Japanese Bronze Vase, Dated A.D. 754
Gift of Mr. and Mrs. Frank Gair Macomber
The Household Furniture of Queen Hetep-heres I

Restored by Mr. W. A. Stewart and now in the Cairo Museum

In two articles printed in this Bulletin, in May, 1927, and October, 1928. A third article, October, 1927, announced the discovery of the tomb of her great-granddaughter, Meres-ankh III, and gave some account of her descendants. It will be remembered that when we looked into the burial chamber of the secret tomb of Hetep-heres the floor and the alabaster sarcophagus were covered with a layer of gold cases which we recognized as the remains of decayed wooden furniture. The difficulty of recovering the forms and uses of these decayed objects struck Mr. Rowe, who first saw the chamber, like a physical blow. When I, three thousand miles away in Boston, realized from the cables the problem presented by this deposit, I advised that the tomb be closed again to await my return.

When, in January, 1926, the tomb was reopened by Mr. Dunham and myself, the problem was evident to us also. We had an intact tomb of the time of Cheops — the only intact royal tomb of the Pyramid Age. It was manifestly a rebural, but it contained the first royal furniture ever found of this period. Our duty was clear. No matter what the cost in time and labor, the evidence contained in that tangled mass of furniture, implements, and vessels must be recovered to the last possible scrap. With the experience of many years of archaeological research we devised a special method of examining the mass of objects and recording every fact, aiming at a record which would enable us to replace every object in the tomb as it was, if so ridiculous a demand should be made on us. In the Bulletin of October, 1928, I have reported that the work required 305 working days and was recorded in 1701 pages of drawings and written notes and 1057 photographs made in the tomb. Mr. Dunham and Lieut. Commander Wheeler assisted me, and Mr. Lucas gave us his services on all questions of decay and preservation. It is this scientific record of the deposit in the burial chamber of Queen Hetep-heres which has made possible the final reconstruction of her furniture. During the clearing we were able to reconstruct theoretically the forms of most of the pieces, and early in 1927 Mr. Dunham prepared wooden models of the carrying chair, the bed, the head-rest, and the canopy. But the reconstruction of the furniture for exhibition required a special study of the parts preserved and the hand of a master craftsman. We were so fortunate as to secure the services of a man ideally fitted for the work — Mr. Will A. Stewart, the painter. He had been director of technical education in the Egyptian Government Schools and had just retired from service at that time, along with the majority of British officials in Egypt. Mr. Stewart has prepared a report on his work which will be published with the final report.

(1) The Carrying Chair.

The first object to be restored was the gold and ebony carrying chair which is shown in two illustrations on page 85 of Bulletin No. 157 (Vol. XXVI). The framework and the ends of the carrying poles were cased in heavy gold-sheer, but the panels were of plain wood. The wood of this chair was better preserved than that of any other piece in the tomb. Three pieces found inside the gold cases and one panel were

of these structures have long since been completely destroyed and today there remains only the memory of their former glory. Under these circumstances, the bronze vase recently acquired by the Museum, bearing the name of the temple Hokōji and the date of execution, is to be much prized as perhaps the only object now extant definitely known to be from this temple. But our appreciation of the vase goes farther, for in it we note excellence of workmanship — the well-proportioned form, the crispness of the moulding as a whole, and of the lotus-petals in particular. Then, too, we see the hand of no mean artist in the modeling of the lion-heads which express the vigor and regal nature of the animal. Together with other branches of art, bronze-making in the Tempyō period was in a high state of development and the vase in question is a worthy example.¹

