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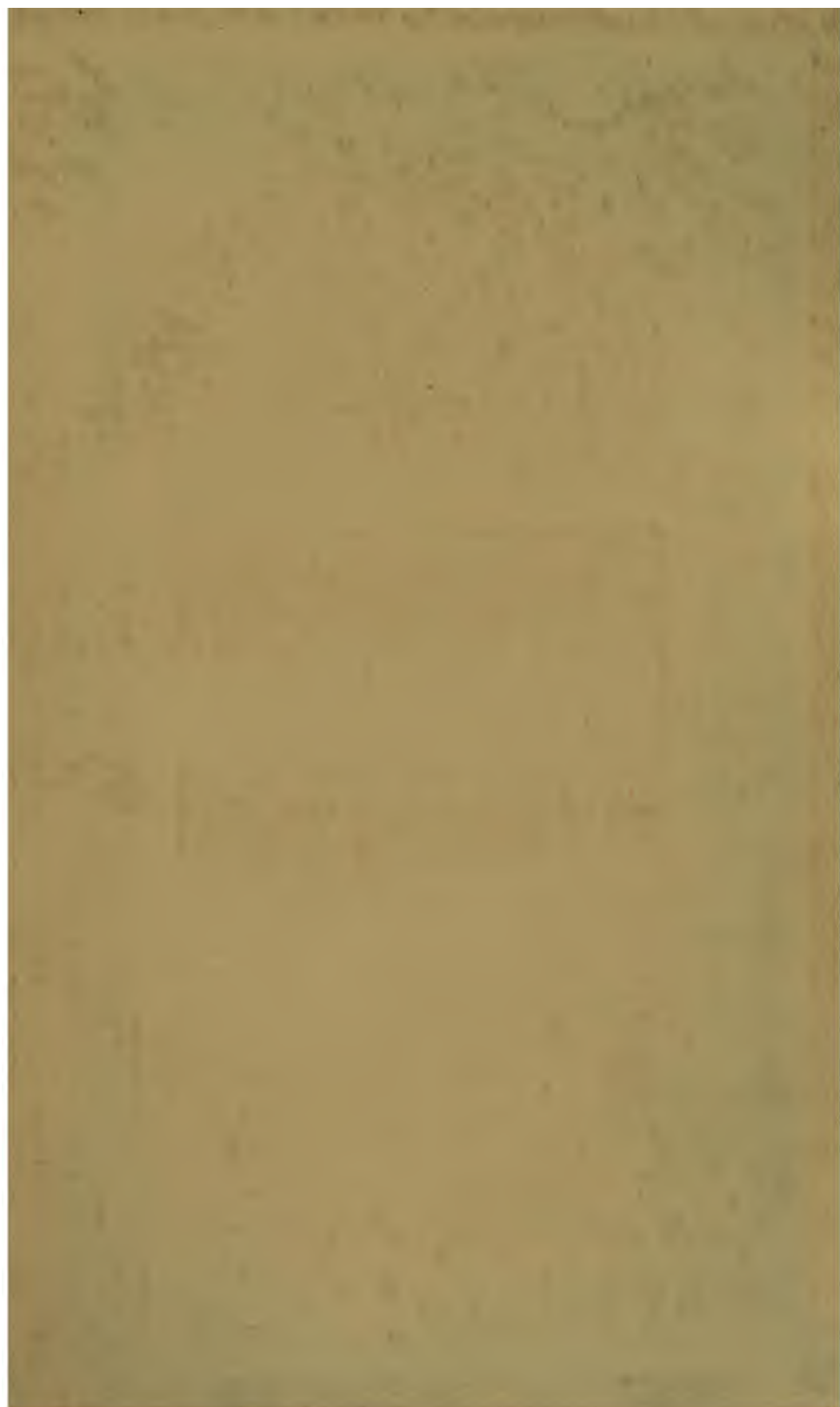
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ARABIC GLASS WEIGHTS.

CATALOGUE
OF
ARABIC GLASS WEIGHTS

IN THE
BRITISH MUSEUM.

BY
STANLEY LANE-POOLE.

EDITED BY
REGINALD STUART POOLE, LL.D.
CORRESPONDENT OF THE INSTITUTE OF FRANCE.

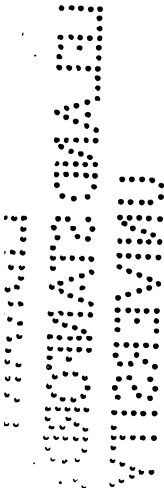
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EDITOR'S PREFACE.

THIS Catalogue of the Glass Weights with Arabic inscriptions in the British Museum forms a supplementary volume to the Catalogue of Oriental Coins, with which it is essentially connected, inasmuch as the majority of the glass weights were clearly used to test the accuracy of the weight of coins.

Arabic Glass Weights are preserved separately in the Department of Coins and Medals, and in that of Mediæval Antiquities ; but the contents of both departments have been included in this volume, with distinguishing letters.

The diameter and weight of each specimen (except when broken) are given in English inches and grains. Tables for converting inches into millimètres and the measures of Mionnet's scale, and grains into grammes, are supplied at the end of the volume.

The Catalogue is illustrated by nine autotype photographic plates.

The author is Mr. Stanley Lane-Poole ; and I have carefully compared each weight with the corresponding description.

REGINALD STUART POOLE.



AUTHOR'S INTRODUCTION.

MANY of the coin cabinets of Europe contain a few glass discs, closely resembling Arabic coins in size, weight, and inscriptions. This resemblance has induced most numismatists to classify them as glass coins, *nummi vitrei*, *monnaies de verre*; and in my earliest contribution to the *Numismatic Chronicle* (xii. p. 199 ff., 1872) I endeavoured to support this view by various arguments derived from examples preserved in the British Museum. These arguments, however, were successfully combatted by the late E. T. Rogers (*Num. Chron.* N. S., xiii. p. 60, ff., 1873, and *Journal R. Asiatic Society*, N. S., x. p. 98, ff., 1878); and a further study of the glass discs themselves, as well as of the historical evidence, leads to the inevitable conclusion that they are nothing else but *standard weights* issued by the government of the day for the purpose, mainly, of testing the accuracy of current coins, but also occasionally destined for other uses.

The most distinct statement on this subject hitherto discovered in a trustworthy Arabic authority is that of El-Mukaddesee, who, writing in A.D. 985, remarks in his *Maghrīb* (i. 240), that the coins in use in the dominions of the Fátımee Khaleefeh are the deenár, and its fourth; the dirhem, half, quarter, eighth and sixteenth (*kharroobeh* or *kharnoobeh*) of the dirhem; all of which are accepted by number (not by weight); and he adds, "the weights for money are made of glass, and bear the same stamp as the ordinary raṭl [pound], namely the style of the [Fátımee] Prince of the Faithful."* This state-

* Prof. de Goeje, *Academy*, 26 Feb. 1876.

ment is sufficient to lay to rest any doubts as to the uses to which glass discs were put in Fátímee times ; and it is corroborated by a passage in Ed-Demeeree's *Hayyát el-Heywán* (i. 80), where it is related how, when 'Abd-el-Melik, the Amawee Khaleefeh, inaugurated his purely Mohammadan coinage, he was advised, in order to secure uniformity in weight, to "cast weights of glass, which cannot alter either by increase or by decrease." These appear to be the only references to glass standard weights for testing coins hitherto noticed in the works of Arabic writers. Ibn-el-Atheer, indeed, mentions weights for testing coins (*Kámil*, iv. 337), but does not state of what material they were made.

The evidence of the weights themselves points unmistakably to their relation to coins as standards of accuracy. Granting this special purpose, we should expect to find the glass discs tallying in weight with the various denominations of coins in circulation at the period to which they belong, and further to find their weight fairly uniform and constant for each denomination. This is precisely what we do find, as an examination of the following table of the glass weights in the British Museum collection will demonstrate :—

TABLE OF WEIGHTS OF GLASS.

(Numerals in thick type indicate that the denomination is specified on the glass weight; the rest are classified by analogy.)

I. Under the *Amaawee* and 'Abbásee' *Khaleefehs*, chiefly 2nd century A.H.

| For Gold Coins. | | | For Silver Coins. | | | Fels. |
|-----------------|-----------|-----------|-------------------|------------|-----------|--|
| Deenár. | ‡ Deenár. | ‡ Deenár. | Double Dirhem.* | Dirhem. | ‡ Dirhem. | |
| 65 | 33 | 22 | 88 | 44 | 19 | 58 |
| 66 | 33 | 22 | 89 | 38† | | 90 of 30 kharr. |
| 66 | 33 | 22 | 76 | 46 | | " " " |
| 66 | 33 | 22 | 93 | 41† | | 90 (<i>great fels</i>) " |
| 65 | 33 | 22 | 93 | 45 | | 56 of 20 <i>ķeeráts</i> . |
| 66 | 33 | 22 | 94 | 44 | | 82 of 19 [? 29] kh. |
| 66 | 33 | 22 | 89 | 46 | | 111 |
| 66 | 33 | 22 | 93 | 46 | | 89 of 33 kharr. |
| 66 | 33 | 22 | 93 | 46 | | 97 of 32 " |
| 66 | 33 | 22 | 93 | 46 | | 79 of 30 <i>ķeeráts</i> . |
| 66 | 33 | 22 | 93 | 46 | | 90 |
| 66 | 33 | 22 | 93 | 46 | | 89 |
| 63 | 33 | 22 | 93 | 46 | | 76 of 25 <i>ķeeráts</i> . |
| 65 | 33 | 22 | 93 | 46 | | 76 " " |
| 65 | 33 | 22 | 93 | 46 | | 63 of 20 kharr. |
| 65 | 33 | 22 | 93 | 46 | | 49 of 15 " |
| 65 | 33 | 22 | 93 | 47 | | 47 " " |
| 67 | | | | | | 37 of 14 <i>ķeeráts</i> . |
| 61 | | | | | | 27 ‡ fels of 9 <i>ķeeráts</i> . |
| | | | | | | 27 " " |

* These double dirhem weights all belong to late 'Abbásee *Khaleefehs*, *circ.* 600 A.H.

† Stated to consist of 13 *kharroobehs*. Cp. *l. infra*, p. xxvii.

II. *Under the Fátímee Khaleefehs, 4th to 6th centuries A.H.*

| <i>For Gold Coins.</i> | | |
|------------------------|---------|-----------------------|
| Double Deenár. | Deenár. | $\frac{1}{4}$ Deenár. |
| 131 | 62 | 15 |
| 132 | 65 | 16 |
| 132 | 65 | 15 |
| 131 | 63 | 16 |
| 130 | 61 | 16 |
| 126 | 61 | 16 |
| 131 | 58 | 15 |
| 132 | 65 | 14 |
| | 65 | |
| | 65 | |
| | 65 | |
| | 66 | |
| | 65 | |
| | 65 | |
| | 65 | |
| | 66 | |
| | 65 | |
| | 66 | |
| | 66 | |
| | 65 | |
| | 60 | |
| | 64 | |
| | 66 | |

| <i>For Silver Coins.</i> | | | | | |
|--------------------------|---------|-----------------------|-----------------------|--------------------------------|-------------------------|
| Double Dirhem. | Dirhem. | $\frac{1}{2}$ Dirhem. | $\frac{1}{4}$ Dirhem. | Double Dirhem. (continued.) | Dirhem. (continued.) |
| 90 | 45 | 22 | 11 | 84 | 46 |
| 88 | 42 | 22 | 11 | 92 | 46 |
| 92 | 44 | 22 | 11 | 92 | 43 |
| 91 | 44 | 23 | 11 | 91 | 40 |
| 91 | 45 | 23 | 11 | 92 | 46 |
| 92 | 41 | 20 | 11 | 92 | 46 |
| 92 | 46 | 18 | 11 | 92 | 45 |
| 90 | 45 | 24 | 11 | 92 | 45 |
| 92 | 43 | 23 | 10 | 83 | 45 |
| 92 | 47 | 18 | 12 | 94 | 41 |
| 92 | 46 | 23 | 11 | 90 | 45 |
| 87 | 45 | 23 | 11 | 91 | 36 |
| 91 | 45 | 22 | 11 | 90 | 32 |
| 90 | 46 | 23 | 11 | 92 | 37 |
| 77 | 46 | 21 | 11 | 90 | 47 |
| 91 | 45 | 23 | 11 | 92 | 47 |
| 90 | 46 | 23 | 12 | 90 | 47 |
| 91 | 47 | 23 | 12 | 89 | 46 |
| 91 | 46 | 23 | 11 | 91 | 46 |
| 91 | 46 | 23 | 11 | 92 | 45 |
| 86 | 44 | 22 | 11 | 90 | 45 |
| 83 | 45 | 20 | 12 | | 47 |
| 93 | 46 | 23 | 10 | | 40 |
| 92 | 46 | 22 | 11 | | 47 |
| 81 | 46 | 23 | | | 46 |
| 80 | 45 | 23 | | | 50 |
| 92 | 46 | 22 | | | 46 |
| 92 | 46 | 23 | | | 47 |
| 86 | 46 | 24 | | | 47 |
| 80 | 46 | 21 | | | 46 |
| 90 | 46 | 21 | | | 44 |
| 90 | 46 | 23 | | | 46 |
| 91 | 46 | 22 | | | 46 |
| 92 | 46 | 23 | | | 46 |
| 91 | 46 | 22 | | | 46 |
| 92 | 45 | 22 | | | |
| 93 | 46 | 21 | | | |
| 92 | 46 | 23 | | | |
| 92 | 46 | 22 | | | |
| 84 | 42 | 21 | | | |
| 89 | 41 | 22 | | | |
| 86 | 47 | 22 | | | |
| 92 | 47 | 22 | | | |

The foregoing table includes all the weights in the Museum series, with the exception of broken fragments, which possess no metrological value, and seven irregular weights. It is remarkable that in a series of about 320 glass weights for deenárs and dirhems and their subdivisions and multiples (the fels will be discussed later), only seven should depart notably from the uniform standard.* The remainder are singularly uniform, when it is remembered that it is not very easy to cast glass exactly to a grain in weight, or to modify the weight after it has hardened. The early weights bear the indication of the denomination of coin which they are intended to test; as *deenár*, *naḡf deenár*, *dirhem*, &c. The long series of Fáṭimee weights carry no such indication, but when classed according to the standard established by the earlier weights, they show almost equal uniformity and exactitude. Thus the deenár is seen to weigh 66 grs. Troy. In only one instance does it touch 67 grs., and only once falls to 58. Out of 37 specimens, 28 weigh 66 or 65 grs. The half-deenár weighs uniformly 33 grs.; the third, 22 grs.; the quarter, 15 or 16 grs.; and the double deenár, 131 or 132, only one falling to 126. Taking 66 as the standard weight of the deenár, the other denominations are seen to agree: the double ought to be, and is, 132; the half, 33; the third, 22; and the quarter, 16½ (the glass weight here falls slightly short).† Again, the dirhem, as shown by 90 examples in glass, weighs 45 to 46 grs. Two-thirds of the 90 exhibit one or other of these weights; of the

* These seven weigh 218, 118, 116, 29, 17, 8, and 6 grs. The last two may represent the *thumb* or ¼th of a deenár referred to by El-Muḡaddesee. The 17 may be an excessive ½ deenár, the 29 a defective ½ deenár, and so on.

† A unique glass weight published by Rogers is stated in its inscription to represent a "dirhem, two-thirds" (دراهم ثلثين) of a deenár; wt. 44 grs. (*e. infra*, p. xxvi.).

remaining 30, 12 attain to 47 grs., only one exceeds 47 grs., and four fall below 40 grs. The double dirhem ought to be 91 to 92 grs., and out of 64 Fátımee specimens 35 weigh 91 to 92 grs., and 51 range from 89 to 94 grs. (The eight 'Abbásee double-dirhems are less regular, but they average a minute fraction under 90 grs.) The half-dirhem should be $22\frac{1}{2}$ or 23 grs., and of 44 specimens, 32 weigh 22 to 23 grs., and only three fall below 20. The quarter-dirhem should weigh 11 or $11\frac{1}{2}$ grs., and with the exception of two of 10 grs. the 24 examples in the Museum all weigh from 11 to 12 grs. If we compare the weights recorded by Mr. Rogers in the articles referred to, we shall find that they tally very closely with those observed in the Museum collection. The accuracy of the glass discs as standard weights for deenárs and dirhems, as well as their doubles and subdivisions, may therefore be accepted as proved. That they correspond to the known weights of the deenárs and dirhems, &c., of their time is of course obvious to the numismatist.

The column headed *fels* demands careful consideration. The word *fels* does not necessarily imply a copper coin, though it was commonly used in this sense. It rather denotes any piece of money accepted *by weight*. It will be noticed that the *fels* is frequently stated in terms of so many *kharroobehs* or so many *ķeeráts*. According to the authorities cited by M. H. Sauvaire,* the *kharroobeh* seed weighs 3 grains of wheat, or 4 grains of barley; and 18 *kharroobehs* equal the dirhem in weight, and 24 the *mithķál* (i.e. deenár). The *ķeerát* is equal to the *kharroobeh*, and runs 18 to the dirhem and 24 to the *mithķál*, or according to others the proportions are 14 and 20. Taking the 15 *fels* in the Museum which state their

* *Matériaux pour servir à l'histoire de la numismatique et de la métrologie musulmanes*, pt. i., p. 106, pt. ii., p. 53.

weight in kharroobehs or *ķeeráts*, and the solitary dirhem which gives its kharroobehs as 13, we arrive at the following conclusions :—

| | | | |
|--------------------------|----------------------------|----------------------------------|--------------------|
| 13 kharroobehs = 38 grs. | | or 1 kharroobeh = (about) 3 grs. | |
| 15 „ = 47 to 49 grs. | „ „ 1 „ | = | 3 $\frac{1}{4}$ „ |
| 20 „ = 63 | „ „ 1 „ | = | 3 $\frac{1}{2}$ „ |
| 30 „ = 90 | „ „ 1 „ | = | 3 „ |
| 32 „ = 97 | „ „ 1 „ | = | 3 „ |
| 33 „ = 89 | „ „ 1 „ | = | 2 $\frac{2}{3}$ „ |
| 143 kharroobehs = 424 | grs. „ 1 „ | = | 3 „ |
| 9 <i>ķeeráts</i> = | 27 grs. or 1 <i>ķeerát</i> | = | 3 grs. |
| 14 „ = | 37 „ „ 1 „ | = | 2 $\frac{3}{5}$ „ |
| 20 „ = | 56 „ „ 1 „ | = | 2 $\frac{2}{5}$ „ |
| 25 „ = | 76 „ „ 1 „ | = | 3 „ |
| 30 „ = | 79 „ „ 1 „ | = | 2 $\frac{3}{5}$ „ |
| 98 „ = | 275 „ „ 1 „ | = | 2 $\frac{7}{10}$ „ |

From this it appears that the kharroobeh and the *ķeerát* are practically equivalent, and their value may be taken as 3 grs. *in Egypt*: but their weight and proportion to the *deenár* and dirhem varied in different countries.*

The question at once arises, what coins, if any, were these weights intended to test? One is avowedly a dirhem of 13 kharroobehs—thus forming an exception to the general estimate of 18 kharroobehs to the dirhem.† The rest are termed in their inscriptions *fels*, *great fels*, or *half fels*. The *fels* (according to these examples) weighs anything from 37 to 97 grs.: the “great fels” 90 grs., and the half fels 27 grs. It is obvious that the denomination counts for nothing, and that the number of kharroobehs or *ķeeráts* stated in the inscription is the real standard of weight. What then was to be tested with these glass

* Rogers published a *fels* of 33 kharroobehs, wt. 99; another of 30 kharroobehs, wt. 90, both of which exactly agree with the British Museum figures; and a fragment of 27 kharroobehs (Cf. below, p. xxviii.)

