

EXCAVATIONS

AT

BEIKTHANO

REPORT
ON
THE EXCAVATIONS AT
BEIKTHANO

By

Aung Thaw

Director, Archaeological Survey, Burma

Revolutionary Government of the Union of Burma

Ministry of Union Culture

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} Archaeological Survey of India.

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PREFACE

This report is a full account of the excavations conducted by the Archaeological Survey of Burma at the ancient city site of Beikthano (also pronounced Peikthano) during the years 1959–63. In tropical countries archaeological field-work is generally done in the open seasons; but owing to unavoidable reasons this site was excavated in six periods during the fiscal years 1958-59 to 1962-63, of which two periods fell out of the open seasons. This was possible owing to the comparatively dry climate of the area.

Just before the present excavations were taken up the site was systematically explored for the first time by the then Director U Po Lat and the author in March 1958. With the enthusiastic support of his Director the author took up the task of digging in mid-June of 1959. In the following normal season the work was continued jointly with U Myint Aung, and thereafter the duties of site-supervision were relegated to his colleagues, while the author gave general direction and guidance as the head of the department. The following table shows the period of work devoted to each site and the respective excavators who took charge of the field-work:—

<i>Site No.</i>	<i>Period</i>	<i>Excavator</i>
1 and 2	... 11 June 1959 to 1 September 1959	U Aung 'Thaw.
3 and 4	... 11 December 1959 to 4 March 1960	U Aung Thaw and U Myint Aung.
5, 6, 7 and 8	... 27 August 1960 to 29 September 1960	U Myint Aung and U Bo Kay.
9 and 10	... 15 January 1961 to 20 March 1961	U Sein Maung Oo.
11, 12 and 13	... 22 January 1962 to 19 March 1962	U Myint Aung.
14 to 25	... 14 October 1962 to 3 April 1963	U Myint Aung.

The survey and mapping of the site was done by U Iltwe Sein, Sub-Assistant Engineer, who is also responsible for drawing the sections in the first season. Thereafter, U Mya Maung and U Ohn Maung, draftsmen, shared the duties of drawing plans, sections, pottery and small finds. Photographic records were made variously by U Paw Nyein, U Kyaw and Ko Khin Maung, departmental photographers.

In the last season voluntary assistance in site supervision for one month was given by Daw Mya Than (*alias* Miss C. A. Rustom). U Than Swe, one of the colleagues, gave a helping hand before proceeding abroad for training in field archaeology. U Hla Pe of Taungdwingyi Museum proved to be a helpful companion to the field party in all the seasons.

Dr. Zaw Tun, Professor of Anatomy, and Dr. Myint Myint Mu of the Medical Institute I, University of Rangoon, very kindly examined the skeleton remains and offered their valuable observations embodied in this report.

The author would like to express most grateful thanks to those mentioned above and to those who helped in the task one way or another.

The excavation of this site is part of a project to unravel the Pyu culture; and since enough materials have been obtained here for correlation with those of other sites awaiting systematic exploration, the work at this site, necessarily, has to be suspended. We have by no means finished with this site which promises to occupy the attention of archaeologists and historians of this country for many more years to come. Some of the materials still remain to be studied in fuller details and further research would throw light upon many unsolved problems. But obviously further delay in bringing out this publication, already overdue, is undesirable. This monograph, therefore, is essentially a long interim report, modifying some of the views expressed in the preliminary report and in the Burmese articles in the Cultural Magazine.

AUNG THAW

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I. INTRODUCTION

The Problem and the Approach

During the past half century the Archaeological Survey of Burma had conducted sporadic excavations at Śrīkṣetra (Thayekhittaya, Old Prome), Pagan, Pegu and a few other sites, but more intensively at the first site. Scattered over these ancient sites are numerous shapeless mounds which are usually found to be remains of religious edifices for which Burma, professedly a Buddhist country, is well noted. Dwelling houses or palace buildings of considerable age are rarely discovered as perishable materials were traditionally used for such structures. Thus the antiquities unearthed from the brick mounds are invested primarily with religious significance, though incidentally many of them possess considerable historical value. Previous efforts have thrown much light on the history and culture of each individual site. But no attempt has yet been made to correlate these results so as to obtain a chronological sequence of the different phases of early cultures in Burma. On the other hand, the country abounds with untrodden fields and partially explored sites like Vesali in Arakan division, Thaton, Tavoy, Tenasserim, Pegu, Twante and Syriam in Lower Burma, Tagaung and Halin in Upper Burma, apart from many more historic and prehistoric sites. It is therefore essential to formulate carefully a large scale plan of archaeological exploration to produce coherent and significant results within a reasonable space of time. In the meantime the Archaeological Survey would deal with selected sites to provide sequence-tables of ancient cultures in various parts of the country. In doing so, even the key-sites of Śrīkṣetra and Pagan shall have to be re-investigated. Materials obtained from these sites are abundant, but reliable field records are lacking and the study of pottery was, hitherto, entirely neglected.

The previous excavations at Śrīkṣetra had established the presence of the Pyu culture dating from circa 5th to 8th centuries A.D. To push back the authentic cultural history of the country beyond 5th century A.D. and to expand our knowledge of successive cultures form the main objectives of the Archaeological Survey. Recent explorations in Beikthano and its vicinity revealed recognizable cultural links between this ancient site and Śrīkṣetra, in the form of urn graves and symbolical coins. Traditionally, these two cities were contemporaneous and Beikthano is not far removed from Śrīkṣetra as in the case of Halin, another pre-eminent Pyu site in Upper Burma. Here indeed is a fresh starting ground for substantive advance in field-exploration in our

country. Thus scientific digging was done at Beikthano to ascertain the cultural equipment and precise relationship with Śrīkṣetra and to obtain a fixed point from which to initiate a systematic culture-sequence.

The Site and its Environments

Beikthanomyo (latt. 20° N, long. 95° 23' E) lies immediately to the north of Kokkogwa, a village 12 miles to the west of Taungdwingyi. (Figs. 1—3.) The Taungdwingyi-Magwe motor road cuts through two adjacent arms of the fortification of Beikthanomyo at the south-east corner just before passing by Kokkogwa. (The old Kokkogwa village is said to be near Gyokkon, east of the metalled road.) The brick fort walls, now reduced to an average height of about six feet, encompass the city area squarishly on the north, east and south sides. The eastern side is two miles long while the north and south sides are shorter by two furlongs. The whole stretch of the western wall, except a small portion at the south-west corner, had probably been eroded by the floods of the Yan Pe stream and the two lakes, the Ingyi and Gyogyakan, situated close to the low-lying western edge of the city area. Irrigation of the fields immediately close to the western wall must have also caused its complete destruction. The meandering Yan Pe stream, a tributary of the Yin *Chaung*, flowing westward along the southern limit of Kokkogwa village takes a northern turn close to the south-west corner of the city for a short distance and then resumes its westerly direction. But for a slight gradient sloping from east to west the city as well as the surrounding country-side occupies a rather flat plain. The area west of the lakes are fertile and rice is cultivated. A greater part of the city area is covered with cactus and shrub. The only hamlet lying within the city area is Inywagyi known after the large lake. It lies exactly in the north-west corner of the fortified area. The city had originally three gates on each side, but now several openings of various dimensions are to be seen. The brick enclosure of the palace site occupies an area 500 yards NS by 400 yards EW, a little to the north-west of the centre of the walled city. This is divided into two halves by a partition wall running from north to south, the western half containing yet another walled area, rectangular on plan. Traces of several brick structures are also seen within the palace area. The whole landscape inside the city is strewn with nearly a hundred debris mounds, some square on plan, some circular, and others of irregular shape. A long ridge of brick debris, interrupted at several points but almost connecting the south city wall and the south enclosure of the palace site, divides the city into two sections—eastern and western. However, the continuation of this ridge on the north of the palace area could hardly be traced.

Surrounding the fort walls are also seen countless low mounds which are urn graves. The most prominent landmark in the area is the Shweyaung-daw or Shweyaung-hlyan Pagoda situated about 400 yards to the east of the north-east corner of the city. This stupa, also with a long tradition attached to it, is one of the most venerated pagodas in the Taungdwingyi township.

Historical Background

The Taungdwingyi Thamaing, a late work of the 19th century, devotes one chapter on the history of Beikthanomyo. The account is not based on any reliable record but is a compilation of the popular tradition regarding the city.

This legend begins with the story of Mahāthambawa and Sulathambawa, two blind princes from Tagaung who were drifted down the Irrawaddy on a raft by their mother in obedience to the royal command. On the way they encountered an ogress, Sandamukhi by name, who had been snatching their daily food for days. When the ogress was caught red handed she promised to cure them of their blindness to atone for her misdeed, and this she did with the help of divine gods. Eventually, the princes reached Yathemyo (Śrīkṣetra). There the elder brother married Bedayee, the foster daughter of a hermit who was also related to the king of Tagaung. After sometime he became the king of the Pyus at Yathemyo. On the death of Mahāthambawa after six years of reign, Sulathambawa succeeded to the throne and married the same queen, Bedayee, then in an early stage of pregnancy. The son born to them was named Duttabaung. In course of time Duttabaung succeeded Sulathambawa and founded the city of Śrīkṣetra.

In the meantime Sandamukhi, the ogress, bore a human baby girl miraculously conceived by her superficial association with Mahāthambawa and Sulathambawa. (The Glass Palace Chronicle states that the baby was born to the ogress by Sulathambawa, as Sandamukhi had attended on the younger prince when Mahāthambawa was married to Bedayee). Sandamukhi left Sulathambawa when he succeeded his brother and married Bedayee. A hermit residing about 10 miles west of Taungdwingyi saw the ogress carrying the child, and thinking she had stolen someone's baby drove her away, adopted the girl and nurtured her till she attained age. In order that he might be left in seclusion the hermit assigned the grown-up girl the task of drawing water with unbaked earthen pots. Everyday she spent the time away from the hermit in doing her tedious job, and feeling weary and disgusted she often heaved sighs of sadness. Thereupon the god Vishnu, realizing that he had been the girl's brother in one of his former existences, helped her to overcome her difficulty by supplying a hundred thousand well fired pots. Furthermore, on the advice of Indra that time was ripe to bestow her a boon requested by her after doing a meritorious deed in a former incarnation, Vishnu created a city of splendour and presented to the girl, who thenceforth came to be known as Princess Panhtwar. She ruled over the kingdom named after her and the city took both the names of Beikthanomyo (Vishnu City) and Panhtwar-Myo.

Now King Duttabaung of Prome, hearing of the prosperity of Beikthanomyo, waged a war against Princess Panhtwar. But the latter possessed a magic drum by the use of which she was able to repel the invading army. Duttabaung then resorted to a stratagem to destroy the drum, attacked Beikthanomyo again, took the princess captive and finally married her. Princess Panhtwar, now known as Queen Beikthano, took revenge upon Duttabaung by destroying his third divine eye.

These incidents are said to have happened in the 5th century B.C., and the local chronicles record a long line of kings ruling at Śrīkṣetra for more than five centuries. No mention, however, is made of the later history of Beikthanomyo. The legend no doubt contains much irrelevant details but there appears to be a substratum of truth embedded in it. The evidences of their once flourishing

state are seen in the remains of the two cities, and among the ruins of Śrīkṣetra a conspicuous site is known as *Beikthanomibaya Thingyaing*, the cemetery of Queen Beikthano.

Previous Work

Possessing so much evidence of its past history, Beikthano city has long been known to archaeologists as a promising site for excavation and the first and only attempt to probe into its past was made as early as 1905 when Mr. Taw Sein Ko, Superintendent of the Archaeological Survey, laid bare two low mounds south of the city. The discovery of only burial urns probably did not provide incentive to the excavator, and as the claims to exploration of Śrīkṣetra and Pagan were peculiarly stronger, no further attempt was made to explore this site. Mr. Taw Sein Ko's report ¹ on his excavation reads as follows:

... As the ancient city of Peikthano, which is close to the modern village of Kokkogwa in the Magwe district, is one of the reputed prehistoric sites of Burma, excavations were undertaken there in the open season of 1904-05; and an article on the subject, which is an attempt to lift the veil of mystery fallen upon an important epoch of ancient Burmese history, was contributed to the General Archaeological Report. On the Palace site, three teeth of a large size were discovered, which were identified by Major Alcock of the Indian Museum, Calcutta, as the teeth of some ruminant, such as a bullock or buffalo. At Yetkan village, charred bones and broken pieces of red unglazed pottery were found. By digging into two low mounds close to the southern wall of Peikthano city, seven funerary urns were unearthed, which were arranged in some sort of order. One remarkable feature of the excavation is, that no implement, weapon or ornament of stone or metal, or of any description, was found; and one is left to base his theory or conjecture on the urns and the calcined bones deposited in them, together with the earthenware tobacco pipes picked up, from time to time, by the villagers in the course of cultivation. My personal impression is, however, that these *tumili* were originally encased in brick and mortar and surmounted by temples, and that they were erected by a people who had attained to a fairly high degree of civilization. There is a uniformity in the thickness of the walls and the size of the bricks used; and the plans of the City, Palace, and other buildings display, in a remarkable degree, geometrical symmetry and mathematical precision. Further, the proportionate shape and size of the urns and the tobacco pipes, and the exquisite ornamentation displayed on them, testify to the high perfection of the ceramic art attained by this forgotten people, who appear to be Kadu prisoners of war brought away in the fifth century B.C. from Mahamyang, in the Chindwin Valley, by Duttabaung, King of Prome.

The article contributed by Mr. Taw Sein Ko does not appear to have been published in the General Archaeological Report. However, a summary ² of that

¹ *Ann. Rep. Supdt., Archl. Survey, Burma; 1905-06; para. 23.*

² *Ann. Rep. Supdt., Archl. Survey, Burma; 1905-06; para. 25.*

article is given below the abovementioned report on his excavation at Beikthano as follows:

The Superintendent, *Gazetteer Revision*, enquired whether there was any recent information about Peikthano, an ancient capital in the Magwe district referred to at page 233 of the *Upper Burma Gazetteer*, Part II, Vol. III. He was informed that there are two ancient cities called Peikthano; one in the Magwe district, and the other in the Upper Chindwin, to which the same traditions are attached. Each city was ruled by a Princess called the Peikthano Minthami, who possessed a fabulous drum, which, when sounded, would cause floods, thereby safeguarding the country against foreign invasion; and each of them was destroyed in 413 B.C. by Duttabaung, King of Prome, who had three eyes, one of which was divine. The King, by means of a stratagem, destroyed the miraculous drum, and the Princess destroyed his divine eye by similar means. A substratum of truth appears to be embedded in these traditions. Peikthano is the Burmanized form of Vishnu, and the Hindu God, Siva, has a third eye. The warring between Prome, whose ruler was three-eyed, and Peikthano, whose queen was called Peikthano Minthami, appears to symbolise the struggle for supremacy between Saivism and Vaishnavism. Further, there is a tradition that, if a person is a native of Taungdwingyi, he belongs to the Kantu race, which may be identified with the Kadus of the present day, who preserve their distinct nationality amidst the Shans, Burmans, Chins and Kachins. The following inferences may be drawn from the above traditions. A Tibeto-Burman colony, which subsequently developed into the Burmese nation, settled down at Prome, which was then under Pyu or Shan domination, and accepted the Siva cult. A colony of Kadus, who were also a Tibeto-Burman tribe, settled down at Mahamyaing in the Chindwin Valley, and embraced the Vishnu cult. The struggle between Peikthano and Prome was due to differences of religious opinion rather than to a desire of territorial aggrandisement. Vaishnavism finally succumbed; and Saivism, in its turn, was later on, absorbed by Buddhism.

The other site situated in the Mahamyaing forest reserve in the Upper Chindwin Valley, which is also traditionally known as ancient Beikthano city, has not yet been explored. The present report is, therefore, confined to the fieldwork done at the more accessible site near Taungdwingyi.

Summary of Results

Owing to the vast extent of the old city it is neither feasible nor necessary to excavate the whole area. The digging was restricted to twenty-five selected sites, most of which being low brick mounds were thoroughly dealt with. Vertical digging was done in cuttings across the city wall and inner enclosure walls. The sites were selected to obtain solutions for the problems which crop up year after year as the work progressed. These are serially numbered KKG 1 to KKG 25, as the area falls within the present village-tract of Kokkogwa. In giving the detailed account of excavation the structures are conveniently grouped in different types rather than adhering to the sequence in which they were excavated.

The excavations, though on a limited scale, unfold the structural remains of an extensive city traditionally known as Beikthano. The exposed structures comprise gateways of the city wall, residential buildings and religious structures associated with burial urns. But for a single exception all these structures belong to the main period of occupation from about 1st to 5th century A.D.

Numerous types of pottery and clay beads were recovered but it is surprising to find very few cultural objects at the excavated sites. The most significant features of cultural equipment are the uninscribed or "symbolical" coins and the burial urns, the occurrence of which firmly established the link between Beikthano and Sriksetra.

The influence of South India, particularly that of Andhradesa is recognized in the religious structures. However, the conspicuous absence of Buddhist sculptures and relics coupled with the results of radiocarbon dating indicate that the founding of Beikthano preceded that of Sriksetra by about four centuries. Beikthano was destroyed by fire about 4th-5th century A.D. and the Pyu occupation of the site declined. It was later partially occupied about the 11th century A.D. The significant result of the excavation is that the beginning of the Pyu culture could be pushed back to the 1st century A.D. and that Buddhism is found to have been introduced at Beikthano by 2nd-3rd century A.D.

II. STRUCTURAL REMAINS AND STRATIFICATION

A. THE FORTIFICATIONS

The city wall is shaped more or less like a rhombus with its extant eastern side declined 13 degrees westward. The southern corners have very smooth bends whereas at the north-eastern corner the wall takes a sharp turn due west. The northern wall does not run straight from east to west but dips slightly southward at the midpoint of its length. The eastern side had suffered damage probably due to the quarrying of bricks, several decades ago, for the construction of the motor road from Taungdwingyi to Magwe and the railway embankment for the projected line, later abandoned, to Pahtanago which passes through the old city. What is now left of the east wall is a very low ridge hardly visible to the casual observer. The north and south walls having crumbled down by natural decay still stand to an average height of about six feet above the ground level and are covered with brick debris sloping on either side. Cart tracks passing through the city have made several gaps in all the sides of the city wall and the original gates could not be located before the excavations. Internal projections of the wall, clearly visible on the north and south sides, which at first suggested to be debris mounds of bastions proved to be the gateways on excavating them (KKG 13 and 15).

Lying directly east of the big lake, a little removed from the central area of the city towards the north is the traditionally known palace site. It is enclosed by a rectangular wall, the sides running almost parallel to the outer walls. Each of the longer sides on the east and west measure approximately 513 yards, and the shorter ones 413 yards. This rectangular enclosure is divided by a partition wall forming two compartments, the western one being a little wider than the eastern. Inside the western compartment is a smaller rectangular enclosure which is also divided into two similar parts. These enclosure walls are also broken at several places though the openings are apparently not original.

KKG 16

The nature of the city wall became apparent after opening up the two gateways piercing the north wall (KKG 13 and 15). But a cutting across this wall was necessary to determine its relation with the inner habitation area and the moat, if one existed. A trench seven feet wide was laid out across the wall at a point 400 yards east of the gateway (KKG 15). At first the trench stretched

90 ft. northward and 45 ft. southward from the top of the wall. In the northern section a gap of 45 feet was left unexcavated. Later, a northerly extension was carried on, and three strips each 9 ft. in length were dug up with intervals of 33 ft. and 57 ft. The lay-out of the trench was therefore 262 feet long of which the total length of cutting was 127 feet. The trench was cut to reach the natural soil at two places—one to the north of the wall and the other to the south—at the depth of 7 ft. 2 ins. and 5 ft. 9 ins. respectively, below the base of the wall.

The cutting revealed only two distinct layers (Fig. 16). The upper layer is formed of dark brown earth which is loose and slightly sandy. The average thickness is about one foot on the north side and two feet on the south. This layer merges with the brick debris at the base of the wall. As this layer is not compact rain water which flows down the slope on either side of the wall percolates through the seepages and carries down tiny brick grits below the surface.

The lower layer is made up of clayey yellow soil which has naturally hardened in course of time. This layer also slopes down very gradually on both sides of the wall. It is in fact an earthen rampart which is provided to raise the low ground to the level of the base of the eastern wall which is naturally higher than the other sides. The wall stands on top of this rampart which is about 7 feet 2 inches high above the natural soil on the north side of the wall. The thickness of the compact layer diminishes as the rampart slopes down towards the original working level.

From the section of the cutting the nature of the soil could be observed to about 200 feet to the north of the wall. It appears that there was no moat within this range where one could expect horizontal watermarks and silt deposits in the section if at all a moat was dug round the wall. However, the existence of a natural channel is found 78 feet away from the wall. It is 15 feet wide from brink to brink but narrows down to 1 ft. 4 ins. at the base. Its depth is 6 ft. from the bottom of the upper layer by which it is completely sealed. A test pit dug up at a place 17 ft. due west of the channel revealed its continuance westward. The entire length of its course was not investigated, but judging from the lie of the land it is possible that a wider stretch of channel might have existed to serve the purpose of a moat on this side of the city.

The fort wall has no foundation but is built free on the rampart, without even having any support of an earthen ramp on the interior. Its width is 8 feet. It now stands to a height of 2 ft. 6 ins. on the exterior and 3 ft. on the interior, made up of 8 and 10 courses of bricks respectively. The bricks, mostly of the size 18" x 9" x 3" are laid in mud mortar. The volume of debris that remains on either side of the wall is not great enough to suggest that the original height of the wall was quite formidable, but allowance must also be made for the erosion and human destruction for the quarrying of brick-ballast.

KKG 19 & 20

These two cuttings measuring 60 ft. by 7 ft. and 45 ft. by 7 ft. respectively were laid out crossing two inner partitions orientated NS in the palace area. KKG 19, lying some 100 yards to the SW of KKG 5, falls on the partition wall

of the smaller rectangle on the west, while KKG 20 falls on the main partition wall of the palace enclosure. These cuttings were made to find out the thickness of the partition walls and their relations with the excavated sites in the area, *viz.*, KKG 5, 7 and 8.

As the remains of these walls stand barely above the surface deep digging was not necessary, and only 2 layers could be revealed in each of the cuttings. The stratification at KKG 19 (Fig. 31) consists of a top layer of yellow compact earth mixed with large broken bricks, and the lower layer having the same texture and colour with a slightly less compact composition of brickbats. As potsherds were unearthed from the lower layer running horizontally to the two lowest brick courses of the exposed wall, and extending into the ground below the last course, it may be surmised that it is a layer of filling for the construction of the wall above it. No other objects besides sherds were obtained from both the cuttings.

The stratification at KKG 20 (Fig. 31 a) is quite similar to that of KKG 19. At both the sites there remain only five courses of bricks and the original height of the walls cannot be gauged. The thickness of the wall at KKG 19 is 4 ft. 7 ins. whereas at KKG 20 it is only 3 ft. 7 ins. These partition walls appear to belong to be coeval with the palace enclosure and the structures within it.

KKG 25

This site lies about 270 yards due south of the excavated site KKG 5. Two trenches orientated NS and EW were laid out at right angles to each other. The cutting was made only at the NS trench as it covers not only a portion of the south wall of the palace site but also the southern end of the main partition wall. The length of the cutting is 51 feet, and the width 10 feet.

The digging revealed the remains of part of the southern enclosure wall of the palace area and a portion of the partition wall meeting the former at right angles to it (Fig. 38). The enclosure wall has an exterior projection of a low brick-edged platform, quadrangular in shape, at the level of the base of the wall. The palace wall is exposed to a length of 10 ft. 5 ins. and the partition wall up to 21 ft. The former is 7 ft. 3 ins. in width and the latter 4 ft. The platform projects 9 ft. 9 ins. from the wall. The base of the partition wall stands on a level higher than that of the south wall.

There are three distinct layers in the section of the cutting, looking west (Fig. 39). The top layer is composed of brown loose soil mixed with humus and brick debris. It slopes down towards north and south from the south wall. The second layer also contains brickbats, but being a pure debris layer it assumes a brighter red colour. On the north side of the wall this layer lies wholly under the top layer, but on the south it stops short at about 9 ft. from the wall and merges with a layer of compact yellow soil free from brickbats. This layer which underlies the top layer on the southern part, covers the slope of the second debris layer. Virtually, a section of the yellow filling earth lies between the two debris layers indicating that there were two phases of destruction of the wall. The lowest layer which is above the natural soil contains reddish loose earth and brick grits. There are no foundation trenches and the walls are free-built. So this third layer was formed by providing an earthen rampart at the base of the walls during or soon after their construction.

The original height of the walls cannot be ascertained. The south wall now stands to a height of 3 ft. made up of 11 courses of bricks. The stratigraphy shows that this wall collapsed twice. After the first destruction the low ground on the south was filled with yellow earth which covered part of the debris. This filling was done probably during the construction or raising of a long ridge which runs southward from the mid-point of the south palace wall, thus dividing the southern city area into two parts.

KKG 23

Close to the south of the southern wall of the palace site where the partition wall meets the former there begins a long ridge which runs parallel to the eastern city wall in a south-easterly direction, with several breaks, down to a point about 200 yards north of the southern wall. To investigate the nature of this ridge a trench was cut across it at a point 700 yards to the south of KKG 25. This site KKG 23 falls approximately half way along the ridge. The actual cutting area covered 72 ft. by 10 feet. The section looking north (Fig. 35) shows that the crown of the ridge is 6 feet 6 inches high above the ground level and slopes down to a distance of 36 feet each towards east and west. The soil deposits are formed of two layers, the upper one being slightly dark yellow compact earth containing a few brickbats, while the thicker lower layer being yellow compact earth. The latter is an earthen ramp on which a brick wall 8 feet 6 inches thick was originally built. Now only 6 courses of the wall remain, and the original height cannot be estimated.

This ridge topped with a brick wall of unknown height seems to be a part of the fortification system of the city. But with a ramp on both sides of the wall its usefulness as a defence work could hardly be imagined. From the section of KKG 25 it is apparent that the earthen dump overlies the first destruction level of the south palace wall. It may therefore be surmised that the ridge was made after the palace wall collapsed for the first time. If the original height of the brick wall was quite formidable the purpose of erecting it might be to provide a second line of defence to the western part of the city where most of the masonry structures are situated.

B. GATEWAYS

KKG 13

This site lies close to the point where the northern city wall takes a slight turn in the south-west direction. It is a debris mound about 100 feet square, projecting inwards from the wall, suggestive of the remains of a bastion. It is about 5 feet high above the surrounding ground level.

On excavating the mound it was found that the debris was formed by the crumbling walls of a gateway (Pl. XXXV, b) which has a pair of arms extending inwards to a distance of 80 feet and 86 feet respectively on the east and west sides. These arms or ramparts do not turn at right angles to the main wall but bend gradually southward to form the gateway and a long passage, 20 feet wide.

The stratigraphy (Fig. 20) shows that the wall was built freely on the natural soil, but at certain points the base was strengthened with earthen ramps about 10 inches thick. The width of the wall as well as the ramparts is 7 feet, and the height remains to eleven courses of bricks above the ground level.

Within the passage formed by the two arms and about 45 feet south of the bend was found a portion of charred wooden post lying across the passage. Directly to the east of it and close to the east arm was found an iron socket. Another socket lay about 15 feet to the south of the burnt post. These are evidently parts of a gate originally fixed in the middle of the entrance passage. The burnt post and bits of charcoal strewn about it indicate that the wooden gate was destroyed by fire. When the whole gateway collapsed the debris not only blocked the passage but formed a big mound which at first sight appeared like the remains of a bastion of the city wall. There are four similar mounds on the north side of the city wall but only two mounds each on the east and south sides are to be identified.

KKG 15

This site lies on the north city wall, about 1,000 yards to the west of KKG 13. The surface indications here are similar to those at KKG 13. The mound is 105 feet long NS, and 90 feet wide EW, with a height of about 5 feet above the surrounding ground level. It projects southwards from the city wall and is the westernmost one of three such mounds along the north wall. The grid system of 15 feet squares was laid out for excavation and vertical digging was done to reach the natural soil at a depth of 8 feet 6 inches from the surface in a limited area measuring 15 feet by 3 feet.

As expected, another gateway was exposed at this site. (Pl. XXXVIII, a,b). It has a road 15 feet wide, bounded by two arms which are projections of the wall gradually bending inwards at the entrance (Fig. 24). The portion of the city wall west of the gateway is 15 feet wide and takes a squarish turn, whereas its eastern counterpart has an irregular width, the maximum being 10 feet. The latter gradually curves inwards from a distance of about 30 feet from the entrance so that the plan of the opening sides are not symmetrical. But the arms run to a distance of 81 feet from the north end of the city wall, and their outer sides which form the walls of the entrance passage are quite regular. The widths of the arms are narrow near the bends where there is a big indenture on the west side of the west arm and a sharp curve on the east side of the east arm. The eastern portion of the city wall has a brick ramp as an internal support. The average width of the arms is 15 feet. These arms are broken near the southern end to form gaps of 3 feet each. The passage is then extended to run 20 feet, but here the portion of the arm is only 10 feet wide.

Within the passage, about 10 feet north of the gaps were found two iron sockets, one each at the base of the wall of the arm. Close to these sockets were unearthened charred wooden posts and beams, iron plates and many bits of iron. At the extreme end of the passage, close to the west wall were also discovered two iron sockets. It is therefore apparent that a double-leaf wooden gate was originally installed at the gateway and guard rooms were provided behind the gate, within the arms, for the security and defence of this entrance.

The walls of the arms still remain at a height of about 20 courses of bricks. The stratigraphy of the section (Fig. 25) across the two arms and the passage shows that after building the walls of the arms directly on the natural soil a road of rammed earth and sand with brickbat foundation was laid out, the level of the road reaching the eighth course of bricks above the ground level. Above the road is a layer of ash, charcoal and burnt soil mingled with bits of iron. These are evidences of the destruction by fire of the wooden gate. The debris of brickbats and mud mortar filled the whole passage and also formed the outer slopes on all sides. After hundreds of years the brick mound diminished in height owing to erosion by rain water and other unnatural causes, thus affording no sound data to estimate the original height of the wall and the arms.

KKG 8

This site lies on the mid-point of the eastern wall of the traditionally known palace site or citadel. A greater portion of the mound stood to the west of the wall. Before excavation the mound measured 90 feet EW by 75 feet NS and is about 6 feet high.

A gateway was exposed at this site (Fig. 14; Pl. XXIX a; Pl. XXXI a, b). But unlike those at the northern city wall the arms turn inwards at right angles to the enclosure wall. The palace wall is of irregular width measuring from 6 to 8 feet. The arms have the same width as the wall, and project to a length of 35 feet from the eastern edge of the wall, forming an entrance passage 14 feet 9 inches wide. The gateway is the principal entrance to the palace site as it lies due east of a brick structure, KKG 5, which is the only substantial building within the inner enclosure. Similar to the western gateway of the north city wall, KKG 15, a sentry recess 3 feet 6 inches to 4 feet wide is provided in each of the arms. These recesses have brick floors of 3 courses.

From the sections of the mound it is seen that the passage was paved with brickbats and properly rammed with earth and sand. Fifteen courses of bricks still remain at the highest portions of the arms. No wooden gate was traceable at the entrance. But about 12 feet outside the enclosure wall, on each side of the entrance was discovered a huge sandstone block bearing in high relief a pair of human feet (Pl. XXX a, b). Unfortunately, the upper portions of the stone slabs probably sculptured with door-guardians bigger than life-size were destroyed and removed long ago and not a single fragment was to be found near by. However, the presence of these two large pieces signify the importance of this eastern entrance to the citadel.

C. RESIDENTIAL BUILDINGS

Structures containing rooms or apartments are here primarily classified as residential buildings. But in most cases, though the buildings were evidently occupied, the exact functions for which they were built, *i.e.*, secular, religious or ritual purposes could not be irrefutably defined. Possible aspects are therefore considered on the facts lighted upon in each case.

KKG 2

This mound (Pl. III) lies within the city, about 300 yards north of the palace site. The axis of the mound running North-South measures about 150 feet and the width about 100 feet. This mound was excavated first as it is the most prominent one among nearly a hundred of debris mounds within the city whose exact nature is not known even to the local people. The highest point is about $14\frac{1}{2}$ feet above the surrounding ground level. Therefore, 15 feet squares were laid over the whole area, and vertically these were carried to depths of 8 feet and 12 feet at which the floor and ground levels respectively of the structure were encountered. Deep digging was done only in limited areas, five feet square, where the natural soil was reached immediately below the foundation of the structure.

The mound is essentially composed of the remains of a brick structure and its debris of a single occupation, but the layers unfolded the story of how the building met its disastrous end (Fig. 4). But for one or two depressions on the surface said to have been formed by brick quarrying to construct a railway line passing through this ancient city site some 30 years ago and which had since been abandoned, each layer remained completely sealed by the successive one (Pl. VI). Above the ground level surrounding the building and on the floor of the structure is found a layer of charcoal and ashes which indicate that a big fire had consumed the woodwork of the building. Above this is the debris layer containing loose ashy mud-mortar and brickbats. This is sealed by another debris of bricks distinguished from the former by its compactness and seemingly fresh material. It is evident that the whole structure did not collapse totally on the outbreak of fire, but portions directly affected by it crumbled down instantly while hanging and unstable parts of the derelict gave way subsequently. Humus accumulation for a long period forms the topmost layer. In order to ascertain the maximum succession of layers and the depth of the natural soil at the same time, a row of squares passing through the highest point of the mound was first taken up and the section of this cutting was maintained to serve as a guide throughout the excavation.

The masonry building exposed at this site, constructed of well-burnt large-sized bricks, is rectangular on plan with a quadrangular projection from the middle of the east side (Fig. 5, 6; Pl. VIII, IX). The longer side from north to south inclines about 13° to the west of the magnetic north. The foundation of the structure goes $1' 1''$ below the ground level, being made up of four courses of bricks. Above the foundation lies the plinth $98' 6''$ by $34' 8''$, and $3' 6''$ high. The east projection measures externally $21' 11''$ by $14' 1''$. The plinth is very plain, rising vertically above the foundation without any mouldings or fillets. The walls rise $1' 8''$ away from the edge of the plinth. The floor plan is divided into ten rooms, *viz.*, one entrance hall on the east which fully occupies the projection, one long corridor hall (Pl. XI) occupying the eastern half of the main rectangle and eight square rooms to the west of the long hall. The exterior walls as well as the long wall dividing the main building into two halves, eastern and western, have a uniform thickness of $4' 6''$ while the partition walls between the small rooms are $1' 8''$ thick. The interior dimensions of the rooms (Pl. XVI)

are as follows: vestibule, $10\frac{1}{2}$ feet by 10 feet; long hall, $89\frac{1}{2}$ feet by $8\frac{3}{4}$ feet; each square room approximately 10 feet by $9\frac{1}{2}$ feet; in the fairly preserved parts of the building the middle long wall stands up to a height of 8 feet above the floor level.

The only exit of the building is provided in the east wall of the vestibule (Pl. V). The door in the opposite wall leads to the long corridor which is again connected with each of the small rooms by a large door. The building is well ventilated. The entrance room has one window each on the north and south sides, the long hall has one window at each end (Fig. 7, Pl. X) and six windows opening to the east, *i.e.*, three on the north and three on the south of the portico. The east elevation of the building (Fig. 8) is therefore perfectly symmetrical. Of the small square rooms the end rooms have two windows each, while the rest have one each opening to the west. All the windows having a width of about 3 feet lie 1' 9" above the floor level (Pl. XV).

The entrance hall and the corridor-room are paved with fine plaster but the small rooms are provided with brick flooring. The plaster from the walls have almost entirely flaked off, but from the patches that still remain (Pl. XIV) traces of whitewash and even yellow paint decorating the dados are visible. Other remarkable features of the building are two moonstones decorated with mosaic of white pebbles, one on each side of the doorway between the entrance hall and the corridor (Pl. XIX). The doorway of Room 8 is also provided with a small plain moonstone on the inner side with an apex shaped like the tip of a banyan leaf (Pl. XVIII). The northern-most room numbered 7 (numbering of rooms being made as they became exposed) also contained traces of another moonstone.

The careful study and correlation of fragmentary items of evidence which came to light in the course of excavation permit reconstruction of several features in the original work that might easily have been overlooked. Thus, it has been possible to ascertain the precise construction of the door-frames and the doors. In each doorway there were two wooden sills, the ends of which were carried into the walls and the brickwork actually built over them (Pl. XX). The sills were connected by two wooden beams placed parallel to the sides of the doorway and the threshold was levelled by brickwork and plaster. The door frame was fixed on this threshold leaving an edge of about 8" on the east side. The single-leaf door was kept in position by inserting into iron sockets (Fig. 83, Nos. 14, 15; Pl. LVI, b) the tenons of the door which were also covered with iron tubes. In each doorway a square slot 10" by 10" was left in the brickwork of the southern jamb immediately inside the doorframe. This was provided to accommodate a wooden beam or bar that could be pushed into it to fasten the door. It is apparent, therefore, that the single-leaf door was swung on the sockets from the opposite jamb and opened inwards into the room. Burnt iron nails of various sizes and iron strips found in abundance indicate that the doors were strongly built. Furthermore, these were decorated with iron bosses (Pl. LVI, a) about 3" in diameter which were fixed in the panels of the doorleaves by driving long nails through the centres. Of the several bosses or studs some were recovered with the fixing nails still intact. The latter being bent at the pointed end at the time of fixing, the portion which lay in the thickness of the door could be measured. Thus it is found that the wooden leaves have an average thickness of 3.1". The height of the doors could be gauged from the doorway of Room 6 which is left

unexcavated to preserve a few courses of bricks which, having sagged after the wooden lintel was burnt, indicate that the arch was built on the corbel system. No traces of any real or voussoir arch have been brought to light. The charred lintel of the door in Room 6 had dropped 4 feet below its original position but the brickwork of the arch is now supported by the debris which has completely filled the doorway (Pl. XVII). The height of this doorway measures six feet.

The structure standing on the plinth 3' 6" high was ascended by a flight of wooden stairs which led directly towards the entrance. Two parallel brick pavements 8 feet long, 1' 9" wide and 6 feet apart from each other served as foundations upon which the wooden staircase was set up. The higher end of the staircase rested on two slits on the edge of the plinth. Charcoal and ashes observed at the ground level and charred beams in those slits clearly demonstrate the existence of a wooden staircase. All round the building on the edge or projection of the plinth are also seen small slits about 5" wide, which pierce into the base of the walls, forming square holes approximately 3 feet apart from one another. As these do not pass through the entire thickness of the walls towards the floor level inside the structure, definitely they are not drainage outlets. But since burnt pieces of wood and ashes occur at the ground level all round the structure it may be inferred that a wooden verandah ran right round it, and the holes and slits were provided to fix the ends of wooden joists which supported its floor. However, no post-holes or remains of posts which should have supported the outer end of the verandah could be detected.

The structural defects of the building are seen in the weak bonds of the bricks (Pl. XIII) and the shallow foundation. But these are amply compensated by the hardness of the sub-soil, the thickness of the walls and the big size of the bricks.

No evidence was available to say about the nature of the roof of the structure. Judging from the narrow width of the rooms it is possible that these could have been spanned by wooden beams over which bricks were laid to form a flat roof. Observation of the strata, however, revealed that the building had an upper storey or a superstructure of attic rooms. This possibility could be inferred on the basis of the recovery of innumerable potsherds from the upper strata which, as already stated, are absolutely undisturbed. This is further supported by the occurrence at these levels of hard pieces of concrete likely to be the flooring material as distinct from the thin plaster from the walls, and also by pieces of plaster with pebble mosaic and a bevelled brick which formed parts of one or more moonstones on the upper floor. In spite of the great mass of debris which filled all the rooms (Pl. VII, a) besides heaping up outside the structure the inner walls still stand to a height of 6 to 8 feet above the floor level. This fact alone is a strong evidence of the existence of a superstructure. To crown all, further corroboration is available by the discovery of a rectangular brick platform at the south-eastern corner of the long corridor hall (Pl. XII). It measures 8 feet by 4 feet and is only 1 foot in height, and was completely covered up by charcoal and ashes. Innumerable pots, jars and cooking vessels being present in all the rooms, this platform obviously could not have been a hearth. No sanctum could either be located in this long corridor hall and as such the platform could

not have been used as an altar. In all probability, it must have served as a landing or foundation upon which was erected a wooden staircase leading to the upper storey.

Whatever may be the nature of the superstructure, that the ceiling or floor above the corridor hall had begun to sag even before the destruction of the building by fire is evidenced by the presence of three burnt wooden posts which must have supported the weak and overburdened portions of the structure directly above that room.

This building was probably used for residential purposes. The abundance of pottery of domestic use such as cooking vessels, bowls and storage jars, and the recovery of personal ornaments, *i.e.* beads of terracotta and semi-precious stones, an ivory (or bone) hairpin, toilet objects like kohl sticks, and the presence of a few terracotta hopscotches which are favourite playthings of children of all times, suggest the secular use of the building. Considering the great size of the structure, the number of objects found seem to be a poor representation of the cultural equipment of the occupants of the building. But this fact may also mean that the calamity did not befall suddenly and the imminent danger of enemy attack and subsequent conflagration could have spurred them to remove their valued belongings in time.

The plan of the building containing small cells may be compared with those of the monasteries at Nagarjunakonda in Andhra State, South India. There the monastic buildings usually comprise three or four wings enclosing a quadrangular courtyard. An exception is however found in the monastery at site 20 which has six small cells and a long corridor and anteroom.¹ The building at Beikthano site 2 resembles that monastic building on plan, and owing to its proximity to the stupa-like structure at site 3 this residential structure may be considered to have been built for use by Buddhist monks.

KKG 5

This site lies near the mid-point of the east wall of the rectangular enclosure within the western compartment of the palace area. It is a brick debris mound measuring 90 feet square and 4 feet high. On excavation only the basement portion of a brick structure was exposed (Pl. XXVII, b). The building is rectangular on plan, the main structure being 66 feet long EW, and 45 feet wide NS. The eastern end of the structure cuts the inner enclosure wall of the palace area, and the plan follows the orientation of the enclosure, *i.e.* the NS walls declining about 13° westwards. The main building is divided into four rectangular rooms running NS parallel to each other. The entrance is provided at the eastern end. Flanking the main building are two square rooms one each on the north and south. These lie close to the west of the enclosure wall and are 12 feet square (Fig. 11).

The structure stands freely on the ground without any foundation. The walls remain to a height of about 2 feet 6 inches and are broken at several points. Originally there was a brick floor of which patches are to be found. Stratigraphy

¹H. Sarkar, *Some Aspects of the Buddhist Monuments at Nagarjunakonda*. Ancient India No. 16, 1960 (pub. 1962) Pl. XLVIII.

shows that the building suffered damage and had undergone a phase of reconstruction, for an upper floor level 1 foot 6 inches high was paved with bricks, cutting the partition wall of the two western rooms. No traces of wooden harts or charred remains of them are found. As the size of the bricks used in the first and second phases of construction are the same it may be inferred that the lapse of time between the two phases was not very long.

Among the sherds obtained from this site are fragments of sprinkler vessels, decorated sherds stamped with floral designs and figures of birds and *hamsa*. A small pot 5 inches in diameter, was recovered in entire condition. It has a convex shoulder and a carinated body. The rim, 1 inch in diameter is featureless. A small hole is pierced through the shoulder which also bears four incised designs in zigzag (Pl. XLII, b).

From this site was also recovered a damaged clay figurine about 6 inches high. It has a head ornament and a necklace. The hands are folded forward to hold what looks like the lower portion of a vase. It has round eyes, a wide mouth and a thick nose with a high bridge. The portion of the figure below the waist bends backwards, and the belly bears marks resembling scales. The figure appears to represent a *kinnari* (Pl. LV, a).

KKG 7

This low mound lies to the south-west of KKG 5 inside the palace enclosure. Before excavation the mound measured 60 feet square with a height of only 2 feet above the ground level. The structure exposed here is the foundation of a quadrangular brick building 34 feet NS by 24 feet EW (Fig. 13, Pl. XXVIII, b). It has an antechamber 12 feet by 10 feet projecting on the east of the main building. The main structure is divided into two parts by a brick partition wall running NS, the eastern room being larger than the west. Each part is again divided into three smaller rooms. The whole structure therefore contains six rooms and one antechamber. No object of significance was discovered here. As this is the only brick building within the palace enclosure besides the larger one, KKG 5, it is likely that it was built for residential purpose though its limited space would not conveniently accommodate a large family. Obviously there must have been many more buildings of perishable materials built separately within the palace enclosure or attached to these brick structures.

KKG 17

This is also a very small mound situated in the northern sector of the city outside the palace enclosure. The discovery of a considerable number of clay beads and potsherds on the surface of the mound spurs the excavator to dig it. A rectangular brick structure 24 feet 6 inches by 11 feet was laid bare. It has a projection on the east measuring 10 feet by 5 feet (Fig. 27). The walls have a uniform thickness of 2 feet but only four courses of bricks are to be found. Two floor levels were discovered inside the structure.

Only two layers could be distinguished at this site (Fig. 28). Both contain brick debris but the top layer is composed of dark brown earth whereas the lower one is made up of yellow compact earth which is the filling before the

construction of the building. The occupation of the site is indicated by the presence of a large quantity of terracotta beads and sherds in the top layer and on the floor level. The absence of other household objects or personal ornaments within the building would suggest it to be a bead factory or workshop rather than a purely residential structure.

D. RELIGIOUS AND RITUAL STRUCTURES

Remains of structures likely to be Buddhist stupas are found at sites 3, 6, 14 and 18. There is another type of buildings which apparently could not have been used as living houses, but were either set up as commemorative structures or spacious congregation halls probably associated with burial rites. Such buildings were found at sites 4, 9, 11, 12, 21 and 24. Burial urns were found within or close to most of these types of structures and the entire absence of religious objects renders it difficult to specify definitely the functional purpose of these buildings. Structurally there is a close resemblance between these buildings and the Buddhist monuments at Nagarjunakonda, but it is unusual to encounter mass burial of urns within religious precincts especially within the city. Therefore the structures here also assume a sepulchral character. Hence the application of the term "ritual structures."

KKG 3

This mound (Pl. XXI, a) forming a triad with KKG 2 and KKG 4 lies about 50 yards east of KKG 2. After clearing the jungle on and around the mound (Pl. XXI, b) it measured 150 feet EW and 170 feet NS. It was 12 feet high above the ground level and its base was circular on plan. The northern side of the mound was steeper than other sides. The central portion of the mound appeared to have been dug up by treasure hunters long before the present excavation. The surface of the mound indicated that a brick structure lay under the debris and its plan round the depression was circular. A grid system of 15 feet squares was laid out for excavation and the main section cutting through the mound from North to South was maintained till the end of the excavation.

The structure exposed here is a cylindrical mass with four rectangular projections on the cardinal points. It is encompassed by two low concentric walls. The cylindrical body is made up of a shell of well-laid bricks, 4 feet thick, and a core of brick rubble. It has a diameter of 31 feet. The projections, 11 feet by 10 feet, contain filling of earth within brick walls 9 inches thick (Fig. 9; Pl. XXVI, b).

Vertical digging revealed that the main structure stands on the natural soil to a height of 10 feet. The projections, however, are only 9 feet high at the cylinder and slope down towards the ends to a height of 7 feet above the ground level (Pl. XXIII, a). The NS axis of the projections incline about 17 degrees westward.

The inner circular enclosure wall is 7 feet wide and has an internal diameter of 108 feet. The outer enclosure wall, 10 feet apart from the inner one (Pl. XXV, b) has an external diameter of 140 feet. These walls stand to a height

of 1 to 3 feet above the surrounding ground level and have no exits. But there is a pair of brick steps on each of the E, W and S sides to reach the top of the exterior wall (Pl. XXIV, a, b). The pair on the north seems to have been eroded by rain water which flows along the depression between KKG 3 and 4 during rainy seasons.

Stratigraphy shows that the structure was originally built freely above the natural soil. The main section of the digging depicts the simple formation of layers (Fig. 10, Pl. XXV, a). The top layer is composed of brickbats and mud mortar. It is 6 to 9 inches thick in the centre and 1 to 3 feet thick on the sides. But for a slight depression in the centre due to treasure digging the mound is not disturbed. Therefore the thick layer of compact yellow soil below the debris is the original filling before the destruction of the structure. This layer is divided into two parts by a thin sloping line of brick grits which meets the building near the mid-point of its height. The lower portion of the structure itself looks older than the upper half (Pl. XXII, b). Close to the cylindrical form where the southern platform projects there is a brick prop directly above the yellow soil ostensibly supporting the bulging circular wall of the main structure. (Pl. XXII, a). It is therefore evident that the building had undergone two phases of construction and soon after each construction it was covered with earth filling. Only a few feet at the top seemed to be exposed originally. The internal surface of the circular shell near the top is made up of well-laid bricks unlike the lower portion which merges with the core. It serves as a retaining wall on the top of the structure which apparently had no dome nor finial.

Though the cylindrical structure looks like a stupa, not a single religious object was found in it. However, from the gradient filling from the enclosure walls towards the main structure were recovered three symbolical Pyu coins and a few sherds stamped with auspicious marks. The plan of the building closely resembles the typical stupa base at Nagarjunakonda in South India, but here the projections (Pl. XXIII, b) are too high compared to those at Nagarjunakonda which are known as *ayaka* platforms and on which inscribed pillars are erected (Cf. Fig. 85, 87: Pl. LXV a, b). As the height of the structure was subsequently raised the surrounding level seemed to have been filled up so that the projections stand to an appropriate height, thus serving as offering platforms.

KKG 4

This is a small mound lying due north of KKG 3. A dry stream intervenes between the two mounds. The mound measures 60 feet square and is 4 feet high. On excavation the plinth portion of a square brick structure was exposed. It is composed of two square walls, the outer one enclosing a circumambulatory corridor and the inner one enclosing a square cell (Fig. 9, Pl. XXVII, a). The walls are 5 feet 6 inches wide and each side of the external wall is 47 feet long. The corridor is 6 feet 4 inches to 6 feet 8 inches wide and the internal wall of the cella is 14 feet long. The building stands to a maximum height of 3 feet made up of 12 courses of bricks. The remains of the structure which is built without any foundation below the ground level barely comprise the plinth and so the entrance is not traceable. On the steep southern side is a flight of narrow steps reaching the existing top of the wall.

From the earth filling and debris within and outside the structure were recovered fragmentary sherds, a few iron nails and a flat iron piece pointed at both ends. Sherds bearing symbols are interesting inasmuch as they are similar to those appearing on Pyu coins.

The cella could have served the purpose of a sanctum of a religious building or might have been used as a living room.

KKG 6

This small mound lies close to the west wall of the palace area. It was taken up to see if the inner fort wall has a bastion projecting on the west. But on excavation it was found that the structure, being 26 feet away from the enclosure wall, is not in any way associated with the palace area. The western portion of the structure has been eroded and what remains of the eastern portion the brick building is found to be a circular mass enclosed by a square wall (Pl. XXVIII, a). The diameter of the circle is 17 feet and the side of the square wall measures 42 feet in length and 4 feet in thickness. The building now stands to a height of 3 feet 7 inches above the ground level. It is built without any foundation (Fig. 12).

Two earthen urns were discovered below the earth filling between the western wall and the central platform. Similar structures were unearthed at sites 14 and 18.

KKG 9

The site lies about two furlongs south of the palace area. It is one of the group of mounds near a dried-up tank known as *Apyin thauk taw kan* (the outer royal tank for drinking-water). Having an elliptical shape the mound measured 135 feet NS and 120 feet EW. The top of the mound was 10 feet 4 inches high above the western ground level. There were two depressions apparently due to the nefarious act of treasure hunters. Before excavation it was overgrown with cactus plants and the surface was strewn with brick rubble. A grid of 15 feet squares were laid out and the main section running EW across the mound was maintained during the excavation.

The remains of a rectangular brick structure 84 feet NS and 49 feet EW was exposed (Fig. 15, Pl. XXXI, b). The walls are 4 feet 3 inches thick and their exterior sides are far more damaged than the interior faces so that the heights still standing are 2 feet and 4 feet 6 inches respectively. The NS axis of the structure is declined about 13 degrees westward.

The whole structure is a big hall without any partition. The entrance is on the north side. Three iron sockets and pieces of charcoal indicate that a wooden door was provided at the entrance. As the height of the exterior sides of the walls was reduced to about 2 feet it is not possible to ascertain whether windows were originally provided. The roofing materials were not found, but traces of eight huge wooden posts to support either the roof or the floor were discovered. The hall was filled with earth at the base after erecting the wooden posts. These posts having been consumed by fire, their places were

taken up by brickbats and mud mortar, so that the post holes appear well defined in the sections of the cuttings (Pl. XXXII, b). Four round post holes each 2 feet in diameter, lie in a row 8 feet away from the east wall and another row of four lie at the same distance from the west wall. The northernmost post of the west row was provided with a circular brick pavement round the base, 7 feet in diameter (Pl. XXXII, a).

On the internal sides of the E and W walls there is an upright slit against each post hole originally accommodating a square post. These are 6 to 10 inches square. The North and South walls also have two such upright niches facing the end posts of each row. Pieces of charcoal still remain in these niches.

The superstructure is lost to us. But the building had undergone a second phase of construction as evidenced by four regular courses of bricks above the debris in the southern portion of the hall. This apparently formed the base of a platform 28 feet square. Close to this platform were discovered bricks with moulded bands and panelled sides and bricks shaped like mango sprouts (ဆရံကင်း in Burmese architecture) (Pl. LI, a, b, c).

The rectangular wall of the building has a low base projecting about 1 foot 6 inches externally. Seven feet away from this base there is a low retaining ridge round the building but only the western side retains its full length whereas traces remain on the east. The north and south sides have disappeared.

The main section running from east to west (Fig. 16) cuts across the highest point of the mound and presents the maximum number of layers which are defined as follows :—

(1) The topmost layer composed loosely of brickbats and sand, 6 inches to 13 inches in thickness.

(2) A compact layer of brick rubble with a line of charcoal at the base in some sectors. It is 12 inches to 18 inches thick. The impact of this layer forced the exterior sides of the walls out of plumb.

(3) This layer 5 to 6 inches thick occurs outside the structure. It was formed by the deposit of brown soil and brick grits from the time of construction till the collapse of the building.

Inside the structure there is a thick layer of yellow compact earth underlying layer 2. This was purposely filled up after erecting the round posts.

(4) This layer is rammed earth and brick grits at the base of the structure. The walls stand freely above the natural soil but the slight depressions on either side are filled with grits in the manner of filling foundation pits.

(5) The natural soil is compact yellow earth.

Two sizes of bricks were used in this building. One size measures 20" × 10" × 3" and the other 10" × 9" × 3".

Forty earthen urns, 27 outside the structure and 13 inside, were discovered in the filling layer. Of those outside the structure 17 were found in a row close to the projecting base of the east wall in the northern sector.

Despite the huge size of the structure only a small quantity of pottery was unearthed. Those recovered are lamps or shallow cups, sherds of rouletted

ware, fragments of bowls, sherds of red washed pots, cooking vessels and a few pieces bearing stamped designs.

The plan of this building resembles that of KKG 11. Apparently it was not built for residential purpose. The large hall with probably an altar near the south end might have served as a congregation building for the performance of rituals connected with the secondary burial of urns.

Mound KKG 10 lying north of KKG 9 was partially excavated. The plan of the ruined structure is gauged to resemble that of KKG 9 and burial urns were to be found. These two sites were excavated almost simultaneously but digging at site 10 was suspended due to heavy work at the other site. In the following season attention was paid to the northern sector of the city and work at this site was not resumed.

KKG 11

This site lies about 500 yards north-east of KKG 3 and 4. The mound measured 135 feet EW and 90 feet NS; the highest point was 6 feet 6 inches above the ground level. Brick rubbles on the surface indicated that the remains of a brick structure lay beneath the mound. Digging in squares of 15 feet uncovered a rectangular structure 88 feet EW and 48 feet NS (Fig. 17, Pl. XXX, a). The west wall is 4 feet wide but the other sides have a thickness of 5 to 6 feet. On the interior sides where foundation trenches are seen, up to 16 courses of bricks exist whereas on the exterior only 5 to 10 courses remain directly above the ground level.

In the eastern half of the quadrangle there is a brick platform standing to a height of 4 feet. Its eastern side measures 20 feet but the plan recedes westwards in three stages so that the west end measures 9 feet 10 inches. The east-west axis has the same length as the east side. The platform stands on a level about 1 foot higher than that of the enclosing walls. The floor inside the structure is not the original ground level. As traces of a cross wall and charcoal are found below the floor level it may be surmised that an earlier structure existed on the same site.

The inner sides of the walls have square vertical slots at regular intervals of 14 feet. Traces of post holes are also exposed in two rows, each of which is parallel to the north and south walls respectively; but the holes are not in line with the square slots of the walls.

Round the structure, except on the west side, there is a low retaining ridge of bricks laid on ends and 6 feet apart from the walls. The west wall is heavily damaged and in the absence of the ridge and following the plan of KKG 9 to which it closely resembles it may be gathered that the entrance was on this side.

From this site, within and outside the structure, were recovered altogether nine entire burial urns similar to those found at KKG 9. But for a few fragments of terracotta bangles this site yields no minor antiquities. The nature of the brickwork and the presence of clay urns of exquisite designs indicate that this structure is also a part of the homogeneous cultural activity of the ancient city.

KKG 12

The mound lies 60 feet west of KKG 11. The buried brick structure here represents an altogether different type of architecture from those brought to light within the city. It is square on plan, each side measuring 34 feet, with a stepped projection on the east side, approximately 12 feet square (Fig. 18, 19, Pl. XXXIII, b).

Traces of an opening exist on the south wall but the structure does not seem to be a hollow type originally. The walls now standing to a height of about 4 feet are elaborately designed on the exterior (Pl. XXXIV, a, b). The lowest six courses of bricks are laid flat in the usual manner resting on the ground level. Over the top course of this series stands a taller course of bricks on edges with the upper ends rounded smoothly and uniformly. The next course which has to be necessarily indented so that the curved moulding below could be properly exposed is the usual flat layer. The overlying course comprises two types of bricks placed alternately on their edges. The first type has a gadrooned end, the upper part of which being smaller than the bottom part and a little retracted. The second type is the common plain brick which is indented between the decorated bricks.

The pattern thus formed is a series of protruding beaded bricks interspersed with small recesses. This course is topped by another flat course and the decorative pattern is repeated in succeeding layers.

Eighty burial urns of various types and in different states of preservation were recovered around the structure. These were found in the same layer of dumped earth and were apparently buried at the same time (Pl. XXXV, a).

Close to the projection on the east was found a skeleton which is flexed and cramped. Being mingled with hard clayey soil it is not practicable as yet to clean it and give preservative treatment for the purpose of anthropological analysis.

KKG 14

The excavation at this site, 100 feet SW of KKG 12, laid bare a square brick structure enclosing a cylindrical core. The northern wall has an oblong projection. Having a diameter of 14 feet the cylindrical core stands to a height of 5 feet 4 inches above the natural soil, comprising 18 courses of bricks. Each side of the enclosure walls measures 28 feet in length and 3 feet in thickness. The projection is 16 feet by 12 feet (Fig. 21, Pl. XXXVI, a, b).

The cylinder and the space enclosed by the walls were originally filled with brickbats and compact earth. Beneath the humus layer and the debris layer outside the structure is the third layer composed of yellow compact filling in which a stretched human skeleton was found close to the south wall, and two groups of human bones were recovered near the north wall. These were associated with five funeral urns. From the anatomical observation of the stretched skeleton it is learnt that the bones are of a man of above 25 years of age.

It is evident from the stratigraphy (Fig. 22, 23) that the urns and the bones were buried in one layer at the same time and this is the second instance at Beikthano where human bones were given a secondary burial together with

urns within the city. The absence of religious objects here and the definite association of the structure with the burial of urns and human skeletons strongly suggest the sepulchral nature of the monument. But as already stated there exists a strikingly analogous type of monument at Nagarjunakonda in the form of *uddesika* stupas. They have a square base or platform on which lies the drum culminating in a dome, as indicated by the stone sculptures decorating some of the bigger stupas.

The structural activity at Beikthano was undoubtedly influenced by the Buddhist builders of Nagarjunakonda and if it was not for the peculiar burial custom characteristic of the Beikthano monuments they could be regarded as Buddhist stupas, the prototypes of which are found at Nagarjunakonda.

KKG 18

Outside the fort walls on the north, about 320 yards NE of KKG 13, there is a group of mounds known to the local people as *Odeintaung* (Potter's mound)—probably corrupted from *Otheintaung*, a mound of hundred thousand pots. The central mound is the biggest and is surrounded by five smaller ones. We have seen that burial of urns was not confined to sites outside the city but that substantial structures within the fort also provided burial space round their base. This big mound was therefore taken up to confirm the converse theory that there are substantial structures also outside the fort where urns were buried close by.

The digging exposed a brick structure (Fig. 29, Pl. XXXIX, a) of the same type as KKG 14 but of a little bigger size. The side of the enclosure wall is 34 feet 6 inches long and 4 feet 6 inches thick. The cylindrical core has a diameter of 16 feet and up to 21 courses of bricks still remain. The projection faces east and has 3 steps at its end.

The section of the mound revealed that the destruction layer overlies a layer of filled earth within the enclosure walls, whereas outside the walls the debris layer is very thick and overlies a compact layer of rammed yellow soil (Fig. 30). In the latter were discovered eight urns and a heap of human bones in a bad state of preservation.

Structurally assuming the form of a Buddhist stupa this monument also appears to have been set up ostensibly for the traditional burial rites.

KKG 24

Owing to the extent of the city site it is not feasible to excavate the area totally. But as the northern sector had been more or less thoroughly explored it was felt necessary to take up another site south of the palace area to counterbalance the operations within the fort. Thus site 24, lying 100 yards NW of site 9 was excavated in the last season.

Being a low brick mound the structure exposed here remains to a height of no more than 6 courses of bricks. The plan is a square, each wall measuring 22 feet 9 inches in length and 2 feet 5 inches in thickness. A portion of the original brick flooring, 22 feet 9 inches by 3 feet still covered the southern sector of the building (Fig. 36).

Directly above the natural soil is a layer of clayey earth round the base of the building (Fig. 37) in which were embedded altogether 9 funeral urns. It is not possible to ascertain the nature of the superstructure but from what remains of its base it may be surmised to be a smaller congregational hall associated with the typical sepulchral rites.

E. MISCELLANEOUS

KKG I

Numerous small mounds outside the city could be identified as urn graves from sherds and calcined bones which appear on the surface as the mounds are washed by rain water and occasionally disturbed by human misbehaviour. One such mound (Pl. I) north of the city was excavated during the first season. Like all other burial mounds in the area it is remarkably low, being not more than $3\frac{1}{2}$ feet above the ground at its highest point. It occupies an area approximately 48 feet EW by 24 feet NS. As deep digging was not necessary, 8 feet by 8 feet squares were laid to cover the whole mound and the cutting lines were fixed 6 inches from each side of the squares. The one-foot wide baulks were gradually removed as digging progressed but the main section of the mound running east to west was retained almost till the end of the excavation.

The digging revealed a small brick structure (Pl. II, a, b) composed of four parallel rows of low walls 6 feet to 8 feet apart, each having a width of $1\frac{1}{2}$ feet, the average size of bricks used being $18'' \times 9'' \times 3''$. Short walls placed at right angles to these longer ones originally seemed to have formed a number of enclosures. As the northern and southern ends of the mound had been much disturbed by cart traffic only one such square remains intact. The plan of the exposed brickwork is therefore a square in the middle bounded by a long rectangle on the east with the southern short side missing, and by traces of other quadrangles whose sides project at right angles from the walls of the square on the north and west. The maximum number of courses of bricks available is six. Immediately below the level of the lowest course is the natural soil which is yellow clayey earth. Excavation revealed that the urns were placed within the enclosures and covered up by the infilling, and no indications of any sequence or orderly disposition were apparent. The rectilinear enclosure contained four entire urns and the disturbed square on its west contained two entire ones and one fragmentary pot while the complete square yielded none. The urns are of unglazed and unslipped common red ware, with medium fabric and texture but of different shape and sizes. But for one simple bowl they are decorated with mouldings and notches. Three of them have knobbed lids intact while the bowl has a simple lid.

Charred pieces of bones and ashes are not the only contents of these urns. The admixture of clayey earth filled them to the brim and the surfaces of the contents often bear impressions of the lids. The urns are badly cramped and crushed by the weight of the infilling which covered them and would have disintegrated them had it not been due to the earthy contents. Even then they did not retain their full shape once they were removed from their original positions.

Due to the same reason no earthen urn was preserved to us from excavations at Śrikṣetra. A few objects discovered in the fillings are two iron nails of medium size, two terracotta sling balls or marbles and one irregularly-shaped terracotta hopscotch. Their exact association with the urns could not be ascertained, so also are two pieces of fossilized wood. Most probably they came to be buried incidentally with the earth filling, precluding them to be identified as grave goods.

Archaeological explorations at Śrikṣetra had firmly established that urns graves are characteristic of Pyu culture. We know well that the Pyus burnt their dead and usually buried the cremated remains in stone and earthen urns, the former being reserved for royalty or nobility. "They buried the ashes, not only in the hill sides but also in the plains, on brick platforms finally covered up with earth, in isolated graves and in extensive cemeteries" (*A.S.I.* 1924-25, p. 106). Nowhere else do we find this peculiar custom having been followed by other races in later times. Therefore the occurrence of several urn graves around Beikthanomyo indicates the cultural relationship involved between this site and Śrikṣetra.

KKG 21

This site lies near the big lake, about 700 yards SW of the palace site. It was vaguely known as *Shwegyingon* (lit. Gold sifting mound), but by further verification with the local elders it was found to have been called "Kyaung-gyi-gon" (Big monastery mound). The surface was strewn with small pieces of iron, plain stucco objects of various shapes and sizes, minute pieces of potsherds and brickbats.

The highest point of the mound is 5 feet above the ground level, but on excavation only a few courses of bricks, being the base of the walls of a fairly big structure, were found. An accurate plan of the building could not easily be worked out from the ruins at this site as the mound appeared to have been badly ravaged by treasure hunters. Roughly speaking, the structure consists of a main rectangular hall and an antechamber on the north side (Fig. 32). From the remains of the walls the original dimensions of the hall and the antechamber would approximately measure 44 feet by 28 feet, and 25 feet by 15 feet 8 inches respectively. The building was enclosed by a brick wall at a close distance but only the south wall and a small portion of the north wall are to be seen.

The size of bricks used in this building is quite small ($15 \times 7 \times 2\frac{1}{2}$ inches) compared to that of all other structures within and outside the city. No urns were found, but the most peculiar feature which distinguishes this structure from the rest is the discovery of a large number of stucco objects in the destruction layer. Many pieces of these are ornately designed and are certainly architectural decorations which once adorned the building (Pl. LVIII-LX). Some pieces are similar to those decorating the monuments at Pagan. Among the pottery also many fragments of sprinkler vessels of Pagan type were recovered. That this site was occupied many times till recently is evidenced by the presence of a modern well about 68 feet SW of the mound. The ruins now unearthed are therefore later than the first city complex and may be assigned to the 11th-13th century A.D.

KKG 22

This site is a depression in the NW sector of the palace area known as *Thauktawgan*, Royal Drinking-water Lake. A trench was cut across it from north to south to find out if it was the source of water supply to the citadel. Only two layers were found in the section of the cutting, the top one being slightly loose dark grey earth and the lower one yellow compact earth. As no silt deposit was found it may be inferred that it had long since ceased to be a perennial lake. (Fig. 22).

Bricks

At all the sites, except KKG 21, large-sized bricks were used for walls and flooring. Of this group the largest is $20 \times 10\frac{1}{2} \times 3\frac{1}{2}$ inches and the smallest $17\frac{1}{2} \times 8\frac{1}{2} \times 2\frac{1}{2}$ inches. The majority belongs to the average size of $19 \times 9\frac{1}{2} \times 3$ inches as in Sriksetra. At KKG 21 which belongs to a later period of occupation the bricks have a conspicuously small size of $15 \times 7 \times 2\frac{1}{2}$ inches. For steps and low enclosure ridges bricks rounded at one end were used. Numerous bricks bear on their top designs executed before firing by moving two or three fingers in straight lines and curves. (Fig. 80). A few bricks have figures which look like Pyu numerals, a very common feature of the bricks from Sriksetra. Accidental foot impressions of a man, a child and a dog were found on three bricks. Entire bricks were usually employed in wall facings whereas half broken bricks and brickbats were used in making the core of the walls. In order to ensure that each brick would be well baked paddy husks and chopped hay were mixed with clay in the process of moulding and are thus seen embedded in broken pieces.

III. THE POTTERY

Stratigraphy shows that the mounds were formed by the debris of the crumbling structures and all the sites except KKG 21 belong to the same cultural period. The main cultural period is therefore named Period I of Beikthano and the later one as Period II.

The bulk of pottery belonging to Period I comes from site 2, but entire earthen urns occur at the burial site KKG 1 and other ritual structures. Some of the urns with elaborate decorations, miniature pots, lamps and shallow bowls are handmade, but the majority of the pottery is generally made on the fast wheel as indicated by the parallel ridges and fine concentric striations on the outside surface. The pottery is generally well-baked except in a few instances of imperfect control of firing.

Storage jars, spouted vessels, cooking vessels and shallow bowls are definitely domestic wares, but numerous fragments of plain bowls and decorated pots presumably belong to funerary urns. About ninety per cent of these are common red ware of medium fabric and texture, the surfaces of which are rarely covered with slip or wash. Bowls, sprinkler vessels and miniature pots are generally made of finely levigated clay and finished with red slip.

Sherds decorated with stamped or incised patterns and figures occur in a very small quantity and only one sample of yellow ochre-washed sherd and two specimens of black-on-red painted sherds were obtained. A few pieces of thin, fine red sherds bear textile impressions on the inner surface.

A small percentage of the pots have incised patterns which seem to have been applied in the same manner as on the rouletted black ware discovered in Arikamedu near Pondicherry on the east coast of South India. The latter is closely associated with a particular type of Roman pottery and is assigned to 1st century A.D. If this technique did not owe its introduction to foreign influence but had evolved locally it would naturally indicate the surprisingly advanced stage of culture for the period of Beikthano I. An analogous type of pot with a pouch-like bulge below the spout is found in early Buddhist sites of India.

Among the stamped sherds were fragments bearing small figures of a *śrīvatsa*, a *kalasa* pot and a pair of fish which, together with various other symbols, are commonly regarded as marks of a great man by Hindus, Jains and Buddhists. It is noteworthy that the *śrīvatsa* symbol is the main representation on the symbolical coins found at Beikthano and the Pyu sites of Śrīkṣetra and Halin.

The burial urns are of unglazed and unslipped common red ware, with medium fabric and texture. Plain bowls were also used as burial pots, but many decorated urns have peculiar designs. The sides of the burial urns are usually thin for their sizes and are hardly strong enough to bear the weight of the contents. Burial urns, being one of the main characteristics of Beikthano culture, were found in and around ritual structures at site Nos. 6, 9, 11, 12, 14, 18 and 24, apart from the burial mound. Most of these could not be retrieved in entire form as the pots were already cracked or broken even before excavation. But it is possible to prepare measured drawings of undisturbed urns soon after exposure. Almost all the burial urns were provided with lids as evidenced by the presence of rim flanges in the types other than bowls and high-necked vessels, and the recovery of 49 entire lids among which are those placed on some of the two latter types. A distinguishing feature of the lids is the upturned flange enclosing the central knob. In many instances these have v-notched edges.

The distribution of elaborately decorated urns at the ritual sites and grave mounds, and the occurrence of identical types evidenced the contemporaneity of the buildings. Some types of the domestic wares continued to be of use in later times, such as the round bowl, shallow lamp, carinated cooking vessel and sprinkler vessel. The latter is a very common ware of Pagan period, 11th—13th century A.D. The alms-bowl invariably used by Buddhist monks today and the lamps still used at the lighting festival in many parts of the country indicate the persisting popularity of the simple but useful pottery types. The shape of ridged cylindrical vessel is also preserved in our betel boxes of lacquer or metal.

The greatest number of sherds occurred within the building at site No. 2. After discarding small plain fragments which are not useful for determining the forms of the full pots, the predominant types collected are : 1080 sherds of large, round storage jars or water pots, 320 sherds of carinated cooking vessels, 360 sherds of incurved, round bowls, and 300 shallow dishes or lamps.

The specimens of urns and types of pottery are listed below:

Burial Urns

Fig. 40

Type 1.—Plain incurved bowl with slightly bulging sides, faceted edge. (KKG 12).

Type 2.—Incurved bowl with a slightly flat base and faceted edge; has a shallow lid with flat top, rounded shoulder and featureless rim. (KKG 12).

Type 3.—Similar to type 2: with a lid having a slightly upturned flange, angularly thickened rim and angular ridge below the flange. (KKG 12).

Type 4.—Deep hemispherical bowl with featureless rim; has a plain lid of medium depth and rounded shoulder. (KKG 12).

Type 5.—Plain hemispherical bowl with a deep lid having prominent ridges and almost round knob with pointed top. (KKG 12).

Type 6.—Plain incurved bowl; the lid has three ridges decorated with notched patterns and a cylindrical knob rounded at the top. (KK 9).

Type 7.—Hemispherical bowl with narrow mouth and slightly ledged rim; at the shoulder between thin ledges are two ridges incised with chevron-like notches: the lid is in the form of a plain bowl of medium depth. (KKG 12).

Type 8.—Ring-footed, hemispherical bowl with externally slightly ledged rim; the shoulder has incised vertical lines above a band of beaded ridge between two concentric incised lines. The lid is in the form of an inverted ring-footed bowl of medium depth. (KKG 12).

Type 9.—Wide mouthed bowl with slightly rounded base, slightly flaring sides and inturned rim. (KKG 12).

Fig. 41

Type 10.—Urn with flared rim, short concave neck, rounded waist and flat base. (KKG 1).

Type 11.—Short-necked, globular pot with externally beaded rim; incised with long oblique lines above the base and inclined rows of short oblique lines in opposite direction on the body. (KKG 21).

Type 12.—Similar to type 11: but this pot has a shorter neck and slightly bulging body, and a notched band at the shoulder. (KKG 1).

Type 13.—A carinated, prominently ledged vessel with a short neck and externally beaded rim; the body below the carination is globular and is decorated with seven horizontal bands of short, oblique, incised lines (or shallow notches): has a lid of shallow inverted bowl. (KKG 12).

Type 14.—Vessel with slightly flaring sides, almost flat base, almost horizontal shoulder, short, vertical neck and externally beaded rim. (KKG 12).

Type 15.—Similar to type 14, but this is ring-footed and has a short concave neck; with a deep and wide lid to rest on the shoulder, the sides of the lid having a slight concave bend. (KKG 12).

