan Bautista Alvarado," Governor of California, will treat of "The Graham Affair;" the American and other foreign settlers of that date; the evacuation of the Russian settlements; the early literature about California; the state of education and Alvarado's efforts to establish schools; of his attempts to reform the regulation of the Missions; of his abdication, etc.

Prof. Joseph LeConte's second chapter of "Rough Notes of a Yosemite Camping Trip" will describe the valley and the high Sierras; give geological observations, and the history of the glaciers of Yosemite and the Sierra region.

Hon. A. A. Sargent, late minister to Germany, will contribute a striking and timely paper upon "The Wyoming Anti-Chinese Riots," indirectly, a study of the whole Chinese problem.

The stories of this number will well maintain the *Overland's* standard. "I'm Tom's Sister," is a realistic tale of the mines, by W. S. Hutchinson; and "Zegarra," a tale of the Scotch occupation of Darien, describes one of the most romantic and long-forgotten chapters of Isthmian history.

Book reviews, editorials, recent sociological discussions, etc., and many other valuable articles, complete the issue, which will be published October 30th. Address, "*The Overland Monthly*," 120 Sutter Street, San Francisco.

Miscellaneous.

The Modern Treatment of Uterine Myoma.

The following quotations are from Lawson Tait's article, under the above heading, in the *British Medical Journal*, with notes by W. J. Sinclair: "The first point of my thesis is to show that the removal of the uterine appendages for myoma, when properly performed, is not a fatal operation, but one with hardly any mortality at all, even when the tumors are large, and when the patients are brought almost to death's door by hemorrhage." To support these statements the author reports 58 cases operated upon since January, 1884, without a single death. In the series published up to the end of 1883, there were 50 cases, with two deaths. It is the author's belief that in experienced hands "the real mortality of the operation" is not more than one per cent.

The second point which Mr. Tait seeks to prove is that the results of the operation are satisfactory and permanent, so that it may be confidently recommended for the relief of suffering and the saving of life. With this object he gives brief notes of the more recent history of each case in his first series of 50. Looking back through a period of 4 to 13 years, he shows that the result was satisfactory, but with two exceptions. In one of these there was a mistaken diagnosis, and in the other the hemorrhage continued and the tumor did not cease to grow, yet in both cases the operation gave some measure of relief. Mr. Tait's results in both series are so brilliant that the reader hardly requires the argument which succeeds the statement of facts. He claims on

the two points of his thesis (1) that the primary mortality of this operation is so low that it can be justified far more decidedly on that score than any other of the serious operations of surgery; and (2) "the secondary results of this operation are as brilliant as those of any other operation in the whole realm of surgery with which I am acquainted." After the publication of this paper, if any doubted before, it will probably be conceded that Mr. Tait has made good his position with regard to the operation. He may be pardoned, perhaps, for recalling the incidents connected with the publication of his first results, even if it reminds some of the facts which they would rather forget. The history of the rejection of Mr. Tait's paper by the Royal Medical and Chirurgical Society of London, its publication in the *American Journal of the Medical Sciences*, and the subsequent vicissitudes of the operation, constitute a lesson in liberality of judgment, if not in surgery. The conqueror, however, can now well afford to have uttered his *va victis* for the last time.

The author discusses the question of priority of discovery, or priority in introducing the new proceedings. While he shows that he and Hegar and Battey were almost simultaneous in the performance of the operation, he claims to have been the first in the field by about six months. These historic facts are well worthy of the closer attention of British surgeons, especially of those who speak of "Battey's operation" when they do not call it "spaying."

Mr. Tait next turns his attention to the relative value of enucleation and hysterectomy, and he thoroughly condemns both operations. He seems to be of opinion that enucleation is completely discredited and ought never to be performed, whilst hysterectomy is to be resorted to only in neglected cases, or in the very few exceptional cases in which the growth is not arrested by the removal of the appendages or by the menopause. "If the removal of the appendages were performed on patients early in the history of these cases, as it ought to be, very few indeed would arrive at the necessity for the operation of hysterectomy."—*Medical Chronicle*.

At the Congress for the Advancement of Science, recently held at Grenoble, MM. Bourru and Burot communicated the result of some experiments on the action of medicinal and toxic substances on hysterical patients exercised at a distance. The sub-

stance was wrapped in paper or contained in a bottle, and placed at the back of the subjects' heads, without their cognizance. The effects produced resembled very closely those due to internal administration. Antispasmodics were very varied in their effects: camphor and cherry laurel water acting as sedatives, in woman producing religious ecstasy and convulsions of the respiratory muscles, in males convulsions only. The essential oils also produce ecstasy. Some of the experiments were made in the wards of MM. Charcot and Dumontpallier. It was proposed to repeat them before the Congress, but a hysterical subject was not procurable.—*Brit. Med. Jour.*

The *British Medical Journal* mentions at length a reception accorded to Dr. Joseph Parrish, President of the American Association for the Cure of Inebriates, at the Dalrymple Home, one of the five existing institutions in the United Kingdom for the treatment of dyspsomania. These Homes are licensed by government, and are for paying patients only. For admission, an appearance before two justices and other formalities are necessary. In replying to the resolution of welcome, Dr. Parrish urged the importance of considering the physical as well as the moral aspect of the question, fifty thousand to one hundred thousand deaths being annually attributable to alcohol. The doctor referred to the greater advantages existing in America, where no law interfered with the personal right of anyone to commit himself for treatment at such an institution for a given time.

Having regard to the prevalence of intemperance in this State, it is a matter of considerable moment that some measure similar to that in operation in the State of New York should be adopted by the Legislature. In his Report on Mental Diseases to the State Medical Society (Transactions, 1883 and 1884, pages 109 and 110), Dr. Simmons urged the importance of this course. During the last session of the Legislature, the Sacramento Society for Medical Improvement appointed a committee on the subject. A bill was drafted, corresponding with the New York act, except that no State aid was asked, an existing institution being utilized. The bill was reported on favorably by a committee of the House, but does not seem to have advanced much further. The matter should not rest here, and it is to be hoped that early efforts during the next executive session may be more successful.

Forster, of Amsterdam, has made some special researches (*Pharm Centralblatte*) with a view to ascertaining what agent could be regarded as absolutely reliable to disinfect the hands of the physician. He is of the opinion that the ordinary 2½ % solution of carbolic acid, and even Billroth's plan of washing the hands in muriatic acid and glycerine of phenol, ten per cent., were insufficient to sterilize them. The only procedure which he found absolutely reliable was the one recently recommended by Koch, namely, the use of a solution composed of seven to fifteen grains of the bichloride to two pints of distilled water.—*Boston Med. and Surg. Jour.*

Dr. K. Kobert (*Centralblatt fur Klin. Med.*) has found that senega contains two glucosides, the proportions of which vary in different specimens of the root. He has also ascertained that these glucosides are present in quillaja bark, but in almost five times the amount that the root will yield.

Experimenting therapeutically, the doctor found that a decoction of the bark (5 parts to 200 of water) gave most favorable results. It seldom produced vomiting or diarrhœa, and from the quantity of sugar present it was most readily taken by children. Its value as an expectorant is undoubted.—*Therapeutic Gazette.*

The *Therapeutic Gazette*, treating of the subject of night sweats, amenable to external applications, mentions that Nicolai has used a mixture of chloral, eight grammes dissolved in two tumblersful equal parts brandy and water.

The patient is sponged with the solution at bed-time, friction being sometimes used.

Radakow recommends the use of a mixture, four grammes of the tincture of belladonna with thirty grammes of water. The fluid is rubbed over the surface of the body, with the exception of the head and extremities.

Dr. John Townsend.

If any pioneer physicians ever knew the above gentleman, they will confer a great favor by writing to Dr. G. L. Simmons, 212 J Street, Sacramento.

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Original Articles.

PROLAPSE OF VAGINA FOLLOWING CHILD-BIRTH.

By CLINTON CUSHING, M.D.

[Read before the California State Medical Society at its last annual meeting.]

Under the terms "cystocele" and "rectocele," there has been described in most of the text-books on diseases of women, that have been published during the past twenty-five years, a condition that consists essentially of a prolapse into the ostium vaginæ of a fold of the lower portion of the vaginal wall. In the case of cystocele, including, together with the anterior vaginal wall, the posterior wall of the bladder, that is attached to the displaced vagina; and in the rectocele, of the posterior wall of the vagina at its lower part, together with the anterior wall of the rectum adjacent.

The condition described exists in varying degrees, in a considerable number of women who have given birth to children, and is doubtless familiar to all who have had much to do with the treatment of the diseases peculiar to the sex.

When this condition has been preceded by child-birth, as is nearly always the case, the cause has been ascribed to laceration of the perineum, or, to what Dr. T. G. Thomas calls sub-involution of the vagina, following a partial laceration of the perineal body. Now, while it is true that in some cases we find the perineum has been destroyed entirely down to the sphincter ani, in others the perineum, so far as size and thickness are concerned, remains intact, while both rectocele and cystocele exists, accompanied by a number of disagreeable symptoms which much impair the comfort and usefulness of the woman.

A careful study of the parts involved, has led, during the past few years, to what appears to me to be a clear and satisfac-

tory explanation of the causes and pathology of these cases of vaginal prolapse. It is through the studies in anatomy by Dr. Henry Savage, of London, Hart and Barbour, of Edinburgh, and through the labors of Braune, Furst and others, in Germany, that we have of late years been enabled to understand and appreciate the elements that enter into the construction of the soft tissues that make up the floor of the pelvis. Here, as elsewhere in the body, it is of the first importance that the anatomy of the part be clearly understood, in order that pathological states can be appreciated.

In order that what I am about to say may be better understood, I desire to call attention to some points in the construction of the pelvic floor that have an important bearing on the cause of vaginal prolapse following child-birth. For the purposes of this paper, we will assume that the pelvic floor is limited anteriorly by the arch of the pubis, posteriorly by the tip of the coccyx, and laterally by the rami of the ischii and pubis, with the anterior border of the sacro-sciatic ligaments. In commencing the description of the surface thus limited, upon its outer surface we have first the skin and superficial fascia, and between the layers of the superficial fascia, we have a deposit of fat. Immediately beneath the superficial fascia we have the external sphincter ani, arising from the tip of the coccyx, surrounding the anus and attached to the tendonous center midway between the anus and the vaginal opening; from this same tendonous centre the transverse perineal muscles extending to the rami of the ischii, and the bulbo-cavernosus muscles, one on either side of the vaginal opening, extending from the same point in the perineum to the inner arch of the pubis.

If these muscles are now removed, we come upon what is known as the deep perineal fascia, and which Savage designates the perineal septum. This dense fascia, consisting of two layers, between which are blood-vessels and intervening muscular fibres, is attached to the inner side of the ischio pubic rami upon either side from the tuberosity of the ischii to the triangular ligament above the urethra. It unites in the central line in the perineal body, in the space between the vagina and urethra, and its fibres are firmly attached to the lower end of and around the ostium vagina. Beneath this fascia we have the levator ani muscle, which constitutes the muscular floor of the pelvis. This muscle arises from the inner surface and near the lower edge of the

ischio-pubic rami from the tuberosity of the ischium to near the symphysis pubis, and its fibres sweep downwards and inwards from either side to the central line, joining each other in the space between the urethra and vagina, between the vagina and rectum, and between the rectum and coccyx, and posteriorly are attached to the borders of the bones of the coccyx, and the lower bone of the sacrum. A portion of the fibres of this muscle are firmly attached to the sides of the vagina and to the lower end of the rectum, that portion of the muscle which is attached around the ostium vagina constituting the true sphincter of that organ. Connective tissue, blood-vessels, nerves and lymphatics, with a padding of adipose tissue, constitute the pelvic floor, which is rendered elastic by reason of the fascia and connective tissues, and contractile by the presence of the levator ani.

Now, in examining women who have given birth to children, and who apply for relief on account of distress in the region of the pelvis, it is not infrequently found that the ostium vagina is abnormally large and baggy, and the anterior and posterior walls tend to roll out into the vulvar opening; the power of voluntary constriction of the vaginal ring around the examining finger is in a great measure lost; she suffers from inability to evacuate the rectum without enemata or laxatives; she complains of distress and a bearing-down sensation in the region of the uterus and ovaries when compelled to stand much upon her feet; and the general health, and particularly the nervous system, seem to be suffering from some depressing cause. So long as she is recumbent she is comfortable, but the erect position soon reproduces the disagreeable symptoms.

In some of these cases complications exist, such as enlargement and retroversion or displacement downwards of the uterus, disease of the ovaries, or the remains of former attacks of pelvic inflammation; or there may be a laceration of the perineum. But in a considerable number of cases no complications exist; the perineal body is apparently intact, except that it is in a greatly relaxed condition, the vaginal opening being seemingly like the mouth of a bag from which the puckering string has been withdrawn.

It is only in the past few years that the real pathology of these cases has been made clear, and we are indebted to Dr. Emmet, of New York, and to Prof. Schatz, of Germany, for elucidating the subject. When the child's head passes sufficiently far down

to begin to distend the pelvic floor, the fibres of the levator ani muscle that are inserted into the perineum and attached to the vaginal ring, and the tissue of the deep perineal fascia that is similarly attached, begin to be put upon the stretch. As the head advances, the elastic vagina and the skin covering the perineal body, become enormously distended, and the skin or vagina may or may not give way and rupture; but the fibres of the levator ani and the tissue of the deep perineal fascia may give way and be torn from their insertion in the vagina and perineum, before the head passes through the vulvar opening, and this independently of any visible injury to the skin covering the perineum, or to the vagina.

When an injury of this kind occurs, the ruptured fibres of the muscle contract upwards, the fascia and connective tissue retreat, and when the woman finally gets upon her feet, the support of the levator ani to the perineum and posterior vaginal wall is partially lost. As the posterior vaginal wall serves to a considerable degree to support the anterior wall in the normal condition, this support being lost, the anterior wall, with the bladder, gradually settles backwards and downwards into the vulvar opening, as a consequence of the intra-abdominal pressure; the uterus also frequently becomes displaced downwards from lack of the normally firm support of the pelvic floor, and as a consequence uterine congestion and enlargement, which still farther complicates and aggravates the morbid state.

If the woman be strong and vigorous, she is enabled to withstand the evil effects of an injury of this kind for years, with but a moderate amount of discomfort from the lesion. Indeed, I know women who are now working hard every day with their uteri half out of the vulva, and who are wearing perineal bandages to keep the uterus and bladder in the pelvis. They are usually Irish or German women who are in rude health, who live much in the open air, eat plain food, and are in fact good animals; but let the same injury happen to a less strong and healthy woman, and it is only a question of time, if she lives, when the local and general disturbance will cause her to seek advice.

In restoring the parts to their original condition, the object to be attained is to draw the tissues on the back and sides of the vagina down, and to secure their union to the borders of the vaginal opening, as well as to narrow the vaginal outlet, where this is requisite. The operation is not difficult, but requires

some experience and judgment to insure success. The essential features of the operation are, the denudation of an oval space across the lower portion of the posterior vaginal wall, just within the ostium vagina, of sufficient width that the upper and lower edges of the denuded part can be brought together with tenaculi without the use of any considerable degree of force. The sutures are then introduced from above downwards, so as to bring the lower and upper borders of the denuded surfaces together, and thus lift up the perineum and draw down the tissues between the vagina and rectum; and when the sutures are all introduced, the line of stitches run across the lower end of the vagina transversely, instead of up and down in front of it as formerly. Three or four stitches are required to approximate the line from side to side in the centre, but these are superficial. I have used for sutures silver wire, silk-worm gut, and iron-dyed silk that has been dropped in boiling wax and afterwards rubbed down smooth, so that the interstices are left filled with the wax. The results have been equally good with all. The silk is the cheapest, and when properly prepared will answer every purpose. That which I have used I have prepared in the following manner: Take any good spool silk and unwind it from the spool and tie it up loosely in a coil, and boil it for twenty minutes in a solution of logwood; then put it into a solution of sulphate of iron and hot water for ten minutes; then wash clean, and when perfectly dry, drop into boiling wax for a moment, and when cool, rub all the superfluous wax out of it with a woollen cloth. It is then antiseptic, will not absorb the fluids of the tissues, and resembles wire in this respect, and its black color renders it easier to see when it is necessary to remove it.