K. T.

¹ A comparison of this vase with one dated A.D. 1265, which is in the Hokkedo in Nara, reveals a notable similarity in form and in treatment of decoration. In the latter, which is regarded as a copy of an old vase, five dragon-heads instead of lion-heads appear on the shoulder.
perfect, but shrunk to one-sixth of their original volume. These gave us the exact system of joints and ties which held the chair together. The pieces found inside the casings showed that the mat-pattern seen in the gold had been carved on the wood and the gold pressed or beaten to fit the carved surface of the wood. The separate pieces of the frame had been made and fitted together with tenons and mortises, then taken apart and covered with the gold. At the joints the margins of the gold casings had been turned over to cover the edges of the joined surfaces. The ties of rawhide and the wooden pegs had been inserted after the chair had finally been put together. For this purpose holes had been made in the gold casing. The holes for the ties were covered with patches of gold-sheet pressed into the original pattern, and those for the pegs with broad-headed gold tacks, which seemed to be the actual pegs but were purely ornamental. It was by observing such details, and even prints made on the gold by the ebony strips, that the chair was finally reconstructed. It stands now in the Cairo Museum, a monument to the skill of Mr. Stewart, reconstructed in all essentials exactly as it was when the mother of Cheops was carried in it by four carriers, and listened to her men singing the song of the carriers:

"Happy are the bearers of the chair.
We'd rather carry it full than empty."1

1 Erman, Egyptian Literature, p. 132.

**Fig. 1.** The gold-cased armchair, as restored by Mr. Stewart.

**Fig. 2.** A detail of the right side of the armchair.
The solid gold hieroglyphs, which form four similar inscriptions giving the names and titles of Hetep-heres, were set in the ebony strips by Miss Marion Thompson. The title of "Mother of the King of Upper and Lower Egypt" shows that the carrying chair was made after the death of Sneferu and given to his mother by Cheops. The graceful lines and the simple beauty of the decorations make the chair one of the monumental pieces of Egyptian furniture.

(2) The Armchair. (Figs. 1, 2, 3.)

The armchair was cased in much thinner gold-sheet than the carrying chair and all the wood had completely decayed. Fortunately the left side had fallen on a fairly level surface and the pieces lay in approximate order so that at one glance we recovered the design, which consisted of three papyrus flowers under a rilled chair arm. Only the arms were decorated; the rest of the gold was quite plain. But the gold had been laid on the wood before the chair was finally assembled and so had been cut for the entry of the tenons in the mortises and for the ties. Furthermore, the pressure of the different parts on one another had left prints on the gold. Thus, even without the wood, we were able to reconstruct the joinery. Where a casing was composed of several sheets these overlapped slightly and the narrow margin of the under piece was brighter, so that the pieces could be exactly fitted together. The legs, carved like the four legs of a lion, presented the greatest difficulty, but Mr. Stewart found that by holding the gold-sheet in the hollow of the hand it resumed the old form in which it had been originally beaten. The chair is very roomy for a person of the size indicated by the carrying chair and the anklets. The seat was covered, of course, with a cushion.

(3) The Jewel Box and the Anklets. (Figs. 4, 5, 6, 7.)

The jewel box bore on its lid an inscription in relief (Fig. 4): on the right, "Mother of the King of Upper and Lower Egypt, Hetep-heres," and on the left, "Box containing deben-rings." As the inscription was not easily legible, some scribe has written "deben-rings" plainly in black ink on the right. The box as found had collapsed, but a careful examination in situ proved that it had contained only the anklets.

The rectangular sheets which had covered the outside (except the bottom) and all the inside faces (including bottom and top) permitted a direct reconstruction of the size of the box and the thickness of the boards. The joints were given by the turned-over edges. The two battens inside the lid were very cleverly ascertained by Mr. Stewart to be rounded on the inside. He found the small end pieces of gold and traced them in the record to the inside of the box. The ivory button on top of the lid was found in place, but so decayed that it had to be replaced with a button of new ivory.
Fig. 4. The lid of the jewel box, showing the ivory button and the inscriptions, one in relief, the other in ink.

Fig. 5. The jewel box with lid raised. Restored by Mr. Stewart.
Fig. 6. The inside of the jewel box, showing the framework and rings in place.

