# EXCAVATIONS AT GÎZA, SEASON 1938.39, Vol. X 



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## ANTIQUITIES DEPARTMENT OF EGYPT

# The Great Pyramid of Khufu and its Mortuary Chapel 

With Names and Titles of Vols. I-X of the Excavations at Giza BY

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The site before commencing excavations

## PREFACE

This short season began in the autumn of 1938 and was discontinued early in the year of 1939.

It was my aim to clear away the mounds of disfiguring debris, which encumbered the eastern and southern faces of the Great Pyramid of Gîza. The area, in which we worked in the eastern face of the Pyramid, had been dug over since ancient times, and there was little or no hope of finding any monuments in that place. All that could be seen of the Mortuary Temple of the Great Pyramid were the blocks of basalt paving, and there was no doubt that the temple itself, as well as the walls of the causeway, had been destroyed at the time when the casing of the Pyramid was removed, if not long before. The mounds of debris, which we intended to remove, were certainly formed when the casing of the Pyramid was demolished, plus an accumulation of wind-borne sand that had gathered there through the years. The removal of this debris was real hard work and, we thought, likely to prove a thankless task, as far as discoveries were concerned. However, we were rewarded by some inscribed fragments, which though scanty, were of the greatest importance for archæology and the history of Egyptian architecture, as they sounded the death-knell of the long-established belief among archæologists that the royal funerary monuments of the early Fourth Dynasty were uninscribed.

In this season's work I was assisted by Shafik Farid, who had been my able and painstaking assistant in the previous seasons's work. The diggers were under the very able control of my old Reis, the late Saddik Silaik, and the photography was in the hands of the late Ahmed Daktor, our trained Kufti.

To all these and to the workmen, on whose shoulders fell the actual hard task of removing that small mountain of stone and debris, I tender my hearty thanks.

I also wish to thank the Director of the Government Press and his staff, especially William Abdel-Sayed, Abbass Hassan and Ahmed Ahmed Mohamed, for their co-operation and care in the printing of this book, and to Hassan Munib and my pupil, Mrs. Dorothy Eady, for reading the proofs, the latter having made the drawings.
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## ANTIQUITIES DEPARTMENT, EGYPT

# EXCAVATIONS AT GÌZA, 1938-1939 

# THE GREAT PYRAMID OF KHUFU AND <br> ITS MORTUARY TEMPLE 

WITH NAMES AND TITLES OF VOLS. I-X OF<br>THE EXCAVATIONS AT GİZA

## CHAPTER I.-THE GREAT PYRAMID OF KHUFU

$\top^{H E}$ Great Pyramid of Khufu at Gîza is perhaps the best-known monument of the ancient world. Standing on the edge of the Libyan Plateau at the apex of the Delta, it commands a magnificent view over the broad Nile Valley to the distant Mokattam Hills. Since the very beginning, the Great Pyramid has excited the wonder and admiration of all beholders, and many and varied are the stories related about it, and the theories formed concerning it. To some of these we shall refer later.

## Some Facts Concerning the Great Pyramid

The ancient name for the Great Pyramid was
 AkhetKhufu, i.e. the "Splendour of Khufu".

We cannot say what made King Khufu choose that particular place in which to kuild his pyramid, but although he was the first to build a pyramid there, the district was already hallowed as a necropolis, and about one mile to the south of Khufu's monument there were already standing some large mastabas, dating from the First and Second Dynasties ${ }^{(1)}$. Khufu's Pyramid gave its name to the surrounding necropolis, and here were erected large mastaba tombs for the members of the royal family and the prominent officials.
( $\left.^{1}\right)$ See Covington, "Ann. du Serv.", Vol. VI, p. 193.

Although Khufu's immediate successor, $\underline{D} e d-e f-R e e^{e}$, preferred to build his pyramid at Abu Rawash, about five miles to the north, Khafra and Menkawra, the son and grandson of Khufu, built their pyramids in the neighbourhood of the "Akhet-Khufu", and laid out their own necropoli near-by. Shepses-ka-ef, the son of Menkaura', abandoned the pyramid form of tomb, and built his funerary monument in the form of a gigantio sarcophagus, choosing for the site a spot at South Sakkara. But Queen Khent-Kawes, who appears to have been a daughter of Menkawra and was the last ruler of the Fourth Dynasty and the link with the Fifth Dynasty, returned again to the Gîza site and built her royal monument in the form of a truncated pyramid surmounted by a huge sarcophagus, a compromise between the sarcophagus-shaped tomb of her brother, Shepses-ka-ef and the pyramid of her father and ancestors. Queen Khent-kawes was the last ruler to build a tomb in the Gîza Necropolis, though it remained for a long time as an important burial-ground for princes and nobles of the Old Kingdom.

The Great Pyramid originally stood 146 metres high, and was 230 metres on each side at the base. The slope angle is $51^{\circ} 50^{\prime}$. Nowadays it stands 137 metres high. It covers an area of 13.1 acres, and is estimated to contain $2,300,000$ blocks of stone, each of which average about two and a half tons in weight but some reach a maximum of fifteen tons each.

Contrary to the statements often made, the Great Pyramid is built of limestone, quarried locally. Some of these quarries, which are quite near the momument, were excavated by me, for they had subsequently been used as cemeteries. The fine limestone for the casing was brought from the quarries on the eastern bank of the Nile, near to the modern city of Cairo, and the granite used in the interior of the monument came, of course, from Aswan. It appears as though the builders made use of a knoll of rock in the middle of the proposed site, and utilized this as the nucleus for the core of the monument.

The rock of the plateau was prepared by being levelled, and a pavement of massive limestone blocks of good quality was laid down around the site; this pavement runs actually underneath the Pyramid on the northern, eastern and western sides. The entrance in the middle of the northern face gives access to a long and narrow passage, which descends steeply to a small chamber cut deep in the underlying rock of the plateau. This is the original burial-chamber, for the plan of the Pyramid was changed more then once. Before the cutting of this chamber was complete, it was decided to enlarge the structure. An ascending passage was built, leading up to another chamber, built in the superstructure. This is the wrongly-named "Queen's Chamber". The plan was again changed, and the famous Grand Gallery, with its corbelled roof, was constructed to lead up to the so-called "King's Chamber". This latter, lined, roofed and paved with red granite, contains the king's sarcophagus and was the burial-chamber of the final plan.

## Early Writers on the Great Pyramid

Even as it stands to-day, stripped of its outer casing and scarred by the hand of man and the slow progress of time, the Great Pyramid excites the wonder and admiration of all who behold it. How much more impressive must it have appeared to the ancients, who had the privilege of beholding it in all its glory and surrounded by the intact monuments of its complex.

The great limestone stela of Amenhotep $I I$, which I discovered during our excavations around the Sphinx in $1936\left(^{1}\right)$, relates how Amenhotep, while still a Crown Prince, paid a visit to the Sphinx and Pyramids of Gîza : "He yoked the horses in Memphis, when he was still young, and stopped at the Sanctuary of Hor-em-akhet (the Sphinx). He spent a time there in going round it, looking at the beauty of the Sanctuary of Khufu and Khafra the revered. His heart longed to keep alive their names, and he put it in his heart". When the young prince at length succeeded to the throne: "Then His Majesty remembered the place where he had rejoiced himself in the neighbourhood of the Pyramids of Hor-em-akhet, and it was ordered to erect a sanctuary there, and to erect in it a stela of limestone, on which is inscribed his great name, Aa-kheperu-Ra', beloved of Hor-em-akhet, to whom is given life eternally ".

There is no doubt that the casing stones of the Pyramid and the walls of its Mortuary and Valley Temples bore many graffiti left there by admiring visitors, for we find such inscriptions on many other ancient monuments, but the destruction of the monuments and the removal of the casing have deprived us of these.

When Herodotus visited Egypt in the middle of the Vth Century B.C., he was conducted around the Pyramids much in the same way as a tourist of our days. The Father of History is especially eloquent when giving an account of the Great Pyramid, and as it is the most complete account of that monument which has survived from the Past, I do not hesitate to give it here $\left({ }^{2}\right):-$
"Till the death of Rhampsinitus, the priests said: Egypt was excellently governed and flourished greatly; but after him Cheops succeeded to the throne and plunged into all manner of wickedness. He closed the temples, and forbade the Egyptians to offer sacrifice, compelling them instead to labour, one and all, in his service. Some were required to drag blocks of stone down to the Nile from the quarries in the Arabian range of hills; others received the blocks after they had been conveyed in boats across the river, and drew them to the range of hills called the Libyan. A hundred thousand men laboured constantly and were relieved every three months by a fresh lot."

Herodotus then describes the construction of the causeway (see p. 18) and continues:--
"To make it took ten years, as I said-or rather to make the causeway, the works on the mound where the Pyramid stands, and the underground chambers, which Cheops intended as vaults for his own use : these last were built on a sort of island, surrounded by water introduced from the Nile by a canal. The Pyramid itself was twenty years in building. It is a square eight hundred feet each way, and the height the same, built entirely of polished stone, fitted together with the utmost care. The stones, of which it is composed, are none of them less than thirty feet in length.
"The Pyramid was built in steps, battlement-wise, as it is called, or, according to others, altar-wise. After laying the stones for the base, they raised the remaining stones to their places by means of machines ${ }^{1}$ ) formed of short wooden planks. The first machine raised them from the ground to the top of the first step. On this there was another machine, which received the stone upon its arrival, and conveyed it to the second step, whence a third machine advanced it still higher. Either they had as many machines as there were steps in the Pyramid, or possibly they had but a single machine, which, being easily moved, was transferred from tier to tier as the stone rose-both accounts are given, and therefore I mention both. The upper portion of the Pyramid was finished first, then the middle, and finally the part which was the lowest and nearest the ground.
" There is an inscription in Egyptian characters on the Pyramid which records the quantity of radishes, onions, and garlic consumed by the labourers who constructed it; and I perfectly well remember that the interpreter who read the writing to me said that the money expended in this way was 1,600 talents of silver. If this then is a true record, what a vast sum must have been spent on the iron tools used in the work, and on the feeding and clothing of the labourers, considering the length of time the work lasted, which has already been stated, and the additional time-no small space, I imagine-which must have been occupied by the quarrying of the stones, their conveyance, and the formation of the underground apartments."

Such is the account of Herodotus, but although he was a very accurate recorder of all that he actually saw, he seems in this case to have been misled by a rascally "interpreter", who pretended to read an inscription of which he certainly had no real knowledge! The insoriptions reported to have existed on the casing of the Great Pyramid is a tantalizing question. Did they merely consist of thousands of graffiti left by visitors through the ages, or were they monumental inscriptions? In either case, we can be sure that the subject of it was not an account of the daily expenditure at the local vegetable-dealer! If food was mentioned at all, it may have been an offering-list for the benefit of the $k a$ of the dead king.

Herodotus opened the eyes of ancient Europe to the wonders of the Pyramid, and to his account were added others by the classical authors. Diodorus of Sicily states that the builder of the Great Pyramid was named Chembes, and that he reigned for fifty years. He also states that the Great Pyramid was built of stone " brought from a great distance in Arabia, and raised on mounds; for machines, in those days, had not been discovered ( ${ }^{2}$ )".

He was especially impressed by the fact that notwithstanding the magnitude of the building operations, no apparent traces of the work was to be seen in the surroundings of the monument. Apparently he was unaware that the areas on the northern, eastern and southern sides of the Pyramid are composed of vast masses of chippings and rubble; in fact, the eastern slopes of the plateau consist of nothing but this builder's waste.

[^0]$\left({ }^{2}\right)$ Diodorus Siculus, Book I,

Pliny ( ${ }^{1}$ ) was not in induirer of the pyramids, and called them an "idle and foolish exhibition of royal wealth". He repeats what Herodotus said about the Great Pyramid and gives a list of the other Greek authors who had dealt with the subject. Of course, the account of Herodotus is full of nonsense compared with what we actually know now.

After the conquest of Egypt by the Arabs in 640 A.D., the Pyramids of Giza again aroused the curiosity of the learned, and several of the Arab historians and geographers visited these monuments and wrote accounts about them. Most of their stories are wild romances of the "Arabian Nights' type", but one or two of the more serious and sober-minded authors left interesting and reasonable accounts!!

Thus, Abu Ma` shar, an astrologer ( ${ }^{2}$ ), says that the Great Pyramid and its mighty neighbours were built by an ancient king to be a refuge against the flood, of the coming of which he had been forewarned. He also says that according to other traditions, they were the granaries built by Joseph to store graiu against the Seven Years' Famine. El-Masoudi relates detailed accounts of the same type, but the Arab physician of Baghdad, Abdel-Latif, gives much more reasonable information. It is noteworthy that all the Arab writers express great admiration for the Pyramids, especially the Great Pyramid, notwithstanding the fact that they were built by people whom they regarded as heathens. The stories of fabulous treasures stored away in the heart of the Great Pyramid led to many attempts to find them, and the Caliph Ma'moun ordered that the monument should be opened (he reigned between 813-833 A.D.).

Although the Pyramid is known to have been accessible in Roman times, apparently the entrance had become buried again under the piles of debris and sand, because the men of Ma'moun, unable to discover the real entrance, forced a passage into the interior. This is the passage which is still used to admit visitors to the interior of the monument. It was said that on that occasion ${ }^{(3)}$, the explorers found a body of a man lying in the sarcophagus, clad in golden armour, enriched with precious stones; "a sword of inestimable value" was in his hand, and on his head a ruby of the size of an egg! But the same author also relates that in the apartments of the Pyramid lay many bodies, enveloped in wrappings. "They retained their hair, and as none of it was grey, they appeared to have belonged to young persons; they were stiffened so that their joints could not be moved, and they had become as light as air". There were also found the bodies of birds wrapped in linen. The account of the human bodies is a reasonable description of mummies, and they may well have been intrusive burials. As for the birds, that also may be true, as a similar find was made in the Bent Pyramid at Dahshur by the late Abdel-Salam Hussein ( ${ }^{4}$ ).

[^1]But the Arab Period was a time of misfortune for the Pyramids, as the building of Cairo, with its mosques, city walls and palaces demanded stone, and the ancient monuments, especially those easy of access, were used as quarries. The temples were destroyed, and the fine limestone casings stripped from the Pyramids themselves.

The wars of the Crusades, and the numbers of Christian pilgrims making their way to the Holy Land, again brought the Pyramids to the notice of Europe. Many of these early travellers were of the opinion that the Pyramids were the granaries of Joseph. Some of their accounts are almost as fantastic as those of the Arab authors, but the more educated of them quoted the classical writers and gave their personal observations and experiences. In these days a visit to the interior of the Great Pyramid was not the easy thing as it is to-day; the visitor, in the light of torches or lamps only, had to climb or crawl over heaps of rubbish and broken stones. The corridors and chambers were infested with bats and (they say) serpents, while outside, the Bedouin of the desert were a menace to the unarmed party of visitors. In spite of these drawbacks, all the visitors record their wonder and admiration of this great monument.

Daring the XVIIIth century several attempts were made to take accurate measurements of the Great Pyramid, and plans and drawings began to be published. The first work of real scientific importance, however, was that made by the savants attached to Napoleon's French Expedition. The admirable publication of Denon and his colleagues opened the minds of modern Europe to the wonders of Egypt; the museums of the world began to demand Egyptian monuments for their collections and several free-lance treasure hunters came to this country to seek for antiquities. Although their methods must be deplored, there is no doubt that these early pioneers laid the foundations for the science of Egyptology. Men like Caviglia, and Belzoni were followed by Perring and Vyse in 1837-39, whose investigations of the Pyramids of Gîza and other monuments were published in three volumes $\left({ }^{1}\right)$. Their measurements, observations and plans are so accurate that their publication remains one of the most valuable to the students of the pyramids and the Old Kingdom monuments in general, despite the lapse of over one hundred years.

## The Excavations carried on at the Great Pyramid

The Great Pyramid was among the monuments investigated by the Lepsius Expedition in 1843. In his "Denkmaler", Lepsius published many plans and drawings of the Pyramid and the remaining parts of its complex. He also cleared and copied a number of the tombs in the vicinity. In 1880-82, Flinders Petrie carried out some important investigations and made new measurements and triangulations ( ${ }^{2}$ ). Mariette had also made some excavations in the neighbourhood, especially in the tombs to the east and west of the Pyramid. Early in the

[^2]XXth century, Borchardt, working with the Von Seiglin Expedition, made some important contributions to our knowledge of the Great Pyramid, and George Reisner made important excavations around it at various times. My excavations, the results of which form the subject of this book, were the first to be conducted actually on the Great Pyramid in recent years. In the intervening years, some clearances have been made on the southern side, with a view to facilitating the progress of visitors. It was during this work at the southern side of the Pyramid that the dramatic discovery of the large wooden boats in their intact pits was made in 1954.

I am happy to say that the Antiquities Department has recently made an examination of the slopes of debris on the eastern edge ${ }^{1}$ ) of the plateau, north of the ex-royal rest-house, and, what is more important, has cleared the debris to the immediate east of the Pyramid in order to trace the whole length of the causeway to the edge of the plateau. Let us hope that this work will not end here, but will be continued to the end, and search will be made for the remains of the very important Valley Temple. At the time of writing, the area to the west of the Great Pyramid is being cleared to the edge of the Great West Cemetery.

## The Great Pyramid Complex

From the time of the end of the Third Dynasty (so far as our present knowledge permits us to say), there came into being a set complex which should accompany every king's pyramid. This is first seen in the Pyramid of Meydoum, which is now attributed (with reserve) to King Huni, or $H u$, but which was apparently finished, if not actually built by his successor, King Snefru. The Step Pyramid at Sakkara is surrounded by an amazing complex of buildings, but these were never, so far as we know, repeated. The Pyramid Complex, which came into being at the Pyramid of Meydoum and remained in use (with few, and uncertain, exceptions) until the end of the Middle Kingdom, consisted of the following :-

1. The Pyramid itself.
2. A Mortuary Temple at the eastern side of the Pyramid.
3. A Valley Temple at the edge of the cultivation.
4. A causeway walled, and later roofed, linking these two temples together.
5. A small pyramid at the south of the parent monument: This has often been referred to as a $k a$-pyramid, in the belief that it may have been for the burial of the king's $k a$. Certainly these small pyramids were never used for real burials, and in some instances their interior passages are too small to admit an adult person, and thus they should be for the use of the spirit, as I have explained elsewhere ( ${ }^{2}$ ).
6. Rock-cut boat pits : These are known from the Great Pyramid, that of Abu Rawash, the Second Pyramid, and many others. No boats are known for the Pyramid of Meydoum or the two Pyramids of Snefru at Dahshur, or for the Third Pyramid at Gîza. But up till

[^3]now these last-mentioned monuments have not been examined in a deliberate attempt to locate such boats and the places, where they might be expected to have occurred, have not yet been excavated. Boat-pits of mud-brick are known from the royal and private mastabas of the First and Second Dynasties, those found at Sakkara being sitrated at the north of the tomb, but those at Helwan are on the south. We shall refer again to the subject of these boats, their number and disposition.
7. Queen's Pyramids: These are smaller in size than those of the kings, and may be situated on any side of the parent monument. As we have seen, the Pyramid bore a distinctive name, and this same name was applied to every component part of its complex; it was also applied to the surrounding nearopolis.
8. The Pyramid City: This is a town of mud-brick dwellings, situated in the near vicinity to the Pyramids and was intended for the accommodation of the officials attached to the Pyramids. So far, the Pyramid City of the Great Pyramid has not been found, but it must be lying in the desert near the Great Pyramid. The Pyramid City belonging to the Third Pyramid was excavated by Reisner, and during our fourth season's work, I excavated the Pyramid City of Queen Khent-kawes, which adjoins that of Menkawre, and both of them lie at the edge of the devert, near the cultivation ( ${ }^{1}$ ).

These Pyramid Cities were very important establishments in the ancient days, and their overseers were always men of high rank. During the time they were engaged in building the Pyramid, it is probable that the workers were housed in these cities, which, according to the evidence of the inscriptions, were divided into two halves, the "right side" and the "left side" $\left({ }^{2}\right)$. From the inscriptions in the tomb of $W r$-hw.w $\left({ }^{3}\right)$, we know that he was the overseer of a "right half" of the Pyramid Plateau. One-half of this settlement housed the employees and clerks, who also performed the funerary services of the king. In this respect, we must not forget that during the Old Kingdom, there was no such thing as a "professional" priest, that is to say a person whose whole life was dedicated to the service of a god or a deified or living king.

All the priests of the Old Kingdom, either of a god or of a king, also held some other post of a secular nature. These people were divided into groups or "Phyles", and were under the leadership of a " ${ }^{\text {hrp }} \mathrm{imj} . w s s w$ " "Director of the Phyle". We know of these phyles from the inscriptions of the Fourth and Fifth Dynasties, and their leaders also bore the titles of leaders of the $W a^{*} b$. w-priests, or overseers of the $W a^{*} b . w$-priests. Thus, they were the leaders of those who performed the priestly services in the royal Mortuary Cult, who read
(1) See Selim Hassan, "Excavations at Gîza", Vol. IV.
( ${ }^{2}$ ) G. Reisner, "Mycerinus", p. 277.
( ${ }^{2}$ ) Selim Hassan, ibid., Vol. V, p. 242.
the monthly services in the temples and received their share of the offerings, together with the workers who were living in the Pyramid Cities ( ${ }^{1}$ ). And here it must be remarked that no outsiders, that is to say persons not connected with the service of the dead king, were allowed to live in the Pyramid Cities or to share in the offerings ( ${ }^{2}$ ).

At the head of the leaders or overseers of phyles was the "Chief of the Settlement" ( $\quad$ d $-m r$ gr.g.t), who was recruited from among the overseers. It appears as though this office was sometimes hereditary $\left(^{3}\right)$. These chiefs also bore the title of "Sub-overseer of ships".

The "Settlement" was again subdivided into small parts, each of which was called a $t n$, at the head of which was the "Chief of the $t n "\left({ }^{4}\right)$, At the head of the overseers of the locality stood the "Overseer of the Pyramid City", whose authority was not, however, limited to this place alone. At the end of the Fourth Dynasty, there was a certain official who was named Snnw-ka, and bore the title: $\leftrightarrows$ "Chief of the Settlement and Overseer of the Pyramid City of Akhet-Khufu".

It is possible that originally the administration of the settlement was in the hands of the "Overseer of the Pyramid", for Prince Ka-nefer, who may be a son of King Snefru, bore the
 without the determining sign of the city : $\otimes$.

We do not know of an overseer of a pyramid city during the Fourth or early Fifth Dynasty, but during the Fourth Dynasty we read of a man called Snnw-ka who bore the title "Chief of the Settlement of Khafra ${ }^{a}$ ", who sprang up from the settlement of the workers.

Later there were other changes in the administration. Thus, in place of the title: $\underline{h r p}$ imj.w s3w "Director of the Phyle" we find: $\quad$ " $H$. a group of handworkers $\left({ }^{5}\right)$, while at the head of the whole administration of the Pyramid City was the "Overseer of the Pyramid City". A good example of this is the inscriptions of the Caravan Leader, Pepy: ankh, of Elephantine, who was: $\square^{\square}$ )

At the time of this man, i.e. the Sixth Dynasty, most of the Viziers were also Overseers of Pyramid Cities; but during the long reign of Pepy II, we find another new development in

[^4]the writing of the name of the Pyramid City. Thus, we have: "Overseer of the Pyramid City", but the name of the Pyramid is not given. The earliest example of this form of the title, known up till now, occurs in the titles of $\underline{H} w j$, who was the father-in-law of Pepy ( ${ }^{1}$ ).

## The Pyramid Form and Cult

We know that the earliest kings of dynastic Egypt were buried in mastabas like their wealthy subjects. Then came the great innovation when Imhotep $\left(^{2}\right.$ ), the architect of Zoser of the Third Dynasty, built the Step Pyramid at Sakkara, which was really nothing but six superposed mastabas, decreasing in size from bottom to top. It was not, apparently, until the reign of Snefru at the beginning of the Fourth Dynasty (if we except the Pyramid of Meydoum) that the steps were filled in and the true pyramid was achieved.

Here we may ask what is the meaning of the pyramid form; what were the ancient architects striving after? That is not an easy question to answer, for it involves a great deal of early symbolism, much of which is still imperfectly understood. First we may ask if Zoser's architect was really aiming at a pyramid, or was he attempting to make a gigantic model of the "Primeval Hill", on which the Great God stood to perform his acts of creation, and onto which the Sun-god first rose out of the Primeval Ocean?

Coming to the question of the true pyramid form, we know that the early object of adoration in the solar-temple of Heliopolis was a triangular, or pyramidal stone, called the"Ben-ben", on which the Sun-god in the form of a phœnix, was wont to perch. It is this "Ben-ben" mounted on the top of a high pillar, which is the obelisk, a famous cult object for the Sun-worshippers. Therefore, we may see in the Pyramid nothing but a gigantic "Ben-ben", and imagine that the king chose this form of tomb in the belief that, buried in the heart of the most sacred solarsymbol, his mortal body would be safe for all eternity. But there are other factors to consider. We have just mentioned the solar-cult as practised at Heliopolis, but do we really know if that cult was the state religion at the time when the first pyramids were built, namely in the beginning of the Third Dynasty? We have one king in the Second Dynasty and one near the end of the Third Dynasty whose names are compounded with that of $R a^{e}$. But the great men of the pyramid age: Zoser, Sekhem-khet $\left(^{3}\right.$ ), Khacba, Huni (or Hu), Snefru, and Khufu, do not bear names having a solar significance. It is true that all of them, even the kings of the First and Second Dynasties, were called "the Horus", which is a solar appellation, but $R a^{e}$ does not appear in the state cult.

[^5]The earlier utterances of the Pyramid Texts give great prominence to the stars, which are grouped as the "Imperishable Stars" and the " Unwearied Stars". The former, which were the fixed stars of the northern sky were the most important, and the most frequently mentioned. The pyramids of the Old Kingdom are all oriented to the points of the compass, and their entrances all face due north, in fact, from the entrance to the Great Pyramid the Pole Star can be seen. There is also the question of the supposed "air-shafts" in the two upper chambers of the Great Pyramid. These are directed due south and due north. Are they really air-shafts, or have they, as some persons believe, a religious significance? The position of the boats in connection with the archaic tombs at Sakkara are on the north, and in the Pyramid Texts the Imperishable Stars are also said to travel in boats and to be the rowers of a boat. Can it, therefore, be that the early kings of Egypt were following an ancient stellar cult, and that the pyramids have also some connection with this? A later historical fact lends some colour to this theory.

In his geographical dictionary ( ${ }^{1}$ ), Yakut el-Hamawi gives the dimensions of the Great Pyramid and that of Khatra, and mentions that "to both of them the Sabians made their pilgrimage". The Sabians were known to be star-worshippers, and it is tempting to think that they derive their name from the Egyptian word: $\cap$ ] $\star s b 3$, meaning "star".

In any case, if there was ever an early stellar cult, having prominence as a state or at least a royal religion, by the time of the Fourth Dynasty it was superseded by the solar-cult, and with $\operatorname{Ded}$ eff-Ra, the immediate successor of Khufu, the element Ra* enters the royal name, and we have Khafrá, Men-kaw-Rá, with a reaction setting in with Shepses-ka-ef and Queen Khent-kawes. But the priests of Heliopolis finally triumphed; one of their number seems to have married Queen Khent-Kawes, the Royal Heiress of the old line of the Fourth Dynasty ( ${ }^{2}$ ), and from then onwards the solar-cult became the state religion, the kings were henceforth styled "Son of $R a^{\cdot}$ ", and the pyramid tomb was firmly established as the accepted type of royal burial. Regarding the question of $\underline{D_{\epsilon}}$ defre", his solar name, and his part in the undoubted dissension among the members of Khufu's family, we tentively offer the following suggestion:-

It has hitherto been assumed that Khufu had married a Libyan princess, and that this lady was the mother of Dedefre', who, surplanting the "King's Eldest Son", Ka-wa'b, succeeded Khufu, and that this accession caused a split in the royal family. This was the theory put forth by Reisner some years ago, and was based on the appearance of Queen Hettp-heres 1I, the supposed daughter of this Queen, as she appears in the tomb of her own daughter, Meres-ankh III at Gîza. In the relief in this tomb, Hetep-heres II is represented

[^6]as being apparently a blue-eyed blonde-haired woman, and she also wears a dress which is not of the usual style of the ladies of the Old Kingdom. But a later theory suggests that the yellow hair of the Queen may be only a kind of head-dress, and the supposed re! lines painted over it are nothing but guide lines. Furthermore, Queen Henutsen is represented in the tomb of her son, Khuju-Khaj, wearing the same kind of dress as Hetep-heres II, and having the same type of head-dress (unfortunately the colour is not preserved) ( ${ }^{1}$ ). In view of these facts, there is really no evidence which would prove the foreign origin of the lady. Nevertheless, there are clear indications that all was not well in the royal family, and some serious reason must have led Dedefre to leave the Gîza necropolis to build his pyramid far away in Abu Rawash. However, there are indications that perhaps the trouble was religious rather than a matter of the right of accession. Certainly Dendefre did not bear any ill-feelings towards his predecessor, and probable father, Khaju, for we now know that he was responsible for completing the monuments of the latter, and his name is found more than once in quarry marks on the stones covering the pit of the wooden boat recently discovered to the south of the Great Pyramid. It is perhaps not too far-fetched to suppose that Dedefre (who, as we remarked, is the first member of the family to include the element " $R e$ "" in his personal name) was a fervent adherer to the sun-cult of Heliopolis, while the older members of his family may have favoured the ancient stellar cult.

To revert again to the question of the Sabians, the above-quoted remark suggests that these people came to the Pyramids to pay homage to the monuments themselves rather than to the kings who built them ; but this was, of course, in a later period. It is well known that the Mortuary Cult of Khufu, and most of the other pyramid builders of the Fourth Dynasty survived for many hundreds of years after their death, and we have inscriptions dating from Saitic, and even Ptolemaic times mentioning priests attached to the cults of Snefru, Khufu, Ded-ef-Ra, Khafrai and Men-kaw-Ra' $\left.{ }^{( }\right)$. But in one of the rock-cut tombs in the northern wall of the amphitheatre of the Sphinx, which I excavated in $1937\left({ }^{3}\right)$, there is a curious scene. This tomb was re-used in the New Kingdom, as were many others in the same place, and a scene had been lightly cut on the western wall of the chapel. This shows two men standing in adoration before the Sphinx. But the curious point is that in front of the Sphinx, that is to say between it and its worshippers, is a representation of a pyramid, as though that also was an object of their veneration. Above this scene are some vertical lines of inscription, but most unfortunately they are too effaced to be read.

On a small stela from the same locality, which we found in 1936, the Sphinx is represented with the Great and Second Pyramids seen behind it. It is remarkable that in this instance the

[^7]pyramids are drawn in perspective ( ${ }^{1}$ ). Is it possible that, in addition to the cult of the ancient kings themselves, the Pyramid itself was receiving a separate vencration? In view of the fact that both the "Ben-ben" and the obelisk were regarded as cult-objects, this may perhaps be possible. The idea was apparently quite acceptable in the beginning of the Christian Era, for Clement of Alexandria stated that "an idolatrous observance of obelisks and pyramids was the most ancient mode of worship, and was practised bcfore the invention of sculptured images $\left({ }^{2}\right)$.

## The Royal Necropglis "Akhet-Khufu"

As representing one of the earliest royal Necropoli, it is not out of place to mention here the Necropolis called "Akhet-Khufu" which surrounds the Great lyramid. From the early dynastic times, it was always the custom for the relatives, friends and courtiers to be buried in the vicinity of the king they had served during life. This was quite in accordance with the Egyptian idea of the Hereafter.

Loving his beautiful Valley of the Nile with all his heart and soul, the Ancient Egyptian could not imagine a paradise better than the land he knew and loved, and to him the Other World, the eternal home of the Blessed Dead, was nothing but a replica of Egypt. True, it was a somewhat glorified version, an Egypt where the inundation never failed to rise to the required height, where the harvest was always abundant, and life was easy and pleasant $\left({ }^{3}\right)$. In this life he expected to meet with his kinsfolk and friends, and he would need all the people who had served him faithfully on earth to continue to minister to him in this pleasant After-life. Therefore, just as the dead were buried surrounded by the personal possessions and abundant food-offerings, so also the kings wished to be buried with their entourage surrounding them; while these folk also esteemed it a privilege to be able to retain their posts at court in the Other World.

In the early dynastic cemetery at Sakkara, we find the king's mastabas and those of the great men of the period all in the same area, but not, so far as I am aware, in any special order. We do not know where the officials of Zoser were buried, but there were 11 tombs for members of his family actually incorporated in the substructure of the Step Pyramid. The Royal Necropolis of Snefric has not been fully excavated, but at Meydoum there are some tombs of the royal family and high officials in the immediate vicinity of the Pyramid. But the cemeteries of the Great Pyramid were specially built and laid out, presumably at the time when the Pyramid was built. The Eastern Cemetery, as it is now called, lies between the eastern face of the Great Pyramid and the edge of the plateau. Here, standing in a row, are the three small so-called Qucen's Pyramids (by analogy), the northern, and middle one of which has a rock-cut boat

[^8]at its southern side, and this area beside the southernmost of these pyramids has not yet been investigated. This latter is known as the Pyramid of Princess Henutsen from a stela found by Mariette near it. It was the chapel of this Pyramid that formed the nucleus of the later Temple of Isis, and the name of the Princess Henutsen (i.e. " their Mistress"), which gave the title of Isis as she was worshipped there-"Mistress of the Pyramids". The stela just referred to is a late (Twenty-second Dynasty) forgery, and relates how King Khufu himself had repaired the Temple of Isis, which had fallen into ruin in his day. Of course, this is quite untrue, and was done to give a fictitious antiquity to the temple ( ${ }^{1}$ )! But the name Henutsen was a usual one among the ladies of the royal family of the Fourth Dynasty, and this princess may have been the daughter of Snefru, married to her brother (or half-brother) Khufu ${ }^{( }{ }^{2}$ ).

To the north-east of these Queen's pyramids lies the deep shaft, found by Reisner in 1926, which contained the splendid funerary furniture and the empty alabaster sarcophagus of Queen Hetep-heres, the wife of Snefru and mother of Khufu. This shaft had no superstructure, and it is possible that the Queen's original burial was in Dahshur, in the neighbourhood of her husband's pyramid, that this burial was robbed, and although the body was destroyed, the remains of the equipment, the sarcophagus and the canopic chest containing the Queen's viscera, were brought to the "Akhet-Khufu" for safety, and perhaps buried secretly.

From north to south past the eastern faces of the small Queen's pyramids runs a wide street, separating them from the mastabas. The latter are laid out in regular rows, seven in all, and were plainly designed as a complete whole.

