OLD ORIENTAL

GILT AND ENAMELLED

GLASS VESSELS

EXTANT IN PUBLIC MUSEUMS AND
PRIVATE COLLECTIONS

REPRODUCED IN THEIR ORIGINAL COLOURING

AND DESCRIBED BY

GUSTAV SCHMORANZ

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32 plates in colours, 12 in photography and 69 illustrations in the text

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VIENNA AND LONDON
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PREFACE

The purpose with which the present work has been undertaken, by the counsel of H. E. Vincent Count Baillet-Latour, Minister of Cultus and Education, is not to deal with the whole subject of old Oriental glass vessels, but only with those examples which are gilt and enamelled, and which represent a class of the highest artistic significance for the history of Decoration in the East. The reproduction of these examples in our plates has been effected rather from the point of view of design than from that of colour. Of that soft lustre (so dear to the painter's eye) which is sometimes brought forth by layers of dirt and accidents of all kinds, and in which the process of the lines of decoration so often disappears, we have retained only just so much as was necessary to fix the impression in the mind. It was sought, by means of reflected light, to illuminate the condition of the object from all sides, so that the design, as far as it was recognisable at present, should stand out clearly. In short, there has been no intention to produce any picture of still-life, but to give such an illustration as would carry a vital image to the eye of the collector, and serve the artist as a model for imitation. With that purpose, all objects are designed as at a short distance, and those parts of the decorative work which either do not appear at all in the general picture, or else lack clearness from the necessities of perspective, are separately represented in detail. This is done to the actual original size, in the photographic detail plates; or with specified proportions, as in the illustrations given with the text. The statement of size is only omitted in relation to the vignettes adorning the text, which are all taken from motifs of old Oriental glass-work, chiefly those described in the present work.

As a consequence to be regretted of the costly character of the reproductions in colour, the details could only be executed in photography. But, thanks to the generosity of the Imperial Austrian Handels-Museum, at least one such detail-plate (plate VII) appears in colour amongst the ornamental illustrations, and another (plate XXI) amongst the figure-representations.

In the description of the plates there are given, besides, exact particulars with regard to the colouring of all the plain details, so that it will be easy for any one, with the aid of the coloured plates, to paint the plain impressions in their proper tints.

For the rest, the description of the pictures is given shortly: in characterising the visible material and the form, only set words are used, so that, in the absence of any attempt at variety of language, the collector and the artist will both come to recognise a certain value in the phrases. Scholars will also find a simple statement of any ascertainable facts in connexion with each article described.

In the first line of this Preface we have mentioned to whom the work is indebted for its existence. The carrying of the idea into effect has been rendered possible by the Ministry of Education, and not less by the Austrian Handels-Museum, the authorities of which were pleased to add the present work to their noble publications upon Oriental Art. I wish here to express my profound gratitude to the Ministry of Cultus and Education for the moral and material support I have received in the production of the volume. Next in order, my thanks are no less due to the Curators of the Handels-Museum, and to the Hofrath Arthur von Scala, who has rendered me the most cordial assistance, not only in his former position as Director of the Handels-Museum, but also in his later office as Director of the Imperial Austrian Museum for Art and Industry.

I have to register an especial meed of thanks to the learned Arabist, Dr. Max van Berchem, of Geneva, for his numerous explanations of inscriptions.

G. Schmoranz.

Prague, *February*, 1898.

The art of working in Glass is generally considered to have been an Oriental invention, and not without justice. Even in ancient times the people of the East were familiar with most of the processes employed; and it was by Muhammadans afterwards that the practice of Enamel-painting on glass was developed. That art was not indeed invented by them, since we know that the use of thick coloured overlays of fused matter upon glass existed in remote antiquity; and in Egypt, examples were known of glass decorated with gold and enamel.* The method, however, was raised in the Muhammadan East, to a degree of brilliant artistic perfection which has never been excelled.

The most numerous specimens of ancient enamelled glass have been found in Christian sepulchres at Rome, belonging to the fourth and the later part of the third century of our era. In them however the employment of enamel is very limited and sparing. It is used only for the faces of figures, the hem of dresses, and such other small portions of the design. Sometimes the ground was first indented by the wheel, and the depression then filled up with enamel,† in a style that reminds us of the process of sunk enamel.

Byzantine industry possessed no doubt the methods of enamel-painting on glass, as well as other practical arts, by inheritance from earlier ages; but there exists, strange to say, not a single specimen of enamelled glass which can be recognised as distinctively Byzantine.‡ We may nevertheless with some probability assign to Byzantine origin a remarkably beautiful vessel, gilt and enamelled, in the Treasury of St. Mark's at Venice. It is a small bowl, 80 millimètres in height by 120 in diameter, formed of deep violet-brown glass, which is nearly opaque.§ As, however, according to Pasini's statement, the enamel exhibits no trace of fusion, or fluidisation, or vitrification, but is only a hardened and polished paste applied with masterly skill,—we cannot reckon this vessel among the genuine productions of enamel-work.

The often-quoted description in the "Schedula diversarum Artium" of the German monk, Theophilus, of the manner in which the "Greeks" produced glass-work decorated with gold and enamel — has decidedly no reference to anything of the same class as the rare and beautiful vessel just mentioned. He tells us that the Greeks had two methods of decorating with gold their "sapphire-blue" vases. In the one case they took gold leaf, and cut out of it human or animal figures, or designs of foliage; then fastening it on the glass, they rubbed it over with pulverised crystal-glass, and burnt it all in. In the other case they took painted gold and silver, placed them on the glass so as to form circular compartments, in which they inserted portraits, animals, and birds, in alternating arrangement, and over these designs they likewise rubbed the pulverised crystal-glass. Then they took white, red, and green glass, such as is used for "electra," rubbed each one in turn assiduously with water upon a slab of porphyry, and with the colours thus produced they immediately proceeded to paint flowers, interlacements, and other pretty trifles in different styles between the circles, with a twisted ornament and an edging along the border. "And they burn-in these not too thinly painted colours, in the oven, in the way which has already been indicated."*

This passage treats of glass-covered gold and of actual enamel. Whether the gilding at least of the vessel previously mentioned corresponds with the *modus operandi* described by Theophilus, we cannot venture to decide. Pasini only states that in passing the finger over it one feels the surface

* Froehner, La Verrerie antique (Collection Charvet) pp. 99-101.

† Fr. X. Krauss, Die Christliche Kunst in ihren frühesten Anfängen, Leipzig 1872, p. 137.

‡ Alexander Nesbitt, Glass (South Kensington Museum Art Handbooks) p. 53, says of a potsherd in the British Museum, of thick opaque turquoise-blue glass ornamented with enamel-painting in lines of blue and gold, that it "may very possibly be of Byzantine origin."

§ Reproduced in colour by A. Pasini, Il Tesoro di San Marco in Venezia. Venezia, 1886, plate xli. At pp. 100-101, Pasini expresses his opinion that the bowl itself is late Roman, and only the applied ornament Byzantine. Emile Molinier, Le Trésor de la Basilique de S. Marc à Venise. Venise, 1888, p. 58, maintains the theory of Byzantine origin.

* C. Friedrich, Die altdeutschen Gläser, Nürnberg 1884, pp. 124, 125.—Schedula lib. II cap. XIV.

perfectly smooth; while the spots on which colour-decoration is found are slightly raised above the level.

Labarte* adduces as an example of the process described by Theophilus two pieces of glass-work: one is a plate or dish on a high stand in the Musée de Cluny;† the other is a large bottle ‡ formerly in the collection of Prince Soltykoff, afterwards in the possession of Baron Gustave de Rothschild in Paris.

We had an opportunity to make a thorough examination of the dish in the Musée de Cluny, the result of which was to establish the fact that the decoration had been executed precisely in the same way as in the case of all gilt and enamelled glass of undoubted Arabic, or rather Oriental, work. There is no trace whatever of any layer of glass superimposed on the gold and protecting it.§ Even the character of the drawing is in no wise Byzantine, but is rather Perso-Arabic. The *motif* of the festooned circles is the one single element which appears in somewhat similar fashion in Byzantine ornament. This *motif* is, however, admittedly common to all Oriental styles alike; and we find it already developed in the scheme of decoration used on the silk stuffs which are usually called Sassanide.

Fig. 1. *A deep Basin. Sec. XIII. Musée de Cluny.* (*Half the size of the original.*)

Judging from the illustration which is given by Labarte of the bottle, we are convinced that this also is not an example of Byzantine work. Labarte's contrary opinion was based upon the circumstance that all the glass vessels produced in "Asia Minor or Egypt" subsequent to the Muhammadan invasion, usually bear Arabic inscriptions, while the dish and the bottle in question have nothing of the kind (we shall see further on, how inadmissible this would be as a test)—moreover, since the enamelled Venetian glass of the fifteenth century exhibits a radically different character of ornament, and the gilding and enamelling are here (as he assumes) in "complete" agreement with the account by Theophilus—therefore the two vessels must be regarded as Byzantine. How far this "complete" agreement can be discovered to exist, especially in the case of the dish, we have just had occasion to notice.

But Labarte goes on still further to assert that there is likewise to be seen in the Musée de Cluny, a basin large in size and deep (figs. 1 and 2), decorated with designs in gold, medallions, and inscriptions in blue enamel; which is of Egyptian origin. "The inscriptions actually express" (he

* Jules Labarte, Histoire des Arts Industriels, Paris 1864. Vol. IV, p. 545 etc.

† Catalogue 1884. No. 4776.—Reproduced in Gerspach, L'Art de la Verrerie, Paris 1885. Figs. 64, 65. The outline is given below, fig. 31.

‡ Reproduced in colour, in plate CXXXII of Labarte's work above cited.

§ This fact has also been attested by Gerspach in his work above cited, p. 86.

states) "the titles of one of the Malek-Adel Sultans, who ruled in Egypt from 1279 to 1294. If a comparison be made between this vase (*i.e.*, the bottle referred to in the preceding paragraph) and the deep basin, a judgment may

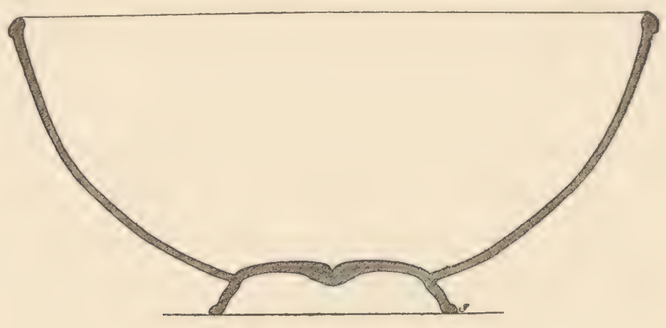


Fig. 2.

easily be formed as to the difference which has been developed between the Byzantine and the genuine Arabic style of glass-painting. The Ægypto-Arab work was, for the rest, a simple continuation of the methods already established under the Byzantine Emperors." But indeed, if the deep basin just referred to, and the dish on a high stand above mentioned, be critically compared (they are both in a single show-case) it will on the contrary be found, in the first place, that they are both technically similar in mode of production ; and in the second place, that the gold ornamentation, lightly outlined in red, has on both vessels the same *motifs* and the same character. The ornaments executed in blue enamel are certainly different in the two vessels, and the gold filigree work arranged like a row of stars on the deep basin (fig. 3) is not seen on the shallow dish ; but both those kinds of decoration, as well as all the *motifs* of the bottle, are found upon many glass vessels of

Fig. 3.

unquestionable Perso-Arab origin, which Labarte had evidently no opportunity of comparing with these.

As for the difference developed between Byzantine glass-painting and pure Arab work, no judgment can be formed from the mode of comparison suggested by Labarte ; particularly since the only known example of what purports to be Byzantine glass, namely the bottle, must, on the basis of a comparison with dated productions,* be ranked as more modern than those of the alleged period of "continuation." Even to Labarte himself the difference he speaks of can hardly have seemed strong enough for definition, since he adds the statement that Ægypto-Arab work was merely a continuation of the methods already practised under the Byzantine Emperors.

There is however one special matter to notice in regard to the gilt and enamelled glass of Ægypto-Arab origin. It is well known that during the ages conventionally spoken of as antiquity, and also at a later period during the sway of the Byzantine monarchs over Alexandria, the Art of Glass-making was in a flourishing condition. But as to the manner of producing the particular examples of that art which were executed under the Arab domination in Egypt, our information is very defective. So far as we can form an opinion, everything tends to show that those examples, when decorated, were not enamelled, but cut and embellished by the wheel.

Makrizi* in his book on the Topography of Cairo (his native city) gives a description after ancient writers of the large treasure-house—destroyed in 1062—of the Khalifa Mustansir. It contained, he says, eighteen thousand vases made of rock-crystal; but there is no mention of glass in the list of precious things. Only in an accidental way do we learn that glass mirrors bedecked with gold and silver filigree, and numerous dishes made of glass figured and ornamented, were also to be found in the collection. But with regard to the method in which the ornamentation was effected, we have no clue to guide us.

It is highly probable that the figures and ornaments were cut, in the manner of those on the vessels of rock-crystal. We know at least of one specimen of Arab glass-work done in that way, presumably of very early date. It is now preserved in the Treasury of St. Mark's at Venice.†

This was a favourite style of artistic glass-work throughout the East at all times ; the softer material being evidently substituted for the one that was harder, and more difficult of treatment. In Egypt it was all the more likely to win favour since the glass fabricated in that country was renowned for its clearness and transparency—a fact which

* See for example Collection Spitzer, Verreries, plate III representing the large bottle, now in the Louvre, bearing the name of the Sultan of Egypt, Malik Kāmil Saif-ad-dīn Sha'bān, 1345-46.

* Born at Cairo about 1364, died 1442. He therefore lived at a period in which the art of gilding and enamel-painting on glass had produced some of its finest effects.

† Alexander Nesbitt, Catalogue of the Collection of Glass formed by Felix Slade, 1871, p. xxviii.—"In the treasury of St. Mark's at Venice, there is however a remarkable vessel of glass which is of Oriental fabrication and probably of early date. It is 8½ inches wide by 4 deep, of a turquoise green paste nearly opaque. On the bottom are four Arabic characters signifying, according to Montfaucon 'God the Maker'; the bowl is five-sided, and on each side is the rude figure of a hare. These figures as well as the inscription are in low relief, and were probably cut with the wheel. The setting is of filigree with stones and ornaments of

was cited even by Roman authors.* Amongst Oriental writers, this excellence of Egyptian glass has been expressly noticed by Nāsiri Khusrau, a Persian traveller who visited Syria, Palestine, Egypt, and Arabia in A.D. 1035-1043.† He says that in Misr (*i.e.*, Cairo) they made glass so pure and so beautifully green that it looked like emerald. At the same time also he adds a remark that it used to be sold by weight.

To conclude from this last circumstance, as Gerspach does,‡ that the glass must have been very costly, would not be quite logical. The traveller's remark can have had reference only to the ordinary glass, untouched by ornamentation of any kind, whether simply cut, or gilt and enamelled. The plain kind must certainly at that time have been widely distributed throughout Egypt, since Nāsiri relates that it was the custom of apothecaries to sell to their customers not only the drugs required, but also, with them, the necessary phials of glass or other material.

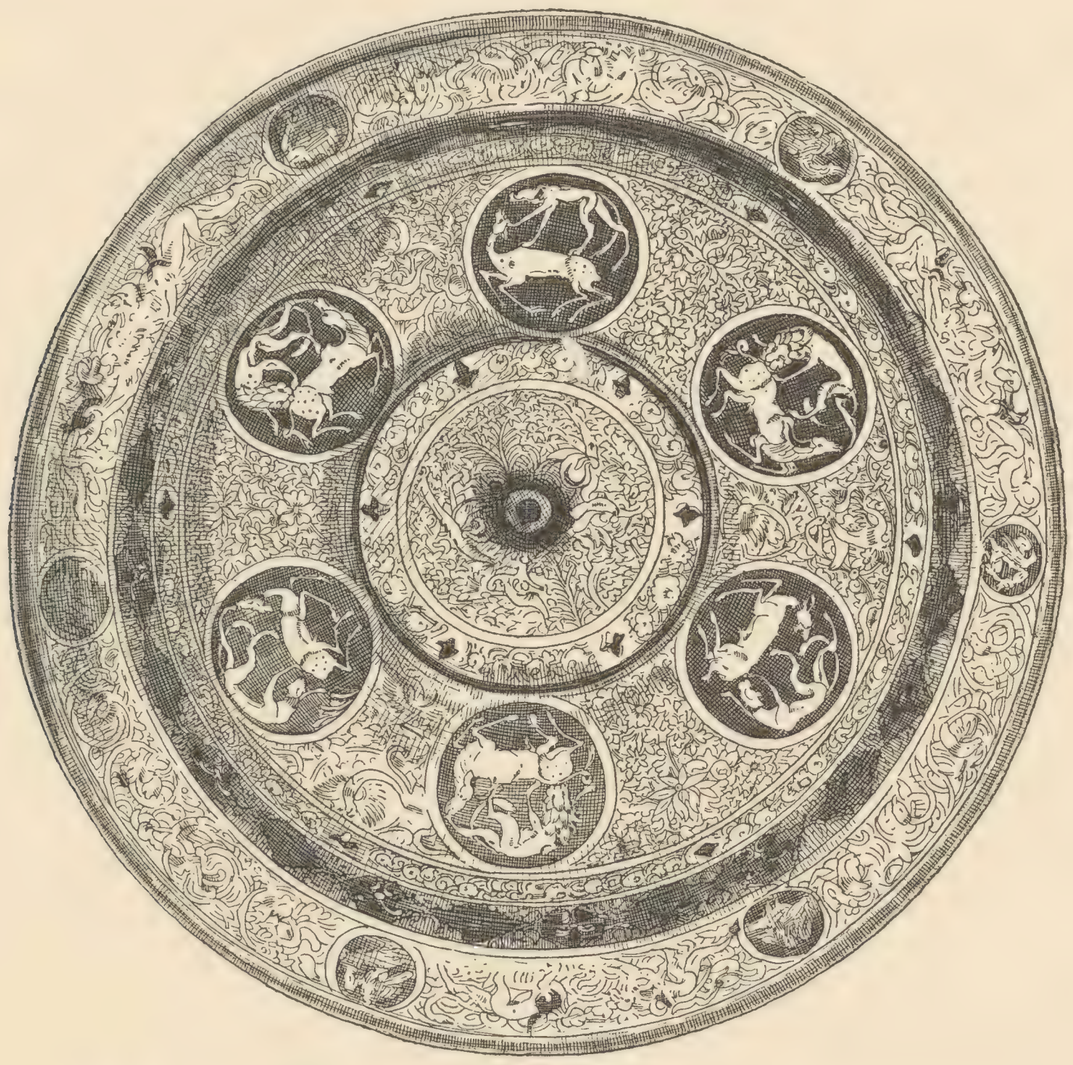


Fig. 4. *A shallow Plate. In the collection of Baron Lionel Rothschild, London.*
(*About one half the dimensions of the original.*)

These assuredly cannot have been examples of the patient labour of the man who decorated glass by cutting it, or of the ornamentation produced by gold and enamel.

Specimens of cut glass have been preserved which can be assigned with certainty to the period of Mustansir and Nāsiri, and even earlier. Of one of them,—in St. Mark's Treasury, we have already spoken. It is universally regarded as Arab, because it bears a Cufic inscription.* But we are persuaded that many of the cut-glass vessels in St. Mark's Treasury, specified by Nesbitt as probably Byzantine (they formed part of the plunder taken at the storming of Constantinople under Dandolo in 1204), are all of similar origin. Of enamelled glass, to which so great an age could justly be assigned, there exists

cloisonné enamels. There is a tradition that it was a present from a King of Persia in 1470, but the setting is of a much earlier character and not Persian in style."—A coloured illustration in Pasini, Tesoro, Tav. XLVIII, No. 105; description pp. 94-95.

* Edouard Garnier: Histoire de la Verrerie et de l'Emaillerie. Tours, 1886, p. 25.

† His Travels, translated and annotated by Charles Schefer, were published at Paris in 1881.

‡ L'Art de la Verrerie, p. 95.

* It is well known that in the Arabic epigraphy of Egypt and Syria, two distinct forms of written characters are found. One consists of bold and abrupt letters, admitting few if any curves in their outlines: this is the older monumental script. The other form, in which the writing is of flexible and flowing style, and all the letter-shapes are curved or rounded, is the younger one which supplanted its predecessor. By the time of Saladin, the Cufic was already excluded from historical inscriptions, and was used only in those of purely decorative kind. Among European writers on the subject of industrial art, it is very common to specify Arabic calligraphy under the names of Cufic, Naskhi, Thulth, and others, in such a way that we never understand precisely what is meant. We will, therefore, in order to avoid obscurity and misunderstanding, confine ourselves to the appellation of "broken letter" for the Cufic, and "round letter" for the Naskhi. For further information on this matter, see Max van Berchem, Notes d'Archéologie Arabe. Monuments et Inscriptions Fatimites (Journal Asiatique) Paris 1891, p. 112, etc.

so far as we know, just as little of Arabic as of Byzantine production.

The single example adduced by Carl Friedrich* as the initial instance from which he developes his theory that Alexandria was the birthplace of Arabic enamel-painting on glass vessels—that namely which bears in Cufic letters the title of the second Fatimite Khalifa of Egypt, Al 'Azīz billāh (975-996), and which is now in the Treasury of St. Mark's† —is not glass at all, but a cut piece of rock-crystal, like the other similar vessels, bearing Cufic inscriptions and the names of Khalifas, in the French Bibliothèque Nationale and the Louvre, and the South Kensington Museum in London.

In Friedrich's book, so remarkable from many points of view, the author likewise mentions a plate (fig. 4) and a large bottle (fig. 5) in the possession of Baron Lionel Rothschild (London); which, as examples of gilt and enamelled glass-work, have no connexion whatever, in style or technique, with the specimens of cut glass and rock-crystal. We must also refuse to accept his opinion concerning the deep bowl in the Musée de Cluny, that, because among the inscriptions on it he professes to find the titles of one of the Malik 'Adil princes who ruled in Egypt,‡ it must have been produced in an Egyptian, that is Alexandrian, glass-foundry. The name of the person who orders a piece of work of that kind would have no necessary connexion with the place of its production.

The bowl of deep violet-brown glass already mentioned as being in the Treasury of St. Mark's, is also ascribed by Friedrich to Alexandria—while Nesbitt for the same reason assigns it to Sicily—because, around the edge on the inside, and on the lower part of the body of the vessel, it has a border, painted white, of illegible, presumably Cufic, writing (?) from which the two critics draw their conclusions. They say that the vessel can only have been produced in a place in which three types of art were at once found in combination; namely, the Antique, because of the representation of heathen figure-subjects; the Byzantine, because of the circular compartments and the style of ornamentation; and the Arabic, because of the apparently Cufic inscription.

Pasini, who was in a position enabling him to examine thoroughly all the pieces in St. Mark's Treasury, informs us in his grand work upon the Treasury (published two years later than Friedrich's book) that both those white friezes or borders were added over the original painted surface,* and with so little solidity that they are now partly effaced, the lower one almost completely; while the old colouring beneath remains fresh and undisturbed. There is consequently a rather strong argument in favour of the late origin of the presumed Cufic border—Pasini is inclined to regard the lettering as a simply decorative imitation of letter-forms;—and the possibility arises that the work was not all done in one place. In the available illustrations representing this beautiful and highly interesting vessel, the supposed frieze-inscriptions are not distinguishable, and as

Fig. 5. *Large Bottle. Sec. XIII. In the Collection of Baron Lionel Rothschild, London.* (*About half the size of the original.*)

our own examination of the pieces in the Treasury was a hurried one, some years ago, we are unable now to deal with the subject more amply.

If the opinion be correct which the eminent Arabist, Prof. Ignazio Guidi, has expressed, that "the frieze"—the upper one of course is meant, since there is nothing now to be seen of the lower—is actually a Cufic inscription, but so transfigured by ornamentation as to be almost undecipher-

* Die altdeutschen Gläser, p. 127.—Dr. Albert Ilg also, in Lobmeyr's Glas-Industrie, Stuttgart, 1874, p. 48, speaks of this rock-crystal vessel as a specimen of Arabic glass-work in Alexandria.

† Figured by Pasini, Tav. LII, No. 118, description p. 93.

‡ The exact wording of the inscription is "Glory to our Lord the Sultan the Wise the Just." It is therefore the ordinary anonymous epigraph, and cannot be said to refer to any particular prince.

* This circumstance has been overlooked by Molinier in his work on Le Trésor . . already cited, in which he deals with the Byzantine origin and decoration of the vessel.

able; then it must be assumed that the second painting was added at a tolerably late period, since it was not till after the twelfth century that we find Cufic writing ornamented to the pitch of illegibility. At that time the rounded characters had triumphed, and the older script was banished to the region of pure decoration.*

Guidi's opinion however is opposed to that of the no less eminent Orientalist Amari, who condemns the apparent script as a mere imitation of writing, by an ignorant hand.

We must therefore ask—if the vessel is to be considered as of Alexandrian fabrication—how is it that an Alexandrian workman of the Muhammadan period could have made an "ignorant" imitation of Arabic writing?

There is moreover very little probability in the assumption that the bowl was produced in an Alexandrian glass-foundry. It might have been a work of Byzantine origin, to which the questionable frieze-inscription was added at a later time. But the only thing we know for certain is, that it does *not* correspond with the process of fabrication described by the monk Theophilus, even if we allow that the system of ornamentation agrees to some extent with his statements.

Friedrich supposes that the specimens seen by Theophilus were vessels of Arab fabrication brought by Greek merchants to the North from Asiatic or Alexandrian workshops The monk lived in the twelfth century, at latest, according to all art-historians, who are agreed on this point;† but there does not exist a single specimen of glass decorated with gold and enamel, produced by Arab workmen at so early a period.

There is every reason to believe that the Muhammadan East, at that time, had not yet begun to fabricate gilt and enamelled glass. If the contrary had been the case, it could not, for example, have escaped the observation of the Persian traveller, Nāsiri Khusrau, who was particularly interested in glass-making and would not have failed to mention such a fact. We have already cited what he says about Egyptian glass, especially that of Cairo. Here it may be added that he speaks also of a lamp-bazaar situated close to the Mosque of 'Amr; but there is no allusion made by him to gilt and enamelled lamps.

Of gilt and enamelled glass in Syria and Palestine, there is likewise not a word, although he does not omit to notice that, in the Church of the Resurrection, in Jerusalem, the wall-paintings were covered with plates of glass, "through which they are seen with extraordinary clearness and depth of effect, because the glass is washed every day by the church-servants." He states further that, in one of the mosques of the city, twenty Jews had to keep in proper condition the glass and metal lamps of the edifice. As to what sort of lamps they were, no mention is made. If they had been examples of the special group we are dealing with, such as aroused the admiring wonder of later travellers, he would not assuredly have left the fact unnoticed. His mind was always attracted by the subject of glass-work, and he took care to inform his readers that the citizens of Sur (Tyre) produced and sold vessels of glass cut with the wheel.

Benjamin of Tudela, a Spanish Rabbi who died in 1173, says that there were in Tyre four hundred Jewish glass-makers and ship-owners. The glass-work, however, which was done not only in that city, but also in the other places he mentions, was probably nothing but cut glass; for the oldest extant examples of enamelled glass, while evidently much more recent than the "renowned" work of Tyre (as Benjamin calls it), are all of simple character, and look like the timid efforts of beginners in a new method of ornament. The high estimation in which they were held during the Middle Ages in Europe, arose not from their costliness but from the circumstance that they had been brought from the Holy Land.*

The precious glass so often referred to, which the Emperor Henry II (who died in 1024) presented to St. Odilon, Abbat of Cluny, and which the Abbat's biographer, Pierre Damien (who died 1073), describes as *preciosissimum vitreum Alexandrini generis*, was surely not decorated with gold and enamel, but merely cut; for we know that the ancient renown of the Alexandrian glass-foundries was based upon *crystalla* and cut glass. The phrase *Alexandrini generis* would still, in Damien's time, have retained its old signification; all the more so as there are actual specimens of cut glass now in existence, which we can assign to Damien's time and to Alexandria,—but of gilt and enamelled glass, not one.

But the monk Theophilus must have had before his eyes some richly ornamented coloured vases. How then are we to solve the riddle? Perhaps the vessels he saw were of the same kind as the deep violet-brown bowl of St. Mark's Treasury,—which corresponds fairly with the terms of the passage cited above from his *Schedula;* and he may have taken the hard polished paste for enamel. Perhaps it was from what he knew of glass-painting that he evolved his description of the technique of such glass-work. That his

* Even then, it is sometimes seen in its old vigorous and simple beauty, though almost always on a ground-work of ornament.

† According to Albert Ilg, in the introduction to his edition and translation of the Schedula of Theophilus, this artist-monk lived near Paderborn late in the eleventh, and at the beginning of the twelfth century.

* They are mostly goblets of modest dimensions, which we describe more fully elsewhere.

technical details are not always to be relied upon, is evident from more than one place in his book of Receipts and Instructions. What are we to think of his experience in regard to crystal-cutting ?

The beginnings of the Oriental art of painting in gold and enamel upon glass vessels, can hardly be referred to a period more remote than the end of the twelfth century. Among the monuments of that art which are known to us, the oldest dated example is a small flagon, or pilgrim's bottle (fig. 6) in the possession of Hakki Bey in Paris. It is a vessel of nearly globular shape but somewhat flattened at two sides ; with a moderately long neck which is a little contracted at the place where it springs from the body ; its base a little concave and footless. The orifice at the top of the neck is very narrow. The glass material is not very transparent ; it has a sort of milky density, is of a yellowish green tint, the colouring thick and badly distributed. The ornamentation is simple, but executed with a well-furnished

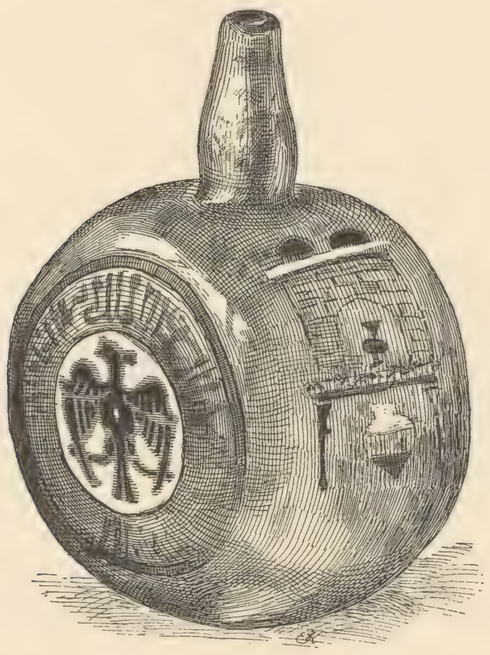


Fig. 6. *A small Flagon. Beginning of Sec. XIII. Hakki Bey's collection, Paris.* (*About half the size of the original.*)

palette, in red, white, blue, and yellow enamel, with gold. The gilding is very light, the enamel thickly filled in, the yellow blistered. The architectural design on each of the rounded sides is of remarkable style : an arcade raised on columns and crowned with two small cupolas. In one hangs a lamp with a blue foot ; in the other (fig. 7) is the bust of a man with full face looking out. But the most important part of the decoration is the armorial medallion with border-inscription which appears in identical form on each of the flat sides.

The inscription is in round letters, in gold, but is unfortunately much rubbed away, especially in the lower half of the medallion. The translation which is given by Hakki Bey runs thus : "Glory to our Lord the Sultan, the King, the Wise, the Just, the Abstinent, the Smiter of Unbelievers, the Defender of the gates of the land against hostile invasions . ." The Sultan's name has disappeared, but we are enabled to identify him by the armorial symbol—a (red) eagle displayed on a (white) field, his bosom slit open. This bearing appears on coins struck at Amid in Mesopotamia in A.H. 614 (1217) for the Malik Sālih Nāsir-ad-dīn Mahmūd ibn Muhammad ibn Urtuk ;—of which there are examples in Hakki Bey's collection. There are some likewise in the British Museum, which were also struck at Amid, and bear the double-headed eagle ; and one which was struck at Al-Hisn in A.H. 615 is described and reproduced (with others) in Rogers Bey's treatise on the escutcheons used by the Moslem princes.*

From the quantity of chromatic adornment used on the flagon above described, we are led to conclude that the art of applying colour to glass by means of fire had already passed through a period of development. Yet notwithstanding the relative abundance and vividness of tints, much had still to be learned and accomplished before the enamelling of glass attained its full splendour of decoration.

Fig. 7. *Detail of* Fig. 6. (*Full size.*)

Many existing specimens prove that even after the thirteenth century was well advanced, there was a continuous production of glass-work richly ornamented with gold, but showing only a sparing application of enamel.

The next dated work of the kind, so far as we know, is the dish on a high stand,† which formerly belonged to Charles Schefer in Paris, and bears the escutcheon of Badr-ad-dīn az-Zāhiri, a military commander in the service of Sultan Baibars I (1260-1277). Although brilliantly adorned with gold, it was enamelled very slightly.

It must be remarked, that those two pieces which we have described as the oldest of the dated examples, as well as most of the other gilt and enamelled glass vessels which are fairly assignable to the thirteenth century, appear to be entirely the work of Persian hands. Thus we have to

* Rogers Bey: Le Blason chez les Princes musulmans de l'Egypte et de la Syrie (Bulletin de l'Institut Egyptien, 1880), fig. 9.

† Reproduced by Gerspach, figs. 44, 45.

consider them as originating either in Persian 'Irāk, or in places where Persian craftsmen were resident. Amongst the latter must be mentioned Aleppo, and, with still greater reason, Damascus.* Those two cities were the principal centres of trade for all the Muhammadan countries during the later Middle Ages.

Among the artists of the Muhammadan world, the Persians were the most eminent, and, of the Persians, especially those who came from 'Irāk. The names of the most renowned miniaturists are Persian; their native places were for the most part in the region around Tabrīz. The names of the most celebrated metal-workers are likewise Persian; most of these came from Mosul. We do not hesitate to affirm also that the incomparably beautiful specimens of glass-decoration which are the finest objects of our particular study, were produced by men of Persian origin.

As a matter of fact, the principle of design in those decorations is so closely akin to that of the ornamental metal-work fabricated in Syria in the thirteenth and fourteenth centuries that their likeness can hardly escape observation. It has already been noticed by Garnier.† But we might with even greater significance, point to the still closer affinity with Perso-Arabic miniature-painting. The drawing and the scheme of colouring are in exact and complete correspondence; and it was certainly by no mere result of chance that, just about the time when Muhammadan miniature-painting, wholly separated from Byzantine influence, achieved an independent position in art —its elemental principles of decoration by colouring, were immediately applied to glass-work. And not to glass alone, but also to polychromatic ornament on monumental structures; for both one and the other are but phases of that process of supreme development which took place in every form of Art under the influence of Muhammadan civilization.

We venture to claim as personally our own, the discovery that Syria must have been the home of the finest productions of enamelled glass. It was based upon the observation that there is in the treatment of flower-forms, a style which may be described as strongly conventional united with a slightly naturalistic feeling for contrast. The same treatment of flowers is seen in all the departments of art-industry which were cultivated in Syria. In the fourteenth and still in the earlier half of the fifteenth century, it was at its highest level. Then, under the influence of Turkish taste, the strong stylism fades gradually out of the floral decoration; this next loses its artistic firmness, and sinks frequently into a tedious irregularity. (The department of fayence-work was the least affected by that taste.)

But it was not only this gradual change in general taste among the Turks which influenced the course of Art-industry in Syria. It had been overtaken by a catastrophe which occurred at a much earlier period, and from which it never recovered. The terrible Timūr Leng, after his capture of Damascus in 1402, gave orders under which the silk-weavers, the bowmakers, and the workers in glass and porcelain were seized, distributed among his Amirs, and carried at once away to Samarkand. In the account which Gonzalez de Clavijo has left us of his embassy to Timūr in 1403-1406, he alleges already that the work done by the craftsmen in those particular lines, in Samarkand, was "now" superior to any produced elsewhere in the world; and adds that at the banquet given by Timūr in the camp at that city, the viands were brought in on vessels of gold, silver, fayence, *glass*, and porcelain.*

Damascus was certainly not the only place in Syria in which glass vessels, decorated with gold and enamel, were fabricated. Hāfiz Abrū, an Arabic author in the fourteenth century, speaks in praise of the art of glass-making at Aleppo. He says: "One industry peculiar to Halab is glass-making. Nowhere in the world are seen more beautiful specimens of glass. Once entered into the bazaar in which they are sold, it is hardly possible for a man to make up his mind to go away, so great is the fascination exercised by the beauty of the vessels decorated in costly style and with the most exquisite taste. The glass-work of Halab is exported to the lands of all sovereigns and lords to serve as gifts."† And in the notice by Charles Schefer on the glass vessel of Charles the Great (so-styled), which is preserved at Chartres, we read, amongst other things, that a number of glass-makers from Armenāz (a place near Tyre) settled in the neighbourhood of Aleppo, and took their glass to that city for the purpose of decoration and enamelling. Stephan of Gumpenberg (in 1449) alleges, in reference to

* Even at a much earlier time—in the tenth century—Persian artists were working in Cairo. Amongst those who successfully competed for the high prizes given by the Wazir Yāzūri, two painters of renown are mentioned: Ibn-al-'Azīz and Kathīr, the one from Basra, the other from 'Irāk (see Henri Lavoix, Les Arts musulmans: de l'Emploi des Figures, Gazette des Beaux-Arts 2e période, vol. XII, p. 312). We also know that there is in Ch. Schefer's collection, a magnificent MS. of Harīri's Makāmāt, which is decorated in entirely Persian style and was written in Cairo in A.H. 634 (1236) by one Yahya al-Wāsiti, from Wāsit, a small place in Mesopotamia (Prisse d'Avennes has reproduced portions of it).- Persian artists in metal were apparently even more numerous than the painters, in Cairo. In 1888 the Musée des Arts Décoratifs in Paris acquired from the Goupil collection a magnificent metal vase which was wrought at Cairo for a Sultān of Yemen, by an artist who calls himself 'Ali of Mausil (Mosul).—However, we have reason to believe (as we shall show in the sequel) that there were no Glass-enamellers among those early Persian craftsmen in Cairo.

† See p. 64 of his work.

* Nesbitt's Catalogue of the Collection of Glass formed by Felix Slade, 1871, p. xxix.

† Charles Schefer, as already cited, p. 33.

Hebron, that "pretty glasses of many kinds" were made there (Feyerabend's Reyssbuch, Frankfurt a. M. 1584, fo. 239 verso); and Felix Faber (1483) states (in the same work, fo. 155 recto) ". . there is much glass-work there, many *Miol*, *Guttren*, and bottles of black, green and blue glass,* and divers ventures are had there because of the many foundries in which the things are made."

But, for all this, the glass industry in Syria seems never again to have raised itself to any high standard of productiveness, after the abduction of the Damascene craftsmen. Among all the examples known to us of glass-work decorated with gold and enamel, we can hardly reckon half a dozen which were fabricated after 1402. And from this circumstance we were led, in connexion with the discovery above mentioned, to question whether the mosque-lamps of Cairo were really produced in Egypt; for, although the glass industry in that country was unaffected by the tyrannic act of Timur in Syria,—the fabrication of massive gilt and enamelled lamps for various mosques in Cairo, so extensively practised during the fourteenth century, ceased utterly and suddenly, so to speak, at the beginning of the fifteenth.

All the other familiar arts flourished on in undiminished vigour in Egypt until the time of the downfall of the Mameluke dynasty, and no material change took place in the general taste. How then could it be supposed that the splendid mosque-lamps would without any reason suddenly lose their attractiveness, and cease to be used? Is it not a natural suggestion that those lamps had been imported until the source of supply was all at once exhausted?

