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The Judgment of Solomon

By the Master F V B

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The royal cemetery, G 7000, at Giza, showing the progress of excavations to 1928. Looking down to S.E.

The Empty Sarcophagus of the Mother of Cheops

THE report issued in May, 1927, carried the account of the examination of the tomb of Queen Hetep-heres I, the mother of Cheops, down to December, 1926, when all was ready to proceed with the opening of the alabaster sarcophagus. It seemed strange to our friends that we did not at once open the coffin. At first we delayed because, after the long summer spent in the tomb-chamber, we all needed rest, and then I myself was incapacitated by influenza. Under these circumstances it was quite impossible to resume work on the tomb before March. I made the final arrangements for the opening of the sarcophagus while still lying disabled.

At each end of the alabaster lid of the sarcophagus there were two short projections which had served as handles for lifting the lid. Lt. Comm. Wheeler prepared a frame of wooden beams which fitted under these handles and rested on three steel jack-screws, one at the north and two at the south.

In the preceding report¹ I wrote: "On September 2 (1926), in one of the linen boxes, we found a flake of alabaster which fitted one of the chipped places in the alabaster sarcophagus. This came as a shock. We already knew that the contents of this box had been gathered up from the original tomb, and that the original tomb had been broken into by thieves. The only plausible explanation of the presence of this chip of alabaster was that the thieves had opened the coffin, for it was in the rubbish left by the thieves. . . . It is needless to say that this evidence of the opening of the coffin by the thieves had a very depressing effect." As a consequence of this conclusion, on November 28, while the inlaid curtain box which lay on the sarcophagus was still intact and the lid could not be moved without disturbing its inlays, I placed secure seals both of mud and paper

¹Bulletin of the Museum of Fine Arts, Boston, Special Number, May, 1927, p. 23.

attaching the lid to the coffin. And when the moment came for opening the sarcophagus, I was careful to have a number of official witnesses present.

About ten o'clock on the morning of March 3 (1927) the witnesses who were to be present at the opening assembled at the wooden shanty which protected the mouth of the tomb-shaft:

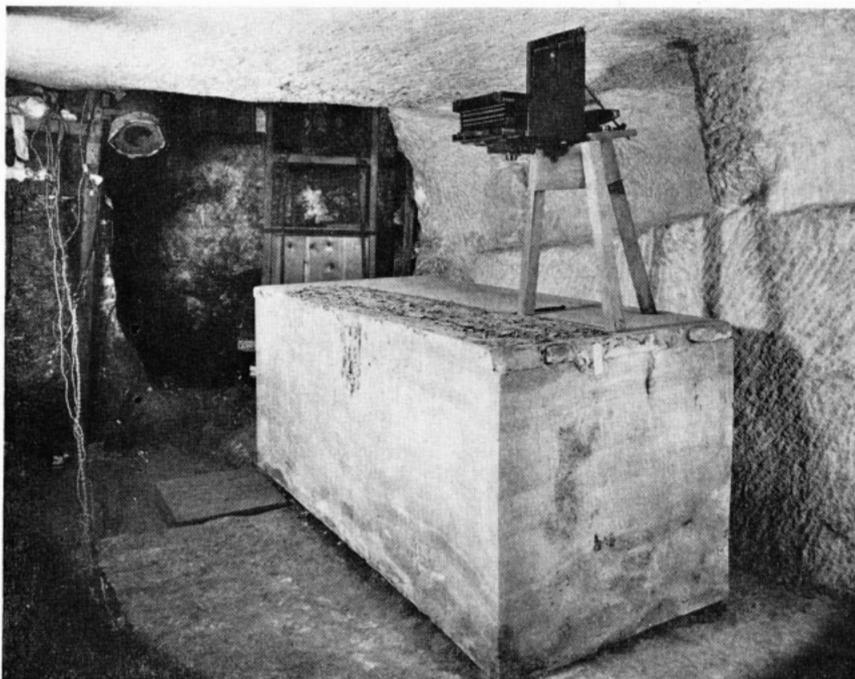
1. Osman Pasha Moharrem, then Minister of Public Works.
2. Ibrahim Bey Fahmy, then his Under-Secretary of State.
3. Monsieur Lacau, the Director-General of the Department of Antiquities.
4. Mr. Joseph Lindon Smith, representing the Trustees of the Boston Museum of Fine Arts.
5. Dr. Morton Howell, American Minister to Egypt.
6. Dunham, Wheeler, and myself.

In a preliminary statement I set forth the facts as known at that time and outlined the various possibilities arising from the known facts:—

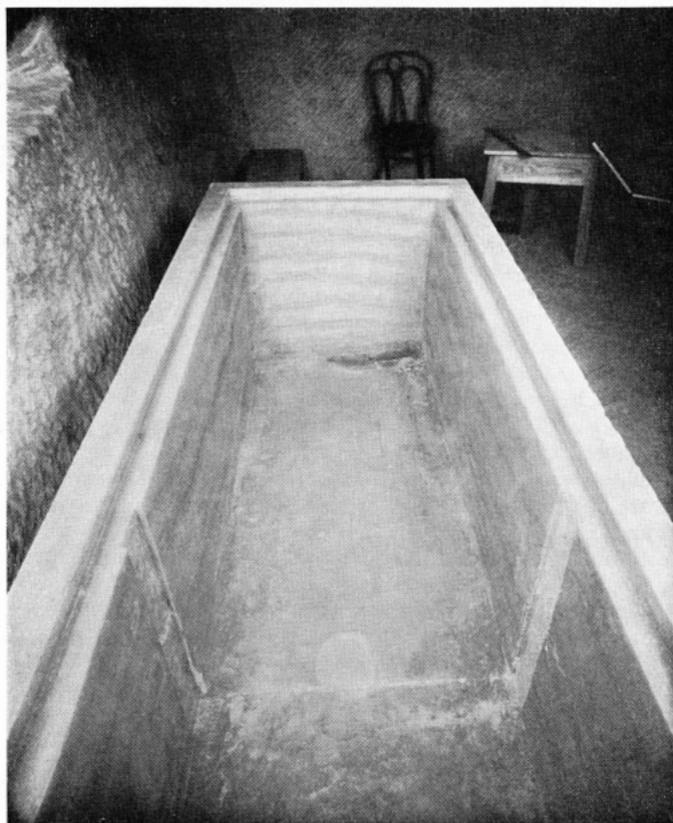
- a. The thieves who had opened the sarcophagus might have been disturbed before doing any great damage.
- b. They might have stripped the body to the bare skin.
- c. Cheops might have replaced the stolen ornaments more or less completely.

