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GLASS
STAMPS AND WEIGHTS

BY

SIR FLINDERS PETRIE

Eg. 95 (40) 49

GLASS STAMPS AND WEIGHTS

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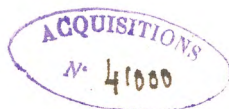
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CONTENTS

SECT.	PAGE
1. Introduction	1
2. Roman period	1
3. Byzantine period	2
4. Omayyad period	3
5. Abbasid period	5
6. Stamps and heavy weights	5
7. Fatimite period	6
8. The Makers	7
9. Weights with private names	8
10. Dates of private workers	9
11. The weight standards, Roman	9
12. The kharrubeh	9
13. The fels	10
14. The dinar and dirhem	10
15. Recutting of dies	10
16. Accuracy of standard and copies	10
17. Colours of glass stamps	11
18. Great families of the viiith and ixth centuries	12
19. The heavier weights	13
20. <i>Catalogue</i> , pl. i. Roman stamps	14
21. Roman coin weights	14
22. Pl. iii nos. 86-125; 680-740 A.D.	15
23. Pl. v „ 126-153; 727-775	16
24. Pl. vii „ 154-180; 754-769	17
25. Pl. ix „ 181-204; 769-780	18
26. Pl. xi „ 205-236; 780-853	19
27. Pl. xiii „ 237-286; 856-905	20
28. Pl. xv „ 287-379; 946-1020	21
29. Pl. xvii „ 380-479; 996-1035	23
30. Pl. xix „ 480-592; 1035-1101	24
31. Pl. xxi „ 593-664; 1101-1259	25
32. Pl. xxiii „ 665-720; Private	26

LIST OF PLATES

PLATE	PAGES
I. Glass stamps, Roman age	1, 2, 14
II, III. Glass weights and stamps, 680-740 A.D.	3, 15
IV, V. " " " " 727-775	4, 16
VI, VII. " " " " 761-769	4, 17
VIII, IX. " " " " 769-785	5, 18
X, XI. " " " " 780-853	5, 19
XII, XIII. " " " " 856-905	5, 20
XIV, XV. Glass weights, Fatimite 946-1020	6, 21
XVI, XVII. " " " " 996-1035	6, 23
XVIII, XIX. " " " " 1035-1101	7, 24
XX, XXI. " " " " 1101-1259	7, 25
XXII, XXIII. " " Private	7, 26
XXIV. Monograms. Weights of dinar and dirhem	2, 9
XXV. Dates of rulers and stampers	7
XXVI. Register of heavier weights	13

Owing to changes in arrangement on pl. xi, 212 is of Bagely, 213 of Delhem; El Motacem 219 is not numbered, nor copied on pl. x.

GLASS STAMPS AND WEIGHTS.

INTRODUCTION

1. THE making of glass discs stamped by a die is peculiarly Egyptian, and there seems no evidence of any other source for such manufacture. They were for various purposes; sometimes as a token or counter, sometimes as a maker's device attached to glass cups, more usually for weights or for designating cup measures. They fall into three main periods, (A) the Roman, (B) the Omayyad and 'Abbasid, and (C) the Fatimite.

The present catalogue represents the third collection that has been published. The first large series issued was that of the British Museum, *Catalogue of Arabic Glass Weights*, by Stanley Lane-Poole, 1891, with 155 photographs, and a valuable introduction. The second series was that of Dr. Fouquet of Cairo, *Catalogue des pièces de verre*, by Casanova, 1893, in the sixth volume of the French *Mission Archéologique*, with 186 photographs. The arrangement of this collection is awkwardly divided in categories, and the Fatimite weights are wrongly classed as amulets; the collection is strong in the measure stamps, of which there are but few in the British Museum. The present catalogue is naturally based on the work of the above descriptions, with 482 photographs, showing nearly all the different dies employed. The relative extent of these series is as follows:—

	B.M.	Fouquet	U.C.
Roman	80	21	85
Omayyad and 'Abbasid . .	58	353	202
Fatimite	397	285	415
(illegible)		(197)	(205)
Total legible	535	659	702

The fresh treatment in this catalogue is the attention to the exactitude of weights, the dating of private weights, and the full series of photographs,

with the transliteration of all of them placed facing, to aid the collector. Whenever the large number in the Arab Museum of Cairo comes to be treated, we may hope for a definitive publication on the whole subject, which will unite all the information and methods of these existing catalogues.

The photographs here are nearly all taken by reflected light, as that gives as clear a result as the oblique lighting of casts, and a more natural appearance. It is only for white or light blue glass that casting is better.

ROMAN PERIOD

2. THERE is no certain evidence of glass weights in Ptolemaic times. Some glass scarabs agree fairly well to the daric, from 61.0 to 788.7 grains or $\frac{1}{2}$ to 6 darics. But as other impressions from the same moulds do not agree with these amounts, the intention of agreement with the daric is left doubtful. These latter glass scarabs have been illustrated in the catalogue "Amulets", and others will appear in the glass catalogue. It is the less likely that the weight of these was adjusted, since in none of the glass stamps of the classical age is there an agreement in weight.

The first class dealt with here is that of the stamps which were applied to the sides of large cups or bowls. These, and the Arabic stamps, are often termed "bottle-stamps," but this is a misnomer, derived from later use, like the recent English stamp of A.D. 1786, following no. 85. Whenever the top remains, it is that of a cup without any contraction at the lip; and the purport of many of the Arab stamps for grain and seed measures proves that the vessels cannot have been contracted upward. There are here two different

dies of a female head wearing a fillet, nos. 1, 2. Another female head coarsely cut with lumpy hair and the mouth open, no. 3. Six different dies of a male head with open mouth, similar to Casanova 1, 9. A head of Bes or of a lion, of very coarse work. Three lion heads (11-13) which are of better work than the previous, and probably earlier. Smaller stamps are of Eros with a bow, three different dies here (14-16) and another in Cas. 1, 2. A head of Pan (17) is of rich blue-green glass; two of the Eros stamps are almost as fine a colour. This group 14-17 seems to be of about Hadrian's time, the lion heads may be the same, the human heads seem to be of the third century. The stamp of a dolphin around a trident is a type on coins of Hadrian (Dattari, 2027), which probably date this example. A cast and a reflection are both photographed for nos. 18-23, 69, 70, 85, as neither alone is satisfactory.

The next class are the discs or tokens, with heads or figures on one or both sides. The weights of these vary quite irregularly; and, on selecting those which are most alike in work and colour, no common standard can be traced. It appears, then, that they are tokens, perhaps of admission to baths or other public places. The Isis and Horus disc (19) is of earlier style than the others; it has an almost horizontal hole through it, left in the making, so it may be for a necklace. The discs with a bust of Serapis and a bust of Isis are not unusual (20-22). The bust on 23 seems to be holding up a sceptre before it; above the head is only a blemish in the glass. This is of clear white glass with a short yellow streak in it; such a streak occurs in a large part of the discs up to no. 55. The commonest type is a head of Herakles on one side, and a bust of Nikē on the other. There were 27 different dies used for the examples here. The type of Nikē is most like that on coins of Aurelius, and the head of Herakles belongs to coins of Commodus, so probably this series may be dated about 190 A.D. A small opaque red glass disc, 56, has a veiled female head, of a deified empress, probably therefore the elder Faustina.

Two stamps of clear green glass (57-8) have the ram of Amen, crowned with disc and horns, a feeding stand (?) before it, and the letters ΔΙ for Diospolis above. This probably refers to Diospolis of the Delta, as that had a ram on the nome coin, while Thebes had a standing figure. These are probably of the time of Hadrian.

The ibis type is common; it is stated by Dattari to have Φ on it, but there is no trace of that on the perfect and well preserved copies of the same die here. There are four dies, three with ibis to right, one to left, nos. 59-67. It probably refers to Hermopolis in the Delta.

The type of 68 resembles the tetrastyle or hexastyle altar of the Caesareum, on the coinage from Hadrian to Aurelius. There seems to be a curve around the back, rendering the further side of a circular altar. It is possible that the object is a radiated head of Serapis on the altar.

The two stamps 69, 70, might seem at first sight to be modern copies of coins. But as there is no inscription on 69 this seems to be a special die. Heads of the Constantine family are occasionally without inscription; but seldom, or never, of this style on coinage. 70 is a copy of the common coin type GLORIA EXERCITVS and in exergue SMKE.

The goat on no. 71 probably refers to Mendes or Busiris, of which cities it is the coin type. The three standing figures on 72 verge on the Byzantine style; a different type with three figures is in Dattari, 6580. In these two we seem to reach the beginning of coin weights, as they weigh each half a solidus, or gold quinarius.

3. Another class is that of the Byzantine solidus weights, bearing the names or monograms of the eparchs (see pl. I). Six of these can be identified historically, and serve therefore as a basis for the chronological order. As others of this class are published in the British Museum *Catalogue of Christian Antiquities*, they will be noted here together. For the list of eparchs see Seymour de Ricci in *Proc. Soc. Bib. Arch.* xxiv, 97. For the monograms of the following names see pl. xxiv.

Strategios A.D. 349. The monogram on no. 74, pl. I indicates this name, granting the € was corruptly used for H. The praenomen Flavios seems given by an indistinct Φ below. The style of the monogram I should have supposed to be a century or two later. The colour is the manganese pink, so usual in the xith century.

Pappos. This name is unknown as eparch, but as there are not more than 67 known in over three centuries, only the smaller part are yet recorded. The style is the earliest of the monograms; 75 is an engraved paste, probably of a signet ring, of the same person as the stamp 76.

Drakōn. Monogram of Drakōn, in gen. Drakonos; well formed but rougher than Pappos.

Hadrianos A.D. 376-7. Monogram of Adrianou; eparch in A.D. 376-7. Two others in Brit. Mus., see DALTON, *Cat.* 679.

Bassianos A.D. 381. Monogram of Bassian, no. 79, the C being included in the curved B. This might seem unlikely, but the lower monogram is Antoninou; Bassianus was eparch in 381, and Antoninus in 383-4; so Antoninus may well have been deputy eparch under Bassianus.

Gennadius A.D. 396. Monogram, in Brit. Mus., see DALTON, *Cat.* 680.

Sergios. Monogram of Sergiou, no. 80. Unknown. Flavios Sergios was a Consul in 351, possibly the same man.

Soteiros. Monogram of Sōteirou, no. 81. Unknown. The name is rare in the masculine form, see Greek *Corpus*, vii, 1757.

Danaos. Monogram of Danaou, no. 82; this name was used in historic times, as it occurs on the coins of Ephesos (MION, *Sup.* vi, 116).

Kyros. Monogram of Kyrou, no. 83. Cyrus of Panopolis was prefect of Constantinople under Theodosius II (408-450); and, as an Egyptian, may well have been eparch at some time. See Brit. Mus. *Cat.* 682.

Nikianos. Monogram of Nikianou, no. 84. Unknown, name rare.

Demosthenes. This having a bust, no. 85, seems likely to be late, as the bust occurs under Justinian (*Cas.* ii, 4). The rich blue cobalt glass was used in Roman times, and also by El Must'aly in xith century; perhaps pieces of old glass remelted.

Rhodo A.D. 538-542. Named on a weight, in Brit. Mus., *Cat.* 669.

Johannes. Eparch during the reign of Mauricius Tiberius, A.D. 582-602, whose monogram is surrounded by the eparch's name; Brit. Mus. *Cat.* 662-3-4. He was probably early in the reign as he seems to be named under Justinian, IVSTIANVS PP AVG IOH., *Cas.* 11, 4.

Other undated eparchs named in the Brit. Mus. *Catalogue* are Gerontios (no. 665-6), Theodotos (660, 667), Kosma (668), Damianos (670-1, and monogram 453), Eupraxios (672), Menōnos (675, possibly the eparch Menas, A.D. 582-602), and Paetos (676). Among other monograms not yet transliterated see Karpos (982), Ennodios (434), and a very clear case of the name Pelegrina (see 307) on 312, where it has been misread.

4. OMAYYAD ARABIC STAMPS AND WEIGHTS

IN describing the Arabic series, references will also be given to the publications of stamps of persons not in the present series. The dates are prefixed in A.H. and A.D. separated by a semicolon. References are to the British Museum catalogue, B.M., and to Casanova's catalogue, C.

(44; 665.) The earliest Arabic stamp known is of the governor 'Oqba. C. i, 166.

(60-4; 680-3.) The khalifeh Yezyd is known on two stamps with large coarse lettering; no. 86, C. i, 95.

(66; 685.) A stamp may belong to the governor 'Abd el 'Azyz, but as no photograph is given, the style cannot be judged. C. i, supp. 6.

(90-6; 709-14.) Of the governor Qurrah ibn Sheryk three stamps are known, all from different dies; here no. 87, C. i, 96, 96 bis.

(96-99; 714-17.) The finance minister was also ordering measures, and first introduced weights under Asamah ibn Zeyd, of whom a dirhem (no. 88) a fels and dinars are known, beside stamps as nos. 89-91.

(99-102; 717-21.) Hayyan ibn Sherykh as financier continued to control the weights and measures, as on no. 92.

Of about this age appears to be an early stamp of Yezyd ibn Aby-Yezyd, no. 93, which is much looser and more irregular in lettering than his stamps under 'Obeydallah.

(106; 724.) Muhammed ibn 'Abd el Melek, the governor, only appears on a dirhem and a stamp here, nos. 94, 95. These mark the beginning of more regular lettering.

(102-12; 721-31.) A great extension of the system was made by 'Obeydallah ibn el Habhab, financier, whose stamps are the commonest of all. The lettering attained full regularity under him, and was never better executed than on nos. 100, 101.

(114-122; 732-40.) El Qasem ibn 'Obeydallah, son of the previous, is the next most prolific maker. The sizes increased, as in the fine wuqiyeh, no. 111, and the fels weights, 112-4.

Perhaps of this period is a fels weight with the name of 'Abdallah ibn 'Aly (no. 126) the lettering of which is too straggling to be later, while the large size of the weight can hardly be earlier. A stamp (127) of an 'Abdallah may be of the same person.

(109, 124, 127; 727, 742, 745.) Hafç ibn el Welyd was repeatedly governor; by the lettering, the dirhem weight, 128, belongs to his later rule.

(124-6; 742-4.) El Welyd II the khalifeh, has left one weight, 129, which is quite unlike any others, in its green-blue colour, and the lettering. Where it was made is a puzzle, as there is no point of comparison.

The maker Yezyd ibn Aby Yezyd appears to have acted independently after his work for Qasem (121), as well as before (93). A large bun-shaped weight (130) seems to bear the name Yezyd; and this is likely as he made similar weights for Mughyra in 749 (no. 137). A small weight (131) and a stamp (132) also have his name alone.

(126-132; 744-9.) 'Ayesy ibn Aby 'Atha (133-5) is stated to be financier, but the Spanish writers name him governor. A large bun-shaped weight is of S'ayd ibn (Lat)ufallah, apparently, by the portion remaining (136).

(131; 749.) Two other bun-shaped weights are of Mughyra; two copies of the dies enable both of them to be completed (137, 138).

About this time probably was Hur ibn Hur (no. 139) who appears to have been the son of the governor El Hur ibn Yuşef of 724, for the name is rare.

(132; 750.) The last governor under the Omayyad khalifehs was 'Abd el Melek ibn Merwan, of whom there are a fels weight (140) and two stamps (141-2). The last was made by 'Abd el Gebar ibn Naçyr; by whom there is also independently a fine fels weight, 143.

5. 'ABBASID ARABIC STAMPS AND WEIGHTS

(133; 741.) 'Abd el Melek ibn Yezyd (144-7). The change of dynasty did not affect the general aspect of the weights or stamps; but a difference immediately appears in the introduction of reverse dies, which give the maker's name. After this, it is seldom that the maker appears along with the ordainer on a single die.

The reverse dies were engraved on the metal tray, on which the glass was put into the furnace, to soften it. The impression is seldom centred, owing to the difficulty of shifting the soft dump of glass. In the Fatimite period the tray was engraved with the confession of faith, and a com-

plete impression is rarely found, usually only a half, or less, appears. Muhammed ibn 'Amru must have been about this time, as his weight, 148, is rather earlier in style than that of Salamat, 188; the latter worked for Yezyd ibn Hatem in 762-768.

S'ayd ibn 'Obeyd, no. 149, must also be of about this period, by the square die and style (132, 5; 750, 3). Çaleh ibn 'Aly shows here another new departure (150). Hitherto the large rotl weights were usually of a bun form; after this the cuboid form, with a hole through the mass, was the rule. A few such were made earlier, as for 'Obeydallah and El Qasem. Some stamps of Çaleh are also known.

(136-58; 754-75.) The khalifeh 'Abdallah el Mançur had stamping done in his name, mainly for measures and large weights (151-153).

(141; 758.) Musy ibn K'ab, governor, is known on some stamps (C. i, 142-3), and employed Muhammed ibn Sherhaby, who worked for 'Abd el Melek ibn Yezyd (to 757), and for Yezyd ibn Hatem, 762-768, covering therefore at least 6 years 757-762. Some independent stamps of M.S. are known, as no. 155.

(136-142; 754-760.) A few weights of the financier Nawful ibn Furat are known, as 154.

(142; 759.) Muhammed ibn el Ash'ab appears on a dinar weight and two stamps, 156-8.

(145; 761.) Yezyd ibn Hatem, the governor, is one of the most frequent names. The accuracy of weights was much improved, three half dinar weights agreeing within $\frac{1}{6}$ of a grain, and the third of a dinar weights within $\frac{1}{10}$ of a grain. Some larger illegible weights, 173-179, belong to about this age.

(152; 769.) Muhammed ibn S'ayd retained two workers of the previous governor, Salamat and Suezy, "the man of Suez" (181-186).

About this period are the weights of 'Abd er Rahman ibn Yezad (187) who worked for Yezyd ibn Hatem (159), and the other weights of Salamat, 188-191, who worked for Yezyd and Muhammed S'ayd, and a similar weight of 'Omar, 192. The position of Tauwaf (193) is uncertain.

(161; 778.) 'Ayesy ibn Luqman, the governor, is known on one weight, 194. The governor Wadih is known on some weights. C. i, 155, iii, 2.

(162; 779.) Yahya ibn Daud, governor, has left a few weights, as 195.

Other names about this period are Hoseyn ibn 'Aly, 'Abd el 'Azyz Homeyd, Ahmed ibn Gubeyr,

G'afar ibn Suleyman, 'Aly ibn Muhammed, Muhammed, all in B.M.; and El Hasan ibn el Huseyn, Musy ibn Yezyd, Musy ibn Abu, 'Abdallah ibn Muhammed, Sinan ibn Ibrahim, Çaleh ibn Salamat, Samand, 'Abd el Wahab, 'Abdallah ibn Ibrahim, all in Casanova.

(158-69; 775-85.) The khalifeh El Mahdy had his name on the Egyptian weights. This period was the culmination of accuracy, the half dinar weights not varying a hundredth of a grain. On his reverse is the name of El Mohagir ibn 'Othman (198, 199), see B.M. 20.

By the lettering, the weight of Qulhem or Mul-khem, 203, must be about this time.

(164; 780.) Two stamps are known of Abu Katiifa Ism'ayl.

(165; 781.) Ghawth ibn Suleyman was four times Chief Justice, in 751, 762, 781 and 784. From the resemblance of this weight, 205, to that of Abdallah, governor in 793 (no. 210), it is evident that this belongs to the later times of Ghawth. A man so often called to office may easily have been financier about this time, when but few names are known; there is no other case of a Justiciar ordaining weights.

(169; 785.) El Fadl ibn Çaleh, 206, is also known on a weight in B.M. The style of lettering is thinner and more upright, approaching the later elongation.

(165-7, 174; 781-3, 792.) Under Ibrahim ibn Çaleh, 207-9, is the latest of the bun-shaped weights, 208.

(171, 789.) One weight is known of Musy ibn 'Ayesy, C. 160.

(175; 793.) The governor 'Abdallah is known on one weight, no. 210. Another ruler of about this time is Begely or Nahely; the weight and stamp 211, 212 are hardly as early as Yahya el Bagely father of Maslama governor in 789, but might refer to Ghalib el Bagely father of the governor Suleyman, of 816.

A fashion of a square arrangement of lettering is seen under Muhammed ibn el Ash'ab (759), no. 156, Ishaq ibn Suleyman (793), C. iii, 1; and Malek (807), no. 214; also in weights yet undated, nos. 213, 217. It seems to have arisen from placing lettering around a square die, as by Ghawth in 785, no. 205. As far as we know, it is not dated beyond the forty-eight years 759-807, but it occurs on a leaden stamp of 900 A.D., see *Pap. Rainer*, II, p. 176. Probably it was the fashion of one factory; the

makers are Delhem ibn Maslama, and Yusuf. The amyr Es Seb'a ibn Hasmethy ibn 'Aly el Katakya ("the early"?) on 217 is as yet unknown.

A very rare formula occurs in place of *bismillah* on 214; Prof. Margoliouth suggests that *tema-allah* is short for *temally-allah*, affirming the constant existence of God.

(182, 3; 798, 9.) Ism'ayl ibn Çaleh is known on a few weights (B.M. 23, 24).

(186, 9; 802, 5.) Hashim ibn 'Abdallah is known on two weights (C. iii, 58-9).

(216; 831.) 'Ayesy ibn Mançur has left one weight, 218, which seems to be of his first governorate, rather than of the second in 843.

(217-27; 833-42.) Of the khalifeh El M'otaçem there are some weights, 219 (too faint to photograph) and C. iii, 45; as also of his feoffee Abu G'afar Ashnas (B.M. 27 G).

6. A group of measure-stamps, nos. 220-235 are apparently of the ixth-xth centuries, by the style of lettering. One is dated to 853 A.D.; and one of them appears to have part of the name of Mustançir, yet the lettering seems too early for that reign.

(218; 834.) Musy ibn 'Abul-'Abbas appears under El Motaçem upon large weights (C. iii, 45), as well as on the ring weight, no. 236.

(242; 856.) Yezyd, governor; on the first die the date is broken away (237); on the smaller, second, die the date line has been smoothed out (238-9). This marks the beginning of a new style, with closely packed lines, on square dies.

(292; 904.) Muhammed ibn Suleyman was governor in this year, and Casanova attributes this die, 240, to him (iii, 57), and it is therefore so left here. But there is great difficulty in dating it as late; the last such dies were in 781-792, of Ibrahim ibn Çaleh (nos. 207-8); and the name of the maker here is El Mohager (misread by Casanova), which is that of the maker under El Mahdy 775-85, stated by Poole to be El Mohager ibn 'Othman, chief of the guard. As this name is rare, while Muhammed and Suleyman are common names, it seems likely that the style should be given full credit, and that these belong to an unknown Muhammed ibn Suleyman about 780 A.D.

Four large cuboid weights have impressions of square dies, and are probably not long after those of Yezyd of 856; but all the stamps are so slightly marked as to be illegible. Of about the same period may be a large bell-shaped weight, of clear blue-green glass, pierced through, with circular stamps,

quite illegible. Also a lesser disc weight of green glass, with a loop handle. A fragment of a clear green glass weight (248) is of a different style to any others here; probably of Tulunid period. Unfortunately the name is lost. Another weight of similar age is 249, which has a private name and title that is not identified or certain in reading.

A fashion arose of placing a small stamp repeatedly on a wide weight: by the lettering nos. 250-1 are about the ixth century.

Some wuqiyeh weights with a square stamp seem probably Tulunid. One of 87 grains is marked with a wrong stamp as "half a dirhem" (253).

There are also cuboid weights which do not seem to have been inscribed, 260-2: and small bun-shaped weights with a square or round impress, quite plain, 263-6, of two and one wuqiyeh. Lesser ones with plain square stamps are half a wuqiyeh, 267-8. Another, 269, has four holes around the centre square, like 205, 210, of about 790 A.D. This, being a rough degradation of the type, is probably ixth century. There are also two glass rings, 270, 270 A, and a thin disc, 271, which may be weights.

A few stamped glass discs seem to be of the Tulunid period. The lettering is too late for the 'Abbasid, and there is no room for them in the Fatimite style until entire degradation set in. Such are nos. 272-80 of Abu Al Hazn, 281 of Mu'awiya, 282-5 of Bashir (?), 286 of Abu Temym. The intense cobalt blue glass of Bashir is peculiar, but occurs rarely in very different times, as the Byzantine 74 of Demosthenes, and no. 580 of El Must'aly. The discs of Abu Al Hazn do not appear to have any relation to weights, or any interrelation. Those of Bashir might be intended for double dinar and double dirhem, yet one of them would be far from any standard. It seems as if these must be tokens or tickets of some kind.

The rarity of weights that can come between the 'Abbasid and Fatimite periods, and the absence of any royal weights then, is akin to the scarcity of the coinage of that age, which is only about a thirtieth of that of the preceding ages.

7. FATIMITE ARABIC WEIGHTS

ALTHOUGH the weights of the previous periods bear the clearest statements that they are for

dinars, dirhems, and other quantities, yet there has been a curious reluctance to allow this to have been the purpose of the later weights. Casanova states (p. 354) "il est peu vraisemblable, en l'absence d'une mention précise, d'y voir des poids du genre des pièces examinées plus haut," that is the pre-Fatimite. Somewhat of the same reluctance appears in the British Museum catalogue, p. 83, where of the private issues it is said "The metrology of the Memlook period is so variable that it has not been considered desirable to hazard any identifications of the intended weights." If this refers solely to the Memluk coins it may be true; but the private weights—which, as we shall see, are not Memluk but Fatimite—are nearly all as regular as the royal weights. Such hesitation has led Casanova to classing the Fatimite weights as amulets.