In this group of mastabas are found those of such famous persons as $K a$-wac $b$, the eldest son of Khufu, Prince Hor-ded-ef, who is mentioned in the Westcar Papyrus, and was reputed in later times to have been the author of a book of Wisdom, Prince Kha'-ef-Khufu I, another son of Khufu, Prince Khnum-ba-ef, a son (or grandson of Khufu), Queen Meres'ankh II, a daughter of Khufu, Queen Meres'ankh III, the daughter of $K a-w a^{\circ} b$ and Qucen Hetep-heres II, Prince Sekhem-‘ankh, Ded-ef-Min, Khac-ef-Min, Hor-ba-ef and Ka-em-sekhem (all sons of Khufu), Queen Mertet-tefes, the wife of Snefru and Khufu.

In the recently published book "The Tomb of Hetep-heres the Mother of Cheops" by Reisner, completed by William Stevenson Smith, the authors consider Mertet-tefes to be the daughter of Snefru and Hetep-heres, and that she was married only to Khufu, her full brother $\left({ }^{3}\right)$. Certainly two fragments of a relief from the chapel of $K a-w^{i} a b$, who is known

[^9]to be the son of $K h u f u$, gives the name and representation of Mertet-tefes, with the statement that she was "his mother, who bore him to Khufu" ( ${ }^{1}$ ). To these may be added some of the high officials of the period, and some added tombs of the descendants of Khufu, but built during the Fifth Dynasty.

The western section of the necropolis is even more extensive, and like the eastern section, was laid out in regular streets of large mastabas. But it was added too greatly in subsequent reigns, and tombs were built there even as late as the Sixth Dynasty. Here stands the mysterious tomb known by Reisner's number 2000. This is the largest mastaba in the necropolis, but there is not a single clue as to the identity of its owner.

Here also is the Mastaba of Prince Hemiwn, the Vizier, who was thought to have been perhaps a brother of Khufu, and is one of the architects responsible for the erection of the Great Pyramid.

According to Reisner $\left({ }^{2}\right)$ IIemiun was the son of Prince Nefermat of Meydoum, and the lattor, in the light of recent researches, seems to have been the son of Huni, and not Sneiru as was once thought. Thus Hemiun must have been the brother of Hetep-heres, and perhaps also of Snefru, and the uncle of Khufu.

Here also are the tombs of Prince Mer-ib, another son of Khufu, and his daughter, the Princess Nen-sedr-Ka, as well as many tombs of ladies of the royal family and priests and officials attached to the Great Pyramid and the Mortuary cult of Khufu. Thus, it will be seen that the Great Pyramid stands amid the numerous tombs of these two necropoli, towering above them, although these mastabas are themselves large and impressive monuments. And thus it was that $K h u f u$ himself, the central figure of the kingdom, towered over the lesser members of his family and officials, who were themselves great men and women, the powerful lords and ladies of the ancient world.
${ }^{(1)}$ Ibid., p. 6, and Fig. 9.
$\left(^{2}\right)$ Ibid., p. 9.
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# CHAPTER II.-EXCAVATIONS OF THE MORTUARY TEMPLE OF KHUFU 

## Introduction

We commenced the clearance of the site of the Mortuary Temple of Khufu at the beginning of the season of 1938, and the work was suspended in January 1939. Actually there was little hope of finding anything of importance in this area, which had been a highway to the Sphinx for many decades, and had been the scene of investigation since the days of Perring and Vyse (1837), and therefore I had little hope of finding anything of importance, but the work was necessary, both for the sake of freeing the eastern side of the Great Pyramid from an unsightly heap of debris (Pls. I-III), and there was always the hope of being able to trace at least part of the plan of the Mortuary Temple, a factor valuable for the study of Old Kingdom funerary architecture, and particularly since it was believed that this temple might be the link between the small, simple chapel of the Pyramid of Meydoum and the large and elaborate building of Khafra. Even of this, there was very little hope, as literally not one single stone remained upon another and even most of the original pavement had disappeared (Pl. IV).

I also re-excavated and cleaned the two large boat-pits running north-south parallel with the eastern face of the Great Pyramid, and also the east-west boat lying beside the causeway, and which was previously excavated by Reisner many years ago, as well as the east-west boat beside the northern Queen's Pyramid, also previously excavated by Reisner. In clearing this area, I was able to trace the walls of the upper end of the causeway of Khufu, and brought to light some limestone blocks, originally from these walls, and which were sculptured in delicate low relief. These blocks proved that the oft-stated theory that the cult temples of the Fourth Dynasty were undecorated, was wrong, and for which confirmation has recently been given by the magnificent reliefs from the Valley Temple of Snefru at Dahshur, discovered by Dr. Ahmed Fakhry in 1952. Here we may mention that apparently Khufu was the first King to decorate his causeway walls with reliefs, as that of the Bent Pyramid at Dabshur was seemingly plain ( ${ }^{1}$ ).

## The Causeway of Khufu

The Valley Temple of Khufu, situated on the edge of the cultivation, now lies buried beneath the modern village of Nezlit-el-Semman. There are several theories as to its exact location, but most probably it lies under or very near to the old house built by Geritley Pasha,

[^10]some 75-80 years ago. According to what I have heard from some old men of the village, the garden surrounding this house is covering a paved area, and all attempts to sink a pump in this garden failed, owing to the near presence of this pavement. The well existing in the garden (which is brackish and undrinkable) is said to have existed even before the house. Furthermore, I was told that the cess-pits under this house consist of hnge rooms, the walls of which are over three metres high, and which are entirely built and paved with huge blocks of stone, some of them about 2 m . long. At the same time, the older inhabitants of this village maintain that the causeway of the Great Pyramid ends in the fields to the east of the village, and one of them, whose family used to own and till the fields there, remembers that many large stones, resembling those of the causeway, encumbered the land in this place, and hindered their ploughing ${ }^{1}$ ). However, these latter stones may have been part of the quay which almost certainly existed in front of the Valley Temple. To the observer standing on the top of the eastern edge of the plateau, the line of the causeway seems to terminate under the old house mentioned above, and certainly the ground ceases to slope immediately to the east of it, although the house itself is built upon a mound. In any case, it is idle to speculate on this question until the time comes when it will be possible to excavate there. Although we know for a fact that this Valley T'emple of $I$ :hufu was serving as a quarry for the Twelfth Dynasty pyramids at Lisht, it is important to excavate it in the hope that enough of its pavement still remains to enable us to trace its plan, which might be the link between the simple Valley Temple of Snefru at Dahshur and the more complex structure of Khafra' at Gîza.

A drawing made by the artists of Lepsius (in 1843) shows the causeway of Ehufu in a good state of preservation (Fig. 1). An old inbabitant of the village of Nezlit-el-Semman told me that he remembered it in this condition when he was a boy, about 60 years ago, and that its destruction began when the village began to grow as a result of the interest taken in the pyramids by an ever-increasing number of yearly visitors and tourists. At that time, no one cared to protect this monument, and persons wishing to build houses or boundary walls, merely broke up the huge blocks into convenient pieces and used them at will. Apparently all the houses of the village, until quite recent times, were built of the stones of the causeway. Thus, though much of this wonderful structure still remains, it is encumbered with houses, and a large gap exists where it joins the natural rock of the plateau.

According to Herodotus, the causeway was nearly as wonderful as the Pyramid itself, and he says: "The time during which the people were thus harassed by toil, lasted ten years on the road which they constructed (the causeway), along which they drew the stones, a work, in my opinion, not much less than the pyramid : for its length is five stades ( $3,05 \mathrm{l} \mathrm{ft}$.), and its width ten orgyae ( 60 ft .), and its height, where it is the highest, eight orgyae ( 48 ft .): and it is of polished stone, with figures carved on it" (Book II, 124-126).

[^11]

From its commencement at the Valley Temple to about the place of its junction with the edge of the plateau, the causeway was running obliquely south-west, but from the top of the platenu the angle changes slightly to the north. Near to the edge of the plateau, there is a subway passing under the causeway. It is cut in the rock and runs north-south, its ingress and exit being somewhat steep. Such subways are a regular feature of pyramid causeways, and may be seen to advantage under the causeway of the Second Pyramid and under that of Queen Khent-kawes. They served the practical purpose of providing a convenience for persons wishing to cross the Pyramid Complex without the necessity of making the long detour behind the Pyramid or in front of the Valley Temple.

A few metres north of the east-west boat discovered by Reisner, and to the east of the eastern face of the Pyramid is another such subway, cut in the rock, and lighted by a square shaft in the middle. As we see it now, it has apparently no purpose, and was never finished. According to the general idea of scholars, the plan of the Great Pyramid was twice changed, and originally it was designed on a much smaller scale. Perhaps, the unfinished subway was intended to run under the causeway of one of the earlier plans, as the rock in the area surrounding it has certainly been levelled for a considerable distance. At the edge of the plateau, near the southeastern corner of the wall surrounding the ex-royal rest-house, there is a considerable area of the surface composed of huge limestone blocks. These blocks run north-east, and descend in courses to a little less than half the height of the plateau. Were these blocks merely intended to fill in a deep crevice in the plateau (which could have been more easily and cheaply accomplished with rubble), or are they the remains of an earlier project for a causeway, of which the above-mentioned subway was part ? On the other hand, they may be part of a construction ramp, demolished when the Pyramid was completed. In this connection, it is interesting to note that although the cliff face to the south of the causeway is literally honeycombed with rock-cut tombs (in some places they are cut in tiers four deep, like modern apartment houses!), to the north of the causeway there are no tombs at all, only a few natural caves, which show no traces of ever having been used for burial. Moreover, Petrie mentions the fact that the whole of the slopes of the plateau to the north-east of the Great Pyramid are artificial, and consist of nothing but rubble and builder's waste, among which he found ancient baskets, cordage and pieces of wood (see "Pyramids and Temples of Giza", p. 213). It is very probable that the main road which leads up to the Pyramid Plateau is nothing but the remains of one of the construction ramps, of which there must have been several, and of which the remains of another is still existing towards the southern part of the village of Nezlit-el-Semman.

The upper, or western end of the causeway, from the edge of the plateau to where it passes the solar-boat, is clearly defined in its rock foundations, and a few blocks from the lower part of the southern wall still remain in place. Its total width at this part is about 9 m . The walls and passage all having nearly the same width. Where it crosses the subway, it has a width of about 10.50 m .

It is from the upper end of the oauseway that we were lucky enough to recover a few of the sculptured blocks which had once adorned the walls, and which, as we have mentioned before, proved the fallacy of the idea that the Fourth Dynasty royal funerary monuments were not so decorated. Though these remains are so meagre, and the blocks themselves often small, from them we can recognize some of the scenes which had existed here, and they conform to what we know to have been represented on the later, and better-preserved causeways of the Fifth and Sixth Dynasties.

## Bloces from the Causeway of the Great Pyramid

## Part of a Royal Scene

The fragment depicted on Pl. V $A$ (Fig. 2) measures $0.16 \times 0.11 \mathrm{~m}$. It comes from a scene on the northern wall of the causeway, and represents the legs and the lower part of the left wing of a bird of prey, either the vulture or the hawk, which is habitually shown hovering over the Pharaoh. In its talons it carries the sign of life, which is represented in full detail,


Fig. 2
as in the Valley Temple of Snefru and other carly monuments. Notice also the fine details in the legs and talons of the bird, particularly the folds of skin where the feet and legs join. Its position on the walls of the causeway can be ascertained by the fact that it should be facing east, that is away from the Pyramid; it being the general rule that the figure of the deceased is represented as though coming forth from his tomb, while offerings are always shown being brought into the tomb.

The fragment shown on Pl. V $B$ (Fig. 3) is from another royal scene, this time from the southern wall of the causeway. On it is seen the lower part of the end of the wing of the protective bird, and below it the head of a hawk, which was most probably perched on the top of a serekh. The modelling of the latter is very fine and characteristic, and is strongly reminiscent of the work from the Temple of Snefru at Dahshur. It is not improbable that the same school of sculptors was responsible for the decoration of both Pyramid Complexes.


Fig. 3

## The Ceremonial Visit to Heliopolis

The block shown on Pl. VI $A$ (Fig. 4) measures $1 \cdot 10 \times 1 \cdot 12 \mathrm{~m}$. On it is depicted the upper part of a large figure of King Khufu, engaged in one of the ceremonies connected with the Heb-sed Feast. The King wears the Red Crown of Lower Egypt, and a white linen tunic supported by a single brace over the shoulder. Over his right shoulder may be seen the curious scarf or stole, which was worn by the pharaohs when performing the ritual visit to Heliopolis. Such a scene is preserved on the blocks of the pylon of Apries from his palace at Memphis. In his study of this scene, Petrie ("The Palace of Apries : Memphis", Vol. III, Pl. V and p. 11) refers for the explanation of the scenes on this pylon to the well-known Stela of Piankhi. He identifies the scarf worn by the Pharaoh as the "sedeb"-garment, determined by a looped scarf, which Piankhi donned after he had bathed in the sacred well of the sun in order to purify himself before proceeding to the Temple of $R a^{\circ}$. In the Memphite scene the King is preceded by the sacred emblems, and before him, two men are performing a ceremonial dance, under the supervision of a chamberlain. Behind him are two men, one of whom is a ritualist and the other a sole confidant and director of the palace. In our relief, we can see above the head of the King the lower part of the wing of a hovering bird and the "shen" symbol of eternity, which it grasps in its talons. Behind Khufu are two superposed registers, in each of which are two small figures of men, all of which are badly eroded; they are all facing in the same direction as the King, and have the right arm bent with the hand resting on the breast, and the left arm hanging at the side. Their titles, if such were ever inscribed, have not been preserved. The features of Khufu are, unfortunately, badly damaged. Originally the eye was an inlaid one of rock-crystal and alabaster, set in a copper frame. This was gouged out, with resulting mutilation to the face. Such artificial eyes inlaid in limestone
statues were well known in the early Fourth Dynasty, but so far as I am aware, it was hitherto unknown in reliefs before the end of the Fifth Dynasty. It occurred in the causeway of Wenis at Sakkara, where a large figure of the King was provided with such an eye (unfortunately removed, with resulting damage to the features). It also occurs in the figures of the gods in the Mortuary Temple of Ded-Ku-Rai-Issy, at Haram-el-Shauwaf, and in two cases, the eyes are still in place.

This block came from the southern wall of the causeway. A drawing of this block, published by Reisner in his: "The Tomb of Hetep-heres the Mother of Cheops", Fig. 4, shows


Fig. 4
only two superposed small figures of men behind the king, and the lower one has his arms upraised. Perhaps this was made some years after the discovery of the block, when the surface had disintegrated somewhat, as when found, two figures in each register were clearly discernible, as the photograph on Pl. VI shows ( ${ }^{1}$ ).

[^12]
## Two Royal Scenes of the Heb-Sed Feast

The block, shown on Pl. VI $B$ measures $1.75 \times 0.27 \mathrm{~m}$. and is probably from the southern wall of the causeway, as the largest figure of the King faces in that direction.

This block bears part of two scenes connected with the Heb-sed Feast. On the right is seen a small figure of Khufu, clad in the characteristic ceremonial cloak ( ${ }^{1}$ ) worn in this ceremony and enthroned in a kiosk. In one hand he holds the flail, and the other hand rests upon his lap. Unfortunately the head of the figure is lacking. In front of the King are traces of a vertical inscription, reading : $-\downarrow$ (1) , (2) ? ? ? ? ?

On the left-hand side of the block was another and larger scene. Near the centre may be seen the remains of a large head of Khufu, wearing a peculiar form of head-dress, rarely seen on the monuments. It was apparently a special form of the nemes, and was worn for the performance of certain ceremonies. It occurs among the fragmentary reliefs from the Solartemple of Neuserra' at Abusir. Behind the head of the King may be seen the lower part of his cartouche. In front of him are part of four vertical rows of text, reading: $\downarrow \rightarrow$

1. $[\bar{y}] \curvearrowright$.
2. 

 (i.e. the Great Pyramid) . . .".


At the extreme left-hand edge may be seen the leg of a small figure of a man ${ }^{(2}$ ).
It appears as though this scene had some connection with the Pyramid. In point of style it differs from the other blocks which we found; the relief is much lower, and the signs are attenuated. It has been suggested that this block is not from the time of Khufu, but is a relic of a Saitic restoration, made when the cult of the pyramid builders received a new impetus under the Twenty-sixth Dynasty. This may be so, but we have to remember also that in most of the royal monuments of the Old Kingdom, the style of work is not uniform. In the Valley Temple of Snefru at Dahshur, there are two types of relief, one is very high and full of detailed modelling, the other is flat, and has less detail. The same thing is seen on the causeway of Wenis, where the style of the work, and even the skill of its execution, varies considerably. As a matter of fact, there is no evidence that the cult of Khufu was ever celebrated in his Mortuary Temple after the end of the Old Kingdom. It is far more likely
(1) For a discussion of the costume and insignis of the king in the Sed-festival, see J.E.A., Vcl. 41, p. 127.
${ }^{(2)}$ This block has been published by Reisner in his: "Tomb of Uotep-heres the Mother of Cheops ", Fig. 6a, 6 b.
that it was celebrated in one of the divine temples, of which we know several in this district, or else in a part of the Valley Temple. We must also remember that in ancient times there was a town of considerable size, flourishing at the foot of the Pyramid plateau; it was called Busiris, and occupied the place of the modern Nezlit-el-Semman. Thus the site of the Valley Temple in the midst of this town would be a more convenient cult-centre ( ${ }^{1}$, and this offers another inducement for the excavation of this temple.

## Speculations Concerning the Heb-Sed Feast

As this representation is one of the early scenes we have which depicts ceremonies from this very important, but little understood ritual of the $H e b$-sed, it will not be out of place to digress for a while to summarize what is known about it, and speculate upon its meaning.

Different scholars have given the $H e b$-sed their attention from time to time, and many theories have been put forward as to its origin and meaning. According to one idea, the aim of this ceremony was to confer upon the king new powers of rejuvenation ( ${ }^{2}$ ), for, according to Fraser $\left(^{3}\right)$, many primitive people believe that their kings were a kind of prodigy, who had the power to make the sun shine, the rain to fall and the crops to flourish. In other words, they bound up with their ruler's personal vigour, the vigorous, reproductive power of Nature. According to this belief, if the ruler grew old and feeble, so also would their crops and herds fail and the prosperity of the tribe diminish. Therefore, as soon as the king showed signs of age and failing powers, he was put to death, and a youthful and vigorous ruler installed in his place.

Not unnaturally, at an early date the kings thought of esoaping this ritual murder by any possible means, and they actually achieved this aim by substituting a sacrifice of human victims, the shedding of whose blood was supposed to rejuvenate the king.

The Egyptologists, Moret and Wainwright, included the Anoient Egyptians among the peoples who had believed in the power of their kings over the elements and the forces of Nature, and had, at a very remote period, practised their ritual murder. According to these authors, the $H e b$-sed Feast should have existed, at least in its primitive form as a kind of repetition of the magical operation, by means of which the old and enfeebled king was rejuvenated ( ${ }^{4}$ ). But all these ideas are mere hypothesis, and have no historical background on the Egyptian soil.

[^13]
## Memphis as the Place where the $H e b$-Sed Feast was celebrated

We have a scene from the Ramesside Period which proved that the Heb-sed Feast was celebrated at Memphis ( ${ }^{1}$ ). This scene occurs in the tomb of a High Priest of Nekhebet, at ElKab, and in it is shown a picture of a boat containing the shrine of the Goddess Nekhebet, which is being towed by another vessel. Above the scene is the following inscription (after the restoration of Gardiner) :--
"Year 29 . . . month of . . . season . . . day, under the Majesty of the King of Upper and Lower Egypt, Lord of (the Two Lands) Usimaré-mi-Amon, the Son of Ra', Lord of Diadems Ramesses, Prince of Heliopolis. First occurrence of the Jubilee Festival. His Majesty commanded to commission the Governor of the Residence City, the Vizier to (bring the divine bark of Nelhebet to the Jubilec) and to carry out her sacred rites in the house of the Jubilee Festival. Arrival at the House of Ramesses-Beloved-of-Amon-the-Great-Spirit-of-the(Sun) . . (?) (in year 29 . . month of . . . season . . . day) Reception of the Front hawser of the divine bark of the King in person."

According to a passage from a Turin Papyrus ( ${ }^{( }$), Gardiner filled in the gaps in the abovementioned text of Setau. And now we are faced with the question: ' was this festival celebrated in Pi-Ramesses by Ramesses III'? The answer is in the negative, for the Harris Papyrus (49,10-12) definitely states in the long declaration addressed by Ramesses III to the Memphite Ptah: "I made for thee the finest Jubilee Festival of my reign, as a great, vast festival for Tanen . . . I restored thy temple and the chapels of the Jubilee Festival that were ruined of old . . .". It must also be noticed here that some of the principal rites of the festivalmaking the circuit of the walls, and the erecting of the $\underline{D}$ ed-symbol-were essentially Memphite ceremonies ( ${ }^{3}$ ). Moreover, we have the decree of Ptah-Tanen at Abu Simbel and at Medinet Habu, where the passages relating to Pi-Ramesse are immediately followed by a reference to Memphis as the scene of the Jubilee Festival : " . . in which are houses of the Sovereign (?)", (var.) "I built a Wall-town, in which is my seat, that thou mightest celebrate the Jubilee which I celebrate within it. I fastened thy crown with my own hands". This means, of course, that the High Priest of Memphis performed the actual rite of Coronation. So under Neos Dionysos, the High Priest of Memphis of that time, Pshen-Ptah, boasts: "It was I who placed the uraeus ornament on the brow of the King, on the day when the Two Lands were united to him, and who performed for him all the usual rites in the chapels of the Jubilee Feast" ${ }^{(4)}$.

[^14]This custom survived into the Old Roman Empire and later, when the Pope used to place the crown upon the head of the Emperor, until this custom was violated by Napoleon, who crowned himself. The text continues: "Thou appearing on the great double dais, Gods and men rejoicing at thy name, like me, when I celebrated Jubilee Festivals". It is to be noticed here that Wall-town is a well-known name of Memphis, and it was around the city walls that one of the most important rites of the festival was carried out. A remarkable fact to be observed in those villages and smaller towns of modern Egypt, where the old customs are still observed, is that the Egyptians of the present day, when they wish to celebrate any great event, either on a glad or sad occasion, have the habit of going in procession around the village cr town. Thus, on the Feast days of certain Sheikhs or Saints the people are accustomed to gather at the tomb of the Saint in question, where they form a procession and make the circuit of the village. Likewise, when a marriage takes place, the people form a joyful procession to escort the bride to the home of the bridegroom, and although this may be only in next street, they will march the procession all round the village. And in the same evening, a similar procession is made in honour of the bridegroom. Similarly, when a person dies, the women of the family and their friends walk all round the village, wailing and mourning for the deceased.

There were a number of feasts celebrated at the end of the month of Khoiak, and which terminated on the first day of Tybi with the principal feast in the Memphite Calendar of Feasts. The first which took place was the procession round the wall, i.e. the White Wall, or Memphis, which took place on the 26th of Khoiak. This was the feast cf the God Seker, and was designated as the "Day (or feast) of going around the Wall (Memphis). In this procession, the King himself, accompanied by his courtiers followed the God Seker, and took part in a ceremony which was repeated as a wish by all pious Egyptians in their funerary inscriptions. After that came the feast of gcing around the Wall with herds of animals. This was celebrated on the 30th of Khoiak, the day of erecting the divine $\underline{D} e d$ symbol, in which the God Ptah-Seker-Osiris was thought to be incarnated. This rite, which is also represented at the erection of an obelisk, must be performed by the King single-handed, watched by all the members of his family. Beside the King stood the High Priest of Memphis, as the most important person, next to the King in the performance of this ceremony.

Possibly there were other feast days of the God Seker in which processions made the circuit of the Wall, but in any case all ceremonies, involving a procession around the Wall, should be in relation with Memphis, which was also called the White Wall, or simply the Walls.

It has been observed that the ceremony of going round the Wall, in which the King participated, is mentioned on the Palermo Stone in association with the Feast of the Succession to the Throne. Thus, we arrive at a conclusion for the history of Memphis which is of the greatest importance, and the idea running through the inscriptions referred to above is that the God Ptah-Tanen claims to have built his seat and city expressly in order that Ramesses II (or Ramesses III) might there celebrate his Jubilee Festival, as the God himself had done in days of yore.

Prof. Breasted was misled by the lacuna in the text, and thus had the impression that the Jubilee was celebrated at Pi-Ramesse. But if the feast was not celebrated at Pi-Ramesse, as Breasted had understood, what is the meaning of the inscription at El-Kab? The answer is not far to seek. Pi-Ramesse was certainly the capital of Egypt at that time. Thus, it is to that city that the Vizier and the high officials must have thronged, together with the High Priests of the different provinces and their sacred barks, bearing the shrines of the Gods. Then altogether, in one solemn and stately procession, with the Pharaoh in their midst, they would have proceeded by river to Memphis, there to celebrate the Jubilee under the patronage of its ancient God Ptah-Tanen. Thus, it would seem likely that this ceremony was always, or nearly always, celebrated in the ancient and historic town of Memphis.

There is still another interesting and significant point to be considered, and which further stresses the suitability of Memphis, as the seat of the cult of the God Ptah, to be the scene of the principal celebration of the $H e b-s e d$. It is well known that one of the characteristic emblems, seen in the representations of that God, is the menat-pendant which is shown hanging from the back of his neck. This pendant, which has the curious form of an inverted tassel, is also found with other deities, notably with the Goddess Hathor, with whom it seems to be a symbol of fertility. But why should that particular form of pendant bave any connection with the idea of fertility and productiveness? The fcllowing may perhaps be an explanation:-

The excavations at Thebes carried out by Winlock, in 1930-1931, produced, among many important and interesting finds, a number of small tablets of wood. These date from the Eleventh Dynasty, and have the form of a female torso, some of which were decorated to


Fig. 5


Fig. 6
represent clothing, but others were naked. All had the body cut off at the upper part of the thighs, the arms are rudimentary, and the head merely suggested. That is to say, the parts stressed are the breasts and pelvis, the pubic mount and the outer edge of the vulva being clearly marked in every case. Fig. 5 shows a sketch of one of these figures, and it will be seen that its outline closely resembles that of the menat-pendant (Fig. 6). The identification
of these female torso-figures, with their suggestion of the female principal of birth and nourishment, and the menat, is strengthened by the fact that we see the latter emblem in the hands of the Goddess Hathor, and that it figures prominently in the scenes depicting incidents in the infancy of the youthful God Horus. It is also significant that the figure of this God often forms the motif of decoration in the lower, circular part of the menat. But, as we have already remarked, the menat has a connection with the God Ptah of Memphis, and had also played a role in the $H e b-s e d$ ceremonies.
M. P. Barguet in an article in the "Bulletin de l'Institut Fr." has proved that the menat denotes new birth, and this again connects it with the idea behind the $H e b-s e d$. There is a still more significant point. It is well known that Hathor was called the "Lady of the Menat", and that her temple at Denderah was sometimes known as the "Palace of the Menat", but the latter name was especially applied to a certain chamber there, in which were stored the sacred jewels and emblems, and to one of the crypts which was connected with the birth of Horus. In these two chambers, the menat is represented on the walls as a personified emblem. In one scene it lies horizontally upon its stand, and is represented in the form of the torso of the Goddess Hathor, her arms holding the ohild Horus. The King, standing before this emblem, is described as "The One engendered by Ta-Tanen, the divine seed of Ptah, who modelled the Menat of gold of the Golden One (Hathor)". This clearly connects the menat with both of the God Ptah and Hathor, as well as the King. When we accept the menat as the emblem of birth, fertility and abundance, it becomes clear why it should be included in the ceremonies of the $H e b-s e d$, as at Deir-el-Bahari, where Hathor presents it to Hatshepsut, or on the Saitic sarcophagus in the Berlin Museum ( ${ }^{1}$ ), where the scene of the Heb-sed of the God Osiris shows him carrying the menat. Again, on the Bubastite Portal at Karnak, the scenes of the Heb-sed of Sheshonk are depicted, and in one of them he is shown wearing the menat, and suckled by Hathor, who also offers him another menat. The accompanying text states: "The first renewal of the Heb-sed of the King". There are also two reliefs from the tomb of Seti $I$, one in the Louvre and the other in Florence, where Hathor presents the menat to the King, and at the same time assures him of "Millions of Jubilees" ${ }^{2}$ ).

We have seen that the menat is one of the characteristic emblems of Ptah, and it is significant that one of his titles is Ptah-tanen, rich in jubilees, or master of jubilees. The same emblem is also found with Khonsu, the third person of the Theban triad, and the God of the moon. Here again, the moon which waxes, wanes and then renews itself again, is emblematical of the idea of rejuvenation, the idea lying behind the $H e b$-sed. Furthermore, Ptah and Khonsu are the only gods, with, of course, the exception of Osiris, who are represented in
(1) "A.Z.", XXIX, Pls. IV, V.
(2) Leflhburi, "Le Tombeau de Seti I", Appendice, Pl. I.
mummied form. All three have at different times been represented as bearing the menat, and all have a connection with the idea of renewal and resurrection, But of the three, Ptah seems to be the first who was represented with the menat, and he is the one most closely connected also with the ceremonies of the Heb-sed.

## The Celebration of the Heb-Sed Festival

From the above-quoted texts, it seems clear that all the doities of the two halves of the kingdom were summoned to Memphis, their statues or emblems being housed in the two rows of shrines erected on opposite sides of the Jubilee Court. The Lower Egyptian shrines had the appearance of the primitive shrine of the Cobra-Goddess Wadj.t Edjo, at Buto a while the Upper Egyptian shrine: resembled that of the Vulture-Goddess Nekhbet of El-Kab. Sethe thought that these structures were royal palaces ( ${ }^{1}$ ), but in reality they are primitive temples or shrines, as is proved conclusively by the Palermo Stone (Pr-nzr Vs. 3, I; Pr-nu, Vs. 3, I), and also by the epithets of the two Goddesses who inhabited them. Both the two shimes of the Cobra-Goddess Edjo have the shape 甶, cf. "Edjo of Dep and Pe, Lady of Pr-nw and Lady of Pr-nzr" $\left.{ }^{2}\right)$.

From this example, it is clear that the title of Edjo mentioned above that the Pr-nw belonged to Dep and the pr-nzr belonged to $P e$, or vice versa. Pe and Dep, as Gardiner has fully explained $\left({ }^{3}\right)$, were the two adjoining early settlements which together constituted the Delta town of Buto, the modern Tell-el-Farain ( ${ }^{\text {i }}$ ( $\mathrm{J}_{\text {) }}^{\text {). Similarly, the Upper Egyptian Vulture }}$ Goddess, Nelhbet of El-Kab, has two shrines, the Pr-wr, or Great House, and the Netrj-Shema,
 White One of Nekhen, Lady of the Netrj-Shema, and Lady of the Pr-wr" ${ }^{(4}$ ). Sethe says that there is a strong possibility that the $\operatorname{Pr}$-wr is situated at El-Kab, but the situation of Netrj-Shema is not yet exactly known.

The scene of the two rows of shrines was first observed in their imitation form in the vast complex of buildings surrounding King Zoser's Stepped Pyramid at Sakkara. Both Sethe and Borchardt did not recognize this scene of the Heb-Sed Festival in the Temple of Sahure, on account of its fragmentary state. This, however, is proved by the rather better preserved, and closely similar scenes in the Funerary Temple of Pepy $I I$, which again forms a link between Sahure's representations and those of the well-known Festival Hall of Osorkon at Bubastis ( ${ }^{5}$ ).

[^15]It is especially to be observed that in all these suenes, the Upper and Lower Egyptian deities are kept strictly apart. In the Temple of Pcpy $I I$, the eastern and western walls of what Jequier terms the Ante-chamber, are occupied by reliefs depicting separately the deities of the two halves of the Kingdom ( ${ }^{1}$ ). On the western wall we see the King standing and facing towards the right; the doorway in the eastern wall has prevented a corresponding representation there. Each wall exhibits five registers, the upper three of which show standing deities facing towards the King, or on the eastern wall, deemed tc be so looking. Befora each row an officiant pronounces the formula of offering, and the deities in turn assure the King that they will give all blessings. In the fourth register, butchers are slaughtering oxen, and in the fifth courtiers approach to pay homage. In front of each deity on the western wall is a typical Upper Egyptian shrine: and on the eastern wall this is replaced by the shrine of Lower Egypt: as in the Temple of Sahure . The damage to both walls is great, especially on the eastern side. But nevertheless, we can still discern Min (of Coptos), Seth (presumably of Ombos) the jackal-headed Spirits of Hierakonpolis and some cynocephalous apes, doubtless belonging to Hermcpolis Magna, while as the leading figure in the third register stood Nekhbet of El-Kab ( ${ }^{2}$ ). The Upper Egyptian section seems to have been completed on the southern wall, where we see Seth of $S w$, Khnwm of Hermopolis Magna, and Month, presumably of Thebes ( ${ }^{3}$ ). They are probably placed here through lack of space, and their characteristic shrines are omitted.

The scene of the Lower Egyptian deities and their shrines is badly damaged in the Temple of Pepy II, but by analogy with a similar scene in the Temple of Sahure we know that it must have contained the God Horus, the Barber-god, Dwa-ur, who is found also in the Pepy reliefs. This shows that there is a close relationship between the scenes in the two temples. This relationship becomes more apparent on account of the presence of the God Dwa-wr among the deities of Lower Egypt, which is unexpected and unexplained, the same being true of the first of his two neighbours in the Temple of Pepy II, namely Heka-s. But the second neighbour, $H p h p$ or Hepwi is known to have Lower Egyptian connections by the fact that there is a little-known Delta town bearing the same name ( ${ }^{4}$ ). The two Gods Heka-s and Hepwi (?) are also shown together among the Lower Egyptian divinities in the Bubastite scene, so that there is little doubt as which half of the country they belong ( ${ }^{5}$ ). It is unfortunate that no better known deity of Lower Egypt has survived the destruction of Pepy's eastern wall, but the human-headed Tḥnwi ("He of Tjehnu" = Libya) points to the north ; perhaps he can be equated with Horus of Tjenhnou, who appears in the Bubastite scenes.
( ${ }^{1}$ ) Jequier, ibid., Vol. II, Pls. 50-53, p. 39 ff., for the wostern wall with the Upper Egyptian series, and Pls. 58-60 and p. 49 ff . for the Lower Egyptian series on the eastern wall.
( ${ }^{\text {a }}$ Jequirr, ibid., Vol, II, p. 42.
(*) Ibid., pp. 46-47.
(*) Bedgasor," Dict. Géog.", p. 494.
(b) Chassinat, "Edfou", Vol. VIII, 137.

There is no doubt that the Bubastite scenes help us to understand those of the Old Kingdom temples. At Bubastis, the Lower Egyptian Gods occupy one long row of their own, also they are represented as being inside their shrines, instead of standing behind them, and in front of each deity is a tiny figure of the King making an offering. This shows that either the King or his representative visited each shrine in turn. Above all, the reliefs of Osorkon prove that the occasion for these ceremonies was the Heb-sed Feast, though the mention of the first day of the year, i.e. the first day of the first month of winter, on the western wall of the Temple of Pepy II, would in itself have been decisive ( ${ }^{1}$ ). Gardiner, from whose article I summarize this scene, says: "I consider it certain that the Sed-Festival was reckoned officially as the beginning of the date named, which is often mentioned as that day when some high official was commanded by the King to 'proclaim' it". We shall treat that subject later here ( ${ }^{2}$ ).