Fig. 7. The mounting of the rings and cones on the wooden frame. Woodwork by Mr. Stewart. Rings cleaned by Mr. Lucas.
The anklets are of silver, each inlaid with four dragon-flies and four carnelian discs. As they lay on the bottom of the box they showed two rows of ten rings each, but a number of the silver rings were irretrievably decayed. The better preserved eastern row contained the remains of a truncated cone of wood at the ends of which were the gold cases of two discs. From this material the mounting of the rings was clear. The large disc had no gold on the bottom and was the one on which the cone was set while in use. The smaller disc had a square slot and was removable, indicating that it was taken off to remove or replace the anklets on the cone. It was evident, however, that the two cones of anklets could not have been laid loose in the box to rattle around, but must have rested on a plain wooden frame. By a careful study of the marks of boards and of nail-holes on the bottom of the box, Mr. Stewart has made a reconstruction of the wooden frame which utilizes all the available evidence and is effective in holding the cones in place. The box and the rings now stand in the Cairo Museum, as shown in the illustrations. The silversmith has taken the common dragon-fly of Egypt and made it into a beautiful decorative motif. He has added two smaller wings on each side to make the design cover a semi-circle, and heightened the neutral colors of the insect by the use of inlays of semi-precious stones. No monochrome picture can give the effect of the beautiful colors of the anklets—a plain surface of silver in which are set glorified dragon-flies in turquoise, lapis lazuli, and carnelian.

(4) The Bed. (Figs. 8, 9.)

The reconstruction of the bed was comparatively easy because the four circular end-knobs and the four lion's legs were well preserved, and indeed two of the legs still contained the original wood. Furthermore, the gold-sheet was thicker than that of the armchair, but not so thick as on the carrying chair. Again, the holes in the gold, the turned-over edges, the prints of overlaps, and similar indicia, led Mr. Stewart to the exact reconstruction. The footboard of the bed had been removed in transferring the deposit from the original tomb at Dahshur to the secret tomb at Giza, and the bed thrown in upside down along the western side of the chamber with the foot end on top of a stack of stone and pottery vessels. Thus the boarding which covered the bed and bore the mattress fell out upside down, with the two longitudinal slats on top. The whole had dis-integrated as it lay, and it was the minute examination of this decayed wood which enabled us to reconstruct the boarding to fit the grooves in the side and end bars of the bed. The inlaid footboard, which had been mounted on the bed in two copper-bordered slots, and was taken off during the transfer to Giza, was laid against the head end of the bed, where it fell over on its face, and, while the wood
had decayed, the incrusted pattern of gold and faience was recovered practically intact, as seen in Fig. 9.

The bed, which is very broad and rather short, slopes from head to foot; and the footboard kept the mattress from slipping off. In the Queen's palace the bed stood under the curtained canopy, which bore the names and titles of her husband, Sneferuw. Even the inlaid curtain box bore his name, so that the bedroom furniture was clearly a gift of her husband, King Sneferuw.

(5) The Razors and Knives. (Figs. 10, 11, 12.)

Among the objects sent to the Cairo Museum in the second delivery were curious implements, some of gold, and some of copper, which had been found close together under the jewel box. There were two types which occurred in both gold and copper.

One, with a rounded top and a tang projecting from the square-cut base, was immediately recognized as the earliest known form of the razor which was used in the Old Kingdom and, with a variation of form, in the Middle Kingdom. One side of each example, even of the gold razors, had been sharpened to a cutting edge by whetting (Fig. 10); and remains of wooden handles were found in which the tang had been inserted (Fig. 11, above on right). The other type was a curious rectangular knife sharpened on all four edges, with one side flat and one rising in a
low panelled form. This rectangular metal knife was previously unknown, but was seen to be the original of certain copper models of Dynasty VI, the character of which only became clear on the discovery of the Hetep-heres knives. There were seven knives (three of gold and four of copper) and seven razors (two of gold and five of copper), as if seven was the number in a set. Now there is a hieroglyphic sign long known to have the value 'sha-ad' and to mean 'knife,' 'to cut,' etc., but never understood. It is now clear that this hieroglyph represents a bundle of four of these curious rectangular knives tied together with a string.

In the early ages of Egypt the objects placed in the graves were of two classes — practicable objects used in daily life and traditional-ceremonial objects made for the grave. The traditional-ceremonial objects were those which had once been used in daily life, but had been displaced by newer forms or by the products of new crafts. Thus it comes about that, in the tomb of Hetep-heres I, rectangular knives and round-ended razors made of flint occur along with the practicable metal knives and razors. Flint implements of these two forms have been found in graves from Dynasty I to Dynasty III, and the metal examples of Hetep-heres present clearly the translation into copper and gold of these original flint forms. The purpose for which the implements were used is obscure, probably for traditional acts or ceremonies practised by both men and women.