The earliest of all the Fatimite weights (287) is one of Ism'ayl el Mançur (946-953 A.D.) who united the west, but never entered Egypt, so far as we know. The work of it is excellent, better than that of his successor Mo'ezz, who conquered Egypt; and there is no reason to suppose that this weight was not made in Egypt. It seems—according to Prof. Margoliouth—that there was an active Fatimite party in Egypt before the conquest; this agrees with a coin of Mo'ezz being struck in Cairo eighteen years before he entered Egypt. We can only conclude that this weight was made by partisans of Ism'ayl in Egypt.

(341-365; 953-975.) El Mo'ezz Ma'ad settled the Fatimite dynasty in Egypt. His weights are scarce, not a twentieth of those of El Hakim.

(365-; 975-.) The weights of El 'Azyz are common; the lettering is good and simple, and clear spaces are left around it, which aid it. At the end of this group is placed a wooden reel, which seems to belong to this age.

(386-; 996-.) El Hakim has left innumerable weights, and only Mustançir rivals him; there are a hundred of each here, and about two thirds of that number in Brit. Mus. and Casanova's catalogues. The double dinars are fine weights, but on the smaller sizes the lettering begins to be corrupt. The marked peculiarity of the weights of this madman is the placing the name of his adopted successor, 'Abd er Rahman, as heir presumptive of the Muslimin, along with Hakim's own name; also the addition to the orthodox formula, of "'Aly favourite of Allah."

(411-; 1021-). Ez Zahir or Dhahir, the son of Hakim, succeeded. Further decay of the lettering is seen, only the large weights being well executed.

(427-; 1036-.) El Mustançir shows much variety of work in his long reign of fifty-nine years, during which the degradation of style was established. This accords with the times, when the untold riches and magnificence of the court was plundered by the Turkish troops, and famine and disorganization ruined the land.

(487-; 1094-.) Under El Must'aly the inscriptions become fossilised and are often barely legible. The reverse inscriptions, which were rare under Mustançir (3 per cent), now entirely cease.

(495-; 1101-.) El Amyr el Mañçur has lettering which is wiry and harsh, leaving aside all attempt at the ornate letters which had decayed.

(525; 1131.) One weight here appears to read El Muntazar, or "the expected one," the theoretical Imam that was to come. The style would exactly agree with this date. It is like the most decadent and indistinct of El Amyr, and certainly before the revival of ornate lettering in the next reign, which lasted for fifty years.

(525-; 1131-.) A fresh start is well marked under El Hafiz, with clean, well shaped, pieces and good lettering; we must go back 150 years to find as good work as on 606. From this point the weights are much scarcer, the three collections together not containing more than fifteen or twenty of each ruler.

(544-; 1149-.) By the reign of Ez Zafir the milky white glass predominates; it first appeared under El Amyr, and is the general colour after this.

(549-; 1154-.) El Fayz shows a slight improvement, in the size and length of inscription.

(555-; 1160-.) El 'Aadid the last of the Fatimites ends this line, which had long been merely puppet kings.

(566-; 1170.) Weights of two 'Abbasy khalifehs follow here, El Mustady, and

(575-; 1180.) En Naçir.

(655-7; 1257-9.) Weights continued yet, as late as El Mañçur 'Aly (no. 637), the only example known of the Bahrite sultans.

The private issues are discussed in a separate chapter, where it is concluded that they are parallel to the Fatimites, El Hakim to El Hafiz (404-527; 1014-1133), and differ from the official weights in using the cursive writing.

No. 641. 'Abd el Lahnah (?) has a circle of dots around; borders of distinct dots are unknown ex-

cept under el Hakim, nos. 359-375, which probably show the date of this.

Nos. 642-54. Muhammed el 'Audy has black and white glass, 651, only used by Mustançir 545. His clear white glass does not occur later than El Must'aly -1101.

Nos. 655-63. 'Omar has the same white glass with a blue splash, 656, as El 'Audy 653. His circular type, with a central word, does not occur later than Mustançir.

Nos. 665-6. The two of "Cairo prosper" are closely like those of 'Omar.

No. 667 is a puzzle. The lettering is too cramped to be 'Abbasid; yet it is not the Fatimite, either monumental or cursive. The year cannot be 228; 843, as it is much later than that style. If 328; 940 it would be close to Ism'ayl Mañçur, which seems also impossible. It is therefore placed to 428; 1035 when lettering was about as bad, though different.

No. 669 plainly reads El Mahdy; this might be a personal name, after the khalifeh.

Nos. 670-1 of 'Aly el D'ay are coarse, and have the *ye* turned back under the line, as by the next maker.

Nos. 672-6. 'Aly Shuweykh continued the white glass with blue splash, 672-3; as also did 'Aly el Maçry 177, Muhammed Shahyn 680, and Muhammed Baba, 682.

8. THE MAKERS

THE names of the makers were frequently placed on the Omayyad and 'Abbasid weights, with the term *'aly yedy*, "by the hand" of such an one. Such names serve sometimes to identify an indistinct or lost name of a governor, to date approximately a governor or financier whose date is not recorded, and to date weights which have only the maker's name. The makers' names have not hitherto been sufficiently regarded, and they are here set out, so far as dated, with the rulers for whom they worked, in the table, pl. xxv. Where the authority can be seen in this catalogue, no reference is given; where it depends on examples in the British Museum catalogue, or Casanova's catalogue of Fouquet's series, a reference is given to B.M. or C. The wavy lines show the extent of action of a person, in the scale of years down the left margin. At the beginning and end of the

table, the names are placed closer together and dated separately, to avoid reducing the scale of the whole diagram.

It can here be seen what rulers were acting together, and who was making weights in their names. When there is an overlap, the maker has the initials of the ruler for whom he worked, placed after his name. The main body of the names and dates is from STANLEY LANE-POOLE, *History of Egypt in the Middle Ages*, pp. 45-58; the makers and some other names are in STANLEY LANE-POOLE, *Catalogue of Arabic Glass Weights in the British Museum*, in Casanova's catalogue of the Fouquet collection, and in the series here published.

WEIGHTS WITH PRIVATE NAMES

9. THERE are three classes of private names, which appear alone without that of a ruler or an amyr; (1) those before the close of the 'Abbasides, the latest date being 856 A.D.; (2) those under the Tulunides; (3) those of the Fatimite age and Ayyubid age, 946-1250.

The first class are, by their style, about 800 A.D. The weight of Delhem ibn Maslama (213) is obviously closely like that of Malek ibn Delhem (214), in square arrangement, lettering and colour of glass—white with blue veins—unknown otherwise. Also of this age, by the lettering, are those of Salamat (188-191, 216), 'Omar (215) und Çaleh ibn Musalem (250).

The second class, of the Tulunid age, is of later style than the lettering of 856 A.D., having forked tops to *lam*, and the beginning of florid lettering; yet it is clearly earlier than the Fatimite style. The names found of this class are Abul Hazn (272-80), Bashir (282-5), Mu'awiya ibn 'Obeyd (281), and Abu Temym (286).

The third class is the more usual, with a variety of names, as Muhammed el 'Audy, 'Omar, 'Aly el D'ay, 'Aly Shuweykh, 'Aly el Maçry, Muhammed ibn Shahyn, Muhammed el Baba, &c. (nos. 642-684). These are assigned by Stanley Lane-Poole to the Memluk period (*B.M. Cat.*, p. xx), *i.e.* 1256-1517 A.D. They often bear dates of units and tens written at length, but hardly ever of hundreds. There is here, however, what may be a key to the true dating. On no. 650 is clearly "El 'Audy year 411" in Arabic numerals. It is true that numerals are stated to be very rare monumentally be-

fore xviiith cent., and not on coins before xvth cent. (VAN BERCHEM, *Corpus Ins. Arab.*, p. 120). But the system was familiar to Arabs in the ixth cent., and brought complete into Europe by the xiith cent. Hence there is no incongruity in the date of 411 A.H. = 1021 A.D., in the reign of Ez Zahir, being used along with written forms. The strongly cursive forms on these stamps are never paralleled on more formal monuments or coins. The nearest approach is on *Corpus Ins. Arab.*, no. 458, of 583 A.H. = 1188 A.D.; after this, the monumental style retreated from the cursive pitfall, and became more and more severely formal. The examples of cursive M.SS. in *Papyrus Rainer* II, III, pp. 93-95, show us that the writing was in such a condition from 934-1380 A.D. that any of these glass stamps might be considered formal in comparison. The long stroke *sin* was used all through that age, and the throwing of letters above and below the line is seen in 1022 to 1113 A.D. markedly, as on the stamps of 'Omar and others. The piling of letters one over the other was already familiar in 989, see 'amud in LEWIS and GIBSON, *Facsimiles* V. The use of diacritical dots is rarely seen on these stamps, most often three over the long stroke of *sin*. Such dots begin by 700 A.D. and were fully in use by 900.

As it is obvious that the style of the writing on these stamps has no parallel on monuments or coins, it must be taken as a branch of cursive writing. The nearest monumental example is of 1188, and the writing would allow of these being anywhere after 1000 A.D. Thus there is no bar to accepting the date of 411 = 1021 as correct, instead of throwing these over to 1250-1517.

There is another date agreeing with this view which seems to have been misread by Casanova, see v, 17. If the reading were *miyeteyn u arba'a* it would be an inversion of the constant order, and therefore the reading of *temanyn u arba'a* (*miyeh*), 480 A.H. = 1087 A.D., would be much more probable. The writing of this is closely like that of 'Aly el Maçry in the year x78; and in the distribution of the lines like those of El Amyr (POOLE, *Cat. B.M.* 300, 309; here no. 594) of 494-524 A.H. = 1101-1130 A.D. Another link is the black and white weight of Mustançir (no. 545, 1036-1094 A.D.) and that of El 'Audy (no. 651, 1013-1020 A.D.); no other such are known here.

We conclude therefore that though the style of writing of these private stamps is so different to

that of the general official weights, yet this is to be accounted for by the imitation of cursive writing instead of monumental, and these weights really run side by side with those of El Hakim to El Amyr. As a parallel to these dated weights, it should be observed that it is in the reign of Hakim that dating first becomes usual on official weights, and continues into the reign of Mustançir, 402-479 A.H. = 1014-1086 A.D. (*Cas. iv, 194; Poole, B.M. 186*).

There is one term of comparison on the other side. We have one late weight, no. 637, of 'Aly el Mañçur, 1257-1259 A.D., and the workmanship of this is far inferior to that of any of the private

weights. Apart from the style of writing, the mere execution of glass weights is shown by this to have so decayed at the beginning of the Memluk age that we could not date the private weights as late as that. Thus if $x32$ of Muhammed Shahyn cannot be 632 A.H. = 1235 A.D., it must be 532 = 1138, and in the range of private weights as already shown above. The details of the separate weights are dealt with in the general description, while it is better to withdraw the discussion of the whole period to the present section.

10. The dated private weights in chronological order are:—

A.H. 404 to 411	1014-1021 A.D.	Muhammed el 'Audy	U.C. 642-654	B.M. 347, 352	Cas. v, 9, 18-19
405 to 408	1015-1018	'Omar	655-663		Cas. v, 10
425 to 442	1032-1050	Ahmed		B.M. 366-8	
428	1036		667		
436	1044	Y'aqub		B.M. 374-5	
437	1045	Abu Bekr		B.M. 383	
440	1048	Year forty	668		
450	1058	El Mahdy	669		
470 to 474	1077-1081	'Aly Shuweykh	672-6	B.M. 337	Cas. v, 20-1
477	1084	'Abd el Malek			Cas. v, 7
478	1085	'Aly el Maçry	677	B.M. 342-4	
471 to 480	1078-1087	Muhammed		B.M. 376	Cas. v, 17
508	1114	Huseyn ibn Ahmed			Cas. v, 23-4
521 to 532	1127-1138	Muhammed ibn Shahyn	678-81	B.M. 386-7	
527	1133	Muhammed			Cas. v, 6

The style of the last two is quite different from that of a century earlier; and Huseyn ibn Ahmed resembles Muhammed ibn Shahyn. Hence these come into the vith cent. A.H.

names would, by their style, fall within the same limits. There are 13 in this collection, 17 published by Casanova, and 20 in the British Museum. The last are not included here, as they are not so accurately weighed. Taking the dated ones only, they are

THE WEIGHT STANDARDS

11. THE Roman solidus weights, that are in good condition here, are four, of 69.4, 70.6, 71.1, 71.6 grains, average 70.7. The two half solidus, or quinarius, are 33.6, 36.0 grains, average for the solidus 69.6. The quarter solidus is scaled, and therefore under weight. This 70.7 accords with an uncia of 424 or libra of 5090, or slightly over the Constantine average solidus of 70.2, 72 in a libra of 5053.

12. The earlier Arabic weights are many of them marked as a fels, usually of so many kharrubehs. So far as these have names on them, they are dated between 714 and 780 A.D. Those without

A.D. 714	14 k. of	3.078	} grains
724	13	3.116	
737	30	3.113	} 3.062
	30	3.017	
750	30	3.023	}
	30	3.023	
	30	2.980	} 2.978
751	24	2.983	
	24	2.975	}
779	30	2.980	
780	30	2.973	

Here it is evident that the number of kharrubeh was 14 or 13 at first, but from 737 onward it was

30 or 24 to the fels. Also it is clear that the kharrubeh diminished from an average of 3.062 to 2.978. The last weight of 750 is probably later, as it is only dated as a private weight of 'Abd el Gebar, who worked for 'Abd el Melek in 750.

The kharrubeh or carob is the Roman siliqua, so far as the names go. This was a sixth of the scripulum, and the numbers 24 and 30 are therefore 4 and 5 scripula. Hence the uncia of these kharrubehs would be 441, diminishing to 429, grains. This is much above the usual Roman uncia; but there was a specially heavy variety in Egypt, influenced by being an octodrachm of the Ptolemaic or Alexandrian system. Two sets of uncia weights in University College collection average 427 and 435 grains; and the Ptolemaic octodrachm of Ptolemy I is 439, or average of the whole series 436. So the kharrubeh showing 441, diminished to 429, closely accords with the Ptolemaic and the heavy uncia standards. The Greek keration likewise means the carob, and Poole has shown that the qirat was equal to the kharrubeh in amount (*B.M. Cat.*, p. xiv). So far the value, source and names of the kharrubeh and qirat seem satisfactorily settled.

13. A very different question is the meaning of the many different numbers of the kharrubeh in the fels. That anyone would trouble to test little copper coins seems improbable, especially as such would probably be weighed in bulk. The fels does not necessarily mean a copper coin, but only money in general, so it might be applied to all foreign coins. When we see how groups of mediaeval coins are mixed in origin, it is evident that many different currencies were circulating together. In George III reign we had Spanish, Portuguese, and French coins, all provided with testing weights in England. In Egypt thirty years ago there were eight different currencies. The numbers of kharrubehs in the fels are 13 (4 examples), 14, 18, 20, 23, 24 (4), 25 (3), 27, 30 (11), 32 (2), and 33, or weights of 39 grains to 100 grains. We might expect that Spanish, Italian, Byzantine, Syrian and Persian coins would all circulate in Egypt, and perhaps more Northern ones, as Arabic coins are found even in the Baltic, and imitated in England. Hence it seems probable that these varying fels weights were for testing the gold and silver of foreign origin current in Egypt. In the lack of published weighings of coins, it would be a long enquiry to settle what coins of the viiith cent. were intended,

even if any result could be obtained from such a wide field. There is at least a good probability that the most usual fels of 30 was the double dirhem, and that of 24 the solidus.

14. The gold dinar and silver dirhem weights are shown on the diagram, pl. xxiv. The curves of each multiple, 2, 1, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, are placed separately, all reduced to values of the unit, so as to see whether changes were intentional—if varying alike—or accidental. The dinar was at first about 65.5, derived from the solidus of 70; this ran down in the early Fatimite to 64.3, then increased quickly to 65.5, and rose gradually to 65.8, according to the largest weight, the double dinar, which is the most consistent.

The early dirhem is low, about 44 grains. At the beginning of the Fatimites it appears as 47.7 grains, and then falls to 45; after this—like the dinar—it gradually rose, reaching 46.2, the double dirhem giving the most consistent results. There was a sudden fall under El Hafiz, 1131—, continuing under Ez Zafir—1154, and then recovering to 47.2, above the full original standard, by 1200.

15. The collection of a large number of duplicates gives ground for examining some questions of the accuracy of manufacture, and the variations of the standards. Of course any injured weights must be excluded in questions of accuracy. The arrangement here is in order of the number of lines of inscription, which is the simplest kind of division. Then all having the same number of lines were compared in order to place together those which were impressed by the same die. The relation of letters in the lines one over the other is the test, as a copy of a die will never be spaced exactly the same. Then it may be seen how a die became worn, and was recut once or twice, ending in mere rough lines and lumps, in some cases. The longest run here from one die is eighteen of Mustançir (532–549), eight before recutting and ten afterward; there are many runs of four to six from a die. These are all catalogued in the order of sharpness, which is in general the order of making. The photographs of each run have been taken from the earliest copy which was in good state.

16. The accuracy of these glass weights is probably greater than that of the gold and silver coins which they were made to weigh; there was no temptation to the maker or the user to abstract the material, and there is no wear in most cases. The errors of the weights depend on variations in

the standards by which they were formed, and errors in copying the standard by chipping down a piece of glass to the exact amount, before melting it. When we have a run from one die, they were presumably copies of the same standard, as they were made in one factory at about the same time. Hence we ought to find that, in any one period, the average error of the copies of one die is less than the average error of the copying, together with the variations of standard,—that is, the average error of all weights together in the period. This works out as follows:—

A.D.	Error of copying	Error of copying and of standard	Separate errors of standards
721-805	0.02 grain	0.06 grain	0.06 grain
946-996	0.09	0.14	0.11
996-1020	0.24	0.26	0.10
1021-1036	0.07	0.24	0.23
1036-1094	0.23	0.28	0.17
1094-1101		0.33	
1101-1130		0.34	
1131-1149		0.36	
1149-1160		0.30	
1160-1171		0.37	
mean	0.13		0.13

The last column results from the square of the middle column, being the sum of the squares of the first and last columns. The ready way to part the third from any two of these quantities is by the 1st and 3rd being the sides of a square and the 2nd being the diagonal of these.

The result of the whole is that the error of copying one standard is 0.13 grain, and the error of the separate standards which were copied is 0.13 grain. Of course this is only approximate, but it shows that the making of the glass copies was as accurate as that of the original standards, and that $\frac{1}{8}$ of a grain was the average error of both classes.

The errors are very small in the earlier period, during the eighth century. The dinar averages on six examples (725-840 A.D.) 65.30 grains, mean error 0.10. The dirhem on four examples (715-747) averages 43.97, mean error 0.09. The half dinar of Yezyd (765) varies 32.51 to 32.67, but under El Mahdi (780) they are 32.662, 32.665, 32.667, only varying two or three thousandths of a grain either way. The third of a dinar of Yezyd varies 21.65 to 21.75, but two of El Mahdi agree as 21.694

and 21.727. The extraordinary exactitude to a few thousandths of a grain is hardly accidental, as they concentrate just after the small range of Yezyd's weights. We must look, then, on 780 A.D. as a time of the utmost accuracy, probably never rivalled until within living memory. This we must remember depended on the trimming of the rough glass, which was then fused, stamped, and has been left uncared for during a thousand years.

Under the Fatimites the error increased, excepting a slight improvement under Ez Zafir and El Fayz (1050). The changes in accuracy are shewn by the line between the dinar and dirhem curves.

17. THE COLOURS OF GLASS STAMPS

IN the Roman age a great variety of colours of glass was inherited from the Greek and Egyptian knowledge. Few of these were used for the glass stamps; beyond the ordinary bottle glass coloured light green by iron, and its degradation in muddy and opaque colours, there were only a rich blue-green, blue, white, opaque red, opaque blue, and milky, and these were mostly rare. In the Byzantine solidus weights, beside the green we find amber, pink, and intense blue. When a colour is only known in a single example in a period, it seems very likely that some older glass bowl or vase has been found broken, and sold to the glass maker to be melted up again.

In the Arabic age there is nothing but light green bottle glass (rarely light green-blue) down to 780 A.D., when a pale greenish yellow appears, followed in 785 by a full amber yellow of El Fadl ibn Çaleh, continued under El Hakim and Mustançir. The next variety is clear white, with streaks of light blue in 807, of Delhem. The clear white was used from Mo'ezz 952- to El Must'aly, -1101, or slightly yellow to El Fayz, -1160. White with a blue patch was usual among the private weights, 1015-1138 A.D.

Opaque violet is once found under Yezyd 856; as it is a difficult colour to make, entirely free of iron, it may be some of the xviiiith dynasty glass remelted.

The shades of manganese pink and purple are very common. Pale pinkish white is found 1000-1035 (Hakim and Zahir); pink and white 1000-1090 (Hakim and Mustançir); pale pink 1020-1250

(Zahir to 'Aly Mançur); pink and green about 1050 (Mustançir); full pink is Byzantine (Strategios) 349 A.D. and 1020-1090 (Zahir and Mustançir); light purple 1020-35 (Zahir); dark purple 1000-1020 (Hakim and geometrical, probably later). Opaque red is found in 1020-35. Dark muddy amber 1020-1090 (Zahir and Mustançir). Brown and white 1035-1090. The gilt splash is found rarely, 1035-1130 (Mustançir and Amyr).

Light blue is from 1000-1100 (Hakim to Must'aly). Opaque blue from 1020 to 1170 (Zahir to El 'Aadid). Black is only of Mustançir. The milky white begins in 1100 (Amyr) and became prevalent down to 1225 (Naçir), slightly green at first, and then greyish toward the end. No doubt some further extensions of these uses may be noted elsewhere; but it is difficult to be certain about colours from brief lists.

18. THE GREAT FAMILIES OF THE VIIITH AND IXTH CENTURIES

IN looking over the lists of names of officials in Egypt, it is evident that office ran in a small group of families, who in each generation filled a large part of the administration, much as in England a century ago. The connection of names is often fixed by stating three generations, of which two can be found together, a generation earlier or later; otherwise it rests on the uncertainty of a single name; but there is so much presumption that an official's father had been in some office before him, that the single name connection is worth noting if it is at the right period.

One of the widest groups is that of the family of the 'Abbasy khalifehs. The dates given are those of holding office.

'Aly el 'Abbasy	Suleyman	{ 'Aly 786	—Ahmed 803
		{ Ishak 793	
	Çaleh	{ Ibrahym 781, 781-3, 792, 792—Abu Katifa 780	
		{ El Fadl 751, 785 { El Leyth 799	
		{ 'Aly 799	
	{ 'Abd el Melik 794		
	{ Ism'ayl 797		
	'Ayesy el 'Abbasy—Musy 787, 791, 796	{ Ahmed 805	
		{ 'Abd er Rahman 803	
		{ El 'Abbas 814—Musy 834	
	El Mahdy 'Abbasy—'Obeydallah 795, 805		
Musy 'Abbasy—'Ayesy—Ism'ayl 798			

Another long family is that of Hudeyg, of six generations.

Hudeyg—Mo'awiya 664—'Abd er Rahman 698	{	'Abdallah 762-9	{ 'Abd er Rahman 803
		Muhammed 760, 772	{ Hashim 805—Hubeyra 812
		El 'Abbas 772	
Ro'eyny	{	Yezyd	{ Hasan 786
		Mançur 779—'Ayesy 831, 843	
Noeym	{	'Oqba 742	
		Kheyr 742, 750	
Daud—Abu Çaleh Yahya el Bagely? 779	{	Maslama 789—'Abd er Rahman 789	
	{	Ghalib el Bagely—Suleyman 809, 816	

The last might seem to cover an unlikely stretch of three generations in only ten years. If Yahya were 59, his son would be 47, and grandson 25 on taking office, allowing the regular 22 years for an eldest son generation. An opposite case of 64 years between office of father and son in the Hudeyg family, is probably covered by the son being born in old age; the connection is certain,

as Hashim is said to be ibn Hudeyg, but this suggests also that a generation may remain unrecited.

There are several shorter family groups, as the three sons of Sherhabil, Malik 685, 'Abd er Rahman and his son Imran 705, and Ayyub 717. The maker Muhammed ibn Sherhabil of 760 may be a grandson.

Yahya had two sons, 'Abd el Wahid 851, and Ishak 850 who had a son 'Anbasa 852.

Merwan el Lakhmy had four sons, 'Abd el Melek 749, Mo'awiya 762, 'Olayy el Lakhmy with his son Musy in 772, and el Akhdar 780.

19. THE HEAVIER WEIGHTS

PL. XXVI.

THE large glass weights require to be considered along with the bronze weights of later period. Generally, the large glass belong to the pre-Fatimite age and the bronze to the Memluk and Turkish times. There appear to have been several standards, which may be classified as follows.

The wuqiyeh and rotl of 12 wuqiyehs seem to form the earlier system, the modern wuqiyeh being a tenth of that rotl. It varied between 5600 and 5970 grains, average 5814 (see pl. xxvi). The wuqiyeh of this averages 487.2, or a rotl of 12 wuqiyehs equals 5846. The modern wuqiyeh of 577.8 is a tenth of this rotl. A recent-looking turned weight marked "Ism'ayl 72" and "24" is 2 wuqiyehs of 571.8, or 24 dirhem of 47.65 grs. the heavier variety. This links the 12 dirhems = wuqiyeh, 10 wuqiyehs = rotl.