Type 16.—Ring-footed vessel with globular body, short, concave neck and externally beaded rim. (KKG 12).

Type 17.—Similar to type 16, but squatter due to the short shoulder; has a band of notches round the neck: with a lid of the type of inverted ring-footed bowl. (KKG 17).

Fig. 42

Type 18.—Wide mouthed cylindrical urn with flat base, vertical rim, and a slightly slim waist; it has a flange below the rim and two bands of ridges, one below the flange and the other above the base. A lid (incomplete) rests on the flange. (KKG 18).

Type 19.—Similar to type 18, but the sides are almost vertical. It has a flange below the rim and another just above the base which is convex. There is only one band of two ridges below the flange. (KKG 9).

Type 20.—Urn, wide mouthed and straight-sided; with a flange below the rim and at the base; straight featureless rim; ridges at upper and lower ends of the side; slightly convex base; vertical rim internally chamfered. (KKG 9).

Type 21.—Urn similar to type 20, but with slightly inclined sides and a prominent flange below the rim and at the base; convex bottom is more pronounced. (KKG 9).

Type 22.—Urn similar to 21, but with two ridges at the waist. (KKG 9).

Type 23.—A variant of wide mouthed cylindrical type; it has a perfectly flat base and slightly tapering sides. The lid which fits on the upper flange has simple vertical lines, but near the roof which is broken a prominent flange protrudes horizontally and supports an upper rim which is v-notched. (KKG 12).

Fig. 43

Type 24.—Urn, wide mouthed, with vertical rim internally chamfered; has slightly inclined sides and a broad neck; a flange below the rim and at the base; the neck is ridged; the waist is slightly convex and a ridge encircles above it: the base is also slightly convex. (KKG 9).

Type 25.—Urn, wide mouthed, featureless rim, slightly convex waist; a flange below the rim; ridges below the short, wide neck and above the base; ring-footed flat base. (KKG 9).

Type 26.—Urn, incomplete; upper portion similar to type 25 with a flange and a notched ridge at the waist. (KKG 9).

Type 27.—Wide mouthed, concave-sided rim, with a slightly convex base and incurved rim. It has a thick flange below the rim and a smaller one above the base; a ridge in the middle of the body and another one above the bottom flange; a thin groove round the upper half of the body: has a bowl type lid with externally beaded rim. (KKG 12).

Type 28.—Medium mouthed, tall-sided, slightly tapering urn, with convex base, vertical rim and a flange below the rim; a prominent ridge at the upper and lower ends of the side. (KKG 11).

Type 29.—Medium mouthed, tall sided urn, with very slightly convex profile and almost flat base; has a flange below vertical rim and at the base. The tall lid has vertical rim and flaring sides topped by a flat roof with pointed flange. (KKG 12).

Type 30.—A variant of type 28 with a mild carination and obliquely-cut flange near the base. (KKG 9).

Type 31.—A variant of type 28 with straight, taller sides and pointed flange at the base; two ridges below upper flange and four ridges above the lower flange: has a lid with an up-turned, slightly flaring flange which is v-notched. The roof of the lid is broken. (KKG 12).

Type 32.—Similar to type 31 but more slim. The lid has a conical knob. (KKG 12).

Fig. 44

Type 33.—Tall, medium mouthed urn with gently sloping concavo-convex sides and a vertical rim above a small flange. At the base is another flange with scallop moulding. (KKG 12).

Type 34.—Medium mouthed pot with vertical rim and a pointed flange below it; has plain gently sloping sides with a slightly bulging waist and almost flat base. (KKG 11).

Type 35.—Urn similar to type 33, but the flanges are grooved; has a lid with up-turned flange and a round knob pointed at top. (KKG 11).

Type 36.—Medium mouthed urn with multi-ridged neck, a flange to place a lid on, a vertical rim, and a convex base with a flange above it. (KKG 9).

Type 37.—Lower part of a broken urn similar to type 36, but with a convex waist between a ridge and the basal flange. (KKG 9).

Type 38.—Upper part of a medium mouthed urn. The inclined sides are straight but incomplete. Below the vertical rim is a notched ridge between two flanges. It has a wide lid with concavo-convex sides, a vertical rim, and a notched ridge below a simple one in the middle of the body. There is also another ridge near the upper end. The top is broken. (KKG 9).

Type 39.—Urn, medium mouthed, short necked, with low vertical rim above a pointed flange, slanting sides, convex waist and almost flat base; angular ridge at the neck and bevelled ridge above the waist. (KKG 11).

Type 39a.—A variant of type 39 with a grooved flange below the rim and a moulding at the waist. No ridge at the neck. (KKG 14).

Type 40.—A variant of type 36. The lower part is similar to type 37, having a convex waist. The basal flange is grooved and the ridges at the neck and above the waist lie between deep grooves. The upper portion of the neck is ledged. The lid has a vertically up-turned flange with a grooved flaring rim. The knob is damaged. The roof has three concentric ridges. (KKG 9).

Fig. 45

Type 41.—A variant of type 40 with multi-ridged neck and waist which are almost vertical. The portion of the body above the waist is bulging. It has a flange below the high vertical rim and another at the base. (KKG 9).

Type 42.—Similar to type 35 but with a well-defined neck. The lid has an externally beaded rim and a flaring flange with v-notched edge; the knob is round but pointed at the top. (KKG 11).

Type 43.—Urn with short concave neck, straight slanting side and carinated waist. A flange below the vertical rim and at the carination. The base is almost round. A scallop moulding at the neck and three ridges in the middle of the body. (KKG 11).

Type 44.—Similar to type 42, but with three ridges at the neck and one at the waist. The basal flange is obliquely-cut. The lid has incurved sides and flaring flange; the roof is broken. (KKG 11).

Type 45.—Similar to type 44, but with a vertical waist ornately decorated with grooves and ridges with square notches. The concave side has a notched ridge. The lid has incurved sides and low v-notched flange. The roof is broken. (KKG 9).

Type 46.—A variant of type 45. Both the neck and waist are decorated with a notched band between ridges. The lower portion of the waist is convex. The lid has a grooved ridge the lower part of which is notched. The vertical flange is v-notched at the edge. The knob is broken. (KKG 14).

Type 47.—Urn with straight slanting sides and a short bulging waist; three wide ridges below the vertical rim and three narrow ridges above the waist. The base is convex and the flange above it is pointed. The lid is deep and wider than the mouth of the pot. It is ledged and ridged at the shoulder; has a flange with everted rim and a conical knob. (KKG 9).

Type 48.—A variant of type 47. Urn, high necked, with long vertical upper side, short rounded waist, a ridge at the shoulder, waist and base; a decorative band of panels enclosed by bordered strokes between two ridges below the rim. It has a knobbed lid with ridged convex side, and a flaring and projected flange round the knob. (KKG 9).

Type 49.—A variant of type 47. The waist is divided by a ridge into a convex lower half and a gradually sloping upper half. The vertical side is short; three wide ridges at the neck: has a deep bowl-type lid to rest on the flange below the vertical rim; the lid has a low flaring flange and a knob with pointed flange and conical top. (KKG 11).

Type 50.—Urn with concavo-convex sides. The top portion is broken; a beaded ridge round the waist and two similar bands divided by low ridges above the base. (KKG 9).

Type 51.—Urn with long vertical neck and truncated round body (having segmental sides and a perfectly flat base); a grooved flange below a short vertical rim, a notched band between ridges at the neck; faint ridges at the shoulder; a pointed flange at the base. The lid has incurved sides and a v-notched vertical flange above a prominent ridge. The body of the lid is incised with a scallop band. (KKG 12).

Fig. 46

Type 52.—Medium mouthed, short vessel with slightly convex waist, similar to type 39. A bevelled flange below the vertical rim and a similar one at the base which is slightly convex. (KKG 14).

Type 53.—A variant of type 52 with perfectly flat base and prominently convex waist; has only one pointed flange below the high and slightly inturned rim. (KKG 12).

Type 54.—A variant of type 50. The basal flange is grooved. A prominent flange between the rim and ridged neck. (KKG 9).

Type 55.—Short necked vessel with bulging waist and slightly convex base. A prominent flange between incurved rim and ridged neck. The basal flange is pointed. (KKG 9).

Type 56.—A variant of type 55 with multi-ridged neck; alternating bands of beaded and ridged mouldings between the base and the bulging body. (KKG 9).

Type 57.—Urn with concavo-convex sides and ridges at the waist and above the flanged base. Below the vertical rim is a wide ridge and a scalloped band. Vertical loops moulded at regular intervals are attached to the ridge with the upper round end and to the edge of the scallop band with the lower end. (KKG 9).

Type 58.—Flat-based urn with concave side and short convex waist; grooved flange below incurved rim and ridges at the waist and above base. It has a deep lid with incurved sides and scalloped band; a flaring flange with slightly incurved rim; a conical knob with an upturned flange at the base. (KKG 12).

Type 59.—A variant of type 58 with a slightly convex base and a scalloped moulding at the waist. (KKG 12).

Type 60.—Urn with medium mouth, inclined sides and slightly convex base; angular flange below the rim and at the base; ridge at the waist which has vertical incised lines; a small notched band above the waist and a scalloped low moulding at the neck. (KKG 18).

Type 61.—Similar to type 54. The base is almost flat. The waist is decorated with two bands of cross-hatched ridges between two bevelled flanges. A pointed flange below a vertical rim and only one ridge at the neck. (KKG 12).

Fig. 47

Type 62.—A variant of type 61: has a prominently convex waist and two bands of cross-hatched ridges. The basal flange as well as the one above the waist are obliquely-cut. The lid also has a cross-hatched moulding above which rises a flaring v-notched flange. The roof is broken. (KKG 12).

Type 63.—Urn, medium mouthed, with short ridged neck, globular body and flat base; a flange below the vertical rim; a ridge at the waist and above the base.

Type 64.—A bulging globular pot with a short neck decorated with two bands of cross-notches between ridges; a prominent flange below vertical rim. The lid is decorated with two scallop mouldings and has a short, slightly out-turned, v-notched flange. (KKG 9).

Type 65.—Urn with globular body, ridged concave neck, a flange below the vertical rim and at the base, slightly convex bottom. (KKG 9).

Type 66.—A variant of type 65 with grooved basal flange and a wavy moulding at the waist. The shallow lid has a scalloped ridge and a flaring flange with splayed rim. The roof is broken. (KKG 9).

Type 67.—A variant of type 66 with a longer neck having only two ridges set apart. The waist moulding has a ridge below it. (KKG 9).

Type 68.—A variant of type 66 with two ridges at the waist and a ring-footed base. (KKG 9).

Type 69.—Urn with almost rounded waist and base, vertical neck and a horizontally chamfered, wide, gradual flange below short vertical rim: decorated with faint grooves at the neck, two ridges below the waist; incised s-curves above the neck and slanting loops at the waist. The lid has a conical knob and a band of moulded scroll on the upper side; two concentric rings of spurs on the roof of the lid. (KKG 1).

Type 70.—Urn with a vertical waist, having carination at the waist and base, which is rounded: has short neck and inclined sides: decorated with two ridges of hatched beads at the waist and a similar ridge or flange below the vertical rim. (KKG 1).

Type 71.—Urn with slightly concave, short neck, bulging body and convex vase. A flange below the rim and at the base : a grooved flange at the waist, above which are two notched bands. Between the basal flange and the waist flange is a band of incised vertical lozenges. There is a scallop moulding at the neck. The bowl-type lid also has a similar moulding. The lid has a high flaring flange with v-notched rim and a conical knob. (KKG 1). (Pl. XLI b).

Fig. 48

Type 72.—Medium mouthed vessel with convex waist and inclined sides, pointed flange below a beaded rim, slightly convex base : two notched ridges at the neck and another above the basal flange. The lid is convex sided with two external ridges at the rim and a notched ridge at the base : the roof and flange are broken. (KKG 12).

Type 73.—Similar to type 72 but with a bulging waist ; flange with scallop moulding below internally chamfered vertical rim ; notched basal flange. (KKG 12).

Type 74.—A variant of type 73 with multi-ridged neck. (KKG 9).

Type 75.—Similar to type 74 but with bold flanges and prominent ridges at the narrower neck. (KKG 24).

Type 76.—Squat urn with short concave neck and convex sides ; a grooved flange below the vertical rim : the neck is decorated with a scallop moulding and two ridges ; a pointed flange at the convex base. The lid has slightly oblique sides and featureless rim ; with an out-turned flange v-notched at the edge ; broken roof. (KKG 12).

Type 77.—Similar to type 76 but with almost flat base and three wide, low ridges above basal flange. The deep bowl-type lid has incurved sides and a featureless rim : ornately decorated with a beaded ridge, two scallop mouldings and two notched ridges : the knob has a concave neck and a flange below the pointed top. (KKG 12).

Type 78.—A variant of type 75 with three ridges at the waist. (KKG 9).

Type 79.—A variant of type 76 with shorter neck and bulging waist. The rim flange is pointed and the basal flange bevelled : one scallop moulding at the neck and another above the waist, with a prominent ridge between the two. (KKG 12).

Type 80.—Medium mouthed urn with short convex waist and concave sides tapering towards the neck ; a scallop moulding with ridged borders at the neck ; high vertical rim and flange below it. The waist flange has an upper ridge as also the basal flange. (KKG 12).

Type 81.—A variant of type 71, with a flat base ; grooved (or double ridged) flanges at the neck, waist and base ; short, concave neck and convex sides or waist : has a deep bowl-type lid with grooved ridges ; a flaring flange with splayed rim, externally grooved : the knob is like an inverted plumb-bob ; a double ridged ring on the roof of the lid. (KKG 12).

Type 82.—A variant of type 80 with tapering sides and narrower mouth ; high vertical rim and moulded v-band at the neck below ridges. (KKG 9).

Fig. 49

Type 83.—Similar to type 82 ; has a lid with oblique sides and externally beaded rim ; a low oblique flange with featureless rim ; a pointed knob with horizontal flange. (KKG 12).

Type 84.—A variant of type 71 with almost flat base as in type 81 ; short carinated waist, a prominent lip-projection below vertical rim ; bold ridges at neck ; bold scallop moulding above and below the waist. (KKG 12).

Type 85.—Concavo-convex urn with rounded base ; grooved flange below vertical rim and a pointed flange above the base. (KKG 11).

Type 86.—Concavo-convex urn with slightly convex base ; a scallop moulding at the neck and a flange above the waist ; ridges above the basal flange : has a lid of shallow-bowl type with convex sides and flat roof ; a short oblique flange with externally bevelled rim ; a big knob of inverted plumb-bob shape rising above the flange. (KKG 11).

Type 87.—A variant of type 86 with taller upper sides ; prominently bevelled flange at the waist and base, between which are two bands of cross-hatched ridges : has a shallow bowl-type lid with oblique sides, featureless rim and flat roof ; a cross-hatched ridge below v-notched oblique flange ; long knob with rounded top. (KKG 12).

Type 88.—Urn with flat base, rounded waist and oblique sides ; a flange below short vertical rim : shallow-bowl lid with convex sides and a ridge on the shoulder ; round pointed knob with short neck. (KKG 12).

Type 89.—A variant of type 88 with ridged neck and two ridges at the waist. The lid has incurved sides with out-turned rim and a flange of corresponding shape ; a central knob of inverted plumb-bob ; the roof is broken. (KKG 11).

Type 90.—A variant of type 88, with two bands of ridges on the body and a moulded festoon band below the pointed flange : has a bowl-type lid with oblique sides decorated with three scallop bands : the oblique flange is v-notched at the edge and panelled at the base ; has a tall conical knob. (KKG 12).

Type 91.—Urn with vertical neck, concave sides and rounded base ; a grooved flange at the carinated waist ; three faint grooves below the neck ; a notched flange below short vertical rim ; a lid of inverted shallow bowl with featureless rim ; a short up-turned flange and a round knob. (KKG 1).

Fig. 50

Type 92.—Concavo-convex urn with convex base similar to type 85 ; a basal flange and a flange below vertical rim ; multi-ridged, shallow bowl lid with conical knob. (KKG 9).

Type 93.—A variant of type 92 with sagger base ; vertically chamfered flange at carinated waist and below rim. (KKG 1).

Type 94.—Urn with inclined sides, carinated waist and convex base ; a flange at the carination and ridges on the upper part of the body : the rim is externally beaded. The lid with mouth narrower than that of the urn has convex sides and deeply corrugated roof, rising to a conical central knob ; has a flaring flange with everted rim. (KKG 12).

Type 95.—A variant of type 94 with two wavy mouldings at the waist and two ridges below a short concave neck. The rim flange is grooved. (KKG 9).

Type 96.—Urn with flat, wide base and gradually tapering body rising to a vertical neck; slightly everted and externally beaded rim; a small notched ridge below the rim and bands of cross-hatching, and twin vertical strokes at the neck and waist. (KKG 12).

Type 97.—Bowl-like, concave sided urn with slightly flaring, featureless rim; carinated at the waist but with a flat base; a ridge above and below the carination. (KKG 12).

Fig. 51

Type 98.—Globular pot with flat base and high, narrow, multi-ridged neck; slightly flaring mouth with externally beaded rim having a groove. The shoulder bears three rouletted bands. (KKG 12).

Type 99.—A variant of type 98 with rounded base and two rouletted bands. The rim and upper part of the long, narrow neck are missing. (KKG 12).

Type 99a.—Gourd-shaped pot with a high, narrow, multi-ridged neck, incised with wavy lines on the shoulder. (KKG 9).

Type 99b.—A variant of type 99a with flat base and wide, prominent ridges at the neck; has a simple bowl-type lid with flat roof, vertical sides, featureless rim and rounded shoulder. (KKG 12).

Type 99c.—A variant of type 99 with a gradual shoulder and prominent ridges at the narrow neck, the upper part of which is broken. (KKG 12).

Type 99d.—A variant of type 99b, with deeply concave, narrow neck and everted mouth; a beaded rim externally grooved; has a simple shallow-bowl lid. (KKG 12).

Type 100.—Similar to type 99d, but with a high concave rim on top of an everted mouth; the edge of the rim is externally chamfered; a ridge above the neck. (KKG 12).

Domestic Pottery

LARGE STORAGE VESSELS

These vessels have multi-ridged necks and large globular bodies. Though numerous sherds were found no entire specimen was recovered. The rims are quite sturdy and are usually flanged for handling but the bodies are too thin for the size. These were probably used for the storage of water and food.

Fig. 52

Type 1.—Fragment of a large storage vessel with globular body, straight multi-ridged neck and a thick incurved rim flanged at its base. Variant 1a has a slightly concave neck. Variant 1b has a ridged flange. Variant 1c has an internally beaded and enclosing rim and a sharp flange. Variant 1d has a recurved rim. Variant 1e is similar to but smaller than Type 1. Variant 1f has a bud-shaped rim with a very gradual flange. Variant 1g has an externally vertical and internally rounded rim. Specimens illustrated are from KKG 2, Period I.

STORAGE VESSELS WITH HIGH VERTICAL NECKS

Type 2.—Fragment of a storage vessel with externally beaded rim and multi-ridged high neck, the upper portion of which is a plain band. The shape of the body is not known. Variant 2a has externally beaded and internally grooved rim below which is a convex band. Variant 2b has a vertical rim with an internal ledge. Variant 2c has an externally thickened and internally ledged rim. Between the rim and the ridges of the neck is a prominent convex band.

Fig. 53

Variant 2d has externally beaded and internally chamfered rim. The topmost ridge below the prominent band is pointed. Specimens illustrated are from KKG 2, Period I.

MEDIUM GLOBULAR VESSELS

Type 3.—Fragment of multi-ridged, globular vessel of medium size similar to Type 1. This specimen has externally convex and internally grooved rim, the top being rounded. The ridges are prominent. Variant 3a has a slightly undercut, externally beaded rim with an internal groove. Variant 3b has externally thickened and flanged rim and an internal groove. Variant 3c has small ridges and an externally convex rim thinner than Type 3. Variant 3d has an externally thickened rim forming an oblique flange. Variant 3e has a rim with short horizontal flange and internal groove. There are broken ridges on the shoulder. Variant 3f has a convex rim and internally concave neck. Variant 3g has a flanged rim with rounded top and an internal groove. Variant 3h has a slightly flaring mouth, externally beaded rim and a wide ridge at the neck. Variant 3i has a flanged and externally beaded rim. Variant 3j has an externally convex rim. Specimens are from KKG 2, Period I.

Fig. 54

Variant 3k has a flanged and externally convex rim, without ridges at the neck. Variant 3l has externally thickened rim. Variant 3m is similar to 3l but has a thinner section. (KKG 2, Period I).

Type 4.—Fragment of a medium size vessel with high oblique rim, rounded at the top and having an internal groove ; ridges at the neck. (KKG 2, Period I).

Type 5.—Fragment of a medium vessel with a beaked rim. (KKG 2, Period I).

Type 6.—Fragment of a medium vessel with vertical neck and everted rim, slightly beaded and probably globular body. (KKG 2, Period I).

Type 7.—Fragment of a medium vessel with straight neck and everted rim which is beaded and has a groove on the top. At the lower part of the neck are the ridges the middle one of which has vertical notches. The shoulder has two bands of inverted v-notches. (KKG 2, Period I).

Type 8.—Fragment of multi-ridged medium vessel with everted rim and broad shoulders. Variant 8a has externally beaded rim. Variants 8b and 8c are fragments of small vessels with out-turned rim and two ridges at the neck. (KKG 2, Period I).

Type 9.—Fragment of a small vessel with an everted rim having a ring on its edge. (KKG 2, Period I).

Fig. 55

Variant 9a has a deep external groove between two bold ridges. Variant 9b is similar to 9a but has a small ridge below the flange. Variant 9c has externally rounded rim with external and internal grooves as well as a groove on the top. (KKG 2, Period I).

Type 10.—Fragment of a small vessel with splayed rim and ledged neck. Variant 10a has the splayed rim pointed, and the neck has broad but shallow ridges. Variant 10c has a ring on top of the splayed rim. (KKG 3, Period I).

Type 11.—Fragment of a medium vessel with vertical neck and an everted rim having a low upper ring. The base of the neck has a wide ridge and there are two bands of inverted v-notches at the shoulder. (KKG 2, Period I).

Type 12.—Fragment of a medium vessel with a slightly concave neck and an everted rim having an external groove. (KKG 3, Period I).

Type 13.—Fragment of a small vessel with concave neck having a ridge at the base, a splayed rim with an external groove decorated with notches. (KKG 2, Period I).

Type 14.—Fragment of a small vessel having flanged but externally vertical-sided rim made up of four ridges. There is an internal groove at the top. (KKG 3).

Type 15.—Fragment of a neck with a widening base and having ridges at the top. Variant 15a has high upper sides. (KKG 3).

Fig. 56

ROUND BOWLS

Type 16.—Round incurved bowl with internally thickened rim forming a slight ridge; fine texture, red slipped ware. Variant 16a and 16b are similar to Type 16, but the internal ridges are less pronounced. Variants 16c and 16d have no internal ridges. Variant 16e has a featureless rim. Variant 16f has internally beaded rim. (KKG 2, 3).

Fig. 57

Variant 16g is prominently incurved though the rim is featureless. Variant 16h has internally thickened but pointed rim. Variant 16i has slightly incurved rim thickened internally. (KKG 2, 3).

BOWLS OF DIFFERENT SHAPES

Type 17.—Vertically sided bowl with slight concave bend and rounded waist. It has a sharpening rim. (KKG 8)

Type 18.—Fragment of an almost vertically sided bowl with nail-headed rim. (KKG 11). Variant 18a has external grooves and ridges but the edge of the rim is internally chamfered. (KKG 15).

Type 19.—Fragment of concave sided bowl with a nail-headed rim internally chamfered. (KKG 24). Variant 19a has externally chamfered nail-headed rim. (KKG 19).

Fig. 58

Variant 19b has an oval rim with two receding grooves below it. (KKG 15)

Type 20.—An almost round bowl with externally thickened rim having slightly sharpened edge. (KKG 2).

Type 21.—Fragment of an incurved bowl with featureless rim and probably narrowing sides. (KKG 15). Variant 21a has convex sides and two internal grooves. Variant 21b has internally beaded rim and two faint internal grooves. (KKG 2).

Type 22.—Fragment of bowl, probably shallow, with incurved top and nail-headed rim. (KKG 15).

Fig. 59

Type 23.—Fragment of slightly convex bowl with two ridges and internally chamfered rim. (KKG 2).

Type 24.—Fragment of a bowl, probably shallow, having a rim with a deep external groove and rounded top. Variant 24a is a shallower type. Variant 24b has two external ledges. (KKG 2).

Type 25.—Fragment of a concave sided bowl having two externally ridged rim. Variant 25a has an in-turned featureless rim and a bluntly carinated waist. (KKG 2).

Type 26.—Fragment of a concave sided bowl with an almost vertical featureless rim and an external ridge. (KKG 3).

Fig. 60

Type 27.—Bowl with blunt-carinated waist and flaring rim with an internal groove at the rim top.

Variant 27a has an externally chamfered rim.

Variant 27b has a splayed rim.

Variants 27c and 27d have flaring mouths with featureless rims. (KKG 2).

Type 28.—Convex sided bowl with slightly thickened rim. (KKG 2).

Fig. 61

Type 29.—Convex sided bowl with a corrugation below the featureless rim; fine fabric. (KKG 2, Period I).

Type 30.—Bowl with slightly tapering profile and a broad external corrugation below the rim. The base is bluntly carinated. (KKG 2, Period I).

Type 31.—Tapering bowl with a rounded waist and featureless rim. (KKG 2, Period I).

Type 32.—Fragment of a concave sided bowl with a rim having two external ridges. (KKG 4, Period I).

Type 33.—Fragment of a bowl with beaded-disc pedestal. (KKG 3).

Variant 33a, fragment of a bowl with a ring-footed base. (KKG 2).

Variant 33b, fragment of a bowl with short-stemmed ring pedestal. (KKG 2).

Fig. 62

SHALLOW BOWLS

Type 34.—Shallow bowl with a flared rim, internally thickened and externally beaded. (KKG 15).

Variant 34a has a groove on the top of the rim. (KKG 15).

Variant 34b is an incurved shallow bowl with a groove on the rim top.

Variant 34c has externally corrugated sides and a featureless rim.

Variants 34d, e, k and n have a corrugation below the rim.

Variant 34f has an externally beaded, flaring rim and flaring sides.

Variant 34g has an inturned rim and a carinated waist.

Variant 34h has an externally thickened or oval shaped rim.

Variant 34i has a featureless rim.

Variant 34j has externally thickened but pointed rim.

Variant 34l has externally beaded, flaring rim.

Variant 34m has a splayed rim and is externally decorated with faintly incised bands of cord designs and horizontal lines.

Variant 34-o has externally beaded rim and flaring sides.

Variants 34b to 34-o are from KKG 2.

Fig. 63

LAMPS OR SHALLOW CUPS

Type 35.—Small incurved bowl with thick sides, featureless rim, disc base which is internally corrugated. (KKG 2).

Variant 35a has internally thickened rim and plain inner base.

Variant 35b is a medium cup with a pointed-edged rim.

Variant 35c is a thick cup with almost round rim and internally corrugated base.

Variant 35d has slightly flaring sides.

Variant 35e is similar to 35d but has internally corrugated base.

Variant 35f has a bud-shaped rim, internally corrugated base and externally concave base.

Variant 35g has an externally chamfered rim.

Variant 35h has very thick sides and thick, corrugated internal base.

Variant 35i has flaring corrugated sides and concave external base.

(Variants from KKG 2, except 35b—KKG 11).

COOKING VESSELS

Type 36.—Carinated cooking vessel with beaded everted rim and short neck; a groove and ridge at the neck and a grooved ridge at the carination. The shoulder is incised with vertical lines. (KKG 15).

Variant 36a has a plain ridge at the carination and incised lines on the body below the carination.

Variant 36b is similar to 36a but the ridge is grooved.

Variant 36c has a sharp carination. Many specimens of this type are soot-stained. (All variants from KKG 2).

MINIATURE POTS

Type 37.—Small round pot of fine texture with almost vertical neck and externally beaded rim; red slipped. (KKG 2, Period I).

Variant 37a has a concave neck ledged at the base and a slightly everted rim externally beaded, medium fabric. (KKG 2, Period I).

Type 38.—Small round pot with short concave neck, everted and externally beaded rim. (KKG 3, Period I).

Type 39.—Fragment of a small round pot with everted rim and concave neck ledged at the base. (KKG 14, Period I).

Variant 39a has more ledges at the neck and the shoulder is decorated with incised bands of squares and zigzag. (KKG 2, Period I).

Variant 39b has a flaring mouth and externally beaded rim. There are two bands of triangular notches on the shoulder. (KKG 5, Period I).

Variant 39c has two ledges at the neck. (KKG 15, Period I).

Type 40.—Fragment of a small pot with short concave neck and everted rim; has a thin groove below the neck. (KKG 15, Period I).

Type 41.—Fragment of a small pot with high concave neck ridged at the base and a beaked rim. (KKG 17, Period I).

Type 42.—Fragment of a pot with everted rim, short corrugated neck and probably round body. The shoulder is decorated with vertically incised parallel lines between a band of triangular notches and a lower band of zigzag lines. (KKG 2, Period I).

Type 43.—Fragment of a round neckless pot with a slightly up-turned featureless rim. The shoulder is decorated with a series of vertically incised parallel lines between two bands of triangular notches. (KKG 2, Period I).

BOTTLE NECKS

Type 44.—Long neck of a sprinkler vessel with a flanged rim-top and nipped opening; fine fabric, red slipped. (KKG 2, Period I).

Variant 44a.—Fragment of a neck similar to Type 44. (KKG 2, Period I).

Type 45.—Fragment of a sprinkler neck with a pointed flange and a button-shaped opening. (KKG 2, Period I).

Type 46.—Lower portion of a sprinkler neck with ridges and faintly incised lines and circles. (KKG 5, Period I).

Type 47.—Neck of a sprinkler vessel with a flanged and bevelled rim. (KKG 5, Period I).

Variant 47a has a wider base; the rim top is broken. (KKG 5, Period I).

Type 48.—Fragment of a sprinkler neck with a ridge at the base and thin grooves on the straight sides. (KKG 2, Period I).

Type 49.—Bottle-neck of a vessel with two ridges in the lower portion and a flanged rim-top; the rim is internally flared. (KKG 21, Period II).

Variant 49a.—Similar to Type 49 but it has an obliquely-cut rim flange the ends of which are broken. (KKG 21, Period II).

Variant 49b has only one ridge; the flanged rim is broken. (KKG 21, Period II).

Type 50.—Fragment of a sprinkler neck with a base flange and straight sides, having a carination above a ridge lying between the flange and the sides. (KKG 21, Period II).

Variant 50a has a groove between the flange and the sides.

Type 51.—Fragment of neck and shoulder of a vessel. (KKG 2, Period I).

SPOUTS AND SPOUTED POTS

Type 52.—Short spout with beaded rim and a pouch-like bulge at the base; fine fabric; treated with red slip. Parallels of this type are found in most of the early Buddhist sites of India. (KKG 2).

Type 53.—Similar to Type 52 but the bulge is more pronounced and the vessel has perforations at the spout base. (KKG 2, Period I).

Type 54.—A spouted vessel with a ring-footed base and bulging shoulder; the rim is broken. (KKG 2, Period I).

Type 55.—Short spout and fragment of a vessel. The base of the spout is externally thickened and the upper side of the rim is pointed. (KKG 15, Period I).

Variant 55a has a featureless rim. (KKG 2, Period I).

Type 56.—Long spout with a gradual curve and a ledge covering a greater portion of the upper side and a small portion of the bottom side. (KKG 15, Period I).

Type 57.—Probably long broken spout with straight sides and widening base. (KKG 21, Period II).

Type 58.—Narrow spout with a sharp bend. (KKG 12, Period I).

Type 59.—Short straight spout with two ridges on the sides of the rim. (KKG 2, Period I).

Fig. 68

Type 60.—A large fragment of a pedestal bowl, probably incense burner. The pedestal has long concave sides; the rim is broken. The internal base of the bowl has a conical knob with a flange in the centre, encircled by two concentric rings of incised wavy lines. (KKG 2, Period I).

Type 61.—A large fragment of a pedestal bowl. The slightly concave stem has deep grooves between graduated bands. The rim is slightly bevelled and pointed. (KKG 2, Period I).

Type 62.—A large fragment of a pedestal bowl. The concave-sided stem has a splayed rim with two ridges on the edge. The base of the bowl is convex. (KKG 2, Period I).

Type 63.—A small carinated pot with long concave neck; the rim is broken. At the carination are two ridges intervened by a band with a series of S-notches. The body is decorated with vertical incised strokes below a band of S-notches and a zigzag border. The base of the pot is flat but slightly beaded. (KKG 2, Period I).

Fig. 69

Type 64.—A bluntly carinated pot, disc footed, with an incurved, dropping rim. At the carination is a broad chamfered ridge. The shoulder is decorated with three concentric bands of zigzag in each of four segments with vertical border lines. In one of the plain alternating segments is a round hole with neat rim, probably serving the purpose of a spout. (KKG 5, Period I).

Type 65. Fragment of neck and rim of a vessel of indeterminate shape. The concave neck has thick sides. The rim is slightly under-cut but has broad vertical sides on which are incised the horizontal zigzag bands. The mouth is not fully open as it is covered with an externally corrugated horizontal top having a circular central hole and a dozen small perforations. (KKG 17, Period I).

Type 66 and 66a.—Loop-handles, coarse to medium fabric (KKG 2 and 15, Period I).

Fig. 70

Type 67.—Top fragment of an indeterminate vessel with a flaring rim. The horizontal top within the rim has six round holes with grooved borders. (KKG 2, Period I).

Type 68.—Top fragment of an indeterminate vessel. The rim has convex sides and vertical edge. It is externally decorated with a series of lotus petals below a narrow notched band. The top within the rim has circular perforations round a bigger central hole. (KKG 2, Period I).

Type 69.—A convex-sided shallow bowl or lid with featureless rim and almost flat base or top which has a funnel-like round hole in the centre. (KKG 17, Period I).

Type 70.—A tiny carinated cup with a stem at the base. The lower portion is incised with a series of spear-head pattern. It might also have served as a stopper, the cylindrical stem being used as a knob-handle. (KKG 18, Period I).

Type 71.—Lid-handle with concave neck, flaring mouth and chamfered rim. (KKG 21, Period II).

Variant 71a.—Lid handle with horizontally splayed rim and corrugated vertical neck. (KKG 2, Period I).

Variant 71b.—Lid handle with flaring sides and beaded rim. (KKG 15, Period I).

DECORATED SHERDS

Fig. 71

Type 72.—Sherd, probably shoulder fragment of a small pot, with stamped rectangular panels each of which bears the figure of a seated man without dress, with the left leg folded and the right knee raised, the left hand stretched towards the left knee and the right hand resting outstretched on the right knee. Above the right shoulder of the man is an object probably depicting an open umbrella. The panels are spaced a little apart from one another between two concentric border bands of short vertical strokes. Each rectangular panel has an internal dotted border line. The upper portion of the sherd has two bands of vertical ridges in low relief, the lower one being trimmed with a scallop band at the bottom. The lower part of the sherd has two bands of incised vertical lines between which is a narrow band of short strokes. (KKG 17).

Type 73.—Sherd similar to Type 72. The figure in each stamped panel represents a man, without dress, standing on his left leg; the right knee raised the right leg hanging, the left hand raised and the right hand resting on the right knee, assuming a dancing attitude. Only the central panel is in entire form but the other two, though fragmentary, also appear to have the same figure. (KKG 17).

Type 74.—Sherd bearing two rectangular panels stamped in low relief. The left panel bears a leaf pendant or festoon. The figure on the right depicts a *kalasa* pot. (KKG 3, Period I).

Type 75.—Sherd bearing the stamped figures of twin fish within a rectangular panel. (KKG 3, Period I).

Variant 75a though fragmentary has similar figures, the only difference being the absence of dots in this specimen. (KKG 3, Period I).

Type 76.—Sherd bearing three stamped designs in rectangular panels. The first symbol probably represents a conch-shell. The middle one is a *srivatsa*. The third figure depicts a man in a peculiar posture. The right hand is raised while the right leg is bent upwards reaching the arm-pit. The left hand and leg are hanging. (KKG 4, Period I).

Type 77.—Sherd bearing stamped symbols in rectangular panels between concentric bands of a series of banyan leaves bounded by horizontal lines. The first fragmentary figure looks like the head of a deer. The middle panel bears the twin-fish symbol, while the third represents probably a *hamsa*. (KKG 5, Period I).

Type 78.—Sherd bearing a *srivatsa* symbol in a rectangular panel. This is one of the eight principal auspicious marks of a great man, as also the twin-fish and the *kalasa* pot. The *srivatsa* appears also on the symbolical silver coins found at Beikthano, Śrikṣetra and Halin. (KKG 15, Period I).

Type 79.—Small sherd bearing incised figures of two fans adjoined at the broad ends, between a chain-like beaded border at top and a chevron border below. (KKG 3, Period I).

Type 80.—A sherd larger than Type 79 bearing two bands of incised fan motifs. The upper band resembles that of Type 79 while the lower band has the fans inverted, with vertical strokes between the narrow ends. The decoration appears on the internal side of a thin sherd of a horizontally splayed shallow bowl. (KKG 4, Period I).

Fig. 72

Type 81.—Thick sherd bearing a large band of lotus petals in low relief with an upper border of small loops and vertical lines. (KKG 5, Period I).

Type 82.—Thick sherd bearing large leaf patterns in low relief below a band of notched pairs of segments. Fragment of a basin with externally chamfered rim. (KKG 5, Period I).

Type 83.—Similar to Type 82 but the relief is bolder though simple. (KKG 5, Period I).

Type 84.—Sherd of probably a bowl bearing inverted lotus petals in low relief round the body. The upper portion is decorated with a zigzag line and a scalloped line between concentric horizontal lines. (KKG 2, Period I).

Type 85.—Sherd bearing part of a stamped rectangular panel containing a quartrefoil enclosed by a dotted band within straight borders. (KKG 2, Period I).

Type 86.—Fragment of a small bowl decorated with conventional lotus leaves in low relief. (KKG 2, Period I).

Type 87.—Sherd with a band of incised petals above a zigzag line and oblique strokes. (KKG 15).

Type 88.—Sherd with a zigzag band above two concentric loop bands. (KKG 5).

Type 89.—Fragmentary sherd having a pellet band above a zigzag line and vertical strokes. (KKG 5).

Fig. 73

Type 90.—Sherd of a footed bowl with a band of geometrical pattern in bold relief below a scalloped ridge. A single motif of the same pattern, a quartrefoil with an additional round leaf crowning the top, appears above the ridge. Below the band is a three-bladed leaf above two horizontal lines. (KKG 17).

Type 91.—Sherd with series of incised vertical lines interspersed with a vertical row of crescent-shaped nicks. The upper and lower borders are made up of upright oval nicks between two bands of hatched upright strokes, cutting the concentric horizontal lines. The hatched lines are repeated below and above the bands.

Type 92.—Sherds with the lower part decorated with upright rows of chevrons, short oblique lines and criss-cross incised within vertical borders. Three concentric lines border the upper end of the pattern.

Type 93.—Small sherd having two rows of rouletted triangular nicks.

Type 94.—Sherd having one incised horizontal line and two concentric bands of short vertical lines incised within horizontal borders.

Type 95.—Sherd having a series of oval figures incised with double outlines and bordered by two bands of cursive chevrons.

Type 96.—Sherd having a series of incised vertical lines with the upper ends shaped like nail-heads; bordered by horizontal bands, one above and one below, containing short vertical nail-shaped lines pointed upwards.

Type 97.—Small sherd decorated with alternate bands of closely seriesed angularly pointed petals and eye pattern, the two sets being spaced apart and intervened by a horizontal line.

(*Types 91 to 97 from KKG 2*).

Fig. 74

Type 98.—Sherd having two horizontal zigzag lines, probably within one alternate segment above a grooved ridge.

Type 99.—Sherd with two horizontal rows of rouletted triangles below a series of short vertical notches within double border lines of hatched vertical strokes.

Type 100.—Sherd with a horizontal zigzag band above a rouletted band of triangles.

Type 101.—Small sherd having two zigzag lines below two vertical lines.

Type 102.—Small sherd having a chain of notches and a zigzag line below three horizontal lines of hatched strokes and a faint row of longer strokes near the rim.

Type 103.—Sherd having two bands of lotus petals in horizontal series in low relief, the two rows being interspersed with horizontal base lines for each petal.

Type 104.—Sherd incised with vertical strokes between horizontal lines which are irregular in the lower portion.

Type 105.—Sherd incised with a band of zigzag lines above a border of oblique lines and irregular squares of vertical lines.

Type 106.—Sherd incised with a series of ladder pattern below concentric lines.

Type 107.—Sherd incised alternately with zigzag and straight lines.

(*Types 98 to 107 from KKG 2*).

Fig. 75

Type 108.—Sherd of a bowl the interior being hatched with fan design and curved vertical lines bordered by concentric lines of short strokes.

Type 109.—Sherd of a bowl the inner side of which is decorated with alternating bands of a scallop line in relief and a notched ridge.

Type 110.—Sherd of a bowl the inner side of which is decorated with two bands each containing a scallop line and a series of vertical strokes. The space between the two bands is partly filled by a scallop line.

Type 111.—Sherd similar to type 110. Here the vertical strokes are replaced by small dots.

Type 112.—Small sherd bearing vertical lines above a zigzag base; bordered with a band of beaded ridge above and below the main pattern.

Type 113.—Sherd of a miniature pot bearing a series of hooked vertical lines, with a pellet band above and dotted beads below.

Type 114.—Sherd of a miniature pot bearing incised vertical lines with a horizontal line above and four large zigzag lines below. Another section has inverted notches between parallel lines.

Type 115.—Small sherd bearing a series of slightly oblique nail-shaped lines above a crenellated band. The upper border has a few oblique strokes.

Type 116.—Sherd bearing a horizontal zigzag line bordered by beaded ridges.

Type 117.—Sherd bearing a crenellated band between beaded borders within horizontal lines.

(*Types 108 to 117 from KKG 2*).

The fragmentary sherds with red slipped surface bearing textile impression on the inner sides are not illustrated.

IV. OTHER FINDS

(i) BEADS

The excavation yielded a total of 708 beads of which 669 are terracotta. Other materials of which the beads are made comprise agate, amethyst, carnelian, jasper, quartz and crystal. Terracotta beads were found at almost all the sites but the greatest number, 588, occurred at site KKG 17 which is therefore deemed to be a bead-making workshop. The beads obtained from that site are either unbaked or ill-fired, 532 of them being spherical and 56 rectangular square. Plano convex and variant types of areca-nut shaped terracotta beads from other sites are made of fine levigated clay and are well baked. These have one or two circular grooves on either side of the edge. The majority of these, numbering 57, were recovered from the structure at KKG 2 and the rest, 24, are fairly distributed among other building sites.

All beads of semi-precious stone and the different types of terracotta beads are listed below:

Fig. 76

1. Agate: Long barrel circular; etched with black chevron bands on white surface. (KKG 3).
2. Amethyst: Spheroid, circular. (KKG 2).
3. Amethyst: Spheroid, oval. (KKG 3).
4. Carnelian: Long, truncated bicone, square. (KKG 3).
5. Carnelian: Long truncated bicone, hexagonal. (KKG 3).
6. Carnelian: Short oval circular. (KKG 3).
7. Carnelian: Spherical. (KKG 3).
8. Carnelian: Oval circular. (KKG 3).
9. Crystal: Long cylindrical, flat hexagonal. (KKG 2).
10. Crystal: Spherical, circular. (KKG 15).
11. Crystal: Long truncated bicone, flat hexagonal. (KKG 3).
12. Jasper: Long rectangular square (square cylinder). (KKG 2, 3).
13. Jasper: Constricted cylinder, circular. (KKG 2).
14. Jasper: roundish. (KKG 3, 6).
15. Jasper: irregular. (KKG 3, 4).
16. Amber: round. (KKG 15).

17. Paste, black: areca-nut shaped. (KKG 15).
18. Paste: black: Short, oval, circular. (KKG 15).
19. Paste: green: Spheriod, circular. (KKG 15).
20. Paste, green: ditto. (KKG 15).
21. Paste, yellow: ditto. (KKG 15).

Not illustrated

1. Jasper: Rectangular square. (KKG 3, 10).
2. Jasper: irregular. (KKG 3, 4).
3. Jasper: Barrel circular. (KKG 3, 20).
4. Jasper: Short cylindrical. (KKG 2).
5. Jasper: two joint beads. (KKG 2).
6. Paste: Black. (KKG 2, 4 Nos.).
7. Paste: Red. (KKG 2).
8. Milky quartz: Cornerless cube with diagonal perforation. (KKG 2).

Fig. 77

Terracotta

- Type 1-3. Terracotta: Round, various sizes. (KKG 17, 3).
4. Terracotta: Square cylindrical. (KKG 17).
 5. Terracotta: Lenticular circular. (KKG 2).
 6. Terracotta: Plano-convex circular. (KKG 2).
 7. Terracotta: Convex truncated-cone, circular. (KKG 2).
 - 8-9. Terracotta: Truncated convex, circular, with slightly convex base. (KKG 2).
 10. Terracotta; Short bicone, circular, double-collared. (KKG 2).
 11. Terracotta: Conical circular, flat base. (KKG 2).
 12. Terracotta: Short truncated cone, convex, circular. (KKG 2).
 13. Terracotta: Areca nut shaped with high collar at base. (KKG 2).

Not illustrated

1. Terracotta: tiny flat disc, red slipped. (KKG 2).

(ii) TERRACOTTA OBJECTS

Of the terracotta objects found during the excavations the most numerous are sling balls, hopscotches and dabbers. The most important find is a small broken piece of originally unbaked lump of clay bearing two impressions of a seal. (Pl. LIV, a, b: Fig. 79-9) found outside the building at site No. 2. It is a damaged half of a clay lump which had apparently sealed, like the sealing wax of the present day, a rod or a cylindrical object which was tied round with a cord. Smoke-stained portions on the outer surface indicate that it was broken when fire raged throughout the building and had fallen from the upper storey to a spot north

of the vestibule. The seal is circular and the letters in Brahmi script of the 2nd century A.D. appear in relief round a central dot. Being slightly damaged the two impressions are not quite complete, but the missing portion of one appears distinctly on the other, thus enabling the decipherment of the writing conjointly from the two impressions. In the Preliminary Report the reading was tentatively given as "*Siri mita raya, Siri mitara ya or Siri mapata raya.*" But a further study of the sealing diligently made by U Bo Kay revealed the undoubtedly correct reading to be "*Saiingha siri.*" In fact the letters are preceded by a swastika symbol, which being a cursive type was at first thought to be two closely inscribed letters *ma* and *pa* as the left upper hood of the swastika is broken, by the round edge of the sealing. The *ta* and *ra* of the first reading are found to be parts of a single letter *sa* with a dot above it; and the *ya* of the first reading is in fact *gha*. Thus we now read in the sealing the title, in Prakrit, of either a religious personage or a donor of the building. Similar names of donors ending in *siri* are found in the Amaravati inscriptions of the 1st century A.D. (*viz.* Dhammasiria, Dighasiri, Hagisiri, Nadhasiri, Nakasiri, etc.)¹. Palaeographically the writing may be ascribed to the 2nd century A.D. The use of a cursive swastika in the cave inscriptions of Western India goes back to the Pre-Christian period.² Considering the nature of the object, the original seal in metal or other substance, which could have been imported from abroad and the shortness of the epigraph we may assign the building to 2nd-3rd century A.D.

Another interesting object is a clay figurine found at site No. 5. (Pl. LV, a; Fig. 78-1). It is broken into many parts and the lower portion is missing. It has a short neck and the head is slightly big for the body. The developed breast and slim waist indicate that it is a feminine figure. It has a head ornament and two necklaces. The hands are folded forward to hold what looks like the base of a vase. It has a massive chin, round eyes, a wide mouth and a thick nose with a high bridge. The lower portion of the body is bent backwards and the belly bears marks resembling scales. It probably represents a *kinnari*, a mythical figure in half-human and half-bird form.

The following terracotta objects are illustrated:

Fig. 78

1. Female figurine; lower portion missing; probably a *kinnari* with head ornament and necklaces. (KKG 5).
2. Small broken figure of a dog; hind portion missing; buff colour of finely levigated clay. (KKG 15).
3. Small head of probably a frog, with an internal groove; probably fragment of a spout. (KKG 17).
4. Dabber with tapering cylindrical body and semi-circular ends. Incised with oblique lines on the body and two zigzag bands at the base. (KKG 15).
5. Fragment of a dabber, barrel-shaped, decorated with two zigzag bands. (KKG 15).

¹ Vide C. Sivaramamurti. *Amaravati Sculptures in the Madras Museum.*

² *Epigraphia Indica*, Vol. VIII, p. 60 ff. ; cited by H. D. Sankalia and S. B. Deo : *Report on the Excavations at Nasik and Jorwe, 1950-51*: Poona, 1955.

6. Dabber, cylindrical ; flat base and semi-circular top, with one zigzag band at the top and two at the base. (KKG 15).
7. Fragment of a plain, barrel-shaped dabber.
8. Fragment of a plain, tapering cylindrical dabber with rounded ends. (KKG 15).

Fig. 79

9. A clay sealing bearing two impressions of a seal which reads —*Sa ingha siri* (KKG 2).
10. Spiral-shaped clay coil. (KKG 9).
11. Hopscotch with basket impressions. (KKG 15).
12. Conical ear-ornament. (KKG 15).
13. Conical pendant.
- 14 and 15. Sling balls. (KKG 9 and 15).

A few clay smoking pipes, being surface finds collected by the local people, were acquired during the preliminary exploration of the site, but only one specimen was recovered from site No. 15 on excavation.

(iii) OBJECTS OF STONE

The excavations yielded very few objects of stone. During the preliminary exploration of the site in 1958 a village elder of Inywagyi reported the discovery, a few years before, of an object which looks like a circular stone slab used by Burmese ladies to grind scented wood to produce make-up paste. The finder was traced in another village and he gave his consent to the acquisition of the object for the Taungdwingyi Museum. The stone slab which is three-footed resembles a *yon*i, the diameter of the circular portion being 13 inches. The exact find spot could not be identified and being a surface find it is doubtful whether it had originally belonged to this site. A workman also made another surface find of a small flat yoni-shaped stone slab having a diameter of 2 inches, within the city.

The stone objects discovered during the excavations are as follows :

1. Two stone slabs, each bearing damaged portions of a pair of feet in relief. The first stone is 2 feet 8 in. wide and 2 feet 5 in. high, and the second 3 feet 3 in. wide and 2 feet 8 in. high. These are fragments of probably large slabs bearing lifesize human figures sculptured on them. The slabs were found on either side of the gateway of the citadel exposed at site No. 8. No other fragments were discovered. The figures could have been none other than effigies of *dvarapalas* erected to keep guard at the main entrance to the citadel. (Fig. 81-1. Pl. XXX a, b).

2. A small, thin, rectangular stone slab, 2 feet 9 inches by 1 foot 5 inches bearing incised figures on both sides. On the obverse is an *ankush* and a handled *cakra* rising obliquely from a common stem on the left half of the slab. To the right is a pair of flowers, one of seven petals and the other of eight, stemming from the opposite edge. The reverse bears two pairs of similar flowers each having six petals, the long stems rising from the bottom edge. The *ankush*

and *cakra* symbols are regarded both by Hindus and Buddhists, among other symbols, as marks of a great man and are usually depicted on the Buddha's footprint. An analogous combination of these two symbols are inscribed on a conch shell discovered at Nagarjunakonda (Pl. V.B. *Indian Archaeology, A Review*, 1958). This slab was recovered from the southernmost room of the building at site No. 2. It is probably a votive slab and suggests the religious function of the building though no iconographic object was found there. (Fig. 81-2, Pl. LIV, e.d.).

3, 4. From site No. 2, outside the building, was found a stone quern and a pestle. The quern is rectangular, 12 in. by 7 in. with one end round, the surface being worn to a concave shape. The pestle is round, having a diameter of $4\frac{1}{2}$ in. (Not illustrated).

5. A stone slab having the shape of a *yonî* without a groove, broken in two, was found at site No. 2. The diameter is 8 in. (Not illustrated).

(iv) IRON OBJECTS

Nails, door bosses, sockets and strips of iron weighing about 500 lbs. were obtained from site No. 2. The objects are in different stages of corrosion and most of them are reduced to pieces of various sizes. Iron sockets were also found at sites 9, 13 and 15. Only one specimen of an iron arrow-head was found from site 15.

Fig. 82

1-8. Different sizes of nails in fair state of preservation, the longest one measuring 10 in. and the shortest 2 in. (KKG 2). (Pl. LV b).

9-11. Iron strips used in decorating the door panels. The specimens have a small nail at each end still intact. (KKG 2).

12-13. Iron bosses fixed in the panels of the wooden doors. Specimens with entire nails were also recovered. (KKG 2). (Pl. LVI a).

Fig. 83

14-15. Iron sockets with base plates. Most of the specimens are ordinary cylinders without the base plates. (KKG 2). (Pl. LVI b).

16. Rectangular iron plate with a broken nail at each of the four corners and a larger one in the centre. (KKG 2).

17. An iron object, probably fragment of a bowl with obliquely flaring mouth. (KKG 2).

18. A screw-like iron object with one end split into two to form a handle.

19. A double-pointed iron object with a wide middle portion: might have been used as an awl. (KKG 9).

20. An iron arrow-head with broken point. (KKG 15).

21. Pointed end of an iron knife-blade.

Other objects not illustrated are:

- (i) Pointed iron piece, grooved like a nib; length 1·2 in. (KKG 2).
- (ii) An iron ring probably used as a latch eye (KKG 2).
- (iii) A cylindrical iron ring, 1·2 in. dia.; ·5 in. high (KKG 2).
- (iv) An iron rod 3·8 in. long, flattened at one end and broken at the other end which is round. Probably used as an antimony rod or kohl stick (KKG 2).

(v) OTHER METAL OBJECTS

Silver

During the exploration of the site a few symbolical coins, popularly known as Pyu coins, were acquired from the local people who claimed to have discovered them within the city. These belong to the type predominantly found at Śrīkṣetra. But on excavation both Śrīkṣetra and Halin types were obtained.

Fig. 84, No. 1.—(Pl. LVIII a). This is the Halin type found at site No. 15. It is of the size of a Burmese *kyat*, the diameter being 1·3 in. The main symbol on the obverse is a *śrivatsa* the apex of which is flanked by the sun and the moon. At the bottom are two curved lines (usually wavy lines in Halin specimens). The symbols on the left and right of the main figure are mutilated but on the fine specimens from Halin they represent the *Vajra* and the *Sankha*. The reverse bears the figure of the rising sun within two concentric circles and a beaded border. The rays are interspersed with beads. (KKG 15).

Fig. 84, No. 2.—This is the Śrīkṣetra type of symbolical coin, having a diameter of ·8 in. The obverse bears the usual combination of the *śrivatsa*, sun, moon, waves and *sankha* symbols. The latter occupies the left side instead of the usual right side of the *śrivatsa*. In this specimen there are two small holes on the right of the *śrivatsa* which indicate that it was strung as a pendant or medallion. On the obverse is a *baddhapitha* within two concentric circles and a beaded border. (KKG 3).

Fig. 84, No. 3.—This is a smaller coin, ·9 in. diameter, similar to No. 1 above. The *śrivatsa* on the obverse assumes a stylized form. (KKG 3).

From site No. 2 was found two tiny silver bosses, approximately ·2 in. in diameter (not illustrated), together with a gold boss of the same size.

Lead

From site No. 9 was recovered eight roughly flat circular pieces of lead and ten fragments. The biggest has a diameter of 2 in., whereas the rest are of the size of a Burmese *kyat* (Fig. 84, Nos. 4 and 5) (KKG 9).

A lead ball ·7 in. in diameter (Fig. 84, No. 15), and a small lead weight in the shape of a truncated cone (Fig. No. 8) were found at site No. 15.

Bronze

Miniature figures in bronze of a lion (Fig. 84, No. 6) and a *hamsa*, brahmani duck (Fig. 84, No. 7) were found at site No. 15. The same site yielded two fragments of an ear tube in bronze, the flat end of which is decorated with a series of beads (Fig. 84, 9-10). Two small finger-rings were discovered, one from site No. 14 (Fig. 84, No. 14) and the other from site No. 15 (Fig. 84, No. 11).

A rim, slightly everted and sharpened, of a concave-necked bronze pot, 2.6 in. in diameter together with two tiny fragments of the pot, was found at site No. 2 (not illustrated).

From site No. 3 was recovered a bronze wire-bangle 2.2 in. in diameter (Fig. 84, No. 12).

Copper

Fig. 84, No. 13.—A broken rod with a loop at one end (KKG 9).

Fig. 84, No. 16 and 17.—(Pl. LVI c). Copper rattles found at site No. 3. A broken one (not illustrated) was also recovered from the same site.

From site No. 2 was found a flat copper rod, 3.5 in. long with one end pointed. Probably it is an antimony rod or kohl stick. (Not illustrated.)

Gold

Very few gold objects were found. From site No. 2 was recovered a tiny boss, approximately .2 in. in diameter, together with two similar pieces in silver.

From site No. 15 was recovered a small piece of gold wire (or pin), .5 in. long with a round section, about half the size of an ordinary office pin. Together with this wire was found another piece of the same length and about .1 in. in width.

(vi) MISCELLANEOUS OBJECTS (NOT ILLUSTRATED)

1. A cylindrical pendant of dolomite (?) longitudinally broken in two. It has three concentric grooves and a hole pierced through the side near the upper end. (KKG 2).

2. Charred fruit, 1 in. long pericarp, originally grey, velvety, identified as *Terminalia Belerica Roxb* (သံဆီမုံသီး) by the Silviculturist of the Forest Department (KKG 2). It is broken in two and the seed, also charred, has come out. A few fragments of identical species were also recovered from the same site.

3. A bone (?) disc, 2.2 in. diameter (KKG 2). Broken in two and one sector missing.

4. A bone (?) piece grooved and pointed like a nib (KKG 2).

5. A bone (?) hair pin-like object broken in two, total length 4 in.

6. A bone (?) object like No. 5 above with the pointed end missing, length 2 in. (KKG 2).

7. Pieces of red ochre and yellow ochre found within the building at site No. 2.

8. Five cowrie shells (*cypraea moneta*) of which two are charred, found within the building at site No. 2. Many flat shells 2 in. to 3 in. long, probably used in the manufacture of lime, also occurred within the same building (Pl. LVII a).

9. Fragments from the moonstones : plaster pieces encrusted with white pebbles from the building at site No. 2.

10. Two pieces of antler. (KKG. 2).

(vii) STUCCO OBJECTS

All the stucco objects which are fragments of architectural mouldings were recovered from site No. 21 belonging to a later period of partial occupation of the city, *i.e.*, about the 11th century A.D. Remarkable specimens are detailed below :

Mythical and Human Figures

1. Head of a deva (?), earless, with *jatamukuta*, probably detached from a wall. H. 6 in. (Pl. LXI a).

2. Head of a demon (?), earless and without headdress ; has a third eye in the forehead. The ends of the mouth bear two round holes like the eyes. H. 3.7 in. (Pl. LXI b).

3. Bust, headless, probably of a woman with hands in adoration attitude ; has arm and wrist bands and pendant ornament above the full breasts. H. 5 in. (Pl. LXII a).

4. Head of a demon with three eyes, and open mouth showing the upper row of teeth ; has a pointed headgear from which dangles a pair of floral ornament beside the face. H. 9 in. (Pl. LXII b).

5. A deva, broken in four pieces: has a pointed headgear, three eyes, a wide mouth with a round hole at each end, arm and wrist bands. The hands are in adoration attitude. It is seated on the knees. H. 12 in. (Pl. LXIII a).

Animal Figures

6. Couchant lion with pointed crest and pendant ornament on the breast: right leg broken. H. 12 in. (Pl. LIX a).

7. Couchant lion with prominent male organ ; head missing. H. 8 in. (Pl. LIX b).

Decorative mouldings

8-24. Fragments of cornice mouldings bearing a series of stylized lotus petals. H. 2-5 in.

25-27. Fragments of corner merlon (*seindaung*) moulding, each bearing a lotus leaf with beaded border. H. 3.5-13.5 in. (Pl. LX).

28-33. Fragments of flamboyant ornaments of arch pediments bearing leaf and flower designs. H. 4·5-7·5 in. (Pl. LX b, LXIV b).

24-44. Fragments of V-shaped base mouldings with beaded borders. H. 2·5-3·5 in. (Pl. LXIII b).

45-74. Fragments of leaf-design mouldings. H. 2-7 in. (Pl. LXIV).

75-82. Fragments of merlon with floral design enclosed by a beaded border. H. 3-3·5 in.

83-95. Fragments of merlon similar to above.

96-105. Lotus-petal moulding. H. 3-3·5 in. (Pl. LXIV a).

106-117. Spiral mouldings with beaded border. H. 2-4·5 in. (Pl. LXIV a).

118-139. Miscellaneous decorative fragments.

V. BONES AND SKELETAL REMAINS

The excavations yielded both human and animal bones. Skeletal remains were found at site Nos. 12, 14 and 18, while fragments of bones and skulls were recovered from the buildings at site 2 and 9. Animal bones occurred abundantly within the building at site 2. Of the few human skeletons only one complete and stretched skeleton from site 14 (Pl. XXXVII a) could be properly cleaned for examination. The rest are so muddled with the clayey soil that it is difficult to extricate them without inflicting considerable damage.

The report on the examination of the skeleton from site 14 by Professor H. Zaw Tun, M.B.,B.S. (Bom.), Ph.D. (St.A), Anatomy Department, Institute of Medicine I, Rangoon, is given below :

Report on Bones Excavated from Beikthano (KKG 14, D 5)

When the wrappings were opened most of the bones were in fragments of various sizes. They were covered and filled with mud which showed that they must have been lying at the site of excavation for a period of several years. After sorting out the bones belonging to the respective parts of the body, they were reconstructed as much as possible. The following deductions are made from the observation of these bones as shown in the tabulated forms attached.

The bones belong to the human skeleton and are from one person only. By looking at the full healthy erupted teeth and the skull, these bones belonged to an adult male above 25 years. Though the teeth from both upper and lower jaws have erupted fully, they are not worn out or decayed to indicate that they have been used for many good years.

Detail measurements of the skull and the radius were further made and the following indices are calculated as shown in the attached table:—

- (1) Cephalic Index=96=Brachycephalic.
- (2) Vertical Index=100=Hypsicephalic.
- (3) Gnathic Index=110=Prognathous.
- (4) Facial angle=35°
- (5) Cranial capacity=411.5—Low.
- (6) Stature=5 feet 5 inches.

The man was about 5 feet 5 inches with a slightly projected face. His cephalic index and vertical index show that he was hypsicephalic as well as brachycephalic. At one time it was thought that particular cephalic indices were characteristic of the different races of mankind. But however, it appears that variation can occur in the index of given racial group through environmental influences. According to Shapiro, Brachycephaly is found in Japanese children immigrating to Hawaii and American born children of European parentage. All early types of man were Dolichocephalic (*i.e.* cephalic Index under 75) and Brachycephalic has appeared recently. But the cranial capacity seems to be low as it is only 411.5. From this figure it will be seen that as regards to the cranial capacity it lies within modern great ape range. But within wide limits there is no correlation between cranial capacity and mental ability.

By looking at the height, skull indices and the sound teeth, this man was an adult belonging to the Mogolian race, who had been living on a well balanced diet. There are no signs of deficiencies, malnutrition or pathological lesions in the bones.

He seemed to be enjoying his good health when death took him by surprise, as I think the cause of death is due to an assault which fractured and dislocated (1) the head of the right condyloid process of the mandible, (2) the mandible itself at symphysis menti. Thus, the head of the Right condyloid process is pushed upwards and backwards above the external Auditory meatus; at the same time the right half of the mandible is placed obliquely and the right half of the face is crushed inwards. All these combined, might result in projection of the face as seen from the skull, and cause intracranial injuries.

Report on Bones Excavated from Beikthano (KKG 14, D 5)

Bones	Observation	Indices	Remarks
1. Skull	... Male skull, covered and filled with mud.	1. Maximum length—13''	The cause of projection of face forwards, and crushing in of the Rt. half of face may be due to the forceful injury or assault which resulted in untimely death.
		2. Maximum breadth—12.5''	
	On the Rt. side	Cephalic Index =	
	(a) Maxilla, Interior and lateral margin of the orbit are fractured.	$\frac{B \times 100}{L} = \frac{12.5 \times 100}{13}$	
		= 96 = Brachycephalic.	
		3. Basi—Bregmatic height = 13''	
		4. Auricular ht. = 6''	
	(b) Mandible: (1) There is a fracture near the symphysis menti. (2) Head of Rt. condyloid process is fractured and is projected upwards, and backwards above External Auditory Meatus. Therefore Rt. half of the Mandible is displaced obliquely. The face on the Rt. half seems crushed in. Left half looks normal. Face is projected forwards. Teeth—good and all erupted. No caries.	Vertical Index :	
		$\frac{B-B. ht \times 100}{Length.}$	
		$\frac{13 \times 100}{13} = 100$	
			Hypsicephalic.
		5. Max. circumference = 19''	
		6. Facial Lb = 35.	
		7. Gnathic Index =	
		$\frac{Basi - Prosthionic Length \times 100}{B - Nasionic length.}$	
		= 24 × 100 = 111 approx.	

<i>Bones</i>	<i>Observation</i>	<i>Indices</i>	<i>Remarks</i>
1. Clavicle	... <i>Right side</i> only. Sternal end is missing.		
2. Humerus	... <i>Right side</i> present. Head and part of lower end are missing. <i>Left side</i> .— Distal end only present.		
3. Radius	... <i>Left side</i> is fully reconstructed and measured 9" = 22.5 cm. <i>Right side</i> = Upper and Lower ends absent. Middle 1/3 only is present.	<i>Pearson's formula</i> $S = 89.925 + 3.271 R$ $S = 89.925 + 3.271 \times 22.5$ $S = \frac{163.5225}{2.5} = 5 \text{ ft. } 5"$	From Pearson's formula, the height of the man was approximately 5 feet 5 inches.
4. Ulna	... <i>Left side</i> is complete. <i>Right side</i> — is incomplete at the Upper and the Lower ends.		
5. Carpal and Meta-carpal Bones.	Mostly in fragments and are very fragile.		
6. Hip Bone	... Very incomplete. Acetabular fossa is filled with the broken head of the femur.	...	The hip bone probably belongs to the Rt. side.
7. Femur	... <i>Right side</i> incomplete at both ends. <i>Left</i> fractured at the neck. Head absent; greater and Lesser Trochanters are absent.		
8. Tibia	... Left ends of both sides are in fragments. Also fractured in the shafts. Reconstructed as much as possible. But they are very fragile.		
9. Fibula	... Shaft are present only on both sides.	...	The bones are of human skeleton, and are of a man above 25 years of age. Height is about 5 feet 5 inches. Bony structure is good showing a well balanced diet. Fragility of most of the bones is probably due to weather.
10. Tarsal bones and Metatarsals-Phalanges.	In fragments and are very fragile.		

Animal bones identified by Professor Zaw Tun are as follows:—

1. a, b & c: Vertebral bodies of a four-footed animal, probably of the size of a small dog. (KKG 2).
2. Head of a femur (note the pit on the articular surface), also of an animal of the size mentioned. (KKG 2).
3. Lower end of the femur of a bird, probably the size of a crow. (KKG 2).
4. Probably the lower end of the humerus of some fowl. It does not conform to any of the characteristics of a tibia. (KKG 2).
5. Probably part of the shaft of a femur of a fowl. (KKG 2).

VI. CHRONOLOGY

The main period of occupation at Beikthano represented by all the excavated sites excepting No. 21 characterized the earliest Pyu culture yet discovered. This period (Period I) may be assigned to 1st to 5th century A.D. The partial occupation represented by site No. 21 belongs to about 11th century A.D. (Period II).

The above chronology is determined by the following evidences:—

(1) The inscription on the clay seal from structure No. 2 may be said to be fragmentary as only three letters, *sa*, *gha* and *ra* were used. But the title inscribed conforms to the popular names of donors appearing on the sculptured stone slabs of Amaravati stupa in Andhra, and the letters clearly pertain to the 2nd century South Indian Brahmi script.* Allowing some time for the introduction of the script or for the importation of the original seal from South India the occurrence of the sealing may be assigned to 2nd-3rd century A.D.

(2) Pottery types such as spouted vessel with pouch-like bulge at the base of the spout, sprinkler vessel with nozzled long bottle-neck have parallels in Rang Mahal,¹ Arikamedu, Yaleswaram,² Ahicchatra, Ujjain, etc. and Brahmapuri³ and Hastinapur,⁴ respectively. Auspicious marks like Srivatsa, twin-fishes, kalasa pot, etc. which appear on pottery and uninscribed auspicious marks like swastika, srivatsa, vajra, baddhapitha, twin fishes, etc. which appear both on the pottery and uninscribed coins at Beikthano may be traced to individual representation of these symbols found at most of the early Buddhist sites in India.

(3) Owing to the similarity of the plans of the religious or ritual structures at Beikthano to those of the stupas and pillared halls at Nagarjunkonda it appears reasonable to infer that the date of the former group was not very far from the chronological limits provided by Nagarjunakonda.

(4) Śrīkṣetra, where Pyu culture is known to have flourished, is assignable to the 5th-8th century A.D. The cultural equipment of that site comprises burial urns, uninscribed or symbolical coins, beads of terracotta and semi-precious stones, Buddhist stupas and temples, iron nails and plates, large-sized bricks with impressions of numerals and curved lines, gold and silver plates

* *Op. cit.*

¹ *Vide* Hanna Rydh. *Rang Mahal*, The Swedish Archaeological Expedition to India 1952-1954.

² Md. A. W. Khan : *A Monograph on Yaleswaram Excavation*, Hyderabad, 1963. fig. XI, 1 ; 3a.

³ H. D. Sankalia and M. G. Dikshit : *Excavations at Brahmapuri (Kolhapur)* 1945-46 ; Poona, 1952, p. 82 fig. 22 (4).

⁴ B. B. Lal *Excavations at Hastinapur and other Explorations*, Ancient India, Nos. 10 and 11, figs. XV, a, b

bearing inscriptions in Pyu and Pali, lithic inscriptions in Pyu, Sanskrit and Pali; stone sculptures of Buddha and Vishnu; gold and silver Buddha images and terracotta votive tablets. The cultural link between Beikthano and Śrīkṣetra is recognized from the burial urns, uninscribed coins, large-sized bricks with finger-marks, and beads of clay and semiprecious stones. But the conspicuous absence of Buddhist statuary and relics such as votive tablets, gold and silver plates bearing excerpts from the Tipitaka indicate that Buddhism was not firmly established at Beikthano. The *uddesika* stupas of Beikthano are devoid of relics, and the structural type is not to be found at Śrīkṣetra. It is therefore apparent that Beikthano is prior to Śrīkṣetra in chronological sequence though the last phase of Beikthano coincided with the beginning of the urban complex of Śrīkṣetra, about the 5th century A.D.

(5) Age determination of charcoal specimens by radio-carbon analysis obtained the following results:—

Charcoal from phase I of site 9—1950 + years Before Present¹

Charcoal from phase II of site 9—1880 + years B.P.²

Charcoal from phase I of site 11—1725 + years B.P.²

Charcoal from phase II of site 11—1650 + years B.P.²

Taking 1950 as the reference year of “zero age B.P.” (as decided at the Fifth Radiocarbon Dating Conference at Cambridge in 1962—*Isotopes Inc.*) site No. 9 is datable to 1st-2nd century A.D., and site No. 11 to 3rd to early 4th century A.D. Thus the radio-carbon dating confirms the chronological estimation based on archaeological evidences.

¹ By Isotopes Inc. New Jersey, U.S.A. *vide Radiocarbon*, vol. 5, 1963, p. 76.

By The Institute of Nuclear Sciences, New Zealand.

VII. GENERAL OBSERVATIONS

Hitherto, excavations in Burma have been comparatively few. Śrīkṣetra and Pagan are the only two sites explored with some thoroughness ; even so the accounts of those earlier attempts were not well recorded. Thus Beikthano is a fresh site to be excavated systematically for the study of Pyu culture. The antiquities discovered at Śrīkṣetra and Halin, nevertheless, provide valuable links with the stratified objects from Beikthano.

The burial urns are definite evidence of cultural relationship between Beikthano on the one hand and Śrīkṣetra and Halin on the other. Innumerable urns unearthed at Śrīkṣetra are of the same character as those from Beikthano as regards the contents and the manner of burials. But very few types of ornate designs were found at Śrīkṣetra. The urns so far found at Halin are comparatively few but the tall and almost perpendicular sided urns are comparable to those found at Beikthano.

From the disposition of urns it is apparent that these were not buried singly at various times but were deposited in different groups at numerous burial sites in or around the structures. It could therefore be inferred that the urns were subjected to secondary burial. There must have been suitable buildings where the remains of the cremated bodies could be temporarily buried or stored until sufficient numbers of them were accumulated for collective burial at proper sepulchral sites or structures built from time to time within or outside the city. Possibly the building at site 2 could have served the purpose. The large quantity of pottery of various types and calcined bones and skulls found within that structure are strong evidences to support this inference. The striking affinity of the plan of this building with that of the monasteries at site 20 in Nagarjunakonda¹ (Fig. 86) leaves no doubt as regards the functional aspect, and the storage of urns in a monastic building before final burial may be deemed to be part of the sepulchral rites observed by the inhabitants of Beikthano.

The antiquity of Beikthano is vouched by the presence of uninscribed coins or medals known as Pyu coins. Though the number discovered by excavation is quite few, surface finds (Pl. LVIII b) were also made by the local people from time to time. From these specimens it appears that not only the predominant type found at Śrīkṣetra but also the type peculiar to Halin occur at this site. The use of these coins as currency is doubtful ; many of them have one or

¹ H. Sarkar : *Some Aspects of the Buddhist Monuments at Nagarjunakonda*; Ancient India No. 16, 1960 (pub. 1962), Plate XLVIII.

two holes for stringing through and might have been worn round the neck as pendant ornaments or sacred medallions to ward off evil and bring good luck to the wearer. The symbols on them, *viz. srivatsa*,¹ *swastika*, twin-fishes, *baddhapitha*,² etc., are common to Brahmanism and Buddhism but in India they are usually depicted individually on coins, pottery stamps and architectural motifs¹ and no parallel specimens in such a combination as on these coins have been found. However, similar coins said to have been discovered from Nakom Pathom in Thailand are exhibited in the National Museum in Bangkok and it would be worthwhile to search for analogous specimens in other South-east Asian countries. In Burma, however, these types of uninscribed coins could be definitely attributed as one of the chief characteristics of Pyu culture.

