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With best regards  
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## The Old Kingdom Linen List.

VON WM. STEVENSON SMITH.

Hierzu Taf. IV.

In examining the list of linen which appears on one of the end panels of the granite sarcophagus of Prince Min-khaf in the Cairo Museum, it was necessary for me to investigate as much of the comparative material as possible. It seemed to me that this material, much of it well known, might prove useful if collected together. The list of linen, actually in its full form quite different from the Min-khaf representation, appears on the slab-stelae and offering niches (usually in the tablet), while in one case it is found on the east wall of an offering chapel (opposite the southern false-door) and once in a burial chamber. The following are all the examples which I have been able to find:

1. Princess Sehefner: tablet apparently built into a mud-brick false-door.; in Cairo Museum; QUIBELL, *Archaic Mastabas*, p. 10, pls. xxvi and xxvii.
2. Ab-neb: tablet in Leyden; WEILL, *Ile et IIIe Dynasties*, p. 220; CAPART, *Recueil de Monuments*, I, Pl. I; BOESER, *Beschreibung der Aegyptischen Sammlung*, Leyden, *Denkmäler des Alten Reichs*, Pl. 23.
3. Waten: Tablet in the Museum of Grenoble: *Revue Egyptiologique*, Jan., 1919. Almost identical representations of husband and wife, each seated at table of bread with offering lists; linen list in front of man and a second list in front of wife.
4. Wep-ka(?): QUIBELL, *Archaic Mastabas*, Pl. XXVIII; tablet set over a stone drum in the mud-brick false-door of a small mastaba.
5. Tablet from FS 3036 X; from Mr. Firth's excavations in the Archaic Cemetery at Saqqarah. Mr. Quibell kindly allowed me to examine the stone.
6. Tablet from FS 3073 X: Ka-nuwty(?); information as No. 5.
7. Neb-iaw(?): small archaic tablet in Cairo: No. 57180 of MORET's Catalogue: sebach, Abusir.
8. Kha-bauw-sokar: stone-lined niche in Cairo; linen list below seated figure at base of back panel; MURRAY, *Saqqara Mastabas*, Pl. I.
9. Hathor-nefer-hetep; like that of her husband Kha-bauw-sokar; MURRAY, l. c., Pl. II.
10. Methen; tablet of false-door of stone-lined cruciform chapel; L. D. II, Pl. 3.
11. Prince Neferma'at; fragment of a tablet which seems to have come from a false-door cut in the blocking of the entrance to the stone-lined niche when the chapel was reconstructed with a mud-brick addition. PETRIE, *Medum*, Pl. XVI; in the Cairo Museum.
12. Prince Neferma'at; tablet of false-door at back of stone-lined niche. PETRIE, *Medum*, Pl. XX.
13. Prince Rahotep; tablet of false-door of stone-lined cruciform chapel; PETRIE, l. c., Pl. XIII; BUDGE, *Egyptian Sculptures in the British Museum*, Pl. V.
14. Ranefer(?) or Khent(?); fragments of a tablet found by the Expedition of the University of Pennsylvania at Medum (this information was very kindly given to me by Mr. Alan Rowe).
15. Teti-ankh; tablet in Liverpool; WEILL, l. c., p. 226.

16. Zefa-nesuwt; tablet in Munich in the VON BISSING Collection; VON BISSING-BRUCKMANN, *Denkmäler Aegyptischer Skulptur*, Pl. XIV.
17. Mery; tablet of false-door in Louvre; WEILL, l. c., p. 300.
18. Cairo, fragment of tablet, No. 46436; probably the same as the fragment without a number mentioned by Prof. JUNKER, Giza I, p. 177.
19. Ir(?)n-sen: Cairo, tablet No. 1391.
20. Isy; tablet in Copenhagen Museum; MOGENSEN, *La Glyptothèque Ny Carlsberg*, Pl. XCIII.
21. Prince Wepemnofret, G 1201, slab-stela; STEINDORFF, *Die Kunst der Aegypter*, p. 194.
22. Prince Ka-m-aha, G 1223; slab-stela.
23. Princess Nefert-iabtyt, G 1225; slab-stela; SCHAEFER, *Von Aegyptischer Kunst*, Pl. 10; BOREUX, *Rev. de l'Eg. Anc.*, pp. 5—14, Pl. II.
24. Kanofer: G 1203, slab-stela.
25. Khufuw-nekht: G 1205, slab-stela.
26. Nofret: G 1207, slab-stela.
27. Seth-hekent, G 1227, slab-stela. (see plate IV.)
28. Yeny: G 1235, slab-stela. (see plate.)
29. Prince Iwnw, G 4150 = Junker I s, slab-stela; JUNKER, Giza I, p. 174.
30. G 4260 = Junker II n, tablet of stone false-door; JUNKER, l. c., p. 185.
31. Princess . . . . .: G 4140, slab-stela.
32. G 4860 = Junker VIII n, slab-stela, JUNKER, l. c., p. 244.
33. G 2135 = Junker VII n, slab-stela, JUNKER, l. c., p. 299.
34. Unknown provenance, slab-stela; JUNKER, l. c., p. 230.
35. Street G 2100, slab-stela.
36. Nofer, in all probability G 2110; tablet from stone false-door in the Barracco Collection, Rome; WEILL, l. c., Pl. IV.
37. Merytyetes, G 7650; tablet of false-door.
38. Prince Mer-ib: G 2100 = Lepsius G 24, tablet of false-door.
39. Seshem-nofer: G 4940 = Lepsius G 49; offering list on east wall of chapel.
40. Ka-m-anekh; linen list painted on west wall of the burial chamber; JUNKER, *Vorbericht*, 1926.
41. Sethuw: tablet from G 2352, Giza.

All the above representations, with the exception of three seem to be earlier than the end of Dynasty IV. The chapel of Seshem-nofer (G 4940) dates from Dynasty V, the list in the burial chamber of Ka-m-anekh is of the VIth Dynasty and the tablet from G 2352 is of the late Old Kingdom. The linen list therefore seems to occur very rarely after Dynasty IV<sup>1</sup>.

The following examples present comparative material, although the linen list proper is not represented.

42. Prince Khufuw-khaf: G 7130 and 7140; the *idm*y linen is given in a list of offerings on the south jamb of the entrance. On the east wall of the inner chamber is a representation of the tomb equipment with linen packed in boxes. See DARESSY, *Annales*, XVI, p. 257.