The commonest unit is the wuqiyeh of 10 lighter dirhems, which averages 443.4 grs. in glass weights, 445.6 in bronze and brass weights of the last few centuries (pl. xxvi). These seem to be contaminated by a few descendants of the Byzantine uncia of 412 to 420 grs.; if the first six are omitted from the bronze, the average is 448.0.

Another unit, which may be connected with this, ranges from 185 to 199 grains, average 192.5. This appears to be 4 heavier dirhems of 48.1 ± 0.12 . There is some chance of this being inherited from the classical unit of the Aeginetan standard, which was 199 under Ptolemy I, and 191 to 196 in the popular cistophori, which were an important currency in the early Roman dominion. It seems quite possible that, just as the Roman uncia was accommodated in Egypt to the Phoenician, and to

the Attic trade and coinage standards, so varieties of the dirhem were accommodated to different standards existing in Egypt. The coinage readily varied from 44 to 47 grains (pl. xxiv). Thus the low wuqiyeh of 406.9 to 416.0 is the Roman uncia, the name *ouggia* becoming *wuqiyeh* in Arabic. The medium value of 446, or 10 dirhems of 44.6, is just the lower value of coin weights. The heavier wuqiyeh of 487, or 10×48.7 , agrees with the cistophoros unit, slightly reduced in the modern 48.15 grains to the dirhem. This is the basis of trade weights now, 144 to the rotl, 400 to the oqqa.

Another standard was apparently the Syrian necef, average 165.3. Another group averages 262.8 grains, and appears to be the Attic tetradrachm surviving; it would imply a drachm of 65.9 which is the usual coinage standard.

A couple of weights seem to show octuple dirhem, or a fiftieth of the oqqa. The multiples preclude assigning these to the decimal dirhem, or the heavy dirhem of the 192.5 grains unit.

There seem thus to be three different standards mixed, in relation to the nominal dirhem.

The commonest bronze wuqiyeh is	446 or dirhem	44.6
Of glass the unit is	443.4	" 44.3
copied from Byzantine silver coinage?		
The dirhem coinage is mostly about		46
The glass weights give a wuqiyeh of		48.7
Others show 192.5, from the cistophori, or		
4 dirhems of		48.1
The modern Egyptian dirhem is		48.1
There was also some continuation of		
the Roman uncia,	about	412.
Some examples of the Syrian necef	at	165.
Also of the Attic tetradrachm	at	263.

The dirhem coinage seems to have been a compromise between the 44 and 48 grain standard, occasionally varying as widely as these limits. Such details as these may only be of interest to a student of the subject, yet they are needed here as the latter half of this Introduction deals with questions which have not hitherto been stated.

CATALOGUE OF GLASS STAMPS AND WEIGHTS.

20. GLASS CUP STAMPS

- 1, 2 Female head, hair parted, wearing fillet.
Different dies. Black glass.
- 3 Female head, hair in lumpy curls, mouth
gaping. Prussian blue.
- 4-9 Male head, ribbed hair. Six different
dies (see C. i, 9).
2 pale green, 2 white, 2 dark blue on white cup.
- 10 Bes head or lion head.
Brown in green-blue cup.
- 11-13 Lion head, fair work. Two of one die. 3 white.
- 14 Eros with bow, both arms forward.
Prussian blue.
- 15-16 Similar, one elbow backward (see C. i, 2).
Prussian blue. Op. white (with balance).
- 17 Head of Pan to r. Rich blue-green.
- 18 Dolphin twisted round trident. White.

GLASS TOKENS AND WEIGHTS

- 19 Isis enthroned, with crowned Horus on
knee. Horizontally pierced. Op. blue 16.9
- 20-2 Bust of Serapis to r., cornucopiae be-
hind, staff in front, (die Datt. 6551);
Rev. Bust of Isis to r. with disc and
horns. Ball in front.
3 white 33.9 + break, 37.0, scaled 32.0
- 23 Bust to r., hand raised before it. Line
division. White, yellow streak 45.8
- 24-7 Herakles head to r.; Rev. Nikē bust to l.
4 clear pale green 49.9, 46.3, 34.9,
much scaled 32.5
- 28-30 (6 different dies.)
3 green with yellow streak 31.9, 29.4, 24.1
- 31-3 Similar, Nikē bust to r. 3 same die
(Datt. 6553). Green 37.0, 28.9, scaled 31.0
- 34-5 Similar, 2 same die of Isis.
Green with yellow streak 35.4, 33.4
- 36-7 Similar, 2 same die both sides.
Green with yellow streak 38.6, 36.0
- 38-47 Similar, different dies.
Green 51.0, 39.4, 36.4, 36.0, 34.5, 31.8 sc.,
30.6 sc., 30.5, 29.3, 25.3
- 48-53 Similar, different dies.
Green with yellow streak, 61.0, 36.4, 33.5,
33.2, 31.5, 31.4

- 54-5 Head of Herakles, plain reverse.
Green and yellow streak 33.0, green 19.9
- 56 Female head to r. (Isis?). Op. red 9.0
- 57-8 Ram to r., disc and horns on head. ΔΙ
above (Diospolis), Datt. 6549. Green 8.6, 8.2
- 59-61 Ibis to r. 3 same die as Datt. 6550, but
no letter.
Dark yellow 35.4, green 24.0, yellow 16.0
- 62-3 Similar, 2 same die. Blue 15.5 12.6
- 64-6 Similar, 3 same die. Blue 14.0, 12.2, 9.7
- 67 Ibis to l. Light blue 15.8
- 68 Tetrastyle temple; head of Sarapis in
semicircular tympanon. Pale green 45.0
- 69 Head of Constantius II (?) no inscrip-
tion, so not from a coin. Op. blue 18.4
- 70 Two soldiers and standards: GLORIA
EXERC. . . . exergue SMKE (from coin).
Op. blue 14.1
- 71 Goat walking to l. Pale green 34.2
- 72 Three figures standing, one with raised
arm. Greenish white 35.1
- 73 Bust of jackal Anubis (?).
Much scaled and broken, Op. green.

21. ROMAN GLASS COIN WEIGHTS
WITH MONOGRAMS

- 74 STRATEGIOS CΤΡΑΤΕΓΙΟΥ, 349 A.D.
Pink 44.0
- 75 PAPPUS ΠΑΠΠΟΥ Seal, amber 89.2
- 76 " " Yellowish white 70.6
- 77 DRAKŌN ΔΡΑΚΟΝΟC White 69.4
- 78 HADRIANOS ΑΔΡΙΑΝΟΥ, 376-7 A.D.
Green 71.6
- 79 BASSIANOS ΒΑCCIAN, 381 A.D.
ΑΝΤΩΝΙΝΟΥ, vice-eparch?
Chipped, white 64.0
- 80 SERGIOS CΕΡΓΙΟΥ
(Quinarius), green 36.0
- 81 SŌTEIROS CΩΤΕΙΡΟΥ
Scaled, green 66.8
- 82 DANAOS ΔΑΝΑΟΥ
Very rough, amber 71.1
- 83 KYROS ΚΥΡΟΥ, 420? A.D.
Scaled, pale green 33.1
- 84 NIKIANOS ΝΙΚΙΑΝΟΥ Scaled, green 15.8

- 85 DEMOSTHENES, bust with hand raised, in octafoil, with letters ΔΗΜΟΘΕΝΟΥ in the bays. Deep blue 33.6

At the end, not numbered, is a modern English bottle stamp of "I.G., B.C. 1786," to show the survival of the system of marking glass vessels.

22. Arabic glass stamps and weights.

OMAYYAD AND 'ABBASID.

Pl. iii. A.H. 60-64 **Yezyd**, Khalifeh 680-683 A.D.

- 86 *Order of the servant of God Yezyd amyr of the faithful; gist of oil, exact, by the hand of Abu . . .* Light bl. green stamp

A.H. 90-96 **Qorrah**, Governor 709-714 A.D.

- 87 *Order of the Amyr Qorrah ibn Sheryk; gist, exact.* Green stamp

A.H. 96-99 **Osamah**, Finance 714-717 A.D.

- 88 *Osamah ibn Zeyd.* Light bl. green, dirhem, 44.12
89 *Order of Osamah ibn Zeyd; half gist, exact.*

Green stamp

- 90 (Duplicate, same die.) Green stamp

- 91 *Order of Osamah ibn Zeyd; quarter gist, exact.* Green stamp

A.H. 99-102 **Hayyan**, Finance 717-721 A.D.

- 92 *Order of Hayyan ibn Sherykh; quarter gist of the Bedawin? (rahal) exact.* Green stamp

Yezyd.

- 93 *Order of Yezyd ibn Aby-Yezyd; gist . . .* Green, stamp

A.H. 106 **Mohammed**, Governor, 724 A.D.

- 94 *In the name of God. Order of Mohammed; weight of dirhem thirteen kharrubahs, exact.* Green 40.5

- 95 *In the name of God. Ordered Mohammed, honesty; quarter gist, exact.* Green, stamp
(These are assigned by Casanova to the Fatimites, as being the family of Mohammed, but the style makes it impossible to place these outside the viiiith century.)

A.H. 102-112 **'Obeydallah**, Finance 721-732 A.D.

- 96 *In the name of God. Order of the amyr 'Obeydallah ibn Al Habhab; rotl for dates, exact.* Dark green, broken 5500?

- 97 *'Obeydallah ibn el Habhab.* Fragment, ground around. Green, stamp? 52.2

- 98 *In the name of God. Order of 'Obeydallah ibn el Habhab; weight fels exact.* Green 85.1 + 5,90.0

- 99 *In the name of God. What was ordered by 'Obeydallah ibn el Habhab; weight of a dinar, exact.* Green 65.29

- 100 *What was ordered by 'Obeydallah ibn el Habhab; weight of a fels, eighteen kharrubat.* Crescent below. Green 56.9

- 101 (Duplicate, same die.) Green 56.3

- 102 *In the name of God. Order of 'Obeydallah ibn el Habhab; weight . . . thirteen kharrubat.* Green 35.38

- 103 *In the name of God. What was ordered by 'Obeydallah ibn el Habhab; weight of a third, exact.* (See B.M. 3 G). Green 21.76

- 104 *In the name of God. Order of 'Obeydallah ibn el Habhab; . . .* Green stamp

- 105 *What was ordered by 'Obeydallah ibn el Habhab; quarter gist, exact.* Green stamp

- 106 (Duplicate, same die.) Green stamp

- 107 *In the name of God. Order of 'Obeydallah ibn el Habhab; gist of oil, exact.* (C. i. 106.) Green stamp

- 108 *In the name of God. Order of 'Obeydallah ibn el Habhab; quarter gist of oil, exact.* Green stamp

A.H. 114-122 **El Qasem**, Finance 732-740 A.D.

- 109 *In the name of God. God has ordered exactitude; and ordered the making of this rotl precise, el Qasem ibn 'Obeydallah; by the hand of Tahyr ibn Naseq (?) year two and twenty and one hundred.* 740 A.D. Black-green 11000?

- 110 (Duplicate, same die.) Black-green 11000?

- 111 *In the name of God. God has ordered exactitude. Weight of a wuqyeh, of el Qasem ibn 'Obeydallah . . . year three and twenty and one hundred.* 741 A.D. Green, 298.0 + 180? 480

- 112 *In the name of God. What was ordered by el Qasem ibn 'Obeydallah; weight of the great fels, thirty kharrubat, exact.* Crescent. (Die as B.M. 5.) Green, 87.5 + 2.5 90.0

- 113 (Duplicate, same die.) Green 90.5

- 114 (Duplicate, same die, fragment from Shurafa.) Green 40.2

- 115 *In the name of God. What was ordered by el Qasem ibn 'Obeydallah; weight of a fels, two and twenty kharrubat. Green, 52.7 + 22? 75?*
- 116 *In the name of God. What was ordered by el Qasem ibn 'Obeydallah; weight of a fels, thirty kharrubat. (C. ii, 22.)*
Light blue, 57.4 + 35? 92?
- 117 *In the name of God. Order of el Qasem ibn 'Obeydallah weight of a dirhem by the hand of Daud ibn . . . year three and twenty. Green 43.87*
- 118 *In the name of God, orders God exactitude; and orders making . . . el Qasem ibn 'Obeydallah . . . by the hand of . . . allah. Green, 42.3 + 30? 72*
- 119 *In the name of God. Ordered by el Qasem ibn 'Obeydallah, the making the measure of . . . exact. Yellow green, stamp (Casanova reads *biçan'aa* "making," Poole *bithob'aah* "stamping".)*
- 120 *In the name of God. Orders God exactitude; and orders making half qist by el Qasem ibn 'Obeydallah, by the hand of Tahyr ibn Naseq (?) year two and twenty and a hundred. 740 A.D. Green stamp*
- 121 *. ordered making by el Qasem ibn 'Obeydallah by the hand of Yezyd ibn Aby Yezyd. year two and twenty and one hundred. 740 A.D. Green stamp*
- 122 *In the name of God. Orders God exactitude; and orders the making a measure, quarter qist, el Qasem ibn 'Obeydallah; by the hand of Sulman . . . Green stamp*
- 123 *In the name of God. Order of el Qasem ibn 'Obeydallah making quarter qist for oil, exact. Green stamp*
- 124 *In the name of God. Order of el Qasem ibn 'Obeydallah, half qist exact. Green stamp*
- 125 *(Period of el Qasem) Measure of a fels exact; weight two and twenty qirats. Light blue, 60.7 + 10? 71*
- Pl. v. 23. 'Abdallah (see C. ii, 48).
- 126 *What is ordered by the amyr 'Abdallah ibn 'Aly; weight of a fels, thirty kharrubat. Green 93.4*
- 127 *In the name of God. Orders God exactitude, and orders the making a quarter qist from Abdallah, by the hand of M. . . . year seven . . . (This Abdallah might be governor of 793 A.D. No. 210.) Green stamp*
- A.H. 109, 124, 127 Hafç, governor 727, 742, 745 A.D.
- 128 *In the name of God. Orders God exactitude, and orders the amyr Hafç ibn el Welyd, stamping the weight of a dirhem. Green 43.89*
- A.H. 124-6 El Welyd, khalifeh 742-4 A.D.
- 129 *In the name of God. The servant of God El Welyd, amyr of the faithful. In colour and fabric most like Fatimite weights. Green-blue 65.13*
- Yezyd.
- 130 *. Yezyd, rotl exact. 2nd stamp. Bisma . . . Fragment 2550, green 11000?*
- 131 *Orders Yezyd ibn Aby Yezyd, the weight of a third (dinar) exact. Green 21.66*
- 132 *By the hand of Yezyd ibn Aby Yezyd (see C. iii, 46). (Period of El Qasem, 732-740, C. i, 128.) Dark green stamp*
- A.H. 126, 128-132 'Ayesy, finance, 744-749 A.D. (governor, see Condé).
- 133 *In the name of God. Orders God exactitude, and orders 'Ayesy ibn Aby 'Atha the making a weight of a dirhem, by the hand of Yezyd ibn Al Zeyad. (Die B.M. 6.) Green 44.00*
- 134 *(Orders God exactitude) . . . and orders 'Ayesy ibn Aby 'Atha making a weight of a dinar by the hand of Yezyd ibn Temym. Green 37.1 + 32? 69?*
- 135 *(In the name of God.) Orders the Amyr 'Ayesy ibn Aby 'Atha the making quarter of a qist. Exact. (C. i, 134.) Green, stamp*
- S'ayd.
- 136 *. S'ayd (ibn Lat) ufallah . . . exact. Fragment 1319. Green 11000?*
- A.H. 131 El Mughyra, Governor. 749 A.D.
- 137 *(Orders) . . . Mughyra ibn 'Abdal(lah) making half rotl. 2nd stamp. By the hand of Yezyd ibn A(bu Yez)yd. Green, 1741 +. 5500?*
- 138 *In the name of God. Orders God exactitude, and Orders the amyr (Mugheyr) a ibn 'Abdal(lah) the making half (rotl) exact. 2nd stamp as previous. Both same dies as previous. Green 1936 +. 5500?*

Hur (? son of Hur ibn Yusuf, governor 724.)

- 139 *In the name of God. (Orders the amyr Hur ibn Hur, whom God benefit, weight of a dinar. Exact. Light blue 65.42*

A.H. 132 'Abd el Melek, governor, 750 A.D.

- 140 *In the name of God. Orders the amyr 'Abd el Melek ibn Merwan, whom God benefit, the making of a fels of thirty kharrubat exact by the hand of Yezyd ibn Temym. (Die, C. ii, 27.) Green 90.7*

- 141 *In the name of God. Orders 'Abd el Melek ibn Merwan, making of a quarter qist exact by the hand of . . . Green stamp*

- 142 *(In the name of God. amyr 'Abd el Melek) ibn Merwan, whom God benefit, . . . by the hand of 'Abd el Gebar ibn Naçyr. Green stamp*

'Abd el Gebar. Maker.

- 143 *By the hand of 'Abd el Gebar ibn Naçyr; weight of fels, kharrubat 30 (*). (Die, C. ii, 68.) Green 89.4*

A.H. 133 'Abd el Melek, governor 751 A.D.

- 144 *In the name of God. Order of the Amyr 'Abd el Melek ibn Yezyd; weight of a fels, four and twenty kharrubat. (Die, C. ii, 29.) Green 71.6*

- 145 *In the name of God. Order of 'Abd el Melek ibn Yezyd, the weight of a dinar. Exact. (Reverse) By the hand of Muhammed ibn Sher(hab)yl (around, reversed). Struck fitly (ta'nah labaq, centre). (Obv., Die, B.M. 10.) Green 65.23*

- 146 *In the name of God. Order of 'Abd el Melek ibn Yezyd; weight of a half (dinar). Exact. (Reverse) . . . ibn Sherhabyl (around, reversed). Struck fitly (centre). Same die as previous. Green 32.68*

- 147 *In the name of God. Order of 'Abd el Melek ibn Yezyd making a qist, exact. By the hand of Muhammed ibn Sherhabyl. Green stamp*

Muhammed (dated by style).

- 148 *What was ordered by Muhammed ibn 'Amru; weight of a fels, three and twenty kharrubat (see C. ii, 45.) Square, green 68.8*

S'ayd.

- 149 *What was ordered by S'ayd ibn 'Obeyd; weight of a fels, thirty kharrubat. Square, green, 76.2 + 22? 98?*

A.H. 132, 135 Çaleh, governor 750, 753 A.D.

- 150 *What was ordered by the amyr Çaleh ibn 'Aly, whom God benefit. Have exact measure and be not thou of the prevaricators. Rotl. Exact. Green*

A.H. 136-158 'Abdallah (El Mançur), khalifeh 754-775 A.D.

- 151 *(What was ordered by) the servant of God, 'Abdallah, amyr of the faithful. Have exact measure and be not thou of the prevaricators. Rotl. Exact. (Die, C. iii, 54.) Green, 2839 + 11000?*

- 152 *What was ordered by the servant of God, 'Abdallah, amyr of the faithful. Have exact measure, and be not thou of the prevaricators. Qist. Exact. (C. i, 153.) Green stamp*

- 153 *Order of the servant of God, 'Abdallah, amyr of the faithful. Green stamp*

Pl. vii. 24. A.H. 136-142. Nawful, finance 758-762 A.D.

- 154 *Order of Nawful ibn Furat to make a rotl. Exact. (2nd stamp) By the hnd of 'Abda(l rahman) ibn Yez(yd). Green 11000?*

Muhammed, Maker.

- 155 *In the name of God. By the hand of Muhammed ibn Sherhabyl; quarter qist. Exact (see C. i, 183.) Green stamp*

A.H. 142 Muhammed, governor. 759 A.D.

- 156 *In the name of God. What was ordered by the amyr Muhammed ibn el Ash'ab; weight of a dinar. Exact. (Reverse, small circular stamp, illegible.) Green stamp*

- 157 *What was ordered by the amyr Muhammed ibn el Ash'ab making half a qist, exact, by the hand of 'Abdallah ibn Rashed. Green stamp*

- 158 *In the name of God. Orders the amyr Muhammed ibn el Ash'ab the making of a measure (of coriander of Meqs?) by the hand of (Damilat ibn . . .?). (C. i, 144.) Green stamp*

- A.H. 145-151 **Yezyd**, governor 762-768 A.D.
- 159 *In the name of God. By the hand of 'Abd er Rahman ibn Yezyd; rotl, exact. (2nd stamp, smaller) In the name of God. Order of the amyr Yezyd ibn Hatem, whom God benefit. (C. iii, 48.)* Dark green 11000?
- 160 *Order of the amyr Yezyd ibn Hatem. By the hand of . . . rotl. Exact.*
Fragment. Dark green 11000?
- 161 *In the name of God. Order of the amyr Yezyd ibn Hatem; weight of a dinar. Exact. (Reverse) In the name of God, by the hand of Muhammed ibn Sherhaby'l (around); (Ktybah) Inscribed (?) complete (centre).*
Green 65.29
- 162 *In the name of God. Order of the amyr Yezyd ibn Hatem; weight of a half (dinar). Exact. (Reverse see 165, illegible around). Impressed (by?) Suezyzy (or nobly?).* Green 32.67
- 163 (Same die obverse). (Reverse) . . . (*Abd-er-Rahman (ibn) Yezyd . . . (around). Impressed, accurate (centre).*) Green 32.59
- 164 (Same die obverse). (Reverse) *In the name of God. By the hand of Muh(ammed) (ibn Sherhaby'l) (around). Inscribed complete (centre). (Dies C. ii, 33).* Green 32.51
- 165 *In the name of God. Order of the amyr Yezyd ibn Hatem; weight of a third (dinar). Exact. (Reverse as 162, same die).*
Green 21.75
- 166 (Duplicate, same dies, much worn.) Green 21.72
- 167 (Same die obverse). (Reverse as 163, die worn and dot added below centre). Dies as B.M. 16. Green 21.65
- 168 (Same die, obverse). (Reverse as 164, same die). Green 21.70
- 169-70 *In the name of God. Order of the amyr Yezyd ibn Hatem; whom God benefit. (And duplicate.) (C. i. 145.)* Green stamp
- (The following are placed by style.)
- 171 *∪ Fels, five and twenty kharrubat.*
Yellow green 79.7
- 172 *Al Nahu (?) ; half rotl (clearly from a vase).* Green stamp
- 173 *qist, exact; by the hand of 'Abdallah ibn Çaleh.* Green stamp
- 174 *Quarter rotl, exact. 'Aly (?).*
Square ring. Green 3602.8 + 50? 3650
- 175 *Quarter rotl, exact.*
Square ring, light green 2892.6
- 176 (Illegible.) Square ring, green 2895 + 60? 2950
- 177 *Ghmrlah (??).*
Half square ring, yellow green 1160 2800?
- 178 *By the hand of . . . ibn . . . yelyn(?).*
Square ring, yellow green 736 2800?
- 179 (Illegible.) Square ring, green 1503.9 + 45? 1550?
- 180 *By the hand of M'oawiyeh ibn 'Abdallah, half rotl. Exact. (See C. iii, 19.)* Green 2071 2800?
- Pl. ix. 25. A.H. 152 **Muhammed ibn S'ayd** 769 A.D.
- 181 *In the name of God. Order of the amyr Muhammed ibn S'ayd; half rotl. Exact.*
Dark green 1703 + 2800?
- 182 *In the name of God. Order of the amyr Muhammed ibn S'ayd; rotl. Exact. (2nd stamp) By the hand of 'Obeyd-el-Wahab ibn el Temym.* Green 11000?
- 183 *In the name of God, &c. (duplicate of above). (2nd stamp) By the hand of Qasah (?) ibn Yezyd.* 2154 + green 11000?
- 184 (Triplicate of larger stamp, all three same die as C. iii, 50.)
- 185 *In the name of God. Order of the amyr Muhammed ibn S'ayd; weight of a dinar.*
Green 43.2 + 24? 67?
- 186 *Order of the amyr Muhammed ibn S'ayd; weight a third (dinar). (Obv. die C. ii, 49). (In circle on back). Impressed (by?) Suezyzy.* Green 21.67
- (The following are placed by names of makers.)
- 187 *In the name of God. By the hand of 'Abd er Rahman ibn Yezād (?) half qist. Exact.*
Green stamp
- 188 *Salamat. Weight of a fels, four and twenty kharrubat. (Die C. ii, 61.)* Green 71.5
- 189 *Salamat. Two (dirhems). (Square, dot border.) (Die C. ii, 72.)* Green 89.0
- 190 *Salamat. Proof. (bayinah?). (Two crescents above.)* Green 77.1
- 191 *Salamat. Chick-peas eighty.* Yellow green stamp
- 192 *'Omar. Two (dirhems.) (C. ii, 73.)* Green 98.8
- 193 *Tauwaf ("watchman"). Fels thirty kharrubat.* Light green-blue 91.1
- A.H. 161 **'Ayesy**, governor 778 A.D.
- 194 *In the name of God. Order of the amyr 'Ayesy ibn Luqman; to make a half rotl.*

Exact. (2nd stamp) *By the (hand of) Zezyd (ibn A)bu Yez(yd).* Green 1295 + 2800?

A.H. 162 Yahya, governor 779 A.D.

- 195 *Ordered to make this the weight, the amyr Yahya ibn Daud; thirty kharrubat.* (Star below.) Green 89.4

A.H. 158-169 El Mahdy, khalifeh 775-785 A.D.