The Pyus at Beikthano knew the technique of building brick structures but since their settlement at the site even before the fortified city was built they dwelt in houses of perishable materials like bamboo and timber. It may be surmised that the main occupation was the cultivation of rice, and a considerable number of the inhabitants were engaged in pottery and bead-making, weaving and producing metal objects of utility and ornaments. Their achievement in sculptural art was not considerable. Writing was hardly introduced and consequently inscribed Buddhist texts were not in vogue.

The evidence of the destruction of the city by a great fire could imply an invasion by enemy forces. Thus the legend of the attack by Śrīkṣetra might be substantiated.

The culture of Beikthano clearly exhibits the influence of Andhradesa in South India, and it would be worthwhile to recount briefly the cultural history of that area. Amaravati (ancient Dhanyakataka) on the Krishna was the eastern capital under the Śātavāhanas who ruled the Deccan for four and a half centuries from about 230 B.C. After its fall the Śātavāhana empire was divided into different states and the Ikshakus ruled over Andhra, the Krishna-Lower Godavari region, with the capital at Nagarjunakonda (ancient Vijayapuri, near Siri Pavarta). Buddhism flourished throughout the Śātavāhana period and the Amaravati stupa originally built about the 2nd century B.C. was enlarged and embellished in the 2nd century A.D. At Nagarjunakonda the main stupa was built long before the 2nd century A.D. and later in the 3rd-4th century A.D. under the Ikshaku dynasty there grew up a cluster of monasteries and stupas which were added to, rebuilt and renovated from time to time. Some of the stupas of Nagarjunakonda had wheel-shaped bases (PL. LXV b) and some had swastika bases. "They were built of large bricks (20 in. × 10 in. × 3 in.) laid in mud mortar. When complete they were covered with plaster from top to bottom and most of the exterior decoration was executed in that material. The dome rested on a drum or circular platform 3 to 5 feet in height according to the size of the stupa. At the four cardinal points, a rectangular platform the same height as the drum, projected outwards and served as an altar or table for the

¹ For *Srivatsa* see Sivaramamurti, *opus cite*; H. D. Sankalia and M. G. Dikshit, *opus cite*, P. 51, No. 4132. Pl. XV; R. E. M. Wheeler: *Brahmagiri and Chandravalli Excavations*, 1947, Ancient India, No. 4, Pl. CXXVII, 25-35; J. Marshall: *Excavations at Bhita*, A.S.I. 1911-12.

² *Baddhapitha*, Cf "A curious stand shaped rather like an angular hour glass, across the centre of which runs a ribbon with turned-up ends": *Excavations at Basarh*, A.S.I. 1913-14, P. 98 ff. Pl. XLVIII. fig. 419a.

floral offerings presented to the shrine by pious worshippers. This is a very important feature of the Andhra stupas and is unknown in Northern India. In the larger and more important stupas each platform supported a group of five stone pillars, which in the inscriptions are called *ayaka-pillars*.¹ The projections are therefore named *ayaka*-platforms. There are plain simple stupas, even without the wheel-base and *ayaka*-platform but many others were profusely decorated from top to bottom, the lower portion being faced with carved limestone slabs.

Nagarjunakonda flourished at an epoch when the doctrines of different Buddhist sects were in the crucible. It would appear from the history of structural activities affirmed by inscriptions that at least four sects existed there, *viz.* Mahāvihāra-vasin, Mahīsāsaka, Bahusrutiya and Aparā-mahāvīnaseliya. The last is the most dominant sect which started its career in the valley at a time when the worship of the Buddha image was not in its tenets. Later it became divided into two sub-sects, one of which accepted the image-worship while the original sect did not accept till the end. The Mahīsāsakas, however, resisted the idea down to their last days in the valley.²

Of the structures at Beikthano the cylindrical building at site 3 with four rectangular projections and two concentric retaining walls resembles the typical Andhra type of stupa at Amaravati and Nagarjunakonda distinguished by the *ayaka*-platforms at the cardinal points.³ Here the swastika or wheel base is absent, the projections are very prominent and do not support any inscribed pillar, and the drum is not decorated with any sculptured stone slab. In Andhra stupas these decorations are later accretions of the 3rd-4th century A.D. Originally they were put up plainly as early as the 1st century B.C. and there are many stupas which do not enshrine any relics. These may therefore be deemed to be prototypes of the stupa-like structure at Beikthano.

Another type of religious or ritual structure is represented by those at sites 6, 14 and 18. This form has an elevation of a square base on which stands, originally, a cylindrical structure perhaps surmounted by a low hemispherical dome like the stupas at Nagarjunakonda. The plan now shows a square wall enclosing the circular mass in the centre. The cylindrical mass rose from the ground level while the space round it, within the square wall, was filled with earth. There are no projections from the drum itself but a rectangular wall projected from one of the basement sides. This feature is peculiar to Beikthano though stupas without wheel-base or *ayaka*-platforms are also disclosed at Nagarjunakonda. Burial urns are definitely associated with the structures at sites 14 and 18, but these are not actually enshrined within them. At Nagarjunakonda there are instances of enshrining the remains of monks or priests placed in earthen water-pot within undecorated monastic stupas (Nos. 4 and 5).⁴ It may be suggested that at Beikthano also the urns of religious personages were buried in or near the brick structures ; but as the large quantity of urns associated with such structures would indicate the inordinate proportion of monks or priests among the populace the assumption cannot be entertained.

¹ Longhurst, *The Buddhist Antiquities of Nagarjunakonda*, Archl. Survey Memoir No. 54 (1938), p. 12.

² H. Sarkar; *opus cite*.

³ See Fig. 85 and 87, Pl. LXV. Longhurst ; Sarkar ; *opus cite*.

⁴ Longhurst ; *opus cite*.

The oblong structures of sites 9 and 11 also have parallels at Nagarjunakonda in the form of pillared congregational halls which belonged to the monastic establishments.¹ Here the pillars are wooden ; and the burial of urns inside the structures as well as round the exterior base is a peculiar feature not found in the South Indian counterpart. In all probability, these structures are the vestiges of Buddhism introduced by the missionaries of the original Aparaseliya and Mahāsāsaka sects of Amaravati and Nagarjunakonda who started their careers without the Buddha image and did not yield to the popular demand of image-worship.²

That the cultural equipment of Beikthano bears the stamp of Indian influence is further evidenced by the occurrence of the peculiar types of pottery and beads, of the clay sealing, the stone tablet with incised symbols of *cakra* and *ankush* and the kohl sticks. The technique of etching agate or carnelian beads by applying a strong alkali and then heating is unknown in Burma. In India etched beads are produced by the use of some twigs of *kirar* (*capparis aphylla*, a bush which grows wild in Sind and S.W. Punjab) rubbed in washing soda.³ As the plant is not grown in Burma the finished bead of this type could only have been imported from India.

Andhra in South India was a prosperous state by the 1st century A.D. and it had commercial contacts with Roman ports as well as the south-eastern countries. Missionaries followed the adventurous traders to convert the people of foreign lands. Thus Buddhism was introduced into Burma after the trade route was opened by sea-farers some of whom later chose to settle down in the country.

An inscription⁴ at Nagarjunakonda records the dedication of a shrine "for the benefit of the fraternities (of monks) of Tambapāṇṇa (Ceylon)⁵ who had converted Kasmīra, Gandhāra, Cīna, Cilāta (Kirāta), Tosali, Avarānta, Vaiṅga, Vanavāsī, Yavana(?), Damila(?), Palura(?) and the Isle of 'Tambapāṇṇi (Ceylon)'" Niharanjan Ray had attempted to identify the Kirāta country with the regions of Arakan and Lower Burma and asserted that the record in the Nagarjunakonda inscription gives a definite reference to the prevalence of Buddhism in Burma sometime before the third century A.D.⁶ His theory deserves consideration for although we cannot ascertain which particular part of Burma Kirāta belonged to it seems there is a strong tradition that Kirāta was a province of Burma as indicated by a bell inscription, though rather modern (*viz.* 1811 A.D.) at the Mahāmuni Pagoda, Mandalay.⁷ May not the archaeological evidence revealed at Beikthano bring the identification of Kirāta within a narrower horizon? Anyway, it may be concluded that the seed of Buddhism was sown at Beikthano earlier than at Sriksetra though it was only at the latter site that its efflorescence eventually took place.

¹ Longhurst ; *opus cite.*

² Sarkar ; *opus cite.*

³ H. C. Beck : *Beads from Taxila*, Archl. Memoir No. 65.

⁴ *Epigraphia Indica*, XX, p. 22-23.

N. Ray suggests to mean " Far South of India ", *vide: Theravada Buddhism in Burma*, pp. 17-18

⁵ *Ibid.*

⁷ *Inscriptions collected in Upper Burma*, Vol. II, 1903, p. 2.

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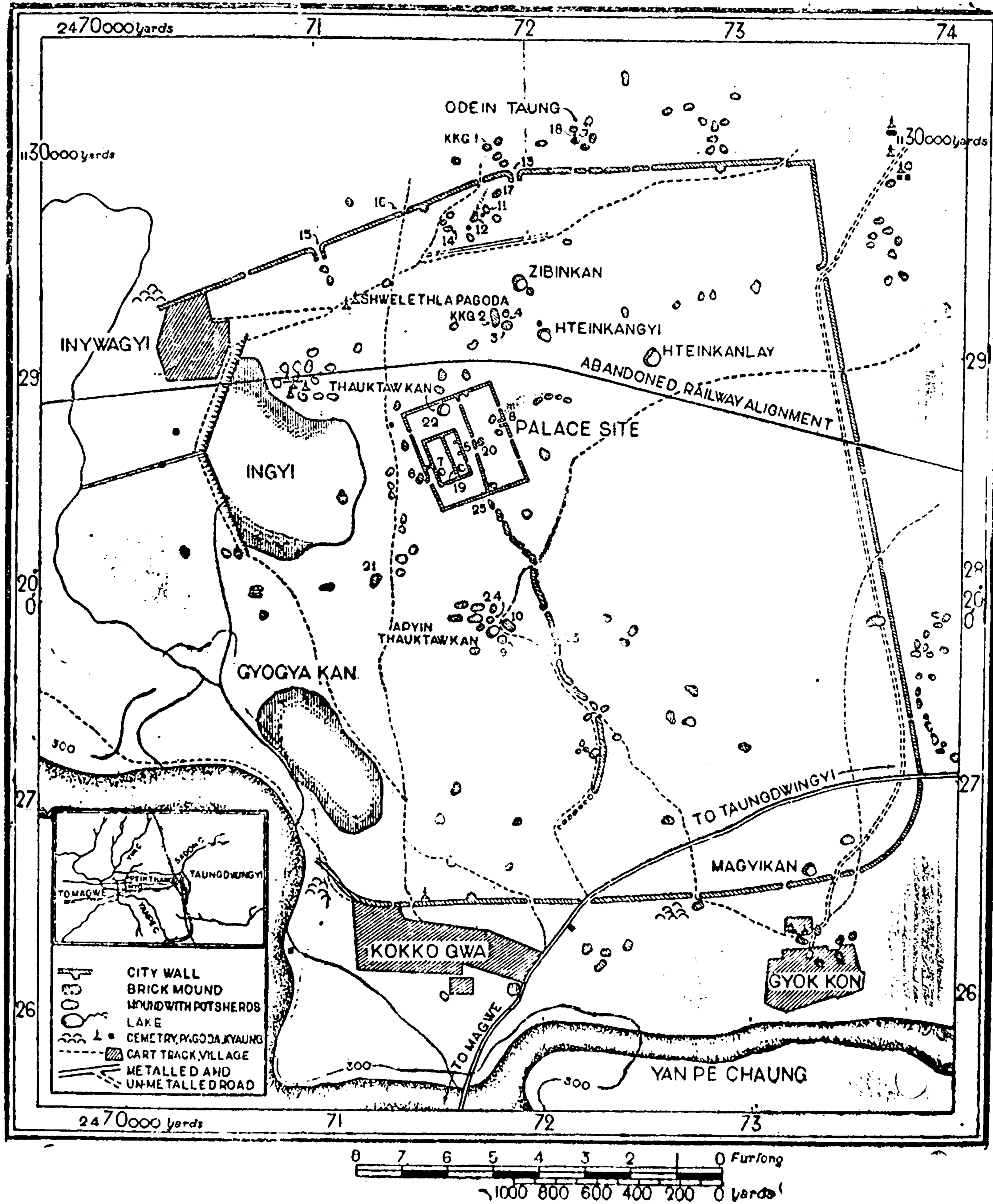


Fig. 1.—Map of Beikthano-myo (Vishnu City).

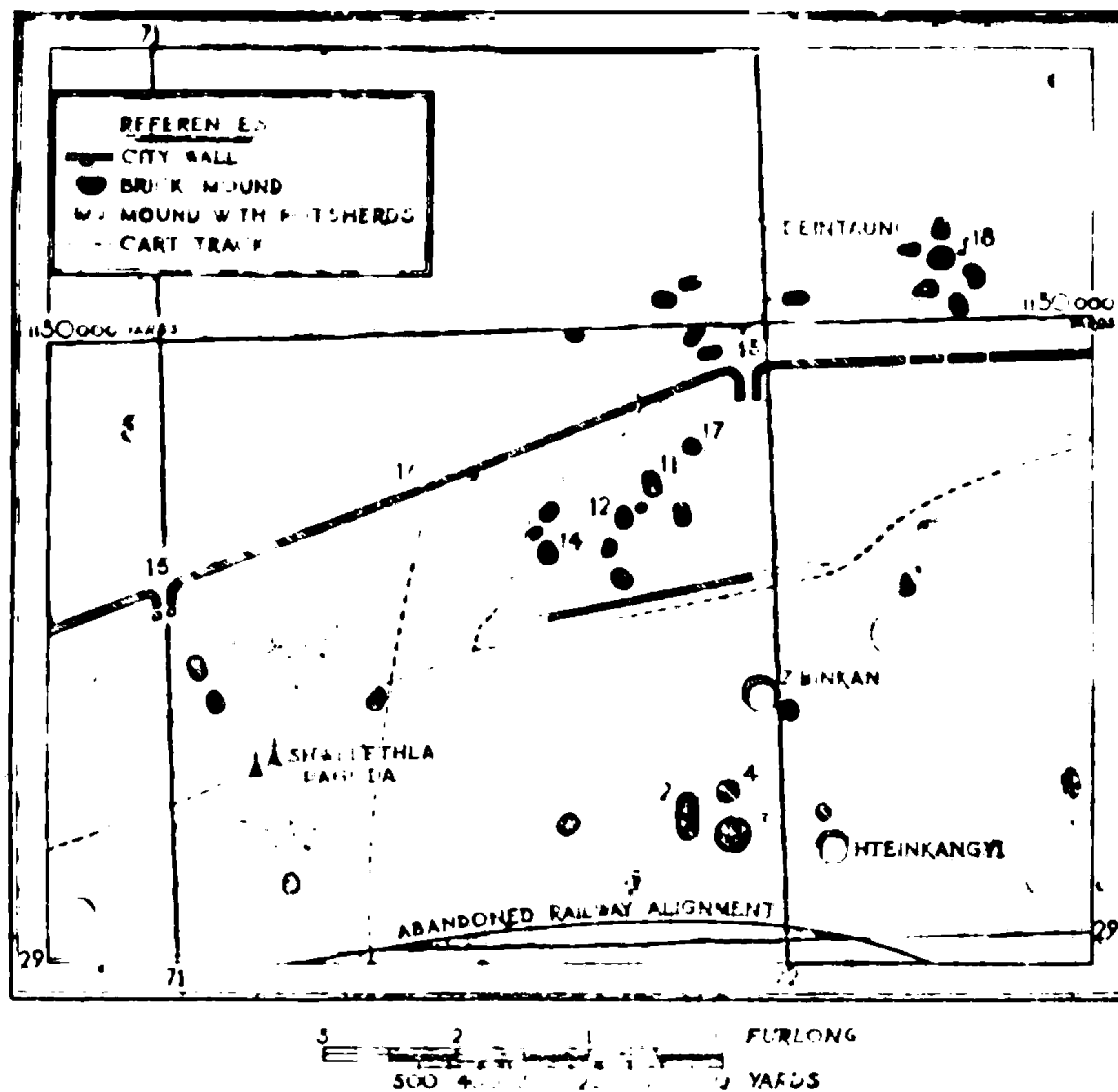


Fig. 2.- Excavated sites in the northern sector, Beikthano.

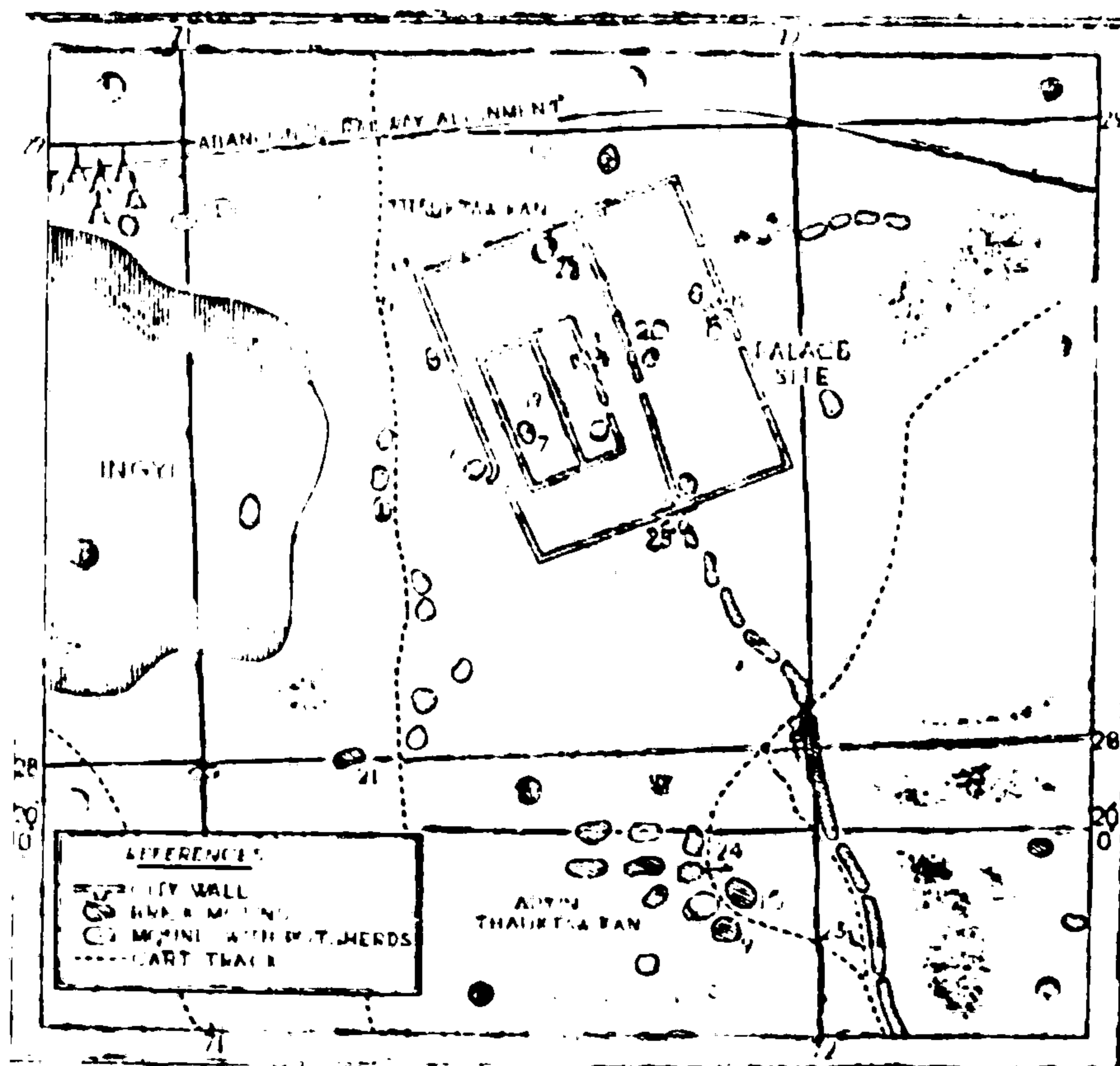


Fig. 3.—Excavated sites in the central sector, Beikthano.

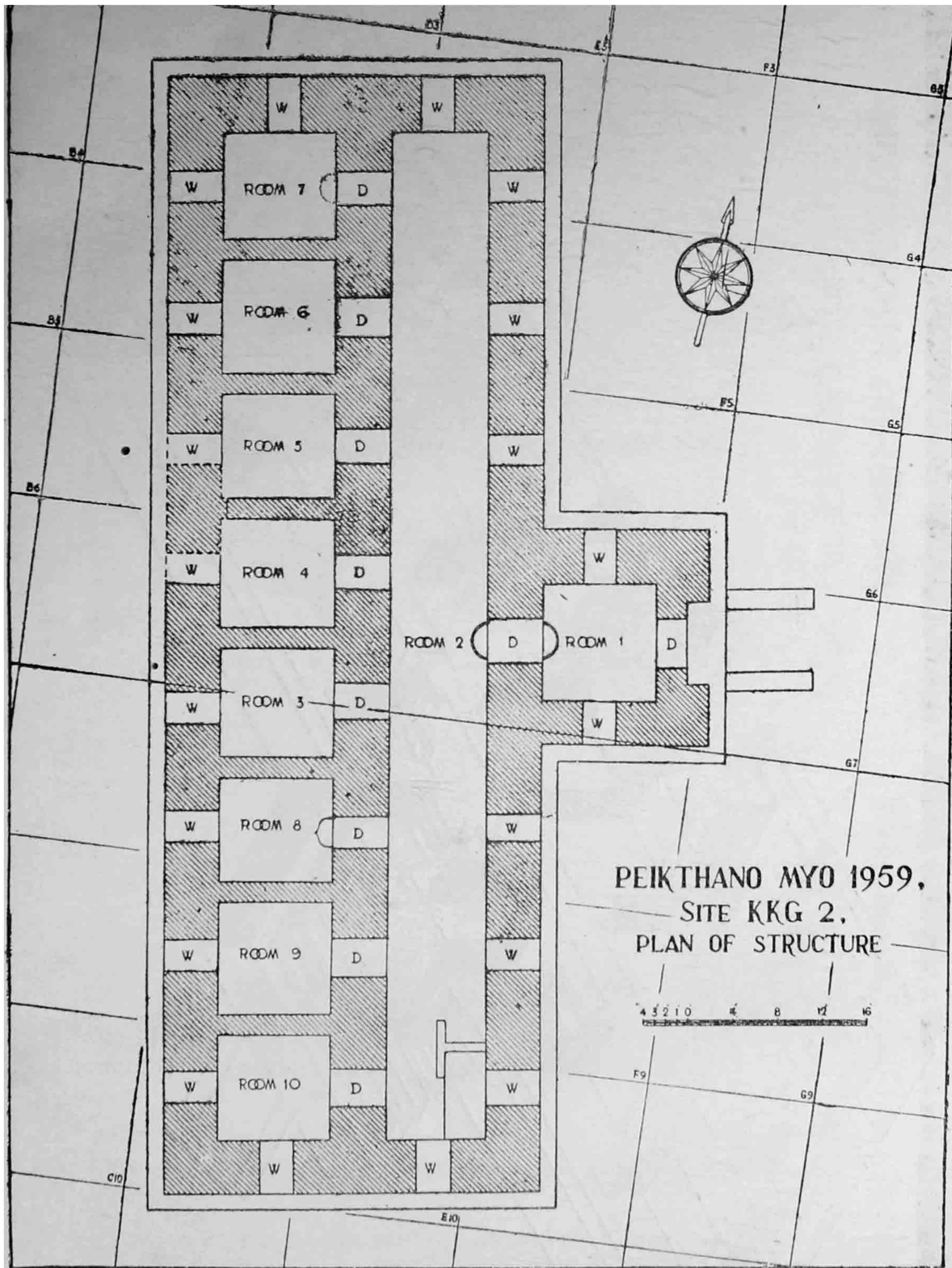


Fig. 5 --Plan of exposed building, KKG 2.

PEIKTHANO MYO 1959. SITE KKG 2.
ISOMETRIC PROJECTION
OF EXPOSED STRUCTURE

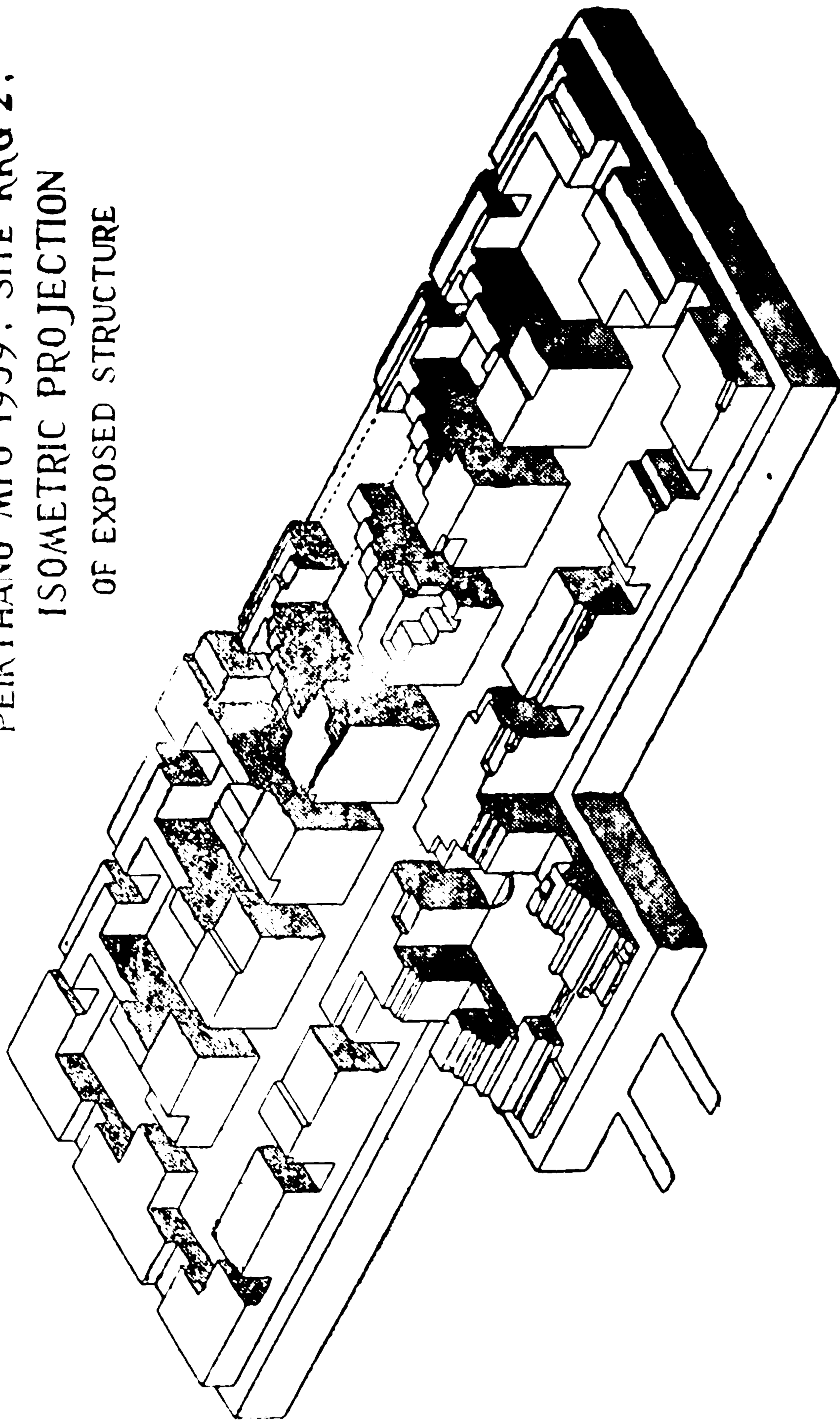
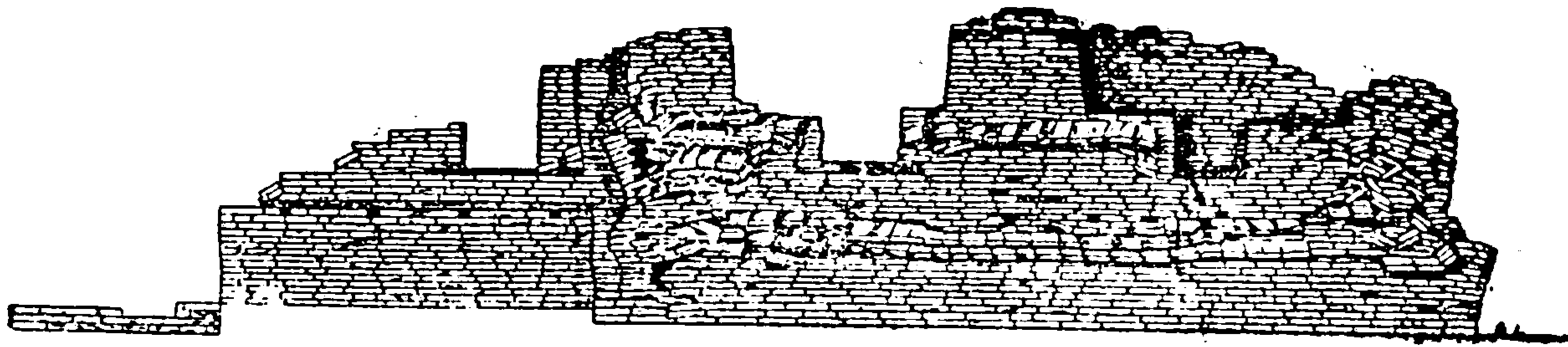


Fig. 6.—Isometric projection of exposed structure, KKG 2.



NORTH ELEVATION OF STRUCTURE . SITE KKG 2.
PEIKTHANO-MYO

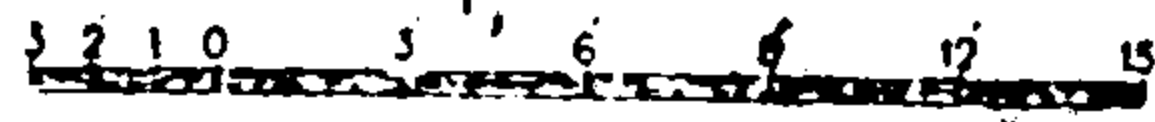
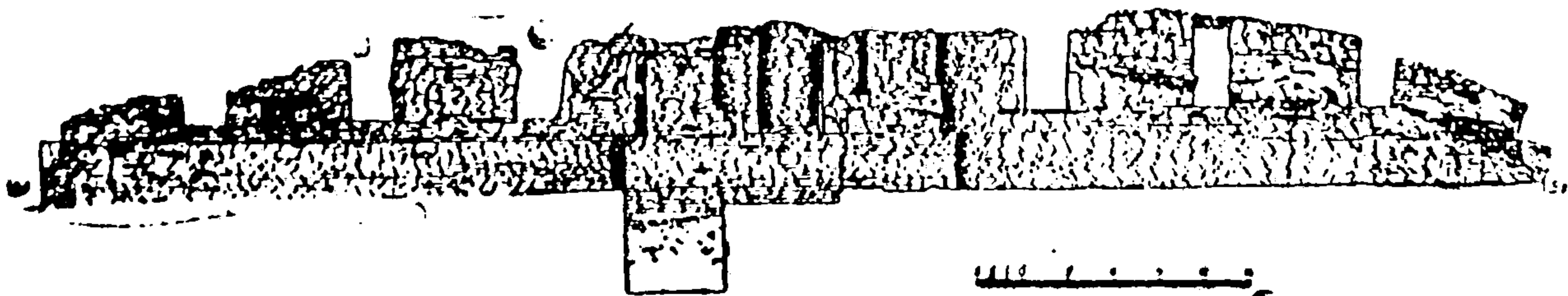


Fig. 7.—North Elevation of exposed structure, KKG 2.



EAST ELEVATION OF STRUCTURE . SITE KKG 2. PEIKTHANO-MYO

Fig. 8.—East Elevation of exposed structure, KKG 2.

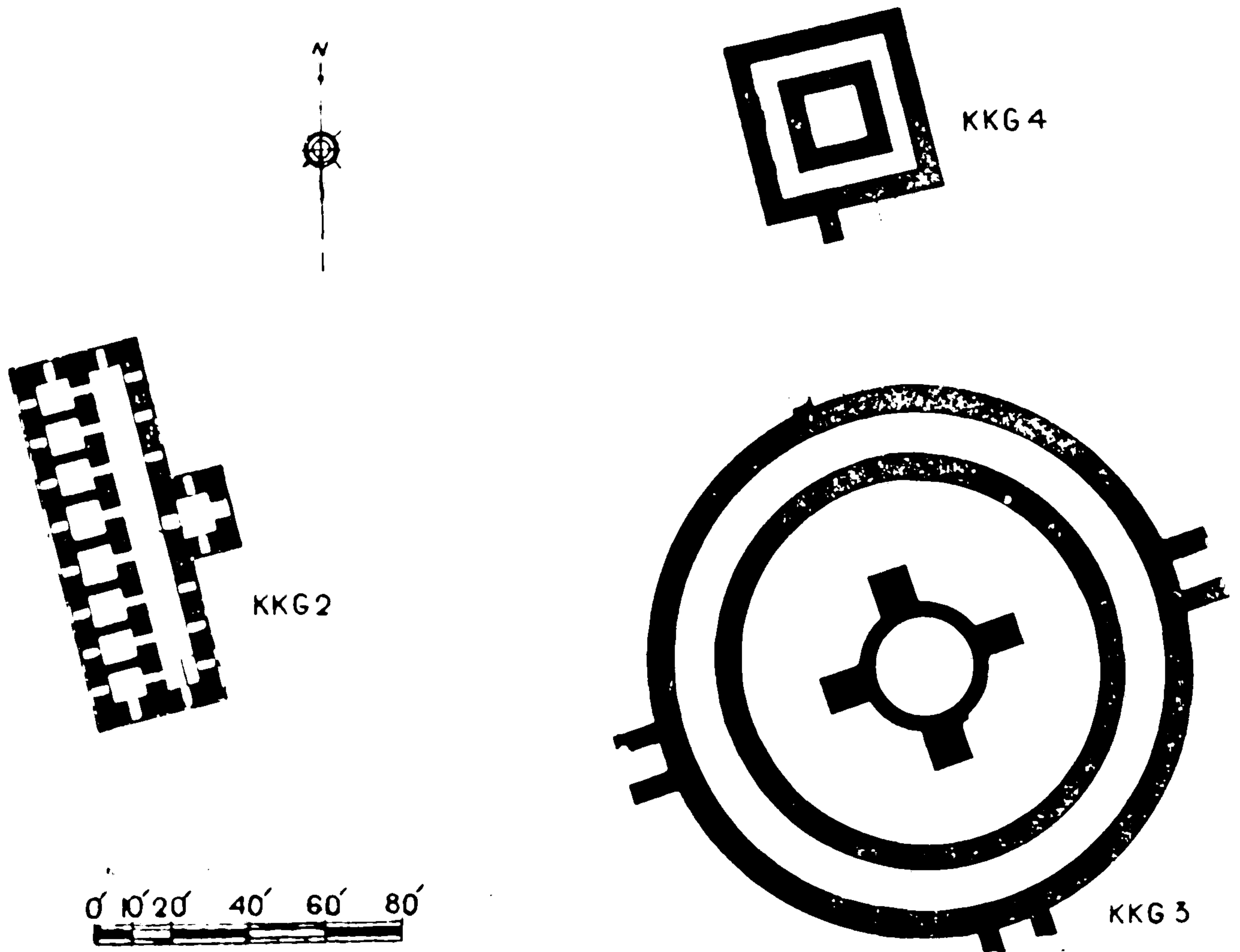


Fig. 9.—Plan of excavated sites KKG 2, 3 and 4.

PEIKTHANO MYO 1960, SITE KKG 5.

PLAN OF STRUCTURE

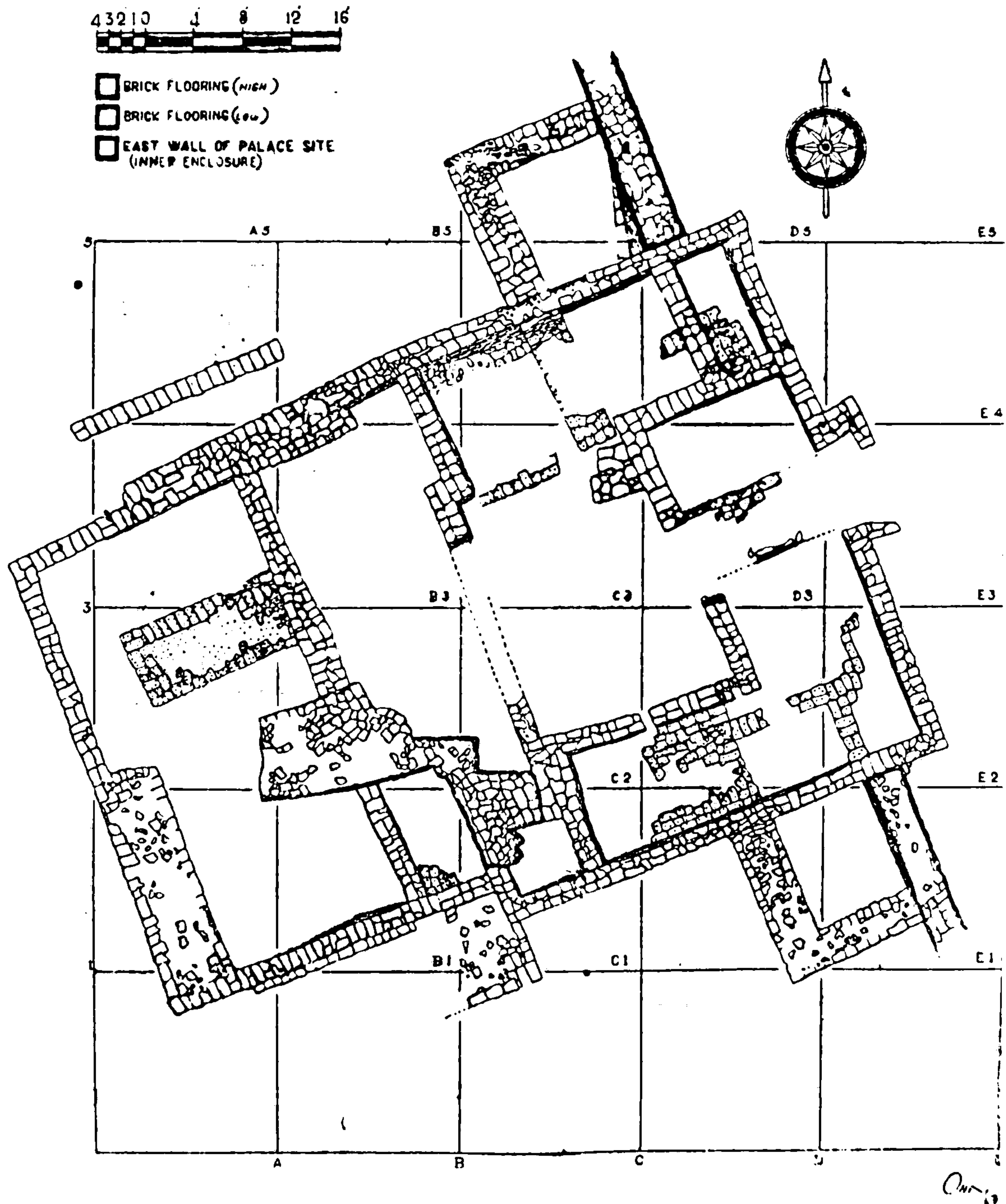


Fig. 11.—Plan of excavated site KKG 5.

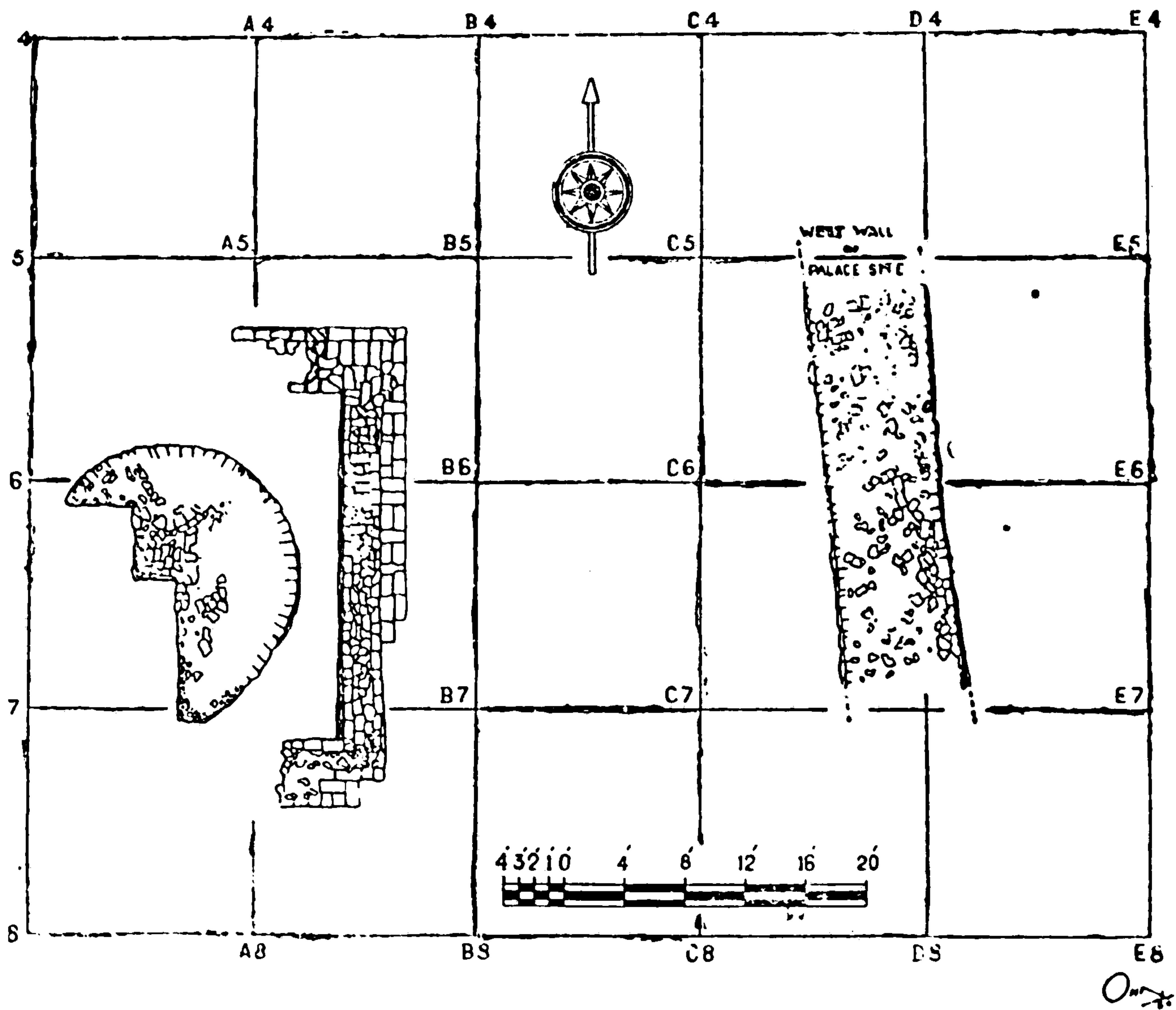


Fig. 12.—Plan of excavated site KKG 6.

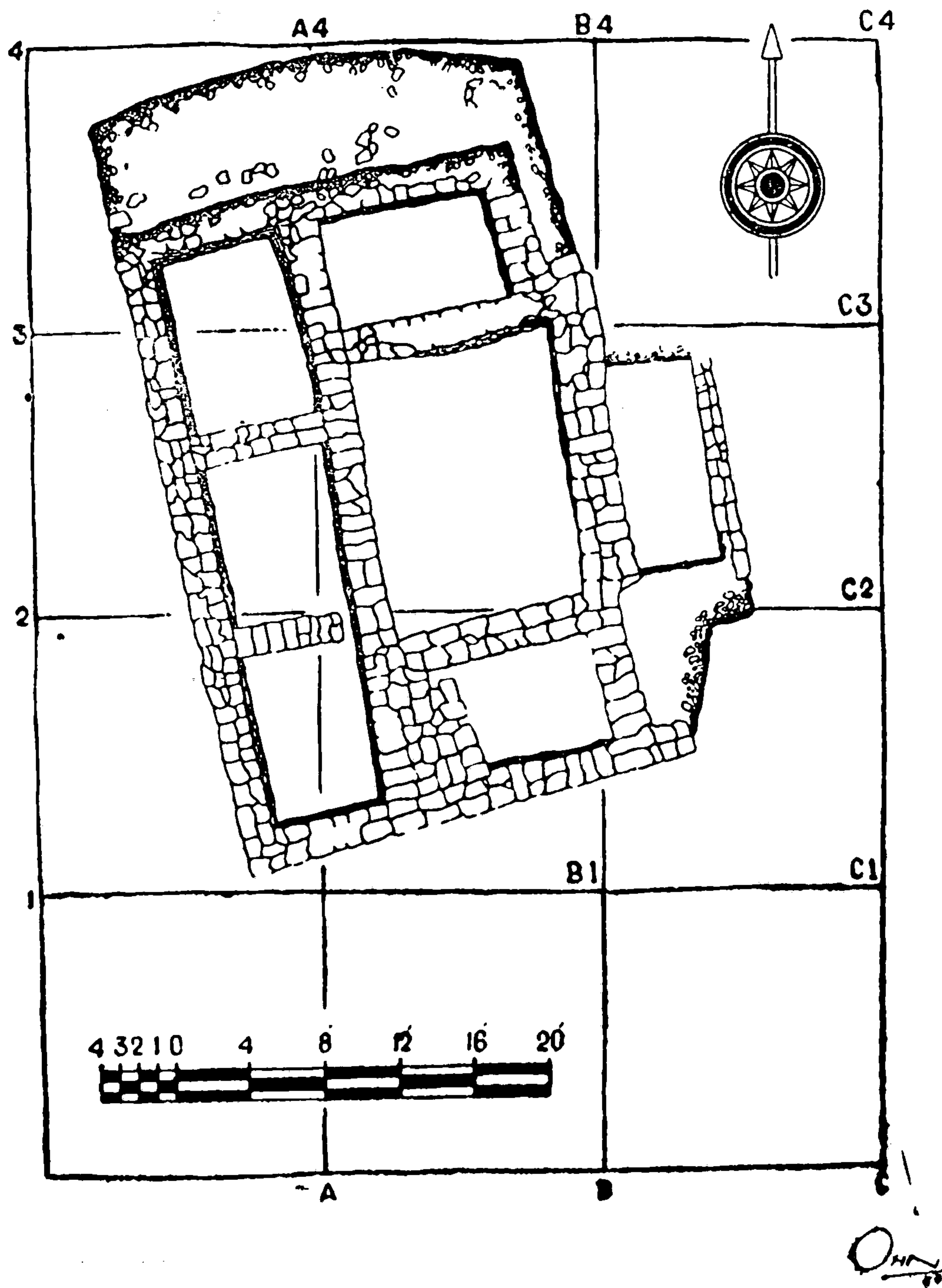


Fig. 13.—Plan of excavated site KKG 7.

SITE KKG 8 : PLAN

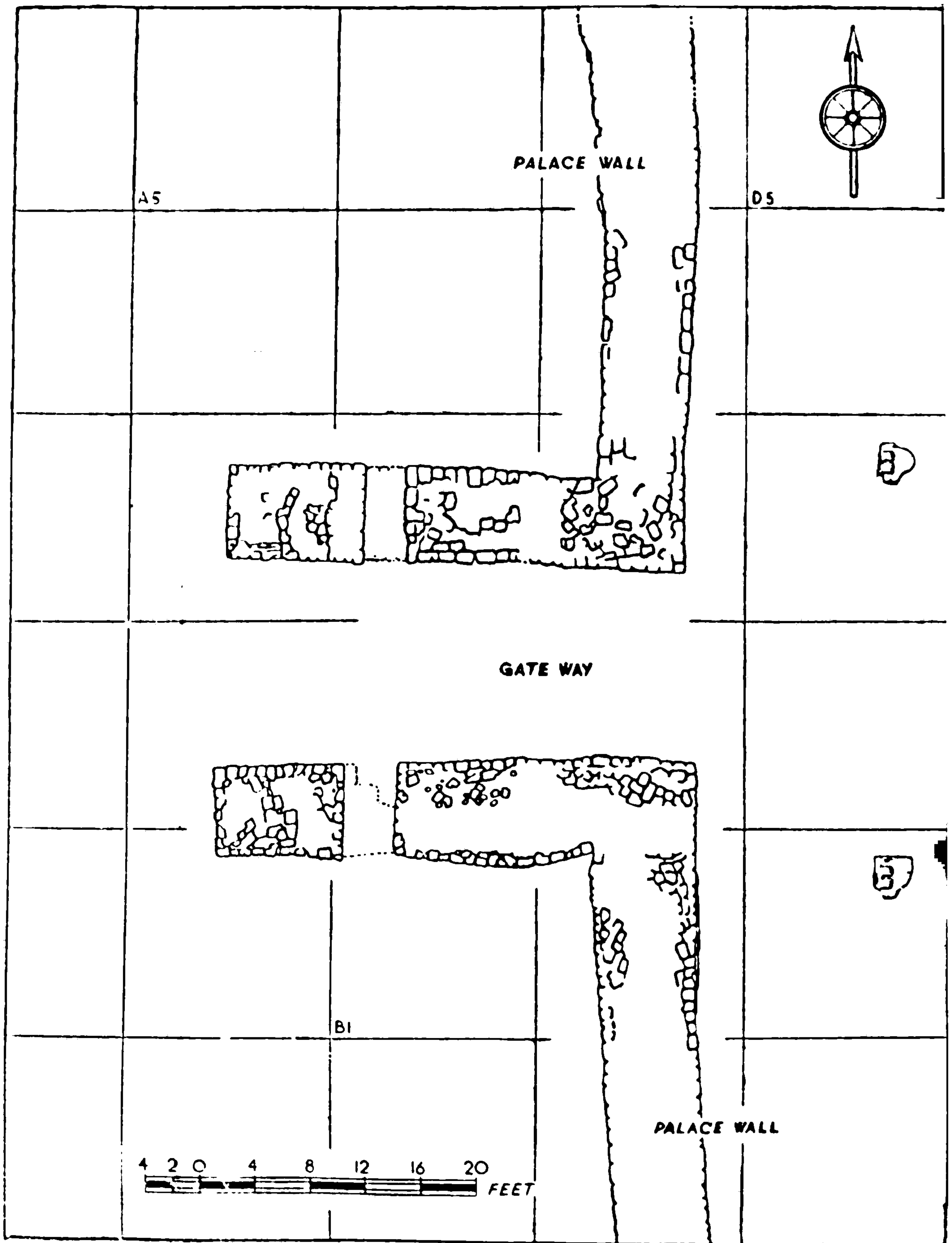


Fig. 14.—Plan of excavated site KKG 8.

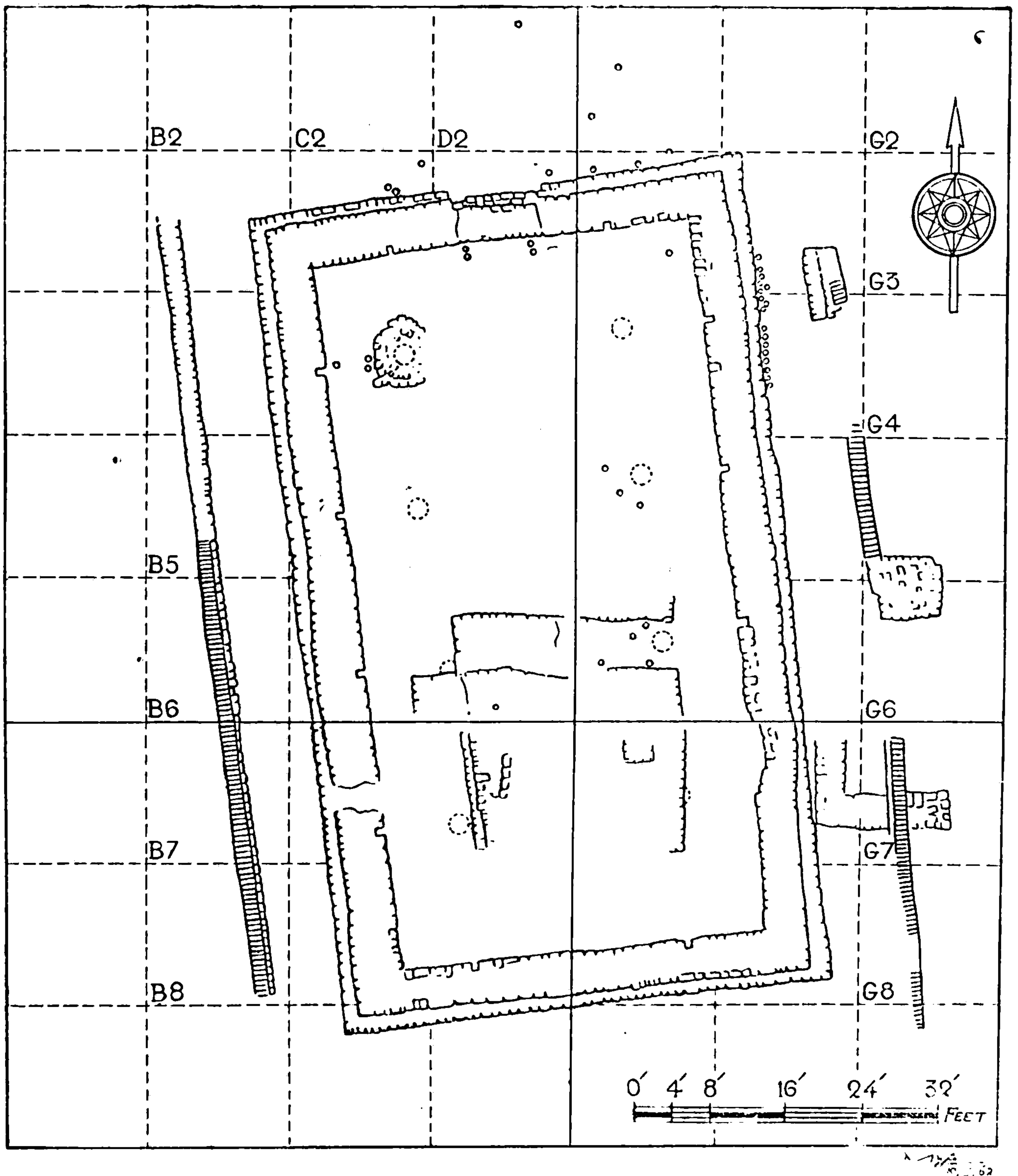


Fig. 15.—Plan of excavated site KKG 9.

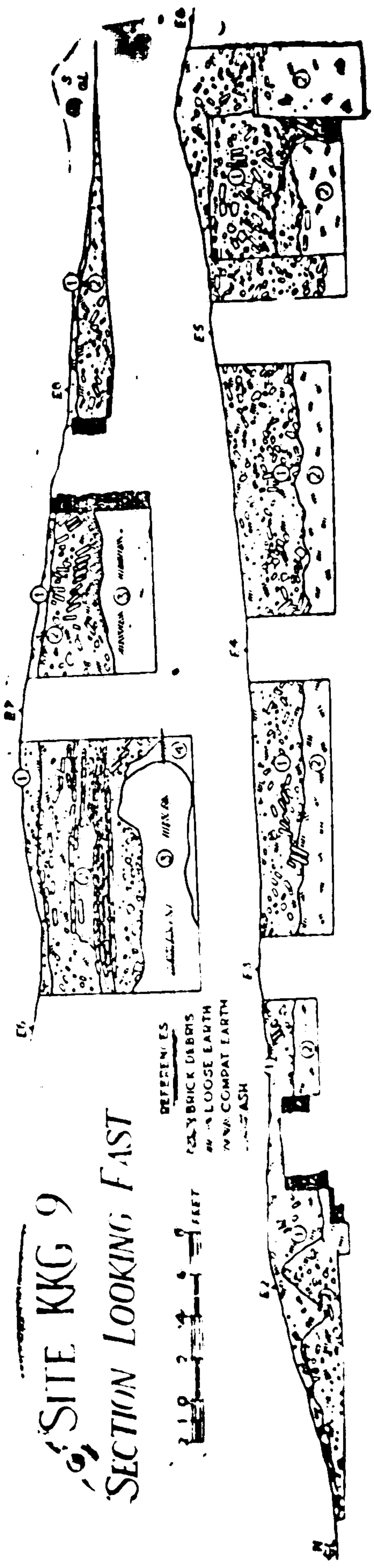


Fig. 16.—Section of site KKG 9.

PLAN OF STRUCTURE

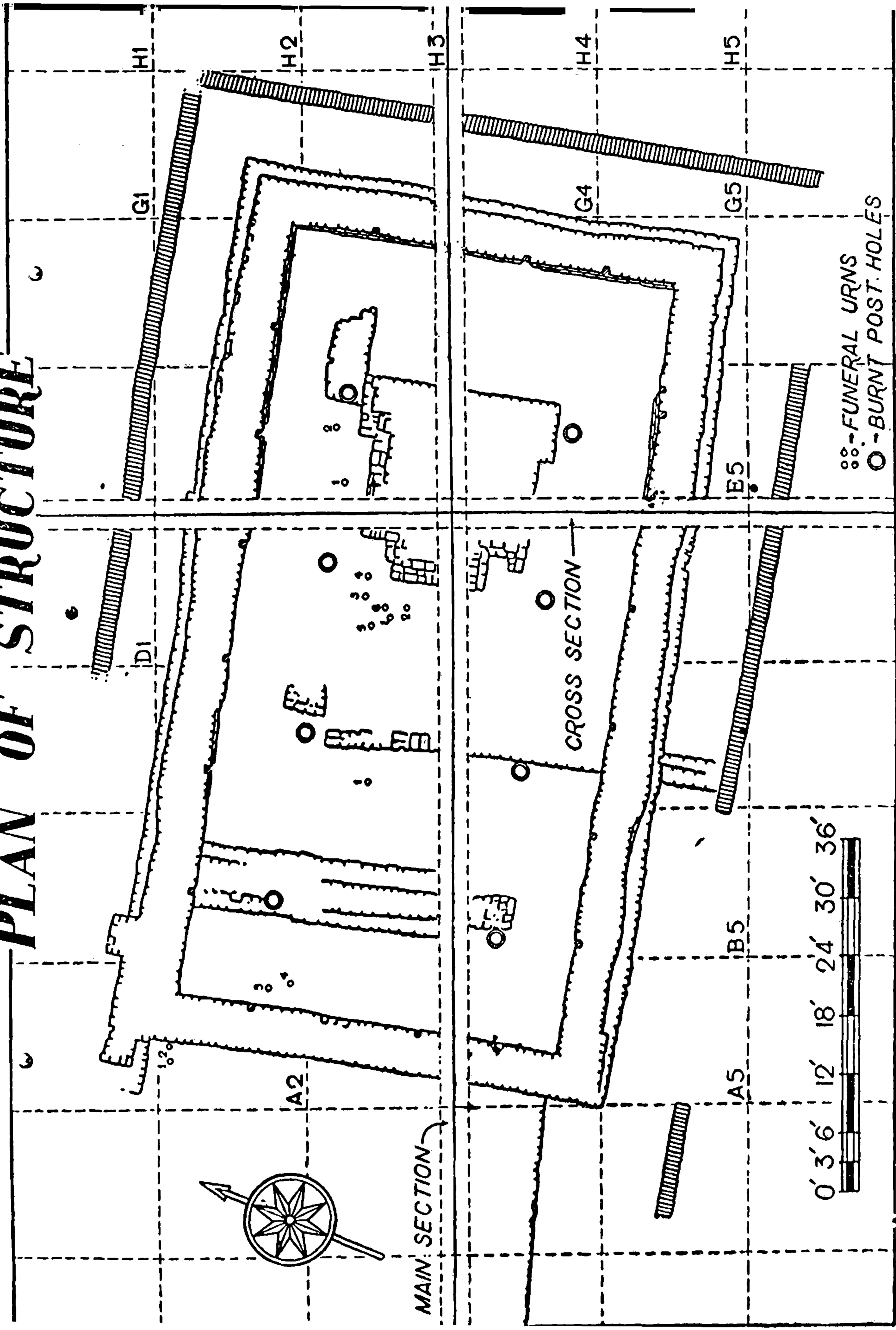


Fig. 17.—Plan of site KKG 11.

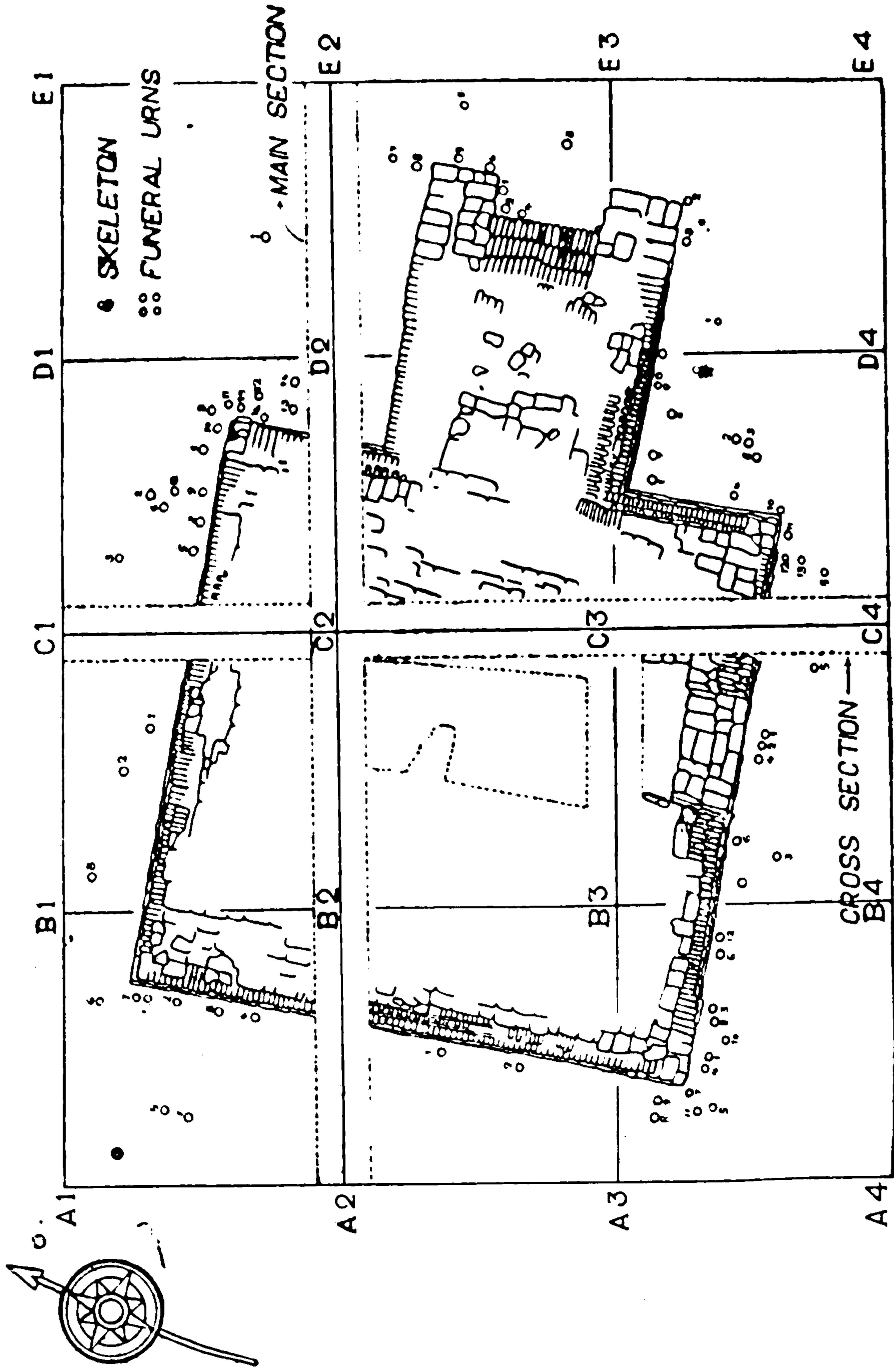


Fig. 18.—Plan of exposed structure, KKG 12.

SITE KKG 12: SECTION LOOKING SOUTH

REFERENCES
CLAY BACK DEBRIS
MAY COMPACT EARTH
OR UNLOOSE EARTH



Fig. 19.—Section of site KKG 12.

SITE KKG 13 PLAN

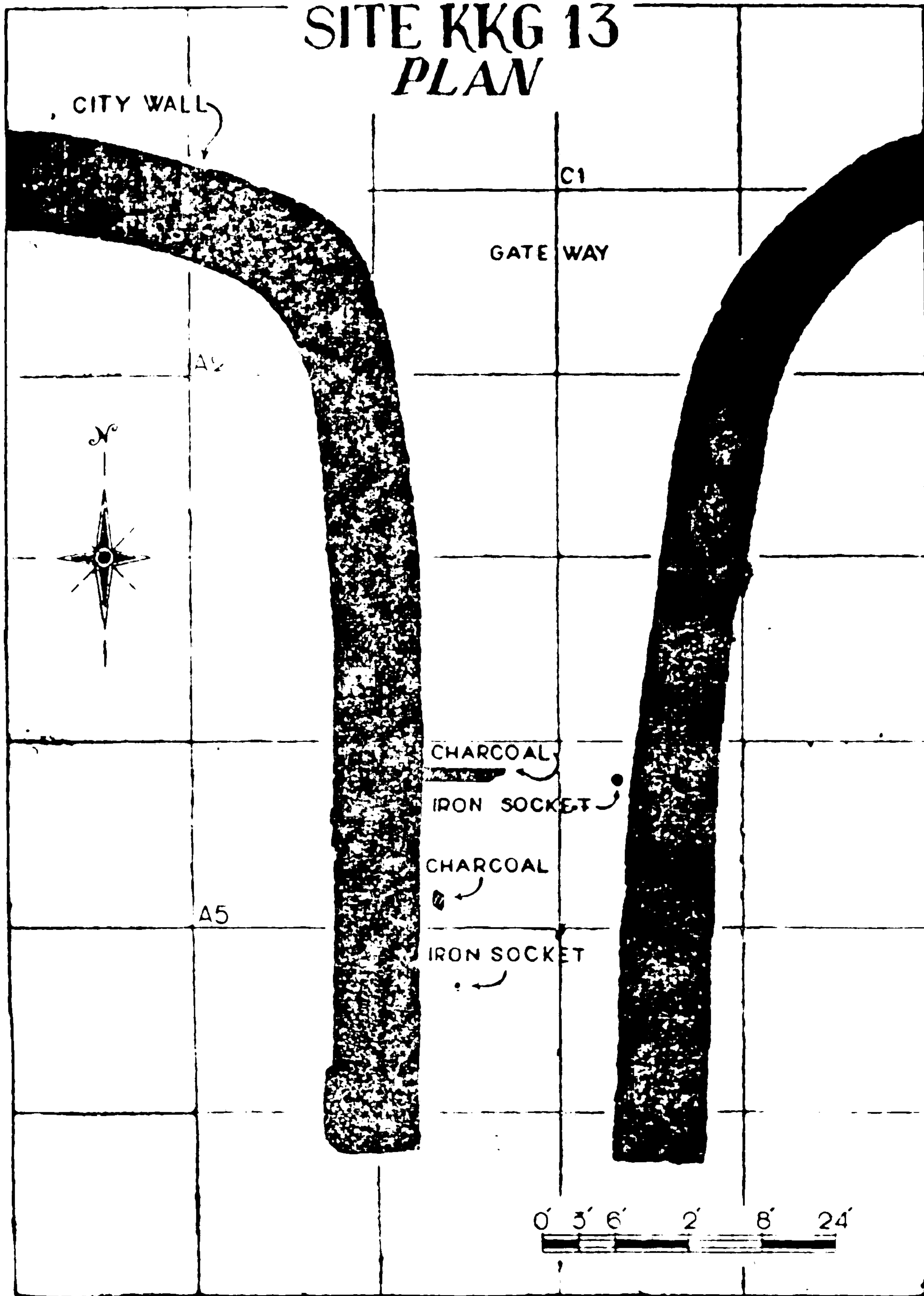


Fig. 20.—Plan of gateway, KKG 13.

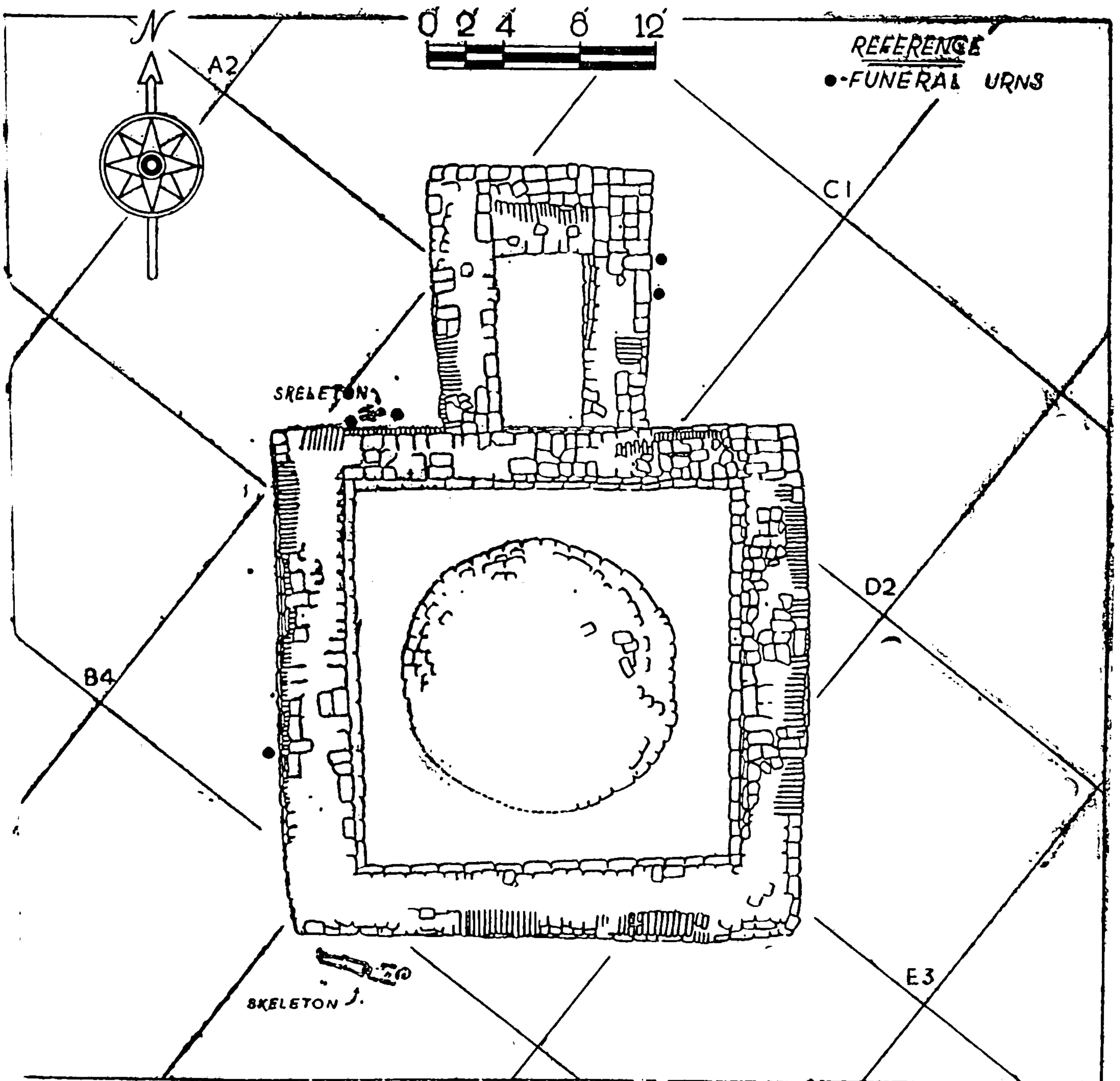


Fig. 21.—Plan of structure, KKG 14.

SITE KKG 14: SECTION LOOKING SOUTH WEST

REFERENCES
 BOLD BACK LEMMA
 COMPACT EARTH
 LOOSE EARTH

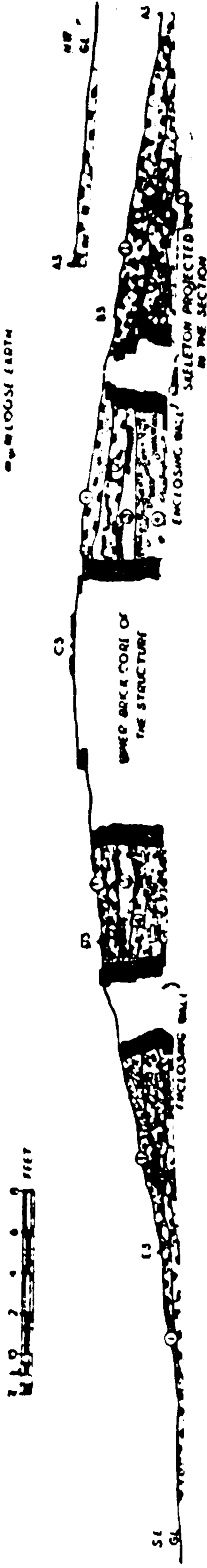


Fig. 22.—Section of site KKG 14, looking south west.

SITE KKG 14: SECTION LOOKING NORTH WEST

REFERENCES
 BOLD BACK LEMMA
 COMPACT EARTH
 LOOSE EARTH

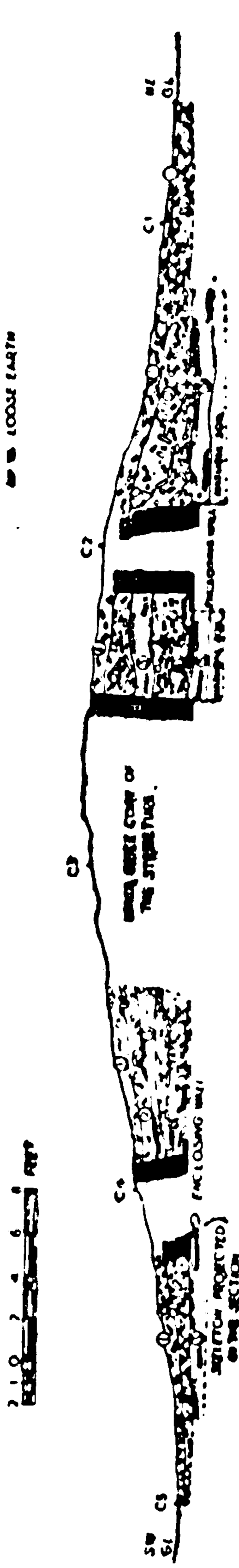


Fig. 23.—Section of site KKG 14, looking north west.