I get better results when I leave the stitches in for twelve to fourteen days, and as they are in the vagina they give no inconvenience, and little suffering at any time. The woman should be confined to bed at least two weeks, the bowels kept loose by laxatives; the urine should be passed upon a bed-pan, or if this cannot be done it should be drawn with a catheter.

For the past three years I have pursued a plan that has proved highly satisfactory, and so far as I am aware is original with myself. Immediately after the completion of the operation I fill the vagina with vasaline, sometimes adding to it a little wax to make it more consistent, and a little carbolic acid. I improvised an instrument for introducing the vasaline, by taking an old-fash-

ioned vaginal hard-rubber syringe and cutting off the perforated extremity, and then, having filled the barrel of the syringe with the ointment, it was an easy matter to deposit the contents in the vagina. The presence of the ointment in the vagina obviates the necessity of disturbing the parts by injections for the first four or five days, while union by the first intention is taking place; its presence prevents the urine from getting into the vagina, and as it meets and escapes from the vagina it keeps the site of the operation covered and protected from the air. Vaginal injections should be used after the fifth day, night and morning, of warm carbolized water. The woman may turn in bed when necessary, and the knees do not require to be bound together, if only reasonable care is observed.

Whatever the opinion of any one may be, that is based upon a theory, it is, after all, the clinical results that are the most important; and while it is true that the repair of the injuries that occur at child-birth does not always restore the woman to perfect health, I am fully justified in making the statement that in properly selected cases the results are in the highest degree satisfactory, and that these good results cannot be obtained in any other manner.

**DILATING TROCAR FOR OPENING DEEP-SEATED
PELVIC ABSCESSSES, WITH SELF-RETAINING
DRAINAGE-TUBE.**

By CLINTON CUSHING, M.D.

[Read before the California State Medical Society at its last annual meeting.]

The instrument represented in the accompanying cut was devised by me two years ago for the purpose of opening deep-seated abscesses in the pelvis. Where necessary, its use is preceded by the aspirator needle to determine the location of the pus cavity. It is introduced through the roof of the vagina into the abscess, and then by closing the handles, the blades in separating tear the connective tissue and make a patulous opening that gives free drainage, and does not tend to heal rapidly. The danger to the ureter, to the blood-vessels of the pelvis, and to the surrounding organs, is much less with this instrument than with the knife.

I have now used this instrument in ten cases of pelvic abscess, and my confidence in its usefulness and safety steadily increases. The self-retaining drainage-tube, also represented in the cut,

and made by fastening a short section of rubber tubing across the end of a longer piece, is useful where, for any reason, it is necessary to keep the parts washed and drained for a considerable period. It is easily introduced into the opening made by the dilating trocar, by bending the ends of the short tube down by the side of the longer one, and then grasping them with a pair of long-handled dressing forceps and carrying tube and forceps into the abscess; the tube is released, the ends spring out, and it remains *in situ*, but can be removed by making moderate traction.

REPORT ON GYNECOLOGY.

By JOHN WAGNER, M.D.

[Read before the California State Medical Society at its last annual meeting.]

“The science of gynecology has in a great degree passed from without the domain of medicine, with its uncertain theories and doubtful resources, into that of surgery,” are words by Professor T. G. Thomas, in a recent address.

If an opinion is to be formed from a knowledge of the practice in this city, and by the literature received upon this subject, these words are in no wise an exaggeration. This is an advancement in the right direction. It not only places gynecology upon a firmer basis, making its resources more exact, in that it enables the gynecologist to promise better and more positive results, but has been the means of restoring many women to health who were otherwise continually in the hands of one physician and another, seeking that comfort which only surgery could afford them; but which, until recently, the profession has been unable to supply. The late J. Marion Sims may well be called the father of gynecic surgery; but it is to Drs. Thomas and Emmet, as well as others now in the field, that we are indebted for bringing into such a state of perfection operations devised by him, as well as instituting many new ones. Although the practice of gynecology is largely surgical, it is as yet mainly confined to the specialist. It is safe to say that in gynecology surgery is not practiced as frequently as it should be; that most patients seeking our aid suffering from uterine troubles, especially those having borne children, require surgical procedures to permanently relieve them of their troubles.

If the Great Designer of the human body intended that in the bringing forth of its young it should be unattended by pain and injury to the parts through which it is required to travel, the de-

viations from this course have been most wonderful. Not only is there great pain, but the lesions are many, and often of a very serious nature. These accidents to the soft parts furnish the gynecologist with most of his work. It is to a few of these lesions that my report will be confined.

The first, and one of the most important so far as it relates to the future comfort of the woman, is a laceration of the cervix uteri. Lacerations of the cervix and of the pelvic floor occur, to some extent, to every primipara delivered at term. In most cases I may say it is wholly without the power of the attending physician to prevent them, in a greater or less degree. A large percentage will suffer in future life from these accidents; some few never feel well from the time of their occurrence until the damage has been repaired; others may continue in fair health, bearing children, and in no way suffer from these lesions until they cease to bear children, either from natural causes or by means to prevent conception; and many pass through life with extensive lesions, both of the cervix and perineum, and enjoy a freedom from uterine or other pelvic trouble unto the end. But I think this statement can be made concerning these lesions without fear of refutation: that the woman in whom they exist is not free from probability of trouble; that she is placed in a state of uncertainty, in one of greater risk than the one in whom they do not exist. Trachelæraphy, or the operation for the restoration of a lacerated cervix, has been, during the last few years, the subject of much discussion, so that it now stands a justifiable and much-needed treatment in most cases where this lesion exists.

That the operation is abused, that it is performed when not absolutely required, and more often made before the patient is properly prepared for it, cannot be gainsaid. But for every time that it is performed unnecessarily, it is left undone more times when it should have been done. That disappointment has followed the operation in many cases is no argument against its usefulness; but is to be considered rather as the fault of the operator; and not so much a fault in the performance of the operation as in the proper preparation of the patient. Proper preparation of a patient consists in this: That the uterus should be made mobile; if retroverted it should be restored to its proper position and a pessary fitted; if the flaps or lips are much hypertrophied, they are to be reduced by scarification and by the general treatment; if there is evidence of disease of the endomet-

rium, the uterus should be well dilated and thoroughly curetted with the dull curette. Indeed, it should be our aim to place the patient in a good state of general health before proceeding to operate; then if she consent to the operation, she may rely upon permanent relief from her trouble; otherwise she will gradually revert to her former condition.

Not much improvement has been made in the operation since the first published description of it by Emmet; but by the many repetitions and descriptions of the operation by different operators, there is a better understanding of its technics and scope among the profession at large.

A few points in the operation and treatment following it that proved stumbling blocks to me before I learned how to correct them, will be mentioned. Mark out first satisfactorily the extent of tissue you wish to denude, and then follow your guide absolutely, unless great reasons deter you from it. When there is much ectropion it will be necessary to carry the denudation well out on the vaginal part of the cervix, both anteriorly and posteriorly, in order to roll in the everted lips so that no part of the cervical canal may be exposed. Introducing the sutures properly is not only the most difficult part of the work, but the part that has the most to do with a good and proper union. They should be passed from without inward into the canal on the anterior lip, and the reverse for the posterior. This should be the mode of introduction for all sutures except the last or crown stitch, which should be more superficial, and instead of passing into the canal should be entered at an angle with the other sutures and made to emerge in the denuded tissue. This enables us to roll in the tissues and saves the sutures from cutting out. The best results are obtained by the use of No. 26 silver wire for sutures. I have used the silk-worm gut, fastened with perforated shot; also the antiseptic catgut. This last is also best fastened with shot, being easier of application, and a knot is very liable to slip. In making an operation on the perineum at the same time, the use of the catgut for the cervix is preferable, since it is absorbed after eight or nine days, and is not then necessary to disturb the perineum to remove the sutures from the cervix. A slight hemorrhage following the operation is not of much import, as it will not interfere with healing. I have known it to last several days, with no bad results following. Usually large injections of hot water into the vagina will control it. If the hemorrhage

is alarming, put the patient on the table and try to find the bleeding point; then pass a deep suture beneath it. I should hesitate before using any styptic, since it is likely to create mischief, as well as interfere with healing. If your case is one in which you anticipate much swelling of the tissue, causing the sutures to cut out, use vaginal injections of hot water freely for the first two or three days.

At one time the question of sterility following the operation was much debated; but now I believe it is pretty generally settled that if it has any influence it is in favor of pregnancy. Two entirely different set of symptoms may call for the operation: those relating directly to the pelvic organs, and those of a reflex character. The symptoms and indications for operation under the first head are so well known that I will pass them by. Under the second, indicating remote reflex trouble, I will give a short history of several cases upon whom I have operated:

CASE 1.

American, aged 25; had had three children previous to the operation, all of them born under my care. She had always enjoyed good health. Some time after the birth of the second child, mental trouble showed itself in the form of hallucinations, a dread of some impending danger, and general low spirits. There was no complaint of any pelvic trouble; but failing to find a cause for her mental trouble, I asked for a vaginal examination, and found a retroverted uterus, a cervix lacerated but healed over, and a slight tear of the vaginal part of the perineum. The uterus was easily reduced, and a pessary worn, but without any improvement in her mental trouble. This was nearly four years ago, before my attention had been called practically to these lacerations as a cause of reflex trouble. A trip to the East was advised, with a view of diverting her mind. She went, and there was some improvement whilst away. Soon after returning home she became pregnant with her third child, and during the nine months was better. But a few months after its birth the mental trouble returned worse than before. I now came to the opinion that it was the laceration of the cervix which was causing her trouble; but before advising an operation I called in consultation one of our leading neurologists, who confirmed my opinion, but suggested that the scar in the perineum had also something to do with it. The cervix and perineum were both operated upon

at the same time, with the result of almost immediately removing the entire disorder of her mind. At the end of a month she was free from her malady. Three years have now passed since the operation, during which time I have confined her with her fourth child. There was a slight tear of the perineum in this last labor, which was immediately united. The cervix has not been examined for laceration since the labor, but there has been no return of any mental trouble thus far.

CASE 2

Was one with intense neuralgic headaches. American; two children, youngest 11 years old. For a number of years she suffered with these headaches, so that she was almost entirely confined to her house. As usual, she had been under the care of several physicians, but as she complained of no pelvic symptoms of disease, no examination had been made. Knowing, however, that the field had been pretty thoroughly gone over by those preceding me, I suggested some uterine trouble as a probable cause, and upon examination found a lacerated cervix, with much ectropion, the angles of the tear being hard and nodular. After two months of local treatment I operated. Improvement in her headaches commenced immediately, and now two years have passed and she has been almost entirely free from them.

CASE 3.

American, aged 27 years; married three years; two children, youngest six months. In addition to her symptoms relating directly to the pelvic organs, she has severe pain in the back of her head, accompanied by spasms, during some of which she would lose consciousness. The cervix and perineum were lacerated. Both were closed at one operation. Five months have elapsed since the operation. There has been some return of pain in the head, but no spasms. During the last two months there has been no pain in the head, and her general health has much improved.

Since the operations there have been no drugs used in any of these cases that could have in any way brought about these results; so that I think the results may well be considered due to the operations.

Injury to the pelvic floor is another and most important lesion following child-birth that the gynecologist is called upon to remedy. Until very recently these injuries or lacerations have

been supposed to consist in a mere laceration of the perineal body, involving in some cases the sphincter ani; and upon this idea have all the operations for its restoration to what we were pleased to call its original state been based. But that there has been dissatisfaction with the result of these operations is evident from the attempt to modify and improve them, and that they may do for the patient that which we induce them to consider needful to be done. During the year there have been several important contributions on this subject, relating to the functions and parts injured, of this so-called perineum. The most important production has appeared in the third edition of Emmet's "Gynecology." "The perineum," he says, "gives no support, either directly or indirectly, to the uterus." This is a startling assertion from such a source, after we have so long looked upon the perineum as one of the main supports of the pelvic organs. But it is evident that when he speaks of the perineum he refers only to the perineal body: "Prolapse of the uterus never occurs directly from loss of support when the perineum has been lacerated; and unless the muscles have been involved to the extent of rupture through the sphincter ani, the injury sustained is seldom more than a superficial tear through the skin, and to a limited extent into the connective tissue."—(Emmet.) It is a misfortune that he uses the word "perineum." It is an indefinite term at the best, but by most persons it is considered to include all the tissue of the pelvic outlet between the vagina and rectum. The term "pelvic floor," as suggested by Skene, is preferable. This will include the perineal body, which is a small part of the tissues of the floor. The office of the perineum, Emmet says, "is to give support to the curve of the rectum during defecation and when in the upright position, so that it cannot encroach upon the vaginal canal." And again he says: "It is to the pelvic fascia and connective tissue that the uterus is indebted for its support, and that this support is from above, suspending the uterus as some of the other organs of the body are suspended." This fascia is the part torn, according to Emmet, when a laceration that affects the future comfort of the woman takes place. A tear in the median line will not affect this tissue, but must extend across the vagina. It is a separation of this pelvic fascia that allows the vagina to gape, the posterior wall falling away from the anterior, and a retraction of the sides of the vulva occurring.

This fascia also affords support to the pelvic connective tissue

and blood-vessels, and when this support is taken away by injury the vessels become enlarged and a dragging sensation is felt. Very great injury may result to the tissues without any visible tears. The parts may be torn or separated subcutaneously, no external wound being caused; and these are the injuries which cause most discomfort and the most difficult to remedy.

Dr. Alexander J. C. Skene has very recently written upon this subject, and although he differs somewhat from Emmet, the difference is more apparent than real. He uses the term "pelvic floor" instead of "perineum," and says "it comprises the tissues which together occupy the space between the bones of the pelvic outlet." "It is composed of muscle, fascia, areolar and elastic tissue." "Its object is to sustain the rectum and vagina, and to aid in their functions." He further says that "in all injuries of the pelvic floor which impair its supporting function to any extent, prolapse of the pelvic organs will in time follow, except in three conditions: 1. When the injury is compensated for by the muscles (which still maintain their attachments to the vagina and rectum), drawing the remaining portion of the pelvic floor upwards, forwards, and towards the pubes, thereby closing the vaginal orifice and supporting the pelvic organs; 2. When, by reason of some intra-pelvic inflammation, the organs have become fixed by adhesions; 3. When the subject is abundantly supplied with adipose tissue and takes very little exercise." It is no uncommon thing for all of us to see cases where the laceration has been down to, and in some cases involving the entire sphincter ani, and yet no appearance of prolapse of the pelvic organs; and I think I have seen this even when no adhesions had fixed the uterus. Dr. Skene says that a laceration which will be followed by prolapse of the vagina and uterus must involve the separation of the muscles, and especially the levator ani muscle. I am of the opinion that we must look for injuries higher up the pelvis than merely at its outlet for an entire solution of these troubles following child-birth. The head, in passing the superior strait of the pelvis, puts not only the neck of the uterus greatly upon the stretch, but often continues that stretching process outside the uterus, involving the entire roof of the pelvis to such an extent that it is not difficult to see how the tissues here, which suspend the uterus and vagina, are so injured that they do not regain their former power. Have we not evidence of this injury in cases of acute cellulitis following child-birth? And then as the head

descends through the vaginal canal this too is enormously distended, even to laceration at times, before arriving at the outlet; and here also the over-distension of this partial sphincter muscle (for such the vagina is) extends beyond the vagina, involving the pelvic cellular tissue which encloses the vagina. This tissue is fibro-elastic, and also contains muscular structure; and although it is very elastic and distensible, can be over-distended, and hence lose its power of supporting the vagina. So we may trace the head as it descends through this canal by the injuries it causes throughout its course, and on arriving at the mouth of the vagina must dilate this portion of the canal at the expense of the perineal body and its attachments, leaving here still greater evidences of its destructive force on the soft parts. No doubt in many cases the injury involves both the fascia and muscles. But whatever the injuries may be, we know that in many cases following child-birth women complain of dragging about the pelvis, a feeling as though everything was going to fall out, in time a difficulty in urinating and inability to properly evacuate the bowels, with many other reflex symptoms. How are we to remedy this condition? I may say that no operation yet devised has or will succeed in thoroughly and permanently relieving all these symptoms. We may and do give great relief, even to satisfaction. We may succeed in supporting the uterus and prolapsed vagina, and the patient will often yet complain of a feeling of dragging and lack of support. In such cases the injury has been higher up in the pelvis, as well as at the outlet.