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1) To the above list should be added the archaic niche-stone of Gem-n-sesher in the Berlin Museum, SCHARFF, *Studies Presented to Fl. Griffith*, p. 346; and the tablet of Ankh-ma'a in Cairo (No. 1465) from Mariette D 27. The latter is published in BRUGSCH, *Thesaurus*, (No. 1410) and is probably to be dated to Dynasty V.

43. Prince Min-khaf; G 7430 = Lepsius 61; granite sarcophagus in Cairo; several kinds of linen are listed on one of the end panels. (see J. E. A., November, 1933, p. 150.)
44. Fétékta; LEPSIUS, Saqqarah 1; representation of linen stored in boxes, L. D. II, Pl. 96.
45. Prince Mer-ib; G 2100 = Lepsius G 24; representation of the *idmy*-linen on the south door-jamb as in Khufuw-khaf.
46. Prince Seshat-hetep, G 5150 = Lepsius G 36; representation of the *idmy*-linen in a list of offerings on the south wall of the chamber.
47. Ankh-ir-s, MARIETTE, Mastabas, B 16, representation of the *idmy*-linen in a list of offerings.
48. Neter-nefer; MASPERO, Musée Egyptien, I, Pl. XXIV; the word *idmy* in a broken list of titles; see WEILL, l. c., p. 229.
49. Abu Gurob: the Sun Temple of Neusera; representation of *idmy*-linen, VON BISSING, Das Re-Heiligtum, pl. 23, and of the Sed *idmy*-linen, l. c., pl. 16, 19, and 22.
50. SETHE, Pyramidentexte, Spruch 816 b, 1202 b, 1511 a.
51. Finally there are certain tombs of the late Old Kingdom and the Intermediate Period with painted burial chambers in which are represented packages or boxes of cloth with their labels over them. For these see the following:
- FIRTH, Teti Pyramid Cemeteries  
Ankh-ma-Hor, p. 97. — Mereruka, p. 146.
- BLACKMAN, Meir IV  
Pepi-ankh, p. 47.
- PETRIE, Denderah  
Mena, Pl. III.
- DARESSY, Annales, XVI: La Nécropole des Grands Prêtres d'Héliopolis sous l'Ancien Empire  
Sebeki, p. 201, 202. — Sebeki surnamed Bi, p. 207. — Khu-n-Her, p. 210.
- JEQUIER, Tombeaux de Particuliers Contemporains de Pepi II  
Ada, p. 19. — Sena, p. 39. — Fragments, p. 107. — Raherka, p. 124. — Shy: Pl. VI. — Baou: Pl. XII. — Pepa: Pl. XIV. — Senit, p. 51; Meha, p. 73.
- MASPERO, Trois Années de Fouilles,  
Pls. II and VII. — pp. 194—207.
- CAPART, Chambre Funéraire de la Sixième Dynastie  
p. 24, Pls. IV, and V.
- Naga-ed-Dêr, Tomb 89 of Haga.

One coffin of the late Old Kingdom, that of Heny, from Naga-ed-Dêr has a representation of linen in boxes with the name of the linen written above.

In the slab-stela of Seth-hekent (see plate) from G 1227 in the Western Cheops cemetery at Giza most of the features of the fully developed linen list occur. This stela may be used to illustrate the form of the list, although no two examples are exactly alike. In this case there are three main divisions each composed of ten squares, five in a line. Above each group the quality of cloth is marked by the signs for *idmy*, *ššr* (←) and *š.t* (←). *Idmy* is represented by four Horus hawks on standards which surmount the top group of squares (the hawks have been destroyed). Beneath the headings for each kind of linen, there are two lines of squares for each group. The first line contains a series of signs, sometimes the  $\perp$  sign, as in this stela, sometimes horizontal strokes in numerical progression, beginning with the highest number and running down (there are two exceptions to this, the slab stela of Junker II and the Cairo fragment 46436, where the num-



Slab-stela from G 1227.



Slab-stela from G 1235.

bering begins with the lowest number). There is a general tendency to use the sign  for the small numbers and the horizontal strokes for the larger numbers, probably because the latter would occupy less space. This numbering indicates a subdivision of the general type of cloth, apparently. In addition to the numbering there are certain designative words which are placed in the same register. On this stela the signs or words are: , ,  and . Finally, in the register below, the amount of cloth is indicated by a thousand sign, one under each of the five subdivisions above. Thus the arrangement is: *idmy* linen, — , 4, 3, 2, 1 (the 2 and 1 are in the same square) and *šsf*, a thousand of each; then *ššr* linen, — , , 4, 2, 1 (the 2 and 1 are again in the same square) and *šsf*, a thousand of each; and '3 · *t* linen, — , , 4, 2, 1 (again the 2 and 1 in same square) and *d3 · t*, a thousand of each. Beneath the linen list on this stela, as well as in a number of other examples, five granaries are placed in squares made by a continuation of the vertical lines of the list above. Sometimes groups of other objects are placed beneath the linen list.

Turning to the earlier stela of the Princess Sehefner (No. 1 in the list above) we find the same general division of the list but with a much less ordered arrangement and with one important addition. The numbers and the designative words are crowded into the same line with the cloth names and a register of determinative signs is added in their register. There are a number of other unusual features, the most striking of which is that there is no division into squares by vertical lines. There are simply horizontal lines between each register. The signs face to the right and the numbering begins on the right. The arrangement is as follows:

Line 1: *idmy*, 5, 5 (while all the rest are *mnḥ · t* signs this is represented by slanting strokes), 3, 2, 1.

Line 2: , , (repeated four times).

Line 3: one thousand two hundred (repeated three times), two thousand, one thousand. Although there are no squares, the signs are lined one above another so that one reads vertically: *idmy* 5, , 1200; *idmy* 5, *nfr*, 1200; *idmy* 3, *nfr*, 1200; *idmy* 2, *nfr*, 2000; *idmy* 1, *nfr* 1000. In none of the other lists does the sign  occur in any register except that containing the numbering. The  sign does not appear in any of the other lists except in the combination   and  forming heading words. *Nfr* occurs in the designation of two materials on the east wall of the chamber of Khufuw-khaf.