SITE KKG 15: PLAN

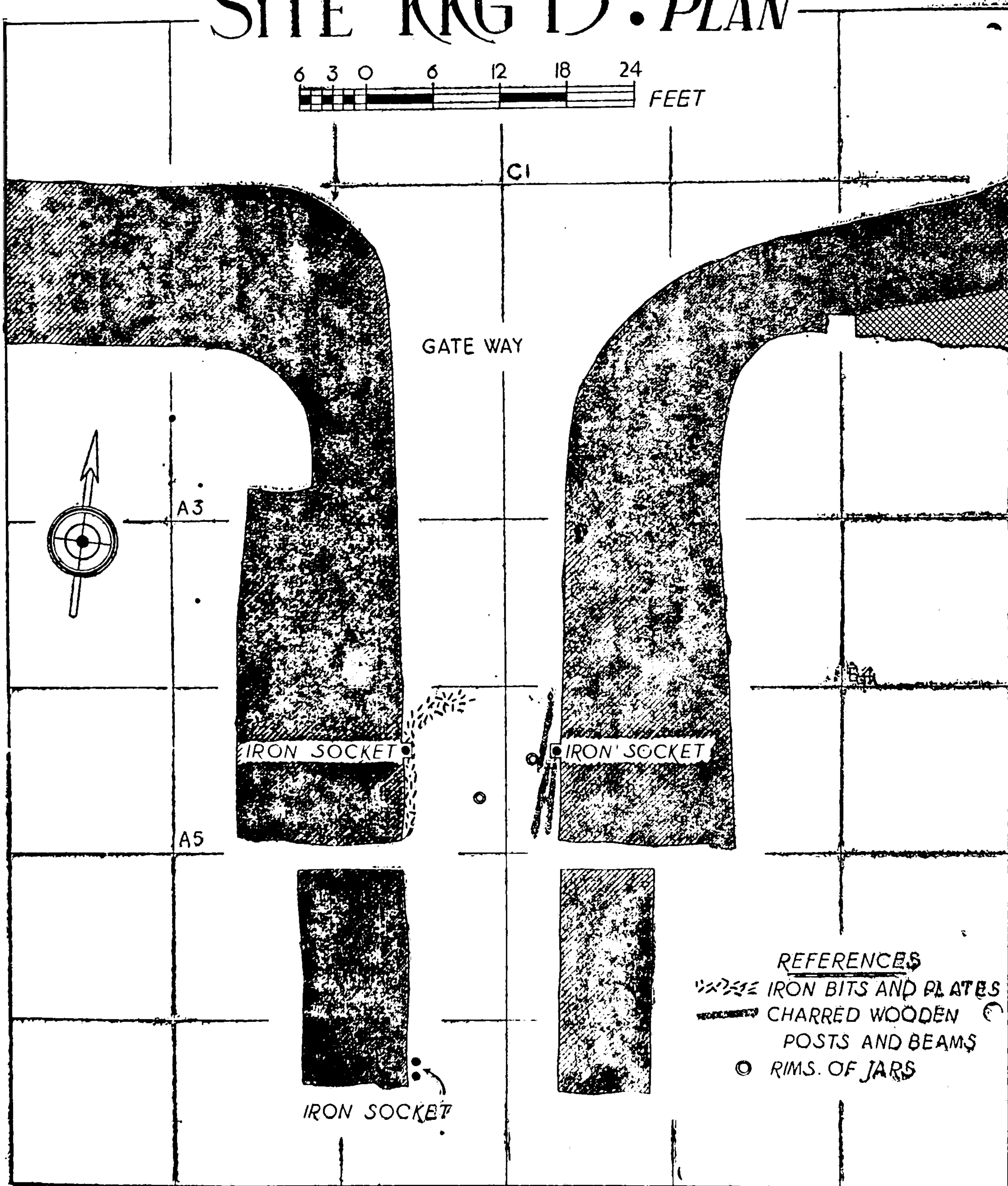


Fig. 24.—Plan of gateway, KKG 15.

SITE KKG 15: SECTION LOOKING SOUTH



APPARENTLY
 UNEXPOSED
 WITH CORRECTION
 AT 1000 M (1000)
 1000 M



Fig. 25.—Section of site KKG 15.

SITE KKG 16: SECTION LOOKING EAST

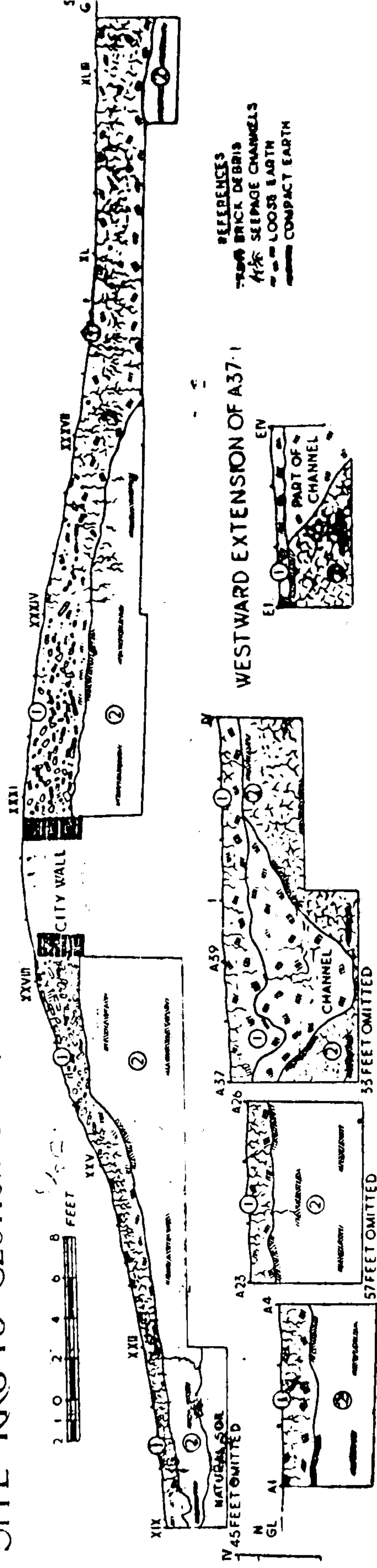


Fig. 26.—Section of site KKG 16, looking east.

SITE KKG 17: PLAN

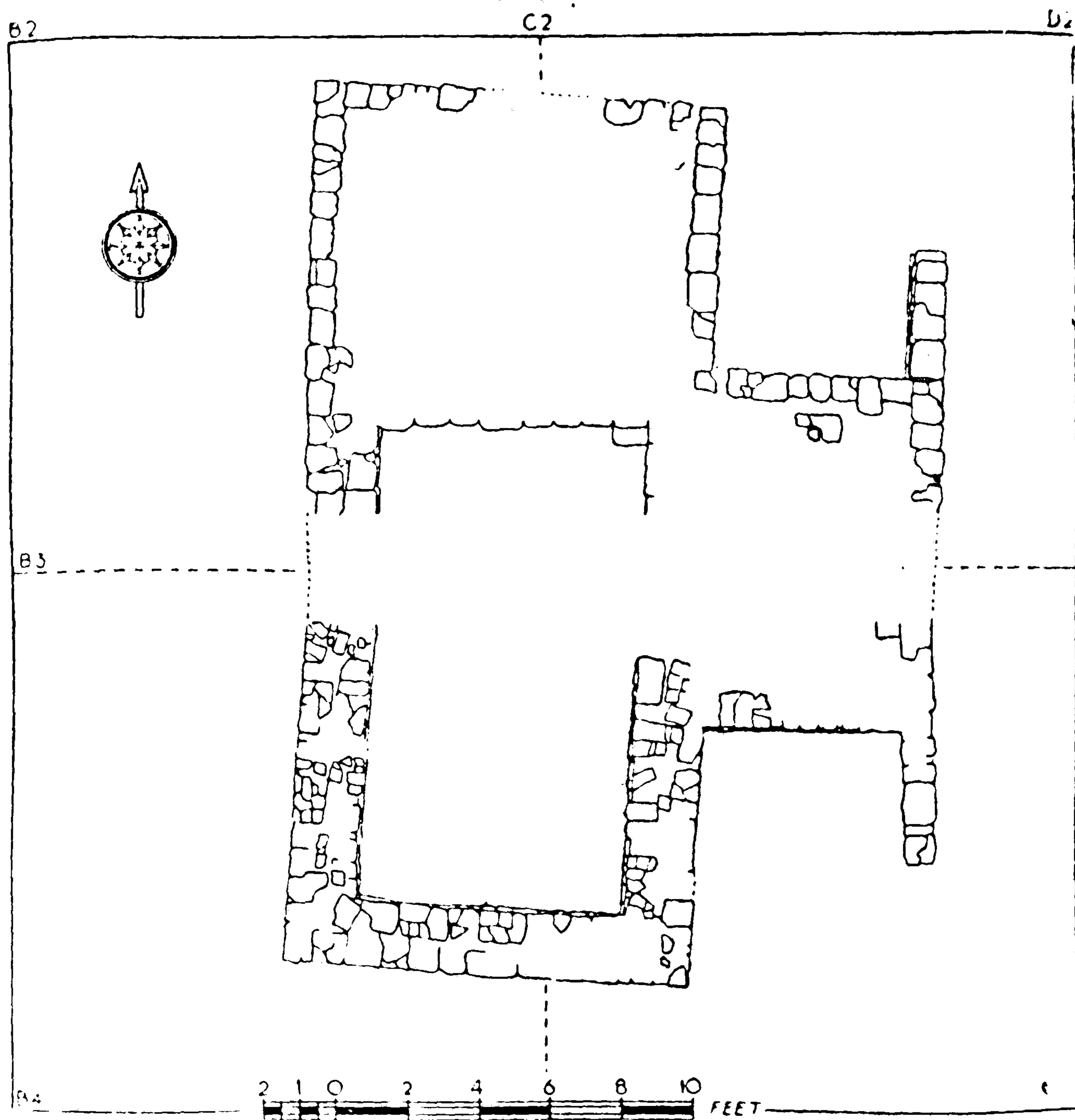


Fig. 27.—Plan of site KKG 17.

SITE KKG 17: SECTION LOOKING SOUTH



REFERENCES
 - BRICK DEBRIS
 - LOOSE EARTH

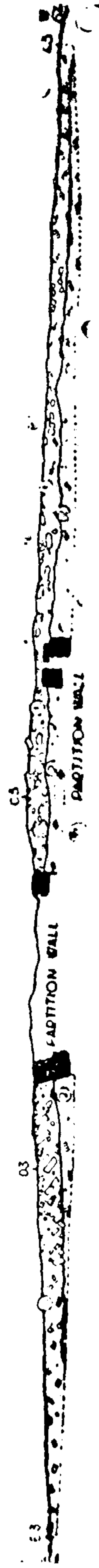


Fig. 28.—Section of site KKG 17, looking south.

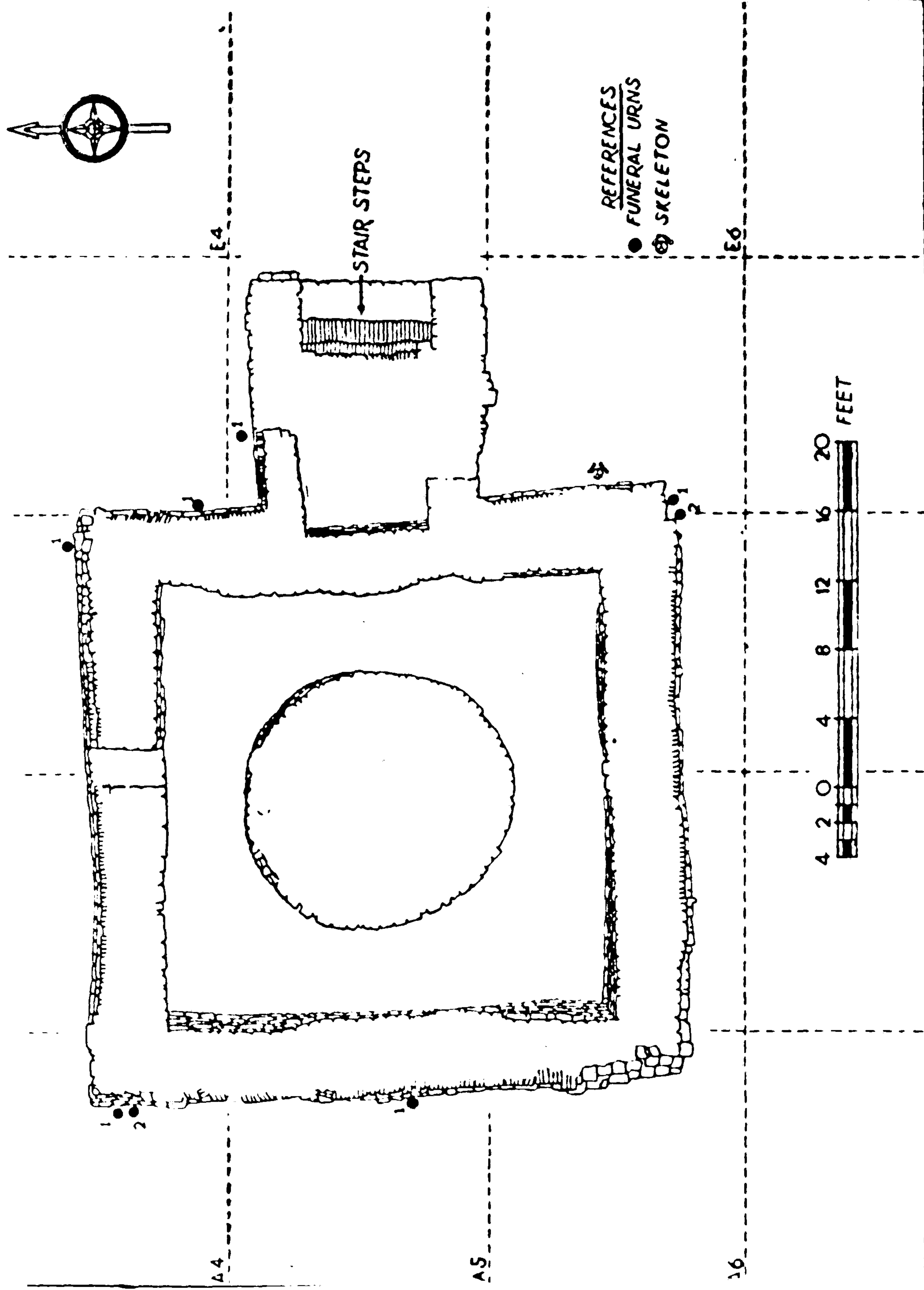


Fig. 29.—Plan of exposed structure, KKG 18.

REFERENCE
BANK DEPOS
- 1000000000

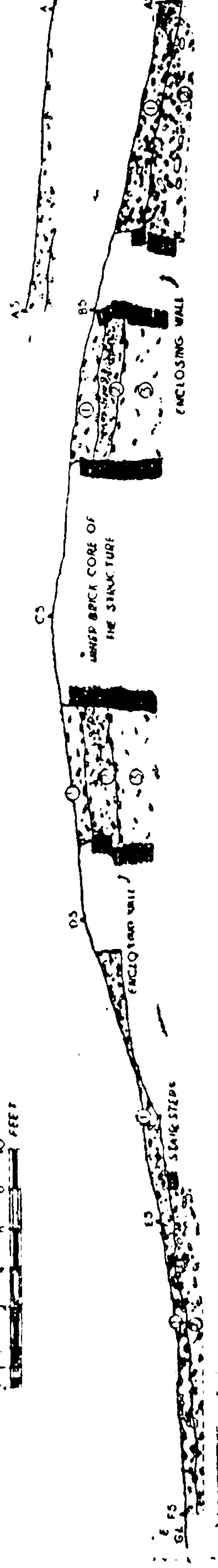
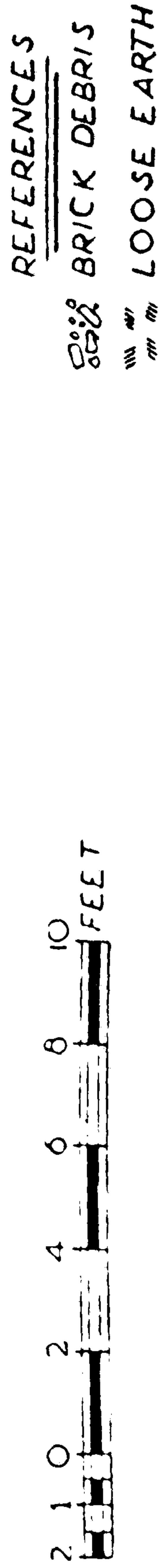
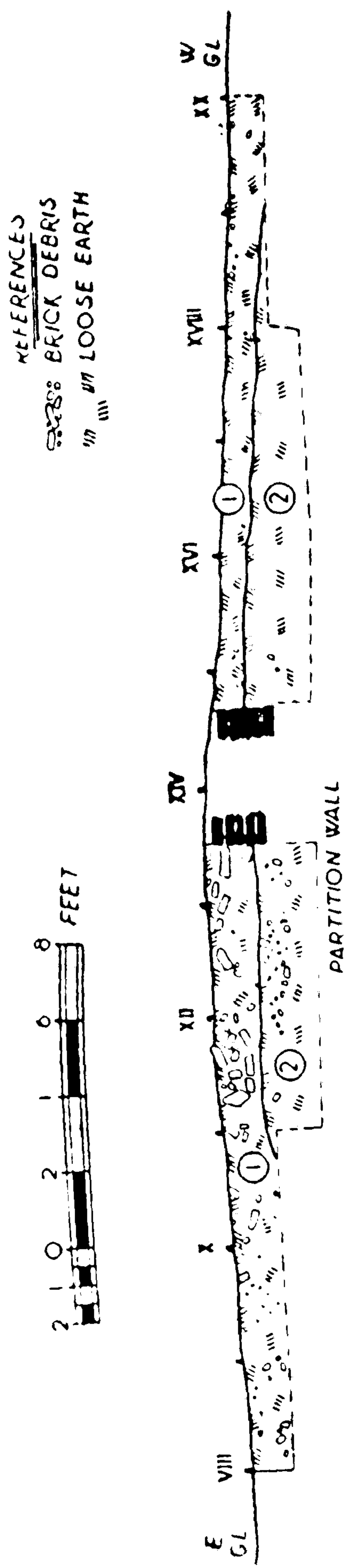


Fig. 30.—Section of site KKG 18, looking south



SITE KKG 21: *PLAN*

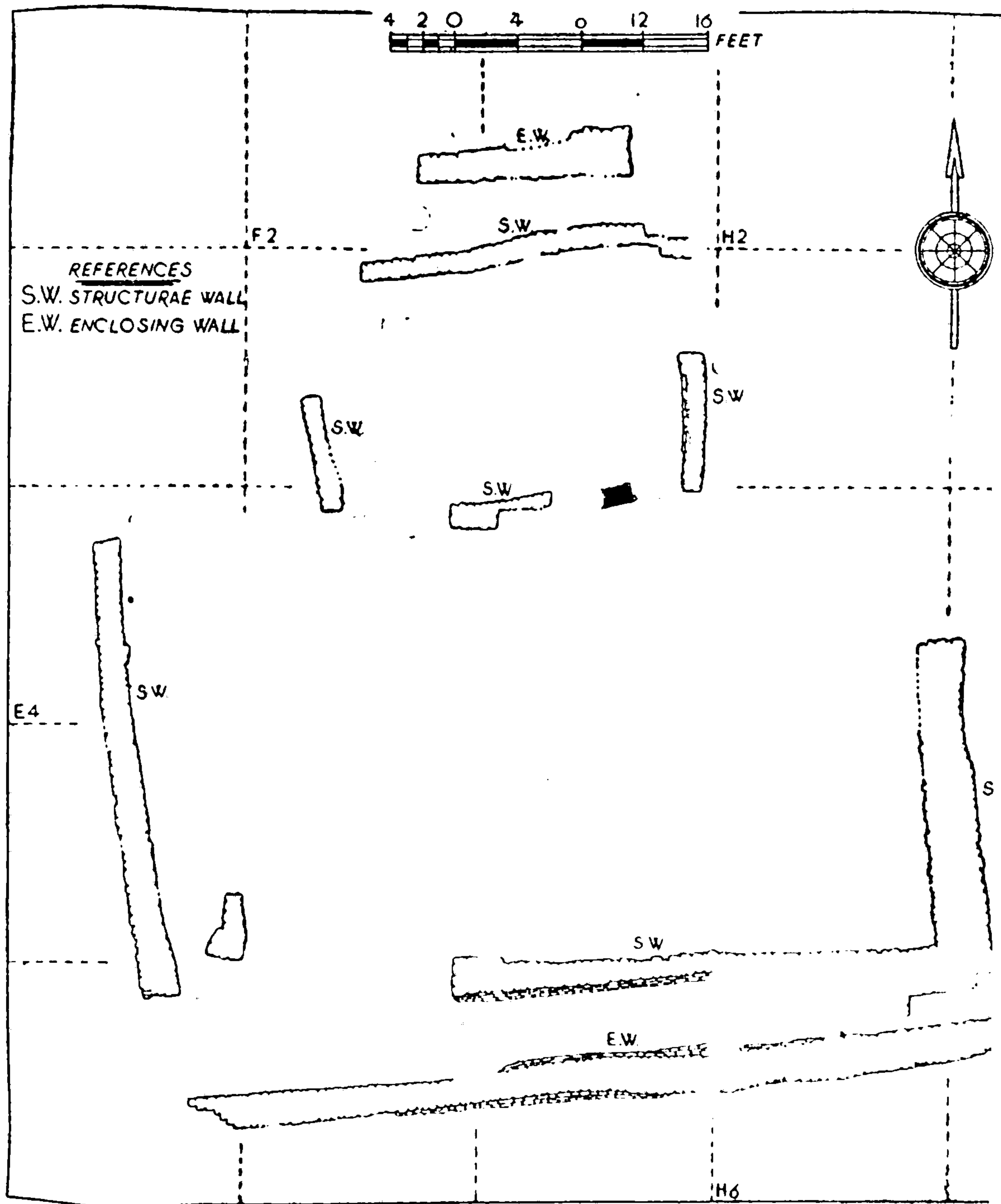


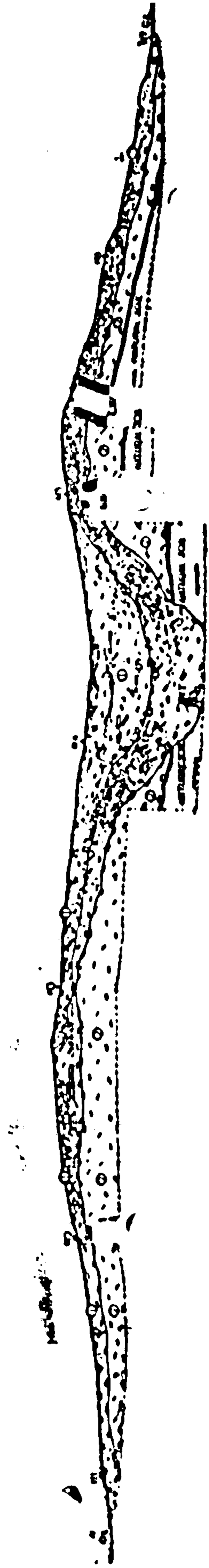
Fig. 32.—Plan of site KKG 21.

Fig. 33.—Section of site KKG 21, looking east

SITE KKG 21: SECTION LOOKING EAST



- STAIRS
- AREA OF WALL
- CONCRETE
- CONCRETE
- STRUCTURAL WALL
- ENCLOSURE WALL



A hand-drawn geological map showing two distinct regions, labeled 1 and 2, separated by a wavy line. The map is oriented with 'S' (South) at the top and 'N' (North) at the bottom. The left boundary is labeled 'GL' and the right boundary is labeled 'GL'. Region 1 is on the left, containing a circle with the number 1 and several small circles. Region 2 is on the right, containing a circle with the number 2 and several small circles. Both regions are filled with short, parallel lines representing geological features.

FIG. 34.—Section of site KKG 22, looking west.

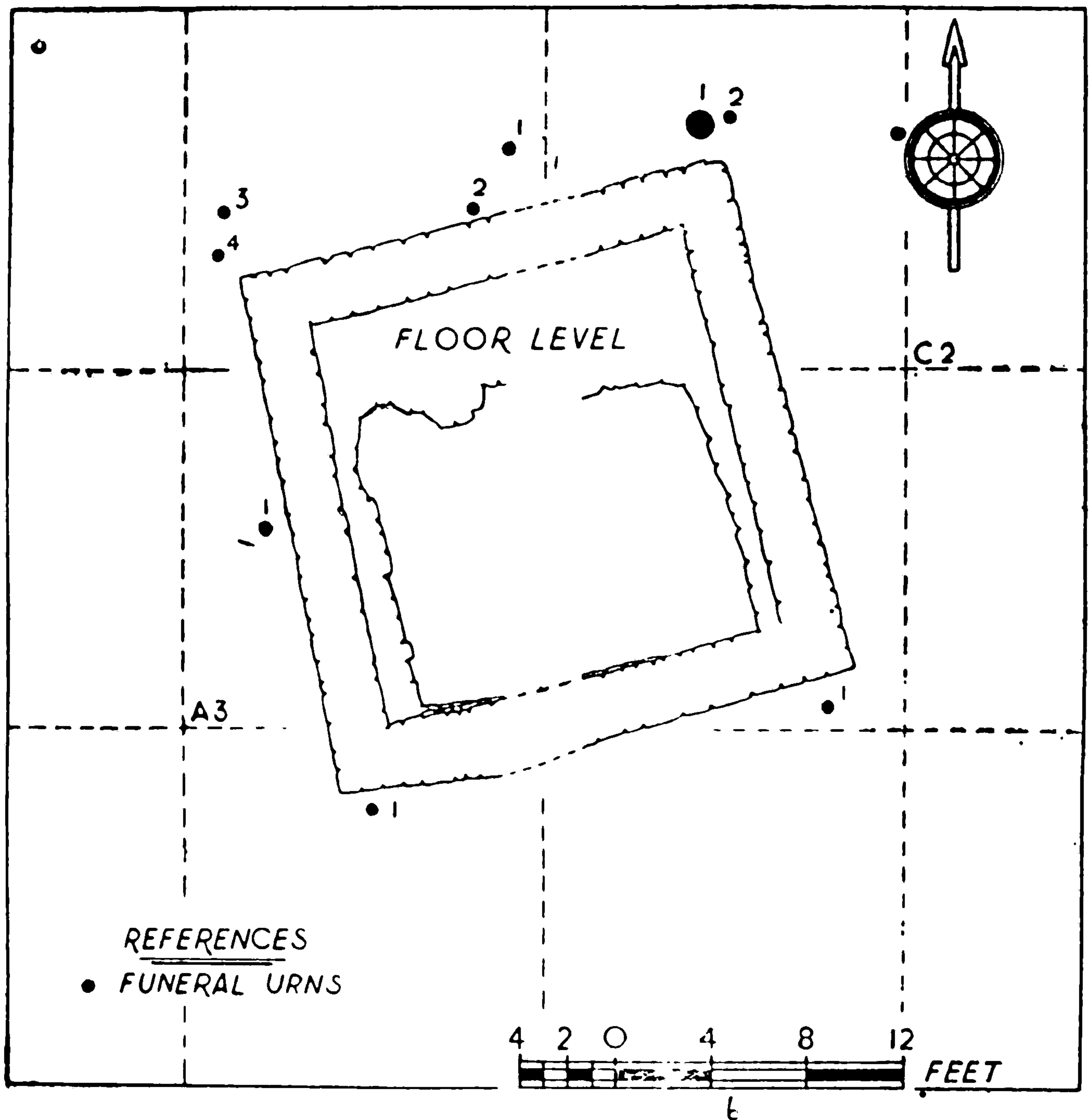


Fig. 36.—Plan of site KKG 24

SITE KKG 24: SECTION LOOKING WEST

REFERENCES
 1/2" BRICK DEBRIS
 3/4" COMPACT EARTH
 1" LOOSE EARTH



Fig. 37.—Section of site KKG 24, looking west

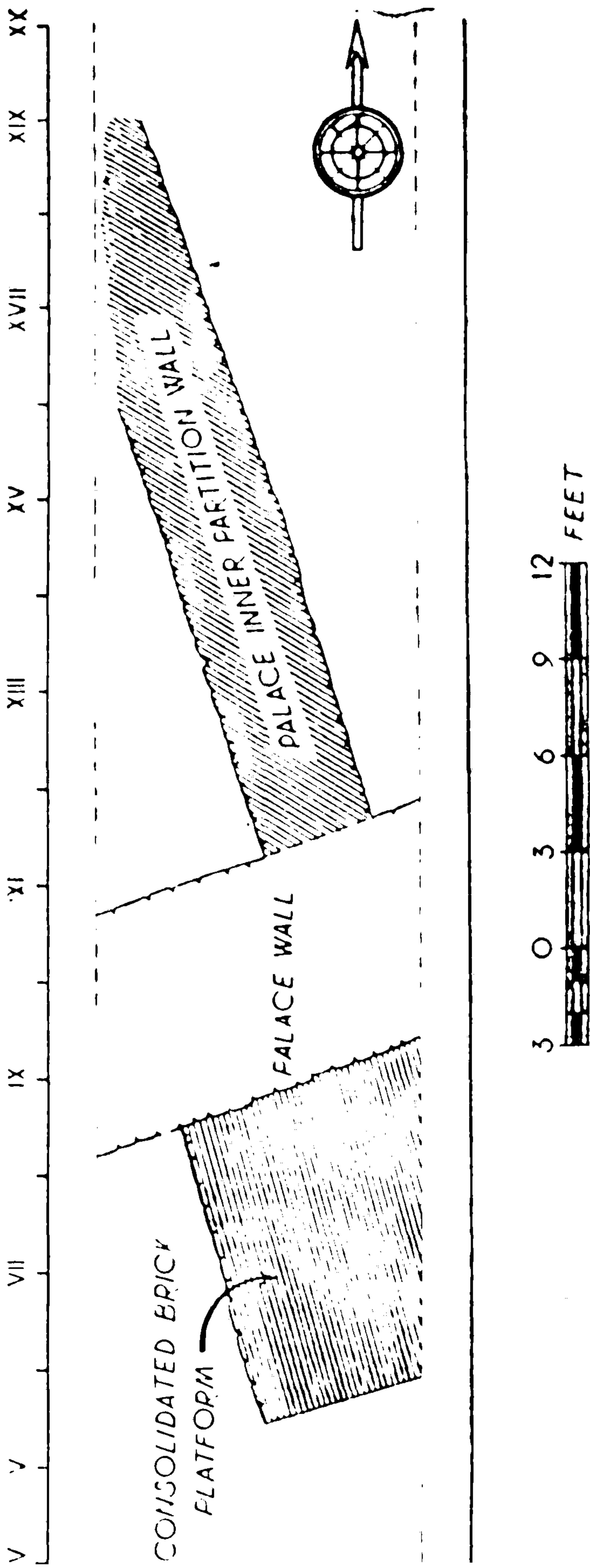


Fig. 38.—Plan of site KKG 25.

SITE KKG 25: SECTION LOOKING WEST

REFERENCES
 1. BRICK DEBRIS
 2. COMPACT EARTH
 3. LOOSE EARTH

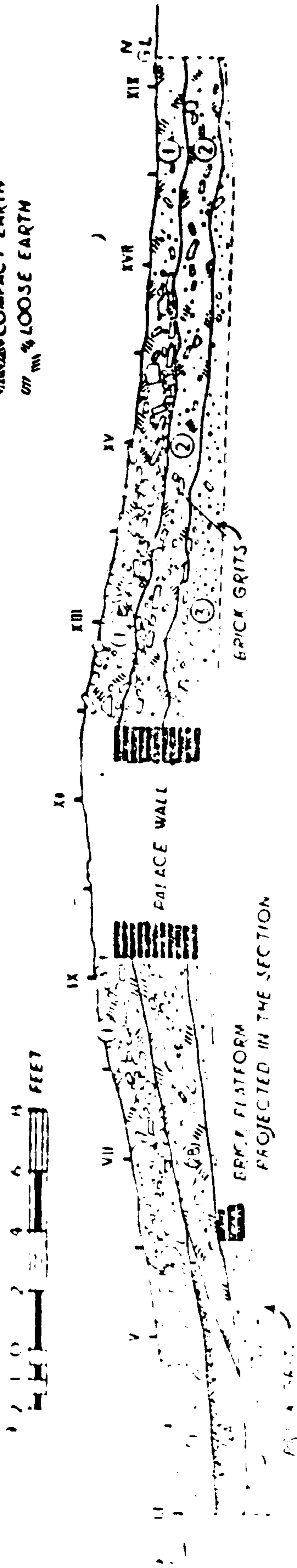


Fig. 39.—Section of site KKG 25, looking west.

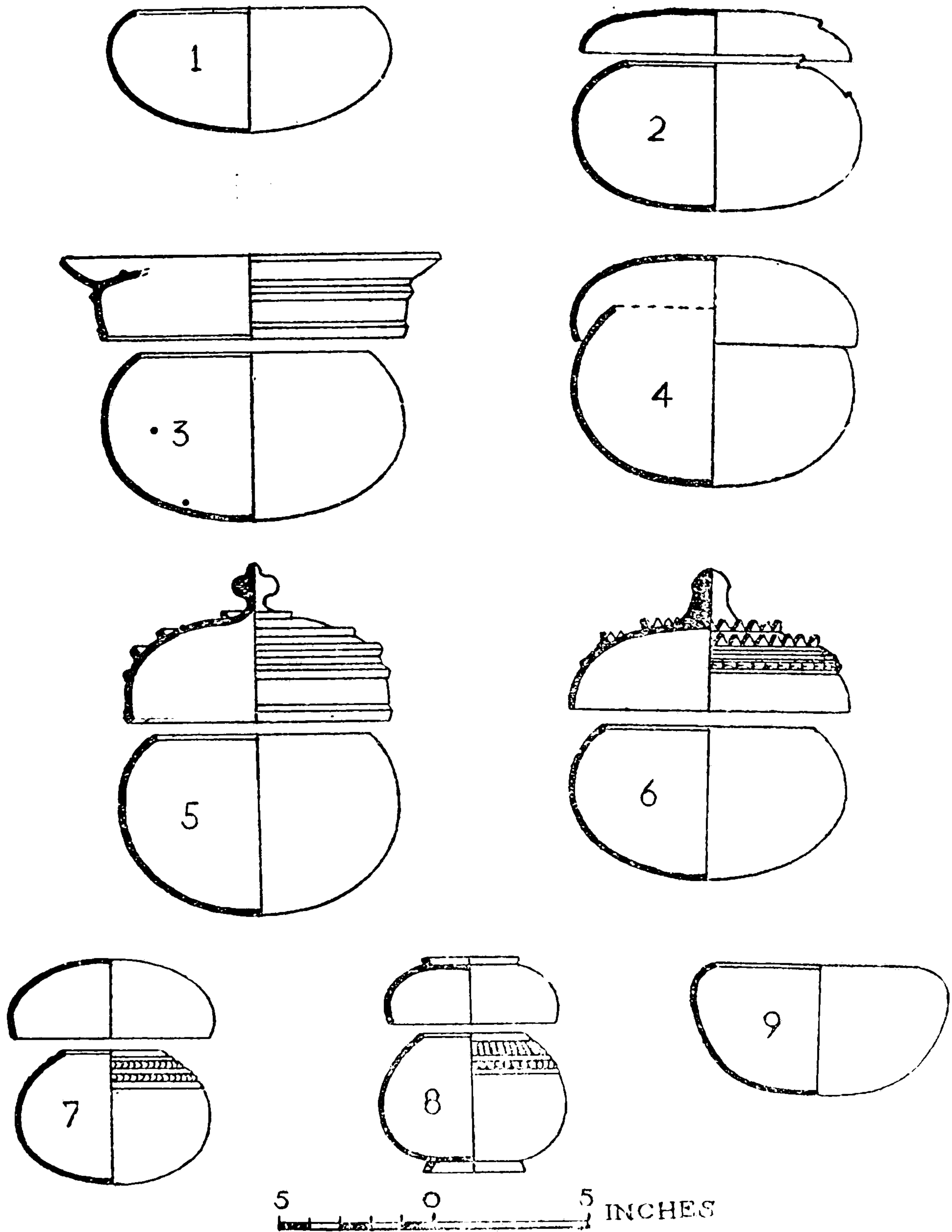


Fig. 40.--Burial urns, types 1 to 9.

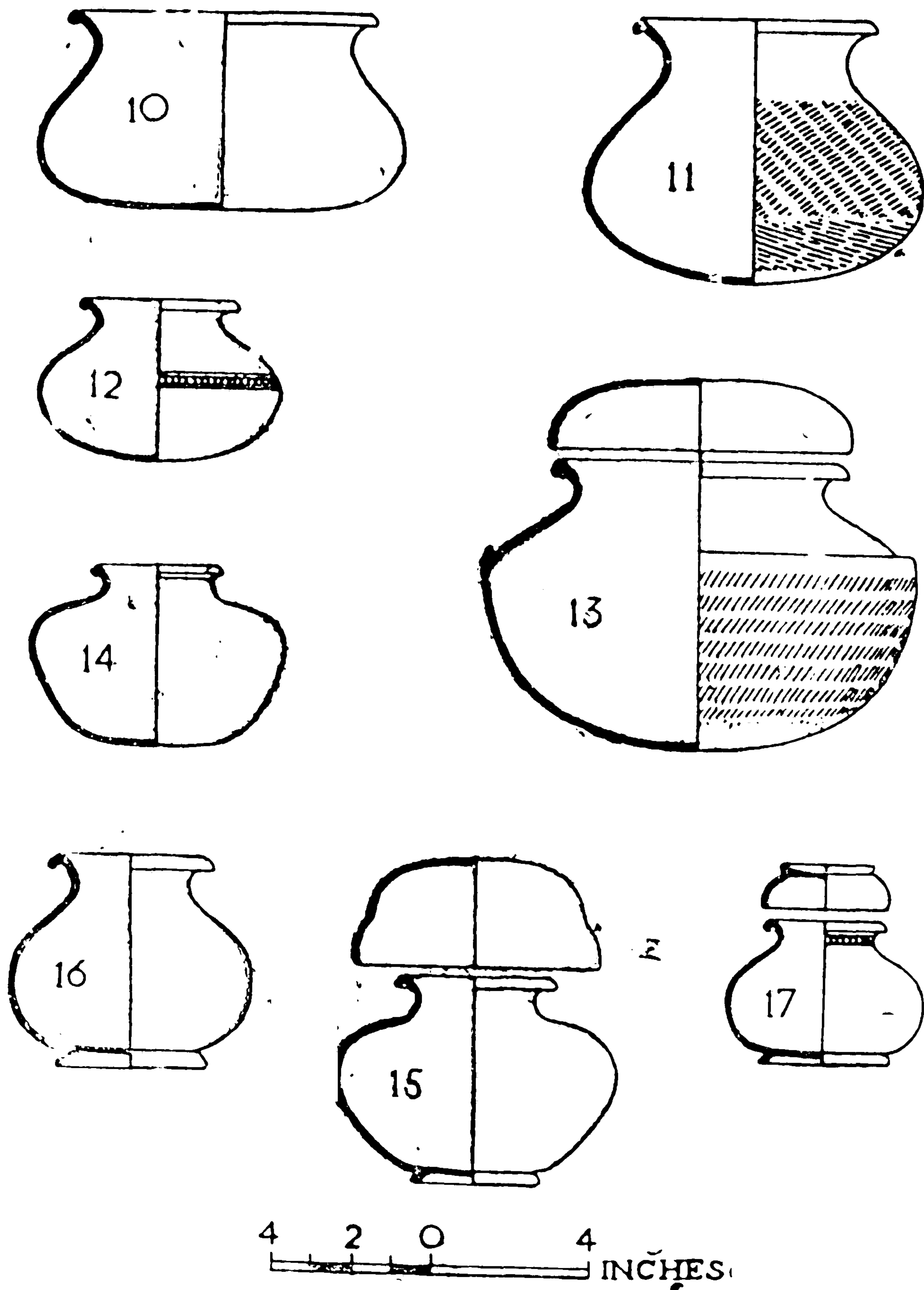
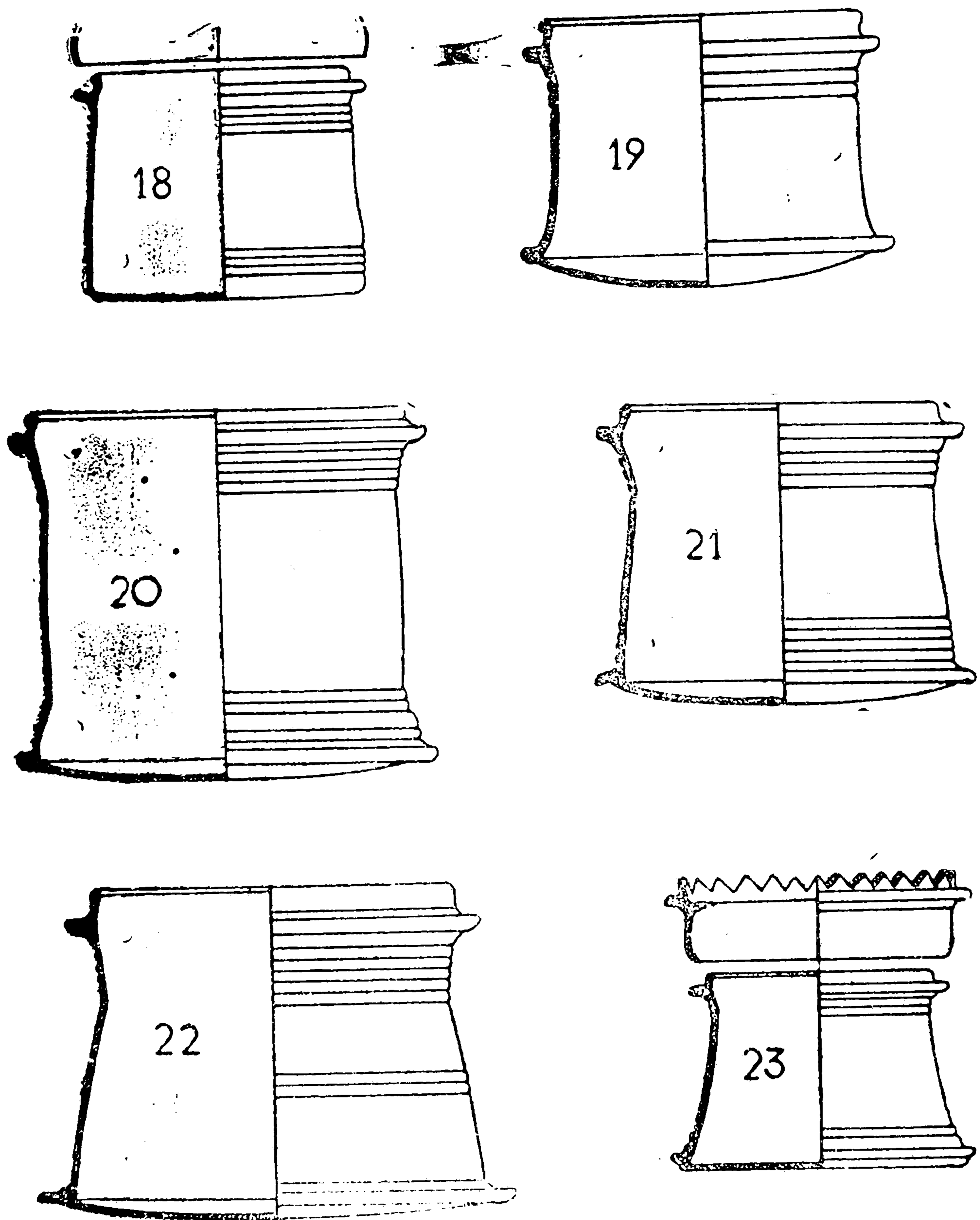


Fig. 41.—Burial urns, types 10 to 17.



4 2 0 4 INCHES

Fig. 42.—Burial urns, types 18 to 23.

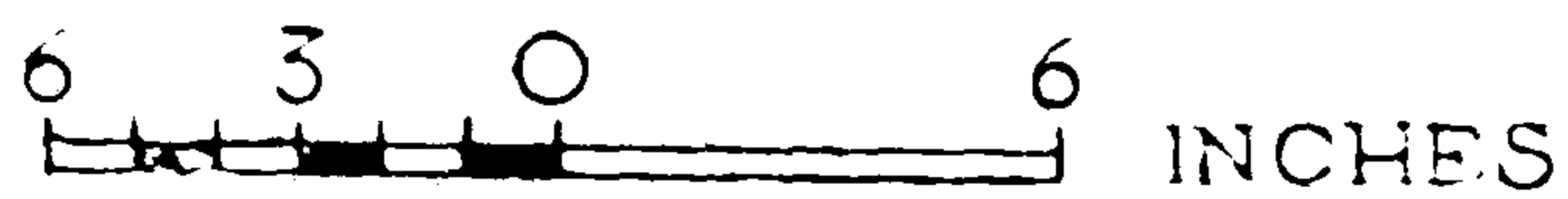
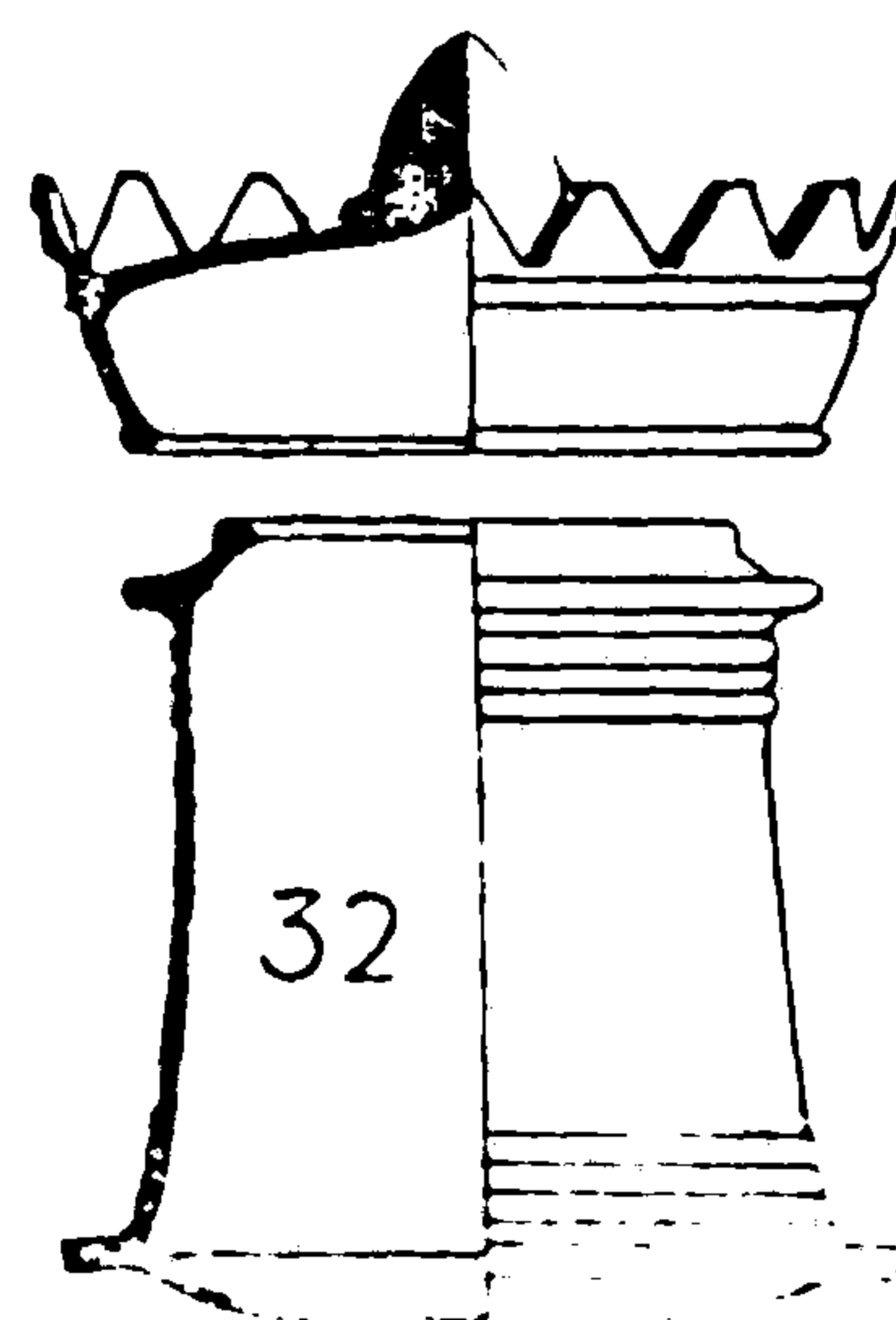
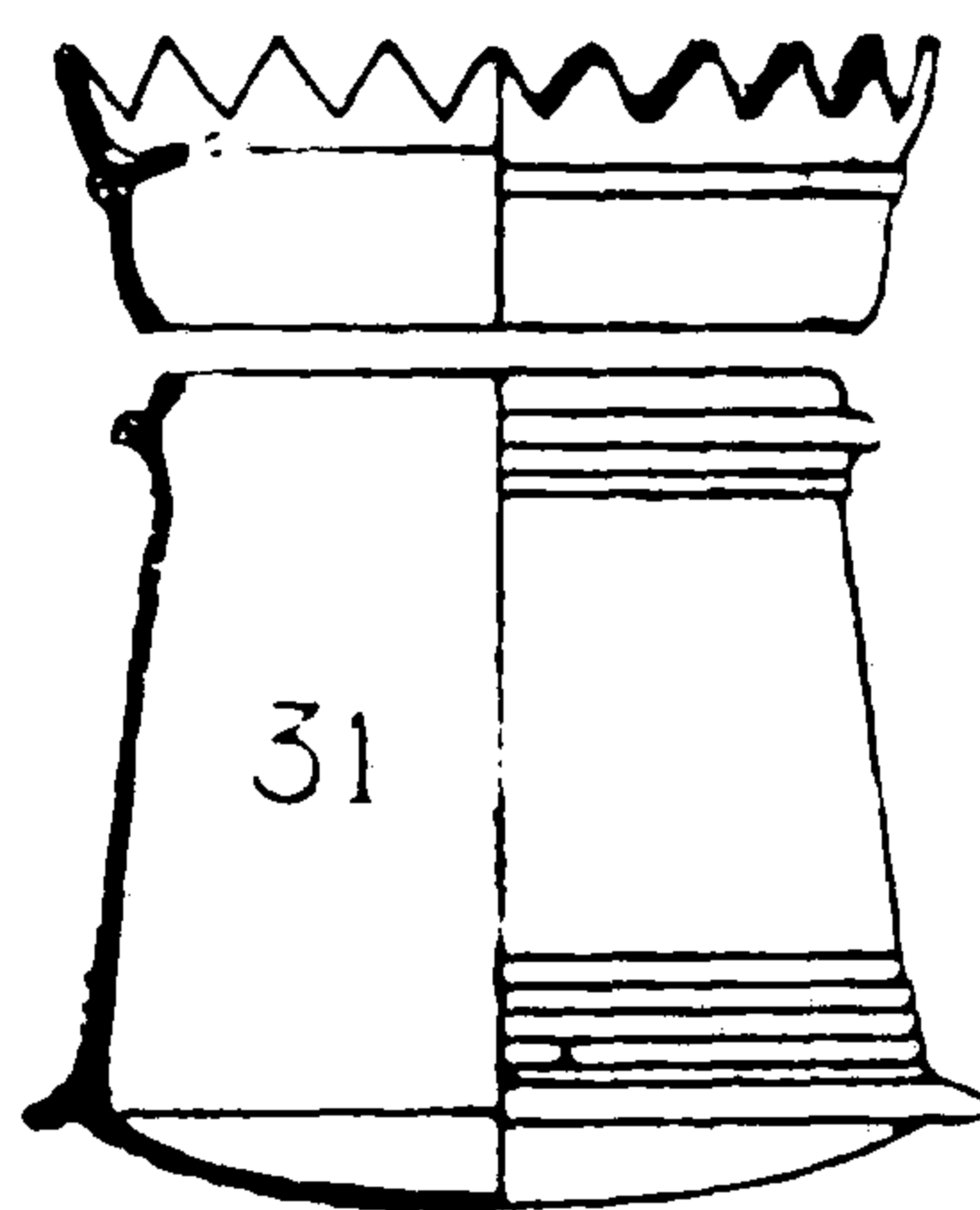
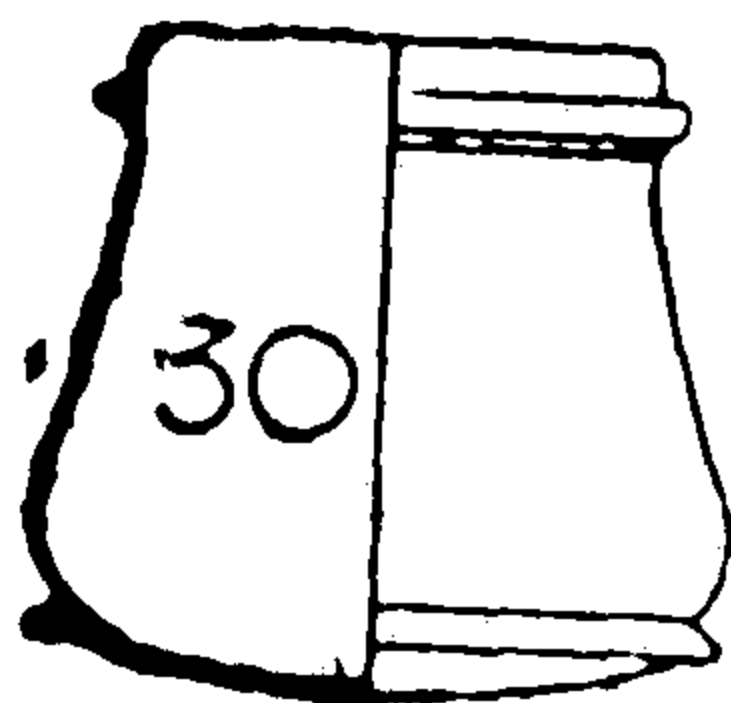
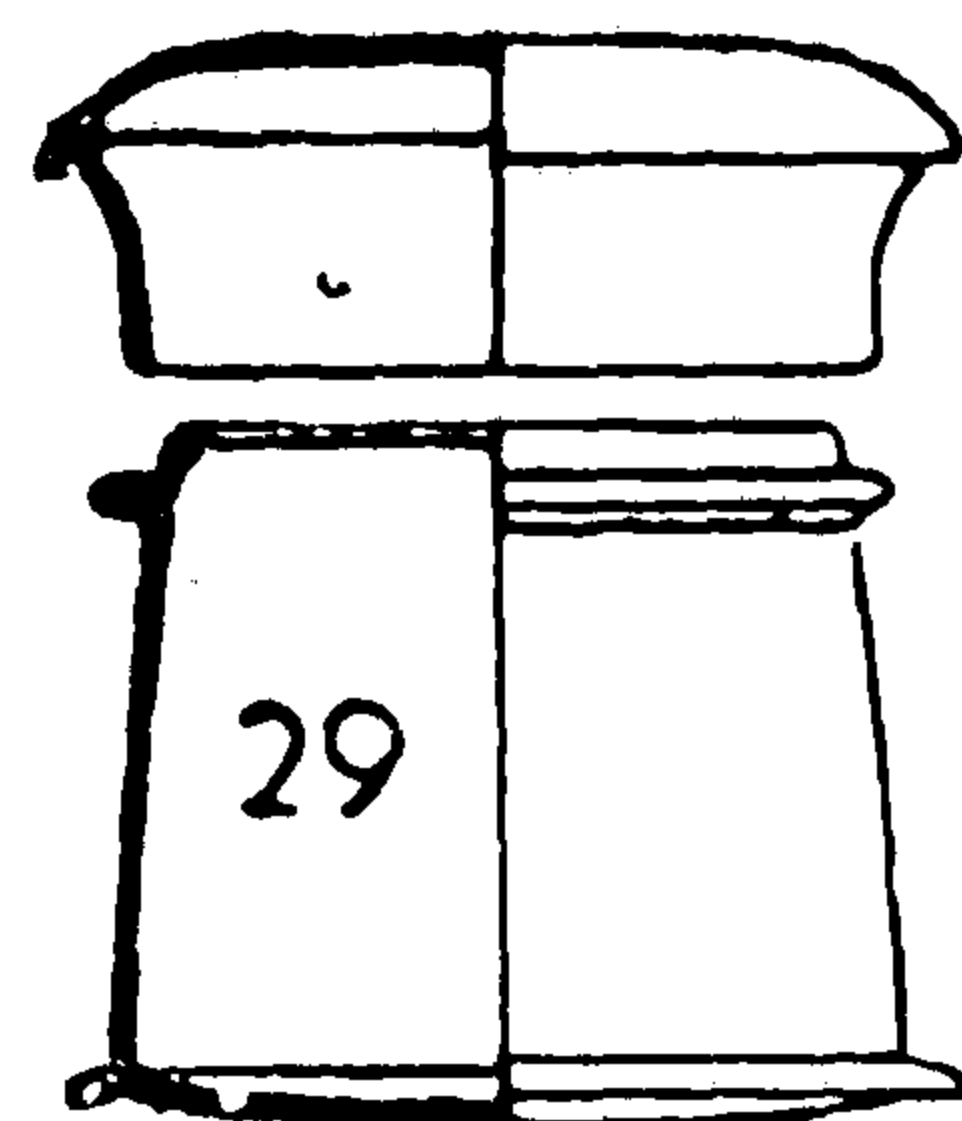
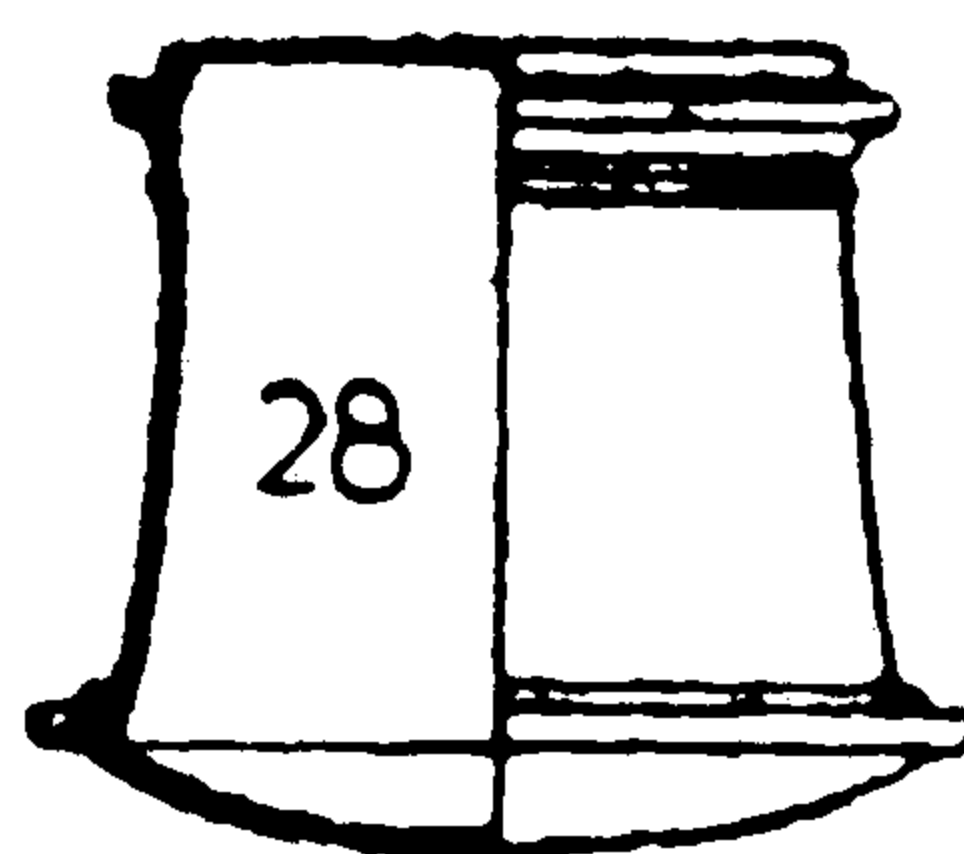
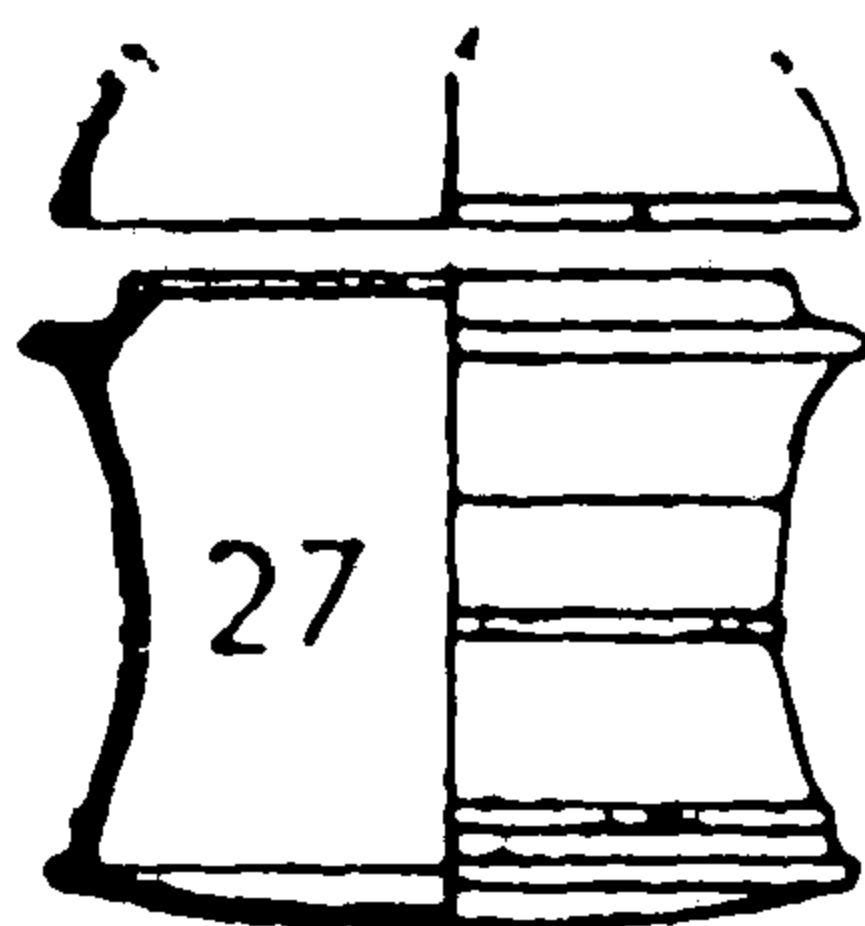
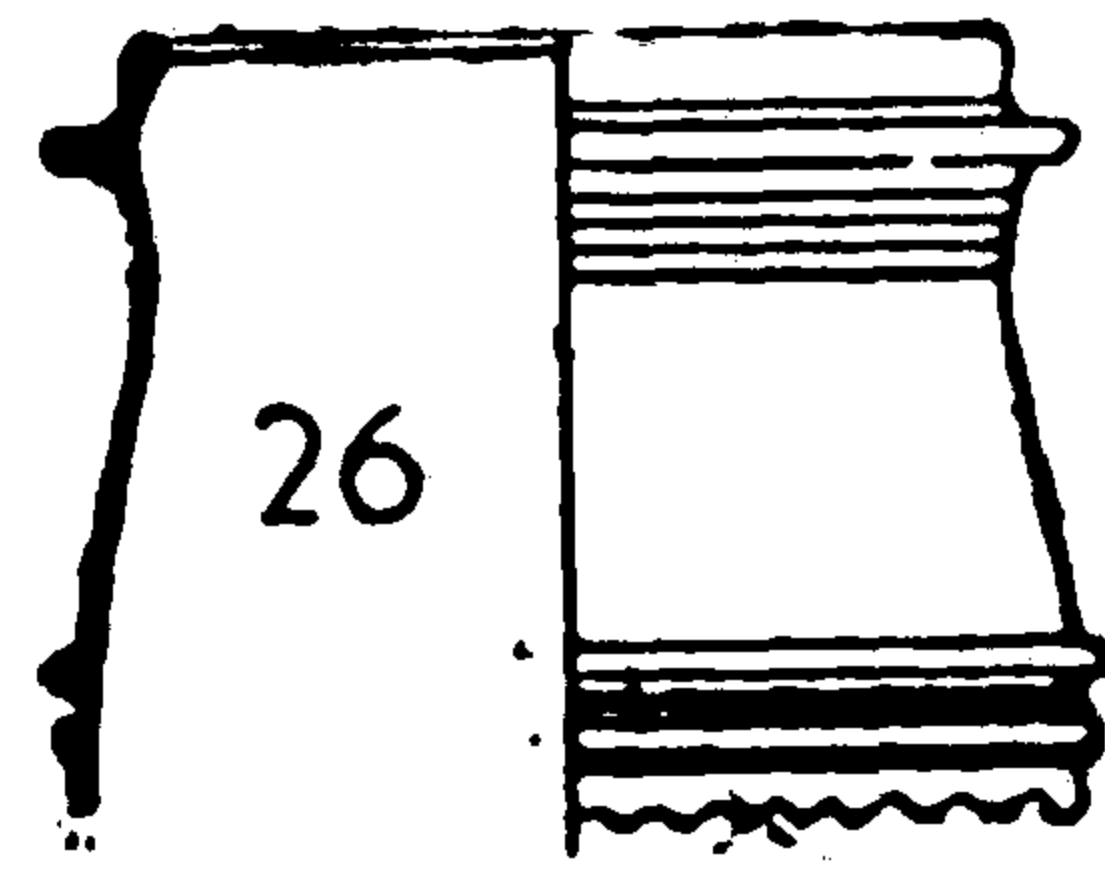
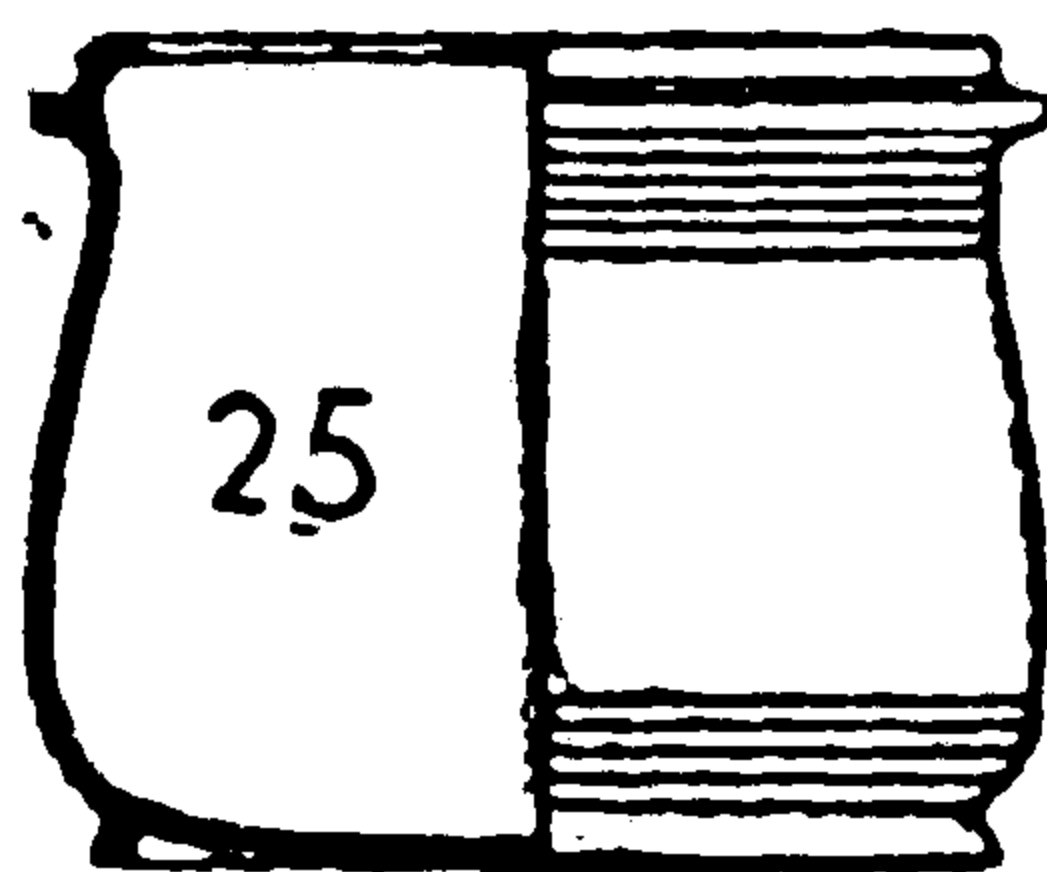
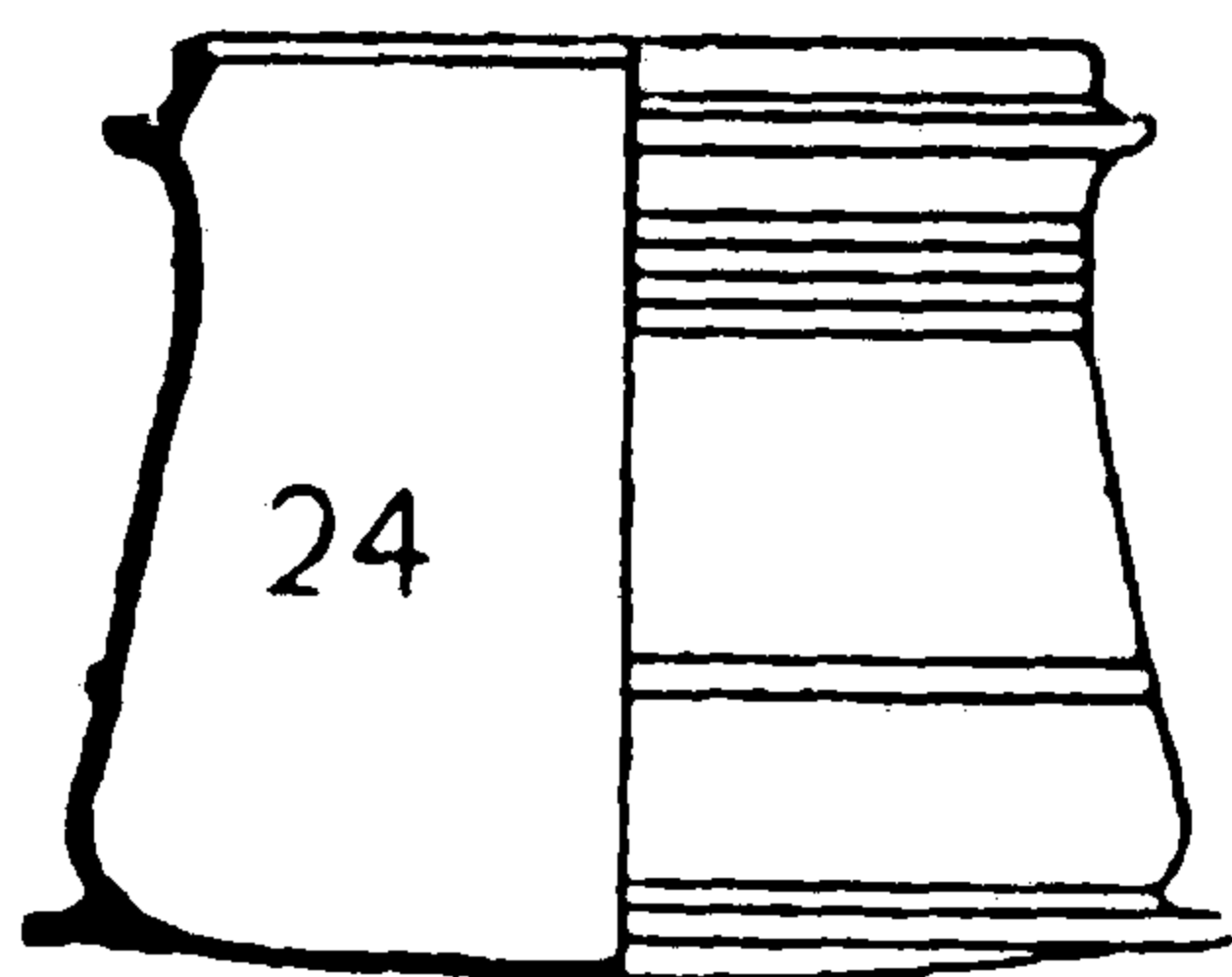


Fig. 43 - Burial urns, types 24 to 32.