We have absolutely no positive information regarding the fabrication in Egypt of glass of that kind. Gayet indeed, in his book on Arabic art, states that in the period of the Fatimite Khalifas, Mansūra had, as *many authors* relate, the speciality of supplying mosque-lamps ornamented with inscriptions and enamelled arabesques on a gold ground, but that no information on the subject dating from the thirteenth century is accessible, and that *certain passages of Cairene historians* give testimony to the fact that Fostāt (Old Cairo) had resigned that distinction to Mansūra. The *many authors* and the *certain passages* are unfortunately not specifically cited, which is all the more to be regretted, as Gayet's book swarms with mistakes,† and the authorities referred to are not to be found without exact indication. Stanley Lane Poole* thinks also that many of the mosque-lamps of Cairo, the finest and the oldest, were produced either on the spot, or else in the neighbouring town of Mansūra, so renowned for its glass-work. He believes indeed that there can be no doubt on the subject, and urges the improbability of any assumption that wares

* The words in the original, ed. Hassler (Stuttgart, 1845), II, 341, are simply *nigra et de mediis coloribus*.

† We will here draw attention to a few of the errors in regard to Arabic glass-work, which are to be found in Gayet's work—L'Art Arabe.

He says that the oldest mosque-lamps which we possess date from the period of Kalāwūn's reign.—A glance at our list of all the glass-work known to us either from historical literature, or from actual inspection, will show that there is not a single lamp of the time of that Sultan.

As an example of the Arab type of mosque-lamp, Gayet gives an illustration—borrowed from Gerspach's L'Art de la Verrerie— representing a lamp in the collection of Madame Edouard André, in Paris, which he wrongly specifies as in the Spitzer collection. In describing the decorative method practised with Arabic mosque-lamps, he says that the neck of the lamp is nearly always encircled with inscriptions.—Our selection, however, shows a goodly number of such lamps differently decorated.

Furthermore he says that this neck-inscription is always verbally identical, containing the words "God is the Light," etc., from the Koran, "sourate 35, cap. XXIV" (*sic*). The same is asserted by Max Herz (Catalogue sommaire du Musée national de le l'Art Arabe. Au Caire, 1895) with this difference only, that he specifies "chap. 24, verset 36." The only correct statement would be that verse 35 of the twenty-fourth Sura, is, in more or less complete form, the quotation most frequently employed as an inscription for the lamp-necks. We have also met with other phrases from the Koran used for the same purpose—(see p. 20).

The ornamentation of the Arabic lamp "brilliant though it may be, remains clear and well-defined," says Gayet. The very illustration on which he bases this statement, is used in his later book "L'Art persan" (p. 216) to represent a Persian lamp, and it is there accompanied by the remark "this ornamentation has the great defect of being confused and ill-defined"!

He alleges further in his last book, that most of the Arab lamps bear the signature of the artist as well as the name of the man for whom the work was done. We have really no more than two, that is, only two lamps have been found bearing the artist's signature. Mr. Nesbitt in his "Glass" (South Kensington Museum Art Handbook) says positively that the three lamps of the Museum offer special interest, since they give the names of the makers or decorators. Stanley Lane Poole, who formerly read the inscriptions in the same sense, has, on seeing them again, some ten years later, modified his former reading, and in the interpretation which he gives at present nothing is found about artists' signatures. See his book: The Art of the Saracens in Egypt, 1886.

Again, in his first-named book, Gayet says that the lamps of the Arab Museum in Cairo were from the mosques of the Sultans Hasan, Barkūk, Kāit-Bāy, and al-Ghūri, and that under Kāit-Bāy a reaction came about, by which the use of decoration was abandoned, and naked lamps employed in preference. The utmost application of ornament to these was the cutting of lines upon them, and at the same time a change in the form of the lamps took place. "Under Qânsûh el Ghūri the high foot disappears, the funnel-like neck is cut short, and frequently reduced to a mere edge, slightly curved, from which the belly of the lamp widens out."—"Moreover, so thorough was the decline of Arab glass industry towards the end of the fifteenth century that the monuments of the last Burgites had numerous lamps of Venetian manufacture. A hundred years later, Egypt had already lost the secret of Enamelling" (p. 243).

In answer to the preceding statements we have to reply that among the lamps of the Arab Museum at Cairo, not one is to be found either of the period, or from the mosque of al-Ghūri (see Herz, Catalogue) nor is any such known to us. There is a single one of Kāit-Bāy's time in the Arab Museum, and one, if we remember rightly, which has the foot and the immoderately high funnel-neck. But this lamp is of very questionable origin (Catalogue, No. 81). We ask ourselves, where can Gayet have made his observations, or contrived to find his facts? There were already footless lamps in the time of Nāsir Muhammad, and under Sultan Hasan they were nearly as numerous as the footed ones (see our selection). The first time that, according to our knowledge, a commission for mosque-lamps was given in Venice, was in 1569; and this order did not come from Egypt but from Constantinople (Charles Yriarte: La Vie d'un patricien de Venise au XVI^{me} Siècle. Paris, Rothschild).

* The Art of the Saracens in Egypt, p. 250.

so fragile could have been imported. So long as there are no definite particulars concerning importation, no one is bound to assume it as a fact, especially since we know—here he appeals to Nāsiri Khusrau—that glass was manufactured in Cairo. Still it seems even to Mr. Poole surprising, that nothing except lamps should have been fabricated there, the fact being so well known that the Mameluke princes made use of glass drinking vessels of all sorts. Yet, beyond a few bottles somewhat more delicately executed than the lamps, there does not exist a single drinking-vessel of unquestionable Ægypto-Arab origin.*

Max Herz, in his catalogue of the Arab Museum at Cairo, repeats Mr. Poole's view concerning the improbability of an importation of things so fragile; and after having described the ornamentation of the mosque-lamps, replies to those who believe that the lamps were, at least partly, produced by Venetians,—by adding: "All these elements (*i.e.*, the script, the ornaments, their character, their multiplicity and purity of style) in combination, can be assigned to none but people who studied at the same sources as the artists who built the grand monuments of Egypt."

"Every one who has busied himself with Arabic epigraphy, will ascribe to the lamp-makers the same origin as that of the men who built the mighty architectural monuments of this land. They are alike members of one artistic family, who, each in his own branch, have produced examples of Arabian art."

Thus, for lack of all positive information on the subject, the two authors last cited base their opinion as to the Egyptian origin of the lamps, upon three points:

1. The unlikelihood that things so fragile would be imported.

2. The character and pure style of the ornament.

3. Epigraphic reasons.

Other authors, who have written about Arab glass-work, take for granted that the Cairene mosque-lamps were produced in Egypt, on the ground that glass industry has flourished in the country ever since a remote antiquity. Thus Edouard Garnier in his "Histoire de la Verrerie et de l'Emaillerie," without adducing any other authority than that of Pierre Damien's statement concerning the costly beaker made in Alexandria and presented by the Emperor Henry to St. Odilon,—says that in that city "even in the fourteenth and fifteenth century the most exquisite specimens of glass-work continued to be produced, including the magnificently enamelled lamps which once decorated the Arab mosques."

We will now proceed to examine the three points which serve to support the theory of Egyptian origin.

The material of old Oriental glass ornamented with gold and enamel, is by no means so very fragile; on the contrary, it is uncommonly thick and tough, and thanks to the imperfect "fining," and the many air-bubbles in the process of fabrication, it is much less easily shattered than any other kind of glass. The dense liquefaction of the molten stuff,*—though not very likely to help in beautifying the shape of the vessel—rendered the glass certainly capable of being transported, more capable, at least, than the Venetian glass, which nevertheless was carried to all parts of the known world. Moreover, Hāfiz Abrū gives testimony that the ornamental glass of Aleppo was exported to the lands of all princes.† And with regard to the exportation of fine glass from Hebron, we have the words of Friar Jacobus of Verona in 1335.‡

We are, however, thanks to a communication from Herr Max van Berchem, enabled to produce one more piece of testimony (and from a classical authority) concerning the exportation of ornamental glass from Syria—this time the place is Damascus. It is a passage from the *Masalik-al-Absār*, an immense encyclopædic work upon all the known sciences, written in A.H. 738 (1337-1338) by the Egyptian State-Secretary al-'Umari (who died in Damascus in A.H. 749). The work is substantially a Description of the realm of the Mamelukes, geographical, political, statistical and otherwise. The writer lived for a long time in Cairo, in the administrative position above mentioned, and was thus enabled to utilise official documents for his work. He speaks frequently of the Sultan Muhammad Malik Nāsir, whose name appears on so many of the finest lamps, either in reference to the prince himself, or in allusion to one of his (Nāsiri) Amīrs. This undeniably trustworthy author,§ in the course of a description of Damascus, states that "Egypt, Syria, 'Irāk, and Asia Minor obtained from Damascus the prettiest articles that were manufactured there, especially bows, copper ware inlaid with gold and silver, things of gilt glass-work, and

* None of those undoubtedly Egyptian bottles is known to us.

* The cause of this dense liquefaction will be examined further on.

† Max Herz omits this particular passage, when citing the author in question (Catalogue of the Arab Museum, p. 62).

‡ Liber Peregrinationis fratris Jacobi de Verona, edidit R. Röhricht, in the Revue de l'Orient Latin, Vol. III, p. 99 of the separate issue: "In hac civitate Ebron, sunt plures fornaces, et ibi fiunt vitri fiale, omnia alia vasa vitrea, valde pulchra, et portantur per omnes terras Soldani in magna copia."

§ Al-'Umari has often been quoted by European Orientalists. Unfortunately his big work has only reached us in a fragmentary state. It is still unpublished save in excerpts. (*Note by Herr Max van Berchem.*)

those sheepskins coloured with *kart* (*i.e.*, the fruit of the sant-tree, a dye well known in the East) of which the fame is proverbial."

From this quotation it is clearly evident, in the first place, that ornamental glass-work was actually produced in Damascus at that time, and secondly *that Egypt was in the habit of importing it.*

There is of course no suggestion here that glass was not made at all in Egypt at that time. But we must not omit to remark that in al-'Umari's work the description of Cairo is much shorter than that of Damascus, and contains no reference (so far as Herr van Berchem was able to see) to industrial arts in the former city. From this circumstance we conclude that in the estimation of the author, those arts stood on a much lower level in Cairo than in Damascus, and chiefly in the special departments mentioned. In this sense al-'Umari speaks again, in his enumeration of the art-craftsmen of Damascus—"The art-craftsmen of Damascus boast their superiority to all the other workers of the Mameluke kingdom, except perhaps some few in Cairo."*

But even before the kindness of Herr van Berchem furnished us with the above highly valuable piece of information, we had been engaged in seeking elsewhere for grounds to support our conviction that the Cairene lamps were of Syrian origin.

There is a not insignificant fragment of the body of a lamp which came (apparently) from the mosque of Sultan Hasan, and which seems from its ornamentation to be derived from a replica of the lamp on plate I. This piece we caused to be chemically examined, at Vienna, in the laboratory of the Industrial School of the Imperial Museum of Art and Industry.† The result of the analysis was to establish convincingly the fact that a strong magnesia element had been contained in the molten glass. Now the presence in the glass-foundries of this very detrimental substance (by which the vitreous mass is too thickly fluidised and thus rendered difficult to clarify) can only be explained by assuming that in the working of the mass, some worn fragments of dolomite limestone were used. Dolomite stone is not found, so far as we know, either in Lower or Upper Egypt; but this formation is plentifully distributed throughout Syria.

What the chemical nature is, or was, of the sand formed, since ancient times, near the mouth of the little river Belus, we are unable to say, but there can scarcely have been any magnesia in it, as in that case it would not have gained the high esteem of glassmakers, including the Venetians.

That the Egyptians—who possessed in their own country the famous smelting clay so highly eulogised in Strabo's Geography—should have gone abroad to import an essentially bad material for the working of the vitreous mass, is too improbable for belief.

Moreover, the Egyptian glass seems to have been much less tough than that of the fragment above mentioned, and on that very account more suitable for cutting. The pieces of reputed Ægypto-Arab glass in the Treasury of St. Mark's are more or less oxydised, while the chemical analysis of our fragment reveals a strikingly exact proportion of the alkalis as against the chalk (magnesia-chalk) by which the glass was rendered capable of resisting atmospheric influences. The greater hardness of this glass explains its adaptibility for enamelling, and for being repeatedly exposed to the action of fire. Its defective lucidity rendered it unfit for cutting and polishing, but was very highly suitable for the application of light gilding and coloured embellishment, under which the dim and somewhat toned surface of the scarcely-transparent material formed a much more effective ground, than the perfectly pure glass, as clear as water, could have given them.

This natural property in the Syrian glass, may have been one of the co-operating causes which led to the direct development in Syria of the magnificent fashion of ornamenting glass vessels with colours and gold. Here, as in so many other instances, the base material is ennobled by the art of the decorator, its deficiencies become the source of artistic excellence.

We now proceed to the consideration of the second point of the theory of those who maintain the Egyptian origin of the Cairene mosque-lamps: the manner in which the decoration was effected.

We have already explained the reason which leads us to regard as Syrian, the mode of decoration, especially the floral types, used on the gilt and enamelled glass. There is between lamps and other specimens of glass-work, only this distinction—that lamps, evidently because they were destined to dominate wide spaces, are as a rule somewhat rougher in design, and bear no figured illustration.* This

* From the MS. belonging to M. Charles Schefer in Paris.

† We have printed the report of Professor Friedrich Linke, along with the section on the technique of old Oriental enamelled glass.

* We have recently become aware of one such lamp with figures—newly acquired by Capt. W. J. Myers of London, and graphically reproduced in a brilliant aquarelle by Herbert Sharp (Fig. 8). It appears to have belonged to a Christian monastery in Syria. It is a vase of a lustrous white like mother-of-pearl, 213 mm. in height, with three exquisitely pretty handles, and a simple kind of decoration. The gilt mouth of the vessel, and the circular base are edged with an ornamental band of rolling lines and curves with free endings. On the body, besides the chief *motif*, which represents mounted Falconers, between the handles which are enclosed

last circumstance results from the fact that the mosque-lamps of that period which are known to us, date from a time when delineations of the human figure were forbidden —*i.e.*, forbidden by the orthodox.* For the same reason, we observe that on the mosque-lamps which were ordered for Egypt, post-Saladinian Egypt, only figures of little birds and fishes are scattered amid the ornamentation, quite according to the spirit of the rigidly religious tradition,† which was not so anxiously adhered to in the matter of drinking vessels, probably because orders for these were not given so frequently as orders for mosque-lamps, and in the market-places of Damascus and Aleppo, where the merchants of the most widely different sects congregated, buyers of all kinds had to be catered for.

FIG. 8. *A hanging Lamp. In the collection of Captain W. J. Myers, London. (About two-thirds of the size of the original.)*

within intertwined medallions, there are only single figures of fish and birds, and on the upper part of the neck isolated ornaments corresponding with the handles on the belly. The design is carefully outlined in red, and as well as the handles and their medallions, gilt. The figured portion is executed in gold and in white, red, yellow, and blue enamel.

* Which was not always the case. See Henri Lavoix.

† Henri Lavoix, p. 315, gives us the following elucidations from Mouradja d'Ohsson on the subject of permissible delineations of animals:— "Representations of animals are forbidden to believers, except when very small and hardly noticeable. Thus it does not matter, when a man is praying, if there happen to be figures of animals under his foot or behind him. There is also nothing to be said if a Muhammedan woman, when she prays, has her breast hung with gold or silver medallions, struck by unbelievers and bearing the impression of any figures whatever, if these figures be so small that they escape the first glance of the beholder. The same applies to men who are praying and happen at the time to have gold and silver coins in their possession."

What kinds of glass-work or decorations may have specially belonged to the various places of production, we do not venture to judge. According to Edouard Garnier's Treatise on the glass in the Spitzer collection,* it would appear that Ravaisse has discovered some examples of glass "distinctly recognizable as having issued from the work-shops of Damascus." There is nothing else in the treatise to explain the assertion, and we do not know a single piece of gilt and enamelled glass which can with any certainty be ascribed to the workshops of Damascus or any other place.

There is, in the South Kensington Museum, a lamp with an armorial bearing (see the escutcheon in fig. 9), and an inscription in round letters containing the name of Kahlīs, a Mameluke of Malik Nāsir (Muhammad ?). It professes to have come from a mosque in Cairo called Devi Saidenaya. There is, however, no mosque of that

FIG. 9. *Armorial Medallion from the Lamp of the Mameluke Kahlīs, South Kensington Museum.*

name known at Cairo; but in Syria, a day's journey to the north of Damascus, we find a monastery called Saidnāyā. The word "Devi" is perhaps due to the writer's carelessness and may be nothing more than a malformation of Dair = monastery. Since we know from al-'Umari's account, that ornamental glass-work of that sort was actually executed in Damascus, we might with some confidence look upon this lamp† as representing the Damascene type of its kind, if, indeed any such type existed. But it cannot be said to exist, in abstraction from the form of the lamp. Some lamps here and there show a good deal of affinity in their decoration, viewed as a whole, but there is so great a diversity and multiplicity in the details, especially in the ornamentation of the lower part, that no such thing as a general type can be recognized. The conclusion we are obliged to come to, is that those vessels can only be grouped according to their principle of decoration. And

* Collection Spitzer, p. 80.

† It is described by Mr. Poole in his above-cited work, p. 258. The lamp belongs to the group of those in which the main decoration consists of inscriptions in round letters on the neck and body, of the kind represented in fig. 66, detail of plate XXXIV.

this indeed was the plan actually followed in the rearrangement in 1893 of the lamp-collection in the Arab Museum. The result of that course was to prove that lamps, widely separated from one another by their fashion and the periods of their production, were precisely similar in various ornamental details, while on the other hand lamps which were wholly different in their system of ornamentation, were so much alike in their make, their tint, and the quality of enamelling and gilding, that they might have seemed to be the work of one hand, notwithstanding the manifest difference of age between many of them. Even in lamps and glasses decidedly belonging to distinct periods, and apparently from widely removed places of production, we find single ornamental *motifs* almost identical in their form and disposition.

Fig. 10. *A Mosque-lamp. Sec. XIV. In the collection of Ch. Mannheim, in Paris.* (*About one-third the size of the original.*)

We will here take a single example. M. Charles Mannheim of Paris, has (besides three others) a lamp, formed with exceptional precision of outline (fig. 10),* which was made under the Sultān Malik Nāsir (Muhammad ?), for a monastery in the Karāfa, the greatest burying-ground in Cairo. This lamp, undoubtedly belonging to the fourteenth century, and made in Damascus (?) if we reason from its analogy with the lamp of Kahlīs, has on its foot the same very rare interlaced ornament with stars, which is seen on the amphora in the treasury of St. Stephen's at Vienna (plate XIII); the latter, however, being much older, judging from the script, and in its whole character evincing an origin still more distantly Oriental, than the lamp.

Tradition has a more tenacious vitality in the East than anywhere else. Yet on the other hand, it is rare to meet with artists more easily moved to action than the Orientals, and hardly anywhere else shall we find artists who, living in a foreign land for years, could, unaffected by local associations pursue their work entirely according to the spirit and traditions of their native school. Orientals are always the same, and this fact helps to explain the problems which occur in the study of Oriental decorative art.

It is on that account that, in the chromatic decoration of the Ægypto-Arab monuments of the Mameluke period, it becomes so exceedingly difficult to discern which is of native and which of Syrian origin.

The same remark holds good as to the calligraphy.

With this we come to the third point in the theory of those who maintain the Egyptian origin of the Cairene mosque-lamps.

There is no actual difference between the elements of Egyptian and Syrian epigraphy. On the contrary there is a remarkable unity in the two, so that an inscription, especially of the Mameluke period, is just as likely to have had its origin in the one as in the other country. The political union is a reason for it. Nevertheless, for the most part, Syrian inscriptions have a somewhat *provincial* aspect; the characters in them seem to be executed with less beauty and care. Yet, quite in the Mameluke period, there were produced in Damascus, Aleppo, and other towns, very beautiful ornamental inscriptions which would be perfectly in place on an Egyptian edifice.*

Consequently the calligraphy of the inscriptions on the Cairene lamps furnishes no argument in favour of their

* This lamp is 335 mm. in height, unusually weak in profile. The ornamental borders edging the frieze of written characters, the inscription on the body and the stars at foot, are blue, having a few spots enamelled in blue, blue-white, red-white, and green-yellow. The spirals underlying the frieze of written letters on the body are enamelled white. The gilding is very rich and fairly well preserved.

The inscription on the neck (fig. 11) runs thus: Glory to our Lord the Sultān al-Malik an-Nāsir, the Wise, the Just, the Warrior for the Faith, the Devoted Defender, the Guardian of the Frontier. The inscription between the handles repeats the same words, as far as "the Warrior for the Faith." The small inscriptions on the little inserted cartouches repeat only the first four or five words of the same invocation.

The inscription on the under part of the body (fig. 12) is "Inalienable property of the blessed and contented monastery of al-Karīmi (*the appellation of the founder*) in the Karāfa. God welcome the Giver, and seal him with Good, Mercy, and Forgiveness. Amen O Lord of the Worlds."

For want of some more definite appellation, it is difficult to identify the monastery, as there are many such houses in the Karāfa.

* We have received assurance of this fact from Herr Max van Berchem, to whom we addressed a special enquiry on the subject. This gentleman has copied, photographed, and stereotyped, in Syria alone, several hundreds of inscriptions; and in his opinion, the style of the writing on the Cairene lamps forms no evidence whatever against the theory of their Syrian origin.

Egyptian origin; quite as little as the fact that most of the lamps in European collections were taken from the mosques of Cairo. Cairo was the capital of the Mameluke kingdom, with the greatest number of mosques, and has been, since the French expedition, the most accessible Arab city to Europeans.

Our conviction, based upon historical and artistic points of detail, as well as upon a chemical analysis, is, that the lamps were fabricated in Syria, most of them probably in Damascus. Many of the other examples of glass-work had their origin undoubtedly in 'Irāk.

Before closing these general observations, we will examine the theory, supported by many writers, of the alleged Venetian imitation of this kind of glass-work.

Gayet maintains, as we have already mentioned above, that the buildings erected by the last Mameluke Sultans were lighted by great numbers of lamps fabricated in Venice. And it is asserted still more positively by Georges Marye* that the Venetians had been endeavouring since the fifteenth century to monopolise the manufacture of lamps, in order to supply the East with them, and with that object in view, they had (with more courage than our modern industrial houses seem to possess) "enticed Egyptian glass-makers" into their service. Many of the examples produced in Venice were, in Marye's opinion, "made by artists from the East, which thus became, to a certain degree, the nursing-mother of the Italian Renaissance."

For Gayet's theory, and for the first part of Marye's statement, there is, so far as we are aware, no testimony available, nor is there an attempt made by either author to produce anything of the kind. The second portion of Marye's assertion is true in so far as it can be connected with Oriental art in general, and with the labours of Oriental-Byzantine artists after the capture of Constantinople by the Turks (1453). These artists, however, after the year 1453, had nothing to do with mosque-lamps, and other glass-work of that kind; as may be readily seen from the chronological review of all the extant specimens of old gilt and enamelled glass which are known to us.

Carl Friedrich* makes strenuous efforts to elaborate a theory that the gilt and painted glass vessels made from uncoloured glass, which are seemingly Arabic, are not Oriental but Venetian. In support of this view, he cites the *wording* of the description of some pieces in the inventory of the Duc d'Anjou in 1360, in which it is said that three blue bottles are "de l'ouvrage de Damas"; and from the inventory of Charles V of France in 1379, the phrase that three red glasses were "à la façon de Damas";

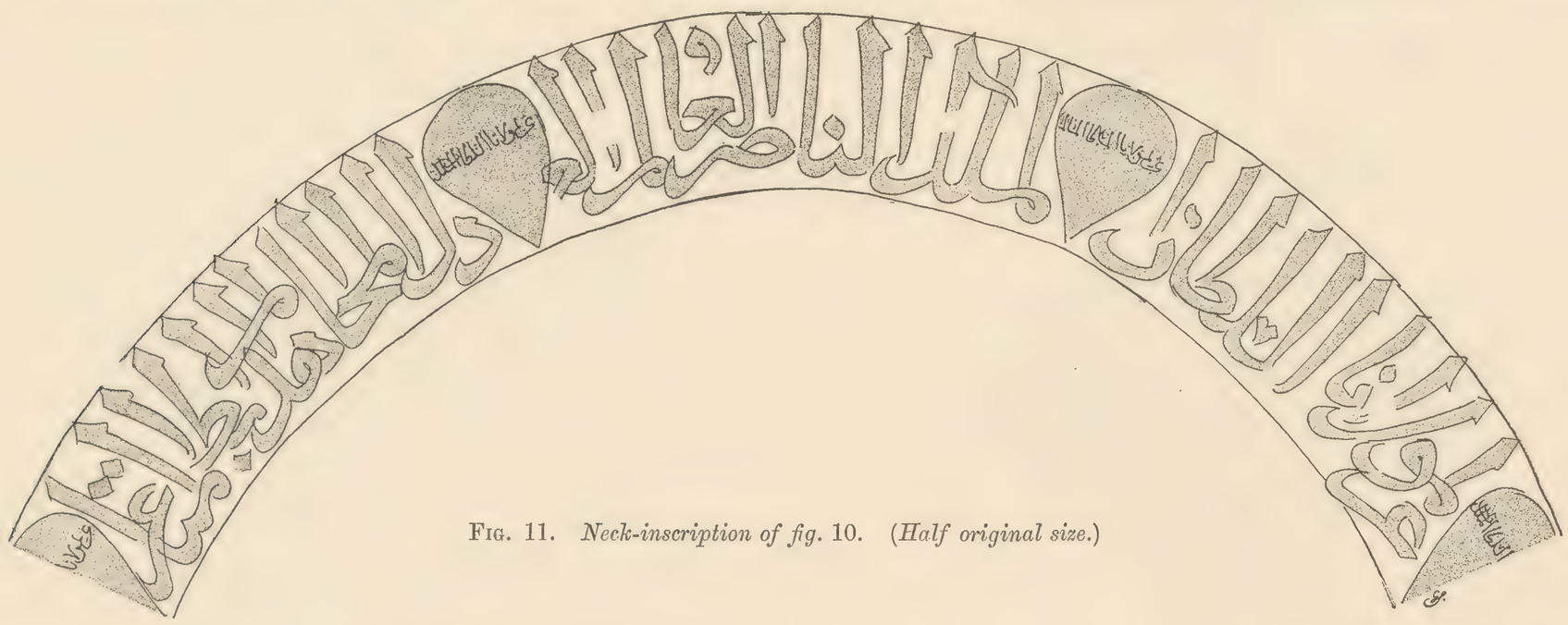


Fig. 11. *Neck-inscription of fig.* 10. (*Half original size.*)

as well as others which run thus: "à la façon de Damas par dehors," "par dehors a ymages à la façon de Damas," "en façon de Damas," all these descriptions being applied to painted and ornamented glass. One is said to be "peint à la Morisque." Friedrich assumes from his reading of these phrases that the genuine glass of Damascus was blue only, although, even from his own point of view, it might possibly have been mere chance, or perhaps a personal predilection on the part of the purchaser, which brought only blue Damascus glass into the possession of the Duke. Then he finds that in another inventory of King Charles, written by a different scribe, who naturally would make use of different forms of expression, the red glass, and others, are described as "wrought in the style of the Damascene [glass]," or as "painted on the outside with figures, in Damascene style." From all this to conclude that any glass not blue in colour is thereby shown

* L'Exposition d'art musulman. Gazette des Beaux-Arts, 3me période, t. XI, p. 54.

* Die Altdeutschen Gläser, p. 130.

to be not Damascene but Venetian, and that consequently the Venetians must "without doubt" have begun soon after 1360 to imitate the "ouvrages de Damas"—is illogical and untenable for more reasons than one.

This esteemed and usually acute author says in so many words (p. 131) ". . genuine Damascene glass is described as blue. Most examples of the extant enamelled glass of the East are blue or red, or consist at the least of coloured glass. If then one specimen is described as only *outwardly painted with figures, in Damascene style*, it must be inferred that the glass itself was formed not from a coloured but from an uncoloured mass. How is it that among the extant specimens which appear to be of Arab origin there are actually such as consist of colourless glass,—thus making my argument unanswerable? Certainly there do exist some." As examples he cites the Soltykoff bottle figured by Labarte, and the basin or dish on a high stand in the Musée de Cluny, which Labarte held to be Byzantine work. Of the bottle he says that its ornamentation, although generally Arabic in character, shows something of a foreign cast in comparison with genuine Oriental glass-work. And of the basin, he states that the catalogue of the Cluny Museum had already declared it to be Venetian (notwithstanding that Labarte pronounced it, like the bottle, to be Byzantine, and to correspond perfectly with the description by Theophilus).

From the statistical table, as well as from our own investigation, and from the general agreement of writers upon the known examples of Oriental enamelled glass, it is clear that the blue specimens (and all coloured glass in general) reckon among the exceptions. From the chronological review above mentioned, it is further evident that the latest dateable blue glass* was made sometime about the year 1320, and that the great majority of all dateable Oriental glass, including not only the unquestionably genuine examples, but also those which seem to be possibly Arabic, were produced before 1360. At that time the Venetians had not yet begun the practice of enamel-painting upon hollowed glass. That branch of the art came into existence about the beginning of the fifteenth century; and it has long been a matter of general knowledge that the credit of bringing the process to perfection was assigned

Fig. 12. *Inscription on the lower surface of fig.* 10. (*Two-thirds the size of the original.*)

* The lamp of the Amīr Arghūn, who was a Mameluke of the Sultan Malik Nāsir Muhammad, and died A.H. 731 (1331). This Amīr was the predecessor of the Amīr Almās in the viceroyalty of Egypt from A.H. 712 to 720 and after. According to the intitulation of the inscription, the lamp must have been fabricated in that period.

Of this precious lamp, there exists at present nothing but a fine copy in the Musée des Arts Décoratifs, in Paris, and an etching inserted in Henri Lavoix's article on "La Collection Albert Goupil" in the Gazette des Beaux-Arts, 2e période, tom. XXXII. The original itself is lost. After the copy just referred to had been so successfully executed, Goupil took it into his head to get some damaged portions of the enamel mended, the result of the attempt being that this lamp, unique in its kind, was utterly destroyed in the fire. The copy therefore figured alone in the artist's celebrated collection, until the auction which took place after his death. [Communicated by M. Charles Gérôme, brother-in-law of the deceased artist and collector.]

by his contemporaries to Angelo Beroviero.* We must here point out that the oldest Venetian enamelled glass, of which no known example can be assigned to an earlier date than the middle of that century, is of a beautiful dark blue colour. Hence arises the question, if the Venetians sought to imitate the blue glass-work of Damascus, why should they have done so in white? The production of blue glass was already well understood in Europe since the earlier years of the mediæval period—at first in connection with church-windows; and the use of the blue cubes of Byzantine glass-mosaics was well known in the preparation of glass-work of particular fineness. Theophilus makes special mention of Greek sapphire-glass. Sapphire-powder, evidently Greek sapphire-glass ground to powder, was known as an article of commerce as far back as the time of the so-called Heraclius (Sec. X), since he recommends (without any detailed instruction) that it should, for the purpose of producing enamel-colours, be mixed with his "lead glass" (carbonate of lead).

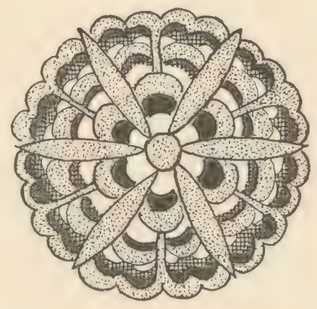
Molinier is justified in regarding it as absurd to imagine that the Venetians were not in possession of the recipes used in Constantinople.† It could hardly be supposed, also —even if we had no information on the subject—that such clever tradesmen and craftsmen as the Venetians would have neglected to utilise their connexion with Constantinople, from the time of Dandolo, in this as well as in other directions. About the end of the thirteenth century, that is, soon after the first start of their glass industry, and probably under the influence of Marco Polo's relation of his travels, they flung themselves energetically into the fabrication of glass pearls and false precious-stones, producing an enormous quantity of these things because they knew them to be capable of the readiest sale and sought for in the widest markets.

The enamelling of glass vessels did not flourish very long in Venice. The process of fabricating colourless glass-masses, which had been brought to perfection by the Beroviero family in 1463 (and the product of which was now termed "cristallo"), soon drove the coloured glass out of fashion, and with it the work of enamel painting upon glass.*

In the East, the earlier and far wider use of colourless glass, which was, however, a more or less lightly toned material by reason of the insufficient "fining" (or clarification) and of the lack of purity in the chemical elements, took the opposite course. The value of blue in a chromatic harmony gave it an increasingly dominant place in the scheme of decoration. In the plan of Oriental polychromy, blue is the colour which complements the large quantity of gold. For blue vessels, naturally, the use of the blue enamel had to be given up, and the effect of white enamel as the dominant colour was then necessarily resorted to. The blue enamel of old Oriental glass is, however, its main characteristic. It was not, as has been generally supposed hitherto, carbonate of lead coloured with cobalt or copper, but lapis lazuli pounded with powdered glass. This has been ascertained from the chemical analysis of our lamp fragment mentioned on a former page. Through the magnifying glass, it is clearly seen how the colouring atoms lie embedded in a mass of colourless glass. The analysis showed that this glass contained the magnesia by which the whole of the fragment was affected.

From this we get an explanation of the poor, and sometimes quite deficient, lustre of the surface of this enamel as compared with the appearance of enamel obtained from carbonate of lead. It also explains the variety of shades and tints, varying from deep blue, to clear or greyish or turquoise blue, which we find in old Oriental glass.

The lapis-lazuli enamel seems to have been prepared and used exclusively by Orientals. The sapphire powder of Heraclius already referred to is assuredly not the same, since the carbonate of lead with which he prescribes that it should be mixed, is absolutely incapable of combining with the sulphur-holding lapis lazuli. We know that the Venetians prepared their blue enamels only with cobalt and copper oxydes. We may therefore consider the lapis-lazuli enamel as the distinctive characteristic of the old enamelled glass of the East.



* According to a notice which has been inserted by Cicogna in his Iscrizioni Venete, t. VI, p. 467, it was Paolo Godi, Vicar of San Giovanni del Rialto, who, at the beginning of the fifteenth century, after long and laborious experiments, succeeded in systematising the various methods of colouring glass. Angelo Beroviero is supposed to have followed him and carried the invention to a practical result.

Godi's discovery, notwithstanding the phraseology of this statement, can hardly have had anything to do with the colouring of vitreous masses, for that had been known long before his time. It must in any case have been in connexion with enamel-painting, and the merit lies undoubtedly with Beroviero of having applied this mode of ornamentation to glass vessels.

† Emile Molinier: Venise, ses arts décoratifs, ses musées et ses collections. Paris, 1889, p. 189.

* From the sixteenth century onwards we only meet with white or whitish glass, or glass coloured in such wise that the tints melt into extreme lightness;—except in the superimposed floral ornament, for which positive colours were still occasionally used.

LAMPS.

The typical form of old Oriental glass mosque-lamps seems to be very ancient. Théophile Roller gives, in his work on the Catacombs of Rome,* a héliogravure representing a glass lamp with six handles and a foot-ring, the funnel-like neck encircled, a little above its middle height, by three contiguous rings in relief; otherwise without ornament. This vessel belongs, as he states, to the class of so-called "gabbata."

The lamp in question is now preserved in the little Museo Cristiano of the Vatican library. Whether it really came from the Catacombs, is, according to a communication from Professor Orazio Marucchi, not positively ascertained.

According to Rohault ed Fleury, the earliest allusion to glass-lamps with three handles, was made by St. Paulinus. In the work upon "La Messe," by the eminent French writer just mentioned, plate CDXLI, fig. 5, in the sixth volume, reproduces a lamp enclosed in a metal net, which was fabricated in the ninth century. It closely resembles the footed Arab lamps, but has no handle. Possibly, however, this lamp may not be of glass at all, but of cut rock-crystal.

On Arab grave stones, as early as the eleventh century, we find delineations of lamps suspended by chains, very similar to those mentioned above; but these extremely simple sketches in relief are not clear enough to show whether they were intended to represent glass lamps or lamps of another kind. But it is in any case unquestionable that the form is older than the first appearance of gilt and enamelled glass-lamps.

An idea is generally prevalent in books upon art, based no doubt upon the Cairene designation of lamps as "Kandīl Kalāwūni," that this kind of lamp must have been introduced into Cairo by the great Sultan Malik Mansūr Kalāwūn (A.H. 678-689 = 1279-1290). But as a matter of fact, we do not know of a single lamp bearing the name of that powerful monarch. The first that we meet with (the simple lamp reproduced on plate XV)† belongs to the reign of his son, Malik Ashraf Salāh-ad-din Khalīl (A.H. 689-693 = 1290-1293) and is the only one of that period that we know. They become more numerous when we reach the time of Kalāwūn's second son Malik Nāsir Muhammad, who ruled three times in Egypt and Syria, first in 693-694, then in 698-708, and finally in 709-741 (1293-94, 1299-1309, 1310-1341). During his second period, in 698-703, he built his own mosque (the Nāsiriyya) in the city, close to the Māristān of Kalāwūn; and in the third period, in and after 718, the mosque an-Nāsir, in the Citadel of Cairo. The course of his reign, including the short interval (708-709) in which his rival, Baibars II, held possession of the throne, formed a brilliant period in the history of Architecture in Egypt; during which the splendid mosques were built of the Amirs Sanjar al-Jāuli (and Salār) in A.H. 703,* Kūsūn in 730, and Māridāni in 738-740. With this remarkable activity in the department of architecture, we must recognise a close connexion in the suddenly augmented production of mosque-lamps. The movement was continuous, and we find also in the reigns of Hasan and Barkūk, a similar relation between the quantity of lamps and the number of the buildings constructed for those Sultans and their contemporaries. Consequently, the fact becomes all the more striking and curious, when we see that, in the fifteenth century, immediately after Timur's plundering campaign in Syria, the parallel progress of the two arts came to a sudden pause in the Mameluke kingdom; notwithstanding that Kāit Bāy's reign in Egypt was a period of

* Théophile Roller, Les Catacombes de Rome. Paris, Vol. I, plate VIII, 1.

† Inscription fig. 50. Max Herz (in the book already cited) misinterprets this inscription as referring to Malik Sālih Ayyūb (Najm ad-Dīn) who ruled in Cairo in 637-647 (1240-1249), because the lamp was found in this prince's sepulchral mosque—the so-called Sālihiyya (in the Coppersmiths' Bazaar, opposite the great Māristān of Kalāwūn—see Max van Berchem, Corpus I, p. 102). The titles used in the inscription can, however, have reference only to the Sultan Malik Ashraf Salāh-ad-dīn, as we are assured by Max van Berchem. The sepulchral mosque is known by several names, as the Sultāniyya, the Ashrafiyya, and the Salāhiyya. Herz Bey reads *ashrafiyya* as a common adjective with the sense of "most noble," which is not only a mistake but is also grammatically incorrect. For Salāhiyya, he substitutes erroneously Sālihiyya, and thus makes the word refer to the Malik Sālih Ayyūb. But the last two titles in combination were borne in Egypt by one Sultan only, namely, Kalāwūn's son Khalīl, whose sepulchral mosque, now in ruins, is also situated in Cairo (more exactly, outside the city on the South side—Van Berchem, p. 141). How the lamp in question came into the Sālihiyya, whether by presentation, or theft, or otherwise, remains unexplained. But, as removals sometimes take place in Cairo, such as the transfer of colossal doors from the mosque of Sultan Hasan to that of Sultān Mu'ayyad, that is from an older (but not dilapidated) building to a newer one—we cannot consider it very wonderful that a thing so easily movable as a hanging lamp, should be carried away to a place for which it was not actually made.

We must note, moreover, that Herz Bey himself, in specifying the oldest dateable monument of Arab glass-work (in his catalogue, p. 67, note) makes no mention of this lamp (which according to his theory should have been the oldest) and assigns the place of honour to the flat basin or dish with a foot, bearing the armorial symbol of Badr-ad-dīn az-Zāhiri (who died in 1277) which was formerly in the possession of Ch. Schefer in Paris.