The next three lines are evidently meant to represent the group of the *ššr* linen, although the sign is badly made and only occurs over the last two of the five designating words.

Line 4: ,  (?), ,  and  (?)

Line 5: *šsf* is determined by a Y-shaped piece of cloth while the rest are determined by what looks like a sleeved garment.

Line 6: the amounts of linen are: beneath *šsf*, — 1000; beneath *tyw*(?), — 400; beneath *mnḥ · t*: 200; while *ššr-d* and *ššr-tyw*(?) each have 1000.

One is tempted to see a resemblance between the sign *tyw*(?) here and the label   on the east wall of the chapel of Khufuw-khaf. I have suggested below that the latter may be intended for the word *irtyw*, „blue Linen“. But of course the possibility of a connection with this tablet is a very slender one. The sign  does not seem to occur in any of the other lists. There is a word   which appears in the Middle Kingdom



first two words. Prof. Junker has explained (Giza I, p. 177) that the two words, which to begin with were distinguished from one another, probably stood for a very similar kind of material which later led to their becoming interchangeable<sup>1</sup>. The Wörterbuch gives two words *idmy·t* and *idmy* and defines the word *idmy* as meaning linen stuff, colored red. Prof. Junker suggests that in the sign for *idmy* it is a folded cloth which hangs down from the front of the standard beneath the hawk. This is certainly



Fig. 1: Garment from N 94.

colored red on the stelae of Iwnw and Wepemnofret, apparently on the tablet of Rahotep and in a number of other examples where the cloth hangs down from a Horus standard (see MURRAY, Saqqara Mastabas, Pl. XLII). On the other hand Prof. Jequier believes that *idmy* does not mean exclusively a red-colored material until the New Kingdom. He cites Spruch 1202 b of the Pyramid Texts where *idmy* certainly seems to be green, and mentions a stela (MARIETTE, Monuments Divers, p. 5) where it is brown (*toile bise*). He adds that in the Middle Kingdom coffin representations the linen called *idmy* is

1) See also WEILL, II<sup>e</sup> et III<sup>e</sup> Dynasties Egyptiens, p. 229. In Saqqara Mastabas, p. 33, the sign is read as *ntr*-linen.

sometimes shown as white, sometimes as red. On the broken tablet of Neferma'at, and on the tablet of the false-door in his deep niche,  defines a second group below that headed by the Horus signs on standards. Some small fragments from a badly broken tablet also found at Medum, that belonging to the mastaba of Ranefer(?) or Khent(?) show the  of *idmy* on one small piece and on another a part of the hawks which headed the group above<sup>1</sup>. Prof. JUNKER in Giza I, p. 177, cites another example (written   ) on an un-numbered broken tablet in Cairo. I believe this is the same as the fragment numbered 46436. In the case of the Louvre Mery tablet,    occurs as an extra heading above the Horus standards.

The word *idmy* appears a number of times outside the linen list. An interesting example, unfortunately only partly preserved, is the scene on the east wall of the chapel of Khufuw-khaf, one of the sons of Cheops (see fig. 2). Here is shown the presentation of the sealed equipment for the prince's tomb. Most of the wall is occupied with jars and vases of oil and ointment, but in one register pairs of men hold up long garments, and just above this is shown the presentation of the linen. The top part of the scene is broken away and it is not certain what the first man is holding forward<sup>2</sup>. At the feet of each man is a long box with curved wood supports. Above the first box is written: *tpy ššr idmy* (followed by six *mnḥt* strokes) *tpy' tyw* (?).  would seem to refer to a garment in the box made of first quality *idmy* linen<sup>3</sup>. Daressy connected it with the word over the second box, behind the first man, *nḥrw*, but he seems to have believed that there was only one long box running behind the two men. The second man appears to be holding up a piece of pleated cloth in each hand, one in front and one behind him (numerous examples of such a figure occur in Old Kingdom reliefs; see, for example, LEPSIUS, *Ergänzungsband*, Pl. VIII). Beside the first piece of cloth is written: *tpy ššr nfr*; below, over the box, is written *nḥrw*, a word probably meaning a kind of clothing. This word appears over a box in the scene from LEPSIUS, Saqqarah 1. The second piece, behind the man, is labelled again *tpy ššr nfr*, while *tp ḥ. t* is written over the box.

A very similar scene to that in Khufuw-khaf appears on a wall of the tomb of Fetekta, LEPSIUS, Saqqarah 1 (L. D. II, Pl. 96). The wall is broken away above, but in the first register remaining are scribes, one of whom is holding up an inscribed roll in front of a large figure of the owner (mostly destroyed). In the next register two groups of men are placing folded pieces of linen in a box, while others approach bearing various articles (a chest, a bale, pieces of cloth and a basin on a cord). In the lowest register men carry boxes which have been attached to carrying poles. Over the first box is written:

1) Mr. Alan Rowe, who excavated this tomb, was kind enough to send me a drawing of these fragments. — 2) DARESSY in *Annales XVI*, p. 262, suggested that he had a piece of cloth or better a hank of yarn hanging from a rod resting on his shoulder. I think Daressy must mean the "pleated" object which is behind the first man, but there is no trace of such a rod on his shoulder and the position of the man's arm stretched forward a little above shoulder level suggests that he is holding up something with both hands. Prof. Junker suggested to me that he is probably reading the list of the objects from a roll held up in front of him. — 3) But it is possible that the word may be    .   occurs a number of times, variously spelled, as a label over boxes in the burial chambers of the late Old Kingdom. See JEQUIER, *Tombeaux Particuliers*, Pl. 16; DARESSY, *Annales XVI*, p. 201, 207, 209; CAPART, *Chambre Funeraire* p. 24; FIRTH, *Teti Pyramid Cemeteries*, p. 97, 146. The word seems to mean blue linen, and of course if the word is the same in Khufuw-khaf and we accept *idmy* as meaning red linen, it can not stand as a sub-heading describing a garment made from the *idmy* linen, but must represent a second kind of linen placed in the box.