But because we cannot permanently and effectually relieve many of these cases, is no reason that an attempt should not always be made. Dr. Emmet, on the principle that lacerations are transverse to the vagina, and that it is the fascia which is torn when followed by prolapse of the vagina, has made a new operation, one which he claims has stood the test of three or four years in his hands. This operation is essentially a narrowing of the vaginal canal, and is best described in his own words: "The first step is to seize with a tenaculum the crest of the presenting rectocele, or posterior wall of the vagina, at a point where it can be drawn forwards without undue traction too near the entrance to the urethra; then give the tenaculum into the hands of an assistant, which is to rest above on the pubes; with another tenaculum for each side, hook up the lowest carunculus, and then bring the three tenacula together. When this has been done it

will be seen at a glance what tissues are to be united together; a crescentic line will be formed just within the vagina, running across its axis, with each horn becoming gradually lost in the sulcus on each side. In order to freshen the surfaces, the surgeon now hands a tenaculum with which a caruncle has been caught, up to the assistant on the side where he wishes to begin, while the tenaculum is still held in position over the pubes. If slight traction be made with the outer tenaculum, two triangular-shaped folds are at once formed, by the apex of each being drawn out by a tenaculum, the upper angle running into the vaginal sulcus on that side, and the other one towards the skin, which would form the outer edge of the fourchette if it were intact. These two surfaces are the ones to be denuded and united. The first suture is to be introduced in the angle at the sulcus, and from thence forward, tying them as you proceed; then in the same way do the other side; then pass a suture from the labium on one side over to the crest of the recticole or posterior wall of the vagina, and then to the opposite labium. After all the sutures have been twisted, a shallow line remains, external in the median line, which will require two or three sutures deep enough in the centre to catch the posterior wall of the vagina."

He claims for this operation over others a closer imitation of nature; that it succeeds in lessening the size of the canal, and does not obstruct the entrance to it; and that it does not require a skilled nurse, as the urine does not require to be drawn, and that it is easier of execution. I have attempted this operation three different times, in one patient meeting with success; but it was not a bad case, there being but little prolapse of the vagina, and was repaired soon after (six months) the injury. In the next, while my success was not perfect, it relieved her of most all sense of dragging, and was satisfactory. But in the third the trouble was one of long standing; and although there was but little prolapse of the uterus, there was a great sense of weight, and a feeling when standing or walking as though all the pelvic organs would fall out. In examining her in the upright position there was a feeling of subinvolution of the vagina; that is, the vaginal canal was encroached upon by a redundancy of tissue; the uterus was mobile, and even in this position was not prolapsed to any great degree. Very little of the tissue showed any evidence of laceration; and yet there must have been a separation either of the pelvic fascia or muscles of the pelvic floor

subcutaneously, which could not be positively made out except from the lax and non-resistant state of the tissues. The vulvar opening was relapsed and gaping; the posterior wall fell away from the anterior, exposing the vagina an inch and a half beyond the meatus urinarus. The cervix, which was lacerated, was operated upon at the same time as the perineum. In the operation for the perineum I tried to follow Emmet, and so far as the operation is concerned, it was a success; but a failure so far as the patient deriving much benefit from it. There is no attempt in this operation to lessen the size of the vulvar opening, nor to build up a perineal body, but simply to lessen the size of the vaginal canal. I am told that patients operated upon by Emmet himself, even though they derive benefit from it, complain that no operation has been performed, on account of the patulous condition of the vulvar opening remaining; and one case recently operated upon (after Emmet) in the California Woman's Hospital, with success in the operation, demanded another operation to close the gaping vulva. Her wish was gratified.

I fail to see how this operation can unite the fascia, if it be that which is at fault, or the muscles, if they be torn or separated from their attachments, as there is no section made of the tissues, but merely a surface denudation; and if the support beneath is left lacking, this new structure, being elastic, will in time give way, especially if much force is brought to bear upon it. But if there be virtue in these operations, a combination of this with the old will offer better success. It will not only lessen the size of the canal, but by closing the vaginal opening to its original state will offer surer and better support. Let the vagina be denuded on the sides as already described, and continue the denudation over the crest of the rectocele and on to the labia, as high up as may be necessary; then freshen so much of the tissues as have been lacerated, as indicated by the scar tissue externally. Now unite the triangular pieces in the vagina as before mentioned, in which about four sutures for each side will be required; then pass the sutures externally, beginning with the lowest point, just above the anus, and continue until all the freshened surfaces shall have been closed. In this part of the operation the sutures should be entirely buried in the tissues, except the last, or gathering string, which should only pass through the labia and crest of the rectocele, as in Emmet's new operation. This does not pucker the sutures all into one point at the fourchette, but leaves a smooth surface. The best suture for this operation is the silkworm-gut,

fastened with perforated shot. No operation on the posterior wall will succeed until the uterus has been replaced if retroverted or prolapsed; and if enlarged, reduced in size. Any laceration of the cervix should be repaired, and may be done at the same time, unless there exist some special indications to the contrary. If there is any cystocele, or prolapse of the anterior wall, this must be corrected by an operation. To do these operations, all of which may be (and often are) required in the same patient, requires time and patience—more time than most physicians, to say nothing of what the patient may think, allow is necessary; but I am sure when we fail it is more often due to the fact that we have hurried in not properly getting our patients prepared, than from any other cause.

MEDICAL LEGISLATION.

By J. R. LAINE, M.D.

[Read before the California State Medical Society at its last annual meeting.]

Mr. President, and Members of the Medical Society of the State of California.

A law to regulate the practice of medicine, to be effectual, should possess the essential elements of equity, brevity, and simplicity. It should be impartial in its application, and the penalty for its violation should be in proportion to the offense.

If it does not possess an even-handed tenor, or if its terms are equivocal or ambiguous, it is distrusted and evaded; and if its penalties are in undue proportion to the offense committed by a violation or disregard of its provisions, public opinion holds its protecting ægis between the offender and the penalty, and permits him to pose before the community as a martyr persecuted for his individuality.

The law regulating the practice of medicine in the State of California has been on trial eight years. The supplemental and amendatory act has been on trial about six years. The law as it now stands upon the statute books was an awkward but commendable attempt to place the practice of medicine completely under State regulation; and it seems to have been the sentiment of the Legislature that the community and the profession would be benefited by the creation of three Boards of Examiners, to be selected annually by the three State Medical Societies.

The effect of the law was to give a legal standing to each division of the profession, and the peculiar function of each of the

newly-created boards was to procure students for its medical school. The act comprises fourteen long sections, with ten more sections tacked on as amendments; and, like all verbose productions, is ambiguous. It has, however, been a goad to compel many delinquents to take a degree in a medical school, or go through the form of a nominal examination before an examining board; but whether in so doing it has served in the interests of higher medical education, is extremely doubtful.

The duties of the three boards for the last six years has been that of passing upon the genuineness of diplomas presented for examination. The "Regular" Board has indulged in a little expensive *quack baiting*, but prosecutions for quackery have had but little effect, other than to demonstrate the ponderous unwieldiness of the law, and to deliver the Supreme Court of a mass of confusing verbiage. Quackery has not been suppressed, and all efforts to suppress it under the law have been practically abandoned for more than three years.

The official register of the Regular Board for 1885 gives a list of 485 illegal practitioners in the State, and the secretary of the board, under the head of "Illegal Practitioners," volunteers the valuable information that "Any one of these persons so violating the laws of this State, is liable to arrest at the instance of any citizen, and, upon conviction, to fine and imprisonment." The force of the above, to be fully appreciated, must be taken in connection with the fact that 114 of the 485 illegal practitioners in California pursue their calling in San Francisco, the birth-place and stronghold of the present law.

There must be anything but a general appreciation of a law that permits about one-fourth of all the doctors in the State to defy its mandates and escape punishment. The profession at large has no confidence in the efficiency of the law; the public distrust it, and the illegal practitioner regards it as a big cudgel in the hands of a huge, blundering and awkward lout, whose blows he wards off by superior nimbleness and dexterity. The law now merely legalizes acts of piracy on strangers and unsuspecting recent graduates; for it seems that all the timid incompetents have long since been gathered in and qualified with the necessary veneering, and the three Boards are confined to the *arduous* duty of levying an embargo of five dollars on each graduate of the four medical schools in the State, in order to determine the genuineness of their diplomas.

But the community and the profession are entitled to some kind of protection, and it is in the interest of higher medical education that this protection should be obtained. The Sacramento Society for Medical Improvement, having more than a year ago this subject in review, drafted a bill embodying their views of the necessities of the situation. There was but one dissenting voice in the Society. The following is the bill:

AN ACT

TO REGULATE THE PRACTICE OF MEDICINE AND SURGERY IN THE STATE OF CALIFORNIA.

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. Every person practicing either medicine or surgery in the State of California shall first have recorded in the office of the Clerk of the county in which he or she resides, a diploma from some legally-chartered medical college, together with his or her affidavit that he or she is the lawful possessor of said diploma, and the identical person named therein.

SEC. 2. The Clerk of each county shall keep, in a book provided for the purpose, a complete transcript of each diploma and affidavit presented for record, and shall exact a fee of five dollars from each person for whom he records a diploma and affidavit.

SEC. 3. Any person shall be regarded as practicing either medicine or surgery within the meaning of this Act who shall profess to be a physician, or surgeon, or doctor of medicine, oculist, or aurist, or who shall habitually prescribe for the sick, or profess to treat, or cure, or heal the sick or diseased, maimed or deformed, by any means whatever.

SEC. 4. This Act shall not be construed to prohibit any person from giving gratuitous medical services, nor medical services in case of emergency, and shall not apply to lawfully commissioned surgeons, or to ex-surgeons of the United States Army or Navy, nor to any person who has on record in the office of the Clerk of the county in which he may now or may at any time have resided, a certificate heretofore granted by a Board of Examiners heretofore existing under an Act entitled "An Act to regulate the practice of medicine in the State of California," approved April third, eighteen hundred and seventy, or under an Act supplemental to and amendatory of said Act, entitled as aforesaid, approved April first, eighteen hundred and seventy-eight.

SEC. 5. Any person practicing medicine or surgery in this State without complying with the provisions of this Act shall be guilty of misdemeanor, and upon conviction thereof shall be punished by a fine of not less than ten dollars nor more than fifty dollars, or by imprisonment in the County Jail for a period not exceeding thirty days.

SEC. 6. Any person who shall knowingly procure to be recorded, or

attempt to have recorded, as his own diploma the diploma of another, shall be guilty of felony, and upon conviction shall be punishable by imprisonment in the State Prison for a term not exceeding seven years.

SEC. 7. All Acts and parts of Acts to regulate the practice of medicine in this State heretofore in force are hereby repealed.

SEC. 8. This Act shall take effect thirty days after its passage.

It is not claimed for this bill that it is the best that it is possible to propose; but it excels the one alleged to be in force, in that it is fair and just, brief and concise, and that the penalty is made in due proportion to the offense. The enforcement of a law for petty offenses cannot be construed into malicious persecution inspired by professional jealousy. The bill was duly introduced into the Legislature and entirely let alone by its friends. A committee from the Examining Boards, however, appeared before the Committee on Hospitals, and begged and urged that no change should be made. The committee did more. It led the Committee on Hospitals to believe that the Sacramento Society for Medical Improvement was a unit in opposition to a change. The matter culminated in a lengthy report, wherein this Society was congratulated upon the successful defence of the law that permits 485 quacks to practice unmolested in California.

In conclusion, it may be well to inquire what the medical profession will lose by a repeal of the present law. We have first to consider that the law has been protected and defended by the Examining Boards, as the exponents of intelligent medical legislation. On the other hand, we are forced to regard the failure to convict under its provisions, as an unerring indication that a subtle but potent unwritten law, Public Opinion, almost completely nullifies it. It is but logical to apply to this case the common aphorism, "*vox populi, vox Dei.*"

A repeal of the act now in force would deprive the profession (and I use the term in a collective sense) of three Boards of Examiners, composed of men whose education and opinions on vitally important essentials forbid their professional consultation. These men would be relegated to the desirable obscurity of fellow practitioners.

It is hardly supposable that the regular profession requires a legislative enactment to lift it to the level of Homœopathy and Eclecticism, and it appears superfluous to give official prominence to obscure irregular practitioners in order to enable us to maintain an emasculated court of our own.

HOURLASS CONTRACTION WITH TWINS.

By N. S. GIBERSON, M.D., Eureka, Cal.

The science and art of obstetrics conflict now-a-days with a frequency which is nowhere more clearly displayed than in the discussions over that "prominent bug-bear to obstetricians," the hour-glass contraction. Prominent writers on that subject, and obstetrical societies, dogmatise over its pathology and treatment with an assurance which would have done credit to one of the ancient councils of the church, when settling the lines of orthodoxy. The American editor of a recent obstetrical work says: "The right-hand illustration [central constriction of the uterus, with after-birth] has been a subject of contest for many years, and was very recently condemned at a meeting of the Philadelphia Obstetrical Society. It is claimed by but few obstetricians that there never has been such a contraction as this. No one at the meeting appeared to believe that the uterus was subject to a true central constriction; still, one claimed that the contraction was located at the internal os, and another that it was sometimes high on the organ. Prof. Meigs taught that an irregularly contracted uterus was the effect of an adherent placenta acting as an obstacle to contraction over the seat of union, while the rest of the organ was free to contract. Some men of very extensive experience still hold to this view. Others, having equal advantages, claim that the uterus contracts uniformly; that the internal os may be spasmodically constricted; and the cervix remain at the same time dilated as a flaccid ice-bag, or a funnel-shaped vestibule. This latter view is based upon the belief that the arrangement of the circular muscular fibres is such that a violent linear contraction in the body of the uterus must be an anatomical impossibility. The recent discussions upon 'tetanoid constriction of the uterus, as a most obstinate form of dystocia,' have revived the question as to the exact seat of spasm, and may lead eventually to an exact determination of the zone of fibres involved."

Playfair disposes of the subject in the following summary manner: "This [the hour-glass contraction] in reality seems to depend on spasmodic contraction of the internal os uteri, by means of which the placenta becomes encysted in the upper portion of the uterus, *which is relaxed*. On introducing the hand, it first

passes through the lax cervical canal, until it comes to the closed internal os, with the umbilical cord passing through it, which has generally been supposed to be a circular contraction of the body of the uterus. Encystment of the placenta, however, although more rarely, unquestionably takes place in a portion only of the body of the uterus. Then apparently the placental site remains more or less paralyzed, with the placenta still attached, while the remainder of the body of the uterus contracts firmly, and thus encystment is produced." And he adds oracularly: "These irregular contractions I believe almost invariably to depend upon defective management of the third stage of labor. If placental expression were always employed, if it were the rule to effect the expulsion of the placenta by *vis a tergo*, instead of extracting by *vis a fronte*, I feel confident that these irregular and spasmodic contractions would rarely, if ever, be met with."