The next known representations of this scene are from the Middle and New Kingdoms. From the Middle Kingdom we have two almost identical lintels from Medamoud, which still retain considerable portions of their door-posts. One belonged to Senusert III ( ${ }^{3}$ ), and the other belonged to Amenemhat-Sobek-Hotep ( ${ }^{4}$ ).

The New Kingdom monument is from the time of Amenhotep $I\left({ }^{5}\right)$. We shall discuss here only the doorway of Senusert III, as there is but little difference in detail with the later scenes, except the bighly ornate example from the reign of Merenptah ${ }^{(6)}$.

A superficial examination of these doorways reveals the fact that their representations are mere modifications of those of the Old Kingdom already referred to, even the vertical line of inscription running down each door-post reproduces in essentials the phrases of the horizontal inscriptions above the deities in the Temple of Pepy II. The more restricted space has forced the artist who designed these scenes to concentrate upon the Upper Egyptian cults, these being chosen because the main purpose was to include the Gods of Medamoud and of Thebes. That there was no deliberate intention to exclude Lower Egypt is proved by the presence of the Heron-God of Djba'et, and of Horus the Behdetite himself. Djeba'et was either another name for $P e$ (Buto), or that of a town close to it ${ }^{7}$ ). This very ancient divinized bird was doubtless incorporated in the scene as the appropriate counterpart of Horus the Hierakonpolite (Nekhen). But a still more curious means was resorted to in order to remind the spectator that the Lower Egyptian deities had their share in the ceremonial here

[^16]commemorated. Although all the divinities depicted in the separate square compartments are Upper Egyptian, behind those on the left-hand door-post are depicted Lower Egyptian shrines [ T ; this reminds us how imaginatively and unliterally we bave to interpret such representations.

On the left-hand door-post of Senusert III, we see Amon of Thebes, Min of Panopolis, Sobek of Imiortu (part of Gebelcin) and his close neighbour Anubis of the Two Rocks (the two mountains composing Gebelein). On the right, beside Month, the Lord of Thebes, residing in Mader (Medamoud), only Satis of Elephantine and Khnum of Hermopolis Magna are remaining.

The central scene of the lintel shows great innovations. In the vignette we see the culmination of the entire festival-the King seated high upon the dais in his robe of state, on one side as the ruler of Upper Egypt, and on the other side as the ruler of Lower Egypt. Horus of Behdet presents the notched palm-rib, symbolizing " millions of yesrs", while Set of Ombos presents to the King of Upper Egypt a similar gift. We must notice here that these larger and so dissimilarly conceived deities are given special prominence, not because they are local gods like the rest but because they are that, and something more, i.e. they are the acknowledged representatives of Upper and Lower Egypt respectively.

Certainly all this means an exposition of the King's power which he has been accorded by the Gods through his new Coronation, while the King, on his part, thanks them by making for them rich establishments and offerings.

During the New Kingdom we have a somewhat full description of the performance of the $H e b-s e d$ Festival, especially in the newly-discovered inscriptions and scenes in the tomb of a great man named Kheruef, at Western Thebes. I have discussed these scenes elsewhere ( ${ }^{1}$ ), and showed that this $H e b-$ sed Feast is solar in its origin and nature from the very beginning, and was celebrated by the King and Queen together, with the Vizier and the High Officials in attendance. On the other hand, the King sent a special official to replace him in the celebration of this feast. Thus was sent Amenhotep, the wise man, who was called the Hereditary Prince, to represent King Amenhotep III in the celebration of the Heb -sed Feast, held in Soleb in Nubia. And at the termination of this feast, there was sent also the Chief of the Canals and the Overseer of the Granary, Khaemhat, who was also the Priest of Anubis. The titles or epithets carried by this Khaemhat denote that his work was to furnish the temples with all the necessities for their maintenance.

The Gods mentioned above are also solar in origin, as I have said before. Thus, in the Fifth Dynasty we have $R a^{e}$, in the New Kingdom we have Amon-Rae and during the Raemesside time this feast was connected with the God Ptah, and the original place, where this feast was celebrated and in which it continued to be celebrated until the end of the Pharaonic time, was his special city of Memphis.

During these periods, temples or additions to temples were built on the occasion of the celebration of the $H e b-s e d$, and were consecrated to the Gods. Thus the Sun-temple of Neuserrae was the first temple built in stone for the Heb-sed. Basing it on this model, Senusert I had erected a temple to Atum at Heliopolis, as well as obelisks, and furnished it with possessions and offerings. It is for this reason that we see, beside the principal ceremony of the temple consecration, the "presenting of fields" to the Divinity of the temple, by the King, which occupied a special and important place on the cycle of the $Y$ Heb-sed since ancient times.

## The Duration of the Heb-Sed Festival

The probable duration of the $H e b$-sed Feast is only known to us from the first feast of Amenhotep III. In Soleb there took place an important feast on the 1 st day of the tenth month (Payni), and in Thebes another feast took place on the 27 th of the same month. It ended on the 2nd day of the eleventh month (Epiphi). In Soleb, the consecration rites went on from the 25 th day of the eighth month to the 21 st day of the ninth month.

The most important representations of this feast are the following : -
(1) Old Kingdom : Von Bissing-Kees, "Reheiligtum", Vol. II (texts Von Bissing, "Reheiligtum Untersuchungen", Vol. III. The most detailed representations are in Vol. III and may be used as authority for the explanation of the feast.
(2) New Kingdom : Thothmes III, Karnak Festival Temple ; "L.D.", Vol. III, Pl. 36; "A.Z.", Vol. 52, Taf. 7/8 (Oppfertanz) : Von Bissing, "Reheiligtum", Vol. III, Beiblatt A (Schluessprozession).

Amenhotep III : Soleb. Only a part published in "L.D.", Vol. III, Pls. $83 / 6$ and "L.D." (text), Vol. V, 224/5, also Breasted, "Journal of Semitic Languages", 25, p. 89. From Thebes: "Bruchstucheim Chonstempel" (see Borchardt, "A.Z.", Vol. 6J, p. 97).

The pieces which Borchardt found built into the Temple of Khons at Karnak were originally brought from the now destroyed funerary Temple of Amenhotep $I I I$, which had been erected on the western side of the Nile at Thebes. Thus, the representation of this feast on the walls of Soleb Temple were only a copy of the originals in Thebes. These blocks bear many scenes
unknown before (see the description, ibid., p. 48 f.) Osorkon II: Naville, "The Fesiival Hall of Osorkon". Although damaged, the scenes in this temple contain invaluable information concerning the $\mathrm{He} e$-sed Feast. It seems that the date of the Coronation, with the nomination to the succession to the throne, may also, during the New Kingdom, be associated together with the Heb-sed Festival, by the changing of the calendar. Usually, it seems that from the earliest times, there was an accepted tie to the old Year Feast of the First of $T y b i$ (i.e. the first month of the winter season), which certainly, at the same time, signifies a fixed coronation day of the divine kingdom. During the New Kingdom, this date is preserved, at least for the sixth Heb-sed of Ramesses II, in the 45th year of his reign; and perhaps also in the 3rd $H e b-$-sed of Amenhotep III, in the 36th year of his reign ( ${ }^{1}$ ).

The repetition of the $H$ eb-sed Festival followed after four years has passed from the original celebration, and later, after every three years. For example, the first Heb-sed of Amenhotep III was followed by a second one in the third year. The Heb-sed was celebrated in the 30th, 34th, 36th and 37th years of the reign of Ramesses II. The Heb-seds 4-6 of Ramesses II, were celebrated in his years 40,43 , and 46 respectively, and the $H e b$-seds 7 -11 were celebrated in the years 54, 57 and 60. The preparation of a $H e b$-sed Festival was entrusted to a Prince, as for example, Khaemwast, during a part of the reign of Ramesses II (this Prince was also the High Priest of Ptah at Memphis, a significant point !), or to a high official, as the Vizier, for example, under Ramesses II, or Khereuf, under Amenhotep III.

For the chronology of this question, see Brugsch, "Thesaurus", p. 1119; Sethe, "A.Z.", Vol. 36, 64 Anm. 3; "Beit. z. Alt. Gesch. Aeg.", 133, N.G.W.G., 1921, 122; Borchardt, "A.Z.", Vol. 72, p. 52. : Mond and Meyers, "Temples of Armant", p. 163.

## The Torso of King Khufu

Two fragments of fine white limestone which fit together and form a piece measuring $0.35 \times 0.30 \mathrm{~m}$. It comes from the northern wall of the causeway, and originally represented King Khufu performing a ritual dance. He is clad in a linen tunic, upheld by a single brace (not seen here, as the upper part of the body is missing). From his belt depends an elaborate apron of bead-work, rendered in minute detail; from the back of the belt hangs the conventional tail. The action performed by the King can be deduced by the forward swing of the bead apron, and by the fact that the right arm is not seen at the side. In the dancing pose, this arm would be bent at the elbow, and the hand, holding either the flail or the "mekes", clenched high on the breast (Pl. VII $A$ ).

## Part of an Inscription

A fragmentary block bearing part of an inscription: It may represent the name of the Great Pyramid, i.e. "Akhet-Khufa". It was found in the northern north-south boat, Dimensions: $27 \times 25 \mathrm{~cm}$. (Pl. VII B, Fig. 7).


The Head of a Bird
On Pl. VIII $B$ is represented a small fragment of limestone, measuring about $90.5 \times 5.6 \mathrm{~cm}$. On it is represented the head of a bird, apparently a hoopoe, with an erected crest. It still preserved traces of blue and red colouring (Fig. 8).


Fig. 8
In Reisner's book, "The Tomb of Hetep-heres the Mcther of Cheops" are published some other sculptured fragment found in the vicinity of the causeway of the Great Pyramid. (Figs. 2, 3, 4, 7), but Smith considers that they are most likely to have come from the chapel of one of the Queen's Pyramids (ibid., pp. 4, 5).

## Sculpture

A few pieces of fragmentary statues were found in the ruins of the Mortuary Temple and its surroundings, but none of them can be said definitely to represent the King himself. It was usual to find statues of private persons in royal temples, and these were doubtless
placed there by royal or priestly favour. In some cases the presence of such statues provide us with a valuable means of dating the length of time, in which a temple was being used as a cult centre for the worship of the dead King. In the ease of the temple now under discussion, all the statues are certainly dating from the Old Kingdom, but they are too few in number to permit us to say that the Mortuary Temple of Khufu was deserted after the end of the Old Kingdom. There may well have been other statues in this place, long ago, removed in the continuous plundering of this area. We also know for a fact that the cult of Khufu was still flourishing in Saitic times and even under the Ptolemies (see p. 12).

## A Fragment of a Granite Statuette

The upper part of the body and breast of a red granite statuette of a man: Originally he was represented seated, as the position of the arms indicate; quite possibly he was represented seated cross-legged in the well-known "scribal pose". The figure represented a plump, probably middle-aged man. The surface of the stone was well finished, and the small fragment remaining displays signs of good workmanship. Dimensions: 30 cm . wide and 20 cm . high (see Pl. VIII A).

## A White Limestone Group

A white limestone group representing a man and a woman seated together (Pl. IX $A-C$ ): The upper part of the figures from the breast is lacking,

The front of the feet and the pedestal are also broken off. The man wears a short kilt with a pleated side-wrap, unheld by a belt. His hands are resting upon his lap.

The woman is clad in a long, tight garment, and apparently one of her arms was bent with the hand resting on the breast, and the other placed around the shoulders of the man. There are still traces of colour on the group, red on the man and faint traces of yellow on the woman. On the side of the seat beside the man is inscribed in sunken characters:(1) $\overbrace{\text { mun }}^{0} 0$


It is curious that this inscription reads from the back of the group and ends at the front of the seat, instead of the reverse.

On the side of the seat beside the figure of the woman is inscribed: "Mitert, Nefert-Sopd.t (?)". Here the signs are inscribed normally, reading from the front of the seat to the back. The title mitr.t is an obscure one, frequently found with women towards the end of the Old Kingdom (see Fisher, "The Minor Cemetery at Giza"). In its present state, the group measures 27 cm . high, and 18 cm . wide.

## Part of an Inscription

On Pl. X $A$ (Fig. 9) is shown a fragment of limestone, measuring 38 cm . long, and 30 cm . high. It bears part of two horizontal lines of inscription, reading: (1) "... the Treasury Hor ...", (2)


Fig. 9
It is probably part of a lintel from the real- or false-door of a neighbouring tomb. It was found in the northern boat directed east-west. As this boat had been previously excavated by Reisner, this fragment must have got into its filling at a recent date.

## The Shoulder of a Granite Statue

In the filling of the northern north-south boat was found part of the right shoulder of a large granite statue. This fragment measures $22 \times 25 \mathrm{~cm}$., and may well have been part of a statue of $K h u f u$ himself ( Pl . XI $A$ ).

## The Head of a Lion

In the filling of the solar-boat to the north of the causeway was found the head of a lion in brown sandstone. It is very finely carved and life-like (Pl. XI C).

## Other Finds

(1) In the filling of the northern north-south boat was found a jug of red-ware, measuring 12 cm . high (Pl. XI B).
(2) On Pl. X $B$ is seen a pottery jug of a late period. It has a long neck, a swelling body and small footed base and a curved handle. It is painted with white streaks, probably in a crude imitation of banded alabaster. Height : 16 cm .
(3) A fragment of a mace-head of hard, crystalline limestone. On it is engraved the serekh of Khufu, containing his name: "Horus mdd.w", Beside it may be seen part of the frame of a cartouche which contained the name of "Khufu". Height : about 45 cm . (Pl. X C).

## The Rock-Cut Boats of Khu/u

During our work of clearance around the Mortuary Temple of Khufu, and the area to the east cf it, we cleaned out the three huge rock-cut boat-pits, two of which lie parallel to the Pyramid itself, and are directed north to south, and the other lies parallel to the northern wall of the causeway, and is directed east-w.st.

These boats were known to Lepsius, and are marked o o his plan of the Giza necropolis ( ${ }^{1}$ ). They became filled in again, and were subsequently excavated by Petrie, who does not seem to have recognized their significance at that time. The boat to the north of the causeway was again re-excavated by Reisner, who found in the debris filling it some pieces of gilded wood and some decayed rope. This suggests that it had contained a wooden boat, and this was the opinion of Reisner himself. The recent discovery of two more boat-pits to the south of the Great Pyramid, each of which does contain large wooden boats, justifies us in considering the surmise of Reisner was correct. With these two latest discoveries, it brings the number of Khufu's mystic "Fleet" up to five vessels, three directed east-west and two directed northsouth. If we exclude the unfinished boat-pit, this is the same number of boats which we found with the Pyramid of Khafra, and which I excavated in 1934-35 $\left(^{2}\right)$. But here there are four boats directed east-west, and one (unfinished one) directed north-south.

As I have already published the boats of Khufu elsewhere in full $\left({ }^{3}\right)$, I give here merely the measurements for reference. These are as follows:-

## Northern North-south Boat (see Pl. XII)

This boat measures 53 m . long, 7 m . wide at its widest part, and 7 m . deep. It has a rebate all round its upper edge, but its great width makes one doubt if it was ever roofed over.

## The Southern North-south Boat

This boat, which is in a better state of preservation than its northern neighbour, measures 51.50 m . long, 7 m . wide and 7 m . deep. It has now been provided with a low stone wall to prevent accidents.

## The East-west Boat

This is undoubtedly to be classed as a solar-boat. It measures 43 m . long, 5 m . wide, and 7 m . deep. It also has a rebate around the upper edge, and as its dimensions are similar to those of the newly-discovered vessels, there is no difficulty in considering it to have been roofed (see Pls. XIII and XIV).

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(1) " L.D. ", I, Pl. 14.
(') "Excavations at Giza", Vol. VI, Part I, p. 56 f.
(`) Ibid., p. }40\mathrm{ ff.
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Fig. 11


## The Mortuary Temple of Khufu

Of all the visible units of the Pyramid Complex of Khufu, the Mortuary Temiple at the eastern side of the Great Pyramid has suffered the most. The visitor passing over this area sees nothing but the scanty remains of a once beautiful basalt pavement (Pls. XV and XVI). There is no doubt that the destruction of the casing of the Pyramid was largely responsible for this total demolition, and at the same time, it is well known that Khufu's monuments were serving as a quarry for later buildings, even as far back as the Middle Kingdom ( ${ }^{1}$ ).

Nevertheless, by caseful examination it is possible to re-capture at least a general idea of the original plan of this temple, or, we should say more correctly, the eastern part of it, according to our excavations, and before the evidence was re-covered or obliterated.

It appears that a vast area of the plateau in front of the eastern face of the Great Pyramid had been artificially levelled, and on this the foundations of the Mortuary Temple were cut (Pl. XV). Thanks to these rock-cut foundations that we are able to glean the little information that we have, and which enables us to present at least a partial plan of this very important monuments.


The sketch-plan given in Fig. 10 shows in solid lines all the features of the temple that can be vouched for by the aid of the evidence of the rock foundations, and these can be seen by anyone who cares to examine the site. In view of the extremely mutilated condition of the western part of the temple, I prefer not to hazard a guess at its appearance, but I append sketches of plans made by Lauer (Fig. 11) and Ricke (Fig. 12), both of whom are expert

[^17]architects, and the reader may judge for himself if the existing remains justify their imaginary reconstructions. I may mention here that it is extremely risky to hazard a guess at any part of the plan of the Temple of Khufu, as it is obvious that it does not resemble either the earlier or later temples of its kind. Alsc the above-mentioned gentlemen made their plans some years after our excavations ( ${ }^{1}$ ).

As will be seen in our sketch-plan (Fig. 13), the temple is situated practically in the middle of the eastern face of the Great Pyramid, and is approached from the east by a causeway, of which, as we have seen, very little remains, except for a few odd blocks and the rocky foundations. This main entrance to the temple is situated in the centre of the eastern wall, and measures about two metres wide. It still retains its massive threshold, formed of a single block of black basalt, in the southern and northern corners of which may be ssen the socket-holes of the pivots of a doable-leaved door.

The entrance gives access to a great court, measuring $52.40 \times 25.0 \mathrm{~m}$., the long axis being directed north-south. This court was paved with huge blocks of basalt; its walls were of limestone, and it was surrounded on all sides by a colonnade supported upon thirty-eight granite pillars, of which those at the corners were apparently rectangular, and the others square. Of these pillars, which measure just over 1 m . on each face for the square ones, only the lower end of one actually remains in place. This is the easternmost of the southern row of square pillars; but the sockets for the remaining pillars, all of which are cut deep in the underlying rock, are plain to be seen in nearly every case, and there is no doubt about their disposition.

As I have previously mentioned in another place $\left({ }^{2}\right)$, there is a limestone channel running from some place in the centre of the court, passing between the third and fourth pillars in the northern row, and running under the northern wall, continues in a north-easterly direction to its outfall in a trench or gully in the plateau. I had suggested that this drain may have had a connection with the rites of embalming, and I still maintain that this may have been its original purpose, and the socket holes of the pillars, which I gave in the small sketch, are still to be seen in the site $\left({ }^{2}\right)$. I do not insist, however, that the ohamber they belonged to was a permanent structure. It may well have been dismantled after its real purpcse was accomplished. Likewise the drain itself, which no doubt served, as in the Temples of Abusir, for the cleaning of the court after the sacrifices, and also like those of Abusir, ran under the pavement of the court.

At the western side of the temple, we have evidence in the rock-cutting that the hall was recessed back in two large bays, the first or outermost one measuring 27 m . wide by 4 m . deep, and the second, or inner one, measuring 18 m . wide and 4 m . deep. These two bays

[^18]

Fig. 13
were roofed over to form a hall, the roof being supported by twelve square pillars of the same type as those of the colonnade. There were eight pillars in the first bay, and four in the second one. In the centre of the western wall of the inner bay is an entrance measuring 2.50 m . at its outer side, and about 1 m . at its inner one, which presumably gave access to the westerumost chamber of the temple. Whether this was a sanctuary, or the five statue-niches suggested by Dr. Ricke, will never be known, as all evidence concerning it was destroyed by the cutting of a large and uneven shaft, which the late Hakim Abu Seif and Mr. Lauer consider to be a water reservoir made at a late date probably during the Roman Period. This shaft measures roughly about $4.0 \times 5.30 \mathrm{~m}$. and is 13.26 m deep at its deepest part.

It is rather difficult to see what useful purpose a large water tank would serve in this place, and I think it is more probable that this shaft is an unfinished cutting for a large Saitic tomb, many of which are known in the neighbourhood. It is a known fact that during the Saitic Period, influential persons liked to have their tombs in ancient temple sites, and a parallel may be drawn with the Saitic tombs cut in the Mortuary Jemple of Weserkaf and Wenis at Sakkara, as well as in many other places. In fact, in the case of Weserkaf's temple, there is a Saitic tomb cut in almost exactly the same place as the supposed "reservoir" in that of Khufu ( ${ }^{\mathbf{1}}$ ).

Up to this point we have been treading on firm ground in our reconstruction of the plan of the Mortuary Temple of Khufu, but we now begin to come to more uncertain territory. There are absolutely no traces remaining which would justify us in hazarding a restoration of the extreme western part of the building. The surrounding walls are easy to trace from the rocky foundations, and we can say with certainty that in the north-western corner was a doorway, measuring about 1.50 m . wide on its outer or eastern side, and about 2 m . on its inner one. This doorway had a threshold composed of two huge blocks of red granite. It gave access to the narrow courtyard of the Pyramid, which lies between the face c.f that monument and its surrounding temenos wall.

There are also faint indications of a massive block of masonry having existed at each of the north-western and south-western sides of the covered pillared hall. Lauer suggests that there may have been chambers in the thicknesses of these blocks of masonry and a staircase in the southern one, leading up to the roof of the temple. But he admits that these suppositions are mere hypothesis, and there are certainly no actual remains to prove this question either way. Dr. Ricke suggests that there may have been an offering-place with two stelae, standing at the back of the innermost room of the temple, and actually inside the Pyramid courtyard. But there are absolutely no traces of such monuments, and he bases his supposition on what was found at Meydoum and Dahshur, to which temples that of Khufu bears no resemblance at all, as we shall see below.

[^19]The above description is all that can be safely said about the ground-plan of the Mortuary Temple of $K h u f u$, let us now see that we can gather about its appearance in elevation.

The building in its heyday must have presented a simple but dignified appearance, well in keeping with the sublime monument to which it was attached.

The walls were of white limestone, terminating at their upper parts in a rounded coping, a section of which came to light in the ruins. From the fact that the causeway walls were certainly adorned with reliefs, makes it more than probable that the temple walls were similarly decorated. In fact, there was a single fragment of a relief found in the northern rock-cut boat, but I would hesitate to claim that this necessarily came from the court of the temple, as the debris, which we removed from these boats, must have been a fairly recent accumulation, for it is known that they were cleared out by Petrie at the end of the XIXth century, and one at least was cleaned by Reisner still later. With its white limestone walls, probably adorned by coloured reliefs, black basalt floor and red granite pillars, the temple must have presented a handsome appearance. We may suppose that there were also statues of the King himself, but of these we have nothing but one doubtful fragment, nor are their emplacements visible in any of the surviving parts of the building, as they are in the Temple of Khafra'. This is a point which may well encourage us to pause and consider what are the main differences between the plan of Khufu's Mortuary Temple and that of Snefru at Dahshur, which preceded it and that of Khafra and the succeeding kings.


Fig. 14

The Mortuary Temple of the Bent Pyramid at Dahshur is a small structure, closely resembling that of the Pyramid of Meydoum (Fig. 14). Unfortunately it was largely built of mud brick
and had undergone structural alterations on more than one occasion ( ${ }^{1}$ ). Originally its principal features were, as in the case of Meydoum, an offering-place flanked by two tall stelae (see Fig. 15).


Fic. 15
It is very unfortunate that the Mortuary Temple of the northern Stone Pyramid of Dahshur, also built by Snefru, has not yet been excavated, as that is the immediate predeoessor to that of Khufu. All that we can say, and even that is treading on dangerous ground, is that it was probably not a large building, as no traces whatever show above the surface of the sand, and the base of the eastern face of that Pyramid is piled high with fallen blocks, which would easily cover and hide a smaller building of the type of that of Meydoum and the Bent Pyramid.

What was the change in the royal Mortuary Cult, that necessitated such a drastic change in the plan of the temples? That is a question which is not easy to answer in our present state of knowledge. But whatever was the reason, the cult kept getting gradually more and more complex and elaborate, as we may see by the increasing complexity of the plans of the Mortuary Temples. Though very much larger than the previous temples, that of Khufu is still fairly simple in plan. It is true, that we do not know what had existed in the western end of the temple, but the restricted space between the last certain wall and the face of the Pyramid (about 12 m .) precludes anything very elaborate.

[^20]Let us now compare this building with later temples ( ${ }^{1}$ ). A glance at the plan of the Mortuary Temple of Khafra (Fig. 16) shows that already a great change had taken place.


Fig. 16
We first enumerate the features common to both buildings, these are :-
(1) The colonnaded court.
(2) The pillared hall.
(3) The north-western passage and doorway leading into the Pyramid court.

On the other hand, the innovations are very striking. Most noticeable is the massiveness of the masonry, which, in the eastern part of the Temple, far exceeds the size of chambers. Secondly, the plan seems to be reversed, and the pillared hall, with three bays is approached

[^21]immediately from the entrance vestibule, and a second pillared hall or corridor must be traversed before the visitor could enter the great court. Beyond this court to the west lay the five large statue niches, which, in the Pyramid Complex of Snefru at the Bent Pyramid at Dahshur, are six in number and are situated in the Valley Temple. From the time of Khafra onwards throughout the Old Kingdom, these five niches are always found in the King's Mortuary Temples, but in the Queen's T'emples they are only tliree. At the back of the statue niches, in the Temple of Khafrai are a number of store-rooms, and finally the sanctuary.

In the Temple of Khufu, there is no available space for such a complexity of chambers. Furthermore, the long axis of the Temple of Khatra is from east to west, while in that of Khufu it is from north to south, and the pillars in the Great Court of Khatra' were apparently fronted by statues of the King, a feature not found in the Temple of Khufu.


The Mortuary Temple of Menkawra was incomplete at the time of his death, and was finished by his son, Shepseskaf, though in mud-brick instead of stone. This temple presents a greater resemblance of plan to that of Khufu than we have seen in the case of Khafra' (Fig 17). Here also the great court is orientated north-south and the pillared hall at its western
side is recessed back in two stages. But here are also great differences. Here, the main entrance gives access to a long, narrow passage before entering the great court ; this court, moreover, had no colonnade. The pillared hall has only six pillars, and it gives access on the west to a long and narrow sanctuary, while from its northern end a corridor leads west to the five statue niches (here placed in the north-west corner of the building), another chamber on the soath, and the Pyramid courtyard, in which was situated an offering place and perhaps a stela.

Of all the later Mortuary Temples, the one, which most closely resembles that of Khufu, is the Vth Dynasty Temple of Weserkaf at Sakkara. As will be seen in Fig. 18, its plan is


Fig. 18
almost identical with that of Khufu, but its situation is abnormal, it being on the southern side of the Pyramid instead of the eastern side. Furthermore, the order of the component parts of the building is reversed in relation to the Pyramid. Apparently the Temple of Weserkat was entered from the western side, though it had two other doorways leading into the Pyramid courtyard. The entrance gives access to the colonnaded court, but the portico surrounds it only on the northern, eastern and western sides. The southern side of the court is bounded by a wall, pierced by doors in its eastern and western ends. Behind this wall lies the pillared hall, recessed back in two stages, and supported by six square pillars. To its east and west are two small chambers, and in the centre of its southern wall is a doorway leading to a small sanctuary (?), which, as in the case with the Temple of Khufu, is completely
destroyed by a later, Saitic tomb. The statue niches, of which only two are preserved, lay to the east of the sanctuary, the area to the north of them being completely obliterated by a large Saitic tomb.

The Pyramid of Weserkaf, though small, and dating from the beginning of the Vth Dynasty, is the last of those built in the great tradition of the IVth Dynasty, and his temple is also the last of the simpler buildings of its kind. The kings following him built their funerary monuments at Abusir, and it was probably their strong adherance to the solar-cult which brought about a change in funerary observance that necessitated a more elaborate and complex Mortuary Temple, a complexity which reached its zenith in the temples of the VIth Dynasty.

From the above comparisons, we can see that the Mortuary Temple of Khufu presents an entirely new type of building, larger and more elaborate than those which had preceded it. We must, of course, take into consideration the fact that we know nothing of the Temple of the North Stone Pyramid of Snefru at Dahshur, but as I have already said, there is little reason to doubt that it differs from that of the Bent Pyramid to the south. In view of the unique plan of the Mortuary Temple of Khufu, I cannot refrain from again repeating how important it is to investigate the remains of the Valley Temple of this King, to compare its plan with the older and later buildings, and see if it can afford us a clue to the reason why the changes were made. If we accept the hypothesis of Ricke, Badawi and others, that the western part of the Mortuary Temple of Khufu contained the five statue niches (and there is absolutely no trace of them left), then we find that Khufu set the standard for the main essentials of the royal Mortuary Temples, which are :
(1) A colonnaded court.
(2) A pillared hall.
(3) Statue-niches.
(4) Corridor and doorway giving access to the Pyramid courtyard.

These features are found in all the later Mortuary Temples of the Old Kingdom, and later, but their disposition is seldom identical, and as we have seen, there was an increasing tendency towards elaboration. But at any rate, this must be accepted as purely hypothetical idea without any preceding basis to rely on.

## APPENDIX

## THE PULLEY IS FIRST INVENTED BY ANCIENT EGYPTIANS

During my Fourth Season of Excavations (1932-1933) in the Pyramid zone-while clearing the Pyramid City of Queen Khent-Kawes (the first woman king in history) I came in contact, in one of its several unbaked-brick houses, with a red basalt monument of a very peculiar shape (Pl. XVII $a, b$ ). I, together with the help of my assistants, began to examine it at once, but we were unable to come to a definite solution as to its use. However, so far as could be judged by its conformation, it rather seemed to be a kind of pulley.

In my season's work of 1935, while cleaning the eastern area of the Second Pyramid of Khefren, it was the good luck and chance that brought to light before me a second monument absolutely identical in every detail with the one already discovered.

This new discovery revived in me the hope of finding out a reasonable solution of its proper use. After a very careful study with the assistance of some intelligent architects, we came to the conclusion that this must be a kind of pulley used by the Ancient Egyptians for raising huge weights. This conclusion seemed to be very plausible and concordant with the circumstances, in which these two monuments were found. It is a wellknown fact that the period of the Old Kingdom in Egypt was the age of the Pyramid builders (about 2,700 B.C.). During that time, the Egyptian architects, supervising the construction of these huge pyramids, were in dire need of technical instruments and machines to raise enormous stones to the various heights required for erecting a pyramid with several steps.

In fact, both the architects and Egyptologists were at puzzle to solve the mystery of raising these huge stones to such great heights up to the top of a pyramid, which, in the case of Khufu's pyramid, was not less than one-hundred and forty-six metres.

Some ingenious hypothesis and devices of raising huge stones were suggested; among them was the use of ramps, on which enormous stones were drawn to the height required. This device was accepted by most Egyptoiogists and corroborated by the fact that there had been discovered some ramps, of which one is still to be seen in Karnak Temple.

On the other hand, despite the wonderful perfection manifested in the building of the Great Pyramids, many Egyptologists still believe that the ancient Egyptians were at that time in a primitive stage in their methods of building, thus denying them the invention of pulley, when the German architect, Holscher, suggested the use of a simple pulley in erecting their pyramids and massive monuments.

As a matter of fact, the ancient Egyptians had been great inventors from the earliest time of their history, especially in building. No wonder that this was necessitated by their great need to erect solid huge tombs and temples to vie with the time and by which to fight death in order to obtain eternal life in the Hereafter. Thus, to attain their object, they cut solid and excellent stones of big sizes from quarries wherever found. So, hard stones were especially hewn out by them for their tombs from the rocks neighbouring the Pyramid's area.

But the most astounding fact here is that the stones of the four pyramids in the Giza area, were found to be hewn out from the local quarries and not from those at Turah, on the opposite bank of the Nile, as stated by Herodotus. This was believed by great Egyptologists to be correct till veiy recent times. The mistake of Herodotus arose from the idea that the stones of the pyramid casings were cut from the fine Turah limestone, and then transported by boats to the opposite bank of the Nile, where the pyramids were built. This proves that these casings might have been intact during the time of Herodotus, and thus he was unable to see the local stones, from which the core of the pyramids was built.

In reality, the disappearance of the casings in our times should have shown that the stones of the pyramids were not from Turah quarries, but in spite of that glaring fact, the old idea of Herodotus still persisted to be dominating.

It was during my cleaning the area near the Second of the Great Pyramids as well as the surrounding area of the Sphinx that I discovered the quarries, from which the stones of the Giza Pyramids were taken. Thus, in the surrounding rocks, near the Pyramids, there cance to light quarries with stone marks and stones cut having the same size and quality as those of the Pyramids. These quarries are of local nummulitic limestone. They are inferior in quality to the stones cut from Turah and sometimes more fragile. However, there are some nerves of stones in the quarries, which are very solid and could be used for purposes other than constructing pyramids.

The most indispensable use of these local stones discovered till now was their employment in erecting a pavement in front of the eastern face of the Second Pyramid. It is astonishing to state here that many of the stone pavements on this side of the Second Pyramid were of unheard dimensions. One stone measured 6 metres in length, 5 metres in breadth and more than 5 metres in depth. These pavement stones can still be seen in situ. I will leave the weight of such a stone to the imagination of the reader.

After this necessary long introduction, it will be not unreasonable to suggest that the people who had cut these gigantic stones, shaped them in their quarries, and transported them to their destination, must have undoubtedly invented some machine to raise these
heavy stones to the heights required. In this respect, the good luck had preserved to us two intact pulleys, found in the very places, where they were employed to raise stones of abnormal sizes and enormous weights. The stone, from which these pulleys were cut, is one of the nost solid kind. They are hewn out of Aswan red basalt. Before examining our two pulleys, let us first give the following definition of a pulley as given by Oxford Dictionary: "The pulley is one of the simple mechanical powers, consisting of a grooved wheel mounted in a block, so that a cord or the like may pass over it; used for changing the direction of power, especially for raising weights by pulliny downwards. Also, a combination of such wheels in a block or system of blocks in a tackle, by means of which the power is increased ".

If we apply this definition to our machine discovered in the pyramids zone, it will not differ much.

Now let us give its measurements: Its length is 24.00 cm . Breadth : 18.00 cm .
From the front (PI. XVII a), it looks like a spindle with a hole in its lower part by which it is kept stable. Its side view (Pl. XVII $b$ ) shows three grooves utilized for three ropes, which can be pulled smoothly by three or several men. It is not impossible in the case of raising a stone of enormous weight that many of these pulleys were fixed near each other and then used at the same time.