I never doubted that the mummy was in the coffin.

We were then lowered in the lift, one or two at a time, and reassembled in the burial-chamber of the queen. Mr. Wheeler, directing the operation, took his place at the northern jack, and Mr. Dunham with our Egyptian foreman, Mahmud Ahmed Said el-Meyyit, at the two southern jacks. The rest of us sat on chairs and boxes or stood along the southern wall. Every eye was fixed on the sarcophagus. The lid started from its place, quite easily breaking



The last stage before opening the sarcophagus; photographing the collapsed curtain-box; note the two seals on the end of the sarcophagus. Looking N.N.E., December 5, 1926.



The empty interior of the sarcophagus. Looking down to south, March 3, 1927.

the five seals, and came up slowly a line at a time. We saw the inside walls of the sarcophagus gradually coming into view, and moment by moment looked deeper into the interior. It was soon evident that there was no inner case; and finally, after ten minutes, we all realized that the sarcophagus was empty and almost as clean as the day it was made. In my preliminary statement I had mentioned every possibility except the one which lay patent before us. There was no mummy in the coffin. It had seemed to me inconceivable that Cheops should have ordered the remains of his mother's burial transferred to Giza and hidden under a hundred feet of masonry unless the body, the most essential part of any burial, had been brought along with the coffin. There

the inside of the coffin. A faint discoloration at one end showed that it had once been used. Then the visitors went up the shaft in the lift, two at a time. Mr. Dunham made scale drawings of the sarcophagus, and Mustapha Abu-el-Hamd took photographs. The next day, Mr. Wheeler went on with the recording of the tomb in addition to the supervision of the forward excavations in the cemetery above; and Mr. Dunham resumed the reconstruction of the furniture.

Between March 4 and April 11, Lt. Comm. Wheeler cleared and recorded the pit in the northwestern corner of the floor of the chamber. The pit was found to be a projected continuation of the main shaft with a chamber several meters



The sarcophagus in its case emerging from the shaft. Looking N.N.E., April 17, 1927.

was a general feeling of poignant disappointment among our guests. I myself had not been sanguine since the preceding September. It was not the absence of royal jewelry which preoccupied my mind so much as the archaeological fact that the coffin did not contain the mummy. But before we could interpret and utilize that fact, one more point remained to be explored. In the western wall of the chamber, there had been visible from the first, as I have already mentioned, a recess, 275 cm. long by 75 cm. high, which was walled up with masonry and smeared with plaster. While the faces of our visitors were so blank, I looked at Dunham and Wheeler and saw that they were both smiling. Their minds, like mine, had turned to the sealed recess in the western wall.

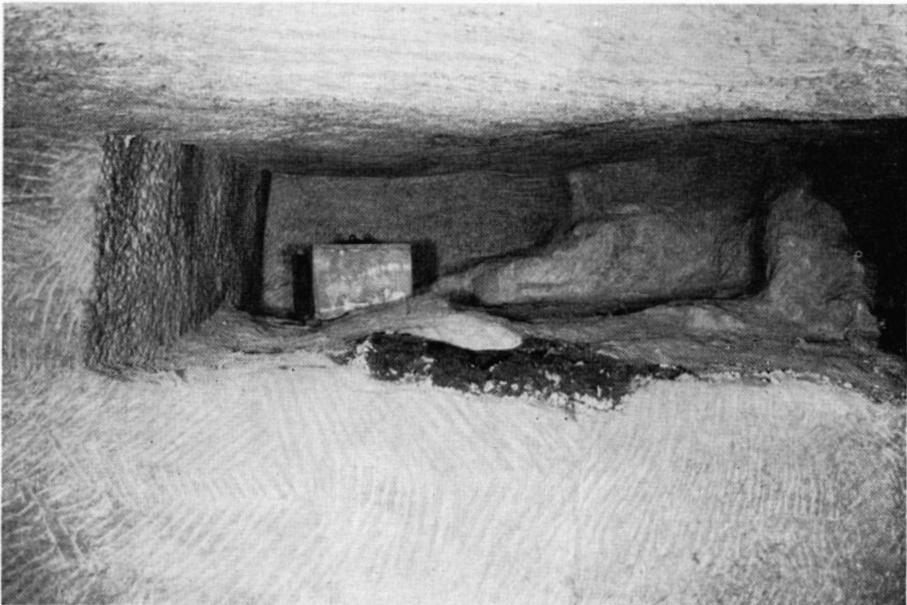
Mr. Wheeler called down a couple of our Egyptian workmen and moved the lid back to the west where it was leaned against the wall below the mysterious recess. We examined carefully

lower than the bottom of the shaft; but the masons had abandoned that project and cut the chamber above, in which we found the deposit. Then he turned the sarcophagus over on its side to the west, and recorded the layer of debris under the sarcophagus. The sarcophagus had rested on a board floor; and a few other curious facts were noted.

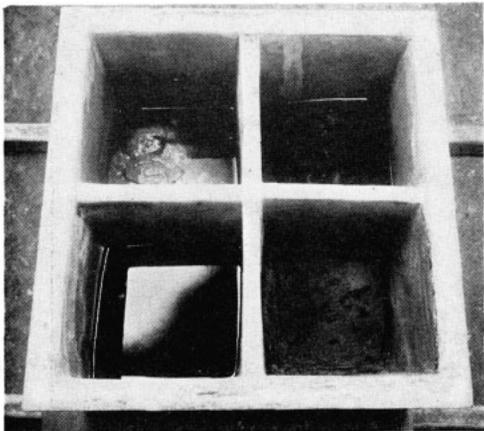
On April 11, Wheeler turned the sarcophagus back on its bottom, replaced the lid, and began encasing the whole in timbers in order to remove it to the surface. The Department of Antiquities very kindly loaned us great beams for a tripod over the shaft, pulleys, winches, and ropes. On April 17, the lifting rope, which had six turns through a compound pulley, was attached to the ropes around the wood-cased sarcophagus. The other end of the lifting rope ran from the pulley at the top of the great tripod to a large steel winch, turned by hand, anchored on the rock about



The recess in the western wall of the burial chamber. May 19, 1927.