* The year of the building of this mosque is held to have been 723 (1323) on the authority of Makrīzi. It is plainly upon this assumption that Max Herz (after Mehren) bases his theory that Sanjar al-Jauli built the mosque in honour of his unfortunate friend, the Amīr Salār, condemned to death by hunger in 710 (1310). As a matter of fact, Salār is buried under one of the two cupolas of the mosque, but the inscriptions referring to the building of the edifice bear the date 703 (1303-4)—See Max van Berchem, Corpus, I, p. 156.

political tranquillity, and rich in architectural developments. The matter is to be explained by the downfall of Syria, and the destruction of the source from which the lamps had been obtained.

The principle of decoration on those lamps consists in the division of the whole surface into horizontal bands which form friezes of greater or less breadth, as the case may be, filled alternately with designs in enamel on a full gold ground, and designs in gold on a bare glass ground. Often, the course of the friezes is broken by medallions; the narrower breadths usually by six small ones, the chief breadth around the neck by three large ones. These larger medallions have each a border and an inner field, the field bearing either pretty patterns of round script arranged as transverse bands, or an armorial symbol,* or a merely ornamental filling-up. The portions of the broad neck-frieze which lie between the medallions are sometimes isolated by simple framing-lines (as on plate XXIV). The disposition and admeasurement of these spaces and medallions is such that they correspond in relative arrangement with the

Fig. 13. *Armorial symbol on a Lamp. Collection of Captain W. J. Myers, London.*

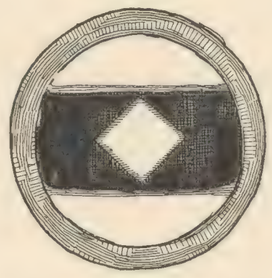


Fig. 14. *Armorial symbol on a Lamp of the Amīr Akbughā. South Kensington Museum.*

handles which lie at proportional intervals on the body; and the same rule is observed in the row on the lower part of the body, in which the medallions are repeated. On the foot or stand, if there be one, the divisions or compartments are arranged so as to harmonise with the spaces between the handles on the body. The division into six or three fields of the frieze that encloses the handles, was a necessity arising from the number of the handles and their position; but it furnished a keen stimulus to Oriental ingenuity.

The decoration is often firm, but as frequently weak. At times single horizontal strokes waver over the surface without coming close to one another, so that the naked glass-ground becomes visible, as for example on plates VIII, XV, XVII, XXVII, and XXVIII. Sometimes the whole upper surface of the vessel is covered with enamel and full gilding, as on plates IX and XVIII and (relatively) XI. But it

* Fig. 13 represents the fleur-de-lis mark, *gules* on *argent*, with a chief *or*, on a lamp belonging to Captain Myers; fig. 14, the lozange on a lamp of the Amīr Akbughā in South Kensington Museum.

never happens that the enamel is placed on the naked glass ground. For, although the glass can hardly be

Fig. 15. *Globe of the Lamp-chain of Saif-ad-dīn 'Azīz al-'Atāwi. Collection of Captain Myers.* (*One-half the size of the original.*)

regarded as quite transparent, the Oriental enamellers were quick to observe that enamels without a gold basis, when the glass is placed against a given background—hollow glass especially—lose their effect, fall out of their place in the harmonious blending of colours, and become null and void. Hence the unvarying combination of gold ground and enamel filling.

But in spite of the richest gilding (effective enough in

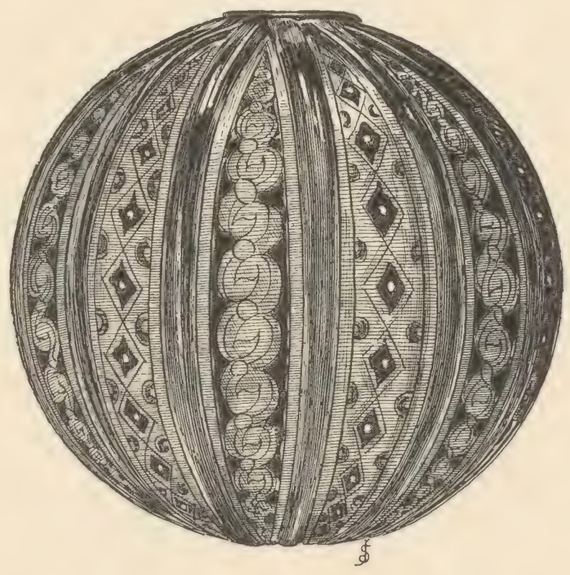


Fig. 16. *Globe of a Lamp-chain. British Museum.* (*Two-thirds of the size of the original.*)

side lights), these lamps never had the strong aspect of metal vessels. They could not belie their vitreous substance, upon which the gilding was necessarily shallow, and when they were held up to the light, the gold became transparent, and seemed almost to vanish. Only in the night-time, could the gilding show with proper effect, as the result of the shining of one lamp against the other.

The lamps were suspended in the arcades of the mosques, by means of three (or six) bronze (or silver) chains

which united at some distance above.* They hung from the vertex of the arches,† or from the beams interlocking the masonry and the pillars (this also being done in a decorative style); or else from the rods supporting clusters of lights in front of the Mihrāb, or prayer-niche. Sometimes, as in the immense mosque of Sultan Hasan, iron hooks and rings were fixed in the vaults of the roof, to receive the chains. In that mosque, the lamps were so numerous that the long bronze chains which are still hanging there present something of the appearance of falling rain.

When the chains were very lengthy, and consequently somewhat wearying to look at, the decorators sought to diminish the effect upon the eye by the interposition of various round bodies of greater or lesser dimensions. These were balls of glass or faience, mounted ostrich-eggs, or pierced globes wrought in metal.

We reproduce here two glass-balls of that kind. One (fig. 15), is 145 mm. in height, and ornamented with a horizontal band of gold letters which is broken by three white-red-gold armorial medallions.‡ The other (fig. 16), is smaller, about 110 mm. in diameter, and is vertically ribbed in relief, the ribs divided by alternating fields of gold ornament on a blue ground, and of enamels in red, white, green, and yellow on a gold ground.

The first ball, which belongs to Captain W. J. Myers, is of greenish glass and tolerably transparent. The inscription (fig. 17) reads thus: "This was fabricated for the noble Lord . . . [three honorific epithets] as-Saifi 'Aziz al-'Alāwi, [Mameluke] of Malik Sālih, glory to his Triumph!"§

The other ball, which is the property of the British Museum, is made of beautiful orange-yellow glass, quite opaque—a material of especial rarity amongst the examples of enamelled Oriental work.*

The ornamentation of both those glass balls is of rough style. The artists reckoned no doubt upon the considerable height at which the balls were to be placed. We may indeed say that it was the same consideration which led to the circumstance that lamps, as a rule, were somewhat heavier in their construction than the other productions of enamelled Oriental glass-work, notwithstanding that there are occasionally some lamps of specially fine execution. Among the latter we must include the little lamp of Baibars II which was formerly in the Goupil collection, and is now in the Paris Musée des Arts Décoratifs.†

We have observed that in general the lamps of the time of Malik Nāsir Muhammad ibn Kalāwūn—that is, the lamps of the first thirty years or so of the fourteenth century—are very finely executed, much more finely indeed than those of a later date. From this we conclude that enamel-painting was never applied to lamps until it had long been practised in the ornamentation of drinking vessels; when the growth of a critical taste had led to a mode of execution more simple and solid, without, however, losing any of the decorative effect.

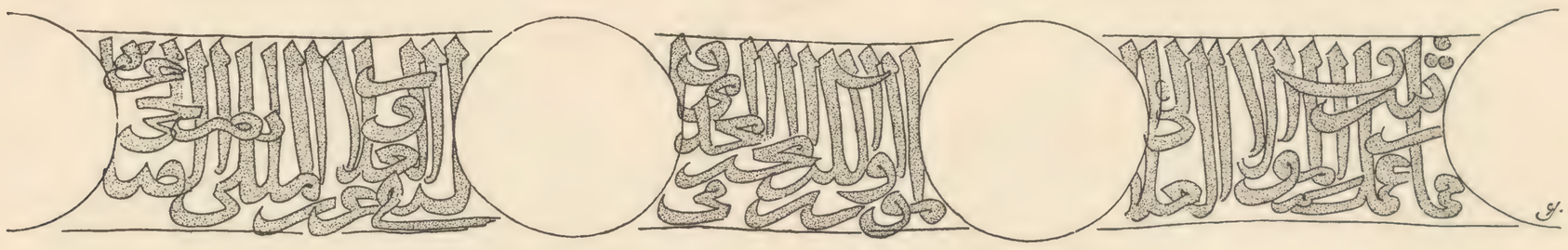


Fig. 17. *Inscription on fig.* 15. (*Two-thirds of the original size.*)

The workmanship of the lamps of Sultan Hasan's time is markedly less firm and decided than that of the older lamps. This will be apparent from a comparison, for instance, of the lamp on plate IX with that on plate XXVI. The lamps of the last thirty odd years of the fourteenth century were frequently executed in a rough hasty way, as for example the one on plate XXIII, or the similarly heavy piece of work (fig. 18) in the possession of Charles Mannheim in Paris. On both of them we find the name of Malik Zāhir Abu Sa'id (Barkūk).

We had an opportunity of inspecting a small mosque-

* The South Kensington Museum possesses such an example, in the lamp of the Amīr Akbughā, with its original silver chains, which are finely and delicately wrought.

† Usually so represented in miniatures, on gravestones, and in decorative work generally.

‡ The armorial medallion, varying in colour, often makes its appearance. We have in fig. 14 one of its variants (white-red) from the Akbughā lamp with silver chains in the South Kensington Museum. Another variant, with the colours reversed (red-white) from a lamp of the Amīr 'Ali al-Māridāni is reproduced (in combination with other symbols) by Rogers Bey in the work already cited, fig. 39.

§ The Sultan alluded to here is not to be identified, since no proper name is given. The last of the Egyptian Sultans who bore the title, was—so far as we are aware—Malik Sālih Nāsir-ad-dīn Muhammad, A.H. 824 (= 1421).

* The British Museum possesses likewise a small footless dish made of similar yellow glass, which we shall describe more particularly in the sequel.

† Reproduced in the Revue des Arts Décoratifs, VIII, No. 3, plate at p. 384.

lamp (fig. 19) in the possession of M. Duseigneur in Paris. It is 2·0 mm. in height, and, however rudely executed, is remarkably effective in the disposition of its ornamental features. Unfortunately the inscription in the medallions, through the overflowing of the outlines by the softened blue enamel, has become illegible. It is a remarkable thing in this lamp that the lower part of the body, and the foot, have remained entirely bare. This is of rare occurrence. We know only one other lamp—formerly in the Spitzer collection—of which the foot is plain.*

Usually, the chief motif of the decoration on the enamelled lamps lies in the inscriptions which (as shown in plate II and in fig. 18) are placed upon the neck as well as the body of the lamp. It is extremely rare to find an

Fig. 18.

inscription on the pedestal, such as appears on plate XXVII in the repetition of one word, "the Wise"; or in the artist's signature on the lamp of the Amīr Almās in the collection of Rostovitz Bey in Cairo;† or that—which we can hardly recognise as real—(fig. 68) on the base of the one lamp belonging to Charles Mannheim in Paris (fig. 66).

The inscriptions on the neck are as a rule texts from the Koran;‡ usually from Sura XXIV, verse 35, but giving in most cases only the opening words: "God is the light of Heaven and of Earth. His light is like a niche in which is a lamp, the lamp encased in glass, the glass like a glittering star. . ."

Besides this Koranic phrase we have also found the others following:—

Sura XXIV, v. 36: "In the temples which God hath allowed to be raised, so that His name may therein be remembered, men must pray morning and evening" (Lamp of the Amīr Akbughā in the South Kensington Museum*).

Sura IX, v. 18: "He only should enter the temples of God who believes in God and the Day of

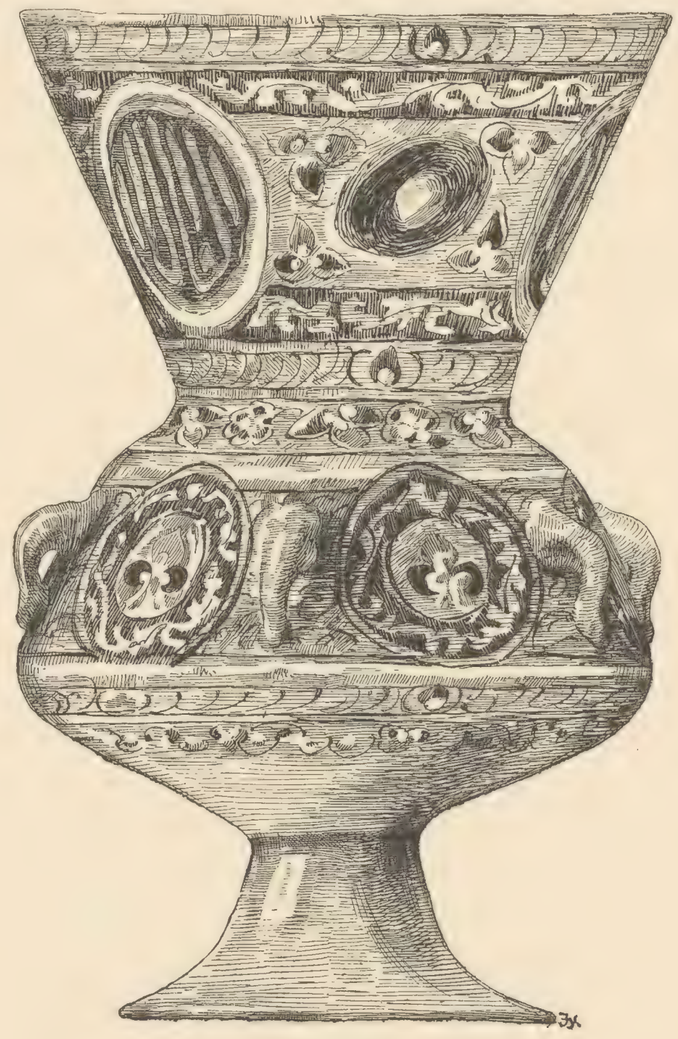


Fig. 19.

Judgment, and prays duly . . ." (Lamp of Kahlīs, the Nāsiri Mameluke, in South Kensington Museum†).

Sura XVII, v. 111: "Praise be to God who has begotten no son, who has no partner in his sovereignty, who has needed no champion . . ." (Blue lamp on plate XXVIII, from the collection of Ch. Mannheim in Paris).

Sura LXXXIII, vv. 22, 24, 25 (without v. 23): "Surely the righteous shall dwell in delight. Thou shalt see upon their faces the brightness of delight. They shall have glowing sealed wine to drink . . ." (Lamp on plate XXVI, in the collection of Captain Myers).

* An illustration is given in the "Collection Spitzer," p. 90, no. 4.

† Reproduced and described under No. 6 in the article by Artin Pasha in the Bulletin de l'Institut Egyptien, 1886.

‡ In the lamp on plate XXVII, the neck-inscription is, however, a mere repetition of the titles of the Sultan Malik Nāsir Muhammad.

* Reproduced and described (fig. 93) in Mr. Poole's book, p. 256, &c.

† Described by Mr. Poole, p. 258.

In the lamp-inscriptions, small defects occur frequently.* There are some lamps in the Arab Museum at Cairo, having Koranic inscriptions divided by medallions into three fields, in which we find the texts quite out of order, the third and the second field being wrongly interchanged. It may be assumed from this that the craftsmen in the enamelling houses sometimes worked after models, as otherwise such errors could not have arisen.

The inscription runs, in very exceptional instances, continuously from the neck on to the body of the lamp, as in an example in the British Museum described by Mr. Poole;† in which Sura XXIV, v. 35 is so continued, much more of the text being given than is usually seen. Another specimen appeared on a lamp exhibited by Mr. J. Dixon, at the Burlington Fine Arts Club, in the summer of 1885; which bore a dedication-inscription with the name and many titles of the Amīr Yalbughā, who conducted the restoration of the mosque al-Akmar, in 1397, under the Sultan Barkūk.‡

Another peculiarity is to be remarked in the first of the two lamps. The flattened base of the handles, where they project from the body, is decorated with enamelled cartouches, in a similar way to the little lamp on plate XVII; but the cartouches are not filled in with any other ornament than an inscription in round letters, gold upon a blue ground. The inscription has unfortunately become unreadable through the excess of the thickly imposed enamel which has overrun the outlines of the letters. We have tried in vain to decipher and copy them. Mr. Poole reads it thus—"Of what was made for the mosque at the grave of the lady Takūna." He considers, from the style of the lamp, since it has neither the characteristic of interposed medallions, nor is marked with the name of any Sultan or great personage, that it varies entirely from the ordinary Cairene lamps, and may therefore have been made in Damascus (his theory concerning the Cairene mosque-lamps being, as already mentioned, that they were all made in Egypt). "But," he adds, "no mosque can be found there bearing the name of Takūna or Takwiya, or whatever the lady's proper appellation may have been." In one cartouche Mr. Poole thinks he can discover the date A.H. 891 (1486) written in the reverse order of the numerals.

It is our belief that the lamp is much older, and the decoration too finely designed to be the work of so late a period. It would in any such case be a rare exception. In connexion with this matter,* we may also mention that the ornamental motif which is seen on the lower part of the body of the lamp is closely akin to that which is found in a similar position on the blue lamp of plate XXVIII, which bears the name of Malik Muzaffar Rukn-ad-dunyā wa-d-din (*i.e.*, Baibars II). It resembles also the piece of reversed work on the foot of the little lamp of Baibars II, which belonged formerly to Goupil and is now in the Paris Musée des Arts Décoratifs. The same motif appears also in a somewhat simpler form on the base of the lamp reproduced in plate XXVI, which likewise exhibits the titles of Baibars II, and has the same sort of flat-pressed attachments at the base of the handles, as have been spoken of above. The affinity, moreover, which is evident between the lamp in question and the one which was made for the grave of the Amir Salār (plate XVII) would lead us to assign the former to the beginning of the fourteenth century, rather than to the end of the fifteenth. It is worthy of observation in all these lamps, that each of them has three handles, and that in none is the neck-frieze broken by the interposition of medallions. The reading of the date is decidedly more than doubtful.†

We have no grounds for supposing that the Oriental art of glass-enamelling maintained so high a standard of excellence till the close of the fifteenth century. What the execution may be of the lamp (the latest dateable but one, so far as we know), which was made before 1453 for the Amir Ināl al-Ya'kūbi—he reigned afterwards as Malik Ashraf Saif-ad-dīn Ināl A.H. 857-865 (1453-1461)—we cannot say, as it is known to us only in a sketchy drawing.‡ The later unique lamp of Kāit-bāi (872-901 = 1468-1496) in the Arab Museum at Cairo (Herz Catalogue, No. 81) is not only very poor in execution, but the enamelling work is also so bad, and the letter-forms of the inscriptions so ungraceful, that we are tempted to ask if it be possible that this lamp was produced in the same home of industrial art as its earlier congeners.

Good and skilful work in the preparation of enamelled

* Herz Bey has pointed out such defects in votive inscriptions, in his Catalogue of the Arab Museum in Cairo.

† P. 260, &c.

‡ Mr. Poole (261) refers this lamp to the period between 1405 and 1410, on the ground that the Amīr styles himself in the inscription not az-Zāhiri but an-Nāsiri, implying that he was Mameluke to an-Nāsir Faraj, the son and successor of Barkūk. That Sultan, however, reigned twice; from 801 to 808 (1399-1405) and from 809 to 815 (1406-1412). Why Mr. Poole prefers to place the lamp in the second period, is not clear to us. The lamp might in any case have belonged to the mosque restored by its founder, and its date should therefore be placed not long after 1397, the year in which the restoration was completed.

* Judgments based upon the collation of similar ornamental motifs, have no value for the fixing of dates; as we have already shown in treating of another example.

† According to Sir Augustus Wollaston Franks, M. Charles Schefer seems to have read the whole inscription in a different way from Mr. Poole, and to have found a man's name in it.

‡ Formerly in the Basilevski collection, now in the Ermitage at St. Petersburg.

glass lamps seems to have been dying away in the first half of the fifteenth century: it was in any case quite dead at the end of that century.

That the tradition of such a splendid career of artistic industry should have been lost in Syria, is easily understood when we remember the murderous wars that led to the second depopulation of that unhappy country in the fifteenth century.

After the extinction of this branch of industrial art, faience and metal came into use in the Muhammadan world as the dominant materials for the production of ornamental lamps. At all times indeed, elegantly wrought metal lamps had been in favour among Oriental people, and during the brilliant period of enamelled glass-work, they were frequently fashioned in the same shape as the glass ones.* The mosque-lamps executed in faience, however, seem not to have come into vogue to any great degree till after the disuse of the glass ones, although even as far back as the fourteenth century and in Cairo itself, the practice of painting and glazing plates of faience was not unusual. This was the Kāshāni faience, so-called from the town of Kāshān in Persia, which is always regarded as the place of origin of the Persian examples of that art.† Stone-mosaic was, however, the favourite mode employed in decorating the walls of the monuments under the Mameluke kings. Faience became afterwards the prevailing fashion, in the time of Turkish rule, and lamps of that material were commonly used.

In 1569, Muhammad Pasha, the Turkish Grand Vazir, was obliged to send a commission to Venice, through the intervention of the Venetian ambassador, Marcantonio Barbaro, for a quantity of glass lamps—nine hundred in number. Barbaro enclosed with the order pattern-drawings of two lamps. These drawings were discovered by Yriarte in the Archives of the Frati,‡ and Gerspach has reproduced them.§ Barbaro advised the Council not to ask for anything on account of the work, because he expected to receive compensation in another form; but whether the commission was actually carried out is not known. If the work was really performed, we may be sure it did not comprise any enamelled lamps, for the glass which was blown in Venice at that time bore no enamelling, and the practice of that mode of ornament had been long disused in the republic.

Concerning the manner in which the lamps were used, Albert Ilg states (in Lobmeyr's "Glas-Industrie," p. 49): "They gave illumination by means of wax candles, not of oil"; and this assertion is based upon illustrations in a MS. copy of Hariri's Makamat, which was written in the fourteenth century, and is preserved in the Imperial Hof-Bibliothek in Vienna.* The book does in fact contain representations of several hanging lamps,† but one of them, which is footed, seems to be undoubtedly a glass lamp. It encloses a lighted candle, visible through the glass; but really no clear evidence is obtainable from the little picture, as the candle may simply have been inserted in a socket which was not made for it.

Others, who many years ago saw such lamps still hanging in the mosques,‡—amongst them, Mr. Poole—say that inside the vessel a tiny lamp was suspended by means

Fig. 20. *Small Lamp in the South Kensington Museum.*
(Quarter size of the original.)

of little hooks of wire from the rim of the orifice above,§ That would be in any case the most suitable and correct way of using the mosque-lamp, as the flame would remain central, and the transparency of the vessel would thus allow the diffusion of a full and equal light.

BOTTLES, AND VESSELS WITH HANDLES.

This group of the old Oriental enamelled glass-work which we are acquainted with, is far less numerous than

* Two very fine specimens are reproduced by Mr. Poole, figs. 76 and 90.

† Artin Pasha, in his work already cited, p. 126, derives the term Kishani or Kishāna (with a soft "K") from the town of that name, on the river Saghd, near Samarkand. This, however, does not agree with the old method of writing al-Kashāni (with a hard "K" or "Q"). Kishani is simply a vulgar Arabic modification of "Qashāni."

‡ Charles Yriarte, La Vie d'un Patricien de Venise au XV Siècle. Paris, Rothschild.

§ In the work already cited, fig. 82. Some authors who have written on this subject, give four hundred as the number of the lamps, and mention only one pattern.

* Flügel's Codex 372.

† Dr. Chmelarz, the Vice-director, has kindly favoured us with copies of the pictures representing lamps.

‡ After the establishment in 1881 of the "Comité de conservation des monuments de l'Art Arabe," all the old gilt and enamelled glass lamps, still existing and accessible, were removed from the mosques of Cairo and placed in the Musée National de l'Art Arabe.

§ There is in the South Kensington Museum, a small footless three-handled lamp, made of green glass and fully gilt (6½ inches in height, and 5½ in its maximum diameter), which was used in the manner described above, and may have been acquired by the Museum along with the larger vessel in which it had been enclosed. Such is the suggestion of the catalogue, but this lamp seems too large, small as it is, for the purpose, and it is not likely that a small inner lamp, meant only for illumination, would have been gilded as this one is. We reproduce it in fig. 20 on account of the rarity of its form.

that of the mosque-lamps, but, considered in regard to form and to the distribution of ornament, it presents a much greater variety of features.

Glass bottles, and vessels with handles, were chiefly used for the table; and on the evidence of miniatures in books,* and from what we know of Arab life under the Mameluke Sultans, they were once widely and abundantly distributed throughout eastern lands. They were, however, as a consequence of their employment at the table, much more liable to damage and destruction, than the sanctified mosque-lamps.

We have already expressed our belief that the art of gilding and enamelling hollow glass vessels was first applied in the East to table-glasses and drinking vessels used by wealthy persons, and only at some later time extended to the adornment of lamps for the mosques.

Many circumstances tend to confirm this opinion, but especially the fact that (so far as we know) not a single mosque-lamp exists which could be assigned to an earlier date than the last decade of the thirteenth century; although as we have remarked before, lamps of that kind, from their association with religious worship, had a much greater chance of preservation than drinking vessels. Even if we accept Max Herzen's reading of the inscription on the lamp in plate XV, as incorporating the name of Malik Sālih Ayyūb (637-647 A.H. = 1240-1249), the enamel-work upon it, done by no very skilful hand, will help to support our theory; for the lamp would in that case still not be representative of the oldest Oriental enamelled glass, and would have to be considered as an isolated attempt to apply enamel to lamps.† How otherwise are we to account for the vulgar Cairene phrase by which the gilt and enamelled lamps were designated Kandīl Kalāwūni? Most of the specimens of costly glass used at the tables of the rich date from the thirteenth century; and some of them, which are particularly splendid, have been for centuries in European possession. The reason for this lies probably in the fact that until the storming of 'Akka (Acre) under the Sultan Khalīl ibn Kalāwūn (in A.H. 690 = 1291) and the final expulsion of the Franks from Palestine, the commercial relations of the Franks with the great trading towns of Syria, and their brilliant bazaars, were more active and continuous than they afterwards became.

It is not unlikely that some of the simplest examples of enamelled glass used in every day life, were fabricated at a period not less remote than the last decade of the twelfth century. It seems indeed as though in the time when Benjamin of Tudela was travelling, that is about A.D. 1163, there was as yet no fabrication of enamelled glass in Syria; but the colouring employed for Hakki Bey's little flagon * (figs. 6 and 7) enables us to say with confidence that in the year 1217, the art of enamelling on glass had already been practised in the Muhammadan East for some considerable time. In any case, so long as the fact remains that no lamps have ever been discovered which could be recognised as forerunners of those that are known to us, we have to look upon the more simply enamelled and undoubtedly ancient specimens of table-glass as the earliest productions of that brilliant phase of art-industry. The lamps of the Malik Nāsir Muhammad ibn Kalāwūn and of Baibars II, are, with some very few exceptions, decorated with extraordinary richness and fulness, and display great brilliancy in the ornamental design. Even the oldest of the lamps which we have mentioned, and which is reproduced on plate XV, though simple and unsure in the application of the enamel, displays at once richness and lightness of treatment in its gold filigree decoration (figs. 49 and 51).

The delicacy of the decorative proportions of the lamps made at the beginning of the fourteenth century is also an argument in favour of our theory. In the fabrication of table-glass this was naturally to be expected, but not so in the case of lamps which were to hang aloof, remote from any close inspection. Since nevertheless we discover that quality in the oldest lamps, we are at once struck with the idea that this fineness of work was derived from some other branch of the art in which it was customary, and that it had only been borrowed in the construction of the lamps, by imitation. It is found, as a matter of fact (which we have already dwelt upon), that in the later lamps the decorative proportions are much more coarsely handled; while, on the contrary, even in the latest dated example of bottles or jugs known to us, namely the large flask made for an Amīr of the Sultan al-Kāmil Saif-ad-dīn Sha'bān (A.H. 746-7 = 1345-6) and now in the Louvre—the proportions are of exquisite delicacy.† From this we do not by any means seek to imply that there exist no roughly executed specimens of table-glass. Such specimens do exist,‡ but

* In the Hariri already mentioned as belonging to Ch. Schefer in Paris.

† The lamp in question is very different from those of Malik Nāsir Muhammad ibn Kalāwūn, much more so than, in our opinion, would harmonise with the space of eleven or twelve years between the reign of Khalīl and the building of the Nāsīriyya, out of which most of the lamps bearing Ibn Kalāwūn's name have come down to us.

* To the group of colours on this vessel, already mentioned elsewhere, —gold, red, white, blue and yellow,—we have to add the black-brown used for the clasp of the capote or hood worn by the figure in the design.

† There is a pretty coloured reproduction in the work "Collection Spitzer: Verreries," plate III.

‡ A vessel of the kind, in the Paris Musée des Arts Décoratifs, has been produced in photography by Champeaux in his "Portefeuille des Arts décoratifs," plate 368.

most of them bear the mark which fixes the period of their production in the last thirty years of the fourteenth century, when the roughness of form which characterised the lamps—(these had now become the main articles of production in the glass industry)—seems to have passed into the fabrication of table-glass as well.

In contrast with the number of mosque-lamps which have been preserved, relatively few examples remain of the fine table-glass; but there exist bottles and vessels with handles, in sufficient quantity to enable us to comprehend the great richness and variety of ornament with which those articles of table-use were embellished.

Only a few of them are dated. They were rarely made to order; being simply costly articles for general sale. On that account they bore no inscriptions, or else were inscribed only with some favourite word, such as "the Sultan" (plate IV), or some one or other of the "beautiful" names of God, most frequently "the Wise" (plates V and XIII), or else some honoric appellative in use among the great, so as to render them suitable for purchase by any of the numerous Amirs and high officials of the state. However, the character of the decorative embellishment, especially the enamelling treatment, enables us to fix, at least approximately, the time at which the undated examples were produced. With regard to the place of production of the various pieces, it would be as difficult to form a conjecture as in the case of the lamps. In all probability so large and varied an assortment of rich table-glass come from more places than the so-called Cairene lamps. These were undoubtedly for the most part produced in Damascus, notwithstanding that Ibn Batūta, in the account of his travels in Asia Minor (about 1332)* speaks of "numerous lamps (or lanterns) of 'Irāki glass." We do not know, indeed, of more than a single lamp which could with probability be assigned to 'Irāk. That one is the pictorial lamp which we have reproduced in fig. 8. Among the specimens of table-glass there are, however, a great many—indeed, it may be said the majority—which might confidently be regarded as of 'Irāki origin. Various motifs in the decoration of these glasses, such as the design of birds of paradise fighting amid rolling clouds (which is found on the necks of so many flasks, as for instance the one reproduced on plate VI, or those in the Louvre and the Musée des Arts Décoratifs immediately above referred to)—are suggestive of a still more remotely Eastern origin, and point to a connexion with China, of which, however, it is not difficult to trace the actual existence, even if it be sought for in commercial relations alone. The work of Charles Schefer, "Relations des Musulmans avec les Chinois," in the *Centenaire de l'Ecōle des langues Orientales vivantes*, cites Oriental writers to show that Muhammadan merchants exported wares of all kinds to China, even the enamelled glass of Aleppo (verreries d'Alep). He quotes also from the encyclopædia of al-'Umari, already mentioned in the present work, the statement that some man placed Aleppine glass-wares before the Mongol Mangu Timur Kaan. The Mongol drank out of one of the glasses, and marvelled at the redness of the wine glowing through the beautiful transparency of the vessel (p. 16, note 2). Amongst the Persians, the proof of an early connexion with China is manifest in several branches of art-industry. It is enough to recollect the various motifs of decoration in carpet-work, and the old Persian achievements in stone-ware in imitation of fine porcelain.

But we cannot with certainty refer to 'Irāk the distinctively Persian examples of gilt and enamelled glass-work. We have elsewhere spoken of the migratory and other

Fig. 21. *Inscription on a Goblet in the Royal Saxon Green Vaults.*
(Three-fifths the size of the original.)

* Defrémery's edition, II, p. 263. The statement is made in reference to the chapel or prayer-cell of a poor Darvīsh, which is described by Ibn Batūta as very richly ornamented.

peculiarities of Oriental artists. It is only too probable that many of the specimens which are distinctly Persian in their aspect, were made in Syria. As an instance, three of the figures of mounted Polo-players on the jug reproduced on plate XXX, are repeated in almost identical fashion (perhaps a degree smaller) upon one of the two goblets in the Green Vaults of Dresden.* There is the same background of spiral ornament, but the interstices are not filled with blue enamel, as they are on the splendid jug, which once adorned the collection of the Duke of Hamilton, under the title of "Venetian glass." The inscription (fig. 21) which surrounds the funnel-shaped mouth of the goblet,† is in characters of decidedly Egyptian but specifically Syrian form.

What, therefore, must we take the origin of the goblet to be? The honorific appellative which appears in the inscription: "al-Malik . . al Mu'ayyad," does not constitute any acceptable by-name, and therefore cannot refer to the Malik Mu'ayyad Shaikh (1412-1421), but the vessel was most probably made for another Egyptian Sultan by a Persian from 'Irāk, resident in Damascus, or in some other Syrian seat of the art of glass-making. In any case it is a Perso-Syrian piece of work.

As an example of Syrian work we must also regard the fine flask or bottle, fig. 5. It is thus inscribed: "To our Lord the Sultan al-Malik al Ashraf, the Just, the Wise."‡ It was the opinion of Sir Augustus Wollaston-Franks§ that the inscription had reference to one of the two Sultans of that name who ruled in "Miafarkin" in the thirteenth century. We know of only one Malik Ashraf ruling at that time in Mesopotamia. The Mongol princes began to hold dominion there about A.H. 642, and none of them used any title which included the word Malik. The Malik Ashraf we refer to was Saladin's nephew, and his full name is al-Malik al-Ashraf Muzaffar-ad-dīn Mūsa ibn al-'Adil. He reigned from A.H. 607 to 628 (=1210-1230), and struck coins in Mayyāfārikīn about A.H. 612.‖ The richly enamelled bottle above mentioned seems, however, from the characters used in the inscription, not to be of his time, but rather of the end of the thirteenth century. In close proximity to it, we must place the Vapereau bottle, plate XXIX, which, from the style of its frieze broken by recurring medallions, reminds us strongly of many of the lamps.* Likewise the vase with handles, belonging to Tigrane Pasha (plate V), which, from the long attenuated characters of the inscription and the large flat surfaces of blue enamel, seems to belong to the fourteenth century.

Of the large flagon on plate IV, and the beautiful amphora on plate XIII, Mr. Nesbitt says that they have been preserved in the Treasury of St. Stephan's, at Vienna, since the fourteenth century.† We do not know upon what authority he makes this statement; but it is probably correct, as both vessels are entirely representative of the work of the thirteenth century.

The age of the bottle on plate XXV may be estimated with tolerable precision. The inscription (fig. 56) comprises

Fig. 22. *Large Bottle, about* 1300. *In the collection of Dr. Max Strauss, Vienna.* (*One-third the size of the original.*)

indeed a proper name of which the reading is questionable, but the Sultan Malik Nāsir who is mentioned in it, can be no other than the Malik Nāsir Muhammad ibn Kalāwūn; since the decoration on the bottle has so great a resemblance in composition, arrangement, and detail with that of the undeniably early basin of the Musée de Cluny (fig. 1), that the two vessels can hardly have been separated by any considerable interval of time. They seem to be identical in material, and the glass in both has a greenish tone. The filigree ornament of stars, in fig. 3,

* See J. G. Th. Graesse: Die Grüne Gewölbe zu Dresden. Berlin, plate 34, photogr. *a*.

† The inscription runs thus: [Praise to] our Lord, the Sultan, the King, the Wise, the Just, the Warrior for the Faith, the Champion of the Frontiers, the Guardian against Invasion, the God-protected, the Victorious . .

‡ Gerspach in the book already cited, p. 103.

§ The Art Treasures of the United Kingdom: Vitreous Art, p. 6.

‖ Stanley Lane-Poole's Catalogue, IV, 125.

* With regard to the anonymous inscription, see the text to plate XXIX.

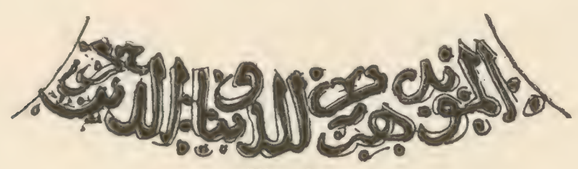
† Art Handbook: Glass, p. 59.

occurs repeatedly on the bottle, in still more delicate style, around the little bird-medallions.

A bottle of unmistakable date is represented in fig. 22, the property of Dr. Max Strauss in Vienna.* The inscription in small round characters, which runs between the medallions, enclosing armorial rosettes (fig. 23), is to be interpreted thus: This was made for the Sultan al-Malik al-Mu'ayyad Hizbar-ad-dunyā-wa-'d-dīn Dā'ūd son of Yūsuf son of 'Umar. Glory to his victory and his [dominion?]. Herr Max van Berchem informs us that this Sultan Malik Muhammad Dā'ūd was the fourth Sultan of a Turkish dynasty, the Rasūlides, which had in the thirteenth century succeeded in winning the throne of Yemen. He reigned in A.H. 696-721 (1297-1321), and was a grandson of 'Umar, by whom the dynasty was founded. The poetical expression —Hizbar-ad-dunyā-wa-'d-din = Lion of the World and the Faith—is a rare combination to form a by-name for a Sultan. In the regular and common forms, the first word of the combination is usually Rukn (Pillar), Nāsir (Helper), Shams (the Sun), Saif (the Sword), or some such epithet, including Asad (which is the ordinary word for Lion). We find the same unusual name upon a coin struck by this prince, on which the legend runs: "The Sultan al-Malik al-Mu'ayyad Hizbar-ad-dīn Dā'ūd, son of al-Malik Muzaffar" (*i.e.*, of Yūsuf).*

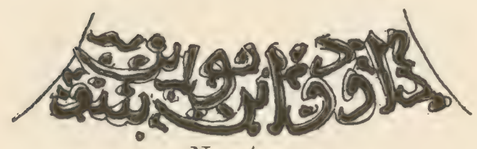
Very interesting is the circumstance that while the inscription on the coin gives the customary designation of Hizbar-ad-dīn, that on the glass vessel gives the full form of Hizbar-ad-dunyā-wa-'d-dīn. By-names composed with ad-dunyā-wa-'d-dīn, were about that time, according to Mr. van Berchem, still a mark of sovereignty.

We lay special stress upon this matter, because the last two words of the inscription are formed in a somewhat unusual manner, and the bottle might on that account be lightly regarded as not genuine. The designer would simply have failed to insert the full title in the spaces between the medallions, if he had not resorted to the method he has chosen of helping himself.† We consider that all possibility of fraud or forgery is entirely excluded in this case. For, to forge an inscription of that kind, in which the name and by-name of a little-known Sultan are correctly given, would be a thing beyond the capability of any imitator, European or Oriental.

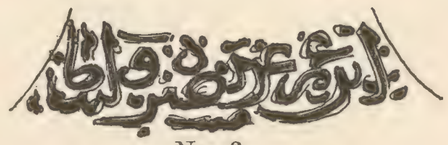


No. 2.

No. 1.



No. 4.



No. 3.