Strictly speaking, one of these pulleys was employed and performed a function in an admirable and excellent manner. In other words, it can be said that, high and mighty, the ancient pulley served a purpose as perfectly as a modern pulley can do nowadays.
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| $4359$ | imihw | The Honoured One，$I:$ pp．9，24，34－36， 77，78，80， 82 ；$I I$ ：pp．12，13，99， 190，216，217；III：10，43，45，80， 81，122， $123 ; I V:$ p． 33 ；V：pp．230， 251 ；VI，Part III ：pp．24，25，93， 100－103，117，119，125，129，130， 133，138，139，217，219，221－223， 246 ；VII：pp．38，39，57，59，60， 68,$126 ; I X:$ pp．14， 15. |


| $430$ | $i m 3 h(w)-f$ | His Honoured One, $I$ : pp. 106, 109 ; VII: pp. 73, 77, 78. |
| :---: | :---: | :---: |
| 4301 | $\operatorname{im}_{3} h(w)-\dot{s}$ | Her Honoured One (or the Honoured One by Her), III: pp. 181, 185, 188. |
| $4300$ | $i m s h(w) n n b$ | The Honoured by the Lord (or the Honoured One of the Lord), III: pp. 16, 18. |
| 43 O | imsh(w) $n$ nb-f | The Honoured by His Lord, $I$ : pp. 106, $109 ; I I: \text { pp. 38, 39, 216, } 217 .$ |
| 430 mma 9 |  | The Honoured by the God, I: pp. 106, 109. |
| $43-70078$ |  | The Well Honoured by the Great God, $I I:$ pp. 174, 175. |
| $4300010$ | imshw hr Inpw | The Honoured by Anubis, VII : pp. 57, 59, 60. |
|  | [im 3 h $]$ w hr İ $n p w n b$ hrjt-ntr $\underset{\sim}{h r}$ Wsir $n b 3 b d w$ | The Honoured by Anubis, Lord of the Necropolis (and) by Osiris, Lord of Abydos, VI, Part III : pp. 207, 209. |
| $45 \% 9044^{2} 098$ |  | The Honoured by Anubis (and) by the Great God, $V:$ p. 46. |
|  | $\begin{aligned} & \mathrm{i}_{\mathrm{in} 3 h w} \text { hr Inpw tpj } \\ & \underline{\underline{d} w-f} \end{aligned}$ | The Honoured by Anubis Who is upon His Mountain, VI, Part III: pp. 11, 14. |
|  |  | The Honoured by Anubis, Who is upon His Mountain (and) by the Great God, VII: pp. 57, 59, 60. |
| $430^{0} 0 \times 0$ | $\dot{i m s h}(w) \underline{h} r$ r $\quad$ t-f | The Honoured by His Father, $I I$ : p. 12; $I V:$ pp. 103, 117 ; VI, Part III: pp. 31, 33. |
|  | $\mathfrak{i m s h}(w) \underline{h} r \mathfrak{\imath} t-f n j \dot{s} w t$ $h r n t r{ }^{\circ} 3$ | The Honoured by His Father (and) by the Great God, IV : p. 119. |
|  | imshw hr Wsir | The Honoured by Osiris, $I$ : p. 63 ; <br> III: pp. 122, 124 ; $V$ : pp. 12, <br> 256 ; VI, Part III: pp. 9, 11-14; <br> VII: pp. 57, 59, 61. |



imshw hr Pth-Skr
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ims ${ }^{2}(w)$ hr njsiwt bit $j$ $M n-k 3 w-R^{c}$
imsh(w) hr njs'wt bitj $\underline{H}^{\bullet}-f-R^{*}$
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$\left[\begin{array}{ll}i m 3 h(w) & h] r \\ n j \dot{s} w t\end{array}\right.$ $\underline{h} r \dot{I} n p w$ tpj $d w-f$ Wsir hantj $\underline{D} d w$

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The Honoured by the King of Upper and Lower Egypt, $\underline{I I}^{e}-f-R^{e}, I V$ : pp. 103, 119.
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| $\stackrel{H}{\infty}$ | $i m j-r{ }^{\prime} h$ | Overseer of the Palace, VII : pp. 73, 76. |
| :---: | :---: | :---: |
| N | $i_{\text {imj-r }}{ }^{\prime}{ }^{\text {a }}$. $w$ | Overseer of the Weapons, $I I I:$ p. 119. |
| $x_{0} 9$ | imj-r ws.t-ب̣ | Overseer of the Road (or Roads?) of Horus, V: p. 61 ; VII: pp. 49, $50,52$. |
|  | imj-r ?? wib.w mw.t njswt | Overseer of the Purifications of the King's Mother, $I I$ : pp. 211, 218, 222. |
| $e^{8}$ | imj-r wib.t | Overseer of the $W^{\prime} b . t$ Workhouse, $I: \text { pp. } 2,15,34 ; I I: \text { p. } 7$ |
| 顑 | $i m j-r w^{\prime} b . t j$ | $\begin{aligned} & \text { Overseer of the Two } w^{\bullet} b . t \text { Workhouses } \\ & \text { (or Workshops), III: pp. 119, } \\ & 122,123,125,127,130,133,134 . \end{aligned}$ |
| $\stackrel{y}{\infty} \stackrel{0}{\infty}$ | imj-r wp.wt | Overseer of the Commissions, VI, Part <br> II: pp. 119, 135 ; VI, Part III : <br> pp. 9, 11, 12; VII: pp. 73, 77, 78. |
| $\stackrel{\square}{\infty}$ | imj-rnwp.(w)t pr-̇ | Overseer of the Commissions of the Palace, VI, Part III : pp. 73, 77, 133 <br>  |
| $\begin{gathered} 4.990 \\ \infty 00 \end{gathered}$ | $\begin{aligned} & \text { imj-r wp.wt htp.t(?) } \\ & \text { ntr } \end{aligned}$ | Overseer of the Commissions of the Service of the Divine Offerings, $V I$, Part III: pp. 11, 14. |
| $\begin{gathered} \text { M } \\ 0 \\ 0 \\ 0 \\ 0 \end{gathered}$ | $\begin{aligned} & i m j-r \text { wp.wt htp-ntr } \\ & m \text { pr-wj } \end{aligned}$ | Overseer of the Commissions of the Divine Offerings in the Two Houses, VI, Part III : pp. 9, 11-14. |
|  | $\begin{gathered} i m j-r w p \cdot(w t) \text { hntjw-s } \\ M n-n f r-P_{p j j} \end{gathered}$ | Overseer of the Commissions of the Tenants of the Pyramid (called) the Beauty of King Ppij Abides, VI, Part III: p. 145. |
| $\sum_{n}^{\infty}$ | imj-r wsh.t | Overseer of the Audience Hall, VII: pp. 81, 83. |
| $\pi_{0}^{\circ}$ | imj-r $u t j(. w)$ | Oversee: of the Embalmers, IV : pp. 71, 74. |

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| imj－r $p r$ | Steward of the House，$I$ ：pp．96， 102， 103 ；$I I$ ：pp．7，18，23，25， $47,53,54,159,165,166,190$ ， 191 ；III ：pp．14，16，17，18，157； V，p． 177 ；VI，Part III ：pp．44， $53,56,60,67,69,81,88,93,97$ ， $98,100,101$. |
| :---: | :---: |
| imj－r pr－irj．t | Overseer of the House of Weavers，I ： pp．111， 112. |
| imj－r $p r^{-}{ }^{\text {a }}$ | Overseer of the Great House，$I X$ ： pp．21， 24. |
| $\begin{aligned} & i m j-r \quad p r-i r j . t \quad \text { n.t } \\ & \underline{h} n w \end{aligned}$ | Overseer of the House of Weavers of the Palace，$I$ ：pp．105， 112. |
| imj－r pr $n$ s ${ }^{\text {m }}$ | Steward of the Sem－Priest，I：pp．62， 63. |
| imj－r pr－nw prj－3 | Overseer of the Royal Pr－nw，VI， Part III ：pp．73， 77. |
| imj－r pr－h | Overseer of the House of Ships，$I I$ ： pp．134， 135. |
| imj－r pr－hd | Overseer of the Treasury（House of Silver），$I I I:$ pp．130，135，136， 217 ；VI，Part III：p． 154. |
| imj－r pr－hod $n$ wis ${ }^{`} p r . w j$ | Overseer of the Treasury of the Two Gangs of the Boat，$V:$ pp．213， 215. |
| $i m j-r$ pr．wj－hd | Overseer of the Double Treasuries，III： pp. 119, 125, 127, 130, 133-136. |
| imj－r pr．wj－hd ${ }^{\text {d }}$ n－$\underline{n} n w$ | Overseer of the Double Treasuries of the Residence，III ：pp．119， 122. |
| imj－r pr－s ${ }^{2}(?) i j$ | Overseer of the House of ．．．（？）， $I I:$ pp．134， 135. |
|  | $\begin{aligned} & \text { Overseer of the Two Houses of Gold, } \\ & I I I: \text { pp. } 119,123,125,127,130, \\ & 133,134,135,136 . \end{aligned}$ |
| imj－r ph．w | Overseer of the Canals，$I I$ ：pp．105， 109， 110. |



| imj－r mnw．w njśut | Overseer of the King＇s Monuments， VI，Part II ：p． 129. |
| :---: | :---: |
| imj－r ms＊ | $\begin{aligned} & \text { Overseer of the Army, } I I: \text { pp. } 155,157 \text {; } \\ & V, \text { p. } 61 ; V I, \text { Part III: pp. } 143, \\ & 145,146 ; V I I: \text { pp. } 49,50,52, \\ & 65,67 . \end{aligned}$ |
| imj－r ms ${ }^{\text {re }}$ idw－nfrw | Overseer of the Army of Young Recruits，$V$ ：pp．237，241， 242. |
| $i m j-r m d .(w) . t$ | Overseer of the Stalls，V ：pp．203， 205. |
| $i m j-r ~ n ~ w d p . w ~$ | Overseer of the Butlers，V ：p． 256. |
| imj－r nw．w | Overseer of the Game Preserve，$V$ ： $\text { p. } 61 ; V I I: \text { pp. } 49,50,52 .$ |
| imj－r ns．w．t | Overseer of the Thrones，$I X:$ p． 21. |
| $i m j-r n s . t j$ | Overseer of the Two Thrones，$I X$ ： p． 21. |
| ímj－r ns．wt pr－s | Overseer of the Thrones of the Great House，IX：pp．21，22， 24. |
| $\begin{aligned} & \cdots b b \quad m \quad \underline{k} n w \\ & \text { iswt } p r-3 \end{aligned}$ | ［Overseer of］All（Pleasures）in the Interior Places of the Great House （Palace），$I I$ ：p． 211. |
| imj－r haw．t wr．t | Overseer of the Great Court of Justice， $V: \text { p. } 61 ; V I I: \text { pp. } 49,50,52 .$ |
| imj－r hawt－hd | Overseer of the Mansion（？）of Silver， III：p． 217. |
| imj－r $h m(w . t)$ | Overseer of the Artisans，$I I$ ：pp．5， 7 ；VI，Part II：p． 117. |
| imj－r $h \mathrm{hm}(w . t) w^{\mathrm{e}} \mathrm{b} . t$ | Overseer of the Artisans of the $w^{\circ}$ b．t－ Workshop，$I I$ ：pp．5，8，10， 11. |
| $i m j-r \underline{h} m(w . t) \quad n \underline{h} k r$ $n j s i w t$ | Overseer of the Artisans of the King＇s Ornament（s），$I I:$ p． 5. |


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imj-r hhkr njsut nb

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| $\stackrel{*}{\infty}$ | imj－r sinw．t | Overseer of the Physicians（？），$I$ pp． $73,83,84$. |
| :---: | :---: | :---: |
| 品 M~~~~~n | imj－r smj．wt | Overseer of the Deserts，$V: 409$ $\begin{aligned} & V I I: \operatorname{pp.} 49,50,52 \quad[\text { var. } \stackrel{\text { 曷 }}{\sim} \mathrm{\sim} \\ & \sim \sim \end{aligned}$ |
| $\stackrel{H}{8}$ | $i m j-r s s^{2}(. w)$ | $\begin{aligned} & \text { Overseer of the Fowling-Marshes, VI: } \\ & \text { Part II : p. } 127 . \end{aligned}$ |
|  | imj－r ss ${ }^{\text {c }}$（．w）sh．t | ```Overseer of the Scribes of Field(s), IV : pp. 189, 193, 194; V: p. 62; VII: pp. 101, }104``` |
| 央 |  | ```Overseer of the Scribes of the Royal Document(s), V: pp. 62, 189; VI, Part II : p. 119.``` |
| 是 相 | $\begin{aligned} & i m j-r s s(. w) \text { pr } h r j- \\ & w \underline{d} b \end{aligned}$ | Overseer of the Scribes of the House of Distribution（of Food），V：p． 62 ； VII：pp．101， 104. |
|  | imj－r ss ${ }^{2}(. w) \quad n$ sh．t $\underline{H} w f w$ | Overseer of the Scribes of the Pyramid （named）Akhet－Khwfw，l ：pp．73， 77，78，80，81，82；VI，Part II； p． 117. |
|  |  | Overseer of the Scribes of Sealed Docu－ $\operatorname{ment}(\mathrm{s}), V: \mathrm{p} .62 .$ |
|  | $\begin{aligned} & i m j-r s s^{\imath}(. w) \quad \underline{h} r j-h t m \\ & { }_{-}^{c}-n j s s^{\prime} u t \end{aligned}$ | Overseer of the Scribes of the Sealed Document（s）of the King，VII： pp．101，103， 104. |
| sun | imj－r nj śst pr－̇ | House－master of the Court，$I X: \mathrm{p} .75$. |
|  | imj－r św．t špśst n．t $p r-{ }^{\prime}{ }^{\prime}$ | Overseer of the August Services of the Great House（Palace），VI：pp．159， 160，165， 166. |
|  | $\begin{gathered} i m j-r \quad \dot{s} b s(j . w) \quad n \\ m s \dot{s} w-n j \dot{s} w t \end{gathered}$ | Overseer of the Tutors of the King＇s Children，V ：p． 60 ；VII ：p． 70. |


|  | $i m j-r \quad s \dot{b s}(j . w) \quad n$ $m s ́ w-n j s \dot{s} w t \quad n \quad \underline{h} . t-f$ |
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|  | imj－r sthmh－ib $n b$ $n f r n n j s w t$ |
|  | $i m j-r \dot{s}{ }^{\text {r }}$ r |
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| 艮 | $i m j-r$ s．t |
| $\sim \min _{\infty}^{\text {en }}$ | $\begin{aligned} & \text { imj-r s.t hantj.w-š } \\ & p r-\underbrace{}_{3} \end{aligned}$ |
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| $\square_{0}^{0}$ | imj－r stnw．t |

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Overseer of the Granary，$I I$ ：pp．155， 157.

| $\triangle \mathrm{D} \leftrightharpoons$ | imj-r šnw.tj |
| :---: | :---: |
|  | imj-r ks.t nb.t |
| $\text { in } \circ 8$ | imj-r ks.t nb.t n.t njsiwt |
| $\stackrel{e}{\infty}<-\int \infty$ | imj-r ǵs imj wr.t ' $3 h r$ |
| $\text { 会 } 1111$ | $i m j-r 4 d p . t$ |
|  | ${ }^{2} m j-r 5 d p . t$ |
| $\xrightarrow{n}$ | $i m j-r 10$ dp.t |
|  | imj.t-r ${ }_{\text {h }} \mathrm{n} \boldsymbol{r}$ |
|  | $i m j \cdot t-r \underline{h} n r$ n $n j \dot{s} w t$ |
|  | $i m j . t-r$ s $h m \underline{h}-i b$ |
| Sn | imj-hnt |
|  | imj-ht pr-c3 |
|  | imj-ht $n$ pr-had |
| $\underset{\min }{\operatorname{An}} \cap \Delta] \int \mathbb{R}^{8}$ |  |
|  | imj-ht $h m-n t r \quad \underline{H}^{\circ} j-f-$ $R^{e}-w r$ |


|  | $\left\lvert\, \begin{gathered} i m j-h t \underset{~ h n-n t r}{ } \\ n f r-M r-n-R^{e} \end{gathered}\right.$ | Assistant Priest of the Pyramid （named）$\quad H^{c}-n f r-M r-n-R_{i}^{c}, \quad V I$, Part II ：p． 139. |
| :---: | :---: | :---: |
|  | imj－ht hm－ntr $\underline{D} d-$ isw．t－Ttj | Assistant Priest of the Pyramid（named） Dd－isw．t－Ttj，VI，Part II：p． 141. |
| －啚） | imj－ht hm－ntr $\quad \underline{D} d-$ $k \geq-R^{e}-n f r$ | Assistant Priest of the Pyramid（named） Dd－kz－Re－nfr，VI，Part II：p． 131. |
| $\cdots \bigcirc$ | imj－ht hm－kz | Assistant Ka－Servant，II：pp．38，40， 41，65， 69. |
| $\mathbb{S o n}_{\Delta}^{\infty}\left(\overline{\bar{l}} l_{0 * 0}^{m m}\right.$ | $i m j-h t h m-k s \quad n d w a . t-$ $n j \dot{s} w t$ | Assistant Ka－Servant of the Cult of the King，$I I$ ：pp．33，38， 40. |
| E？ | ${ }_{\text {i }} \times \mathrm{j}-\mathrm{mrh}[. t]$ | The Concerned with the anointing－ Oil（s），VI，Part III ：pp．81，89， 94， 97. |
| 0 | irj－mdz．t | Book－keeper（Archivist），VI，Part III ： pp．207， 209. |
| 잢o | ${ }^{\text {r }}$ j $n w b$ hkr．t | Guardian of the Gold of Ornaments， VI，Part III：pp．133，135， 136. |
| 中men | irj nwb hakr．t njs＇wt | Guardian of Gold of Ornaments of the King，VI，Part III ：pp．133，135， 136， 138. |
| F mono | irj nwb hakr．t njsư．t pr－s | Guardian of King＇s Gold of Ornaments of the Great House（Palace），VI， Part III：pp．133，135， 136. |
| － $0_{0}^{0}$ | irj nfr ha．t | The Attached to the Fair－is－the－Face， i．e．the Crown，$I: \mathrm{pp} .2,6,16,29 ;$ II：pp．7，75， 85 ；VI：pp．160， 164，165，170，176，178，182； $V:$ pp．257， 259 ；VI，Part II： p． 125. |
|  | irj nfr has．t mis．t n．t njšut | The Attached to the Crown in the Place of the King，II，Part III ： |
| SRI葍 |  | $\text { pp. } 187,189 .$ <br> He Who Follows in the Footsteps （of the King as a Protector）（？） VI，Part III：pp．187， 189. |




He Who is Concerned with the Great House (Palace), VI, Part III: pp. 133, 137.
He Who Does What His Lord Likes, $I:$ p. 115; $I I:$ pp. 186, 187 ; IV: pp. 160, 170.
He Who Does What His Lord Likes every Day, VII : pp. 26, 27.
He Who Does What His Lord Praises, VI, Part III: pp. 81, 88.
He Who Does What is Always Praised, $V:$ p. 256.
She Who Does What Her Father Likes every Day, VI, Part III : pp. 43, 48.
He Who Does What the God Likes, $I X:$ p. 24.
She Who Always Does What Her God Likes, II : pp. 204, 206.
Hairdresser, $I I I:$ pp. 166, 170, 171 ; VI: p. 119.
Maker of the Nails, $I I$ : pp. 65, 67.

Hairdresser of the King, $I:$ pp. 2, 16, 27, $29 ; V:$ pp. 258, 259.
Docr of Outline(s) (Draughtsman of Outlines), $I I$ : pp. 190, 191.
... II: p. 179.
His Father, $I$ : p. 29.


Assistant of the God Dwow (i.e.oculist) III: pp. 115, 117 ; IV : pp. 103, 111; VII: pp. 7, 10.
Nome Administrator, V: p. 317.


| ${ }^{\bullet} d-m r h^{\prime} w$ |
| :---: |
| ${ }^{\bullet} \underline{d}-m r s m j . t$ |
| $\begin{aligned} & { }^{〔} \underline{d}-m r d w_{3} \text { Yr } \underline{H} n t j \\ & \quad p . t \end{aligned}$ |

Administrator of the Navy, II: pp. 105, $109,110$.
Chief of the District of the Desert, i.e. Master of the Hunt, $V:$ p. 61; VII : pp. 49, 50, 52.
Domain Administrator of (the Vineyard) called: Star of "Horus, President of Heaven", $I$ : pp. 3, $4,6,18,19,23,34,35 ; I I$ : pp. 104, 107, 179, 190.


The Unique One among the Great of the Feast, $I:$ pp. $2,6,18,32,34$, 35.

Purificator of the King, $I I$ : pp. 15, $20,25-29,33,38,40,41,46$, $55,56,58,159,161,211,218$; $I I I:$ pp. 14, 16-18, 57, 63, 64, 160, 162, 200, 207, 208; IV: pp. 5, 203, 204; V: pp. 279, 281 ; VI: pp. 124, 134, 140 ; VI, Part III : pp. 73, 75, 77, 81, 83-85, 89, 93, 94, 97, 98, 100, 101, 133, 137-139, 155,158 (?), 163, 166, 192, 193 ; $V I I:$ pp. 21, 26, 27, 30, 31, 35, 38, 39 ; $I X:$ pp. 13, 14, 21, 49, 50, 59, 62, 71, 72.
Purificator of the Court of the Pyramid (called) $\underline{H}^{e}-b s-S z h w-R^{e}, \quad V I$, Part II : p. 126.
Purificator of Ptah, $I I:$ p. 7.

Purificator of the Pyramid (called) $M n-i s{ }^{\prime} w t-N j-w \boldsymbol{s}^{r}-R^{e}, I I: ~ p p .211$, 218.


| $w^{\text {c }}$ n njsiwt $n$ pr-s |
| :---: |
| $w^{\circ} b R^{e} m$ Nhn-R |
| $W \dot{s} r-k 3-f$ |
| $w^{\circ} \mathrm{b} \underline{d} \mathrm{bs.t} n j s{ }^{\text {chet }}$ |
| wn-r hntj |
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wr harp hamw.t m pr.wj
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wr ht Hz
wr s3
wr djw pr-매hwt $j$

Royal Purificator of the Great House (Palace), III: pp. 108, 110.

Purificator of $R^{e}$ in the (Sun-temple) called $N \underline{h} n-R^{e}$ of W'r-kz.f, VI, Part II: p. 126.

Purificator of the Royal Palace (?), $V I I: ~ p p .45,47$.
(A Priestly Title), VI: pp. 103, 104.
The Greatest of the Bst (Official of the Treasury), W.b., I: p. 472 ; III: pp. 119, 122, 130, 133, 134, 135, 136.

Great Seer (High Priest of Heliopolis), VI, Part II: pp. 148, 151.

Great of the Ten of Upper Egypt, $I V:$ pp. 43 (?), $74 ; V:$ pp. 261, 263, 269-274; VI, Part II: pp. 118, 121, 122, 136; VI, Part III: pp. 155, 158, 159, 160 ; VII: pp. 49, 50, 52, 95, 97, 101, 103, 104 ; IX: p. 84.

The Great Educatress, $I I:$ pp. 8, $10 ; 1 I I:$ pp. 176, 181, 183, 185, 188, 196 ; VI, Part III : pp. 1, 5, 22.

The Chief Director of Artisans in Upper and Lower Egypt, II: p. 1.

High Priest, $I V$ : pp. 125, 140, 141, 143 ; VI, Part III : pp. 31, 33, 34.
High Priest of the God $\mathrm{Ha}, ~ I V$ : pp. 125, 131.
Great of the Phyles (of Priests), II: pp. 112, 137.
Greatest of the Five in the Temple of Thoth, VII: pp. 13, 17.


$w t j$
wt ${ }^{I} n p w$
$w \underline{d} m d w n h r j . w w d$
$w \underline{d}-m d w \quad m \quad h s j . t$
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$w$ dit hat nest nfr.t ir .t
$n . \dot{s}$ (or) dd dit hat nb .t
nfr.t ir.tn.s

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Commander of the Overseers of the Distribution, $I I$ : pp. 155, 157.
He Who Judges in the Audience Chamber, V: pp. 238, 241.
Judge in the . . Mansion, $I I:$ pp. 155, 158.

The Real Commander of the Overseers of the Distribution, $I V:$ pp. 151, 155 (= Junker, $I I$ : p. 161).
Every Good Thing Which She Orders is Done for Her (or : of Whom One Relates All Good Things Which She has Done), IV: pp. 1, 2, $3,16,17$.
$p \boldsymbol{k r} m$ h $m$ šw.t
He Who Fully Encompasses the [King's] Protection (by Justice), VI: pp. 238, 241.


mast nfr.w n nbs' r $n b$
$m$ zit $\underline{H} r \dot{S} \underline{\underline{h}}$

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She Who Sees Horus and Seth, $I I$ : pp. 8, 10 ; $I I I:$ pp. 176, 181, 185, 188, 190, 196 ; $I V:$ pp. 5, 104, 117, 125, 140 ; $V I:$ pp. 1, 5, 22.

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| $x \gg$ | $m r r n b-f r^{\prime} n b$ |
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| $x<0$ | $m r . t-f$ |
| $x \stackrel{\circ}{\square}$ | $m r . t-f r^{s} n b$ |
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$n b \underset{i m s h}{ }(w) \underset{\sim}{h} n t r$

$n b \operatorname{im} s \underline{h}(w) \underline{h} r n t r-f$
$n b$ imshw har ntrw $n b w$ imntj.t
$n b$ ta d $d s$
$n b . t \stackrel{i m}{2} h(w)$

$n b . t \underset{i m}{\sin }(w) \underline{\operatorname{h}} r \operatorname{nt} r$


Possessing Honour, $I$ : pp. 82, 84, 85, 102, 103 ; V: p. 184 ; VI, Part III : pp. 213, 215 ; VII: p. 126.
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Possessor of Honour, IV : p. 143.
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Possessor of Honour before the Great God, IV : p. 133.

##  <br> ㄷ: <br> 1 f

$\left\lvert\,$| $n b . t$ ims $h(w) ~ h r ~ n t r$ |
| :--- | :--- |
| $n f r$ |
| $n b . t ~ m r(w) . t$ |\(\quad \begin{gathered}Possessor of Honour before the Good <br>

God, V: pp. 195, 197. <br>
n f r ~ i d w <br>
Possessor of Love, II: pp. 208, 210. <br>
<br>
Cadet, I: pp. 103, 106, 107, 110-112, <br>
115 .\end{gathered}\right.\)
$\infty \quad r$
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$r \underline{h} n j s i w t$ n $p r-{ }^{-} 3$
rh.t njśwt

241, 243, 245-248, 257, 259, 261, 264, 276, 279, 281-284, 289, 291, 292, 299, 301, 317 ; VI, Part II: pp. 134, 135, 142, 145 ; VI, Part III : pp. 24-26, 43, 57, 59, $62,67,69,73,77,78,81,83-88$, $93,94,97,98,100,101,103,117$, $119,125,127,128,133,137,139$, $147,149,155,157,159,163,168$, $169,173,176,187,192,193,197$, 199, 213, 215, 239 ; VII: pp. 21, $24,26,27,31,35,38,45,47$, $49,50,52,57,59,60,95,57$, 127 ; $I X:$ pp. 13, 14, 49, 50, 52, $53,55,63,64,68,69,75$.
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Metal-Worker, $I I$ : pp. 190, 192.
Artisan, $I I$ : pp. 190, 191.

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| $\underline{h m m}$ Bsw Nhn | Priest of the Souls of Nhn, VI, Part III : pp. 31, 33, 34. |
| :---: | :---: |
| $h m-n t r$ | Priest, $I X:$ p. 38. |
|  | Priest of (the Goddess) Iatet, V: p. 276. |
| $\underline{h m-n t r}$ İnpw | Priest of Anubis, V : p. 276. |
|  | Priest of the Pyramid (called) Beauty of King Isesi (or King Isesi is heautiful), V: p. 315 ; VI, Part II : p. 128. |
| $\underline{\text { hm-ntr }}$ Wp-wz.wt | Priest of Wep-Wawt, V: p. 276. |
| $\underline{h m-n \underline{t} r}{ }^{\text {W }}$ d $\underline{d}$.t | $\begin{aligned} & \text { Priest of (the Goddess) Uto, } I: \text { pp. } 2 \text {, } \\ & 23 ; I I: \text { pp. } 75,85 . \end{aligned}$ |
|  | Priest of (the Goddess) Uto (in) the Towns Pe and Dep, $I:$ pp. 2, 6, 21, 34, 35. |
| $h m-n \underline{t r}$ Wsir | Priest of Osiris, V : pp. 238, 249. |
|  | $\begin{aligned} & \text { Priest of (King) } W \dot{s} r-k s . f, V I, \text { Part III: } \\ & \quad \text { p. } 133 . \end{aligned}$ |
| hm-ntr $\mathrm{B}_{3} w-N \underline{h} n$ | Priest of the Souls of $N \underline{l n} n, V:$ p. 276. |
| $\underline{h m-n t r ~ P t h ~}$ | Priest of Ptah, $I I:$ pp. 5, 7, 8, 10, 11, 13. |
| $\underline{h m-n t r} M_{i}{ }^{\text {ct }}$ | Priest of Ma'at, III: pp. 1, 3-5; V: pp. 238, 249, 261 ; VI, Part II: p. 148 ; VI, Part III : pp. 201, 204, 205, $I X$ : p. 84. |
| $\underline{h m-n t r}$ mw.t njs̈wt | Priest of the King's Mother, III: $\text { pp. } 160,162 .$ |
| $\begin{aligned} & \underline{h m-n t r} M n-i \dot{s} . w t-N j- \\ & w \dot{s} r-R^{R} \end{aligned}$ | Priest of the Pyramid (called) Mn ${ }^{i s} \dot{s} . w t-N j-w \dot{s} r-R^{e}, \quad V I, \quad$ Part II: p. 127. |



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hem-ntr $n b t j$ ? or ( $H r w j$
$n w b$ )
ham-ntr $N b t j-w \dot{s} r-m$
 $m r . t-f$
hm-ntr Nfr-ir-kz-Re
$h m-n t r$ Nhbb.t
$h m-n \underline{t r}$ N.t
ham-ntr $R^{e} m$ sh.t $R^{e}$
$h m-n \underline{t r} R^{e} m \check{S} s p-i b-R^{e}$
$h m-n \underline{t} r R^{e} n \underline{h} n-R^{e}$

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Priest of $M \underline{d} d-r-n b t j$ (Cheops), III: pp. 179, 180.
Priest of $M \underline{d} d w-\underset{H r}{ }$ (Cheops), III: pp. 179, 180.

Priest of $N j$-ws $r$ - $R^{e}, V I$, Part II: p. 131 ; $V I$, Part III : pp. 81, 84, 89, 93, 97.

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Priest of $N b t j$-wsr-m (Khephren), VI, Part III : pp. 93, 96, 105.
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Priest of $N f r-i r-k_{3}-R^{i}, V I, ~ P a r t ~ I I: ~$ p. 126.

Priest of Nhbb.t, I: pp. 21, 23; II: pp. $75,85$.
Priest of Neith, $I I$ : pp. 208, 210, $I I I:$ pp. 78, 82, $83 ; V:$ p. 70, $V I$, Part III : pp. 147, 152, $I X$ : pp. 43, 45-47, 63, 70.
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Priest of the Sun-Temple of King $N j$-wśr-R', VI, Part III : pp. 81, 84, 89.
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Priest of Horus and Anubis, President in the House of Service, $I:$ pp. 2, 19,$34 ; I I:$ pp. 104, 107, 179.
Priest of Horus and Anuhis, Sole President in the House of Service, $I$ : pp. 2, 4, 6, 9, 19.
Priest of $H r$-ws'r-ib (Khephren), $V$, Part III : pp. 93, 96, 104.
Priest of Horus the Great (Priest
 p. 180.

Priest of Ḥorus . . ., $I I I$ : pp. 176, 188.

Priestess of Ilathor, $I I:$ pp. 9, 12, 13, $34,38,43,75,81,82,159,163$, 170 177, 178, 208, 210; III: pp. 176, 193; V: pp. 169, 171, $V I$, Part III : pp. 43, 48, 53, 56, 125, 129, 239 ; VII: pp. 21, 24 ; $I X:$ pp. 63, 70.
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[Priest of Hatḥor] the Mistress of Iwnet (Dendereh), II: pp. 169, 171, 172, 175, 176.
Priestess of Hathor, Mistress of the Sycamore, $I V:$ p. $143 ; V I$, Part II: p. 134 ; VI, Part III: pp. 147, 152, 239.



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Priest of Khephren, $I I$ : pp. 15, 20, 27-29; III: pp. 200, 207, 208; $V:$ pp. 279, 281 ; VI. Part II : pp. 124, 125, 129 ; VI, Part III: pp. 93, 98, 100-105, 117, 119, 125, 127, 128; VII: pp. 95, 97, 126.
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Priest of Sashat (Goddess of writing and Mathematics), $V:$ pp. 97, 98.
Priest of Soker, $I I$ : pp. 5, 8, 10, 11.

Priest of Sahure, VI, Part II : p. 132 ; $V I I: ~ p p .21,26,27,30,31, I X:$ pp. 21, 24.
Priest of the Sun-Temple $\check{S} s p-i b-R^{c}, I I$ : pp. 212, 218; VI, Part II : p. 133.
Priestess of the God $\underline{T}_{3}-s p-f, I I I$ : pp. 176, 190.
Priest of the Pyramid (called) $\underline{D} d$ -is.ut-Ttj, VI, Part II: p. 143.

Priestess of Hathor, [Mistress] of the Sycamore, in All Her Places, IV: p. 126.

Priest of the God $D w s w, I X:$ pp. 49, 52.