- 196 *In the name of God. Order of El Mahdy Muhammed, amyr of the faithful, whom God protect, weight of a dinar, exact.* (C. ii, 36.) Green 65.42
- 197 *In the name of God. El Mahdy, amyr of the faithful; weight of a half (dinar). Exact. . . . mu . . . (around) of the faithful (centre) (obverse die B.M. 20).* Green 32.67
- 198 (Same die obverse.) (Reverse.) *In the name of God. By the hand of the a(myrr Ism'ayl) (around), ibn al Mohager (centre). Two dots. (Die P. 20.)* Green 32.66
- 199 (Same, but different die.) (Reverse) *In the name of God. By the hand of Muhammed . . . Mohager (centre).* Green 32.66
- 200 } *In the name of God. Order of El Mahdy,*
201 } *amyr of the faithful; weight of a third (of a dinar). Exact. (C. ii, 35.) (Reverse) In the name of God, by the hand of . . . Impressed Mohager. Reverse die B.M. 20.* Green 21.71, 21.70
- 202 *In the name of God. Weight of a third (of a dinar). Exact. Pentagon below.* Green yellow 22.10

Qulhem?

- 203 *What was ordered by the amyr Qulhem (? Mulgem), God lengthen his life,* Green 240.0

A.H. 164 Abu Katifa Ism'ayl, finance 780 A.D.

- 204 *In the name of God. Order of the amyr Ism'ayl ibn Ibrahym, to whom God be generous. Half qist, exact. (C. i, 157.)* Green stamp

Pl. xi. 26. A.H. 164-8 Ghawth, justiciar 780-4 A.D.

- 205 Ghawth ibn Suleyman (in square). (Circular stamp) h Shurafa. Fragment. Bright green

A.H. 169 El Fadl, governor 785 A.D.

- 206 *What was ordered by the amyr El Fadl ibn Çaleh, to whom God be generous; weight of a dinar, exact. (Reverse) By the hand of 'Aaçem ibn Hafç, star centre.* Die of B.M. 26. Amber glass 65.5

A.H. 165-167, 174 Ibrahym, governor 781-3, 792 A.D.

- 207 *In the name of God. The amyr Ibrahym ibn Çaleh, to whom God be generous. Rotl. Exact. (2nd stamp) By the hand of 'Abdallah (ibn) Zezyd . . . (rotl). Exact.* Green 2845 + 5600?
- 208 *Order (of the a)myr (Ibra)hy(m ib)n Ç(aleh). (2nd stamp, larger) Quarter (rotl) L(ar)ge. Exact. (3rd stamp, a trace).* Yellow green 1008.5 + 2800?
- 209 *Order of the amyr Ibrahym ibn Çaleh. (C. i, 158.)* Green stamp

A.H. 175 'Abdallah, governor 793 A.D.

- 210 *Order of the amyr 'Abdallah (2nd stamp). Half (rotl), great; exact. (Form, see Ghawth 205).* Green 5600?

Bagely?

- 211 *(In the name of Go)d. Order (of the amyr Bage)ly (?) freed(man of the amyr of the) faithful, to whom God (be generous) (rotl) exact. (For reading see next.) (2nd stamp.) By the hand of 'Obeyallah*.* Dark green 2752 + 5600?
- 212 *In the name of God. Order of the amyr Bage)ly (?) freedman of the amyr of the faithful, to whom God be generous. Quarter qist, exact.* Green stamp
Possibly of Ghalib el Bagely, father of Suleyman, governor in 816.

about A.H. 165 Delhem, about 780?

- 213 *In the name of God. Weight of a third (of a dinar). Exact. By the hand of Delhem ibn Maslemah.* Pale blue, iridescent 19.7

A.H. 193-194 Malek, governor 807-808 A.D.

- 214 *God always is. That ordered by the amyr Malek ibn Delhem; weight of a dinar. Exact. (Die C. ii, 43.)* White clear, iridescent 64.57

- 'Omar.
- 215 'Omar. *Weight of a fels, thirty kharrubat.*
(Ring of dots as 117, but later lettering.)
(Die C. ii, 59.) Green 89.8
- Salamat? or Suleyman?
- 216 *What was ordered by the amyr Salam (?)*
... (2nd stamp.) *Rotl, great. Exact.*
Green 2179 + 11000?
- Es Seb'a or Es Senem? (about 810).
- 217 *In the name of God. Order of the amyr*
Al Senem (? Seb'a) ibn Hasqathy (? Khash-
makhy) ibn 'Aly el Kataky; rotl. Exact.
(2nd stamp) *By the hand of Yusef*
Green 5600?
- A.H. 216, 229-234 'Ayesy, governor 831, 843-7 A.D.
- 218 *to whom God be generous. By the*
hand of the amyr 'Ayes(y) ibn Mançur,
freedman (?) of the amyr of the faithful.
Green 2793.2 + 2870?
- A.H. 217-227 El Motaçem, khalifeh 833-842 A.D.
- 219 *What was ordered by the servant of God*
Abu Ishaq, the Imam, El M'otaçem billah,
amyr of the faithful (indistinct), (C. iii, 45.)
Dark green 5423 + 11000?
- Private stamps.
- 220 *year eight and thirty and two*
hundred (853 A.D.). Light blue stamp
- 221 *A measure of white coriander (C. i, 53-56).*
Green stamp
- 222 *A measure of red coriander (see C. i, 53-56).*
Green stamp
- 223 *A measure of gilban of Meqs. (C. i. 72.)*
Green stamp
- 224 *A measure for dates (or paint, or gum).*
(C. i, 93.) Green stamp
- 225 *By the hand of S'ayd ibn Yusef.* Green stamp
- 226 *By the hand of S.* Green stamp
- 227-8 *Honesty is of God. (Duplicate same die.)*
(C. i, 20.) Green stamp
- 229 *In the name of God. That by the amyr Al*
Gabr ibn 'Abdallah (?). Green stamp
- 230 *By the hand of 'Abdallah ibn Mer(wan?).*
Pale green stamp
- 231 . . . (Munsta)ncir billah . . . (by the hand
of) abu A Pale blue stamp
- 232 Illegible.
- 233 " "
- 234 " "
- 235 *In the name of God, fixed is the earth,*
fixed is God. Green. Part of weight?
- A.H. 218 Musy, governor 834 A.D.
- 236 *By the hand of Musy ibn el 'Abbas (see*
C. iii, 45.) Ring form. Green 244.1
(See in 814 'Abbas ibn Musy ibn 'Ayesa
el 'Abbasy.)
- Pl. xiii. 27. A.H. 242 Yezyd, governor 856-867? A.D.
- 237 *In the name of God, blessing. That ordered*
by the amyr Yezyd ibn 'Abdallah freed-
man of the amyr of the faithful, God
lengthen their life. Year Shurafa.
Green 11000?
- 238 (Another much worn, with bottom line
of date omitted; repeated twice.)
Complete. Dark yellow-green 11384
- 239 (Same altered die as last.)
Complete. Opaque violet glass 2960.5
- A.H. 292? Muhammed, governor 905? A.D.
- 240 *In the name of God. Order of the amyr*
Muhammed ibn Suleyman, whom God bene-
fit. Rotl. Exact. (2nd stamp) By the hand
of Al Mohager. (C. iii, 57.) Dark green 5600?
- 241 (Duplicate, with only first stamp com-
plete.)
The only amyr Muhammed ibn Suley-
man in the lists in this person; but the
official Al Mohager is placed under El
Mahdy, 775-785, and the work of this
die is like those of that period.
- Illegible. Square with central hole.
- 242 Square three line impress, twice re-
peated, last line "Hasaballah"?
Dull green 11116 + 800? 11900
- 243 Two impressions of square stamp. Sur-
face decomposed. Dull green, 11545 + 50 11600
- 244 Square six line stamp, repeated twice.
Dull green 5955.5 + 10 5965
- 245 Large square four line stamp, lower part
plain. Decomposed 5646.3 + 50 5700

- 246 Disc with upright handle. Two circular stamps illegible.
Clear blue-green 16051 + 900? 17000
247 Flat disc with loop handle.
Yellow green 5112.9 5120

- 248 (Around.) *In the name of God. Orders God exactitude . . . (Centre) Freedman of the Amyr of the faithful, to whom God be generous.* Late style. Shurafa.

Light green

- 249 *Lekelyf 'Ayesy naby tehety or tekhaby.* Pentagram. *For the duty, 'Ayesy deputy (of the counter?).* 163.1

- 250 *By the hand of Çaleh ibn Musalem.* (Four repetitions). (Centre) . . . k . . . exact.
Disc. Light green 320 + 650?

- 251 *Wuqiyeh, great, exact.* (Four? repetitions).
Blue green 224 + 650?

- 252 *Wuqiyeh, great, exact.* Flat ring.
Blue green 1015.9 + 1020

- 253 *Weight of a half dirhem (sic).*
Pale blue with three white patches 87.8

- 254 *Wuqiyeh, star between two crescents.* (Square stamp in disc). Amber 482.2

- 255 *Wuqiyeh (same die).* Yellow green 489.0

- 256 *Wuqiyeh (same die).* Light blue green 483.4

- 257 *'Oq . . .*
Pale yellow, with three blue patches 447.0

- 258 *Llah al amr.* (Device below).
Hazy green 4795 + 11000

- 259 *Llah al amr.* Ring. Hazy green. 763.7

Uninscribed.

- 260 Square, central hole. Green 3815.0 3820

- 261 " " " Dark green 1192.7 1194

- 262 " " " Green 1466.1 1475

- 263 Bun. Square impress. Green 904.5

- 264 " " " Light green 839.0

- 265 " Round impress. Green 891.2

- 266 " " " Light green 482.0

- 267 " Square impress, iridescent.
Pale yellow 225.6 227.0

- 268 " Square impress, flaked.
Pale yellow 213.8 220?

- 269 " Square, four pricks around as 205,
210. Green 489.8

- 270 Ring, wide opening. Green 966.0

- 270A " " " White 210.0

- 271 Thin disc, no stamp. Pale yellow 587.4

Late. Abul Hazn.

- 272-280 *Abu Al Hazn.* Shurafa, light green 141.2
Others of 116.1, 108.6, 105.8 + (107), 96.9,
94.3, 77.9, 70.0 and fragment. All from
same die; late by the peculiar forked
top to the *Lam*.

M' uawiya.

- 281 *M' uawiya ibn 'Obeyd.* Light green 71.5

Bashir.

- 282 *I commend to God, Bashir.* (Fayum, Tri-
angular.) Deep blue 134.7, 95.4

- 285 (Same die.) Light blue 79.1, white 92.8

These must be shortly before the Fati-
mites by the florid writing and forked
top to *Lam*, so cannot be of the go-
vernor Bashir in 717 A.D. (Condé).

Abu Afyf or Temym.

- 286 *Abu Temym?* (or *Afyf*, or *Amym*, or
Aqyq) *ibn Thaslaq* (or *in* or *c*). Green

GLASS WEIGHTS, FATIMITE.

These are arranged with the circular inscrip-
tions first, and then by the number of lines, from
vi to i. The search for a given type can thus be
quickly limited.

- Pl. xv. 28. A.H. 335-341 *Ism' ayl el Mançur* 946-953 A.D.

- 287 *The servant of God Ism' ayl, amyrr of the faithful, centre. Around, In the name of God, order of the Imam Mançur; by God is exactness and justice.* Green 64.4

A.H. 341-365 *Al Mo'ezz Ma'ad* 953-975 A.D.

- 288 *'Abdallah lidyn Allah Ma'ad abu Temym, around. The Imam Al Mo'ezz.*

- Slightly scaled, light green 127.0
289-90 *Ma'ad abu Al Mo'ezz.*

White 48.1, light green 47.4

A.H. 365-386 *El 'Azyz* 975-996 A.D.

- 291 *El 'Azyz billah, amyrr of the faithful. Centre around, In the name of God . . . the servant of God, freedman of the Imam Abu el Melek . . . of the Imam.* Green 128.9

- 292 *In the name of God. What was ordered by the Imam El 'Azyz billah, amyr of the faithful.*
Circle and dot in centre, pale green 64.1
- 293-4 Parts of die 292. Greenish white 16.3 16.2
- 295 *The Imam El 'Azyz billah, amyr of the faithful.* Centre, *Just* (die B.M. 75; C. iv, 133). Pale green 64.5
- 296 Early impress, fragment (die B.M. 75; C. iv, 133). White
- 297 *The Imam El 'Azyz billah, amyr.* Centre, *Just.* White 16.2
- 298 *The Imam El 'Azyz billah.* (C. iv, 116.) Green 45.3
- 299 *What was ordered by the amyr El 'Azyz, billah, amyr of the faithful.* (C. iv, 116.) Green 128.4
- 300 *The Imam, Imam El 'Azyz billah, amyr of the faithful, in double circle.* White 45.1
- 301 *El 'Azyz billah, spray below.* Fayum, light green 88.9
- 302 Same die, worn. Greenish white 90.1
- 303-5 Same die, recut. Green 90.4, 90.0, 89.8
- 306-7 *The Imam Nezar* (die of double dirhem, B.M. 77). Green 44.9, 44.8
- 308 Similar in double circle (die, C. iv, 129). White 89.0
- 309 *The Imam El 'Azyz.* Green 22.7
- 310 *El 'Azyz, billah.* White 22.8
- 311 *The Imam El 'Azyz.* Greenish white 15.9
Qasem ibn Sh'aar. (Wooden reel, about this age.)
- A.H. 386-411 El Hakim 996-1021 A.D.
- 312 *The Imam El Hakim amyr of the faithful, centre; around In the name of God, there is no God but Allah, and he has no companion, Muhammed.* Reverse *Just.* Greenish white 65.8
- 313 Same die obverse; reverse traces with *Just* in centre. Green and brown 131.8
- 314 *The Imam El Hakim biamr allah, amyr of the faithful around. Centre and 'Abd er Rahym heir presumptive of the Muslimin. Year eight and four hundred.* Reverse. *There is no God but Allah, and Muhammed is the prophet of God, and 'Aly favourite of Allah.* (Dies C. iv, 196.) Pale green 131.0
- 315 Same dies. Pale green 65.4
- 316 Similar. Pale green 65.2
- 317 *The amyr El Hakim, biamr allah, amyr of the faithful, and 'Aly heir presumptive, centre. Around, There is no God but Allah and Muhammed is the prophet of God.* Reverse, three lines of inscription in ring of dots, very faint. Pale green 64.1
- 318 Obverse similar, different die. Reverse, *That made in year and four hundred* Different dies in B.M. 90. Greenish white 65.8
- 319 Of El Hakim, by similarity, but die greatly worn. Pale green 65.2
- 320 *El Hakim, biamr allah, amyr of the faithful, in beaded circle, inscription around lost by partial impress of large die.* Brown 16.4
- 321 *The Imam El Hakim, biamr allah, amyr of the faithful.* Centre, *Just.* Light green 130.8
- 322 *El Hakim, biamr allah, centre. Around blundered, as B.M. 104.* Brown white 65.1
- 323-4 Similar. Around indistinct. Green 65.1, brown white worn 62.6
- 325 Similar, die much worn. White 65.2
- 326 *The Imam El Hakim, biamr allah, amyr of the faithful . . . around. Centre, That made in year six and four hundred.* Reverse. *There is no . . . &c. 'Aly favoured by Allah.* Centre *Just.* Greenish white 65.2
- 327 *El Hakim biamr allah and his heir apparent.* (B.M. 115.) Reverse. *There is no . . . &c.* Centre, *Just.* (Die B.M. 115.) Green 91.7
- 328 Same dies, both sides. Green 46.3
- 329 Different dies. Green 46.3
- 330 *El Hakim and the heir apparent.* Green 12.0
- 331 *The Imam El Hakim biamr allah, amyr of the faithful and khalifah heir apparent of the Muslimin. That made in year seven and four hundred.* Reverse, *There is no . . . &c.* (Die B.M. 89.) Green 65.5
- 332 *The Imam El Hakim, biamr allah, amyr of the faithful. That made in year three and four hundred.* Reverse, *There is no . . . &c.* Greenish white 65.2
- 333 *El Mançur Abu 'Aly, the Imam El Hakim biamr allah, amyr of the faithful* (see B.M. 102). White 129.9
- 334 *amyr of the faithful made in year four hundred.* Part of v line stamp. Green 16.7
- 335 *The Imam El Hakim, biamr allah, amyr of the faithful; that made and four (hundred).* Part of iv line stamp. Pale green 16.7

- 336 *The Imam El Ha(kim), biamr allah, and his heir apparent.*
Green 90.3; 92.1, 91.4 (brownish white) and 45.4 same die; 82.3 scaled and 45.9 same die; 45.7 and 45.9 same die; 46.0, 46.1, 46.1, 45.8, 45.0 (worn), 90.3 very faint and dubious.
- 350-1 *The Imam El Hakim, biamr allah, and his heir apparent, amyr of the faithful.*
Same die. Green 91.1, pale green 47.1
- 352-4. Similar, same die. Green 91.9, 90.7, 45.9
- 355-6 Similar. Green 92.0, 45.6
- 357-8 *El Hakim, biamr allah.*
Green, broken; green 11.7
- 359-62. Similar (die B.M. 98).
Green 91.8, 91.2, 46.0, worn 44.6
- 363 Same die from Menzaleh. Pinkish, scaled 89.4
- 364 *El Hakim, biamr allah, and his heir apparent* (die B.M. 96). Green 46.0
- 365-8 Similar, four same die.
Green 91.2, 90.9, 46.3, 46.3
- 369-72 *El Hakim, biamr allah, Just*, four same die.
Green 91.1, 46.3, 45.9, 45.3
- 373-5 Similar, three same die.
White 91.7, white scaled 38.4, green 45.6
- 376-81 *The Imam El Hakim, biamr allah*, six different dies.
Green 92.0, 45.4, 45.4, 44.8, 45.0, 44.7
- Pl. xvii. 29. 382-3 Similar, two same die.
Pale blue 45.4, greenish white 45.5
- 384-7 Similar, four same die.
Blue 22.8, pale green 23.0, 22.8, 11.5
- 388 *El Hakim biamr allah*, within two circles.
Pale green 16.5
- 389 *The amyr of the faithful*, in circle, part of large die. Pale green 6.1
- 390 *four hundred*, in circle, part of large die. Pale green 5.7
- 391-4 *The Imam El Hakim*, different dies.
Pale green 11.0, 11.6, dark brown 25.4, decomposed 10.7
- 395-7 *El Hakim biamr allah*, different dies.
Yellow 11.3, 11.1, pink and white 11.7
- 398-9 *El Hakim biamr allah*, small dies.
Bluish white 22.7, 22.1
- 400-2 *The Imam El Hakim and the heir apparent*, different. Pale green 22.7, 22.7, 22.8
- 403-6 *El Hakim* in circle of large dots.
Pale green 23.0, 11.4, 11.0, blue 8.4
- 407 *El Hakim*, different die (B.M. 135). Blue 11.3
- 408 *El Hakim*, single line. Pale green 11.3
- 409-12 Probably *El Hakim*, but indistinct.
White 11.3, 11.7, pale green, scaled 10.0, 2.9
- A.H. 411-427 *Ez Zahir* 1021-1036 A.D.
- 413 *The Imam Ez Zahir la 'Azyz dyn Allah, amyr of the faithful*, centre; around *There is . . . &c. . . . prophet.* (B.M. 146.)
White 131.1
- 414-5 Obverse similar; two same die, both scaled, reverse, *There is . . . &c.*; in centre, *Just*. White 59.5, green 42.6
- 416 Obverse similar; reverse, scroll lines round centre, indistinct. Pale green 65.0
- 417-9 *Amyr ez Zahir la 'Azyz dyn Allah*, around a circle; in centre, *The Imam?* ? two same die.
Green 45.3, yellow green scaled 44.5, 39.8
- 420 *The Imam Ez Zahir la 'Azyz dyn Allah, amyr of the faithful.* White scaled 88.4
- 421-2 Similar, two same die (B.M. 164).
White 92.1, green 92.2
- 423-5 Similar, three same die.
Green 45.9, yellow worn 45.7, white 46.3
- 426-8 Similar, three same die.
Brownish white worn 45.2, green 46.1, scaled 38.3
- 429-30 Similar, partial impresses.
Pale blue . . . 16.5, 16.7
- 431 *Ez Zahir el 'Azyz dyn Allah, amyr of the faithful.* Green broken
- 432 *Ez Zahir el 'Azyz* Green 65.6
- 433-5 *The Imam Ez Zahir la 'Azyz dyn Allah, amyr of the faithful*, three same die.
Green 91.3, 45.9, pink 46.1
- 436-9 Similar, four same die.
White 91.4, green 91.3, 45.2, pink 44.7
- 440-1 Similar, two same die.
White scaled 44.0, yellow 45.7
- 442-5 Similar, four same die.
Green 46.1, 45.7, 45.7, 45.8
- 446 Similar. Green 91.2
- 447 Similar. Scaled, green 43.1
- 448 Similar. Scaled, amber 45.1
- 449 Similar. Scaled, white 88.3
- 450 Similar. Dark green 92.7
- 451 Similar, partial, from larger die. Blue 16.7
- 452-3 *The Imam Ez Zahir la 'Azyz dyn Allah* (two same die, B.M. 162).
Green 46.0, scaled 43.8
- 454 *Ez Zahir (li) 'Az(yz dyn) Allah, amyr of the (faithful).* Op. blue chipped 89.4

- 455-60 *Ez Zahir amyrr of the faithful* (?), six same die, B.M. 166 d).
White 90.7, green 91.2, scaled 88.7, 89.0, 45.7
- 461 *Ez Zahir li 'Azyz dyn Allah.* White 45.8
- 462 Reverse of type 355-60 White 45.4
- 463-4 *Ez Zahir li 'Azyz llah* (two same die).
(Die C. iv, 216; B.M. 145).
Scaled white 91.0, green 46.4
- 465 *The Imam Ez Zahir . . .* Opaque red 22.9
- 466-7 Similar, dot over and under (two same die, B.M. 167). Green 22.9, white 22.9
- 468 Similar. Green 22.9
- 469-70 Similar.
Dark brown 11.6; from Menzaleh, green 23.4
- 471 Similar, in square. Green 22.2
- 472-3 *Ez Zahir*, 3 dots over, 8 below. 2 same die.
White 23.1, green 11.4
- 474-5 Similar, 3 dots over, 3 below. 2 same die, B.M. 171. Green 11.4, 23.2
- 476 Similar, 2 dots over, 2 below. Green 11.5
- 477-8 *Ez Zahir*, 2 dots over, 2 below. (Die B.M. 170). Green 11.5, dark brown 22.9
- 479 Similar. Green 11.7
- Pl. xix. 30. A.H. 427-487 *El Mustançir* 1036-1094 A.D.
- 480 4 lines centre *El Mustançir billah, amyrr of the faithful*; around, *There is . . . &c. prophet of God.* Green broken (86.0)
- 481 Around, *The Imam Ma'ad abu Temym El Mustançir billah*; centre, *amyrr of the faithful.* Blundered (B.M. 184), reverse illegible. Green 130.4
- 482 Similar, die greatly worn. Purple 130.9
- 483 Similar, blundered, worn die recut badly. Yellow 91.8
- 484 Similar, good early impression. White 92.4
- 485-6 Similar, medium die. Green 91.1, white 46.2
- 487 Similar, die greatly worn. White 46.5
- 488-93 6 same die (B.M. 202) good to worn.
Green 46.4, 46.4, 92.4, 45.3, white scaled 40.5, green 92.1
- 488 reverse *Year seven and forty and four hundred = 1055 A.D.*
- 494 Similar, rather decomposed. White 45.2
- 495-9 Similar, 5 same die, good to medium.
Blue 45.1, green 46.5, brown 46.4, green 46.2, blue 82.0
- 500-2 Similar, 3 same die, poor to bad.
Pink-brown 92.1, white 46.6, green broken (81.3)
- 503-4 Similar, 2 same die, bad.
White 46.5, white decomposed 45.0
- 505 Similar, centre blundered. Blue 46.7
- 506 Similar, badly recut. Green 92.1
- 507-8 Similar, good and rather worn, 2 same die. White 46.3, green 92.1
- 509 Similar, badly recut. Amber 46.2
- 510 Similar, worn. ∪ over centre line. Yellow 73.0
- 511 Similar, fairly good. Blue 91.4
- 512 Centre *Ma'ad*, around illegible. White 47.1
- 513 *The Imam Ma'ad . . .* illegible; reverse, three lines illegible. Pale green 66.0
- 514 to 518 } *The Imam Ma'ad abu Temym El Mustançir billah, amyrr of the faithful, year eight and twenty and four hundred.* (5 same die, B.M. 182.)
- 518 } Good to worn, white 91.8, green 46.1, white 91.8, greenish yellow 91.8, scaled green 40.7
- 519 *The Imam Ma'ad abu Temym El Mustançir, billah, amyrr of the faithful.* (Die B.M. 219.) White 80.7
- 520-6 Similar, 7 same die (B.M. 177), good to worn.
White 64.8, brown 130.8, green 65.6, 65.7, 131.4, pinky 132.6, green scaled 122.5
- 527 Similar, portion of same die. Light green 16.7
- 528 Similar. Amber 67.1
- 529 Similar (die B.M. 228). Blue 92.4
- 530-1 Similar, abbreviated; 2 same die, very rough. Clear pink 46.1, green 91.9
- 532-49 Similar, 18 same die (B.M. 192, 220; C. iii, 284): after 539 here the die was recut, joining up amy(ral) (mu) in two senseless signs.
Brown 46.0, green 91.7, 46.8, 92.4, 92.2, scaled 27.3, pink 46.3, green 91.3 (scaled 90.8). Recut, green 46.1, 41.0 broken, pink and green 92.2, green 90.7, blue 45.9, dark brown and white, gold splash, broken 69.6, green 91.9, pink scaled 85.1; scaled green 66.6, white 43.0
- 550-1 *The Imam Ma'ad abu Temym billah* (C. Supp. 5).
White op. scaled 43.6, 12 dots added, white 46.5
- 552 *(The Im)am Ma'ad abu (Temym) El Mustançir billah (amyrr of) the faith(ful)*, large die, incompletely stamped. Qeneh, white 32.9
- 553 *The Imam (El) Mustançir (am)yr of the faith(ful).* Thebes, blue op. 15.9
- 554-5 *Billah El Mustançir, amyrr of the faithful.* (2 same die, C. iv, 247).
Green 22.9, blue scaled 21.0
- 556 *El Mustançir billah, amyrr of the faithful.* Blue 23.0