Fig. 23. *Inscription on fig.* 22. (*Full size.*)

Whether there ever was a glass industry in Yemen, we have no means of learning. According to its make and various features of its ornamental decoration, this vessel connects itself with the little lamp of Baibars II, formerly Goupil's, now in the Musée des Arts Décoratifs;‡ and with

* The bottle is 370 mm. in height, of yellowish-brown glass, very transparent, but ill-fined. The inscription in the friezes which surround the belly and the spring of the neck, are done in blue enamel, and repeat over and over again the one word "The Wise." The underlying ground of interlaced ornament is preponderantly enamelled in white, the armorial rosettes white on a red field. In the narrow borders of the frieze which encircles the bottom of the neck, little animals (hares?) are seen running; right and left of the armorial medallions, below the ornamental script, there are running panthers (?); and on the centre, below and above the inscription, there are symmetrical ornamental *motifs*. Immediately under the neck-ring, also immediately above and below the small borders adjacent to the spring of the neck, and in two places of the slim neck itself, there are dainty bands of filigree work—(in our small illustration, this is only marked in the space under the neck-ring). The design of the filigree ornament reminds us of the similar bands encircling the mouth of the large goblet on plate XXXI. The whole design was gilt; the enamelled inscription-frieze and all the plain intervals filled up with gold.

When the bottle came into the possession of Dr. Strauss, its foot was also decorated. On the edge there was a heavy ornament facing upwards, in the style of that seen on the mouth and the foot-rim of the pictorial lamp, fig. 8; and under the place of junction with the body, a simple band; both of these coloured with a paste of red seal-lacqer, and then gilt over it. This paste was capable, without difficulty, of being removed without leaving any trace. It was added at a later time, if not indeed quite recently, by means of cold application, probably to give a richer appearance to the vessel. The "embellishers" of the old piece of art-work—(that it is old the test of the blue enamel has made clear)—have also, with the red paste, and their pretended "gilding in relief," thickened the outlines of the red-white, blue-white, and green-yellow enamelled medallion-flowers, and covered the open intervals around these and the armorial-medallions.

* See the Catalogue of Oriental Coins in the British Museum, Vol. V, p. 123. Confer Quatremère, Sultans Mamlouks, II b, p. 27, and a metal plate in the Louvre, bearing the same by-name.

† We have met with arrangements contrary to rule, in relation to the mode of combining or connecting letters, in a superb Kuran of the end of the thirteenth century, in the Khedivial library. The peculiarities were evidently due to the caprice of the calligrapher.

‡ The framing of the medallions disposed about the handles of this lamp, is so done as to fall with sufficient exactness into the general plan of the filigree ornament.

the goblet of the Ritter von Launa in Prague, plate XXXI; but especially with the blue lamp of the Amīr Arghūn, a copy of which is in the Musée des Arts Décoratifs.* Thus we may conjecture that it was made according to order in Syria, probably in Damascus or Aleppo.

We have already remarked that the group of bottles and of vases with handles, is more various and manifold than that of the lamps, as well in form as in the manner of decoration.

In treating of the lamps adorned with enamel and gold which are known to us—leaving aside the small full-gilt lamp, fig. 20, and the lamp of Arghūn—we have recognised only two types of form, namely the lamp with a foot-stand, and the lamp without it.† Among the bottles and the vases with handles, varieties of shape are much more frequent.

The bottles or flasks may be divided primarily into two classes: the round and the flattened. The former again falls into two groups: those with a high foot-stand, and those with a simple foot-rim. Those with the high foot-stand (usually much hollowed out) have generally a very long and slender neck, which at about two-thirds of its height (as on plate XXIX), and frequently even higher (as in Fig. 22) is, for the purpose of equilibrium, ringed with a necklet or collar which often projects strongly outward. (The particular manner of this formation is shown in the profiles 1 and 2 of Fig. 42.) On the contrary, in the vessels which rest on a low flat support, and which are usually very big-bellied, the neck is somewhat shorter, is narrower at the spring of the throat, and has no collar (fig. 5, and plates VI and XXV). The body of the rounded vessel is always broadest in the lowest third of its height; and from that point it is conically narrowed upwards and downwards, the upper recession being made with a more or less protuberant surface, the lower one hollowed in concave fashion. The only exception to be mentioned here is the Amphora (plate XIII) of the Treasury of St. Stephan's at Vienna, which is provided with a special and peculiar mouth-piece, and has handles; by reason of which it varies from all other rounded vessels, and claims a distinct place for itself.

The flattened vessels, the so-called field-bottles, or as they are styled in England, "pilgrims' bottles"—this last expression being a remarkably apt one, since the vessels in question were generally brought from the Holy Land by pilgrims—are divided into two groups, according to their shape: namely, those with handles and those without handles. Both sorts are footless, but have the base indented, to enable them to stand securely,—this being the only way in which they were intended to be placed. Those without handles are of smaller, or it may even be said, of very small dimensions, as in the instance of the tiny flagon or pilgrim's bottle which belongs to Hakki Bey (fig. 6); and the neck, which is moderately long, and a little swollen just above the point of junction with the body, has a very narrow mouth-orifice. These vessels were probably perfume-bottles, or meant to hold rose-water. (It is generally known that Orientals like to have their drinking water scented.)

Of the pilgrims' bottles with handles, we reproduce on plates IV, IVA, XX, and XXA, two superbly fine pieces. In the large one from St. Stephan's Treasury at Vienna, the formation of the neck is especially remarkable; in the so-called Würzburg vessel in the British Museum, it is the profile or side view which attracts attention. The shape of the bottle ensured for it the greatest measure of capacity, and enabled it to lie most commodiously when it was hung up. The shape was probably also the efficient cause of the manner, unique in its variety, in which the ornamentation of this lordly piece of glasswork is carried out (plate XXI).

Amongst the vessels with handles, there are again two sorts: the double-handled and the single-handled.

On plate V we reproduce the bladder-shaped vase of the first sort, in the possession of Tigrane Pasha in Cairo.* The thick neck opening funnel-wise, appears to characterise the vessel as a flower-vase; while, on the contrary, the single-handled vessel on plate XXX—a small jug in the collection of Baron Alphonse de Rothschild in Paris—seems decidedly to belong to the division of table-glass. This rare piece† has, unlike all the other vessels of the group, a globular body very slightly depressed in its vertical extension, with a broad neck widening like a funnel, which is inwardly of peculiar formation, and displays outwardly a remarkable ornamental design in plastic application. (See the profile 5, fig. 42.)

* See the etching in the Gazette des Beaux Arts, as already cited.

† The Musée National de l'Art Arabe in Cairo comprises a three-handled, globular lamp (Herz Catalogue, No. 7) without that ornament; of which the age is questionable.

* One of similar kind, but somewhat more bigbellied, in the collection of Ch. Schefer in Paris, has been reproduced in chromolithography, but not happily, by Presse d'Avennes in his L'Art Arabe. Marvellously enough, he considered it to be Venetian work and of the seventeenth century!

† Besides the little jug in question, we know of only one single-handled vessel of this group. It is reproduced in the Gazette des Beaux Arts, 2e période, tome XXXII, p. 301, as an illustration of the article by Henri Lavoix on Albert Goupil's collection. This bottle is bladder-shaped, lanky, and without any figured decoration. In the character of the ornament on the neck, it strongly resembles the little jug; but in the net-like expansion of the ornament on the body it reminds us rather of the amphora on plate XIII, save that this ornament is not composed of straight lines, and that it also covers the lower surface of the body. The inscription refers to some person belonging to the court of a prince "an-Nāsir." The attenuated characters of the script indicate, in the opinion of Lavoix, a rather late period.

On the bottles and the vases with handles, there is more variety in the composition of the decorative features, than in the shape of the vessels. In most of them, the ornament consists of horizontal bands which sometimes cover the entire vessel from its broadest part upwards to its mouth. Sometimes again the bands are not quite in contact, and the naked glass ground shows between them. Nevertheless, the effect of design and of colour in bringing out, now the broad part, now the shoulder, now the approach to the neck, now the mouth or the mid-neck, particularly the narrow part of the neck,—lends to the decoration of these vessels an air of great variety. And this is enhanced by the way in which the different friezes are sometimes left running their circular course unbroken, and are sometimes interrupted by ornamental or armorial medallions. If such medallions appear in two contiguous friezes they are always so disposed that the centre of the medallion in one frieze corresponds with the centre of the mid-field in the other; just as it is done on the lamps. But this variety is especially rich, when the decoration consists of detached medallions, cartouches, and complementary fields, as for instance on the large "pilgrim's bottle" of the Treasury of St. Stephan (plate IV and IVA), and particularly on the Würzburg glass vessel in the British Museum (plate XX, XXA, and XXI).

On whatever principle of decoration the ornamental details were arranged, the lower part of the body and the foot remained always uncovered. An exception* is seen in the decoration (very uncertain in other respects) on the lower part of the body of the handled vase on plate V. If the foot should be at all decorated, it is done in the simplest manner with nothing but gold filigree work.† The cause of this mode of distribution is probably to be sought in the circumstance that the Oriental "table" consisted solely of a carpet spread out on the ground, upon which the guests sat down without any other support, or else upon very low seats (the so-called *kursi* which are placed by all the low divans) hardly as high as our stools; the victuals on the "table" thus lying deep beneath the horizon of vision. Such being the relative position of the guests and the viands, it was of course impossible for the eye to take in any ornamental details on the lower part of the protuberant vessels, and for that reason no decoration at all was used upon it, or only some of a careless and formal kind. As however in drinking glasses, and in other table ware, the lower part is found to consist of naked glass, we must conclude that it was intentionally so, for the purpose of allowing the guests to satisfy themselves by inspection that the liquor in the glass was clear.*

* Another exception is the before-mentioned vessel with handles in the Goupil collection.

† See the mention further on of the large bottle in the Spitzer collection. The glass vessel from the Musée des Arts Décoratifs which is reproduced by Champaux, has indeed a high foot or pedestal richly enamelled in colour, but the foot is an addition to it and may come from some fragment of an old lamp, or be wholly modern. We have seen in the Berlin Kunstgewerbe Museum, a lamp-funnel, decorated in the style of plate I, converted into a drinking vessel, by means of a hollowed foot added to it; and there was, two years ago, in the South Kensington Museum, a lamp (No. 2234) which had the inverted convex mouth (?) of some vessel mechanically fastened to it as a foot by means of a ring of copper. The repairers had not been troubled by the fact that the tiny ornamental inscriptions, arranged as oblique bands upon medallions, were reversed in their new position!

GOBLETS AND TUMBLERS.

We group these vessels together, because they are closely related both in shape and in decorative embellishment; and both belong to the class of table-ware.

FIG. 24. *The Goblet of the "Eight Priests." In the Douai Musee.*

The group of drinking glasses is much less numerous than that of the bottles and jugs, but is probably, nevertheless, the most important for the student who would critically review the development in the Muhammadan East of the brilliant art of enamel-painting on glass. For although not a single specimen of such glass is dated, so far as we know, and the inscriptions upon them are either illegible or, if legible, anonymous; still the existence of several of them can be traced back to a remote period, in many instances to the thirteenth century, and in some even to the close of the twelfth.

The one which can be shown to have had the longest existence is the so-called Goblet of the eight Priests, now preserved in the city Museum at Douai (fig. 24). The inscriptions, in round characters, are indeed illegible, but

* The handled vase in the Goupil collection, previously referred to, which is covered with decoration down to the foot-ring, is formed of opaque milky-white glass.

must not be considered, as Gerspach* supposes, merely arbitrary signs. Their illegibility can only have been the result of attrition.

At the beginning of the fourteenth century, this vessel was already in the possession of a lady, Marguerite Mallet, surnamed Baudran. She bequeathed it by her will, with all her other property, as an endowment for the perpetual maintenance of eight priests. Mounted on a simple high metal foot, the goblet has been, since that early period, preserved in a leathern case or box, magnificently cut and embossed with patterns in the style of the thirteenth century (fig. 25). Gerspach's suggestion, that perhaps Guillaume de Dampierre brought the goblet with him on his return

Fig. 25. *Leathern case of the Goblet, fig. 24, Sec. xiii.*

from Egypt in 1251, is therefore not without probability. Many French knights followed St. Louis in the last Crusade.

Of a still more ancient period seems to be the vessel known as the goblet of Charles the Great, which is preserved in the Museum at Chartres.† It has a single inscribed frieze, ending freely in an upward direction; the round characters of which bear a marked analogy with those of the inscription on a celestial globe executed in 1225 for the Sultan Malik Kāmil (Muhammad). The great

* As already cited, p. 105.

† Reproduced by Gerspach, fig. 46, the inscription fig. 47.

age* of the goblet is made evident from the strong and simple style of band-ornament formed by the principal frieze, coupled with the absence of all floral design, and the very modest supply of colours, namely blue and white enamel with gold (whether there may not also be the usual red outlines, is unknown to us).

In fig. 26 we reproduce a small goblet decorated with figures, which assuredly belongs to the thirteenth century. It is mounted with a node of rock crystal upon a high and splendid pedestal of gold, early-Gothic in style, the upper part of which is set with pearls and precious stones.†

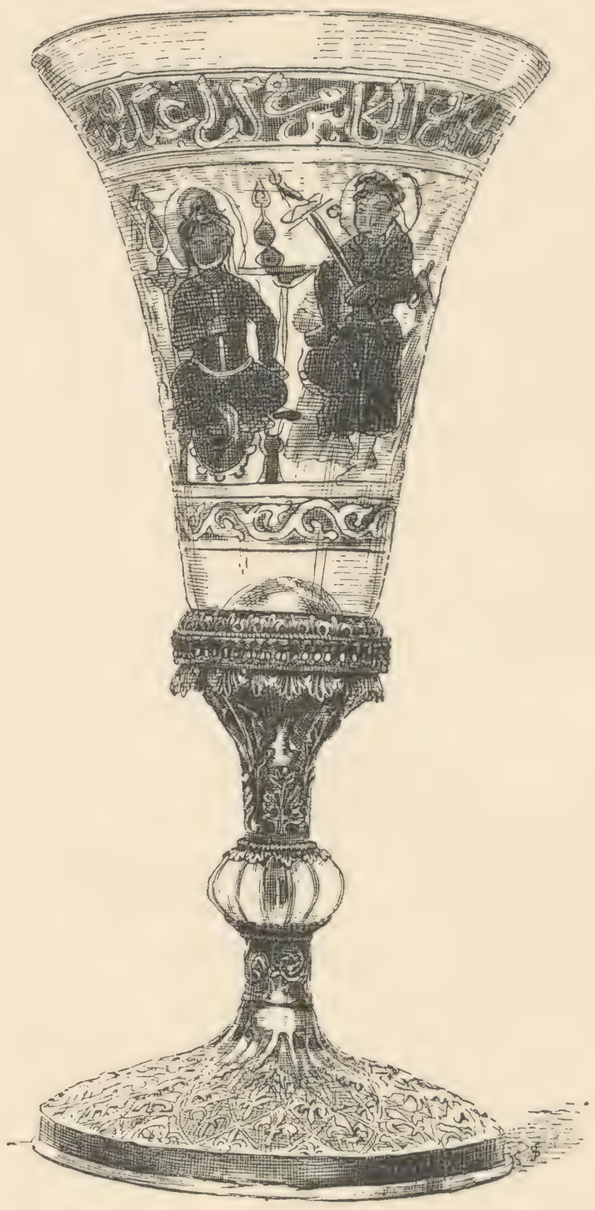


Fig. 26. *Goblet, in private possession.*

This goblet is far more magnificent than the two previously mentioned; but, except in the blue ground of the borders, enamel is very sparingly used upon it; and in the figured

* The tradition from which the goblet takes its name, describes it as a gift from Hārūn ar-Rashīd to Charles the Great, but without any ground whatever. We believe, however, for the reasons assigned above, that the goblet is older than it was thought to be by Henri Lavoix, whose opinion, based upon the script, was, that it belonged to the end of the thirteenth century. See Gerspach.

† This goblet was bought by an unknown collector, at an auction in London in the spring of 1881, for £1600. Our reproduction is taken from a photograph with which Mr. Charles Read of the British Museum was good enough to furnish us.

decoration it is gold which predominates. The ground upon which the figures are placed is left wholly without ornament. The subject of the design is of quite a different character from the hunting, sporting, or musical scenes which appear upon other figured examples of glass-work. It is somewhat in the style of King Chosroes on the celebrated dish in the Paris Bibliothèque Nationale; and represents a figure seated, but with his legs doubled under him, upon a low throne. He is attended by followers, the nearest two on each side of him bearing swords.

A fourth enamelled and gilt goblet,* which also seems to be a work of the thirteenth century, is preserved in the Museum of Silesian Antiquities at Breslau, under No. 4800. It is one of the two goblets known as "Hedwig's Glasses." It was certainly not till the sixteenth century that the name of Hedwig's glass was formally given to it; but there are several reasons for believing that the tradition is not unfounded. The make and shape of the goblet, the manner of its decoration, which is no more than gold filigree ornament,† very slightly outlined round the mouth of the glass and on the lowest part of the mantle, of the same kind as the epaulette (fig. 49) on the lamp reproduced in plate XV—all lend chronological support to the legend which connects the glass with the name of the good princess Hedwig. Born in 1174, she died in 1243 in the nunnery she had founded at Trebnitz, widow of Heinrich, the Duke of Saxony and Poland.

Three of those Hedwig-goblets are thus of very simple kind, yet they have all come to be regarded as precious things. It is evident that they were brought from Syrian harbours to Europe by crusaders or pilgrims on their way home from the Holy Land. They were assuredly not costly works of art, but they were reverenced in the Middle Ages, notwithstanding their simplicity, as precious relics. There was costly work indeed (but scarcely any enamelling) on another goblet already mentioned in an earlier page, namely that which the Emperor Henry dedicated to the Saints, and which was referred to by Pierre Damien, the biographer of St. Odilon, as "pretiosissimum vitreum Alexandrini generis." As we have before remarked, it was the examples of cut-glass which made the foundries of Alexandria famous in antiquity, and such a phrase as *vitreum Alexandrini generis* would still, in the eleventh century, have retained its ancient meaning; as, even then, artistically cut-glass was a noted product of Alexandria.

In the later Middle Ages, when the technique of glass-enamelling had made progress in the Muhammadan East, more richly enamelled goblets were brought to Europe. Amongst these was the one, decorated exclusively with ornamental work, which has been made famous by the ballad on "The Luck of Edenhall," written by Philip Duke of Wharton, when the glass was in the possession of Sir Richard George Musgrave of Edenhall. Like the "Eight Priests" goblet, it is preserved in a handsomely (though simply) worked leathern case, which is however of much later date than the Douai case, as it seems to belong to the end of the fourteenth or the beginning of the fifteenth century.*

Two other goblets, more richly enamelled, with a costly mounting of gold and silver, are preserved in the Grüne Gewölbe at Dresden, one of which we have already mentioned.† The setting of the one is late-Gothic, and is said to bear the mark of an Augsburg goldsmith, with the year 1492 (?). In the setting of the other there is a blending of Renaissance and Gothic forms: it belongs undoubtedly to the sixteenth century. The decoration of both glasses is figured; and on one of the two there are border inscriptions above and below the figures. We have reproduced the upper one in fig. 21. The text of the lower inscription is a simplified repetition of the upper one, and does not include any proper names.

In fig. 27, we reproduce a goblet, 230 mm. high, which is decorated with figures. It is preserved in the (formerly Electoral) Art collections in the Löwenburg at

* Mr. Nesbitt saw it while it was still in the Breslau University Library, and was, so far as we know, the first who described it (in his catalogue of the Slade Collection, 1871) as the goblet of St. Elizabeth of Hungary. Ilg, Friedrich, and others adopted his error. It was first corrected by E. von Czihak, in the "Schlesische Gläser," Breslau, 1891, in which a fine photograph (plate VI) is given of the vessel, with a description (p. 188).

† Czihak, citing a communication by Kalesse in the Zeitschrift für bildende Kunst, 1883, speaks of "slender interlacements painted in red enamel, which at first sight seem to resemble Arabic writing, and are not in any case a development of the scheme of ornament. The form most frequently recurring in it, is like the character ƀ (ta); but there is nothing readable in these figures nor anything to represent a sequence of connected letters." Although we have not seen the goblet itself and know it only through Czihak's reproduction, we venture to assert that those so-called interlacements have nothing to do with the shapes of Arabic letters, but are simply the slight red outlines which accompanied the (now effaced) gold filigree ornament, and which duly played their part in the scheme of decoration, as any one may see who carefully examines in a strong light the places formerly occupied by the gold.

* The glass and its case are reproduced in full size as a coloured plate in the Magna Britannia of Daniel and Samuel Lysons: Cumberland, 1816. The decoration of this vessel reminds us strongly of that on the neck-funnel of the little jug on plate XXX, but only in its design. The scheme of colour is essentially different, even to the endless twining band which on the goblet is enamelled white; there are red, and black, and a dominant blue; but the ornamentation is enamelled, and the ground was gilt. [At least we judge so, from analogy with other examples of old Oriental enamelled and gilt work; for in the reproduction only the white band is margined with yellow (*i.e.*, gold); and the yellow (gold) colour appears in some of the double outlines of the design.] The ornamental *motif* of the leathern case is the vine-leaf; and on the lid it bears the I H S monogram in handsome Gothic letters.

† J. G. Th. Graesse, as already cited, plate 43 *a* and *b*.

Wilhelmshöhe near Cassel. It is made of slightly smoked glass; and in this respect, as well as in its decoration, and in its shape and make, it has a close affinity to the larger (185 mm.) of the two Dresden goblets. On the Löwenburg goblet however the figured decoration represents a music-scene (see plate XXXIII), while on the Dresden goblet it is a fowling-scene, in which water-birds are attacked by bowmen and beaters. The ground of the picture was left plain in both glasses, without the interlaced ornamentation of the other Dresden goblet, which, as we have elsewhere mentioned, is almost exactly like the design on plate XXX, even to its enamelled ground. These goblets are decidedly in close relation, and

Fig. 27. *Goblet in the Löwenburg, near Cassel.*

are derived visibly from one and the same place of origin, not to say the one foundry. They must have been brought from Syria by German pilgrims returning from the Holy Land. Many pilgrimages were made by South Germans in the fifteenth century. Hans Tucher performed one, and has left a description of it in his work published in folio by Hans Schönsperger in Augspurg, in 1482, under the title of "Wallfahrt und Reise in das gelobte Land." (There was an earlier edition in 1479.) The glass with the polo-players, which seems to have come from a different foundry, if not a different place of production, is decidedly less recent, and, from its entire character, not merely from the style of the inscription alone, appears to belong to the fourteenth century.

Another figured goblet, which in its size (170 mm.), shape, and decoration* approximates closely to the Dresden glass with the polo-players, may be adduced here. It was presumably registered in the oldest inventories of the Collections of Industrial Art belonging to the former Electoral Picture Gallery in Cassel, and is still preserved there. The glass was badly shattered and has been put together again with great pains, but the ornamentation on it is of such clumsy workmanship that we do not venture to ascribe it to the same origin as the others. A peculiarity to be noticed in this glass is the treatment of the enamel in the ornamental frieze round the mouth of the vessel. Since we have had occasion to test the "embellishments"† on the bottle belonging to Dr. Max Strauss, which is so precious by reason of its specified date,—the peculiarity we refer to seems all the more remarkable. It is paste-enamel ornament on a paste-enamel ground, the enamel ground everywhere gilt. This gilding in relief produces a very heavy effect, and deprives the glass of its transparency; while, as the gold on the more elevated portions of the surface is rubbed away, leaving the basis of red paint exposed in spots here and there, the clearness of delineation in the ornamental work (still also red in

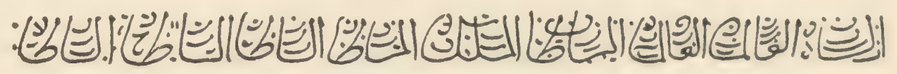


Fig. 28. *Inscription on a Goblet in the Picture Gallery at Cassel.*
(*About two-thirds of the size of the original.*)

places) is quite destroyed. There is likewise a peculiarity in the writing of the inscription which decorates the lower border on the goblet (fig. 28). It is in black characters, containing nothing beyond a frequent repetition of the phrase "The Sultan, the Wise."

The British Museum possesses a goblet, the smallest of all examples of the kind known to us—not quite 110 mm. in height. It is undoubtedly genuine, and charming in its simplicity; adorned with figures of little fishes in various positions (fig. 29). The glass is very transparent, of a delicate honey-colour; the little fishes are slightly gilt, and outlined in red with extreme fineness. This pretty goblet was obtained at Koptos in

* The polo-players are here replaced by mounted falconers, and the mouth-funnel of the vessel is encircled, not by an inscription, but by an ornamental frieze, the ground of which is principally enamelled in blue. Some of the details are in white, red-white, and green-yellow, and some places are covered with a very pasty enamel (?) of red seal-lacquer, to which gilding has been added. The lower band bearing an inscription is painted white from behind, as a background to the characters which are black. In the Dresden goblet it is otherwise: the ground (also painted from behind) is red, while the inscription is gold, as on the lantern in fig. 34

† See the note as to fig. 22.

Upper Egypt, but is, we have no doubt, of the same origin as the other old Oriental enamelled glasses, dating probably from the end of the thirteenth or the beginning of the fourteenth century.*

The goblets which we have hitherto described are all of small or only moderate dimensions. But large and capacious drinking vessels were also not unknown in the Muhammadan East. Specimens of these are to be had in the goblet, 300 mm. in height (plate XXXI), in the collection of the Ritter Adalbert von Launa of Prague; and another, similar to it, 310 mm. in height, in the Bavarian National Museum at Munich.† But it is evident that those great goblets would not be so quickly emptied as the small ones, since provision was made for their greater stability by a flat platter-foot. A slight modification of the form usual in small glasses shows itself in the circumstance that the extension of the mouth-opening was not produced by

Fig. 29. *Little Glass in the British Museum.*
(Four-fifths of the size of the original.)

a concavation of the mantle (the outside of the glass), or by piercing through it like a conical funnel (as with the polo-players' goblet in the Grüne Gewölbe), but by

* Another large and "superb" goblet, mounted on a high pedestal, with figures of leopards chasing gazelles, an armorial device of an eagle three times given, and an inscription of the word "al-'Ālim" frequently repeated—has been described by Henri Lavoix in the Gazette des Beaux Arts, 2e période, Tome XXXII, p. 303, in his article on the Goupil collection.

† In the decoration of this last vessel, only the topmost band of variegated enamel on the Ritter von Launa's glass is replaced by a filigree band without outlines, and the principal frieze under it has not an interrupted row of medallions, but is filled all the way round with figures of sitting musicians (flute and lute-players, and triangle-strikers) and tipplers, on an ornamental ground. The embellishment is otherwise the same in both vessels. The frieze of musicians and tipplers, which is only sparingly enamelled in varied colours, reminds us strongly of the figured fields (Gerzpach, fig. 45) on the salver or basin of Badr ad-dīn az-Zāhiri, formerly in the collection of Charles Schefer in Paris.

bellying out slightly as in the glass on plate XXXI (profile 3, fig. 42) or somewhat more markedly so in the goblet in the Bavarian National Museum.* Otherwise, in both goblets, the mantel rises from its starting-point to the approaches of the mouth-opening, in a vertical direction with a slightly undulating tendency.

From the treatment of the enamel-decoration, we conclude that both those vessels are of the older kind, and belong to the early thirteenth century. The one in the Bavarian Museum—which till the French Revolution was preserved in the castle of Daun or Dhaun, and came, by purchase at an auction towards the end of the last century, into the possession of the Faber family, whence it passed into the Museum by presentation in 1861—is traditionally asserted to have been brought from Damascus by Crusaders. If there be any truth in this tradition, the Crusaders spoken of may have been knights in the host of Frederick Barbarossa.†

In form generally resembling the smaller goblets, but much broader and made of thicker glass, and furnished with a projecting collar, are the two tumblers, of which one, belonging to Madame Edouard André in Paris,‡ is reproduced in fig. 30, and the other appears on plate XXXII, which is in the Art Collections in the Löwenburg at Welhelmshöhe. The shape of the collar, or neck-ring, will be seen in the profile 2, fig. 42; as well as the base. This, which, in the tumbler, fig. 30, is formed quite as is the case with the smaller goblets, is in the goblet on plate XXXII, slightly indented, and has, like the little jug in fig. 42, a foot-ring welded on it.

The inscription on the tumbler of fig. 30 we have not had the means of seeing in its entirety. It is, however, from what we can see on the exposed side, an inscription of dedication. By the characters, and the decoration and make of this splendid piece of glass-work, we are led to assign it to the period which comprises the first thirty years of the fourteenth century. The intertwining Cufic characters of the apparent inscription on the other vessel, which is somewhat smaller, may be merely decorative. Their richly ornamental interlacements, and the less ornate performance of the entire decoration, are a note of the period comprising the last thirty years of the fourteenth century. There is

* A similar slight swelling is seen on the goblet of St. Hedwig in Breslau, which is however almost cylindrical in the mantle.

† The Crusaders never carried their arms successfully as far as Damascus itself, but under the Emperor Frederick Barbarossa, a regular connexion between the Germans and the trading centres of Syria may have been established, as in 1229 Jerusalem was handed over to him, by treaty, for ten years.

‡ It had previously been in the Basilewski collection. It is 280 mm. in height.

a strong affinity to be remarked between the zigzag work of the frieze and medallion borders (above the neck-ring),* and the foliage-patterns, of this vessel, and the corresponding motifs in the decoration of the amphora of St. Stephan's at Vienna, a piece unquestionably of much older date, which is reproduced on plate XIII.

A third vessel of this sort, now in the possession of Baron Alphonse de Rothschild in Paris, was formerly in the Spitzer collection, in the catalogue of which it is reproduced in chromolithography.† It had been previously described by Edouard Garnier in his "Histoire de la Verrerie et de l'Emaillerie, 1868."‡

The scheme of decoration employed on those tumblers and goblets consists mostly of a division into horizontal compartments, with alternating effects of design and colour in the various friezes, and the successive fields and medallions of which these are made up. On the tumblers the

Fig. 30. *Large Tumbler. In the collection of Madame Edouard André, Paris. (About one-third the size of the original.)*

primary divisions had naturally to be determined in connexion with the collar; the subdivision of the decoration followed in due course. With the goblets, there is sometimes no divisional arrangement; the decoration spreads out without compartments, as in the case of "the Luck of Edenhall" or the large goblet in the Grüne Gewölbe. But in the drinking-glasses, it never covers the whole surface of the vessel (the little goblet with the fish-figures in the British Museum, fig. 29, excepted). The part of the margin which is touched by the lips is left bare, as well as the lowest part of the mantle. This is also the case with the tumbler, fig. 30. In some cases, even the whole of the margin is decorated, but only with delicate filigree work not in relief; for instance, St. Hedwig's goblet at Breslau, and the big goblet on plate XXXI (as well as that in the Bavarian National Museum). In all these instances, some ornamentation of kindred character is repeated lower down; but in every case the decoration of the mantle is loose and uncertain, so that a good deal of the ground is left uncovered.* The decoration of all drinking-glasses is much less opaque, and much more broken by naked spaces, than that of other vessels; the difference being undoubtedly based upon the uses which the various vessels were intended to serve.

Of tumblers, we may conclude, from their relatively great size, that the intention was to use them as receptacles for sweet things.

PLATES AND BASINS.

This is the least numerous group among the old Oriental enamelled and gilt glass vessels that are known to us. By virtue, however, of several magnificent specimens, it is brilliantly representative of the table-glass of the Muhammadan East in the later Middle Ages.

This group comprises deep plates or basins, and flat ones on a high pedestal; likewise footless and high-footed bowls, these latter having covers or lids.

We have already mentioned, and illustrated in figs.

* This zigzag work is likewise seen on the footed salver of Badr-ad-dīn az-Zāhiri, mentioned on an earlier page.

† Collection Spitzer: Verreries, plate II, fig. 7.

‡ In his description of the old Oriental gilt and enamelled vessels in the Spitzer collection, Garnier makes the following remark: "One of the principal pieces of this interesting series is an immense goblet, on which yellow and red enamel predominate." [Nothing more now remains of the yellow, than we find on the other glasses of the group bearing variegated enamel, that is, very little. Of the red there is only too much, and it is applied and gilt in the same way as on the goblet of the Cassel Gallery.] "The mantle is at the middle of its height dominated by a large Cufic inscription of rich polychromatic interlaced ornament with fantastical endings in zoomorphic heads." [The inscription, however, is not in Cufic but in round characters.] He goes on to say that "we see a heraldic lion painted red." [The lion is blue!] "The same lion is also found on a big long-necked bottle of blue glass. . . ." [The bottle is reproduced by Gerspach in his fig. 52.] "These two pieces are, the one for its extraordinary size" [It is really not larger than the two tumblers above described], "the other by reason of its blue colour" [It is simply the deep ultramarine-blue of all pieces of dark blue Oriental glass] "quite unique examples, nothing analogous to which can be found in any other Museum or collection. Yet they are even more distinguished by the perfection of their ornament, and the richness of their enamelling and gilding, than by their inestimable rarity; and we may place them in the front rank amongst the finest productions of the glass-industry of all ages." The description and the appreciation, as may be observed, are inexact in many points.

* This applies also to the little goblet with the fishes, in the British Museum (fig. 29), in which the ornamentation extends over the entire mantle, but is distributed very unevenly.

1, 2, and 3, the deep plate with an inscription apparently including the titles of one of the Malik 'Adil princes who ruled in Egypt between 1279 and 1296.

Another deep plate, of great size, and quite similar in profile to the preceding, has been acquired in Damietta for the British Museum. The mass is greenish in tone; rows of filigree-ornament are lightly drawn around the edges; and a gigantic blue inscription, which covers the whole lateral surface, is overlaid on a ground of large white-enamelled interlacements, with foliate ornament in red and green. The flat surface of the plate is decorated with a simple but massive wreath of blue, red, and green enamelled leaves and filigree work. The gilding has been totally rubbed away. The round letters of the inscription, colossal in height and very lanky, are grouped with their heads outwards round the flat surface of the plate, and coloured with unusual pastiness. The forms of the characters, the arrangement, and the heavy fashion of the entire work, enable us to conclude that the plate can hardly be earlier than the second half of the fourteenth century. In any case it seems to be later than the deep plate of the Musée de Cluny, which it resembles both in material and in shape.

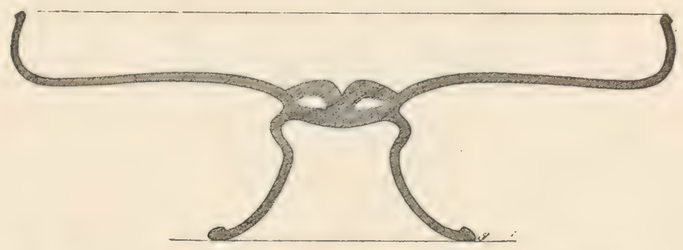


Fig. 31. *Profile of a Basin on a high stand, in the Musée de Cluny.*
(*One-fourth the size of the original.*)

Of flat plates on a high stand, we have already mentioned an instance in the flat basin of the Musée de Cluny (reproduced by Gerspach in figs. 64 and 65 of his "L'Art de la Verrerie"), which is described by Labarte and others as of Byzantine origin, and by Gerspach and others as Venetian. We give here in fig. 31, the exact profile of the vessel, and have only to add to our former description, that the upright rim is painted on the outside, and the decoration of the foot, resembling in motif that of the basin itself, reaches from the bottom to a place beneath the knot of attachment to the body.

Whether the plate with the ensigned margin, fig. 4, has also a high stand, we do not know; being acquainted with that superb piece of work only through a photograph.* The medallion-designs of gazelles worried by lions and leopards give the decoration a distinctly Persian aspect,* and the plate seems, from its make, to be of the early part of the fourteenth century.

Of footless basins, an instance has been already mentioned in our note on the yellow ball belonging to a lamp-chain (fig. 16); the instance in question being also remarkable for its orange-yellow tint. It is a small drinking-bowl in the British Museum, roundly hollowed out, and very simply decorated. The inside of the vessel, just below the rim, is encircled by an ornamental band outlined in red, and at the bottom of the bowl, in the centre, enamelled in various colours, a winged figure is kneeling, with a bottle in one hand and a goblet in the other. The character of this figure differs very markedly from the other figured representations found upon enamelled Oriental glass and reminds us strongly of the winged figures found on old Persian carpets. This vessel, and probably also the yellow ball of the lamp-chain, seem to have had their origin in a different region from the other pieces of gilt and enamelled glass, perhaps in or near the Caucasus.†

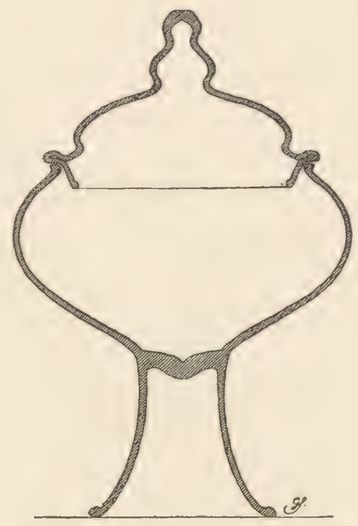


Fig. 32. *Profile of a high-footed Bowl with lid.*
(*About one-fourth of the size of the original.*)

Of the high-footed bowls (fig. 32)—all originally made to be covered with lids, as the shape of the edges indicates—no perfect example is extant.

The costly bowl of Badr-ad-dīn az-Zāhiri, already frequently mentioned, and reproduced by Gerspach in fig. 44; and the one which recently passed from R. Zschille's

* Oriental faience-plates with ensigned margins are usually without a pedestal.

* Precisely similar medallions adorn the lamp with undecorated foot, which is reproduced in the "Collection Spitzer," p. 90; as to the date of which we receive no hint from its inscription, consisting of no more than the title "the Wise." There is however in the disposition of its ornament something that reminds us of two lamps of the time of Baibars II, namely the blue one on plate XXXVIII, and the one in the Musée des Arts Décoratifs which formerly belonged to Albert Goupil.

† Amongst the glass specimens found by Alschewsky in the Caucasus, and now in the Ermitage at St. Petersburg, there is a smelling-bottle of similar yellow glass, entirely without enamel-decoration, so far as we know; but another, which is of ruby-red glass, has the edge of the mouth enamelled in white.

collection into the possession of Herr Franz Sarre of Berlin —both have their lids; the one in the British Museum (Slade Bequest, No. 335) has lost its foot; and Captain Myers is in possession of the lid only of a similar bowl.* This seems to have formed part of a vessel of more modern date (Sec. XIV ?) and is adorned with a blue-enamelled frieze of written characters, round and slender, three interesting armorial-medallions breaking the continuity of the inscription. These medallions (fig. 33) represent a golden writing-tablet in a field which is enamelled of a yellowish flesh-colour.† The upper and lower compartments of the medallion are red.

The lidded bowl in the British Museum, which, to judge from the slightly undulant form of the lower part of the body, seems to have had a similar ribbed foot to that of Badr-ad-dīn az-Zāhiri—may possibly be the oldest example of the group. It is perhaps a work of the first half of the thirteenth century. There is a fairly sufficient richness in the embellishment, although it is very sparingly enamelled, apart from the red outlines of the gilt design. There is around the broad part of the vessel, a frieze comprising eight fields edged with blue bands. In those fields some remarkable figures are designed, of griffins and sphinxes with ornamented bodies, in the manner of

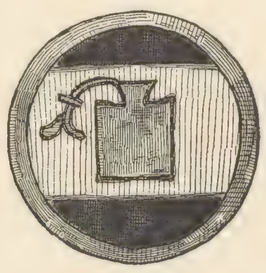


Fig. 33.