† Cp. *l.*, p. xxvii., below. This estimate does not tally with the average weight of an unworn dirhem—about 46 grs.; 15 or 16 kharroobehs would be nearer the mark.

weights of so many *ķeeráts* or *kharroobehs*? Not *deenárs* or *dirhems*, since only two or three of these weights approximate the standards of *deenárs* and *dirhems*; moreover, these coins have standard glass weights of their own, specified as such. Again, testing an individual copper coin or *fels* by these standard weights would be useless, since the *fels* is very variable in weight, generally much worn and clipped, and sometimes intentionally cut into quarters. The *fels*, moreover, was usually passed by weight, not by number; and one is forced to the conclusion that these glass standards were used by the merchant to test the weight in copper of a certain number of *fuloos*, when offered for goods. This theory would account for the numerous varieties of weight employed, as indicated by the figures 9, 14, 15, 20, 25, 27, 30, 32, 33, *kharroobehs* or *ķeeráts*. The merchant is selling, let us suppose, a piece of cloth for two *dirhems* and a half, and the buyer has no half-*dirhem*, but tenders copper *fuloos* instead. These *fuloos* are of varying size and weight, but the proportion of copper in *kharroobehs* to the *dirhem* at the given time is of course known, and the merchant would proceed to weigh the required number of *fuloos* by his standard glass weight of so many *kharroobehs*.

Besides coin weights, the British Museum possesses a few heavier glass weights which represent the pound (*raṭl*) and ounce (*wuķeeyeh*), and were perhaps used for weighing a number of coins collectively. Some of these are inscribed with their denominations: such are the *raṭleyñ* or 2 pounds, 5670 grs. (but the specimen is broken); the *raṭl* or pound, 3240 grs. (also broken); the half-*raṭl*, 1200 grs. (also broken); the quarter-*raṭl*, 1144 grs.; the half-*wuķeeyeh* or half ounce, 244 and 525 grs.; and the sixth of a *wuķeeyeh*, 96 grs. The uninscribed discs weigh 171, 115, 111 grs.; a hollow green glass cylinder, closed at both ends, weighs 4900 grs.; a glass ring (perhaps merely an ornament)

3000 grs.; and a square block, with a central hole, 1460 grs. One weight has what appears to be the numeral ۲ (2) upon it, weight, 120 grs.; another has the letter ح, wt. 147 grs.; and a third bears the representation of a figure, seated cross-legged, wearing a turban, and holding a bottle in his right hand and a wine-cup in his left. We learn from M. Sauvaire (ii. 93) that the Egyptian *raṭl* (for this weight varied greatly in different countries) weighed 6912 grs. of corn, or contained 12 oz. (*wuḳeeyeh*). At this rate, the sixth of a *wuḳeeyeh* weight of 96 grs. is exactly right; the half-ounce of 244 grs. wants 44 grs. to be full weight; * the other half-ounce of 525 grs. is inexplicable; the quarter of a pound, 1144 grs. is also very short of weight. The broken weights must of course be disregarded. Of the uninscribed weights, those of 4900, 3000, and 1460 grs., may represent the *raṭl roomee*, the Ḥalab ounce, and the double ounce of the *raṭl fulfulee*.

The scarcity of large glass weights may be accounted for by the brittle nature of the material; for a large piece of glass is more likely to be broken than a small one, if accidentally dropped. But the great preponderance of small glass weights is probably due chiefly to the fact that glass was specially reserved for testing the weight of coins, whilst copper and other materials could more easily be employed for the heavier weights required for weighing merchandise. It is singular, however, that so many weights of the Fāṭimee period should represent dirhems and their sub-divisions, whilst Fāṭimee dirhems are very rare in comparison with *deenárs*; and one is forced to the conclusion that the silver coinage of the Fāṭimee Khaleefehs, in spite of its scarceness in modern collections, must originally have been very numerous.

* M. Sauvaire has a half-ounce glass weight of 235 grs., *infra*, p. xxvii.

A cursory examination of the inscriptions on glass weights shows that they were specially and almost exclusively used in Egypt. Only two specimens bear the names of places; one of these is Miṣr, which means the capital of Egypt, and the other is El-Mansooreeyeh, a Tunisian city under the rule of the Egyptian sovereign. Almost all the names of governors and princes found on the weights indicate an Egyptian origin. Of forty-three weights bearing the names of governors under the Khaleefehs of Damascus and Baghdád, thirty-four indicate holders of office (governors, treasurers, &c.) in Egypt, one has the word Miṣr, and it is fair to assume that the other eight names, though not hitherto identified, were those of Egyptian officials. Eighteen weights present the names of 'Abbásee Khaleefehs, without any indication of locality: but it is noteworthy that they all belong to times when Egypt was under the rule of governors or princes who acknowledged the supremacy of the 'Abbásee Khaleefehs. So long as their rivals the Fátímees held Egypt, not a single glass weight appears with an 'Abbásee name: but as soon as Šaláh-ed-deen had restored the allegiance of Egypt to the 'Abbásees, the names of the Khaleefehs El-Mustaḍee and En-Náṣir appear on the weights—a sufficient indication of their Egyptian origin. The great majority of glass weights bear the names of the Fátímee Khaleefehs: but none exhibits a Fátímee name or date prior to their conquest of Egypt. It may, therefore, be taken as proved that the use of glass weights as standards for testing coins was characteristic of Egypt, and, so far as can be proved, of Egypt alone. Had they been used elsewhere, the names of princes and governors, other than Egyptian, would surely have been found upon them. It may be added that the great majority of the glass weights in the British Museum were discovered in

Egypt, in the rubbish heaps round Cairo and Fustát and elsewhere, largely by the industry of the Rev. Greville Chester.

In the present state of our knowledge any inquiry into the origin of this use of glass weights in Egypt would be premature. The manufacture of objects in glass was, of course, common among the ancient Egyptians, and the art was never neglected in later times. And, although specially characteristic of the period of Mohammadan rule in Egypt, glass weights of the Roman and Byzantine ages are not uncommon. The British Museum possesses nearly eighty of these older weights, which were undoubtedly manufactured in Egypt, where they were found, for the most part by the Rev. Greville Chester. The Byzantine glass weights conform fairly closely to the standard of the solidus of 68 grs., which was the origin of the Mohammadan deenár of 66 grs. The figures run, approximately, 64, 65·7, 67·4, 67·7, 68·3, 69, 70·4; 32, 32·5, 33·4, 34, 34·4, 34·5, 34·9; 17·2, 17, 17·7, 18,—representing the solidus, half, and quarter, and very nearly the deenár, half, and quarter. The device on these weights is generally a bust or head, and some have inscriptions recording the name of the ruler of the province. That these are the direct ancestors of the Arabic glass weights is beyond question.

The older, Roman, glass discs present types obviously Egyptian—such as the figure of Harpocrates, Bes, Serapis, Isis, the ibis, the ram. Their weight, however, is not uniform like the Byzantine. Older still is the one Phoenician glass disc in the British Museum, bearing the words עבד מר ('Abd Mar) in Phoenician round a bull's head, and weighing 11·8 grs. These various specimens carry the history of glass weights considerably further back than Mohammadan times. The Arabs found

Byzantine glass weights already in use in Egypt when they conquered it, and these were doubtless derived from earlier Roman discs, and from the glass scarabs of the Ptolemaic period.*

The inscriptions on glass weights are generally brief; for the reason that the letters are necessarily coarse; since great fineness in the lines is difficult in a material run into a mould. The formula *بِسْمِ اللّٰهِ*, *In God's name*, sometimes begins the inscription, and the words *امر به* or *مما امر به* (Such a one) *ordered*, or *Of what* (such a one) *ordered*, frequently precede the name of the governor or khaleefeh. In the time of the Fátímees, *مما عمل*, *of what was made*, is substituted. Instead of the verb *ضرب*, *strike*, *طبع*, *stamp* or *impress*, is used, in the phrase *امر بطبعه* (Such a one) *ordered the stamping of it* and the like. If a lower official, such as a sub-governor or inspector of markets, is indicated as well as the chief governor, his name is prefixed with the words *على يدى*, *by the hands* (of so-and-so). The object of the disc, as a mean of testing the weight of coins, is indicated by the word *مثقال* *weight*, prefixed to the denomination which it is intended to test; as *مثقال دينار*, *weight of a deenár*. In a few instances *وزن*, which has the same meaning, is substituted for *مثقال*, and rarely *كيل*, *measure*; whilst such forms as *طبع بموزن*, *stamped by weights*, and *امر بميزن* (Such a one) *ordered for weighing* (such a coin) occur: the alif of prolongation in such words as *ميزان*, *موازن*, *دينار*, being usually omitted.

The accuracy of the weight is attested by the word *واف*, *full* (weight); or, rarely, by *ملة*, *كامل* or *كامل*, and *صح*, which have equivalent meanings; or, especially under the Fátímee Khaleefehs, by *عدل*, *just* (weight).

* See the notes of Mr. W. Flinders Petrie in the *Archaeological Journal*, vol. xl., p. 419, 1883.

The denominations of coins and weights indicated on the glass standards are,—

ثلث *third* (of a deenár).

ثلثين *two thirds* (of a deenár).

خزوبة *kharroobeh*. The plur. خزوبات also occurs.

درهم *dirhem*.

دينار, دينار, *deenár*.

رطل *pound*. رطل كبير *great pound*. رطلين *two pounds*.

سدس *sixth* (of an ounce).

فلس *fels*. فلس الكبير *great fels*.

قيراط *keerát*. The plur. قيريط also occurs.

نصف *half* (of a dirhem, deenár, pound, fels, and ounce).

وقية *ounce*.

The names of the rulers under whose authority the weight was issued are chiefly (1) those of governors of Egypt under the Amawee and 'Abbásee Khaleefehs, with the style (if any) of *Ameer*, and rarely with the name of the contemporary Khaleefeh; (2) a few with the names and styles of the 'Abbásee Khaleefehs, without those of subordinate princes or governors; (3) those of the Fátímee Khaleefehs, whose titles are precisely the same as those occurring on their coins; and (4) those issued during the Memlook government of Egypt, and bearing names not identified hitherto with any of the known rulers or officers of the period. Such names are 'Alee Esh-Shuweykh ("the little Sheykh"), 'Alee El-Miṣree ("the Egyptian"), 'Alee Ed-Da'ee ("the emissary"), Moḥammad El-'Oodee ("the lutist"), Moḥammad El-Bábá, Aḥmad, 'Omar El-Faḳeeh ("the jurist"), 'Omar, Ḥasan, Ya'koob, El-Jemálee, Aboo-Bekr, Faraj, &c. These persons were apparently private individuals, and their weights may have been stamped for their own shops. In some cases, however, they appear to have manufactured them themselves, for the phrases عمل عمر, 'Omar made it, عمل

عمل بوسر المسعودى احمد * , عمل فرج , حسن clearly indicate personal manufacture. It is noteworthy that, with the exception of the Khaleefehs, no Egyptian sovereigns' names appear on glass weights, neither of the Benezooloon, the Ikhsheedees, the Ayyoobees, or the Memlooks. No obvious explanation of this circumstance suggests itself. It can hardly be assumed that all the glass weights issued by these dynasties have disappeared, and the only conclusion to arrive at is that they were not issued by them; but why they should not have been issued, and why glass weights appear in so sporadic a manner, are questions to which at present no answer seems to be forthcoming.

Benedictory phrases in connexion with the names of princes and governors are rare on glass weights. Those that occur are *امتع الله به* and *امتع الله له*, *God preserve him*; *اكرمه الله*, *God honour him*; *اعزه الله*, *God exalt him*. Other religious phrases are *يثق بالله* (Such a one) *trusts in God*; *حسبى الله*, *God suffices me*; *ربى الله*, *God is my Lord*; *امر الله بالوفى*, *God ordains honesty* (or just dealing); *كيل الله*, *God's measure*; *نعم الرفيق التوفيق*, *How excellent a companion is the grace of God*; *استجرت بالله تعالى*, *I seek the protection of God the most High*; *لله*, *To God*; *العزة لله* *To God* (belongeth) *power*; *الله احد*, *God is One*; *انصر الله*, *God grant victory*. Some of the discs bearing simply a formula such as the last may be in the nature of charms or medals. The 'Alawee *kelimah*, with *على ولى الله*, occurs on some Fátimée weights.

The colour of each glass weight is stated in the Catalogue, but it is impossible to describe the great variety of tints, ranging from deep purple or blue to pale yellow, which are exhibited. Some examples have a

* This can hardly refer to Sultán Faraj, the Memlook.

metallic lustre, some are gilded, some have striae of a different colour from the ground tint; and while the great majority are transparent or translucent, some are opaque. The commonest colour is bottle green.

Closely allied to glass weights are the curious glass stamps, indicating measures of capacity, of which a few are described at the end of this volume. They are known as *Bottle Stamps*, because they were impressed upon glass measures of bottle form. Very few of them have come down to us. The five in the British Museum are evidently Egyptian, for they are precisely similar to the glass weights of the same period, and three of them bear the names of Egyptian governors of whom we also possess glass weights,—namely, 'Obeyd-Allah ibn El-Ḥabḥáb and 'Eesá ibn Abee-'Aṭá.

The first in order bears the name of 'Abd-El-Melik ibn Marwán, who may be either the Amawee Khaleefeh, A.H. 65—86, or the governor of Egypt of the same name (A.H. 132). In form of inscription this stamp exactly tallies with the early glass weights; but instead of an indication of some denomination of coin, or weight, it bears the words *نصف كسط* *half a kist*. The *kist*, which is simply the Greek *ξέστης*, the Latin *sextarius*, a well known liquid measure of antiquity, was used by the Arabs as a measure for oil, wine, honey, and the like, and contained 18 (Arab) oz. of oil, or 20 of wine, or 27 of honey, by weight, according to Mar Eliyá the Archbishop of Naṣeebeen (*J. R. A. S.* ix., 291 ff. The various estimates of this measure may be referred to in Sauvaire, *Matériaux*, pt. iii., pp. 99, 198.)

The second stamp was issued by 'Obeyd-Allah ibn El-Ḥabḥáb, treasurer of Egypt at the beginning of the second century of the Flight (see the glass weights nos. 3, 3 G.), and bears also the name of a subordinate official, Haleem (?) ibn Meysarah and the date 111 A.H.: it indicates a quarter of a *kist*, or about half a pint measure.

Rogers, who described this stamp in the *Journal of the Royal Asiatic Society* (x. p. 99, 1878), observed that "the inscription and the marginal rim were produced from two different moulds," and believed "that the former was first impressed, and that, before the glass had time to cool, the mould of the latter was pressed over it," with the effect of partially obliterating some of the letters.

The third and fourth bottle-stamps bear the name of 'Eesá ibn Abee-'Atá, who also issued the glass weight no. 6, and indicate the measure of half a *kist*; while the fifth was made by a certain Hoseyn ibn 'Alee, unknown, and gives no indication of measure.

Rogers has also described (*J. R. A. S.*, *ibid.* pp. 100 and 111) four other bottle-stamps, not in the British Museum. One belonged to Lord Talbot de Malahide, and bears the inscription,—

| | |
|-------------|----------------------|
| امر حيان بن | Ordered Hayyán ibn |
| شريح ربع | Shureyh: quarter |
| قسط . . و | <i>kist</i> . . . F- |
| اف | ull measure. |

Rogers was unable to identify the name, which is that of the same governor of Egypt (A.H. 99—101) who issued no. 1 of the series of glass weights in the Museum collection. Another has the name of the *Káid* 'Obeyd-Alláh, but the measure it represents is doubtful, and Rogers gives no engraving by which to correct his uncertain reading of the inscription:—

بسم الله امر القائد | عبید الله | مكيلة شفر | فه واف

A third stamp, belonging to the Rogers' collection, is inscribed,—

| | |
|-----------------|------------------------|
| بسم الله | In God's name |
| امر الامير | ordered the Ameer |
| (?) محمد بن بشر | Mohammad ibn Bishr (?) |
| نصف قسط | Half <i>kist</i> |
| واف | Full measure. |

And a fourth, belonging to Yakub Pasha Artin, reads,—

| | |
|--------------|-------------------------|
| مما امر | <i>Of those ordered</i> |
| به عبيد الله | <i>by 'Obeyd Allah</i> |
| بن الحباب | <i>ibn El-Habbáb.</i> |
| قسط وا | <i>kist. Full</i> |
| ف | <i>measure.</i> |

The Department of Mediæval Antiquities possesses a series of copper stamps analogous to the glass bottle-stamps, but these do not come within the scope of the present Catalogue. Several of them bear the names of the 'Abbásee Khaleefehs El-Mo'temid, El-Mo'tadid, and El-Muktedir, ranging from A.H. 256 to A.H. 320 (A.D. 870—932), together with the names of the Bencee Abce-Dulaf of Karaj, Isfahán, &c.; viz., 'Abd-el-'Azeez, Dulaf, Aḥmad, and 'Omar, all ruling between 240 and 290 A.H.

In conclusion, I have specially to thank Mr. Herbert Grueber for much useful assistance, and Monsieur Sauvaire for some valuable notes on the Egyptian governors.

Athenæum Club.
June, 1891.

S. LANE-POOLE.

PUBLISHED GLASS WEIGHTS, NOT IN THE
BRITISH MUSEUM.



1. GOVERNORS UNDER THE AMAWEE KHALEEFES.

Osámeḥ ibn-Zeyd. (See no. 2, p. 3.)

a. *Half-deenár.* As 2, but نصف دينار

(Castiglioni, but cp. Fráhn, *Op. posth.* p. 150).

El-Kásim Ibn 'Obeyd-Alláh (see p. 5) : A.H. 116.

b. *Third of deenár.* امر الله بالوفا وامر بطبعه مثقال ثلث
القاسم بن عبید الله على يدى بن سيف [؟] ستة عشرة

Wt. 22 grs. (Collection of H. Sauvaire.

E. T. Rogers, *Num. Chron.* xiii., p. 76, 1873.)

(Rogers reads سنة instead of ستة ; but El-Kásim was not
appointed to the Treasury of Egypt before A.H. 112.)

Ḥafṣ ibn El-Weled.

Treasurer of Egypt, A.H. 124-5, 127 = A.D. 742-5.

c. *Deenár.*

| | |
|-------------------|---|
| بسم الله | <i>In God's name :</i> |
| امر الله بالو | <i>God ordained hon-</i> |
| فا وامر الامير | <i>esty. And ordered the Ameer</i> |
| حفص بن الوليد | <i>Ḥafṣ ibn El-Weled</i> |
| بطبعه مثقال دينار | <i>the stamping of it ; weight of deenár.</i> |
| واف على يدى يز | <i>Full weight. By the hands of Yez-</i> |
| يد بن | <i>eed ibn</i> |

Wt. 65 grs. (E. T. Rogers, *J. R. A. S.*, x, p. 108).

d. *Third of deenár.*

Same as preceding ; but lowest lines

بطبعه مثقال *the stamping of it : weight*

ثلث دينار وا *of a third of deenár, full*

... ف *weight*

Wt. 22 grs. (E. T. Rogers, *ibid.*)

2. GOVERNORS UNDER THE EARLY 'ABBÁSEE KHALEEFES.

Yezeed ibn Hátim (see nos. 14-16): A.H. 144-152.

e. *Dirhem, two-thirds of deenár.*

بسم الله امر *In God's name. Ordered*

الامير يزيد بن حاتم *the Ameer Yezeed ibn Hátim*

مثنى درهم *weight of a dirhem :*

ثلثين واف *two thirds [of a deenár]. Full weight.*

Wt. 44 grs. (Collection of H. C. Kay.

E. T. Rogers, *J. R. A. S.*, x, p. 106).

Šáliḥ ibn ('Eesá). (See no. 25g.)

f. *Half-deenár.*

Round central star,

بسم الله مثقال نصف دينار

على يدي صالح بن سيف [عيسى ؟]

Wt. 32 grs. (E. T. Rogers, *Num. Chron.* xiii, p. 68, 1873).

3. EARLY ANONYMOUS WEIGHTS.

g. *Half-ounce.* نصف وقية

Wt. 235 grs. Collection of H. Sauvaire,
(Rogers, *Num. Chron.* xiii, p. 88, 1873).

h. *Deenár.*

طبع السد *Stamped was the d-*
ينر سنة ست *eenár year six*
وتسعين *and ninety.*

Wt. 65 grs. (E. T. Rogers, *J. R. A. S.*, x, p. 107).

This is the earliest *dated* glass weight yet published.

i. *Half-deenár.*

بسم الله ضرب [؟] هذا النصف سنة مة

In God's name : this half was struck [?], year 100.

(Von Bergmann, *Die Nominale, u.s.w.* Num. Zeitsch.)

k. *Half-deenár.*

مئقال نصف واف

Weight of a half. Full weight.

