

II

THE CLEARANCE OF THE SHAFT AND CHAMBER OF G 7000 X

A. THE SHAFT

IT would appear that the first intention was to make a stairway tomb for Queen Hetep-heres I, such as had been the custom in Dynasty III. The stairway was begun in the quarry scarp south of the Cheops causeway. Evidently quarrying operations had ceased here when the rock surface was leveled for the foundations of the First Queen's Pyramid, the project which was abandoned for another site 28 m. to the west when it was decided to prepare a secret tomb for Hetep-heres near this spot. Twelve steps were cut of the stairway, which was open for 3.40 m. and had a width of 55 cm. This was continued as a tunnel in the rock for 95 cm. (whole length 4.35 m.), but at this point a vertical shaft was decided upon and driven down from the surface of the rock, the stairway entering it at a depth of 3 m. The mouth of the shaft lay just south of the edge of the old quarry scarp and had a length of 1.75 m. (N-S) and a width of 2.37 m. (E-W). Grooves for beams were noted at the top of the pit, probably for lowering the sarcophagus, and on the sides of the pit were notches to enable the workmen to climb up and down. The width (E-W) soon narrowed to 1.35-1.55 m. Beneath the irregular paving of local stone, the shaft, like the blocking of the stairway, was laid with courses of small squared blocks of white limestone (see Pls. 1-2; Figs. 12-14).

At a distance of 7.47 m. there was reached the top of a niche in the west wall of the shaft, walled up with a blocking of plastered white masonry. This niche was 2.10 m. high and 1.67 m. deep, but the space inside the blocking had an area of only 92 × 67 cm. (Figs. 14, 15; Pl. 3). When the blocking was removed the recess was found to contain the horned skull and three leg bones of a bull which had been wrapped in a much decayed reed mat, as well as two wine jars (Type A-II b; see Fig. 16). There was also a limestone boulder which Rowe thought had been thrown into the niche for the intentional purpose of ceremonially crushing the skull of the bull 'to release its spirit'. It might be suggested that if this were so one would have expected the jars to have been smashed, too. A piece of metal which adhered to the jawbone of the bull was tentatively identified as silver. There were also two chips of basalt which had accidentally intruded but which seem to indicate that work was continuing on the pavement of the Cheops temple at the time that this offering to his mother's spirit was made by the king. There were also some bits of charcoal. Pieces of burned wood had worked down into the filling of the pit below the entrance to the offering niche. These may have formed the material for censuring the offerings with the smoke of fragrant wood.

The laying of the stones was particularly haphazard at a level between 10.60 and 11.60 m., while at 15 m., layers of clean sand were met which alternated with chips and blocks of stone. At the 20-m. level a new section of the pit began with a slightly different alignment, while at 24.80 m. a regularly laid blocking was again reached. This well-laid masonry continued to 25.50 m. where the top of the ceiling of a chamber was observed on the south side of the pit. There was no special blocking of this entrance, which opened directly on the pit, the pit blocking simply being continued to the bottom.

The entrance to the chamber is 1.92 m. high, and the pit contracts at the lower end to 1.14 m. (N-S) × 1.30 m. (E-W). The total depth of the pit was 27.42 m. (see Figs. 19, 21).

In addition to the contents of the offering niche, a few other objects were recovered from the pit. Near the bottom was found an uninscribed mud sealing and at the very bottom several fragments of another sealing inscribed with the name of the mortuary workshop of Cheops (Pl. 43; Fig. 47; No. 1434). In the packing of the pit were found smashed fragments of pottery, these being particularly frequent near the bottom. A few pieces were found in the blocking of the stairway. Some of this pottery consisted of large basins which had been used to hold the plaster of the filling. None of these basins could be reconstructed, but eight other vessels could be put together. These seem to have been from the queen's original chamber at Dahshur and were then overlooked in placing the objects in the new tomb, only to be thrown down into the pit at the last. They consist of four wide basins with spout (one of Type XXXV b, Fig. 72; three of Type D-XXXVI, Figs. 72, 74), a bag-shaped pot (Type A-LI, Fig. 59), a neckless shoulder jar with flat base (Fig. 63), a domed cover (34-4-52, Fig. 78), and a jar stand (Fig. 77). They are included in the list of pottery in Appendix II.