*tpy ššr idmy* 1000, followed by 2 *mnht* strokes, and beneath it *šhpt r pr hq*. Over the second box is written: *tpy ššr nhrw*. Beneath, the inscription under the first box is repeated. Over the third box is written: *tpy ššr ššr htm pr (?)*, and beneath it *š[h]pt qbw r.....* The procession is terminated by two men, the first carrying a box on his shoulders and a curious striped object in a basin hung on a cord (perhaps these are articles concerned with the sealing of the boxes). The second man is apparently an overseer. Here *nhrw* is included with *idmy* and *ššr*, while the word *qbw*, to be discussed below with the subdivisions of the linen list, appears. A third representation similar to these two scenes is to be found in fragments from the Sahura temple, although these are too incomplete to add any further details (see BORCHARDT, Sahura II, Pls. 59, 60, 61). On the east wall of the chapel of Khemten, G 5210, is a much weathered scene of men packing linen into boxes. No inscriptions are preserved. On the east wall of the chapel of Prince Mindedef (G 7760) is a badly preserved scene which seems to have been very similar to that on the east wall of Prince Khufuw-khaf. Several figures can still be recognized, carrying

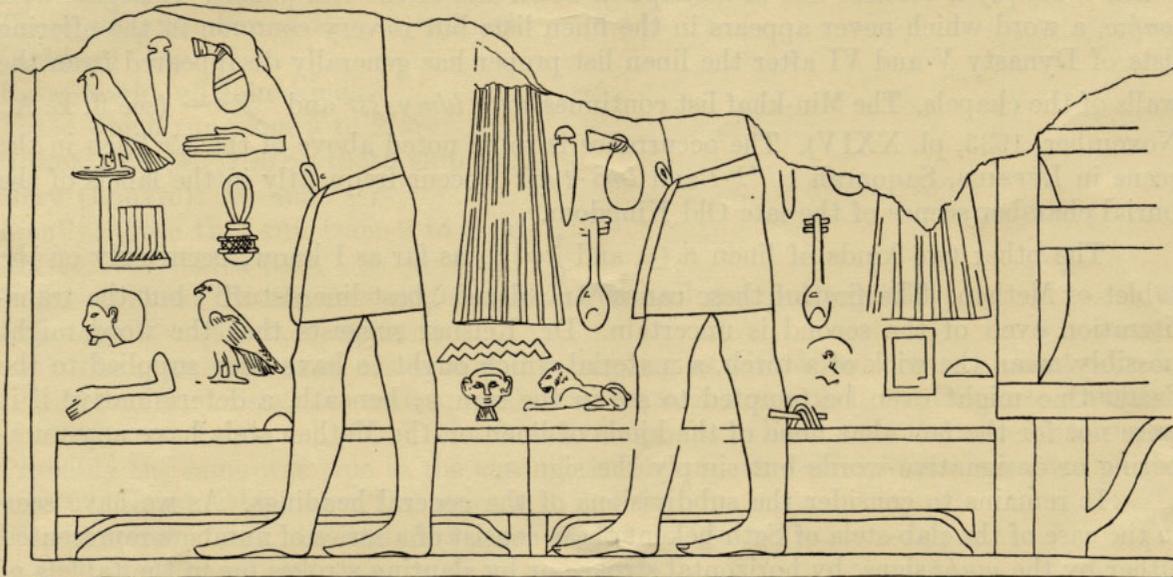


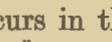
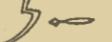
Fig. 2: Presentation of linen to Khufuw-khaf.

long garments, one of which is labelled *m<sup>3</sup>š.t*, and a row of stands bearing vessels. Probably there was here also a presentation of linen, now destroyed.

On the southern jamb of the entrance to the inner chamber of Prince Khufuw-khaf there is a list of the sealed offerings being presented to the Prince. Here the *idmy* linen is mentioned. It appears in a similar list on the south jamb of the entrance to the chapel of Mer-ib, and on one of the end panels of the sarcophagus of Prince Min-khaf. It occurs (written with the determinative ) on the south wall of the chamber of Prince Seshat-hetep (Lepsius 36) in an offering list, and also in a list in the tomb of Ankh-ir-s (MARIETTE, Mastabas, B 16). It is found, too, in a series of damaged titles on the stela of Neter-nefer written:  followed by four *mnht* strokes (MASPERO, Musée Egyptien, Pl. XXIV), and there are a number of references to *idmy* linen in the Pyramid Texts (see below).

The *idmy* linen appears five times in the Heb Sed scenes from the Sun Temple at Abu Gurob (VON BISSING, Re Heiligtum Neusera, pls. 16, 19, 22 and 23). On Plate 23, the hawks are actually broken away but the three standards have the numbering 6, 4, 4, beneath. It is difficult to tell what relation this mention of linen had to the rest of the

broken scene. On the other three plates the *idmy* linen appears in an inscription inside a building, and seems to refer to the Sed garment worn by the king. These inscriptions read *ššp šd idmy* with four *mnht* strokes (once, and partly preserved on another fragment) and *ntr hm šd idmy* (with three *mnht* strokes) (represented in two scenes).

*Ššr* and '3·*t* are always represented with *idmy* in all the lists, with the exception of the rudely made list of Ab-neb which has only the *idmy* linen, the tablet of Neb-iaw(?) which has a very rudimentary list without any headings, and the Cairo fragment No. 46436 which lacks the '3·*t* linen. *Šm<sup>3</sup>·t nfr·t* is common but not always represented. Of the first 41 monuments given in the list above, 19 have the *šm<sup>3</sup>·t nfr·t* linen (in a few cases there are breaks where it is certain that this linen is to be restored). On the tablet of Zefa-nesuwt in Munich, the *ššr* linen is written: , while the '3·*t* is written: . A curious variation occurs in the sarcophagus of Min-khaf where in the usual place of the '3·*t* linen is written  (followed by four *mnht* strokes). The list on the Min-khaf coffin is simply a vertical line of inscription down one of the end panels. It begins with *wnhw*, a word which never appears in the linen lists but is very common in the offering lists of Dynasty V and VI after the linen list proper has generally disappeared from the walls of the chapels. The Min-khaf list continues with *idmy*, *ššr* and  (see J. E. A., November, 1933, pl. XXIV). The occurrence is to be noted above of the *ššr* linen in the scene in LEPSIUS, Saqqarah 1. '3·*t* and *šm<sup>3</sup>·t nfr·t* occur frequently in the labels of the burial chamber scenes of the late Old Kingdom.