The recess with the alabaster Canopic chest. May 19, 1927.



The interior of the Canopic chest, showing the water. May 21, 1927.

twenty meters away from the mouth of the shaft. Turning the winch so as to lift the northern end of the case, Wheeler maneuvered it into the shaft by means of jack-screws applied to the southern end. This was a difficult piece of work because of the narrow clearance in the doorway of the chamber, and required four hours of hard labor before the case swung clear hanging vertically suspended in the bottom of the shaft. The sarcophagus with its lid weighed 2.2 tons and with the case not quite 2.5 tons. Wheeler came up riding on the case in order to steer it past the wooden boarding in the shaft. The only difficulty was encountered at the westward bend about a third of the way up. That evening at sunset, the case stood on the surface of the rock south of the mouth of the shaft. Seven hours and forty-five minutes had elapsed from the moment of hooking on until the case stood on the surface, and the actual passage of the shaft had taken about three hours. The whole operation was a comparatively simple one with the apparatus at our disposal.

The lowering of the sarcophagus by the skilled workmen of Cheops was hardly more difficult even with the primitive means at their disposal, and probably did not take any more time than the raising as carried out by Lt. Comm. Wheeler. The sarcophagus was tied up in ropes with pads of cloth to prevent damage, and hung on perhaps four long ropes. When it had been worked into the shaft, the weight was eased by the friction of the ropes against the top of the pit. A gang of twenty or more men on each rope pulling horizontally could have held the sarcophagus with ease and have lowered it slowly following the word of command of the overseer. Probably as each rope slid down the mouth of the shaft the nearest man let go and passed back to take hold behind the last man. Once started down, the operation ought not to have taken more than a few hours. It is difficult to see how the lowering could have been interrupted once it had begun. The original tomb

at Dahshûr had a sloping passage. In lowering stone sarcophagi and other heavy stones down such passages, the ropes were usually eased around wooden posts set outside the entrance and braced with other posts against the face of the pyramid or mastaba. We found holes in the rock to take such posts at the entrances of all three of the small pyramids which belonged to the queens of Cheops. The raising of the alabaster sarcophagus of Hetepheres up the inclined passage of her tomb at Dahshûr must have been more difficult than the lowering in the Giza tomb, because the ropes had to run horizontally from the entrance of the sloping passage. We know that the Egyptians used grooved bearing blocks of stone to change the direction of the pull of ropes; and I conclude that such a block with greased grooves was set in the entrance of the Dahshûr tomb when the sarcophagus was raised. With such a block the raising of the sarcophagus was possible; and the fact that it was raised is indisputable because the sarcophagus had been at Dahshûr and was found at Giza.

The main chamber of the Giza tomb was now completely empty and the whole room available for the next step,—the opening of the recess. But the end of the season was approaching and arrangements had to be made to terminate the excavations and dismiss the working gangs. I had fixed April 23 as the final pay-day. In the morning of that day, the men uncovered the entrance to the rock-cut chambers of Meresankh III, under the northern end of the mastaba of Hetepheres II, the fair-haired. Hetepheres II was a daughter of Cheops and a granddaughter of our older queen, Hetepheres I. The historical significance of this chapel of Meresankh III was so great that we devoted our time for the next four weeks to its study.¹ The leave granted to Mr. Dunham by the Trustees expired and he departed on April 30 to return to America.

On May 21, Lt. Comm. Wheeler removed the plaster from the masonry blocking the western recess and made a scale drawing of the stones forming the masonry. In the afternoon, we proceeded to demolish the masonry, assisted by Mahmud el-Meyyit and two other workmen. When two of the stones of the top course had been removed, we looked in and saw a large space, empty except for a very beautiful alabaster chest in the southwestern corner. The rest of the masonry was then removed. Some of the blocks were well-dressed rectangular blocks of fine white limestone, but over half were of the local nummulitic stone and evidently quarried in the chamber itself. The recess was quite roughly cut with a maximum width of 240 cm. (275 cm. long by 75 cm. high), and had been made in an attempt to enlarge the chamber, as I had always supposed. The alabaster chest with its lid in place stood on the decayed remains of a four-handed wooden stretcher on which it had been carried from the tomb at Dahshûr. Upon the lid lay a perforated

¹See Bulletin of the Museum of Fine Arts, Boston, October, 1927, No. 151.

pot-lid of red pottery with a loop-handle on its top. Later we discovered that this lid protected the original mud-sealing of Cheop's mortuary department; and on the under side of the sealing was a print of the knot in which were tied the ends of a fine rope passing twice around the chest. The polished and beautiful surfaces of the chest and the straight edges showed at once that this chest, no doubt a Canopic chest, was a companion piece of the great alabaster sarcophagus. It was the custom in this period and for many ages thereafter to place the Canopic chest or the Canopic jars in a rectangular hole in the floor covered with stone slabs, or in a recess in the wall blocked with stone masonry. The placing of the alabaster chest alone in the recess was therefore in accordance with custom; but it was at the same time clear that the recess was not cut for that purpose, but, having been cut, was used as an afterthought to receive the chest. The splashes of plaster on the floor proved also that the chest had been placed in the recess and hidden with masonry before anything else had come into the tomb.