Cazeaux, with his usual conservatism, weds himself to no particular theory, but observes that in these cases of hour-glass contraction, "the uterine neck sometimes measures five or six inches in length, and from four to five in diameter, in this state of flaccidity; the cavity of the womb containing the placenta is found above the retracted part. *In some instances the uterine walls are firmly contracted around this mass, while at others they are in a state of partial or complete inertia.* The cavity of the womb is thus divided into two portions. When the upper one is contracted upon the placenta, as most generally happens, its volume does not exceed the moiety of the whole organ; and hence the retraction, although seated at the internal orifice, seems to exist very near the middle of the uterus, which circumstance has induced many practitioners to suppose that they had encountered an irregular contraction of the body of the womb. In most cases the after-birth is retained entirely within the superior cavity; but this is not always the case, for in some instances the vascular mass has been found strangulated, to a certain extent, by the stricture of the neck, one part being retained in the upper part, and in the lower, whence it may happen that a very small portion of the placenta projects into the vagina, or it may be strangulated near its central part, or more than one-half of the placenta may hang below the stricture. The hour-glass contraction is recognizable by the shape of the uterus, and by the resistance presented at the internal orifice, both to the placenta and to the accoucheur's finger. The organ is found hard and contract-

ed, when felt through the abdominal walls, and all tractions on the cord prove ineffectual; besides, the operator, by resorting to the touch, will find the placenta above the internal orifice, which is contracted, whilst the walls of the neck below are soft, flabby, and dependent in the vagina; and, lastly, there is no discharge of coagula, and sometimes even no blood of any consequence escapes." There seems to be almost a smack of empiricism in the declaration that a central constriction of the uterus is an "anatomical impossibility," or that "encystment of the placenta takes place in a portion only of the body of the uterus."

How long has it been since venesection, once the corner-stone of the therapeutic art, was discarded as a relic of barbarism? Or how long since hypodermic medication, now one of the chief remedies in angina pectoris and in cerebral meningitis, was interdicted in diseases of the nervous and circulatory systems? And in view of the constant and systematic advance of the genius of investigation, why fence in the explorer with an "anatomical impossibility?" In these discussions, nothing has been said with reference to the possibility of the hour-glass contraction complicating plural births—with one child and its after-birth above the constriction, and the other with its placenta below. To such a case, with numerous complications, I have the honor to invite the attention of your readers.

The patient was a vigorous, well-formed woman of eight-and-twenty, the mother of two children, both in the enjoyment of robust health, and aged respectively three and five years. Without any special cause, other than the constitutional reluctance of American women in general to "increase and multiply," she was fiercely averse to any further augmentation of the responsibilities of maternity, and no sooner did she realize that she was pregnant, than she went resolutely to work to destroy the product of conception. Dreading her husband's wrath, she dared not apply to a physician, and she became a mendicant upon the charity of her married neighbors. And right nobly did they respond; prescriptions by the score poured in on her, and they were all welcomed, and most of them used. Inexplicable as it may seem, however, she failed to miscarry. She then concluded (in the latter half of the period of gestation) to try the effect of starvation; and in order to make the plan an undoubted success, she combined it with violent horseback rides. Her self-immolation continued, with occasional brief intermissions, for the bal-

ance of the term, but all in vain. She starved herself to a shadow, but the detested fœtus would not relax its hold. This prolonged and fruitless violence was to me a striking demonstration of the perfect sympathy which exists between a healthy uterus and its contents; not usually to be dislocated by anything short of actual local violence (this, strange to say, was not attempted), and then, not infrequently, causing dissolution of the entire organism of which it formed a part.

With the fact in view, that of the small army of the "untimely ripped" from their mothers' bodies, the great majority are the victims of the crudest and most ignorant methods—one's heart sickens to contemplate the list—the wonder is that so many mothers escape the penalty of their criminal rashness.

About two weeks before delivery, I was called in to prescribe for an annoying headache, which had troubled her more or less ever since she had reduced her diet down to the true Spartan allowance. I was struck with her woe-begone appearance, and inquired the reason of her famine-stricken and exhausted condition. But it was not until months after, that she confessed the true reason; at present it was only an irritable stomach, which would retain nothing. Within a day or two, by her reckoning, the premonitory symptoms of labor expressed themselves, and after she had suffered for a few hours, I was summoned to her bed-side. I ascertained that the dilating pains had been in progress all night; the presentation was apparently normal; the abdomen, while very prominent, did not attract my special attention, owing perhaps to the fact that her emaciated condition would account for a reasonable excess of size. She was in a condition of nervous prostration, and morbidly apprehensive of the approaching ordeal. Altogether, the prognosis was as unpromising as it had been my lot to encounter in a woman who had no pelvic deformity to contend with. About nine o'clock, A. M., the bearing-down pains began, but feebly and inefficiently, and their interval was filled with those sharp, irritating, neuralgic pains whose principal function seems to be that of tormenting the sufferer. And it is worthy of remark that even those women who have borne children and are reasonably familiar with every variety of labor pain, have the same horror of those almost tetanic paroxysms, which is exhibited by the primiparæ in their first dreadful experience. I have often speculated upon the probable cause of this apparently over-wrought horror, and have

made inquiries pertinent thereto among intelligent and thoughtful women, and the opinion elicited is, that while the effective labor-pains are frequently agonizing beyond the power of language to describe, they are yet supported and rendered endurable by the hope of a speedy delivery, and the recompense which every true woman expects for her agony in the infant, who will be at once her care and delight. But with the ineffective pains of labor, this element of hope is lacking; the woman is tormented with a train of thought which, including as it invariably does, the injury or death of the infant, and a fate hardly less tragic for the mother, deepens her anxiety for every moment of delay, until literally

“On horror’s head, horrors accumulate,”

and the sufferer rapidly becomes demoralized. A hypodermatic injection of one-fourth of a grain of morphia (mixed injection) secured quiet for her, and about two hours of sleep, when the womb renewed its efforts with some promise of energy, which, however, soon proved delusive. By the middle of the afternoon inertia was complete; the child’s head had not budged from the first cranial position; the patient’s mind was wandering, and I felt apprehensive that eclampsia would soon close the scene. Without hazarding further delay, I summoned a friend to administer the anæsthetic, and proceeded as expeditiously as possible to apply the forceps. The delivery was rapidly and easily accomplished, and was not attended by any unusual circumstances. The infant was puny and emaciated to a degree, and upon examination was found to have a *double inguinal hernia*. It was as if reluctant and starving nature had not been able, out from the scanty material so grudgingly doled out to her, completely to construct the miniature being who should have been her master-piece. There was no apparent deformity, and his cry was lusty for one so hopelessly weazen. Placing my hand over the abdomen, to reanimate the uterine contractions, I found to my dismay, that although the uterus was firmly contracted, it was not notably diminished in bulk, and in all probability contained another child. Careful external manipulation settled the point conclusively, and also determined a transverse presentation, with the cephalic extremity to the mother’s left side. It seemed a cruel irony of fate that the unfortunate woman should have been elected to starve in utero, not one being, but *two*!

After a brief consultation, we concluded that the possible ad-

vantages of delay were more than over-balanced by the apparently hopeless inertia of the womb and the critical condition of the patient, and that the second child should be delivered before the dilatation of the maternal passages had at all diminished. The anæsthesia was resumed, and after administering twenty drops of a solution of ergotine hypodermatically, I proceeded to explore my way towards number two, and podalic version. I experienced no difficulty in introducing my hand into the uterus, which seemed completely relaxed. I grasped the placenta, which was slightly adherent, and in a moment became impressed with the fact that the after-birth and membranes were apparently the only occupants of the uterine interior. To say that I was amazed would fall far short of the truth. I removed the placenta and re-examined the external appearances. The evidence of the presence of another child was conclusive. There was not the slightest probability of a rupture having occurred, and the child being at large in the peritoneal cavity, so that I had no option but to re-examine the uterus, and to ascertain, if I could, the cause of so phenomenal an appearance. I examined the supposed fundus carefully, and swept my fingers freely and uninterruptedly around the entire circuit; but finally, with the aid of pressure on the outside, I succeeded in boring my index-finger through an orifice which seemed almost cartilaginous in its unyielding density, but which undoubtedly communicated with an upper cavity within the uterine body, between which and the lower it had formed a veritable partition. Here, then, I was face to face with a central constriction of the uterus. I saw no possible way of evading that conclusion. That it was not the os internum uteri seemed demonstrated by the fact that I had removed the placenta while the constriction was existing, and they had apparently no connection at all, beyond the circumstance of their occurrence in the same organ. Furthermore, the removal of the placenta had no perceptible effect upon the contraction, which still held the second child, with even its membranes intact. Here a Barnes dilator would have served me well; but none was to be had, so the digital dilatation had to go on, and it was a happy moment when the yielding constriction enabled me to differentiate and to grasp a foot. The remainder of the delivery was accomplished readily, the membranes remaining intact until the last stages of the manipulation were complete. The infant, also a boy, was similar in appearance to his brother, and like him, had a *well-marked*.

double inguinal hernia. These herniæ occurring with both children were not the least of the points of interest which clustered so thickly around this, to me, unique obstetrical experience. Had it existed in the case of the second child only, I should have attributed it to a possible injury in the operation of turning; but this position was untenable, from the fact that number one was in the same condition, and he had undergone no manipulation which could possibly have produced such a lesion. I have no theory to advance in that instance, and only mention it as a curiosity. The after-birth and membranes were extruded in a few moments, requiring but a gentle traction on the cord; the uterus contracted slowly but rationally, under the combined influence of friction and the injection of hot water within the cavity. The patient recovered slowly, but escaped any dangerous sequelæ. She formed no milk, and the unfortunate waifs slowly died under the artificial food and the constant irritation produced by the herniæ under the burning climate of central Arizona.

Now, if my deductions in this case have been erroneous, I have been honestly in error. It was a novel experience to me, and I was not able to realize at the time that I was about to demonstrate, to my own satisfaction at least, that the hour-glass contraction is something more than an obstetrical bug-bear, and to traverse the well-settled opinions of many most competent observers. If I have been Quixotic enough to charge the windmill of an "anatomical impossibility," then my temerity will invoke its own retribution. But it would be a source of great satisfaction to me if some of our keen, practical observers, who have no theories which are not open to revision by the practical deductions of bed-side experience, would give their views upon this department of the obstetrical study.

The *Berliner Klinische Wochenschrift*, in its report of the debate on cholera at the Munich Medical Union, gives some interesting facts. Numerous specimens of bacteria were exhibited by Dr. Immerich, who stated that in nine bodies examined, his bacteria, "the Naples cholera bacteria," had been proved to exist in the liver, kidneys, spleen, mesenteric glands, brain, and blood, in a state of pure cultivation. Koch's vibrio was only found in the intestine, but seldom in the intestinal wall, and never in the internal organs; it was of secondary importance, probably one of the constant inhabitants of the digestive tract, of which little was known as yet.

**AN ANATOMICAL POINT OF MUCH IMPORTANCE
TO THE LITHOTRITIST.**

By GEO. CHISMORE, M.D.

During the operation of crushing a stone in the bladder, it is often necessary to sweep the floor of the organ in search of the calculus or its fragments. In prosecuting this manœuvre it is very important to bear in mind an anatomical fact which, so far as I am aware, has hitherto escaped the notice of writers on lithotripsy. The recto-vesical fold, passing transversely across the posterior wall of the bladder, fixes, so to speak, a narrow band along the course of the upper margin of the fold. Below and above this line the wall of the viscus is freely movable, and may be carried backwards by slight pressure to a considerable extent. In working with the beak of the lithotrite reversed, if one blade be above and the other below this fold, and the handle of the instrument raised enough to carry the points well backward, on closing the jaws the fold crowds into the bill, carrying the whole thickness of the bladder walls before it. Although this would be very perceptible to the feel if no fragment of the stone were caught, it is quite another matter when a rather large piece is included with it; then a careful man might inflict a severe pinch, and a hasty one do fatal mischief.

An examination of the cadaver will verify the foregoing views. Tie the rectum at the sigmoid flexure, remove the intestines and observe the bladder empty. The band referred to will at once be seen. Pass the finger into the pouch between the bladder and rectum; note how freely movable the wall of the organ is below the peritoneal fold, and remark the slight mobility of the upper margin of the band. Inflate the bladder, insert the lithotrite, reverse the beak, open the jaws so as to include the fold, raise the handle and see how readily the entire thickness of the bladder wall may be seized on closing the instrument.

As this fold is readily recognized in the living subject, it is only necessary to keep both blades of the lithotrite below or above it when sweeping the floor, to be in as little danger here as elsewhere, the general tendency of the bladder walls being to slip out of the bite of the instrument except in the locality described.

THE RELATION BETWEEN CHEMICAL CONSTITUTION AND PHYSIOLOGICAL ACTION.

[Being a reply to the statements made by Dr. Lauder Brunton in his recent work on Pharmacology. By JAMES BLAKE, M.D., Lond. F.R.C.S.]

In a review of Dr. Brunton's work on Pharmacology, etc., which appeared in the last number of the *JOURNAL*, you alluded to some inaccuracies which had appeared in the work in relation to investigations I had made on the subject. I shall not attempt any general criticism of Dr. Brunton's chapter on the "General Relations between the Organism and Substances Affecting It," but shall merely point out the inaccuracies of his statements in regard to work I have myself performed in connection with this subject.

In the paragraph on the "Connection between Chemical Constitution and Physiological Action," it is stated: "It has long been known that different metals exercise different actions on the body; that mercury, for example, causes salivation and antimony sickness. But an immense step has been made of late years in our knowledge of the relation between chemical constitution and physiological action, by the discoveries of Crum-Brown, Fraser and Schroff, who have shown that by modifying artificially the chemical constitution of a drug, it is possible to modify its physiological action." It would appear from this statement that before the researches of the gentlemen named, the most we knew about the connection between chemical composition and physiological action was that mercury caused salivation, and antimony vomiting. Now, many years before this, I had published certain facts which might be considered as having at least some bearing on the question. In a paper read before the *Academie des Sciences* at Paris in 1839, I had shown that the physiological action of a salt, when introduced directly into the blood, is dependent on the base of the salt, and is but slightly modified by the acid, a fact which has since been confirmed by Ringer. I had also shown, in a paper read before the *Royal Society* in 1841, that the physiological action of substances was connected with their isomorphous relations, and this has been confirmed by Ringer as regards the Baryta group, and by Gamgee in relation to the analogy between the physiological action of vanadium and

phosphorus, which are isomorphous.* I had also shown that when the valency of the element changed, as in the ferrous and ferric salts, and in the cerous and ceric salts, that the physiological action was completely altered. Surely these facts, confirmed as they have been by other observers, would indicate that a closer connection had been discovered between chemical constitution and physiological action than the knowledge that mercury salivates or that antimony was an emetic.