The other two kinds of linen , and , as far as I know, occur only on the tablet of Methen. The first of these can be translated „best linen stuff”, but the transliteration even of the second is uncertain. Dr. Reisner suggests that the word might possibly mean the wick of a torch, a material which ought to have been supplied to the dead. One might even be tempted to see in the sign , beneath, a determinative if it were not for the fact that none of the kinds of linen on the Methen stela have any numbering or designative words but simply the sign .

It remains to consider the subdivisions of the general headings. As we have seen in the case of the slab-stela of Seth-hekent these consist of a series of numbers represented either by the *mnht* signs, by horizontal strokes or by slanting strokes (as in the tablets of Sehefner, Wep-ka and FS 3036 X). There are also the signs  and , and a group of designative words: ,  (determined by a curious vertical sign which turns over slightly at the top), , , , , . These designations present the following alternatives:

1. That they represent the number of threads in a fixed length of cloth.
2. That they mark the quality of the yarn, the number of fibres in the spun thread used in the weaving.
3. That the numbers and the special terms designate the breadth of the cloth, 1, 2, 3, etc. hand-breadths. The special terms may indicate unusually large or unusually narrow breadth, or even plaited bands such as are used for girdles and so on.

To begin by an examination of the numbering, the most common series of numbering begins with 9 and occurs at least once in 19 lists (in four of these lists it includes all the kinds of linen represented). The series varies considerably and ends on 7, 6, 5, 4, 3, 2, and 1. The lists which have numbers ending on 7 are:

Nefert-iabtyt; all four kinds.

Ka-m-aha; three kinds (*idmy* partly obliterated but the numbering is fairly clear).

Iwnw; *ššr* and '3·*t*.

IIn; '3·t (this actually is reversed and runs 7, 8, 9).

Unknown Provenance (Junker): '3·t.

Cairo No. 46436: *idmy* and *ššr* (this is also reversed and runs 7, 8, 9).

The lists which have a numbering running from 9 to 6 are:

Kanofer: *ššr*, *šm<sup>3</sup>·t nfr·t* and '3·t

Iwnw: *idmy*.

Yeny: all four kinds.

G 2135: *ššr*.

Kha-bauw-sokar: *ššr* and '3·t

Those which run from 9 to 5 are:

Nofret: *idmy*, 9, 8, 7, 5 (?)

Khuwfuw-nekht: *idmy*

Those which run from 9 to 4 are:

G 4140: *idmy*, '3·t (9, 8, 7, 6, 6 (?), 5, 4)

Hathor-nefer-hetep: *ššr*.

Those with numbering from 9 to 3 are:

Carlsberg: Isy: '3·t

Ka-m-ankh: all four kinds.

Those which run from 9 to 2 are:

Nofret: *ššr*, *šm<sup>3</sup>·t nfr·t* (both skip 3).

Mery (Louvre): *ššr* and '3·t

Finally, those that run from 9 to 1 are:

Nofret: '3·t (skips 3).

Nofer: G 2110: the *ššr*, *šm<sup>3</sup>·t nfr·t* and '3·t are all grouped together.

Rahotep: '3·t (has 9, 5, 4, 2, 1)

The next most usual series of numbering begins with 4 and occurs at least once in 12 different linen lists. The series usually runs: 4, 3, 2, 1 or 4, 2, 1, but there are a number of exceptions. In the tablet of Teti-ankh all the groups of linen have the same numbering. Probably the same was true in the case of the Merytyetes tablet which is broken at the top. Those lists which have the series 4, 3, 2, 1 are:

Wepemnofret: *idmy*, *ššr* and *šm<sup>3</sup>·t nfr·t*.

G 4860: *idmy* and '3·t

Seth-heknt: *idmy*

Kanofer: *idmy*

G 2135: *idmy*

Mer-ib: *ššr* and *šm<sup>3</sup>·t nfr·t* (together)

Merytyetes: *ššr* and '3·t (?): 4, 3, 3, 2, 2, 1. *idmy* broken away.

Neferma'at niche: *idmy·t*(?)

Those which have 4, 2, 1 are:

Seth-heknt: *ššr*, '3·t

G 4860: *ššr*, *šm<sup>3</sup>·t nfr·t* (together)

Rahotep: *ššr*

Teti-ankh: all three kinds.

Mer-ib: *idmy*

Nofer (G 2110): *idmy*

Those which have only 4, 3 are:

Wepemnofret: '3·t

Neferma'at niche: '3·t

One has 4, 3, 2:

Carlsberg: Isy: *idmy*

The Neferma'at niche also has 4, 2:

Neferma'at niche: *idmy*, *ššr*, *šm<sup>3</sup>·t nfr·t*

In addition to those beginning with 9 and 4 there are series which begin on every number below 9 with the exception, curiously enough, of six and of course of 1. There is one example, too, which begins on 10. In no case do all the groups in a single list have the same numbering. The list which begins with 10 is:

Carlsberg: Isy: *šm<sup>3</sup>·t nfr·t* 10, 7, 7, 6, 5, 4, 3 (?)

Those which begin with 8 are:

Khufuw-nekht: *ššr*, 8, 7, 6, 5, 2 and *šm<sup>3</sup>·t nfr·t*: 8, 7 . . . . . (broken).

Hathor-nefer-hetep: '3·t: 8, 6, 5, 4.

Two begin with 7:

G 4140: *ššr* 7, 6, 5, 4, 3, 2

Neferma'at, fragment of stela: '3·t: 7, 6, 5, 4.

Those which begin with 5 are:

Street 2100: One register has 5, 4, . . . This stela is badly weathered and no register can be made out completely.

Cairo No. 1391: *idmy* 5, 4, 3, 2.

Mer-ib: '3·t 5, 4, 2, 1.

Neferma'at, fragment of stela: *idmy·t(?)* 5, 4, . . . .

*idmy* 5, 4, 2.

*ššr* 5, 4, 3, 2

Kha-bauw-sokar: *idmy* 5, 4, 3, 2, 1

Hathor-nefer-hetep: *idmy* 5, 4, 3, 2, 1

One begins on 3:

Mery (Louvre): *idmy* 3, 2, 1.

And one begins on 2:

Unknown provenance (Junker): *ššr*: 2, 1

Consideration should be taken of the numbering where it occurs, usually with the *idmy* linen, outside the linen list proper.