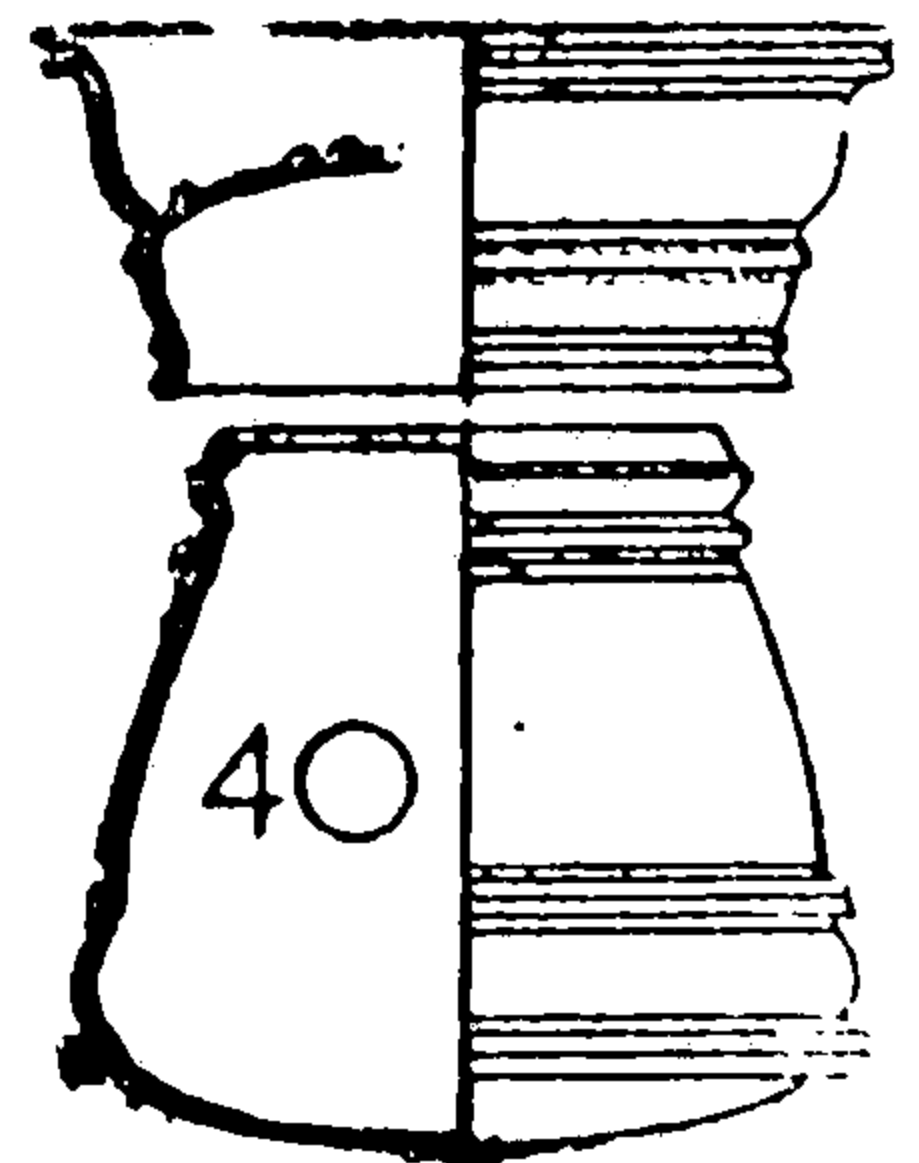
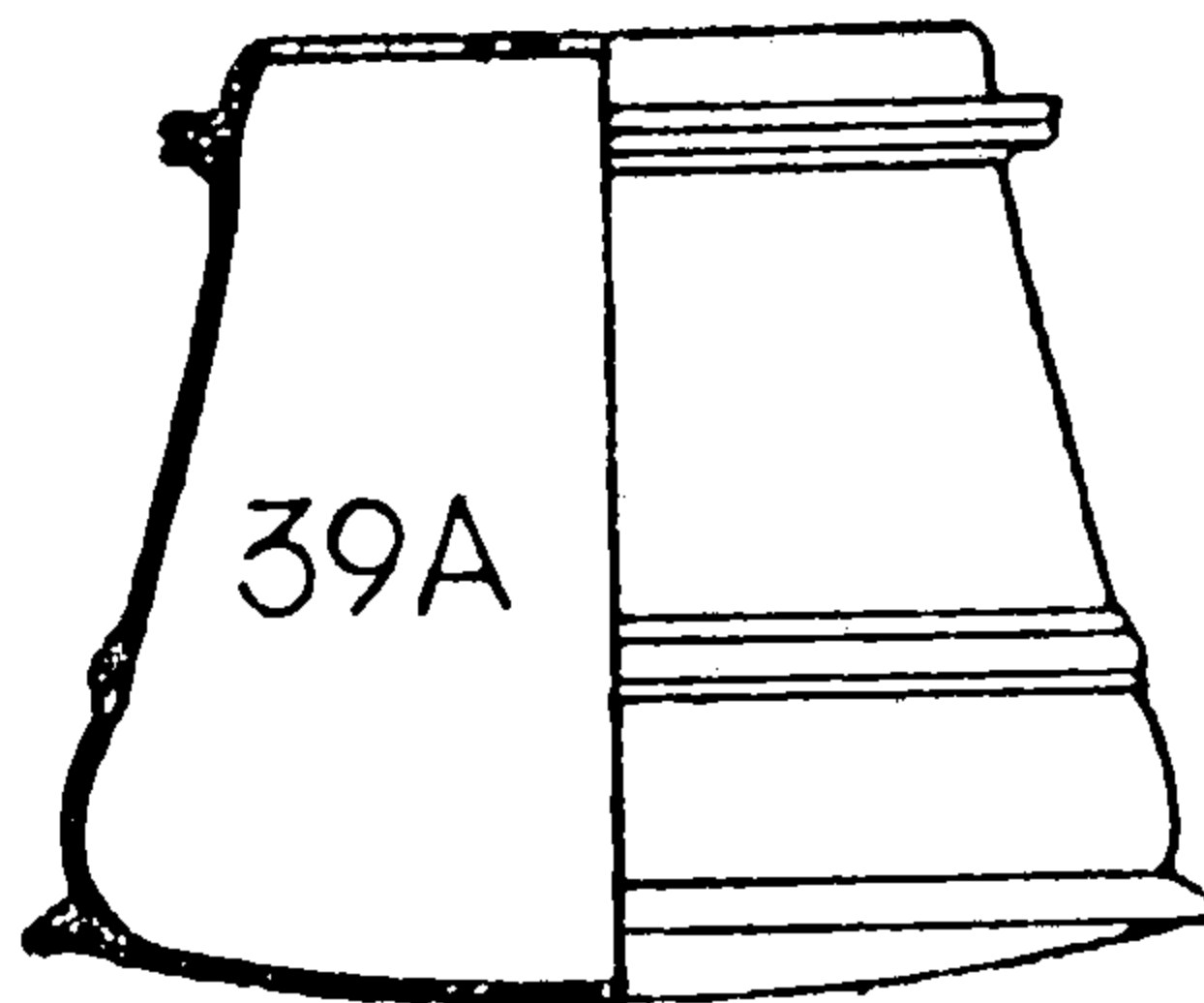
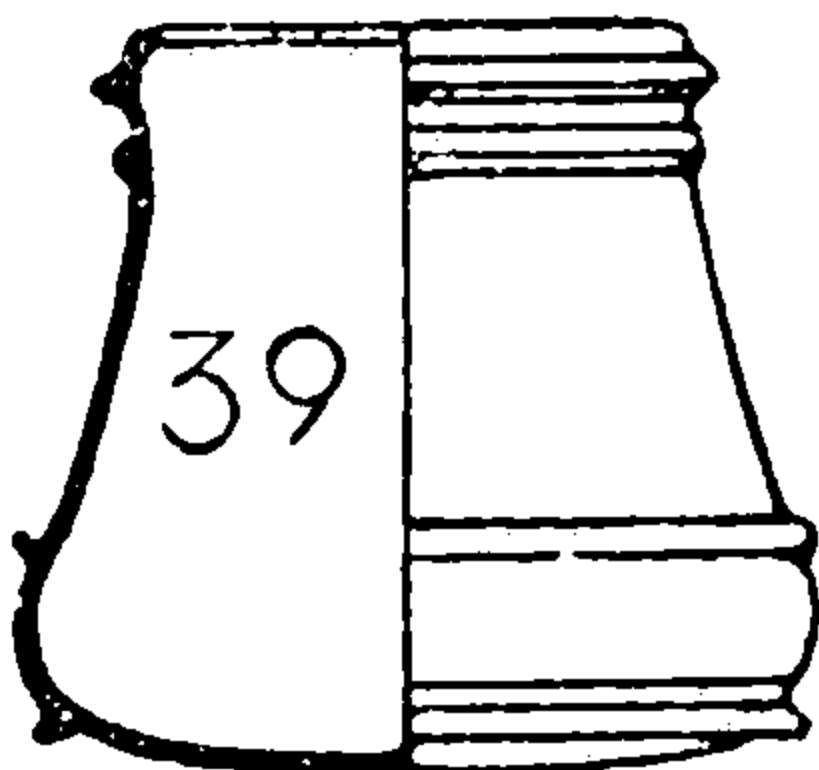
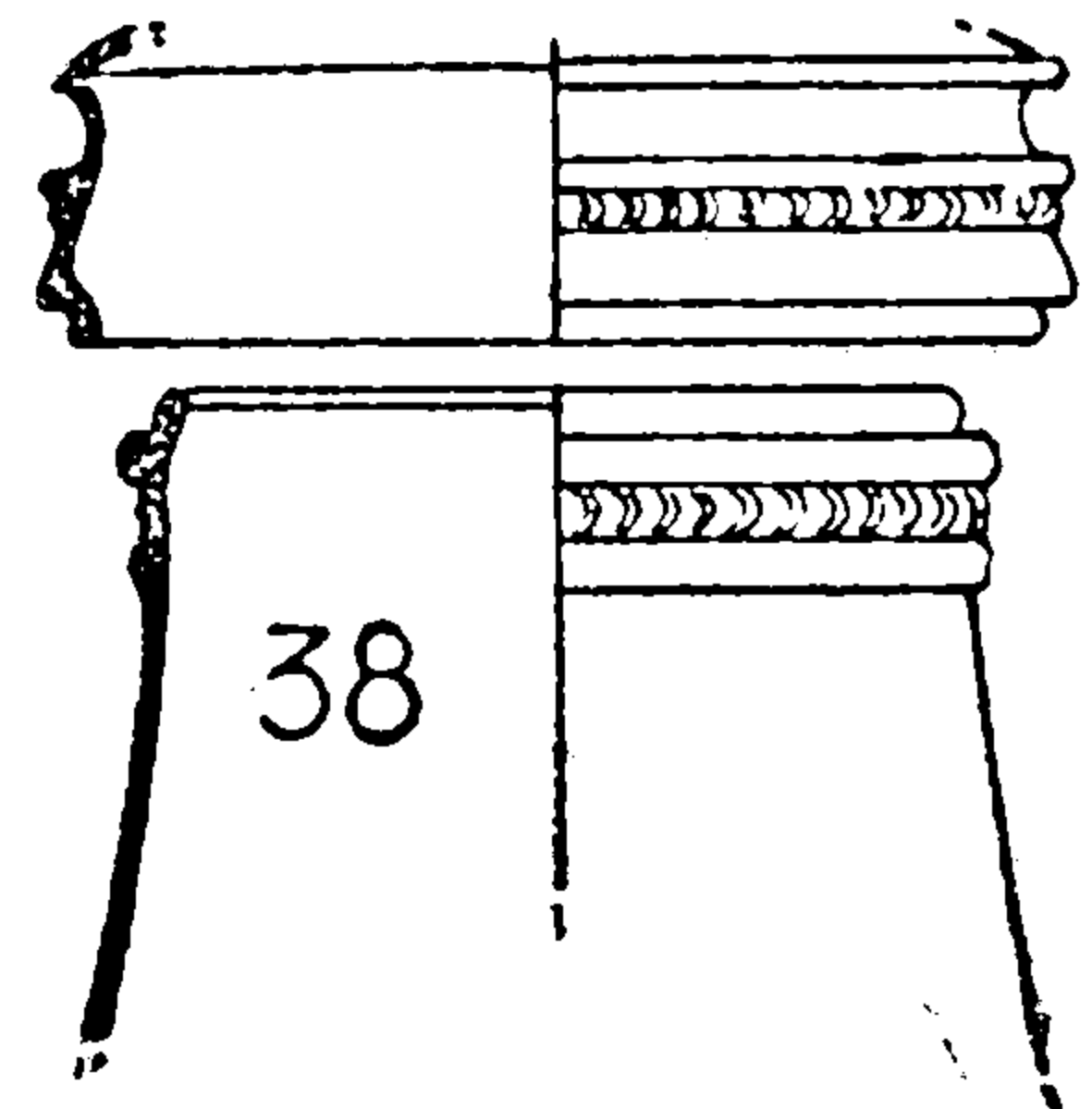
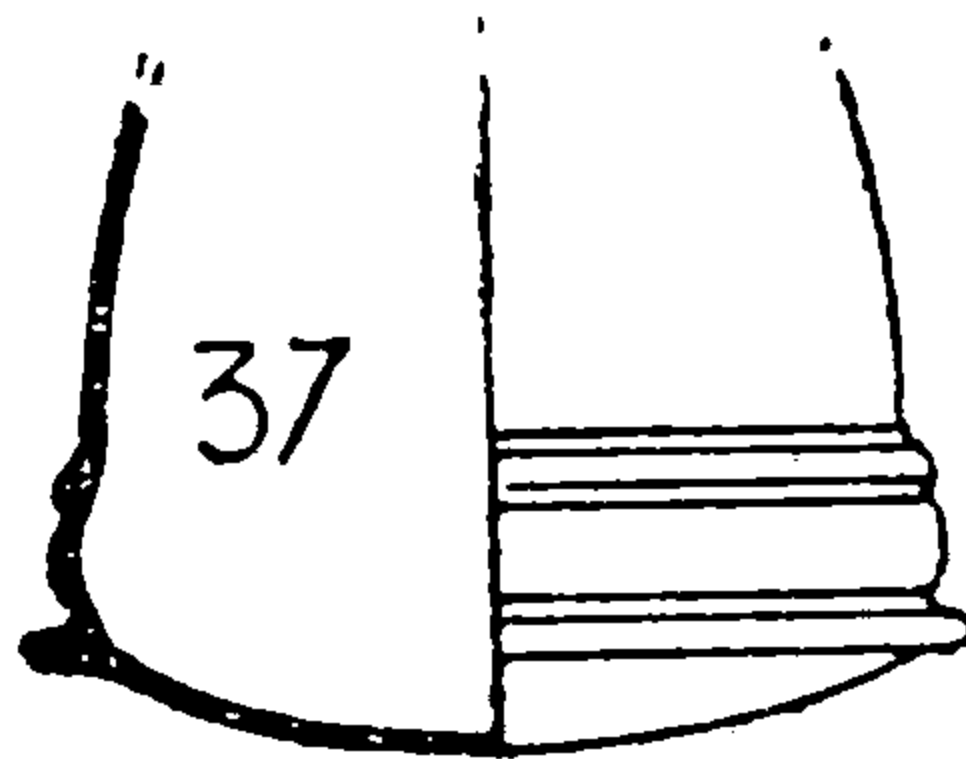
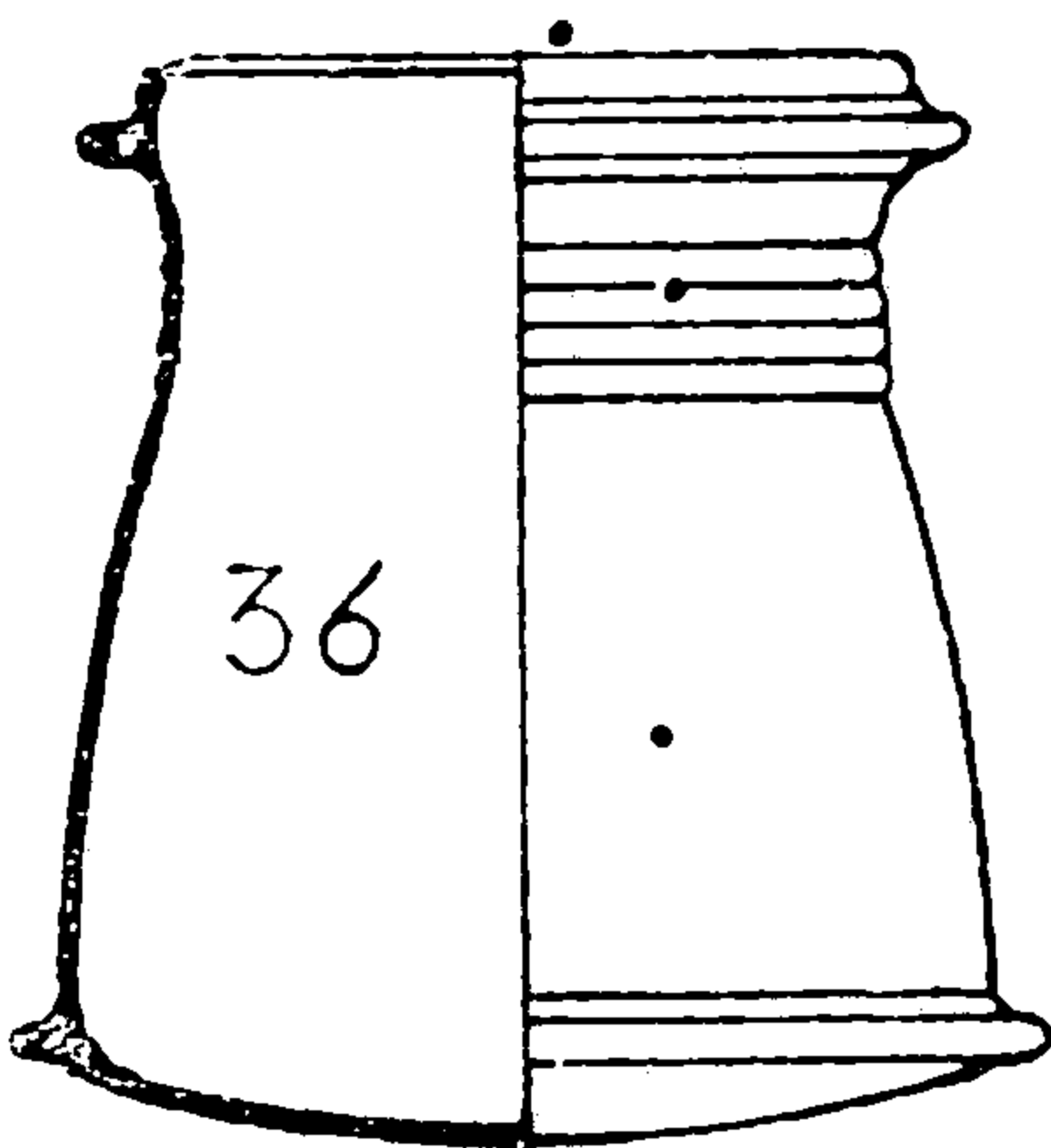
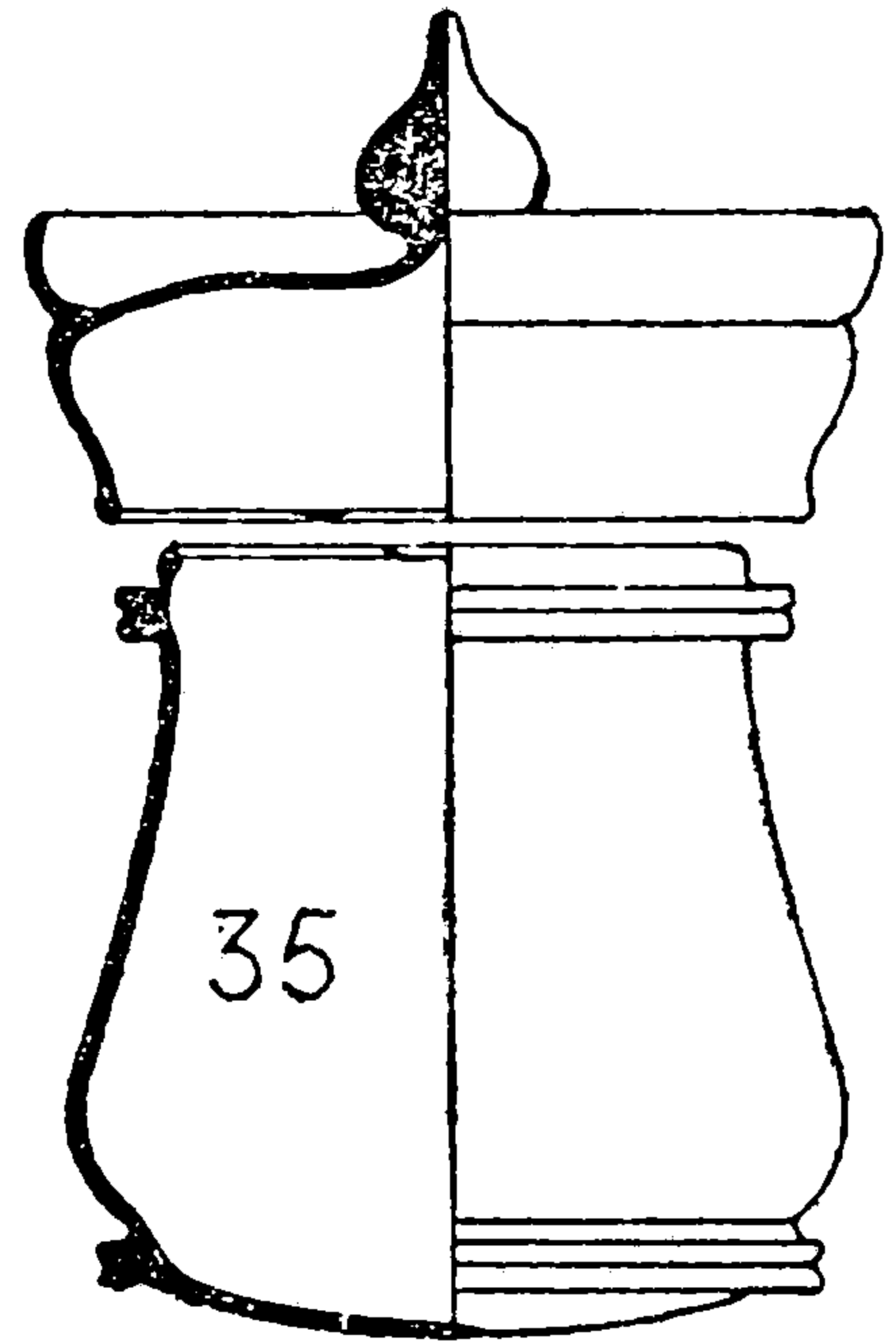
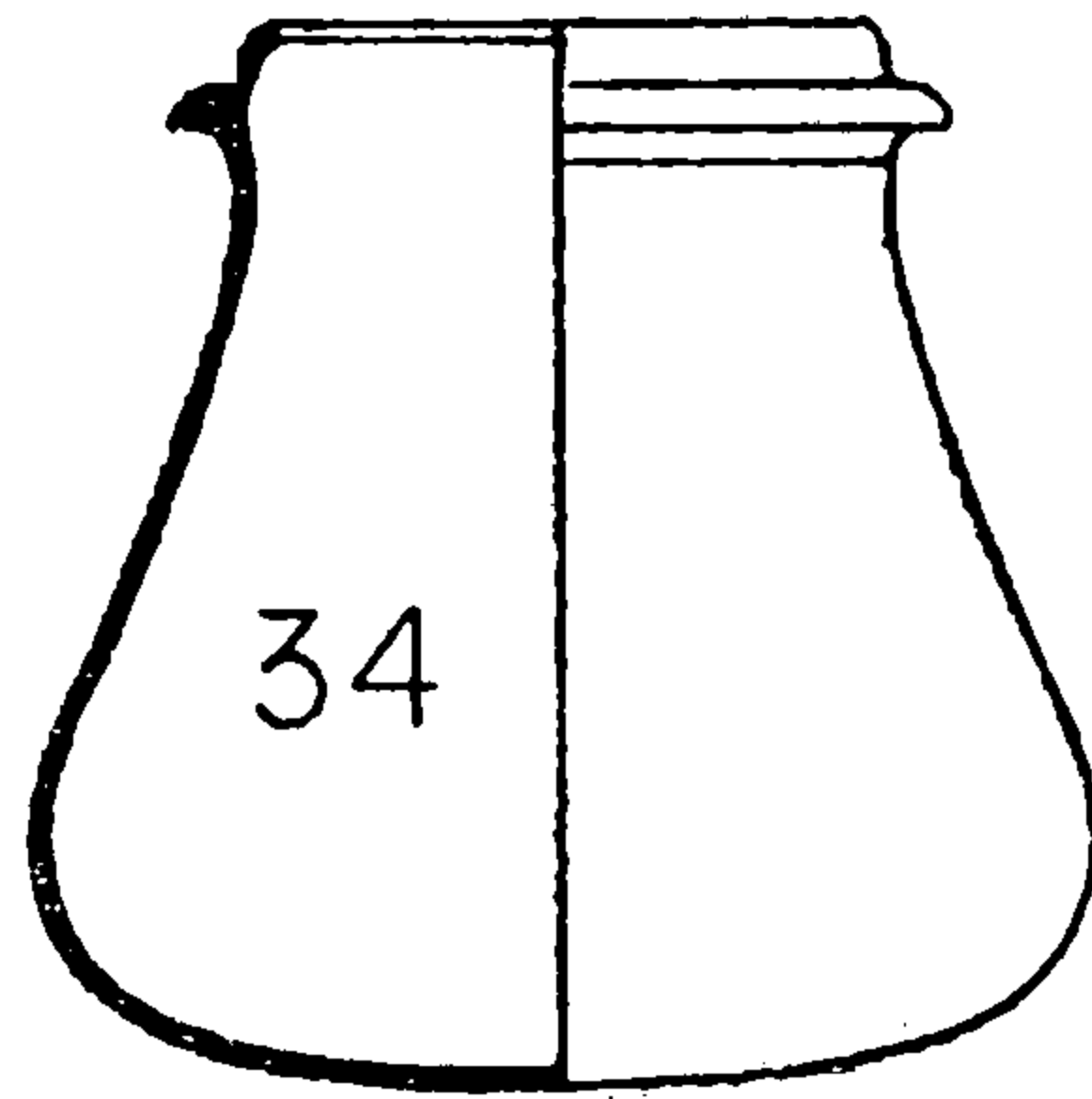
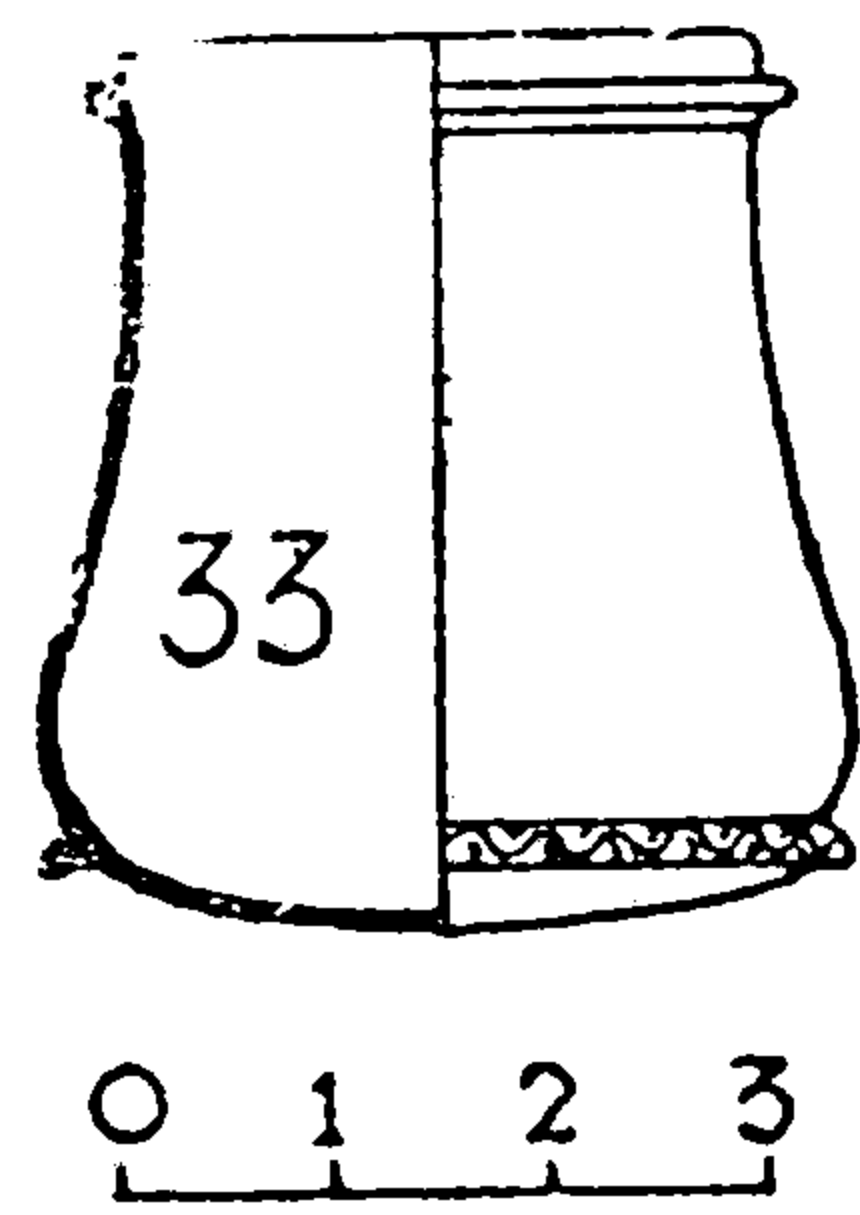


Fig. 44.—Burial urns, types 33 to 40.

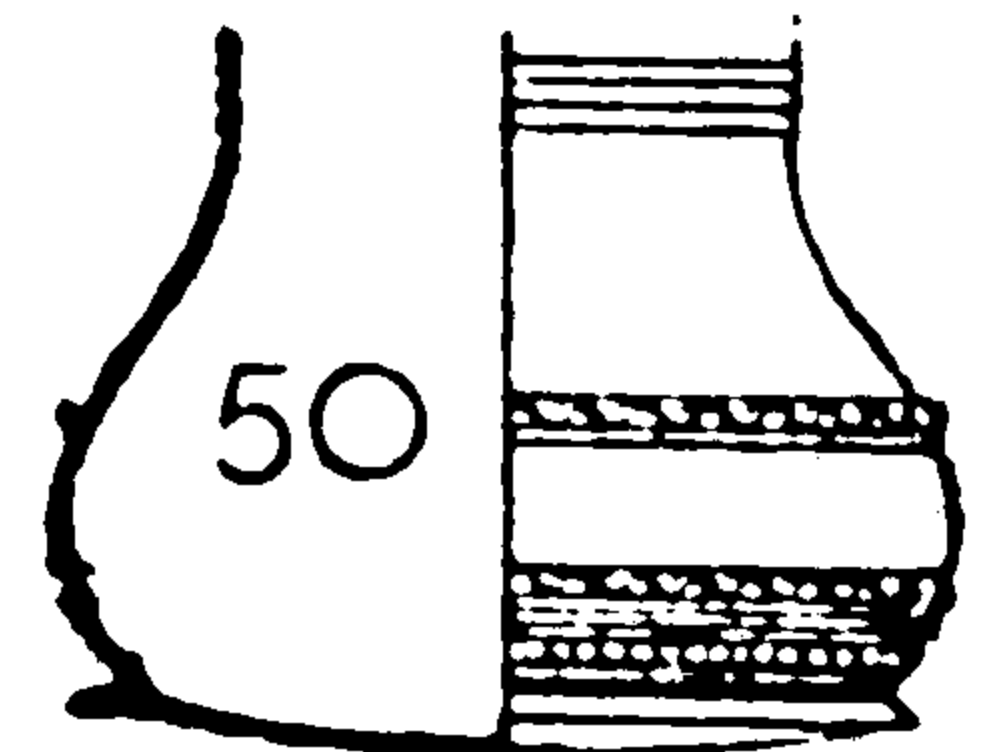
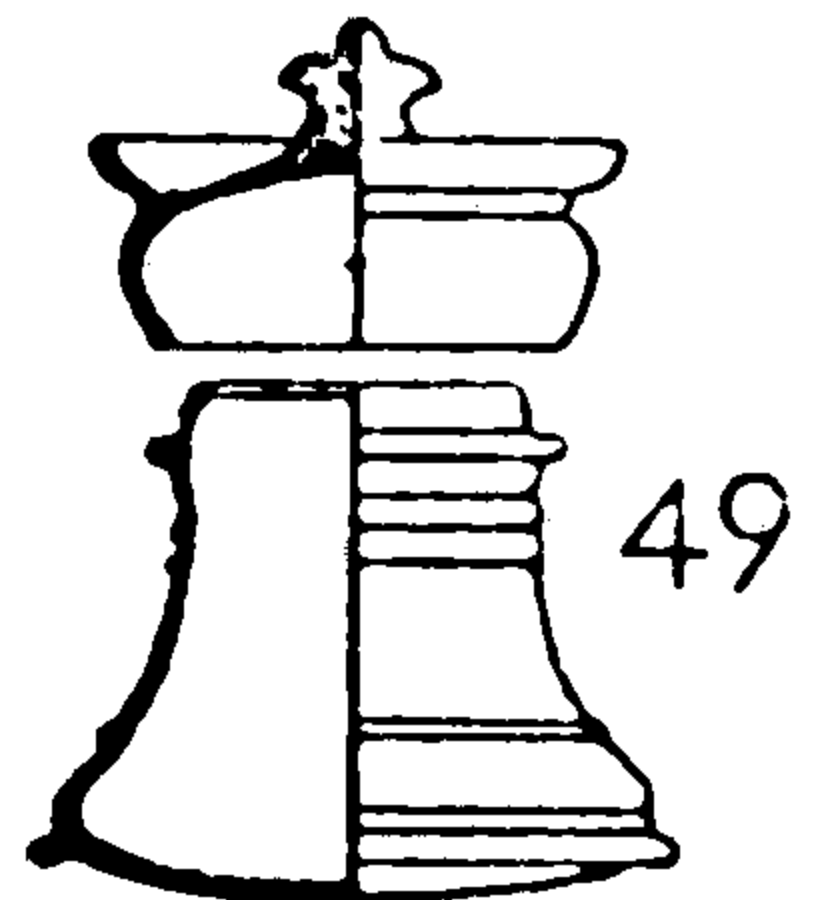
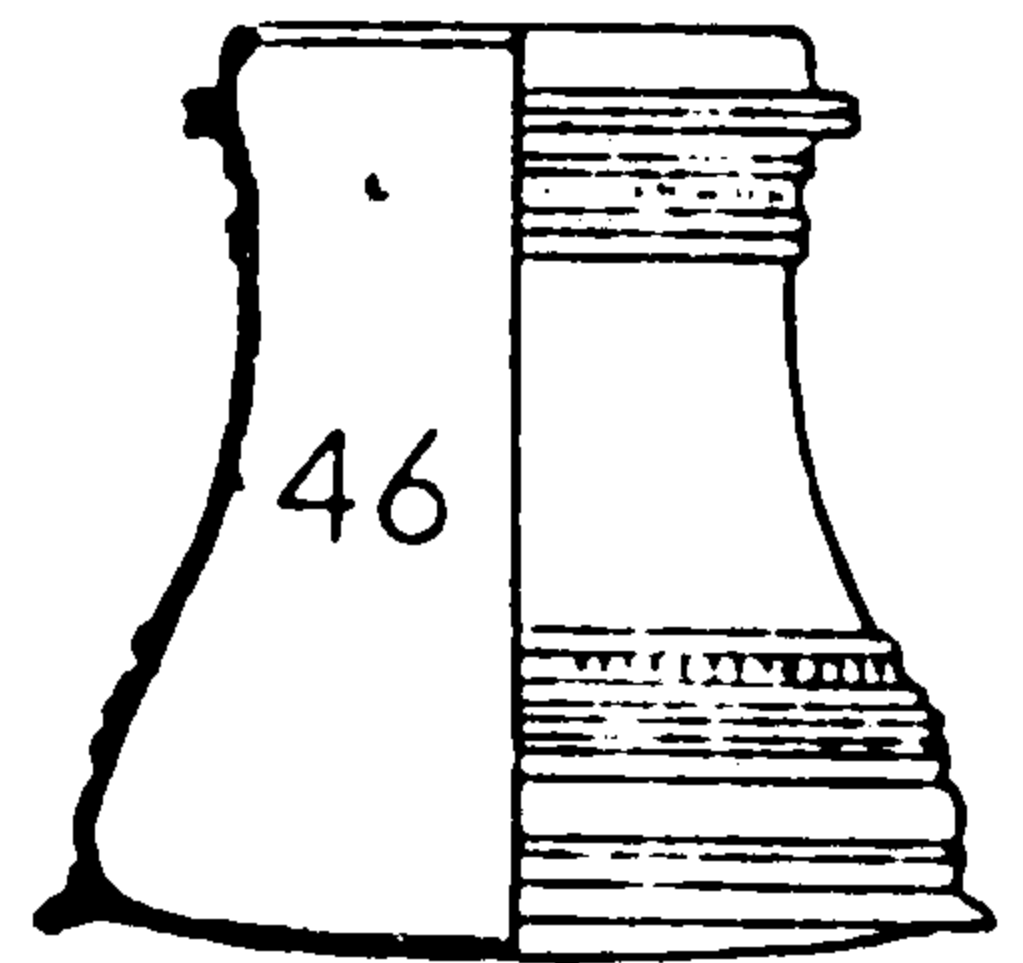
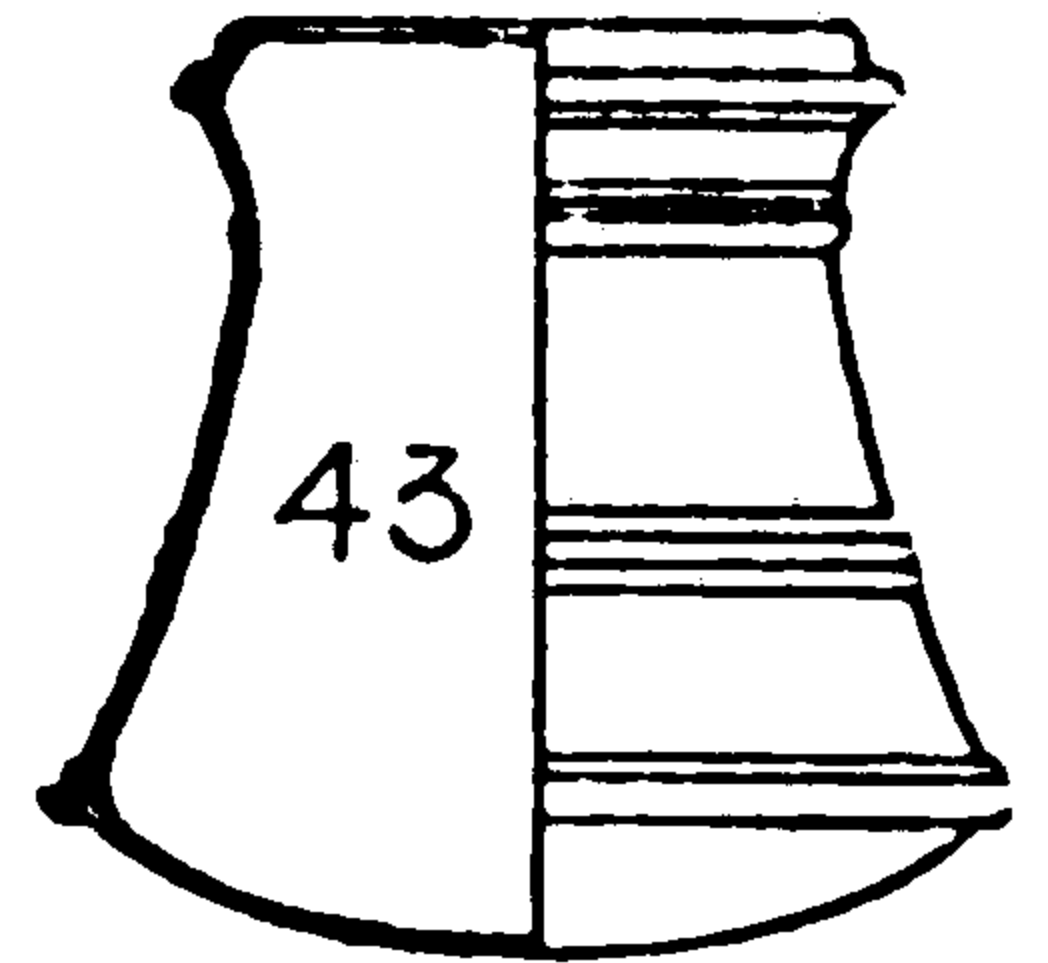
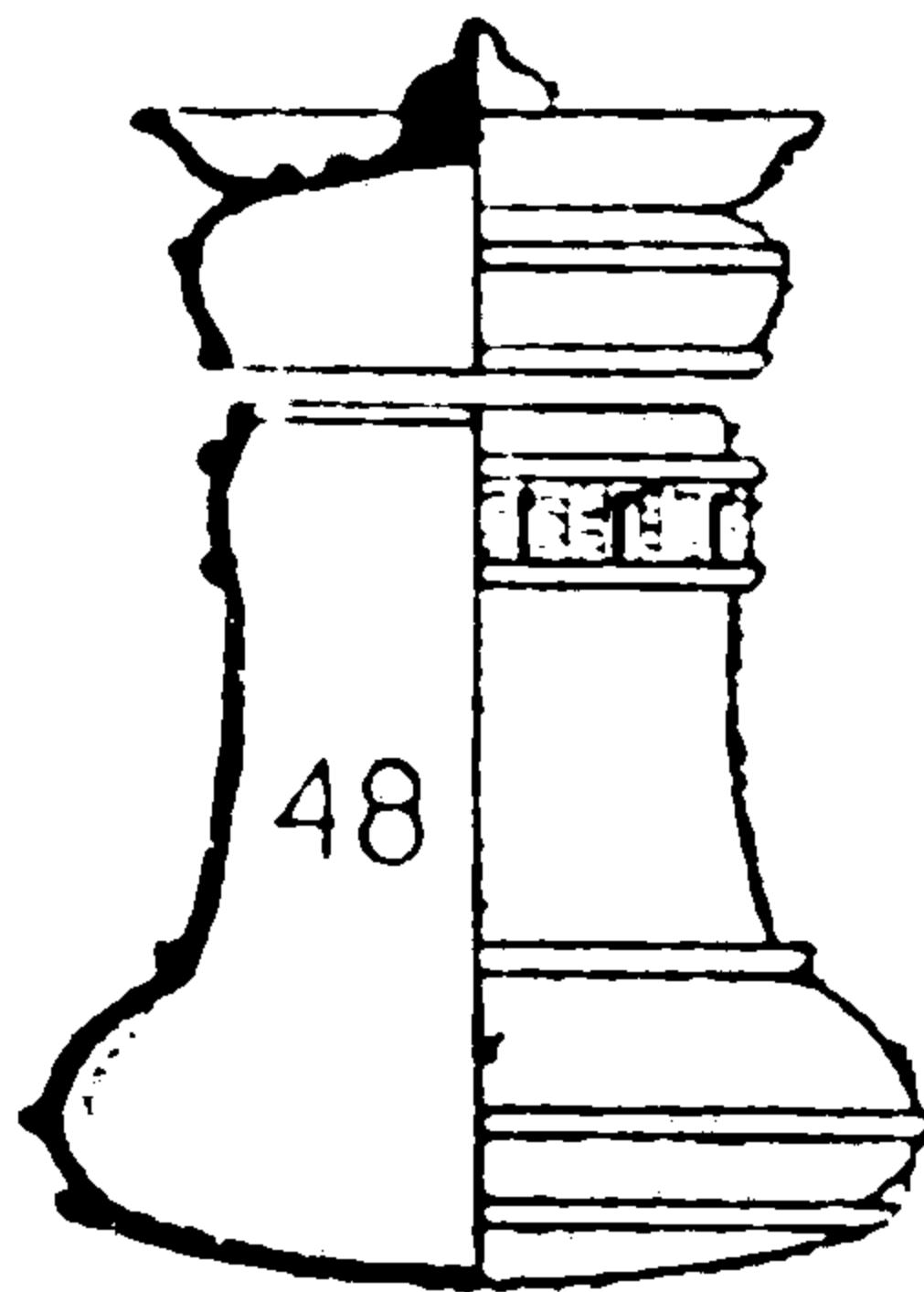
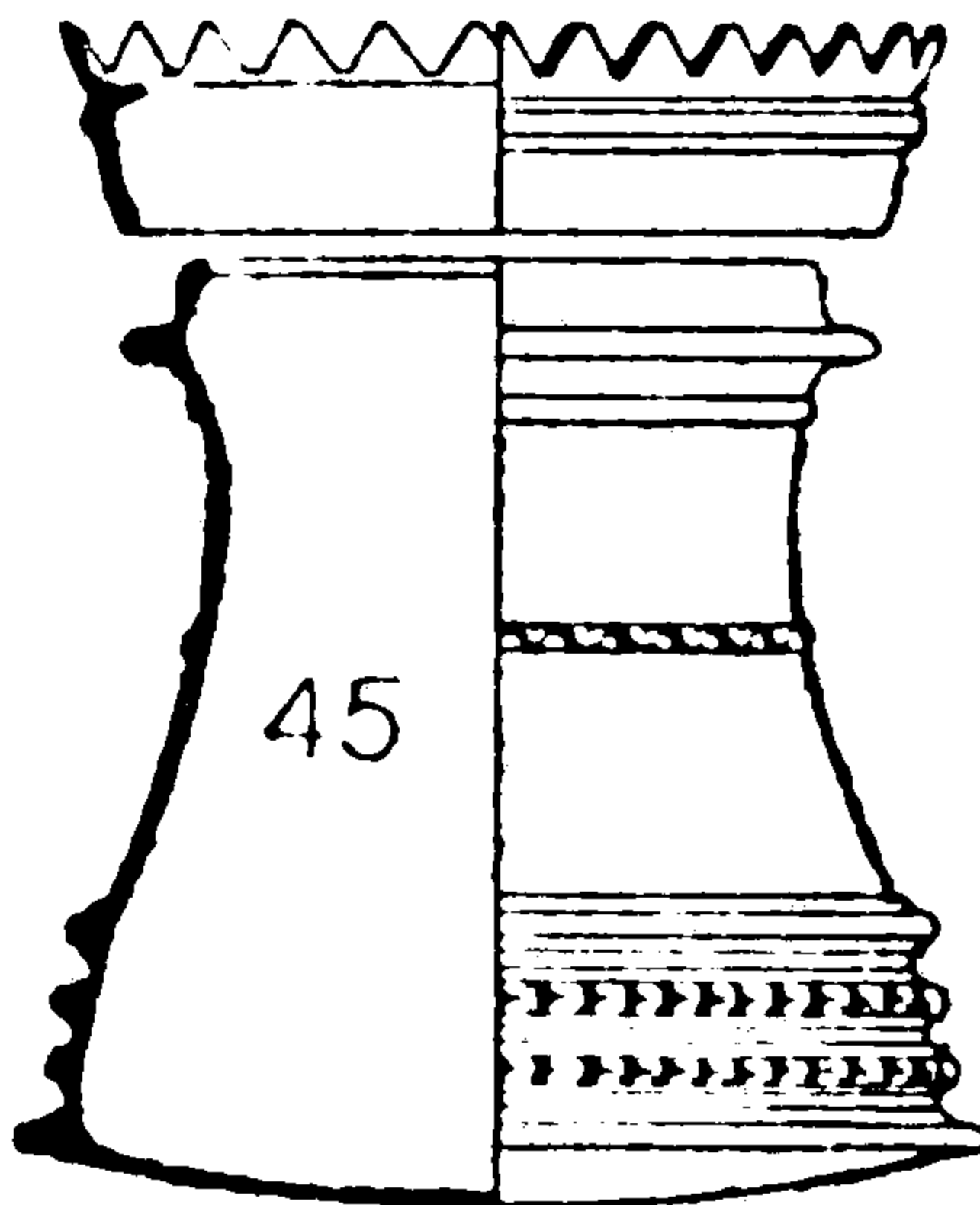
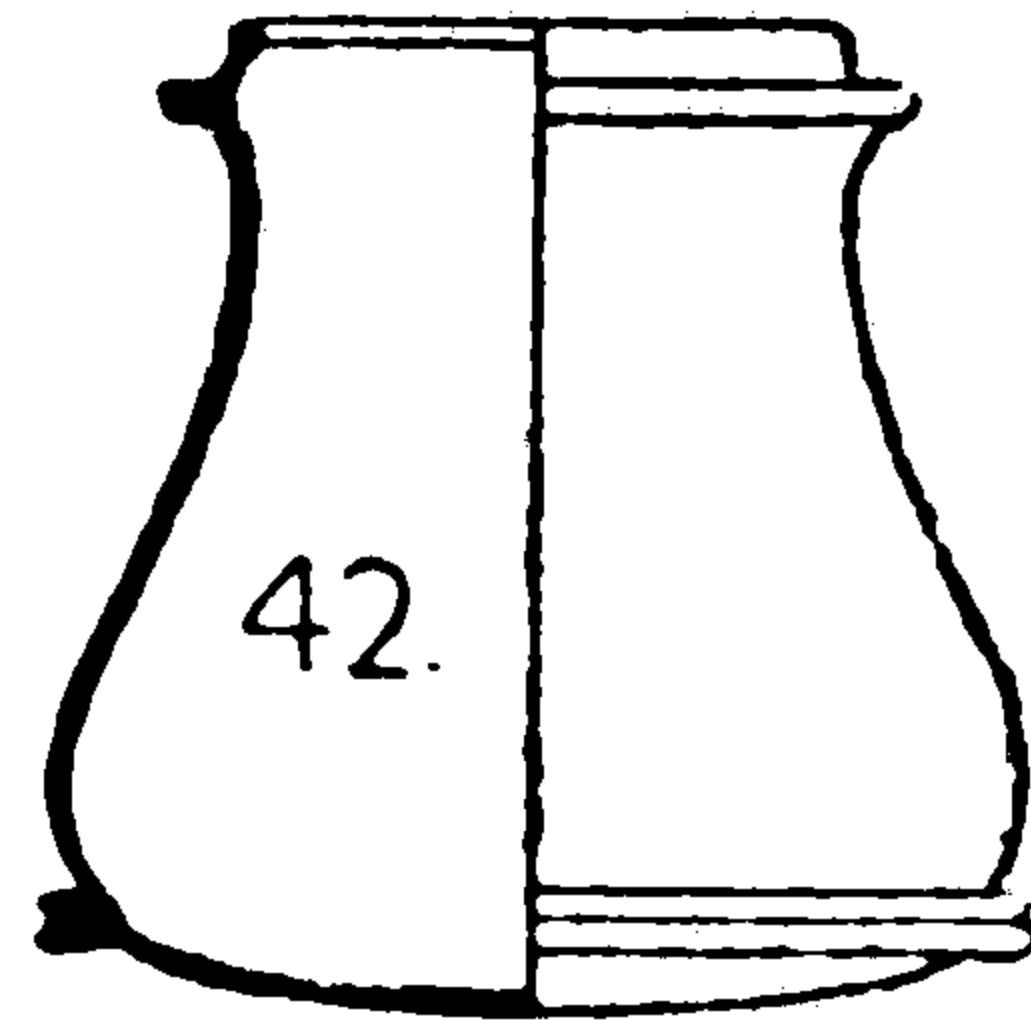
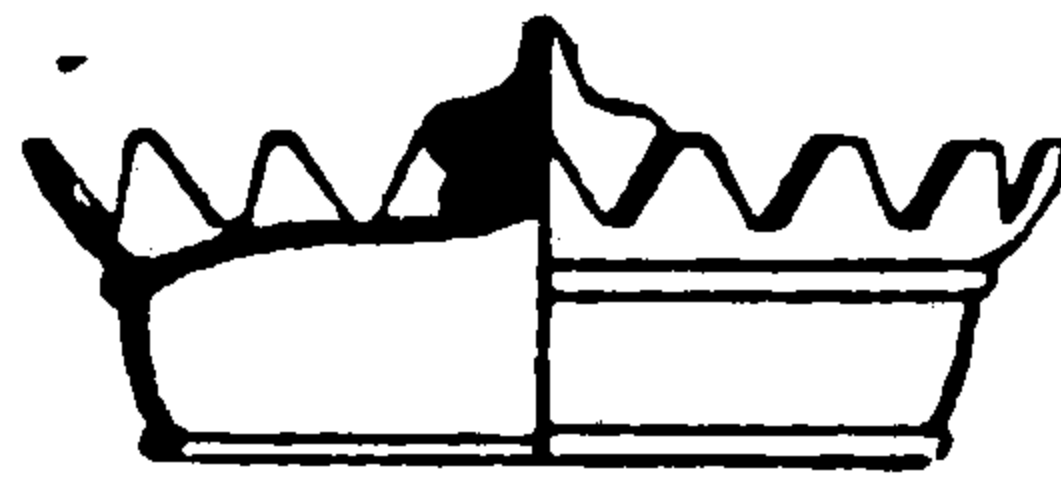
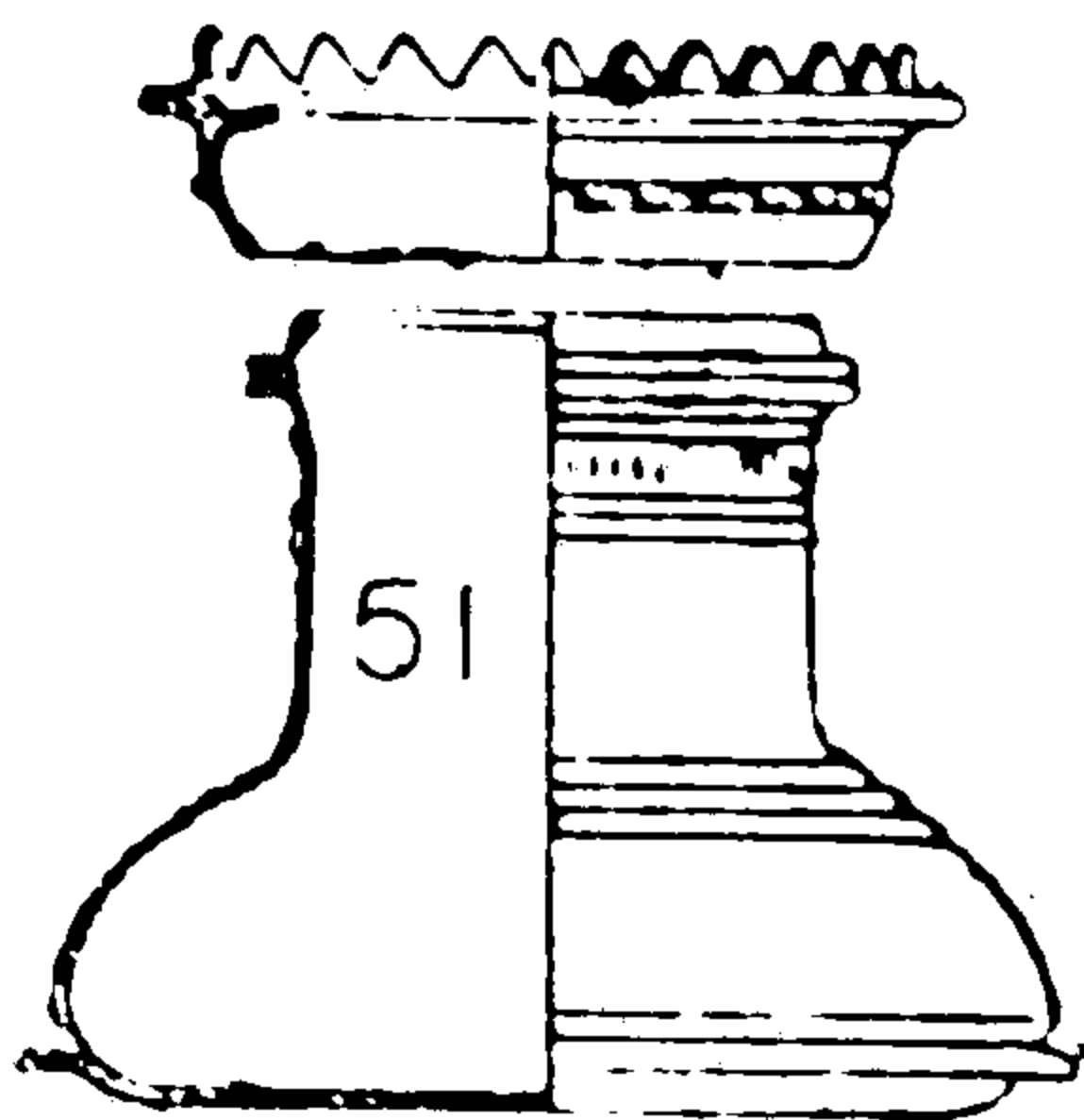
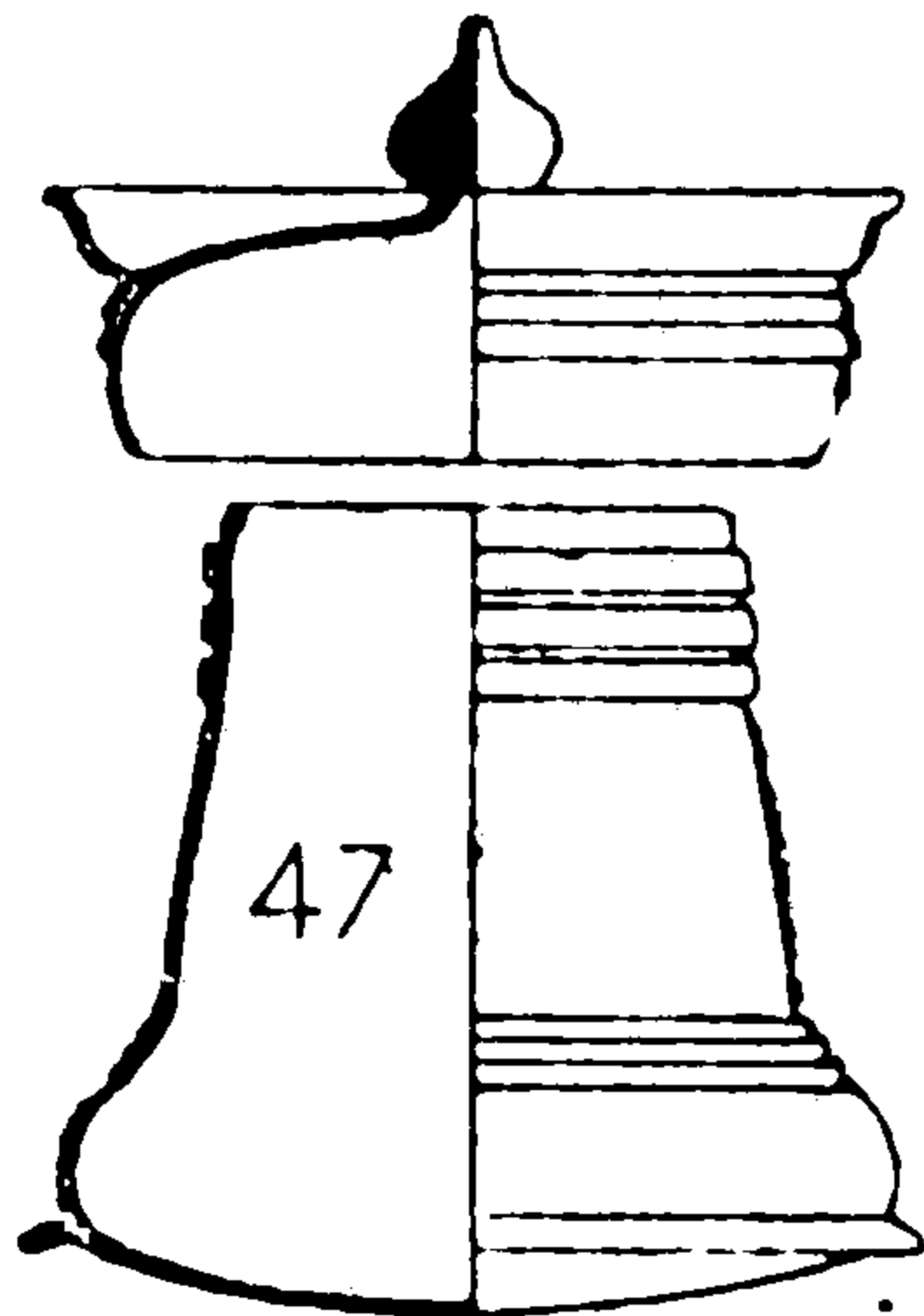
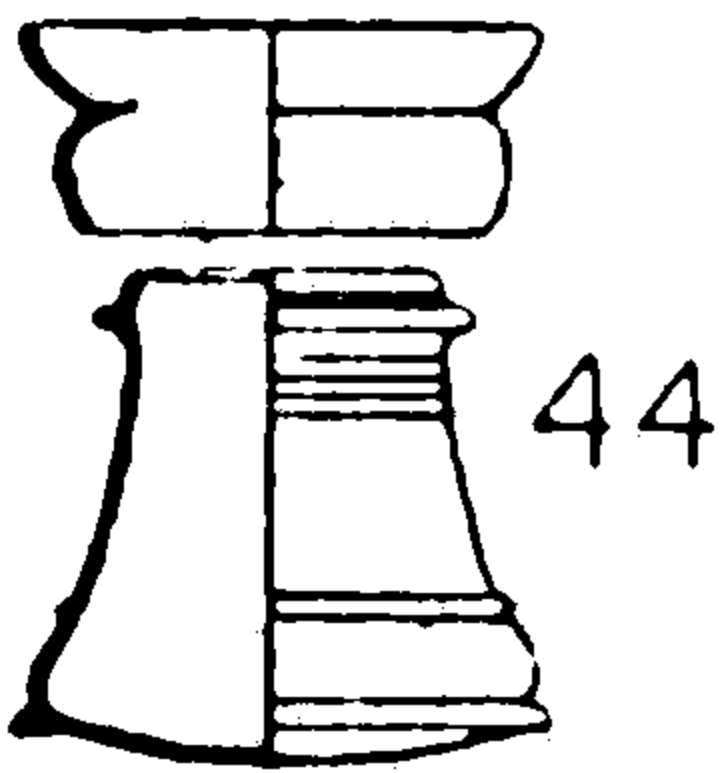
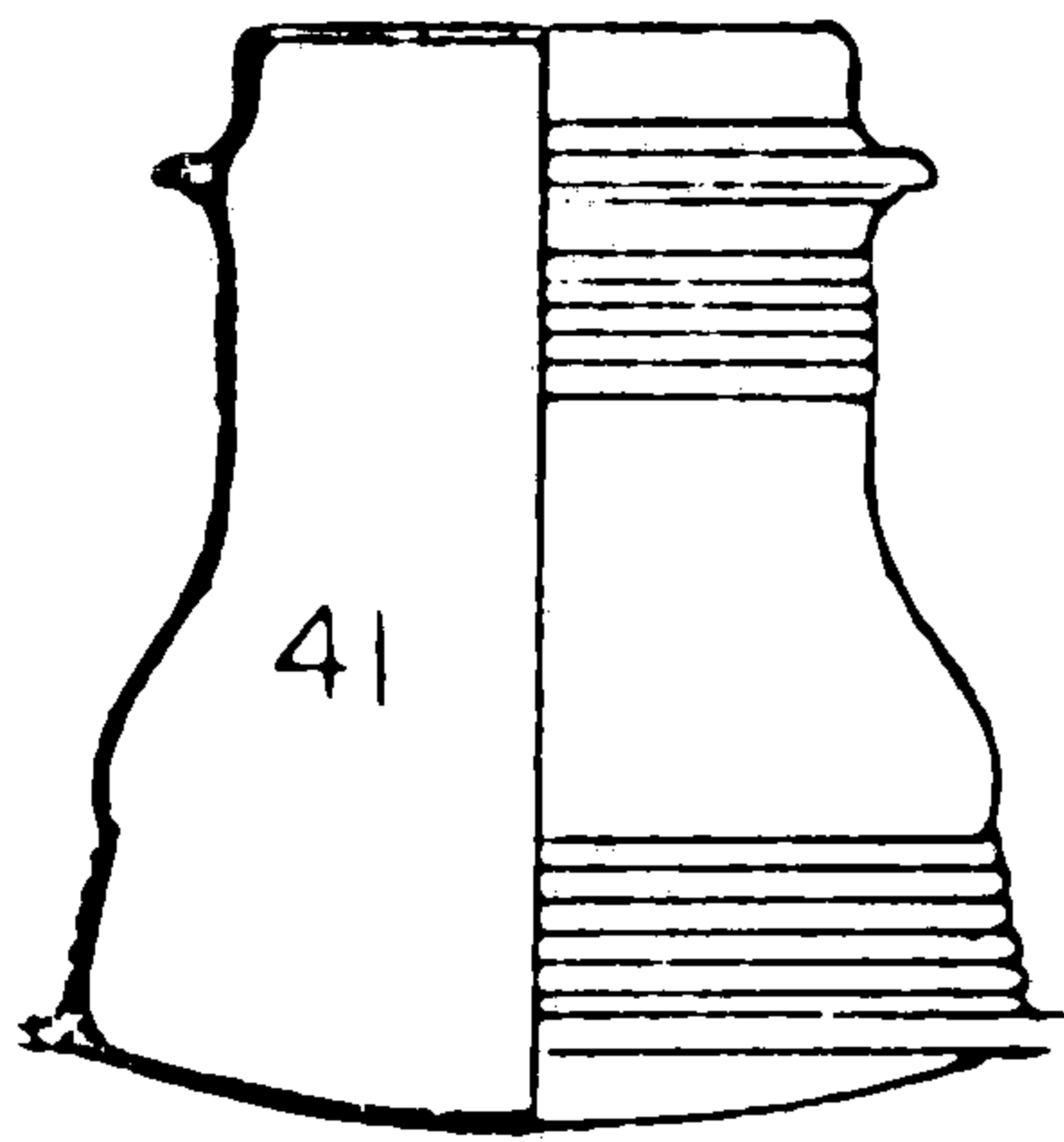


Fig. 45.—Burial urns, types 41 to 51.

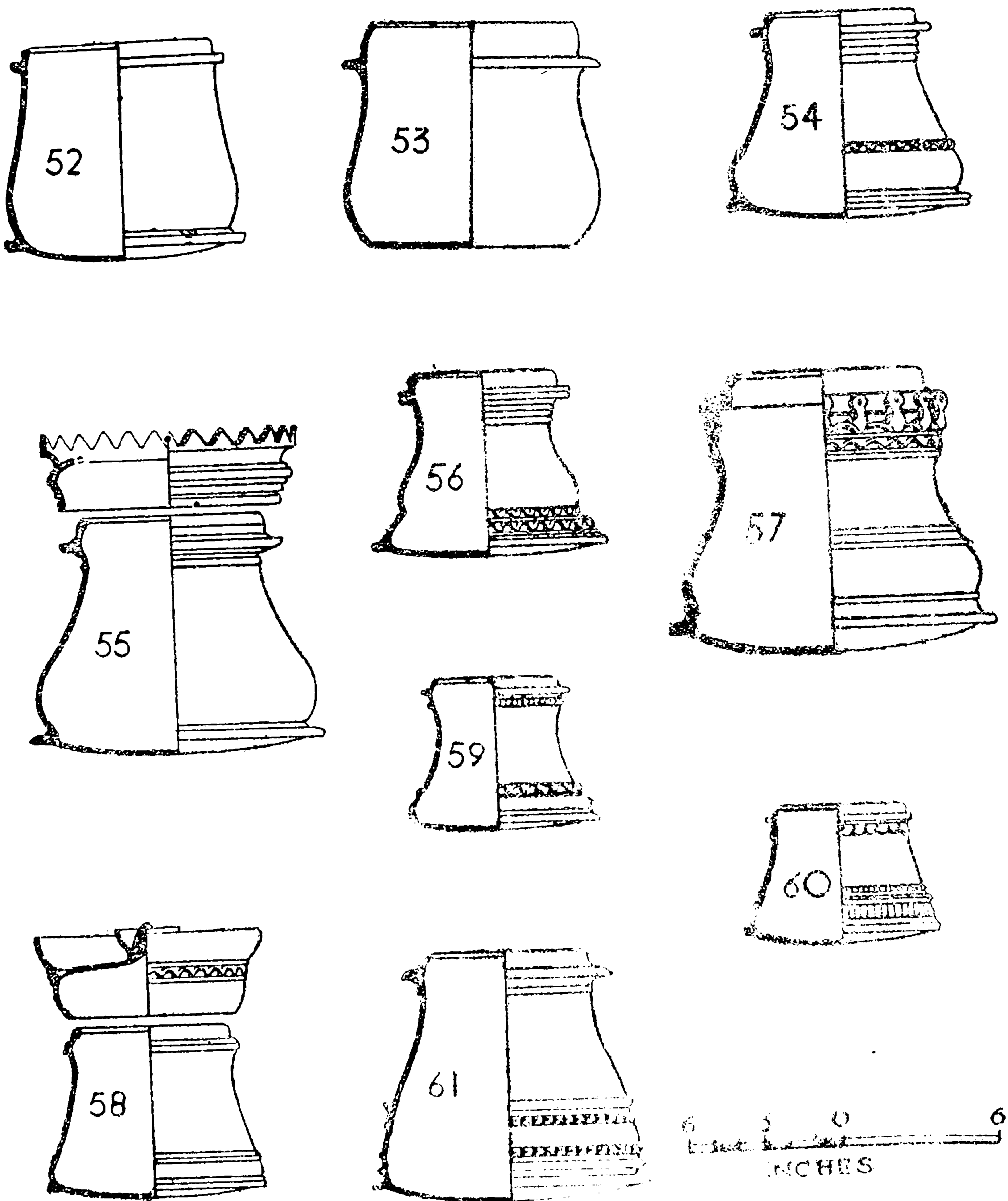


Fig. 46.—Burial urns, types 52 to 61.

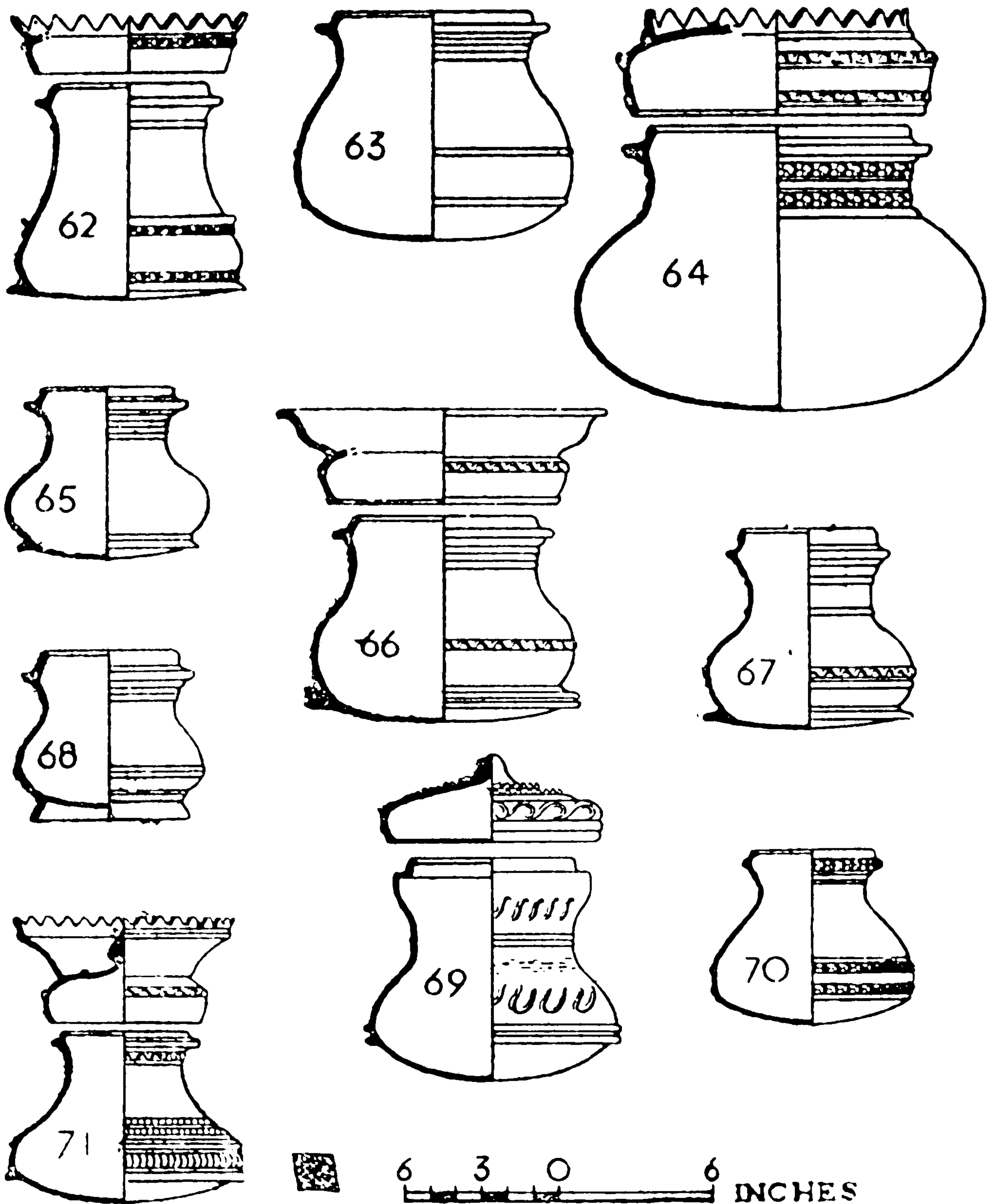


Fig. 47.—Burial urns, types 62 to 71.

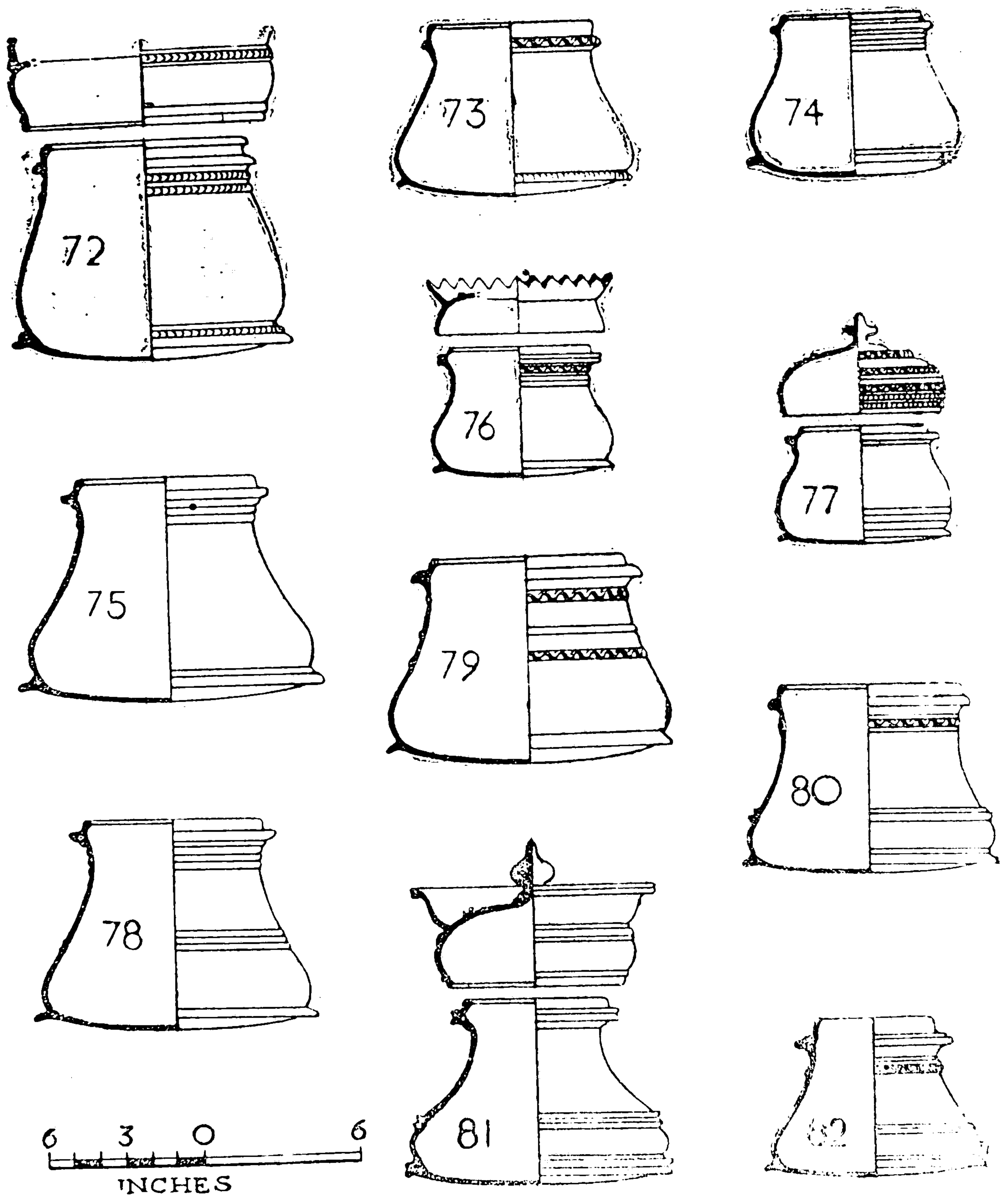


Fig. 48.—Burial urns, types 72 to 82.