His Wife, $I$ : pp. 92, 93, 99, 100, 102 103 ; $I I:$ pp. 12, 13, 36, 37, 38, 43, $91,92,96,101,186,187$, 188 ; $I I I$ : pp. 95, 96, 103, 105, 205(?),206; $I V, \mathrm{pp} .140,141$, 143, 198 ; $V$ : pp. 228-230, 243, 281, 282, 301.



| $\underline{h r j-w d}$ d m ḥw.t $n \underline{h}$ | The Director of the Distribution of Food in the Mansion of Life, $I I$ : <br> pp. 105, 110, 111, 179, 190 ; <br> IV': pp. 160, 164, 170, 180. |
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|  | The Director of the Distribution of Food of the Mansion of Life, $V:$ pp. 289, 291, 292. |
| $\underline{h r j-p r ~ h a n t j w-s ̌ ~} \mathrm{pr}^{\text {c }} 3$ | Clief of the House of the Tenants of the Court, $I X$ : pp. 59, 61, 62. |
| $\underline{h r j}$ hlw.t | Overseer of the Woods, III: pp. 41, $43,45$. |
| $\underline{h r j} \underline{h k r}$ (?) | Overseer of the Ornaments, $I I:$ pp. 5, $8,10,11$. |
| $h r j-\dot{s}^{2} s^{\prime} t$ | Master of Secrets, $I:$ pp. 3, $29 ; I I$ : 75 (?), 179, 186, 187, 189, 190, 211, 216 ; $I I I:$ pp. 119, 132, 133, 200, 205, 207 ; $V$ : pp. 13, $14,62,89,257,259 ; V I$, Part III : pp. 81, 89, 93, 94, 97, 102-105, 133, 137 (?), 155, 157, 158; VII: pp. 13, 17 (?), 45, 47 (?). |
| hrj-s'štz ip.t njşot | Master of the Secrets of the Royal Harem, $I I I:$ pp. 48, 80, 81. |
|  | Master of the Secrets of King $M n-k 3 w$ $R^{\text {e }}$ (Mycerinus), VI, Part II : p. 121. |
| hrj-s'sts $n$ it-f | Master of the Secrets of His Father, $I V: \operatorname{pp} .103,107,108,125,140$ 141. |
| hrj-sist ${ }^{2} \quad n \quad w p . w t$ $h t p-n t r$ | Master of the Secrets of Commissions of the Divine Offerings, VI, Part III : pp. 207, 209. |
| $\underline{h r j}$-s'šts $n$ w $\underline{d}^{\prime}-m d w$ | Master of the Secrets of Judgment, II: pp. 134, 135 ; VI, Part III: pp. 9, 11 . |
|  | Master of the Secrets of the Great House (Palace), $I I I$ : pp. 115, 117. |



hrj-śš̌з $n$ mdw(-w)$n t r$
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Master of the Secrets of the Toilet House, $I$ : pp. 3, 6, 9, 16, 35, 36 ; $I I:$ pp. 112, 123, 136, 137, 179, 181, 186-188, 190 ; $I V$ : pp. 103, $107,108,117-119,151,155,159$, $160,164,170,174,176,178,180$; $V:$ pp. 257, 259, 289, 291, 292 ; VI, Part II: pp. 120; VI, Part III: pp. 31, 33, 34.
Master of the Secrets of the Sacred Words (Scholar), I: pp. 3, 26 ; IV: pp. 151, 155.
Master of the Secrets of the King, $I:$ pp. 3, 19, 29, 34; $I V:$ p. 160 ; $V:$ p. 15.
Master of the Secrets of the King in All His Places, $I I:$ p. 7.
Master of the Secrets of the King in All His Places, IV : pp. 151, 155.
Master of the Secrets of His Lord, VI, Part III: pp. 117, 119.
Master of the Secrets of His Lord, VI, Part III: p. 119 ; VII: pp. 95, 97; $I X:$ pp. 59, 62, 63, 70.
Master of the Secrets of His God, $I I$ : p. 7.

Master of the Secrets of the Great Court, V : pp. 261, 263, 267, 269.
Master of the Secrets of the Divine Treasury, VI, Part III: pp. 9, 14.
Master of the Secrets of His Lord, VI, Part III: pp. 81, 89, 157.
Chief Nekhbite, $I:$ pp. 2, 4, 6, 9 , $16,19,21,23,27,32,34-36,71$; $I I:$ pp. 15, 20, 106, 109, 110, 179, 181, 186, 187, 190; V: pp. 159, $165,166,170,174,176,178,182$.

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Praised by His God，VII：p． 126.

The Great Favourite（Queen＇s Title）， VI，Part III：pp．1， 22.

She Who is Praised by Him （Her Husbard），$I I I:$ pp．82， 83

Singer of the Palace，$I I$ ：pp．212， 214.

Administrator of Bat（or Leader of the Bat）$I I:$ pp．105，109－111； $V:$ p． 276 ；$I X:$ p． 84.
The King＇s $h k k^{3}=$ Royal Intendant of the Estate，III：pp．98， 100 103，104，105．（Koniglicher Gut－ shofmeister，Junker，＂Gize＂，XII： p．173）．

Ruler of the Domain（？），VI，Part II： p． 114.
Ruler of the Great Castle（＝Intendant of the Principal Domains $V$ ： pp．103， 104.

Exempted， $1 I:$ pp．105，109，110， 111.
Protector of the King＇s Subjects，$V$ ： p． 70.
President of the $w^{\circ} b$－Chamber，$V I$ ， Part III：pp．187， 189.

He Who is at the Head of the Smelting for the Golden Ornaments，VI， Part III：pp．187，189，192， 193.
Presiding over the God＇s Dwelling， $V:$ pp．62， 230.

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Landholder of the Great House（Palace）， $I I:$ pp．169， 172 ；$I I I$ ：pp．245， 247，248，249，250；$I X$ ：pp．59， 60， 62.
Presiding over Busiris，$V$ ：p． 46
Director of the Vineyard，$V:$ p． 89.
Director of the Black Vase（？）［or Director of the Town Iakmt（？）］＝ Junker，$I I$ ：p． $161 ; I I$ ：pp．105， 109－111．
Director of the Book－keepers，VI， Part III ：pp．9，11， 12.
Director of the Hairdressers，$I I$ ：pp．75， 81， 82.
Chief Hairdresser of the King，III： pp．200， 206.
Director of the Palace，$I:$ pp．2，6， 75 81，82， 85 ；$I I: \mathrm{pp} .75,81$ ， 82，85，104，108－111，179，186－ 188，190；III：pp．200，205，207， 208 ； $1 V$ ：pp．103， 107 （？）， 108 （？）， 117－119，159，160，164，170，174， 180；$V$ ：pp．240，289，291，292；VI， Part II：p．114；VI，Part III： pp．31，33，34；VII：pp．7，10，11， 13，17， 18.
Beloved Director of the Palace，$I I$ ： pp．179，186， 187.
Director of the King＇s Purificators， VI，Part III：pp．157，159；VII： pp．95， 97.
Director of the Large Hall，$I V$ ：pp．151， 155 ；VI，Part III：p． 203.
Director of the Mitr（the People of the Gebelain District ？），（a Title of a Workman in the Royal Court）． $V:$ p． $61 ; V I I:$ pp．49，50， 52 （see Helck，＂Beantentiteln＂，p．102）


| hrp mr．w ih．w | Director of the Pastures，$I I:$ pp．169， 172， 173. |
| :---: | :---: |
| $\underline{h r p}$ mhak－w njṡwt | The Leader of the Rewarded Persons of the King，$I I:$ p． 7. |
|  | Director of the Msktt and Director of the $M$ rndt－Boats of the Sun， VI，Part II：p． 139. |
| hrp hw．wt mw | Director of the Administration of the Textile mw（a Kind of Cloth）， （see Junker，$V$ ：p．14），$I$ ： pp．2，6，20，32－35． |
|  | Director of every Craft，$L I:$ p． 7. |
| $\begin{aligned} & \underline{\operatorname{hrp}} \underset{p r-\mathfrak{B}}{ } \sin w(. w) \text { ir.tj } n \\ & \hline \end{aligned}$ | Chief Oculist of the Great House， （Palace），$I I I:$ pp．115， 117. |
| $\underline{h r p}$ srk．t | He Who Has Power over Serket（＝ Sorcerer），II：p． 15 （Leader， of the Goddess Serket）（Junker， $X I:$ p．84）． |
| $\underline{h r} \boldsymbol{p}$ sh | Caterer（Manager of the Dining Room）， <br> $I I: ~ p p .32,33,37-40,42 ; V$ ： <br> p． 133 ；VI，Part III：p． 128 ；VI， <br> Part III ：pp．44，62，63，197， 199. |
| $\underline{h r p} s s^{\text {c }}$ ．w | Director of the Scribes，$V:$ pp．267， 269，270，272－274；$I X$ ：p． 84. |
| $\underline{\operatorname{hrp}}$ sš̌．w irj（．w）spr | Director of the Scribes of Petitions， |
| hrp sš．w irj（．w）śpr $m \underline{d} \boldsymbol{d}$ d．t wr．t | Director of the Scribes Attached to the Petitioners in the Great Judicial Council，$V$ ：pp．237， 241. |
| h̆rp sš．w m wsh．t ${ }^{\circ} 3(. t)$ | Director of the Scribes in the Great Hall（the Court），V：pp．261， 263. |
| $\underline{h r p ~ s s ̌ . w ~ n j ~ i t-f ~}$ | Director of the Scribes of His Father， IV：pp．103，118，119，125， 131. |


| $\text { 数 } 0$ | $\underline{-h r p}$ sš.w $n b(. w)$ | Director of All the Scribes, $V:$ p. 61 ; VII: pp. 49, 50, 52. |
| :---: | :---: | :---: |
|  | hrp sš.w hw.t-urt | Director of the Scribes of the Great Hall (Court), V: p. 182. |
| $8 ? A$ | $h r p$ śšr | Director of Linen, $I:$ p. 33. |
| $\sqrt{1 \pi}$ | $\underline{\text { hrp }}$ šnd $w . t$ | Director of the Kilt (Apron), $I:$ pp. 2, 6, 21, 22, 32, 62, 63 ; $I I$ : pp. 65, 67 ; VI, Part III: p. 113. |
| A 4 | $\underline{h r p} \operatorname{lod}(. w)$ | Director of Masons, II: pp. 190, 191. |
|  | $\underline{h r p}$ is.t bjtj | Leader of the Companions of the King of Lower Egypt ( ${ }^{1}$ ), $I I$ : pp. 211, 213. |
| $8 \text { 会 }$ | $\underline{\text { hrp }}$ dng.w s'šr.w(?) | Director of the Dwarf's Linen, VI, Part II: p. 155. |
| 8 \% | $\underline{h r p}$. . - | $V:$ p. 97. |
| $\xrightarrow[000]{200}$ | htij Mnw | Khet-Priest of Min, $I:$ pp. 2, 6, 23, 26, 32, 34, 35 ; $V:$ pp. 103, 104. |
| $0_{0}^{0} \frac{0}{0} x^{2} x_{x}^{2} x^{2}$ |  | Sealer of the Best Provisions of the King of Lower Egypt (or Sealer in Chief of the Sweet Provisions), $V$ : pp. 213, 215. |
|  | $\underline{\text { htm }}$ d ${ }^{\text {f } 3 . w ~ b j t j ~}$ | Sealer of the Provisions of the King of Lower Egypt, III: pp. 130, 133, 134. |
|  | $\infty$ h |  |
| $8 \pi]$ | $\underline{h} r \boldsymbol{r}-\underline{-h b(. t)}$ | $\begin{aligned} & \text { Ritualist, } I: \text { pp. } 2,6,26 ; I I: \text { pp. } 179, \\ & 186-190 ; I V: \text { pp. } 69,71-75, \\ & 77-79,83,151,155,156 ; V: \\ & \text { pp. } 11,13-15,46,62,171,256, \\ & 293,296 ; V I I: \text { pp. } 81,83,126, \\ & 127 ; I X: \text { pp. } 59,61,84 . \end{aligned}$ |
| $8 \Delta \square]{ }_{x}^{\infty}$ |  | Ritualist of His Father, VII: pp.13,17. |


|  | $\underline{h r j}-\underline{h b}(. t) \quad$ hrj－tp | $\begin{aligned} & \text { Chief Ritualist, } I V: \text { pp. } 118,119,125, \\ & 131,133,140,141,143,159,160, \\ & 164 ; V I, \text { Part II: p. } 121 ; V I I: \\ & \text { pp. } 13,17,18,73,76 . \end{aligned}$ |
| :---: | :---: | :---: |
|  |  | Chief Ritualist of His Father，IV： $\begin{aligned} & \text { pp. } 103, \quad 107, \quad 108, \quad 111 ; \quad V I, \\ & \text { Part III: pp. } 31,33-35,38 . \end{aligned}$ |
| 专署 | $\underline{h r j-t p} n j s$ cot | Royal Director（the Liegeman of the King），$I I$ ：pp．112， $123 ; I I I:$ pp． 1 ， 3－5，7，10，130，135， 136 ；IV： pp．151， 155 ；$V:$ pp．61，64， 256 ； VI，Part II：pp．134， $150 ; V I$ ， Part III ：9，11－14，201，204，205， 246；VII：pp．49，50，52，57， 59－62，73，77，78，81， 83. |
| $\square$ |  | The Liegeman of the King in the Court，VII：p． 127. |
|  | $\underline{h r j-t p}$ njśut haw．t har－ h $h p r$ | Royal Director in the Mansion of King $H r-h p r\left(\underline{D} d-f-R^{e}\right), \quad V I$, Part JI ： p． 115. |
| $\frac{\beta}{\text { 号 }}$ | $\underline{h} r t j-n t r$ | Cemetery－Keeper，$I I:$ pp．190， 191. |
| $\neq 0$ | $\underline{h} k r(. t) n j s{ }^{\text {c }}$（ | King＇s Ornament，III：pp．119，132， 133 ；$V$ ：pp．197，198，200，213， 215－218，223；VI，Part III ：pp．81， $84,94,97,125,129,130,217,221$ ； $I X:$ pp．43，44，55，56， 57. |
| $\begin{aligned} & 0 \times \infty \\ & 0-\infty \end{aligned}$ |  | Sole Concubine of the King，$I I$ ：pp．47， 54－56，204，206，207，208；V： pp．169，171；VI，Part III： pp．127，141，144， 148. |
| $10$ | $\underline{h} k r(. t) \quad n j s \neq w t w^{\circ} t j . t$ $m r . t-f$ | Sole Concubine of the King，His Beloved，II：pp．205－207． |
| $\neq 0<\infty$ | $\underline{h} k r(. t) n j \dot{s} w t m r . t-f$ | Concubine of the King，His Beloved， II：pp．204，206， 207. |


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| B | $s z^{-} b$ | Guard of the Cattle，V：pp．97， 98. |
| $3_{x}^{2}$ | $s$ s－f | His Son，$I$ ：pp．29，78－80，99，100， 113 ： <br> $I I$ ：pp．22－24，26，28，29，80－82， <br> 87， $90-92,172$ ；$I I I$ ：pp．19， 95 ， <br> 96，204－206；IV：pp．111， 112 ； <br> $V:$ pp．228，229，291；VII， <br> Part III：pp．129，130，136， <br> 137；VII：p． 40. |
| 3 | s 2 －f mrij | His Beloved Son，III：pp．103， 105. |
| 为 | s3（－f）mri－f | （His）Son，His Beloved，VI，Part II： p． 156. |
| $\operatorname{com}_{x}^{2} \operatorname{man}_{\infty}$ | sz－f nj h．t－f | His Son of His Body，II：pp．10－12， 111. |
| 是埛 | s－f $\operatorname{sims}$ w | His Eldest Son，$I$ ：pp．75，76，78，80， 103，104，113， 117 ； $1 I$ ：pp．21，83， 84，87，91，92，214，216， 217 ； III ：pp．20，63，64，66，68，95，96， 133；IV：pp．111，112；VII： pp．77， 78. |
| 异骨 | sz－f $\dot{s} m s{ }^{\text {c }}$ mrij | His Beloved Eldest Son，VI，Part III ： p． 16. |
|  | sz－f stmsw mrij－f | His Eldest Son，His Beloved，II： pp．186－188；VI，Part III： pp．151，VII： 76. |
| 108 | s2 njsut | King＇s Son，$I I I$ ：pp．29，31－33，36； IV：pp．151，155，156；VI， Part II：p．115；VII：pp．7，10， 73，77，78，81， 83. |
|  | sa njsiwt nj h．t－f | King＇s Son of His Body，III ：p．29； IV：pp．103，107，125，126，131，133， 140，141，143， 144 ；VI，Part III ： pp．114－115，136，139， 150. |

| sınjśwt nj h̆.t-fśmśw


The King's Eldest Son of His Body; IV: pp. 111, 112, 118, 119; VI, Part III: pp. 35, 38; VII: pp. 13, $17 ; I X:$ p. 17.
Her Son, $I I I$ : p. 251 ; VI, Part III : pp. 57, 59.
Her Beloved Son, $I I I$ : pp. 181, 185, 188.

The Son of His Daughter, $I I$ : pp. 88, 90, 91 ; $V$ : p. 259.

The Son of His Sister, $I I I$, p. 117.

His Daughter, $I:$ pp. 29, 75, 76, 99, 100, $116 ; I I:$ pp. 26, 28, 29, 87, 91, 92, 98, 99, 110 ; $I I I:$ pp. 43, 44, 95, 96 ; V: pp. 229, 247; VI, Part III : pp. 22, 129, 130.

His and Her Daughter, $I I$ : pp. 12, 13.

His Eldest Daughter, I: pp. 78, 79 ; VI, Part III : p. 26.
The King's Daughter, $I I$ : pp. 179, 186-188; $I I I: ~ p p . ~ 29, ~ 31, ~ 33, ~$ $I V:$ pp. $5,10,58 ; V$; pp. 92, 93 , 111 ; VI, Part II: p. 116 ; VI, Part III: pp. 1, 5, 43, 62, 64, 231, 232 ; $I X$ : p. 164.
The King's Beloved Daughter (lit. the King's Daughter, His Beloved), VI, Part III : pp. 62-64.
The King's Daughter of His Body, III: pp. 176, 182, 193 , $I V:$ pp. 5, 22, 140 ; VI, Part III: pp. 1, 6, $8,43,53,56,57,59,60,61,64$.
The King's Eldest Daughter of His Body, $I I$ : pp. 8, 10 ; VI, Part III : pp. 43, 48.

| $980$ | s s．t ntr | Daughter of the God，IV：pp．1－3， 5－7，16， 17. |
| :---: | :---: | :---: |
| $\underset{0}{8 \pi}$ | s3．t－s＇ | Her Daughter，$I I$ ：pp．87，91， 93 ； <br> III ：pp． 251 ；VI ：pp．57， 59. |
| $318<0$ | s s．t－s＇s mr．t－s | Her Daughter，Her Beloved，$I I$ ：p． 23 ； III：pp．170， 171. |
| $\square \text { 然 }$ | s3 Srk．t prj－¢ | Protector（Magician ？）of the Serket of the Great House（Palace）， II：pp．15，20，25－29． |
| ¢ | $s 3 b$ | $\begin{aligned} & \text { Judge, } I I: \text { pp. 17, 21, } 22 ; I I I: \text { pp. 176, } \\ & \text { 181, 185, } 188 . \end{aligned}$ |
|  | s2b imj－r sš．w | Judge and Overseer of Scribes，$I:$ p．72， <br> $V: ~ p p . ~ 182, ~ 240-243, ~ 249-251 ; ~ ;$ <br> 257，259，261，263－267，269，270， <br> 272－274 ；VI ：Part II：pp．122， <br> 154 ；VI ：Part III：pp．9，11，12， <br> 207 （？）， 209 （？）；VII ：pp．57，59， 60， 61 ；$I X$ ：p． 84. |
| $\text { 领 } \overrightarrow{00}=$ | sab imj－ht irj－md $3 . t$ | Judge and Assistant Book－keeper， VI，Part III：pp．11， 14. |
| $\text { 凩 } \underset{0}{\infty}$ | $s 2 b$ irj－md $3 . t$ | Judge and Book－keeper，VI，Part III ： pp．217， 222. |
| 人 | $s 2 b$ irj Nhn | Judge Attached to Nekhen，V：p． 276. |
| $x_{1} \bigotimes_{\text {(1) }}$ | $s_{2} b$ irj－Nhn $n$ hav．t wr．t | Judge and Mouth of Nekhen of the Great Court，pp．VI，Part II： p． 125. |
| $x_{A} \rightarrow 15 d$ | sz $b$ irj Nhn śmza $w d^{e}$ $m d w$ | The Judge Attached to Nekhen Who Judged Justly，VI，Part III： pp．147， 152. |
| 的 | $s s b^{\prime} \underline{d} \mathrm{~m} m$ | Judge and Nome Administrator，III： <br> pp．，1，3－5 ；$V$ ：pp．61，293，296； <br> VI，Part II ：p．193；VI，Part III ： <br> pp．11，12，14，201，204，205； <br> VII ：pp．49，50，52，57，60，73， 77， 78. |
| 凩 | ssb harj－ṡkr | Chief of Police（？），V ：pp．103， 104. |


| 交同盛 | $s 3 b s s^{*}$ | Judge and Scribe ，V：241，242；VI， <br> Part II ：pp．134，140；VI，Part III ： pp．94，98，147，151， 163. |
| :---: | :---: | :---: |
|  | ssb stmśw haj．t | Judge and Usher，VI，Part II ：p． 135 ； <br> $V I$, Part III ：p． 149 ［悀関吴 <br> pp． $150,152$. |
| \％n90 |  | Judge and Inspector of Book－keepers， VI，Part III ：pp．9，14，207， 209. |
|  | ssb sthd sš．w | Judge and Inspector of the Scribes， $V:$ pp．241－243（？）， 250 （？），251， 257－259；VI，PartII：p．121；VI， Part III：pp．163，165－167． |
| 万解颣mm | ssb sthd sš．w $n$ wp．wt | Judge and Inspector of the Scribes of Commissions，$V$ ：pp．237， 241. |
|  | ssb śhd sš（．w）n hawtj imj wr．t n．t $\underline{h n w}$ | Judge and Inspector of the Scribes of the Two Courts of Justice Which are in the Western Part of the Residence，$V$ ：pp．237，241， 243. |
| $\overleftarrow{O}$ | $\sin w$ | $\begin{aligned} & \text { Physician, } I I: \text { pp. 190, 191; III: } \\ & \text { pp. } 93,95\left(\frac{\text { d. }}{\delta}\right), 96,168,171, \\ & 172 . \end{aligned}$ |
| $\square_{\infty}^{\infty}$ | sinw ir．t pr－s | Oculist of the Great House（Palace）， VI，Part II：p． 130. |
| $\overleftarrow{\sigma}_{\infty}^{\infty} \infty$ | sinw ir．tj | Oculist，$I I$ ：pp．190， 191. |
| $\stackrel{\square}{\square}$ | sinw ir．tj pr－z | Oculist of the Court，$I X$ ：pp．49，52， 53. |
| $\stackrel{\square}{\infty}$ | sinw $p r-3$ | Physician of the Great House（Palace）， III：pp．115， 117. |
| 相 | $s s^{*}$ | Scribe，$I I$ ：pp．15，17，23，24，28，47， $51,52,87,90,91,92,112$ ； III ：pp．14，19，168，171，172，200， $206 ; V:$ p． 266 ；VI，Part III： pp．45，47，56， 59 ；$X I:$ p． 87. |
| $\mathrm{N}_{1}<$ | $s s^{\prime}$ irj－spr | Scribe of Petition（s），$I I:$ pp．134， 135. |


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| :---: | :---: |
| － | sš ${ }^{\text {e }}$－njs ${ }^{\text {cot }}$ pr－${ }^{-3}$ |
| $\text { 朝禺 } 0 \sim \infty$ | $s s^{\text {c }}$ e－njswt $\underline{\underline{h}} \mathrm{ft}$－har |
|  |  |
| 成成的 | $s s^{\text {c }}$＇pr．w |
|  | $s s^{\text {c }} p r-{ }^{\text {c }}$ |
| \％ | $s s^{\text {s }}$ pr－md $3 . t$ |
| $\theta_{0}^{\circ}$ | ss＊pr－hd |
| 9\％䢕 | ss $s^{2}$ md $2 . t n t r$ |
| Fof dix ma | sš้ md $3 . t n \underline{t r}$ n it－f |
| 洞 | $s s^{\text {s }}$ n pr－d． t |
|  | $s s^{v} n m s^{\text {ve }}$ |
| 晠 |  |
|  | sš ššr $n$ njśwt（or） sš $n$ śšr $r$－njśwt |



| sš šnw.t pr-hd |
| :---: |

sš šnw.t pr-hd $\underline{d} n w$
$s s^{v} \quad \underline{l} d(w) . t$
$s s{ }^{\vee} g s(?) w i z$
sš tst gs 4 hm.wt
$s s^{*} p w$

Scribe of the Granary, $I I:$ pp. 16, 23.

Scribe of the Granary of the Treasury or Scribe of the Granary and Scribe of the Treasury, I: pp. 73, 75, 76.

Scribe of the Granary of the Treasury of the Residence, $I$ : pp. 73, 79.

Painter, $I I$ : pp. 190, 191; $I V$ : pp. 127, 137, 138.
Scribe of the Gang of the Ship, $V$ : p. 171.

The Scribe of the Crew of the Four Divisions of Artisans, $I I:$ pp. 96, 99.

Polisher, $I I$ : pp. 190, 196.


 w.wnjśwt
$\dot{s} m$
s'm $3^{+} m d u$ wde $n$ haw.twr.t
$\dot{s} m r$
$m$

The Glorified and Dignified One in the Presence of the Great God, VII, pp. 75, 77.
The Instructor of the Royal Singers, I: pp. 66, 67.
Sem-Priest, $I:$ pp. 2, 6, 13, 18, 20-22, $26,32-35$; $I I:$ pp. 65, 67 ; $I V$ : p. 77.

He Who Judges Justly in the Great Court, VI, Part III, pp. 155, 157, 158.

Companion or Confidant, $I:$ pp. 29, 32 ; III: pp. 200, 208, 209 ; $I V:$ pp. 160, 170, 180, $182 ; V$, pp. 289, 291, 292 ; VI, Part II : pp. 146, 147.
$\int_{10}^{0} 0$


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$\dot{s} m r w^{\circ} t j$
$\dot{s} m r$ wit $t j$ n it-f
$s m r w^{e} . t j n$ mr.wt
$\dot{s} m r p r$
$s m r p r-3$
s'hd (?) $p r-{ }^{\prime} z$ or $\dot{s} m r$ prj- ${ }^{-3}$
śmr $n$ ib nb-f
$s^{\prime} m r R^{*}-w r$
śmśw is.t

Sole Companion or Sole Confidant, $I:$ pp. 2, 4, 6, 9, 13, 16, 18, 23, 27, 32, 34, 35, 71 ; $I I:$ pp. 74, 104, 108-111, 179, 181, 186-190; III: pp. 119, 122, 123, 125, 127 ; $I V:$ pp. 103, 107, 108, 117, 125, $140,141,143,151,155,156,159$, $160,163-166,170,174,176,178$, 185,$187 ; V: 12-15,46,171$, 240, 257, 259, 289, 291, 292; VI, Part II: pp. 116, 123, 129, $140,143-146,149,151,152$; VI, Part III: pp. 246; VII: pp. 7, $10,11,13,17,127 ; I X:$ p. 84.
Sole Companion of His Father, IV : pp. 103, 118, 119, 125, 133 ; VI, Part III: pp. 31, 33, 34; VII: pp. 13, 17.
Sole Beloved Companion, $I$ : pp. 2, 20, 23, 33, 35 ; $I I:$ pp. 179, 181.
Friend of the House, $I I$ : pp.211, 216, 217, 222 ; $V:$ pp. 15, 89 ; VI, Part III : pp. 81, 85-87, 89, 94, 97.

Friend of the Great House (Court), $I X, \mathrm{pp} .59,62$.

Inspector of the Palace, $I:$ pp. 92, 95.

Beloved Companion of His Lord (lit. Companion of the Heart of His Lord), IV : pp. 159, 160, 186

Companion of $\operatorname{Re}^{e}$-wer, $I$ : pp. 104, 106, 109 ; VI, Part II: p. 122.

Eldest of the Chamber (is.t), III: pp. 130, 133, $134 ; I V:$ pp. 151, 155; VII: pp. 73, 77, 78, 81, 83.



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| smsw whr．t <br> $\dot{s} m s \dot{s} w w h r . t n h b$ |  |  |
| śmśw $p r$ |  |  |
| $\begin{aligned} & \dot{s} m \dot{s} w \quad n \quad m s^{r e} \\ & \dot{s} m s ; w h z j . t \\ & \text { smśw haj.t Mn-kuw- } \\ & R^{e}-n t r j \end{aligned}$ |  |  |
| $\begin{aligned} & s m s w^{2} \text { haj.t } M n-k u n- \\ & R^{e}-n t r j \end{aligned}$ |  |  |
| $\begin{aligned} & \dot{s} m s \dot{s} w \text { hajt n } \underline{H}^{e} j-f- \\ & R^{e}-w r \end{aligned}$ |  |  |
| śmśw sinw ${ }^{\text {a }}$（w）pr－̇ |  |  |

śmśw śnw．t
śmsw snw．t $n$ it－f
$\dot{s} n-f$
$\dot{s} n . t-f$
s＇hd imj ntr．w（？）
$\dot{s} h \underline{d} \dot{i} d w(-w)$ hw．t ${ }^{\text {e }}$ ．$t$

The President of the Shipyard（？）or Dockyard，（var．$\triangle \square \square$ ，合 $\square \square \sqsupset)$ ；VI，Part III ：pp．24－26．
President of the Shipyard（？），VI， Part II：p． $116 ;$ VI，Part III： pp．19，21，22，24， 25.
Eldest of the House（？）$I I$ ：pp．48， 60， 61.
Elder（？）of the Army，$I X:$ pp．13， 14.
The Eldest of the Audience Hall ； VI，Part III：pp．93，100， 101 ； VII：35，38，39， 40.

The Eldest of the Audience Hall of the Pyramid（called）$M n-k_{3} w-R^{e}-n t r i$ ， $V:$ p． 186 （ $=$ Mycerinus is Divine）； VII：p． 55.
Eldest of the Audience Hall of the Pyramid（called）$H^{i} j-f-R^{e}-w r$ （Khephren is Great），VI，Part II， pp．93，102， 103.

Senior of the Physicians of the Great House（Palace），III：pp．121，125， 127.

Eldest of the Senwt［House］，IV ： pp．140，141， 143.

Eldest of the Senwt［House］of His Father，IV：pp．125，131， 133.

His Brother，II：p． 101.

His Sister，IV：p． 133.
．．．，$I X:$ pp．49，52， 53.

Inspector of the Recruits of the Great Mansion，$I I I$ ：pp．41，43， 45.


| s'hd $w^{\prime} b(. w)$ | Inspector of the Purificators, $I I I$ : <br> p. 166 ; VI, Part III: pp. 93, 96, 102, 103, 104, 105, 117, 119, 125, <br>  |
| :---: | :---: |
| $\begin{aligned} & s h d \quad w^{c} b(. w) \quad M n- \\ & k 3 w-R^{c} . \end{aligned}$ | Inspector of the Purificators of Mycerinus, $I I:$ pp. 169, 174, 175, 176. |
| s'hd w'b(.w) njs wt | Inspector of the King's Purificators, $I X: \text { pp. 21, } 24 .$ |
| s'hd w w.w Nhn-R | Inspector of the Purificators of $N \underline{n} n-R^{e}$, VI, Part II: p. 120. |
| $\begin{aligned} & \dot{s} h \underline{d} w^{\bullet} b(. w) \underline{H^{`}} j-f-R^{e}- \\ & w r \end{aligned}$ | Inspector of the Purificators of the <br> Pyramid (called) $\underline{H}^{\prime} j-f-R^{e}-w r$ <br> (Khephren is Great), VI, Part II: p. 137. |
| $s h d p r$ | Inspector of the Palace (?), VI, Part III: pp. 81, 89. |
| shd $p r-{ }^{-} 3$ | Inspector of the Court, VI, Part III: pp. 81, 83, 84, 86, 87, 89, 94, 96, 97. |
| s $\operatorname{sh} \underline{d} p r-h \underline{d}$ | Inspector of the Treasury, $I V$, Part II : <br> p. 155. |
| $s$ s'hd nhisj(.w) | Inspector of the Nubians, $V I$, <br> Part III: pp. 133, 135, 133, 139. |
| s'hd $n$ hmw.t $p$ | Inspector of the Artisans of the Court, $I I: \text { pp. 212, 216, } 217$ |
| s'hd $n$ str.w | Inspector of the Officials, $I I:$ pp. 155, 157. |
| $s ' h \underline{d} h m(. w)-n t r \quad m w . t$ $n j s$ sut | Inspector of the Priests of the King's <br> Mother, III: pp. 93, 95, 96 ; $I V:$ p. 10. |
| $\begin{aligned} & \text { s'hd } h m . w-n \underline{t r} \quad M n- \\ & k s w-R^{*} \end{aligned}$ | Inspector of the Priests of $M n-k: z w \cdot R^{C}$ (Mycerinus), $I I:$ pp. 169, 174, 175. |
| $\begin{aligned} & \text { s'hd hm.w-ntr } M n- \\ & k 3 u-R^{e}-n \underline{t r j} \end{aligned}$ | Inspector of the Priest of the Pyramid (called) Mn-kzw-Re (Mycerinus is Divine), $I I:$ pp. 169, 177, 178 ; VI, Part III: pp. 9, 11, 12, 14. |

s＇hd $\underset{\text { I }}{\text { Issj }}$
hm．w－ntr
Nfr－
s＇hd（hm－w－ntr？）Nfr－ $k 2-R^{e}-m n-n \underline{h}$
shd hm．w－ntr $\underset{H}{H} t h r$
s＇h $\underline{d} \quad h m . w-n \underline{t r} \quad \underline{D} d-$ is．$w t-S_{3}-R^{e}-T t_{i}^{\prime}$
shd hm．w w＇b．t
shd hm．w－kz
s＇hd h h $m w . t$
s＇hd hśsw（．w）
s＇hal $n h \dot{s} w(. w) W^{\prime} b-i s^{\prime}-$ $w t-w \dot{s} r-k \geq-f$
s＇hd h́sw（．w）drmat
s＇h $\underline{d}$ hntj．w－s

Inspector of the Priests of the Pyramid （called）$N f r$－Issj（Isesj is Beautiful） Beauty of Isesj，VI，Part II ：p． 132. Inspector of the Priests（？）of the Pyramid（called）Nfr－ks－R $R^{r}-m n-n h$ （ Nfr r －ka－R ）is Established and Alive），VI，Part II：p． 151.
Inspector of the Priests of Hathor， $V I I: ~ p p .45,47 ; I X:$ pp．21， 22， 23.
Inspector of the Priests of the Pyramid （called）$\underline{D} d-i s s^{\prime} w t-S_{3}-R^{e}-T t j$ ）（Firm are the Places of the Son of the Sun Teti），VI，Part II：p． 140.

Inspector of the Artisans of the $w^{\circ} b . t-$ Workshops，$I I:$ pp．9，10，11， 12 ； $I X:$ p． 73.
Inspector of the Ka－Servants，$I$ ：pp．27， $67,104,107,110,111,113,115$, 116，II：pp．15，29，33，36，37， $47,50,52,159,161,163,190,191$ ； $I I I: ~ p p .23,41,43,44, ~ 93, ~ 95$, $96 ; I V: p p .105,109,111,114$, 117， 118 ；$V$ ：pp．225，226，228， 230，232， 316 ；VII：p！．21，29， 30 ；$I X$ ：pp．63，66． 67.
Inspector of Crafts（？），$I I:$ pp．96， 101 ．

Inspector of Singers，VII：pp．45，47， 48.

Inspector of the Singers of the Pyramid （called）$W^{\prime} b-i s . w t-w s^{\prime} r-k 3 f$（Pure are the Places of Ouserkaf，VI， Part II：p． 33.
Inspector of the Singers of ．．．，VI， Part II：p． 117.