Khufuw-khaf; east wall has *idmy* 6.

south door jamb, *idmy* 4,2.

Mer-ib: *idmy* 6, 4, 2, 1.

Min-khaf: *idmy*: 4.

*ššr* : 4.

? : 4,

Abu Gurob, Pl. 23: *idmy*: 6, 4, 4,

Pl. 16: *idmy*: 4

Pl. 22: *idmy*: 3

LEPSIUS, Saqqarah 1: *idmy* 2

Seshat-hetep: *idmy* 3.

Ankh-ir-s: *idmy* 4.

The title of Neter-nefer is written with *idmy* 4.

There are a certain number of exceptions which do not fall into any of the above divisions. It should be noted that I have placed under the series beginning with 9 the tablet from Junker II in where the '3·t linen numbering has been reversed and really begins on 7, running 7, 8, 9. Unfortunately this stela is only preserved in a fragment, but what seems to be the *ššr* linen also began with the lowest number and ran 2, 3, . . . . . The fragment in Cairo No. 46436 also has its numbering running 7, 8, 9. In one or two other cases, Mer-ib for example, the numbering does not begin on the left as usual, but all the signs face to the right where the numbering begins. In II n and No. 46436 it is

only the order of the numbering which is reversed (but the  $\text{⌘}$  and  $\text{Ⓞ}$  appear at the end of the series, next to the highest number as usual). On the tablet of Methen the numbering is very curious. At the base of the hawk standards of the *idmy* linen, three upright strokes are repeated three times and a single stroke is placed behind the last standard. These are not *mnh·t* signs. Beneath the other kinds of linen there is no numbering, only the sign.  $\text{Ⓞ}$ , once, under  $\text{šsr}$ ,  $\text{ʿ3·t}$  and  $\text{⌘} \text{Ⓞ} \text{⌘}$ , but omitted under  $\text{Ⓞ} \square$ . It is not unusual for the numbering, and even designating signs to be forced up from the register under the *idmy* linen onto the line at the base of the hawk standards. This usually appears to be the result of lack of space when some extra feature is crowded into the list itself or into the space beneath the list. But there are three instances where the signs are placed at the base of the *idmy* standards and the squares in the register below are left empty. These are the tablet of Ab-neb and the false-doors of Kha-bauw-sokar and Hathor-nefer-hetep. In the case of the latter two, the determinative of *šsf* does indeed fall in the first square of the otherwise empty register. The tablet of Ab-neb has a linen list of very simple form. It is divided by the continuation of the upright lines of the two standards of the *idmy* hawks (which may here mean simply linen in general) into three vertical divisions. This is further divided by two horizontal lines to form three registers. The third square of the second register has been divided in two by a vertical line. In the top register at the base of the *idmy* standards, in front of each standard, are vertical strokes, two in front of the first and one in front of the second. The space behind the second standard is blank as are the four squares of the second register. In the third register the three squares have each a thousand sign. Thus the third thousand sign falls under a blank space both in the first and second register. This arrangement of the amounts, more or less arbitrary to all appearances, is paralleled in the tablet of Methen where there are four thousand signs under the *idmy* linen and two under each of the other four kinds. But in both these examples the arrangement of the list, not the meaning, seems to be the influencing factor. In the case of Ab-neb the carrying down of the lines of the Horus standards formed three squares and a thousand sign was placed in the third square probably for the sake of balance. Why the third square in the second register was divided in two is not easily explained. In the case of Methen, the four thousand signs under *idmy* fell beneath the numbering 3, 3, 3, 1 at the base of the standards. The other four kinds of cloth, grouped two to a register, have no numbering (three of them having simply  $\text{Ⓞ}$  and one a blank space) but two thousand signs have been placed beneath each, making four thousand signs in the three registers. This apparently satisfied the artist's sense of arrangement, although as far as the meaning is concerned there seem to be two unnecessary thousand signs in all but the first register. In the case of the tablet No. 1391 in Cairo, the numbering and *šsf* (?) are placed at the base of the Horus standards. The space in front of the first standard is blank. In the register below, five of the six squares are empty, but in the first square (beneath the blank space) is the  $\text{Ⓞ}$  sign. This sign occurs in the first square beneath the register in which the headings *šsr*; *šm3·t nfr·t* and  $\text{ʿ3·t}$  are combined. The following five squares are blank as they are under the *idmy* linen. In the tablet of Zefa-nesuwt there is no numbering at all, but a series of five blank squares is left under the *idmy* linen and another under *šsr* and  $\text{ʿ3·t}$ . The *šsr* and  $\text{ʿ3·t}$  are not written in the same line but placed in two horizontal lines, one above the other. There is no indication at all of the amounts. The register in which the thousand signs usually occur is missing. The tablet from FS 3073 X has a badly cut linen list which appears to have only blank squares under the headings (which themselves are so crudely cut as to be barely distinguishable as *idmy*, *šsr* and  $\text{ʿ3·t}$ ), without numbering or statement of amount. The small tablet of Neb-iaw (?) has simply two rectangles, one with three (?)

*mnht* strokes placed on top, and the other with four. The representations on the tablets of Wep-ka and FS 3036 X are similar. The linen list consists of a single horizontal line. In 3036 X the line is divided off into compartments like the list of other objects below. In the first square on the right is a *idmy* hawk with two *mnht* strokes, placed on a rectangle and with a thousand sign beneath. The next four compartments each have a horizontal sign above, difficult to make out, but probably two *šsr* and two '3·t signs. The numbering is not clear, but is perhaps 4, 5 (slanting strokes) 4. Each compartment contains a thousand sign below. The last square on the left has an element unique in these lists, the *šš* sign (⌘) above a rectangle, with a thousand sign beneath. The Wep-ka list begins on the left and seems to have four hawks over two rectangles, then two rectangles with a horizontal sign above (*šsr*?), and two with '3·t(?) above. The numbering above each of the rectangles is not certain (slanting strokes above last two rectangles), and the whole list is merely scratched on the stone and difficult to see in the small photograph. The Waten tablet has, in the man's list, a numbering which may be 1, 3, 2, 1 (?), under the *idmy* standards, and no other numbering or indication of amounts under the *šsr* and '3·t or under any of the headings (*idmy*, *šsr* and '3·t) of the wife's list. Finally, it should be mentioned that in many of the lists there are certain repetitions of numbers in the series. In the tablet of Sehefner, the 5 is repeated twice under the first linen. This occurs again in the case of G 4140 where the 6 seems to be given twice, in the Carlsberg tablet with 7 repeated, and in the Merytyetes tablet where both the 2 and the 3 are repeated (the repetitions mentioned above on the tablets of 3036 X and Waten are somewhat uncertain). An amount is given below each number in every case.