As regards the opinion of Dr. Brunton on the bearing of my investigations on the connection between chemical constitution and physiological action, it is easy to show that it has been given without any attempt to understand their nature or the manner in which they have been performed, as the following quotations will prove. At page 49, when speaking of the "Relation between Atomic Weights and Physiological Action," he states: "As long ago as 1841, Blake thought that the toxic action of inorganic substances increased in proportion to their atomic weight, and this idea was again advanced by Rabuteau. Both of them afterwards qualified this when they found it was incorrect, by saying that the poisonous action increased with the atomic weight amongst elements belonging to the same group." Now this paragraph contains about as many errors as it does lines. In the first place, I never wrote a word about the connection between atomic weight and physiological action in 1841. It was not until thirty-two years later, or in 1873, that I first published anything showing the connection between toxic action and atomic weights. In 1841, in a paper read before the Royal Society, an abstract of which was printed in Volume V. of the Proceedings, I first pointed out the connection between chemical constitution and physiological action, by showing that when injected directly into the blood of living animals, the members of the same isomorphous group of elements resembled each other in their physiological action. In a paper read before the California Academy of Sciences in 1873, I pointed out the true connection between toxic action and atomic weight, at the same time criticising the statements of Rabuteau on the subject, whose supposed law was, when tested experimentally, falsified in ninety per cent. of the cases to which it was applied (not verified in only ninety per cent., as stated by mistake in your last number), as I have shown

*It is a curious fact that in these instances in which my previous discoveries have been confirmed by other observers, no allusion was made to them, either by Ringer or Gamgee.

in a communication to the Academie des Sciences at Paris. (See *Compt. Rend.*, Vol. 96, P. 439). Neither as regards the connection of physiological action with isomorphism or with atomic weight, have I found the facts as first published by me to be incorrect, as stated by Dr. Brunton. As for Rabuteau, I am not aware that he has ever modified his first statement, although I proved that it was altogether wrong, and that the connection between atomic weight and intensity of toxic action was not absolute, as he stated, but only applied to the elements in the same isomorphous group.

As for Husemann's experiment with lithium, in which it is stated that its salts are more poisonous than those of potassium or sodium, it is plain that he was as ignorant of my researches as is Dr. Brunton, or he would not have selected for comparison the salts of two elements which I had repeatedly pointed out formed exceptions to the general rule, and which, with the salts of palladium and beryllium, were the only exceptions amongst the salts of twenty-nine of the metallic elements. I have not seen the details of Husemann's experiments, and therefore shall not attempt to criticise them. All I can say is that I have repeated my experiments with the lithium salts, with a chemically pure preparation, and find them, as originally stated, far less poisonous than the salts of potash.

Dr. Brunton then states that these results of Husemann's have been confirmed by Richet, although I had shown in a communication to the Academie des Sciences at Paris (see *Comptes Rendues*, Vol. 96, p. 1,055) that his experiments had no bearing at all on the subject. I, however, will describe these experiments, as an example of the unscientific manner in which physiological experiments are too often conducted, and also as showing the critical acumen of Dr. Brunton in weighing evidence on an important scientific point :

The question to be elucidated was : Does the toxic action of the metals in the same isomorphous group, when introduced directly into the blood, increase with their atomic weight? In order to determine this, Richet dissolves a certain quantity of the salts of the different metals in equal portions of water, and places in these different solutions a lot of minnows. When he found that the toxic action of these solutions on the minnows was not in accordance with the atomic weight of the substances employed, he concluded that my results were wrong. The proba-

bility is that under the conditions of the experiment none of the salts found their way into the blood, but proved fatal by their local action on the gills. Had I stated that these substances exerted a toxic action in proportion to their atomic weight when introduced into the trachea, Richet's experiments might have had some sort of bearing on the question. As it is, they have about as much relation to it as has the length of a broomstick to the height of Tenterdon steeple; and yet it is this sort of evidence that Dr. Brunton adduces to show that the results I have obtained from some hundreds of carefully observed experiments are wrong.

Dr. Brunton then indulges in some *a priori* reasoning in support of his previous criticisms. He states: "It is evident that the relationship between atomic weight and physiological action is no simple one. But, indeed, in looking into the matter more closely, one could hardly expect it would be; for the toxic action of an element may depend on its effect on the muscles, nerves, nerve-centres, blood, or on the digestive or secreting systems. These differ from one another in their composition, and while it is possible that the elements belonging to a certain group may have relations varying with their atomic weights, to individual organs or structures, we can hardly expect these relationships to be the same for all the organs." That the relation between atomic weight and physiological action is no simple one, I long ago pointed out when criticising the statements of Rabuteau; but because a phenomenon is dependent on two factors instead of on one, surely this is no reason for denying its existence. That the toxic action of an element is connected with its isomorphous relations as well as with its atomic weight, does not render either relation the less probable.

There is no doubt that the toxic action of an element may depend on its affecting different organs of the body, but because these organs differ in composition from each other, I see no *a priori* reason why a set of elements belonging to the same isomorphous group should not exert an analogous action not only on any one organ, but on all of them. Had Dr. Brunton taken the trouble of making himself acquainted with the facts he was criticising, he would have seen that the statement of the analogous action of isomorphous substances was founded not only on their action on single organs, or solely on the action by which they proved fatal, but on their action on all the more important

organs of the body. Thus the salts of the whole of the magnesian group of metals, including magnesium, iron, manganese, copper, zinc and cadmium, when introduced directly into the veins in physiological quantities, kill by destroying the irritability of the heart. But not only do they agree in this respect, but they all exert the same action on the nervous centres, leaving the respiratory and vaso-motor centres unaffected, whilst stimulating the vomiting centre, and influencing in the same manner the functions of the cerebrum and cord; none of them produce any direct effect on the pulmonary or systemic capillary circulation, and all—with the exception of the salts of magnesia—retard or prevent the coagulation of the blood. It might have been concluded that this similarity of action on the various organs, of substances differing apparently so much as do the salts of iron and cadmium from those of magnesia, but agreeing in belonging to the same isomorphous group, might have attracted the attention of any one scientifically investigating the connection between chemical constitution and physiological action; yet this evidence seems to be entirely ignored by Brunton.

Amongst the metals in the magnesium group are some in which the basic molecule exists in two distinct forms, giving rise to salts which belong to different isomorphous groups. Now, to any one comprehending the meaning of chemical constitution as connected with physiological action, the question naturally presents itself: Does the same element, when changing its chemical constitution and migrating from one isomorphous group to another, change at the same time its physiological action? And if so, is its action now analogous to that of the other members of the group into which it has migrated? Now I have shown that the salts of iron, as ferrous salts, agree with other members of the magnesian group in their physiological action, whilst the action of the ferric salts is quite different, but is identical with that of the salts of alumina, with which under their new molecular structure they are isomorphous. The analogy of action between the salts of alumina and the ferric salts is shown not solely by their effects on any one organ, but by their influencing all the more important organs of the body in the same manner. In order to show the striking change in the physiological action of the same element when its atoms assume a different molecular structure, I present in a tabular form the principal reactions of the ferrous and ferric salts, and also of the salts of alumina, with which these ferric salts are isomorphous:

| SALTS. | Action on heart. | On systemic arteries. | On pulmonary arteries. |
|--------------------|----------------------------|-----------------------|------------------------|
| Ferrous salts..... | Destroy its irritability. | Unaffected. | Unaffected. |
| Ferric salts..... | Increase its irritability. | Contracted. | Contracted. |
| Alumina salts..... | Increase its irritability. | Contracted. | Contracted. |

There is another almost as important a consideration which must have presented itself to any one comprehending the full meaning of the term "isomorphous," viz., that as there are certain elements which serve to connect two or more isomorphous groups, do these linking elements give rise also to physiological reactions characteristic to the two groups they connect? The salts of lead, for example, have isomorphous relations both with the baryta group through baryta, and with the soda group through thalium and silver. Now I have shown that the salts of lead agree with the salts of the thalium and silver in their action on the heart and on the pulmonary and systemic arteries, whilst they resemble the salts of the baryta group in causing the most striking physiological reaction that characterizes that group, the combined contraction of the systemic muscles for many minutes after death. The salts of magnesia and lime, two elements uniting the magnesium and baryta groups, also offer analogous intermediate relations in their physiological reactions.

Now, these two facts, the change in the physiological action of the salts of iron and cerium, when the molecular structure of the base of the salts was changed and the resemblance of their action to the other members of the isomorphous group into which they had migrated, and the intermediate physiological action of the salts of lead and of magnesia and lime, substances connecting two isomorphous groups, might each be looked upon as an experimentum crucis for the truth of my conclusions, and to any one capable of weighing scientific evidence, either of them would have been allowed far more weight than whole schools of minnows showing their white bellies on the surface of any number of buckets of solutions of metallic salts.

The same close relationship has been shown between physiological action and isomorphism in the members of other well-marked isomorphous groups, including not only the more marked electro-positive elements, but also many of the electro-negative groups. There can be no doubt, as Brunton states, this relation-

| Vaso-motor centre. | Respiratory centre. | Vomiting centre. | Brain and chord. | Blood. |
|--------------------|---------------------|------------------|------------------|-------------|
| Unaffected. | Unaffected. | Stimulated. | Affected. | Fluid. |
| Stimulated. | Decidedly affected. | Unaffected. | Not affected. | Coagulates. |
| Stimulated. | Decidedly affected. | Unaffected. | Not affected. | Coagulates. |

ship could hardly have been expected; and when indicated by the late Professor Graham, about fifty years ago, on my calling his attention to the resemblance in the physiological action of the salts of soda and those of silver, both Graham and myself were as sceptical on the subject as Dr. Brunton still appears to be. But when an extended series of experiments with compounds of more than forty of the elements, and involving more than two hundred experiments, had shown that such a connection exists, neither Graham or myself saw in its improbability any reason for rejecting the evidence they furnished.

At the conclusion of the paragraph on the "Relation between Isomorphism and Physiological Action" (see page 52), Dr. Brunton states: "These experiments are open to the same objection as those of Rabuteau. The author's statements regarding their mode of action show that their physiological action has not been carefully investigated, and his results as to the lethal dose are probably only approximate, and may want re-investigation." As regards the experiments of Rabuteau, I have proved that the law they led him to formulate was, when tested experimentally, falsified in ninety per cent. of the cases to which it had been applied; and I would ask Dr. Brunton what shadow of proof he has that such is the case in the experiments I have brought forward. As to my statements showing that I did not carefully investigate the physiological action of the substances I experimented with, I cannot imagine how such a charge could be made by Brunton, when, as is evident, he had never taken the trouble to consult the records of my original experiments, and must have been ignorant of the manner in which they were made, and of the precautions taken to arrive at the truth. I think it will be a sufficient answer to Dr. Brunton's criticism if I point out the manner in which my experiments have been made, and possibly may furnish him an example which he may profitably imitate when he again undertakes to investigate the subject. At the time when most of these experiments were performed, the ma-

nometer* had lately been discovered by Poiseuille. With the aid of this instrument all the most important modifications produced in the circulation were observed, and I believe carefully recorded. Having found that some of the substances used, by arresting the passage of blood through the lungs, and others by stopping the heart, were, when injected into the veins, prevented from circulating over the body, I devised the plan of injecting them through the axillary artery back into the aorta, by this means insuring the contact of the re-agent with the nervous centres before it reached the heart or the lungs. The data furnished by this method were most important, as showing the direct action of the substance on the nervous centres, uncomplicated by its local action on other important organs. As experiments performed with the manometer required the animal to be confined, experiments were made by injecting the substance whose action was being investigated, into the jugular vein, the animal being at liberty, as by this means the general effects would be more readily observed. Immediately after the death of the animal, the thorax was opened, the state of the heart and lungs noted, and blood collected from both sides of the heart, for subsequent examination. The investigation of each substance involved at least four distinct experiments, and generally five or six; one or two preliminary, to ascertain the quantity required to give rise to well-marked physiological reactions, without proving too rapidly fatal; one for the venous injection; one for the arterial injection; and one for ascertaining the general symptoms.

The animal being at liberty, as the physiological action of compounds of more than forty of the elements was thus investigated, it will be seen that the investigation involved a great deal of work. It was, however, the only method by which results pretending to anything like scientific accuracy could be arrived at. And these are the experiments which are stated in Brunton's work not to have been clearly investigated. True it is, I did not ascertain the effect of the substances experimented with on

* It was when this instrument was being described by Dr. Sharpey, in his physiological lectures, that I perceived the important use it would be in physiological investigation, and whilst still a student at University College I made many experiments with it. The results I obtained secured me on two occasions the annual prize awarded by the Students' Medical Society for the best paper read before it during the session—the only recognition of my work, let me add, that I ever received from any learned society.

the gastronemius of a frog, or by how many thousandths of a second they would retard a nerve current. All I have endeavored to do has been to ascertain if possible the most important points, the broader lines by which chemical constitution and physiological action are connected. When I entered on the investigation the field was entirely unoccupied, and having, as I believed, found out the right way in which it should be worked, I proceeded to obtain all the experimental evidence I could, bearing on the subject, in the hope that others would be found who would continue and extend my researches in the same direction. It is a curious fact, however, that during the whole of the period of forty-five years that has elapsed since I first published my researches, it should not have attracted the attention of other observers. The causes of this, however, are not far to seek. The attention of physiologists has been given to the more complicated and most difficult problems of living beings, before there had been formed a foundation of elementary principles on which to build. The functions of the nervous system has been the favorite field of research, as furnishing the most magic-lantern-like pictures for delighting an audience. One of the natural results of this has been to encumber about two-thirds of the space of our physiological journals with refutations of what had been previously published.

As to the re-agents employed, they have been chosen principally from the nitro-glycerine class. Instead of selecting those with the chemical constitution of which we are better acquainted, they have been taken almost entirely from amongst the compound ammonias or ethers, and the nitrogenized alkaloids, substances on the molecular constitution of which we possess less knowledge than on any other compounds. It is probable that in the whole history of science it would be impossible to find a more determined attempt at explaining the unknown by the unknown than is offered by physiological experiments on the action of drugs during the last twenty years. Take, for instance, the experiments lately published by Brunton and Cash, in the last volume of the Transactions of the Royal Society, on chemical constitution, physiological action and antagonism. They begin by using re-agents on the chemical constitution of which but little is known; they use them in a manner which precludes their getting any correct data as to their comparative physiological action, and from these two unknown quantities they arrive at the

conclusion that "all attempts to establish a relationship between atomic weight and physiological action have hitherto failed." The compound ammonias, which were the re-agents principally used, are substances on the chemical constitution of which we know probably as little as of any class of bodies that could have been selected. Most of the experiments were performed by injecting the substances into the cellular tissue, and the following quotation from the "Pharmacology" plainly shows that the many unknown factors involved in this way of experimenting must completely vitiate their results. At page 54 it is stated: "The amount of a drug which actually comes in contact with and affects the tissues depends on several conditions: (1) The quantity given; (2) Its proportion to the body-weight; (3) The rapidity of its absorption by the blood from its place of introduction; (4) The condition of the circulation in the various parts of the body, which determines the quantity of the drug carried to each; (6) The rapidity of its excretion." Now of all these factors, each of which must have exerted an influence on the results, the authors of these experiments were entirely ignorant, except on the first and second. With all these unknown factors influencing the quantity of the re-agent that at any one time was present in the blood, conclusions drawn from such experiments, either in support of or opposed to the existence of any connection between chemical constitution, atomic weight, and physiological action, must be absolutely worthless, even had the re-agents employed been such as were calculated to throw any light on the subject.

Another reason which would probably prevent Brunton from fairly criticising my researches, is the very indefinite notions he appears to entertain on the subject of chemical constitution and isomorphism. When alluding to the relation between "Isomorphism and Physiological Action," it is stated: "He (Blake) divided the elements into nine groups," etc., implying that this division was one I had invented for the convenience of classifying my re-agents; whereas the elements had been arranged in these same groups by Mistcherlich many years before I wrote. It appears also that far too restricted a meaning is attached to the term "isomorphism," as this conveys to the chemist not merely resemblance in crystalline form of isomorphous substances, but also far more important resemblances in what may properly be called chemical constitution. It was this too limited meaning attached to the term that led Rabuteau to relegate my researches

amongst *les baggages du passe*, conceiving that I had revived the doctrine of the old physiologists, who attributed the action of most poisons to the sharpness of the points of the molecules of which they were composed. I have already shown that on another point Dr. Brunton's ideas on chemical constitution are decidedly indistinct (see *Journal of Physiology*, volume 5, page 44). I am about tired of exposing these cavilling objections as to the truth of my researches. After expressly stating that my deductions only applied to substances introduced directly into the blood, the reply is, "They are not true terms; the phenomena you describe do not follow when they are applied to minnows' gills, or injected into the cellular tissue."