Wt. 33 grs. (Von Bergmann, *ibid.*)

l. *Dirhem.*

بسم الله *In God's name :*
مئقال *Weight of*
درهم *a dirhem*
وزن ثلث عشر *weighing 13*
ة خروبة *kharroobehs.*

Wt. 38 grs. (E. T. Rogers, *Num. Chron.* xiii, p. 68, 1873).

m. *Fels of thirty-three kharroobehs.*

مشقال فلس ثلاث وثلاثين خروبة

Weight of a fels of thirty-three kharroobehs.

Wt. 99 grs. (E. T. Rogers, *J. R. A. S.*, x, p. 103).

n. *Fels of thirty kharroobehs.*

عمر مشقال فلس ثلاثين خروبة

'Omar, weight of a fels of thirty kharroobehs.

Wt. 90 grs. (E. T. Rogers, *J. R. A. S.*, x, p. 104).

o. *Twenty-seven kharroobehs.*

سبعة وعشرين خروبة

Fragment. (E. T. Rogers, *Num. Chron.* xiii, p. 68, 1873).

4. 'ABBÁSEE KHALEEFES.

El-Muktedir, A.H. 295-320 = A.D. 908-932.

p. *Third of deenár.*

| | |
|---------------|---------------------------------|
| بسم الله | <i>In God's name.</i> |
| امر المقتدر | <i>Ordered El-Muktedir</i> |
| امير المومنين | <i>Prince of the Faithful :</i> |
| مشقال ثلاث | <i>Weight of a third.</i> |
| واف | <i>Full weight.</i> |

Wt. 22 grs. (E. T. Rogers, *J. R. A. S.*, x, p. 109).

TABLE
OF THE
METHOD OF TRANSLITERATION ADOPTED IN
THIS CATALOGUE.

| | | |
|--|--|---|
| <p>ا a, ب b ت t ث th ج j ح h خ kh د d ذ dh ر r ز z س s ش sh ص s ض d (z) ط t</p> | | <p>ظ dh ع 'a غ gh ف f ق k ك k ل l م m ن n ه h و w ي y َ a, e اَ á ِ i اِ í ُ u اِ u اِ ay, ey او aw, ó</p> |
|--|--|---|

ERRATA.

p. 20, no. 28 g., *dele* reference to Pl. II.

p. 63, no. 185, *read* ست or ثنين (?), 476 or 472.

p. 89, nos. 370 and 372, *dele* references to Pl. VIII.

p. 97, no. 391. *For* استحرب *read* استجرت, and translate,
I seek the protection of God the Most High.

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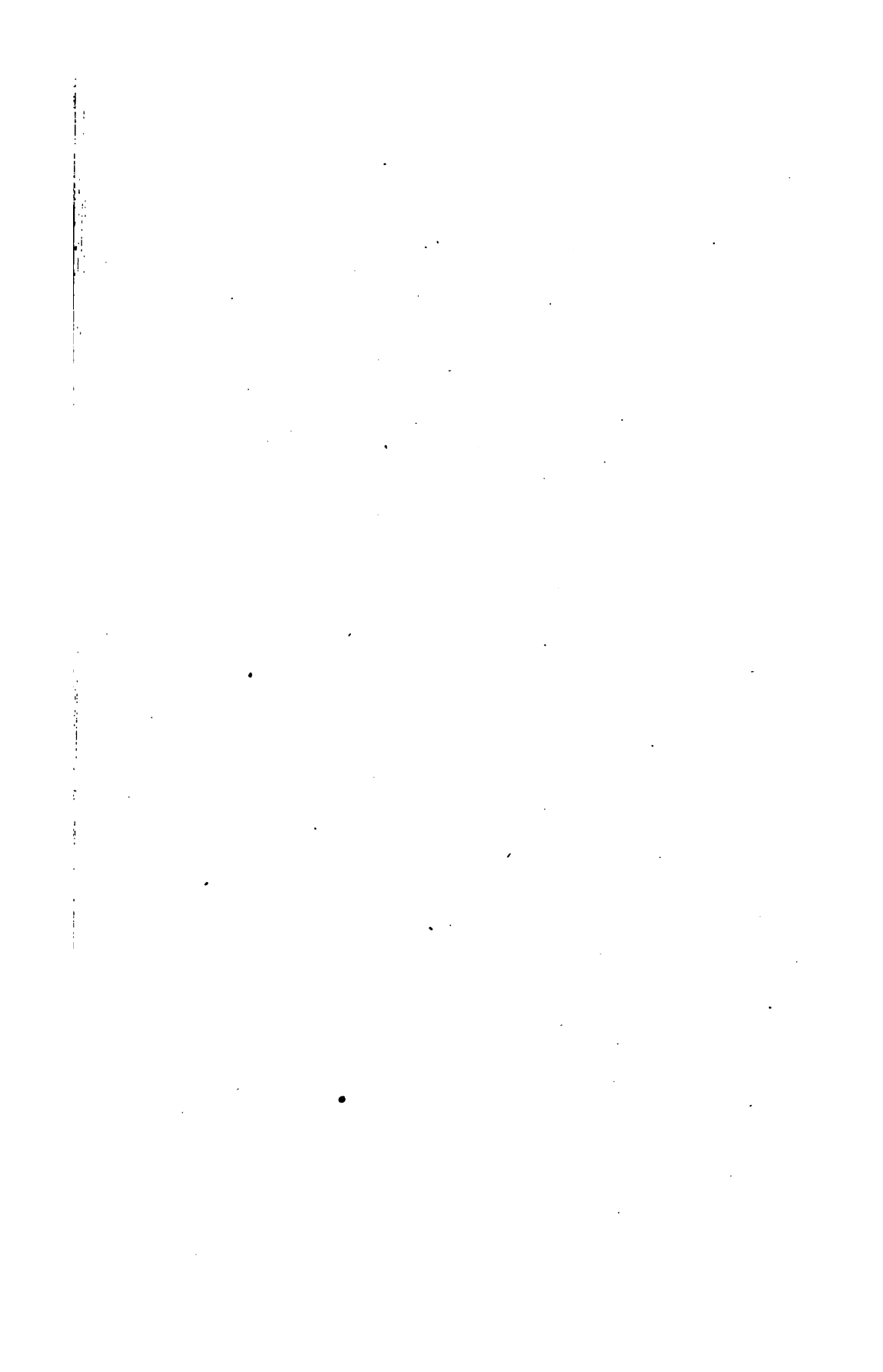
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**I.—GOVERNORS UNDER THE
AMAWEE AND 'ABBÁSEE
KHALEEFES.**

NOTE.

WHEN the nature of the Arabic inscriptions is sufficiently indicated by the name, etc., set forth in the heading, no detailed translation is given, in accordance with the system adopted in the *Catalogue of Oriental Coins*; but in the case of the inscriptions on the glass weights of the early Governors, where some metrological data, interesting to others besides Arabic scholars, are found, literal translations are added. Most of the weights are stamped on only one side: in this case the words *obv.* and *rev.* are omitted. The colour of the glass is given approximately, as the shades are too numerous to be individualized, and the attempt to distinguish them would rarely convey the same impression to two minds. They are always understood to be transparent except when stated to be opaque. The inscriptions are generally in a circular depression; when otherwise the form of the depression is stated. G. C. indicates that the specimen belongs to the Glass Collection in the Department of Mediaeval Antiquities, and not to the Department of Coins.

1.—GOVERNORS UNDER THE AMAWEE KHALEEFES.

HAYYÁN IBN SHUREYH.

Treasurer of Egypt, A.H. 99—101=A.D. 717—719.

DEENÁR.

1.

| | |
|-------------|--------------------------|
| * | |
| امر حيان | <i>Ordered Hayyán</i> |
| بن شريح | <i>ibn Shureyh.</i> |
| مثقال دينار | <i>Weight of deenár.</i> |
| واف | <i>Full weight.</i> |

Pl. I. Green, 1·15, Wt. 65

OSÁMAH IBN ZEYD.

Governor of Egypt, A.H. 102*=A.D. 720.

HALF-DEENÁR.

2.

| | |
|-----------|---------------------------------|
| امراسا | <i>Ordered Osá-</i> |
| مة بن زيد | <i>meh ibn Zeyd</i> |
| بميزن نصف | <i>for the weighing of half</i> |
| دينر واف | <i>a deenár. Full weight.</i> |

Pl. I. Green, ·85, Wt. 33

* So Ibn-el-Atheer, v. 77: but not Wüstenfeld.

'OBEYD-ALLÁH IBN EL-ḤABḤÁB.*

Treasurer of Egypt, A.H. 102—114=A.D. 720—732.

FELS.

Year 110.

3.

| | |
|------------------------|------------------------------|
| بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| اَمْرٍ عِبِيدِ اللّٰهِ | <i>Ordered 'Obeyd-Alláh.</i> |
| مِثْقَالِ فِلْسٍ | <i>Weight of fels.</i> |
| سَنَةِ عَشْرٍ | <i>Year ten</i> |
| مِائَةٍ | <i>a hundred.</i> |

Pl. I. Green, '95, Wt. 58

THIRD OF DEENÁR.

3G.

| | |
|---------------------------|------------------------------|
| بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| اَمْرٍ عِبِيدِ ا | <i>Ordered 'Obeyd-A-</i> |
| لِلّٰهِ ابْنِ الْحَبِيْبِ | <i>llah ibn El-Ḥabḥá-</i> |
| بِ مِثْقَالِ ثَلَاثِ | <i>b. Weight of a third.</i> |
| وَأَف | <i>Full weight.</i> |

G. C. Green, '8, Wt. 22

* See bottle stamps in Appendix.

EL-KĀSĪM IBN 'OBEYD-ALLĀH.

Treasurer of Egypt, A.H. 112—124 = A.D. 730—741.

(UNDER WHOM MUSLIM IBN EL-'ĀFEE.)

FELS: THIRTY KHARROOBEHS.

Year 119.

4.

بِسْمِ اللّٰهِ ا
 مَرَّ اللّٰهُ بِالْوَفٰى
 وَاَمَرَ بِطَبْعِهِ
 مِثْقَالَ فِلَسٍ ثَلَاثِينَ
 خَرُوبَةَ الْقَاسِمِ
 بِنِ عِبِيدِ اللّٰهِ عَلٰى يَدِى
 مُسْلِمِ بِنِ الْعَافِ
 فِ سَنَةِ تِسْعِ
 عَشْرَةِ وَمِائَةِ

In God's name :
God commands honesty ;
and the stamping of it ordered
[as] the weight of a fels of thirty
kharroobehs El-Kāsim
ibn 'Obeyd-Allāh ; by the hands
of Muslim ibn El-'Ā-
fee : year nine-
teen and one hund-
red.

Pl. I. Green, 1·3, Wt. 90

EL-ḲĀSIM IBN 'OBEYD-ALLĀH.

GREAT FELS: THIRTY KHARROOBEHS.

Year 119.

5.

| | |
|-----------------------------|-----------------------------------|
| بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| مِمَّا اَمَرَ بِهِ ا | <i>of what ordered E-</i> |
| لِقَاسِمِ بْنِ عَمِيْدٍ | <i>l-Ḳāsim ibn 'Obeyd-</i> |
| اللّٰهِ مِثْقَالِ فِلْسٍ | <i>Allāh : weight of fels,</i> |
| الْكَبِيْرِ ثَلَاثِيْنَ خَر | <i>the great, of thirty khar-</i> |
| وَبَةً وَا | <i>roobehs. Full</i> |
| ف | <i>weight.</i> |

Pl. I. Green, 1·3, Wt. 90

'EESĀ IBN ABEE-'AṬĀ.*

Treasurer of Egypt, A.H. 125—127, 128—132, = A.D. 743—
745, 745-749.

(UNDER WHOM YEZEED IBN ABEE-YEZEED.)

DIRHEM.

6.

| | |
|----------------------------------|---|
| بِسْمِ اللّٰهِ ا | <i>In God's name :</i> |
| مَر اللّٰهُ بِالْوَفَا وَا | <i>God commands honesty : and</i> |
| مَر عِيْسَى بْنِ اَبِي عَطَا | <i>'Eesā ibn Alee-'Aṭā ordered</i> |
| بَطْبَعَهُ مِثْقَالِ دَرْهَمٍ | <i>the stamping of it : weight of a</i> |
| عَلَى يَدِيْ يَزِيْدِ بْنِ اَبِي | <i>by the hands of Yezeed ibn Abee-</i> |
| يَزِيْدٍ | <i>Yezeed.</i> |

Pl. I. Green, 1·0, Wt. 44

* See bottle stamps in Appendix.

HALF-DEENÁR.

6d.

بِسْمِ اللّٰهِ (sic)
 امر عيسى بن ابي
 عطا بطبعه وز
 ن نصف دينر على
 يدى يزيد بن
 ابي يزيد

*In God's name :**Ordered 'Eesá ibn Abee-**'Atá the stamping of it : the weight**of half a deenár ; by**the hands of Yezeed ibn**Abee-Yezeed..*

Green, '9, Wt. 33

YEZEED IBN ABEE-YEZEED.

FELS: TWENTY KEERÁTS.

7.

امر يزيد
 بن ابي يزيد
 مثقال فلس
 عشرين قير
 ط

*Ordered Yezeed**ibn Abee-Yezeed.**Weight of a fels**of twenty keerá-**ts.*

Pl. I. Green, 1'05, Wt. 56

HALF-DEENÁR.

8.

| | |
|--------------------|--------------------------------|
| امر يزيد بن | <i>Ordered Yezeed ibn</i> |
| (?) ابى يزيد * وزن | <i>Abee-Yezeed. Weight</i> |
| نصف واف | <i>of a half. Full weight.</i> |

Green, '85, Wt. 33

HALF-DEENÁR.

9.

| | |
|-----------------|--------------------------------|
| بسم الله | <i>In God's name :</i> |
| امر الله بالوفى | <i>God commands honesty.</i> |
| بطبعه مثقا | <i>Stamped, weight</i> |
| ل نصف على | <i>of a half. By</i> |
| يدى يزيد بن | <i>the hands of Yezeed ibn</i> |
| (sic) ا يزيد | <i>A[bee]-Yezeed.</i> |

Pl. I. Green, '85, Wt. 33

2.—GOVERNORS UNDER THE EARLY 'ABBÁSEE KHALEEFES.

'ABD-EL-MELIK IBN YEZEED.

Governor of Egypt, A.H. 133—6 and 137—141 = A.D. 751—
753 and 754—758.

(UNDER WHOM MOHAMMAD IBN.....)

DEENÁR.

10.

| | | |
|------|-----------------------|------------------------------------|
| Obv. | بِسْمِ اللّٰهِ | <i>In God's name ;</i> |
| | اَمْرٍ عَبْدِ ا | <i>Ordered 'Abd-e</i> |
| | لِمَلِكِ بْنِ يَزِيدِ | <i>l-Melik ibn Yezeed</i> |
| | بِمِثْقَالِ دِينَارِ | <i>for the weight of a deenár.</i> |
| | وَأَف | <i>Full weight.</i> |

| | | |
|------|-----------------|------------------|
| Rev. | In centre, طبعه | <i>struck</i> |
| | كامل؟ | <i>accurate.</i> |

Margin inverted, على يدى محمد بن . . .
By the hands of Mohammad ibn

Pl. I. Green, 1-15, Wt. 66

DIRHEM.

11.

Obv. within square,

بِسْمِ اللّٰهِ
 مَرَعْبِدِ الْمَلِكِ
 بِنِ يَزِيدِ بَمَثَقَا
 لِ دِرْهَمٍ وَ
 زَن ثَلَاثَةَ عَشْرٍ
 خَرُوبَةٍ

In God's name :
Ordered 'Abd-El-Melik
ibn Yezeed for the weight
of a dirhem ; weight
of thirteen
kharroobehs.

Pl. I. Green, 9, Wt. 38

NAWFAL IBN FURÁT.

Treasurer of Egypt, A.H. 141—143 = A.D. 758—760.

(UNDER WHOM IBN YEZEED.)

FELS: NINETEEN KHARROOBEHS.

12.

أَمْرُ نَوْفَلِ بْنِ
 فُرَاتٍ بِطَبْعِهِ
 مَمْسُوكِ فِلْسٍ
 تِسْعَةَ وَعِشْرَةَ
 خَرُوبَاتٍ

Ordered Nawfal ibn
Furat the stamping of it :
weight of fels
of nineteen
kharroobehs.

Pl. I. Green, 1·35, Wt. 82

HALF-DEENAR.

13.

| | | |
|--------------|-----------|-------------------------------|
| Obv. | امر نوفل | <i>Ordered Naufal</i> |
| | بن فرات | <i>ibn Furát</i> |
| | بطبعه | <i>the stamping:</i> |
| | مثقال نصف | <i>weight of half</i> |
| | دينر واف | <i>a deenar. Full weight.</i> |
| Rev. Centre, | طبعه | <i>Stamped</i> |
| | كامل | <i>accurate.</i> |

Margin, در بن يزيد *ibn Yezeed.*

Pl. I. Green, '9, Wt. 33

YEZEED IBN ḤĀTIM.

Governor of Egypt, A.H. 144—152 = A.D. 761—769.

(UNDER WHOM 'ABD-ER-RAḤMÁN IBN YEZEED.)

Interim Governor of Egypt, A.H. 147 = A.D. 764.

DEENÁR.

14, 15.

| | | |
|--------------|--------------|--------------------------|
| Obv. | بسم الله | <i>In God's name :</i> |
| | امر الامير | <i>Ordered the Ameer</i> |
| | يزيد بن حاتم | <i>Yezeed ibn Ḥátim.</i> |
| | مثقال دينر | <i>Weight of deenár.</i> |
| Rev. Centre, | طبعه | <i>Stamped</i> |
| | كامل | <i>accurate.</i> |

Margin, على يدى [عبد الرحمن بن يزيد

By the hands of 'Abd-er-Raḥmán ibn Yezeed.

Pl. I. Green, 1·2, Wt. 66

Green, 1·15, Wt. 66

THIRD OF DEENÁR.

16, 17.

Same as 14: but **مشقال ثلث** *Weight of third.*
واف *Full weight.*

Pl. I. Green, '75, Wt. 22

Green, '75, Wt. 22

'ABD-ER-RAḤMÁN IBN YEZEED.

SIXTH OF OUNCE.

18.

Obv. Within square,

سدس *Sixth*
وقية *of ounce.*

Rev. Centre, **طبعه** *Stamped*
كامل *accurate.*

Margin, **على يدي عبد الرحمن بن يزيد***By the hands of 'Abd-er-Raḥmán ibn Yezeed.*

Pl. II. G. C. Green, 1·2, Wt. 96

MOHAMMAD IBN SA'EED.

(UNDER WHOM SA'EED IBN EL-MUSEYYIB.)

Governor of Egypt, A.H. 152=A.D. 769.

DEENÁR.

19.

| | | |
|--------------|-------------------------|-----------------------------|
| Obv. | بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| | اَمْرِ الْاَمِيْر | <i>ordered the Ameer</i> |
| | مُحَمَّدِ بْنِ سَعِيْدٍ | <i>Mohammad ibn Sa'eed.</i> |
| | مِثْقَالِ دِيْنَرٍ | <i>Weight of deenár.</i> |
| Rev. Centre, | طَبَعَهُ | <i>Stamped</i> |
| | بِمَوْزِيْنٍ | <i>by weight.</i> |

Margin, بِسْمِ اللّٰهِ عَلٰى يَدِيْ سَعِيْدِ بْنِ الْمُسَيَّبِ

In God's name : by the hands of Sa'eed ibn El-Museyyib.

Pl. II. Green (metallic lustre), 1·1, Wt. 65

UNDER THE KHALEEFEH
EL-MAHDEE.

A.H. 158—169=A.D. 775—785.

EL-MOHÁJIR [IBN 'OTHMÁN].

Chief of the body-guard of Moḥammad ibn El-Ash'ath,

Governor of Egypt in A.H. 141*=A.D. 758.

(UNDER WHOM THE AMEER . . . SMR.)

HALF-DEENÁR.

20.

| | | |
|------|----------------|--------------------------------|
| Oby. | بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| | المهدى امير | <i>El-Mahdee, Prince</i> |
| | المومنين مثقا | <i>of the Faithful. Weight</i> |
| | ل نصف و | <i>of half [deenár]. Full</i> |
| | اف | <i>weight.</i> |
| Rev. | طبعه ا | <i>stamped it</i> |
| | لمها]جر | <i>El Mohájir.</i> |
| | . * . | |

Margin, على يدى الامير سمر

By the hands of the Ameer smr.