Above have been mentioned a few extraordinary occurrences of the sign @. Usually it appears at the head of the numbering register, either alone or preceded by the sign ⌘. Sometimes these signs are enclosed in a fringed rectangle. They always appear adjoining the highest number, while the following series of numbers shows the widest variety. When the ⌘ is included, one of the numbers in the series is dropped out to make a place for it. But this omission occurs repeatedly when only the @ is given, and as the number omitted is never the same one throughout the different lists (if we except 10 which only appears in one rather carelessly executed example) this seems to form no clue as to the meaning of the signs. Apparently, again the arrangement of the list, rather than the meaning, is the cause of the omission of the number. Curiously enough, though, ⌘ never seems to appear except with @.

It remains to consider the words which occur in the same register with the numbering. These words are found always at the opposite end of the register from ⌘ and @, that is adjoining the lowest number in the series. *Ssf* is the most common of these words. Except when it is mentioned below as occurring after one of the other words it always follows 1. A word, *tm<sup>3</sup>*, appears once with *šsf* on the slab-stela of unknown provenance. An upright sign, turning over a little at the top, seems to determine this word. It looks somewhat like the tall bags that sometimes stand behind the figures of dancers. The only Old Kingdom word which in any way approaches this in appearance is *tm<sup>3</sup>* determined by the bow case. The arrangement on the slab stela is 2, 1, *tm<sup>3</sup>* and *šsf*. Another word, *q<sup>3</sup>·t*, appears on the slab-stela of Seth-hekent under the '3·t linen in the combination ⌘, @, 4, 2, 1, *q<sup>3</sup>·t*. The Wörterbuch gives this as meaning Leinenzeug or Kleiderstoff. The very similar word with the same meaning, *q<sup>3</sup>w* appears under a chest carried by two men in the interesting scene in the tomb of Fetekta mentioned above. The inscription under the chest reads *s[h]pt q<sup>3</sup>w r . . .*, while another over the chest is

*tpy ššr ššr htm pr* (?). The word *q3w* here seems almost a sort of subheading to the *ššr* linen. A word  is found on the slab-stela of G 4860 in the combination , *šsf*, 1, 2, 3, 4, and two @ signs (each in a rectangle, one above the other), under the standards of the *idmy* linen, and , *šsf*, 1, 2, 3, @ and  (each in a fringed rectangle) with the other three types of linen (compressed into two groups). A mutilated word, , occurs on the tablet of Nofer (2110) at the end of 9, 8, 7, 6, 5, 4, 3, 2, 1, *šsf*, *hr* . . . . I have mentioned above, in referring to the determinatives, the sign  on the Rahotep stela. Perhaps it should be mentioned again that *šs* occurs once, on the tablet of 3036 X.

No two examples have exactly the same arrangement of the linen list. The only two which have the same numbering (Ka-m-aha and Nefert-iabtyt) are really not exactly alike. Ka-m-aha has four different kinds of linen, while Nefert-iabtyt has only three. In the other examples the numbering varies with the different kinds of linen in the same list, while I have found no case of one kind of linen having the same numbering throughout all the different lists. The '3·t linen has the same numbering on five of the slab-stelae (Nefert-iabtyt, Ka-m-aha, Iwnw, IIn and the stela of unknown provenance). The numbering of the different linens is the same on a single stela in the case of Nefert-iabtyt, Ka-m-aha, Teti-ankh, and perhaps the broken tablets Merytyetes and Cairo 46436, but even in these examples there is always a certain amount of variation caused by the use or omission of , @ and the designating words. Even Kha-bauw-sokar and Hathor-nefer-hetep which appear very much alike at the first glance are not identical. They have the *idmy* linen alike, — 5, 4, 3, 2, 1, *šsf*, but the '3·t and *ššr* on Kha-bauw-sokar have @ (written in a fringed rectangle in these lists), 9, 8, 7, 6, while on Hathor-nefer-hetep they are @, 8, 6, 5, 4, and @ 9, 6, 5, 4. The lists of Waten and his wife which appear together on the same stone also show variations. The most striking example of the variety that can be found is in the slab-stela of G 4140 which has series of numbering beginning with 9, 8, 7 and ending with 4, 3 and 2.

In spite of the diversity of the numbering and the variety shown by the components of the various lists I think it is possible to draw certain conclusions from the above lists, taken in conjunction with the representations of linen which occur outside the linen list proper. Most of these representations fall into two main groups, — the scene on the chapel wall of the presentation to the master for inspection of the sealed equipment of the tomb, and the representation on the wall of the burial chamber of the grave equipment. The latter appears in many of the burial chambers of the late Old Kingdom and Intermediate Period. The representation of the linen in both these groups is almost entirely confined to a sealed box or package with a label above it. One VIth Dynasty burial chamber, that of Ka-m-ankh, actually has a linen list proper, but it is the only example I have been able to find. Sometimes, as in the representation of the registration of the sealed equipment which appears occasionally on the jamb of the entrance to the chapel (Khufuw-khaf, Mer-ib), there is simply the statement of kind and amount without any picture of the box even, but on the east wall of Khufuw-khaf's chapel, pleated pieces of linen are shown which seem to be meant to represent the contents of the boxes beneath. In LEPSIUS, Saqqarah 1, men are actually shown placing folded pieces of linen in boxes. Unfortunately, although the Khufuw-khaf pieces are labelled, neither of these representations give a very definite idea of what sort of garments or linen pieces are in the boxes. However, these last two scenes do suggest a confirmation of the suggestion made above in connection with the stela of Sehefner that the designative words may mean an article made from the type of linen named above them. In the case of one of the inscriptions from LEPSIUS, Saqqarah 1 there is a word *q3w* which is very similar in

construction and meaning to the designative word  $q\beta \cdot t$  of the slab-stela of Seth-hekent. This word is placed in an inscription beneath a box, as though subordinate to the word  $\dot{s}\dot{s}r$  in the label above the box. None of the other subordinate words resemble those in the linen lists, but in both these tombs there are similar 'heading' words to those of the lists, as has been shown above in discussing these words. In the Khufuw-khaf scene the word  $nhrw$  seems to designate a garment made of  $tpy \dot{s}\dot{s}r nfr$ . The word  under  $tpy \dot{s}\dot{s}r idmy$  and the word  $tp h \cdot t$  under  $tpy \dot{s}\dot{s}r nfr$  are very doubtful in meaning. In fact the material is much too scanty to allow any feeling approaching certainty in the interpretation of it.