On May 23 we were ready to open the alabaster chest. Lt. Comm. Wheeler, Mahmud el-Meyyit, and I crawled into the low recess, and while they lifted the lid vertically I looked in the box. The interior was hollowed out in four square compartments. The compartment on my right hand which I saw first, contained a flat-topped deposit of organic matter which I at once recognized as a Canopic packet wrapped in linen,—that is, a package containing part of the viscera of the queen which had been removed in the process of mummification. In the left-hand compartment I saw a similar package, but to my astonishment covered about five centimeters deep with a clear yellowish liquid. The other two compartments also contained Canopic packages, making the traditional four, and of these one was also covered with liquid and the other partially covered. Never before had any liquid been found of this amazing antiquity. A week later Mr. Lucas drew off samples from each of the two compartments and analyzed them. Both were practically the same,—a three per cent. solution of Egyptian natron in water. Mr. Lucas points out for comparison that sea water is a 2.5 per cent. solution of various salts in water. The pale yellow color of our fluid is due to the presence in solution of a small quantity of organic matter from the Canopic packages.

At last we had found in the tomb part of the mortal remains of the mother of Cheops, probably all that will ever be recovered. These Canopic packages were in a chest which was made of the same stone and clearly by the same craftsmen as the alabaster sarcophagus, and proved that the body which once rested in the coffin had been mummified. The evidence was final that the officials of Cheops had transferred the remains of an actual burial from its original tomb to Giza; but the mummy itself was not in the Giza tomb. The

examination of the tomb was finished. The evidence was all before us. Five thousand years ago, in the reign of Cheops, a number of men had carried out certain acts which had resulted in the deposit in our chamber of the remains of this burial. The story of their acts was recorded more or less perfectly in the contents of that chamber, and safely hidden away a hundred feet underground until with infinite labor and patience the Expedition had extracted them from the mass of material in the chamber. The main outlines of the story had been already deduced from the facts known before the opening of the recess:—

1. The owner of the deposit was Hetep-heres I, daughter of Huni, wife of Sneferuw, and mother of Cheops.

2. She had died in the reign of Cheops and been buried by him in a tomb beside the pyramid of her husband at Dahshûr.

3. The original tomb had been plundered by thieves, and *the coffin was opened by them.*

4. The remains of the burial had been transferred on the order of Cheops to an unfinished rock-cut chamber entered by an unusually deep shaft, beside Cheops' pyramid at Giza; and the shaft, a hundred feet deep, had been blocked solid with masonry.

5. That chamber at Giza was absolutely intact and had never been seen by human eyes until the Expedition discovered it in March, 1925.

We now had the certainty that the mummy of the queen had not been brought to Giza, and it was necessary to explain that fact. The most reasonable explanation is that the mummy had ceased to exist at the time of the transfer. The ruthless and horrible methods of those who plundered the burial chambers of the dead kings and queens of Egypt and of their great nobles is only too well known to us both from the ancient records of the trials of such criminals and from the conditions found in the tombs by modern excavators. The body was usually dragged out or hauled up to the surface where it was unwrapped and broken up in the search for gold ornaments and amulets; and the dismembered bones left lying to be gnawed and dragged away by dogs or jackals. In some cases the thieves set fire to the linen left in the chamber with the manifest intention of burning out the whole burial deposit. It may be that there was some superstitious reason which lies just beyond our ken for this destruction, some idea of rendering the spirit helpless and incapable of vengeance. I have no doubt that the mummy of Queen Hetep-heres was broken up by those who violated the tomb and her bones scattered beyond recovery.

Several other explanations have been offered both by ourselves and by others, but always each of these theories left some known fact out of account. Usually it was the indisputable fact that

the original tomb had been really plundered, or that the body is the essential part of any burial and its separation from the equipment intended for the use of the spirit would have been in itself a sacrilege. In every case I come back to the most reasonable explanation which fits the known facts — the mummy was destroyed through the ruthless greed and malice of the thieves.

Accepting this point, it remains to consider how the king of Egypt came to order the remains of the burial to be transferred to Giza and buried so securely in the secret tomb that it alone of all the royal tombs of the Pyramid Age escaped intact until our day. It seems impossible to believe that he could have known that the alabaster sarcophagus was empty. The fact that Cheops placed a food offering in a niche in the shaft indicates the belief of the king that his mother's mummy rested in the alabaster sarcophagus below. Was it possible to conceal the destruction of the mummy from the "great god"? Let me attempt to reconstruct the crime.

The attention of the Court was concentrated on the new royal cemetery at Giza where Cheops was building his pyramid. The old cemetery of Sneferuw at Dahshûr was left to the care of the police guards and of the funerary priests of the tombs already built. The other persons who frequented the cemetery were the masons and quarrymen (the so-called "necropolis workmen") who were engaged in building the mastabas of members of the family and adherents of Sneferuw. These people, left very much to themselves, had time enough to think of the gold buried in the tombs and plot evil. A conspiracy was formed to loot the tomb of Hetep-heres. The gang certainly included masons and quarrymen, perhaps some of the very people who had prepared the tomb. If my reconstruction of the tomb be correct, they sunk a shaft vertically in the filling at the southern end of the stairway or sloping passage until they reached the mouth of the sloping tunnel. They then bored through the filling of the tunnel until they came to the masonry blocking the entrance. They broke through the two upper courses of the masonry, thrusting the inner stones with their plaster inwards into the chamber. The room thus entered was about 18 feet long by 10 feet wide and 9 feet high. The alabaster sarcophagus stood in the corner (southwestern corner) opposite the entrance, with its long axis north-south. The bed, with its baldachin erected over it and the head-rest in place, stood along the south wall; the carrying-chair, the two armchairs, and the gold-covered chests stood beside the baldachin, east of the sarcophagus; and the vessels of alabaster and pottery were on the north nearer the doorway. The thieves made straight for the sarcophagus, for the most valuable objects, the personal ornaments, were on the body. The lid was difficult to lift because it fitted so closely, and the handles at the ends were only about five centimeters long. The thieves used