At a depth of 17 m. were found the copper fittings and some small bits of wood, one of which had traces of gilding, which are illustrated on Pl. 3. Several of these pieces were like small fluted columns, but the longest piece only measured 12 cm., with a diameter of 2.5 cm. They could have been the very slender poles of a light canopy, since the Dynasty I examples found by Emery at Saqqara in Tomb 3471 were only 3.3 cm. in diameter.¹ That this may have been the case is suggested by the discovery in the pit of G 7000 X, at a depth between 22.0 and 24.5 m., of eight limestone objects which seem to have been the bases for canopy poles. The circular depression to hold the bottom of the pole is in this case 6 cm. in diameter, but there was a lining of cement in which were impressed traces of wood graining. This would have narrowed the diameter of the hole. Six of these limestone bases are shown on Pl. 3 and a drawing of one in Fig. 17. On the top of each was incised a mark (Fig. 17) which perhaps indicated the position of the piece in setting up the completed object. One thinks of a light structure, like that pictured in the tomb of Hesy-ra in the Third Dynasty,² under which the tomb equipment was set on the day of the funeral before being let down the shaft into the burial chamber. It may very well have resembled the large gold-covered bed canopy actually found in the chamber of Hetep-heres. Fragmentary canopies of wood have been found in the store chamber under the southern enclosure wall of the Zoser Pyramid³ as well as in the First Dynasty Saqqara Tomb 3471 mentioned above.

It might be well to point out that several uses for a light canopy structure are indicated by Egyptian representations. First, there is an actual bed canopy, which evidently carried curtains to enclose a space for the bed of the owner in a house or palace. This is perhaps best represented in the tomb of Queen Meresankh III (G 7530-7540; Smith, *A History . . .* fig. 67), but it appears again at Giza in the tomb of the son of Meresankh III and King Chephren, Prince Nebemakhet (Lepsius, *Denkmäler*, II, pl. 14); and in the Dynasty V Giza rock-cut tomb of Ankhmara (G 7837 in the cliff's edge of the Eastern Cemetery, Expedition Photo No. A 6151). At Saqqara there is a fine example of the Sixth Dynasty (Duell and others, *The Mastaba of Mereruka*, 1938, Oriental Institute Publication, no. XXXI, pl. 93). The gold-covered structure from the burial chamber of Hetep-heres is almost certainly such a bed canopy, particularly since the inlaid box which accompanied it probably contained the curtains with which it was hung. However, although it was probably part of her household furniture during her life-

¹ W. B. Emery, *Great Tombs of the First Dynasty*, I, *Excavations at Saqqara*, Service des Antiquités de l'Égypte (1949), p. 58, fig. 30.

1911-1912 (1913), Service des Antiquités de l'Égypte, pls. XXII-XXIII.

² J. E. Quibell, *The Tomb of Hesy*, *Excavations at Saqqara*,

³ C. M. Firth and J. E. Quibell, *The Step Pyramid*, *Excavations at Saqqara* (1935), p. 62 and pl. 37.

time, it was large enough to have been set up over the alabaster sarcophagus in her original tomb, and it may well have been used in this fashion. Cecil Firth, in a letter to Reisner, called attention to the fact that such a usage might be imitated in the palace-façade paneling painted on the alabaster slabs that surround on three sides the coffin recess in the burial chamber of Unas, the last king of Dynasty V, at Saqqara. Here certainly is a reflection of the mat hangings of Hesy-ra's tent. Here also is a warning against an attempt to separate too precisely into their component parts Egyptian customs which had been inextricably mingled.

The structure just mentioned as being represented in the Third Dynasty tomb of Hesy-ra shows a sort of tent with hangings of colored matting stretched on a frame supported by poles. In this the tomb equipment is set out. This may well be the *sh*, or tent, often mentioned in funerary inscriptions. The custom of setting out food offerings in such a tent in connection with a banquet is often represented later, one of the finest examples being in the Dynasty V tomb of Iyemery at Giza (G 6020; Lepsius, *Denkmäler*, II, pl. 52). Quibell, however, in publishing the Hesy-ra paintings, called attention to a resemblance between this tent of the Third Dynasty and a Sixth Dynasty example in the tomb of Pepy-ankh at Meir where it was called the *ibw* (B. Grdseloff, *Das ägyptische Reinigungszelt*, 1941, p. 11, fig. 4; Smith, *loc. cit.*, pp. 104, 140, 206, 221, 319, 349). Grdseloff sees in this latter, however, a structure which was set up for the ceremony of purifying the embalmed body of the dead man. This would, then, be a third use for the tent-pole canopy with hangings.