In the tablet of Sehefner there is a suggestion from what certainly seems to be the determinative of the word  $\dot{s}sf$  that the latter is some sort of a narrow piece of cloth. There is also the very uncertain possibility that  $tm^3$  on the stela of unknown provenance might be some sort of a narrow strip made into a bag. Unfortunately the words on the Sehefner stela which are determined by what seems to be a sleeved garment do not occur elsewhere unless the  $tyw$  be identified with  $irtyw$  and means a sleeved garment made out of blue linen.

The most decisive element in the linen list to be determined is the numbering. It has been suggested that these figures represent the number of threads in a fixed length of cloth. In modern weaving the fineness is designated by the number of threads to the inch. But it is impossible that in ancient Egyptian weaving the figures 1 to 9 and even 10 in one case can have been used to designate the number of threads covering the same length of cloth. One thread can not have filled the same space as nine threads, the difference is too great. Then too the number of threads is too small when compared with the actual number of threads shown by ancient examples of cloth. The proportion between the number of threads in the woof, which was generally much less close than the warp, and those of the warp is not indicated either by this numbering. Sir FLINDERS PETRIE in *Deshasheh*, p. 32 gives the following proportions of the threads in linen of the Old Kingdom. The finest was  $93$  (warp)  $\times$   $44$  (woof) threads to the inch. Near the edge the warp threads ran as many as  $148$  to the inch. Other cloths were  $74 \times 20$ ;  $50 \times 30$ ;  $58 \times 18$ . „A fine delicate stuff, almost transparent“ had  $72 \times 36$  threads. „A very loose open stuff“ was of fine thread  $48 \times 22$ . The most widely spaced thread was in a piece of material  $13 \times 10$ . It is also clear that the figures do not represent the number of strands in the thread used in the weaving. Again the difference between 1 and 9 is too great. Then in this case the order of fineness should be 1, 2, 3, 4, 5 etc. instead of which it is 9, 8, 7, 6 etc. The only explanation which seems to me to clear away these difficulties is that the numbering marks the breadth of the cloth. Prof. JEQUIER in *Les Frises d'Objets des Sarcophages du Moyen Empire*, p. 31 ff. suggests that the  $mnht$  strokes represent the fringe on the end of the cloth and that their number determines the width of the cloth. He bases this interpretation upon a representation on the coffin of Zehuti-hotep in Cairo where three pieces of cloth are shown with the fringe at the top spaced regularly in groups of three threads. These groups of three threads are repeated 9 times on one piece, 8 on another and 7 on the third, and this numbering corresponds roughly to the figures written above the cloth. He concludes that the  $mnht$  sign would then be a rolled piece of cloth terminated by units of fringe. This does not involve a definite statement of the number of threads in each unit of fringe which might vary according to the fineness of the cloth and is perfectly in accord with the other evidence which makes me believe that the numbering of the linen lists corresponds to the breadth of the material.

If the numbering indicates the width of the cloth, then the special terms would be used for unusually wide or narrow pieces of cloth. This is supported too by the fact

that the signs ⌘, and @ always appear at the beginning of the lists preceding the largest number, while the other words are at the other end of the series adjoining the smallest number. I would suggest, in spite of the appearance of the hieroglyphs themselves, that the signs ⌘ and @ represent unusually large widths of cloth, while the words *śsf*, *tm³* etc., represent unusually narrow widths such as might have been used for belts or ribbons. There is even confirmation of this in the determinative of *śsf* and possibly in the word *tm³*. JEQUIER, l. c., cites three passages from the Pyramid texts which seem to refer definitely to different widths of *idmy* linen, — Spruch 1202 b where *idmy* is used for a cord to drag a boat, Spruch 1511 a where *idmy* is used as strips for mummy bandages (*wnhw*) and finally Spruch 816 b where it refers to material for clothing. These words then designate, possibly, articles of linen, mainly clothing, household linen and linen for the grave (mummy bandages), made from certain widths of material.

The linen list would then represent by its headings certain qualities of cloth differentiated by fineness, color or material employed, while its subdivisions represent the width of the cloth employed and the amounts of the material to be supplied. It is very much to be regretted that the representations of cloth articles (much less labelled representations) are so infrequent in the reliefs known at present. An interesting scene shows the weaving women presenting their cloth on a great estate and perhaps receiving gifts in return (see L. D. II, Pl. 103)<sup>1</sup>. The reliefs in the Abu Gurob Sun Temple would suggest that the *idmy*-linen four hand-breadths and three hand-breadths wide was employed for the garment worn in the Heb-Sed Festival. But this is the only Old Kingdom Heb-Sed scene in which this detail is preserved, and there is therefore no comparative material to support such a conclusion. We have seen that the other representations of linen are in more or less isolated examples. The variety, too, shown in the numbering and special terms of the lists makes it difficult to place them in any sort of chronological order of development or to allow of any grouping by the rank of their owners. It would seem to me that the suggestion that the breadth of the cloth is indicated by the numbering might best allow for the expression of individual taste and fashion, the survival of the use of older forms, and the caprice of the artist in the various lists which run over a period from Dynasty II to Dynasty VI.

1) Compare also a similar scene on the jamb of the entrance to the chapel of Akhet-hetep in the Louvre (CAPART, Memphis, Fig. 357). A new word occurs here, the reading of which is uncertain: — *ś . . . .* (donkey's head followed by four *mnh* signs) *ipy śśr n idmy*, and again *ś . . .* (donkey's head followed by *hbs* sign) *r gś imy r³ pr*. The word occurs in a title of Isy (Copenhagen): *imy r³ gś pr ś . . . . .* (donkey's head) *m špwt mhw šm*.