Inspector of Tenants，$I I:$ pp．87，90， 91.


|  | Inspector of Tenants of the Great House (Palace), I: pp. 68, 69, 92, 95 ; $I I$ : pp, 87, 90, 91 ; $I I I$ : pp. 245, 248-250; $V:$ p. 317 ; $I X$ : pp. 59, 61. |
| :---: | :---: |
| $\operatorname{s} h \underline{d} \underline{\sin } \mathbf{~}(. w)$ | Inspector of the Physcians, $I I I:$ pp. 93, $95,96 ; I X: \text { p. } 55 .$ |
| s'hd $\underline{\sin } \mathbf{s}(. w) p r^{-}$, | Inspector of the physicians of the Great House (Palace), VI, Part II : p. 118 ; $I X$ : pp. 49, 50, 52. |
| $\operatorname{shd} \underline{d} \sin w(. w)$. | Inspector of the Physicians of . . ., $V I, \text { Part II : p. } 130 .$ |
|  | $\begin{array}{r} \text { Inspector of the Scribes, } I I: \text { pp. 112, } \\ 137 ; I I I: \text { pp. } 119,122,176,181, \\ 185,188 ; V I I: \text { pp. } 21,26(?), 28(?) . \end{array}$ |
| śhd $s s^{*}(. w) \quad$ enjówt šnw.t | Inspector of the Scribes of the King's Document(s) of the Granary, VII: pp. 21, 26-31. |
|  | Inspector of the Scribes of the Gangs of Workmen, $\nabla$ : pp. 226, 228, 229. |
| $\begin{aligned} & \text { shd } \underline{d} \quad s s^{\prime}(. w) p r j-m d \Omega . t \\ & h r j-w \underline{d} b \end{aligned}$ | Inspector of the Scribes of the House of Archives of the King's Largess, $V:$ pp. 237, 241. |
| $\begin{aligned} & s \not s \underline{d} \quad s s^{\nu}(. w) \quad p r-h r j- \\ & w d b \end{aligned}$ | Inspector of the Scribes of the House of the King's Largess, VI, Part II : 113. |
| sh $\underline{d} \underline{s} s^{2}(. w) p r-h \underline{d}$ | Inspector of the Scribes of Treasury, <br> $I: ~ p p .73,77,78,81,82 ; I I I:$ <br> pp. 119, 132, 133, ; V: pp. 213, <br> 215, 216, 217, 218, 223. |
| $\begin{aligned} & \dot{s} h \underline{d} \quad \text { sš}(. w) \quad n \quad h w . t \\ & \text { wr.t } \end{aligned}$ | Inspector of the Scribes of the Great Court, V: pp. 238, 243. |
|  | Inspector of the Scribes of the Granary, $I$ : pp. 73, 76, 77, 81, 82; VII: pp. 21, 26-28. |



sbm $m(?) n t r . w$
shmb ib $n$ bitj $m$ is. $w t-f n b$
ślhnw 3h
$s \underline{h} k r h_{3} . t n t r-f$
$s \underline{h} k r \underset{H}{H}$
s'šm
stp sz $\underline{h} r$ st $n j \dot{s} w t$
$\dot{s} d \quad 3 w t j$
$\dot{s} d$ swtj wís ntr ?
s'd ${ }^{2} w t j$ wír.wj ntr
$\dot{s} d \quad 3 w t j b i t j$

Inspector of the Fields, $V:$ p. 276.

Inspector of the Cooling of Drinks of the Court, VI, Part III: pp. 73, 75, 77.

Inspector of the Pyramid (called) $\underline{D} d-i \dot{s}-w t-S_{3}-R^{e}-T t j$ (Firm are the Places of the Son of the Sun Teti), VI, Part II: p. 136.

He Who Has Might with the Gods (?), III: pp. 115, 117.
She Who Pleases the Heart of the King of Lower Egypt in All His Places, II: pp. 204, 206, 207.

The Seeker of the Spirit(s), V: p. 89.

He Who Adorns the Forehead (Front) of His Lord, II : p. 7.

He Who Adorns Horus (the King ?), $V I:$ pp. 159, 160, 164, 176, 178, 182.

Butcher, III: pp. 169, 173.

Bodyguard under the Throne of the King (?), II: pp. 211, 216.
Sealer, $I$ : p. 27 ; $I I$ : pp. 190, 191 ; III: pp. 168, 171, 172.

Divine Treasurer (Boat Captain), III: pp. 29, 33; VI, Part III : pp. 143, 145.

Captain of the Two Divine Boats, V : p. $60 ;$ VII: pp. 65, 67, 70.

Treasurer of the King of Lower Egypt, VI: pp. 103, 107; VI, Part II: p. $144 ;$ VII: pp. 13, 17.

$\dot{s} \underline{d} \mathbf{w} w t j$ bitj $n$ it-f
$\dot{s} d \mathbf{d} w t j-n \underline{r}$
$\dot{s} d m m d w \quad m$ śsts $n b$
$n j s \neq t$
${ }^{\text {s.msw }}$ njı̈wt
${ }^{v} p \dot{s} \dot{s}(. t) n j \dot{s} w t$
$\stackrel{v}{v} p \dot{s} \dot{s}$ hr nịswt
$\triangle \boldsymbol{k}$
kbh hw.t $m d s(?) p r-{ }^{\circ} 3$
$k d w$

Treasurer of His Father the King of Lower Egypt, VI, Part III: pp. 35, 38.
The Treasurer of the God, $I V:$ p. 71; VII : pp. 65, 68.

He Who Hears the Words in every Secret of the King, $V:$ pp. 237, 241.

King's Attendant, $I X:$ p. 88.
Noble Woman of the King (or Honoured Woman of the King), VI, Part II : p. 146.
Honoured before the King, $I$ : p. 19; $V:$ pp. 15, 169.

He Who Distributes Libation in the Place of Cult (?) of the Great House, V: pp. 279, 284.
Builder (or Architect), $I I$ : pp. 190, 191.

Sculptor, $I I$ : pp. 190, 191; VI, Part III : pp. 125, 127, 129, 130.

Sculptor of the $w^{e} b . t$-House, VI, Part II: p. 125 ; VI, Part III: pp. 125, 129.

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$|$| $\cdots$ | $\begin{array}{c}\text { Priest of the God } h p h p \\ V: \text { p. 276. }\end{array}$ |
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| $\cdots I I:$ pp. 155, 157. |  |

## INCOMPLETE TITLES



$|$| tntt $\operatorname{irj}(?)$ | $\begin{array}{c}\text { Herdsman of the Thentet Cows, II : } \\ \text { pp. 169, 172, 173. }\end{array}$ |
| :--- | :--- |

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$\left\lvert\, \begin{aligned} & \underline{d} 3 j h n(?) \\ & \underline{d r t j w}\end{aligned}\right.$
Priest for Funerary Garments, II: pp. 105, 110.

Mourning Woman, IV : p. 71.

|  | II : pp. 155, 157. |
| :---: | :---: |
|  | (A Title Connected with Shipbuilding), $I$ : pp. 3, 16, 29. <br> (Priest of a Solar Temple), II : pp. 134, 135. |
| $m$ hww.t Srk.t (?) | (Priest of the Pyramid of Khephren), II: pp. 112, 123. <br> (Priest ? in the House of Serket), II: pp. 112, 123. |

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## PROPER NAMES

| \% 3 |  |  |
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| T $]$ d | $36 b j$ | $V: \mathrm{pp} .161,174$. |
| \% $0^{4} 4$ | ${ }^{2} h \mathrm{j}$ | VI, Part II : p. 145. |
| 300mm参 | sh $h$-n-nb | II : pp. 33, 38, 42. |
| $0 \%$ | ${ }_{3} \underline{h}-R^{\text {e }}$ | $\begin{aligned} & V I, \text { Part III: pp. 43, } 57,59 ; X I, \\ & \text { p. } 17 . \end{aligned}$ |
| $-8$ | 3tht-htp | $I:$ pp. 73-82, 86, 89 ; $V:$ pp. 7, 9, 75-77, 80, 81, 84, 126, 129, 131, 132, 138, 141, 142, 146, 149, 156; VI, Part II : pp. 10, 14, 17, 28, $31,48,61,62,64,66,70,89,95$, $102,104,117$. |
|  | 2 2 l - h tp- $\mathrm{h} r$ | $\begin{aligned} & V: \text { pp. 141, 147, 149, } 152 ; \text { VI, } \\ & \text { Part II: pp. 62, 80, } 126 . \end{aligned}$ |
| 込 | sshw | $V:$ pp. 161, 173, 175, 177. |
| 5 | $3 t-k z w$ | II : pp. 17, 23. |
| $4 i$ |  |  |
| \% | İabtjt | $\nabla$ : pp. 78, 82. |
| $3 \times 44$ | ${ }_{\text {Ij-mrj }}$ | VI, Part II : pp. 69, 72, 126, 152. |
| B®o | $\dot{S}_{j-m r t}$ | $I: \mathrm{pp} .105,109,110,116$. |


|  | $\dot{I}_{j-m-h t p}$ | $\begin{aligned} I I: & \text { pp. } 15,23 ; V: \text { pp. } 50,161,171, \\ & 299,302 ; V I, \text { Part III : pp. } 44,61 . \end{aligned}$ |
| :---: | :---: | :---: |
| S00 | $\dot{I}_{j}-n f r t$ | $\begin{gathered} I: \text { pp. 103, } 104 ; \text { VI, Part III : pp. 19, } \\ 21,143 \text { \&) } \end{gathered}$ |
| ALS | $\breve{I}_{j}-k z(j)$ | $V: \mathrm{pp} .78,82,128,129,131,133$. |
| $\left.A_{x}^{2}\right]$ | $\dot{I} j-d f_{2}$ | II: pp. 15, 23. |
| 444 | $\check{I}_{i j}$ | $I$ : pp. 101-103; V: pp. 134, 138, 145, 149, 163, 170, 174; VI Part II: pp. 10, 94. |
| 438 | İww | $V: 166$. |
| $4 \times 4$ | $\vec{I}_{\text {ufj }}$ | $\begin{aligned} & V: \text { pp. 78, } 82 ; V I, \text { Part II : pp. 143, } \\ & \quad 145,146 . \end{aligned}$ |
| $4 \times$ an $f$ |  | $I I:$ pp. 33, 38, 42, 159, 163. |
| - | İwn-Mnw | $\begin{aligned} & V: \text { pp. 74, 81, 84; VII: pp. 13, 14, } \\ & \quad 17,18,113 . \end{aligned}$ |
| $\bigcirc$ | $\bar{I}_{\text {I }}$ n- $R^{\text {c }}$ | $V:$ pp. 49, 60, 74, $83 ;$ VII, Part II : p. 33 ; VI, Part III : pp. 31, 33 34, 241-243, 245. |
| 48 m | $\dot{I}_{\text {uns }}$ | Iwnes, $I X:$ p. 85. |
| $4 \int 44$ | ${ }_{\text {İb }}$ ji | $\begin{aligned} & I I: \text { pp. } 179,186,188,189,190 ; V \\ & \quad \text { [ ¢ J \& ] pp. } 161,166 ; V I, \\ & \text { Part II: p. } 106 . \end{aligned}$ |
| 4迤49 | $\dot{I} p j-n \underline{n} w$ | $V:$ pp. 161, 169, 172, 175. |
| 4風30 | $\dot{\text { Ipwt }}$ | $\begin{aligned} & I V: \text { p. } 7 ; V: \text { pp. } 161,167,169,173, \\ & \quad 174 ; V I, \text { Part II: pp. 109, 110, } \\ & \text { 153, 441. } \end{aligned}$ |
| 9 909 | $\dot{\text { Iptizw }}$ | $V: \mathrm{p} .164$. |
| $4 \times 4$ | : ${ }^{\prime} j$ | $V:$ p. $176 ; V I:$ pp. 217, 223. |
|  | $\stackrel{\prime}{\text { Ifj-mrjij }}$ | II : pp. 170, 177, 178. |


| （曾40） 430 厚 | $\stackrel{\text { Im }}{2}$－Ppij | $V:$ pp．161， 177 ；VI，Part II ：p． 149. |
| :---: | :---: | :---: |
| $4 \mathrm{~N}^{(?)} 5 \times 0$ | Im 3 －Nt | $I V:$ pp．197，203， 204 ；V ：p． 134. |
| $(0 \times 44) 438$ |  | $V:$ pp．161， 165. |
| 4.4 | $\stackrel{\prime}{\text { Imj}}$ | $I I:$ pp．169，175， 176. |
| $4 \text { 感 }<J 44 \rightleftharpoons$ | $\dot{I m b j}$ | $\begin{aligned} & I: \text { pp. } 89,91-95,101 ; V: \text { pp. } 76, \\ & 81,83,126,164,175 . \end{aligned}$ |
|  | $\dot{I}_{n j}{ }^{\prime}$ | $V:$ p． 169 ；VI，Part II ：p． 137. |
| $(\hat{10 x}) \& A \times 8$ | İnj－ŚSfrw－istref | $V: \mathrm{pp} .78,82,130,132,133$. |
| $\int_{\min } \infty$ |  | II：pp．190，194；IV ：pp．127，137， $138 ; V: \mathrm{pp} .50,187,188 ; V I$ ： <br> Part II ：pp．63，72，95，101， 125 ； <br> VI：Part III：pp．111，117，119， <br> 125，127－130；IX：pp．21－24． |
| $\sum^{2} \mathbb{R}$ | $\stackrel{\rightharpoonup}{\text { In }}{ }_{2}$ | II：pp．190， 191. |
| $\operatorname{man} \text { of }$ | $\underline{I} \underline{\underline{L}} \boldsymbol{j}$ | VI，Part III：pp．47， 63. |
| $\min ] 4$ | $\stackrel{s}{n}$ tj | $V:$ pp．132，133；VI，Part II： pp．62，65， 129. |
| $4 \infty 4$ | $\stackrel{\rightharpoonup}{I} r j$ |  |
| $\therefore \sqrt[\pi]{\pi}$ | Irj－n－3ht | $\begin{aligned} & I I I: \text { pp. } 93,95,96 ; V: \text { pp. } 69,134, \\ & \quad 150 ; V I, \text { Part III }: \text { pp. } 9,11-16 ; \\ & \quad I X: \text { pp. } 59,60 . \end{aligned}$ |
| $\text { 曷 } 8 \text { —m }$ | Irj－n－Pth | $V I, ~ P a r t ~ I I I ~: ~ p p . ~ 11, ~ 12 . ~$ |
| $S \infty$ | $\overrightarrow{I r j}-n-R^{\text {e }}$ | $V:$ p． 141. |
| $\oint_{m m}^{\infty} \leftharpoonup ?$ | $\stackrel{\rightharpoonup}{\text { Irj}} \boldsymbol{r} \boldsymbol{n} \boldsymbol{s}$ | $V: \mathrm{pp} .161,167,168,173,175$. |

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\begin{aligned}
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& \text { 4面 } \\
& 4109 \\
& \text { 4:9 } \\
& \text { 4-4 } \\
& (1-1)]+ \\
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& \text { ( } 1=1)_{1} b_{A}^{A N} \\
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& \text { 4ns楽 } \\
& \text { queu } \\
& \text { 1要 } \\
& 181
\end{aligned}
$$

| Irw | $\begin{gathered} I I I: \text { pp. 1, 57, } 60-68 ; V: \text { pp. } 47, \\ 75,80,81,83,130,132 . \end{gathered}$ |
| :---: | :---: |
| $\stackrel{\rightharpoonup}{\operatorname{Irj}}-k_{3}(j)-P t \underline{~}$ |  |
| $\stackrel{\text { Irsstgw }}{ }$ | $\begin{aligned} V: & \text { pp. 60, } 75,80,83,129,130 ; \\ & V I I: \text { pp. } 65,67,68,70 . \end{aligned}$ |
| Irtj | $V:$ pp．164，166，174， 185. |
| $\stackrel{3}{\text { Ih }}$ | $V:$ p．140；VI，Part III ：pp．19， 21. |
| $\stackrel{3}{l} h i j$ | $\begin{aligned} V: & \text { pp. 140, 141, 156, } 164 ; V I, \\ & \text { Part II: pp. 104, } 139 . \end{aligned}$ |
| İblh $j$ |  |
| $\stackrel{\text { Isj }}{ }$ | $V:$ pp．149， 151 ；VI，Part II ：p． 154. |
|  | $I I:$ pp．47，50，51， 64 ；$V$ ：pp．138， $150,151,155,156$ ；VI，Part III ： 179. |
| $\stackrel{\text { Issj－}}{ }$ | $V: \mathrm{p} .138$. |
| $\overrightarrow{\text { Issj－nfr－nmtt }}$ | $V: \mathrm{p} .197$. |
| $\dot{I} s t j$ | $V:$ pp．161，168， 173. |
| İut－k w | II：pp．17， 23. |
| İsmt | $V:$ pp．161，173， 175. |
| Istsz | IV：pp．127， 148. |
| $\stackrel{\lrcorner}{I k} 3 w$ | VII：pp．73，77， 78. |
| $I k w$ | VI，Part III：pp．127，129， 130. |
|  | $\begin{aligned} V: & \text { pp. } 160,172,173,176 ; V I, \\ & \text { Part III: pp. 217, 219-222. } \end{aligned}$ |


| 404 | $\dot{I}+j$ | $I I:$ pp. 32, 38, 42, 84 ; $I I I$ : pp. 93, $95,96 ; V:$ pp. 163, [4ه4 $1 t i j]$, 174, 186 ; VI, Part II : pp. 80, 95, 134; VI, Part III : pp. 173; VII: p. 73 [4○44]. |
| :---: | :---: | :---: |
| 俞 | It-s' | $I: \mathrm{pp} .3,29$. |
| 404 | Ittj | $V: \mathrm{p} .153$. |
| $4=4$ | İ ${ }^{\text {j }}$ | $\begin{aligned} & I: \text { pp. } 105,109 ; I I I: \text { pp. 119, 122-125, } \\ & \quad 127 . \end{aligned}$ |
| $4=3$ | It w | $V: \mathrm{pp} .164,166,167,174$. |
| 494 | $\underline{I} d j$ | $\begin{gathered} V: \text { pp. 161, } 167 ; V I, \text { Part II: pp. 69, } \\ \quad 163,[4 \backsim \&], 149,151 . \end{gathered}$ |
| 4 4 | Idw | $I V:$ pp. 75, 79-83, 89 ; $V$, 161, 173-175, 178 ; VI, Part II: pp. 20, 21, 81, 86, 89, 90, 92, 93, 98, 104, 138; VI, Part III: p. 113. |
| $4 B 0$ | Idwt | $\begin{aligned} V: & \text { pp. } 7,161,169,174,175 ; V I, \\ & \text { Part III: pp. } 30,62,73,74,100, \\ & \quad 103,136,268 . \end{aligned}$ |
| $\sim C$ |  |  |
| $\overbrace{0}^{\text {mm }}$ | 'nh | $\begin{gathered} I I I: \text { pp. } 93,95,96,121,125,127 ; \\ V: \text { pp. } 79,82,128,164,174 . \end{gathered}$ |
| $q_{0}^{m m}$ | ${ }^{\text {'nhw }}$ | $V: \mathrm{p} .183$. |
| $\dagger \infty 1$ |  | $\begin{aligned} & V I, \text { Part II : pp. 58, 63, 68, 91, 94, 95, } \\ & \quad 121 . \end{aligned}$ |
| $f_{\infty}^{\circ}$ | 'nh-it-f | $I:$ pp. 66, 67 ; $V:$ pp. 35, 50, 134, 144, $153,155,203,213,225,226$, 228-230, 232. |
| $\text { f } x_{x}$ | ' $n \boldsymbol{h}$-m-s 2 - $f$ | $V:$ pp. 134, 153; VI, Part III: pp. 147, 149-152. |






## 89

843
${ }^{e} n \underline{b}-m\left({ }^{\circ}\right)-R^{e}$
${ }^{e} n h-m^{e}-k 3(j)$
${ }^{\bullet} n h-m$ - -Hr
${ }^{\prime} n \boldsymbol{l}-h \quad h-f$
${ }^{\prime} n \underline{k}-h \underline{d} w-s$
' $n \boldsymbol{h l}$ - $k$ d-s'
${ }^{\prime} n h-k z w-s$
' $\mathbf{d}$ - $h r t$

## B $w$

$W 2 s^{v}-P t h$
$W a s-k a(j)$
$W 2 s^{v}-D w s w$

Wad-pks
Wiw
$V:$ pp. 60, 74, 83, 139, 146, 150, 151, 155, 156, 188, 189 ; $\nabla I$, Part II: p. 138 ; VI, Part III: pp. 35, 38. $V:$ p. $139 ; V I$, Part II : pp. 62, 68, 95, 127, 366; VI, Part III: pp. 47, 62. $I V:$ p. $71 ; V I$, Part II : pp. 62, 138.
$I:$ p. 67 (?); $I I I:$ pp. 119, 121-123, 128, 130, 132-137, 142 ; V: pp. 6, $134,144,163,225,228,229$; VI, Part II : pp. 14, 15, 18, 20, 30, 31, 34, 37, 40-44, 93 ; $V I$, Part III : p. 240 .
$V:$ pp. 138, $154 ; V I, \operatorname{PartIII}: 9\{\cap$ ? ' $n \underline{h}$-wd-s' (?), pp. 94, 98.
$I I:$ pp. 17, 23.
$I X:$ pp. 63, 69. 70.
$I I:$ pp. 88, 91, 92.

|  | $W^{\prime}-r$ r $w$ | $I I:$ pp．88，90， 91. |
| :---: | :---: | :---: |
| SY | Wp | II ：pp．179， 190. |
|  | $W p-m-n f r t$ | $\begin{aligned} & I I: \text { pp. 179-181, 186-190, 200, } 202 \text {; } \\ & \quad V: \text { pp. 134, 144; VI, Part II: } \\ & \quad \text { pp. 19, 106. } \end{aligned}$ |
| Bom | Wmtt－kz | $I I:$ pp．9，12， 13. |
| 且盛 | $W n-h r-3 \underline{h} t$ | VI，Part III ：pp．125，128－130． |
| minon | Wnst ${ }^{\text {ct }}$ | $V: \mathrm{pp} .78,82$. |
| $\pm 4$ | Wrj | VI，Part II ：pp．96， 140. |
|  | Wr－ir－n－Pth | $V: \mathrm{pp} .139,152,154$. |
| 碞 | $W r-b s w$ | II：pp．190， 197. |
| \％ 3 | $W r-\underline{k} w w$ | $I:$ p．72；$V:$ pp．11，47，134，137， 145，195，237，238，240－243，245， 246，249，250， 289 ［ 5 ］， 291 ；VI，Part II：pp．51，59，60， $65,68,95,106,108,122,154$. |
| 突し | $W r-k z(j)$ | $V: \mathrm{p} .53$. |
| $\cdots \theta$ | Wr－tz | II ：pp．190， 191. |
| $\stackrel{\pi}{\Sigma} U$ | Wrt－kza） | II ：pp．75，81， 82. |
| 䕗卑 | Wr－d d－Pth | $V:$ pp．139，146，169， 171. |
| 今88 | Whz | $\nabla$ ：pp．134，138，142，166，255， 256. |
| Sopos | W－h－$w$ | $V$ ：p． 161. |
| $B 110$ | $W \dot{s} r$ | $I:$ pp．95，96， 101 ；V ：pp．76， 83. |

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\begin{aligned}
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| $W \dot{s} r-n \underline{r}$ | $V I$, Part II：pp．16，29，31，62，63， $72,79,80,95,123,280,345$. |
| :---: | :---: |
| $W \dot{s} r-k 3-f^{-} n \underline{h}$ | III：pp．98，103， 105. |
| $W \dot{s} r-k s(j)$ | $V:$ p． 53. |
| $W \dot{s} r-k 3 w$ | $V: \mathrm{p} .53$. |
| $W \dot{s} r-k s w-h^{2}-f-R^{e}$ | $V: \mathrm{p} .53$. |
| $W \operatorname{sirt}-k 3(j)$ | $I X: 43,44,46,47$. |
| Wt－ks | III：pp．57，60，61，63，64，66－68． |
| Wtt－htp | $I I:$ pp． 1,$4 ; V:$ p． $134 ;$ VI，Part II ： pp．14，16， 20. |
| $W \underline{d} b t n$ | $I V:$ p． $96 ; V I$, Part II ：pp．109，110， 153， 441. |



148
$\int \underset{000}{\infty}-4$
$\left.\int\right]_{0}^{\infty}$
185
88
dg
$W \dot{s} r-n \underline{t} r$
$W \dot{s} r-k 3-f^{-} n \boldsymbol{n}$
$W \dot{s} r-k s(j)$

Wsr－ksw
$W \dot{s} r-k s w-h^{e}-f-R^{e}$

W＇strt－ks $(j)$
$W t-k 3$

Wtt－htp
$W \underline{d} b t n$

VI，Part II：pp．16，29，31，62，63， $72,79,80,95,123,280,345$.
$I I I:$ pp．98，103， 105.
$V:$ p． 53.
$V:$ p． 53.
$V:$ p． 53.
$I X: 43,44,46,47$.
$I I I:$ pp．57，60，61，63，64，66－68．
$I I:$ pp． 1,$4 ; V:$ p． $134 ;$ VI，Part II ： pp．14，16， 20.
$I V:$ p． $96 ; V I$, Part II ：pp．109，110， 153， 441.

| $B{ }^{2}$ | $V:$ pp．161， 173 ；VI，Part III ：p． 16. |
| :---: | :---: |
| Bjw | $\begin{aligned} & V: \text { p. } 165 ; V I, \text { Part II : pp. 60, 69, } \\ & 96,104,145,150 . \end{aligned}$ |
| $B^{\text {e }} n w-T t j$ | $V: \mathrm{pp} .139,152$. |
| $B^{¢} k$ | II ：pp．190， 191. |
| $B w-n f r$ | $\begin{aligned} I I I & : \\ & \text { pp. } 185,189,176,178,179,181-183, \\ & \text { pp. } 10,197 ; V: \text { pp. } 60,74,84 . \end{aligned}$ |
| $B b j$ | $\begin{aligned} & V: \text { pp. } 160,161,168,173,174,177, \\ & \quad 185 ; V I, \text { Part II }: \text { pp. } 25,26,65 . \end{aligned}$ |
| Bhnw | $V: \mathrm{pp} .163,173,177$. |


| 䦸 $\boldsymbol{p}$ |  |  |
| :---: | :---: | :---: |
| 曾44 | Ppij | $V:$ p． 165 ；VI，Part II ：p． 144. |
|  | Prij－${ }^{\text {n }}$ ¢ | $I V:$ pp．69，71， $80 ; V:$ pp．162，173， 174 ；VI，Part II：pp．100，103， 419. |
|  | Ppij－$n \underline{l}-n-\dot{s}$ | $V:$ pp．161，168，175－178， 180. |
| （曾44）+ \％ | Ppij－＇nl－hrj－ib | VI，Part II ：p． 146. |
| （匋44） $\mathrm{S}_{5}$ | Ppjj－mr－Ḥb－S＇d | $V: \mathrm{p} .163$. |
|  | Prij－nnj | VI，Part II ：p． 148. |
| 署真盛 | Pnw | VI，Part II ：p． 62. |
| $\stackrel{\square}{\square}$ | Prj－＇$n \underline{\underline{k}-{ }^{\text {c }} \text {＇}}$ | $I: ~ p p .105,109,110$. |
| 舄」 | Prj－nb | III：p． 157. |
| Emin | Prj－n－（？）$n b$ | $I:$ pp．105，109， $110 ; I I:$ pp．48， 60， 61 ；V：p． 76 ；VI Part II： p． 345. |
| $\stackrel{\square}{\infty}$ | Prj－n－ka（j） | $I I:$ pp．87，91， 93. |
| $\square$ | Prj－ndıu | $V: \mathrm{pp} .139,147,151,156$. |
| － $8^{\text {m }} \triangle$ m | $P h-n-w j-k s(j)$ | $V$ ：p． 141. |
| $\Omega)_{\alpha_{2}}^{10}$ | Ph－nfr | $V: \mathrm{p} .164$. |
| 目吅 | Pss ${ }^{\text {c }}$ | $V: \mathrm{p} .147$. |
| －$\square_{0}^{\infty}$ | Ps＇s＇t | $I: \mathrm{pp} .73,81$ ；V ：pp．129，131， 132. |
| $\text { 园 } 8$ | Pth－＇pr－f | II ：pp．212， 214. |


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$=4$ $\left\lvert\, \begin{array}{ll}\text { Ffj } \\ & \end{array}\right.$
$I:$ pp． $95,97-101 ; V:$ pp． 35,61,
$62,134,138,145,152,170,279$,
$[$ 2 4$], 283 ; V I$, Part II：
p． $93 ; V I$, Part III ：pp．173， 177.
pp． $95,97-101 ; V:$ pp． 35,61,
$62,134,138,145,152,170,279$,
$[$ 2 4$], 283 ; V I$, Part II：
p． $93 ; V I$, Part III ：pp．173， 177.
pp． $95,97-101 ; V:$ pp． 35,61,
$62,134,138,145,152,170,279$,
$[$ 2 4$], 283 ; V I$, Part II：
p． $93 ; V I$, Part III ：pp．173， 177.
pp． $95,97-101 ; V:$ pp． 35,61,
$62,134,138,145,152,170,279$,
$[$［ 4$], 283 ; V I$, Part II：
p． $93 ; V I$, Part III ：pp．173， 177.

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Pthenhw

Pth－wr

Pth－htp

Pth－htp－ij－n－enㅡㅐ

Pth $\dot{s} \underline{d} f_{2}$

Pth－nds
Pth－$d t$
$\nabla:$ p． 165.

VI，Part VIII：pp．19， 21.
II：pp．190， 191 ；$V$ ：pp．139，151， 152，161，167，171，174，177， 182－184，189；VI：pp．29，30， $63,68,86,89,92-95,132$.
$V:$ pp．14，17，139，149，152，156，159， 181 ；VI，Part II：pp．63， 132.
$I:$ pp．97，99，100， $102 ; V:$ p． 61.
$V I:$ Part III ：pp．19， 21.
$I I:$ pp．9，11， 12.