I suspect that the fragments found in the shaft of Hetep-heres belonged to a structure which either served as the 'purification tent' (probably at her original tomb at Dahshur) or else contained the equipment before it was placed in the tomb. The Zoser canopy may well have had a similar use, since it was placed with a hand barrow and a large box in the store chamber of the 'Southern Tomb'. The First Dynasty example found by Emery, on the other hand, lay with a bed in one of the storerooms of Tomb 3471 and was probably a bed canopy.

Finally, before leaving the subject of the shaft, it should be noted that a number of the limestone blocks of the filling bore marks on them. These bear a resemblance to other builders' and quarry marks that are known, but contribute little to the understanding of their purpose. They are drawn on Fig. 18. Amongst these worked blocks there were about a dozen which seemed originally to have formed part of the lid of a limestone sarcophagus.

B. THE CHAMBER

The burial chamber of Hetep-heres extended 5.22 m. to the south of the shaft and had a width varying from 2.67 to 2.77 m. It was somewhat irregularly cut and has a present height of 1.95 m. Obviously, it was once intended to make the room larger in area and greater in height. Just inside the entrance, in the northwest corner, is a pit in the floor, 1.21 m. deep and 1.40 m. (N-S) × 1.60 m. (E-W). This pit had been filled in with rubble and dust which had been raked over the area until it rested some 50 cm. above the floor in the northwest corner of the entrance wall. This filling had subsided a few centimeters near the northwest corner of the coffin, leaving an irregular surface to the floor at this point and the edge of the pit clearly evident. This settlement had probably caused the collapse of one of the arm-chairs, two legs of which rested on the filling (see Figs. 19, 21, 22; Pls. 4, 43).

Thus a full height of 3.16 m. for the room was probably planned, and this would have given ample clearance to set up the bed canopy, which has a height of 2.21 m. A cutting in the east wall, above the sarcophagus, runs in 2.60 m. from the entrance and extends down from the ceiling 95 cm. It has a depth of 40 cm. into the rock. It had been partially filled with blocks of stone when it was decided to use the

chamber in its present state. A similar cutting in the west wall extends in 2.76 m. from the edge of the shaft and 75 cm. down from the ceiling. It was somewhat irregular in depth but 2.40 m. at its greatest extent of cutting into the rock. This was carefully blocked up with masonry set in plaster and contained the queen's canopic chest (see Pl. 44; Fig. 22).

The alabaster sarcophagus stood against the east wall, a meter inside the entrance to the chamber and with a space of 30 cm. between coffin and wall. It measured 2 m. \times 85 cm. and stood 80 cm. high. The lid showed on the outside a thickness of 5 cm., but it fitted into a rebate in the top of the box, 6 cm. wide on the rim with a ledge 5 cm. wide and 4 cm. deep. The total thickness of the box was, therefore, 11 cm. and that of the lid 9 cm. (Fig. 21; Pl. 4). The ends of the lid each had two projecting hand grips. The coffin rested on a flooring of decayed wooden boards. On the bottom of the coffin were three wedge-shaped marks (Pl. 43) cut in the alabaster. It was immediately noticed when the chamber was opened that a metal tool had been used across the upper edge of the box to pry off the lid (Pl. 4), and later that such chipping of the upper edge of the box occurred along the side facing the wall. In one of the cases which had contained linen at the south end of the tomb was found an alabaster chip from the upper edge of the box which suggested that this chip had been picked up from the floor with the rest of the disturbed contents of the original tomb and transported to the new burial place. More chips were later found in the debris of other cases along the south wall. There was, then, from the first, evidence that the contents of the coffin had been tampered with. Actually, the body had been removed; when the lid was finally lifted at the end of the clearance of the tomb, the box was found to contain nothing.