- 557 *El Mustançir billah*, 7 dots. Green 22.8
 558 Similar, 5 dots and sprig. White 23.1
 559 Similar, 3 dots below. Green 11.7
 560 *Billah El Mustançir*, 4 dots. Pale green 23.0
 561 *El Mustançir billah abu Temym*. Blue 22.8
 562 *Ma'ad the Imam*. (Die B.M. 246). Green 12.0
 563 *Al Ma'ad billah*. Blue green 44.5
 564-7 *The Imam Ma'ad*, 4 of one die.
 Op. blue 22.2, green 23.1, amber 12.1, black 11.3
 568-9 *The Imam Ma'ad*, different dies.
 Green 23.1, scaled 11.6
 570-1 *The Imam Ma'ad*, 2 same die.
 Amber and gold 23.1, pink 22.6
 572 *The Imam Ma'ad*, square die (with case
 of scales). Pale green 22.3
 573-4 *The Imam Ma'ad*, 2 same die, B.M. 240.
 Black 23.1, pale green 11.8
 575 *The Imam Ma'ad*. Black 72.7
 576 *The Imam Ma'ad*, 3 dots under. White 23.6
 577 (*The I*)*mam* . . . (*Mustan*)*çir* . . . , portion
 of die. Blue op. 6.2
 578 (*The I*)*mam* , portion of die.
 Alexandria, blue op. 5.6
- A.H. 487-495 *El Must'aly* 1094-1101 A.D.
- 579-80 *Ahmed, the Imam Abu el Qasem El
 Must'aly billah, amyr of the faithful.*
 2 same die. Amber 66.1, rich blue 124.4
 581 Similar, previous die recut? 9 dots.
 Green 66.3
 582-4 *Ahmed, the Imam El Must'aly billah,
 amyr of the faithful*, 3 same die (B.M.
 280). Good to poor.
 Green 93.2, amber 92.3, amber scaled 43.5
 585-6 Similar, 2 same die, fair, much worn.
 White 46.2, pale pink 92.2
 587 *Ahmed, the Imam El Qasem (?) Must'aly
 billah, amyr of the faithful*. White 46.9
 588 *Ahmed, the Imam* (see B.M. 296-7). Green 22.7
 589 *The Imam Ahmed*. Quft, op. blue 92.3
 590-91 *Qas (?) Ahmed*, spray below. (2 same
 die), fair and worn. Green 12.5, 24.6
 592 *Ahmed*, dot over, 3 under. Blue 23.5
- Pl. xxi. 31. A.H. 495-524 *El Amyr. El Mançur*
 1101-1130 A.D.
- 593 *El Amyr El Mançur billah (?)*; (centre
 3 lines) *The Imam the ordered by power.*
 Green 92.8
- 594-5 *The Imam El Amyr by order of God,
 amyr of the faithful*, 2 same die (B.M.
 300, 309). Green 92.1, 47.2
 596 Similar, different die. Milky 46.5
 597-8 *The Imam El Amyr*, 2 same die.
 Green 23.8, 22.8
 599-600 Similar, 2 same die.
 Green op. 22.5, milky 23.3
 601 Similar. White 11.8
 602 Similar. Milky 11.2
 603 Similar (die B.M. 311). Scaled, milky 18.5
- A.H. 525 *El Muntazar* 1131 A.D.
- 604 *God, El Muntazar, by the order of (God).*
 Milky 87.1
- A.H. 525-544 *El Hafiz* 1131-1149 A.D.
- 605 *The Imam El Hafiz li dyn Allah, amyr of
 the faithful*, part of a large die. Blue op. 16.5
 606 *God, The Imam El Hafiz li dyn (Allah).* Milky 45.9
 607 *The Imam El Hafiz li dyn Allah.* Milky 92.4
 608 *The Imam El Hafiz* (B.M. 316). Milky 46.1
 609 Similar. Green 46.8
- A.H. 544-549 *Ez Zafir Ism'ayl* 1149-1154 A.D.
- 610 *The Imam billah Ez Zafir abu Manç(ur).*
 (Centre) *Amyr al mu.* Green 46.4
 611 *The Imam Ez Zafir.* Milky 46.1
 612-3 Similar (2 same die, C. iv, 291).
 Milky, chipped 89.5, 90.3
- A.H. 549-555 *El Fayz* 1154-1160 A.D.
- 614 *The Imam El Fayz bi-naçri-llah amyr of
 the faithful.* Blue op. 131.7
 615 Similar. Alexandria, milky 87.8
 616 *God. The Imam El Fayz bi-naçr.*
 Qeneh, milky 45.1
 617 Similar. (Die B.M. 330.) Milky 89.2
 618 *The Imam El Fayz bi-naçri-llah.*
 Scaled, yellowish white 42.8
 619 Similar (?). Green 45.6
- A.H. 555-566 *El 'Aadid* 1160-1171 A.D.
- 620-21 *The Imam El 'Aadid lidyn Allah, amyr
 of the faithful.*
 Opaque blue 61.2, double struck 61.5
 622 *The Imam El 'Aadid lidyn Allah.* Milky 45.3
 623-4 Similar (2 same die).
 Milky, scaled 44.4, milky 46.8

- 625 Similar. Menzaleh group, milky 45.0
 626 *The Imam* (?) *El 'Aadid*. Scaled, greenish milky 40.9
 627 Similar. Milky 45.6
 628 Similar (?). Chipped, milky 88.7
 629 Similar. Greenish white 15.4
 630 *El 'Aadid*. Milky 21.8
 631 *El 'Aadid*. Milky 23.0
- A.H. 565-575 *El Must'ady* 1170-1180 A.D.
- 632-3 *God. The Imam El Must'ady by order*,
 2 same die. Milky 44.0, 93.2
 634 Similar (?). Milky 92.0
 635 Similar. Milky 92.3
- A.H. 575-622 *En Naçir* 1180-1225 A.D.
- 636 *God. The Imam En Naçir*. Greenish milky 94.3
- A.H. 655-657 *'Aly el Mañçur* 1257-1159 A.D.
- 637 *The Imam . . . 'Aly el Mañçur* (?) *the am . . .*
 Pinkish 46.8
- 638 *The Imam, the elevated, may God open to*
him. Pink and white 46.4
 639-40 *The Imam, amyr of the faithful*.
 Pale green 92.8, green 46.5
- 'Abd el Lahneh?
- 641 *'Abd el Lahneh* (? *Laftah*, ? *Laqbah*), circle
 of dots. Green 64.1
- A.H. 404-411 *Muhammed el 'Audy* 1013-1021 A.D.
- 642 *Year, El 'Audy, four* (1013 A.D.). Purple 46.0
 643 *Made by El 'Audy, year four*. Scaled pink 35.0
 644 " " " " *year five*. " " 40.6
 645-6 *Muhammed el 'Audy, year five*.
 Pinkish 90.6, pink scaled, B.M. 347, 74.9
 647 *El 'Audy year . . . ? and ? five*.
 Dark grey blue 91.0
 648 *El 'Audy, year five*. Pink 92.1
 649 *Muhammed el 'Audy, year eight?*. Pink 46.2
 650 *El 'Audy, year 411* (1020 A.D.). White 91.7
 651 *Made by El 'Audy*. Black and white 46.0
 652 *El 'Audy*. Black 91.9
 653-4 *Muhammed el 'Audy* (?). 2 same die.
 White and blue 93.3; white 45.5
- A.H. 405-408 *'Omar* 1015-1018 A.D.
- 655 *Made by the stamp of 'Omar, around;*
centre illegible. Pink 135.2
- 656 *Year eight, 'Omar, Cairo*.
 Scaled, white and blue 83.9
 657 *'Omar al Qahirah*. (C. v, 5.) Amber 91.8
 658-9 *Made by 'Omar*.
 Pink 92.7; with cross line, pink 93.2
 660-1 Similar.
 Black 92.7; green and op. white (B.M. die 360) 46.6
 662 *'Omar, quatre foil*. Purple 92.7
 663 *El hag 'Omar*. Black 92.1
- 'Abd Ahmed or Abd el Hamid.
- 664 *'Abd Ahmed* (?), fleur de Lys. White 46.5
- Pl. xxiii. 32. Cairo.
- 665-6 *Maçr prosper, 2 same die*.
 Blue 45.1, dull blue 46.5
- A.H. 428 *Year eight and twenty* 1036 A.D.
- 667 *In the name of God. Weight of the amyr*
of the faithful, (year) eight and twenty.
 Green-yellow, broken (56.2)
- A.H. 440 *Year forty* 1048 A.D.
- 668 *Year forty*. Purple, scaled and broken (27.8)
- A.H. 450 *El Mahdy* 1058 A.D.
- 669 *Fifty, El Mahdy, year*. Scaled, black 45.0
- 'Aly ed D'ay.
- 670-71 *'Aly ed D'ay*.
 Dull white 91.5; Fayum, pinkish 46.5
- A.H. 470-474 *'Aly esh Shuweykh* 1077-1081 A.D.
- 672 *'Aly, centre; around esh Shuweykh*.
 Fayum, blue and white 66.0
 673-4 *'Aly esh Shuweykh, different dies*.
 White and blue 93.5, pale pink 46.1
 675-6 *'Aly esh Shuweykh, year three and*
seventy (same die, = B.M. 337).
 Scaled, pinkish 41.0, 33.4
- A.H. 478 *'Aly el Maçry* 1085 A.D.
- 677 *'Aly el Maçry, year eight and seventy*.
 (die B.M. 342). Fayum, blue and white 93.1
- A.H. 521-532 *Muhammed ibn Shahyn* 1127-1138 A.D.
- 678-9 *Muhammed ibn Shahyn (year) one and*
twenty (same die). Blue 92.9, white 93.3

- 680 *Muhammed ibn Shahyn (year) eight and twenty* (die B.M. 386). White and blue 46.6
- 681 *Muhammed ibn Shahyn (year) two and thirty.* White 92.3
- Muhammed el Baba.**
- 682-3 *Muhammed el Baba, son of Talkha (?)* (2 same die, B.M. 354).
Blue and white 46.3, pinkish white 91.6
- Cairo.**
- 684 *El Maçr er Rashyd* (Cairo the Righteous).
White 45.4
- Undated.**
- 685 *Bismillah, roby Allah. (In the name of God, God is my Lord.)* Green 65.4
(This is the reading ascribed to the copy in B.M. 46, but there seems no trace of *r* on either; the word *dinar* has been added to the die B.M. 46, since this copy was made.)
- 686 *Bismillah fi billah.* Green 21.6
- 687 *'Aal Allah sema'a. The high God hear.*
White, pink streak 92.2
- 688 *Zafu Allah. God provides. Broken, milky* (35.0)
- 689 *Allah aç ç(amad)* (see C. iv, 283). *God the eternal.* Amber 12.6
- 690 *'Adl temam. Just, exact.* White 45.1
- 691 *Just.* Pale green 11.7
- 692 *Allah.* Pale green 213.8
- Geometrical.**
- 693 Double triangle, with branching. Purple 91.2
- 694-6 Double triangle, different dies.
Purple 92.9, 92.5, scaled 87.8
- 697 Double triangle modified, circle with projections. Black 92.1
- 698 Six-petal flower. Black 79.9
- 699 Four parallel lines. Purple 85.0
- 700 Cross, recurved arms.
Qeneh; red, yellow and white 11.6
- 701 4 & 4 cross lines. Green 47.0
- 702 Irregular cross lines. Brown and white 92.1

INDEX

- 'Aaçem ibn Hafç, 19
- El 'Aadid, 7, 25
- 'Abdallah, governor, 5, 19
- " b. 'Aly, 3, 16
- " b. Çaleh, 18
- " b. Ibrahym, 5
- " el Mañçur, 4, 17
- " b. Merwan, 20
- " b. Muhammed, 5
- 'Abd Ahmed, 26
- " el 'Azyz, 3
- " el Gebar, 4, 17
- " el Homeyd, 4
- " el Lahnah, 7, 26
- " el Melek b. Merwan, 4, 17
- " " b. Yezyd, 4, 17
- " el Wahab, 5
- " el Rahman b. Yezad, 4, 18
- " " b. Yezyd, 18
- Abu Bekr, 9
- " G'afar, 5
- " al Hazn, 6, 8, 21
- Abu Katifa, 5, 19
- " Temym, 6, 8, 21
- Accuracy of weights, 11
- Ahmed, 9
- " b. Gubeyr, 4
- 'Aly el D'ay, 7, 8, 26
- " el Maçry, 7, 8, 9, 26
- " el Malek, 9
- " el Mañçur, 7, 26
- " el Shuweykh, 7, 8, 9, 26
- El Amyr el Mañçur, 7, 25
- Anubis, 14
- Asamah, 3, 15
- 'Ayesy deputy, 21
- " b. Aby 'Atha, 4, 16
- " b. Luçman, 4, 18
- " b. Mañçur, 5, 20
- El 'Azyz, 6, 21
- Bashir, 6, 8, 21
- Bassianos, 3, 14
- Bagely, 5, 19
- Bes, 2, 14
- Bottle stamps misnamed, 1
- Bun weights, 21
- "Cairo prosper", 7, 26
- "Cairo the righteous", 27
- Çaleh b. 'Aly, 4, 17
- " b. Musalem, 8, 21
- " b. Salamat, 5
- Cobalt blue glass, 3
- Collections numbers in, 1
- Colours of glass, 11
- Constantine types, 2, 14
- Cuboid weights, 5, 6
- Cursive Arabic, 8
- Danaos, 3, 14
- Delhem, 8, 19
- Demosthenes, 3, 15
- Dinar weights, 10
- Diospolis, 2, 14
- Dirhem weights, 10, 13

- Disc weights, 21
 Dolphin on trident, 14
 Drakon, 2, 14
- Eparchs, 2
 Eros, 2, 14
- Fadl ibn Çaleh, 5, 19
 Families of rulers, 12
 Faustina, 2
 Fayz, 7, 25
- Gabr b. 'Abdallah, 20
 G'afar b. Suleyman, 5
 Gennadius, 3
 Geometric designs, 27
 Ghawth, 5, 19
 Gilt glass, 12
- Hadrianos, 3, 14
 El Hafiz, 7, 25
 Hafç b. el Welyd, 4, 16
 Hakim, 6, 22
 Hasaballah, 20
 Hasan b. el Huseyn, 5
 Hashim, 5
 Hayyan, 3, 15
 Herakles, 2, 14
 Hermopolis, 2
 Huseyn b. Ahmed, 9
 " b. 'Aly, 4
 Hur b. Hur, 4, 17
- Ibis, 2, 14
 Ibrahim b. Çaleh, 5, 19
 Isis and Horus, 2, 14
 Ism'ayl b. Çaleh, 5
 " el Mançur, 6, 21
 " b. Mohager, 19
- Johannes, 3
- Kharrubeh weight, 9, 10
 Kyros, 3, 14
- El Mahdy, khalifeh, 5, 19
 " private, 7, 9, 26
 Makers of weights, 7
 Malek b. Delhem, 8, 19
- Manganese glass, 11
 El Mançur, 7, 25
 El Mançur 'Aly, 7, 26
 Measure stamps, 20
 Mo'awiyeh b. 'Abdallah, 18
 Mo'ezz, 6, 21
 Mohager, 5, 19, 20
 M'otaçem, 5, 20
 Mu'awiya b. 'Obeyd, 6, 8, 21
 El Mughyra, 4, 16
 Muhammed, governor, 15
 " b. 'AbdelMelek, 3, 15
 " b. Amru, 17
 " el Ash'ab, 4, 5, 17
 " el 'Audy, 7, 8, 9, 26
 " Baba, 7, 8, 27
 " b. S'ayd, 4, 18
 " b. Shahyn, 7, 8, 9, 26
 " b. Sherhabyl, 4, 17, 18
 " b. Suleyman, 5, 20
- El Muntazar, 7, 25
 El Mustady, 7, 26
 El Must'aly, 7, 25
 El Mustançir, 7, 20, 24
 Musy b. abul 'Abbas, 5, 20
 " b. 'Ayesy, 5
 " b. K'ab, 4
 " b. Yezyd, 5
- El Naçir, 7, 26
 El Nahu (?), 18
 Nawful, 4, 17
 Nikē, 2, 14
 Nikianos, 3, 14
- 'Obeydallah, 3, 15
 'Omar, 7, 8, 9, 18, 20, 26
 Omayyad stamps, 3, 15
 'Oqba, 3
 'Osamah, 15
- Pan head, 2, 14
 Pappos, 2, 14
 Private weights, 8, 20, 26
- Qasah (?), 18
 Qasem b. 'Obeydallah, 3, 15
- Qulhem, 5, 19
 Qurrah, 3, 15
- Reflection photographed, 1
 Rhodo, 3
- Salamat, 8, 18, 20
 Samand, 5
 S'ayd b. Latufallah, 4, 16
 " b. 'Obeyd, 4, 17
 " b. Yusuf, 20
- Scarabs of glass, 1
 Al Seb'a (?), 20
 Al Senem (?), 20
 Serapis, 2, 14
 Sergios, 3, 14
 Sinan b. Ibrahim, 5
 Solidus weights, 9
 Soteiros, 3, 14
 Square weights, 21
 Square of lettering, 5
 Strategios, 2, 14
 Suezy, 4, 18
 Sulman, 16
- Tahyr, 16
 Tauwaf, 4, 18
- Uncia, varieties, 10
- Wadyh, 4
 Weight standards, 9, 13
 Welyd II, 4, 16
 Wuqiyeh weights, 13, 21
- Y'aqub, 9
 Yahya b. Daud, 4, 19
 Yezyd, governor, 5
 " khalifeh, 3, 15
 " b. 'Abdallah, 20
 " b. Aby Yezyd, 3, 4, 15, 16, 19
 " b. Hatem, 4, 18
 " b. Temym, 16
 " b. Al Zeyad, 16
- El Zafir, 7, 25
 El Zahir, 7, 23





YEZYD, KHALIFEH. QORRAH, GOV. S. OSAMAH, FINANCE. 714-17
680-3 709-14

- 86: امر عبد الله. يزيد امير المو. منين قسط. زيت واف علي. حوايع...
- 87: امر ال امير. قرة بن سر. يك قسط. واف.
- 88: اسامه. بوزيد.
- 89: امر ا. سا مة بوز. يد نصف. قسط واف.
- 90: امر ا. سا مة بوز. يد نصف. قسط واف.
- 91: امر ا. سا مة بوز. يد ربع قسط. واف.

HAYYAN, FINANCE 717-21 YEZYD, MAKER MUHAMMED, GOVERNOR 724 'OBEYDALLAH, FINANCE 721-32

- 92: امر حيار بن. شريم ربع. قسط الردر. واف.
- 93: امر يزيد. بن ابي يزيد. قسط زيت و. اف.
- 94: بسم الله. امر ال محمد. متقار كره. تلة عشر خر. ويات واف.
- 95: بسم الله. صر ال محمد. ربع. قسط واف.
- 96: بسم الله. امر ال امير عبيد. لله بن ال حجاب. ر رطل بله. واف.
- 97: عبيد. الله بن. الحجاب.

- 98: بسم الله*. امر عبيد. لله بن ال حجاب. متقار فلس. واف.
- 99: بسم الله. مما امر به عبيد. الله بن ال حجاب. متقار دينار. واف.
- 100: مما امر. عبيد الله بن. ر حجاب متقار فلس. ثمنه اعشر. حرويه.
- 101: بسم الله. مما امر به. عبيد الله بن. ال حجاب واف.
- 102: بسم الله. امر عبيد الله. بن ال حجاب متقار. ب دار اسر. كره و لله. واف.
- 103: بسم الله. مما امر به. عبيد الله بن. ال حجاب واف.
- 104: بسم الله. امر عبيد الله. بن ال حجاب. حله عبيد. محرا لا سر. واف.
- 105: مما امر. به عبيد الله. بن ال حجاب ربع. قسط و. اف.
- 106: مما امر. به عبيد الله. بن ال حجاب ربع. قسط و. اف.
- 107: بسم الله. امر عبيد الله. ال حجاب قسط. زيت و. اف.
- 108: بسم الله. امر عبيد الا. بن ال حجاب. ربع قسط. زيت و. اف.

EL QASEM, FINANCE 732-40

- 109: بسم الله. امر الله بالو. قا و امر يصنع. ال رطل بلا. ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 110: بسم الله. امر الله بالو. قا و امر يصنع. ال رطل بلا. ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 111: بسم الله. امر الله بالو. قا و امر يصنع. متقار وقيه. ال قاسم بن عبيد. الله ر ر حجاب. ثمنه تلة. و عشرين. عبيد.
- 112: بسم الله. مما امر به. ال قاسم بن عبيد. ال كبير تلتير خر. و به. و.
- 113: بسم الله. مما امر به. ال قاسم بن عبيد. ال كبير تلتير خر. و به. و.
- 114: بسم الله. مما امر به. ال قاسم بن عبيد. ال كبير تلتير خر. و به. و.
- 115: بسم الله. مما امر به. ال قاسم بن عبيد. ال كبير تلتير خر. و به. و.
- 116: بسم الله. مما امر ال امير. ال قاسم بن عبيد. الله متقار. فلس تلتير. حرويه و واف.
- 117: بسم الله. امر ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 118: بسم الله. امر ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 119: بسم الله. امر ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 120: بسم الله. امر الله بالو. قا و امر يصنع. ال رطل بلا. ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 121: بسم الله. امر الله بالو. قا و امر يصنع. ال رطل بلا. ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 122: بسم الله. امر الله بالو. قا و امر يصنع. ال رطل بلا. ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 123: بسم الله. امر ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 124: بسم الله. امر ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.
- 125: بسم الله. امر ال قاسم بن عبيد. الله على خير طعير. بن سنة سنه اتينرو. اشترينرو وميه.

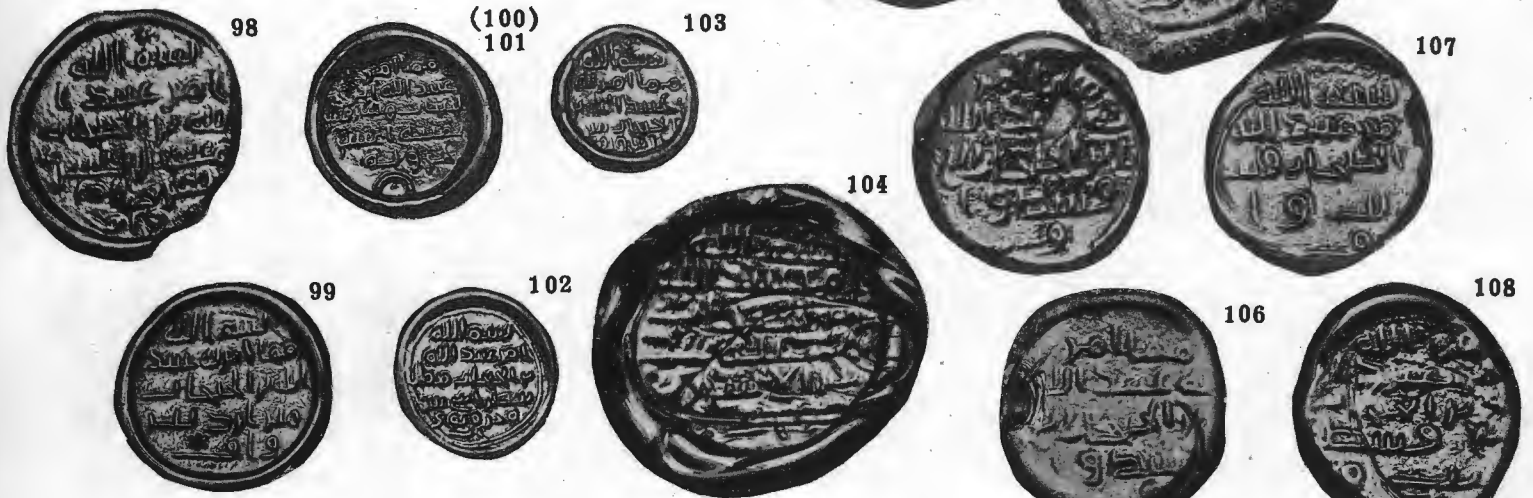
YEZID 680 QORRAH A.D. 709-714. ASAMAH A.D. 714-717.