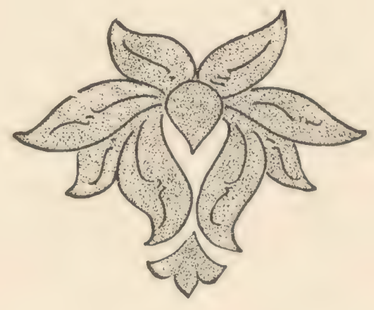
fig. 64 from the bottle belonging to M. Vapereau in Paris, but apparently older in style. Whether these fantastic winged creatures represent Al-borak, on whose back the prophet was borne to the Seventh Heaven; or the fabulous bird 'Anka of the Muhammadan Paradise, that animal which had the legs of a stag, the tail of a tiger, and the face of a woman, and which the superstitious Arabs endowed with wings, and so much strength that it could soar aloft with an elephant as easily as an eagle could carry away a mouse—we know not. These fanciful figures appear however frequently enough in Perso-Arab decorations, particularly in wood-carvings and metal-work.*

The decoration of this lidded and lofty-footed bowl is based on a division into horizontal compartments. A broad frieze, broken by medallions, encircles the lid, and another surrounds the broad part of the vessel. On the bowl of Badr-ad-dīn az Zāhiri, corresponding friezes are found, besides which slight bands of filigree encircling the edge, and in three places the foot of the vessel; while on the lower part of the body (—which in the British Museum lidded bowl is naked) there are three ornamental medallions in variegated enamel. The medallions alternate with the same number of ornamental motifs symmetrically disposed, but without any exact boundaries, in the style of those on the lower part of the mantle of the large goblet on plate XXXI.

The deep plates and flat basins are divided into concentrical compartments, and within these compartments, the decoration radiates, so that the medallions with animal figures (fig. 4) appear to bend outwardly, and the inscriptions (fig. 1; as well as the large inscription of the deep plate in the British Museum) seem to turn inwardly.

Basins on a lofty stand were used as fruit-dishes; those which had lids and a high foot served to hold sweet things.

Beautiful vases for sweets were used as far back as the time of the story-teller Harīri (born in 1054 at Basra, where he died in 1122), but we do not know how they were made. In the eighteenth station of his popular Makāmāt, he relates† that Abu Zaid, the adventurous poet-hero of the work, on the way with his companions from Syria to Baghdād, received from a rich merchant in Sinjar an invitation to a wedding-feast, which he accepted. A principal portion of the banquet consisted of the sweets which were brought on by the merchant in a glass goblet. The goblet seemed as though it were of condensed air, or formed of powdered sunshine, or fashioned from the light of the firmament, or made of peelings from a white pearl. Further on, Abu Zaid singularly calls the glass a Cheater.



* A footed bowl (the lid missing) was exhibited not long ago in the German Museum at Nürnberg, and has been reproduced by Essenwein in his "Kunst und kunstgewerbliche Denkmale des Germanischen Museums," on plate XV, as "an Oriental vessel (1230-1260) Egyptian work"—greatest diameter, 260 mm. It is designated by Mr. Lane Poole, fig. 94, as "Vase of Sultan Baibars II." In our own judgment, formed after a thorough and careful examination of the original, this bowl does not belong to the class of old Oriental glass-work.

† It was probably intended to be white, but the tint was altered by the action of the fire.

* They are also found in the decoration of the ensigned border of the plate belonging to Baron Lionel Rothschild (fig. 4).

† We are indebted for this piece of information to Herr F. Bayer, of the K. K. Handels-Museum in Vienna.

A rare piece of glass-work, entirely outside of all the groups, is the lantern illustrated in fig. 34, which is in the collection of Baron Alphonse de Rothschild in Paris.

The shape, of which we give the profile under No. 1 of fig. 42, is an exact approximation to that of metal lanterns. Even the straight-lined geometrical pattern of interlacements, which here forms the chief motif in the ornament of the mantle (or body) is in itself far more suited to the technique of engraving than to that of the glass-painter. Ornamentation of that kind is, so far as we know, met with in only two other examples of old Oriental gilt and enamelled glass-work. These are the amphora of St. Stephan's Treasury in Vienna, plate XIII, and the mosque-lamp belonging to Mr. Charles Mannheim in Paris, fig. 10. This glass, however, derives its resemblance to

Fig. 34. *Glass Lantern. In the collection of Baron Alphonse de Rothschild, Paris.* (*About one-half the size of the original.*)

a metal lantern, especially from the way in which the enamelling and gilding of the decoration is treated.

With the exception of the raised rim, of the narrow mantle-edge immediately contiguous, and of the inscription-frieze which is painted red from behind, the whole vessel is completely covered with enamel and gold, in such wise that the material—glass—is belied by its decoration. The anonymous inscription in gold (fig. 35) runs as follows: "Glory to our Lord the King, the Wise, the Just, the Warrior, the Watcher in advance, the Maintainer of the borders, the Assisted of God, the Mighty, the Victorious." There is a double repetition of this inscription from the word "King" to the word "Victorious," and besides these, a single repetition of the two words, "The King, the Wise." It gives us no aid towards forming a conclusion as to the age of the vessel, not even through the fashion of the round-letter script. This kind of extremely thin characters, lightly and rapidly written without outlines, is met with in the fourteenth as well as the fifteenth century—it is likewise to be seen, as we have said already, in the lower inscription-frieze of the Polo-players' goblet in the Grüne Gewölbe—that inscription being also painted red from the inside. But the heaviness of the make, and especially the thick application of the enamel, lead us to judge that the lantern is a specimen of glass-industry of the period comprising the end of the fourteenth and the beginning of the fifteenth century.

In the scheme of colour, white, blue, red, and green

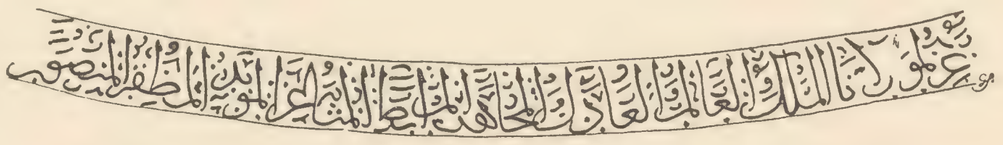


Fig. 35. *Part of the Inscription of fig.* 34. (*Half the size of the original.*)

enamel are comprised, the blue dominating. White is but sparingly used, being limited to the smallest fields grouped around the eight-pointed middle star of the principal figure in the geometrical interlacements, and to the endless band which is enamelled in the ornament on the upper surface (fig. 36). The upper band of this ornament, and a part of

Fig. 36. *Detail of fig.* 34. (*One-half the size of the original.*)

the five-pointed star in the interlaced work on the mantle, are red; the rest of the five-pointed star being green. Everything else is enamelled in blue.

The green enamel has run soft and is of very unequal thickness, the red is proportionate, the blue and white unusually thick, laid on in the manner of relief.

The vessel is 220 mm. in height, 195 mm. in its lower diameter; it has been somewhat deformed by the fire, and on one side is slightly pressed back.

We have, in the course of our disquisition on the Syrian origin of most of the old Oriental examples of gilt and enamelled glass, expressed a belief that, after the great blow inflicted by Timūr upon Damascus, the art of enamelling glass perished completely in the Muhammadan East as a result of the continual state of warfare during the fifteenth century, by which unhappy Syria was wasted and dispeopled.

It is true, as every one knows, that von Gumpenberg in 1449, and Felix Faber in 1483, make mention of glass-manufacture as still practised in Al-Khalli (or Hebron). But, we must repeat, hardly half a dozen dateable examples have come down to us, of gilt and enamelled mosque-lamps of the time which followed the year 1402. Very fairly, therefore, Alfred von Kremer conjectures that the mosque-lamps bearing inscriptions, were imported from 'Irāk; but this does not increase the number of the lamps known to us. The words of that eminent Orientalist, in his "Culturgeschichte des Orients unter den Chalifen" (Wien, 1877, Bd. II, p. 282) run as follows: "In 'Irāk were also manufactured those beautiful glass-lamps, decorated with inscriptions, which the Moslems used to hang in their mosques, most of them white, with blue ornamentation." Here he quotes as his authority Ibn Jubair.* But that learned Arab from Spain, in the passage which is cited by Kremer, is making reference only to five windows, or properly light-openings, which were closed with 'Irāki glass of beautiful workmanship. They are part of the subject of his description of the Mosque at Mecca which he visited in the month of Jumada, A.H. 579 (*i.e.*, September, 1183). How Kremer discovered any allusion to inscriptions in that passage, is incomprehensible; for the word *naksh* to which the epithet *beautiful* is attached by Kremer must here, according to Herr Max van Berschem, to whom we are indebted for the communication and the verbal explanation of the passage, be represented only by the general phrase "workmanship." It can be used indeed in the sense of "inlaying inscriptions," but this is not its special meaning. In any case, the thing referred to by Ibn Jubair is panes or plates of glass, and not vessels of glass. Besides, any one who has dealt familiarly with the gilt and enamelled ornamentation of the particular glasswork in which we are interested, will certainly admit that it would be utterly out of place in a window frame, since it is not in the full light that its ornamental beauty is best perceived, but only in a low side-light. In short, the quotation from Ibn Jubair, on which Kremer relies, contains nothing whatever definite with regard to any particular kind of glass vessels produced in 'Irāk. Moreover, the characters used in the inscriptions upon all the glass lamps known to us, are decidedly Egypto-Syrian.

Muhammadan glass-industry must surely have been flourishing in Mesopotamia at a very early period. Kremer mentions (p. 281) that Harawi (in Seligmann's edition, p. 24) compares the diamond to the crystal glass of Baghdad. Of course, Oriental similitudes must not always be taken literally, but after all allowances, we must at least hold that the Baghdad glass was remarkable for fineness and clearness.

We read further on in Kremer (pp. 281, 282): "The industrial art-craftsmen promptly learned the use of this material for the manufacture of costly articles. Various sorts of glass were known. As far back as the second century of the Hijra, they understood how to prepare enamelled glass and molten glass (*talwihat*) as well as glass showers (suyūlu z-zajāj) in which variegated masses of glass were combined. A learned chemist is named, who was an expert manipulator in this art, and wrote special dissertations on the subject. He practised experiments with the object of making false pearls out of glass, and one of his treatises is devoted to this matter.* Drawn glass was also manufactured, and costly vessels made from it. The more splendid pieces, prepared for the palaces of the rich and the great, vases of glass (*katramiz billaur*) of smelted masses (*mīnā*)—must have been extremely costly. Amongst those which are named are vessels of molten glass with gold setting (al-minā al-mujra bi z zahab), vessels of drawn glass, and of Baghdād glass. The learned Makrizi tells us of a wine-goblet made of crystal, which had come from the treasury of the Fatimite Sultans, and was sold for no less that 360 dinars (3600 francs) . . ."†

It is not always clear to us what Kremer precisely means by his various designations; and we think it very likely that the original expressions were not always used in an exact technical sense by the Arabic authors from whom, in his astonishingly wide reading, that scholar derived his somewhat vague general terms. So far as we have certain knowledge, the Arabic expression "fluid glass" had a general sense, excluding rock-crystal (ballaur or billaur, probably a corruption of *βηρύλλος*) and other transparent stones—these being non-fluid glass.

But even if we accept all the terms used in Kremer's statement as comprehensible and as the proper expressions of the craftsmen with whom he is dealing,—still one question remains to be answered, which is, how long did the production of costly glass continue to flourish in Mesopotamia?

* Ibn Jubair, ed. Wright, p. 81.

* "Ifhrak (*sic*) ibn Nosair, Fihrist 360.

† Makrizi, Khitat, I, 414.

It has already been said above, that amongst all the dateable mosque-lamps adorned with gold and enamel,—and glass-work in general,—with which we are acquainted, hardly half a dozen can be found, assignable to the period following 1402. And, as upon all these, the inscriptions are similar to those on their elder sisters, they must be assumed to be Syr'an, not examples of 'Irāki glass. Mr. Nesbitt, in his Handbook "Glass", pp. 59-60, speaks of two vessels, not otherwise known to us,* one of which he considered to be Persian, and distinctly later than the fourteenth century. It might therefore be held to have originated in Persian 'Irāk; and its date may unquestionably be regarded as more recent than 1402.

Now it is stated by Chardin,† (who, according to Nesbitt, p. 61, was in Persia in 1664-1667,) among other observations on the art of Glassmaking in Persia, that—"Moreover, the art of glassmaking was first introduced into Persia some eighty years ago. A needy and greedy Italian taught the practice in Shiraz for 50 dollars. But if I had not been well informed on the point, I should have supposed that the Persians were indebted to the Portuguese for their knowledge of this noble and useful art."

Why to the Portuguese? Because at that time, the noble and useful art of glass-making had manifestly long been extinct in the neighbouring land of Mesopotamia. The turbulent Portuguese seamen had, after the circumnavigation of Africa, made their way to the Persian Gulf, but Chardin should never have taken them to be the teachers of the Persians.

As a matter of fact, we obtain from the travellers of the fifteenth and sixteenth centuries, only some scanty notices of Oriental glass, and these refer exclusively to Syria. There, it would seem, the fabrication of glass had never wholly ceased, although the art of executing gilt and enamelled work was dead; and the principal articles of production were the rings and bracelets made of coloured glass, so dear to Eastern women, especially those of Syria; and also glasses for domestic purposes, which are described by Gumpenberg as "pretty", but are otherwise unknown to us. Dawson Borer, in the description of his Journey from Naples to Jerusalem in 1845‡ speaks also of lamps made there, which were imported into Egypt and other regions, for the decoration of mosques and houses. But as to this matter we are quite ignorant, and know neither how the lamps were made, nor whether they had any artistic value.

In fig. 37 we reproduce a vessel, made of very thick glass, greenish in tint, with a sort of cloudy milkiness, and badly clarified, which is of relatively modern origin. It comes apparently from Nabi Yahya near Damascus, and has considerable artistic value.

It was acquired in 1895 by the "Ferdinandeum" Landes-Museum in Innsbruck, and is a vase 252 mm. in height; round and full-bellied, with a strong welded ring-

Fig. 37. *A Vase, in the Tiroler Landesmuseum Ferdinandeum, at Innsbruck.* (*About three-fifths the size of the original.*)

foot. The neck is short, thick, and nearly cylindrical, slightly in-bowed, and springs, without a break in the outline, in a graceful concave sweep from the shoulder of the vessel. The profile of the vase is elegant in its upper proportions, but somewhat crushed in the lower part, in which it has been a little deformed by the fire.

This vase was bought for about 25 florins (out of the fund left by Johann von Wieser, Statthaltereirath) from a Tyrolese stone-mason who had been in Syria, and had obtained it in the place near Damascus mentioned above.

The decoration of the vessel is remarkable.

* A long-necked bottle, adorned with inscriptions in gold on a blue ground, and figures of dancing-girls enamelled in various colours (recently in the possession of the Princess Eleonora Corsini); and an elegant vase, about a foot in height, made of blue glass, enamelled with inscriptions, birds, and other ornaments. The latter has a beautiful silver mounting of the fifteenth century, with German inscriptions, and seems to the author not much earlier in date than the mounting. Hence he considered the bottle to be decidedly more recent than the fourteenth century, and probably Persian.

† Voyages de M. le Chevalier Chardin en Perse et autres lieux, tom. IV, p. 257.

‡ Dawson Borer: Journey from Naples to Jerusalem 1845, p. 454, cited by Nesbitt in his catalogue of the Slade collection.

The ground of the design is slightly sunken all over, with tolerable equality in the depression; and seems to have been filled up with a light yellow mass (enamel?) in the remains of which gold atoms can be seen glittering. Whether the hollowing of the ground was effected by means of the wheel or of an acid, it is difficult to ascertain, because of the bubbles in the material, and the present condition of the vessel.

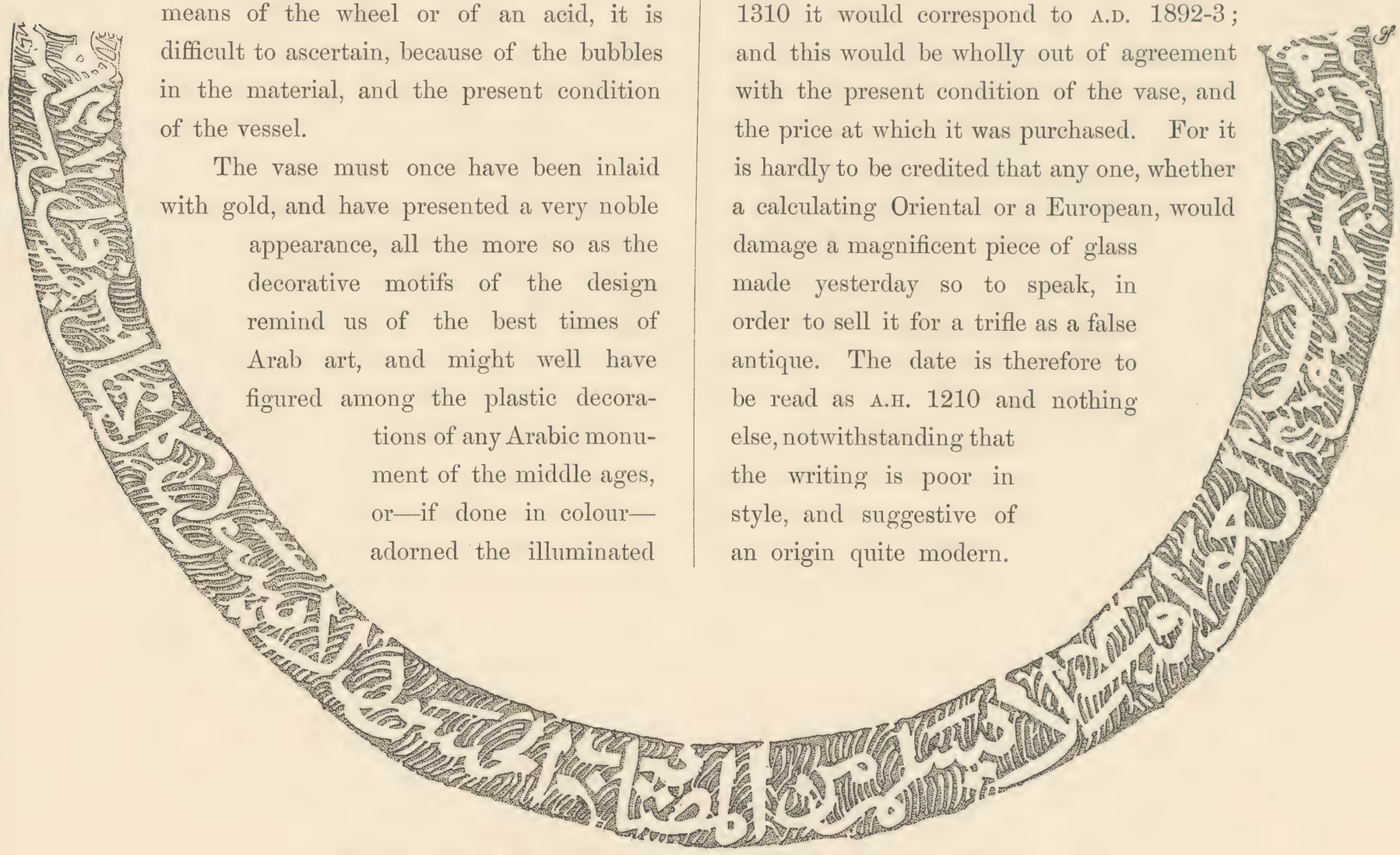


Fig. 38. *Inscription on the vase in fig.* 37. (*Four-fifths the size of the original.*)

The vase must once have been inlaid with gold, and have presented a very noble appearance, all the more so as the decorative motifs of the design remind us of the best times of Arab art, and might well have figured among the plastic decorations of any Arabic monument of the middle ages, or—if done in colour—adorned the illuminated Kuran of some Mameluke Sultan. But the round letters of the inscriptions which in several places decorate the vase, are much more recent-looking; and the inscription on the shoulder (fig. 38), which consists of wise saws, closes with numerals unquestionably representing the comparatively modern date of A.H. 1210 (1795-6).

The words of this inscription are "He who does not count consequences, does not escape calamities. The envious man will not be lord. Every condition has an end. Year 1210." The numeral 2 is here written in such wise that it might probably be read as 3, but if the date were 1310 it would correspond to A.D. 1892-3; and this would be wholly out of agreement with the present condition of the vase, and the price at which it was purchased. For it is hardly to be credited that any one, whether a calculating Oriental or a European, would damage a magnificent piece of glass made yesterday so to speak, in order to sell it for a trifle as a false antique. The date is therefore to be read as A.H. 1210 and nothing else, notwithstanding that the writing is poor in style, and suggestive of an origin quite modern.

Fig. 39. *Inscription on the Vase in fig.* 37. (*Three-fourths of the original size.*)

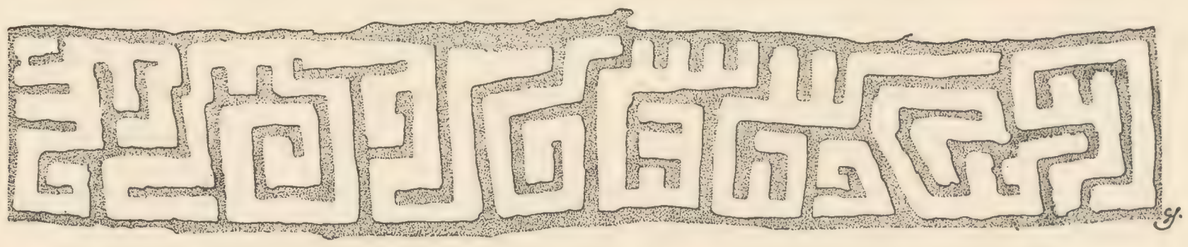


Fig. 40.

The inscription on the five cartouches (fig. 39) and that on the ring-foot contain an identical text, which is as follows:—*He who is patient is strong and he who* . . The remainder is questionable, and moreover unfinished.

The inscription on the neck, in the so-called square Cufic character (fig. 40) may be regarded as one of the

decorative motifs composed of letter-forms without any intended significance, such as we often find in the lapidar mosaics of the Arabs.

In fig. 41 we reproduce one of the ornamental cartouches of the principal frieze encircling the broad part of the vase.

Fig. 41. *A detail of fig.* 37. (*Two-thirds the size of the original.*)

THE TECHNIQUE OF OLD ORIENTAL ENAMELLED GLASS.

As we give in the sequel, the report of Professor Friedrich Linke on his chemical analysis of our sherd of mosque-lamp glass, we will here limit ourselves to a description of the technical methods used in the process of decorative design.

That the glass-blowers who produced the particular kind of glass in which we are interested, were men of taste and real lovers of their art; that, amongst other things, they possessed a knowledge that the beginning of the vitreous mass was the small knob, so called, and that they must have had in use many more instruments than the monk Theophilus was acquainted with;*—is placed beyond doubt by the shapes and the sometimes enormous dimensions of the vessels which they made. But it is no less certain,—as shown by the preparation of the material for those vessels, its want of purity, its defective "fining," and other things,—that the preliminary labours and the actual smelting of the vitreous masses, were carried out in the most primitive and imperfect way; somewhat, indeed, as the art is now practised in the East.

The glass vessels thus produced had no actual artistic value until they had passed through the hands of the decorator—the enameller.

He painted the decoration first in gold. That is, he drew the outlines, apparently with a wooden, or more probably, a reed-pen, in gold rubbed on pretty thickly—identical, in fact, with our present shell gold. Then, with gold rubbed on in a fluid state, he painted the design on the necessary places, filling in the spaces between the outlines, but leaving still bare the parts which were to receive the enamel. This process is visible, as a rule, on the inside of the vessels.

The gold must sometimes have been rubbed on in an extraordinarily thin state of fluidity, since it entered even into the fine channels, as fine as a hair, which lay under the setting of the handles.*

Then the gold design—which must usually have been composed when it was painted, since it takes account of all accidental circumstances, such as the often very unequal arrangement of the handles—was burnt in; and it was only after this was done that the proper enamel design, red in colour, was executed. This was drawn with a pen, as we see from the strokiness of its character. (Observe the details of the photographic plates.) That the design in gold was actually carried out in its completeness, in the first instance, before the design in red, we may readily perceive by looking at the decoration from behind, in every piece of old Oriental gilt and enamelled glass. Even when the gilding has been quite effaced by attrition, there are still visible under the red outlines some traces of the gold, proving that the red must have been of later application. And that the design in gold was burnt in, before the red, we may conclude from the circumstance that on many pieces of glass, the red outlines are but carelessly drawn, sometimes by conjecture only, over the gold lines (figs. 3, 44, 48, 49, and 51). If the gold delineation had been still clear, the enameller would have followed it more carefully, but it had disappeared through the action of the fire, either because the gold had been applied too thinly, the fluid retaining too little of the metal; or else because it had been treated too fiercely and had burnt away.

When the design in red was prepared, the proper enamel-painting took place. The enamel was superposed so thickly, and applied in such a way that, on all the glass of which we are treating, there is a certain interval left bare between the spots of colour and the red outlines, evidently with a purpose, so that, in case the enamel ran during the process of burning, it might not overflow the outlines, and so disfigure the picture. In the enamelling of flower-shapes, this space is sometimes very broad, gaining in breadth gradually from the base to the top of the petal, so that it helps to model the form of the leaf.

* Concerning the technical knowledge of glassmakers in the Middle Ages, see C. Friedrich's book, Introduction I.

* That the matter with which those channels, in our lamp-fragment, were filled, was not the result of a mere smudge, we have convinced ourselves by subjecting the fragment to a heat of about 500° C. The smudge burnt away without leaving a trace, the atoms of gold remained. It may be remarked, by the way, that under such heat all the enamels bubbled up. At the cherry-red glow (about 900° C.) the gold itself burned and disappeared. These tests were performed by Director B. Kadlec in Count Harrach's glass-foundry in Neuwelt.

The expression of the flower's growth was closely regarded in the manner in which the drawing and colouring were done, and this gives to the floral decorations on the old glass-work, in spite of the most extravagant stylism, a particularly natural grace and charm. The enamels are densely and harmoniously grouped around the eye or heart of the flower, and if the various leaves or petals are expressed by means of double or treble tints (—to go beyond that number is extremely rare),* the innermost spot of colour is usually the smallest, and is succeeded, as the painter approached the tip of the petal or leaf, by a gradual expansion of the tint in proportion to the shape and size of the leaf. The colour-combinations made use of are the following: the innermost spot of colour† is always the clearest, and in blue and red leaves is without exception white, in green leaves yellow. Sometimes, in red and blue leaves thus flecked with white, there are intermediate tones of clear red and light blue; in green leaves, it is greenish-yellow.

Besides the colours mentioned above, the Oriental enameller knew only of black-brown in various shades, some of which were evidently the result of chance, and some were modifications produced by mixture with white or red. The tree-stems in plates IV and XVI are expressed in this way. The plain black-brown is used exclusively in figured decorations and in armorial symbols.‡

It is only by chance that the enamels undergo disturbance inside the outlines, and plainly by the running of the material at the time of burning-in. There was never any expectation that the colours would flow and mingle together. The enamel drawn on in the form of paste—as we have elsewhere mentioned—was never left without the corresponding broad frame-lines in gold, so that its chromatic effect should be maintained upon any incidental ground whatever. Most frequently the whole fields were full-gilt, in which the flowers or ornaments were enamelled. The mode of colour-treatment is summed up briefly in these formulæ: Coloured decoration and gold ground; gold decoration and bare glass ground.

The principle of Decoration employed upon these examples of glass-work is, in fact, nothing else but a perpetual alternation of full-gilt fields with enamel painting, and variegated fields with gold designs, these being either outlined in enamel, whether carefully or negligently, or not outlined at all. It is an exceptional case when the ground of the variegated designs is coloured; and then it is only painted on the back of the glass in thin tints.*

The burning-in of the enamels seems to have been effected by a single operation. The green appears often to have run flat, as it is indeed the most easily liquefied. Often the various enamels lose their colour and become baked, which indicates that their preparation, and the provision made for the success of the work, were of the most primitive kind.

And yet the decorative effect, even of the most clumsily executed pieces, is very striking, because of the fact that in these decorations there is manifest a continuous tendency towards harmonious contrasts in drawing

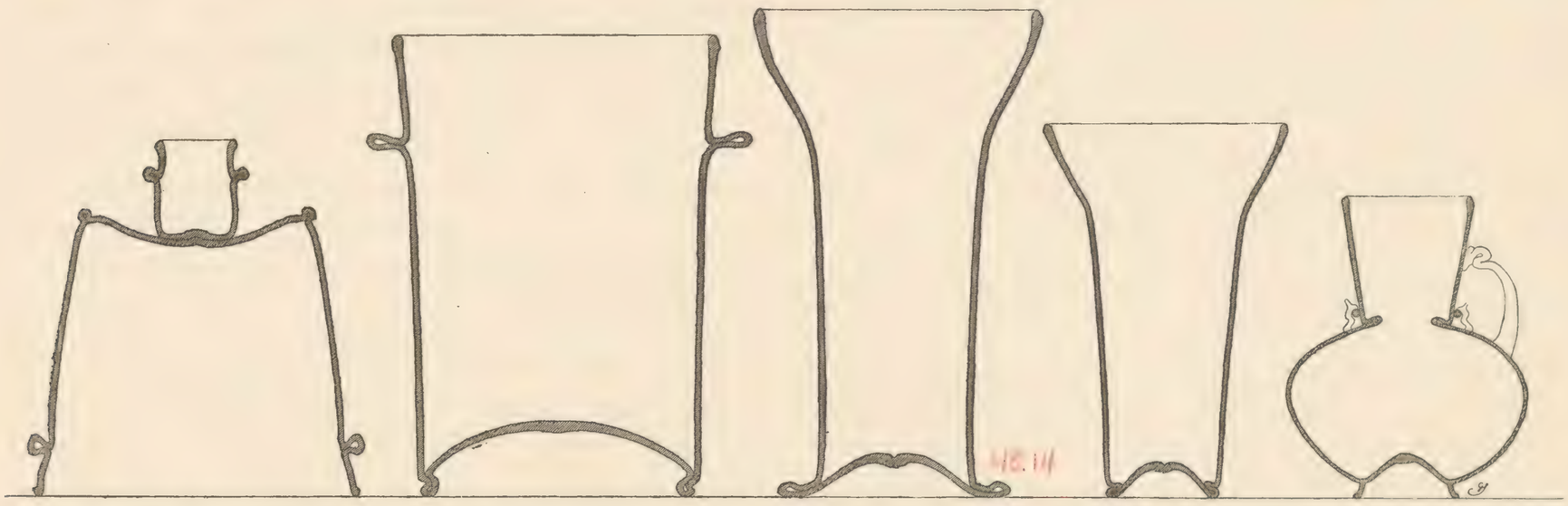


Fig. 42. *Profiles:* 1. *The Lantern, and* 5 *the Jug of Baron Alphonse de Rothschild.* 2. *The Tumbler of Madame Edouard André.* 3. *The Great Goblet of Ritter Adalbert von Launa, at Prague, and* 4 *the Goblet in the Löwenburg.* (*One-fourth the size of the originals.*)

* We know but one specimen of the kind, in which as many as four different shades of colour appeared in a single leaf. It is the Würzburg glass in the British Museum. See the tree-top on plate XXI.

† Exceptions to this rule are of the utmost rarity. There is one such in the green enamelled spots of the tree-crown on plate XXI.

‡ In the armorial figures there is a colour used, which is very thin, and of the tint of white wine or a little warmer. We find it nowhere else in the decorative adornment.

* The "green" lamp of Captain Myers (plate XVII) and the foot (fragment) of a lamp in the Slade Collection, British Museum,—likewise green—are the only specimens we know of glass painted with a relatively thick application of pigment from behind, and this occupies the whole surface.

and colour,—between the fully-covered ground and the broken ground, between the larger elements of design, and the more delicate minute work.

The perfect taste inherent in the decorations of the old Oriental gilt and enamelled glass-work, and not its laborious technical completeness, enables every one who looks at most of those artistic creations of the Muhammadan East, to realise the sense of satisfaction and delight in beauty.

CHEMICAL ANALYSIS

of the vitreous mass, and the enamelled decorations of the fragment of an old Arab glass vessel, which came probably from the Mosque of Sultan Hasan in Cairo dating from the middle of the fourteenth century.

The article to be tested—a crescent-shaped fragment, about 150 mm. in breadth and 55 in height, manifestly part of a mosque-lamp or vase—has on both sides, upon undecorated fields within round borders, the molten settings of handles; the remainder of the surface is decorated with polychrome ornament in relief-enamel, placed within red outlines, in free, careless, and unelaborate work.

The enamel layers have spread sometimes over the outline, in other places they do not exactly reach it, and in some others still, they seem formless, having merely the character of spots of colour.

The enamels, as well as the outlines, lie partly upon gold—which we know to be a characteristic of Arabic enamelled glass.

Gold ornaments once undoubtedly covered the whole vessel between the colour-decorations, and occupied the handle-fields, and perhaps there was gold on the handles themselves; but it has been corroded by the lapse of ages, and has disappeared. Traces of the former gilding, besides those which lie under the enamel, and appear in irregular dots in connexion with the enamel-ornament, may also be found here and there on the empty surface with the aid of the microscope. Even in little clots and hollows under the welded handles, atoms of gold are lodged. The glass surface, in all the spots on which gold was used, appears dull, and of a quality quite distinct from that of the places which were not gilt. This can be noticed from the inside of the glass which allows the whole surface to be observed.

The relief enamels of the ornament are, even to the white and the red, half-transparent. Blue, in the colour of the lapis lazuli, is richly handled; iron-red is used in a much lesser degree; while the other colours, clear green, clear yellow, and white, are employed on small surfaces.

The glass substance of the vessel and the handles, is badly clarified, and dotted with clots and with great and little bubbles; it is not purely white, but of distinctly brownish-green colour.

The analysis of the glass-mass gave the following results :—

		I	II
Silicious earth	SiO_2	68·73 %	...
Lime	CaO	8·62 %	...
Magnesia	MgO	4·15 %	...
Kali	K_2O	2·87 %	...
Natron	Na_2O	12·54 %	...
Potter's earth	Al_2O_2	1·69 %	1·68 %
Peroxide of iron	Fe_2O_3	0·47 %	0·50 %
Protoxide of Manganese	MnO	0·74 %	0·69 %
		99·81	

Striking, and even unique in the numerous analyses of old and new hollow glasses known to me in the literature of the subject,—is the high proportion of magnesia in the fragment, derived from dolomite lime-stone used in the manufacture of the glass. Magnesia, as well as dolomite lime-stone, is regarded in the foundries as a detrimental substance to be avoided. It densely fluidises the glass-mass which thereby becomes difficult to clarify. From the above analysis, the molecular formula of the glass is calculated as 0·9 R_2O : 1 RO : 4·45 SiO; in which, under R_2O, the alkalies, and under RO the alkaloid earths, are put together.

Of other examples of tested glass, capable of resisting atmospheric influence, the combination runs thus— 0·9 R_2O : 1 RO : 5 to 5·4 SiO_2. The glass of the specimen appears then to be poor in silicious earth, which is a necessary result of the use of the magnesia-holding lime-stone, as with a higher sand capacity, the mass would be far too densely fluid.

Further remarkable is the proportionate relation of alkalies to lime (in this case, magnesia-bearing lime), for the purpose of affording a fitness to resist atmospheric influence (the injurious action of bad weather); which appears here precisely as the best known proportion of our own time.

With the enamels, by reason of their small quantity, only qualitative investigations could be set on foot, as to colour-bodies, and their possible holding of lead. To this the blue enamel offered an exception of very special interest. The single enamels were rubbed off with the diamond point, aided by a few drops of water, and poured into a dish of platinum. Then they were exposed to analysis, and the result was as follows—

Red : Lead glass coloured by oxide of iron.
Green : ,, ,, oxide of copper.
Yellow : ,, ,, antimonic acid.
White : ,, colour-body not ascertainable.

That would correspond with the synthesis of the glass-enamels known to-day.

The examination of the blue enamel furnished interesting particulars. A sufficient mass of this was placed before me to enable me to make not only a qualitative analysis, but also a sufficiently exact quantitative analysis also.

Under the microscope, the enamel showed clearly grains of blue colour imbedded in a colourless vitreous mass.

The analysis revealed that the enamel was absolutely free from cobalt, copper, and lead; also that there was no boracic acid in it. On the contrary, there were all the elements of the glass-mass of the fragment: potter's earth, iron, manganese, lime, magnesia, and alkalies.

Thus there were absent here the oxides of cobalt and of copper, once regarded as the only blue-colouring principles for glass and enamel. Even the most subtle re-agents failed to discover any trace of them.

The impression forced itself upon my mind that in some way (for which there is nothing analogous in the technique of glass), the lapis lazuli—a semi-precious stone—had been used for the colouring of the enamels.

A splinter of the blue enamel brought into a smelting borax-pearl, is dissolved in it on the spot in a brownish vapour. Precisely the same result attended a similar treatment of a splinter of lapis lazuli.

There are analyses of lapis lazuli, made by several investigators (Dammer, Anorganische Chemie, 1893, Vol. III, p. 194; Rammelsberg, Mineralchemie, 1875, p. 458).

They give the following list for the synthesis of that mineral:—

Sulphur . .	0·95 — 3·96 %
Sulphuric acid .	1·92 — 5·98 %
Potter's earth .	12·33 — 43·00 %
Silicious earth .	40·54 — 45·70 %
Peroxide of iron .	0·86 — 4·20 %
Lime . . .	1·14 — 23·56 %
Natron . . .	8·76 — 11·45 %
Chlor . . .	0 — 0·42 %

Characteristic in the silicated mineral, are the holding of sulphur (in the form of sulphuric acid), and the high degree of potter's earth.

This must also be remarkable in the synthesis of the blue enamel.

The quantitative analysis, performed with 0·1200 grains of substance, came out thus:—

Sulphuric acid — SO_3 . .	1·1 %*
Potter's earth . . .	6·7 %
Silicious earth . . .	56·6 %
Peroxide of iron . . .	1·3 %
Protoxide of Manganese .	1·9 %
Lime	4·7 %
Magnesia	3·7 %
Balance of alkalies . .	24·0 %

* The substance was disintegrated with bromic acid, and thereby all sulphur maintained as sulphuric acid.

Thus we discover in the enamel, the elements of the glass-mass—characteristically the magnesia and manganese deposits—but a much greater holding of potter's earth and also sulphuric acid.

From this we might conclude that the Arab glass-artists manufactured the blue enamel by rubbing the lapis lazuli with powdered glass—probably a smelted glass made weakly fluid by the heightening of the quantity of alkalies contained in it.

With the addition of lead, as usual, the fluid glass would not here have become fluent, as lead glass will not mingle with the sulphur-holding lapis lazuli and becomes black. In agreement with this is the fact that the Arabic blue enamel exhibits no real enamel-lustre, but a sort of macaroni-looking surface, and is considerably harder than the other lead-holding colour-enamels.

A direct attempt established these conclusions.

Lapis lazuli rubbed with powdered glass gave a blue enamel smeltable on glass, to which only purity and depth of colour were lacking; as I had no clear deep-coloured lapis to make use of.

The colour-substance of the lapis lazuli is used to-day in art manufacture to a great extent; this is the ultramarine blue of trade.

With this ultramarine blue, rubbed with a vitreous mass (1 Na_2O, 1 K_2O, 1 CaO, 6 SiO_2) we succeeded in producing an enamel like the Arab enamel in colour-tone and in character.

I know of no statement in technical glass literature, that with ultramarine or lapis lazuli, a blue enamel-colour is producible or has ever been produced; nor do I know of any analysis which has recorded the absence of the two metals, cobalt and copper, in a blue enamel.

This cobalt-less lapis lazuli blue may for the present be taken as the direct characteristic of old Arabic glass-work, and must, as against imitations, take its place as a chemical criterion.

Dr. F. Linke,
Imperial-Royal Professor.

Vienna, *February 3rd*, 1896.
Chemical Laboratory of the Imp.-Roy.
School of Art-Industry.

A confirmation of this discovery has since taken place, through the examination of the Arabic mosque-lamp of the fifteenth century (Inventar, no. 9949) in the Austrian Museum for Art and Industry.