The dismantled parts of the gold-cased wooden bed canopy had partly been placed on top of the sarcophagus and partly between the coffin and the east wall. The ends of these pieces rested on the boxes south of the sarcophagus, and with the decay of the wood the gold casings fell down upon the pottery in that area (Figs. 19, 20, 23-27; Pls. 4-10). Along the western edge of the coffin lid had stood the inlaid curtain box (Figs. 28, 29) which collapsed in place, one end falling over the southwest corner of the coffin. A few inlays also lay along the west face of the coffin (Pls. 7, 11-13). Dr. Reisner formed the impression (particularly from the damage to the side of the coffin facing the wall) that the contents of the tomb were placed in their new positions in reverse order from that in which they had stood in the original tomb. In other words, the coffin had been placed in the far corner of the original tomb, and at the time of burial the furniture and boxes of linen and pottery were then set around it. One can only speculate as to whether the canopy was set up in position around the sarcophagus in the larger original chamber or whether the bed stood inside it with the curtains hanging in place.

The space just inside the entrance, north of the coffin and including the area of the unfinished cutting in the floor, had not contained any objects (Fig. 20; Pl. 14), but some 35 cm. south of the northwest corner of the sarcophagus there stood a gold-cased armchair with its back to the coffin and the front and back legs of its north side resting on the filling of the floor pit. Partly through the settlement of the rubble in the pit and partly from the blow which the chair received when the box south of it collapsed, the parts of this chair fell to the floor in a general northerly direction, but more or less in their original positions (Pls. 14-16).

The four gold-cased lion legs of the chair collapsed on the floor close to their original positions, and the twined papyrus flowers forming the openwork decorations of the arm supports fell over to the right retaining quite clearly their original pattern. The wood had almost completely decayed, but the gold frames of the seat and back panel indicated plainly the size and construction of the original parts (Pls. 15, 16; Fig. 31). Mixed with these were the fragments of gold leaf forming a figure of the queen, seated

on a throne and smelling a lotus flower (Pl. 14; Fig. 30). These do not seem to provide a very appropriate design, particularly in the size and proportions of the preserved parts, for the back of the chair which has been restored as a plain wooden panel. It may be that the gold-leaf figure of the queen formed the decoration of the lid of a small box which had been placed on the floor underneath the chair. Conventional though the representation may be here, it is the only picture which we have of the queen, save for the tiny gold hieroglyphs which determine her name on the carrying-chair (Pls. 28, 29) or the little inlaid figure in the inscription on top of the large box (Fig. 40; Pl. 35). Although the figure is only 28 cm. high and worked in very thin gold sheeting, it conveys an impression of large-scale design and modeling which is in keeping with the boldly conceived high reliefs of the reign of Sneferu which have been preserved in a few examples such as the chapel of Methen and Tomb 3078 at Saqqara, the cased niches of Iyenefer at Dahshur, and the reliefs of Rahotep at Medum.⁴ The same bold treatment of simple masses is again seen in the papyrus flowers of the gold-cased armchair. It should be noted that the queen is wearing large bracelets, graduated in size to fit the arm, like the inlaid silver ones actually found in the tomb (Pl. 38). They are worn again by Rahotep's wife, Nofret, and by the wife of Prince Khufu-khaf in the reliefs of the Giza tomb G 7140.⁵

Beside the first armchair, but facing the entrance, stood a second chair with even more elaborate decoration, this time worked out in colored inlays (Figs. 20, 32; Pls. 17-24). Beyond this to the south and parallel to the west wall, the queen's bed had been dismantled and laid down with one end resting on a box of pottery. This box must have stood about 60 cm. high, judging from the size of the great pottery basins which it contained. The bed was upside down and turned around so that its short legs at the foot end were toward the south, while the longer legs at the head end stood up in the air just behind the inlaid armchair (Figs. 19, 20, 33; Pls. 25, 26).

The footboard of the bed was decorated with a design of floral rosettes alternating with a feather pattern in blue and black faïence inlays. It had been removed from the copper sockets in which the two projecting tangs on its base were designed to rest and had evidently been placed leaning against the head bar of the bed, which rested on the floor. On the sloping surface of the wooden planks of the bed, which presented their under surface to view, and between the bed legs, which rose up in the air, had been set the considerably narrower carrying-chair (Figs. 19, 20, 34; Pls. 27-31). It lay at a pronounced angle with the gold-cased palm capitals of its rear poles resting on the ground. The back of the seat of the carrying-chair, with its ebony strips inlaid with gold hieroglyphs giving the queen's name and titles, thus jutted out in the direction of the back of the second armchair.