HAYYAN 717-721 YEZID 680-

MOHAMMED

OBEYDALLAH
IBN EL HABHAB
A.D. 720-732



EL QASIM A.D. 732-740
IBN OBEYDALLAH



'ABDALLAH

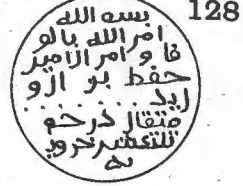


126



127

HAFU, GOVERNOR 727-45



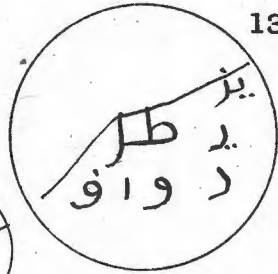
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ELWELYD, KHALEM 742-4



129

YEZYD, MAKER



130

131



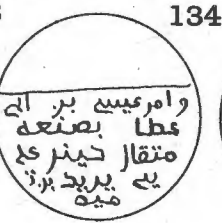
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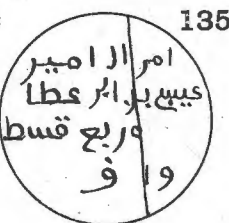
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133

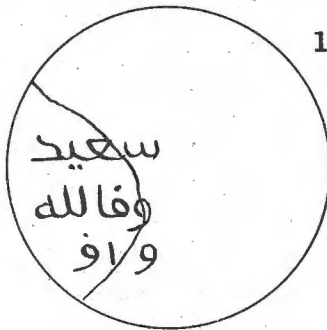


134



135

SAYD



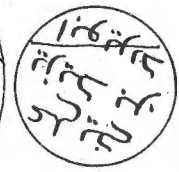
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EL MUGHYRA

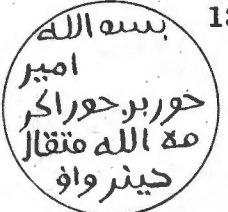
EL MUGHYRA GOVERNOR 749



137



HUR



139

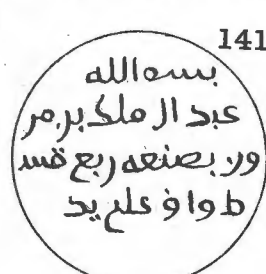


138

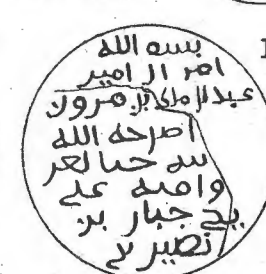
'ABD EL MELEK, GOVERNOR. 750



140



141



142

'ABD ELGEBAR, MAKER



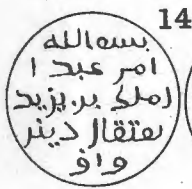
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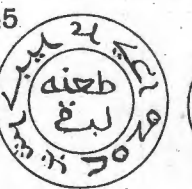


144

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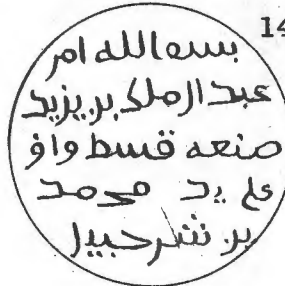
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146

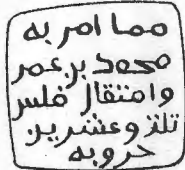


MUHAMMED

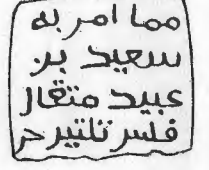


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SAYD



148



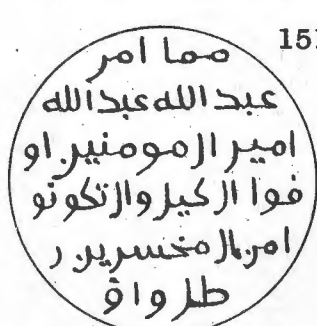
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'ALEH, GOVERNOR, 750, 753

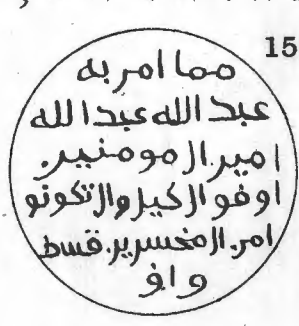


150

'ABDALLEH EL MANÇUR, KHALIFEH. 754-75



151



152



153

ABDULLAH

HAFQ 727-742 WELYD 742 YEZID

130

131



126



127



128



129



132



138

AYESY IBN ABI 'ATA
A.D. 743-749.



133



134



135

SA'ID



136

EL MUGHYRA A.D. 749

137



HUR 721-732



139



ABD EL MELEK A.D. 750



140



141



142

ABD EL GEBAR



143

ABD EL MELEK



144

IBN YEZID
A.D. 751-758



145



146



MUHAMMED

147

SAYD 754-

148

149



CALEH A.D. 750-753

ABDULLAH EL MANCUR



150



151

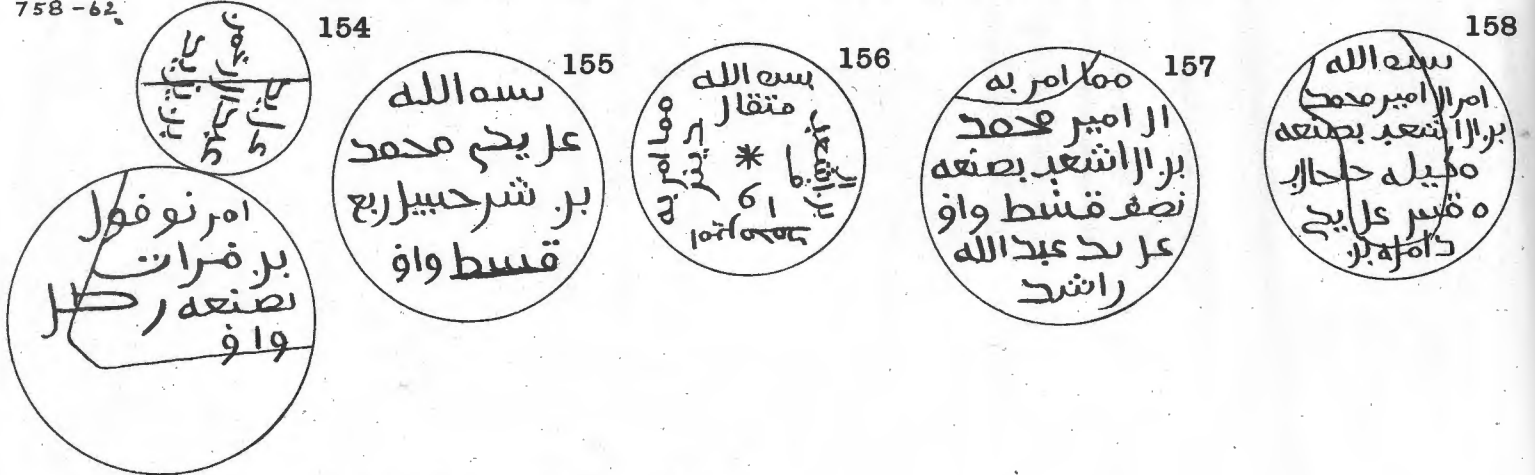


152

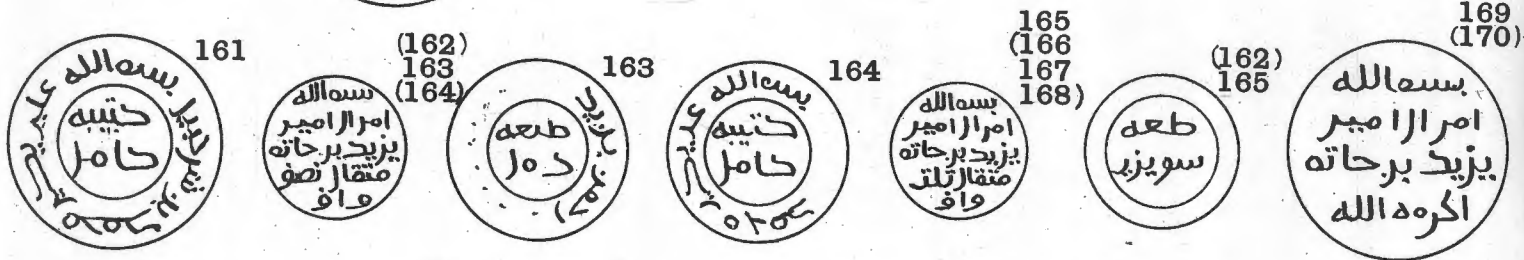
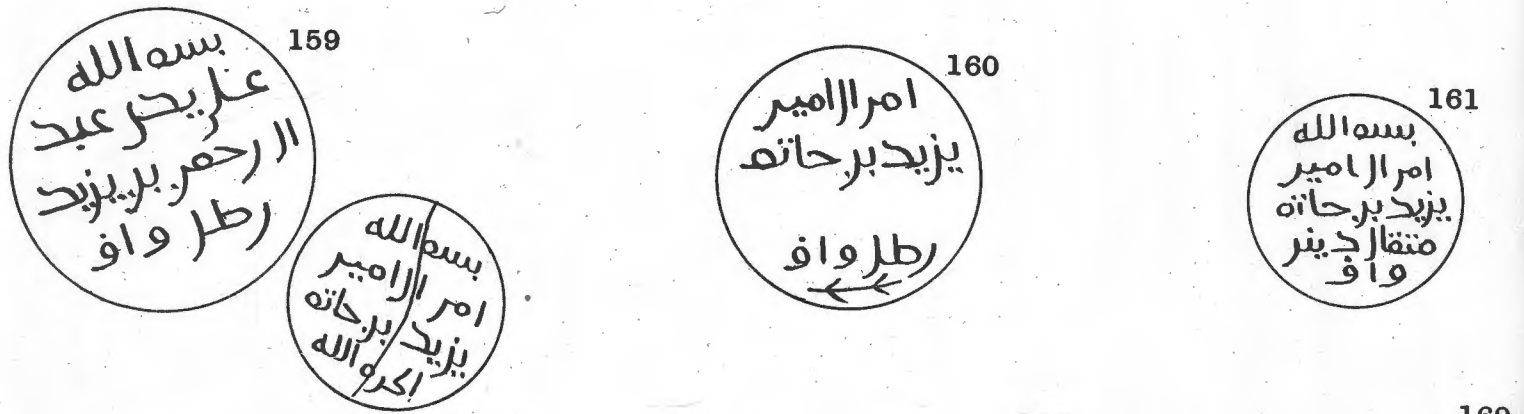


153

NAWFUL FINANCE MUHAMMED, MAKER. MUHAMMED, GOVERNOR. 759
758-62.

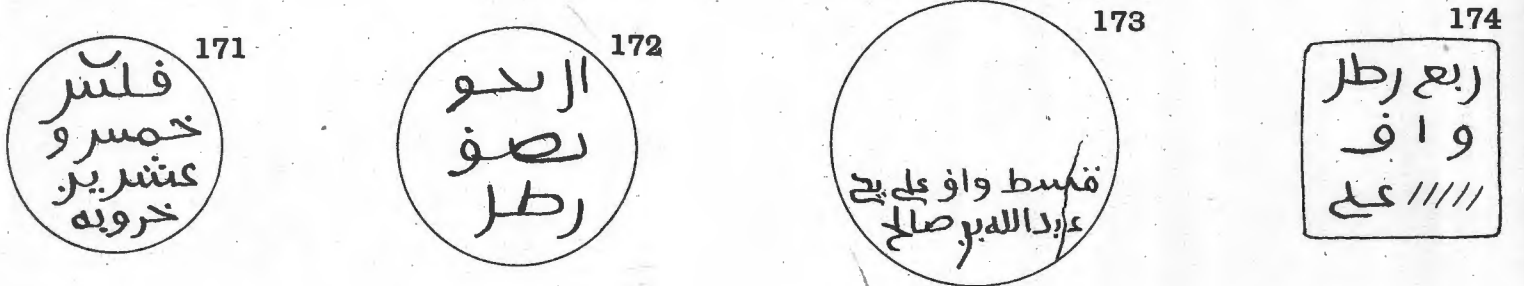


YEZYD, GOVERNOR 762-8

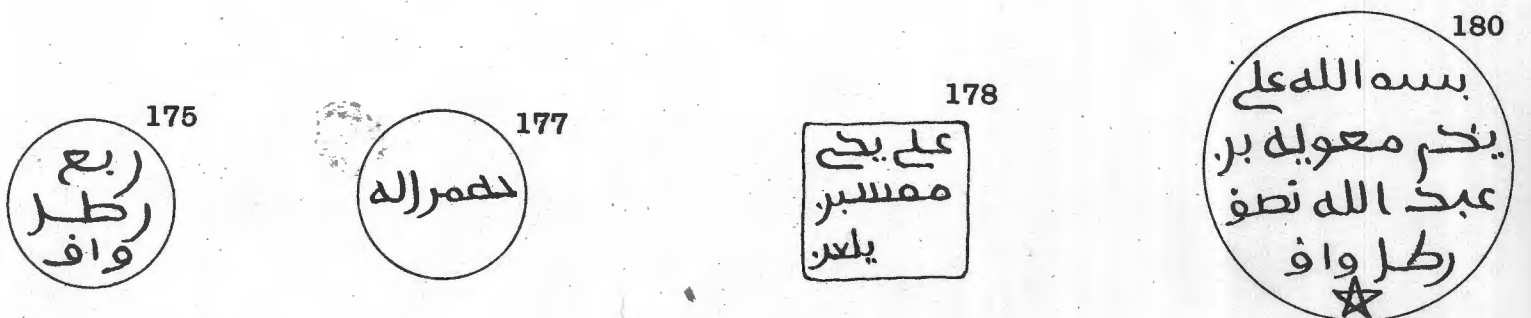


AL NAHU ?

'ABDALLAH, MAKER



MO'AWIYEH



NAWFUL A.D. 754-760

M. IBN EL ASHAB A.D. 759



154



155



156



157



158

YEZID IBN HATIM A.D. 761-769



159



160



161



161



162
163
164



163



164



165
166
167
168



166
167



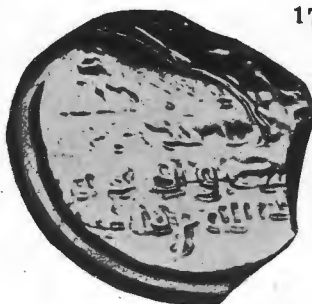
169
170



171



172



173



174



175



177



178



180

MOAWIYA

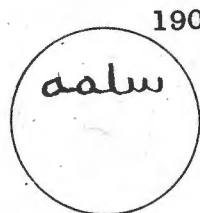
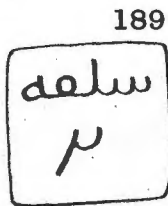
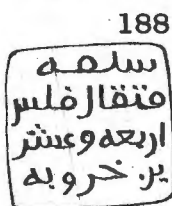
MUHAMMEDI



'ABD ER RAHMAN



SALAMAT



'OMAR



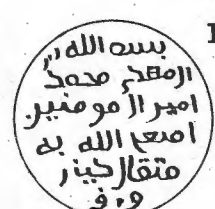
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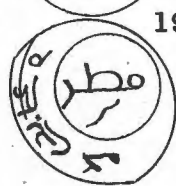
'AYESY, GOVERNOR 778



YAHYA GOVERNOR. EL MAHDY, KHALIFEH 779 775-85



TAUWAF



197 (198)



199



200 (201)



QULHEM?

ISM'AYL. FINANCE 780



MUHAMMED IBN SAID.
A.D. 769

184



181



182
183



185



186



187



SALAMAT

188



189



190



191



'OMAR

192

AYESY A.D. 778

YAHYA A.D. 779

EL MAHDY

A.D. 775-785



193



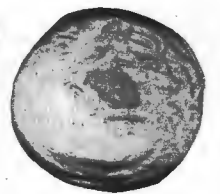
194



195



196



197
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200
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202



ISMAYL 780



203



204



197



198



199



200

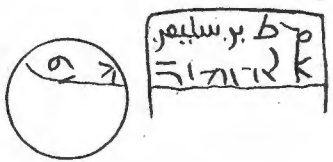
G HAWTH, JUSTICE. 780-4

EL FADL GOVERNOR 785

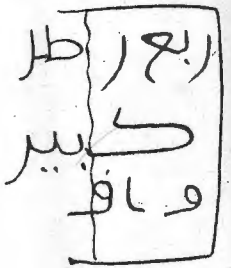
IBRAHYM, GOVERNOR. 781-3, 792

208

205

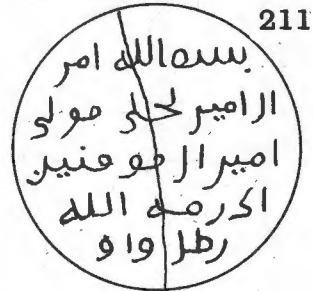


206



BAGELY ?

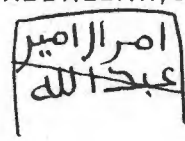
211



209



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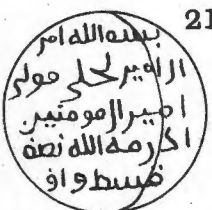


DELHEM, MAKER. MALEK GOV 807-8

'OMAR, MAKER

SULEYMAN ?

212



213



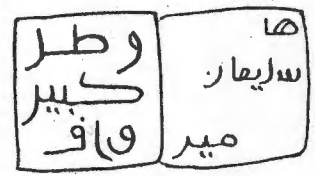
214



215



216



ES SABA ?



'AYESY, GOVERNOR. 831, 843-7

218



853 A.D.

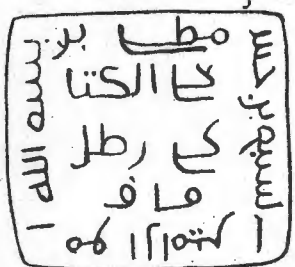
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S'AYD

225



226



227



228



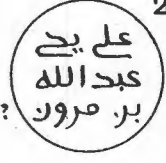
AL GABR

229



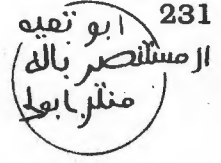
'ABDALLAH

230



MUSTANÇIR ?

231



232



233



235



MUSY, GOV 834 236



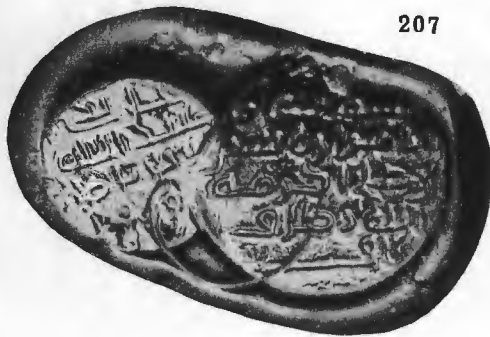
GHAWTH A.D. 780-784 EL FADL A.D. 785



205



206

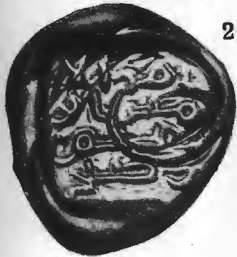


207



208

IBRAHYM
IBN CALEH



209



ABDALLAH A.D. 793

210

BAGELY



211

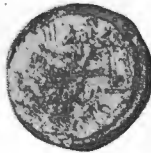
DELHEM



212



213 MALEK 807-808



214



215



216



217

AYESY A.D. 831



218

EL MOTACEM



A.D. 853
220



221



222



223



224



225



226



227



228



229

ABDALLAH



230



231



232



233



234



235

MUSY 834

236



YEZYD, GOVERNOR. 856-67

238 239

MUHAMMED, GOV. 905??

237

بِسْمِ اللّٰهِ بَرَكَةُ مَا كَفَرَ
اَلْ اَمِيْرُ يَزِيْدُ بِنِ عَبِيْدِ اللّٰهِ
مَوْلَا اَمِيْرِ اَلْ عَوْسِيّينِ
اَطَاةُ اللّٰهِ بِقَاهَا
سِرَارُ

بِسْمِ اللّٰهِ بَرَكَةُ مَا اَمَرَ
اَلْ اَمِيْرُ يَزِيْدُ بِنِ عَبِيْدِ اللّٰهِ
مَوْلَا اَمِيْرِ اَلْ عَوْسِيّينِ
اَطَاةُ اللّٰهِ بِقَاهَا

بِسْمِ اللّٰهِ بَرَكَةُ مَا اَمَرَ
اَلْ اَمِيْرُ يَزِيْدُ بِنِ عَبِيْدِ اللّٰهِ
مَوْلَا اَمِيْرِ اَلْ عَوْسِيّينِ
اَطَاةُ اللّٰهِ بِقَاهَا

240

بِسْمِ اللّٰهِ اَمَرَ
اَلْ اَمِيْرُ مُحَمَّد
بِنِ سَلِيْمِ اَلْ اَكْرَه
اَللّٰهُ رَطْلُ وَاوَا

كَايِي
اَلْ هَا جِي

GALEH

250

241

بِسْمِ اللّٰهِ اَمَرَ
اَلْ اَمِيْرُ مُحَمَّد
بِنِ سَلِيْمِ اَلْ اَكْرَه
اَللّٰهُ رَطْلُ وَاوَا

248

بِسْمِ اللّٰهِ اَمَرَ
مَعَا اَمِيْرِ
اَلْ مَوْسِيّينِ
اَلْ اَكْرَه
لِلّٰهِ
١٤٦٥

'AYESY

249

اَكُو وَا عَسِي
اَسِي عَسِي

سَلِيْمِ
اَلْ اَكْرَه

عَلِيّ
كَلَام
بِرْمَسَلَه

251

وَقِيَه
كَبِيْر
وَاوَا

وَقِيَه
كَبِيْر
وَاوَا

252

وَقِيَه
كَبِيْر
وَاوَا

255

وَقِيَه
سَلِيْمِ اَلْ اَكْرَه

256

وَقِيَه
سَلِيْمِ اَلْ اَكْرَه

257

ع
ا ح

258
(259)

لِلّٰهِ اَلْ اَمَرَ ?

ABU AL HAZN.

273 272
275 274
277 276
279 278
280

اَبُو اَلْحَزْنِ

MU'AWIYEH.

281

مَوْاويَه
بِنِ عَبِيْدِ

BASHIR.

282 283 284
285

اَسْتُوْدِعْتَه
اَللّٰهُ
بَاشِر

ABU TEMYM.