metal chisels to start the lid, breaking off one corner and chipping both lid and box, but only along one side, which was the eastern side, as the sarcophagus stood in that chamber. Judging from other cases of plundering, they probably turned the lid back against the west wall, exposing the whole interior of the coffin. All the visible jewelry was hastily seized. The body was dragged out and brought up to the surface and taken into some adjacent enclosure where their lights would have been hidden by the walls. The linen wrappings were stripped off in the search for gold ornaments concealed in or under the folds. The head and the limbs would have been broken off to remove the necklaces, the girdles, the bracelets, and the anklets. We can only surmise the loot which the thieves divided among themselves. They did not trouble to strip the gold casing from the furniture nor to search thoroughly the rest of the deposit, else the cups and toilet implements of solid gold had not escaped. It is possible that there were, in addition to the box of silver anklets, other jewel-boxes containing more valuable ornaments which were taken; but the thieves were in a hurry as always at the early plundering of a tomb, and by the time the coffin lid was raised, the rest of the deposit must have been in indescribable confusion, trampled and thrown about the room. The work was certainly done at night by the light of torches and the minds of all were intent on getting the mummy out and stripping it. Four or five men at least, they were,—working in a passion of avarice and fear. Once the gold ornaments on the body were secured they fled silently to their quarters. Some animal or other would have arrived before they had disappeared in the darkness.

Perhaps early the next day the violation was noted or it may have escaped discovery for several days. Some honest person accidentally passing by may have seen that something had happened. Some enemy of the thieves may have had his suspicions aroused by an unusual noise in the night, and looked for evidence of plundering. Or, as often happened, some member of the gang believing himself cheated in the division of the loot may have denounced the others. The report would have come straight to the chief vezier, the man who had the king's confidence. It was a question concerning the king's mother. The vezier knew at once that he was in danger, he and all his party at court. His place certainly, and probably his head, would be the penalty unless the affair were properly managed. Usually a commission would be sent to investigate. I imagine that the vezier went himself, taking only his most trusted friends. They penetrated the plundered chamber and saw that the mummy was gone. By this time, several hundred people may have known that a violation had taken place, but besides the thieves themselves only the vezier and his friends knew its exact extent. There was a hasty consultation in the chamber by the flickering light of torches, and the vezier made up

his mind to conceal the destruction of the mummy from the king. With their own hands they replaced the lid on the sarcophagus. They came out and placed one of their own number in command of a guard over the tomb. The next step would have been to arrest every person who could by any possibility know the whole truth,— every possible witness, in particular every one of the cemetery guards and workmen. They would have been questioned in secret under torture and a large part of them, perhaps all, summarily executed. The vezier would not have been too particular about their guilt or innocence. His own life and fortunes were at stake and those of his intimate associates. A formal report would have been drawn up of all these proceedings, not according to the facts, but according to the resolution taken by the vezier. Before the end of the day, the vezier would have been ready to interview the king. After the usual formalities in approaching the "great god," he would have told the king that certain evil persons had attempted to violate the rest of Queen Hetep-heres, the honored mother of His Majesty, but, thanks be to Ra and to the vigilance of His Majesty's servants, they had been detected in time, had been put to the torture, had confessed, and been executed on the spot. The burial of the queen was intact, but measures should be taken to prevent any further attack. It was probably the vezier who suggested that the burial be transferred to a place of safety beside the king's pyramid at Giza. It must be remembered that the vezier was the most trusted official of the king and as intimate with him as a man could be with His Majesty of Egypt. His word would have been accepted. His partisans and spies filled the court and the king's harem, and he had every hope of preventing any other version from reaching the king. The feelings of Cheops during this recital may be imagined,—rage, relief, and determination to put an end to such infamies. He may have demanded the heads of all the remaining persons who had any connection with the cemetery, and further executions may have followed. Thus the story may be reconstructed of the events which led to the destruction of the mummy and the deception of Cheops by his highest officials. I assume that the alabaster sarcophagus was hauled out of its original tomb with the lid in place and so transported on a hand-drawn sledge to Giza, where it was lowered with its lid still in place and set in the chamber below. The vezier could trust to the natural repugnance of the king to prevent his opening the coffin and looking on the body of his dead mother.

The rest of the proceedings are perfectly clear from the facts, and have already been recounted.¹ The main pieces of furniture — the bed, the curtain-box, the carrying-chair, and the two armchairs — were whole and in good condition; the baldachin was dismantled and the parts carried on a stretcher; the alabaster Canopic chest was also on a stretcher;

and all the rest of the deposit had been gathered up in new wooden boxes. The coffin on its sledge appeared intact. The whole must have presented a satisfactory appearance to the king when he reviewed the procession, as I have no doubt he did at some point during the transfer. He would have seen no reason for suspecting any greater damage than the vezier had reported.

The remains of the queen's burial were placed in the chamber, the Canopic box going down first and then the sarcophagus. The lid of the sarcophagus was in place just as it was five thousand years later when we raised it. The boxes from the other tomb were placed in the chamber, then the furniture, and finally the parts of the baldachin. In the meantime a large number of blocks of white limestone from Turah had been assembled and a great quantity of sulphate of lime (plaster of Paris). With these materials the shaft was packed from the floor of the tomb upwards. When the packing had reached a level about a meter above the roof of the chamber it was discovered that a certain amount of pottery and other rubbish, perhaps the contents of one box, had been overlooked, and they were cast down the pit with the stones and plaster. From here upwards for some distance the packing continued to be very carelessly dumped into the shaft, but always turned to a solid mass by the liberal use of plaster. When within ten meters of the top a niche was cut in the west wall of the shaft and a deposit was made consisting of the two fore-legs and skull of an ox and two jars of beer(?). Such offerings, intended for the food of the spirit of the dead person, occur frequently in the burial-chambers of this period at Giza and elsewhere. I know of no other case of the deposit being made in the shaft leading to the chamber; but other things, statuettes, models of boats, and similar objects, which are usually in the burial-chamber or in the offering-chapel, have been found in a number of cases concealed in closed niches in the shaft. I have no hesitation in concluding that this meat and beer were intended as a food offering to the soul of Queen Hetep-heres made on the express order of her son, as if the mummy of the queen were actually in the chamber below.