Standing vertically and leaning against the back of the carrying-chair was an object which we have somewhat hesitantly suggested to be a tall leather case with a caplike lid (Figs. 20, 46). The top and bottom of it consisted of thin round sheets of wood cased on both sides with thin gold. The upper two sheets forming the casing of the lid were composed of darker, more brittle metal which may have contained a proportion of silver. They were, therefore, probably electrum. The upper surface of the lid was inscribed: *mwt nswt bity . . . Hr . . . Htp-[hrs]*, and thus seems to have contained the names and titles of Hetep-heres as mother of the King of Upper and Lower Egypt. Of the leather, only a small fragment was preserved, and this contained part of an inlaid design containing the emblem of the god Min which evidently ran around the side of the cap. This pattern, divided at intervals by three vertical strips of inlay, was also found under the end bar of the bed and in the neighborhood of the inlaid box to the east of it. The pattern differs from that on the lid of this inlaid box (Fig. 40) in having the separating

⁴ Smith, *A History* . . . pp. 148-156. Through an unfortunate error in the second edition, the number of the Saqqara tomb

is given as 3080 instead of 3078 in one place on p. 149.

⁵ Smith, *loc. cit.*, pls. 33, 34, 43.

vertical strips. It was found associated with strips of wood having an oval section, 2.5 cm. wide by 0.08 cm. thick, and was identified from the start as being a wooden staff decorated on two sides with the Min elements.

Fallen parallel with the east side of the bed were two gold rilled staves. Their various elements of gold sheeting graduated in size down from a large gold knob at the top and were found to give a length of 1.03 m. for each staff (Fig. 46; Pl. 33). There were enough Min inlays which actually showed evidence of having been inlaid into the wooden staff to give a length of 80 cm. The remaining portion of the 1.03 m., if this staff was as long as the gold staves, could have been decorated with a number of unassigned Min elements which were left over after the requisite number had been restored to the similar design on the box lid.

It would seem then possible to restore a leather case containing these three staves. The more rapid decay of the leather apparently allowed the staves to fall out, the two gold ones sliding down to the east and the inlaid wooden one falling to the west. The two silver or electrum sheets from the cover eventually fell down on top of the bright gold sheets of the bottom of the case, in an area just south of the easternmost palm capital of the carrying-chair pole (Pls. 32, 33; Figs. 19, 20), and just to the west of the bed leg and papyrus flower of the end of its side bar.

Along the west face of the coffin, extending from the south side of the armchair to the southwest corner of the coffin and in the space between the coffin and the east side of the bed, stood a long gold-encased box with an inlaid lid decorated with a design in narrow horizontal registers (Figs. 20, 38-40; Pl. 35). The design consisted of, first, a line of cartouche-like *šn* signs separated by vertical inlays; then two long bands of flower rosettes separated by feather pattern as on the footboard of the bed. Below this was an inscription giving the name and titles of Hetep-heres, banded above and below with Min elements. Underneath was again a row of flower rosettes, with Min patterns at the bottom. The whole was framed with thin gold strips worked into a mat pattern (Fig. 40).

This lid collapsed over the contents of the box and slid over in the direction of the bed footboard panel and the inlays of the second armchair. There was thus produced a deposit containing several layers of inlays from different objects (including those from the wooden staff). Obviously the recovery of these designs provided a most difficult problem which was solved in the tomb itself after a long and trying period of tiring effort. Subsequent study has made it possible to assign the correct elements to their original places. It is believed that the drawings in this volume offer a final solution to the puzzle. The order of restoration consisted, first, in establishing the designs which covered the footboard of the bed (Pl. 25), which were fortunately isolated, then the parts which belonged to the second armchair (Fig. 32), third, those which formed the lid of the box (Fig. 40), and finally, the inlays from the wooden staff and the cap of the leather case (Fig. 46).