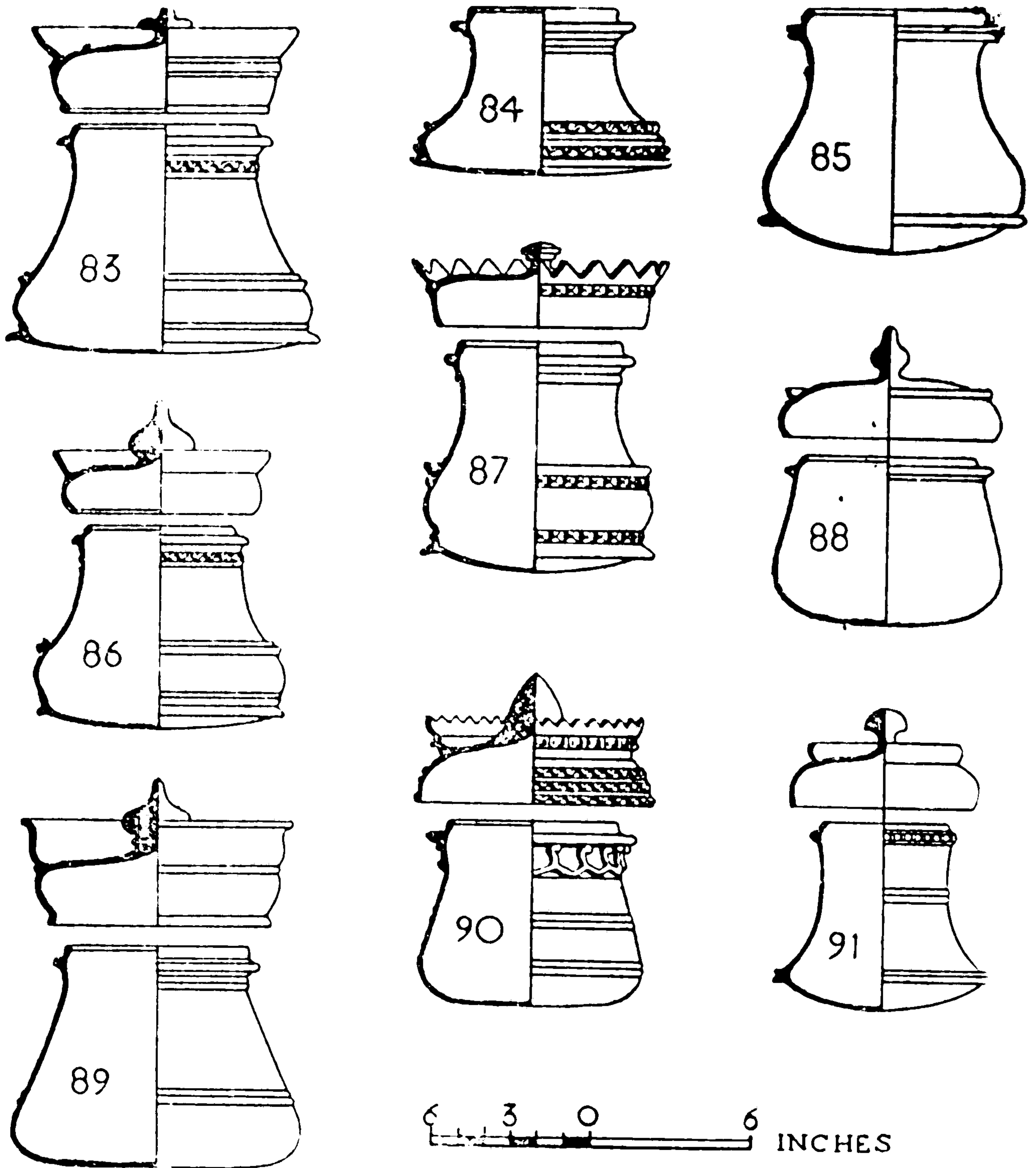


Fig. 49.—Burial urns, types 83 to 91.

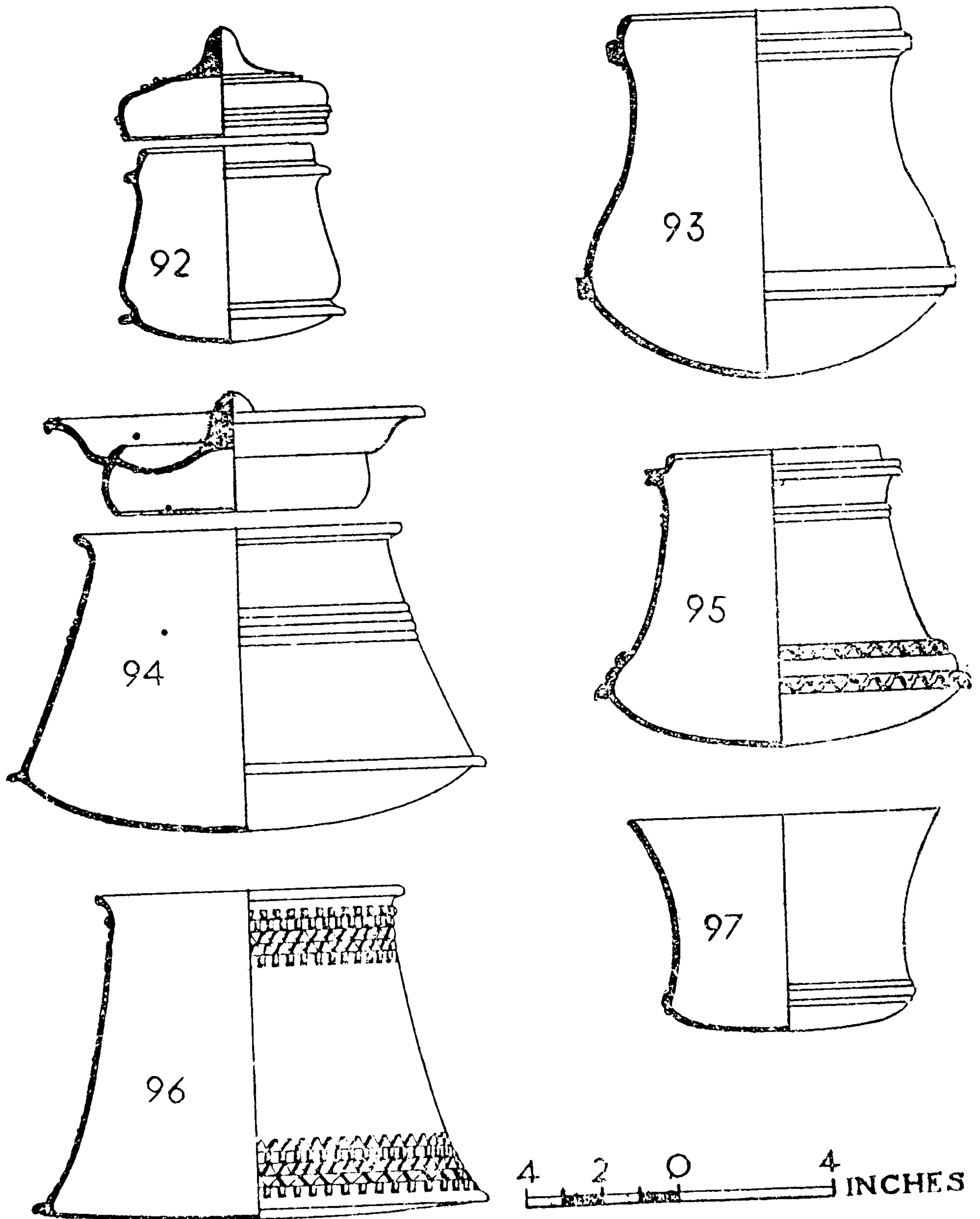
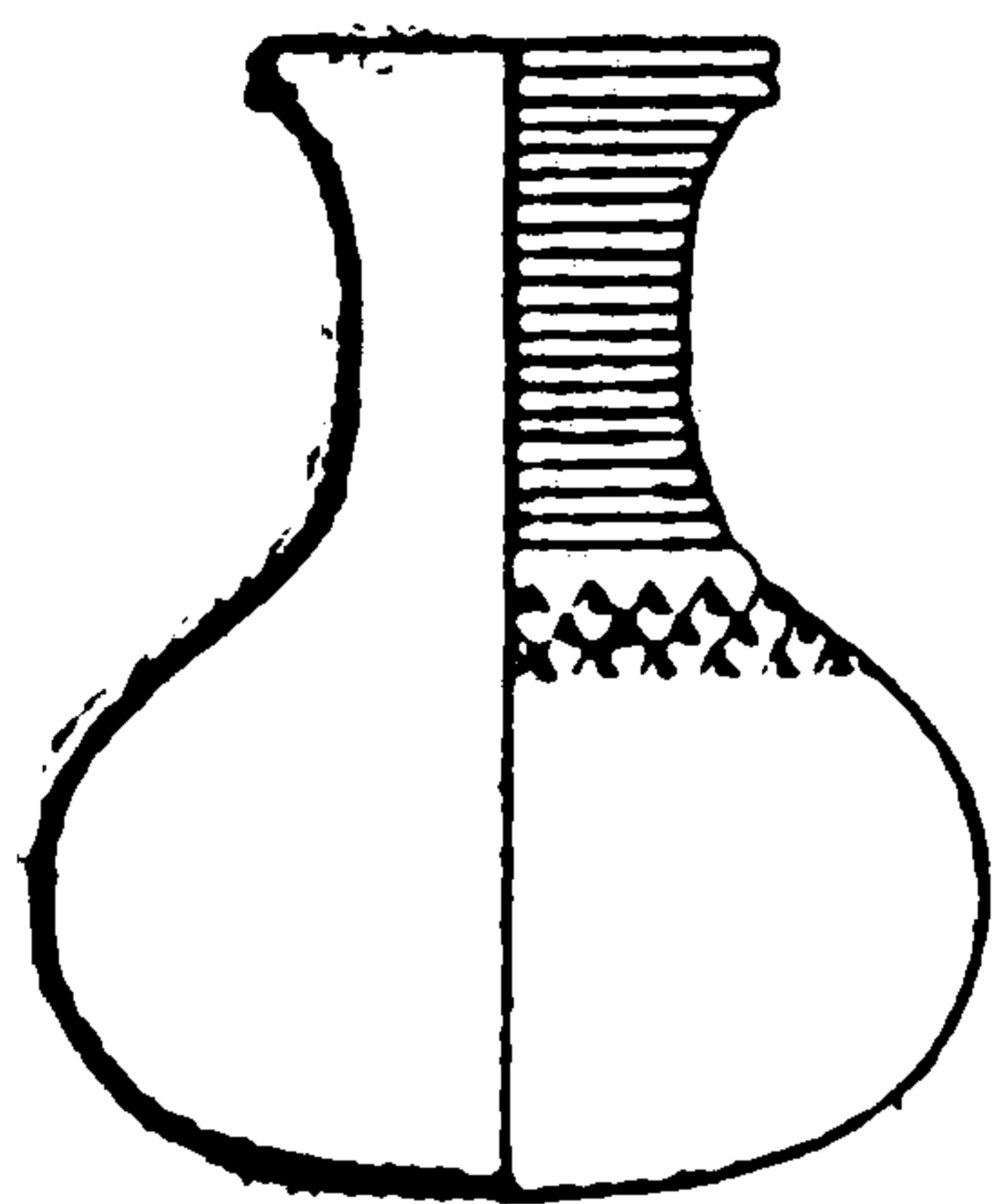
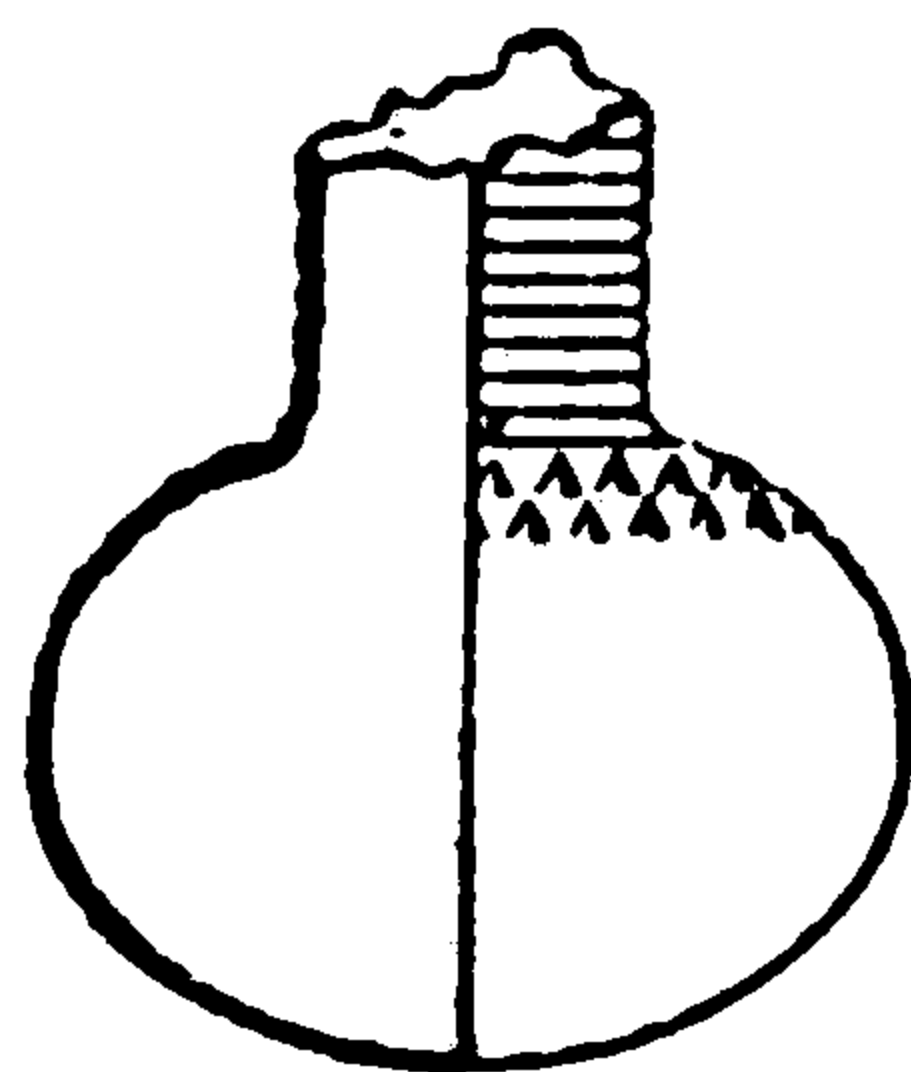


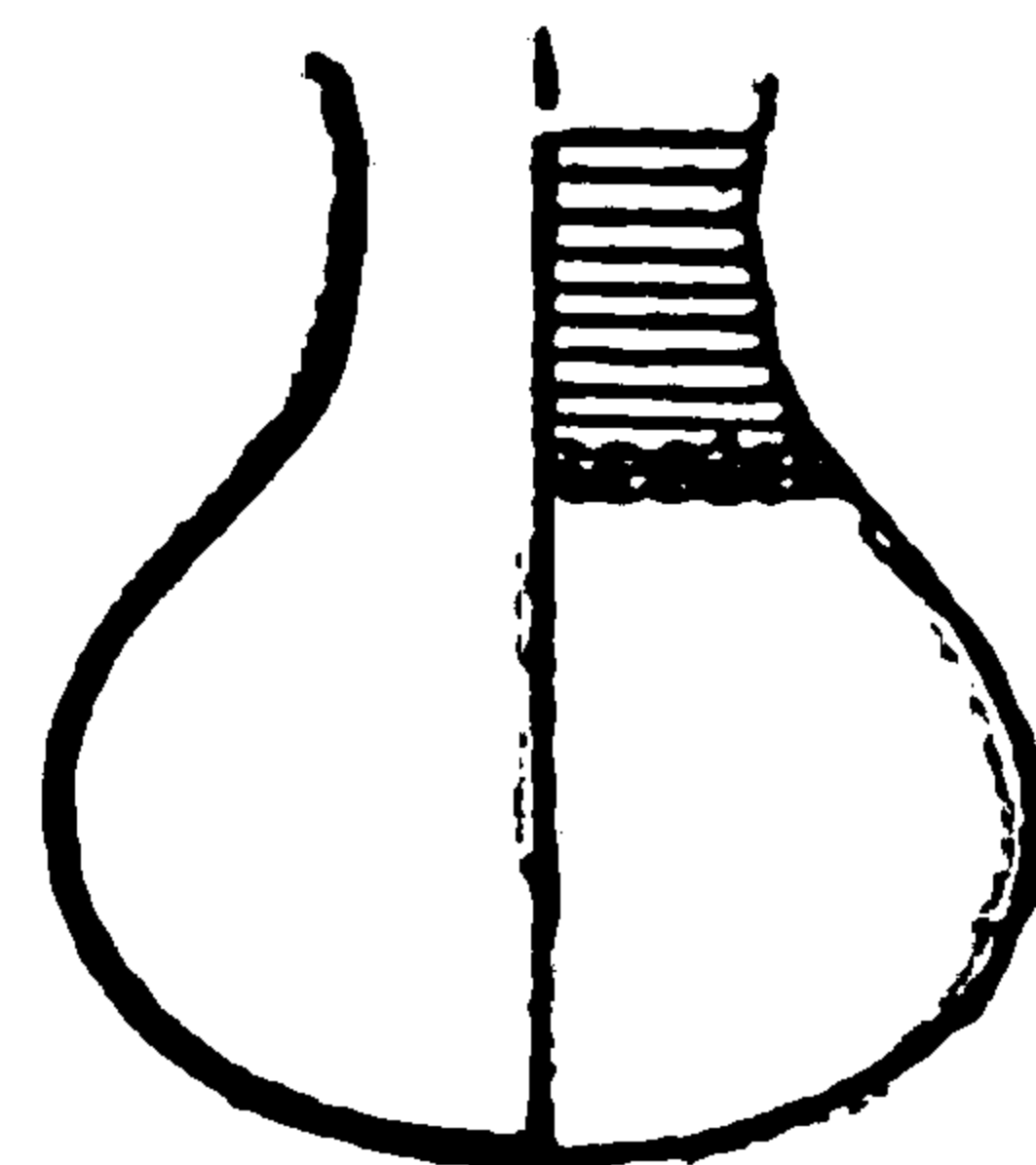
Fig. 50.—Burial urns, types 92 to 97.



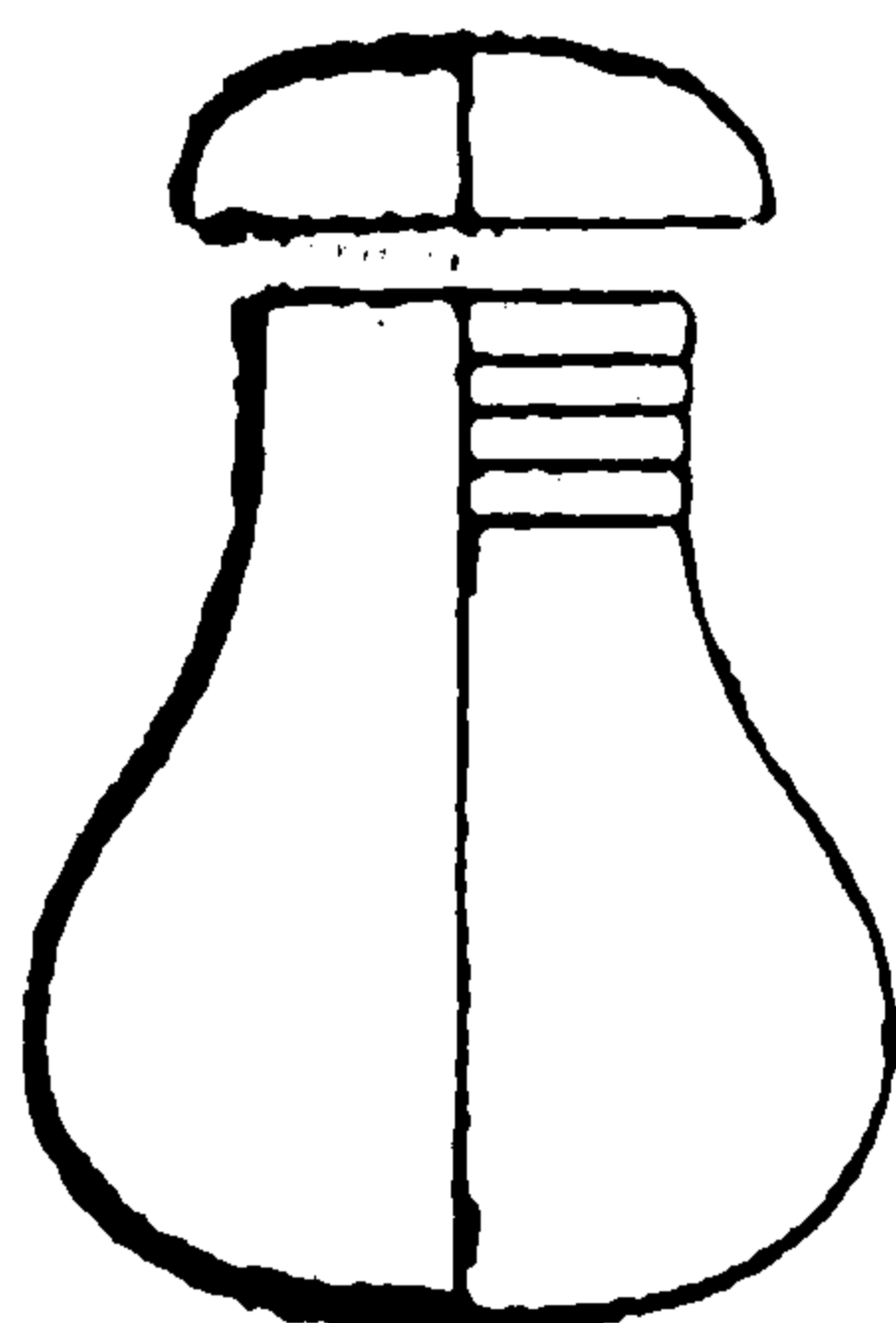
98



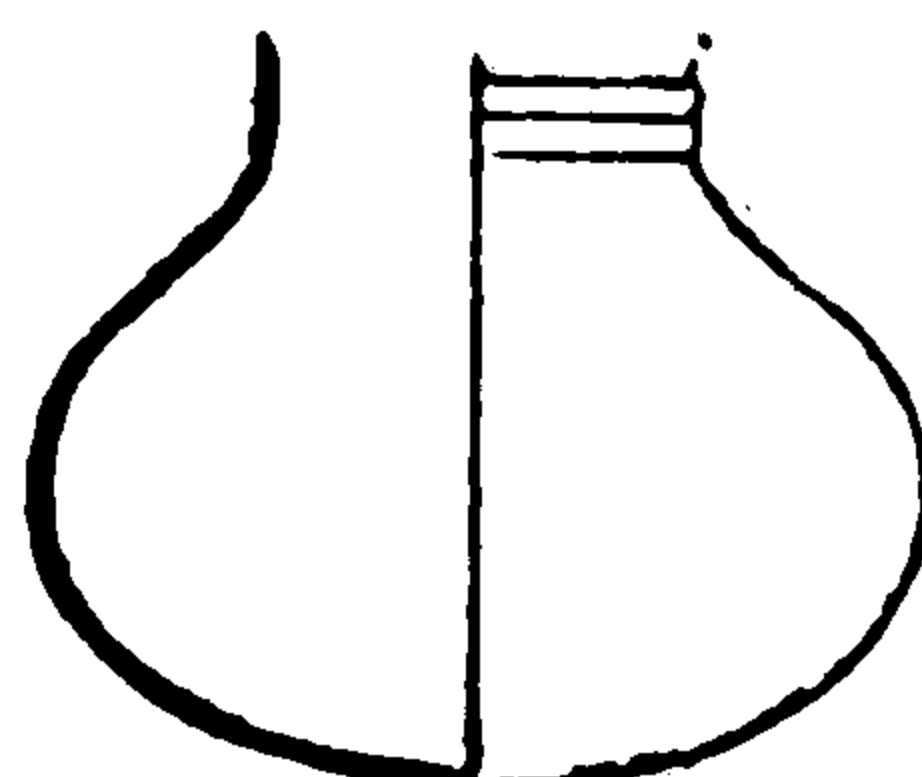
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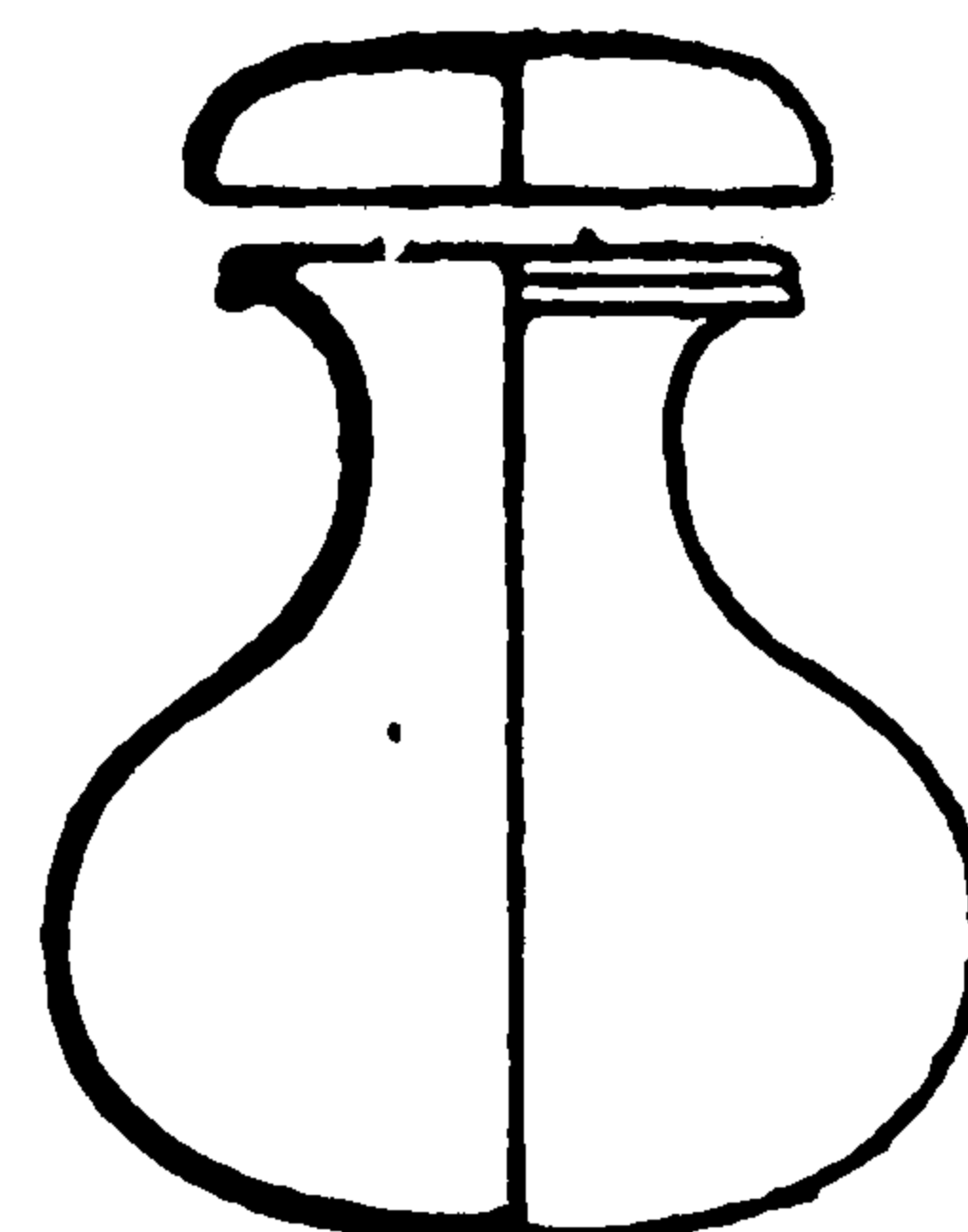
99A



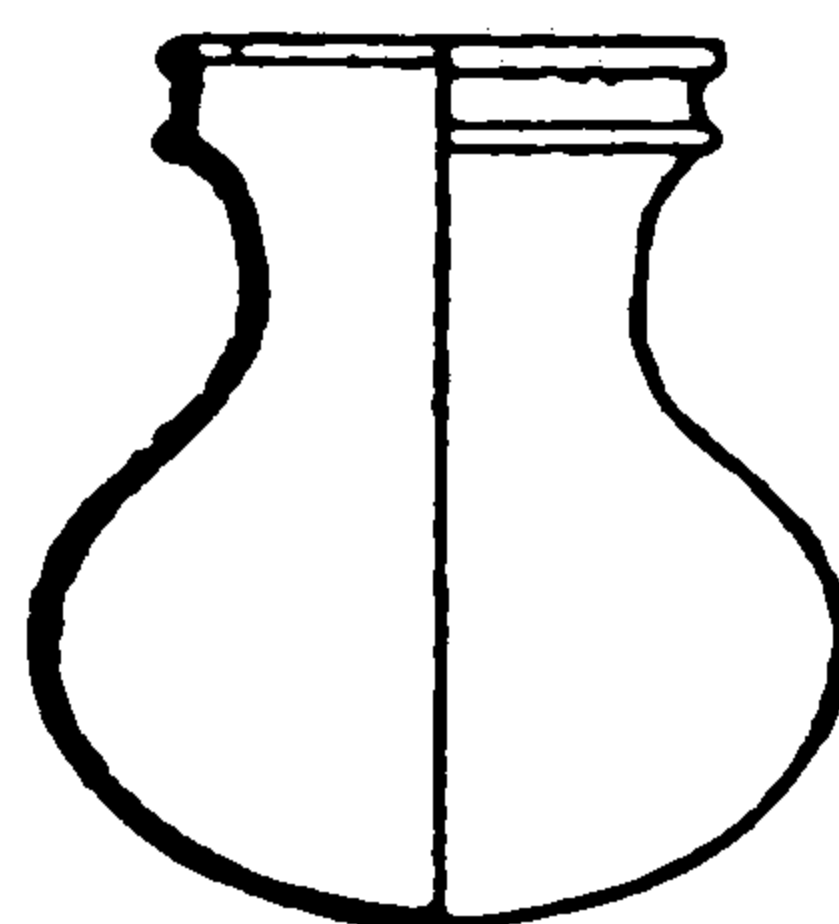
99B



99C



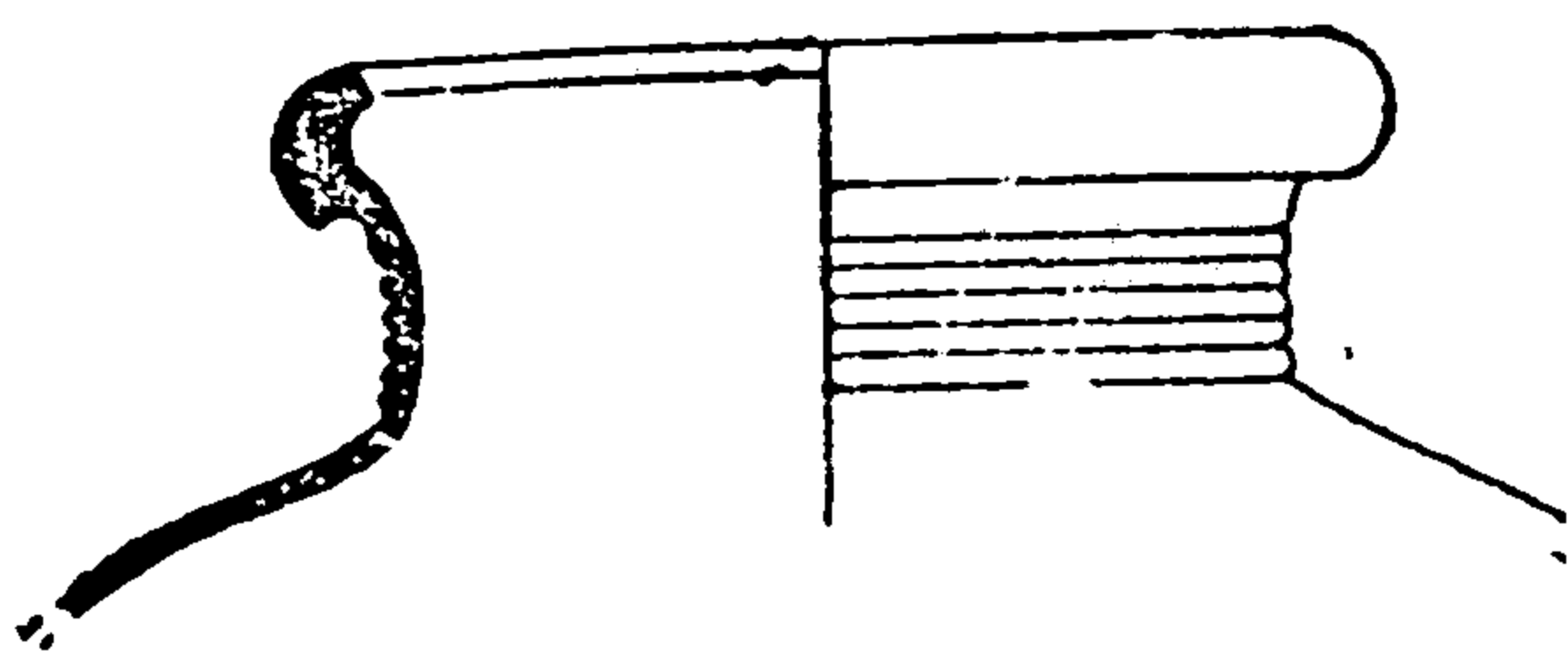
99D



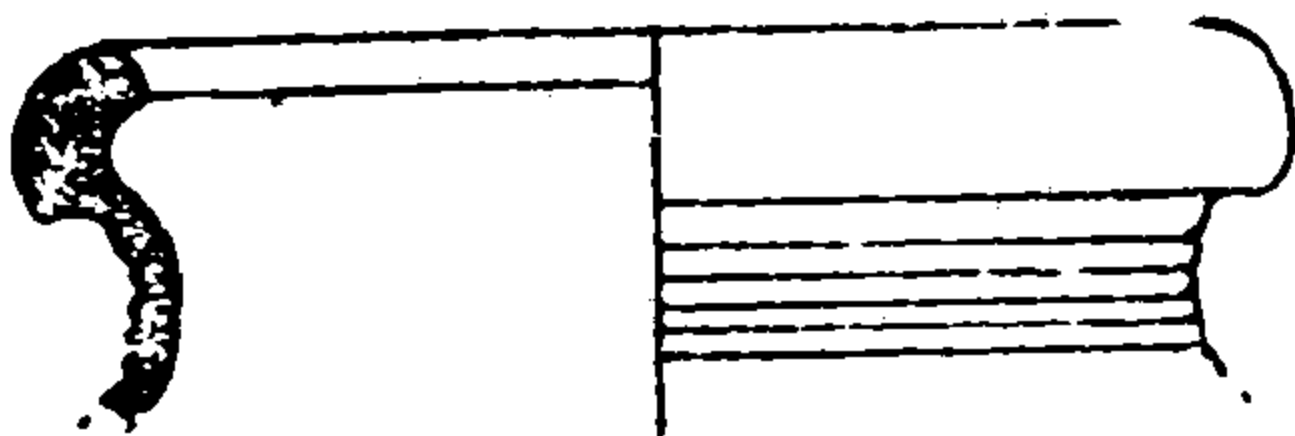
100



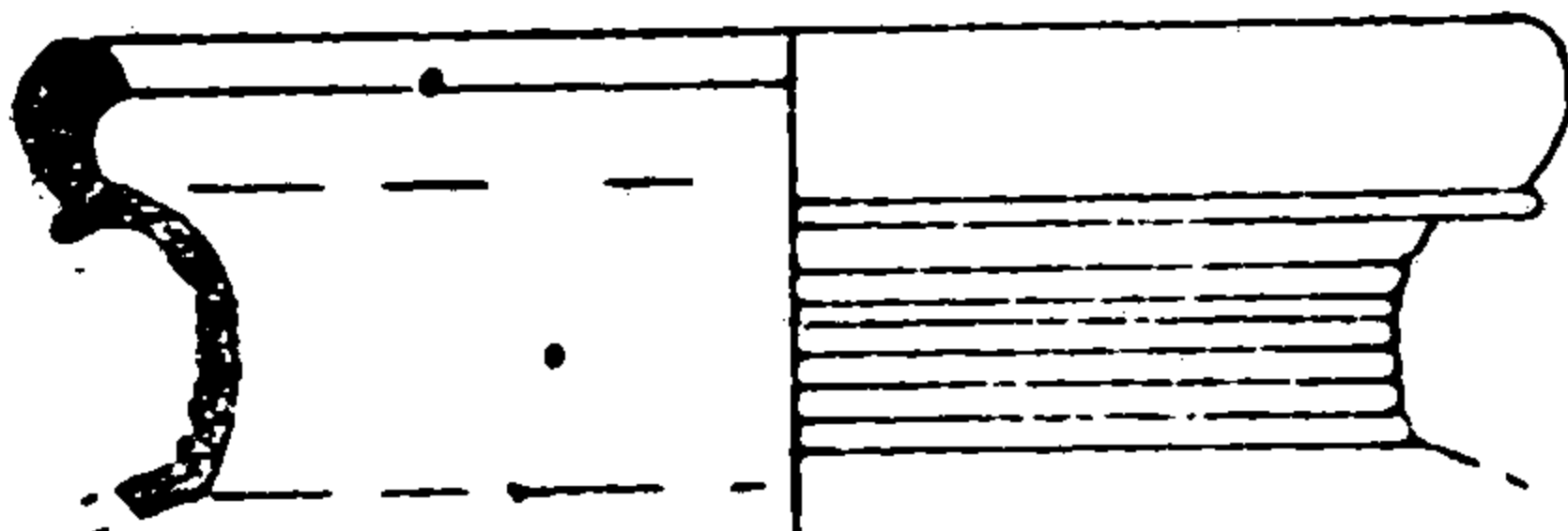
Fig. 51.—Burial urns, types 98 to 100.



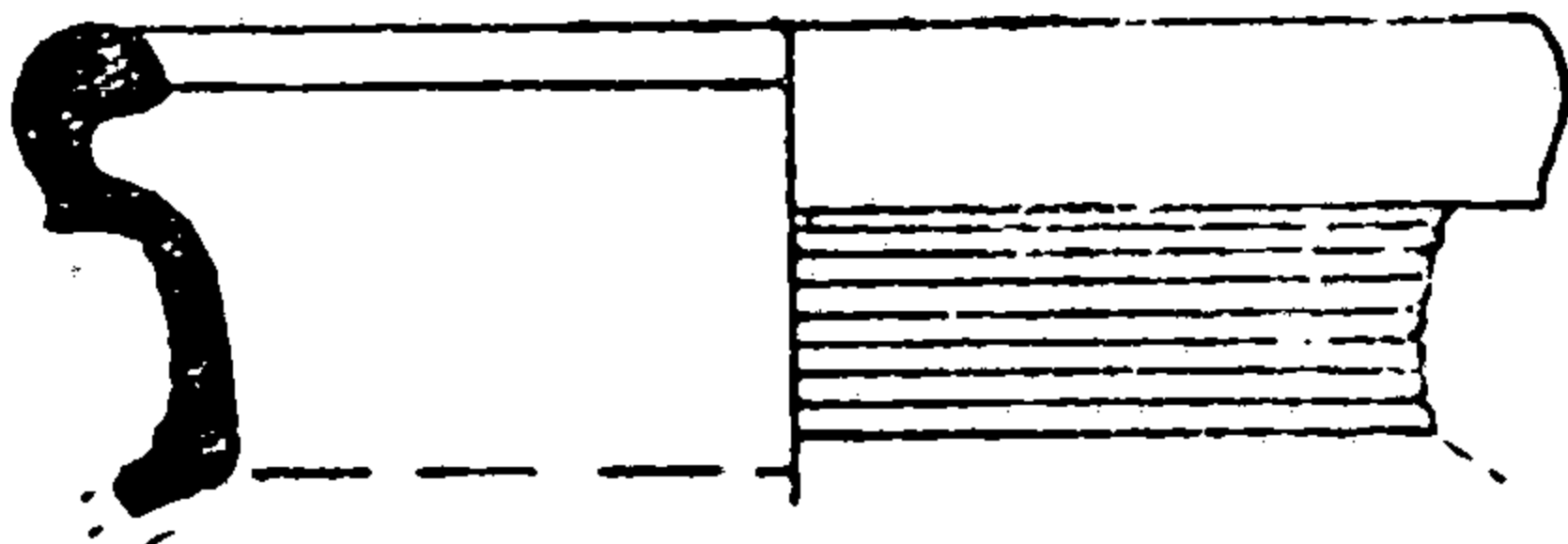
1a



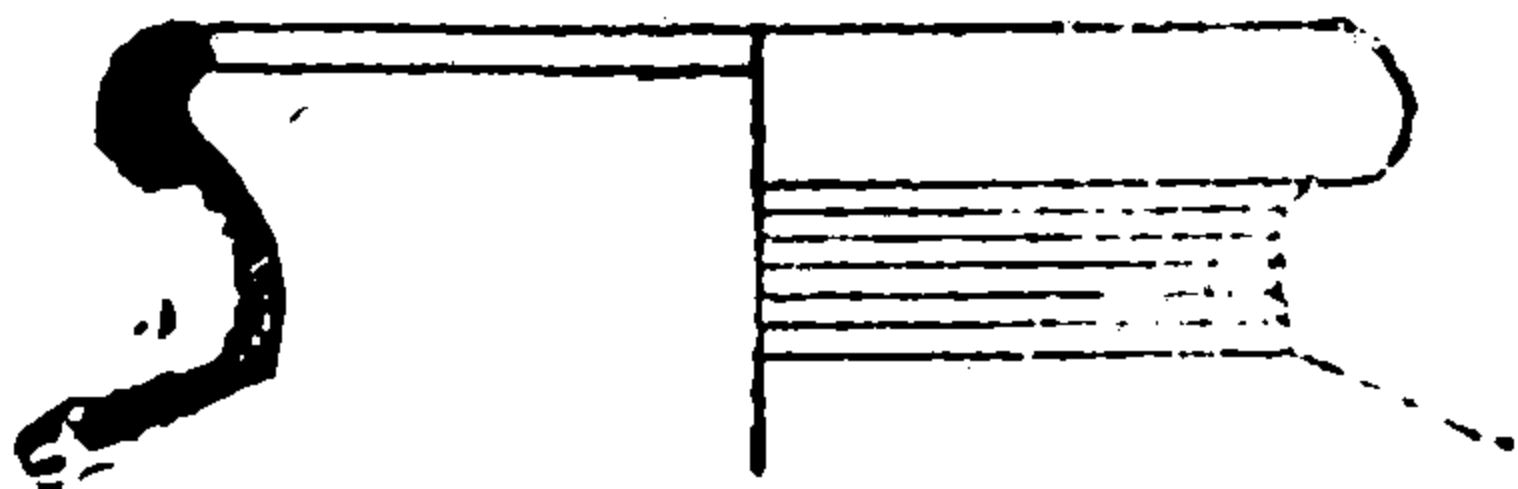
1b



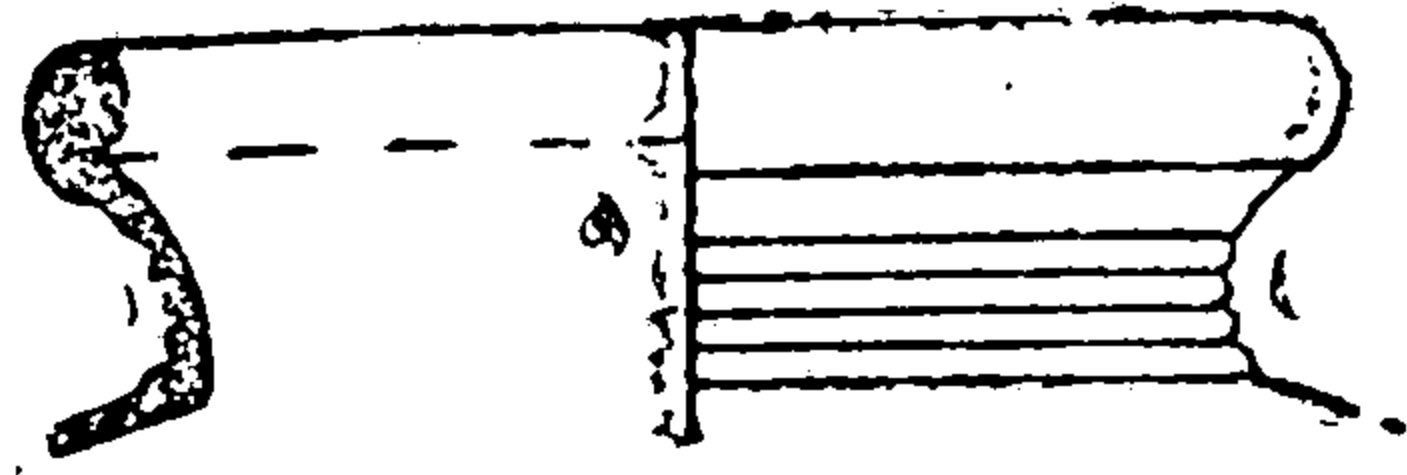
1c



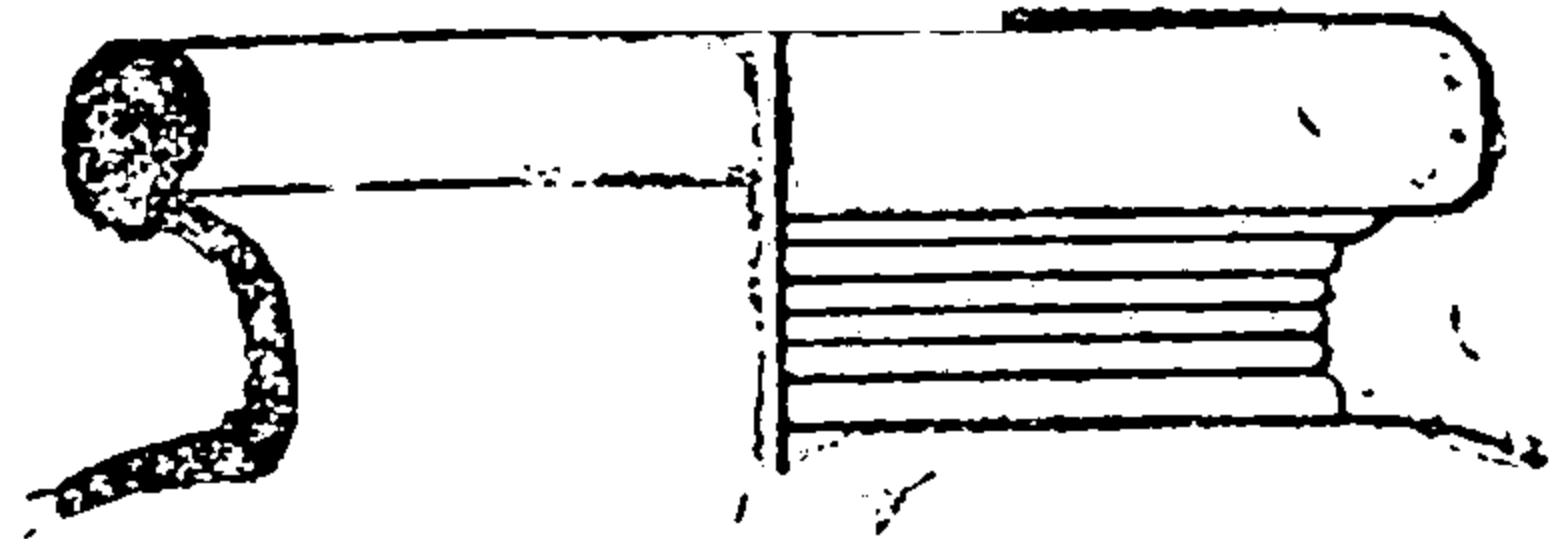
1d



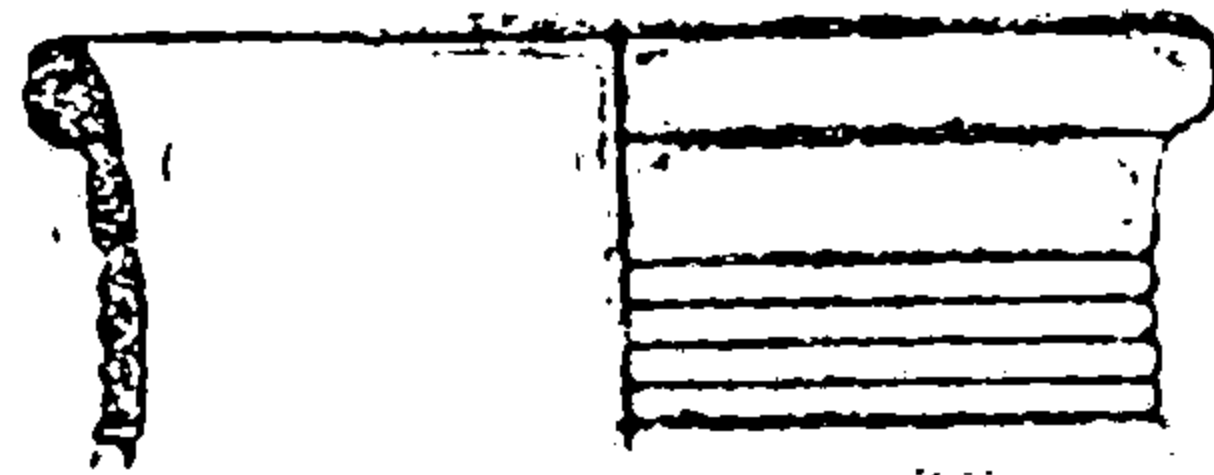
1e



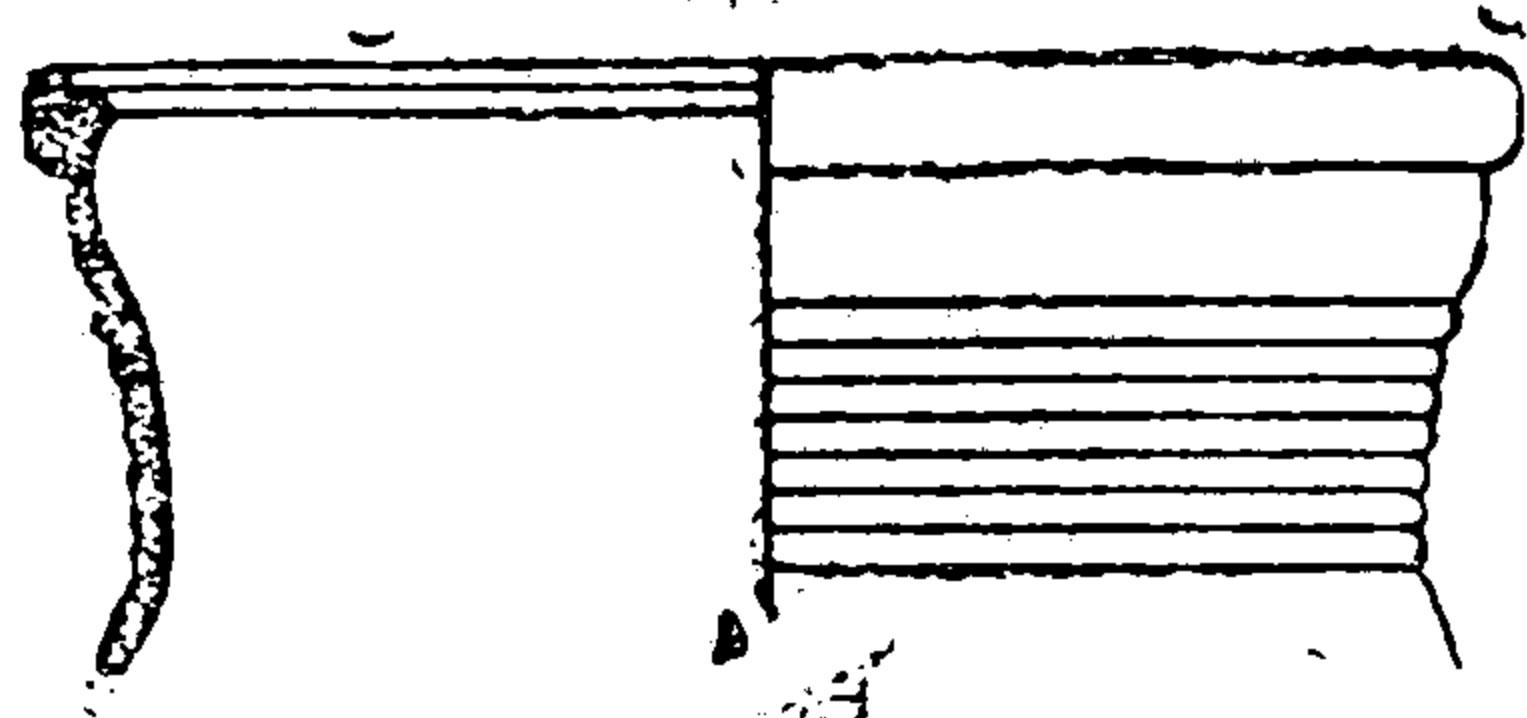
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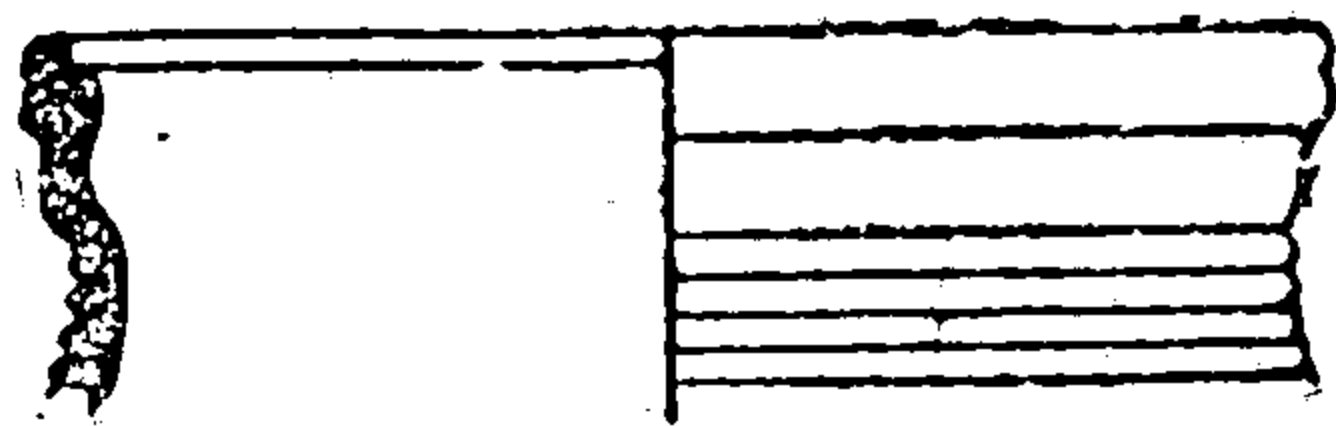
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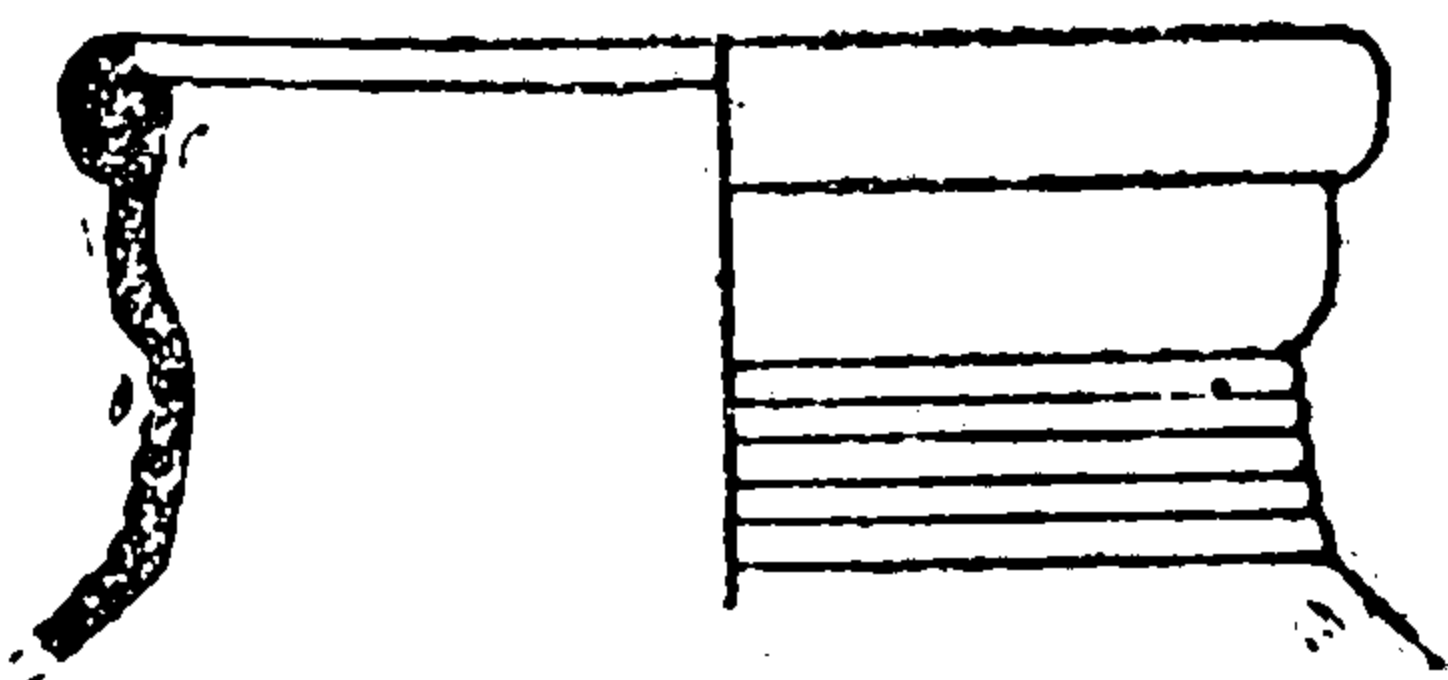
2



2a



2b



2c



Fig. 52.— Pottery types : large storage vessels.

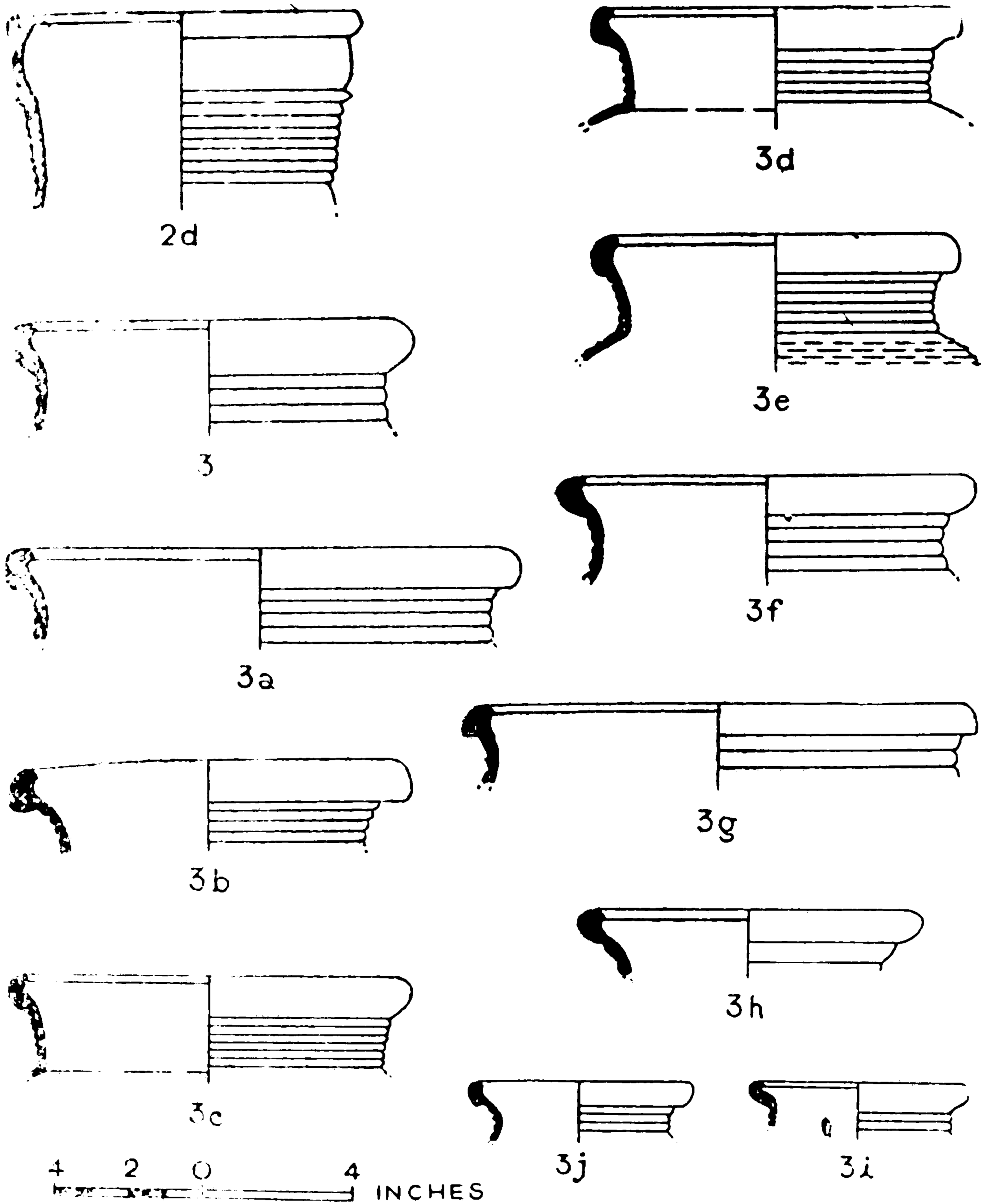


Fig. 53.—Pottery types - medium globular vessels.

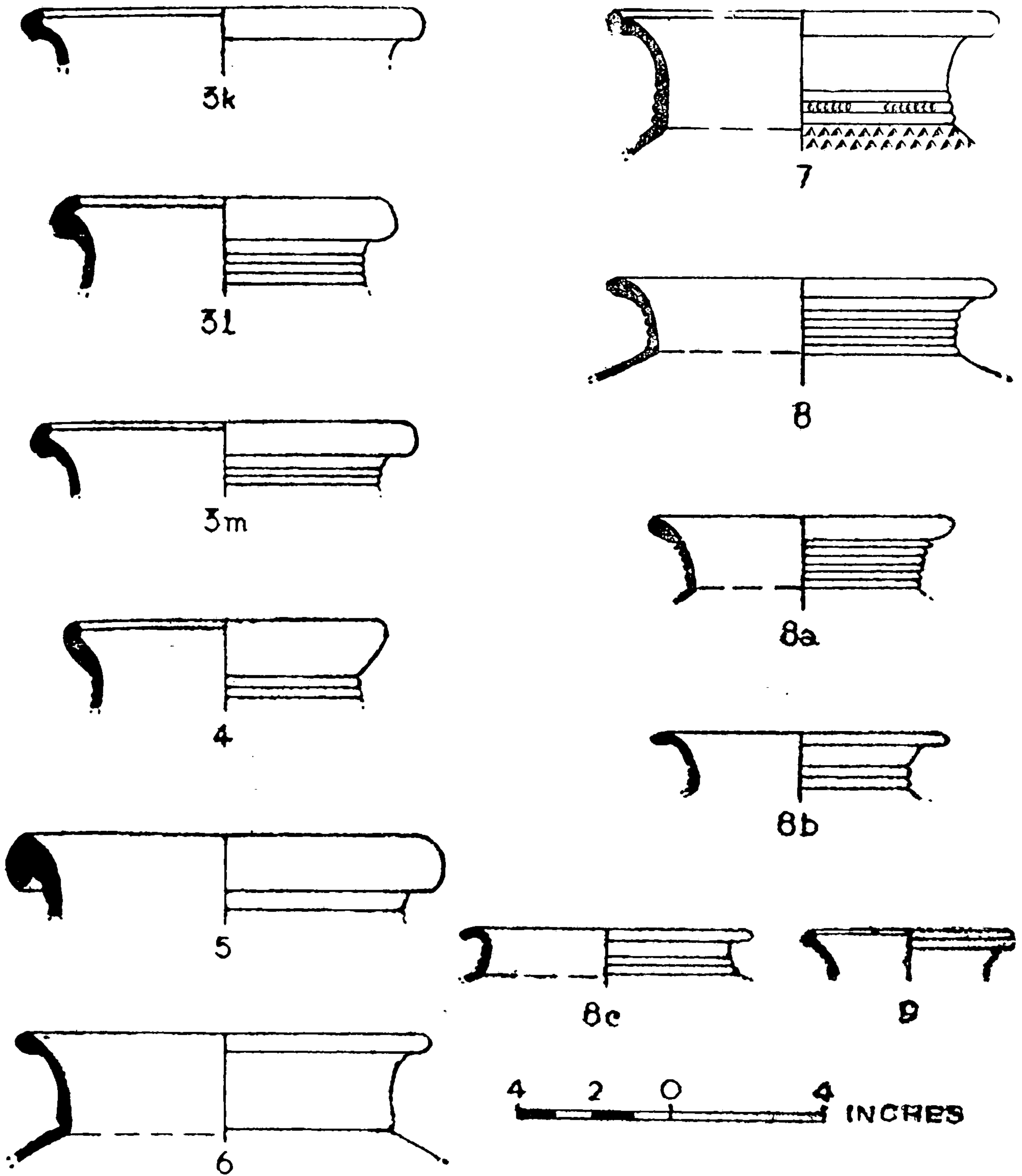


Fig. 54 --Pottery types : medium globular vessels

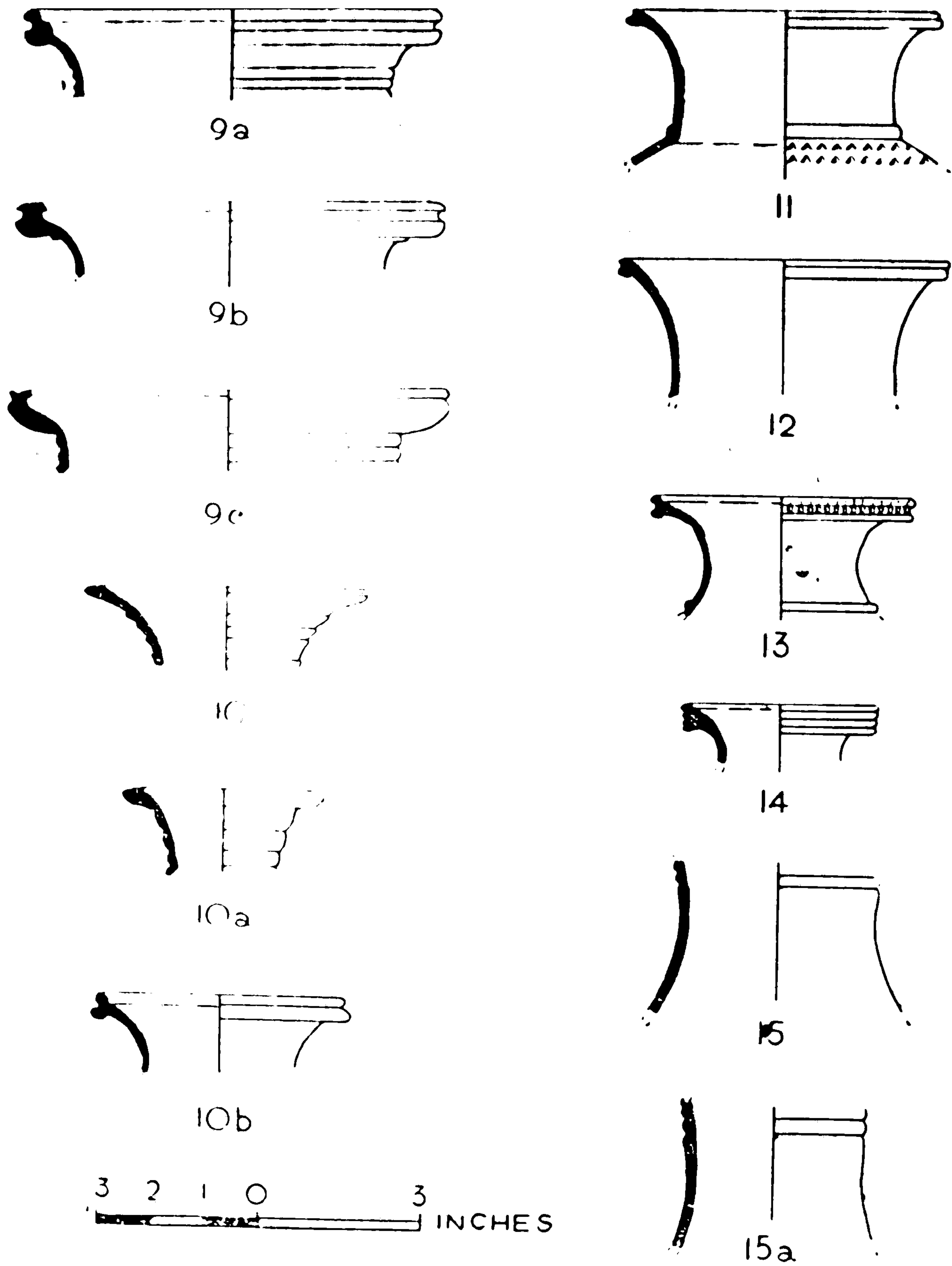


Fig. 55.—Pottery types: medium and small globular vessels

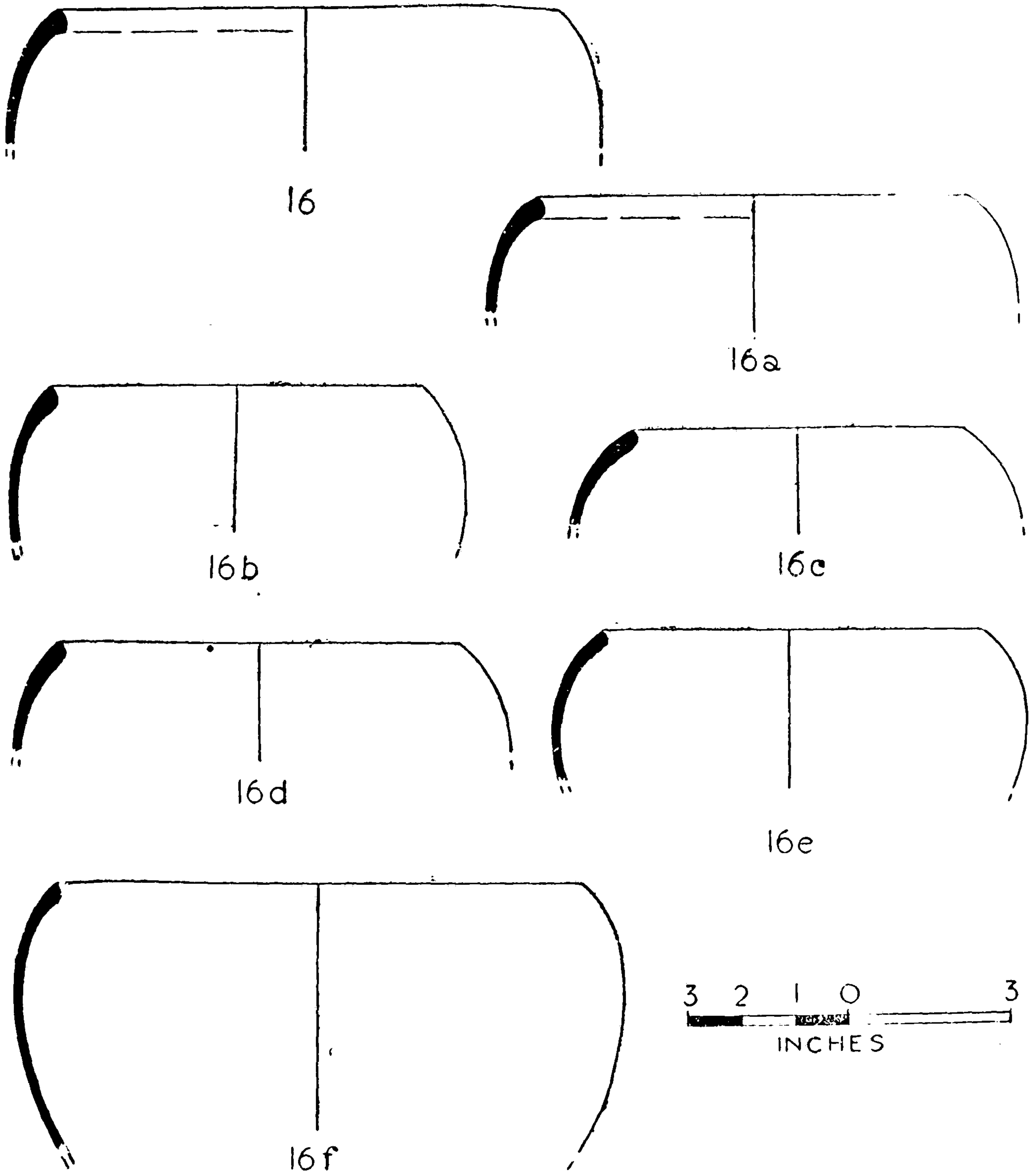


Fig. 56.—Pottery types: plain round bowls.