Pl. II. Green, 85, Wt. 33

* It is not stated in the histories whether El-Mohájir was confirmed in office by El-Mahdee, but these weights prove that he was in authority under that Khaleefeh.

THIRD OF DEENÁR.

21.

| | | |
|------|-----------------------|------------------------------------|
| Obv. | بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| | اَمْرُ الْمَهْدِيِّ ا | <i>Ordered El-Mahdee,</i> |
| | مِيرِ الْمُؤْمِنِينَ | <i>Prince of the Faithful.</i> |
| | بِمِثْقَالِ ثَلَاثِ | <i>Weight of a third [deenár].</i> |
| | وَأَف | <i>Full weight.</i> |
| Rev. | Centre, طَبَعَهُ ا | <i>Stamped [by]</i> |
| | لِمُهَاجِرٍ | <i>El-Mohájir.</i> |
| | •*• | |

Margin, عَلَى يَدَيِ الْ... سَمِرِ

By the hands of the smr.

Green, '75, Wt. 22

22.

As 21 : reverse obliterated.

Green, '75, Wt. 22



ISMÁ'EEL [IBN SÁLIH].

Mohtesib of Miṣr under El-Mahdee, afterwards Governor of
Egypt, A.H. 182, 3=A.D. 798, 9.

DEENÁR.

23.

*

| | | |
|------|--|--|
| Obv. | بِسْمِ اللّٰهِ اَمْرٌ المهدى محمد امير المومنين امتع الله له مشقال دينر واف | <i>In God's name : Ordered El-Mahdee Moḥammad, Prince of the Faithful. (God preserve him !) Weight of a deenár. Full weight.</i> |
|------|--|--|

Rev. Margin, بِسْمِ اللّٰهِ عَلَى يَدِي الْاَمِيرِ اِسْمَاعِيلِ
In God's name : by the hands of the Ameer Ismá'eel.

Centre, ملة *Full [weight].*

Pl. II. Green, 1·1, Wt. 66

UNCERTAIN.

DEENÁR.

24, 24g.

Same as 23.

Green; 1 05, Wt. 66

Margin obscure.

G. C. Green, 1·1, Wt. 66

IBRÁHEEM IBN ŞÁLIḤ.

Governor of Egypt, A.H. 165—7=A.D. 781—784.

HALF-DEENÁR.

25.

| | | |
|------|----------------|---------------------------------|
| Obv. | بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| | المهدى امير | <i>El-Mahdee, Prince</i> |
| | المومنين مثقال | <i>of the Faithful. Weight</i> |
| | ل نصف و | <i>of a half [deenár]. Full</i> |
| | اف | <i>weight.</i> |

Margin, . . . ابراهيم
 Ibráheem . . .

| | | | |
|------|---------|----|------|
| Rev. | Centre, | صا | Şá- |
| | | لح | lih. |

Pl. II. Green, '85, Wt. 33

(UNDER WHOM ŞALIḤ IBN 'EESÁ.)

POUND.

25g.

| | | |
|---|--------------------|--|
| * | مما امر به الامير | <i>Of what ordered the Ameer</i> |
| | ابراهيم بن صالح ا | <i>Ibraheem ibn Şalih : or-</i> |
| | مر مثقال رطل . . . | <i>dered [as] weight of a pound...</i> |
| | على يدي صالح بن | <i>by the hands of Sá[lih ibn]</i> |
| | عيسى | <i>'Eesá.</i> |

G. C. Brown. Originally in form of square with hole in centre, but broken. Wt. 3240

EL-FAḌL IBN ṢĀLIḤ.

Interim Governor of Egypt, A.H. 136=A.D. 753;

Governor, A.H. 169=A.D. 785.

(UNDER WHOM 'ĀṢIM IBN ḤAFṢ.)

DEENÁR.

26.

Obv. *مما امر به الا* *Of what ordered the A-*
مير الفضل بن *meer El-Faḍl ibn*
صلح اكرمه الله *ṢāliḤ (God honour him!)*
مثقال دينار واف *Weight of a deenár. Full weight.*
 *

Rev. *Margin, على يدى عاصم بن* *By the hands of 'Āṣim ibn*
Centre, حفص *ḤafṢ.*
 *

Pl. II. Yellow, 1·1, Wt. 66

'ĀṢIM IBN ḤAFṢ.

HALF-DEENÁR.

27.

Obv. *بسم الله* *In God's name:*
مثقال نصف *Weight of half-*
دينر واف *deenár. Full weight.*
 *

Rev. *Margin, على يدى عاصم بن* *By the hands of 'Āṣim ibn*
Centre, حفص *ḤafṢ.*

(partly obliterated).

Pl. II. Green, ·85, Wt. 33

ABOO-JA'FAR ASHNÁS.

Governor of Egypt, A.H. 219—230 = A.D. 834—844.

(UNDER WHOM MOHAMMAD IBN . . .)

27g.

HALF-OUNCE.

Year 223.

مما امر به الامير ابو
 جعفر اشناس مولى
 امير المومنين اعزه
 الله على يدى الامير
 محمد بن بسطام ابو
 وسار مولى امير المو
 منين سنة ثلثة وعشر
 ين وماتين نصف وقية

*Of what ordered the Ameer Aboo-
 Ja'far Ashnás, servant
 of the Prince of the Faithful, aug-
 ment him
 God; by the hands of the Ameer
 Moḥammad ibn Aboo-
 servant of the Prince of the Faith-
 ful: in the year three and twen-
 ty and two hundred. Half an ounce.*

G. C. Pl. II. Green, 2·05, Wt. 525

3.—UNCERTAIN GOVERNORS.

'ABD-EL-'AZEEZ IBN HOMEYD.

HALF-DIRHEM.

28.

| | |
|---------------|---------------------------|
| م [ما] امر به | <i>Of what ordered</i> |
| عبد العزيز بن | <i>'Abd-el-'Azeez ibn</i> |
| حميد نصف | <i>Homeyd. Half-</i> |
| درهم | <i>dirhem.</i> |
| (blundered.) | |

Pl. II. Yellow, '75, Wt. 19

AHMAD IBN (JUBEYR P).

QUARTER-POUND.

28g.

| | |
|----------------|-------------------------------|
| مما امر به الا | <i>Of what ordered the A-</i> |
| مير احمد بن | <i>meer Ahmad ibn</i> |
| جبير ربع ر | <i>Jubeyr (?) : quarter</i> |
| طل واف | <i>pound. Full weight.</i> |

Pl. II. G. C. Green, 2'4, Wt. 1144

DIRHEM.

29.

Within square,

| | |
|----------------|-----------------------------------|
| مما امر به الا | <i>Of what ordered the A-</i> |
| میر احمد بن ج | <i>meer Ahmad ibn Ju-</i> |
| بیر وزن در | <i>beyr (?): Weight of a dir-</i> |
| هم و اف | <i>hem. Full weight.</i> |

Pl. II. Green, '95, Wt. 46

MOHAMMAD IBN S....

HALF-DEENÁR.

Miṣr.

30.

| | | |
|------|---------------|---------------------------------------|
| Obv. | بسم الله | <i>In God's name :</i> |
| | امر امیر ا | <i>Ordered the Prince of</i> |
| | لمومنین مثقال | <i>the Faithful. Weight</i> |
| | نصف و اف | <i>of half [deenár]. Full weight.</i> |

Rev. Centre, مصر Miṣr.

Margin, محمد بن س *Mohammad ibn S.*

Green, '8, Wt. 83

JA'FAR IBN SULEYMÁN.

80g.

| | |
|----------------|----------------------------|
| ر بالله ر | <i>In God</i> |
| جعفر بن سليمان | <i>Ja'far ibn Suleymán</i> |
| * يثق * | <i>trusts.</i> |

Pl. II. G. C. Blue, 1·55, Wt. 171

'ALEE IBN MOḤAMMAD.

(UNDER WHOM IBRAHEEM ?)

[POUND?]

30g.

| | |
|--------------|--------------------------------|
| ما امر | <i>Of what ordered</i> |
| به الامير | <i>the Ameer</i> |
| علي بن محمد | <i>'Alee ibn Moḥammad,</i> |
| امتع الله | <i>God preserve</i> |
| به واف على | <i>him. Full weight. By</i> |
| يدي ابراهيم؟ | <i>the hands of Ibraheem ?</i> |

G. C. Opaque Green coated with yellow, 3·45, Wt. 5350
(a small portion broken off.)

' O M A R .

THIRTY-TWO KHARROOBEHS.

31, 32.

| | |
|--------------|-----------------------|
| عمر | 'Omar. |
| اثنین وثلثین | <i>Two and thirty</i> |
| خروبة | <i>kharroobehs.</i> |

Green, 1·25, Wt. 96

Pl. II. Green, 1·25, Wt. 96

M O Ḥ A M M A D .

DIRHEM: THIRTEEN KHARROOBEHS.

33.

| | |
|----------------|-----------------------------|
| بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| امر اا محمد | <i>Ordered Moḥammad.</i> |
| مئقال درهم | <i>Weight of dirhem</i> |
| ثلاثة عشر خر | <i>of thirteen kharr-</i> |
| وبة واف | <i>oobehs. Full weight.</i> |

Green, ·95, Wt. 41

[HALF-DEENÁB.]

34.

Obv. As 20: but *مشقال* in one line.Rev. Centre, *محمد* *Mohammad*?

Around, illegible inscription.

Straw, '9, Wt. 33

34g.

محمد *Mohammad*.
*

G. C. Brown, 1·25, Wt. 115

UNCERTAIN.

34k.

A.H. ٢٢٩.

Within square,

بِسْمِ اللّٰهِ *In God's name**سوى* ?*سنة تسع* *Year nine.*

G. C. Green, metallic lustre, 1·45, Wt. 111

**II.—EARLY ANONYMOUS
WEIGHTS.**

II.—EARLY ANONYMOUS WEIGHTS.

TWO POUNDS.

84q.

رطلين *Two pounds.*

*

G. C. Green, originally in form of square with hole
in centre, but broken, Wt. 5670

HALF-POUND.

84r.

نصف *Half*

رطل *pound*

كبير *great.*

G C. Green, a rough square block, chipped, 1·7, Wt. 1200

HALF-OUNCE.

85.

Within square, نصف *Half*

وقية *ounce.*

U

Pl. III. Green, 1·5, Wt. 244

35d.

F E L S

مثقال *Weight*

فلس *of fels.*

Green, 1·35, Wt. 111

FELS: THIRTY-THREE KHARROOBEHS.

36.

| | |
|----------------------|--------------------------|
| بِسْمِ اللّٰهِ | <i>In God's name :</i> |
| مِثْقَالِ فِلس | <i>Weight of fels of</i> |
| ثَلَاثَةِ ثَلَاثِينَ | <i>three and thirty</i> |
| خَرُوبَةِ | <i>kharroobehs.</i> |

Green, 1·15, Wt. 89

FELS: THIRTY-TWO KHARROOBEHS.

37, 37g.

Within square,

| | |
|-------------------------|--------------------------|
| مِثْقَالِ | <i>Weight</i> |
| فِلسِ اثْنَيْنِ | <i>of fels of two</i> |
| وِثْلَيْثِينَ خَرُوبَةِ | <i>and thirty kharr-</i> |
| وَبَةِ | <i>oobehs.</i> |

Pl. III. Green, 1·25, Wt. 97

G. C. „ 1·25, Wt. 97

FELS: THIRTY KEERÁTS.

38.

| | |
|------------------------|---------------------------|
| مِثْقَالِ الْفِلسِ | <i>Weight of the fel-</i> |
| سِ ثَلَاثِينَ قِيرَاتٍ | <i>s of thirty keer-</i> |
| اطِ وَاوِ | <i>áts. Full weight.</i> |

(Inscription reversed.)

Pl. III. Green, 1·5, Wt. 79

FELS: TWENTY-FIVE KHARROOBEHS.

39, 39g.

| | |
|-----------------|--------------------------|
| مِثْقَالِ فِلسِ | <i>Weight of fels :</i> |
| خَمْسِ وَعَشْرٍ | <i>of five and twen-</i> |
| يْنِ خَرُوبَةِ | <i>ty kharroobehs.</i> |

Fragment. Opaque Black, 1·15

G. C. „ „ 1·1

F E L S.

40, 40g.

| | |
|-------|---------------------|
| مثقال | <i>Weight</i> |
| فلس | <i>of fels.</i> |
| واف | <i>Full weight.</i> |
| | Green, 1·25, Wt. 90 |
| G. C. | „ 1·2, Wt. 89 |

FELS: TWENTY-FIVE KEERÁTS.

41, 42.

| | |
|-----------|------------------------------|
| مثقال فلس | <i>Weight of fels :</i> |
| واف وزن | <i>full weight : weight</i> |
| خمسة وعشر | <i>of five and twen-</i> |
| ين قيرط | <i>ty keeráts.</i> |
| | Pl. III. Green, 1·15, Wt. 76 |
| | „ 1·15, Wt. 76 |

FELS: TWENTY-*x* KHARROOBEHS ?

43.

| | |
|-----------|------------------------|
| ب[سرالله | <i>In God's name :</i> |
| مثقال فلس | <i>Weight of fels</i> |
| و | <i>. . . and twen-</i> |
| وحربر (?) | <i>[ty]</i> |
| | Fragment. Green, 1·1 |

FELS: TWENTY KHARROOBEHS.

44.

| | |
|-------|------------------------------|
| فلس | <i>Fels of</i> |
| عشرين | <i>twenty</i> |
| خروبة | <i>kharroobehs.</i> |
| * | |
| | Pl. III. Green, 1·05, Wt. 63 |

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

20

1. The first part of the paper
 2. The second part of the paper
 3. The third part of the paper
 4. The fourth part of the paper

See, p. 11, W. 89

THE UNIVERSITY OF CHICAGO

21

1. The first part of the paper
 2. The second part of the paper
 3. The third part of the paper
 4. The fourth part of the paper

See, p. 11, W. 97

See, p. 11, W. 97

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22

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 2. The second part of the paper
 3. The third part of the paper
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See, p. 11, W. 79

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23

1. The first part of the paper
 2. The second part of the paper
 3. The third part of the paper
 4. The fourth part of the paper

24

F E L S.

40, 40g.

مثقال *Weight*فلس *of fels.*واف *Full weight.*

Green, 1·25, Wt. 90

G. C. „ 1·2, Wt. 89

FELS: TWENTY-FIVE KEERÁTS.

41, 42.

مثقال فلس *Weight of fels:*واف وزن *full weight: weight*خمسة وعشر *of five and twen-*ين قيرط *ty keeráts.*

Pl. III. Green, 1·15, Wt. 76

„ 1·15, Wt. 76

FELS: TWENTY-X KHARROOBEHS?

43.

ب[سم الله *In God's name:*مثقال فلس *Weight of fels*و عشر *. . . and twen-*وحرير (?) *[ty]*

Fragment. Green, 1·1

FELS: TWENTY KHARROOBEHS.

5, Wt. 63

D E E N Á R.

45.

مثقال *Weight*
 دينار *of deenár.*
 واف *Full weight.*

*

Green, '95, Wt. 63

D E E N Á R.

46.

بسم الله *In God's name .*
 ربي الله *God is my Lord.*
 له
 دينار *Deenár.*

Pl. III. Green, '95, Wt. 65

[D E E N Á R.]

47.

بسم *In the name*
 الله *of God.*
 كيل *Measure*
 الله *of God.*

Pl. III. Green, '9, Wt. 65

[D E E N Á R.]

48.

نعم *How good*
 الرفيق *a companion [is*
 التوفيق *God's] grace.*

Pl. III. Opaque Black, '9, Wt. 67

FELS: FIFTEEN KHARROOBEHS.

49.

مثقال فلس *Weight of fels*
 خمس عشر *of fifteen*
 ة خروبة *kharroobehs.*

Pl. III. Green, 1·0 Wt. 49

50.

Same as 48.

Green, ·9, Wt. 47

DIRHEM.

51.

Within square, درهم *Dirhem*
 كيل *measure.**

Pl. III. Green, ·95, Wt. 45

FELS: FOURTEEN KEERÁTS.

52.

مثقال فلس *Weight of fels:*
 و[اف اربعة *full weight: four-*
 عشر قيراط *teen keeráts.*

Pl. III. Opaque Black, ·9, Wt. 37

HALF-DEENÁR.

53.

In centre, star surrounded by dots.

Margin, بسم الله مثقال نصف دينار

In God's name: weight of half a deenár.

Pl. III. Green, ·9, Wt. 33

* I.e., *weight*. The verb *عال* is used for the weighing of coins.
 (Kámoos.)

[HALF-DEENÁR.]

54.

لله الله *To God: God is.*لله احد *To God: One.*

Green, '8, Wt. 33

HALF-FELS: NINE KEERÁTS.

55, 55g.

* مثقال

Weight

نصف فلس

of half a fels.

تسعة



وزن

Weight of nine

* قريبط

keeráts.

Pl. III. Green, '9, Wt. 27

G. C. „ '9, Wt. 27

[THIRD OF DEENÁR.]

56.

بسم الله *In God's name:*ربى الله *God is my Lord.*

* * *

Green, '65, Wt. 22

56d.

Same as 47.

Green, '75, Wt. 22

III.—'ABBÁSEE KHALEEFEHS

WITHOUT GOVERNORS' NAMES.

III.—'ABBÁSEE KHALEEFES.

II.—'ABD-ALLÁH EL-MANŞOOR.

A.H. 136—158 = A.D. 753—775.

DEENÁR.

57.

| | |
|----------------|------------------------------------|
| مما امر به | <i>Of what ordered</i> |
| عبد الله عيد | <i>the servant of God 'Abd-</i> |
| الله امير المو | <i>Allah, Prince of the Faith-</i> |
| نين مثقال د | <i>ful. Weight of d-</i> |
| ينر واف | <i>eenár. Full weight.</i> |

Pl. III. Green, 1·65, Wt. 218

III. EL-MAHDEE BI-LLÁH.

A.H. 158—169 = A.D. 775—785.

57k.

[DEENÁR.]

*

مما امر به
الامام المهدي
بالله امير
المؤمنين

Green, 1·05, Wt. 61

XXXIII.—EL-MUSTAḌEE BI-AMRI-LLÁH.

A. H. 566—575 = A. D. 1170—1180.

[DOUBLE DIRHEM.]

58, 58a, 59, 59a.

الله
 الامام
 المستضى
 بامر

| | | | |
|----------|---------------|------|--------------|
| Pl. III. | Opaque White, | 1·1, | Wt. 88 |
| | „ | „ | 1·0, Wt. 89 |
| | „ | „ | ·95, Wt. 76 |
| G. C. | „ | | 1·05, Wt. 93 |

60.

Same as 58, apparently, but imperfectly run.

Opaque Turquoise Blue, 1·0, Wt. 93

61—63.

[DIRHEM.]

Same as 58.

Opaque White, ·9, Wt. 44
 „ Green, ·8, Wt. 46

64.

Same as 58, omitting الامام.

Opaque White, ·8, Wt. 46

XXXIV.—EN-NÁŠIR LI-DEENI-LLÁH.

A.H. 575—622 = A.D. 1180—1225.

65, 66.

[DOUBLE DIRHEM]

الإمام
الناصر
لدين له (sic)

Green, 1.1, Wt. 9½
,, 1.05, Wt. 89

67.

—
الإمام
الناصر
—

Opaque Green, 1.0, Wt. 93

68.

[DIRHEM.]

As 65.

Green, .85, Wt. 46

69.

الله
الإمام ناصر (sic)
لدين

Opaque Green, .9, Wt. 46

70.

الله
 الامام
 الناصر
 لدين

Pl. III. Opaque White, '8, Wt.

71.

الله
 لاما النانا
 م صر؟

Opaque White, '85, Wt. 47

IV.—FATIMEE KHALEEFES.



IV.—FĀṬIMĒE KHALEEFĒHS.

IV.—EL-MO'IZZ MA'ADD.

A.H. 341—365=A.D. 952—975.

[D E E N Á R .]

72.

El-Manṣooreeyeh.