From this tangle of inlays had also to be extricated the tiny gold hieroglyphs which were let into the ebony panels of the back of the seat of the carrying-chair (Pls. 28, 29). When this back panel fell toward the north, it seems to have struck the decaying back and arms of the second armchair which swung about and came to rest, the left arm against the west wall of the tomb and the right arm lying diagonally across the floor (Figs. 19, 20; Pl. 17). The inlaid parts of these armrests had framing bands of flower elements and feather pattern and contained an openwork design of a Horus hawk with outstretched wings standing on a palm column (Fig. 32; Pls. 18, 19). The hawks and palm columns were covered with gold sheet and inlays on both the inner and outer faces. The back panel of the chair was inlaid on both sides and, as it twisted around, fell with its back face uppermost. This back face had three projecting vertical wooden strips and a horizontal top border inlaid with flower rosettes and feather pattern.

These framed two emblems of the Goddess Neith consisting of standards bearing her symbols of shields and crossed arrows. These were modeled in raised plaster covered with gold and set in a background imitating matting composed of zigzag inlays of blue-green faïence (Pls. 22, 23).

The front of the chair back had a similar design bordered by flower and feather strips. However, in this case the Neith standards were made of colored faïence inlays let into a background of gold sheeting (Pls. 20, 21). The tops of the chair arms were covered with gold sheeting worked into a mat pattern (Pls. 17, 24). The gold-cased chair legs, with their copper bases beaten into graduated concentric rings, were similar to those of the first armchair but composed of thinner gold sheeting which had torn badly. It has not yet been possible to identify certainly the gold from the frame of the chair seat.

In discussing the inlaid material from the Hetep-heres tomb in my *History of Egyptian Sculpture and Painting in the Old Kingdom*, pp. 145 ff., I have pointed out that there is very little comparative material except for the inlaid wooden ceremonial vessels from the pyramid temple of Neferirkara (L. Borchardt, *Das Grabdenkmal des Königs Nefer-ir-ke-er*, 1909, pls. 3-8). There the rectangular strips of feather pattern with their rounded ends appear combined with the more usual scale-shaped feather patterns. Both of these patterns appear in a more naturalistic usage on the bodies of the Horus hawks on the arms of the inlaid Hetep-heres chair. On the Neferirkara vases the Min emblems are also used, in this case separated by the *šn* signs. Something similar may have been applied to an inlaid wooden vase from the temple of Mycerinus, of which only a small fragment was recovered (Reisner, *Mycerinus*, 1931, pl. 65). The flower patterns, of course, constitute one of the basic elements in Egyptian decorative design, while the use of the Neith emblem is familiar from Early Dynastic objects. Some of these designs will have to be considered further in the chapters which deal with the furniture in more detail. One should perhaps remark here that the inlaid butterflies of the silver bracelets are unusual and that the flower patterns are elaborated in Old Kingdom crowns and headbands, as well as on thrones and on the sail of a ship (L. Borchardt, *Das Grabdenkmal des Königs Sahu-er*, II, 1913, pls. 16, 44, 9). Coupled with the frequent use of mat patterns imitated in gold or faïence inlay, these designs remind us of the ingenuity in ornamentation of the craftsmen who fashioned the buildings of the Step Pyramid complex for Zoser in the Third Dynasty. They continue directly in the tradition of the marvelous but sadly smashed furniture from the First Dynasty tombs at Abydos. The furniture-makers of the time of Sneferu and Cheops were clearly following traditions established in Dynasty I and seem logically to belong in a period shortly after Zoser's time.

To return to the box with the inlaid lid and its contents, the size of this box can be determined by a number of different factors described in Chapter V. The wooden floor board was traced beneath all the objects which stood south of the first armchair (Figs. 19, 20). The various elements of the inlaid lid had fallen down over these objects and the rilled gold sheeting which covered the box was recovered from this area. Like the second armchair, this box is one of the most richly decorated objects in the tomb and must have been one of the queen's precious possessions (Figs. 38-40; Pls. 33, 35). The varied nature of its contents seems to suggest that these were not intended originally to be placed in it but were gathered up more or less at random in the plundered tomb for transportation to Giza. The gold and copper razors and small toilet articles (Fig. 45), for instance, were probably originally in a flat box of their own as they are shown on the painted wall in Hesy-ra's tomb. A small gold spouted cup which appears to have formed part of an original set with the two little gold saucers found here (Pl. 40 b) had actually been placed with the pottery and stone vessels of a big box in the southern area of the tomb. The razors and other toilet articles were hastily pushed into a corner of the box beside the gold-covered case which contained the queen's silver bracelets (Pl. 40 d; Fig. 38). That they were loose is indicated by the fact

that in transportation one of the rectangular copper razors was shaken out of place and fell into the copper basin, where it eventually worked under the ewer and was found stuck fast to the bottom of it.