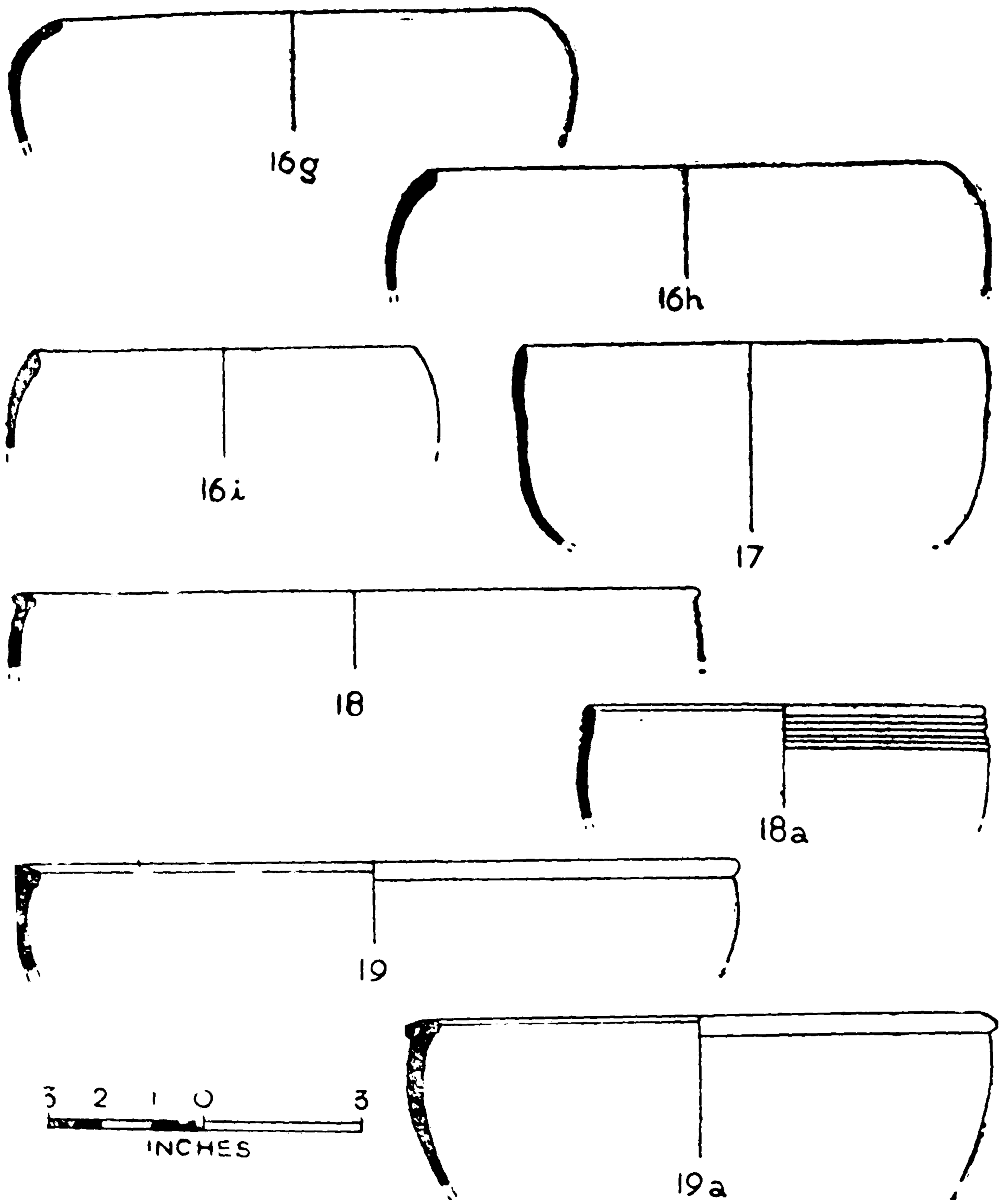


Fig 57.—Pottery types: plain round bowls

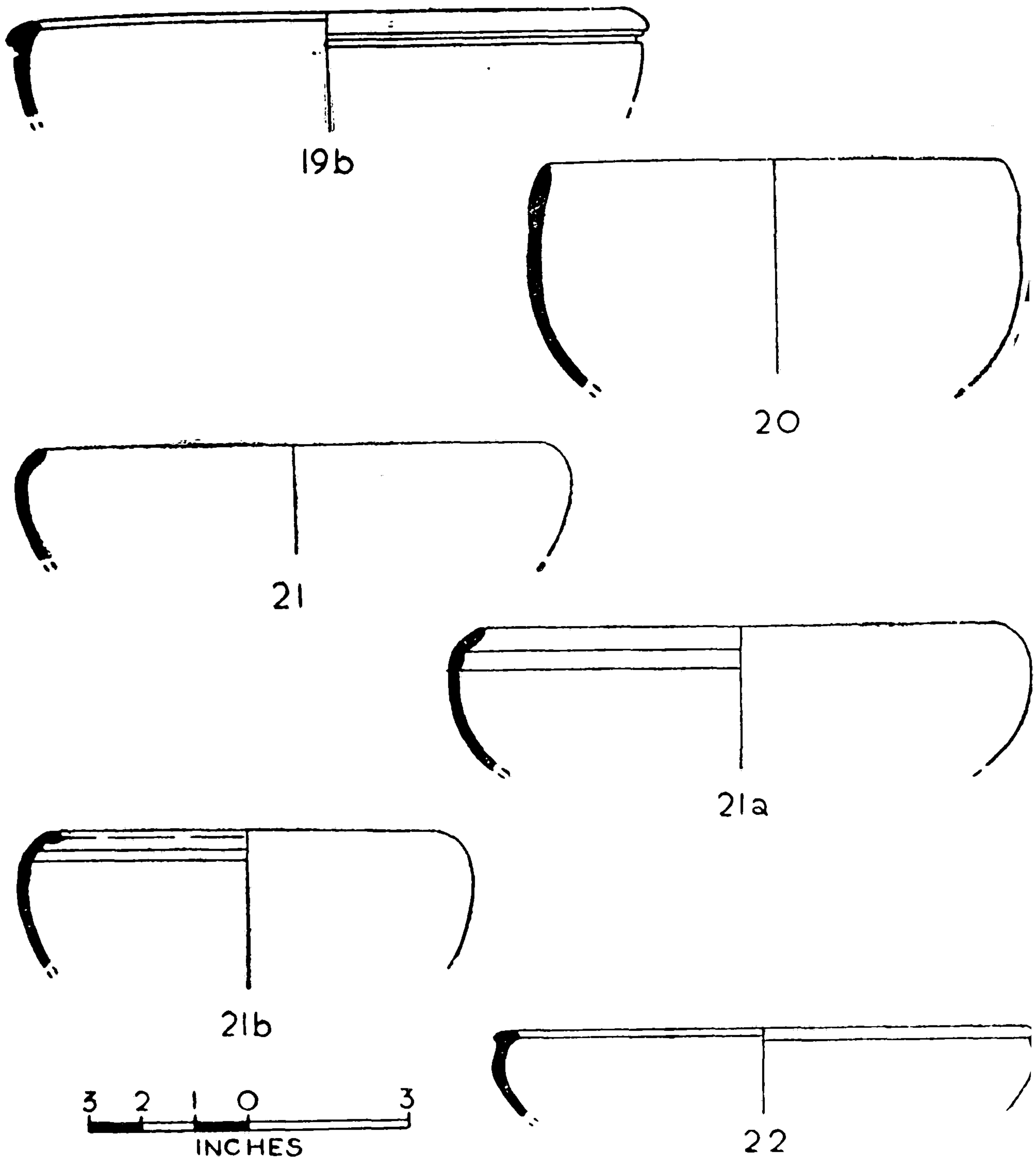


Fig. 58.—Pottery types: round and convex bowls.

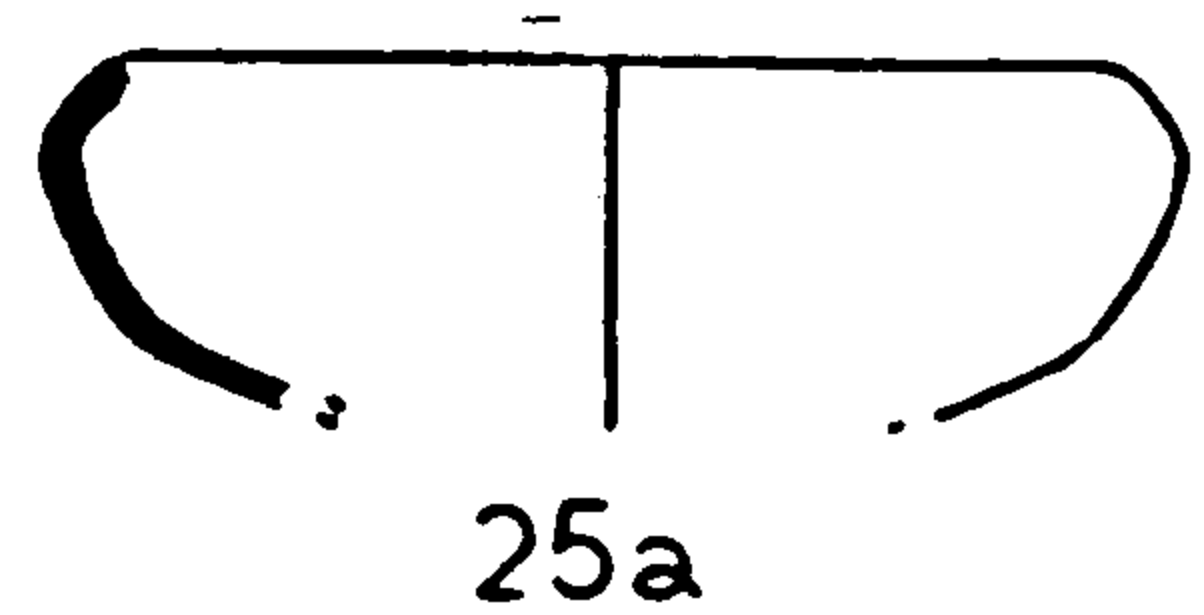
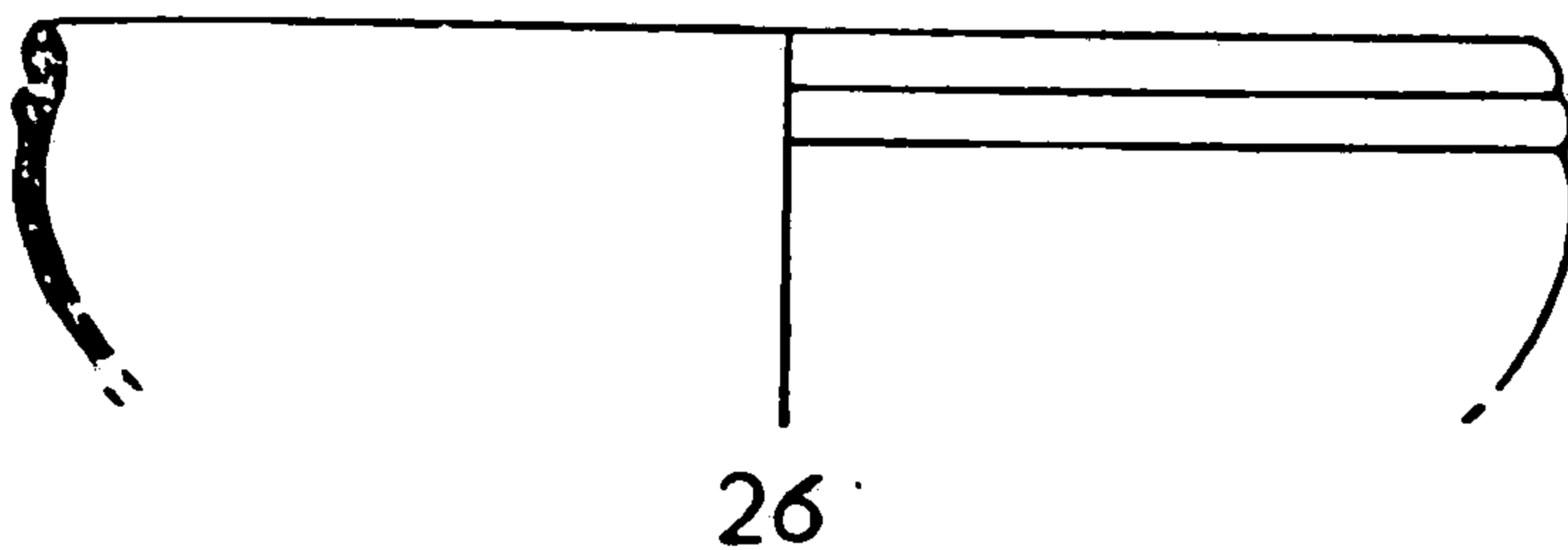
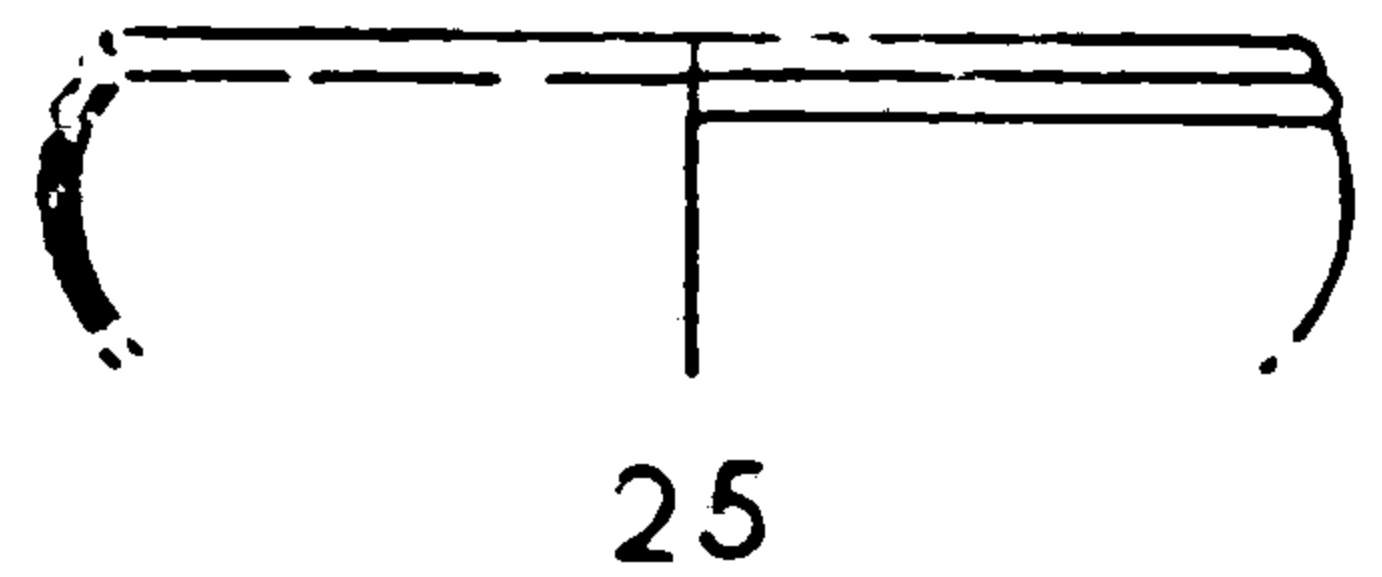
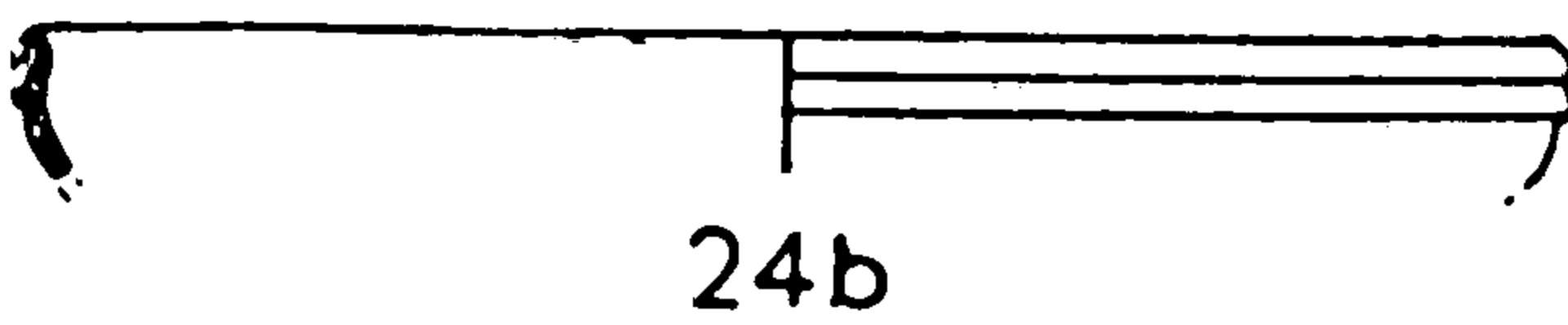
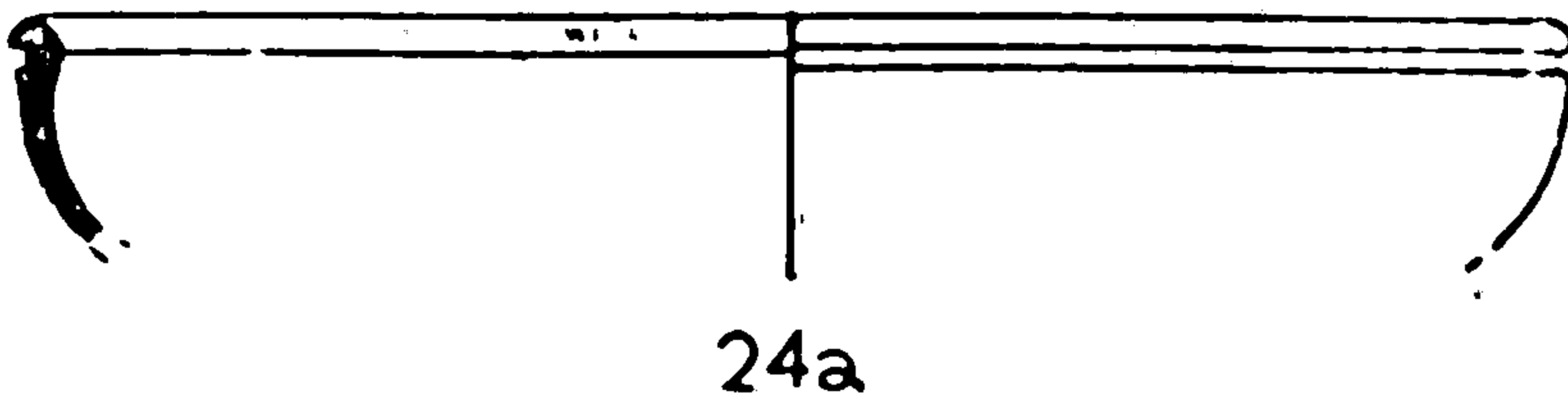
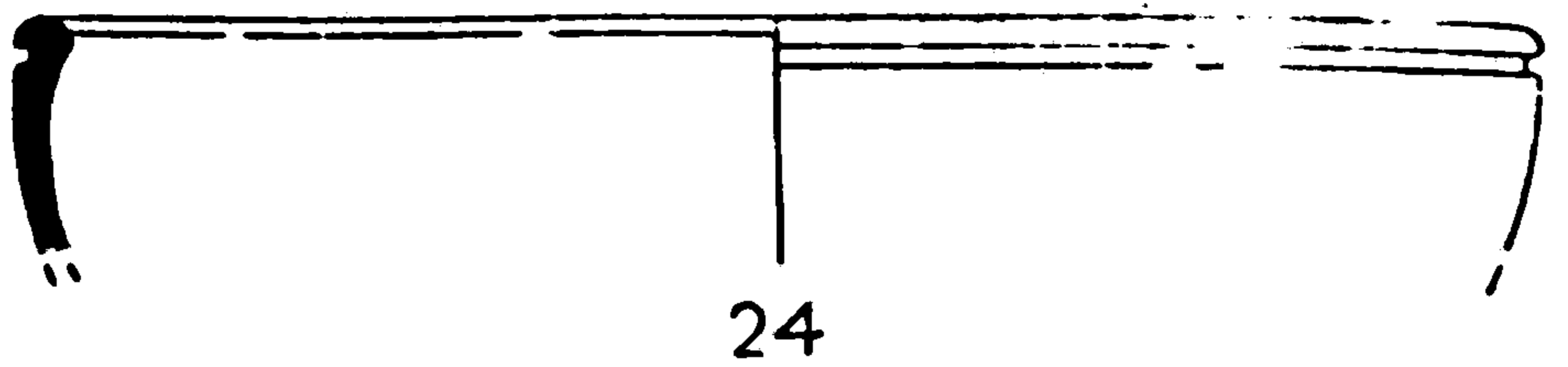
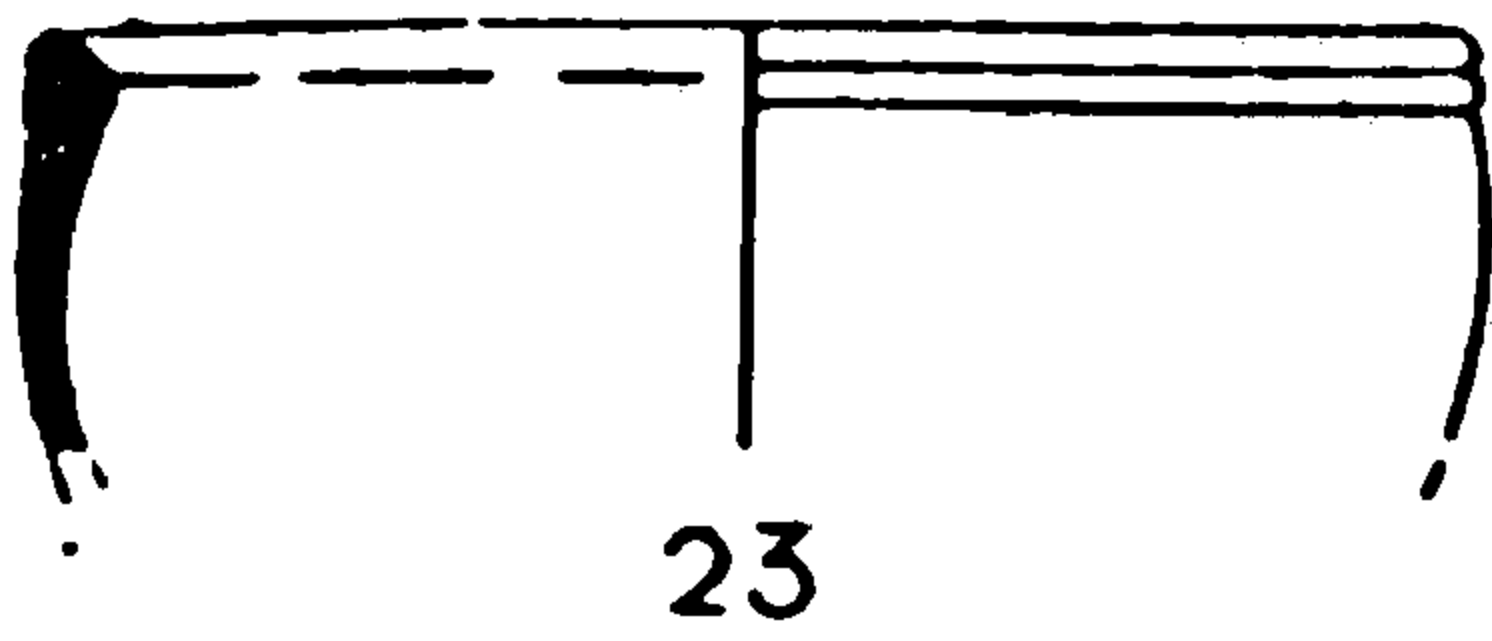
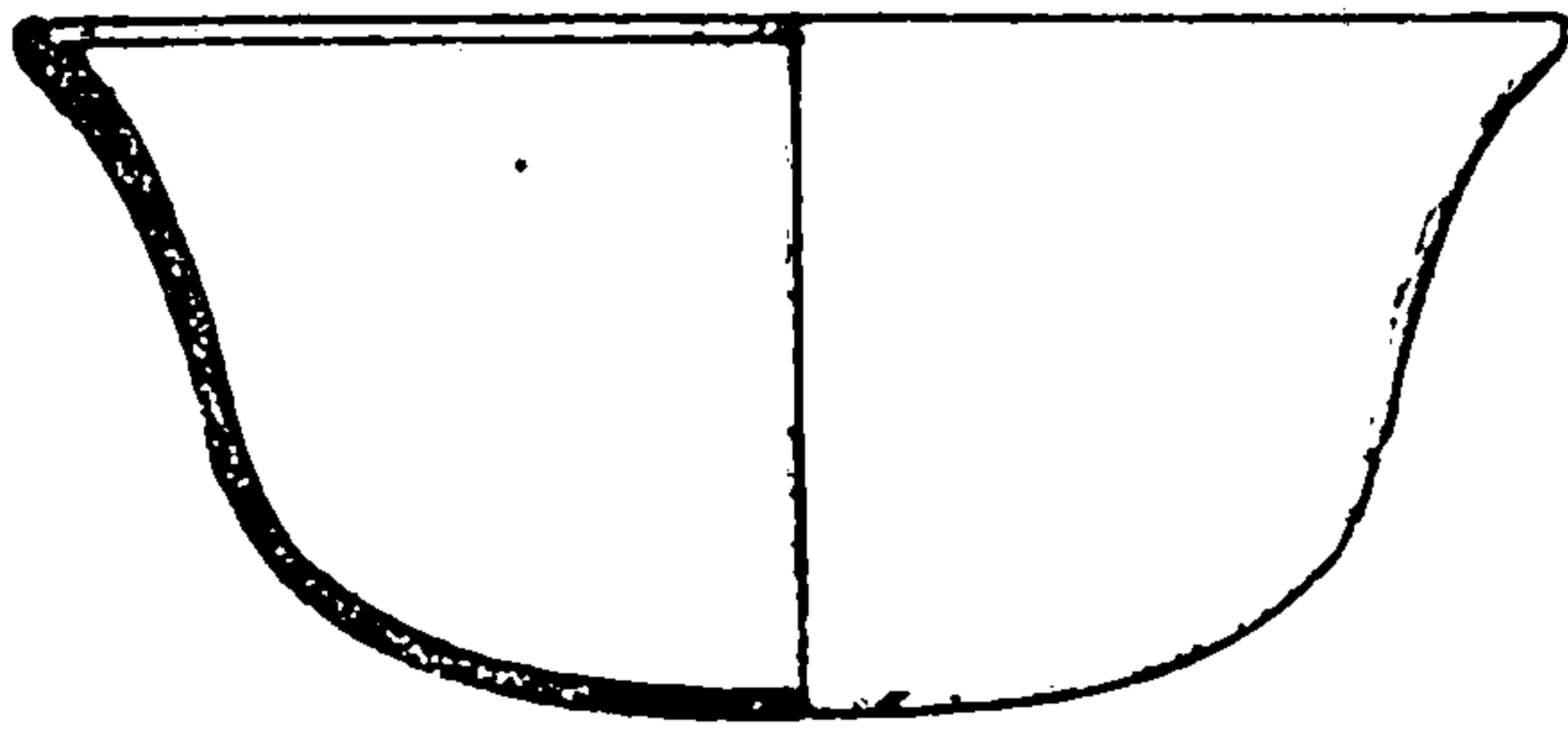
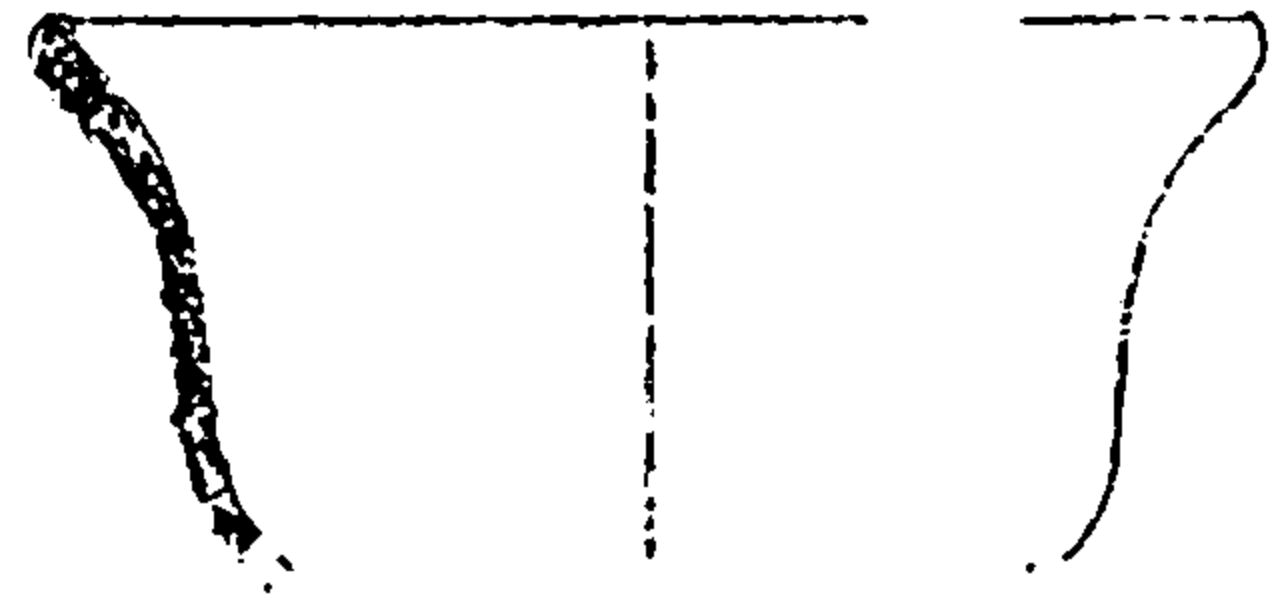


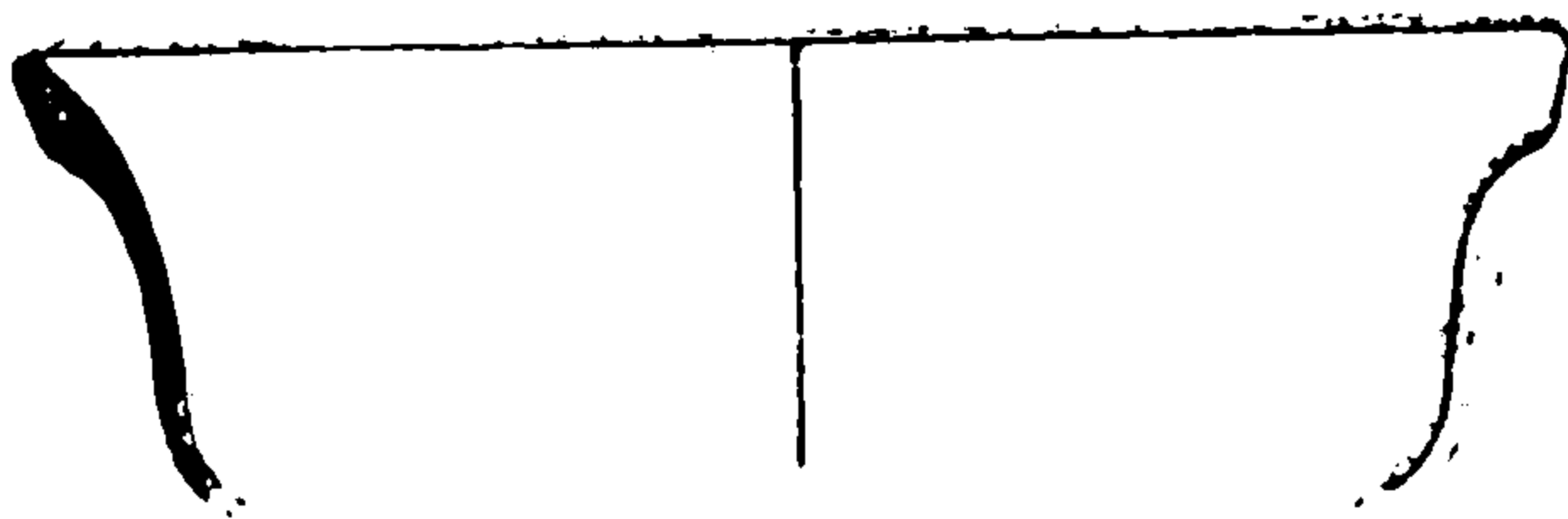
Fig. 59.—Pottery types: convex and shallow bowl.



27



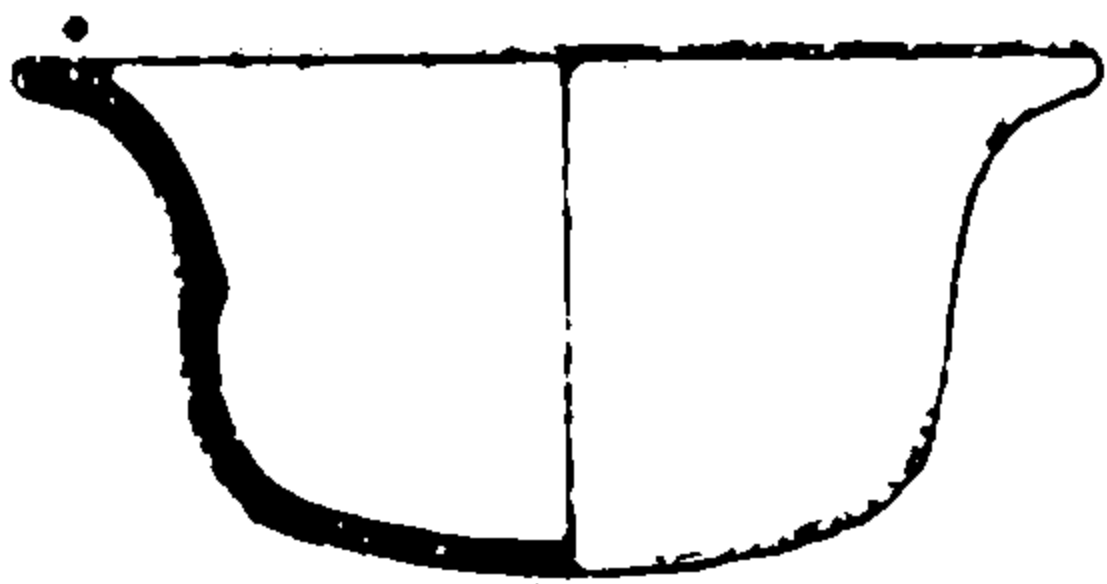
27d



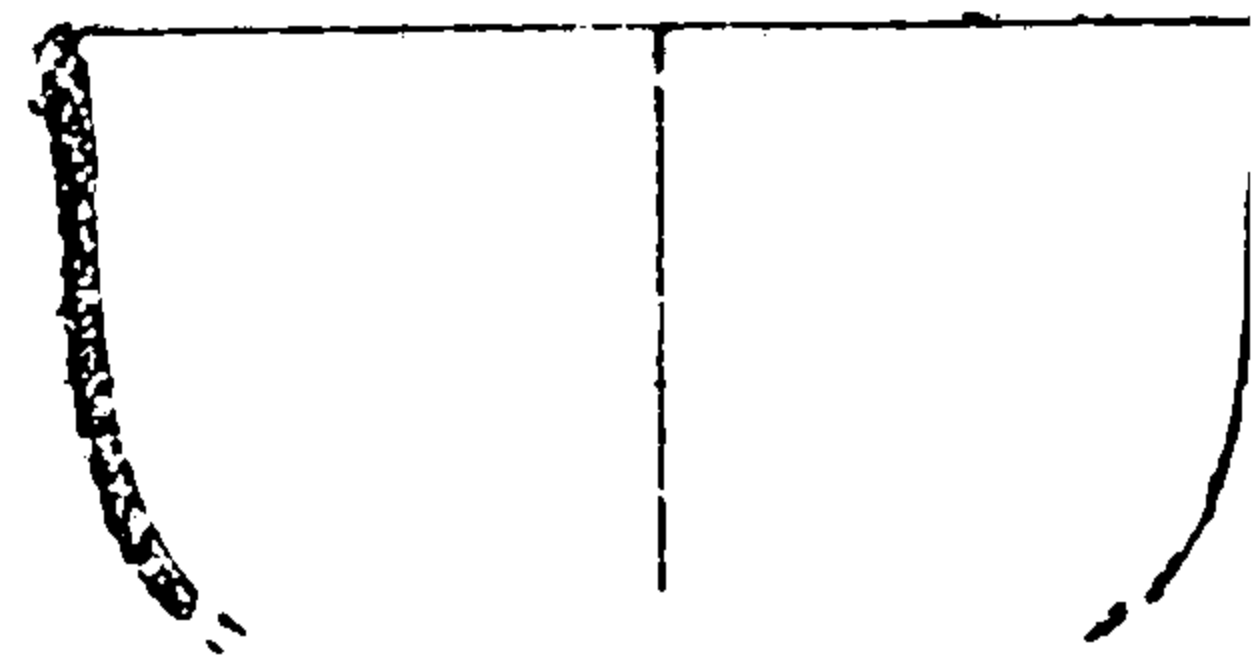
27a



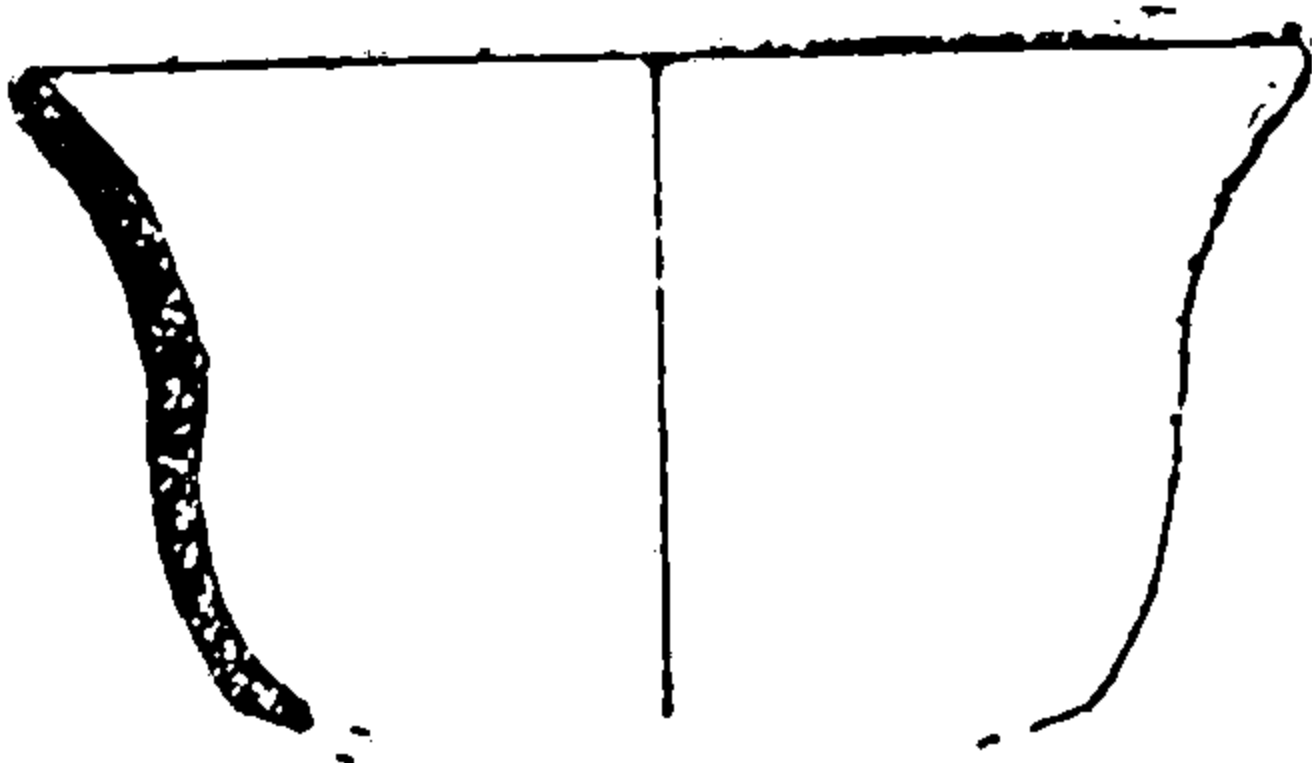
27e



27b



28



27c

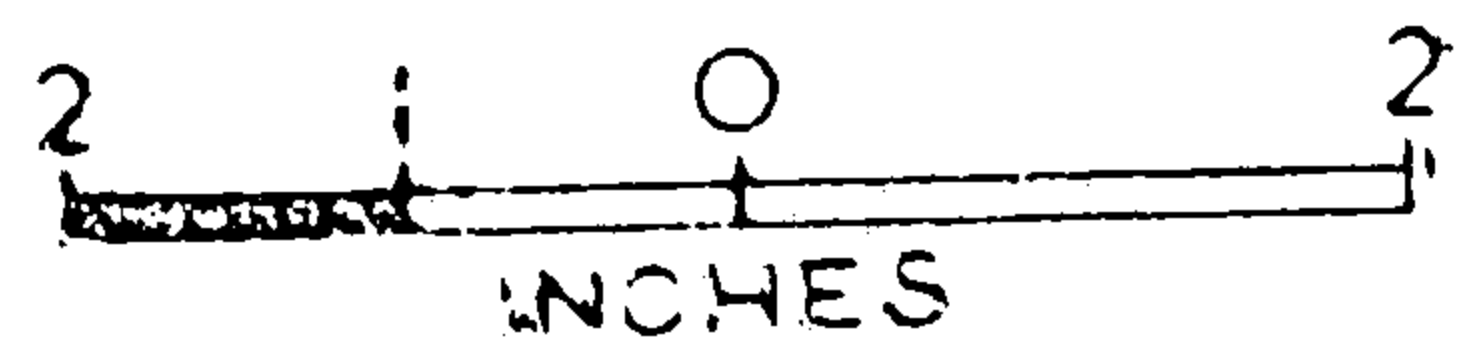


Fig 60 Pottery types: convex sided bowls with flaring rims

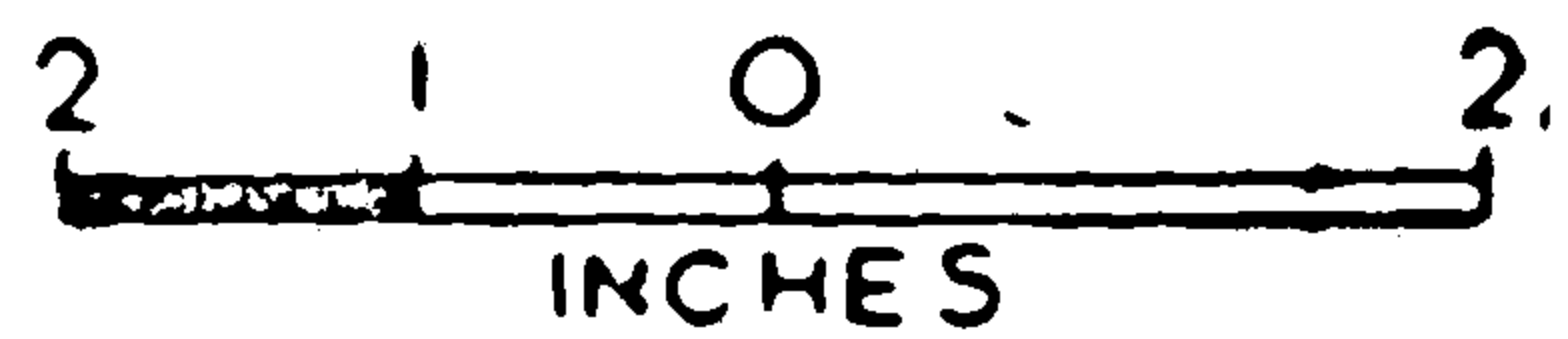
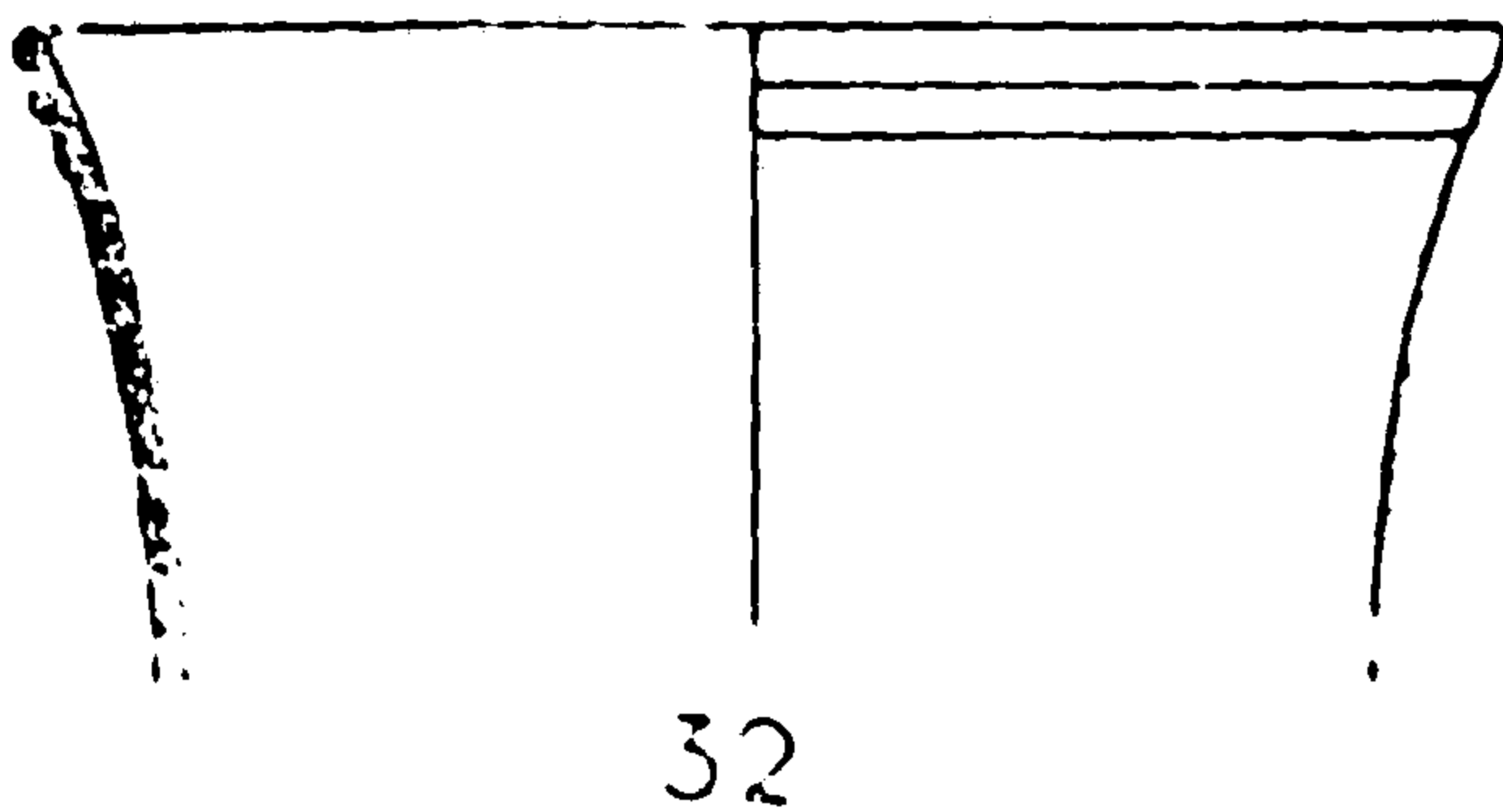
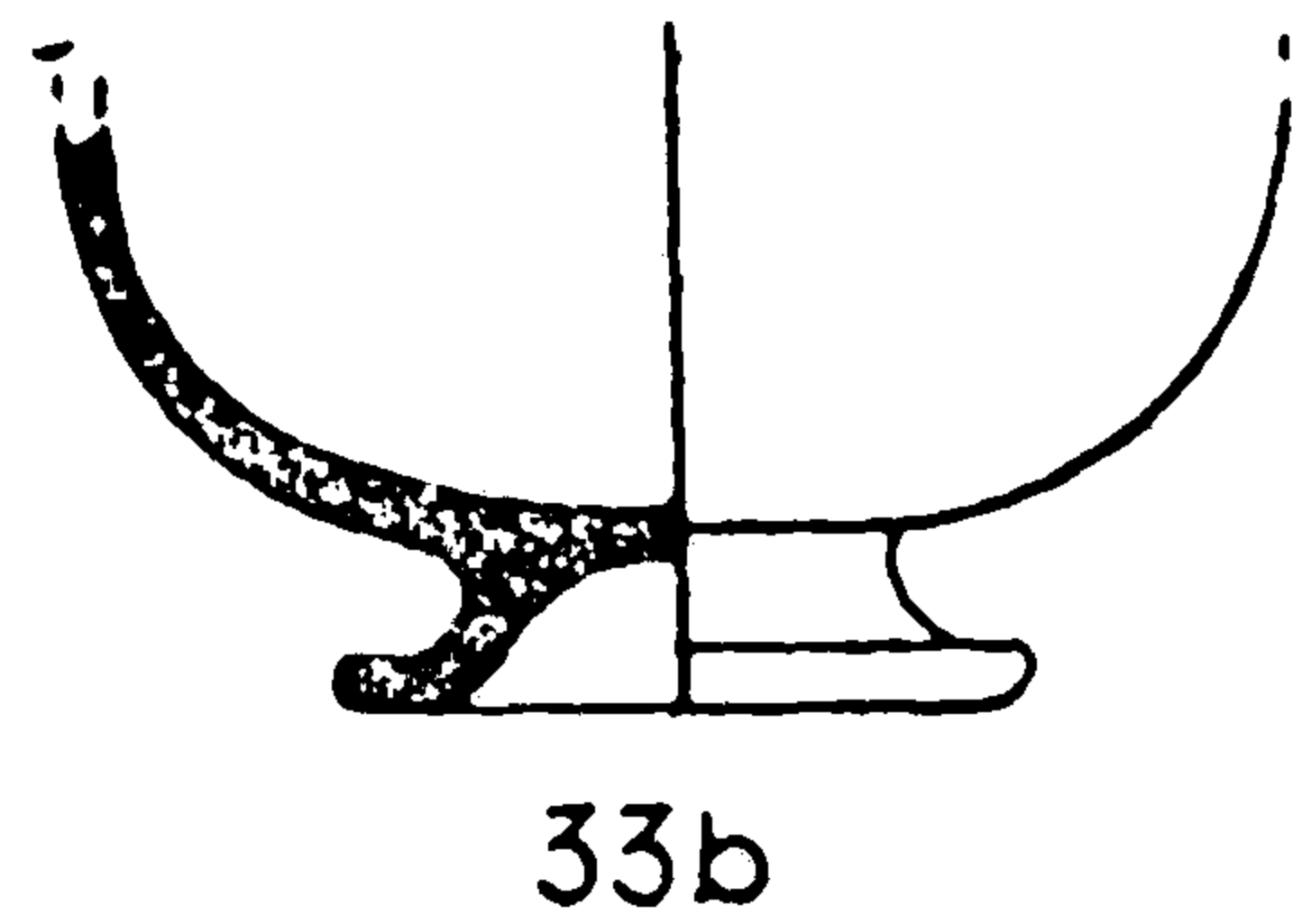
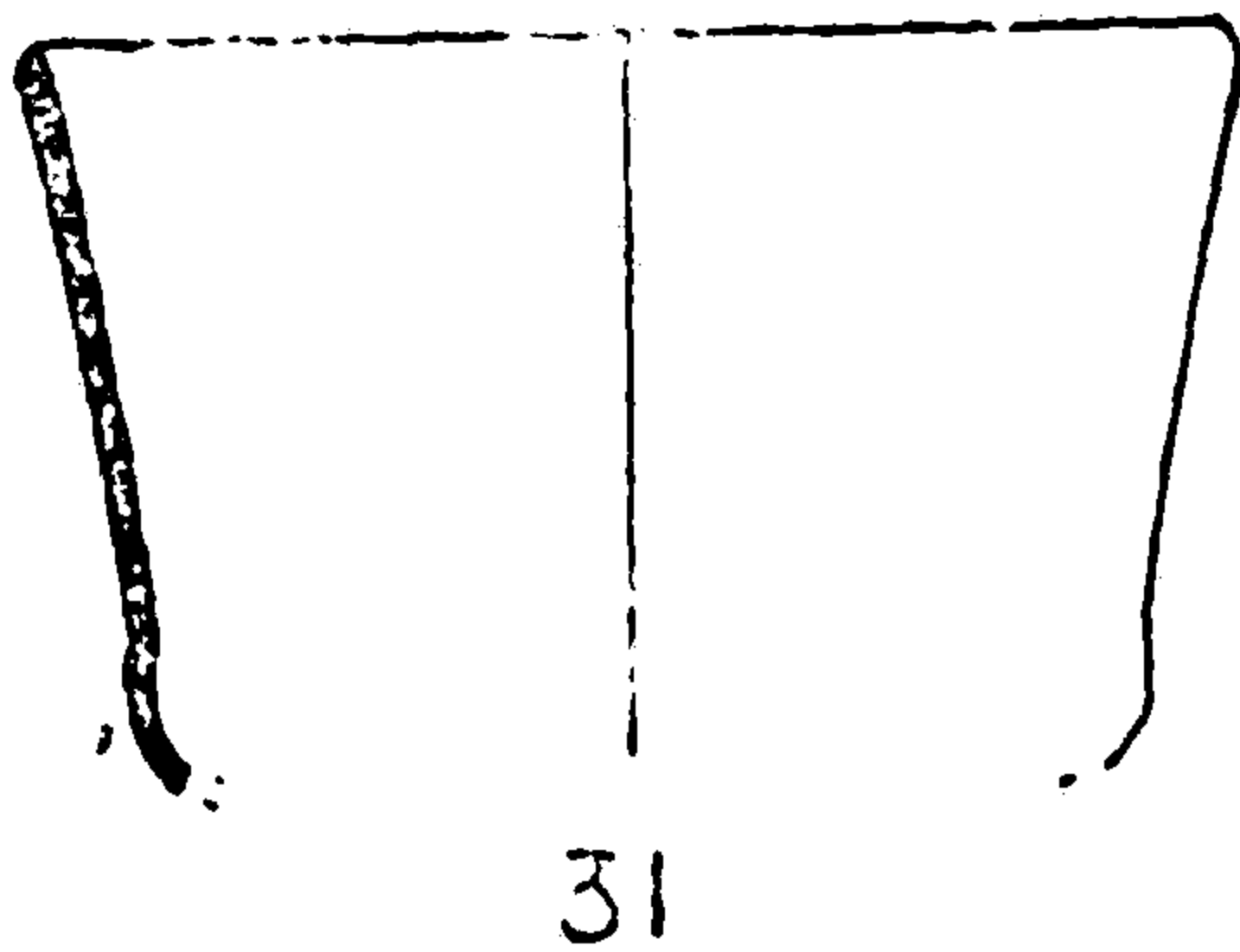
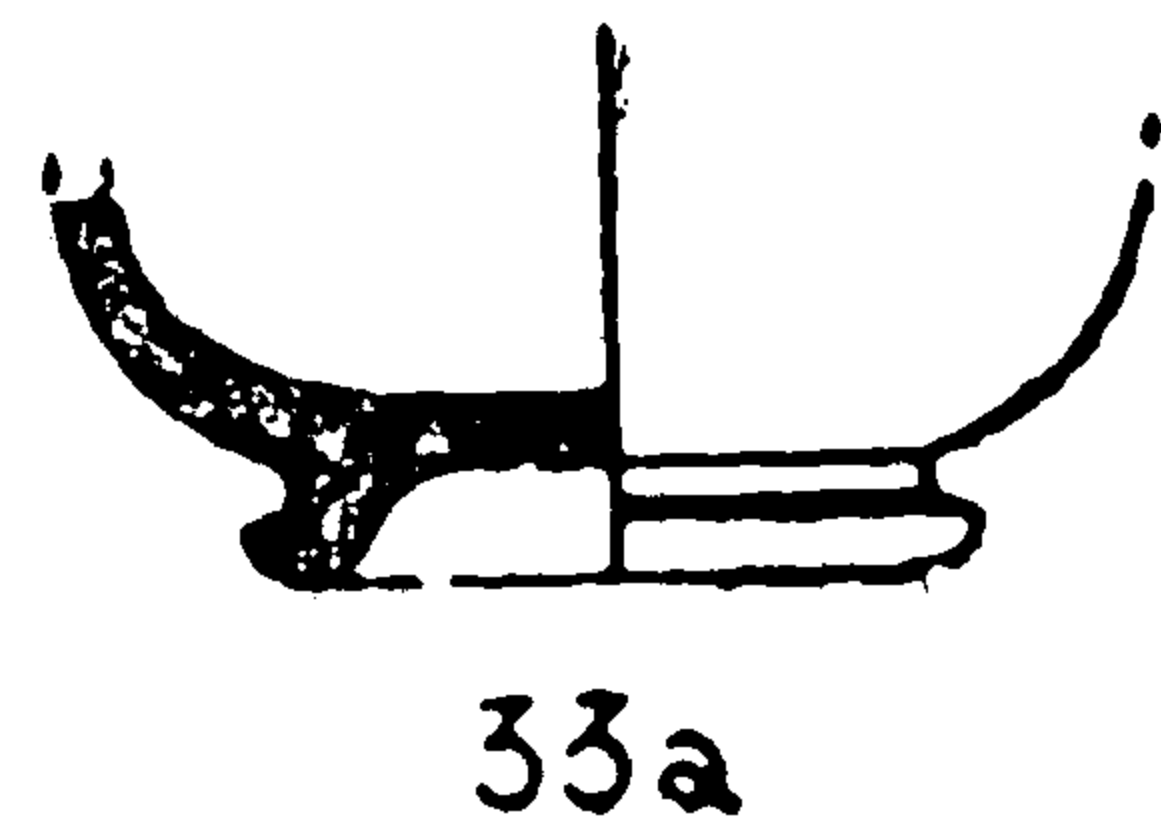
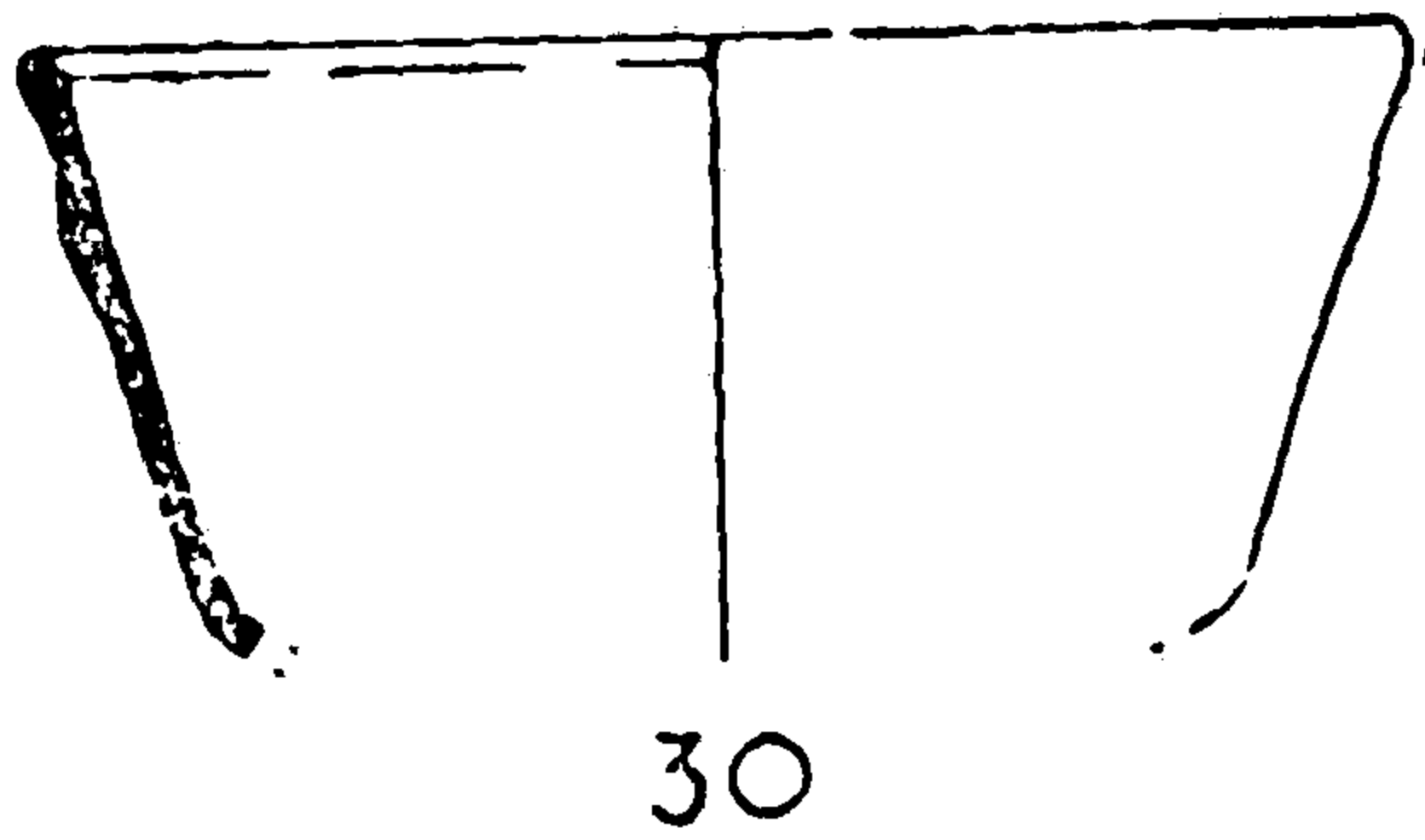
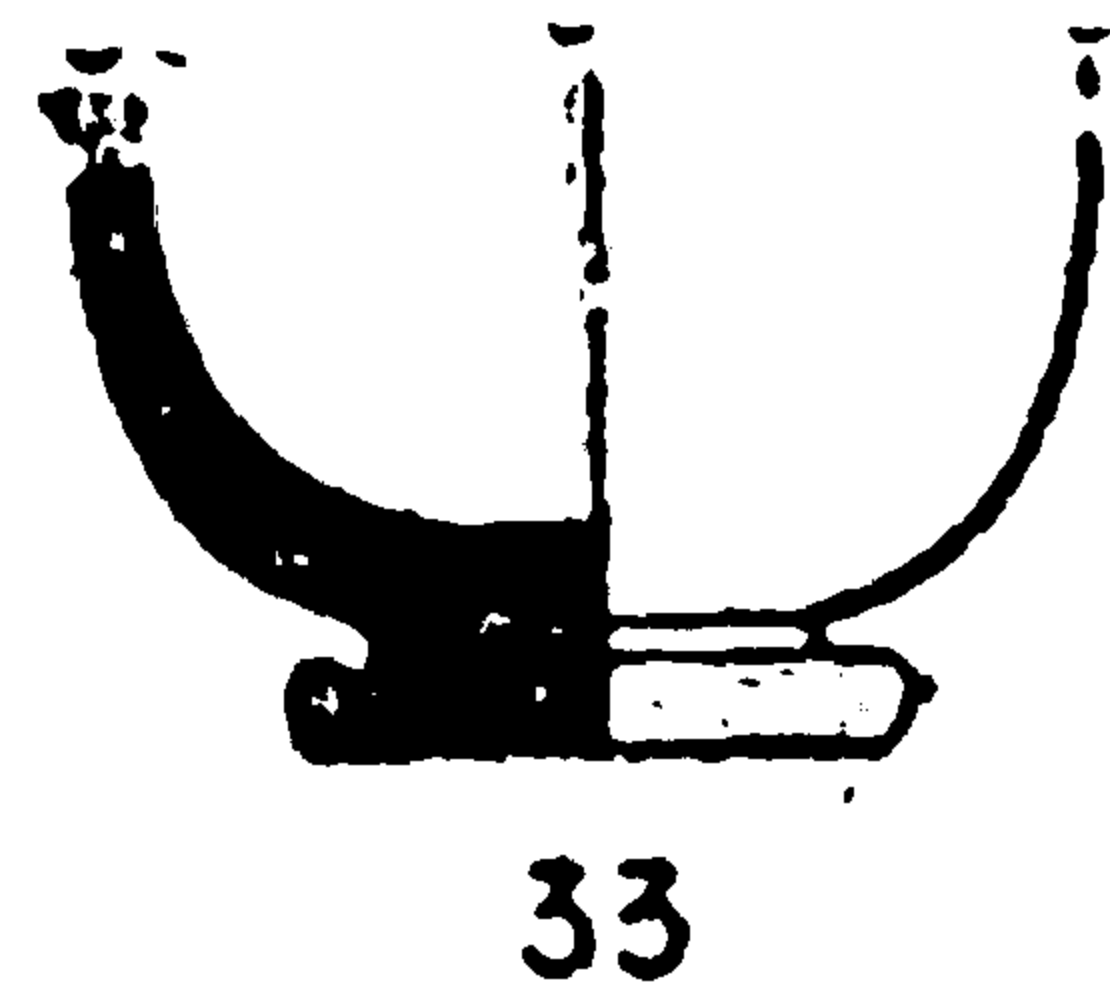
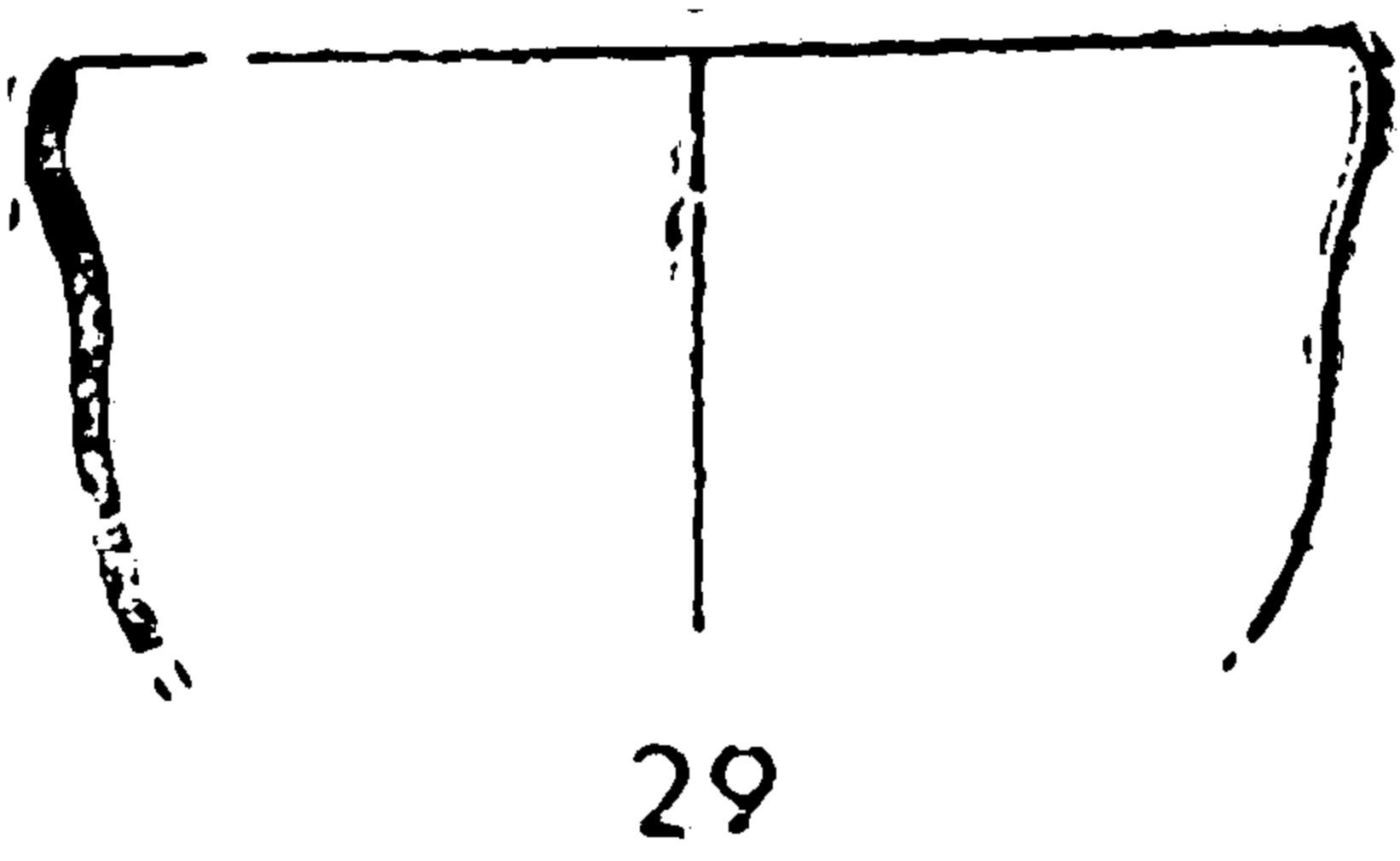


Fig. 61.—Pottery types: convex and concave sided bowls; pedestal bowls

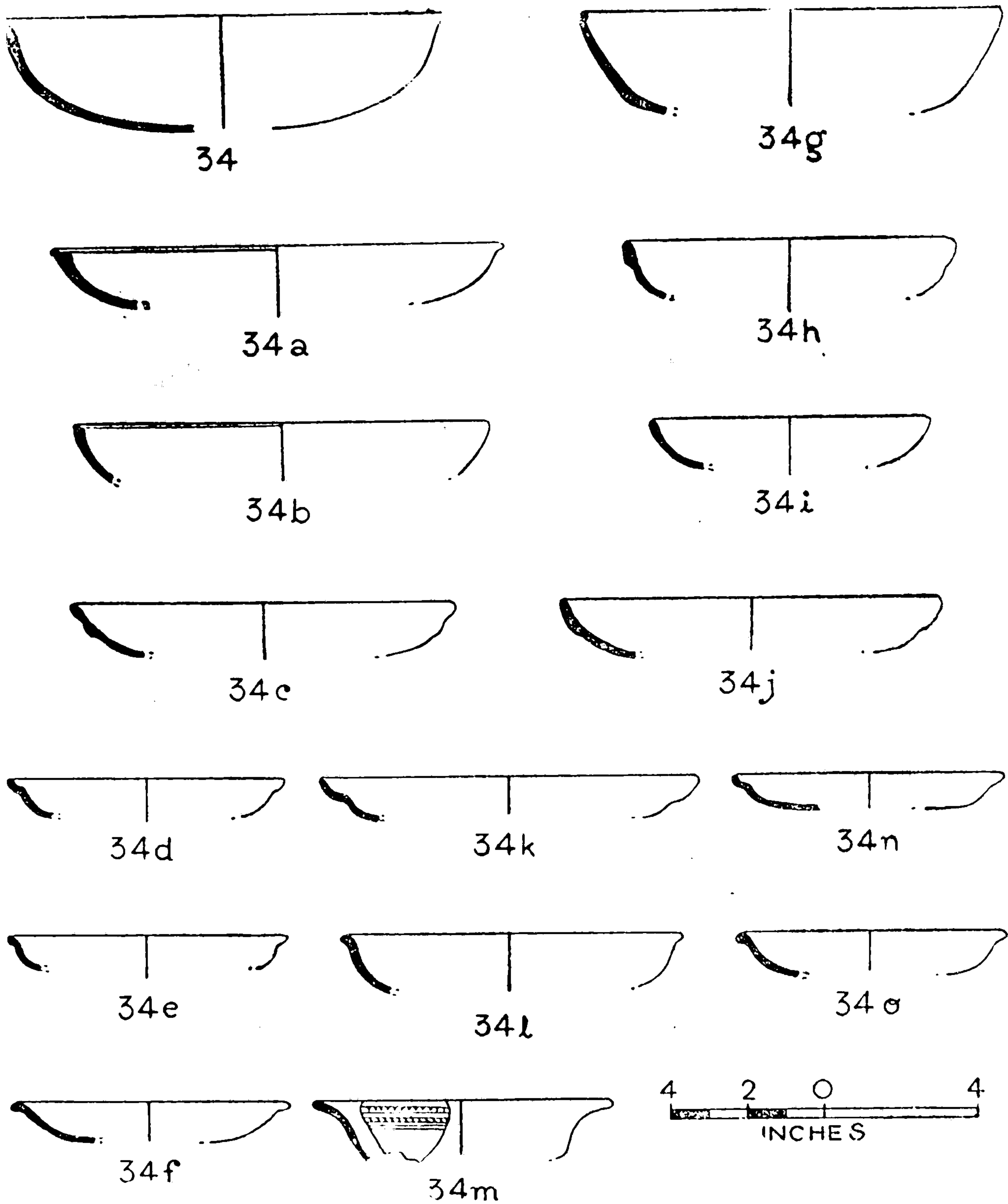
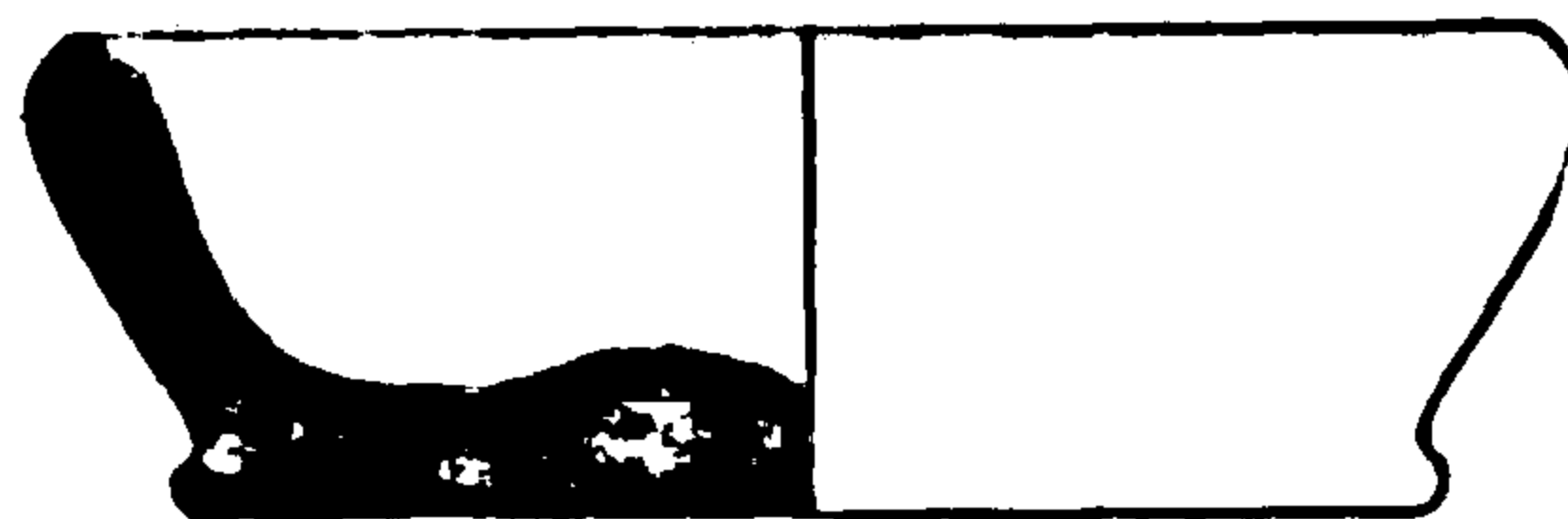


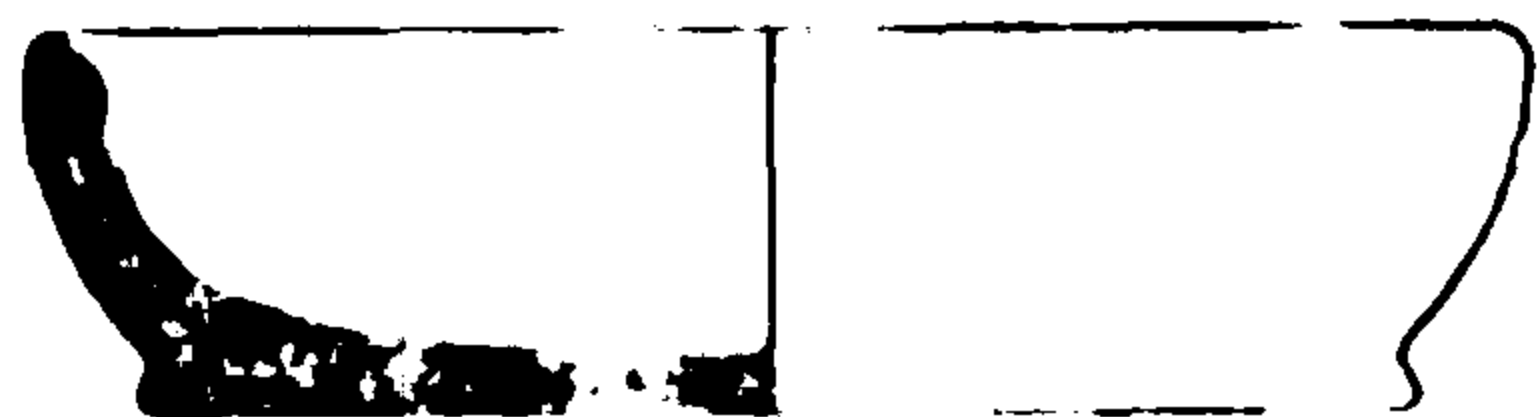
Fig. 62.—Pottery types: shallow bowls.