Outer margin, بسم الله امر به عبد الله معد ابو تميم الامام

Inner margin, المعز لدين الله بالمنصورية

Centre, . . .

Pl. IV. Green, 1·1, Wt. 62

[D I R H E M .]

73.

Margin, الامام المعز لدين الله

Centre, point.

Pl. IV. Green, ·9, Wt. 45

[Q U A R T E R - D E E N Á R .]

74.

Same as 73: no point.

Purple, ·7, Wt. 15

V.—EL-'AZEEZ NEZÁR.

A.H. 365—386 = A.D. 975—996.

[DOUBLE DEENÁR.]

75.

Centre,

عدل

Margin, الامام العزيز بالله امير المومنين

Pl. IV. Green, with metallic lustre, 1·3, Wt. 121

[DOUBLE DIRHEM.]

76.

Within octagon,

الامام

العزيز بالله

امير المومنين

نزار

Pl. IV. Yellow, 1·1, Wt. 91

77.

الامام

نزار

Pl. IV. Blue, 1·05, Wt. 88

[DEENÁR.]

78.

مما امر به

الامام العزيز

بالله امير

المومنين

Pl. IV. Green, 1·1, Wt. 65

[HALF-DIRHEM.]

79.

Same as 77, but within square.

Pl. IV. Green, '7, Wt. 22

80.

الإمام

العزیز

Green, '65, Wt. 22

81.

العزیز

[بالله]

Fragment. Green, '6

82.

بالله

العزیز

Green, '45, Wt. 4

[HALF-DIRHEM.]

83.

Apparently same as 82: but obscure.

Opaque Black, '55, Wt. 22

VI.—EL-ĤĀKIM EL-MANṢOOR.

A.H. 386—411 = A.D. 996—1020.

[D E E N Ā B.]

84, 85.

Year 403.

Obv. لا اله الا الله
 محمد رسول الله
 على ولي الله
*There is no God but God :
 Moḥammad is the Apostle of God,
 'Alee is the Friend of God.*

Rev. الامام الحاكم
 بامر الله امير
 المؤمنين مما
 عمل في سنة
 ثلث واربع مائة
 عدل
*The Imām El-Ĥākim
 bi-amri-llāh, Prince
 of the Faithful. Of what
 was made in the year
 three and four hundred.
 Just.*

Pl. IV. Green, 1·1, Wt. 65

Yellow, 1·1, Wt. 63

86.

Year 403.

As 84 : but obv. arranged as far as **ولى** in circular margin,
 with **الله** in centre.

Green, 1·1, Wt. 61

87.

Year 404.

As 84 : but last lines of rev.,

عمل فى سنة اربع
واربع مائة
عدل

Green, 1·0, Wt. 61

88.

Year 406.

الامام الحاکم
بامر الله امير المومنين
مما عمل فى سنة ست
واربع مائة

Brown, coated with opaque yellow paste, '95, Wt. 58

89.

(With name of 'Omar.)

Year 407.

Obv.

As 84 :

beneath, عمر

Rev.

عدل الامام الحاکم بامر
الله امير المومنين وخليفة
ولى عهد المسلمين
مما عمل فى سنة سبع
واربع مائة

Pl. IV. Green, metallic lustre, 1·1, Wt. 65

90—93.

Year 409.

Obv. Centre, الإمام الحاكم
 بامر الله امير المومنين
 وولي عهده

Margin, لا اله الا الله وحده لا شريك له محمد رسول الله
 على ولي الله

Rev.
 مما عمل في سنة
 تسع واربع مائة

Pl. IV. *Chipped.* Green, 1·05, Wt. 65
 „ 1·05, Wt. 65
 Yellow, 1·05, Wt. 66
 „ 1·1, Wt. 66

[DOUBLE-DIRHEM.]

94, 95.

Obv. Centre, عدل
 Margin, لا اله الا الله محمد رسول الله على ولي الله

Rev. Centre, Star.
 Margin, الحاكم بامر الله وولي عهده

Pl. IV. Green, 1·05, Wt. 92
 „ 1·05, Wt. 91

96, 97.

Obv.

As 84.

Rev.

الحاكم بامر الله
 وولى عهده

Pl. IV. Green, 1·1, Wt. 91

,, 1·05, Wt. 92

98.

Obv.

As 96.

Rev.

الحاكم
 بامر الله
 عدل

Pl. IV. Green, 1·1, Wt. 92

98g.

الحاكم
 بامر الله

G. C. Green, 1·05, Wt. 90

99, 99g.

Obv.

Inscr. obliterated.

Rev.

الامام الحاكم
 بامر الله وولى
 عهده

...

Green, 1·05, Wt. 92

G. C. Brown, 1·0, Wt. 92

100.

Centre,

حسب

My sufficiency

الله

is God.

Margin, الامام الحاكم بامر الله امير المؤمنين

Blue, 1·05, Wt. 92

101.

الحاكم
بامر الله

Green, 1·0, Wt. 87

[DEEN ĀR.]

102.

المنصور
بالله على الامام
الحاكم بامر الله
امير المومنين

Pl. V. Purple, 1·1, Wt. 65

103.

In centre, الحاكم *El-Hākim*
 المنصور *El-Manṣoor*
 يثق بالله (?) *trusts in God.*

* Margin, الامام المنصور بالله الحاكم بامر الله

Pl. V. Green, 1·1, Wt. 65

104.

In centre, الحاكم
 بامر الله

Margin obscure.

Pl. V. Green, 1·1, Wt. 65

105.

Similar to 104.

Fragment. Green, ·75

[DIRHEM.]

106—113.

Obv. As 84.

Rev. الإمام الحاكم
 بأمر الله وولى
 عهده

(Obv. nearly obliterated on some specimens.)

Green, .85, Wt. 42

Green, with metallic lustre, .85, Wt. 44

Green, .85, Wt. 44

,, .85, Wt. 45

,, .8, Wt. 41

,, .85, Wt. 46

,, .9, Wt. 45

Green, coated with opaque brown paste, .85, Wt. 43

114.

Obv. In centre, عدل

Margin, لا اله الا [الله محمد رسول الله] على ولى الله

Rev. الحاكم بأمر الله

وولى عهده

Green, .9, Wt. 47

115, 116.

Obv. As 114.

Rev. In centre, ⊙

Margin, الحاكم بأمر الله وولى عهده

Pl. V. Green, .9, Wt. 46

Green, coated with brown paste, .85, Wt. 45

H

117.

Obv.

As 84.

Rev.

الحاكم
 بامر الله
 عدل

Green, .85, Wt. 46

118—120.

الحاكم
 بامر الله

Green, .9, Wt. 45

,, .85, Wt. 40

Purple, .85, Wt. 45

121.

As 118: star beneath inscription.

Yellow, .85, Wt. 40

121g.

Same as 96.

G. C. Green, .85, Wt. 39

[HALF-DIRHEM.]

122.

Obv., traces of same formula as on 84.

Rev.

الحاكم
 بامر الله
 وولى عهده

Green, .65, Wt. 22

123—125.

الحاكم

بامر الله

Brown, streaked, '7, Wt. 22

Green, '6, Wt. 23

Green, with lustre, '6, Wt. 23

126, 127.

الامام الحاكم

وولى عهدہ

Pl. V. Green, '7, Wt. 20

,, '65, Wt. 18

128.

ابو على

المنصور

Green, '65, Wt. 24

129.

الامام الحاكم

Green, '65, Wt. 28

[QUARTER-DEENÁR.]

130, 130g.

In centre,

الحاكم

بامر الله

Margin illegible.

Pl. V. Brown, '6, Wt. 16

G. C. Purple, '55, Wt. 15

131.

As 130: no margin.

Green, '55, Wt. 16

[QUARTER-DIRHEM.]

132.

Obv., portion of formula as 84.

Rev. as 130 : no margin.

Green, '5, Wt. 11

133.

As 126.

Green, '55, Wt. 11

134, 134G.

Obv., portion of formula as 84.

Rev.

الحاكم
وولى عهده

Green, '55, Wt. 11

G. C. ,, '65, Wt. 18

135.

Obv., portion of formula as 84.

Rev.

الحا
كم

Pl. V. Purple, '55, Wt. 11

VII.—EḌH-DHĀHIR 'ALEE.

A.H. 411—427 = A.D. 1020—1035.

[DOUBLE DIRHEM.]

136.

Year 41x.

Obv.

مما
عمل سنة
عشر واربعة
مائة

Rev.

•
الامام الظاهر
لاعزاز دين الله
امير المؤمنين
•

Green, 1·05, Wt. 91

137.

Year 420?

Oby.

مما
عمل سنة
عشرين (?) و
.....

Rev. as 136.

Pl. V. Green, 1·0, Wt. 90

138.

Year 42*x*.

Obv.

مما
 عمل سنة
 عشرين واربع
 مائة

Rev. as 136.

Green, 1·0, Wt. 77

139.

Obv. as 84 : rev. as 136.

Green, 1·05, Wt. 91

140, 141.

Same as 136 : but no obv. inscription. .

Brown, 1·1, Wt. 90

Green, 1·05, Wt. 91

142.

Obv. obliterated.

Rev.

الامام
 الظاهر لاعزاز
 دين الله امير المو
 منين

Yellow, 1·15, Wt. 91

143, 144.

Same as 139 : but rev. differently divided, and blundered
 and obscure.

Green, 1·05, Wt. 91

Green, metallic lustre, 1·0, Wt. 86

145, 145g.

الظاهر

لاعزاز دين الله

Pl. V. Green, 1·05, Wt. 83

G. C. Green, 1·05, Wt. 93

[D E E N Ā R.]

146.

Year 4xx.

Obv Centre, الامام الظاهر
لاعزاز دين الله
امير المؤمنين

Margin, لا اله الا الله وحده لا شريك له محمد رسول الله
الله على ولى الله

Rev. Centre, عند
Margin اربعة مائة

Pl. V. Green, 1·0, Wt. 66

147.

Year 415.

Same as 146: obv. margin defective.

Rev. margin, سنة خمس عشر واربعمائة

Opaque Brown, 1·0, Wt. 65

148.

Obv. Same as 146: rev. different but obscure.

Chipped. Green, 95, Wt. 50

149.

Same as 146, but margin imperfect ; no rev. inser.

Green, 1·1, Wt 66

150.

Same as 147, so far as preserved.

Green, fragment, 1·25

[DIRHEM.]

151—153.

Year 415 or 425.

Obv.

الامام الظاهر
لاعزاز دين الله
امير المومنين

Rev.

Centre,

عدل

Margin, سنة خمس عمارة

Pl. V. Green, ·9, Wt. 45

„ ·8, Wt. 46

„ ·9, Wt. 46

154, 155.

Same as 151: rev. almost obliterated.

Green, ·85, Wt. 45

„ ·85, Wt. 46

156, 157.

Year 412.

Obv. As 151 (but 156 has الظ [sic].)

Rev . . . سنة اثن [sic] ع . .
واربع مائة

Green, .85, Wt. 47

„ .95, Wt. 46

158—161.

Same as 151: but reverse plain.

Green, .9, Wt. 46

„ .8, Wt. 44

„ .9, Wt. 45

Purple, .8, Wt. 46

162, 163.

×

. الامام .

الظاهر لاعزاز

× دين الله ×

. × .

Pl. V. Green, .8, Wt. 46

„ .85, Wt. 46

164.

Obv. . الامام .

الظاهر لاعزاز

دين الله امير المو

. منين .

Traces of inscr. on reverse.

Green, .8, Wt. 45

165.

الظاهر
لاعزاز دين الله
امير المومنين

Pl. V. Green, '9, Wt. 46

165a.

الامام الظاهر
لاعزاز دين الله
امير المومنين

Rev. obscure.

G. C. Green, '85 Wt. 46

166, 166d, 166e.

الظاهر
لاعزاز دين الله

Yellow, '95, Wt. 46

Pl. V. Green, '9, Wt. 46

Purple, '9, Wt. 46

166a.

Same as 166.

G. C. Green, '9, Wt. 29

[HALF-DIRHEM.]

167.

Obv.

الامام
الظاهر

Rev. obscure.

Pl. V. Green, '65, Wt. 28

168, 169.

Same as 167; but no points, and reverse plain.

Purple, ·7, Wt. 23

Green, ·7, Wt. 22

170.

Obv.

الظاهر

Traces of rev. inscr.

Pl. V. Yellow, ·7, Wt. 23

171, 171g.

· × ·

الظاهر

· × ·

Pl. V. Green, ·65, Wt. 21

G. C. „ ·6, Wt. 23

172.

· ^ ·

الامام الظاهر

لاعزاز دين الله

امير المومنين

Green, ·65, Wt. 17

[QUARTER-DIRHEM.]

173, 174.

الامام

الظاهر

·:·:·

Pl. V. Green, ·55, Wt. 11

„ ·55, Wt. 11

175.

الإمام الظَّالِم (sic)

Portion of dotted border on reverse.

Green, '5, Wt. 11

176.

○ ○
الظَّالِم ○
○ ○

Traces of inscription on rev.

Pl. V. Brown, '6, Wt. 11

176g.

As 170: no rev. inscription.

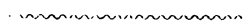
G. C. Green, '6, Wt. 10

176g*.

As 173: but no pellets.

Traces of inscr. on rev.

G. C. Brown, '55, Wt. 12



VIII.—EL-MUSTANŞIR MA'ADD.

A.H. 427—487 = A.D. 1035—1094.

[DOUBLE DEENÁRS.]

177—179.

الإمام معد أبو
 تمير المستنصر بالله
 أمير المؤمنين

Above, ornament.

Pl. VI. Brown, 1·25, Wt. 131

,, 1·25, Wt. 132

Green, 1·25, Wt. 132

180.

Centre,

امير
 المؤمنين

Margin, الإمام معد أبو تمير المستنصر بالله

Brown, 1·3, Wt. 131

181.

Same as 180: but امير added to margin, and in centre,

المؤمنين

Pl. VI. Green, 1·3, Wt. 118

[DOUBLE DIRHEMS.]

182.

Year 428.

الإمام
معد أبو تميم
المستنصر بالله
أمير المؤمنين سنة
ثمان و عشرين وار
بعمارة

Pl. VI. Purple, 1·1, Wt. 92

183.

Year 450.

Obv. الإمام معد أبو
تميم المستنصر با
لله أمير المؤمنين

Rev. سنة
خمسين
واربعمائة

Pink, 1·0, Wt. 81

184.

Year 474.

Obv. Margin, الإمام معد أبو تميم المستنصر بالله

Centre, أمير
المؤمنين

Rev. سنة أربع
وسبعين وا
ربعمائة

Blue, 1·05, Wt. 80

185.

Year 476.

As 184 : but rev.

سنة ست
و سبعين وار
بعمانة

Pl. VI. Green, 1·1, Wt. 92

186.

Year 479.

Same as 184 : but امير in margin, and only المومنين in centre ;

and rev. سنة تسع
وسبعين و
اربعمانة

Yellow, 1·15, Wt. 92

187, 188.

Year obscure.

Same as 184 : but rev. inscription obscure, arranged in marginal
form round central مائة

Green, 1·1, Wt. 86

Purple, 1·1, Wt. 80

189, 189G, 189H.

No year.

Same as 184 : but no rev. inscription.

Brown, coated with paste of metallic lustre, 1·1, Wt. 90

G.C. Opaque Black, splashed with White and Green, 1·1, Wt. 90

G. C. امير المومنين in one line. Green, 1·15, Wt. 91

190, 191.

معد

الامام ابو تميم

المستنصر بالله

امير المومنين

Pl. VI. Blue, 1·1, Wt. 92

Green, 1·1, Wt. 91

192—197, 197g, 197h.

الامام معد ابو

تميم المستنصر با

الله امير المومنين

Pl. VI. Green, 1·0, Wt. 92

Green, 1·05, Wt. 93

Green, 1·05, Wt. 92

Blue, 1·0, Wt. 92

Green, 1·05, Wt. 84

(Fragment) Brown, 1·0

G. C. Green, 1·05, Wt. 89

G. C. Green (Lustre), 1·05, Wt. 86

198, 199.

الامام

معد ابو تميم

المستنصر

(Blundered.)

Pl. VI. Yellow, 1·0, Wt. 92

Green, 1·0, Wt. 84

[D E E N Ā R].

200.

Same as 184: but no reverse.

Pl. VI. Yellow, 1·1, Wt. 66

201, 201G.

Same as 186 : but reverse illegible,

and ∴ ∪ ∴ above and below المومنين

∴ ∩ ∴

(Ornaments obscure : rev. plain.) G. C. Green, 1·0, Wt. 65
Purple, 1·1, Wt. 60.

[DIRHEM.]

202—214, 214G.

Same as 184 : but no reverse inscr.

| | | | | |
|--|-------------------|--------------------------------------|------|--------|
| | Pl. VI. | Yellow, | ·95, | Wt. 46 |
| | | „ | ·85, | Wt. 46 |
| | | Purple, | ·95, | Wt. 46 |
| | | Brown, splashed with white and gold, | ·95, | Wt. 46 |
| | Inscr. imperfect. | Yellow, | ·9, | Wt. 45 |
| | | Green, | 1·0, | Wt. 46 |
| | | „ | ·9, | Wt. 46 |
| | | „ | ·95, | Wt. 46 |
| | | „ | 1·0, | Wt. 42 |
| | | „ | ·95, | Wt. 41 |
| | | Blue, | ·9, | Wt. 47 |
| | | Yellow, with metallic lustre, | ·95, | Wt. 47 |
| | | Opaque Black, | ·97, | Wt. 46 |
| | G. C. | Green, | 1·0, | Wt. 46 |

215.

Traces of year.

Same as 184 : but rev.,

..... س

..... واربعة

..... بعما د

Fragment, Green, ·9

216.

Same as 186 : but reverse inscr. illegible.

∪ over المومنين

Yellow, metallic lustre, 1·0, Wt. 43

K

217, 218.

Year 428.

الإمام
 معد أبو تميم
 المستنصر بالله
 أمير المؤمنين سنة
 ثمان وعشرين و
 أربعمائة

Pl. VI. Green, '95, Wt. 40

,, '9, Wt. 46

219.

Year 42x.

Obv. same as 217: but ending at **المؤمنين**

Rev. سنة (٩) عشر
 . . . وأربع
 مائة

Pl. VI. Green, '9, Wt. 46

220—227, 227g.

الإمام معد أبو
 تميم المستنصر با
 لله أمير المؤمنين

Pl. VI. Blue, '9, Wt. 45

Green, '9, Wt. 45

,, '9, Wt. 45

,, '9, Wt. 41

,, '9, Wt. 45

,, '9, Wt. 36

,, '9, Wt. 37

,, '9, Wt. 32

G. C. ,, '9, Wt. 47

228.

• • •
 الامام ابو تمه
 مير المستنصر بالله
 امير المومنين
 •

Pl. VI. Blue, .9, Wt. 47

[HALF-DIRHEM.]

229—233, 233g.

بالله
 المستنصر
 امير المومنين

Pl. VI. Brown, .75, Wt. 23
 Yellow, .7, Wt. 23
 „ .7, Wt. 23
 Green, .8, Wt. 23
 „ .7, Wt. 22
 G. C. „ .7, Wt. 20

234, 234g.

المستنصر
 بالله

Green, .7, Wt. 23
 G. C. Yellow, .7, Wt. 22

235.

بالله
 المستنصر

Pink, .75, Wt. 23

236.

∨
 المستنصر
 ∧

Pl. VI. Opaque White, .65, Wt. 23

236g.

الإمام
معد

G. C. Brown, '65, Wt. 22

237.

الإمام [م] معد arranged in circle round central point.

Yellow, '65, Wt. 23

237g.

In centre, امير
المومنين

Margin, الإمام المستنصر

G. C. Purple, '6, Wt. 16

[QUARTER-DIRHEM.]

238, 239.

المستنصر
بالله

Pl. VI. Green, '6, Wt. 11

,, '6, Wt. 11

240—245, 245g.

الإمام
معد

Pl. VI. Blue, '55, Wt. 11

Yellow, '55, Wt. 11

Green, '6, Wt. 11

,, '55, Wt. 11

Blue, '55, Wt. 12

Yellow, '55, Wt. 12

G. C. Green, '55, Wt. 11

246, 246g.

معد
الامام

Pl. VI. Green, .6, Wt. 11

G. C. „ .55, Wt. 11

247, 248.