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x-f
$$

$M_{3 j w}$
$M 3^{\circ}-\underline{h} w-P t h$

Mz－nfr

Minw
$I I:$ pp．32，38，41，190， 191.
$V I:$ pp．72，101，102， 138.
$V:$ pp．139，149，151，152， 156 ； VI，Part II ：pp．62，63，68，81， 89， 131.
$V I:$ p． 142.

|  | M－wnt ．．．（？） | $V I I: ~ p p .35, ~ 38-40$. |
| :---: | :---: | :---: |
| 垦 | $M m j$ | VII ：pp．45，47， 48. |
| $\operatorname{man} 4$ | $M n j$ | $V:$ pp．72，162，173－175 ；VI，Part II pp．46，69，81，104，150，243， 245，247， 252. |
| S | Mnw | $I:$ p． 27 ；$I I$ ：p．84；VI，Part II： <br> Irw，pp．62，85，91，107， 123. |
| $\infty$ | Mnw－nfr | VI，Part II ：pp．67，68，80， 135. |
| $\xrightarrow{\infty+\infty}$ | Mnw－nht | IX：p． 33. |
| $\min _{4}$ | $M n-k$ w | VII：p． 126. |
| $\infty$ | Mrji | $\begin{array}{rl} I I: ~ p p . ~ 88, ~ 91, ~ & 92 ; V: \text { pp. } 70,151 \\ & \text { VI, Part III: pp. 44, 60, } 113 . \end{array}$ |
| $\pm\}$ | Mr－ij | $I I:$ pp．16，26， 27. |
| $\pm 0$ | Mrj－ib | $V:$ pp．77，82，127，129，169；VI <br> Part II：pp．27，61，70，78，105， 108 |
| $\pm 403$ | Mrjt | $V: \mathrm{p} .184$. |
| $\infty \quad \infty$ | Mrjt－it－s | $V$ ：pp．78，82，279，284；VI，Part III pp．143，145， 146. |
| ＊9 $\underbrace{m m}_{0}$ | Mrj－$n \underline{\underline{k}-f}$ | III：pp．14，16－21，26，31， 49 ；$V$ pp．76，80，83，126，129， 132. |
| 屡8 | Mrj－Pth | II：pp．76， 84. |
| $(\odot 44)+e_{0}^{m m}$ | Mrij－$R^{\text {e }}$－$n \boldsymbol{h}$ | $V: \mathrm{pp} .162,170,177$. |
| O屏8) | Mrj－R－Pth | $V: \operatorname{ppp}_{178 .} 155,162,168,174,175,177,$ |
| $0 \times 44) 100$ | $M r j z-R^{*}-n f r$ | $\begin{aligned} & \text { VI, Part II : pp. 29, 68, 80, 101, 102, } \\ & \quad \text { 104, } 146 . \end{aligned}$ |
| Enfis | Mrj－sj－ihj | $I I: \mathrm{pp} .32,37,38,43$. |


| $* 19$ | $M r j-s j-n h w$ | II：pp．96，101，181，182，186－188； $V I:$ pp．5，13， 140 ；$V:$ pp．77， 80，127；VI，Part II：pp．63，64， 66，67，110，112，116，154， 441 ； VI，Part III，pp．43，57，59， 239 ［ \＆ค具］，$I X, 59$ ． |
| :---: | :---: | :---: |
|  | Mrj－so－＇nhw | $I$ ：pp．66，104－117；$I I:$ pp．104， 139 ； $I V:$ p． $140 ; V:$ pp．48，50，69， 134，138，143，153－155，192；VI， Part II ：pp．84，89，90，101， 122. |
| $\pm \square$ | $M r(j)-k s(j)$ | II：pp．76， 84. |
| $\pm$－ $0^{9}$ | Mrw | $V I:$ Part II ：pp．94，101，102，141， 366. |
| －\％o | Mrwt | $V: \mathrm{pp} .162,166,168,173$. |
| 区近 | $\operatorname{Mrw}(j)-k s(j)$ | $I:$ pp．62，63；V：p． 135. |
| E4 | Mirrj | $I I:$ pp．88，91， 92 ；$V:$ pp．14，162， 174，183；VI，Part II：pp．33，74， 147， 328. |
| 号时 | $M r r-w(j) k a(j)$ | $I V:$ pp．71， 82 ；$V$ ：pp．66，162， 175 ； VI，Part II ：pp．11，86－88，90，92， 96，98，99，101，103－105， 140. |
| 8ப4 | Mrr－ks $(j)$ | VI，Part III ：pp．147， 151. |
| $\pm \bigcirc 4$ | Mrtj（or）Mrjt | $V:$ pp．139， 156. |
| $\text { 为 } \infty$ | $M \underline{j}$ | $V:$ p．168；VI，Part II ：pp．81， 144. |
| 感 | Mḥw | $V:$ pp．162， 174. |
| $\text { So } \sin ^{\circ}$ | Mhnw | $V I I: ~ p p .81,83$. |
| 需 | Ms－sz | $V:$ pp．135，240，289，291，292；VI pp．64－66，113，170，260，266，267， 280，286，312，400，447，465． |


| $\pi 114$ | $M s j$ | VI, Part III: p. 245. |
| :---: | :---: | :---: |
| $1 \text { 最 }=$ | $M \underline{t} n$ | $V I:$ pp. 6, 74, $76 ; V:$ pp. 77, 82, 103, 104, 127, 129, 131, 133, 168; 169, 180 ; VI, Part II: pp. 10, 24. $78,85,87,158,159,260,349$, $388,389,400$. |
| $10 \infty$ | $M d w-n f r$ | $\begin{aligned} & I I I: \text { pp. 108, } 110,115,117 ; V: \text { pp. } 75, \\ & 83,141,154 . \end{aligned}$ |



| $N_{3}{ }^{\text {j }}$ | $V:$ pp. 50, 299, 301. |
| :---: | :---: |
| $N j$-iswt-Pth | $I I:$ pp. 169, 172. |
| $N j-i t-k 3(j)(?)$ | $I V:$ p. 166. |
| $N j-{ }^{-} n \boldsymbol{h}-{ }^{\text {e }} n t j$ | $V:$ pp. 163, 174, 175. |
| $N j-{ }^{-} n \boldsymbol{h}-\mathrm{P} p j j$ | $\begin{aligned} V: & \text { pp. } 11,12,14-16,46,50,124,162, \\ & 167,174,178,181 ; V I, \text { Part II: } \\ & \text { pp. } 24,61,73,74,81,86,89,90 \\ & 93,101,104,145,285,296 . \end{aligned}$ |
| $N j-{ }^{-} n h-P t h$ | $\begin{aligned} & I I: \text { pp. } 87,90,91 ; V: \text { p. } 164 ; V I: \\ & \text { Part III: pp. } 44,56,59 . \end{aligned}$ |
| $N j-n \underline{h} \cdot M 3^{\circ} \mathrm{t}$ | VI, Part II: pp. 103, 128. |
| $N j-{ }^{-} n \boldsymbol{L}-n \underline{t r}$ | $V:$ p. 153 ; VI, Part III: pp. 163, 165, 166. |
| $N j-n j-R^{e}$ | $\begin{aligned} I I: & \text { pp. } 32,33,38,42,43 ; I I I: \text { pp. 168, } \\ & 171,172 ; I V: \text { pp. } 151,152,155, \\ & 156,162,185,189 ; V: \text { pp. } 60, \\ & 75,83,140,143,154,156 ; V I, \\ & \text { Part II: pp. 24, 28, 41, 43, 67, } \\ & 119 . \end{aligned}$ |


| mof mm | $N j-¢ \underline{n}-\mathrm{H}$ th r | III: pp. 245, 251, 252. |
| :---: | :---: | :---: |
| 0 mm f | $N j-n \underline{l}-\underline{H} n m w$ | II : pp. 15, 28 ; $V$ : pp. 12-14, 48, 75, 85 129, 130, 132; VI, Part II: pp. 93, 94, 365 ; VI, Part III: pp. 47, 111, 133, 135-140. |
| Pro mim | $N j$ - $n \underline{l}$-Shmt | $V: \mathrm{pp} .139,149,151,155,156$. |
| $\infty \hat{Q}_{f}^{m m}$ | $N j-n \underline{n}-s^{2} r t$ | IV: pp. 197, 198, 199, 200. |
| of $\mathrm{mm}_{f}^{\text {ma }}$ | $N j-{ }^{-} n \boldsymbol{l}$-Dwzw | $\nabla$ : p. 139. |
|  |  | III: pp. 41, 43, 44. |
| $m_{\sigma}$ | $N j w$ | II: pp. 34, 43, 44. |
| $\infty_{0}^{\min f \cap}$ | $N j-w s^{\prime} r$ - $R^{\text {e }}$ | $I V:$ pp. 3, 9, 98, 101, 106, 126, 145, 152, 185 ; VI, Part II: pp. 24, 77, 81, 107, 111. |
| $\max _{2}-44$ | Njutij | $V: \mathrm{pp} .141,146$. |
| $03=0 \mathrm{~mm}$ | $N j-M{ }^{2}+$ - ${ }^{\text {e }}$ | II: pp. 202, 203, 211-221, 224 ; III: pp. 169, 173 ; VI: pp. 105, 111, $114 ; V:$ pp. 30, 64, 74, 83, 85, 138, 143, 148, 149, 150; VI, Part II: pp. 63, 67, 68, 86, 92, 93, 99, 105, 107, 133. |
|  | $N j$-Ma't-hp | $\begin{aligned} & I V: \text { pp. } 5,6,7,10 ; V: \text { pp. 261, 264, } \\ & 265 . \end{aligned}$ |
| 風 ${ }^{\text {m }}$ | $N j$-Mı't-Hthr | VI, Part III : p. 181. |
|  | Nj-hp | II: pp. 48, 59. |
|  | ${ }^{\text {' }} \mathbf{j}-\mathrm{n}-\mathrm{H} \boldsymbol{H} r$ | $V: \mathrm{pp} .162,177,182$. |
| 0 \% m | $N j-\underline{H} n m w$ | IX: pp. 59, 60. |


| 1 P ¢ 0 | $N j-\dot{s} j-s^{\prime \prime} n \underline{h}$ | III: pp. 14, 20. |
| :---: | :---: | :---: |
| $-\pi \rho 1 \overbrace{m}^{m}$ | $N j-s^{\prime t} n \underline{\underline{L}}$-s $\underline{h} t j$ | $\begin{array}{r} I I I: \text { pp. } 119,121-125,127-130,133,136, \\ \quad 148 ; V: \text { pp. 135, 137, 138, } 142, \\ \\ \quad 150,153,155 ; V I, \text { Part II : p. } 93 \end{array}$ |
| no mix |  | VI, Part III: pp. 155, 160. |
| $M_{1}^{m} \neq 0$ | $N j$-sw-wstrt | $\begin{aligned} & I I: 32,34,37,38,39,41,42,45 ; \\ & I I I: \text { p. } 217 . \end{aligned}$ |
| $\int \overbrace{\pi} \Delta Q \stackrel{m}{4}]$ | Nj-siw-bsk | $I I:$ pp. 48, 53, 54. |
| $\square 8478$ | Nj-siw-Pth | $\nabla:$ pp. 162, 177. |
| $\sqrt{\infty} n^{\leftharpoonup}$ | $N j-s \dot{w}-k d$ | $I I:$ pp. 96, 98, $99 ; ~ \nabla:$ pp. 135, 138, $139,145,153,154,156,163,171$, 174, 195, 203, 205, 206, 213; VI : pp. 10, 14, 17 ; VI, Part III : pp. 47, 63. |
| $\neq 0$ | $N j s{ }^{\text {chet-nfr }}$ | $V:$ p. 152; VI, Part II: pp. 28, 29, 58, 59, 61, 64, 65, 74, 76, 79, 82-84, 87, 108, 114175 346, 447, 452, 461, 465, 470, 471. |
| $7_{\min }^{0} 0$ | $N j \dot{s} w t-n f r t$ | $\begin{aligned} & I I: \text { pp. } 87,88,90-93,95 ; V: \text { pp. } 135, \\ & \quad 139,145,149,152,153 . \end{aligned}$ |
| $\neq \prod_{0}^{0}$ | Njsiwt-nfrt nds | $I I: ~ p p .87, ~ 91, ~ 92 . ~$ |
| $\operatorname{man} L T$ | Nj-kz-nh | II : pp. 18, 23, 24. |
| $314$ | $N j-k 3-N b t j$ | VI: Part III : pp. 94, 99. |
|  | $N j-k s-h r$ | $V:$ pp. 77, 80, 128-130, 172. |
| $\begin{aligned} & \text { 圆 } 8 \varnothing \\ & \text { 요 } \end{aligned}$ | $N j-k s w-P t h$ | II : pp. 48, 53, 54. |
| $\underset{m}{0}$ | $N j-k s w-R^{\text {c }}$ | $\begin{aligned} & I I: \text { pp. } 48,53,54 ; I V: \text { pp. 106, } 128 ; \\ & V: \text { pp. 139, } 150,152,154,156, \\ & \quad 169,170,191 ; V I, \text { Part II : pp. 63, } \\ & \quad 80,108,109,133 . \end{aligned}$ |




|  | III：p．178， 179. |
| :---: | :---: |
| $N f r$ | II：pp．76， 84 ；$I I I$ ：pp．14，19， 200，202，205－209，216，217；V： pp．75－77，80，84，126，130．132， $139,141,146,148,154,156,160$ ， 169，170，191；VI，Part II： pp．87，98，108，175，277，289， 298，315， 447 ；VII ：p． 126. |
| Nfrj |  |
| Nfr－irw | $V:$ pp．257， 259. |
| $N f r$－irt－n－f | $V$ ：p． 141 ；VI，Part II：pp．29，63， 101， 121. |
| $N f r-i r t-n-\dot{s}$ | $V: \mathrm{pp} .137,148,150$. |
| $N f r$－wnt | $\begin{aligned} & I: \text { pp. 66, 68-70; V : pp. 160, 166, } \\ & \quad 172,176 . \end{aligned}$ |
| Nfr－bav－Pth | $V I: \mathrm{p} .124$. |
| $N f r-f$－$R^{-}-n \boldsymbol{h}$ | II：pp．190， 196. |
| Nfr－ms＇t | $V:$ pp．77，80，139，149，151，152，156； VI，Part II：pp． 109 ；VI，Part III ： pp．94， 98. |
| $N f r n($ ？$)$ | $V: \mathrm{pp} .141,154$. |
| Nfr－nmtt | $\begin{aligned} & V: \text { pp. } 75,83,195,197,198,200,203 ; \\ & \quad I X: \text { pp. 43, } 44 . \end{aligned}$ |
|  | III：pp．41，43， 44. |
| $N f r-h r-n-P t h$ | $I I:$ pp．190， 191 ；$V:$ pp．279，281，282； <br> VI，Part II：pp．10，67，80， 135. |
| $N f r-h$ tp | $V:$ pp．135，138，144，155，186； VI，Part II：p． 131 ；VII ：p． 55 ； $I X:$ pp．13－76． |

$I I: ~ p p .76,84 ; I I I:$ pp．14，19， 200，202，205－209，216，217；V： pp．75－77，80，84，126，130．132， $139,141,146,148,154,156,160$, 169，170，191；VI，Part II： pp． $87,98,108,175,277,289$, 298，315， 447 ；VII：p． 126.
$V:$ p． 162 ；VI，Part III ：pp．220，221， ［1～09］．
$V:$ pp．257， 259.
$V:$ p． 141 ；VI，Part II：pp．29，63， 101， 121.
$V:$ pp．137，148， 150.
$I:$ pp．66，68－70；V ：pp．160，166， 172， 176.
$V I:$ p． 124.
$I I:$ pp．190， 196.
$V:$ pp．77，80，139，149，151，152，156； VI，Part II：pp． 109 ；VI，Part III： pp．94， 98.
$V:$ pp．141， 154.
$V:$ pp．75，83，195，197，198，200，203； $I X:$ pp．43， 44.
III：pp．41，43， 44.

II：pp．190， 191 ；$V:$ pp．279，281，282； VI，Part II：pp．10，67，80， 135.
$V:$ pp．135，138，144，155， 186 ； $I X:$ pp．13－76．


| $N t r-h t p-\dot{s}$ | $I I:$ pp. 16, 23, 24, 26-28; $I I I$ : pp. 14, 16-18, 245, 251, 252; $V$ : pp. 140, 152. |
| :---: | :---: |
| Nfr-hww | $I I: \text { pp. 17, 23, } 25 ; V: \text { p. } 136 ; V I$ Part III : pp. 155, 157-160. |
| Nfr-s-rs' | $I I: ~ p p .202,204 ; V: p p .135,142$, 149, 150, 153, 155 ; VI, Part III : pp. 93, 98. |
| Nfr-s's'm | III: pp. 236, 238; IV: p. 132; $V$ : pp. 12, 77, 82, 129, 132, 135, 140, 147, 152, 156, 160, 173, 176, 177, 226, 228, 229 ; VI, Part II : pp. 14, 17, 25, 31, 65, 71, 72, 74, 79, $80-84,86,89,94,97,108,115$, 119, 133 ; VI, Part III: pp. 15, 111, 157, 159, 160, 201, 204, 205, 217, 219, 220, 221, 223, 241; VII: pp. 57, 59-63. |
| $N f r$-s's'sm-Pth | $\begin{aligned} & I: \text { pp. 105, } 113 ; V: \text { pp. 163, } 167 \text {, } \\ & \quad 177 . \end{aligned}$ |
| $N f r-s^{\prime} s^{\prime} m$ - $R^{\text {e }}$ | $V: \mathrm{pp} .163,174,178$. |
|  | VI, Part II: pp. 94, 139. |
| $N f r$ - $\dot{s} d m$ | II: pp. 190, 191. |
| $N f r-k z w-s$ | $I:$ pp. 91, 99, 100. |
| $N f r-\underline{t s}$ | II: pp. 190, 181. |
| Nfrt | $I:$ pp. 73, 75, 78, 79, 92, 93; II: pp. 16, 28, 29 ; $V:$ pp. 50, 173, 299, 301 ; VI, Part II : p. 87 ; VI, Part III: pp. 197, 199 (?), 217, 221, 222. |


| $\begin{aligned} & \text { 才 } \\ & 0 \\ & 0 \end{aligned}$ | Nfrt-izbtjt | $V:$ pp. 110, 111 ; VI, P art II: pp 365, 396, 400. |
| :---: | :---: | :---: |
| $\ddagger \infty$ ¢ | $N f r t-i w^{\prime}-\dot{s}$ | VI, Part III : pp. 39, 40. |
| $\cdots \square$ | $N n-\underline{h} f t-k s(j)$ | $\begin{aligned} V: & \text { pp. } 139,148,151,152,156 ; \\ & V I, \text { Part II: pp. } 63,68,81,95, \\ & 96,100,104,126,140 . \end{aligned}$ |
| $\operatorname{man}_{\Omega} \cap$ | $N n-\dot{s} \underline{d} r-k z(j)$ | $V: \mathrm{pp} .78,82,127,129$. |
| $\sum_{i}^{\infty} 4$ | $N h r j$ | $V: \mathrm{pp} .162,175$. |
|  | Nht-hd-s | III: pp. 168, 171, 172. |
|  | Nht-s $3-\dot{s}$ | $V:$ pp. 139, 146, 147, 151, 152, 156. |
| ${\underset{0}{x}}_{\min _{0}}^{s}$ | Nht-kaj | $\begin{aligned} & V: \text { pp. } 9,135 ; V I: \text { pp. 14, 16, 17, } 30 \\ & \quad 35,40,41,108,109 ; V I I: \text { pp. } 21, \\ & \quad 22,24,26-31 . \end{aligned}$ |
| $\bigwedge_{\min }^{\sim}$ | $N s$-mn ${ }^{\prime}$ | $\begin{aligned} & V: \text { p. } 141 ; V I, \text { Part II : pp. 67, 68, } \\ & 80,91,95,108,118 . \end{aligned}$ |
| $\pi n_{0}$ | $N s t j$ | $V:$ pp. 162, 167. |
|  | Nt-htp | $V:$ p. 70. |
| 9 | Ntr-wr | III: pp. 236, 238, 239. |
| $58110$ | $N \underline{t r-w s ' r}$ | $V:$ pp. 139, 141, 147, 152. |
|  | $N \underline{t r}-m w$ | $I V:$ p. 4. |
| 9才 | Ntr-nfr | $V:$ pp. 162, 166, 174, 175. |
| min | $N \underline{d} t$ | 1II: pp. 168, 171, 172. |
|  | $N \underline{d} t-m-p t$ | $V:$ pp. 257, 259. |


| $0$ | $R^{r}-w r$ | $I$ : pp. 1, 3, 4, 6-10, 12, 13, 15-24, 26, 27, 29-32, 34-36, 63, 66-68, $73,78,80,86,89,105 ; ~ I I:$ 74, 113, 141 ; $I V:$ p. 1; $V$ : pp. 4, $10,12,14,17,31,41,48,49$, 135, 138-140, 144, 151, 156, 226, 229, 293, 295, 296; VI, Part II: pp. 14, 17, 18, 35, 39, 74, 90, 105, 224, 225; VI, Part III : pp. 163, 167. |
| :---: | :---: | :---: |
| $\leftrightarrow 4$ | $R^{\text {e }}$-wr $n j$ | I: p. 67. |
| $\bigcirc$ | $R^{\text {e-wrwj }}$ | II : pp. 15, 26, 29. |
| $\infty$ | $R^{\text {c-mrrj-Pth }}$ | VI, Part II: pp. 49, 63, 64, 66, 68, 70. |
| ○际 | $R^{\text {e }}$-nd- $f$ | VI, Part III: pp. 44, 60, 62, 63. |
| $\bigcirc$ Spl | $R^{*}-\underline{h} 2 j$ | II: pp. 190, 191. |
| $0 \text { (e⿻ }$ | $R^{\text {e }}-7 r-k z(j)$ | IX: p. 64. |
| $0 \frac{0}{0}$ | $R$--htp | $V:$ pp. 74, 83, 85, 135, 145, 169, 203, 205, 206; VI, Part II: pp. 23, 26, 76-78, 175, 272, 388 ; VII : pp. 81, 83. |
| $\infty \cdot M$ | $R^{2}-\underline{h w j}$ | II: pp. 179, 186, 187. |
| $0^{0} 0$ | $R^{e}-\underline{h w}-f$ | $\begin{aligned} & V: \text { pp. } 46,75,80,83,129,130 ; V I I: \\ & \quad \text { pp. } 95,97,98 . \end{aligned}$ |
|  | $R w d$-s'sw-s' | $\begin{aligned} & I: \text { pp. } 105,109,111,112 ; V: \text { pp. } 135 \text {, } \\ & 154 . \end{aligned}$ |
| $\vec{\forall} \underset{u}{\longrightarrow}$ | $R w \underline{d}-k_{2}(j)$ | $V$ : pp. 135, 146, 153 ; VI, Part III: $\text { pp. } 125,\left[\begin{array}{ll} \Omega & \circlearrowleft \end{array}\right], 127,128 .$ |
| 08 H | $R w \underline{d}-k s(j)-n d s$ | VI, Part III: pp. 127, 129, 130. |


| $\cdots 0 \mathrm{SHL}$ | $R m n w-k \mathbf{z}(j)$ | $I I:$ pp. 169-178; V:7, 8, 11, 135, 155 <br> VI, Part III: pp. 242, 244, 245 |
| :---: | :---: | :---: |
| $\left\{\begin{array}{l}0 \\ 0\end{array}\right.$ | Rnpt-f | $V:$ pp. 226, 228. |
| $\left\{\int_{0}^{\infty}\right.$ | Rnpt-nfr | $\begin{aligned} & I I I: \text { pp. } 160,162,169 ; V I: \text { pp. } \\ & 75,83 . \end{aligned}$ |
|  | Rhij | $V: \mathrm{pp} .163,175$. |
| $\infty \infty$ | Rhjt-R ${ }^{\text {c }}$ | $\begin{aligned} V: & \text { pp. } 60,74,81,83,84,125,133 ; \\ & V I, \text { Part II : pp. 20, 28, 30, } 93, \\ & 95 ; V I, \text { Part III : pp. 1, } 5-8,19, \\ & 21,22,26,241-245 . \end{aligned}$ |
| $\rho_{0}$ | Rtj (or $\stackrel{\rightharpoonup}{I}_{2 r t j} \mathbf{w j}$ ? $)$ | $V: \mathrm{pp} .162,177$. |
| $\underset{ \pm}{*}$ | Rtst | $I V: \mathrm{pp} .105,111$. |
| $\text { 迕 } 8<1 \mathrm{~mm}$ | Rdj-nj-pth | $V: \mathrm{pp} .225,229$. |
| ■ $\boldsymbol{h}$ |  |  |
| [J] | Hbtj | $I I: p p .34,38,43$. |
| $\stackrel{\square}{\infty}$ | Hrw-nfr | Part III: pp. 44, 61. |
| 的 | $H t j$ | $\begin{aligned} & V: \text { pp. } 77,80,82,103,104,127,129, \\ & \quad 131,133 . \end{aligned}$ |
| \& $\boldsymbol{h}$ |  |  |
| 808 | $H_{2-8}{ }^{-3}$ | I: p. 27. |
| 910 | $\underline{H}$ st-nfr | VI, Part III : pp. 133, 136-139. |


| $\Rightarrow<\frac{\square}{4}$ | $\underline{H} s t-r-k s w$ | III: pp. 98, 103, 105. |
| :---: | :---: | :---: |
| 844 | $\underline{H} j 0$ | $I I:$ pp. 34, 38, 39. |
| 8444 | $H_{i} \mathbf{i j}$ | $I I:$ pp. 88, 91, 93. |
| $4 \sim 860$ |  | $V I$, Part II: pp. 81, 100, 146. |
| $(\mathrm{O} 44) \rightarrow \square \cap \mathrm{Eln}$ | $\underline{H} b-\dot{s} d-P p j$ | $V: \mathrm{pp} .161,171,173,177$. |
| $(\overline{0 .}) / \cap \leftrightharpoons \square$ | $\underline{H} b-\dot{s} d-N f r-k z-R^{e}$ | $\begin{aligned} & V: \text { pp. } 162,175 ; V I, \text { Part II : pp. } 69, \\ & 150 . \end{aligned}$ |
| $8 \text { 異 } 4$ | $H p j$ | $V: \mathrm{pp} .162,173,175$. |
| $\sqrt{\sqrt{ }{ }^{(1)}} 0$ | $H p(t ?)-k 3(j)$ | $I I:$ pp. 17, 23. |
| d18 | Hm-İwnwj | $\begin{aligned} V: & \text { pp. } 160,166,172,173,176 ; V I, \\ & \text { Part II: pp. } 7,11,18-20,24,27, \\ & 32,39,71,72,108 ; V I I: \text { p. } 127 . \end{aligned}$ |
| $\& O \min _{\min }$ | Hmw | $\begin{aligned} V: & \text { p. } 135 ; V I, \text { Part II : pp. } 68,131 ; \\ & V I, \text { Part III: pp. } 81,83,84,86, \\ & 87,89,94,96,97,102,110 . \end{aligned}$ |
| \% $\square^{4}$ | $\underline{H m w-k 3}$ | $I: ~ p p .73,74,76,78,80$. |
| ${ }^{-100}$ | $H m-M n w$ | $V:$ pp. 140, 147, 157. |
| $\infty$ | $\underline{H m t}$ - ${ }^{\text {e }}$ | $\begin{aligned} & V: \text { pp. } 16,17,60,61,135,162,173, \\ & \quad 177 ; V I, \text { Part III : pp. 33, } 36, \\ & \quad 43,47,48,53,55,56,57,59-65, \\ & \\ & \quad 67,245 . \end{aligned}$ |
| $80 \overbrace{}^{2}$ | Henw-nds | $I I:$ pp. 87, 91-93. |
| $80 \cap 18$ | H?nwt-siw | $V:$ pp. 203, 205. |
| $80_{0}^{\mathrm{mmm}}$ | Hnwt-s'n | $\begin{aligned} I I: & \text { pp. } 96,98,99 ; V: \text { pp. } 238,240, \\ & 243 ; V I, \text { Part III : p. } 178 . \end{aligned}$ |


| 8 Vo | Hnnw | $V:$ p． 162. |
| :---: | :---: | :---: |
| $8 \text { § мим }$ | Hnnt | $V:$ p． 162 ；VI ：pp．81，86，104， 141. |
| $\stackrel{\text { 虫 }}{\square}$ | $H r j-m r w$ | $V: p p .164,173$. |
| $90_{0}^{\infty}$ | $H r-n f r t$ | $I:$ pp．73， 80. |
| $8<8$ | $H r-h h^{2}-f$ | $I V:$ pp．104，111， 112. |
| $\infty$ | $\underline{H r-k 3-R}$ | $V:$ pp．162，171，174， 175. |
| AN | $H \cdot r-k 3 w-N b t j$ | $V I: p p .80,134$. |
| $88-4$ | $\underline{H s j}$ | $I I I:$ pp．2，5，247－250；IV ：p．73； $V:$ pp．68，69，71－74，102，135， 153，155，166，168，169，200；VI， Part III：pp．5，6，17，41－43， 48. |
| $8 \longdiv { 8 4 4 }$ | $\underline{H} s j j$ | $\begin{aligned} & V: \text { p. 163; VI, Part III: pp. 96, 98, } \\ & \quad[8] 49] . \end{aligned}$ |
| $\text { n } 81$ | $H s j-H \underline{H} / \underline{r}$ | $V:$ pp．225， 229. |
| $88 \cdots 4$ | $\underline{H s s j}$ | $V:$ pp．162，177；VI，Part III： pp．96， 98. |
| $\therefore \overbrace{\pi} 88_{0}^{-\cdots}$ | Hst－3htj | $V I$, Part III：pp．147，150， 151. |
| \％ mm | $\underline{H k n}$ | $I I:$ pp．16，28， 29. |
| $\operatorname{Kin}_{8} 8 \underset{\sim}{\infty}$ | $\underline{H k n j-\underline{H} n m w ~}$ | $V:$ pp．60， 61 ；VII ：pp．49， 5052. |
| $8 \underset{0}{8}$ | Hknw | $I:$ pp．102， $103 ; I V:$ pp．105， 109. |
| $\stackrel{0}{0 \text { 畄 }}$ | Hetp | $I I:$ pp．32，38， 41 ；V ：p． 62. |
| $\therefore 4 \text { 色 }$ | $\underline{H t p j}$ | $\begin{aligned} V: & \text { pp. } 14,62,63,135,138 ; V I, \\ & \text { Part II: p. } 136 ; V I I: \text { pp. } 101, \\ & 103-105 . \end{aligned}$ |


| $\stackrel{\text { O }}{\square}$ | $H t p-n b(j)$ | $\nabla: \mathrm{pp} .162,166$. |
| :---: | :---: | :---: |
| $\underset{0}{a}$ | $\underline{H} t p-n f r t$ | II：pp．16， 28. |
| $\infty$ | $\underline{H} t p-h r-s$ | $I:$ pp．3，8，9，29，97，99， $100 ; I I$ ： pp．16，28，208－210；IV ：pp．3， 5－7，11，13，22；V：pp．59， 82，129，135，142，149，150，151， 171 ；VI，Part II ：pp．5，19，21， $23,24,26-28,34,37,39,43$ ， 78 ；VII，Part III：pp．43，57； VII：pp．21， 24. |
| 品 | $H t h r-w r$ | $I: \mathrm{pp} .105,116,117$. |
| $n 0_{0}^{2 x}$ | Hthr $r$－nfr | II：pp．16，26， 27. |
| $9 A \circ 80$ |  | $\begin{aligned} & I V: \text { pp. 104, } 117 ; V: \text { pp. } 140,141, \\ & 145,154,157 . \end{aligned}$ |
| －H |  |  |
| qum No No | $\underline{H}^{2}$－hnmt | $V: \text { pp. } 79,82,130,131$ |
| 圆8日 | $\underline{H}^{e}-b z w-P t h$ | $V:$ pp．140，152，154， 156. |
| $\stackrel{\pi}{\infty}$ | $\underline{H}-b s w-S k r$ | $V:$ pp．73，74，97，98，102，103，127， 168， 169 ；VI，Part II ：pp．3，5，22， $23,28,33,44-46,48,51,74,76$ ， $99,201,245,346,365,372,378$ ， $388,396,400,411,416,426,432$ ， 441，442，445，458，462， 465. |
| $\text { 曷 } 88 \underset{\square}{\circ}$ | $\underline{H}-m r r w-P t h$ | $\begin{aligned} V: & \text { pp. } 140,146,151,156 ; V I, \\ & \text { Part II : pp. 63, } 95,134 . \end{aligned}$ |
| $3 \times 8$ | $\underline{H}^{-}-m r r w-N b t j$ | $\begin{array}{r} I I: \text { pp. } 8,10 ; I I I: \text { p. } 31 ; I V: \text { pp. } 5, \\ \\ 10 ; V I I: \text { pp. } 13,17 ; I X: \text { p. } 64 . \end{array}$ |
| $8$ | $\underline{H}^{+}-f-M n w$ |  |


| $\left(0 a^{x}\right) f_{0}^{m m}$ | $H^{e}-f-R^{e}-n \underline{n}$ | $\begin{aligned} & V: \text { pp. } 77,80,82,128,132,169,171 ; \\ & \\ & V I, \text { Part II: pp. } 81,106 . \end{aligned}$ |
| :---: | :---: | :---: |
| - 34 | ${ }_{-}{ }_{\text {wj }}$ | $I I:$ pp. 87, 91, 92 ; V : p. 153. |
|  | $\underline{H} w-n-P t h$ | $\begin{aligned} & I I: \text { pp. } 65,69 ; V I: \text { pp. } 80,95,103, \\ & \quad 135 ; V I I: \text { p. } 1 . \end{aligned}$ |
|  | $\underline{H} w-w j-P t h$ | $\begin{aligned} & V I: \text { Part II: pp. 64, 66, 80, 94, 95, } \\ & \quad 101,102,104,117 . \end{aligned}$ |
| 号 $8^{8} 8$ | Hwj-nj-Pth (?) | $V: \mathrm{pp} .75,135$; VII: pp. 35, 38-40, 43. |
| - 1 | $\underline{H} w-n j-s^{\prime} w$ | $V: \mathrm{pp} .78,79-80$. |
| $\left.\left(0 x_{0}\right)\right]_{0}^{0}$ | $\underline{H} w f w-n f r t$ | $V:$ p. 164. |
| (0) $0^{3}$ ) ${ }^{3} \times 97$ | Hufu-mr-ntrw | $V: \mathrm{pp} .79,81,130$. |
| $\left.\left(00_{0}\right)\right)_{\infty}^{a}$ | $\underline{H} w f w-\underline{h}-f$ | $V:$ pp. 77, 88, 127, 133 ; VI, Part II: pp. 64, 66, 67, 70, 81, 87, 90, 108, 112, 115, 278, 309. |
| (0) 0 ¢ ${ }^{\text {a }}$ | $\underline{H} w f(w)-m r$ | $\begin{aligned} V: & \text { pp. } 78,82,127,129,130,171 ; \\ & V I, \text { Part II: p. } 71 . \end{aligned}$ |
| - ${ }^{\circ} \mathrm{O}$ | $\underline{H}$ w | III: pp. 31, 41, 43-47; $V$ : pp. 7, 135; <br> VI, Part II: pp. 14, 17, 93, 94. |
| ${ }_{\operatorname{mn}}^{0} \sigma$ | $\underline{H} n w$ | $I:$ pp. 105, 113 ; $I I:$ pp. 159, 161-167 <br> $I I I: ~ p p .53,60 ; V:$ pp. 77, 82, <br> 128, 143, 153, 155; VI, Part II : <br> pp. 84, 89, 93, 95, 98, 131; VI, <br> Part III: pp. 127, 129, 130. |
| $\begin{array}{cc} 0 \quad 0 \\ \operatorname{mn} & 0 \end{array}$ | Hnwt | $I I:$ pp. 33, 36, 208-210, 212, 214; <br> III: pp. 29, 31, 33, 166, 171 (?); <br> VI, Part III : pp. 127, 129, 130, <br> 137 ; VII: pp. 35, 39, 40. |
| 荋 | Hnt | $I I:$ pp. 88, 91, $93 ; V:$ p. 135 ; VI, <br>  |


| $\min _{0}^{\circ} 4$ | $\underline{H} n t j$ | $V: \mathrm{p} .183$. |
| :---: | :---: | :---: |
| 叫枵 | $\underline{H} n t-k: w-s$ | $V:$ pp．1－10，12－14，16，17，24，26， $35,46,51,54,57,58,60,64,65,69$ ， 93－95，106， 162 ；$V$ ：pp．8，14， $29,31,59,63,74,76,84,85,125$ ， 129，133，140，154，156，225， 229 ； VI，Part II：pp．36，77，78，110， 111；VI，Part III ：pp．43，57， 59. |
|  | $\underline{H} t-R^{\text {r }}$ | $I X: \mathrm{p} .53$. |
| － | $\underline{H} n t j t-k 3$ | II ：pp．17， 23. |
| $\pm \underline{\boldsymbol{h}}$ |  |  |
| $\because M$ | $\underline{H} r \underline{-t m} 2 t$ | $V: \mathrm{pp} .135,142,152$ ；$I X:$ pp．75， 76. |
| 0 mmm | $\underline{H} n m w$ | $V:$ pp．141， 154. |
| $0{ }_{0}^{\text {ma }} 9$ | $\underline{H} n m w{ }^{-} n \underline{h}$ | VI，Part II ：pp．68，81，99，103， 147. |
|  | $\underline{H} n m w-b_{2}-f$ | $I V:$ p． $31 ; V:$ pp．10，35，44，59，60， 74,83 ；VI，Part II ：pp．9，12，13， $16,20,24,27,32,39,40-43$ ； VII：pp．1，7，9，10， 11. |
| cidy | $\underline{H} n m w-h s-f$ | $I:$ pp．105， 113. |
| 6㫛易 | $\underline{H} n m w-h t p$ | III：pp．41，43，44；V：pp．162， 169，174， 175 ；VI，Part II： pp．65，72，80，120， 310. |
| 6边 | $\underline{H} n m(w) t$ | $V:$ pp．162，173， 175. |
| $\left.g_{n}\right]$ | $\underline{H} n m w-d f_{3}$ | $\begin{aligned} & I I: \text { pp. 47, } 52-54,62,64 ; V: \text { pp. } 153, \\ & \quad 155 . \end{aligned}$ |


| $\boldsymbol{s} \rightarrow$ |  |  |
| :---: | :---: | :---: |
| $(8 a \times)]_{x}^{2}$ | $S_{2-f}-H_{-}{ }^{e}-f-R^{e}$ | IV：pp．104，111， 112. |
| $3 \times 44$ | $S_{3}$－mrij | VI，Part III：pp．44， 62. |
| $\text { 务 } 4 \underset{m}{\omega} 44$ | Stt－imnij | IX：p． 38. |
| $\xi_{5}^{\circ}(004) 1 \mathrm{~A} \mathrm{~mm}$ | S $3 t-i n-T t j$ | VI，Part II：pp．33，72，80，86，89， 92，93，96，103， 148. |
| $\text { 务 } 44$ | Sst－mrij | VI，Part III ：pp．127，129， 130. |
| 0 | $S 3 t-m r j t$ | $V:$ pp．279，281－283． |
| Fsome | S3－hnt | $V: \mathrm{pp} .80,127$. |
| Bepomm | $S_{3 t}$－s＇n | $V: \mathrm{pp} .163,173,177$. |
| 可い | Stt－kz | II ：pp．17，23， 24. |
| $B+$ | Suf | $V$ ：pp．135，257， 259 ；VI，Part III： <br> p． 245. |
| $s=\frac{0}{0 \text { 圆 }}$ | $S b k-h t p$ | $I I I:$ pp．93，95，96，245，251， 252. |
| $\begin{aligned} & 50 \\ & \times 0 \end{aligned}$ | Smdtt | $I I:$ pp．96，98， 99. |
| $\rightarrow \rightarrow \text { 禺 }$ | Sš－sst | VI，Part III ：pp．147，149， 152. |
| $\dot{B} \stackrel{0}{\infty}$ | Skr－htp | $\begin{aligned} & I I: \text { pp. } 18,23,24 ; V: \text { pp. } 140,154, \\ & \quad 157 . \end{aligned}$ |
| $\cdots 4$ | Stj | $I I:$ pp．96，97， 100. |
|  | St $w$ | $\begin{gathered} V: \text { pp. 78, 79, 80; VI, Part II: } \\ \text { pp. } 58,60,63-65,114,248 . \end{gathered}$ |