The blue enamel of this lamp was recognised as without cobalt, and made with lapis lazuli, while the blue enamel, externally very similar to it, of an imitation-vase by Brocard of Paris (Inventar, no. 7552) owes its colour to cobalt oxide.

Vienna, *March 14th*, 1898.

DESCRIPTION OF THE PLATES.

I and Ia.

A LARGE MOSQUE-LAMP.

Thick glass, little transparent.

The body is round, broad in its lowest third part, resting on a hollowed foot. It narrows conically, with a strongly marked recession below, and a more gradual decrease in the upper-part. The wide neck is funnel-shaped. On the upper surface of the body, six handles are set, some of which display a violet colour, evidently accidental.

The decoration is divided into a series of broad and narrow friezes, each separated from the other by plain intervals. In the principal frieze on the body, medallions, pointed at top and bottom, surround the handles, and form six interruptions. Some of the other friezes are broken by three or six round or entwined medallions. The medallions of the narrow frieze, above the spring of the neck, are painted alternately red and green, from behind. In the filigree ornament between them little fishes are drawn. The broad neck-frieze has, in its blue foliated fields, ornamental Cufic characters symmetrically interlaced, and in the cross bands on the medallions, a frequently repeated inscription in round letters.

The surface of the under-body (—see Detail to plate I on plate Ia) is in three fields separated by large medallions, similar to those on the neck. The fields have each in its middle, a small medallion formed by a twining blue band, and on each of these small medallions is a filigree pattern containing a red-white, blue-white, and green-yellow enamelled ornamental flower. A border and ornament on a blue ground mark out the fields, above and below. The corners of the fields are carelessly decorated with red-white-blue enamelled flowers, and green-yellow and red-white leaves.

On the medallions drawn from behind, the enamel is thin, but everywhere else it is very thickly used.

Even to the ground of those medallions, and of the entire filigree ornamentation, the whole vessel was gilt, save where it was covered by enamel, from the upper rim down to the foot.

The interlaced Cufic letters are illegible and were probably meant only to serve as ornament. The repeated medallion-inscription—"Glory to our Lord the Sultan the Ki[ng]"—is anonymous. As the lamp however was brought with others of its kin, which bore the name of Sultan Hasan A.H. 748-762 (*i.e.* 1347-1361, with an interval between 1351 and 1354), from that Sultan's mosque in Cairo (built 757-760 A.H.)—we may consider that he was the person by whose order it was manufactured. The other lamps are in the Musée National de l'Art Arabe (—see Catalogue for 1895, no. 27). The manner in which the Cufic letters are interlaced, point to the time of Sultan Hasan, if not to a yet more recent period.

The vessel is undamaged, the enamel very good; nothing of the gilding remains.

Height 420 mm.

II and IIa.

LARGE MOSQUE-LAMP.

Thick glass, little transparent.

The shape is the same as that of I. The handles are of fairly pure and transparent glass.

The vessel has been somewhat deformed in the fire.

The decoration is divided into a series of broad and narrow friezes, separated from each other by plain intervals. The whole upper surface of the body forms a single broad frieze, decorated with round written characters of large dimensions, and leaf-work scattered about them on a blue ground. Some of the long characters penetrate into the double-pointed medallions, which enclose the handles. The broad neck-frieze, broken by three great medallions, is decorated in its fields with great, blue writing in round characters. (Fig. 44 shows the filigree ornament of the border of those medallions.) Even the cross bands of the medallions are decorated by inscriptions in a round hand. In the filigree ornamentation of the six fields of the narrow neck-frieze, little fishes are drawn with very slight outlines.

The under surface of the body (—see Detail of II in plate IIa) falls into three fields separated by great

medallions similar in kind to those on the neck-frieze. These fields are divided horizontally by means of an ornamental band on a blue ground. On the axis of the divisions, triangles are placed, formed by a twining band of blue, and having their basis resting on the periphery. The filling-up of these triangles consists of filigree ornament, and a little cartouche in the middle containing a flower on a blue ground. The angles of the fields are decorated with green-yellow and red-white-blue enamelled leaves and blossoms. The motif of the triangle appears again, in simpler form, in the three fields of the foot-frieze, but here the detail of ornament is converse, the outside angles being occupied with filigree decoration, and the triangles with enamelled leaves and blossoms.

All the enamel is superimposed thickly.

The whole vessel, from its topmost rim to its foot, was originally gilt, the enamelled places and the ground of the filigree ornamentation excepted.

The blue inscription on the neck is a verse from the Kur'ān Sura 24, verse 35: "Allāh is the light of Heaven and Earth. His light is like a lantern . ."

The large inscription on the body (fig. 43) runs thus: "Glory to our Lord the Sultan an Nāsir Nāsir ad Dunyā-wa-d-dīn (Helper of the world and the faith) Hasan son of Muhammad. Glory to his Victory!"

Sultan Hasan, son of Sultan Malik Nāsir Muhammad, ruled in Egypt and Syria from 1347 to 1351 and 1354 to 1361 (having been deposed during the interval). His renowned mosque in Cairo was built in 1356-1359, and from it the lamp we are describing was probably taken. It came into the Naturhistorisches Hofmuseum in Vienna (along with the lamp figured on plate III) with the ethnographic collection of the Emperor Maximilian, from the castle of Miramar in which it had been placed by the Emperor (then an Austrian Archduke) on his return from a journey in the East.

The vessel is undamaged; the enamels are in very good condition; visible traces remain of the gilding on the neck.

Height 400 mm.

Fig. 43. *Inscription on Plate II.* (*One-fourth the size of the original.*)

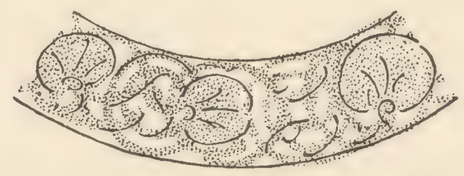


Fig. 44. *Detail of Filigree-ornament on Plate II.* (*Original size.*)

III and IIIa.

GREAT MOSQUE-LAMP.

Thick glass, little transparent.

The round, bellying, body is very broad in the lower third part of its size, but narrows conically above and below; with a wide funnel-neck, and resting on a strong riveted foot. The six handles set on the upper surface of the body are particularly strong.

The vessel is somewhat deformed by the fire.

The decoration is divided into five friezes separated from each other by blank intervals. The broad uppermost frieze is divided by three large medallions into fields which are decorated with large blue letters of the round sort. Small characters of the same kind decorate the cross bars of the medallions.

The lower neck-frieze, which is narrow, is divided into six fields by small encircled medallions, decorated with lilies, the fields enclosing filigree ornament, with flying birds (fig. 45). The broadest upper-frieze on the body, in which the handles are placed, has an ornamental division by means of bands enamelled white. These bands leave untouched plain pointed medallions round the handles, and between these medallions cross over and intertwine forming small round medallions at the point of intersection. These small medallions are painted red inside, and have on the outside either gold filigree not outlined, or a small gold inscription.

The lower surface of the body—see Detail of III on plate IIIa—is divided into three fields by medallions similar to those on the neck. A circular band filled with ornamentation on a blue ground, forms in the middle of the fields a medallion, and is itself surrounded by a border. At the four places in which this border with the medallion lies, the blue band forms some smaller rounded twists. The medallion thus produced is filled with filigree ornament, in the middle of which sits a red-white green-yellow, and blue-white enamelled flower. The corners of the fields are adorned with red-white and blue enamelled flowers and leaves of green-yellow.

The enamel is thick everywhere, except when it runs thin in the medallions painted on the inside. With the exception of these medallions, the ground of the filigree ornament, and the places covered with enamel-filling, the whole vessel from top to bottom, including the foot, was gilt.

The blue inscription on the neck is from the Kur'ān Sura 24, verse 35; and that on the band over the medallions, is the same anonymous one which we found on plate I. According to the character of the decoration, and the make of the vessel, this work must be ranked among the lamps of the time of Sultan Hasan (the beginning of the second half of the fourteenth century).

The lamp was formerly in the possession of the Emperor Maximilian in the castle of Miramar, whither he brought it (being still Archduke of Austria), along with the other one reproduced on plate II, from a journey in the East.

The vessel is undamaged, but the enamels, blue and white, have fallen off in places. Of the gilding, there remain veritable but only smudgy traces.

Height 365 mm.

Fig. 45. *Detail of Plate III.*
(*The size of the original.*)

IV and IVa.

LARGE PILGRIM'S-BOTTLE.

Fairly clear, in places reddishly coloured by evident chance, yellow-brown thick glass.

The body is in the shape of a ball compressed on two sides, and indented below. It has no foot. The setting of the neck is in the form of a knot; the narrow and tolerably long neck swells a little towards the top, but is slightly depressed near the mouth. On each of the narrow sides of the vessel is a handle, one end of which is on the shoulder, the other closing in a ring is placed on the knot of the neck.

The arrangement of the decoration is a frieze on the neck; four large medallions on the body, which are united by a blue band forming a quaterfoil above on the broad side of the vessel, and on the narrow sides a medallion encircling the lower setting of the handle. The frieze on the neck has lightly outlined letter-borders and is adorned with dancing figures. The four large medallions on the body have similar letter-borders. The field of each of the two large medallions which stretch out as far as the lowest surface of the body, is decorated with similar figured scenes, only slightly varied in the postures and costumes. They represent four figures in each medallion sitting with their legs folded beneath them, and playing musical instruments, at a river edge under a tree of the most highly original style. A filigree ornamentation in gold, of the most delicate ornamental kind, forms the background; out of which rises a rough outlined branch-ornament, with fruit-dishes distributed here and there.

The medallions at the sides (—see Detail of plate IV on plate IVa) show falconers riding on horses, which are usually white but sometimes red, with fluttering coloured trappings. The costume is in enamel and gold, treated like that of the musicians. The ground is also similar to that of the principal medallions, except that the outlined branches are only partly enamelled, the flowers are blue-white and red-white, and the leaves green-yellow. A similar ornament, but symmetrically arranged, decorates likewise the corner-fields. The medallions which encircle the handle-settings are negligently outlined; the quaterfoils only decorated with carefully outlined and symmetrically arranged gold-ornamentation, without a filigree-ground.

The enamel is laid on very thickly, the gold of particularly delicate brilliancy, but both the enamel and the gilding are sparingly used. Only the actual design was gilt: so far as it is not covered with enamel, and including the intervals and the inscription, the ground remained bare all over. The spaces between the dancing figures were the only places on which the neck was gilt.

The fairly pure, and originally transparent glass is now for the most part untransparent, since it is covered on the inner side with a whitish curtain. The bottle contains the limestone earth of Bethlehem, supposed to have been drenched with the blood of the Innocents. It is still sealed, but the authentication of the seal is unfortunately not to be recognised.

The inscriptions repeat constantly one word "the Sultan." The shape of the letters, and especially the Persian character of the figured decoration, indicate an origin to the East of Palestine, Syria for instance, in the thirteenth century. When this vessel was added to the treasures of the Domschatz of St. Stephan at Vienna, is not known Its condition is in the upper half very good; the lower part is badly damaged by handling; and on the narrow sides the red outlines are rubbed away.

Height 350 mm.

V.

A VASE WITH HANDLES.

A yellow-greenish shining glass, moderately thick and fairly transparent.

The body resting on a strong riveted foot, is bladder-shaped, with an elegant concave transition to the broad neck, which opens like a funnel, towards the mouth. The edge of the mouth is strengthened by a rolled rim. The two handles on the upper part of the body are massively set on, and curve as they approach the neck, first swelling in a large bow, then falling into three small rings of diminishing size. At the spot where one of the handles springs, the glass mass is coloured a striking green.

The ornamentation consists of two friezes encircling the neck at its narrowest and the body at its broadest part. As, by the position of the handles, the whole vessel is divided into two symmetrical halves, so in the two friezes the centre of symmetry is indicated by medallions. In the principal frieze decorated with round characters on a blue ground, it is a medallion filled up with ornament, and in the ornamental frieze, a medallion of armorial character. Even the decoration of the space between the two friezes—two flower-medallions on an ornamental ground—is on both sides symmetrically disposed. The lower part of the body, and the mouth-funnel are each somewhat clumsily adorned with four rows of lightly sketched little fishes.

The enamel is laid on unevenly; the blue and white thickly, the red less so, the yellow and especially the green run quite thinly in places. The six-petalled rosette of the armorial bearing is only lightly tinted with a warm rose-colour.

The whole design with all its bare intervals, the handles with the fields enclosing their roots, the edge of the mouth, and the rolled foot, were gilt. Between the little fishes, and in the interspaces of the outlined ornament, the naked glass ground peeps through.

The inscription repeats eight times the one word "the Wise." Its long slim characters, taken in connexion with the fashion of its ornamental decoration, and especially with the large enamelled surfaces, indicate the beginning of the fourteenth century.

The vessel is in the possession of Tigrane Pasha in Cairo, and is with the exception of the missing topmost ring of one of the handles, undamaged. The gilding is of uncommon brilliancy and in splendid keeping, and is well shown up in a side light. It is almost rubbed away near the handles only. The blue enamel between the letters of the inscription has fallen out from several places; as is also the case with the white from the heart of the medallion-flowers.

Height 305 mm.

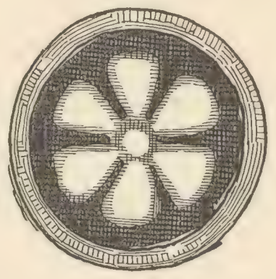


Fig. 46. *White-red Armorial Rosette, from the lamp of the Amīr Kāfūr, XIV Century. South Kensington Museum.*

VI and VII.

A LARGE BOTTLE.

Glass: yellow-green, of a troubled milkiness of tint, hardly transparent, very thick. With numberless small and several large bubbles. The body round, somewhat deformed by the fire, large bellied; broadest in its lowest third part, a little hollowed out towards the rolled foot. The lanky, long neck a little bowed, and too gradually widened towards the mouth.

The decoration on the body consists of a richly enamelled figured frieze encircling the broadest part; three great medallions filled with centrally disposed ornament on a blue ground (—see Detail of VI, on plate VII); and the same number of interstice-fields with delicate foliage-work, and birds hovering amongst them. The medallions are surrounded by a band of meandering interlacements, which serves likewise as the borders of the interstice-fields. A similar band forms also the under-border of the figured frieze.—The neck is in several horizontal divisions. Above and below it has broad borders of filigree pattern with carelessly outlined ornaments; and, contiguous to those, narrower borders with ornamentation on a blue ground. The proper neck-frieze exhibits a remarkable enamel-decoration: a flying bird of Paradise, which seems to have just torn another to pieces in the sky, with four cloudwreaths lying in succession one over the other. The enamel is for the most part very thickly laid on; especially

the blue in the three large medallions. Peculiar to this picture are the moiré reflections of the dresses of the various riders, and the pommels of the horses' saddles.

The mouth above the last plain interval, and all the part of the body under the figured frieze, along with the rolled foot, remained bare; otherwise the entire vessel was gilt, even to the ground of the interstitial fields, and the filigreed borders on the neck.

The character of the ornamental part of the decoration indicates the middle of the fourteenth century (after the time of Sultan Hasan), that of the figured part a Persian origin, and the motif of the neck-frieze is drawn from a region still more easterly.

This work of art came into the collections of the Imperial house in 1825, when it was sent from Cairo by Vice-Consul Champion. It is now in the Kunsthistorisches Hof-Museum in Vienna.

The vessel is, with the exception of slight injuries to the enamels, in very good condition; but of the gilding only some insignificant traces remain.

Height 440 mm.

VIII.

LARGE MOSQUE-LAMP.

Clear green glass, of a tone resembling troubled milk; moderate in size.

The body is round, broad in the lowest third part, narrowing conically but unevenly towards the top and bottom; on a high and gracefully curving foot. The neck is funnel-shaped. On the upper surface of the body, six handles were set, one of which has broken off.

The decoration is simple. On the neck there is a row of pointed medallions ornamented with flowers on a blue ground, and connected by horizontal cartouches bearing filigree ornament. On the body a row of pointed medallions enclosing the handles, and horizontal cartouches with round writing on a blue ground. The disposition is such that the centres of the cartouches in this row correspond with those of the medallions in the upper row. The mouth, the narrow part of the neck, and the spring of the foot, are marked by plain spaces with undulating edges, fringed by golden filigree ornament with light outlines, and free endings, which must have originally had the aspect of a lace curtain (fig. 48). As a weak relief to the naked surface, filigree work with free endings accompanies the cartouches of writing on the body, and the medallions of flowers on the neck. The only other trace of ornament is the undulating outline of the plain circlet on the lower part of the foot.

The design is executed partly in a very rough style, and partly with fine or light strokes; the enamel laid on somewhat thickly.

The cartouches of writing, the medallions enclosing flowers and those which surround the handles, with the handles themselves and all the bare interval-bands, were gilt. The naked glass ground peeped through the filigree ornament everywhere.

The inscription (fig. 47) runs as follows: "His noble and great Majesty our Lord the Sultan al-Malik al-Ashraf Nāsir-ad-dunyā-wa-d-dīn Sha'bān." This Sultan ruled in Egypt in A.H. 764-778 (1362-1376).

Fig. 47. *Inscription to Plate VIII.* (*One-half the size of the original.*)

Fig. 48. *Filigree Ornament. Detail to Plate VIII.*

The lamp probably came, with others, out of the mosque of the Sultan at Cairo. It is now preserved in that city in the Musée National de l'Art Arabe (Catalogue, 1895, No. 15).

By the breaking away of a handle, the vessel has had a hole put in it. The gilding is nearly all gone. The design of the filigree ornament can now only be observed by a close inspection of the spots where a dull glimmer has replaced the once gold-covered ground.

Height 365 mm.

IX.

LARGE MOSQUE-LAMP.

Grey-green, very thick, virtually untransparent glass.

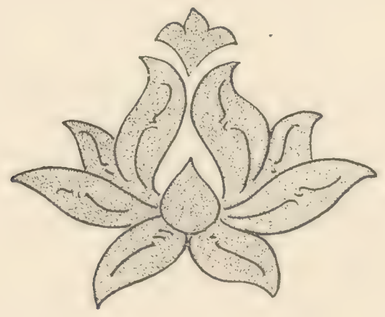
The round body bellies greatly, and rests upon a strong rolled foot. The wide neck is funnel-shaped. Six strong handles are set on the upper surface of the body.

The decoration consists of a luxurious ornamental design of flowers regularly distributed over the whole surface of the vessel, and only broken by a dividing strip of bare glass at the narrow part of the neck. On the body, only a single-pointed field, with an undulating edge, is left bare around each handle. Above the foot, the flower pattern is arranged in just the same way as above the narrow part of the neck.

The blue enamel is laid on very thickly; and all the space which is not enamelled, was gilt, including the mouth, the narrow part of the neck, the handles and the fields around them, and the foot. This lamp is now preserved in the Musée National de l'Art Arabe at Cairo (—Catalogue, 1895, No. 18, plate XI); and most probably came from the great mosque of Sultan Hasan built in that city in 1356-1359. The Museum Catalogue gives under No. 19, plate XI, a footed lamp which came from that Sultan's mosque, and has small medallions of inscriptions, but is otherwise identical in material and decoration with the above.

The vessel is in good condition, as is also the enamel; but the gilding has suffered severely. In several places, however, especially on the neck, and in the recess above the foot, distinct remnants of the gilding are visible.

Height 340 mm.



X.

LARGE MOSQUE-LAMP.

The glass is yellow-brownish in colour, clear and thick, fairly transparent.

The form is similar to that of the lamps on plates I, II, and VIII; most like the last with its elegantly curved foot.

The arrangement of the decoration is effected by the means of white-enamelled endless bands which wind into the shapes of various medallions, and leave pointed plain fields bare around the handles. The larger medallions and the triangular spaces left open under the spring of the neck, are filled with partly enamelled flower-work on a blue ground; the smaller ones with lightly silhouetted motifs on a red ground. Filigree ornament of mixed kind and with very light outlines, decorates the fields between with leaf-work. In the midst of the filigree-ornament, little blue or red medallions are introduced; at the foot, there are simply green-yellow enamelled leaves. About the mouth, the narrow part of the neck, the setting of the foot, and the edge all round, narrow strips of filigree ornament are laid.

The enamel, especially the blue, is laid on very thickly.

The whole vessel was gilt from the edge of the mouth to the foot. The bare glass ground was seen only in the filigree ornament.

The lamp was brought home by the Archduke Rainer, on his return from an Eastern journey, and presented to the Austrian Museum für Kunst und Industrie in Vienna. The character of the decoration and the make of the vessel indicate the beginning of the second half of the fourteenth century. The Musée National de l'Art Arabe (—see Catalogue 1895, No. 20, plate XI) possesses a very similar lamp, which came from the mosque of Sultan Hasan in Cairo, and which has been reproduced by Le Bon ("La Civilisation des Arabes") as one of the three lamps on his coloured plate. It was not however correctly executed, as the two bands, painted red from behind, which encircle that lamp at its mouth and at the narrow part of the neck (instead of the filigree bands of our lamp) are reproduced as green in the illustration.

The vessel is sprained in the foot, but is otherwise, except that much of the gilding has been lost, in good condition.

Height 370 mm.

XI.

SMALL MOSQUE-LAMP.

Green, cloudy glass.

The body, round; in its lowest third part, broad; narrowing conically upwards and downwards; is somewhat pressed inward below the broad part; has been deformed by the fire. It rests upon a rolled foot, and has a very large funnel-neck. Six handles are fixed upon the upper part of the body.

The whole of the body, and the funnel-neck as far as the uppermost third part of the altitude, are ribbed in a wavy style; which, in connexion with the original full gilding, as in the little lamp, fig. 30—must formerly have given a brilliantly rich aspect to the vessel.

This lamp came into the Musée National de l'Art Arabe (Catalogue 1895, No. 10) from the mosque of Sultan Sha'bān in Cairo, built in the year 764 H. (= 1363).

The vessel is undamaged; but of the gilding there is nothing left save the dull outlook and some smudgy remains.

Height 295 mm.

XII AND XIIA.

LARGE MOSQUE-LAMP.

Warm-grey, thick, cloudy glass, scarcely transparent.

It is similar in form to the lamps in plates I, II, VIII, and X; but the body is greater, and the neck markedly hollowed.

The whole upper surface of the body is covered with a largely drawn ornament on a blue ground, symmetrically disposed between the handles. This ornament is outlined and bold, and partly enamelled. Pointed fields, edged with a white ribbon, are left bare around the handles. In other respects, the decoration is divided into several friezes, broken by three, or six, medallions. The broad neck-frieze has in the fields, great blue round written characters upon a basis of enamelled interlacements, and in the cross-bars of the medallions there are pretty inscriptions also in round letters. In the fields decorated with filigree ornament, in the small neck-frieze, carelessly designed little fishes appear.

The lower surface of the body—see Detail to XII on plate XIIA—is divided by three great medallions similar to those on the neck, into fields which have borders above and below, with ornamentation on a blue ground; and in the middle, oval medallions formed by a twisted blue band, with filigree decoration, and a red-white, green-yellow, and blue-white, enamelled flower. The interstices are ornamented with red-white-blue enamelled flowers and green-yellow and red-white leaves. The enamel is thickly laid on, but the yellow and green have run flat here and there.

The whole vessel was gilt from the topmost edge to the foot, only the ground of the filigree ornament remaining bare. The filigree work is very flimsy; the bold ornamentation on the body is however very decidedly if roughly outlined.

The large inscription on the neck is from the Kur'ān, Sura 24, verse 35. The small medallion inscription, constantly repeated, is the anonymous "Glory to our Lord, the Sultan, the King." But the lamp, from the character of its vigorous ornamentation, and from its make, seems to belong to the beginning of the second half of the fourteenth century. It was as a matter of fact transferred from the mosque of Sultan Hasan in Cairo to the Musée National de l'Art Arabe (Catalogue 1895, No. 32).

The vessel is undamaged, but the blue enamel has fallen off in several spots; and of the gilding, except for the dull and faded appearance of the places formerly covered with it, scarcely any traceable relic is left.

Height 405 mm.

XIII.

AMPHORA.

Glass, of the colour of white wine, tolerably pure, transparent, thick.

The body,—resting on a rolled foot, and widening moderately upwards—at a little above half of the full height, passes with a graceful concave sweep into the long, slim and gradually narrowing neck. The mouth is of special character; it is developed in the form of a reversed and somewhat flattened bell, exhibiting a striking gold-yellow mass with delicate red veins. On the shoulder of the vessel there are two handles, opposite to one another, each drawn out arch-wise towards the neck where it ends in a minor wave under the starting point of the mouth.

The decoration is in several horizontal divisions.

Above the lowest division, which is blank, there is a prettily ornamented broad border, then a specimen of interlaced work forming stars; and contiguous to this the principal frieze encircling the full breadth of the vessel, which is interrupted by four medallions filled with delicate ornamentation. The fields of the frieze are decorated with blue-enamelled ornament symmetrically arranged.

Adjacent to the fields and the medallions there is above and below a narrow border with written characters. This is twice repeated on the neck, where between the two an endless blue band forms fields in harmonic relation to the main centres and those of the handles. These fields are filled with pretty and symmetrical ornament, the interspaces on the contrary with rough and free designs partly enamelled. The shoulder of the vessel is decorated with free leaf and branch work, in which on the two main centres large medallions are laid. The border of the medallions is prettily ornamented, and the middle bears upon a blue ground, a design of a hawk (?) swooping on a little bird.

The enamel is not laid on with equal thickness all over, and the blue is of a specially delicate grey tint. All the ornamentation is lightly outlined, and the whole design was gilt, in the fields of the principal frieze and the irregular fields on the neck, as well as in the ground beneath the lettered borders. Remains of the gilding, which is of unusually weak lustre, are numerous; partly in the handle curves, less frequently on the bell-mouth; but the handles and the mouth were probably completely gilt.

The inscriptions repeat constantly the one word "The Wise." The form of the characters is suggestive of Mesopotamia, and the mode of distributing the enamel points to the thirteenth century.

This exceptionally fine piece of glass work is preserved, with the one reproduced on plate IV, in the Cathedral treasury of St. Stephan at Vienna; and once contained the same consecrated matter, namely Bethlehem earth, supposed to have been moistened with the blood of the Innocents. It has still the uninjured, but unknown, seal of authentication; but the contents are gone, and only the whitish non-uniform cover has remained. The precious vessel once received a damaging blow in the lower part; but luckily it was not beyond repair, and we find it restored. When it came into the treasury of St. Stephan, is not known.

Height 345 mm.

XIV and XIVa.

LARGE MOSQUE-LAMP.

Clear, but thick glass, hardly transparent.

The form is similar to that of the lamps figured on plates III, IX, and XI. The neck is slightly concaved, the lower part of the body a little more so, and the place below the narrow part of the neck, without any diminution of their proportions.

The chief characteristic motif of the decoration on the upper part of the body, starts from the handles. A white band around these serves to shape the silhouette of a lily turned downwards, while in its continuous progression it forms a similar silhouette turned upwards, in the field between the handles; and this is repeated all the way round. The connected spaces between the lilies are ornamented thickly with leaf-work on a blue ground; while the isolated fields are negligently painted with single enamelled flowers. The neck is decorated in a manner similar to that of the lamp on plate XII.

The under surface of the body (—see Detail of XIV on plate XIVa) is divided by three large medallions quite similar to those on the neck. In the fields thus produced, a riband ornamented on a blue ground forms a large eight-fold intertwining figure with angles, the bands of which are filled up with filigree work, and have in their intervals red-white enamelled leaves.

The large interstitial field is furnished with symmetrical red-white, blue-white, and green-yellow enamelled ornamentation, the small one with a red-white and green-yellow trefoil.

The blue and the white enamel are laid on very thickly.

The whole vessel was gilt from bottom to top. Only the ground of all the filigree ornament—even in the narrow ribands accompanying the white band—remained bare.

The large inscription on the neck is from the Kur'ān, Sura 24, verse 35). The small repeated inscription is the anonymous "Glory to our Lord, the Sultan, the King."

The lamp came from the large mosque of Sultan Hasan in Cairo, into the Musée National de l'Art Arabe (Catalogue 1895, No. 39, plate X). The character of the decoration as well as the fashion of the vessel, correspond with the style of the beginning of the second half of the fourteenth century.

The lamp is undamaged, but the blue and white enamel has fallen off in several places, and the only traces left of the gilding are to be found upon the neck.

Height 375 mm.

XV.

SMALL MOSQUE-LAMP.

Smoked glass; unusually transparent under the circumstances.

Similar in form to the lamps reproduced on plates I, II, VIII, X, and XII, but with a higher neck, and only three ornamental handles. The high foot has been knocked off, but a fragment of it has remained in the setting.

The decoration is simple, and consists of a main frieze at the height of the handles, bearing an inscription in round letters, and delicately ornamented; borders encircling the mouth and the narrow part of the neck; and half way up the neck a narrow unconfined frieze of filigree strokes, which are also used at the half-breadth of the under part of the body. From the border which encircles the narrow part of the neck,—and which is apparently repeated in a simpler form at the setting of the foot—there is suspended over the shoulder of the vessel a gold filigree hanging of undefined limits, with extremely light outlines (fig. 49). Above, it was provided with a pretty gold ornamental edging similarly undefined (fig. 51), which served as a marginal fringe for the upper neck-border.

The blue spots of enamel are moderately thick, the red design very unevenly laid on. Of the gilding (—the whole design, with all its bare places and the edge of the mouth, were surely gilt, the handles with their medallions probably gilt) but few traces have remained, although the pale places where the gold formerly lay, mark out here and there the course of the filigree pattern.

The inscription (fig. 50) runs thus: "This was prepared for the consecrated sepulchre of the Sultan al-Malik al-Ashraf as-Salāhiyya. May God be merciful to its occupant in grace and good will!"

We are told by Max van Berchem (—see p. 11) that this inscription refers to the Sultan Khalīl son of Kalāwūn, the conqueror of Akka, the only Egyptian Sultan known to him who bore the two titles of Malik Ashraf and Salāh-ad-dīn at the same time. He ruled from 689 to 693 A.H. (1290-1293). The Catalogue (1895) of the Musée National de l'Art Arabe, makes it refer (No. 12) to the Malik Sālih Ayyūb, from whose mosque the lamp was transferred to that Museum. He reigned in Egypt from 637 to 647 A.H. (1240-1249).

The diameter of the mouth is 140 mm.; the height is 220 mm.

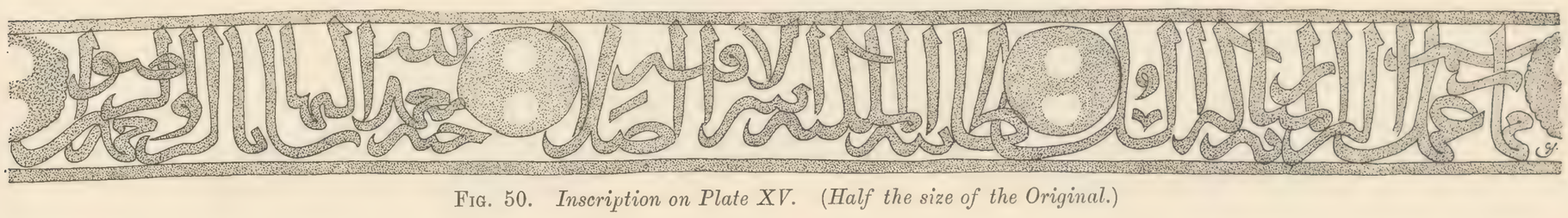


FIG. 50. *Inscription on Plate XV.* (*Half the size of the Original.*)

FIG. 49. *Detail of the Filigree Ornament on Plate XV.*

FIG. 51. *Filigree Ornament. Detail to Plate XV.*

XVI.

LARGE MOSQUE-LAMP.

Clear but clouded, very thick glass.

Similar in form to the lamps on plates III, IX, and XIV, the body somewhat deformed by the fire.

The characteristic motif of the decoration of the upper surface of the body lies in the strongly conventionalised enamelled shrubs upon a roughly though lightly drawn ground of leaf-pattern. Around the handles, ornamental bands on a blue ground enclose bare pointed fields. The neck-decoration is similar to that on plates XII and XIV.

The lower surface of the body is divided by three large medallions similar to those on the neck, into fields which are decorated with the same motif as appears in plate I on the principal frieze of the body.

The enamel is laid on thickly, and only the green and yellow have here and there run flat.

The whole vessel, from its upper edge to the foot, was gilt; and the naked glass ground was only seen in the filigree ornament and in the leaf-work on the upper part of the body. There are a good many remains of the gilding, but they are deadened and dull.

The large inscription on the neck is from the Kurān, Sura 24, verse 35; the small one, which is repeated, in the medallions, is the anonymous "Glory to our Lord, the Sultan, the King."

The lamp is now in the Musée National de l'Art Arabe at Cairo (Catalogue 1895, No. 36); to which it was brought

from the large mosque of Sultan Hasan. From the character of the decoration, and the make of the lamp, we judge that it is to be assigned to the beginning of the second half of the fourteenth century.

Height 355 mm.

XVII.

SMALL MOSQUE-LAMPS.

Clear thick glass, with the appearance of clouded milk.

The round body, resting upon a rolled foot, is in its lowest third portion very broad, rising conically in the upper part, at first only slightly so, then suddenly narrowed under the setting of the handles. The funnel-neck is very wide. From the foot up to and beyond the narrow part of the neck, the surface of the lamp is slightly wavy. On the body there are three handles set on with unusual broadness.

Under the broadest part, the body is somewhat unevenly pressed inwards, evidently by accident during the burning-in of the decoration.

This consists of a broad neck-frieze ornamented with round letters on a blue ground, and two parrallel rows of chain-work with enamelled twists, one of them encircling the shoulders and the other the broad part of the body. In the space between these rows, there are the three handles, and, between each pair of handles, a series of three cartouches, the first and third always uniform in shape, the middle one free in form, but all with symmetrically arranged ornament on a blue ground. The former two are alternately edged white and red. But the most remarkable part of the decoration is the little enamelled cartouches on the flat label formed by the lower attachment of the handle. The enamel is thickly laid on, and has only fallen off in a few places. The entire design and the handles were gilt. The dull, faintly shining, gold is in great measure preserved. Even on the edge of the mouth there are traces of gold (perhaps accidental).

The inscription (fig. 52) runs as follows: "This was prepared for the monument of the God-needing slave Saif-ad-dīn Salār, viceroy of the mighty sovereignty, God pardon him." The Amīr Saif-ad-dīn Salār was ruler in Egypt under the Sultan Malik Nāsir Muhammad in A.H. 698 (1299), but in 710 (1310) was condemned by the Sultan to die of hunger, for having supported the cause of Baibars II, the rival claimant to the throne. He lies interred under one of the two cupolas of the mosque of the Amīr Sanjar al Jāuli in the quarter of Cairo in which the Tūlūn mosque is situated. That mosque was built in 1303-1304 by order of Salār's friend Sanjar. The lamp

FIG. 52. *Inscription on Plate XVII.* (*Half the original size.*)

came probably from the mosque in question. It is now preserved in the Musée National de l'Art Arabe in Cairo (Catalogue 1895, No. 29).

A piece is broken near the mouth.

Height 250 mm.

XVIII.

LARGE MOSQUE-LAMP.

Clear, grey-greenish, very thick glass.

The form resembles that of the lamps on plates III, IX, XIV, and XVI, but is more slender and very elegant in profile. The mouth strengthened by rolled work, is somewhat arched by the fire; the foot-support is not evenly shaped all round.

The decoration is formed by an enamelled loosely drawn pattern of leaf-work, which spreads evenly over the whole vessel and is only cut off by a plain space near the narrow part of the neck. In this design, there are six medallions on the neck, and the same number on the lower part of the body; and around each handle, a pointed plain field. These fields have borders ornamented on a blue ground; the medallions on the neck are filled with a symmetrical ornament on a blue ground; and the lower medallions have a middle field surrounded by ornamental borders on a blue ground; the middle field bearing repeated inscriptions in pretty round letters.

Leaving aside the green and yellow which for the most part have run flat, the enamel is laid on thickly; and still shows, between the blue and white, as well as between the red and white,—except at the very heart of the flowers—a pallid blue, or a pallid red, as the case may be. The whole vessel, from the bottom to the strengthened edge of the mouth, was gilt; the glass ground appearing bare nowhere. In the medallions on the neck, there are some distinct but faded remains of the original gilding.

The little medallion inscription is as follows: "Glory to our Lord, the Sultan al Malik az-Zāhir, praise to his victory."

The by-name az-Zāhir was borne by several Sultans, but as the lamp was transferred to the Musée National de l'Art Arabe in Cairo (Catalogue 1895, No. 24) from the city-mosque of the Sultan Barkūk (Malik Zāhir Abu Sa'īd Barkūk) it must be to this prince that the inscription refers. The mosque was erected in 1384-1386; the Sultan reigned from 1382 to 1399.

The vessel is undamaged, with the exception of the gilding.

Height 360 mm.

XIX.

FRAGMENT OF A LARGE MOSQUE-LAMP.

Thick greenish glass.

This funnel-neck, with a rolled strengthening of the mouth, must have belonged to a lamp shaped like those on plates III, IX, XIV, XVI, and XVIII.

The body was decorated, as may be seen, with a broad main frieze with large letters (as upon plate II). On the shoulder was a series of small medallions, formed by a blue encircling band, and ornamented with filigree. The neck is covered with a strong enamelled ornament harmoniously arranged; the mouth is encircled by a narrow frieze decorated with round letters in blue on a bare ground.

The enamel is laid on very thickly, but the green has fallen off altogether, and the white has become a smutty red by the action of the fire. Only in a few places can we see the white colour unchanged.

The whole fragment was gilt, except the ground of the filigree decoration in the small medallions on the shoulder. The clearest remains of the gilding are to be seen in the inscription-frieze.

The inscription is from the Kur'ān, Sura 24, verse 35; a little more completely given than is usual on the lamps. "Allāh is the light of Heaven and Earth. His light is like a lantern in which there is a lamp The lamp is in a glass, which is like to a glittering star."

This fragment of a lamp was found in the city-mosque of Sultan Barkūk, in Cairo (the building of which was completed in 1386), and is now preserved in the Musée National de l'Art Arabe (Catalogue 1895, No. 59), along with another well-kept lamp (No. 30), which is chromo-lithographically reproduced by Prisse d'Avennes (L'Art Arabe, plate CXLIII). The latter is likewise covered on the body with the strong harmoniously arranged ornament and has the frieze of letters surrounding the mouth broken by six medallions of writing bearing the titles of Sultan Barkūk. Another lamp, quite similar to this, and also having the titles of that Sultan, but brought from a mosque in the Fayyūm, is now in the possession of Professor R. von Kauffmann, in Berlin.

The diameter of the mouth is 240 mm. Height 210mm.

XX, XXa, and XXI.

PILGRIM'S BOTTLE.

Yellow-greenish, fairly transparent glass.

This vessel, of highly original shape, is globularly protuberant on one side, and flattened on the other, which, for that reason, is known as the back. It is likewise flattened on the narrow sides, and at the bottom is strongly indented, to make up for the absence of a foot. The transition from the body to the short narrow neck is produced by an elegant concave sweep. Two thin ornamental handles are set on the shoulder and neck, each opposite to the other.

The disposition of the ornamentation is exceptionally rich and varied. The front side has upon its vertical centre two cartouches of unequal size, prettily silhouetted, filled with a symmetrical large ornament on a blue ground, and edged with red. Around these, on three sides, there is a handsome arabesque ornament, the twists of which end in animal heads. The flat surface of the back has a motif of stars designed in a circle, with a broad border strongly ornamented, through which winds a blue riband hither and thither. The flat surfaces of the sides are covered with large figured medallions on a blue ground, representing a harp-player and a tippler. The remaining space, on the shoulders of the vessel, is filled with hunting scenes—men on horseback chasing lions, hares, and waterfowl (perhaps wild geese?) on an arabesque ground; in which, on one side (the right, developed in plate XXI), a tree of peculiar style appears (compare plate IV).