معد الامام معد in circle round inner circle, point in centre.

Green, .55, Wt. 12

„ .55, Wt. 10

249, 250.

Same as 240.

Green, .5, Wt. 8

„ .55, Wt. 6

251—277.

In addition to the legible examples of El-Mustansir's glass coin-weights, the Collection contains twenty-seven pieces, none of which is legible, but all have the general appearance of this Khaleefeh's weights.

IX.—EL-MUSTA'LEE AḤMAD.

A.H. 487—495 = A.D. 1094—1101.

[DOUBLE-DIRHEM.]

278, 279.

Margin, الإمام ابو القاسم المستعلى بالله

Centre, أمير المؤمنين

Pl. VII. Blue, 1·1, Wt. 92

Green, 1·1, Wt. 92

280, 281.

احمد

الإمام

المستعلى بالله

أمير المؤمنين

Pl. VII. Green, 1·0, Wt. 91

Brown, 1·0, Wt. 92

282—285.

الإمام

احمد

Pl. VII. Opaque Grey, splashed with

Blue, 1·05, Wt. 92

Opaque Green, ·95, Wt. 92

Opaque Grey and Brown, ·95, Wt. 92

(Inscr. nearly obliterated.) Opaque Green, ·95, Wt. 83

[D E E N Á R.]

286.

Same as 280.

(Broken.) Blue, 1·0, Wt. 64

[DIRHEM.]

287.

احمد
 الامام احمد
 المستعلى بالله
 امير المومنين

Blue, .95, Wt. 47

288.

Same as 278.

Pl. VII. Yellow, .9, Wt. 46

289, 290.

Probably same as 278, but obscure.

Green, .9, Wt. 46

,, .95, Wt. 45

290g.

Same as 280.

G.C. Brown, .9, Wt. 45

291, 292.

الامام
 احمد

Opaque Grey, .85, Wt. 47

,, Brown, .8, Wt. 40

[HALF-DIRHEM.]

293—295.

الامام
 احمد

Pl. VII. Green, .65, Wt. 24

,, .55, Wt. 21

Blue, .6, Wt. 21

296, 297

أحمد

الإمام

Yellowish White, .7, Wt. 23

Green, .7, Wt. 22

298.

أحمد

Green, .65, Wt. 23

X.—EL-ĀMIR EL-MANṢŪR.

A.H. 495—524=A.D. 1101—1130.

[DOUBLE DEENĀR.]

299.

المنصور

أبو علي الإمام

الإمر باحكام الله

أمير المؤمنين

Opaque Blue splashed with gold, 1.2, Wt. 130

[DOUBLE DIRHEM.]

300

الإمام

الإمر باحكا

م الله أمير

المؤمنين

Pl. VII. Green, 1.1, Wt. 94

301.

الامام

المنصور

(sic) امير المو

Pl. VII. Green, 1·1, Wt. 90

,, 1·1, Wt. 91

302.

الامام

المنصور

Green, ·95, Wt. 90

[D E E N Á R.]

303.

Centre,

الامام

المنصور

Margin, ابو على الامر باحكام الله امير المومنين

Pl. VII. Blue, 1·05, Wt. 66

[D I R H E M.]

304, 305.

Centre,

الله ؟

م

Inner margin, ابو على المنصور الامر باحكما

Outer margin illegible.

Brown, ·95, Wt. 47

Blue, ·9, Wt. 46

L

306.

Centre, الامام
 المنصور

Margin, ابو على الامر باحكام لله (sic) امير المؤمنين

Green, '9, Wt. 50

307.

 الامام
 المنصور ابو على
 الامر باحكام
(sic) الله امير المو

Green, '9, Wt. 46

308.

 المنصور ابو على
 لامر (sic) باحكام
(sic) الله امير المو

Green, 1'0, Wt. 47

309.

 الامام
 الامر باحكا
 م الله امير
 المؤمنين

Pl. VII. Green, '9, Wt. 47

310.

 الامام
 الامر باحكام
(sic) الله اميره

Green, '95, Wt. 46

[HALF-DIRHEM.]

311, 312.

الإمام
الإمام

Pl. VII. White, '65, Wt. 22
,, '65, Wt. 22

812a.

Centre,

الإمام
المنصور

Margin illegible.

Green, '6, Wt. 17

[QUARTER-DIRHEM.]

313.

Same as 811.

White, gilt, '5, Wt. 11

XI.—EL-HĀFIDH.

▲ H. 524—544=▲.D. 1130—1149.

[DOUBLE DEENÁR.]

‡14.

الإمام
الحافظ لدين
الله أمير
المؤمنين

Pl. VII. Opaque Black, 1·2, Wt. 126

FĀTĪMĒE KHĀLEEFĒHS.

315.

[DOUBLE DIRHEM.]

الإمام
الحافظ لد
ين الله

Pl. VII. Yellow, 1·15, Wt. 92

[DIRHEM.]

316.

الإمام
الحافظ

Opaque White, ·8, Wt. 44

[HALF-DIRHEM.]

317—319.

Same as 316.

Pl. VII. Green, ·65, Wt. 23

,, ·65, Wt. 22

,, ·65, Wt. 21

[QUARTER-DEENĀR.]

320—322.

الإمام
الحافظ لد
السه امير
المومنين

Pl. VII. Opaque Blue, ·6, Wt. 16

,, ,, ·6, Wt. 15

,, ,, ·5, Wt. 14

VII.—EDH-DHĀFIR ISMĀ'EEL.

A.H. 544—549=A.D. 1149—1154.

[DOUBLE DEENĀR?]

322g.

الإمام
 (sic) الظافر بمير الله
 أمير المؤمنين

G. C. Opaque Red, 1·2, Wt. 116

[DOUBLE DIRHEM.]

323, 324.

الإمام
 الظافر

Opaque Grey, 1·0, Wt. 90

„ „ 1·0, Wt. 92

[DIRHEM.]

325, 326.

Same as 323.

Pl. VII. Opaque Grey, ·85, Wt. 46

„ „ ·9, Wt. 46

[HALF-DIRHEM.]

327, 328.

Same as 323.

Opaque Grey, ·65, Wt. 22

„ „ ·55, Wt. 22

XIII.—EL-FĀĪZ 'EESĀ.

A.H. 549—555=A.D. 1154—1160.

[DOUBLE DEENĀR.]

329.

الإمام
 الفانز بنصر
 الله امير
 المومنين

Pl. VII. Opaque Green, 1·2, Wt. 131

[DOUBLE DIRHEM.]

330, 330_a, 330_b.

الله
 الامام الفانز
 بنصر

Pl. VII. Opaque Grey, ·95; Wt. 90

" " 1·0, Wt. 89

" " ·95, Wt. 91

[DIRHEM.]

331.

Same as 330.

Opaque Grey, ·8, Wt. 46

XIV.—EL-'ĀDID 'ABD-ALLAH.

A.H. 555—567=A.D. 1160—1171.

[DOUBLE DEENĀR.]

332.

الإمام
العاقد
لدين الله

Pl. VII. Opaque Green, 1·2, Wt. 132

[DOUBLE DIRHEM.]

333.

Same as 332.

Opaque Grey, ·95, Wt. 92

334.

الله
الإمام
العاقد
لدين

Opaque Green, 1·0, Wt. 90

[DIRHEM.]

335.

Same as 332.

Opaque Grey, ·8, Wt. 46

[HALF-DIRHEM.]

336.

الإمام
العاقد

Pl. VII. Opaque Green, ·65, Wt. 22



V.—LATER ISSUES.



V.—LATER ISSUES.*
OF THE PERIOD OF THE MEMLOOK SULTĀNS, &c.
~~~~~  
'ALEE ESH-SHUWEYKH.

337.

Year 70.

على ا  
لشويخ سنة  
وسبعين و

Pl. VIII. Yellow (yellow splash), 1·05, Wt. 92

338, 338g.

Year 83.

على  
الشويخ سنة ثلث  
و ثمانين

Yellow (blue splash), 1·05, Wt. 93

G. C. Blue, 1·0, Wt. 92

339, 339g.

على يخ  
الشو

Yellow (blue splash) 1·05, Wt. 93

G. C. „ „ 1·1, Wt. 94

340.

Same as 338.

Purple, ·9, Wt. 46

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\* The metrology of the Memlook period is so variable that it has not been considered desirable to hazard any identifications of the intended weights. At the same time it may be noted that there is a general average of weights of 93, 47, and 23 grs., which appear to represent double dirhems, dirhems and half dirhems.

## LATER ISSUES.

341, 341a.

Same as 339.

Yellow (blue splash), .8, Wt. 44  
 G. C. White „ „ .9, Wt. 48

## 'ALEE EL-MIŞREE.

342, 343, 344.

Year 796?

على  
 المصرى  
 (sic) سنة و تعد  
 وسعممة

(possibly وسبعين)

Pl. VIII. Green (blue splash), 1.0, Wt. 92  
 Yellow, .9, Wt. 47  
 „ .85, Wt. 41

## 'ALEE ED-DA'EE.

345.

Within square, على  
 الدعى

Pl. VIII. Yellow, 1.1, Wt. 94

346.

Same, but الدعى

Purple, .9, Wt. 44

MOHAMMAD EL-'OODEEP

347.

Year 850.

محمد

العوي  
د

سنة

خمسين

(محمد dotted thus)

Pl. VIII. Purple, 1·1, Wt. 91

348, 349, 350.

Same : dates blundered or illegible.

Purple, 1·1, Wt. 91

„ 1·1, Wt. 93

„ 1·05, Wt. 93

351.

Same as 347.

Purple, ·85, Wt. 38

352.

Same as 347.

Purple, ·85, Wt. 46



352g.

Year *xx7*.

ى  
العود  
سبع  
سنة

G. C. Opaque Black and White, '85, Wt. 47

353.

العودى

.....

(Fragment) Blue.

---

MOHAMMAD EL-BÁBÁ IBN MOHAMMAD.

---

354.

Within sevenfoil, محمد البابا بن

محمد

Pl. VIII. Yellow, 1·05, Wt. 93

355.

Same.

Yellow (green splash), '85, Wt. 47

## EL-BÁBÁ.

---

356.

Within cusped hexagram, الببأ

Stars outside.

Yellow (blue splash), 1·0, Wt. 83

357.

Within hexagram, الببأ

Yellow (brown splash), ·9, Wt. 47

358.

Same as 357.

Yellow, ·65, Wt. 23

---

## BÁBÁ.

---

359.

Within hexagram, الببأ

Green, 1·05, Wt. 93

360.

Same as 359.

Blue, ·9, Wt. 47

361.

Same as 359.

Opaque Black, ·6, Wt. 23



## ' O M A R .

360—364, 364a.

عـمـل  
عـمـر

|           |                                   |      |        |
|-----------|-----------------------------------|------|--------|
| Pl. VIII. | Opaque Black, striped with white, | 1·0, | Wt. 93 |
|           | Purple,                           | 1·0, | Wt. 92 |
|           | Dividing line. Opaque Black,      | 1·0, | Wt. 92 |
|           | Opaque Green,                     | 1·0, | Wt. 89 |
|           | Purple,                           | ·95, | Wt. 80 |
|           | G. C. „                           | 1·0, | Wt. 89 |

## A H M A D .

365.

اـحـمـد  
اـحـمـد  
(Incuse.)

Pl. VIII. Green, '9, Wt. 45

366.

Year x42.

In centre,

اـحـمـد

Around,

سنة اثنى واربعين

Purple, ·85, Wt. 43

367, 368.

Year x25.

Same: but

سنة خمس وعشرين و . . . . .

Green, ·85, Wt. 47

Pink, ·85, Wt. 47

## UNCERTAIN.

369.

Year x27.

In centre,

مـحـرـه

Around,

سنة سبع وعشرين . . .

Yellow (blue splash), '9, Wt. 47

## HASAN.

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370.

حسن

عمل

Pl. VIII. Blue (white and blue surface), '85, Wt. 46

371.

عمل

حسن

Blue, '65, Wt. 23

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## RAMADAN P

372, 373.

رمضان

قدر

Pl. VIII. Green, '85, Wt. 48

,, '8, Wt. 46

---

## YA'KOOB.

374.

Year 36.

يعقوب

سنة و

ثلاثين

Pl. VIII. Brown, '9, Wt. 46

N

375, 375a.

Year x50 or x56.

صح ؟  
 يعقوب  
 سنة (or ستة)  
 خمسين

Brown, '8, Wt. 46

Yellow (purple spot), '85, Wt. 46

---

## EL-JEMÁLEE.

376.

سسل ؟  
 الجمالى

Pl. VIII. Yellow, '9, Wt. 49

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## MOHAMMAD.

376a.

Year x71?

Centre, محمد

Margin, سنة احدى (?) و سبعين ؟

G. C. Pink, 1'3, Wt. 135

'ABD-ALLÁH 'OMAR.

---

377.

الله  
عبد  
عمر

Purple, '85, Wt. 46

~~~~~

EL-FAKEEH 'OMAR.

378.

الفقيه
عمر

(With diacritical points.)

Pl. VIII. Purple, '8, Wt. 40

~~~~~

EL-MUSHARRAF

---

379.

المشرف ...

(Thus pointed.)

Yellow, '9, Wt. 43

~~~~~

A H M A D.

380.

سعيد؟

احمد

في

Pl. VIII. Green, 5, Wt. 13

F A R A J P

381.

عمل

فرج؟

Purple, 8, Wt. 38

M O H A M M A D.

382.

Within triangle,

سعيد

Green, 1.05, Wt. 93

ABOO - BEKR.

383.

Year 337.

بو بکر
سبع وثلاثين

Opaque Black, 1·0, Wt. 90

EL-MES' OODEE AHMAD.

384.

In centre,

احمد

Margin,

عمل برسر المسعودی

Pl. VIII. Purple, 1·25, Wt. 134

SHÁHEEN GIRAI.

385.

ح و ا .
شاهین کر

ی

Pl. VIII. Green, 1·15, Wt. 94

MOHAMMAD IBN SHÁHEEN.

386.

Year α 28.

محمد بن

شاهين

ثمان عشرين

سنة

Pl. VIII. Yellow, 1·05, Wt. 93

387.

Year α 29.

Same : but (*sic*) تسع وعشرين انا

Yellow (blue splash), 1·0, Wt. 93

388.

Same : date obscure.

Green, 1·05, Wt. 94

389.

Same : date obliterated.

Green (coated with metallic paste), 1·05, Wt. 85

390.

Same as 388.

Yellow (blue splash), ·8, Wt. 47

VI.—WITHOUT NAMES.



VI.—WITHOUT NAMES.

391. .

بالله *By God*
استعرب *I am ready to fight.*
تعالى *the most High,*

Pl. VIII. Brown, 1·0, Wt. 92

392.

(sic) الله *[To] God [belongeth]*
العزة *power.*

Pl. VIII. Green, ·7, Wt. 23

393, 394.

الله *God*
انصر *grant victory.*

Pl. VIII. Green, ·65, Wt. 25
Purple, ·65, Wt. 19

395.

In centre, امير *Prince*
المومنين *of the Faithful.*

Margin obliterated.

Yellow, ·55, Wt. 15

396.

عدل *Just.*

Pink, ·5, Wt. 11

VII.—WITH DEVICES ONLY.



VII.—WITH DEVICES ONLY.

397.

Whorl.

Blue, 1·2, Wt. 174

398—400.

Lion to left.

Opaque Black, ·8, Wt. 47

Blue, ·85, Wt. 65

Purple, 1·0, Wt. 91

401—402*a*.

Ornamented interlaced hexagram.

Yellow, 1·05, Wt. 94

„ 1·05, Wt. 90

„ ·8, Wt. 46

403—415, 415*c*.

Hexagram, usually with central point.

Yellow, 1·0, Wt. 87

Green, with white marks, ·85, Wt. 46

Opaque Black, ·95, Wt. 91

„ „ 1·0, Wt. 91

Purple, ·8, Wt. 48

„ ·8, Wt. 44

Opaque Black, 1·15, Wt. 94

(Broken) „ „ 1·0

„ „ 1·0, Wt. 87

Brown, metallic lustre, ·9, Wt. 45

Purple, ·85, Wt. 45

„ ·6, Wt. 21

„ ·6, Wt. 16

G. C. Yellow, ·85, Wt. 46

416—418g, 419.

Hexagram with central annulet.

| | | | |
|-------|---------------|------|-------------|
| | Grey, | ·85, | Wt. 44 |
| | Purple, | ·85, | Wt. 45 |
| | Opaque Black, | ·8, | Wt. 45 |
| G. C. | „ | „ | ·85, Wt. 47 |
| | Purple, | ·65, | Wt. 23 |

420, 420g.

Hexagram, plain centre.

| | | | |
|-------|-----------------------------|-------|--------|
| | Purple, with white stripes, | ·7, | Wt. 23 |
| G. C. | Opaque Black, | 1·05, | Wt. 88 |

421.



Blue, ·85, Wt. 67

422—425.

Flower of six petals.

| | | | |
|--|---------------|------|--------|
| | Opaque Black, | ·95, | Wt. 92 |
| | Purple, | ·95, | Wt. 56 |
| | „ | ·6, | Wt. 24 |
| | Blue, | ·65, | Wt. 24 |

426.

Diamond or lozenge.

Green, brown splashes, ·6, Wt. 19

427.

Square within square; central point; around, ornaments.

Opaque Blue, ·5, Wt. 11

427g.



G. C. Green, .9, Wt. 90

428—432.

Crossed lines (grill).

Opaque Black, 1.05, Wt. 90

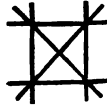
Brown, 1.05, Wt. 92

Opaque Green, .85, Wt. 99

Brown, .7, Wt. 24

Grey, .9, Wt. 46

433.



Green, .75, Wt. 22

434.

Similar, irregular.

Green, .9, Wt. 90

435.

Point within circle, surrounded by dots.

Opaque Red, .6, Wt. 22

436—441.

With central hole.

Brown, .85, Wt. 67

Opaque Blue and Green, .7, Wt. 40

(With Green bead in hole). Yellow, .65, Wt. 29

„ .65, Wt. 30

Opaque Red and Blue, .7, Wt. 32

Brown, .8, Wt. 46

WITH DEVICES ONLY.

442—444.

With central deep hollow.

Opaque Blue, 1·15, Wt. 226

Green, 1·0, Wt. 138

Yellow, blue and white splash, ·9, Wt. 130

445—449.

With slight hollow.

Opaque Black, ·35, Wt. 7

Brown, ·45, Wt. 12

Purple, ·45, Wt. 12

" ·45, Wt. 12

Blue, ·4, Wt. 7

450, 451.

With central boss.

Green, ·95, Wt. 78

Yellow, ·95, Wt. 64

452, 453.

Plain.

Opaque Green, 1·0, Wt. 115

Blue, ·55, Wt. 11

454.

Inscription or ornament within square.

Green, blue and white splash, 1·8, Wt. 902

VIII.—BOTTLE-STAMPS.

GLASS BOTTLE-STAMPS.*

'ABD-EL-MELIK IBN MARWÁN.

HALF-KIST.

391.

بِسْمِ اللّٰهِ
اَمْرُ اللّٰهِ بِالْو
فَا وَا مِرَام . .
عَبْدُ الْمَلِكِ بْنِ مَرْوَانَ
ن بِطَبْعِهِ نَصْف
قِسْطٍ وَ
اِف

*In God's name :
God commands honesty ; And ordered the Ameer 'Abd-El-Melik ibn M[arwán the stamping of it, half a kist. Full measure.*

Pl. IX. G. C. Green, 1·7

* Of other specimens in the Glass Collection, one is stamped with the numeral ۲ (2); another with ح; and a third bears the representation of a figure seated cross-legged, wearing a turban, and holding a bottle in his right hand and a wine-cup in his left, enclosed in a circle of dots. A hollow glass cylinder, closed at ends, weighs 4900 grs., and may be meant for a pound (*rafl*) weight; a glass ring weighs 3000 grs.; and a square block with hole in centre 1460 grs.

'OBEYD-ALLAH IBN EL-ḤABḤĀB.*

Treasurer of Egypt, A.H. 102—114 = A.D. 720—732.

(UNDER WHOM IBN MEYSARAH.)

QUARTER-ḲIST.

392.

Year 111.