| 18 fl | $\dot{S}_{\text {S }}$ bw | $\begin{aligned} & V: \text { pp. 163, } 166 ; \text { VI, Part II: 80, } \\ & 81,92,93,141 . \end{aligned}$ |
| :---: | :---: | :---: |
| form | $\dot{S}_{2} b-f$ | $\nabla:$ p. 73. |
| $0 \times 1$ | $\dot{S}_{\text {S }}{ }^{3}{ }^{\prime}$ | VI, Part III : p. 221. |
| 1为 |  | III: pp. 219, 223. |
|  | S'n $n$-w $w(j)$-Pth | $V:$ pp. 225, 229. |
|  | $\dot{S}$ 'nh-Pth | $\begin{aligned} & I I: \text { p. } 107 \text {; VI, Part II: pp. 68, 103, } \\ & \text { 139. } \end{aligned}$ |
| p¢ぃ | $\dot{S} \underline{n} \underline{l-k z}(j)$ | II: p. $137 ; V:$ p. 53. |
| - ¢f | $S^{\prime} n \underline{l}-k_{2}-R^{\text {c }}$ | $V$ : p. 53. |
|  | $\dot{S}^{\prime} n \underline{h}$ | $\begin{aligned} & I I: \text { pp. } 15,25 ; I I I: \text { pp. 169, 172, } \\ & 173 . \end{aligned}$ |
|  | $\dot{S} b_{2} k w$ | $\begin{aligned} & \text { VI, Part II: pp. 68, 69, 101, 103, } \\ & \text { 104, 146, 152. } \end{aligned}$ |
|  | $\dot{S} b k j j$ | VI, Part II: pp. 69, 151. |
| $1 J \bigcirc 44844$ | $\dot{S}$ Skji-bjj | VI, Part II: pp. 101, 148. |
| $1 S m f$ | Stmz- $n$ bl | $\begin{aligned} & V: \text { p. } 136 ; \text { VI, Part III: pp. } 163, \\ & 165,166,169 . \end{aligned}$ |
| 190 | $\stackrel{S}{\text { S }}$ mr-Kı $(j)$ | IV : pp. 127, 137, 138. |
| $t \operatorname{man} 4$ | $\dot{S} n j$ | $\begin{aligned} & V: \text { pp. 165, 171; VI, Part II: pp. 62, } \\ & \quad 68,90,101,143 . \end{aligned}$ |
| $\bigcirc \mathrm{mmn}$ ¢ | $\dot{S} n b$ | $\begin{aligned} & V: \text { pp. 164, 167, 175, 176, } 178 ; \\ & \\ & V I, \text { Part II : pp. 41, 155. } \end{aligned}$ |
| $\rho_{d}^{m m}$ | $\dot{S} n$ bwj-kzj | $V:$ p. 136; VI, Part III : pp. 43, 53, 56, $61,62,67,\left[\rho_{\downarrow}^{m} \rightarrow\right], 69$. |
| $\left(\prod_{0}^{*} \infty \beta_{0}=\right.$ | Śnfrw-htp | $V: \mathrm{pp} .79,82,129,130,132,133$. |


| $\left.\left(\prod_{0}^{1} \infty \hat{n}\right)\right]_{\infty}^{\infty}$ | $\dot{S} n f r w-h{ }^{\text {che }}-f$ | $V:$ p． $79 . \quad$ ： |
| :---: | :---: | :---: |
| $d \operatorname{mim}_{0} S$ | $\dot{S} n-n w$ | $V:$ pp．140， 151 ；$I X:$ p． 64. |
| $\operatorname{mim}_{0} f$ | Śnnw－$n h$ | $\begin{aligned} & I I: \text { pp. } 169,172 ; V: \text { pp. } 140,153, \\ & 154,156 . \end{aligned}$ |
| $d x \infty 4$ | ŚSn－mrrj | III：pp．115， 117. |
| to | $\stackrel{\text { S }}{ }$ nt | VI，Part II，pp．89，96，103， 144. |
|  | ŚSntj（or）ŚSnit | $V: \operatorname{pp} .163,165(?), 169,175,177,178$. |
|  | $\dot{S} n d m-i b$ | $\begin{gathered} I V: \text { p. } 5 ; V: \text { pp. } 140[\text { 竍 } \\ 147 ; V I, \text { Part II: p. } 105 . \end{gathered}$ |
| $\mathrm{P}$ | $\dot{S}$ Shtpw | $V:$ pp．140， 146. |
| $18 \mathrm{sim}$ | $\dot{S} h f n r$ | $V:$ pp． $72,80,86,92,93,97,98,168$, 169， 171 ；VI，Part II ：pp．28，45， 51，102，202，203，292，317，365， $368,372,388,389,400$. |
| $8 \cap A \circ O$ | S＇hm－$n$ h－Pth | $I I:$ pp．32－34，36－38，40－44；V： pp．136，138，140，143，145，146， $149,151,153,155,156 ; V I$ ， Part II：pp．14，17，29，95， 128. |
| 包88共 | S＇hm－Pth | III：pp．166，170， 171. |
| $\infty \text { 会 } 19(?)$ | $\dot{S} h 6 m(?)-R^{c}$ | I：p． 67. |
| $8_{0}^{0} \underset{0}{0}$ | $\dot{S} \underline{l} h m t-h t p$ | $I X:$ p． 38. |
| $\text { 18Q 是 } 4$ | $\dot{S} h m-k 3(j)$ | $V:$ pp．75， 157 ；VI，Part II：pp．24， $72,94,104,109,125$ ；VI，Part III：pp．143，145， 241. |
| $\sin$ |  | $\begin{gathered} I V: \text { pp. } 72,73,103,104,106-108, \\ 111,112,114-118,185,187 ; V: \\ \quad \text { pp. } 60,74,76,80,84,200 \\ \\ V I, \text { Part II: pp. } 9,42,108 . \end{gathered}$ |

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\begin{aligned}
& \text { 嘈。需 } \\
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| $\dot{S}$ Shnt2 | II：pp．190， 191. |
| :---: | :---: |
| $\dot{S} h \underline{n t-k s-H r}$ | IV：pp．197，198，199， 203. |
| $\dot{S}_{s}^{s} s t-h t p$ | $V:$ pp．77，80，82，128，131，133，145， VI，Part II ：pp．27－29，61，63，65， 71，72，79，82－84，90，97， 108. 114，176，445，447，452，458，470， 471. |
| $\dot{S} S_{s}^{\prime} m$ | VI，Part III：p． 16. |
| $\dot{S}^{\prime} s^{\prime} m w$ | III：pp．78，80，81，83，115， 117 $V:$ pp．136，140，144，153， 155 ； VI，Part II ：pp．14，20，30，40－44． |
| $\dot{S}{ }^{\prime} m-n f r-\frac{1}{W} w f w$ | $V:$ pp．78，128， 129. |
| $\dot{S}$ St－wrt | $V:$ p． 163. |
| $\dot{S} d$－hhtp | $\begin{aligned} & I I I: \text { pp. } 98,108,110,117 ; V: \text { pp. } 136, \\ & \quad 142,152 . \end{aligned}$ |
| $\underline{S} d \underline{\sim}$ | $V:$ pp．162，167， 173. |

区
$\check{S}^{2} j j$

$V:$ p． $165 ; V I$, Part II：pp．149， 328.
$V:$ p． 183.
$V:$ pp．140，164，166， 171.
III：p． 178.
$I I I:$ pp．93，95，96， $98 ; V:$ pp．136， 153， 155.


| Šps＇ś－Pth | $\begin{aligned} & I I: \text { pp. } 7-11,32,38,42,170,177,178 ; \\ & V: \text { pp. } 139,141,142,148,152, \\ & 157 ; V I, \text { Part II : pp. } 16,72,81 \\ & 103,143 ; V I, \text { Part III : pp. } 94 \\ & 98,127,129,130 . \end{aligned}$ |
| :---: | :---: |
|  | VI，Part III ：pp．39， 40. |
| $\check{S} p p s{ }^{\prime}-R^{\text {c }}$ nd ${ }^{\text {c }}$ | $V I, ~ P a r t ~ I I I ~: ~ p p . ~ 43, ~ 57, ~ 59, ~ 61, ~ 62 . ~ \$$ |
| $\check{S} p s \dot{s}$ Hthr | $I X:$ pp．49，51， 64. |
|  | $V:$ p． 126 ；VI，Part III ：p． 23. |
| $\check{S} p s{ }_{s} \dot{s}-k w$ | $V I$, Part III ：pp．43，57， 59. |
|  | $I:$ p． $27 ; I I$, pp．15，17，20，23，25－29， 81－84；$V$ ：pp．136，143，144， 155，VI，Part II ：pp．14，17，71， 88，93，98，105， $109 ; V 1$, Part III ： pp，44，56，59，81，83，87， 88. |
|  | $I I:$ pp．17， $22 ; V, \mathrm{pp} .136,150$. |
| $\check{S} p s{ }^{\prime}-d d$ | II ：pp．190， 193. |
| $\dot{S} p \dot{s} t-k 3 w$ | $I V: \mathrm{pp} .126,144$. |
| $\check{S} m 3 t$ | $V: \text { p. } 165 ; V I, \text { Part II: }\left[\begin{array}{ll} \square & 4 \end{array}\right] \text {, }$ $143 .$ |
| $\check{S} n s{ }^{\circ} \mathrm{j}$ | VI，Part III ：pp．44， 62. |
| $\check{S} r j j$ | $V:$ pp．78，80，82，128，131；VI， Part III ：pp． 44 ［ 4 4］， 56. |
| Šs ${ }^{\text {c }}$ j | $\begin{gathered} V: \text { pp. } 78,82,128,129,163,173, \\ V I, \text { Part III : p. 181. } \end{gathered}$ |
| $\check{S} d-\stackrel{\imath}{\text { b }}$ d $d$ | $V:$ pp．163，167，171，175， 177. |
| $\check{S} d w$. | $V I$, Part II ：pp．60，63，67，81， 129. |




$|$| $K z-p w(?)$ |
| :--- |
| $K a j-p w-P t h$ |
| $K a(j)-p w-R^{c}$ |
| $K a(j)-m-n \underline{h}$ |
| $K a(j)-m-n f r t$ |

$K z j-m-R^{e}$
$K_{2-m}(?)-r h w w$
$K a j-m-h a t$
$K: j-m-h m t$
$K a j-m-s \dot{s} n w$
$K z(j)-m-\dot{s} t$
$K(j)-m-k d$
$K 2(j)-m-\underline{t} n t$
$K 2(j)-m n j$
$K_{2}-n j-n j s{ }^{2} w t$

II: pp. 190, 191.
VI, Part II: p. 142.
$V:$ pp. 140, 150, 154, 156; VI, Part II : pp. 102, 128.
$V:$ pp. 164, 174 ; VI, Part II: pp. 74, 86, 93, 103, 140, 155.
$I I:$ pp. 104, 107-112, 118, 123-125, 129, 130, 134, 139, 151 ; $V$ : pp. 75, 80, 81, 84, 126, 129, 131, $132,136,137,140,146,149,152$; 156, 169, 170, 171 ; VI, Part II: pp. 64, 66, 70, 80, 81, 93, 94, 95, 97, 101, 102, 104, 108, 116; VI, Part III: pp. 1, 8, 19, 21, 22, 24-26; 244, $I X$ : p. 84.
VI, Part II: pp. 60, 67, 102, 130.
II: pp. 88, 90, 91.
$I I:$ pp. 17, 23, 24.
$I V:$ pp. 57, 60, 62.
$V:$ pp. 140, 146, 156, 169; VI, Part II: 62, 81, 142.
$V:$ p. 163.
$V: p .140$.
$V:$ pp. 163, 167, 174.
III: pp. 76, 98, 100, 101-105; V: $140,150$.
$V:$ pp. 78, 82, 129, 133, 145; VI, Part II: 71, 72, 79, 80, 84, 86, $89,94,97,108,115,118,302$, 445, 465, 474.

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\begin{aligned}
& \text { - } \square_{1}^{6} \\
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& \text { ulv } \\
& \text { 4) } \\
& \text { Thi } \\
& 1 \therefore-\therefore \\
& \text { (uul) }{ }^{-\cdots}
\end{aligned}
$$

$K_{z}-n b-f$
$K_{z}-n f r$
$K_{3}-r \dot{s} j$
$K_{3}-h j-f$
$K_{3} j-h p$
$K_{2}(j)-h r-s t-f$
$K a(j)-k r-n j \dot{s} w t$
$K_{3}-k j j^{-n} n \underline{h}$
$K_{3 j-g m-n j}$
$K_{3 j}{ }^{-t p j}$
$K_{3} j-\frac{-s}{} w$
$K_{3}-d w_{3}$
$K$－$d b \not b n j$
$K z w$
$K a w-n j \dot{s} w t$
$K z w-h 2-s$
$V:$ p． 316.
$I:$ pp．73，78，83；$V:$ pp．77，82， 132.
II：pp．18，23，24， 25.
$V:$ pp．140，162，166， 173 ；VI， Part III：pp．91，96，142， 365.
$I I:$ pp．47，55， 56 ［var． 8 昏司］； $V:$ p． 141.
$V:$ pp．3，50，136，138，151；VI， Part III：pp．73，75－78；IX： pp．71， 72.
$I I:$ pp．65， 67 ；$V$ ：pp．136，138，152， 153， 156 ；VI，Part II：p． 10.
$I V:$ p． $83 ; V:$ pp．84，136，187，201， 213 ；VI，Part II：pp．62，63，68， 72，89，94，103，104，108，109， 124；VI，Part III ：pp．24，25，111， 116，197，199，240， 244.
VI，Part II：pp．81，89，90，96，98， 99，101－103，136，175， 416.
$V:$ pp．77，82， 132.
$I I: ~ p p .190,191$.
III：pp．245，249， 250 ；$V$ ：pp． 136. 138，156，171， 201 ；VI，Part II： pp．20，65，70，84，86，89，91， 93，97，98，105，108，109， 129 ； VI，Part III ：pp．93，94，96，97， 98，100－106，242，244，245， 246.
$V:$ pp．136，150，155，203，213，215－ 218， 223 ；VI，Part II ：pp．84， 90.
$V:$ pp．78， 82.
$I I:$ pp．72，75，80－83，85， $86 ; V$ ：pp．45， 136， 145 ；VI，Part II：pp．33， 94.
$I I$ ：pp．17， 23.

## $4 . g$



| $G m: n h$ | $V: \mathrm{pp} .163,177$. |
| :---: | :---: |
| $G m-n-s^{\prime}-n h$ | $V: \mathrm{pp} .163,167$. |
| $G m-n-s^{\prime} s r \text { (or } G m-n-$ $\dot{s}(j)$ | $V:$ p. 89. |
| Ggj | $V: \mathrm{pp} .163,167,174-177$. |



## $\therefore 4$

$T t j$
$V:$ p. 317.
$V:$ pp. 140, 151, 155, 157.
V : pp. 136-138, 151, 189, 261, 263267, 269, facing page 269, 270, facing page 271, 271, 272, facing page 272, 273, 274, 284; VI, Part II : pp. 49, 70, 72, 95, 96, 104-106, 122, 124.
$V:$ pp. 160, 163, 165, 173, 184, 185, $V I$, Part IIl: p. 110; VI, Part III: pp. 15, 213, 215.
$\Longrightarrow t$
$=44$
$=4$
$=34$
$=40$

| $\underline{T} j$ | $V:$ pp. 140, 147, 152, 154, 157; VI: <br> Part II ; pp. 89, 94, 103, 105, 123, 127, 366. |
| :---: | :---: |
| $\underline{T} f w$ | $V:$ pp. 46, 163. |
| $\underline{T} n t j$ | $I I:$ pp. 34, 38, 39, 96, 101 ; $V$; pp. 77, 82; VI, Part II : p. 18; VII; pp. 73, 76-78. |



$$
\propto d
$$

| $\underline{T} n t t j$ or $\underline{T} n t j t$ | II: pp. 34, 38, 39. |
| :---: | :---: |
| $\underline{T} r$ r $w$ | III: pp. 23, $26 ; V:$ pp. 76, 126. |
| $\underline{T} s t$ | $I I:$ pp. 65, $68 ; I I I:$ pp. 93, 95, 96 $V:$ pp. 163, 173, 174, 177, 226 228, 229. |
| $\underline{T} s t j$ | $\begin{aligned} & I I I: \text { pp. 132, 148, 150-156; V: pp. 76, } \\ & \quad 83, \quad 124,120,131,132,169 ; \\ & \quad V I, \text { Part II: p. 11. } \end{aligned}$ |
| $\underline{T} t j$ | $V:$ pp. 163, 174. |
| $\underline{T} t w$ | $V:$ p. 163. |
| $\underline{T}$ twt | III: pp. 78, 81-83. |
| $\underline{T} t$ j | $I I:$ pp. 47, 54-56; V : pp. 153, 155. |
| $\underline{T} t w t$ | $V: \mathrm{pp} .136,144,153,156$. |
| $\underline{T}$ ti | $V: \mathrm{pp} .78,80,82,128$. |
| $\underline{T}$ tw | $V: \mathrm{pp} .163,174,175$. |


| $D 2 g$ or $D_{g} z^{2}$ | $\begin{aligned} I I: & \text { pp. 46, } 50,54-60,62,64,67 ; \\ & V: \text { pp. 136, 149, 153, } 155 . \end{aligned}$ |
| :---: | :---: |
| $D w_{3}$ - $R^{\text {e }}$ | III: pp. 245, 249, 250; V: pp. 78, 82, 136, 149, 153, 155, 156 ; $I X$ : pp. 59, 61, 62. |
| $D w s w-\underline{h w}(j)-f$ | IX: p. 55 |


| $\Leftrightarrow 8 \mathrm{~mm}$ | Dbhnj | VI：pp．69－71，73－76，78，84，152， 159－167，170，174，177，180，182， 187 ；$V$ ：pp．63，64，75－77，83， 188 ；VI，Part II：pp．31，49， 61－64，66，82，94，97，101，102，104， 106，108，109，111，112，116，159， 175，241，245，250，256，287， 338 ； VII：p． 14. |
| :---: | :---: | :---: |
| $\subseteq \int 30$ | Dbt | $V: \mathrm{pp} .78,128$. |
| $x_{x} 94$ | Dfd $j$ | $V I$, Part II：pp．68，90，95， 130. |
| $\triangle$ 盛 $\triangle$ | Dmg | $V: \mathrm{p} .164$. |
| $\infty \sin$ | Dmd | $V: \mathrm{pp} .141,152,156$. |
| 唯名而 | Dr－sts $3 t$ | $\begin{array}{r} I I I: \text { pp. } 1,7,10,41 ; V: \text { pp. } 64,136, \\ \quad 188 ; V I, \text { Part II: pp. } 37,40,44 . \end{array}$ |
| $\infty<1$ | Ds ${ }^{\text {r }}$ r | VI，p． 147. |
| $\mathscr{\theta}$ | Dgm | $V:$ pp．163， 175 ；VI，Part II：pp．68， 143. |
| Q d |  |  |
| $2 \rightarrow 8$ | $\underline{D} w$ | $V:$ pp．163，166，174， 177. |
| $\triangle \text { 昌 }$ | $\underline{D} w-n b-p w$ | VI，Part III：pp．47，61－63． |
| $\text { 皿 } 1 \circ \mathrm{~mm}$ | $\underline{D} f^{3} n j s{ }_{\text {d }}$ | $I:$ pp．63－66；$I I:$ p． $104 ; V:$ p． 136. |
| $x^{\infty} \circ \infty$ | $\underline{D} f_{t} t-z_{z}(j)$ | II：pp．17， 23. |
| $\stackrel{\square}{\square}$ | $\underline{D} d j$ | $I: \mathrm{pp} .86-88 ; V: \mathrm{p} .136$. |
| $\infty$ | $\underline{D} d-f-w^{\text {e }}$ | II ：pp．16， 23. |


$|$| $\underline{D} d-f-M n w$ |  |
| :--- | :--- |
| $\underline{D} d-f-R^{e}$ | $V:$ pp. 74, 78, 80. |
| $\underline{D} d-n f r t$ | $I V:$ pp. 105, 109. |
|  | $V:$ p. 164. |

NAMES IN TRANSLITERATION

| $\underline{I} j-n^{\text {e }}$ nh | $V: \mathrm{p} .151$. |
| :---: | :---: |
| Iwnw | $V:$ p. 170. |
| İpw-njsut | $V:$ p. 73. |
| Ifwj | $V:$ pp. 160, 172, 173, 176. |
| Inj-it-f-ikr |  |
| $\stackrel{\text { Itf }}{ }$ | $V I, ~ P a r t ~ I I ~: ~ p . ~ 32 . ~ \$$ |
| ${ }^{\prime} n \mathbf{h}-\mathrm{k}_{3} \mathrm{j}$ | $V:$ p. 53. |
| B3- ${ }^{-} n h w$ | $V:$ p. 151. |
| Ppij-nht | $\begin{aligned} & V ., \text { pp. } 147,150-152,166,167 ; V I, \\ & \text { Part II: p. } 103 . \end{aligned}$ |
| Mrrj- $R^{e}-n f r$ | VI, Part II: p. 34. |
| $N j-w j-n \underline{t}$ | VI, Part II : p. 107. |
| Nj-kz-whr | VI, Part II : p. 70. |
| $N j-k z-R^{e}$ | $V:$ p. 150 ; VI, Part II: p. 109. |
| $N t r-m s^{\circ}$ |  |
| $N f r t-k ; w$ | $V I$, Part II : p. 105. |


| $\underline{H} w t j$ | VI, Part II: pp. 41, 64, 66, 113, 203 $293,295,349,431,445,447$, 452, 461, 462, 470, 471, 474. |
| :---: | :---: |
| $\underline{H m-R}$ | $V$, p. 152 ; Vl, Part II: p. 339. |
| Hr-ksw-Pth | $V I$, Part II: p. 94. |
| $\underline{H} t h r-n f r-h t p$ | V : p. 102 ; VI, Part II: pp. 5, 48, 388, 442-444, 459. |
| $\underline{H} u f w-{ }^{-n} \underline{n}$ | $V$, p. 59. |
| $\underline{H} w t j$ | VI, Part II: pp. 29, 88. |
| $\dot{S} n f r w-n f r$ | VI, Part II: p. 99. |
| $\dot{S} n f r w-s{ }^{\text {s }}$ b | VI, Part II: pp. 54, 63, 64, 105, 113, 358, 445, 450, 451, 454, 456, 471, 474. |
|  | $V, \mathrm{pp} .172,173,176,177$. |
| $\underline{K}{ }^{2}$ | VI, Part III: p. 246. |
| Kıj-whm | $V, \mathrm{p} .69$; VI, Part II : p. 86. |
| $K 3 j \cdot h t p$ | $V$, p. 155. |
| Kıj-hr-Pth | $V I$, Part II : p. 20. |
| K3.t3 | $V$, p. 173. |
| $K 3 w-i b$ | VI, Part II : p. 63. |
| $\underline{T} \mathbf{j}$ | VI, Part II : p. 80. |
| $\underline{D}_{3}$ | $V$, p. 169. |
| $\underline{D} d-f$ - ${ }^{\text {d }}$ wfw | VI, Part II : pp. 78, 79. |

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## INCOMPLETE NAMES

| Min | $\cdots p$－hrt | VI，Part III ：p． 178. |
| :---: | :---: | :---: |
| ［4］回［4］ | ${ }^{\prime} \mathrm{Ipj}$（？） | VI，Part III ：pp．197， 199. |
|  | $\ldots n j-M z^{2} t$ | VI，Part III ：pp．231， 232. |
| 9㐱安嵒 | $\ldots t-n \boldsymbol{n}$ | II，pp．32，38， 42. |
| 億陉复 | ．．．－shm | II，pp．32，38， 42. |
|  | ．．－skm | II，pp．33，38， 42. |
| $\text { 湠 } 84$ | $\ldots h$ | II，pp．33，38， 42. |
| 圈须 | Ph．．．？ | II，pp．65， 68. |
| Nan | $N n \ldots s$ | II，p． 65. |

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## UNCERTAIN READING OF SOME NAMES

$$
\begin{aligned}
& -188^{\circ} \\
& \text { 口易 }
\end{aligned}
$$

## PLATES I-XVII



Workmen clearıng away the high mound of debris accumulated against the eastern face of the Great Pyramid. There is no doubt that this
accumulation had remained undisturbed since it first began to form with the destruction of the casing of the Pyramid during the Arab Period


A close view of the mound of debris accumulated against the eastern face of the Great Pyramid


The mound of debris against the eastern face of the Pyramid, and covering the site of the western part of the Mortuary Temple. In the foreground are some of the basalt blocks of the temple pavement


A general view of the site of the Mortuary Temple of Khufu, taken from the eastern face of the Great Pyramid. The loose blocks in the toreground

A.-Part of a royal scene from the northern wall of the causeway

B.-Part of a royal scene from the southern wall of the causeway

A.-A blook from the southern wall of the causeway.

On it is part of a scene showing Khufu making the ceremonial visit to Heliopolis

B.-A block bearing part of two scenes of Khufu performing the ceremonies of the Heb-sed Feast

A.-The torso of King Khufu, from the northern wall of the causew y

B.-Part of an insoriptioa

Pl. VIIl

A.-The breast of a granite statuette

B.-The head of a hoopoe


B
C


A-C. - A group of limestone statuettes

A.-A slab of limestone bearing part of an inscription

B.-A painted jug of red-ware

C.-A fragment of a mace-head inscribed with the Horus-name of Khufu

A.-A shoulder of a granite statue

B.-A pottery jug

C.-The head of a lion in sandstone



The solar-boat cleared of debris (looking east)


The solar-boat cleared of debris (looking west)


Clearing the temple court. (Note the klocks of basalt pavement in situ and scattered. Notice the artificially


BASALT PULLEY

A. - Front view

B.-Side view

Printed at the General Organisation for Govenment Printing Offices, Cairo, afannimg-Director MOHAMED BL-FATEH OMAR

10535-1969-330


[^0]:    ( ${ }^{1}$ ) Recent excavations brought to light a machine for raising big weights. This machine is undcubtedly the first simple form of the modern pulley (see Appendix, p. 49).

[^1]:    ( ${ }^{1}$ ) Pliny, "Natural History", Book XXXVI.
    ${ }^{(2)}$ Bodleian Library MS., No. 392.
    ( ${ }^{2}$ ) Al-Katsi, " Tohfat Al-albab" (MS).
    (') See A. Batrawi, "Anatomical Reports, 1948, a Small Mummy from the Pyramid of Dahshup", in "Ann. du Serv.", Vol. XLVIII, pp. 585-598.

[^2]:    ${ }^{(1)}$ Perring and Vyse, "Operations carried on at the Pyramids of Gîza" (London, 1839).
    $\left(^{2}\right)$ See Petrie, " Pyramids and Temples of Giza", for an interesting account of his work on and around this monument.

[^3]:    ${ }^{(1)}$ Happily the work of clearing the western side of the Great Pyramid is in progress now, A retaining wall has been discovered on this side of the Pyramid similar to that discovered in its southern side.
    $\left.{ }^{(2}\right)$ See Selim Hassan, "Excavations at Giza", Vol. V, pp. 57, 58.

[^4]:    (1) See "Urkunden', I, 212, II.
    (²) "Urkunden", I, 283, 14; 287, 17; 292, 6.
    () See JUnKer, "Giza", VI, p. 239, and "Urkunden", I, 230.
    (4) We know of an "Overseer of the Southern Part of the Settlement of King Khafra" "; see Junker, " Giza", III, p. 163
    ${ }^{(5)}$ See Kees, "Orientala", 1948, p. 86.
    ${ }^{(6)}$ See "Urkunden", I, p. 131.

[^5]:    ${ }^{(1)}$ See " L.E.N.", 1578.
    $\left(^{2}\right)$ Recent researches show that Imhotep never bore the title of physician (see "Les médecins dc l'Egypte pharaoniqne, by Dr. Frans Jonckieere), p. 11.
    ${ }^{(3)}$ This is the name of the king who built the unfinished Step Pyramid near that of Zoser, and which has recently been discovered by Zakeriah Ghoneim. Hitherto this king was only known from some jar-sealings found at Abydos.

[^6]:    ${ }^{(1)}$ Yakdt-el-Hamawi, "Mo'gam-el-Buldän"", Vol. VIII, p. 457 (Cairo edition). For the question of the stellar cult and the boat-pits, see also Selim Hassan, "Excavations at Gîza", Vol. Vi, Part I, p. 44 ff.
    $\left(^{2}\right)$ For the question of Queen Khent-kawes and the part she played in the history of the Old Kingdom, see Selim Hassan, "Excavations at Gîza", Vol. IV, p. I $f f$.

[^7]:    ${ }^{(1)}$ Rersner "A History of the Giza Necropolis", Vol. II, "The Tomb of Hetep-heres the Mother of Cheops", 1. 7.
    $\left({ }^{2}\right)$ See, for example, the graffiti in the Temple of $I s i s$, to the east of the Great Pyramid (Selim Hassan, "The Greal Sphinx and its Secrets", p. I12); see also the Stela of Psamtik-menkh, Lourre, No. 314.
    ${ }^{(3)}$ Selim Hassan, "Excavalions at Giza", Vol. VIII, Part 2, p. 30, Fig. 10.

[^8]:    ${ }^{(1)}$ See Selim Hassax, "The Great Sphinx and its Secrets", pp. 61, 62, Fig. 53.
    $\left.{ }^{(2}\right)$ Quoted by Prof. Greaves, in his "Pyramidographia" (1938-39).
    

[^9]:    (1) See Selim Hassan, "The Great Sphinx and its Secrets", p. 112 ff.
    $\left({ }^{2}\right)$ For a hypothetical reconstuction of the relationships of mombers of the royal family of the Fourth Dynasty, see W. S. Smith in Reisner, "A History of the Giza Necropolis", Vol. II, "The Tomb of Hetep-heres the Mother of Cheops", p. $1 f$.
    ${ }^{(3}{ }^{3}$ Reisner, " A History of the Giza Necropolis", Vol. II, "The Tomb of Hetep-heres the Mother of Cheops ", p. 6.

[^10]:    ${ }^{(1)}$ I cannot insist on this point, as the causeway of the North Stone Pyramid at Dahshur has not yet been investigated.

[^11]:    ( ${ }^{1}$ ) The map, published by Lepsius, "L.D." I, Pl. 1t, placos the end of the causeway in the fields, but this may be a continuation after the Valley Temple, as at Dahshur.

[^12]:    ${ }^{(1)}$ The drawing, published by Reisner, was made without consulting the oxcavator as were also certain other publications, which, in my opinion, have also proved to be faulty.

[^13]:    ${ }^{(1)}$ For the question of ths cult of Khufu and the other Pyramid builders in the later periods, see p. 10.
    $\left(^{(2)}\right.$ See Moret, "Clans aux Empire", pp. 175-176.
    $\left(^{(3)}\right.$ Fraser, The Golden Bough" (3rd edition), London, 1912, pp. 14-46.
    ( ${ }^{4}$ ) Moret, "Clans aux Empirt", pp. 175-176, and Wainwriatt, "The Sky Religion in Egypt", Cambridge (1938), p. $14 f$.

[^14]:    (1) See "J.E.A.", Vol. V, p. 192.
    $\left(^{( }\right)$See Pleyte and Rosst, "Papyrus de Turin", Pl 44, IT, 18-19.
    ${ }^{\left({ }^{3}\right)}$ See "Ontersuchungen zur Geschichte und Altertumskunde Aegyptens", Vol. III, p. 135.
    (4) Ibid., p. 135.

[^15]:    ${ }^{(1)}$ See Sethe, "Urgeschichte", p. 130, No. 2.
    $\left(^{2}\right)$ Borchardt, "Das Grabdenkmal des Königs Sahure"", Vol. I, p. 52, Flg. 5 ; Jequter, "Le Monument Funéraire de Pepi ler', Vol. II, Pl. 18, for a much-damaged example.
    $\left.{ }^{(3}\right)$ Gardiner, " J.E.A. ", Vol. XXX, p. 55
    ( ${ }^{4}$ ) Borchardt, "Sahure ${ }^{\text {" } ", ~ V o l . ~ I I, ~ P l . ~} 18$.
    '" Naville, "The Festival Hall of Osorkon", Pls. 7, 8, 12 (four photos), and Pls. 32, 34, shoving the restored portion.

[^16]:    ${ }^{(1)}$ See Brdasch, "Thesaurus", p. 1125 ; Sethe, "Untersuchungen", Vol. III, p. 144.
    $\left.{ }^{(2}\right)$ Gardiner, "J.E.A.", Vol., 30, p. 33, Note 4.
    ( ${ }^{2}$ " Fouilles de Medamoud" (1911)-Cottrielle-Gibaudet, "Les Monuments du Moyen Empire", PI. 1.
    ( ${ }^{4}$ ) Ibid., Pl. 5.
    (9) Seter, "Das Jubilaumbild aus dem Totentempel Ainenophis $I$ " in "Nachr. Gottingen", 1921, p. 31 f.
    (') See Petrie, "The Palace of Apries", PI. 21.
    (') See Sethe, "Urgeschichte", 4, 170.

[^17]:    ${ }^{(1)}$ M. Gredicke told me that a new book of his will soon appear containing a discussion of pieces of inscribed stones from the causeway of Khufu reused in the building of Middle Kingdom pyramids at Dahshur.

[^18]:    ${ }^{\left({ }^{1}\right)}$ I have already given a partial plan of this temple in "Excavations at Giza", Vol. VI, Part I, p. 41. This made no claim to being a complete plan of the building, but was merely given in order to show the relative positions of the rock-cut boat-pits, as it is always the case in such circumstances.
    $\left(^{(2)}\right.$ See "Excavations at Giza", Vol. IV, p. 89.

[^19]:    (1) See Lautr, "Ann. du Serv.", Vol. XLVI, p. 251, Fig. 20.

[^20]:    ${ }^{(1)}$ See Dr. Ahmed Faghry, "The Bent Pyramid of Dahshur", pp. 7-10.

[^21]:    ( $^{1}$ ) The Mortuary Temple of Ded.f $R a^{\bullet}$ at Abu Rawash is completely destroyed, perhaps was never finished but the ares it occupied is as small one, compared with that of Khafra'.