286

اَبُو تَمِيْمِ
طَسَلَه

YEZYD A.D. 856-867

MUHAMMED A.D. 905



237



238
239



240



241



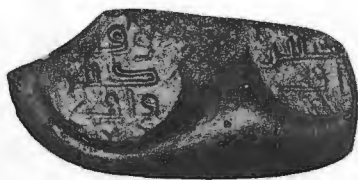
248



249



250



251



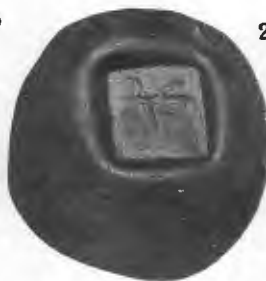
252



255



256



257



258
259

ABUL HAZN

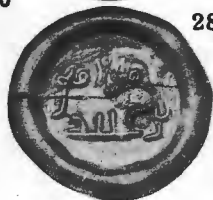
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BASHIR

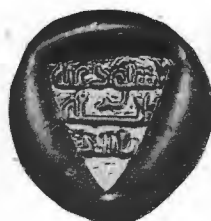
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A.D. 946-953



272 - 280



281



282
283
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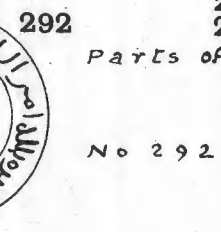
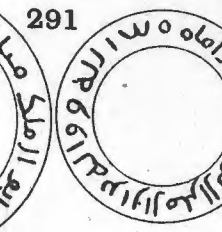
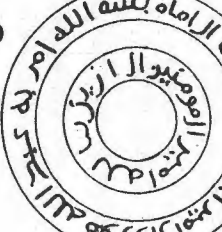
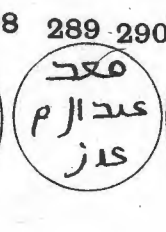
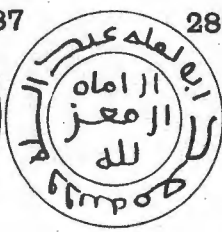


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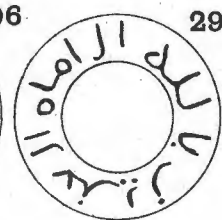
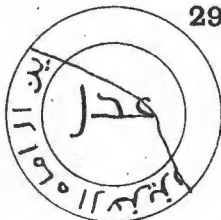


ISMA'YL EL MANÇUR AL MO'IZZ 953-75

EL 'AZYZ 975-96



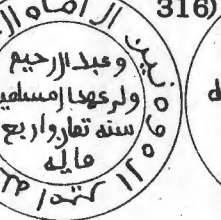
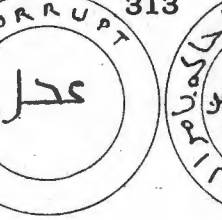
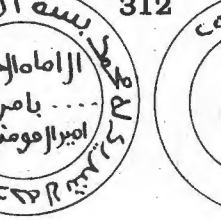
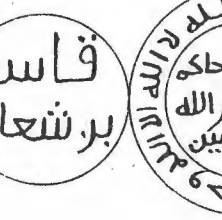
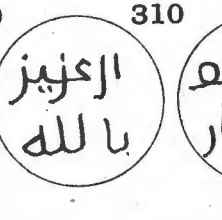
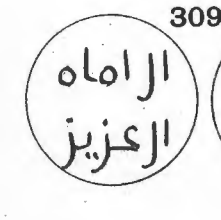
Parts of No 292



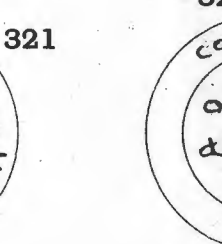
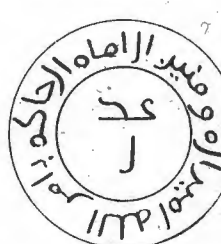
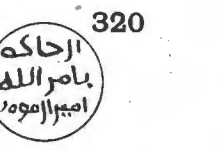
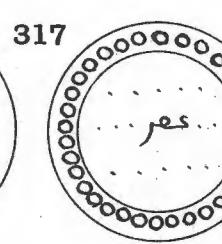
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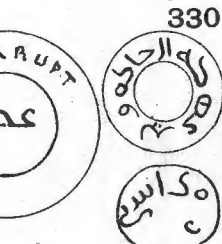
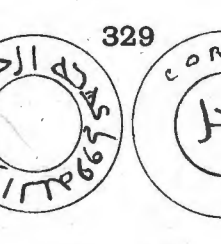
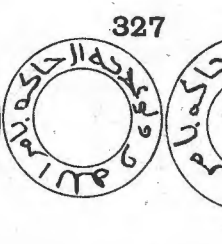
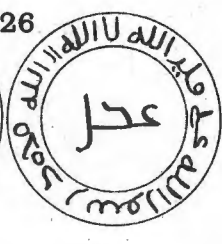
QASEM EL HAKIM. 996-1021



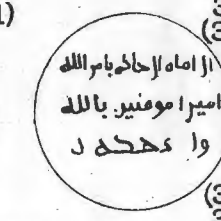
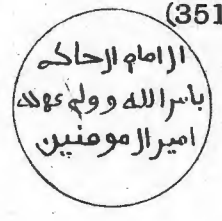
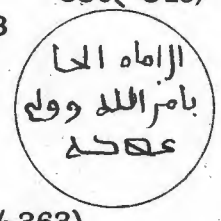
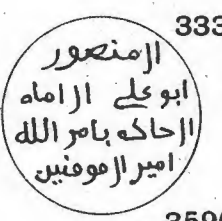
314 (315) 316



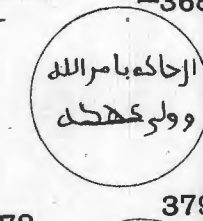
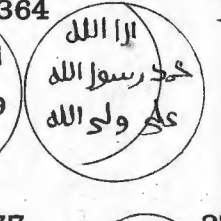
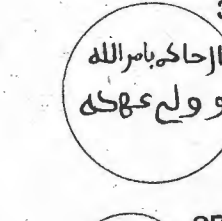
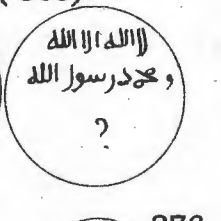
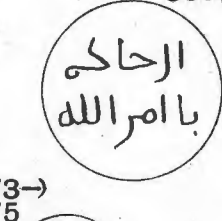
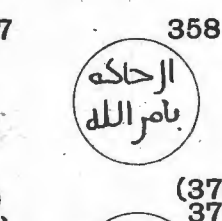
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336(-349)



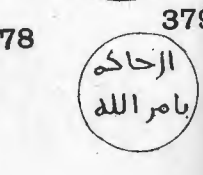
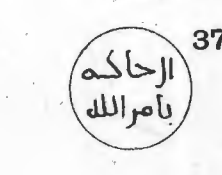
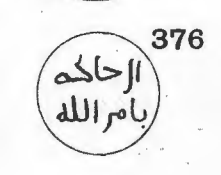
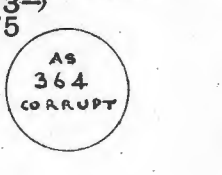
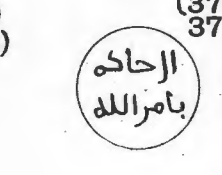
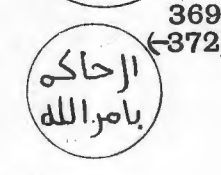
350 (351) (352) 353 (354)



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(355) 356

365 -368



369 (-372)

(373-) 375

AS 364 CORRUPT

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ISMAYL
EL MANQUR
946-953



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EL MOEZZ
A.D. 953-975



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EL' AZIZ
A.D. 975-996



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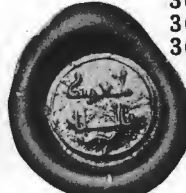
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EL HAKIM
A.D. 996-1020



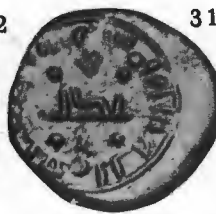
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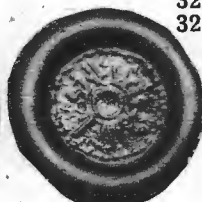


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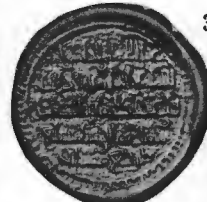
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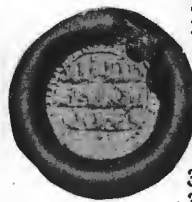
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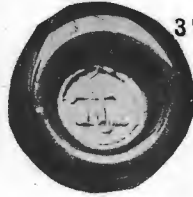
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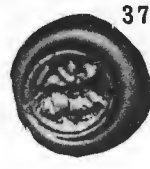
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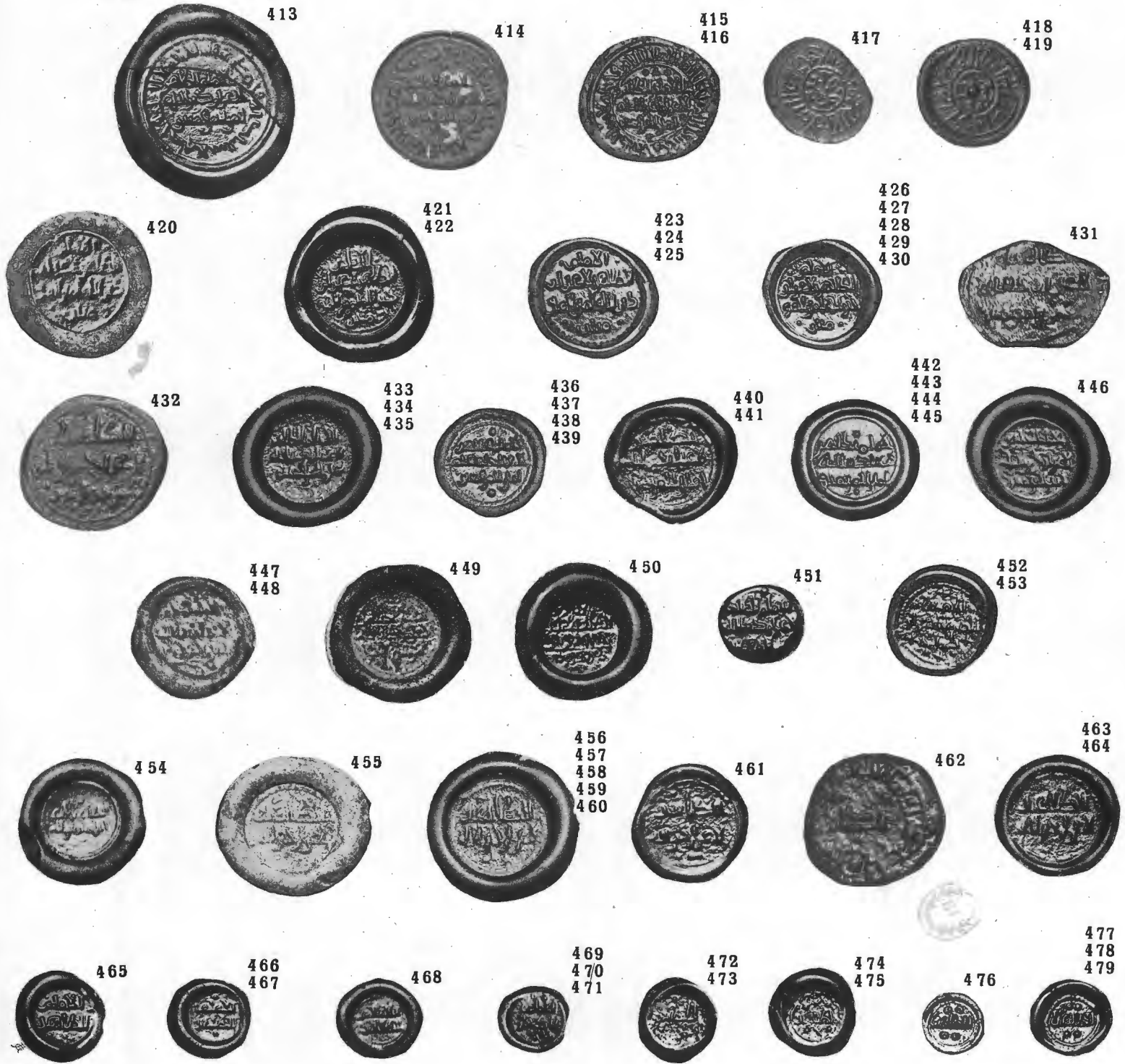


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EL HAKIM A.D. 996-1020



EZ ZAHIR A.D. 1020-1035



EL MUSTANÇIR 1036-94 SEE 231

488(489)
490 491
492 493
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(495) 496
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503 (504)

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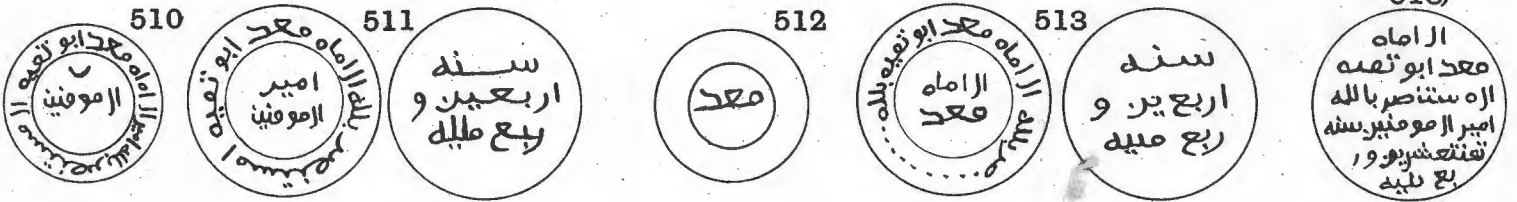
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EL MUST'ALY. 1094-1101

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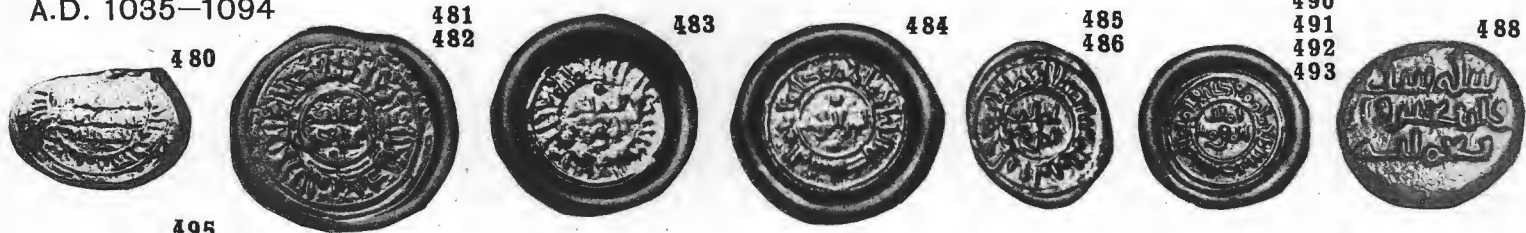
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EL MUSTANSIR
A.D. 1035-1094

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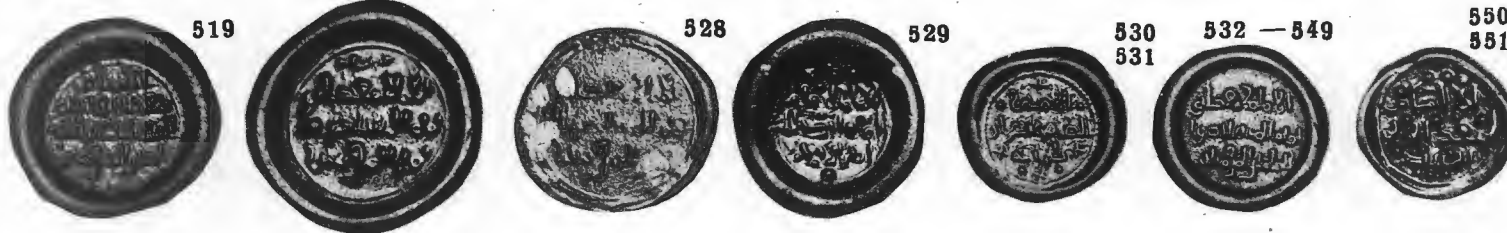
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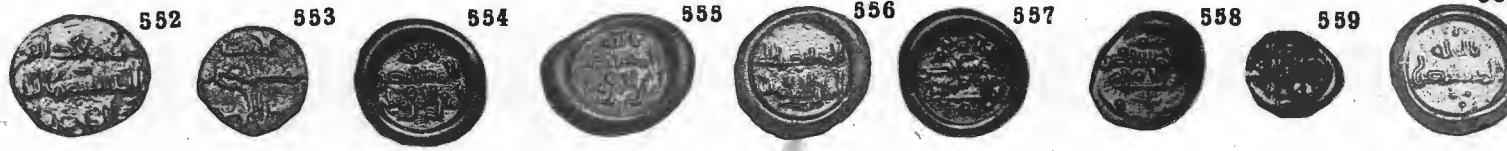
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EL MUST'ALI
A.D. 1094-1101

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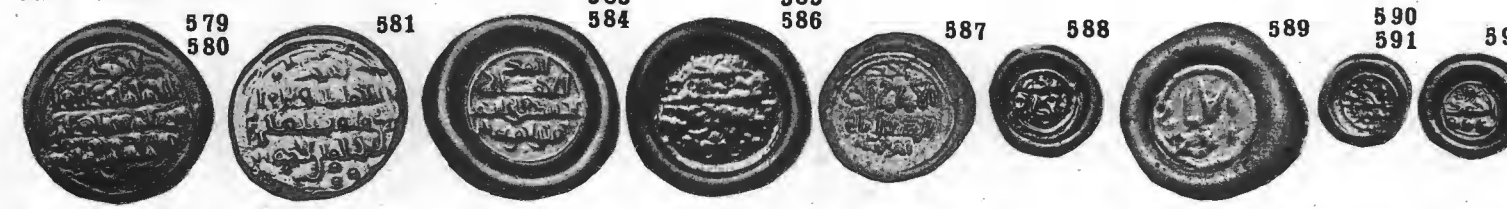
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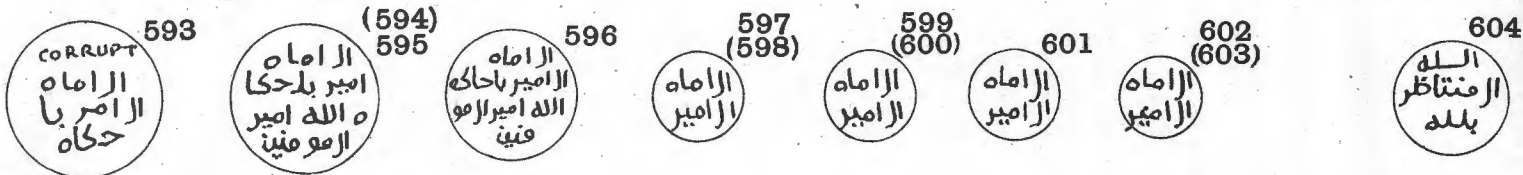
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EL AMYR EL MANÇUR. 1101-30

EL MUNTAZIR 1131

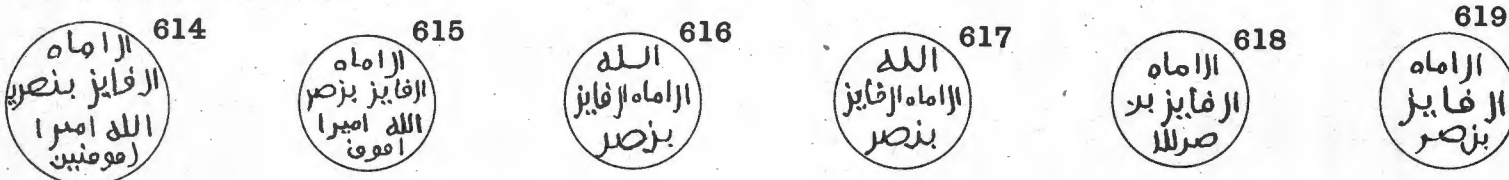


EL HAFIZ. 1131-49

EZ ZAFIR ISMAYL 1149-54



EL FAYZ. 1154-60



EL 'AADID. 1160-71

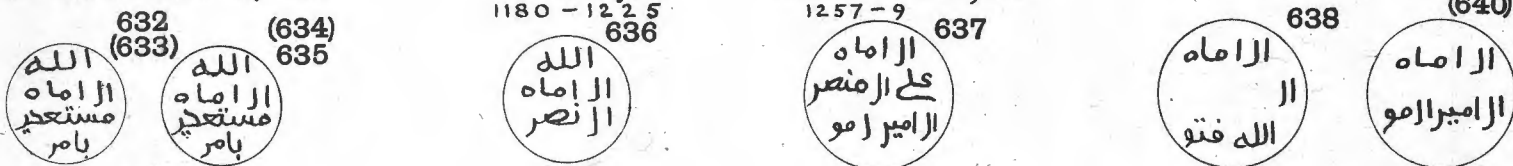


EL MUST'ADY 1171-80

EN NAÇIR 1180-1225

'ALY EL MANÇUR 1257-9

639 (640)



'ABD EL LAHNEH?

MUHAMMED EL 'AUDY. 1013-21

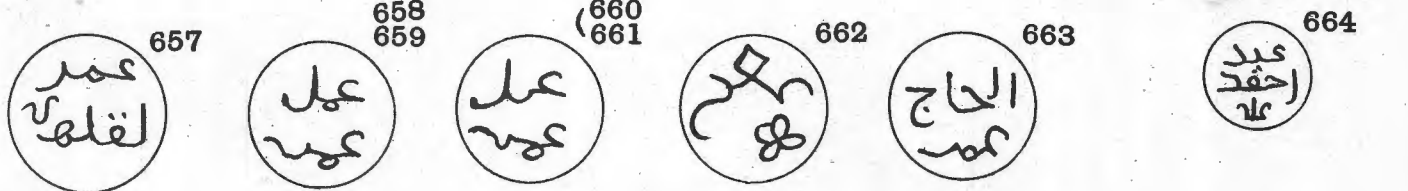


COMAR, 1015-18



REVERSED

'ABD AHMED



EL AMIR
A.D. 1101-1130



EL MUNTAZAR
A.D. 1131



EL HAFIZ
A.D. 1130-1149



EZ ZAFIR
A.D. 1149-1154



EL FAIZ
A.D. 1154-1160



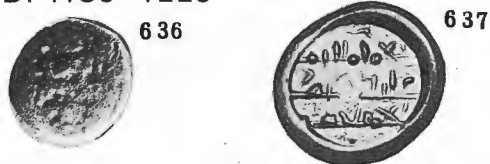
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A.D. 1160-1171



EL MUSTADI
A.D. 1171-1180



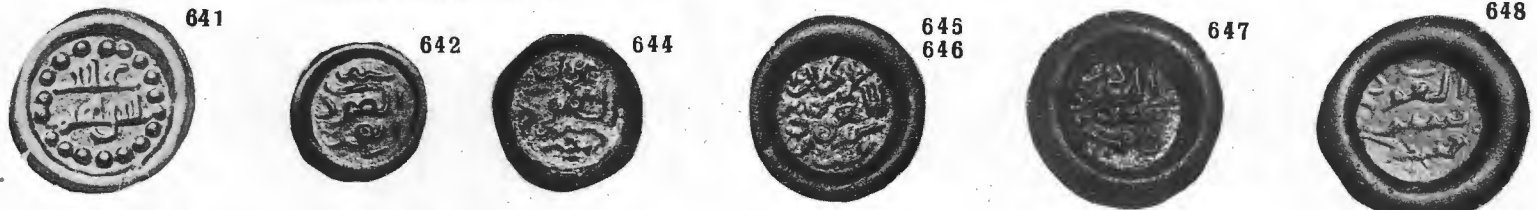
EN NACIR ALY EL MANCUR
A.D. 1180-1225 A.D. 1257-1259



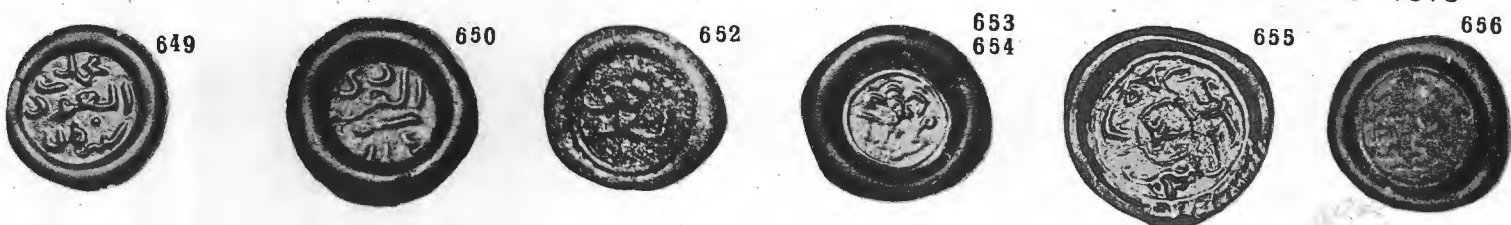
THE IMAM
A.D. 1021-1036



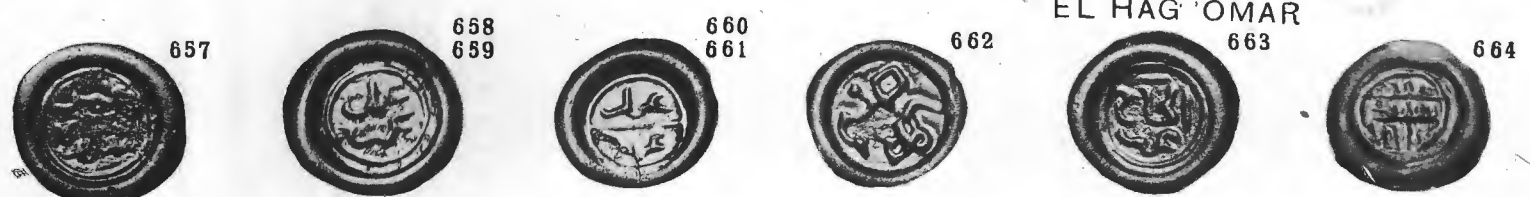
MUHAMMED EL 'AUDY A.D. 1013-1021



'OMAR A.D. 1015-1018



EL HAG 'OMAR



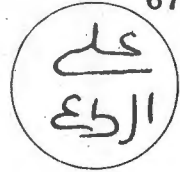
CAIRO

1036 A.D. ?

1048 A.D.

EL MAHDY
1058 A.D.