Beside the bracelet box, on the north, stood the gold-covered headrest, and next to it a large pottery jar (34-4-8; Fig. 58, 1/1) was placed leaning against the side of the box and forced against the ewer and basin which stood in the northwest corner of the outer case (Fig. 38). On top of the ewer stood a small wooden box which contained a set of alabaster ointment vessels. When the outer case decayed, this fell over, spilling the little jars on the floor, the weight probably contributing much to the collapse of the chair with the papyrus arms which stood alongside (Fig. 19; Pls. 14, 15, 34).

Inside the large box with the inlaid lid were also several other objects, including a bead garment, which will be described in Chapter V. The box rested unevenly on a fragment of limestone. While the north end and west side of the box were flush with the floor, the southeast corner was slightly raised. With the general settlement of the objects as the wood decayed, the gold-covered bracelet box gradually slid down to the west. The pointed base of the pottery jar gradually pushed under the bottom of the bracelet box and finally came to rest on its side (Pl. 37). The headrest was pushed around to the west and toppled over (Pl. 39). A small red pottery bowl with an ointment jar inside it fell out of an alabaster dish and through the floor boards of the case (Pl. 39). It was forced around to come to rest on its side under the western edge of the gold sheet of the bottom of the bracelet box. The ewer and basin fell over to the north, tipping over the box of ointment vessels which fell down on the floor very close to the place in which they had originally stood upright (Pl. 34).

The area under the bed was virtually free of objects. However, an alabaster bowl had evidently rolled out of the decaying box of pottery and stone vessels upon which rested the southern end of the bed (Figs. 19, 20; Pl. 32). From this same box seem to have come a number of little mud pellets fashioned into tiny model jars and two small bone tools (Fig. 35). In the middle of the area under the bed were three heavy copper tools which had evidently been dropped by the workmen (Figs. 19, 36; Pl. 30). Finally, there were two unidentified strips of heavy gold (upper part of Pl. 32).

On the floor against the south wall of the tomb had been placed a row of four boxes of various sizes containing linen (Figs. 19, 20).⁶ In the area south of the bed it was possible to trace out, not only the outlines of a box on the floor, but two layers of decayed linen separated by two layers of decayed wood (Figs. 19, 20; Pl. 31). These clearly indicated that a large box, about 90 × 59 cm., supported a second, smaller box with an area of about 58 × 43 cm. These boxes seem to have been about 40 cm. high. Next to them stood three more boxes placed endwise to the south wall. The first of these to the east measured about 50 × 70 cm., the second 60 × 90 cm., and the third 40 × 120 cm. (Fig. 20). The pottery found amongst the decayed linen seems to have been standing on top of the boxes and not contained in an upper layer of boxes, as is indicated in the restored drawing on Fig. 20. Pottery seems also to have been packed into the rather wide space between the second and third boxes. Beginning in the second box was found the first of a number of broken box and jar mud sealings (Fig. 47), inscribed with the name

⁶ Specimens of the cloth from these boxes were examined for Mr. Lucas by Dr. A. C. Thysen and Mr. H. J. Bunker of the Bacteriological Laboratory of the Royal Naval Cordite Factory, Holton Heath, Dorset, England. They found that the definition of the fiber particles was insufficient for the cause of deterioration to be diagnosed; however, it was possible to detect spores of fungus. Their report goes on to state: 'The existence of fungi in the fabrics investigated has thus been made highly probable. Nevertheless, it would be incautious to attribute to this agency more than a purely temporary and superficial action on the fabrics on which they were found.' As for the wood in the Hetep-heres

tomb which it had been thought was attacked by a fungus growth, their report states: 'A microscopic examination of the silvery covering of the sample of wood . . . established beyond doubt that it could not be a layer of *fungus mycelium*. It was found to be a plaster mould or impression of the wood on which it lay. . . . The more woolly portion of the surface covering of the wood, which to the naked eye resembled a *fungus mycelium* was found on microscopical examination to consist solely of needles of an inorganic nature, probably of calcium sulphate interspersed between the wood cells.'