The niche was closed with masonry and the packing of the shaft was carried past the niche to within 75 cm. of the surface. The last ten meters were very carefully laid, especially as the work approached the inner end of the stairway tunnel. The tunnel and the stairway itself were filled with masonry, and the filling of both shaft and stair was covered with a heavy layer of plaster. Then came the final or trick-course of masonry which closed the mouth of the shaft. This was of irregular blocks of local stone set very craftily to look like the surrounding surface of the rock. Over all a layer of mason's debris was spread to form the foundations of what was afterwards Queens' Street.

I suppose half a dozen persons may have known at the time what had happened. The original

¹See Bulletin of the Museum of Fine Arts, Special Number, May, 1927.

thieves, the only real witnesses of the outrage, were probably all dead. The evidence was buried under a hundred feet of masonry. The vezier and his friends were safe except for the possibility of treachery among themselves; and with the vezier still in power that possibility was remote and probably never materialized.

The secret tomb at Giza now lies empty with only the chisel-marks on the walls to show that it

1927

Feb. 27-Mar. 2, preparing apparatus to open sarcophagus.

Mar. 3, opening the sarcophagus.

Mar. 4-6, recording coffin; clearing and recording pit in floor.

Apr. 6-11, turned sarcophagus on its side and recorded floor deposit underneath.



The gold cases of the carrying-chair, as found. February 15, 1926.

was the work of man. The examination took a long time as may be seen from the following summary of the operations:

1925

Feb. 2, plaster smear noted on quarry scarp.

Feb. 10-13, plaster patch fully exposed by excavation.

Feb. 19, plaster patch recorded.

Feb. 20, excavation of stairway begun.

Feb. 23, stairway clear; mouth of shaft discovered.

Feb. 23-Mar. 8, shaft excavated to top of chamber; an intact deposit discovered; 12 working days.

Mar. 18, chamber closed and bottom of shaft refilled.

1926

Jan. 21, chamber reopened.

Jan. 21-Feb. 4, the remainder of the masonry removed from bottom of shaft.

Feb. 4-Dec. 16, the deposit was recorded and removed from the chamber; 326 days, of which 280 were working days, spent in the chamber.

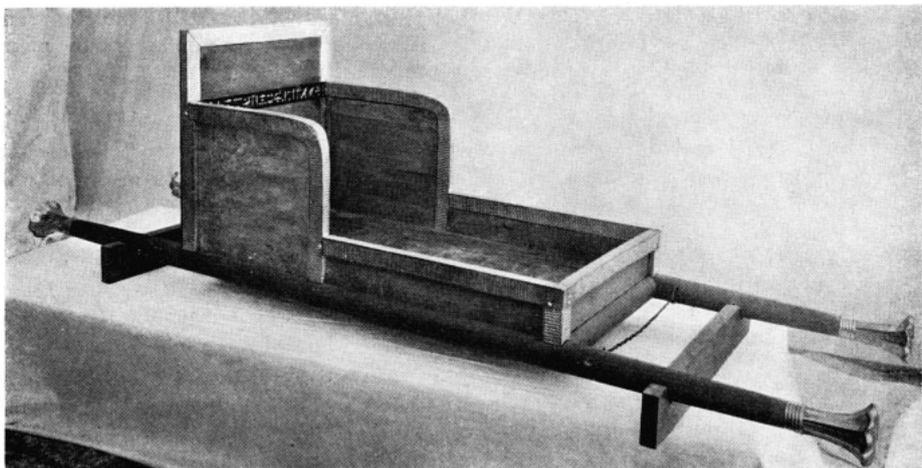
Apr. 12-17, packing sarcophagus and lid in one padded wooden case.

Apr. 18, lifted sarcophagus in its case to the surface.

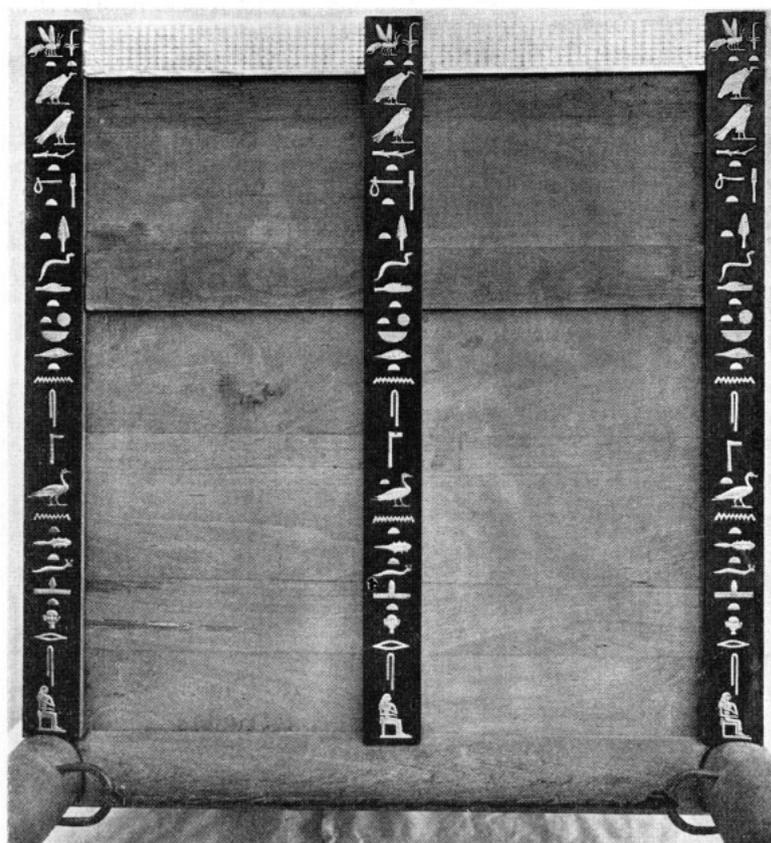
May 21, opened recess in western wall; discovered alabaster Canopic chest.

May 23, opened alabaster Canopic chest and saw packages of viscera covered with natron-water.