Mr. Stewart is now at work on the great golden bed canopy. There remain another armchair, the curtain box, the rilled staves, and various other objects, including several pieces of wood covered with remarkable inlaid patterns of faience and gold. The whole of the gold-cased wooden furniture came undoubtedly from the palace of the Queen. The bed, the head-rest, the canopy, and the curtain, which bore the name of King Sneferuw, had been given to Hetep-heres by her husband; but the carrying-chair, the jewel box, and the other pieces had been presented by her son, Cheops, for on these pieces the Queen is called the Mother of the King.

The greater part of the objects — all the furniture, the anklets, the implements, the stone vessels, and much of the pottery — had been taken from the palace of the Queen. This was the bed on which she slept, the armchair in which she sat, the gold and ebony carrying chair in which she was borne shoulder high through the streets of Memphis. The copper spoon in Fig. 11 (bottom) was that with which she drew the perfumed ointment from the jars of the toilet box (BULLETIN, Vol. XXVI, No. 157, p. 86) to use on her face and hands. The little needle with pierced eyelet was used by the Queen or her maid. The whole group of objects gives a view, incomplete perhaps, but vivid in its detail, of the intimate personal life of a royal lady of the Pyramid Age. It illumines for the first time the great skill and the correct taste of the royal craftsmen of that age.

**A Yakshi Torsos from Sanchi**

The Museum has recently acquired, by gift from Dr. Denman W. Ross, what may well be regarded as the most important example of Indian art in the collections. This is a female torso from Sanchi, in sandstone, nearly complete from the neck to the knees. This torso is undoubtedly a part of one of the large Yakshi figures which served as brackets to the lower architraves of the gateways (toranas) of the Great Stupa, but it cannot be said definitely to which of the four gateways the fragment belonged. The bracket figures of the north gate are complete in situ, and of those of the east gate, one is complete in situ, the other partially so, the remainder being in the Sanchi museum; it follows that the Museum torso must have belonged to either the southern or the western gate. As the workmanship of the western gate is somewhat inferior to that of the others, while the quality of the torso is fully equal to that of the magnificent Yakshi of the east gate, it may perhaps be assumed that it belonged to the southern gate, which is regarded as the earliest of the four, dateable about 100-75 B.C., the western gate being the latest, about 50-25 B.C.

Undoubtedly this Yakshi stood beneath a tree, her feet supported on or near its roots, her arms embracing the stem or branches of the tree and supporting part of her weight. In the case of the east gate figure (right bracket), the Yakshi is swinging from the tree and mainly supported by the arms; but in the present example it is clear that the greater part of the weight must have rested on the feet. It may either be that the Yakshi leaned outwards from her tree, as in the east gate bracket just referred to, or she may have been enclosed and framed by the tree, as in the north gate figures, and in the case of the smaller Yakshis which occupy corresponding positions between the first and second, and second and third architraves of all the gates. In the tentative restoration on page 94, prepared in collaboration by Mr. Philip L. Hale, Mr. S. Tomita, and the present writer, it has been assumed that the figure formed a left-hand bracket, and that the tree, as in some of the other examples, was a mango.

In costume, the figure conforms to the types usual in Sunga art, and in most respects to that of the other Sanchi Yakshis. Although apparently nude, she wears a thin muslin dhoti, fastened by a girdle knotted on the proper left; the folds of this garment passed between the legs and were tucked into the girdle at the back in the usual way, as can be clearly seen at the back; it is understood to be so thin and transparent as only to be visible when thus folded together, but it is not unlikely that the lower edges of the dhoti were also indicated below.

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1. Now exhibited in Room A3.
2. For a full account of this stupa, see Sir John Marshall, Guide to Sanchi.
3. One of these is preserved in the British Museum (see Binyon, L., Asiat. Art in the British Museum, 1925, Pl. 11); this may be the only Sanchi fragment, other than the present torso, to be seen outside of India.