بِسْمِ اللّٰهِ
 امر عبید اللہ
 بن الحجاب ربع
 قسط علی یدی حد
 م بن میسرہ سنۃ
 [ا] حدی عشرة
 مئة

In God's name :
 Ordered 'Obeyd-Allah
 ibn El-Ḥabhāb a quarter
 ḳist, by the hands of . .
 . ibn Meysarah, year
 one ten
 hundred.

Pl. IX. G. C. Green, 1·75

'EESA IBN ABEE-'AṬĀ.†

Treasurer of Egypt, A.H. 125—132 = A.D. 743—750.

HALF . . . KEYLEH ?

393.

بِسْمِ اللّٰهِ
 امر اللہ بالوفا
 [ا] امر الامیر عیسع
 بن [ا] بع عطا نصف
 . . کیلے واف

In God's name :
 God commands honesty :
 ordered the Ameer 'Eesá
 ibn Abee-'Atá half .
 . . Keyleh. Full measure.

Pl. IX. G. C. Green, 1·4

* See above, p. 4, nos. 3, 3g, and Introduction.

† See above, p. 6, no. 6.

HALF-KIST.

394.

ا[مر الامير
 ع[سى بن ابى عط]ا
 ب[طبعه نصف
 ق[سط واف

*Ordered the Ameer
 'Eesá ibn Abee-'Atá
 the stamping of half
 a kist : full measure.*

Pl. IX. G. C. Green, 1'4

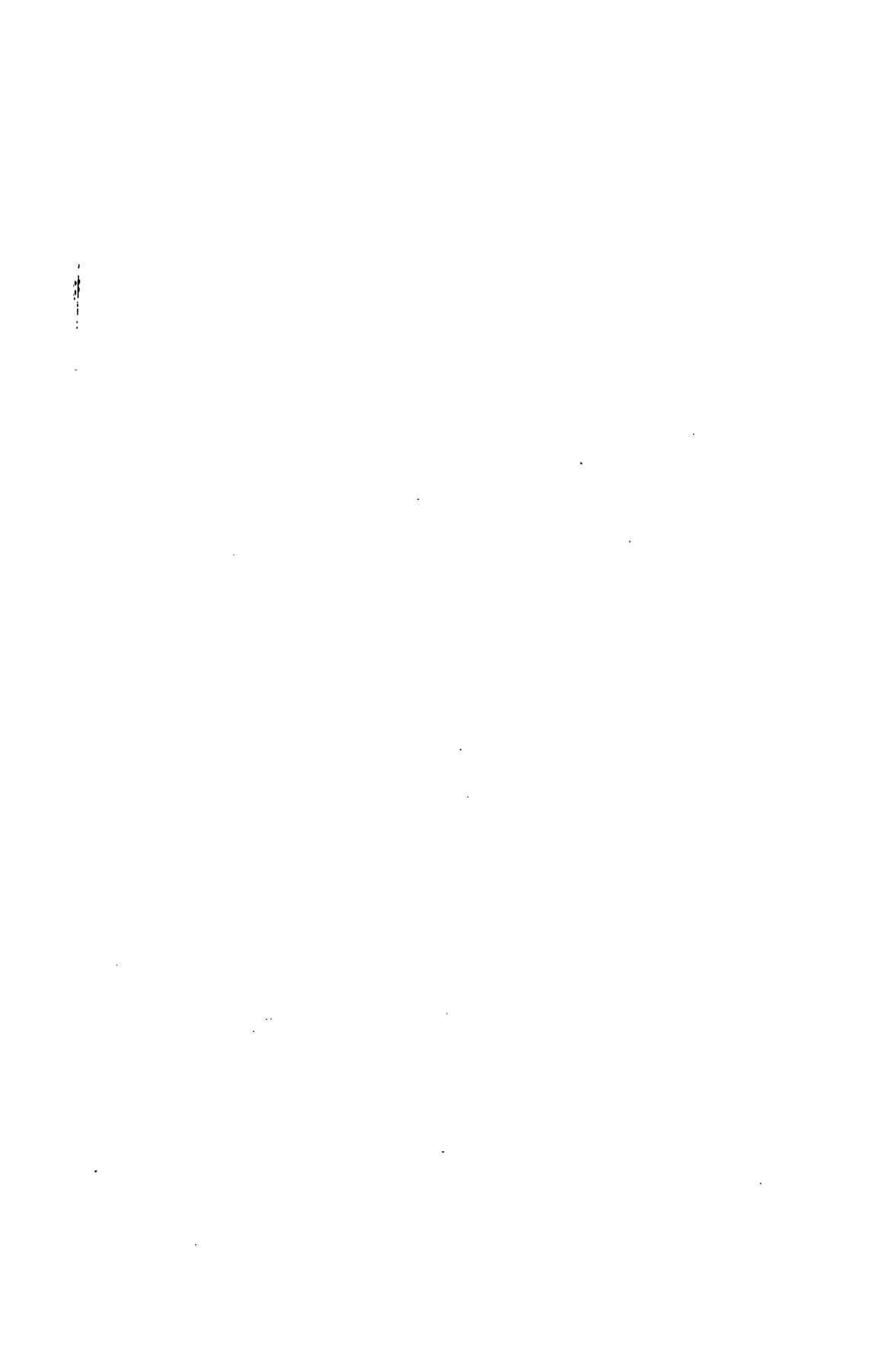
 HOSEYN IBN 'ALEE.

395.

عمل *Work of*
 حسين *Hoseyn*
 بن على *ibn 'Alee.*

Pl. IX. G. C. Yellow, 1'05





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* There are only two examples of the name of a mint city on a glass weight—Mişr, p. 21; El-Manşooreeyeh, p. 41.

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CONVERTING ENGLISH INCHES INTO MILLIMETRES
AND THE
MEASURES OF MIONNET'S SCALE.

| ENGLISH INCHES | | FRENCH MILLIMETRES |
|----------------|--|--------------------|
| 4. | | 100 |
| | | 95 |
| | | 90 |
| 3.5 | | 85 |
| | | 80 |
| | | 75 |
| 3. | | 70 |
| | | 65 |
| | | 60 |
| 2.5 | | 55 |
| | | 50 |
| | | 45 |
| 2. | | 40 |
| | | 35 |
| | | 30 |
| | | 26 |
| 1.5 | | 20 |
| | | 15 |
| | | 10 |
| 1. | | 5 |
| | | |
| | | |
| .9 | | |
| | | |
| | | |
| .8 | | |
| | | |
| | | |
| .7 | | |
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| .6 | | |
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| .5 | | |
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| .4 | | |
| | | |
| | | |
| .3 | | |
| | | |
| | | |
| .2 | | |
| | | |
| | | |
| .1 | | |

TABLE
OF THE
RELATIVE WEIGHTS OF
ENGLISH GRAINS and FRENCH GRAMMES.

| Grains | Grammes. | Grains. | Grammes. | Grains. | Grammes. | Grains. | Grammes. |
|--------|----------|---------|----------|---------|----------|---------|----------|
| 1 | ·064 | 41 | 2·656 | 81 | 5·248 | 121 | 7·840 |
| 2 | ·129 | 42 | 2·720 | 82 | 5·312 | 122 | 7·905 |
| 3 | ·194 | 43 | 2·785 | 83 | 5·378 | 123 | 7·970 |
| 4 | ·259 | 44 | 2·850 | 84 | 5·442 | 124 | 8·035 |
| 5 | ·324 | 45 | 2·915 | 85 | 5·508 | 125 | 8·100 |
| 6 | ·388 | 46 | 2·980 | 86 | 5·572 | 126 | 8·164 |
| 7 | ·453 | 47 | 3·045 | 87 | 5·637 | 127 | 8·229 |
| 8 | ·518 | 48 | 3·110 | 88 | 5·702 | 128 | 8·294 |
| 9 | ·583 | 49 | 3·175 | 89 | 5·767 | 129 | 8·359 |
| 10 | ·648 | 50 | 3·240 | 90 | 5·832 | 130 | 8·424 |
| 11 | ·712 | 51 | 3·304 | 91 | 5·896 | 131 | 8·488 |
| 12 | ·777 | 52 | 3·368 | 92 | 5·961 | 132 | 8·553 |
| 13 | ·842 | 53 | 3·434 | 93 | 6·026 | 133 | 8·618 |
| 14 | ·907 | 54 | 3·498 | 94 | 6·091 | 134 | 8·682 |
| 15 | ·972 | 55 | 3·564 | 95 | 6·156 | 135 | 8·747 |
| 16 | 1·036 | 56 | 3·628 | 96 | 6·220 | 136 | 8·812 |
| 17 | 1·101 | 57 | 3·693 | 97 | 6·285 | 137 | 8·877 |
| 18 | 1·166 | 58 | 3·758 | 98 | 6·350 | 138 | 8·942 |
| 19 | 1·231 | 59 | 3·823 | 99 | 6·415 | 139 | 9·007 |
| 20 | 1·296 | 60 | 3·888 | 100 | 6·480 | 140 | 9·072 |
| 21 | 1·360 | 61 | 3·952 | 101 | 6·544 | 141 | 9·136 |
| 22 | 1·425 | 62 | 4·017 | 102 | 6·609 | 142 | 9·200 |
| 23 | 1·490 | 63 | 4·082 | 103 | 6·674 | 143 | 9·265 |
| 24 | 1·555 | 64 | 4·146 | 104 | 6·739 | 144 | 9·330 |
| 25 | 1·620 | 65 | 4·211 | 105 | 6·804 | 145 | 9·395 |
| 26 | 1·684 | 66 | 4·276 | 106 | 6·868 | 146 | 9·460 |
| 27 | 1·749 | 67 | 4·341 | 107 | 6·933 | 147 | 9·525 |
| 28 | 1·814 | 68 | 4·406 | 108 | 6·998 | 148 | 9·590 |
| 29 | 1·879 | 69 | 4·471 | 109 | 7·063 | 149 | 9·655 |
| 30 | 1·944 | 70 | 4·536 | 110 | 7·128 | 150 | 9·720 |
| 31 | 2·008 | 71 | 4·600 | 111 | 7·192 | 151 | 9·784 |
| 32 | 2·073 | 72 | 4·665 | 112 | 7·257 | 152 | 9·848 |
| 33 | 2·138 | 73 | 4·729 | 113 | 7·322 | 153 | 9·914 |
| 34 | 2·202 | 74 | 4·794 | 114 | 7·387 | 154 | 9·978 |
| 35 | 2·267 | 75 | 4·859 | 115 | 7·452 | 155 | 10·044 |
| 36 | 2·332 | 76 | 4·924 | 116 | 7·516 | 156 | 10·108 |
| 37 | 2·397 | 77 | 4·989 | 117 | 7·581 | 157 | 10·173 |
| 38 | 2·462 | 78 | 5·054 | 118 | 7·646 | 158 | 10·238 |
| 39 | 2·527 | 79 | 5·119 | 119 | 7·711 | 159 | 10·303 |
| 40 | 2·592 | 80 | 5·184 | 120 | 7·776 | 160 | 10·368 |

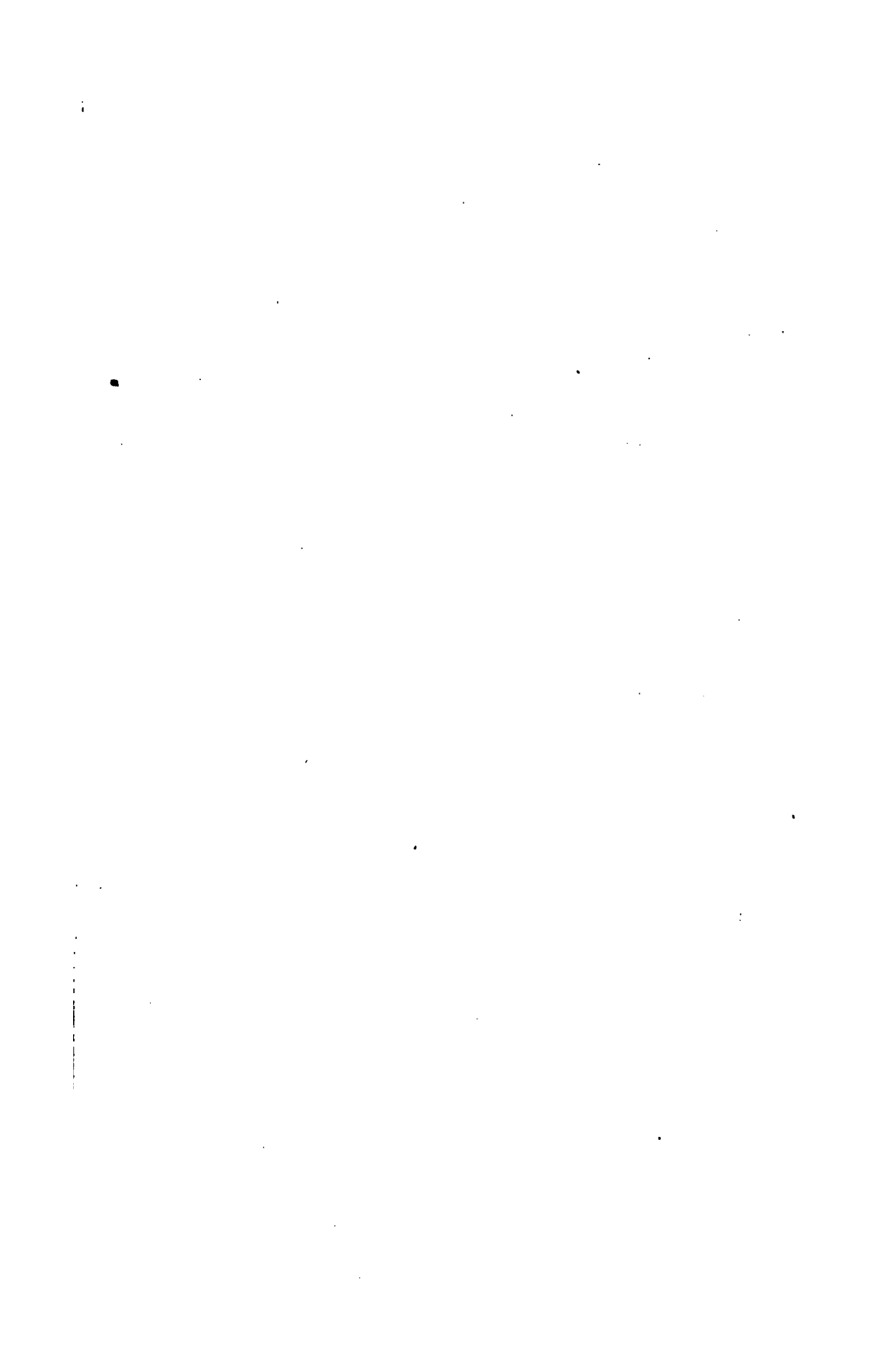
TABLE

OF THE

RELATIVE WEIGHTS OF

ENGLISH GRAINS and FRENCH GRAMMES.

| Grains. | Grammes. | Grains. | Grammes. | Grains. | Grammes. | Grains. | Grammes. |
|---------|----------|---------|----------|---------|----------|---------|----------|
| 161 | 10·432 | 201 | 13·024 | 241 | 15·616 | 290 | 18·79 |
| 162 | 10·497 | 202 | 13·089 | 242 | 15·680 | 300 | 19·44 |
| 163 | 10·562 | 203 | 13·154 | 243 | 15·745 | 310 | 20·08 |
| 164 | 10·626 | 204 | 13·219 | 244 | 15·810 | 320 | 20·73 |
| 165 | 10·691 | 205 | 13·284 | 245 | 15·875 | 330 | 21·38 |
| 166 | 10·756 | 206 | 13·348 | 246 | 15·940 | 340 | 22·02 |
| 167 | 10·821 | 207 | 13·413 | 247 | 16·005 | 350 | 22·67 |
| 168 | 10·886 | 208 | 13·478 | 248 | 16·070 | 360 | 23·32 |
| 169 | 10·951 | 209 | 13·543 | 249 | 16·135 | 370 | 23·97 |
| 170 | 11·016 | 210 | 13·608 | 250 | 16·200 | 380 | 24·62 |
| 171 | 11·080 | 211 | 13·672 | 251 | 16·264 | 390 | 25·27 |
| 172 | 11·145 | 212 | 13·737 | 252 | 16·328 | 400 | 25·92 |
| 173 | 11·209 | 213 | 13·802 | 253 | 16·394 | 410 | 26·56 |
| 174 | 11·274 | 214 | 13·867 | 254 | 16·458 | 420 | 27·20 |
| 175 | 11·339 | 215 | 13·932 | 255 | 16·524 | 430 | 27·85 |
| 176 | 11·404 | 216 | 13·996 | 256 | 16·588 | 440 | 28·50 |
| 177 | 11·469 | 217 | 14·061 | 257 | 16·653 | 450 | 29·15 |
| 178 | 11·534 | 218 | 14·126 | 258 | 16·718 | 460 | 29·80 |
| 179 | 11·599 | 219 | 14·191 | 259 | 16·783 | 470 | 30·45 |
| 180 | 11·664 | 220 | 14·256 | 260 | 16·848 | 480 | 31·10 |
| 181 | 11·728 | 221 | 14·320 | 261 | 16·912 | 490 | 31·75 |
| 182 | 11·792 | 222 | 14·385 | 262 | 16·977 | 500 | 32·40 |
| 183 | 11·858 | 223 | 14·450 | 263 | 17·042 | 510 | 33·04 |
| 184 | 11·922 | 224 | 14·515 | 264 | 17·106 | 520 | 33·68 |
| 185 | 11·988 | 225 | 14·580 | 265 | 17·171 | 530 | 34·34 |
| 186 | 12·052 | 226 | 14·644 | 266 | 17·236 | 540 | 34·98 |
| 187 | 12·117 | 227 | 14·709 | 267 | 17·301 | 550 | 35·64 |
| 188 | 12·182 | 228 | 14·774 | 268 | 17·366 | 560 | 36·28 |
| 189 | 12·247 | 229 | 14·839 | 269 | 17·431 | 570 | 36·93 |
| 190 | 12·312 | 230 | 14·904 | 270 | 17·496 | 580 | 37·58 |
| 191 | 12·376 | 231 | 14·968 | 271 | 17·560 | 590 | 38·23 |
| 192 | 12·441 | 232 | 15·033 | 272 | 17·625 | 600 | 38·88 |
| 193 | 12·506 | 233 | 15·098 | 273 | 17·689 | 700 | 45·36 |
| 194 | 12·571 | 234 | 15·162 | 274 | 17·754 | 800 | 51·84 |
| 195 | 12·636 | 235 | 15·227 | 275 | 17·819 | 900 | 58·32 |
| 196 | 12·700 | 236 | 15·292 | 276 | 17·884 | 1000 | 64·80 |
| 197 | 12·765 | 237 | 15·357 | 277 | 17·949 | 2000 | 129·60 |
| 198 | 12·830 | 238 | 15·422 | 278 | 18·014 | 3000 | 194·40 |
| 199 | 12·895 | 239 | 15·487 | 279 | 18·079 | 4000 | 259·20 |
| 200 | 12·960 | 240 | 15·552 | 280 | 18·144 | 5000 | 324·00 |





EARLY GOVERNORS.

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EARLY GOVERNORS.