The last object taken out was the Canopic chest, on June 14, 1928, when it was taken directly to the Cairo Museum from the tomb. The actual number of working days during the above operations was $4 + 12 + 7 + 280 + 6 + 4 + 5 + 3 = 321$ days. I have already described the care with which the deposit was taken apart for examination and recording. In the 321 days mentioned, we made a written record in the tomb of 1,701 foolscap pages, each page dated and numbered serially, including all plans, sketches, and notes made in the tomb but not those made at the camp. This record was supplemented by 1,057 photographs also taken in the tomb and mostly of a large size (18 x 24 cm.).



The carrying-chair of Queen Hetep-heres, as delivered to the Cairo Museum.



The back of the carrying-chair.



Wooden toilet box (restored) with ointment jars.

It was this careful method of work and the painstaking record which have made possible the reconstruction of the disjointed and decayed furniture. The reconstruction was worked out partially in the tomb as we proceeded and was afterwards taken up at the camp first by Mr. Dunham and now by Mr. W. A. Stewart. Mr. Dunham was occupied during the winter of 1926-1927 and completed the first reconstructions of the wooden frames of the carrying-chair, the bed, the head-rest, and the toilet box, and had begun on the armchair, and two of the panels. Miss Thompson set the gold hieroglyphics in the ebony strips which are now incorporated in the completed chair in the Cairo Museum. In September, 1927, Mr. W. A. Stewart took over the work where Mr. Dunham left off, and is making the final reconstructions which are to be exhibited in the Cairo Museum.

By the terms of the agreements with the Egyptian Department of Antiquities, the contents of the unique tomb of Queen Hetep-heres I are to go to enrich the great national collection in the Cairo Museum, as is only fit and proper. As a recompense, the Department has presented to the Expedition a number of important objects found during 1924-1926, which was also a fit and proper act. The delivery of the objects found in the tomb has begun and has been carried out as follows:

1. June 18, 1927, the alabaster sarcophagus.
2. June 5, 1928, the restored carrying-chair.
3. June 10, 1928, the alabaster vessels, the copper ewer and basin, the gold drinking cup, the two gold saucers, the gold razors, knives, and manicure implement, the copper razors and knives, the flint razors and knives, the copper tools, the copper needle, and the restored toilet box with its eight alabaster ointment jars and its copper spoon.

4. June 14, 1928, the alabaster Canopic chest with its packages intact and the preservative natron-water undiminished.

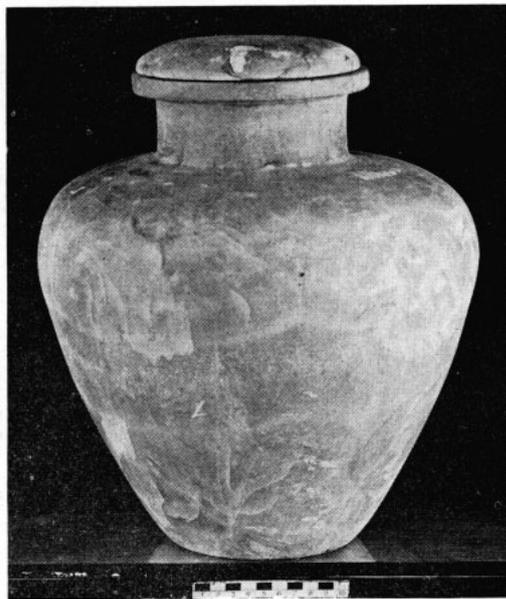
These deliveries were acknowledged by the Department of Antiquities with official communiqués issued by the Government Press Bureau, of which Nos. 11 and 12 are as follows:

COMMUNIQUE NO. 11, JUNE 14, 1928

The Carrying-chair of Queen Hetep-heres I, the Mother of Cheops

"The Harvard-Boston Expedition has begun the delivery of the funerary furniture of Queen Hetep-heres I, the mother of Cheops, to the Cairo Museum. The first piece to be handed over was the beautiful carrying-chair of the queen, which is cased in patterned gold and inlaid with solid gold hieroglyphics, in four duplicate inscriptions. The inscriptions read:—"The mother of the King of Upper and Lower Egypt, the follower of Horus, the guide of the ruler, the favorite whose every word is done for her, the daughter of the god of his body, Hetep-heres." This is the first example of a carrying-chair to be placed in the Museum. Its exquisite simplicity and the beauty of its lines testify to the great artistic sense of the Egyptian craftsmen of the Pyramid Age.

"The chair was found in the secret tomb of the queen lying disjointed on top of a mass of other objects, and was removed in 1926. The greater part of the wood had decayed; but three pieces of the frame were found in their gold cases, and one panel lying exposed, which were perfectly preserved although shrunk to one-sixth of their original volume.



Large alabaster jar with lid.

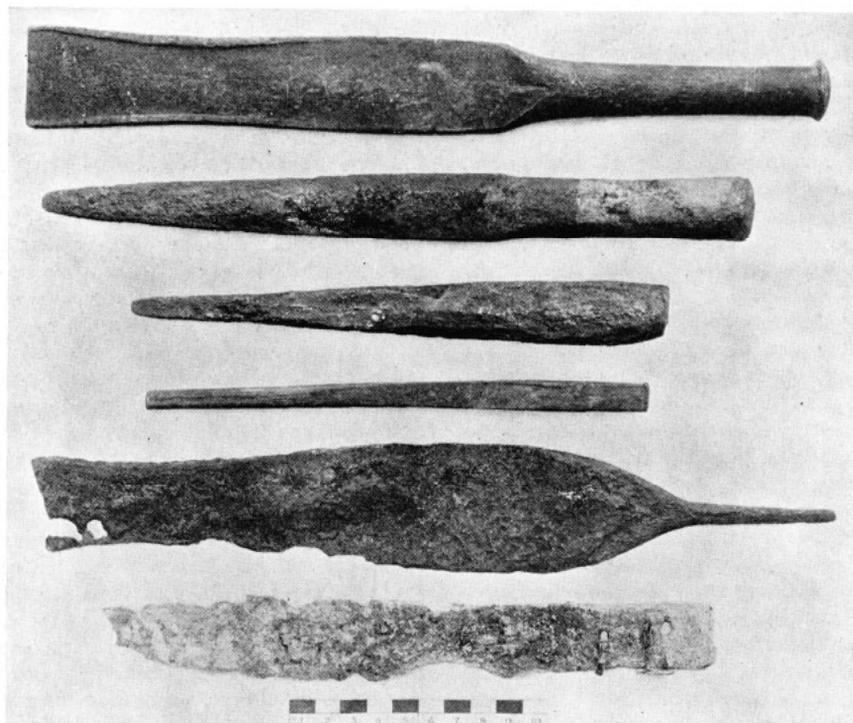


Ten alabaster jars.