I have expressly stated that the connection between atomic weight and intensity of physiological action is only found to exist amongst the salts of the more electro-positive elements, and this is attempted to be disproved by showing that the law does not hold good in respect to compound ammonias, and other substances as different from the electro-positive elements as light is from darkness. If it is desired loyally to test the truth of my statements, why cannot my experiments be repeated in the manner in which I performed them? Should the facts thus obtained justify the accusation that I had not carefully observed the physiological phenomena recorded, I shall be the first to acknowledge my error. As it is, I cannot stand quietly by, and see what I believe to be an important scientific truth squelched out by a mass of irrelevant facts, and relegated *aux baggages du passe*. This would undoubtedly have been the case had I not survived the publication of my experiments beyond the usual time; for, unfortunately, these futile criticisms are advanced by Fellows of learned societies, by men whose opinions necessarily carry weight, particularly with those who are not capable of comprehending both the chemical and physiological aspects of the problem.

That the field I have opened up promises a rich physiological harvest, even independently of the confirmation or rejection of my results, the following quotation will prove. In a paper I read before the British Association in 1846, I observed, after bringing forward additional facts, showing the connection between isomorphism and physiological action: "The verification of this law enables us to undertake the investigation of the chemical phenomena of living beings from an entirely new point of view, whilst its existence accounts for the failure that has con-

stantly attended the attempt to explain the chemistry of animal life by analogy with ordinary chemical phenomena. The fact that we now possess the means of producing well-marked and definite modifications of some of the most marked physiological properties of various organs, and this, too, by means of re-agents the laws governing whose action we are acquainted with, places in our hands an instrument of discovery which has hitherto been wanting in physiological investigations. The enumeration of some of the effects that can be produced on many of the more important functions will, I trust, suffice to lead others into this rich field of inquiry. As regards the functions of the heart, we can annihilate or increase its irritability; quicken or diminish its pulsations; render them regular or irregular; augment their force or render them weaker; destroy the irritability of the auricles, whilst that of the ventricles continues; keep up the circulation of the blood for many minutes after every other sign of life has disappeared, and this too more actively than when respiration was going on; we can facilitate or arrest the passage of the blood through the pulmonary and systemic capillaries;* produce important modifications in the functions of the brain. In short, the injection of various substances into the arteries and veins enables us to modify all the most important functions of the body, and this, as before stated, by agents the laws of whose re-action we may fairly hope to discover. My reason for having neglected the closer investigation of these interesting phenomena, was a determination fully to establish the law of the analogous action of isomorphous substances. This having been accomplished, shall now [1846!!'] direct my researches to the elucidation of these secondary questions." (See Report of British Association for the Advancement of Science for 1846.)

* This was written before the contractility of the smaller arteries had been demonstrated, before the influence of the vagus on the heart had been discovered, and long before the existence of a vaso-motor centre had been dreamed of.

Proceedings of Societies.

San Francisco County Medical Society.

SAN FRANCISCO, Oct. 13, 1885.

The meeting having been called to order by the President, Dr. Jewell, and the minutes of the previous meeting read and approved, the committee reported favorably on the credentials of F. Z. Bazan, M.D., who was forthwith elected to membership.

The President then introduced Dr. Graves, of Petaluma, whose case was made the special order of business for the evening.

Dr. Graves gave the following account of the recent trial for malpractice in the case, *Winters v. Graves*:

He had been a practitioner of medicine and surgery in Petaluma for nearly sixteen years, and during that time had attended the family of Mr. Winters, without receiving any remuneration except some work done by the latter, which might be valued at one dollar and fifty cents. In April of 1884, he was called to see Mrs. Winters, who had fallen from a height of seven or eight feet, and injured her ankle. He found her lying on the floor, with the foot much swollen; but there was no shortening nor displacement of the foot, and the malleoli seemed to be entire, as there was neither crepitus nor any apparent solution of continuity. But the great swelling rendered the diagnosis difficult, so he told the patient that he thought it was only a severe sprain, but that it was quite possible that some of the smaller bones were broken. As the limb was still swelling, he refrained from putting on bandages, but laid it in position and applied loose cloths with anodyne lotions. But the pain continued to be so severe for some days, that it was necessary to relieve the suffering of the patient by administering morphine.

He attended her for between two and three months, but kept no record of the visits, and made no charge, as his long experience with the family had shown him that it was unnecessary to do so. The patient was not a strong woman, appeared to be somewhat strumous, and was fifty-eight years of age, although at the trial she changed this statement, and said she was only fifty. After some time she went around upon a crutch, and attended the doctor's office, who told her to come and see him

from time to time, or to let him know, and he would call and see her. He saw nothing of her for some months after this, until he heard that Dr. Ivancovich had said that the tibia was broken, and advised her to sue for compensation for malpractice. Dr. Graves went to see her, and wished to examine the limb and bring other surgeons to see it. He even went so far as to offer to take her to any surgeon in San Francisco ; but she refused to let him touch it, and said that Dr. Ivancovich was now her physician. Dr. James Murphy saw it, and said that it was all right, and that there were only some adhesions which might be broken up. Dr. Graves made these overtures to clear his own reputation with the woman and the public, and not because he believed himself to be guilty of malpractice.

The plaintiff was brought to the city by her attorneys to see if they could beat up evidence in her favor, and was shown to Drs. Lane, McLean, Morse, Leonard, Phillson and Dennis, all of whom testified that the treatment had been skillful. Dr. Lane said that there might have been a partial fracture of the internal malleolus, but that the fragments had not been separated, as the bone was not broken completely.

The case came up for trial on the 29th September, 1885, but was postponed for twenty-four hours, as the affidavits of the San Francisco surgeons could not be found. These affidavits which were not forthcoming, were taken in the presence of the *plaintiff's* attorney, and were favorable to the *defendant*.

In answer to a telegram, Dr. Lane went to Petaluma and testified in behalf of the defendant.

Drs. Wells and Ivancovich appeared for the plaintiff. The former measured the patient's limb in court with a mechanic's metal rule, and said that there was one inch shortening. Dr. Ivancovich testified that the inner malleolus was broken, and the lower fragment pushed up behind the fibula, producing the shortening referred to by Dr. Wells.

Dr. Patty said that he could only endorse the statement made by Dr. Graves. When he saw the limb there was some swelling, with stiffening of the joint and slight inversion ; but he believed this displacement to be due to inflammatory adhesions, and advised the patient to let Dr. Graves break them up.

Dr. Lane saw the patient and recognized her injury as one of those cases of imperfect fracture where a perfect result can never be obtained. He thought that extra care had been bestowed upon the case, and that the result was a good one.

There were some very ugly facts connected with the trial, which warranted a re-hearing of the case. All the affidavits were taken in the office of the plaintiff's attorney; they all testified to the skillful treatment of the case; but when called for at the trial they were not forthcoming. The jury was mainly composed of the communistic element of the populace, who rendered a verdict contrary to the evidence. The profession should stand by Dr. Graves at this time, as every one is liable to be attacked in the same manner. The best counsel in the State should be employed for this purpose, and as the case is one affecting the profession, the necessary funds should be raised by subscription among medical men.

Dr. Graves intimated that he did not wish any of the money to pass through his hands, but should like the Society to manage it themselves.

Dr. Whitney said that as the verdict was not in accordance with the charge to the jury, there would not be any difficulty in obtaining a new trial.

Dr. Simpson noticed that there was an increasing tendency to suits for malpractice; several cases were now pending in San Francisco, and every one passed in the lower courts formed a precedent. Workmen and others had formed themselves into unions for mutual protection, and the medical societies must do the same. It was only right that the San Francisco Society should take the initiative, as practitioners in this city are more liable to be attacked, and also because this is the largest Society in the State. It would cost from \$1,000 to \$2,000 to employ first-rate counsel in this case, and that sum should be raised entirely by subscription, or to supplement a donation from the funds of the Society.

Dr. McLean had seen and examined the patient, and was convinced that whether the injury had been a fracture or a sprain, the result was excellent, considering the form of injury, and with which any surgeon might be satisfied.

Dr. Dennis said that the plaintiff had come to his office as an ordinary charity patient, more than a year after the accident. He told her that the limb might have been broken, but could not say. There was some ankylosis and adhesions, which he wished to break up, but the patient would not permit it. He forgot all about the case, and failed to recognize the patient. He urged the adoption of some means to appeal this case, as it was infa-

mous that the profession should stand as a target for such attacks.

Dr. Morse moved that—

WHEREAS, The San Francisco County Medical Society has fully and carefully investigated the facts at issue in the case of *Winters vs. Graves*, and after such investigation has reached the conclusion that the verdict of the jury in such case is utterly contrary to the evidence, and is entirely without foundation or justice.

Resolved, That this Society extend to Dr. Graves, in this bitter and unreasonable persecution, its warmest sympathy; and, appreciating fully his position,

Resolved, That a committee of five of the members of this Society be appointed by the President, to receive contributions and employ counsel for the defense of Dr. Graves, to demonstrate the unanimity of the medical profession in condemnation of this and all unwarranted attacks upon its reputable members.

Dr. Plummer suggested that

(1.) A private subscription be taken up.

(2.) That one or more persons be instructed to solicit subscriptions from all regular practitioners.

(3.) That a copy of the resolution and subscription form be immediately sent to all societies in the State.

(4.) That the Society supplement this subscription, if necessary, by a donation not exceeding \$1,000.

Dr. Morse's motion was carried, and the following committee appointed: Drs. Lane, Simpson, McLean, Whitwell and Kerr.

There being no further business, the Society adjourned.

WM. WATT KERR, Rec. Sec'y.

SAN FRANCISCO, Oct. 27, 1885.

The meeting having been called to order by the President, Dr. Jewell, the name of J. M. Eaton, M.D., St. Louis Medical College, was submitted for membership by Dr. James Simpson and Dr. Wm. Watt Kerr, and referred to the Committee on Admissions.

Dr. J. D. Arnold then delivered the annual address, taking for his subject, "Tubage of the Larynx." This was handed to the Committee on Publication, with the request that they should have two hundred copies printed for the use of the Society.

Dr. Jewell, as chairman of the Committee on Prosecutions of Illegal Practitioners, reported that the so-called "Doctor" Fish had been convicted in the Police Court, of practicing without a

license. This was only a commencement of the warfare, and he hoped the Society would keep it up with increased vigor till every irregular was driven from the State.

The following annual reports were presented and received :

TREASURER'S REPORT.

Income Account.

| | | |
|------------------------------|----------|----------|
| Cash Balance from 1884 | \$112 07 | |
| Received from Secretary..... | 526 30 | |
| | <hr/> | \$638 37 |

Disbursements.

| | | |
|------------------------------|----------|----------|
| Hall Rents..... | \$115 00 | |
| Librarian's Account..... | 59 25 | |
| Collector's Commissions..... | 54 55 | |
| Postage..... | 34 25 | |
| Printer's Account..... | 107 75 | |
| Sundries..... | 16 15 | |
| Paid to Trustees..... | 200 00 | |
| | <hr/> | \$586 95 |
| Balance on hand..... | | 51 42 |

DIRECTORS' REPORT.

Dr. Simpson reported that additional \$200 had been placed to the account of the society in the Savings Bank, and that there were some dividends due from the Odd Fellows Bank which should be drawn, and added to the same account.

LIBRARIAN'S REPORT.

The library consists of 252 bound volumes, together with the unbound journals for the present year; one book-case; one skeleton and case; and pathological specimens.

Dr. Kenyon further recommended that the above journals should be bound, and a revised list made out for the ensuing year. He reminded the Society that henceforth the library would be under the charge of Mr. Duncombe, Post Street. The books had been re-catalogued.

SECRETARY'S REPORT.

The Secretary reported that there were 123 members in good standing; twenty-two new members had been admitted during the session, and three old members had renewed their membership after prolonged absence from the State. There were two resignations on account of removal from the city.

Income Account.

| | | |
|---------------------------|----------|----------|
| By Balance from 1884..... | \$ 34 00 | |
| By Dues for 1885..... | 578 50 | |
| | | \$612 50 |

Disbursements.

| | |
|------------------------------------|----------|
| Paid to Treasurer..... | \$526 30 |
| Balance in hand of Secretary | 86 20 |

Three members were reported more than six dollars in arrears, and therefore suspended from active membership.

The Secretary asked for instructions regarding the delinquents, and after considerable discussion Dr. Kenyon moved that the Secretary be requested to notify these gentlemen that they are suspended, and liable to be dropped from the roll of members. This motion was carried.

The President then declared that the nominations for office-bearers were now open.

PRESIDENT.

Dr. James Simpson, nominated by Drs. Plummer and Kenyon.
Dr. W. E. Taylor, nominated by Drs. Kerr and Whitwell.

First Vice-President and Second Vice-President—Dr. J. D. Arnold and Dr. Le Tourneaux, nominated by Drs. Cachot and Plummer.

Secretary—Dr. Wm. Watt Kerr, nominated by Drs. Plummer and Kenyon.

Assistant Secretary—Dr. A. P. Whittell, nominated by Drs. Morse and Plummer.

Corresponding Secretary.—Dr. M. M. Chipman, nominated by Drs. Baldwin and Le Tourneaux.

Treasurer—Dr. Baldwin, nominated by Drs. Kenyon and Plummer.

Librarian—Dr. Kenyon, nominated by Dr. W. W. Kerr.

Directors—Drs. James Simpson, W. F. McNutt and Henry Gibbons, nominated by Drs. W. W. Kerr and Kenyon.

Committee on Admissions—Drs. Hart, Fitzgibbon, Abrams, C. E. Blake, A. P. Whittell, nominated by Drs. W. W. Kerr and Whitwell. Drs. G. W. Davis, H. H. Hart, G. F. Fitzgibbon, Winslow Anderson, J. McMahon, nominated by Drs. Plummer and Whittell.

Committee on Medical Ethics—Drs. W. S. Whitwell, C. G. Kenyon, R. H. Plummer, M. Cachot, A. P. Whittell.

Finance Committee—Drs. A. G. Soule, W. S. Whitwell, J. O. Hirschfelder.

Executive Committee—Drs. W. W Kerr, E. V. Lonigo, Basil Norris.

Committee on Library and Publication—Drs. Henry Gibbons, W. S. Whitwell, W Watt Kerr.

As the graduating exercises of the medical schools take place upon the second Tuesday in November, it was moved to suspend clause number one of By-Law one, and hold the next meeting upon the first Tuesday in November. This motion was carried.

There being no further business, the Society adjourned until Tuesday, November 3d.

WM. WATT KERR, Rec. Sec'y.

Sacramento Society for Medical Improvement.

SACRAMENTO, October 20, 1885.

The Society met in regular session, Dr. H. H. Nichols, President, in the chair.

A communication from the San Francisco County Medical Society, relating to the case of Dr. Graves (PAC. MED. AND SURG. JOUR., November, page 624 *et seq.*) was read.

A letter from Dr. Graves, giving a brief review of the case, was also read.

Dr. W Watt Kerr, of the San Francisco Society, who was present, being called on, stated that his Society had opened a subscription list for the purpose of defraying the expense of a new trial, now being moved for. The Society had forwarded circulars to all parts of the State, soliciting co-operation.