'ALY ED D'AY
670)
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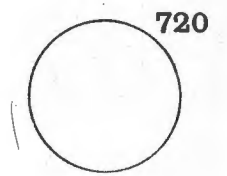
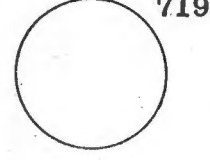
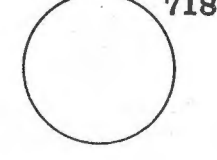
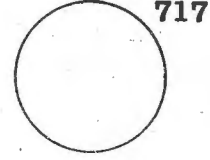
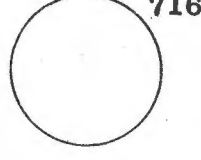
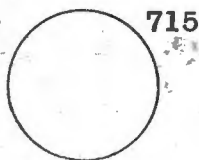
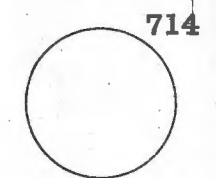
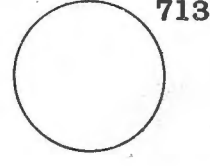
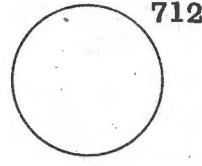
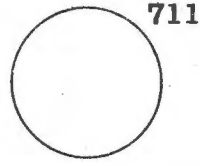
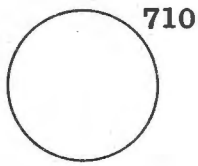
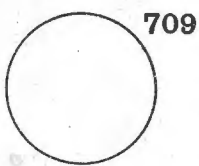
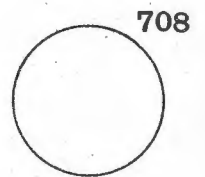
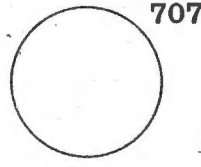
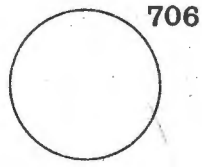
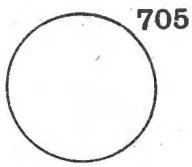
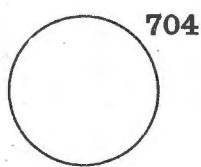
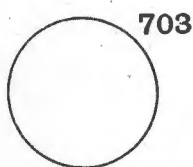
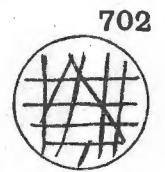
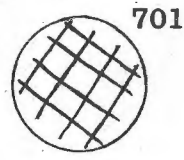
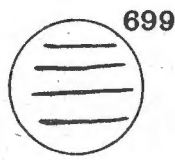
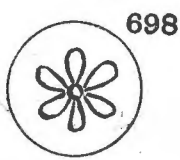
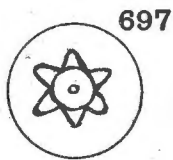
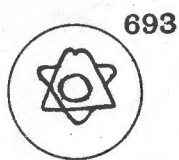
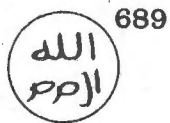
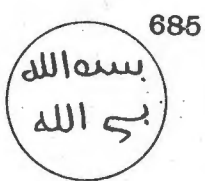
'ALY ESH SHU WEYKH 1077-81

'ALY EL MAÇRY 1085



MUHAMMED IBN SHAHYN 1127-38

MUḤ EL BABA CAIRO



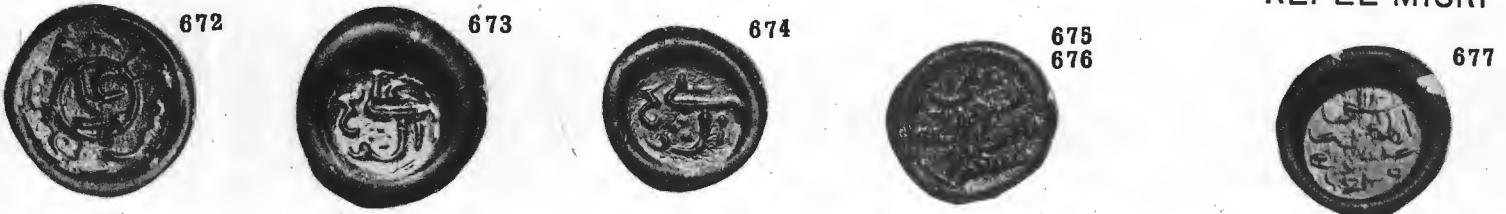
EL MAHDY
A.D. 1058
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'ALI ED D'AI
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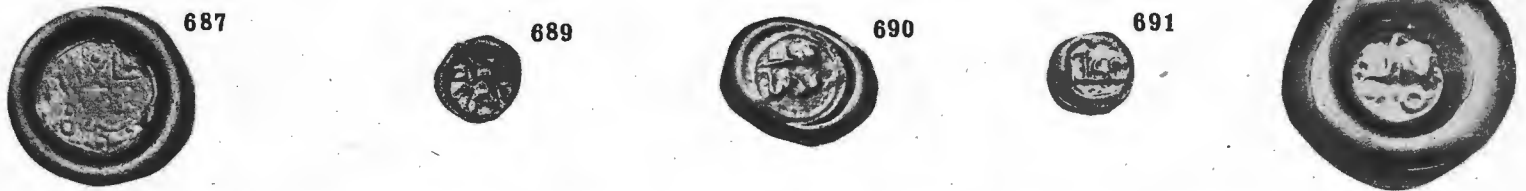
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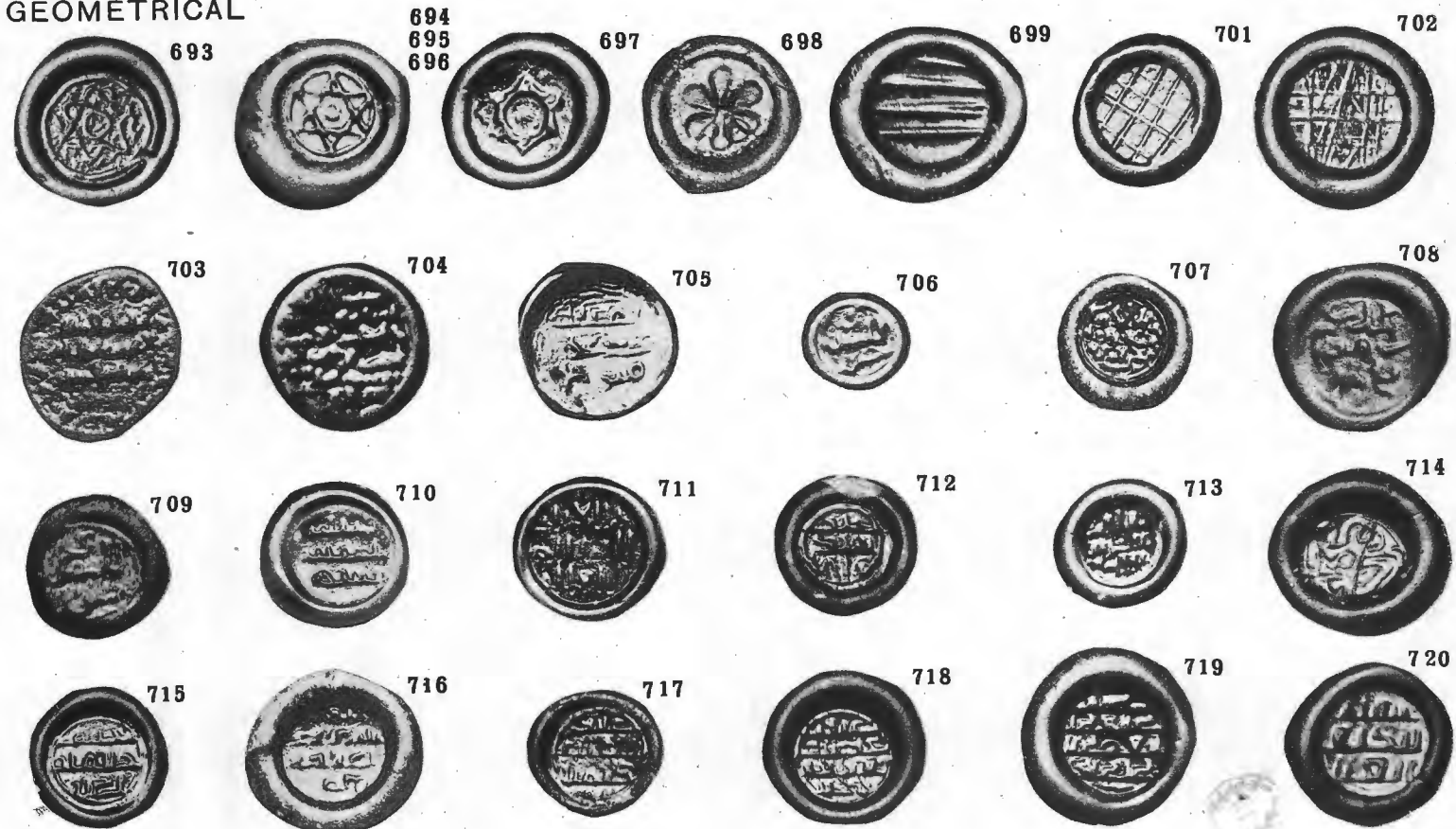


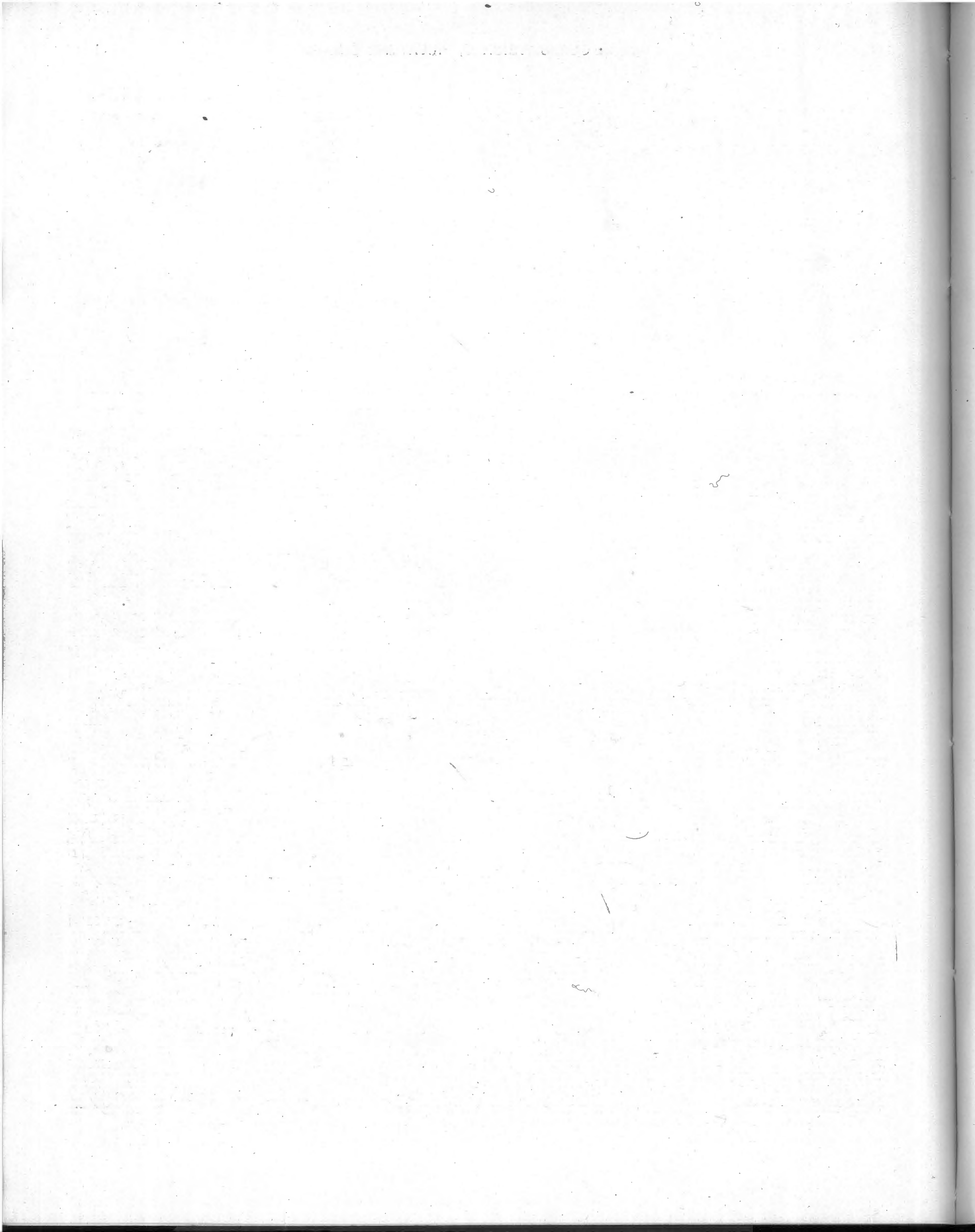
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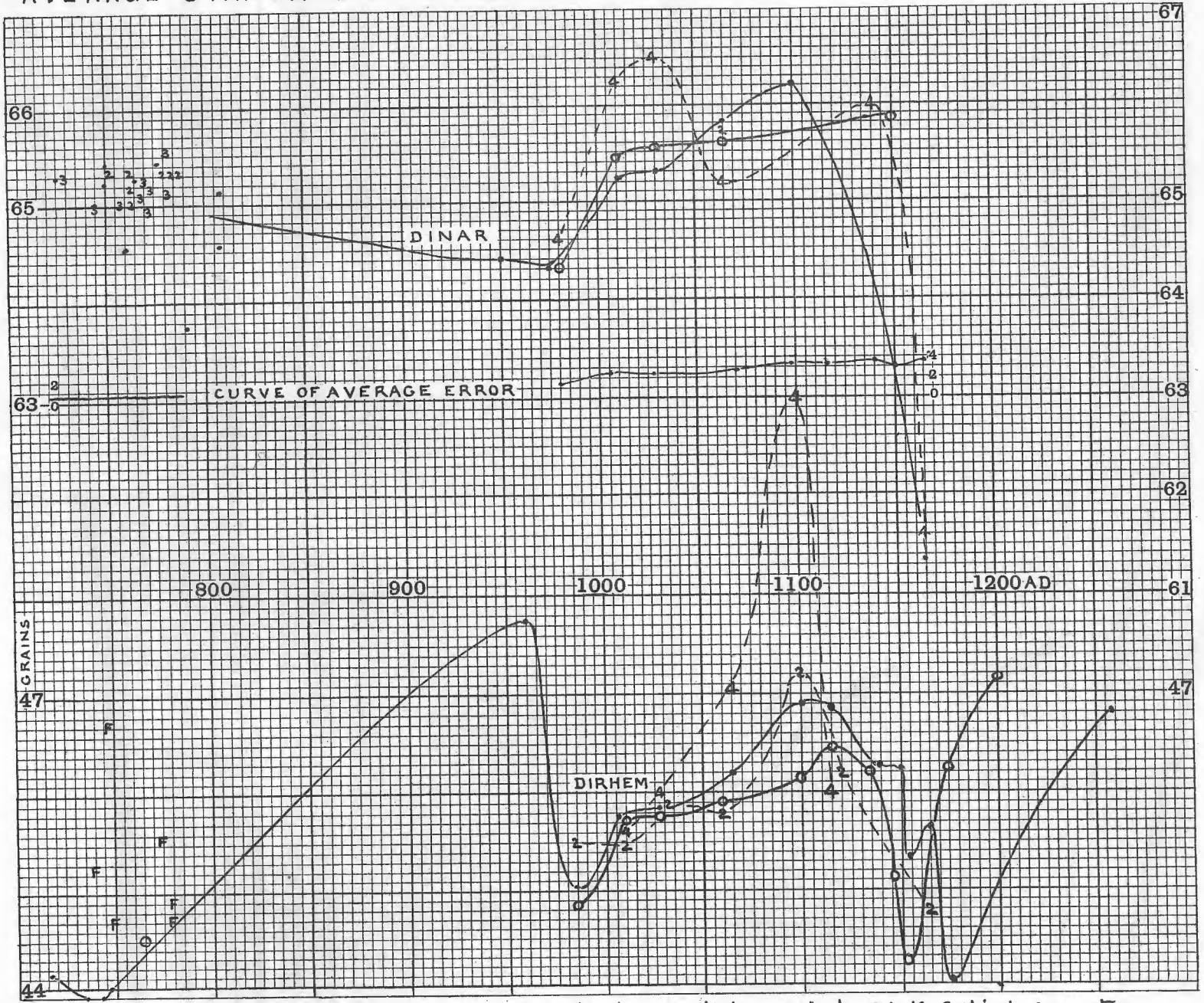




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⊕ CTRATEΓIOY A.D.349	⊕ CEPΓIOY	⊕ ΔAMEIANOY B.M.453	
⊕ ΠΑΠΠΟΥ	⊕ CΩTEIPΟΥ	⊕ MENΩNOY B.M.675	
⊕ ΔΡΑΚΟΝΟC	⊕ ΔΑΔΑΝΑΟΥ	⊕ ΠΑΕΤΟΥ B.M.676	
⊕ ΑΔΡΙΑΝΟΥ 376	⊕ ΚΥΡΟΥ	⊕ ΚΑΡΠΟΥ B.M.982	
⊕ ΒΑCCIΑΝΟΥ 381	⊕ ΚΥΡΟΥ B.M.682	⊕ ENNOΔIOY B.M.434	
⊕ ANTONINOY 383	⊕ ΚΝΙΚΙΑΝΟΥ	⊕ PELEGRINA B.M. 307 312 315	

MONOGRAMS OF BYZANTINE AGE TRANSLITERATED.

AVERAGE STANDARD OF THE DINAR AND DIRHEM, AND AVERAGE ERROR.



F. Fals probably intended for double dirhem. ○ double dinar or dirhem, ◻ single, ▴ 2 half, ▾ 3 third, ◊ quarter.

KHALIFEH GOVERNOR FINANCE MAKER

KHALIFEH GOVERNOR FINANCE MAKER

A.D. 665 QORBAH C.I.166

MUSY B. 'AYESY C.I.160

680 TO 682 YEZYD

ABU

790

685 ABD EL 'AZYZ C. p. 375

'ABDALLAH ISHAQ. B. SULEYMAN C.III.1

710

709 QORRAH B. SHERYK

714 OSAMAH B. ZEYD

800

HAYYAN B. SHAREYH

720

'OBEYDALLAH B. EL HABHAB

MALEK B. DELHEM

MUHAMMED B. ABD EL MELEK

810

730

. B. MEYSARAH B.M. p. 108

820

740

EL QASEM B. 'OBEYDALLAH

MUSLIM B. EL 'AAFI B.M.4
TAHYR B. NASEQ
DAUD B.
SULMAN
YEZYD B. ABY YEZYD

EL WELYD

HAFÇ B. EL WELYD

'AYESY B. ABY 'ATHA

YEZYD B. TAMYM

830

MUGHEYRA B. 'ABDALLAH
CALEH B. 'ALY
'ABD EL MELEK B. YEZYD

'ABD EL MELEK B. MERWAN

MU. 'ABD EL GABR B. NAÇYR AM.

EL MOTAÇEM

MUSY B. ABUL 'ABBAS

750

'ABDALLAH EL YEZYD

'ABD EL MELEK B. YEZYD

KIBLY C.II.34 MANÇ

840

ABU ÇAFIR ASHNAS B.M.27 G

MUHAMMED B. ABU

EL MANÇUR

MUSY B. KAB C.I.142
MUHAMMED B. EL ASH'AB

'NAWFUL B. FURAT

MUHAMMED B. SHERHABYL
'ABDALLAH B. RASHED M.A.

850

'AYESY B. MANÇUR

YEZYD B. HATEM

ABDERRAHMAN B. YEZYD N.F. Y.H.

770

MUHAMMED B. SAYD

SUEYZY
SALAMAT C.I.144,1150
'OBEYD EL WAHAB B. TEMYM
S'AYD B. MUSEYIB
QASEH B. B.M. 19
YEZYD

850

ABD EL WAHID B. YAHYA C.III.41

YEZYD B. 'ABDALLAH C.III.56

EL MAHDY

'AYESY B. LUQMAN
WADIH C.III.2
YAHYA B. DAUD

ABU KATYFA ISMA'YL B. IBRAHYM

EL MOHAGIR

YEZYD B. ABU YEZYD A.L.

860

905 MUHAMMED B. SULEYMAN C.III.57

EL MOHAGIR ?

785

IBRAHYM B. ÇALEH

EL FADL B. ÇALEH

GHAWTH B. SULEYMAN

'ABDALLAH B. YEZYD
CALEH B. 'AYESY B.M.25
ISMA'YL B. ÇALEH ELM.
'AÇEM B. HAFÇ F.Ç

908 EL MUQTEDIR ?
932 ?EL MAHDY B.M.XXVIII

REF ^B	No	GLASS	X	UNIT	TYPE, BRONZE	X	UNIT	TYPE BRONZE	X	UNIT	MATERIAL, REF ^B	GRAINS	X	UNIT	
	180	2800	1/2	5600	Q	406.9	406.9	899.6	2	449.8	BRONZE	740	4	185.0	
	246	17000	3	5670		815.8	2 407.9	450.2	2	450.2	GLASS	Ciii 1	188	188.0	
	238	11384	2	5692		818.2	2 409.1	225.1	1/2	450.2	"	Ciii 26	190	190	
	245	5700		5700		409.2	409.2	225.2	1/2	450.4	BR. E		762.6	4 190.6	
	175	2893	1/2	5786		1644.	4 411.	450.8		450.8	"		762.6	4 190.6	
	243	11600	2	5800		2067	1/2 413.4	451.0		451.0	GLASS	B.M. 28 G	1144	6 190.7	
	176	2950	1/2	5900		416.0	416.0	451.0		451.0	"	259	763.7	4 190.9	
	239	2960	1/2	5920		208.0	1/2 416.0	225.6	1/2	451.2	"	260	382.0	20 191.0	
	242	11900	2	5950		419.2	419.2	F 4512.4	10	451.2	"	Ciii 28	383	2 191.5	
	244	5965		5965		419.3	419.3	903.0	2	451.5	BR.		191.8	191.8	
	261	1194		5970		419.8	419.8	452.0		452.0	"		385.0	2 192.5	
MEAN ROTL				5814		210.6	1/2 421.2	226.0	1/2	452.0	GLASS	179	1550.	8 192.7	
MEAN ERROR				116		422.5	422.5	906.0		453.0	BR. F		386.5	2 193.2	
				± 31		423.5	423.5	226.5	1/2	453.0	"		194.5	194.5	
						212.0	1/2 424.0	453.2		453.2	"		779.0	4 194.7	
THE WUQIYEH OF THIS IS						424.0	424.0	907.0	2	453.5	"		389.9	2 194.9	
	206	482.0		482.0		424.0	424.0	907.2	2	453.6	"	O	1175	6 195.8	
	254	482.2		482.2	K	1696.0	4 424.0	908.0	2	454.0	GLASS	271	587.4	3 195.8	
	270	906.0	2	483.0		848.6	2 424.3	227.0	1/2	454.0	BR.		784.2	4 196.0	
	256	483.4		483.4		424.5	424.5	454.4		454.4	"		199.5	199.5	
Ciii 13	243	1/2	486			849.0	2 424.5	227.5	1/2	455.0				192.5	
B.M. 35	244	1/2	488			849.0	2 424.5	911.2	2	455.6				M.E. 2.5	
	255	489.0		489.0	Q	850.2	2 425.1	911.5	2	455.7	AEGINETAN			± .5	
	269	489.8		489.8		851.0	2 425.5	911.5	2	455.8	FROM CISTOPHORI? 191-196				
Ciii 9	491		491		Q	2131.0	5 426.2	456.0		456.0					
	262	1475	3	491.7		854.8	2 427.4	228.3	1/2	456.4					
Ciii 8	494		494			855.0	2 427.5	228.8	5	457.6	GLASS	249	163.1	163.1	
MEAN WUQIYEH				4872		855.0	2 427.5	458.2		458.2	BRONZE	P	326.5	2 163.2	
				M.E. 3.6		P 214.1	1/2 428.2	458.5		458.5	"	K	1644.	10 164.4	
IF 12=ROTL, THEN				5846		428.8	428.8	2296.8	5	459.4	"	O	658.4	4 164.6	
				M.E. 43		858.0	2 429.0	D 9190.	20	459.5	"	O	998.1	6 166.3	
				± 13		429.4	429.4	230.0	1/2	460.0	"		333.6	2 166.8	
MOST USUAL WUQIYEH						216.0	1/2 432.	460.0		460.0	"		337.6	2 168.8	
OF 10 DIRHEMS						865.0	2 432.5	460.0		460.0					SYRIAN NECEF?
	2170.	5	434.			920.5	2 460.2							M.E. 1.7	
Ciii 29	412.6		412.6			217.5	1/2 435.0	230.8	1/2	461.6				± .6	
	264	839.0	2	419.5		2178.	5 435.6	923.3	2	461.6	BRONZE WORN	(62.0) 1/4 (248)			
	270A	210.0	1/2	420.0	C	436.4	436.4	D 923.9	2	462.0	GLASS	252	1020.	4 255.0	
Ciii 32	856	2	428			872.8	2 436.4	924.0	2	462.0	"	247	5120.	20 256.0	
B.M. 57	218	1/2	436			878.0	2 439.0	231.1	1/2	462.2	BR.		64.5	1/4 258.	
	268	220	1/2	440		439.6	439.6	231.3	1/2	462.6	GLASS	B.M. 27 G	525	2 262.5	
Ciii 30	442		442			879.5	2 439.7	463.2		463.2	"	B.M. 30 Q	5350.	20 267.5	
Ciii 31	444		444			439.8	439.8	232.0	1/2	464.0	"	Ciii 37	278	278.	
	265	891.2	2	445.6		220.0	1/2 440.0	464.0		464.0				ATTIC TETRADRACHM?	
	257	447.0		447.0		440.0	440.0	464.0		464.0				M.E. 6.7	
Ciii 14	225	1/2	450			440.2	440.2	464.4		464.4				± .5	
Ciii 27	225	1/2	450			2208.5	5 441.7	930.6	2	465.3	BRONZE		361.8	8 45.2	
Ciii 33	900	2	450			2211.0	5 442.2	E 930.6	2	465.3	GLASS	174	3650.	80 45.6	
B.M. 454	902		451			444.2	444.2	232.8	1/2	465.6	APPARENTLY MULTIPLES				
	263	904.5	2	452.2		890.5	2 445.2	932.8	2	466.4	OF THE DIRHEM.				
Ciii 34	906.6	2	453.3		P	222.8	1/2 445.6	466.8		466.8					
	267	227	1/2	454		223.0	1/2 446.0	467.0		467.0					
Ciii 12	231	1/2	462			223.0	1/2 446.0	234.3	1/2	468.6					
OMITTING FIRST THREE				443.4		446.2	446.2	471.0		471.0					
				M.E. ± 3.8		223.2	1/2 446.4	D 1185	2 1/2	474.0					
OR INCLUDING ALL				439.2		446.5	446.5	2370	1/2	474.0					
				M.E. ± 8.7		446.5	446.5	475.6		475.6					
				± 1.7		446.8	446.8	Q 954.6	2	477.3					
						446.9	446.9	Q 2394.	5	478.8					
						224.0	1/2 448.0	O 239.5	1/2	479.0					
						897.0	448.5	WUQIYEH		445.6					
						897.5	2 448.7	OF 10		M.E. 14.2					
						449.0	2 449.0	DIRHEMS		± 1.1					
								S SPHEROID WITH 20 FACETS.							

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