TABLE
OF THE
RELATIVE WEIGHTS OF
ENGLISH GRAINS and FRENCH GRAMMES.

| Grains | Grammes. | Grains. | Grammes. | Grains. | Grammes. | Grains. | Grammes. |
|--------|----------|---------|----------|---------|----------|---------|----------|
| 1 | ·064 | 41 | 2·656 | 81 | 5·248 | 121 | 7·840 |
| 2 | ·129 | 42 | 2·720 | 82 | 5·312 | 122 | 7·905 |
| 3 | ·194 | 43 | 2·785 | 83 | 5·378 | 123 | 7·970 |
| 4 | ·259 | 44 | 2·850 | 84 | 5·442 | 124 | 8·035 |
| 5 | ·324 | 45 | 2·915 | 85 | 5·508 | 125 | 8·100 |
| 6 | ·388 | 46 | 2·980 | 86 | 5·572 | 126 | 8·164 |
| 7 | ·453 | 47 | 3·045 | 87 | 5·637 | 127 | 8·229 |
| 8 | ·518 | 48 | 3·110 | 88 | 5·702 | 128 | 8·294 |
| 9 | ·583 | 49 | 3·175 | 89 | 5·767 | 129 | 8·359 |
| 10 | ·648 | 50 | 3·240 | 90 | 5·832 | 130 | 8·424 |
| 11 | ·712 | 51 | 3·304 | 91 | 5·896 | 131 | 8·488 |
| 12 | ·777 | 52 | 3·368 | 92 | 5·961 | 132 | 8·553 |
| 13 | ·842 | 53 | 3·434 | 93 | 6·026 | 133 | 8·618 |
| 14 | ·907 | 54 | 3·498 | 94 | 6·091 | 134 | 8·682 |
| 15 | ·972 | 55 | 3·564 | 95 | 6·156 | 135 | 8·747 |
| 16 | 1·036 | 56 | 3·628 | 96 | 6·220 | 136 | 8·812 |
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| 23 | 1·490 | 63 | 4·082 | 103 | 6·674 | 143 | 9·265 |
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| 28 | 1·814 | 68 | 4·406 | 108 | 6·998 | 148 | 9·590 |
| 29 | 1·879 | 69 | 4·471 | 109 | 7·063 | 149 | 9·655 |
| 30 | 1·944 | 70 | 4·536 | 110 | 7·128 | 150 | 9·720 |
| 31 | 2·008 | 71 | 4·600 | 111 | 7·192 | 151 | 9·784 |
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| 33 | 2·138 | 73 | 4·729 | 113 | 7·322 | 153 | 9·914 |
| 34 | 2·202 | 74 | 4·794 | 114 | 7·387 | 154 | 9·978 |
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| 36 | 2·332 | 76 | 4·924 | 116 | 7·516 | 156 | 10·108 |
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| 38 | 2·462 | 78 | 5·054 | 118 | 7·646 | 158 | 10·238 |
| 39 | 2·527 | 79 | 5·119 | 119 | 7·711 | 159 | 10·303 |
| 40 | 2·592 | 80 | 5·184 | 120 | 7·776 | 160 | 10·368 |

TABLE

OF THE

RELATIVE WEIGHTS OF

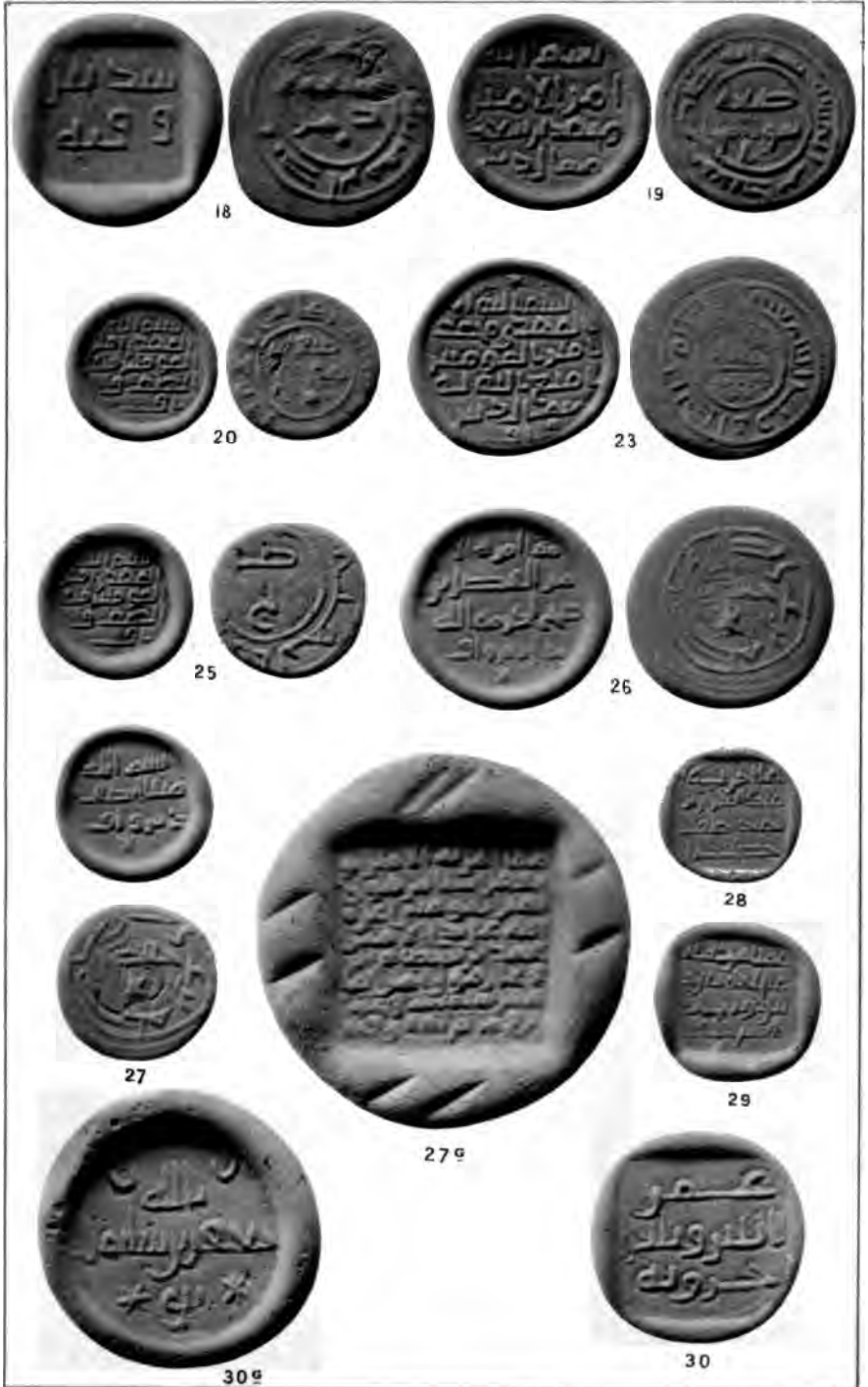
ENGLISH GRAINS and FRENCH GRAMMES.

| Grains. | Grammes. | Grains. | Grammes. | Grains. | Grammes. | Grains. | Grammes. |
|---------|----------|---------|----------|---------|----------|---------|----------|
| 161 | 10·432 | 201 | 13·024 | 241 | 15·616 | 290 | 18·79 |
| 162 | 10·497 | 202 | 13·089 | 242 | 15·680 | 300 | 19·44 |
| 163 | 10·562 | 203 | 13·154 | 243 | 15·745 | 310 | 20·08 |
| 164 | 10·626 | 204 | 13·219 | 244 | 15·810 | 320 | 20·73 |
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| 168 | 10·886 | 208 | 13·478 | 248 | 16·070 | 360 | 23·32 |
| 169 | 10·951 | 209 | 13·543 | 249 | 16·135 | 370 | 23·97 |
| 170 | 11·016 | 210 | 13·608 | 250 | 16·200 | 380 | 24·62 |
| 171 | 11·080 | 211 | 13·672 | 251 | 16·264 | 390 | 25·27 |
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| 176 | 11·404 | 216 | 13·996 | 256 | 16·588 | 440 | 28·50 |
| 177 | 11·469 | 217 | 14·061 | 257 | 16·653 | 450 | 29·15 |
| 178 | 11·534 | 218 | 14·126 | 258 | 16·718 | 460 | 29·80 |
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| 185 | 11·988 | 225 | 14·580 | 265 | 17·171 | 530 | 34·34 |
| 186 | 12·052 | 226 | 14·644 | 266 | 17·236 | 540 | 34·98 |
| 187 | 12·117 | 227 | 14·709 | 267 | 17·301 | 550 | 35·64 |
| 188 | 12·182 | 228 | 14·774 | 268 | 17·366 | 560 | 36·28 |
| 189 | 12·247 | 229 | 14·839 | 269 | 17·431 | 570 | 36·93 |
| 190 | 12·312 | 230 | 14·904 | 270 | 17·496 | 580 | 37·58 |
| 191 | 12·376 | 231 | 14·968 | 271 | 17·560 | 590 | 38·23 |
| 192 | 12·441 | 232 | 15·033 | 272 | 17·625 | 600 | 38·88 |
| 193 | 12·506 | 233 | 15·098 | 273 | 17·689 | 700 | 45·36 |
| 194 | 12·571 | 234 | 15·162 | 274 | 17·754 | 800 | 51·84 |
| 195 | 12·636 | 235 | 15·227 | 275 | 17·819 | 900 | 58·32 |
| 196 | 12·700 | 236 | 15·292 | 276 | 17·884 | 1000 | 64·80 |
| 197 | 12·765 | 237 | 15·357 | 277 | 17·949 | 2000 | 129·60 |
| 198 | 12·830 | 238 | 15·422 | 278 | 18·014 | 3000 | 194·40 |
| 199 | 12·895 | 239 | 15·487 | 279 | 18·079 | 4000 | 259·20 |
| 200 | 12·960 | 240 | 15·552 | 280 | 18·144 | 5000 | 324·00 |



EARLY GOVERNORS.

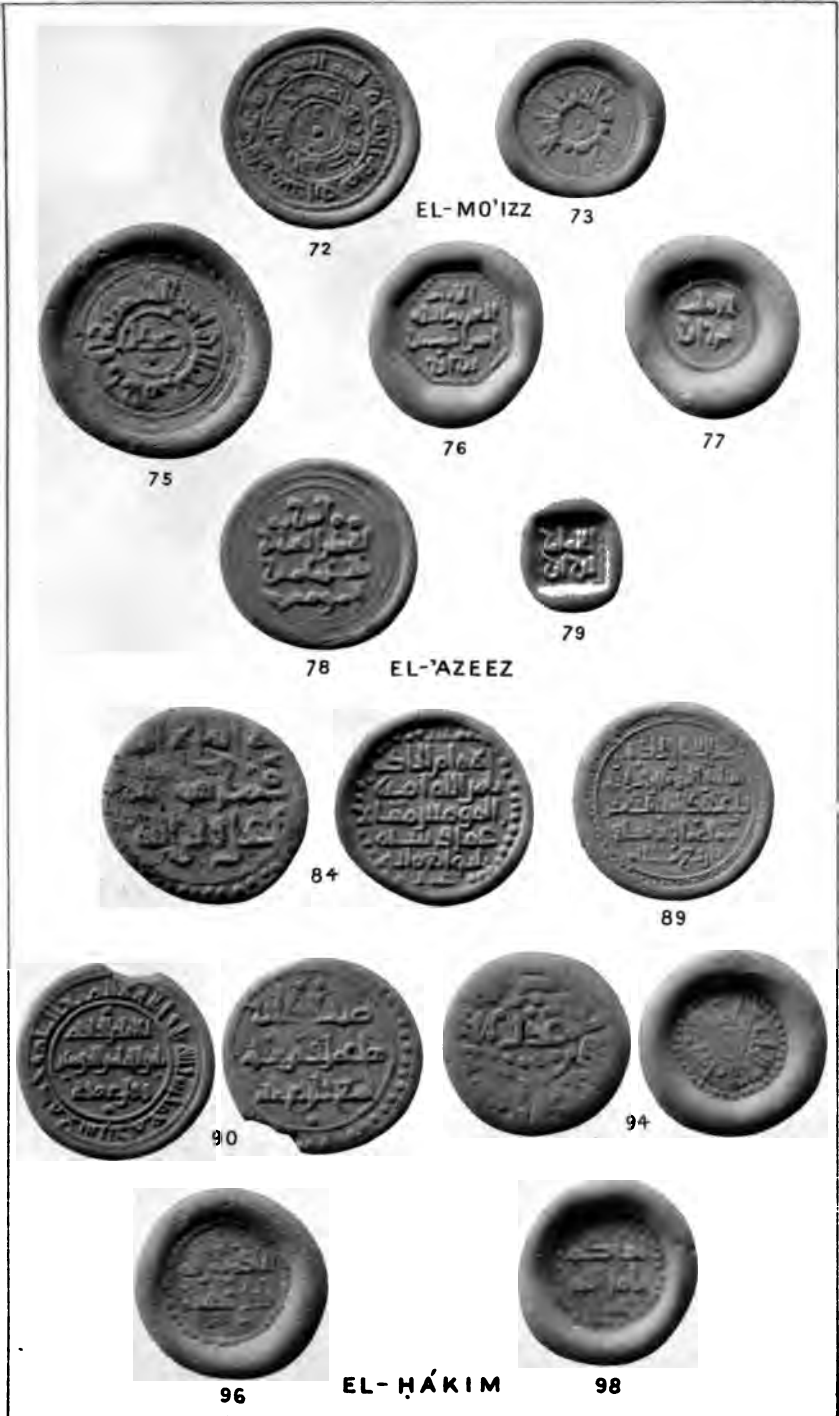




EARLY GOVERNORS.



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FĀṬIMEE KHALEEFEHS.

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EL-HÁKIM



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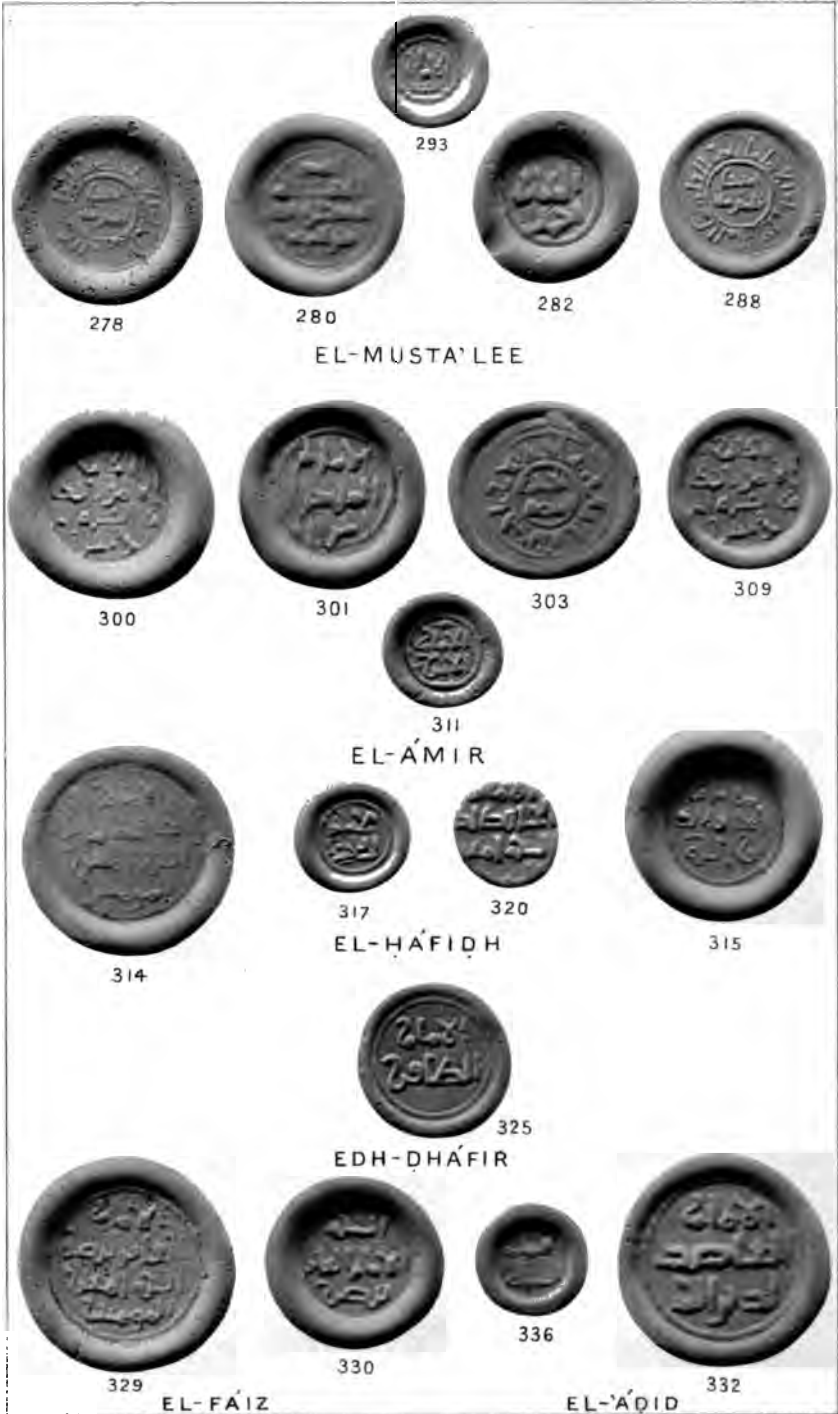


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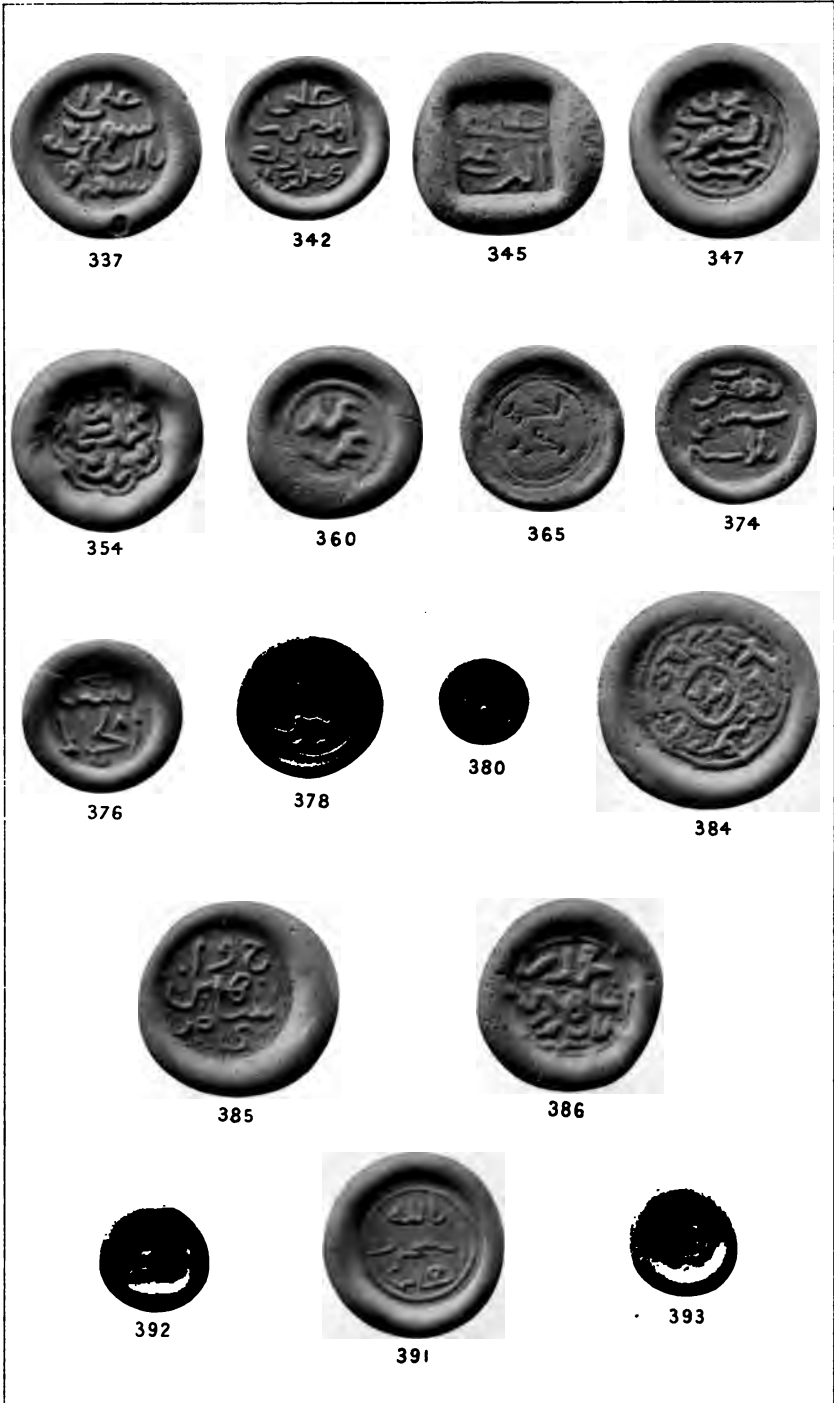
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FÁTIMEE KHALEEFES.





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