Several members present testified to their personal knowledge of Dr. Graves, and to his skill and competence as a practitioner.

After some further discussion it was

Resolved, That the profession in Sacramento and its vicinity should individually take up the matter, subscribing according to their several abilities; and that the Secretary be requested to hand the subscription to each member of the regular profession in Sacramento, for the purpose of securing his co-operation.

In the absence of the usual paper, Dr. Cluness read some notes of his recent visit to Alaska, illustrated by maps of the localities.

On motion the thanks of the Society were extended to the Doctor for his instructive and interesting description.

The Society adjourned at a late hour, to meet on the third Tuesday in November.

JAMES H. PARKINSON, Sec'y.

Clinic of the Month.

SURGICAL NOTES.

By ROBT. I. BOWIE, M.D.

Under certain conditions, spontaneous dislocation of the shoulder joint is not uncommon. Roser,⁽¹⁾ of Warburg, has observed three cases of luxation of the hip, which could only be attributed to the many reflex movements of the adductor and flexor muscles, with contractions, due to kypbotic hemiplegia. They were unaccompanied by pain or other symptoms of coxitis, or of Charcot's arthropathia tabetica. Every surgeon knows how difficult it is to treat successfully fractures of the olecranon. A bony union is the exception, and even then the usefulness of the arm is more or less impaired. Over four years ago, Taucustein,⁽²⁾ in Hamburg, introduced a method of operation similar to that of Volkmann in fractures of the patella. He is now convinced, after repeated trials, of its efficacy, and advises its adoption in all cases; that is to say, of transverse fracture. Under antiseptic precautions, the effused fluid is evacuated, and the two ends of the bone brought together by means of bands of adhesive plaster, running spirally up and down the arm. The whole is then enveloped in a woolen bandage, and placed, *extended*, upon a solar splint. At the end of five or six weeks, passive motion, if necessary at first under chloroform. He narrates three illustrative cases, with remarkable results.

Diphtheria has been so prevalent in this city of late, and with such fatal results, that the following report by Anfrecht⁽³⁾ will be welcomed: Out of 225 cases, nearly all children and young people, but one died, due (he thinks) to the use of the nasal douche, as the patient was suffering from diphtheritic rhinitis. The injury to the mucous membrane was followed by septic absorption into the blood and lymphatics. The treatment consisted of cold compresses to the neck, and gargling with kali-chloric. Children of tender years received small doses of the drug internally. The gargling was kept up, night and day, at very short intervals.

(1) C. Bl. f. Chirurgie, No. 33, Aug. 15, 1885.

(2) " " " " "

(3) l. c.

Dr. Schleyteudal,⁽⁴⁾ of Hanover, presents two unique cases. The first was that of an old woman afflicted with a swelling above the right eye, accompanied by constant headache. Palpation was slightly painful, which increased on pressure, otherwise the cerebrum was apparently not involved. An exploratory puncture evacuated healthy pus, and was followed by a linear incision. The opening communicated directly with the right frontal lobe, the bone having been completely absorbed. Cerebral pulsation was easily noticed. Drainage was accomplished by perforating the thin, bony lamella forming the roof of the nostril. Patient made a good recovery.

The second case was excision of a carcinomatous testis from a child one and a half years old. No family history. The child died three months later from recurrence.

Mr. Wright (*S. Med. Rec.*, June, 1885) has tried, with good results, the drug known as *Jacaranda lancifoliata*, used by the natives of South America, in gonorrhœal discharges, both acute and chronic. The dose is 20 to 30 m., three or four times daily, of a liquid extract made from the leaf.

Some interest of late has been shown in the operation of transfusion. Jennings (*Br. Med. Jour.*, June, 1885) injected a small quantity of fresh milk into the vein of a moribund person, who survived several hours. He concludes that the result warrants further investigation, especially in cases where a blood-donor cannot be procured, or where this operation is for other reasons impracticable.

Scalded throats from hot liquids taken unawares, are of frequent occurrence, and sometimes lead to serious complications. *London Practitioner* relates a case where a child, three years old, after drinking from the spout of a boiling teakettle, and was found in a state of collapse, was given, hourly, teaspoonful doses of codliver-oil and lime-water. In three days all the urgent symptoms abated, and eventually recovery was assured.

Sam (*Annals of Surg.*, August, 1885), after a series of experiments on air embolism, concludes that the danger attending insufflation is proportionate to the amount of air introduced, and that spontaneous ingress of air into a wounded, healthy jugular vein is a physical impossibility, as the atmospheric pressure

(4) C. B. f. Chirurgie, No. 34, 1885.

causes the resilient walls of the vessel to collapse forthwith. If we remember rightly, this latter conclusion is contradicted by numerous reports scattered through surgical literature. Further experiments as to the therapeutic measures convinced him that the heart can be punctured aseptically, without immediate or remote danger, and that aspiration of the right ventricle (before a fatal dose of air has been forced into the pulmonary artery) must be considered in the light of a life-saving operation.

As a final result of his experiences, Schede (*Ann. of Surg.*, Aug., 1885) asserts that whoever makes use of corrosive sublimate with the necessary precautions, will find it not only the most reliable and efficient disinfectant, but one that will promote the rapid healing of wounds more than any other, and is at the same time more free from disagreeable or dangerous secondary effects than any other. From his own observations, the writer fully coincides with the above statement, and keeps constantly on hand the following preparation, as advised some months ago in the *Boston Med. and Surg. Jour.*.

| | |
|---------------------------------|-----|
| R hydrarg bichlor..... | ʒii |
| Sodii chlorid | ʒi |
| Aq. destil..... | ʒiv |
| S. ʒi ad ʒxvi Aq.=Sol. 1:1,000. | |

At a recent meeting of the Medical Society of London, a remarkable case of asymmetry was exhibited by Dr. Isambard Owen. The patient was a young woman in whom the two sides of the body were unequally developed. There was an obvious enlargement of the left malar bone, a very apparent dropping of the left inferior maxilla, and a distinct enlargement of the arm, which was a quarter of an inch longer than on the opposite side. The clavicles were equal; the left hand and foot were larger, the latter measuring five-eighths of an inch more than the right foot. The left inferior extremity was one inch and an eighth longer than the right. The median line of the skull was not displaced. There was very little cranial deformity; some fullness at the point where the left parietal bone articulated with the temporal. The left ear was longer than the right. The chest was irregularly distorted, the left side being smallest above and largest below. The veins in both legs were varicose, more so on the left side. The patient stated that the malformation was congenital.

—*Brit. Med. Jour.*

Licentiates of the California State Board of Examiners.

SAN FRANCISCO, November 9, 1885.

At the regular meeting of the Board of Examiners, held November 4th, 1885, the following physicians having complied with the law and the requirements of this Board, were unanimously granted certificates to practice medicine and surgery in this State :

ABRAHAM A. J. ARBEELY, Los Angeles; American Protestant Med. Col. of Beirut, Syria, July 17, 1872; and Royal Med. Coll. of Constantinople, Turkey, October 9, 1874.

ABBIE E. BEASOM, San Francisco; the Woman's Hosp. Med. Coll. of Chicago, Ill, April 22, 1884.

CHAS. E. CLACIUS, Los Angeles; Rush Med. Coll., Ill., Feb. 21, 1882.

THOS. E. ELLIS, Elsinore; the Indiana Med. Coll., Ind., Feb. 28, 1878; and the Med. Coll. of Indiana, Ind., Feb. 28, 1879.

ISAAC S. ESHLEMAN, Oakland; Jefferson Med. Coll., Penn., Mar. 8, 1851.

IDRIS B. GREGORY, Ontario; the Coll. of Med. and Surg. of the Univ. of Michigan, Mich., March 29, 1876.

FORDYCE GRINNELL, Pasadena; Miami Med. Coll., Ohio, Feb. 28, 1873.

GEO. IVANCOVICH, Petaluma (lieu certificate); Med. Coll. of the Pacific, Cal., Nov. 5, 1878.

WM. H. JOHNSON, San Francisco; Med. Dep. Univ. of Pennsylvania, Penn., March 13, 1862.

JOHN C. KERR, Pasadena; Med. Dep. Univ. of the City of New York, N. Y., March 9, 1882.

JOSEPH M. LEWIS, San Jose; Med. Dep. Univ. of Buffalo, N. Y., Feb. 25, 1880.

FRED. W. LUX, San Francisco; Harvard Med. Coll., Mass., June 24, '85.

JOHN MANSON, North Bloomfield; Victoria Coll. at Coburg, Canada, May 1, 1866.

EDMOND NUGENT, San Diego; Fellow of the Royal Coll. of Surgeons, Ireland, July 6, 1871.

HERMAN SCHAFER, Igo; Long Island Coll. Hosp., N. Y., June 28, 1866.

FRANK D. SEEBER, Orange; Rush Med. Coll., Ill., Feb. 21, 1882.

HERMAN WILFERT, Los Angeles; Med. Coll. of Ohio, O., March 2, 1880.

ALBERT C. WINN, Porterville; the Coll. of Med. of the Univ. of the State of Missouri, Mo., June 1, 1882; and Bellevue Hosp. Med. Coll., N. Y., March 14, 1883.

The following parties were refused certificates, on the ground of insufficient credentials :

CHRISTOPH KLEINEBERG, San Francisco.

E. MAGUIRE, Bloomfield.

R. H. PLUMMER, Sec'y.

St. Bartholomew's Hospital claims to be the oldest institution of its kind existing in London. It was founded in the reign of Henry I., more than seven centuries back.

EDITORIAL.

The graduating exercises of the medical and dental departments of the University of California took place on November 10th, at 2 o'clock in the afternoon, at the Grand Opera House. The gathering was large, and the theatre was well filled with friends of the graduating classes.

The address on behalf of the Medical Department was delivered by Dr. Benj. R. Swan, while Dr. Maurice J. Sullivan discharged a similar duty in the Dental Department. According to the usual custom, Dr. R. Beverly Cole administered the Hippocratic oath to the graduates of medicine.

On the evening of the 11th, the graduating exercises of the Cooper Medical College were held at Metropolitan Hall. The President of the College, Dr. L. C. Lane, after a brief address, in which he commended the class for the faithfulness with which they had attended to their studies during the prescribed course, conferred the degrees. The class was quite a large one, consisting of nineteen members, and it was the first one which had received all of its professional education within the walls of Cooper College.

The Valedictory address was delivered by Dr. W. D. Johnston, who holds the position in the school of Professor of Chemistry.

He believed that in time medicine would become a perfect science, and called attention to the very slow development of the science of astronomy, of chemistry, and of electricity, to show that we should by no means be discouraged in regard to medicine.

The closing address was delivered by Professor Howison, of the University of California, on the Metaphysics of Physics. He argued for a higher and broader training for physicians, whom he considered as one of the nobility. The physician belongs to one of the three learned professions, which profes-

sions should always rank above all others, for the clergyman, the lawyer and the physician alone dealt with human nature; the other so-called professions with nature alone.

Moral qualifications were also most needful for the physician; for he often discerned the skeleton in the closet of his patients, and in order that he might cure a bodily ill, recognized the necessity of dealing with the condition of the mind.

It has often been said that where three physicians are there are always two sceptics. Many are unquestionably so, and may it not be explained by their dealing almost exclusively with material matters and with scientific subjects? Professor Howison then urged that the best method for overcoming this atheistic tendency, which kills all ambition, was to give the physician a thorough moral and metaphysical training. Much could be accomplished by the law requiring a broad and liberal education, and by thus doing, not only raise the physician, but at the same time protect the community from quacks and charlatans.

P. G. Unna, of Hamburg, reports the case of a woman, thirty-eight years of age, a native of Germany, who had lived fifteen years in Brazil, and contracted leprosy in an unknown manner. It was a pure case of *lepra tuberosa*, without anæsthesia, extending over the face, arms, legs, and a portion of the trunk. She was under treatment in Unna's clinic for four months, and at the end of that time was pronounced cured. She was treated with pyrogallol, resorcin, chrysarobin and sulph. ichthyolate (?) of ammonia. A concentrated ointment, 10 % of chrysarobin and resorcin acted very well on the nodules, ichthyol only feebly, while the pyrogallol caused the formation of vesicles. During the last three weeks, treatment was mainly directed towards removing the pigmentation and cutaneous deformity, by a plaster of mercury, carbolic and salycilic acids.—*Jour. Am. Med. Assoc.*

At the meeting of the Fifth District Branch New York State Medical Association, Dr. Govan mentioned that he had used aneline oil as a local anæsthetic with excellent results. In the case of felons, previous immersion of the part in aneline oil for a short period had produced perfect anæsthesia, even with deep incisions.

Notices of Books, Pamphlets, Etc.

MINOR SURGICAL GYNECOLOGY. A Treatise of Uterine Diagnosis, and the Lesser Technicalities of Gynecological Practice, including General Rules for Gynecological Operations, and the Operations for Lacerated Cervix and Perineum, and Prolapsus of Uterus and Vagina; for the use of the advanced Student and General Practitioner. By PAUL F. MUNDE, M.D., Professor of Gynecology at the New York Polyclinic, and at Dartmouth College, etc. Second edition, revised and enlarged, with 300 illustrations. New York: Wm. Wood & Co. 1885. San Francisco: W. S. Duncombe.

When the first edition of this work appeared in Wood's Library for 1880, we gave it high praise, and to the present edition we desire to give equal credit to the author for the commendable manner in which he has accomplished the task of revision, and for the judgment he has shown in the selection of new matter. As it now stands, it makes a most excellent text-book, and should be used in all schools in which gynecology is taught.

A SYSTEM OF PRACTICAL MEDICINE. By American Authors. Edited by WILLIAM PEPPER, M.D., LL.D., assisted by LOUIS STARR, M.D. Vol. III. Diseases of the Respiratory, Circulatory, and Hæmopoietic Systems. Philadelphia: Lee Brothers & Co. San Francisco: W. S. Duncombe. 1885.

We have already noticed the first two volumes of this excellent system of medicine. The present volume deals with the diseases of the respiratory system. The articles are written by at least twenty different authors, among whom we notice the names of Jacobi, Elsberg, Loomis and Flint. An interesting article on Diseases of the Pleura is written by Dr. Frank Donaldson, in the course of which he gives a history of Thoraceutics, showing how Wyman and Bowditch met the usual trials of discoverers and the opposition of almost the entire medical profession, both in America and Europe. Dr. Donaldson rightfully claims, we think, that the modern method is an American invention, and that while Morrill Wyman was the discoverer, Bowditch was the utilizer. Although Bowditch used this method with success in 1850, and has to the present time operated nearly four hundred times, in Germany its great utility has but lately been recognized. Diseases of the circulatory system are also considered in this volume, and we find the first article under this head written by Prof. Wm. Osler, on "Diseases of the Substance of the Heart." Dr. Loomis contributes one upon Endocarditis and Cardiac Valvular

Diseases. Dr. Andrew H. Smith writes upon the "Caisson" disease, which is especially interesting as dealing with the effects of high atmospheric pressure. This disease, when fatal, is so from congestion of the brain and spinal cord, and hence it is found that men of spare habit are less liable to it than those with a tendency to corpulency. The chief symptom, intense neuralgic pain in one or more of the extremities, is best treated by morphine. This volume is fully equal to those which have preceded it, and shows the intention of the editor that this "system" shall rank among the first.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Being a Complete and Convenient Work of Reference for Information upon Topics belonging to the entire range of Scientific and Practical Medicine, and consisting of a series of Concise Essays and Brief Paragraphs, arranged in the alphabetical order of the topics of which they treat. Prepared by writers who are experts in their respective departments. Illustrated by chromo-lithographs and fine wood engravings. Edited by ALBERT H. BUCK, M.D., New York City. Vol. I. New York: Wm. Wood & Co. San Francisco: W. S. Duncombe, 211 Post Street.