These four pieces presented the joints, tenons, and the mortices and with the marks on the gold cases made it possible to reconstruct the wood of the chair in new wood jointed exactly as was the old chair. The gold cases and hieroglyphics which are all original were then mounted on this new wood. The reconstruction has required nearly two years of careful work by the staff of the

Expedition. The first reconstruction in soft wood was made by Mr. Dunham and the final form in hard wood by Mr. Stewart. Both had the assistance of the expedition carpenter, Said-el-Halaby.

"The chair was made about five thousand years ago by order of King Cheops for his mother who was then the greatest lady in Egypt. The queen sat on a cushion on the floor with her knees up



Copper implements — stone-mason's tools and a knife.

and her arms resting on the arms of the chair, and was carried shoulder high by four men. The size of the chair indicates that Hetep-heres was a small slender woman."

COMMUNIQUÉ NO. 12, JUNE 14, 1928

Objects from the Tomb of Hetep-heres I, Mother of Cheops

"A third lot of objects from the tomb of Queen Hetep-heres I was delivered to the Cairo Museum on June 10 by the Harvard-Boston Expedition. The two previous deliveries contained the alabaster coffin and the reconstructed carrying-chair. The third lot includes thirty alabaster vessels, the large copper ewer with its copper basin, the toilet box, the three gold cups, and the implements and tools of gold, copper, and flint.

"Among the alabaster vessels are two of unique form. The copper ewer and basin, cleaned by Mr. Lucas, are beautifully preserved. The toilet box of wood is a reconstruction of the old box which was found in fragments on the floor; but its contents are the original contents—eight small alabaster jars and a copper spoon. Seven of the jars contained the seven traditional perfumed ointments of the Egyptians and the eighth, kohl. Six of their lids are preserved and are inscribed with the names of the contents, while a single hieroglyphic sign on the rim of each jar indicated the connection between lid and jar. The contents of the jars consisted of dry fibrous remains, probably vegetable, which have been removed for examination.

"The objects of solid gold include a small drinking cup with recurved rim and spout, two small cups, two razors (sharpened on one edge only), three rectangular knives (sharpened on all four edges), and a manicure implement with a sharp end for cleaning the finger nails and a rounded end for pressing down the skin at the base of the nails. The copper implements consist of five razors, which, with the two gold razors, make a set of seven, and four rectangular knives, which, with the three gold knives, make another set of seven. With these are sent the extraordinary flint implements, which show the older prototypes of the metal implements—thirteen oval flints or flint razors, and nine rectangular flint knives. Further, there is a small very fine copper needle with a pierced eye. This lot also includes the five heavy tools of hardened copper which were used by the stone masons in cutting the chamber of the secret tomb at Giza—two crushing tools and three stone punches.

"On June 14 the Expedition brought to the Cairo Museum the alabaster Canopic box to be placed beside its companion piece, the alabaster coffin. The contents of the compartments, that is, the packages of intestines wrapped in linen and the natron-water, have not been touched except for the few grammes of water which Mr. Lucas drew off for analysis. Otherwise the water has suffered no diminution during the last year.

"The work of reconstructing the gold-cased wooden furniture is being continued by Mr. W. A. Stewart."

In closing this preliminary report, I call attention once more to the significance of the material from the secret tomb of Hetep-heres I. The canopy, the bed, and the curtain box were given to the queen by Sneferuw. Cheops may have been born on that bed. He it was who gave the carrying-chair and most of the other gold-cased furniture. The toilet boxes and implements, the silver anklets, and most of the vessels had been used by the queen "while alive on earth." In those days when Hetep-heres lived in the palace of Sneferuw, Egypt and its monuments presented an appearance very different from that seen by the modern traveller. The queen was a witness of the building of the pyramid of Medûm, made perhaps for her father, and that of her husband at Dahshûr,—monuments seldom visited by the layman. She must have visited the ever-famous temples of the Step Pyramid at Saqqarah built for King Zoser of Dynasty III by Imhotep, the greatest of Egyptian architects. That great complex is still in course of excavation by Mr. C. M. Firth for the Egyptian Government, and has not yet caught the attention of the public. It appears to have been the earliest building of dressed stone in Egypt and served as the inspiration of all the great temples and pyramids at Giza. In the life time of Hetep-heres I, men were still conscious of the temples of Zoser as something new and wonderful. She saw the pyramid plateau at Giza as a bare dome of rock, a part of the desert thrusting forward into the black fields; and before she died she saw the pyramid of her son rising on that rock. But none of the other familiar pyramids of Giza, Abu Roash, or Abusir, had been conceived nor had the Great Sphinx taken form in the imagination of her grandson Chephren, whose features are portrayed in its face. The queen may have visited great temples of the gods at Memphis and Heliopolis, but they do not exist to-day; for they were overbuilt ages ago or now lie as hidden ruins under obscure mounds of earth. All the great temples of Upper Egypt, and even the world-famous tombs of Giza and Saqqarah, which the traveller sees, were the work of later reigns or later dynasties. Hetep-heres I had been dead nearly fifteen centuries before the first tomb was cut in the Valley of the Kings. In her day, Egyptian culture was still a creative force, and the powers of its craftsmen, in particular the masons and sculptors, were only approaching their culmination. It was an age marked by common-sense materialism and high technical skill whose source rose in the dim past of the neolithic age, but a time when the greatness of Egypt lay unknown in the future. Men, whether at court or in the fields, went about their individual concerns scheming and planning as in all ages, unconscious of that which was to be, the accumulated result of all their lives.

REISNER.