of the mortuary workshop of Cheops. These had evidently been broken off the objects in the deposit in the original tomb. Here also were found the fragments of alabaster chipped from the coffin and a number of flint blades (Pl. 41) which were mixed with the broken pottery in the area south of the sarcophagus and seem to have been gathered up from the debris of the original burial deposit. There were twenty-two flints in all, thirteen with rounded ends and nine of a smaller rectangular shape. Amongst the pottery on top of the second box lay a sandstone rubbing stone.

In the center of the southern area stood two more superimposed boxes of pottery. In the upper of the two were a good many stone vessels and the little spouted gold cup (Pl. 40 b). On the lid of this box lay two groups of badly decomposed tools, four in one group and six in the other (Figs. 20, 37). In decaying these had formed a large mass of bright green material (hydrated copper carbonate, being in fact the same substance as malachite according to Mr. Lucas). The two boxes seem both to have measured about 70×60 cm., and each was perhaps 40 cm. high, like the linen boxes against the south wall, although this can be little more than a guess.

Between these boxes and the coffin stood two more superimposed boxes measuring about 100×55 cm. These contained pottery. Here we can be fairly certain that their total height was about 80 cm., since the ends of the bed-canopy beams and poles rested upon the lid of the upper box. The bed-canopy parts extended out southward from the lid of the sarcophagus which was at a height of 85 cm. (Fig. 20). In the rectangular space left by the boxes and the east side of the bed lay a round basket with a lid of undetermined height which Reisner states contained plaster and was left lying there by the workmen (Fig. 20; Pl. 42). There seems an alternate possibility that it might have contained a group of alabaster vessels which were lying in this area (Pls. 30, 42), although these may have fallen out of the upper box immediately to the south of this basket.

It should finally be stated that the boxes in the center of the room, as well as the one which lay against the east wall, contained plaster which Reisner identified as being from the blocking of the doorway into the chamber of the Dahshur tomb. One of these pieces which he sketched in the register of objects from G 7000 X was stated to bear the impression of the juncture between the roof of a vaulted sloping passage and the doorway into the chamber. Reisner considered this a very important indication of the nature of the original tomb. It must be confessed that no amount of work over these pieces by Dows Dunham and the writer could be brought to a satisfactory result in confirming this suggestion. It should also be remarked that although sloping passages were employed in the transitional tombs of the reign of Sneferu, as well as in the Queens' pyramids at Giza, these were in no case cut with a roof rounded or vaulted in section. Neither the width, height, nor angle of this passage can be determined from the plaster fragments. Although they may well have filled the interstices between the squared blocking stones of the entrance to the original chamber, it does not seem that they can be made to produce any very satisfactory evidence in regard to its size or shape.

There remains to be considered, in this general survey of the contents of the tomb, the recess in the west wall which contained the alabaster canopic chest of Queen Hetep-heres I. The canopic chest was set well back in this recess which had been completely sealed by a masonry blocking set in plaster (Pl. 44; Fig. 22). It rested on a small wooden sledge (or stretchers). The runners of this could be made out but it was too badly decayed to be recovered. The alabaster chest was 48.2 cm. square and 35 cm. high. The walls were 3.5 cm. thick and the lid 2.8 cm. thick. The lid had two small projecting ledge handles and rested flat on the box without any rebate. Inside, the box was divided into four compartments by narrow walls and one dry compartment was 26.2 cm. deep. This dry compartment contained a mass of decayed organic matter, but amazingly enough, the other three compartments retained about 5 cm. of

yellowish liquid which was found by Lucas to consist of a 3 per cent solution of natron in water. In this lay the remains of the canopic packages which contained the entrails of the queen; all that has survived of the mortal remains of the mother of Cheops. In the center of the lid was a mud seal which had fastened a string that had run around the box. The seal was protected by a small perforated pottery lid (34-4-42; Fig. 78). Unfortunately the surface of the mud was badly decayed, but, as on the other sealings from the tomb, there must have been mention here of the mortuary workshop of Cheops which had prepared his mother's body for burial.