The members of the profession have been notified for some months that this work was to be issued, and from circulars which have been sent to them, have learned somewhat of the plan upon which it is to be issued; but when they see the first volume, and even examine it cursorily, they will be surprised at its immense scope. It is, in fact, a medical encyclopædia, and furnishes "fairly exhaustive information on all the subjects of which it treats." It is limited to eight imperial octavo volumes, thoroughly illustrated. Much of the material is original work, and much has been collected from manuscript records and archives. The contributors are all Americans—at least from this side of the Atlantic—and have not been selected according to their geographical distribution, but are connected for the most part with the great medical schools of Boston, New York and Philadelphia, and are therefore capable of writing much from practical experience. The editor, in consulting the size of the work, has chosen to limit the number of topics rather than to curtail important articles, and in so doing he has shown excellent judgment.

Again, while bearing in mind the different tastes and needs of his readers, he has devoted a great space to practical subjects, while he has not forgotten to provide for the departments of medical botany, climatology, embryology, medical jurisprudence, etc. The work is a valuable one, and the publishers deserve all

credit for its conception. The sale on this coast has already been large, and promises, at least in this section, to reward the publishers handsomely for their energy and push.

It will be sold only by subscription, at prices varying from six to eight dollars a volume, according to binding. The present volume contains over eight hundred pages, and even then, taken in alphabetical order, "Cataract" is the last subject with which it deals.

THE SCIENCE AND ART OF MIDWIFERY. By WM. T. LUSK, A.M. M.D., Professor of Obstetrics and the Diseases of Women and Children in Bellevue Hospital Medical College, etc. New edition, revised and enlarged, with numerous illustrations. New York: D. Appleton & Co., 1885. San Francisco: W. S. Duncombe, 211 Post Street.

Dr. Lusk is to be congratulated on the eminent success of this treatise, and the favor with which it has been received. Besides being used very generally as a text-book in the medical schools of this country, the appreciation in which it is held abroad may be judged when we learn that it has been translated into French, into Spanish, and into Italian. In Great Britain also has its excellence been recognized and highly praised. Much has been accomplished within the past few years, and in recognition of this fact, Dr. Lusk has thoroughly revised his work and brought it up to date. In no branch of medicine have Mr. Lister's teachings had such a noticeable effect as in the branch of midwifery, and attention is called especially to the wonderful results which have been accomplished in the mortality among lying-in women, having been reduced from 20 % to a small fraction of 1 %.

Much has been added in this edition, of great practical importance to the student, and the treatise rendered so valuable that it will easily maintain its position as the best in the English language, both for student and practitioner.

THE DISEASES OF SEDENTARY AND ADVANCED LIFE. A Work for Medical and Lay Readers. By J. MILNER FOTHERGILL, M.D. New York: D. Appleton & Co., 1885. San Francisco: W. S. Duncombe, 211 Post Street.

This is the latest of the works of this prolific author, and, like all his others, is interesting and instructive reading. It considers a class of diseases concerning which, while the physician is meeting them every day of his life, but little can be learnt from any text-book with which we are familiar. It therefore, as the author expresses it, fills a gap in medical literature.

Part first is devoted to a plea that the young should not be

restrained too much, but should be allowed the exercise that nature demands for them. The sight of former times of the children playing upon the village green is compared with that pitiful sight, the "crocodile," the long file of children walking the streets under the sharp eye of their teacher, who is on the lookout to repress every natural motion or emotion.

The dangers of sedentary habits of adult life are then dwelt upon. These are often obligatory from the nature of the occupation, but nevertheless by proper attention may be counteracted. The evils of sedentary amusements, of keeping a carriage, are noted. Part third deals with the diseases of advanced life, and one chapter warns the reader of the harm which so often results from the pernicious system of banting. The final chapter is entitled "Gerocomy," or the hygiene of old age.

The book is full of useful and wise hints for the physician and the lay reader, whether an adult or already of advanced years, who may, by digesting the instruction he finds within its covers, very materially lengthen his life.

ESSENTIALS OF HISTOLOGY. By E. A. SCHÄFER, F.R.S., University College, Lond. Philadelphia: Lea Brothers & Co. San Francisco: W. S. Duncombe.

In the preface, the author, who was also editor of the histological branch of Quain's Anatomy, says: "the work is written with the object of supplying the student with directions for the microscopical examination of the tissues." He has succeeded in his task, and the book will prove useful, not only to beginners, but to that class of practitioners who enjoyed the advantage of a course of histology previous to graduation. We know too well that microscopy has been raised to its present advanced position only within recent years; therefore any light thrown on such an interesting study is to be welcomed. But our praise is not unstinted. Most of the illustrations are familiar, which fact is mentioned in the preface. The methods of preparing, staining, injecting and mounting the specimens lack that fullness of detail so essential to the beginner who approaches this engrossing study in total ignorance, and which are so admirably set forth in Frey's classical work, "Das Mikroskop." The writer states, in his introduction, that students may consult other authors for more minute details. But this necessitates extra expense. Otherwise the text is clear and concise, and the wood-cuts give a good idea of the microscopic structure of the tissues. There is no index—a minor fault, however, as the book is not large.

HAY FEVER AND ITS SUCCESSFUL TREATMENT BY SUPERFICIAL ORGANIC ALTERATION OF THE NASAL MUCOUS MEMBRANE. By CHARLES E. SAJOU, M.D., Instructor of Rhinology and Laryngology in the post-graduate course, Jefferson College, etc., etc. Illustrated with thirteen wood engravings. Philadelphia: F. A. Davis, att'y, publisher. 1885. For sale by W. S. Duncombe, 211 Post St., S. F.

This book, of but 103 pages, is so pregnant with facts connected with the cause, pathology and treatment of those subject to the disease called hay fever, that it is difficult to condense, in the limits of a review, what is already presented in a very condensed form. We will avail ourselves of the author's use of italics in those parts which he wishes to especially impress his readers, and quote some of them literally from the book. The affection is characterized as "periodical attacks of acute rhinitis, complicated sometimes with asthma, occurring as a result of special susceptibility, on the part of certain individuals, to become influenced by certain substances, owing to a deranged state of the nerve centers. It manifests itself only provided the mucous membrane primarily affected in the course of an attack is in a state of hyperæsthesia, and when the irritating substances are present in the atmosphere."

"Three conditions are necessary to produce an attack: First, an external irritant; second, a predisposition on the part of the system to become influenced by this irritant; third, a vulnerable or sensitive area through which the system becomes influenced by the irritant."

"Among the substances which are considered as causes of the affection are dust, the pollen of certain plants, grasses and cereals, the emanations of certain flowers and perfumes, fruit, animals, sulphur, smoke, cinders, etc., etc. As to the second condition, essential to the production of an access, a predisposition on the part of the system to become inordinately affected by certain substances must exist, which statistics prove are inherited. Taking a glimpse into the early life of the cases, the author finds that forty per cent. have had six of the diseases incident to childhood, sixty per cent. have had at least five, eighty-two per cent. have had at least four, ninety per cent. at least three, and that none were exempt, while one only had had but one of them. Still more curious in this connection is the fact that, of the forty cases upon which these remarks are based, all have had whooping-cough. Of all the affections cited, this is, without doubt, that in which the neurotic element is most marked. In further support of the theory of systemic predisposition, the author cites

numerous cases in which the near and many distant relatives of patients are or have been similarly affected.

In support of the third requisite—*i. e.*, that the local condition of the nasal mucous membrane is an essential factor in the production of an attack, was demonstrated by the results attained with a treatment in which this point was kept in view, and as long as it was overlooked all efforts to conquer the disease were fruitless.

The conclusions to be drawn from the foregoing can be summarized as follows:

1. That as a result of heredity, or of diseases implicating markedly the nervous system, the nerve centers become abnormally sensitive, and are therefore inordinately influenced by the external elements to which they are naturally susceptible.

2. That as a result of local disease, the portions of the nasal mucous membrane over which the branches of the sphenopalatine ganglion and those of the nasal branches of the ophthalmic nerves are distributed, become hyperæsthetic.

3. That when these two elements co-exist, and when the external elements to which the nerve centers are inordinately sensitive are present in the atmosphere, a paroxysm termed "hay fever" is excited.

4. That as a consequence of the above, elimination of one of the three elements necessary to the production of a paroxysm will prevent its occurrence.

As bearing upon the treatment, the author suggests:

1. That all abnormal conditions of the nasal cavities, such as marked hypertrophies, polypi, exostoses, etc., must be eradicated, and the hyperæsthetic areas subsequently cauterized with acids or the galvano cautery.

2. That the immunity against hay fever depends upon the thoroughness with which the treatment is conducted.

Dr. George R. Fowler, of New York, advocates hydronaphthol as an antiseptic. It is said to be from ten to fifteen times more powerful than carbolic acid. Amongst the advantages which it possesses are, that it is neither irritant, poisonous, nor corrosive. It has no odor, and so will not mask that of putrefaction. It is not decomposed by the presence of organic matter. It is more stable than carbolic acid; not volatilizing at ordinary temperatures.—*Jour. Am. Med. Assoc.*

Miscellaneous.

Medical Society of the State of California, 1885-'86.

OFFICERS.

President.—W. P. Gibbons, Alameda.

Vice-Presidents.—R. H. Plummer, C. G. Kenyon, San Francisco; W. E. Briggs, Sacramento; W. H. Hammond, San Jose.

Permanent Secretary.—Wallace A. Briggs, Sacramento.

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**Board of Examiners, Medical Society State of California,
Treasurer's Report for the year ending April 15th, 1885.**

Dr.

| | |
|---|------------|
| To Cash on hand from previous year..... | \$156 00 |
| “ received for 174 Certificates issued..... | 858 00 |
| “ “ from S. F. Co. Medical Society..... | 112 50 |
| “ “ “ sale of Registers..... | 53 50 |
| “ “ “ applicants for Messages, Ex-
press, etc..... | 3 90 |
| “ “ “ Advertisements in Register..... | 690 00 |
| | \$1,873 90 |

Cr.

| | |
|---|------------|
| By Cash to Bancroft & Co., Printing and Supplies, etc.,
as per voucher | \$795 30 |
| “ “ Pensman, filling in Certificates..... | 17 80 |
| “ “ W. W. Sherman, Printing, Supplies, etc.,
per voucher..... | 45 75 |
| “ “ Le Count Bros., as per voucher | 8 40 |
| “ “ Witness and Notary Fees, per vouchers | 25 00 |
| “ “ Postage, Postals, Wrappers and Supplies... | 149 76 |
| “ “ Expressage, Telegrams, Messenger, etc..... | 41 25 |
| “ “ Secretary's services, office expenses, etc..... | 250 00 |
| “ paid out for extra clerical labor..... | 355 00 |
| “ for Attorney's Fees..... | 100 00 |
| | \$1,788 26 |
| Balance in the Treasury..... | \$85 64 |

**F. W. HATCH, M. D., IN ACCOUNT WITH THE MEDICAL SOCIETY
OF THE STATE OF CALIFORNIA.**

1884.

Dr.

| | |
|---|----------|
| To Balance, as per Treasurer's Report, 1884.. | \$190 00 |
| June 24. “ Cash from Secretary | 620 00 |
| July 1. “ “ “ | 26 80 |
| Total..... | \$836 80 |

1885.

| | |
|-------------------------|----------|
| April. To Balance | \$240 50 |
|-------------------------|----------|

1884.

Cr.

| | |
|--|----------|
| June 24. By Cash paid Secretary as per voucher No. 1.. | \$149 35 |
| “ “ <i>Daily Bee</i> “ “ 2.. | 50 |
| Sept. 13. “ “ M. R. Beard & Co. “ 3.. | 446 45 |
| By balance..... | 240 50 |
| Total..... | \$836 80 |

WALLACE A. BRIGGS IN ACCOUNT WITH THE MEDICAL
SOCIETY OF THE STATE OF CALIFORNIA.

Dr.

| | |
|--|----------|
| To Dues of Members for year ending April 14, 1885..... | \$790 00 |
| “ Renewal of Certificate | 3 25 |
| | \$793 25 |

| | | | |
|-----------|------------------------------|----------|----------|
| 1884. | <i>Cr.</i> | | |
| June 24. | By Cash paid Treasurer..... | \$620 00 | |
| July 1. | “ “ | 26 80 | |
| Sept. 11. | “ as per voucher No. 1 | 15 00 | |
| 1885. | | | |
| Mch. 30. | “ “ “ 2 | 5 00 | |
| Apl. 11. | “ “ “ 3 | 5 00 | |
| | “ “ “ 4 | 4 15 | |
| “ 13. | “ “ “ 5 | 20 50 | |
| | By balance..... | 96 80 | |
| | | | \$793 25 |

M. Pasteur's latest communication on the subject of hydrophobia is in substance as follows: "M. Pasteur some time ago succeeded in rendering proof against rabies, some sixteen out of every twenty dogs experimented upon; but to ascertain that immunity had really been conferred, he had to wait four months after the inoculation had taken effect. He therefore set himself to obtain virus of different degrees of strength, with the object of obtaining prompter and more certain results. This was effected by the following means: A rabbit was inoculated with a fragment of tissue taken from the spine of a rabid dog. The incubation of the poison occupied fifteen days. As soon as the rabbit was dead, a portion of its spinal marrow was in turn inoculated into a second rabbit, and so on until sixty rabbits had been inoculated. At each successive inoculation the virus became of increased potency, and the last period was not more than seven days. Having ascertained that exposure to dried air diminishes the virus and consequently reduces its force, M. Pasteur supplied himself with a series of bottles containing dried air. In these bottles were placed portions of the inoculated spinal marrow of successive dates, the oldest being the least virulent, and the latest the most so. For an operation, M. Pasteur begins by inoculating his subject with the oldest tissue, and finishes by injecting a piece dating from two days only, whose period of incubation would not exceed one week. The subject is then found to be absolutely proof against the disease. At the beginning of

July, a young Alsatian named Joseph Meister, who had been severely bitten in several places by an undoubtedly rabid dog, presented himself at the laboratory. His case left to itself being considered hopeless by Pasteur, Vulpeau and other high authorities, the patient was submitted to the same series of inoculations that had been so successful on dogs. As a proof, a series of rabbits were simultaneously subjected to the identical processes. In ten days thirteen inoculations were made with pieces of spinal marrow, containing virus of constantly increasing strength, the last being from the spine of a rabbit which had died only the day before. The youth, thus operated upon by the successive administrations of weaker virus, was made proof against the virus of the intensest strength. At the date of the communication one hundred days had elapsed since the last inoculation, and he was in perfect health. Those rabbits, on the contrary, which were at once inoculated with the strong virus without first being rendered fit to receive it, became affected within the proper incubation period, and died with the usual symptoms. The first inoculation practiced upon Meister was sixty hours after he had been bitten.”
—*Brit. Med. Jour.*

Obituary.

A. O. Holmes, Jr., M.D., was born in El Dorado County, California, April 28, 1860, and died of typhoid fever at Calico, San Bernardino County, California, October 13, 1885. Dr. Holmes studied medicine in San Bernardino under the direction of Dr. W. R. Fox, for nearly two years, after which he attended three full courses of lectures at the Medical College of the Pacific in San Francisco, graduating in 1882. After practicing his profession a few months in San Bernardino, he went to the Calico Mining District, where he made many warm friends, and exhibited in a marked degree those qualities that make the successful physician. In the death of Dr. Holmes, the profession and society have lost an honest, honorable and capable young man—one whose place will not be easily filled.

For sale for \$2,000 cash, the practice of a regular physician, worth \$5,000 to \$6,000 a year. One who speaks foreign languages preferred. References will be exchanged. Ill health the only reason for selling. Address Physician, at this office.

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