The interstitial spaces below, near to the medallions, are filled with symmetrical ornament, unconfined by limits.

The whole design is carefully and finely outlined, and gilt. The enamels are thick, but laid on with unusual evenness: the blue of two exceptionally beautiful shades—in the medallions on the side, and the lower cartouche, it is dark blue; in the upper cartouche it is a clear blue.

This precious vessel, which was for centuries in the possession of a patrician family at Würzburg, is now the property of the British Museum.

The style of the figured decoration, and of the arabesques, points to a Persian origin; the manner of applying the enamel, and the character of the cartouche ornament, suggest the end of the thirteenth or the beginning of the fourteenth century.

The blue and the white enamel has fallen off in some places. The delicately lustrous gilding is rubbed away completely in the lower portion; and the red lines of the design have suffered in the same way; but the effect of the artistic work remains, in spite of all drawbacks, thoroughly charming.

Height 230 mm.

XXII and XXIIa.

SMALL MOSQUE-LAMP.

The glass is honey-coloured (in the original the tone is not quite so greenish, and is more transparent), thick, and fairly transparent, with numerous bubbles.

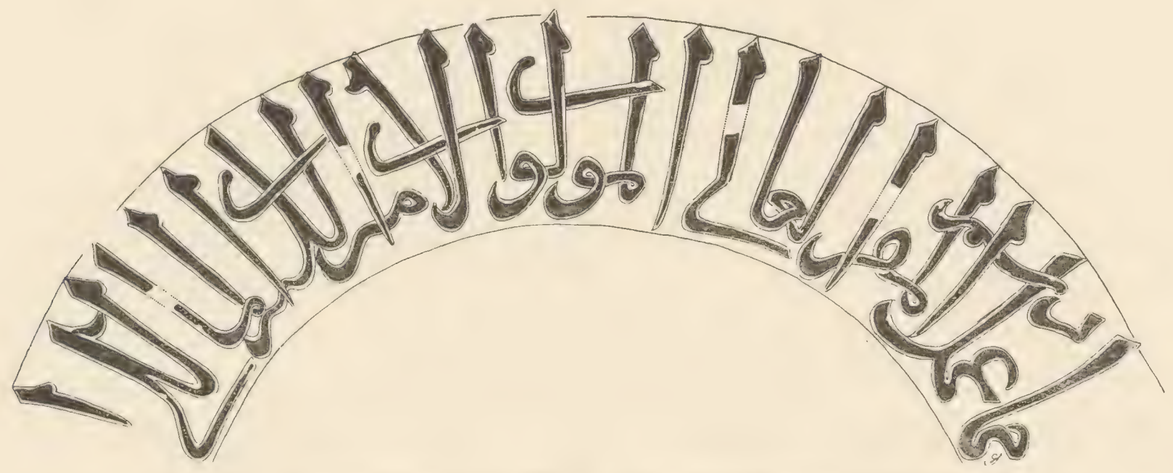


Fig. 53. *Inscription on Plate XXII.* (*One-third the size of the original.*)

The form is like that of the lamps on plates III, IX, XIV, XVI, and XVIII; but is deeply hollowed below, and strongly drawn inwards at the narrow part of the neck. The neck is of high funnel-shape, as in the example on plate XI.

The decoration consists of friezes and borders. The main frieze on the body is divided into six fields by the intervention of pointed medallions on bare spaces around the handles. The fields are alternately arranged, three times with large round writing imposed on a partly enamelled ground of twisted knot-work, and three times with ornamentally interlaced Cufic writing, on a blue ground, with leaf work left bare. The narrow shoulder-frieze is divided by a blue riband twining hither and thither, into small triangular fields, some of which are filled with enamelled flowers, others with filigree work. The neck is encircled, at the mouth and at the narrow part, by narrow borders of delicate design, and a broad frieze,

decorated with large, blue, slim, round characters, upon an enamelled intertwining knot-ornament.

The lower surface of the body (see Detail to XXII on plate XXIIa) is decorated by free flower-work, partly enamelled blue-white, red-white, and green-yellow, in which an encircled medallion, with ornament on a blue ground, occurs six times, and an inscription in round letters thrice.

The enamel is mostly thick, the blue on the body especially thick.

The whole vessel, from the indentation at the edge of the mouth to the foot, was gilt lightly. The naked glass-ground peeps only through the filigree and the delicately drawn ornaments, and through the intertwined pattern under the round writing.

The interlaced Cufic characters appear to have no meaning, and to be merely ornamental. The round writing on the body repeats constantly the one word "the Wise." The large inscription on the neck (fig. 53) runs thus: "This was prepared by order of his Highness the Lord, the great Amir, the Malikite." It is thus anonymous.

According to its make this lamp may belong to the first third part of the fourteenth century; but the complicated interlacement of the Cufic writing, and especially the exaggerated lankiness of the round characters, are suggestive rather of the end of the fourteenth century.

With the exception of slight damages to the enamel, and the almost complete disappearance of the gilding, the lamp is in good condition; and has a particularly elegant profile. It was acquired by its present owner, Baron Nathaniel de Rothschild, of Vienna, during a tour in Spain.

Height 280 mm.

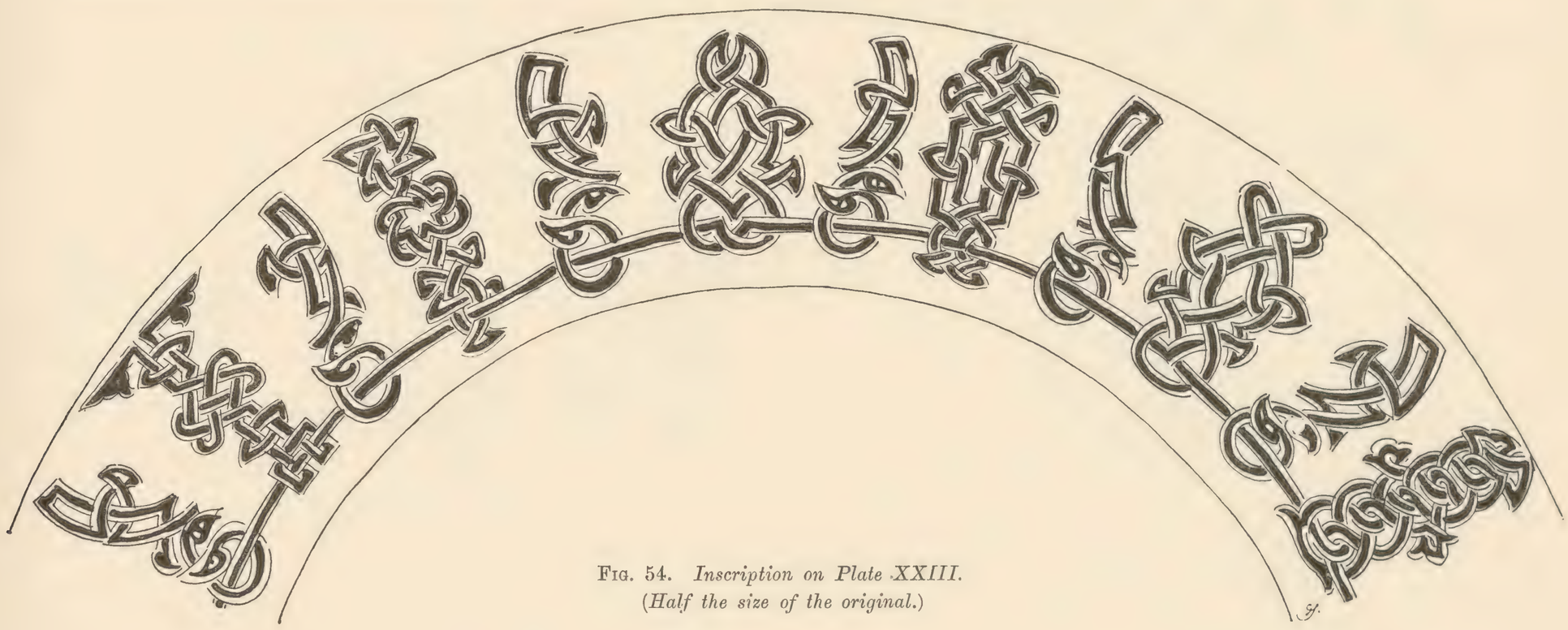


Fig. 54. *Inscription on Plate XXIII.*
(Half the size of the original.)

XXIII and XXIIIa.

LARGE MOSQUE-LAMP.

Smoky green glass, little transparent, very thick.

Similar in form to the lamps represented in plates III, IX, XIV, XVI, and especially XVIII, with very strong handles. The vessel has been somewhat deformed by the fire.

The distribution of the decoration on the upper surface of the body is produced by an endless blue band which leaves single-pointed medallions bare around the handles, and above them forms smaller enclosed triangular fields, decorated with enamelled trefoils. The large fields formed between the handles have in their middle an enamelled strongly conventionalised tree (compare plates IV and XXI), and the ground filled out with delicate golden flower-rows, in which we find little enamel and few outlines. Narrow ornamental filigree borders, with very slight outlines, encircle the mouth, the narrow part of the neck, and the broad part of the body. The broad neck-frieze is decorated with ornamentally interlaced large Cufic letters, upon an enamelled pattern of involutions.

The under-surface of the body (see Detail of XXIII, on plate XXIIIa) is decorated by six medallions set in an ornamental pattern of carelessly drawn blue-tipped flowers with few outlines. The medallions occur alternately, three of them having symmetrical ornament on a blue ground, three having ornamented blue borders, and one middle field in three divisions, filled in with pretty round writing.

The enamel is laid on very thickly, but much discoloured and smudged, especially round the neck, either as the result of chemically impure preparation, or by the action of the fire.

The whole vessel was gilt, excepting the ground of the filigree-ornamented borders, that of the flowery branches in the tree fields, and that of the flower-work on the lower part. Of the gilding, sufficient remains have been left in the places protected by the enamel-relief, but they are really smudgy and dull.

The interlaced Cufic inscription (fig. 54) cannot be read, and is probably only ornamental.

The medallion-inscription runs thus: "Glory to our Lord the Sultan al-Malik az-Zāhir, glory to his victory." It probably refers to the Malik az-Zāhir Abū Sa'īd Barkūk, and the lamp may have come from one of the mosques built by this art-loving prince, towards the end of the fourteenth century. It is at present in the collection of Captain Myers, in London, who acquired it some years ago from Linant Pasha, in Cairo.

The make of this vessel is very heavy, but the style of decoration renders it one of the most original.

Height 345 mm.

XXIV AND XXIVA.

MOSQUE-LAMP.

The glass is thick, yellow-brownish, clear, and fairly transparent (the original is somewhat lighter in tone than the reproduction).

In form it resembles the lamps on plates I, II, VIII, X, and XII. The foot is very much hollowed.

The decoration consists of several horizontal divisions. The mouth, the narrow part of the neck, the shoulder, the broad part of the vessel, the lower portion of the body above the foot, the setting of the foot, and the edge of the foot, are encircled by narrow borders ornamented with lightly designed flower-work, some of the borders sparely enamelled. Between the borders, ribands ornamented on a blue ground form bare pointed medallions round the handles. The fields thus produced from handle to handle are enclosed within broad isolating spaces, and are filled alternately with enamelled flower-work, or pretty filigree, and little birds. On the neck, between the borders, there are three large armorial medallions (two polo sticks), and fields (likewise isolated by broad spaces) containing blue round writing on an underlaid enamelled spiral ornament.

The lower surface of the body is adorned with flower-work, lightly outlined and sparingly enamelled in blue, red-white, and green-yellow. In the flower-work, six medallions are placed in alternate succession, three of them having the armorial symbol as above (two polo sticks), and three enclosed within a blue band; with filigree-ornament and a larger blue-enamelled motif in the middle (—see Detail to XXIV in plate XXIVA).

On the foot, there runs between the borders an uninterrupted frieze adorned with enamelled flower-work.

The enamel in the armorial fields is flat, although thickly laid on.

Fig. 55. *Inscription on Plate XXIV.*
(*Half the size of the original.*)

The entire design is gilt. The broad isolating spaces remained bare, as well as the ground of the filigree work, and of the lightly ornamented borders. The delicate transparent gilding is richly preserved, even close to the handles and the mouth.

The inscription (fig. 55) runs thus: "This was prepared by order of his Highness, As-Saifi al-Malik an-Nāsiri." The Amir for whom this piece of art-work was executed, may have been a mameluke of the Sultan Nāsir Muhammad, from Cairo. In any case, the lamp belongs, from its make, to the first half of the fourteenth century. It is now in the Musée National de l'Art Arabe, in Cairo (Catalogue 1895, No. 60).

The foot is damaged.

Height 340 mm.

XXV.

LARGE FLAGON.

Green, thick, but fairly transparent glass.

The form is similar to that of the bottle on plate VI, only less globular, and with long, slim neck. The profile is noble.

The decoration is effected in several horizontal divisions.

The lower surface of the body is bare. The broad part is encircled by two endless meandering bands, which intertwine at certain distances and form circular frames around six medallions bearing figures of birds on a blue ground; leaving in the intervals fields decorated with slim round letters. Broad isolating bare compartments surround these fields, as well as the mid-fields of the medallions. Above this frieze there is another, set with six medallions, alternately large and small (three of each size) framed within loose filigree work of star-pattern (similar to what appears in fig. 3). The larger medallions are of armorial character with emblematic signs; the smaller ones bear uncoloured designs upon a blue ground, of hawks (?) swooping upon smaller birds. These medallions are disposed above the lettered fields of the lower frieze. Between them intervene fields ruled off by isolating spaces, and ornamented with filigree patterns; which are arranged above the medallions of the lower frieze. Higher still is a meandering riband, and under the setting of the neck there is a band with running animals: two dogs (one of them is represented in fig. 57) which are chasing a hare, a gazelle, and some sort of small bear. These figures are superposed upon ornamentation on a blue ground.

The neck has at about half its height a broad frieze, ornamented with filigree, with borders of meandering bands. In little compartments, standing aloof above and below, there are narrow irregular filigree rings; over the setting of the neck a free-ending filigree ornament turned upwards; and near the mouth a wavy line of termination.

The enamel is laid on very thickly in the filling up of spaces, it is very uneven in the design, and very light in the volatile outlines of the filigree ornaments.

The whole design was gilt, as well as the setting of the neck, and the mouth above the line of termination; but noticeable remains of it are very few. The ground of the filigree ornaments, of the fields of writing, and the isolating spaces, as well as the foot and the lower part of the body, remained bare.

The inscription (fig. 56) is as follows: "His gracious Highness the Lord, the Mālikite, the Master, as-Saifi Jarji (?), Court-Marshal of our Lord al-Malik an Nāsir, may his victory be glorified and his power doubled." How we should read the name written "Jarji (?)" above is

Fig. 56.

questionable. But it is evident that the inscription refers to a mameluke of al-Malik Nāsir Muhammad, and is, if we are to judge from the manner of arranging the enamel, of some time in the period of his second reign, A.H. 698-708 (1299-1309). The slim round letters suggest the fourteenth century; but the whole character of the decoration, and the make, indicate the early part of that century. (See fig. 1.)

This rare vessel is in the South Kensington Museum.

Height 430 mm.

Fig. 57. *Detail of Plate XXV.* (*Original size.*)

XXVI.

MOSQUE-LAMP.

Glass, greenish and very thick; moderately transparent.

Similar in form to the lamp reproduced on plate XVII, but the body more protuberant, the neck more narrowed below, and the three handles broadly flattened at their lower attachment. The rolled foot is not quite even; the vessel has been somewhat deformed by the fire (this is not observable as it is presented).

The decoration consists of a broad frieze encircling the body at the height of the handles, and adorned with fine round letters enamelled in blue upon a plain ground. This frieze is framed within a narrow blue band, which similarly winds round the handles. The decoration also includes a broad frieze surrounding the neck, with round letters enamelled in white upon an underlaid and partly enamelled

branch-decoration on a blue ground. There is further filigree ornament, very finely and completely outlined, covering the narrow part of the neck and the shoulder, in proportionate arrangement (—there are twelve ornamental sections), with various single enamelled ornamental flower-motifs at the centres. On the lower part of the body (fig. 58) there are magnificently designed vine-clusters, somewhat conventionalised and pretentious, with green enamelled hearts in the leaves.

The enamel is thickly laid on, but the green and yellow have for the most part run flat. The outlining is fine and careful. The whole vessel was gilt, from the edge of the mouth to the roll of the foot; but in the filigree ornament —excepting the fields between the centres at the spring of the neck—and in the vine-branches the naked glass ground is visible. The gilding was very light and transparent; most of the remains of it have been left in the vine-branches and in the frieze of letters on the neck.

Fig. 58. *Detail of Plate XXVI.* (*Two-thirds the size of the original.*)

Fig. 59. *The Body-inscription on Plate XXVI.* (*Half the size of the original.*)

The inscription of this frieze is from the Kur'ān, Sura 83, verses 22, 24, and 25, with some variations from the received text (verse 23 is omitted): "Truly, the Just live in happiness. Thou seest upon their faces the radiance of happiness. They shall have fiery sealed wine to drink of."

The other inscription (fig. 59) reads thus: "Glory to

our Lord, the Sultan al-Malik al-Muzaffar the Wise the Just Rukn-ad-Dunyā-wa-d-dīn. God strengthen his victory . ."

Several Sultans bore the by-name of Rukn-ad-dīn (Pillar of the Faith), but we believe, from the character of the writing and the strong conventionalism of the vine-branches, we shall not be far wrong if we assign the inscription to the Sultan Malik Muzaffar Rukn-ad-din Baibars II, A.H. 708-709 (1309-1310), the rival of Malik Nāsir Muhammad (—his mosque, in Cairo, was built in 706). In any case, this work of art may be referred to the beginning of the fourteenth century.

The splendid vessel in question is in the collection of Captain Myers. It is the only one known to us in which the bottom part is decorated with a motif of starry arrangement (fig. 60).

Height 285 mm.

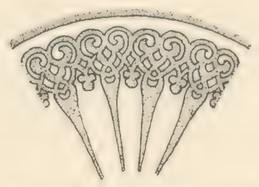


FIG. 60. *Detail of Plate XXVI.* (*Two-thirds the size of the original.*)

XXVII.

MOSQUE-LAMP.

Thick glass, of clear white-wine colour, the inner surfaces of the whole vessel enamelled in green; a style which we have only seen elsewhere in the foot-fragment of a unique lamp in the British Museum (Slade bequest). With numerous small and several larger bubbles.

In form it resembles the lamp in plate I and others, the straight funnel-neck very high, and the handles very massive.

The decoration consists exclusively of a red, gilt encircled by carelessly outlined borders ornamented with flower-work. The two on the neck, next the free sides, are edged with an unconfined ornament, which in simpler form is used above the setting of the foot, and as a fringe to the handle-frieze.

The under-surface of the body is adorned with three lettered shields quite similar to those on the neck, and between them has fields which contain floral designs (fig. 62).

FIG. 61. *Body Inscription on Plate XXVII.* (*Half the size of the original.*)

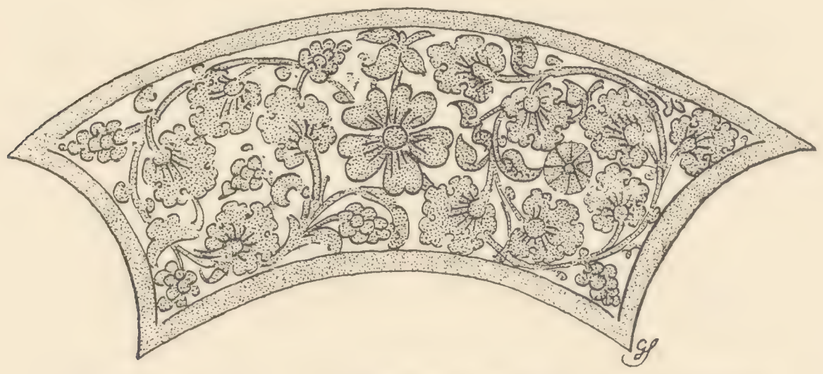


FIG. 62. *Detail of Plate XXVII.* (*The size of the original.*)

design, which extends in several horizontal bands over the whole vessel. Three of these bands are adorned, upon an underlaid serpentine pattern, with an inscription in round letters which looks like the work of an unpractised hand. The script-frieze half way up the neck is broken by three shields bearing, in a transverse bar, a small inscription in pretty round letters; the similar frieze on the body is broken by six plain pointed fields surrounding the handles. The mouth, the narrow part of the neck, and the shoulder are

The red design is very uneven and unsure in its drawing. The inscriptions on the neck and the body (fig. 61) both say (with slight variations) the same thing: "Glory to our Lord the Sultan al-Malik an-Nāsir, Nāsir-ad-dunyā wa-d-dīn" (Helper of the world and the Faith). The small inscription on the shields contains the first three or four words of the same text.

The inscription probably refers, if we consider the roughness with which the decoration is executed, to the

Sultan Hasan (—see the inscription of the lamp on plate II, fig. 43). Otherwise it might be assigned to his father, the Sultan Malik Nāsir Muhammad of Egypt. The inscription on the foot repeats several times the one word, "the Wise."

The fashion of the ornament is certainly very heavy and clumsy, but the principle which inspired it is very effective, as may be seen by looking at the places in which the gilding has been well kept.

In the possession of Captain Myers.

Height 280 mm.

XXVIII.

LITTLE MOSQUE-LAMP.

Dark blue glass of moderate thickness.

The round body is globular, somewhat drawn out in relation to its height, resting on a rolled foot, with three pretty handles, and high hollowed funnel-neck. The handles are of special form; a long-drawn setting below, a very minute ear above.

The decoration on the body is effected by means of a white endless band, encircling the full breadth of the vessel, and the narrow part of the neck. It winds around the centres between the handles, forming medallions above and below, an oblong horizontal cartouche in the middle, and bare pointed fields around the handles. In the cartouches there is round writing on an underlaid serpentine ornament formed by a single spiral line. The medallions enclose ornamental symmetrical flowers, partly enamelled. On the remainder of the surface there are pretty rows of flowers, tipped with green at the flower-core. The lower part of the body is decked with an ornamental hanging, which reminds us of a conventional fringe, the interlacements in it being enamelled in white.

The mouth and the narrow part of the neck are encircled with borders of carefully designed flower-work, and on the free sides there is unconfined ornament, the interlacements of which are also partly enamelled. Halfway up the neck there is a free-bordered frieze, with white round writing upon an underlaid serpentine ornament, produced by a double line, and partly enamelled in colour.

The enamel is thick in the ornamentation and on the band; in the writing it is unequally laid on; the red design, especially in the flower-borders, carefully and thoroughly imposed upon an outline originally gilt. The handles, with the pointed fields around them, were fully gilt; besides these, only the writing in the cartouches and the flower-work with its ornamentation, so far as it exhibits closed forms, or has double-lined intervals. There are only scattered remains of the gilding left. The inscription on the neck is from the Kur'ān, Sura 17, verse 111: "Praise be to God, who has not begotten a son, who hath no partner in the Kingdom, nor hath need of a protector" (the characters are similar to those on the blue lamp of the Amīr Arghūn).

The inscription on the body (fig. 63) runs thus:

Fig. 63. *Inscription on the Body. Plate XXVIII.* (*Half the size of the original.*)

"Glory to our lord the Sultan al-Malik al-Muzaffar the Wise, the Just, the Pillar of the World and of the Faith. God strengthen his victory." The inscription probably refers to the Sultan Baibars II (see XXVI.), A.H. 310.

The vessel is damaged. A small piece is broken off the setting of a handle (—the further one in our illustration), and the belly has in one place several star-shaped splinters, caused by a knock, although the splendid beauty of the lamp has suffered nothing in consequence. This mishap is not visible in our reproduction, because it is on the back of the vessel.

In the possession of Mr. Charles Mannheim, in Paris.

Height 268 mm.

XXIX.

LARGE BOTTLE.

Clear brownish, thick glass.

A round protuberant body, somewhat compressed in the vertical direction; rising with an elegant curve into a long slim neck, which narrows gradually to the topmost third part of its height, and there is clasped by a strongly projecting collar. The mouth is somewhat widened. It rests on a high hollowed foot.

The foot and the under part of the body are bare. On the upper part of the body is a broad frieze, adorned with large blue round writing, upon an underlaid enamelled serpentine ornament. It is broken by three large medallions, with filigree borders and symmetrical ornament on a blue ground in the middle field. Above it, on the shoulder of the vessel, is a narrow frieze, again broken by three smaller medallions enclosing birds, on a blue ground. The fields of this frieze (fig. 64), which are disposed to harmonise with the centres of the large medallions, are occupied by figures of rushing winged lions, with human faces, upon an ornamented and partly enamelled ground.

On the neck there are two borders—a broad one low down, a narrow one under the collar—which contain rows of leaves and filigree ornament. Between them, narrow blue bands form an uneven network, the interstices of which are alternately filled with lightly outlined symmetrical ornament, in the form of enamelled flowers. The mouth is encircled by a frieze with blue round writing, upon a ground similarly ornamented to that of the principal frieze.

The enamel was thickly laid on, and has fallen off here and there. The contours and the outlines are delicate and light. The whole design, with all its intervening spaces, was gilt, as well as the ground in the friezes of writing, and the network interstices with enamelled flowers. The gilding was very light and transparent. A considerable number of weakly lustrous traces have remained.

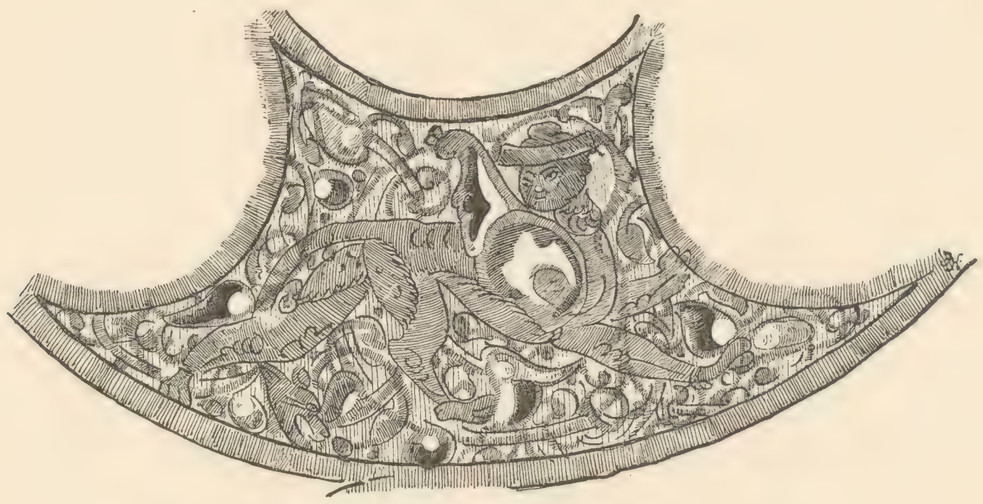


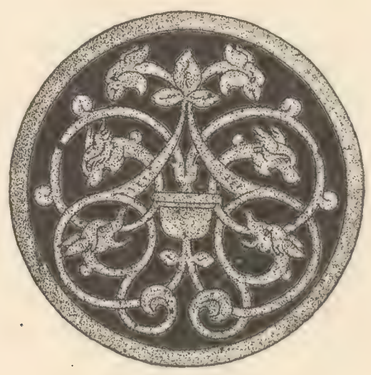
Fig. 64. *Detail of Plate XXIX.* (*The size of the original.*)

The large inscription reads as follows: "Glory to our Lord the Sultan the King the Wise the Warrior." The inscription on the neck repeats the first words of the preceding: "Glory to our Lord the Sultan."

Judging from the character of the decoration, and the make of the vessel, we should assign it to some time between the thirteenth century and the middle of the fourteenth.

It belongs to Mr. Vapereau, in Paris.

Breadth 240 mm.; height 475 mm.



SMALL JUG.

XXX.

Clear brownish glass, of moderate thickness.

The body is round and globular, somewhat compressed in a vertical direction; with indented base. The neck is broad and high, slightly widening as its rises; very much drawn in at the spot from which it springs (—see No. 5, fig. 42). Above the narrow part of the neck a wooden ring is laid round as a collar, to which rises up a whole garland of ornamental forms, set on the shoulder of the vessel. An elegant handle, of the colour of white wine, is set on the body, and drawn out to about half the height of the neck, where it attaches itself in a billowy curve. The foot is smelted in ring-form (—see fig. 42).

The foot and the under-surface of the body are bare. All the remaining surface of the body is decorated with a frieze, which exhibits six polo-players on horseback, and (at the handles) one which has a white-haired and white-bearded servitor, bearing a dish laden with fruit, and standing upon a rich ornamental pattern of branches, on a blue ground. (This is the only bearded figure—and the beard is a full one—which we have met with in all the figured decorations of the glass-work we are describing.) The neck, in its whole breadth, is divided by a twining endless band of white into three regular fields, with symmetrical heavy ornamentation on a blue ground; and has borders, above at the mouth, and below just over the collar, of narrow intertwining bands.

The enamels are moderately thick, the white alone is laid on heavily. The whole design is gilt; as is also the narrow part of the neck with the collar, and the garland of ornamental forms. The stripes immediately outside the interlaced border-bands are bare, but the edge of the mouth above is gilt. Probably the handles were also gilt, at least partly, since near the billowy curve in which the handle ends, there are undeniable traces of gold still visible. The gilding is pale, and of unusually feeble lustre.

The character of the figured decoration is suggestive of Persian ʻIrāk, that of the heavy ornament indicates the end of the thirteenth century; but the rich use of enamel in the filling seems to point to the fourteenth century.

This vessel, which is unique in its way, once adorned the collections of the Duke of Hamilton. The "Illustrated Priced Catalogue, the Hamilton collection, Paris, Librairie de l'Art, London, Remington and Co." in its conclusion, describes the vessel as Venetian glass. At the auction of the renowned collections it passed into the hands of Baron Alphonse de Rothschild, in Paris, at the price of £2730. With the exception that some parts of the enamel have peeled off, it is in excellent condition. Height 185 mm.

XXXI.

LARGE GOBLET.

Yellow-brownish glass, clear, thick, and transparent. Numerous bubbles.

The slim and round form, standing on a broad flat foot, is cylindrical in its lower part; then rises gradually, widening into funnel shape (—more markedly at the mouth). The bottom is pressed inwards, in the form of a navel (No. 3, fig. 42); the mantle is ribbed upwards, in soft, billowy curves, from the edge of the foot to just under the widening at the mouth. The whole vessel is somewhat warped from its true vertical axis, and bowed, by the action of the fire. (This is not to be seen in our reproduction.)

The decoration, which is not firmly done, consists in the first place of a main frieze, with narrow filigree-ornamented borders. The frieze is divided by three medallions, enclosing enamelled figures of horsemen (—apparently polo-players), on a bare ground, into so many fields, with symmetrically arranged and partly enamelled ornament. Also of a narrower frieze, in the lower third part, broken by three large medallions similarly enclosing figures of horsemen, but upon a filigree-ornamented ground. The fields of this second frieze are divided by a blue band, twining hither and thither, into triangular interstices

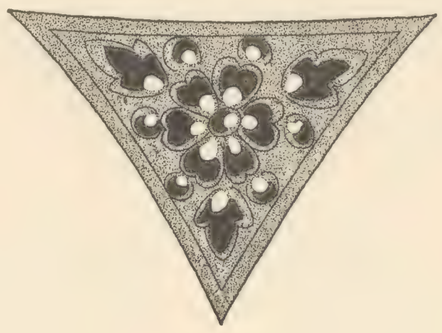
adorned with enamelled trefoils or filigree patterns. At half the height, between the mouth and the main frieze, the vessel is encircled by a narrow band enclosed within strong gold border lines, with an outlined chain of flowers in enamel, on a ground filled up with delicate gold filigree. At the mouth, and above the flat foot, there are still further ornamental bands of filigree, lightly outlined, with free endings on the inner side, and having on the outer side a strong gold bordering line.

The enamels are thick, in places very thickly laid on; the outlines are uncertain and irregular. The whole design was gilt; all the open places, the medallions of horsemen in the main frieze, and the trefoil-fields in the under frieze, were fully gilt; in other respects the naked glass peeped through the ornament. Of this gilding, however, nothing remains; the only thing left behind is the paleness which marks the once gilt places.

This great-sized drinking-glass seems, from the character of the figured decoration, to have been the work of Persian hands; and, by its make, appears to belong to the thirteenth century.

It is at present in the possession of Adalbert, Ritter von Lanna, in Prague.

Height 300 mm.



XXXII.

LARGE TUMBLER.

The glass is clear, grey-blown, very thick, and fairly transparent.

The form, somewhat rounded at the bottom, is cylindrical up to the broad collar in the upper third part of the glass; the mouth very slightly widened. The bottom is pressed inwardly; the foot is smelted in ring-shape (as on the little jug, No. 5, fig. 42).

encircling the mouth, there are smaller borders of the same kind, which wind into four large medallions arranged over the centres of the fields in the large frieze below. The places where these borders meet and intertwine, have an enamelled motif disposed in proper harmonious relation, upon a bare ground; the middle-fields each containing an enamelled flower with peculiarly conventionalised stamens on an

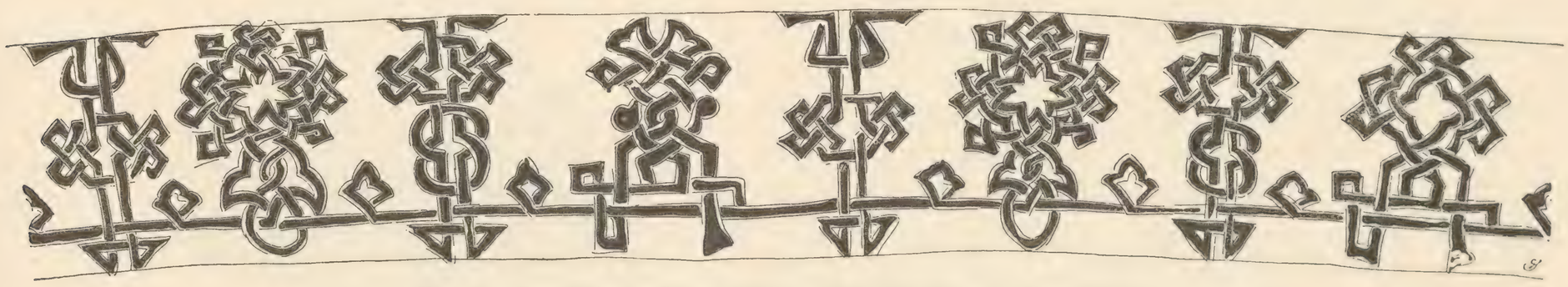


Fig. 65. *Inscription on Plate XXXII.* (*Two-fifths the size of the original.*)

The whole upper surface is ornamented. Underneath the collar, between two lightly designed borders of blue-tipped flower-work, which are broken by four small medallions, containing enamelled flowers on a filigree ground, stretches a frieze splendidly decorated with a blue Cufic inscription, elaborately interlaced, upon an enamelled ground of serpentine pattern. Above the collar, and

ornamental ground. The fields between the large medallions are framed within a narrow blue band which, twining in the middle, form medallions decorated with enamelled flowers upon an ornamental ground. The fields are, for the rest, filled up with ornamentation, in which, on both sides of the twined medallions, carelessly outlined birds are designed.

The enamel is for the most part laid on thickly, and

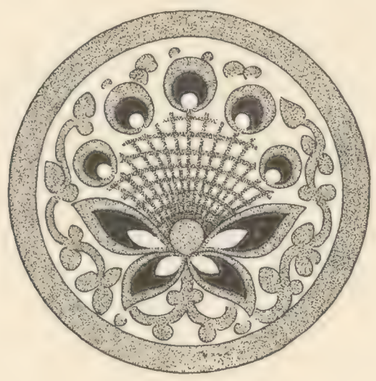
has only fallen off in a few places. The blue is remarkably deadened.

The whole design was gilt; the main frieze, all interspaces, and the interlacement of the borders to the large medallions being fully gilt. Even the outermost edge of the collar seems to have been gilt. The gold, which is of unusual transparency, has been well preserved.

The Cufic inscription (fig. 65) must be merely ornamental. If we may judge from its mode of interlacements, and the fashion of the decoration, the work of art before us belongs probably to the last thirty years of the fourteenth century.

This splendid vessel is preserved in the formerly Electoral Löwenburg of Wilhelmshöhe, near Cassel (along with the goblet reproduced in fig. 27).

Height 265 mm.



XXXIII.

DEVELOPED DECORATION FROM THE MANTLE OF THE GOBLET Fig. 27.

The group of enamelled and gilt old-Oriental drinking glasses, which have been seen in Europe for centuries, has few examples equally charming with the goblet, fig. 27, from which we give the development of its figured ornament on plate XXXIII, and the exact profile of the vessel in fig. 42, No. 4.

The glass is moderately thick, lightly smoked, and of a transparency which is unusual in Oriental glass.

The design of ornament was first drawn in gold, and only some contours in red were added afterwards. The places covered with enamel have had only gold outlines, which give a particular softness to the decoration.

The following is the detail of colouring:—The Tambourine-player wears a dress with white-blue-red stripes, and has a green-red shawl, out of which his turban is rolled, yellow shoes, and a white-covered tambourine. The lute-player has a blue gold-spotted dress, with a white turban, and red shoes; and his lute is striped with red and yellow. The vessels included in the picture are white with green-red fruits, red with green-yellow fruits, red-blue, and white-red. The plants have green leaves, with red-yellow fruits. The six water-birds at the funnel-mouth of the goblet (fig. 27) are enamelled alternately white, red, and blue, and only outlined in gold.

The enamelling is very careful, and moderately thick; only the white and the yellow are laid on thickly. The last is baked, and exhibits several burst bubbles.

The gilding was of uncommon lightness and transparency. It has now completely disappeared.

This charming drinking-vessel, 230 mm. in height, is preserved, along with the tumbler reproduced on plate XXXII, in the former Electoral Löwenburg at Wilhelmshöhe, near Cassel.

The costume of the figures is suggestive of Syria (?). End of the thirteenth, or fourteenth century.

Height 230 mm.

XXXIV.

DETAILS OF THE ORNAMENTATION OF A LARGE MOSQUE-LAMP.

We have decided to add this plate, not because the lamp (fig. 66) would exhibit any special type, but because

Fig. 66. *Lamp of the Cup-bearer Kūsūn. Sec. XIV. In the collection of Charles Mannheim, Paris.* (*About one-fourth the size of the original.*)

the filigree and flower-work is rarely seen so carefully outlined; and thus the detail-plate is very instructive with regard to the character of the decoration.

The colour-effect in this finely profiled vessel, 360 mm. in height, is relatively simple. It is of clear glass, with a yellowish-grey cloudiness; and in its decoration blue dominates. The ground of the fields of writing on the neck, the medallions, and the triangles on the shoulder, the characters of the large inscription on the body, the twining band on the lower part of the body, and various spots in the enamel ornamentation here and on the foot, are enamelled in blue.

"Work of the poor slave 'Ali son of Muhammad ar-Ramaki (?) God protect him."

Besides the artist's signature here given, we know only (as we have already remarked elsewhere) of one other, amongst specimens of this kind of glass-work. It is the signature on the foot-edge of the lamp from the collection of Rostovitz Bey, in Cairo, which has been described by Artin Pasha in the Bulletin de l'Institut Egyptien (No. 6 among the photographs of lamps annexed to the memoir).

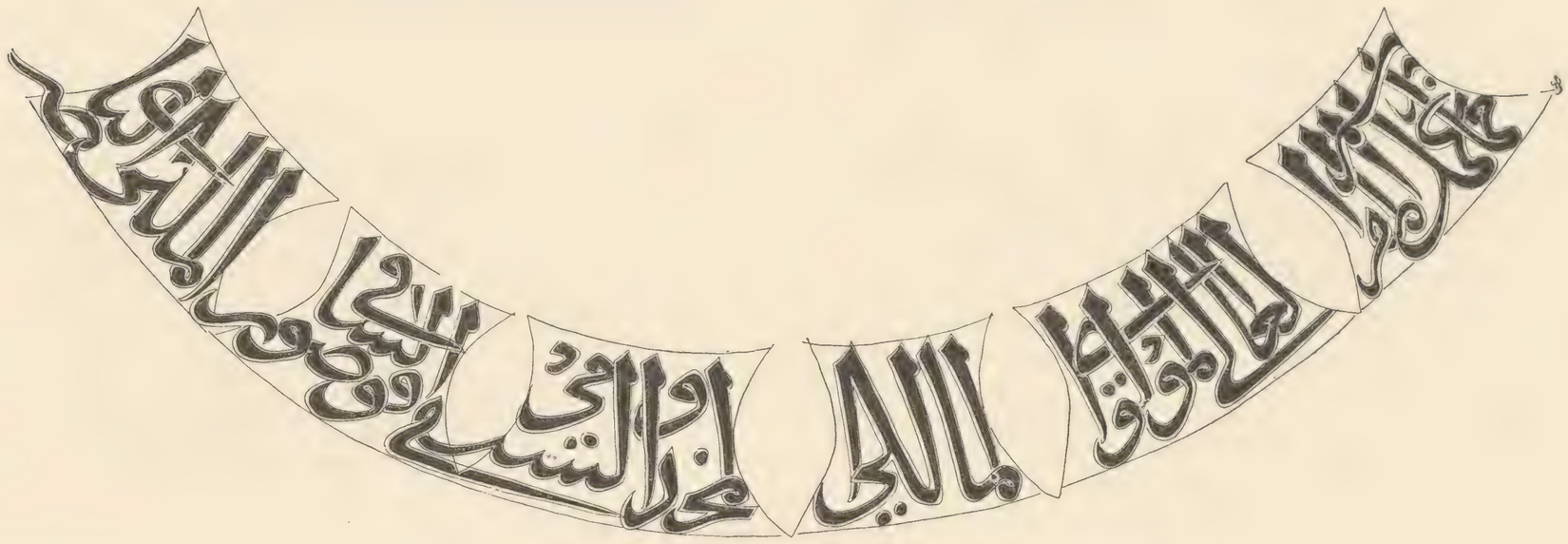


Fig. 67. *Inscription on Plate XXXIV.* (*Half the size of the original.*)

The inscription on the neck is from the Kur'ān, Sura 24, verse 35, the beginning. The inscription on the body (fig. 67) reads thus: "This was prepared by order of his Highness, the Maulawi, the Māliki, my Lord As-Saifi Kūsūn, the cup-bearer of al Malik an-Nāsir." The cup-bearer of the Sultan al-Malik an-Nāsir Muhammad is a personage of historical note. His fine mosque in Cairo,

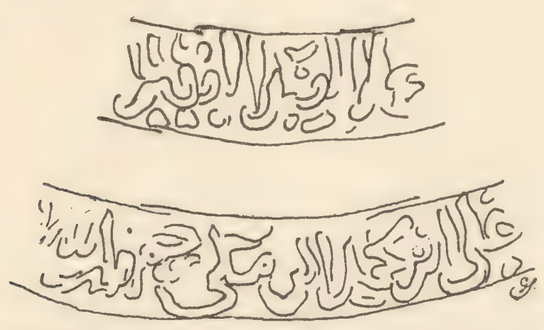


Fig. 68. *Detail* (*the Artist's signature*) *to Plate XXXIV.* (*The original size.*)

built in A.H. 730 (1329-1330), is now for the most part a ruin. This lamp undoubtedly came from it.

The most interesting feature of the vessel is, however, the artist's signature, placed between the filigree and leaf ornament, on a narrow band which encircles the foot, immediately under its setting (fig. 68). It runs thus: There, too, 'Ali son of Muhammad' mentions himself as performer of the work. The local or tribal designation is uncertain, but Artin Pasha reads it as "Ameki," which seems to be identical with our "Ramaki." Thus we may assume that the two lamps were produced by one and the same artist, who did his work about A.H. 730. Besides, if we remember rightly, the lamp of Rostovitz Bey is outlined with the same careful accuracy as the one we have described —which is in the possession of Charles Mannheim, in Paris.

In the armorial cartouche there stands a red chalice in a yellow fess. The upper field, or chief, is golden. A similar bearing is found on a lamp belonging to Captain Myers, which we here reproduce in the final vignette (fig. 69).

Fig. 69. *Armorial Medallion on a Mosque-lamp. Collection of Captain W. J. Myers, London.*

CHRONOLOGICAL REVIEW
OF DATEABLE OLD-ORIENTAL GILT AND ENAMELLED GLASS-VESSELS

Small Pilgrim's-bottle, figs. 6 and 7 Beginning of Sec. XIII

With armorial bearing (an Eagle with slit breast) and the titles of the Malik Sālih Nāsir-ad-dīn Mahmūd ibn Muhammad ibn Urtuk, about 1217.

(Reproduction of the inscription, in the owner's copy, as final vignette of the article by George Marye: L'Exposition d'Art musulman, Gazette des Beaux-Arts, 3e période, tom. XI).

Collection of Hakki Bey, Paris.

Goblet of Charles the Great (so-called) . . Sec. XIII

(Gerspach, L'Art de la Verrerie, figs. 46 and 47).

Musée de la ville de Chartres.

Goblet of the Eight Priests (so-called), fig. 24 . Sec. XIII

Musée de la ville, Douai.

Goblet, fig. 26 . . . . . Sec. XIII

Possessor unknown.

Dish on a high foot . . . Second half of Sec. XIII

With the armorial bearing of Badr-ad-dīn az-Zāhiri, commander of the troops of the Sultan Baibars I (1260-1277). (Gerspach, in the work cited above, figs. 44 and 45).

Formerly in the possession of Charles Schefer, in Paris; now in an American collection.

Mosque-lamp, plate XV.

Figs. 49, 50, 51 . . . . . end of Sec. XIII

Made for the grave of the Sultan Malik Ashraf Salāh-ad-din (Khalīl, 1290-1293).

Musée National de l'Art Arabe, in Cairo. Catalogue 1895, No. 12.

Large Bottle, figs. 22 and 23 . . . about 1300

With armorial bearing (a five-petalled Rosette) and an inscription bearing the names of the Sultan Malik Mu'ayyad Dā'ūd, fourth Sultan of the Rasulide dynasty in Yemen (1297-1321).

Formerly in the Spitzer (?) collection in Paris; now in the possession of Dr. Max Strauss, in Vienna.

Mosque-lamp . . . first thirty years of Sec. XIV

With an inscription bearing the names of the Sultan Malik Nāsir Muhammad (Ibn Kalāwūn), who reigned during 1293-1294, 1299-1309, and 1310-1341. During the second period of his reign he built his mosque—the so-called Nāsiriyya—in Cairo. During the final period he built the mosque an Nāsir in the citadel.

Musée National de l'Art Arabe, in Cairo. Catalogue 1895, No. 61.

Mosque-lamp . . . first thirty years of Sec. XIV

With armorial bearing (a sabre), and an inscription bearing the same names as the preceding (Gerspach, fig. 50).

Collection of Madame Edouard André, in Paris.

Mosque-lamp . . . first thirty years of Sec. XIV

With armorial bearing (a chalice, Rogers Bey: Le Blason chez les Princes Musulmans de l'Egypte et de la Syrie, fig. 23—Bulletin de l'Institut Egyptien, 1860), and an inscription bearing the same names as the preceding.

Cited by Gerspach, p. 112.

Collection of Charles Schefer, in Paris.

Large Bottle, plate XXV.

Figs. 56 and 57. . . first thirty years of Sec. XIV

With armorial bearing (emblematic), and an inscription bearing the name of a Court-marshal of the Sultan Malik Nāsir (Muhammad).

South Kensington Museum, London.

Mosque-lamp, plates XXIV and XXIVA.

Fig. 55 . . . . first thirty years of Sec. XIV

With armorial bearing (two polo-players), and an inscription bearing the name of Saifi (or Saif-ad-dīn), mameluke of the Sultan Malik Nāsir (Muhammad).

Musée National de l'Art Arabe, in Cairo. Catalogue 1895, No. 60.

Mosque-lamps . . . first thirty years of Sec. XIV

Described by Mr. Nesbitt as made in the time of the Sultan Malik Nāsir Muhammad ibn Kalāwūn (and some of his successors).

(Catalogue of the Collection of Glass, formed by Felix Slade, Esq., 1871. Pp. xxviii, xxix.)

Mosque-lamp 1310

With the titles of the Sultan Baibars II (1309-1310) (Henri Lavoix: La Collection Albert Goupil, Gazette des Beaux-Arts, 2e période, tom. XXXII, p. 303—a photogravure in the Revue des Arts Décoratifs VIII, No. 3).

Formerly in the collection of Albert Goupil, now in the Musée des Arts Décoratifs, Paris.

Mosque-lamp,* plate XXVIII, fig. 63 . . . 1310

With the same titles of the Sultan Baibars II.

In the collection of Charles Mannheim, Paris.

Mosque-lamp, plate XXVI, figs. 58, 59, 60 . . 1310

With the same titles of the Sultan Baibars II.

Collection of Captain W. J. Myers, London.

Mosque-lamp, plate XVII, fig. 52 . soon after 1310

For the grave of the Amīr Salār (†1310).

Musée National de l'Art Arabe. Catalogue 1895, No. 29.

Mosque-lamp* . . . . . about 1320

With an inscription bearing the name of the Amīr Arghūn (died A.H. 731 = 1331). Among the many titles of the inscription we find that of a viceroy (nā'ib as-sultanat al-mu'azzama), which office the Amīr took up in A.H. 712, again in 716, and further, on the authority of a trustworthy passage cited by Max van Berchem, in 720. In 716 he made the pilgrimage to Mekka and Medina, where he is said to have erected several religious edifices. The traveller Ibn Batūta met in 726 or 727 with an Arghūn, as Governor in Aleppo, who, from his titles, must have been the same personage. For this conjecture there is also confirmatory evidence in Makrīzi's biography of the Amīr Almās (Khitat, Vol. II, p. 307), as follows:—"When the Amīr Arghūn was sent as Governor to Aleppo, and the office of vicegerent became thereby vacant . ." The Amīr must therefore have given up the vicegerency between A.H. 720 and 726, and the lamp which bears that title must consequently have been made sometime between 716, when he began to build, and 726 (about 1320).

(An etching on p. 286 of the Gazette des Beaux Arts, 2e période, tom. XXXII.—The Inscription: Henri Lavoix, pp. 303-304.)

The original was formerly in the collection of Albert Goupil. There is a copy in the Musée des Arts Décoratifs, Paris.

Mosque-lamp, plate XXXIV.

Figs. 66, 67, and 68 . . . . . about 1330

With armorial bearing (chalice), signature of the artist, and inscription bearing the name of Kūsūn, the cup-bearer of the Sultan Malik Nāsir Muhammad. His mosque, in Cairo, was built in 1329-1330.

Collection of Charles Mannheim, in Paris.

Mosque-lamp . . . . . about 1330

With the same inscription as on the preceding (Max van Berchem, Corpus, I, 179).

Formerly in the possession of Charles Gérôme, in Paris.

Mosque-lamp . . . . . about 1330

With inscription bearing the name of the Amīr Almās (†1333) (Stanley Lane-Poole, The Art of the Saracens in Egypt, p. 250).

Formerly in the possession of Linant Pasha, Cairo.

Mosque-lamp . . . . . about 1330

With armorial bearing, signature of the artist, and inscription with the name of the Amīr Almās.

(Artin Pasha: Description de six Lampes de Mosquée, Bulletin de l'Institut Egyptien, 1866, No. 6.)

Collection of Rostovitz Bey, Cairo.

Mosque-lamp . . . . . about 1340

With armorial bearing (a die, Rogers Bey, fig. 39) and inscription with the name of the Amīr 'Ali al-Māridāni, mameluke of the Sultan Malik Nāsir Muhammad; from his mosque built in 1338-1340.

Musée National de l'Art Arabe, Cairo. Catalogue 1895, No. 42.

Mosque-lamp . . . . . about 1340

With armorial bearing, fig. 14 (a die), and inscription with the name of the Amīr Akbughā (†1343), mameluke of the Sultan Malik Nāsir Muhammad.

(Stanley Lane-Poole, fig. 93, p. 256.)

South Kensington Museum, London.

Mosque-lamp. . . . . about 1340

With armorial bearing (Eagle, a chalice in base, Rogers Bey, fig. 45), and inscription with the name of Tukuzdimur (†1345) the "sitting" State-Councillor (Amīr Majlis) of the Sultan Malik Nāsir Muhammad.

(Stanley Lane-Poole, p. 259.)

British Museum.

* Dark-blue glass.

Large Bottle 1345-1346

With armorial bearing (Eagle, a chalice in base), and inscription with the name of an Amīr of the Sultan Malik Kāmil Saif-ad-dīn Sha'bān (1345-1346).

(La collection Spitzer, Verreries, No. 5, pp. 80-81, plate III.)

Formerly in the Spitzer collection, previously Albert Goupil's (?), now in the Musée du Louvre.

Mosque-lamp 1355-1356

With armorial bearing (a chalice, Rogers Bey, fig. 22), and inscription (Rogers Bey, p. 112) giving the name of the Amīr Shaikhu (†1356), mameluke of the Sultan Hasan. His mosque was built in 1355.

Formerly in the possession of Linant Pasha, now, by the presentation of Rostovitz Bey, in the Musée National de l'Art Arabe, Cairo. Catalogue 1895, No. 76 (?), plate XI. (There was probably an inscription, but nothing to represent it is visible in the plate.)

Mosque-lamp 1355-1356

With armorial bearing (a chalice), and an inscription bearing the same name as the preceding (Lane-Poole, pp. 258-259).

British Museum (Slade Bequest).

Mosque-lamp 1355-1356

With armorial bearing (a chalice), and inscription bearing the same name as the preceding (La collection Spitzer, Verreries, No. 2, p. 79).

Formerly in the Spitzer collection.

Mosque-lamp, plate XXVII, figs. 61 and 62 . 1293-1361

With inscription bearing the name of the Sultan Malik Nāsir-ad-dunyā wa-d-dīn (Muhammad or Hasan). Whilst the distribution of the ornament and the character of the writing seem to indicate the first or second regnal period of Muhammad, the make of the vessel, and the painting of the whole inner surface with (green) enamel, point rather to the time of Hasan. By the lack of firmness in the shape of the written characters, we are reminded of the writing on Khalīl's lamp, plate XV, fig 50.

In the collection of Captain Myers, London.

Mosque-lamp . . . . . about 1360

With inscription bearing the name of Sultan Hasan (1347-1351 and 1354-1361). His large mosque, in Cairo, was built in 1356-1359.

(La collection Spitzer, Verreries, No. 1, pp. 77-78, plate I.)

Formerly in the Spitzer collection; now in the Musée du Louvre.

Mosque-lamp . . . . . about 1360

With inscription bearing the same name as the preceding (Nesbitt, p. xxviii).

In the Magniac collection, London.

Mosque-lamp, plate II, figs. 43 and 44 . . about 1360

With inscription bearing the same name as the preceding.

Formerly at Miramar, now in the Natural History Hof-Museum, at Vienna.

Mosque-lamp. . . . . about 1360

With inscription bearing the same name as the preceding; from a mosque in the Fayyūm.

In the Kaufmann collection, in Berlin.

Twenty-one Mosque-lamps . . . . about 1360

With inscriptions bearing the same name as the preceding; from Sultan Hasan's large mosque in Cairo.

Musée National de l'Art Arabe, Cairo. Catalogue 1895, Nos. 49, 50, 51, 52, 53, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 77, 78, and 79.

Two Mosque-lamps 1363-1367

With inscription bearing the name of the Sultan Malik Ashraf Nāsir ad-dunyā wa d-dīn Sha'bān (1363-1367).

Musée National de l'Art Arabe, Cairo. Catalogue 1895, Nos. 13 and 14.

Mosque-lamp, plate VIII, figs. 47 and 48 . 1363-1367

With inscription bearing the same name as the preceding; from Sha'bān's mosque in Cairo, built in 1363.

Musée National de l'Art Arabe, Cairo. Catalogue 1895, No. 15.

Mosque-lamp, fig. 18 1382-1399

With inscription bearing the name of the Sultan Malik Zāhir Abū Sa'id (Barkūk)—Henri Lavoix, p. 303.

Formerly in the collection of Albert Goupil, Paris.

Mosque-lamp, plate XXIII, XXIIIA, and fig. 54 1382-1399

With inscription bearing the name of the same Sultan (Barkūk).

No. 3 of the article of Artin Pasha, Description de six Lampes de Mosquée, Bulletin de l'Institut Egyptien, 1886.

Formerly in the possession of Linant Pasha, at Cairo; now in the collection of Captain Myers.

Mosque-lamp 1382-1399

With a similar inscription to that on the preceding; from a mosque in the Fayyūm.

Kaufmann collection, at Berlin.

Mosque-lamp, plate XVIII. . . . 1384-1399

With a similar inscription; from the mosque of Sultan Barkūk, the so-called Barkūkiyya, built in Cairo in 1384-1386.

Musée National de l'Art Arabe, Cairo. Catalogue 1895, No. 24.

Fifteen Mosque-lamps 1382-1399

With inscriptions bearing the name of the same Sultan (Barkūk); mostly from his town-mosque, the Barkūkiyya, built in 1384-1386. His sepulchral-mosque, in the so-called "Graves of the Khalifas," was begun in 1382, and finished in the time of his son Faraj, in 1410.

Musée National de l'Art Arabe, Cairo. Catalogue 1895, Nos. 21, 22, 23, 25, 30—Plate XI (Presse d'Avennes, L'Art Arabe, plate CXLIII) 31, 40, 41, 43, 44, 45, 46, 47, 48 (merely the funnel of a lamp), and 54 (badly damaged).

Fragments of Mosque-lamps 1384-1399

With inscriptions bearing the name of the Sultan Barkūk. Found under a thick layer of dust at the time of the restoration of the Barkūkiyya, in 1892, in a high niche under the cupola.

Musée National de l'Art Arabe, Cairo. Catalogue 1895, No. 84.

Mosque-lamp . . . . . about 1400

With armorial emblem (a sword), and an inscription bearing the name of the Amīr Yalbughā, restorer of the mosque al-Akmar in 1397.

(Lane-Poole, p. 261.)

In the Dixon collection, London.

Mosque-lamp 1438-1453

With inscription bearing the name of the Sultan Jakmak.

(Gerspach, p. 112.)

The present owner unknown.

Mosque-lamp . . . . . about 1442

With armorial bearing (a sword, hieroglyphs, a chalice, and two unknown emblems), and inscription with the name of the Amīr Kānibāi al-Charkasi. His mosque, in Cairo, under the citadel, close to the old Karamaidān, was built in 1441-1442.

Musée National de l'Art Arabe, Cairo. Catalogue 1895, No. 80.

Mosque-lamp . . . . . before 1453

With armorial bearing (a sword), and inscription with the name of the Amīr Ināl al-Ya'kūbi, who was afterwards the Sultan Malik Ashraf Saif-ad-dīn Ināl (1453-1461).

Formerly in the Basilevski collection 754, now in the Ermitage, at St. Petersburg.

Mosque-lamp (of questionable origin) . . 1467-1495

With inscription bearing the name of Kāit-bāi (1467-1495).

Musée National de l'Art Arabe, Cairo. Catalogue 1895, No. 81.

STATISTICAL TABLE

Place and Owner.	Lamps.	Chain-balls.	Bottles.	Vessels with Handles.	Goblets.	Tumblers.	Plates.	Dishes.	Other Vessels.
Berlin: Dr. Richard von Kauffmann	2								
Kunstgewerbe Museum	1[1]								
H. Fr. Sarre								1[2]	
Breslau: Museum of Silesian Antiquities					1				
Cassel: Gallery of Pictures					1				
Chartres: The City Museum					1				
Douai: City Museum					1				
Dresden: Royal Saxon Green Vaults					2				
Edenhall: Sir Richard George Musgrave, Bart.					1				
Florence: The Princess Eleonora Corsini			1						
Innsbruck: Landesmuseum Ferdinandeum									1
Cairo: Kuchuk Husain Pasha	?[3]								
Musée National de l'Art Arabe	69[4]	3[5]							
M. Parvis	1								
Rostovitz Bey	1								
Tigrane Pasha				1					
London: British Museum[6]	6	1[7]	4		1		1	2[8]	
Mr. James Cook	1[9]								
Mr. Dixon	1								
Mr. Hollingworth Magniac	1								
Captain W. J. Myers	14[10]	1						1[11]	
Baron Lionel Rothschild			1				1		
South Kensington Museum	4		1						
Unknown					1				

[1] The funnel neck of a lamp converted into a goblet.

[2] Formerly in the possession of R. Zschille.

[3] Number unknown.—Artin Pasha, Description de six lampes de mosquée, Bulletin de l'Institut Egyptien, 1886.

[4] Besides these lamps, partly well-preserved and partly more or less damaged, of which two are blue, and one has blue handles welded on it, the Museum in question possesses five large and about 115 small fragments of lamps. These last, to judge from their decoration, belong to at least ten various lamps. The nineteen chalices and little bottles (Catalogue 1895. No. 2) from the old rubbish-heaps of Cairo (presented by Dr. Fouquet to the Museum in 1893) are not included in our calculation; as they do not belong to the class of old Oriental glass-work with which we are dealing.

[5] One blue one amongst them.

[6] The Museum inherited part of its gathering of old Oriental glass from the Slade collection.

[7] Orange-yellow glass.

[8] One of the two—the only footless one (—all the other dishes in our list are high-footed) is of orange-yellow glass.

[9] Formerly in the possession of Linant Pasha; afterwards in that of Rostovitz Bey.

[10] Some of these were formerly in the possession of Linant Pasha and 'Ali Pasha Mubārak.

[11] Only the cover.

STATISTICAL TABLE—*Continued.*

Place and Owner.	Lamps.	Chain-balls.	Bottles.	Vessels with Handles.	Goblets.	Tumblers.	Plates.	Dishes.	Other Vessels.
Munich: Bavarian National Museum					1				
New York: Unknown								1[12]	
Löwenburg: The former Electoral Art Collections					1	1			
Paris: Madame Edouard André	2					1[13]			
Le Comte Benedetti	1								
M. Bogier	1								
Princess Iza Dzalinska	1								
Formerly Albert Goupil[14]	1		1[15]	1	2[16]		1		
Hakki Bey			1						
Dr. Machon	1[17]								
M. Charles Mannheim	4[18]								
Musée des Arts Décoratifs	1[19]		1						
Musée de Cluny	1[20]						2		
Musée du Louvre	2[21]		1[22]						
Baroness Alfred de Rothschild	2								
Baron Alphonse de Rothschild	5		2[23]	1[24]		1[25]			1[26]
Baron Edmond de Rothschild	3								
Baron Gustave de Rothschild			1[27]						
Mr. Charles Schéfer	?[28]			1					
Formerly M. Spitzer[29]	3								
M. Vapereau.			2						
In a dealer's possession	2								
Prague: Adalbert, Ritter von Lanna					1				
Saint Petersburg: Ermitage	3								
South Lodge, near Horsham: Mr. F. Ducane Godman	?								

[12] Formerly in the possession of Charles Schéfer.

[13] Formerly in the Basilevski collection.

[14] We place here, from the list given by Henry Lavoix (La Collection Albert Goupil.—Gazette des Beaux-Arts, 2e période, tom. XXXII, pp. 303-304) only those examples of which we were not in a position to ascertain the later ownership.

[15] Probably identical with the Spitzer example in the Louvre.

[16] Or bowls. Henri Lavoix describes them as "une grande et superbe coupe, dont le calice est exhaussé sur un long pied," and as "une seconde coupe . . ."

[17] The gift of Linant Pasha.

[18] Among them is a blue one.

[19] Formerly in Albert Goupil's collection.

[20] The gift of M. Charles Mannheim.

[21] A large one from the Spitzer collection; and a small one, decorated in the style of our plate IX, which had belonged to Baron Davillier.

[22] From the Spitzer collection.

[23] Amongst them a blue one, from the Spitzer collection.

[24] From the Hamilton collection.

[25] From the Spitzer collection.

[26] A lantern.

[27] From the Soltykoff collection.

[28] We do not know how many.

[29] We give here, from the list of Oriental glass in La Collection Spitzer, Verreries, only those pieces of which the later ownership is unknown, that is, Nos. 2, 3, 4.

STATISTICAL TABLE—*Continued.*

Place and Owner.	Lamps.	Chain-balls.	Bottles.	Vessels with Handles.	Goblets.	Tumblers.	Plates.	Dishes.	Other Vessels.
Turin : Marchese Alfieri									1[30]
Venice : M. Salviati	1								
Vienna : Treasury of the Cathedral of St. Stephan .			1	1					
Kunsthistorisches Hofmuseum . . .	1[31]		1						
Natural History Hofmuseum . . .	2[32]								
Austrian Museum für Kunst und Gewerbe .	1								
Baron Nathaniel von Rothschild . . .	1								
Dr. Max Strauss			1[33]						
Total . . .	140	5	9	5	14	3	5	5	3

The preceding Statistical Table comprises a list of 189 old Oriental glass vessels, of which four or five (in the Musée National de l'Art Arabe) were apparently made of uncoloured glass; six are of dark blue, and two of orange-yellow. All the rest are—fortuitously, we may suppose—mostly greenish or smoky yellowish in tone, with some extremely rare violet exceptions, and frequently resemble more or less the consistency of troubled milk.

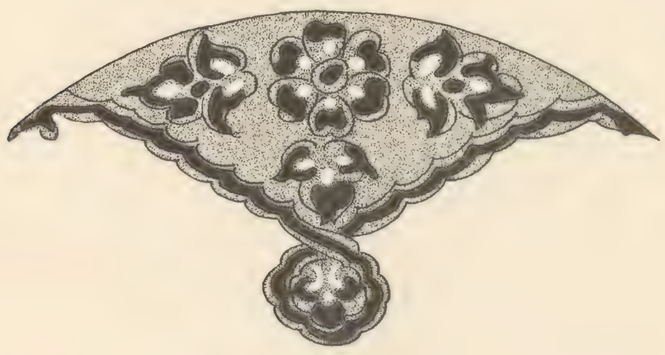
In each of the three groups of lamps which we have included in the above list, without the addition of any certain number, there are at least two pieces—in the Godman collection, so far as we know, three or four—which will bring the old Oriental gilt and enamelled glass vessels, known to us either by actual inspection, or from the descriptions of others, up to the total sum of two hundred pieces.

[30] A blue vase, in silver mounting (fifteen century work) with German inscriptions. See Nesbitt's Glass (South Kensington Museum Art Handbooks), p. 60.

[31] The upper half of an armorially decorated lamp.

[32] Formerly at Miramar.

[33] Probably from the Spitzer collection.



LONDON
G. NORMAN AND SON, PRINTERS, FLORAL STREET
COVENT GARDEN

Musée National de l'Art Arabe au Caire. H = 0'42M Gustav Schmoranz fecit.

EXPL Nº I.

MVSÉE ARABE DV CAIRE. DETAIL DE I. GVSTAV SCHMORANZ FECIT.

K. K. Naturhistorisches Hofmuseum, Wien. H = 0·40m Gustav Schmoranz fecit.

EXPL. Nº [illegible]

II.

K.K. NATVRHISTORISCHES HOFMVSEVM, WIEN.

DETAIL ND II.

GVSTAV SCHMORANZ FECIT.

K. K. Naturhistorisches Hofmuseum, Wien. H = 0·365 m Gustav Schmoranz fecit.

EX Dn. No

III*.

K.K. NATVRHISTORISCHES HOFMVSEVM, WIEN.

DETAIL ad III

GVSTAV SCHMORANZ FECIT.

Domschatz zu St Stephan, Wien. H = 0'35 m Gustav Schmoranz fecit.

EXP.E No. 111

IV.A.

DOMSCHATZ ZV S.T STEPHAN, WIEN. DETAIL AD IV. GVSTAV SCHMORANZ FECIT.

Collection Tigrane pacha au Caire. H = 0'305 m Gustav Schmoranz fecit.

K. K. Kunsthistorisches Hofmuseum, Wien.

H = 0'44M

Gustav Schmoranz fecit.

K. K. Kunsthistorisches Hofmuseum, Wien. Detail ad VI. Gustav Schmoranz fecit.

Expl. N[illegible]

VIII.

Musée National de l'Art Arabe au Caire. [illegible]

Gustav Schmoranz fecit.

Musée National de l'Art Arabe au Caire. H. 0m,234 Gustav Schmidt fecit.

Expl. No. 1117

K. K. Oesterr. Museum für kunst u. Industrie, Wien. H = 0·37 M

Gustav Schmoranz fecit.

Expl. N° XI.

Musée National de l'Art Arabe au Caire. H = 0'295 M Gustav Schmoranz fecit.

Musée National de l'Art Arabe au Caire.

H = 0'405 M

Gustav Schmoranz fecit.

EX PL Nº 1117.

XII me.

MVSÉE ARABE AV CAIRE.

DETAIL DV XII.

GVSTAV SCHMORANZ FECIT.

Domschatz zu St Stephan, Wien. H = 0'345 M Gustav Schmoranz fecit.

Musée National de l'Art Arabe au Caire. H = 0'375 M Gustav Schmoranz fecit.

EXPL. Nº

XIVª.

MVSÉE ARABE AV CAIRE.

DETAIL DV XIV.

G. SCHMORANZ FECIT.

Expl. N° 11½

XV.

Musée National de l'Art Arabe au Caire.

Gustav Schmoranz fecit.

Musée National de l'Art Arabe au Caire. H = 0'355 m Gustav Schmoranz fecit.

Musée National de l'Art Arabe au Caire.

Gustav Schmoranz fecit.

Expl. N° 1173

XVIII.

Musée National de l'Art Arabe au Caire.

H 0'30 M

Gustav Schmoranz fecit.

Musée National de l'Art Arabe au Caire. H = 0'21 M Gustav Schmoranz fecit.

British Museum, London.

H = 0'23 M

Gustav Schmoranz fecit.

EXH. No. 77. PL. XX.

BRITISH MVSEVM, LONDON. No. XX. CVSTAV SCHMORANZ FECIT.

British Museum, London. Detail ad XX. Gustav Schmoranz fecit.

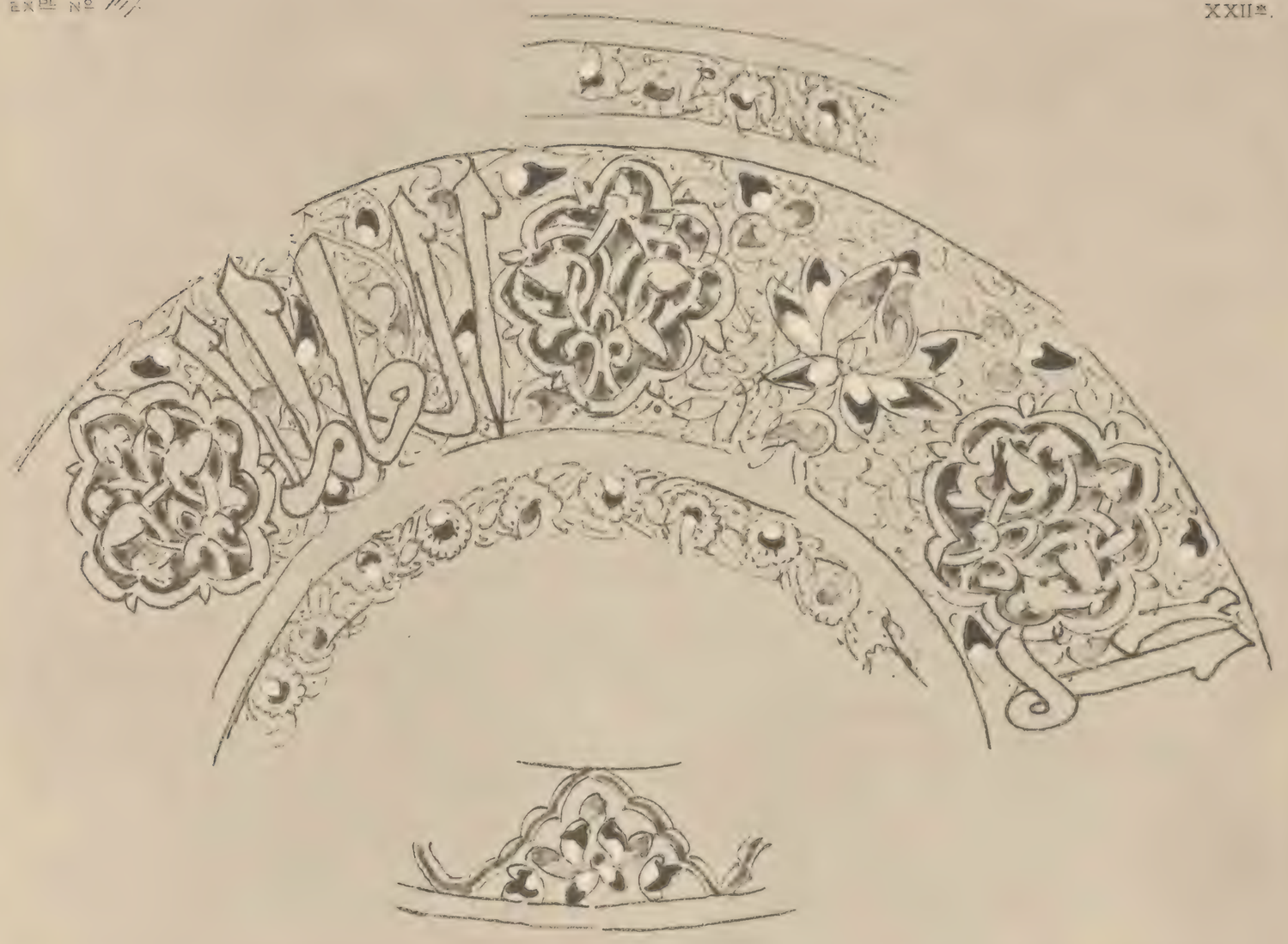
Expl. N°. 1117

XXII.

Collection Freiherr Nathaniel von Rothschild, Wien. H = 0'28 M Gustav Schmoranz fecit.

EXPL. N° ///.

XXII*.



COLLECTION FREIHERR NATHANIEL VON ROTHSCHILD, WIEN. DETAIL AD XXII. GVSTAV SCHMORANZ FECIT.

Captain W. J. Myers Collection, London. H = 0·345 M Gustav Schmoranz fecit.

EXH. N° //

XXIII*

CAPTAIN W. J. MYERS COLL^N, LONDON.

DETAIL OF XXIII.

GVSTAV SCHMORANZ DEL.

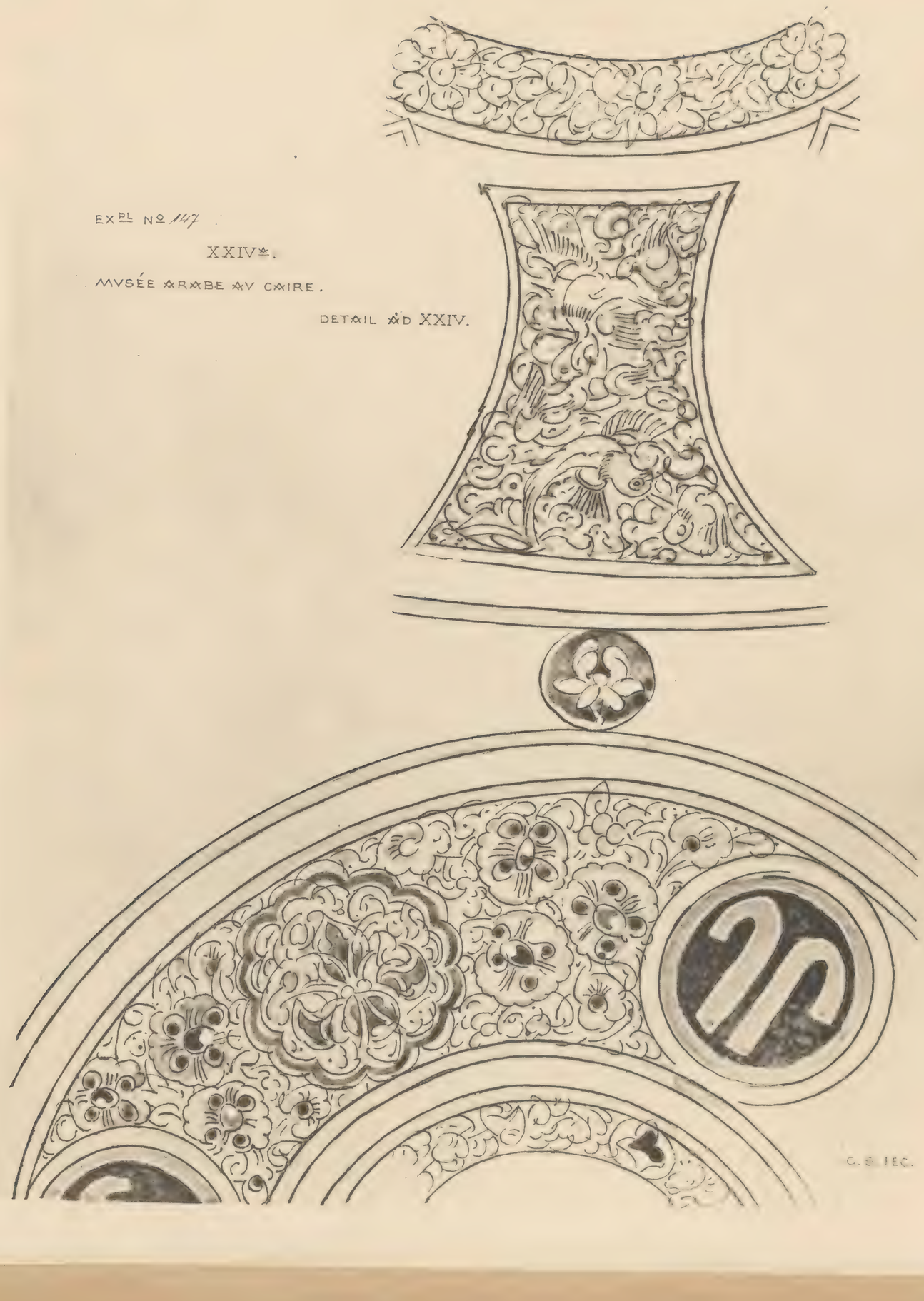
Musée National de l'Art Arabe au Caire. H. 0'34 m. Gustav Schmoranz fecit.

EXPL Nº 1117

XXIVe.

MVSÉE ✲R✲BE ✲V CAIRE.

DETAIL ✲D XXIV.



C. G. IEC.

South Kensington Museum, London.

H = 0'43 M

Gustav Schmoranz fecit.

Captain W. J. Myers Collection, London. H = 0·285 m Gustav Schmoranz fecit.

CAPTAIN W. J. MYERS COLLECTION, LONDON. H 0·28 M GUSTAV SCHMORANZ FECIT.

Expl. N° [illegible]

XXVIII.

Collection Charles Mannheim, Paris. H. 0m27. Gustav Schmoranz fecit.

Collection Vapereau, Paris. H — 0·475 m Gustav Schmoranz fecit.

Collection Baron Alphonse de Rothschild, Paris. Gustav Schmoranz fecit.

H 0·185M

Expl. N° 117

XXXI.

Collection Adalbert Ritter von Lanna, Prag. H = 0'30 M Gustav Schmoranz fecit.

Schloss Loevenburg. H 0'265 M Gustav Schmoranz fecit.

XXXIII.

LOEWENBVRG BEI CASSEL.

DETAIL.

GVSTAV SCHMORANZ FECIT

COLLECTION CHARLES MANNHEIM, PARIS. DÉTAILS. GVSTAV SCHMORANZ FECIT.