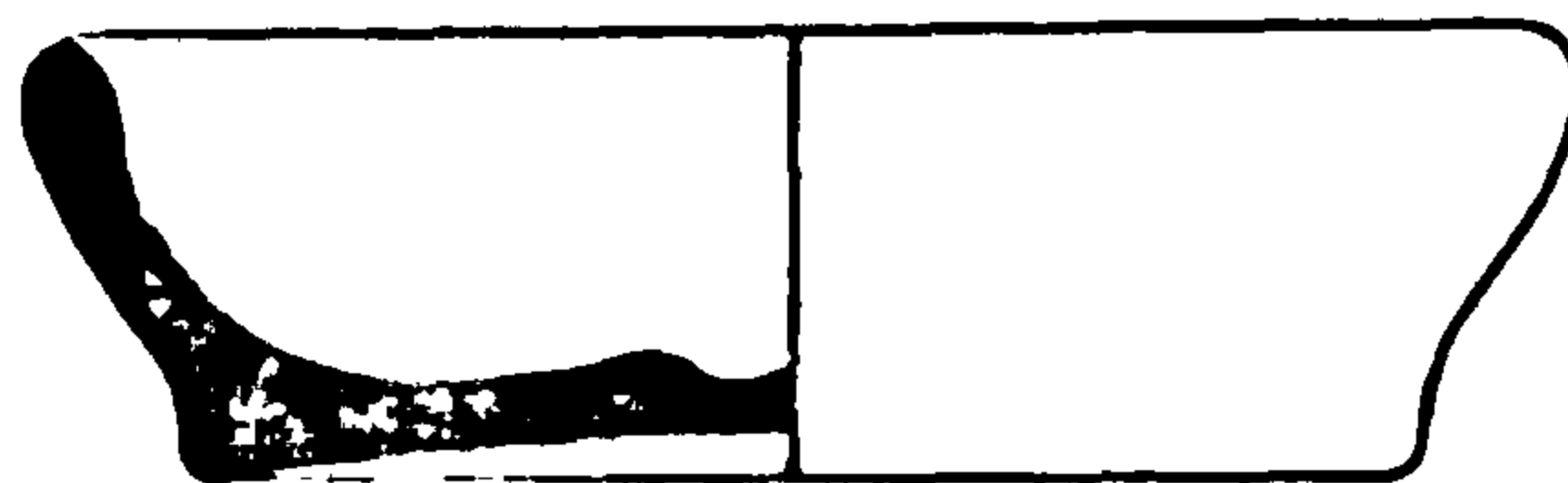
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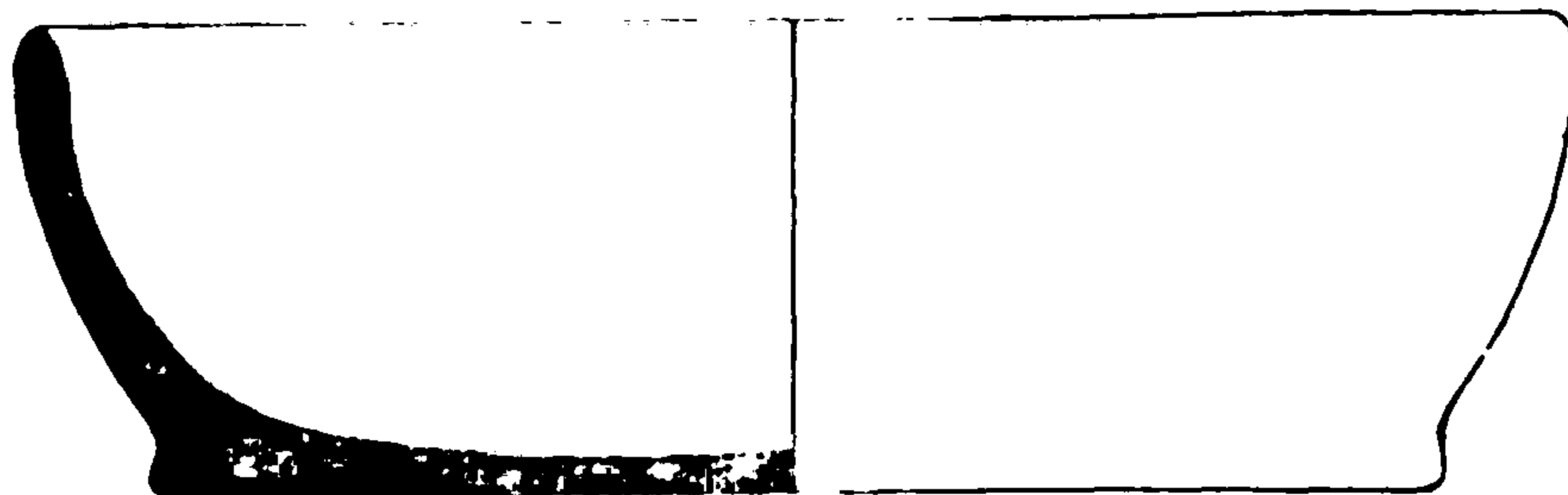
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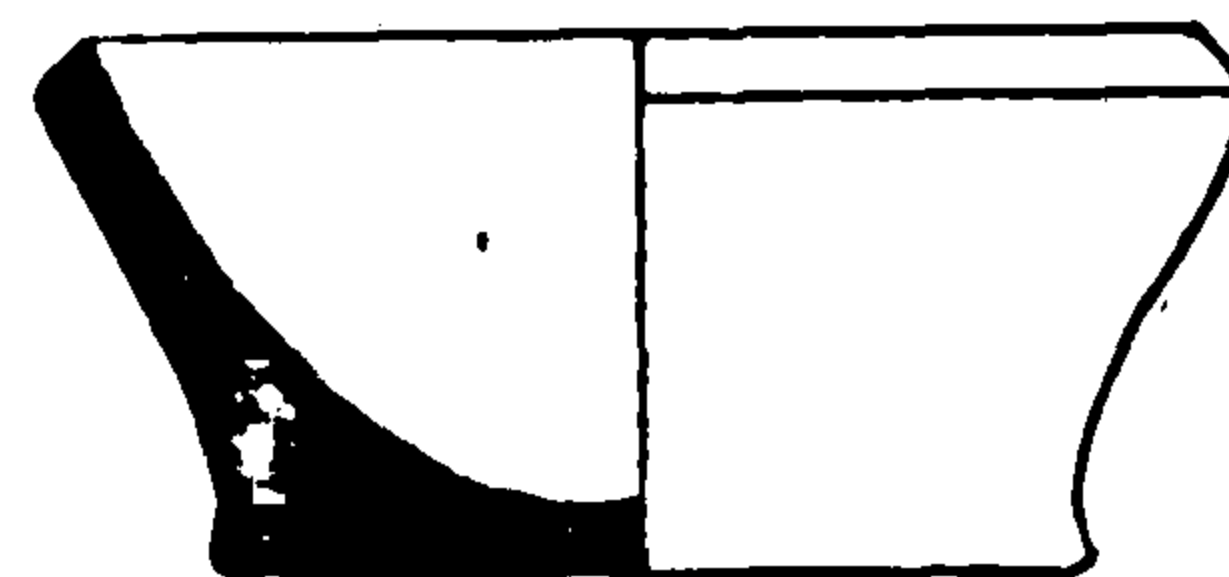
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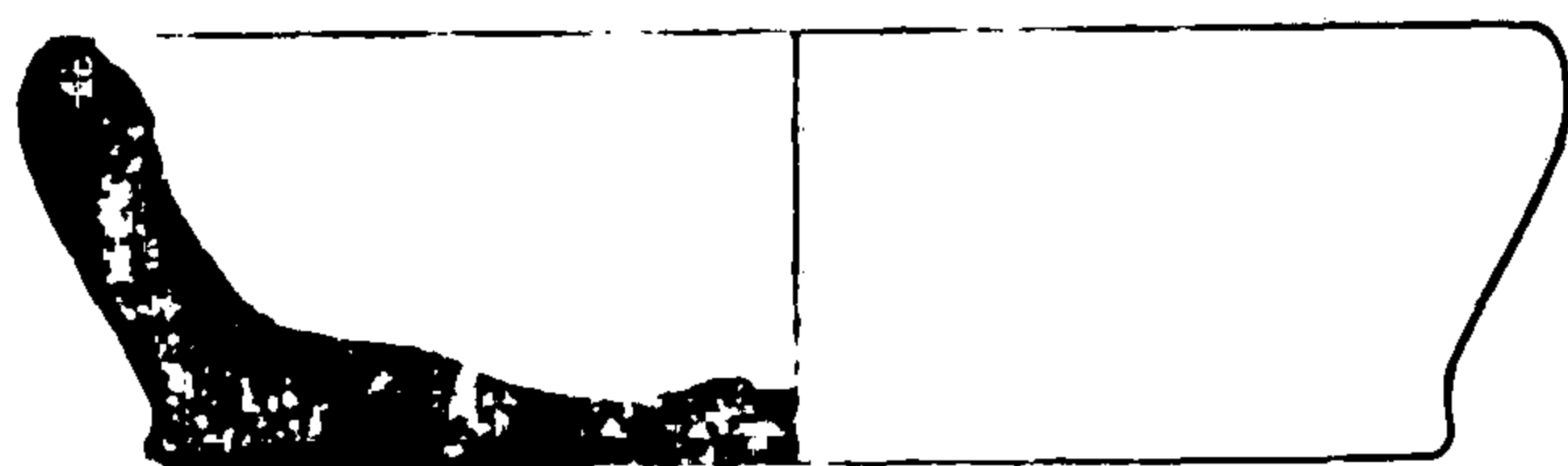
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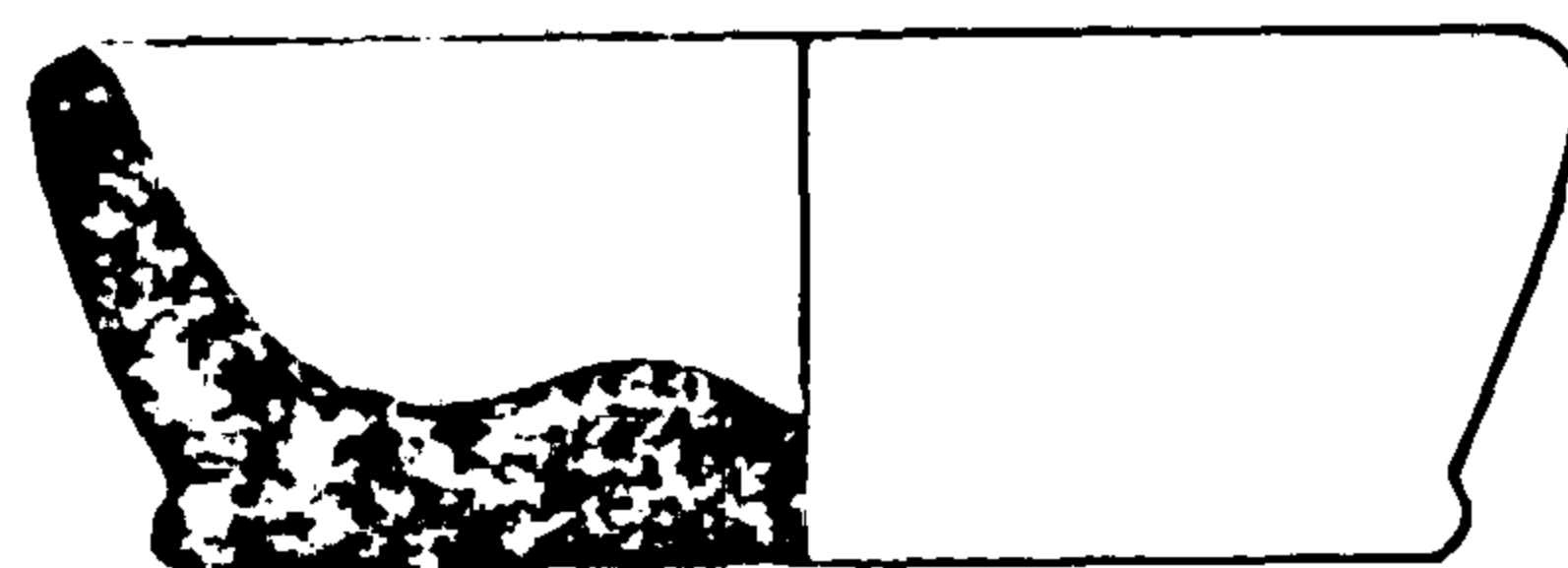
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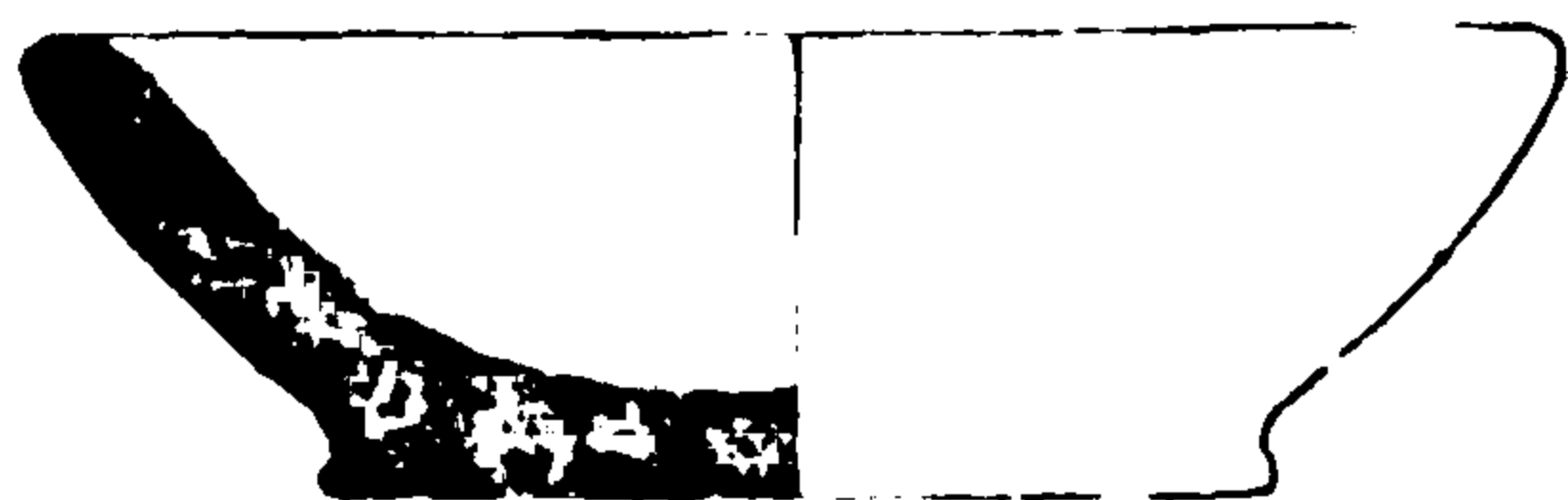
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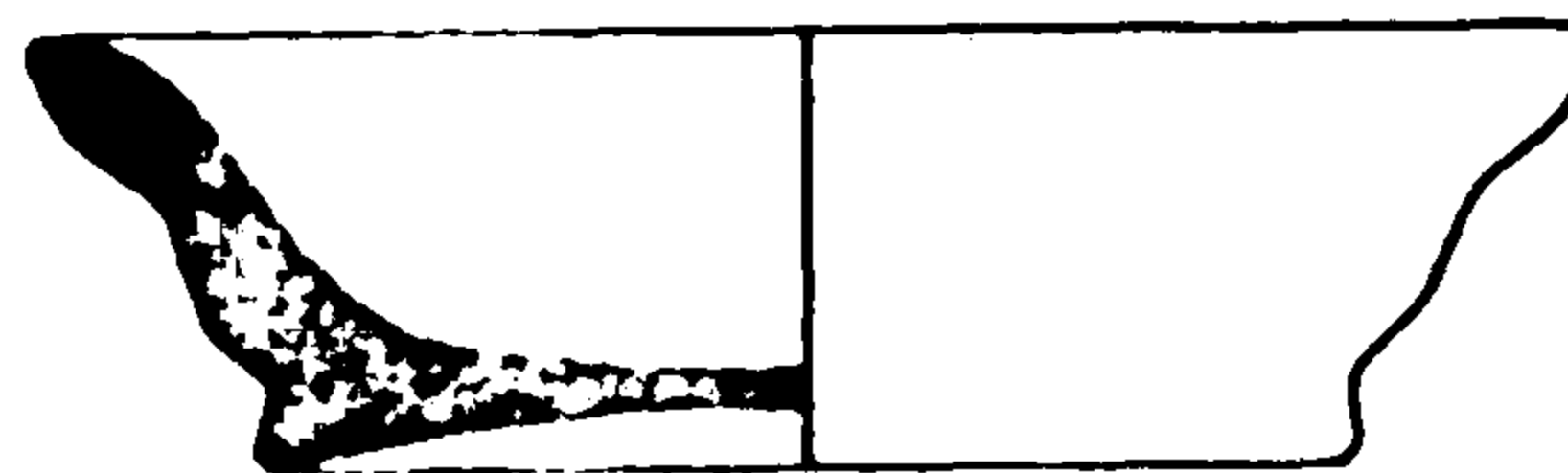
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35h



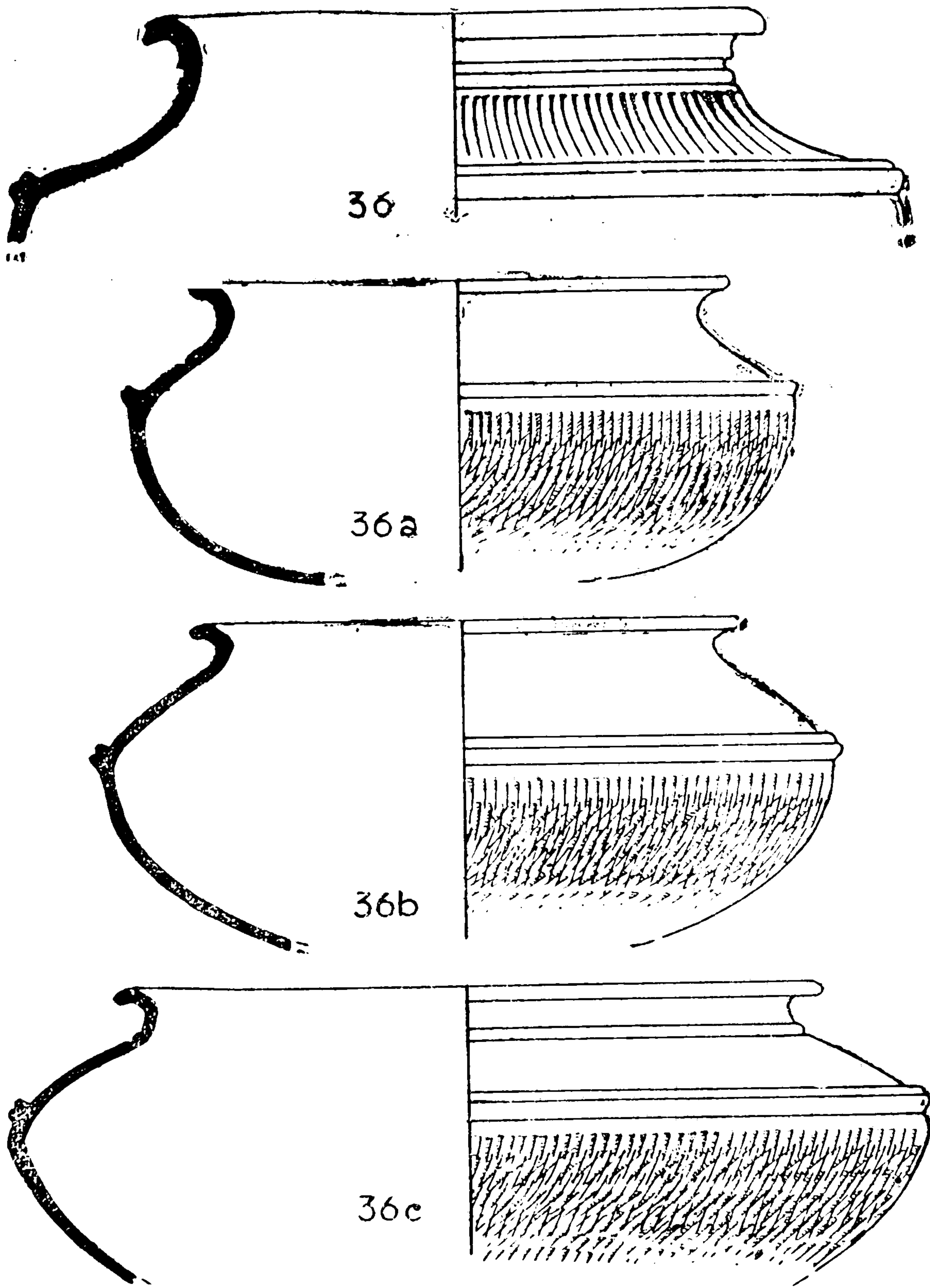
35d



35i



Fig. 63.—Pottery types: lamps or shallow cups.



2 1 0 2 INCHES

Fig. 64. Pottery types: cooking vessels.

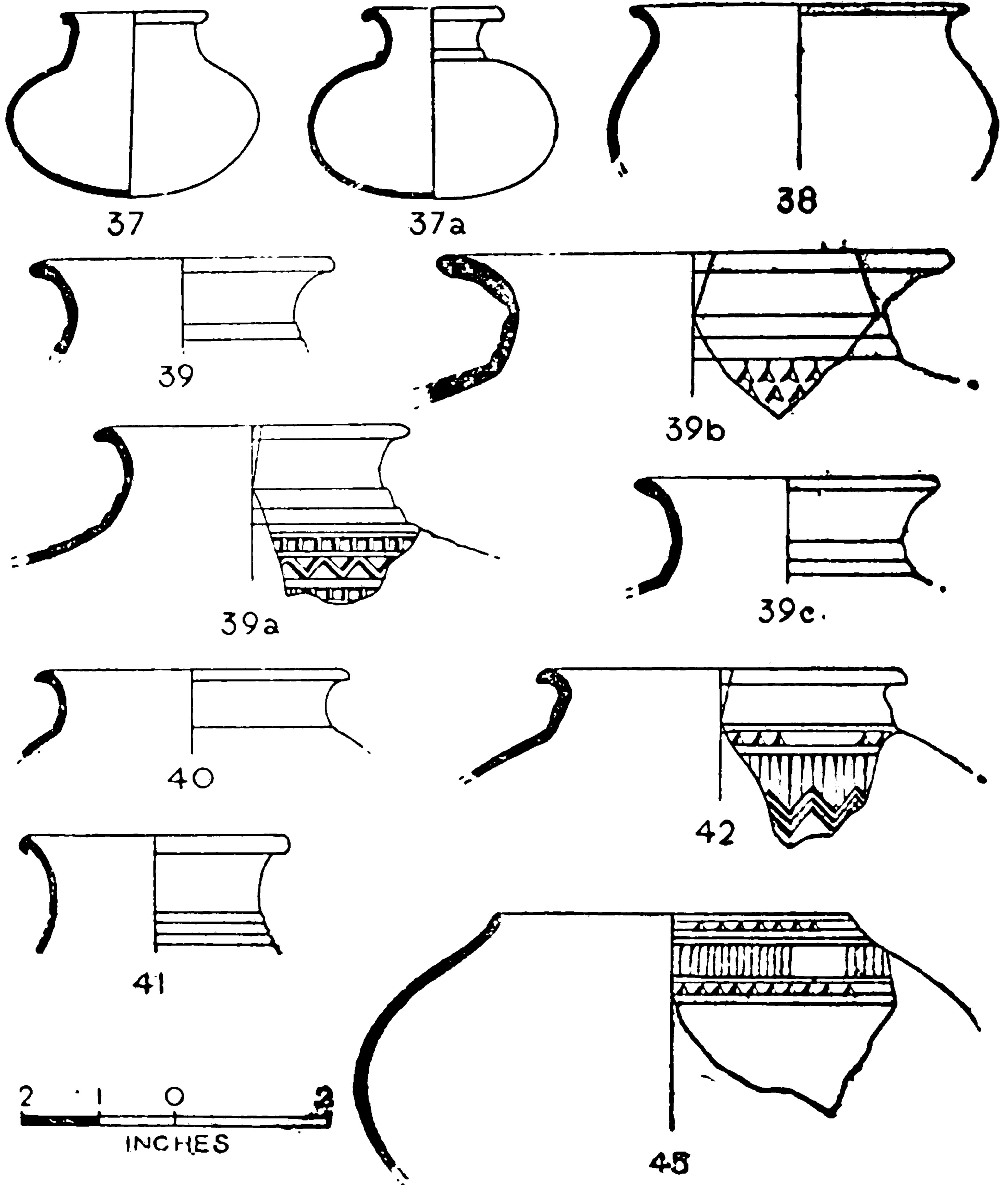


Fig. 65.—Miniature pots.

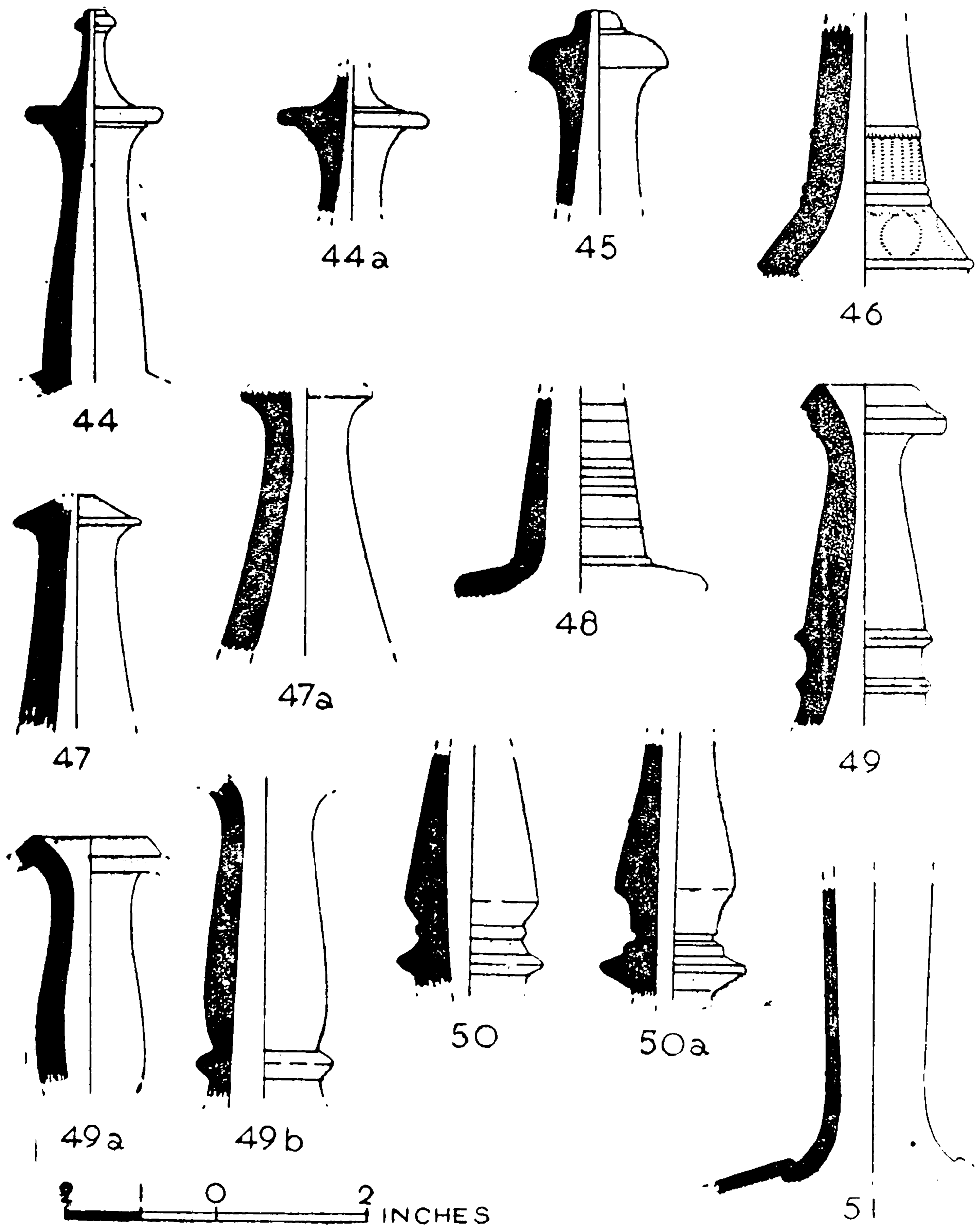


Fig. 66.--Long bottle necks (of sprinkler vessels).

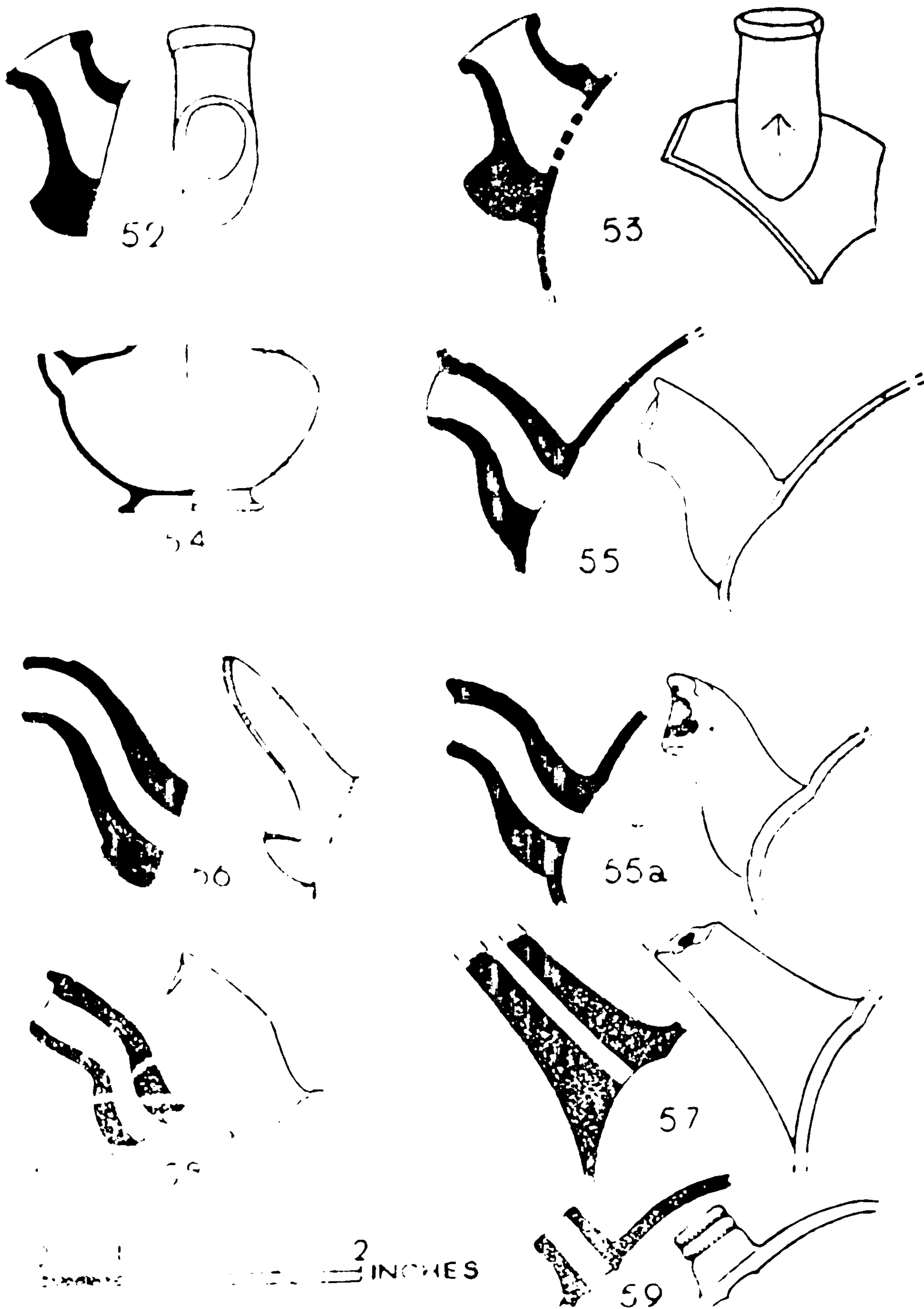


Fig. 67.—Spouts and spouted pot.

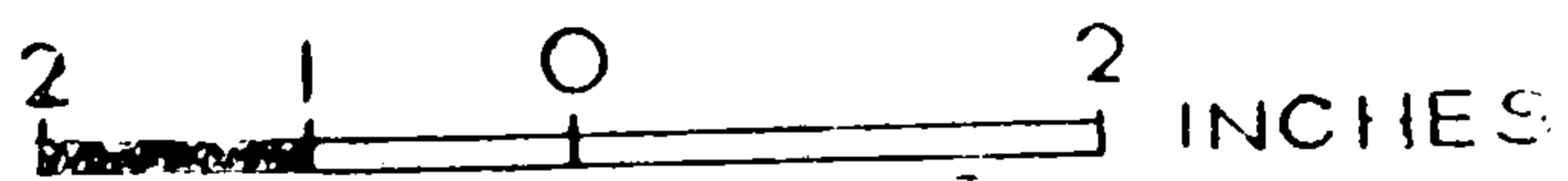
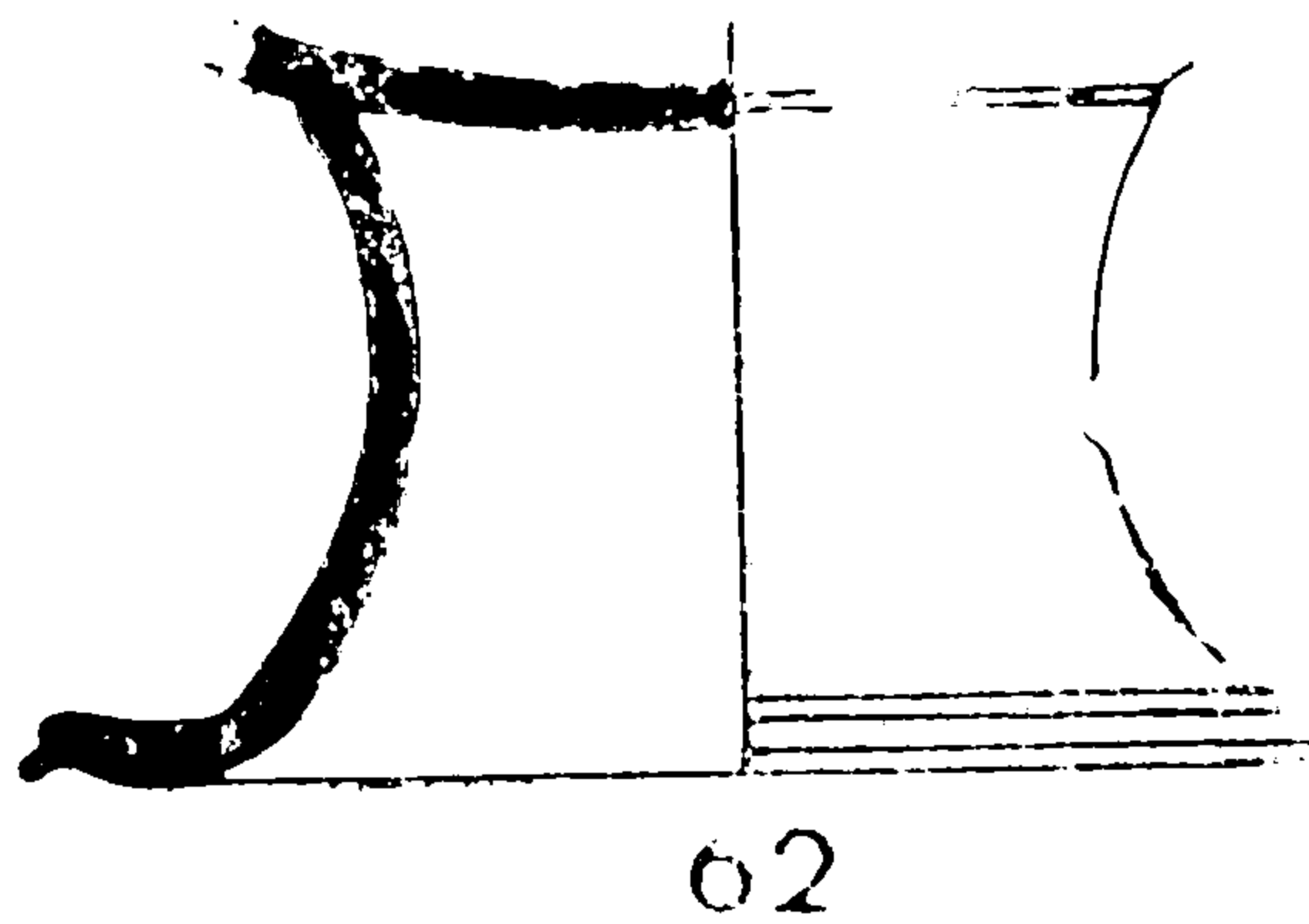
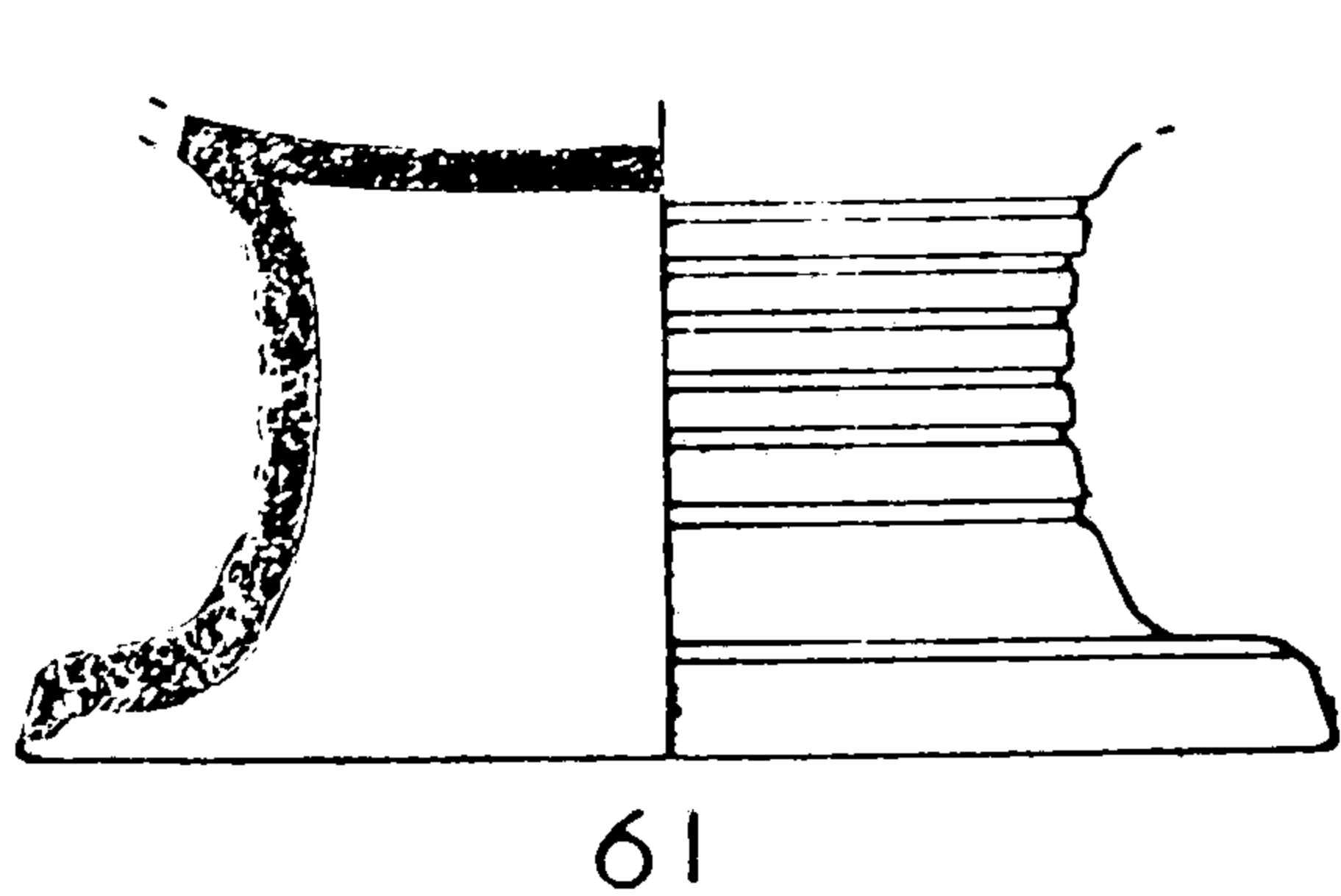
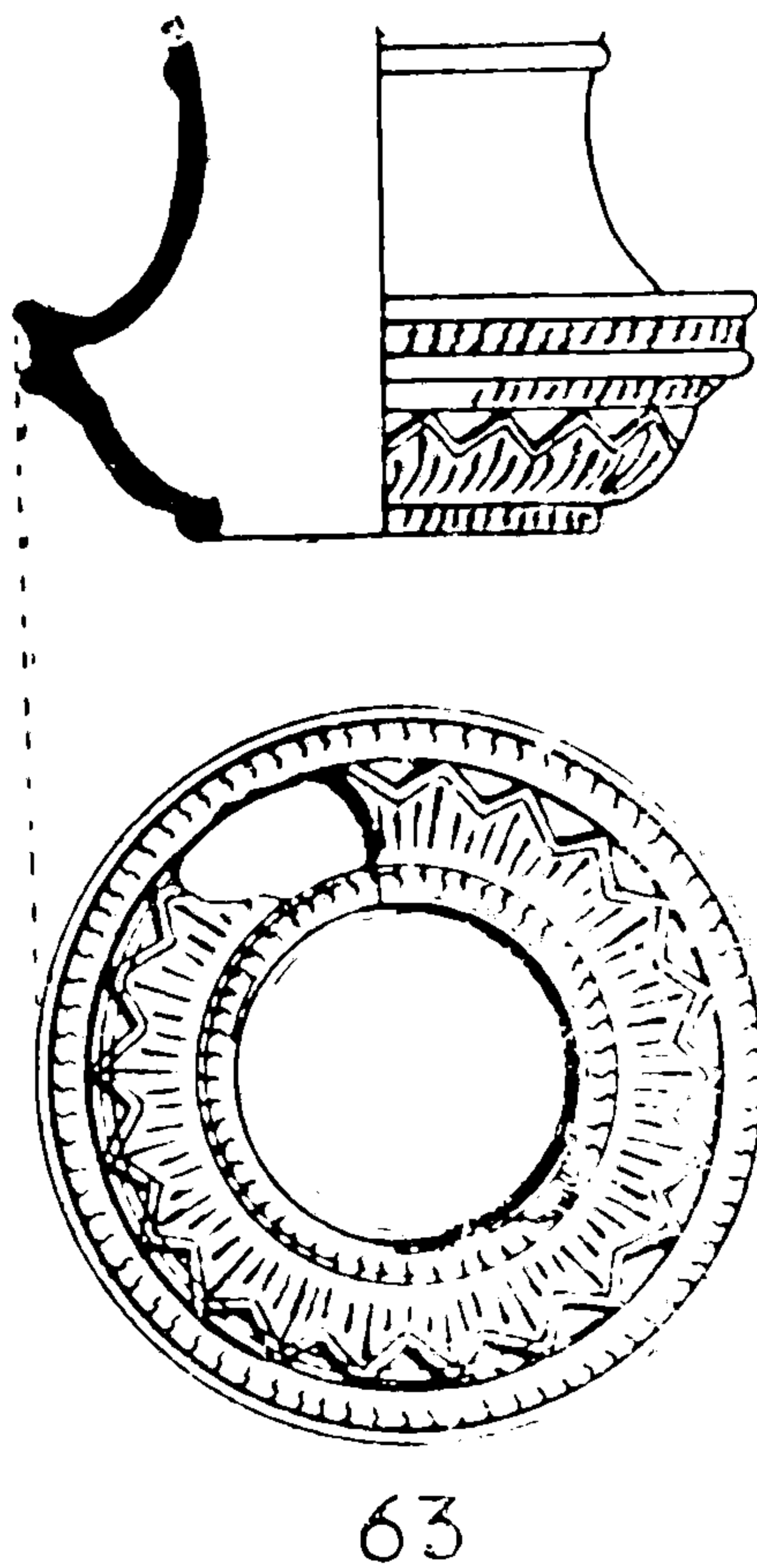
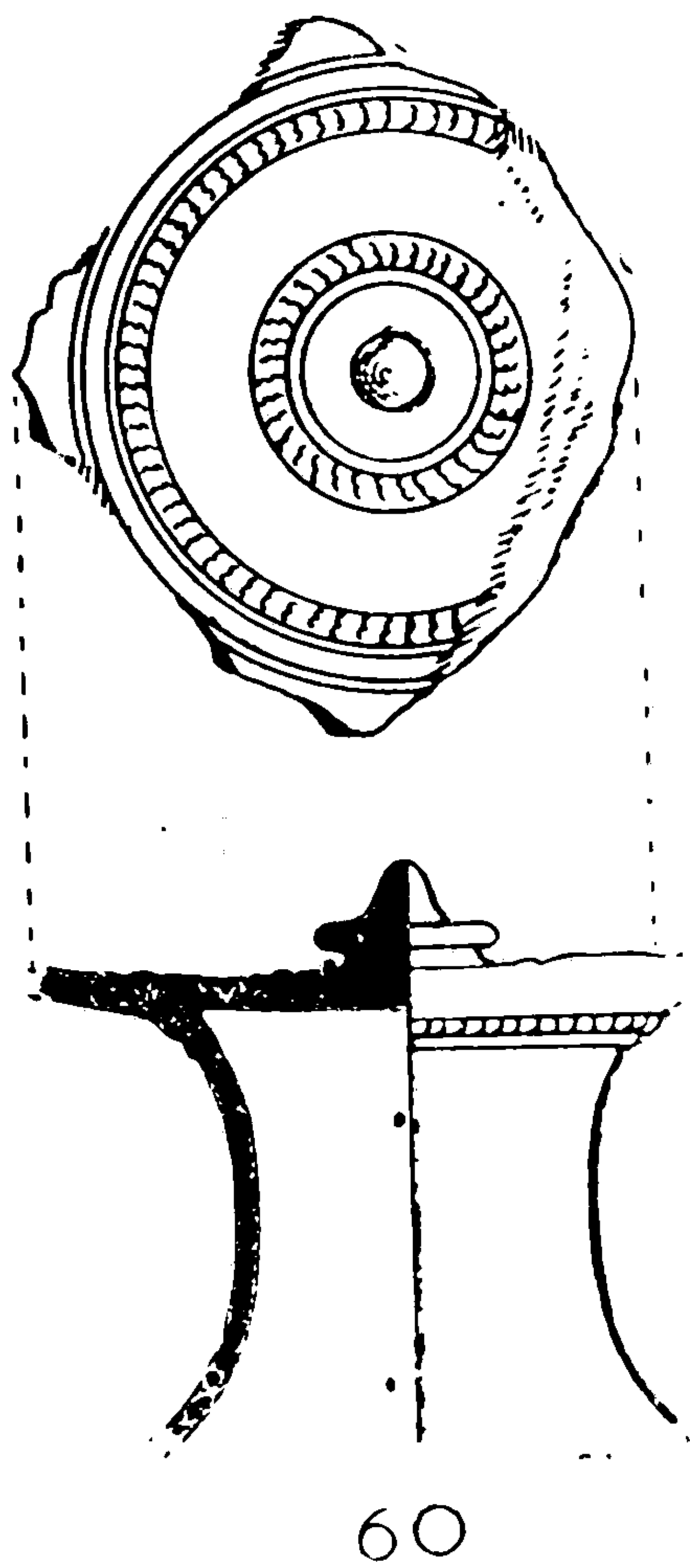
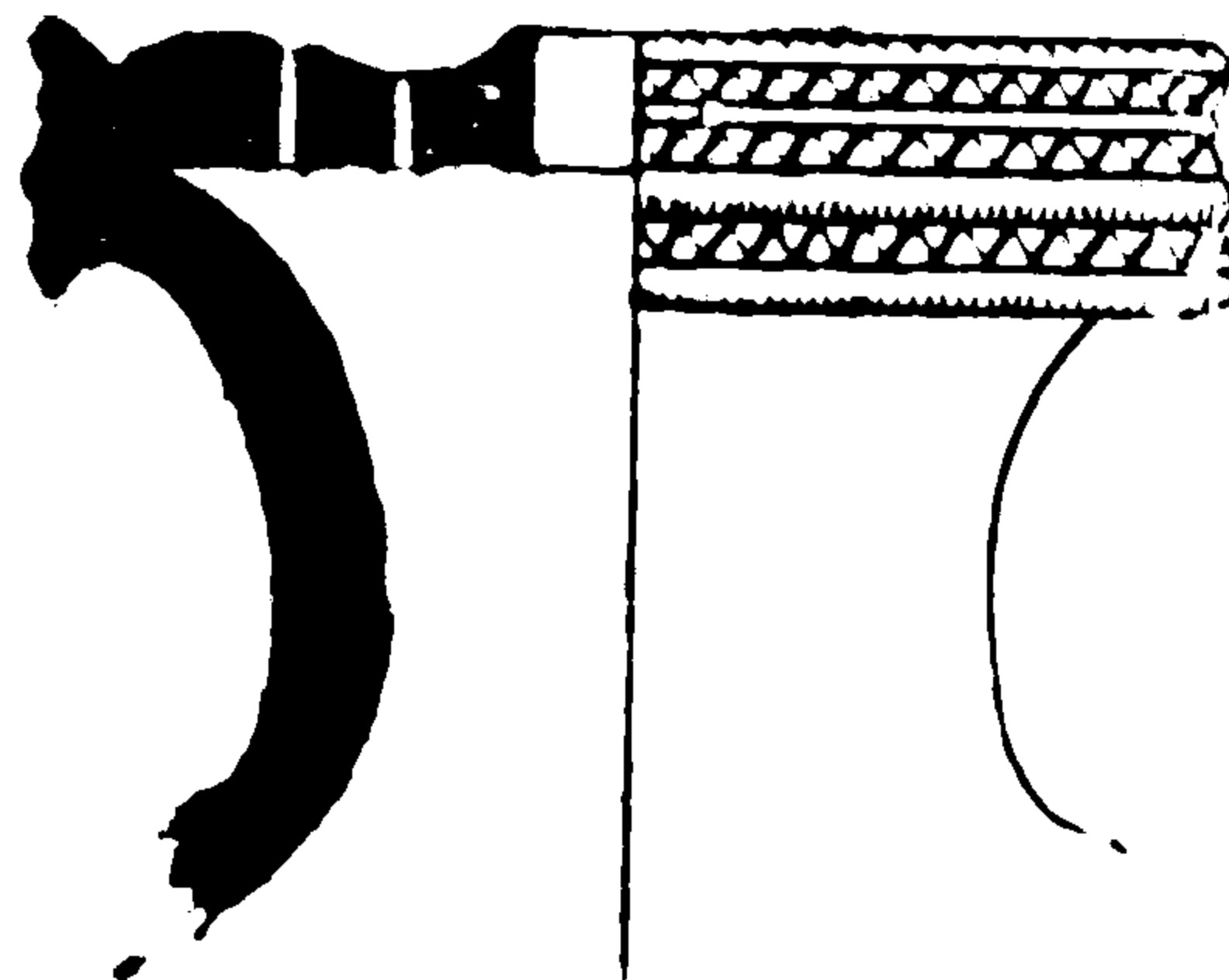
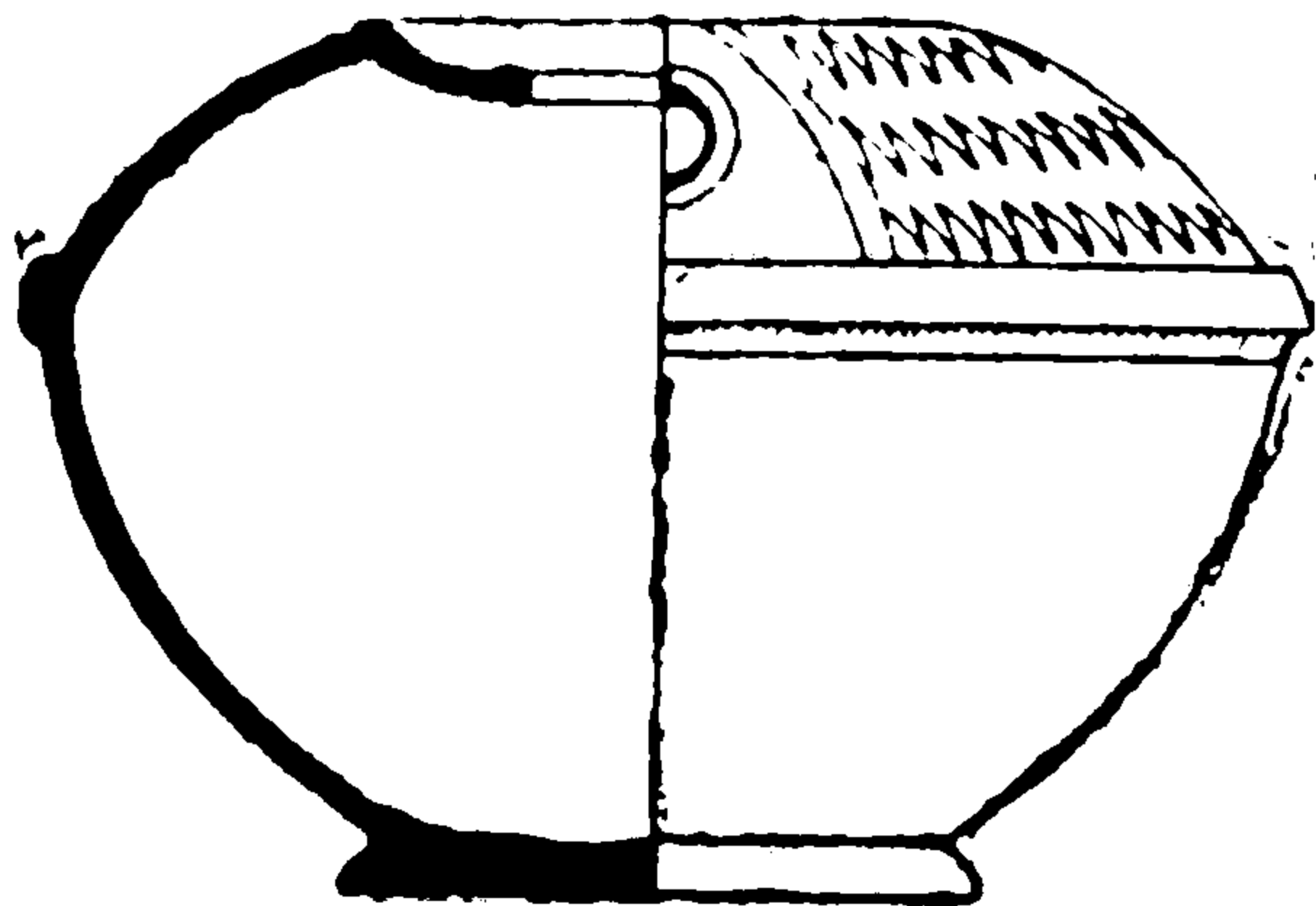
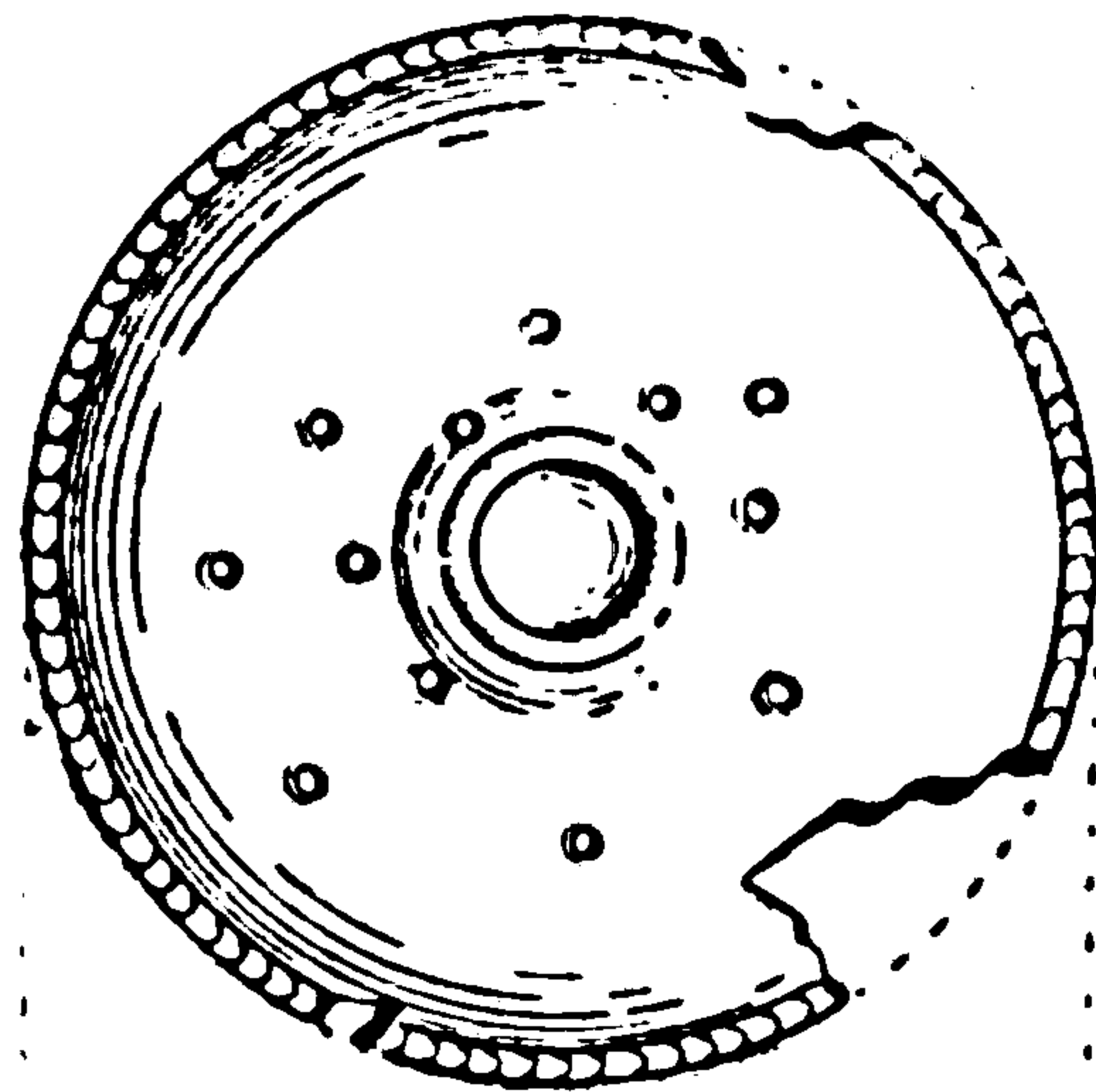
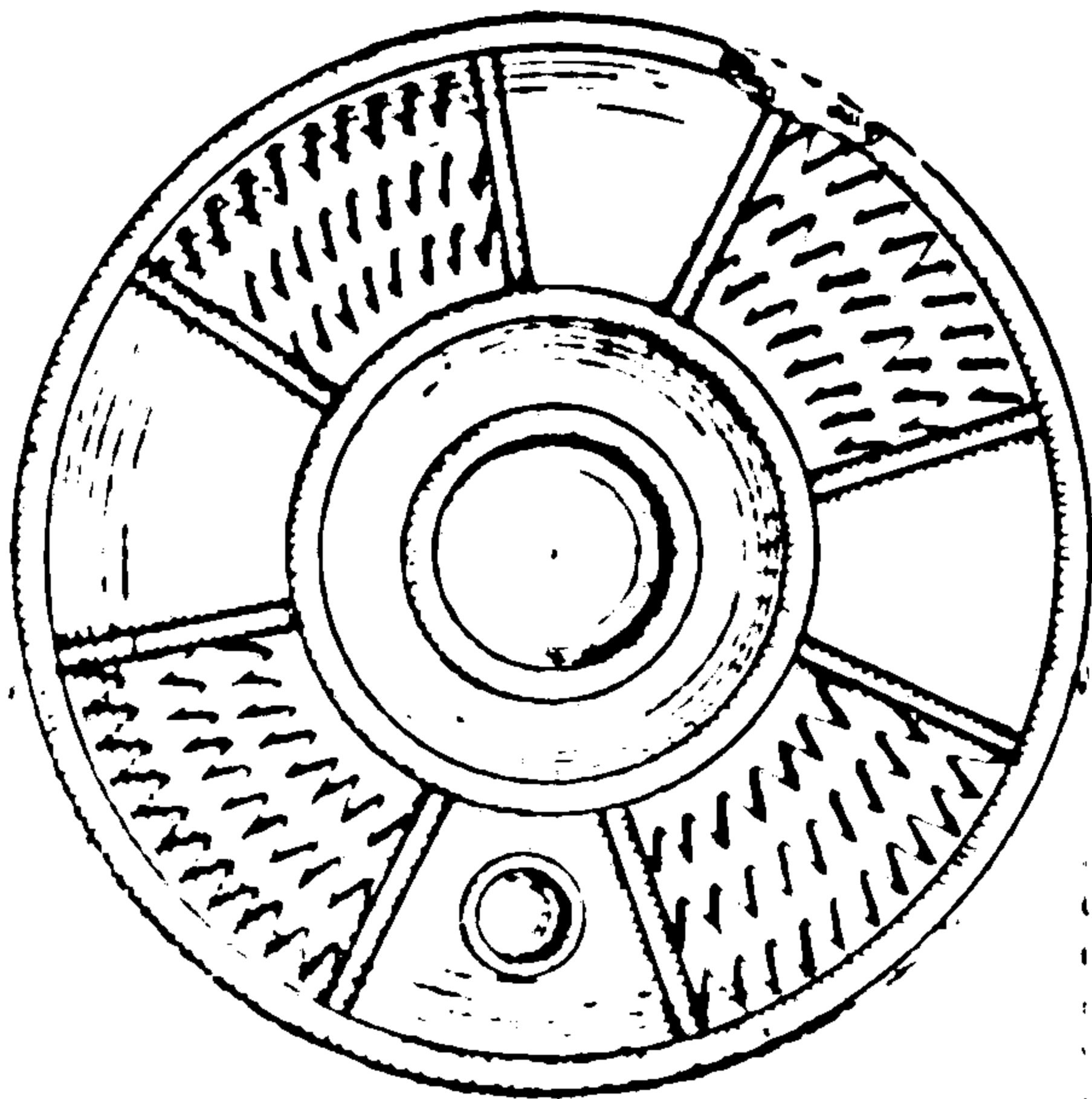


Fig. 63.—Incense burner, pedestals and a decorated pot.



64

65



66

66a



Fig. 69.—Decorated pots and loop handles.

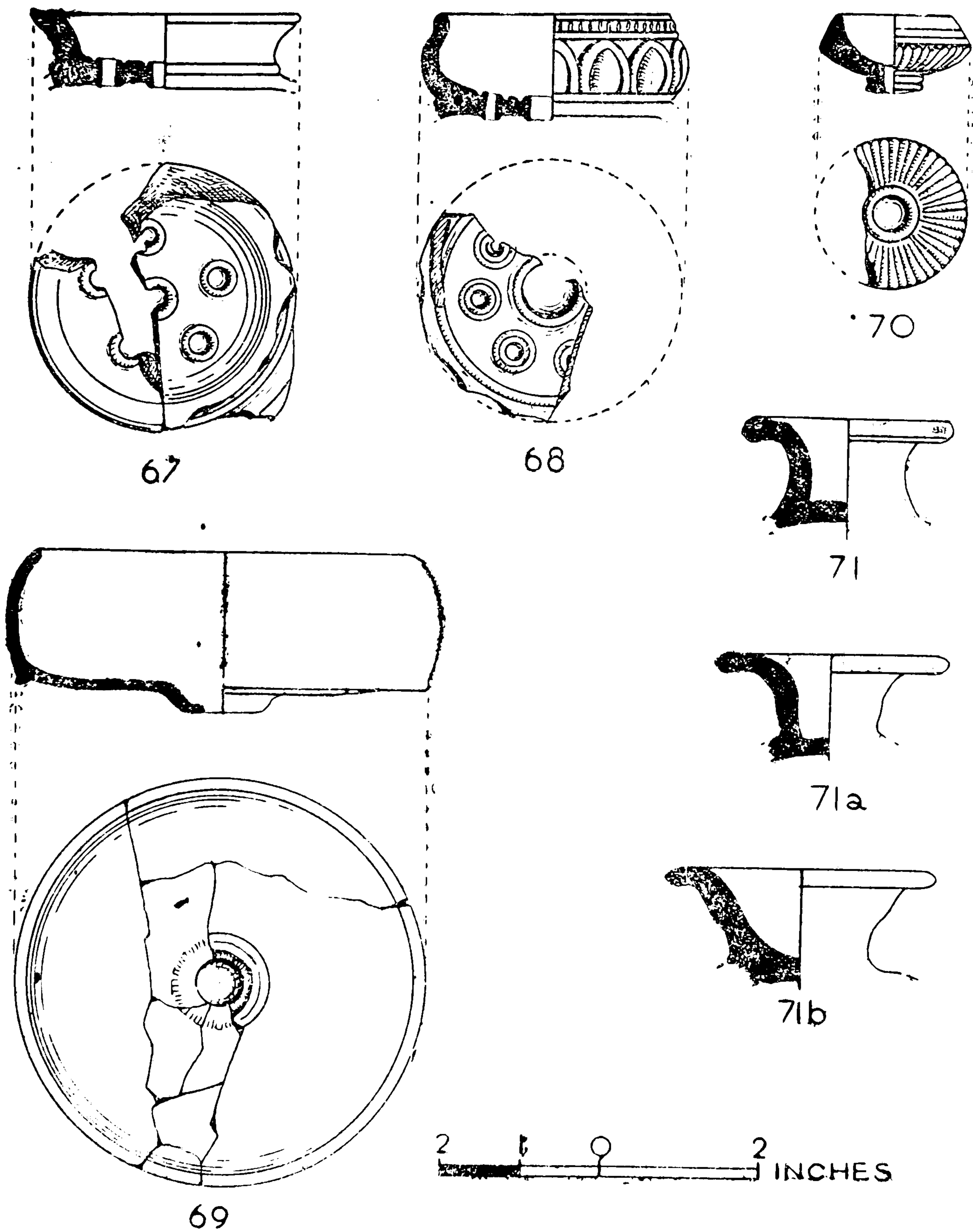
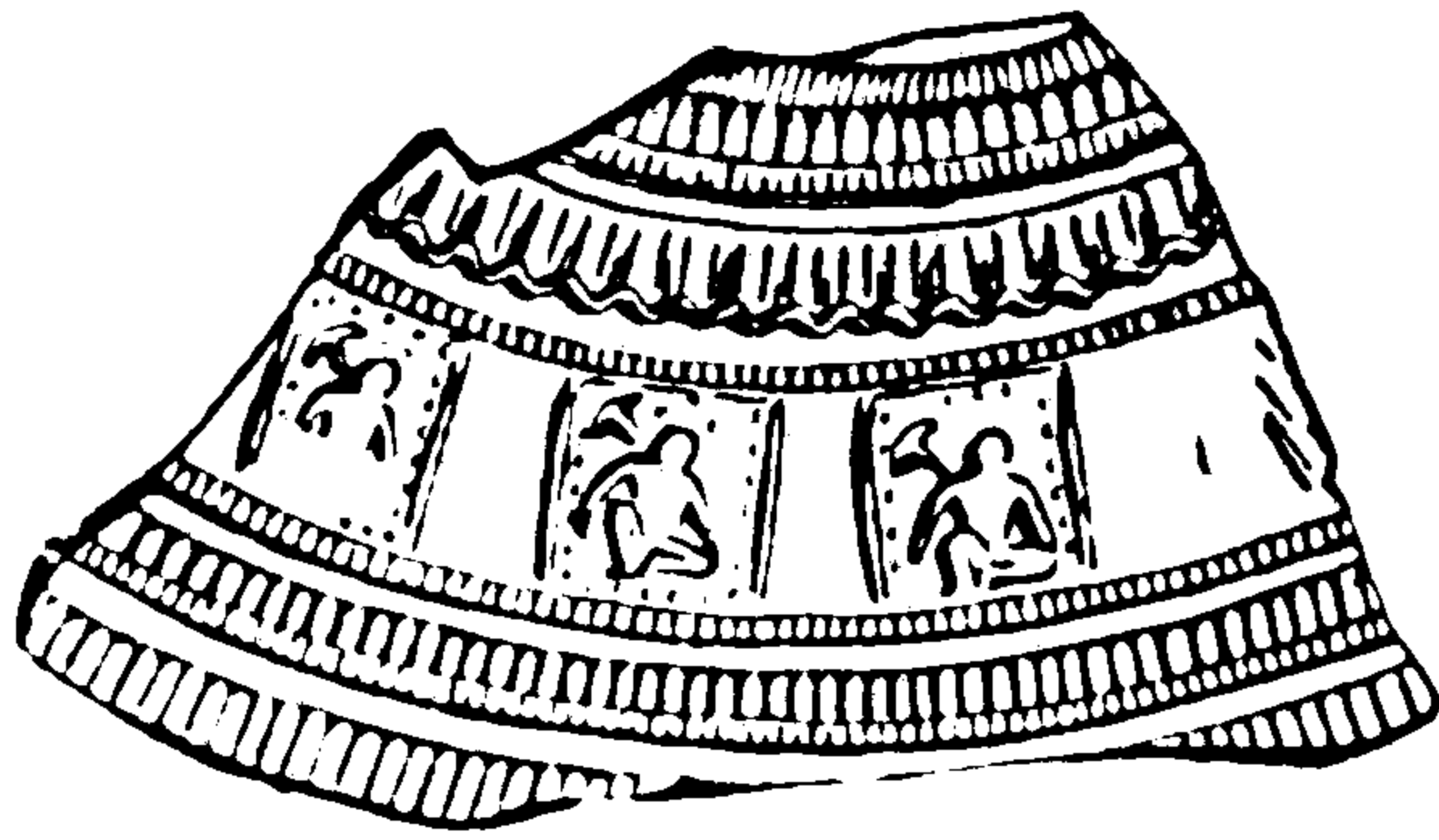


fig. 70 Perforated pots and miscellany



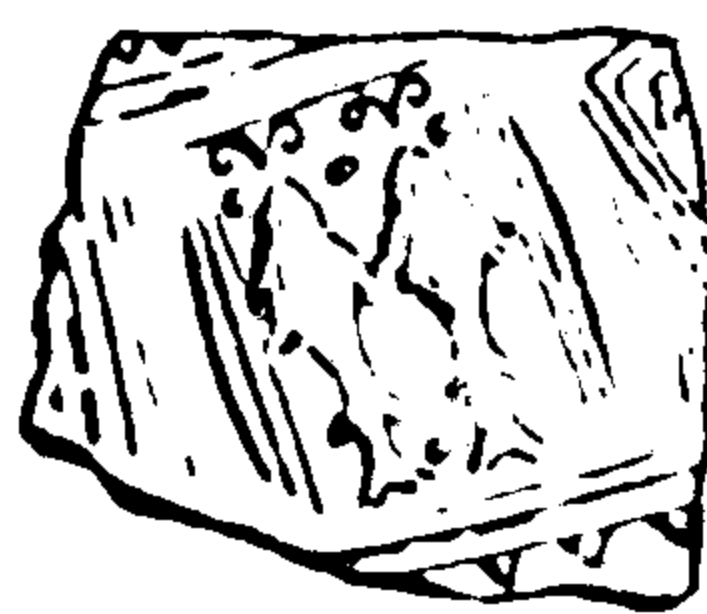
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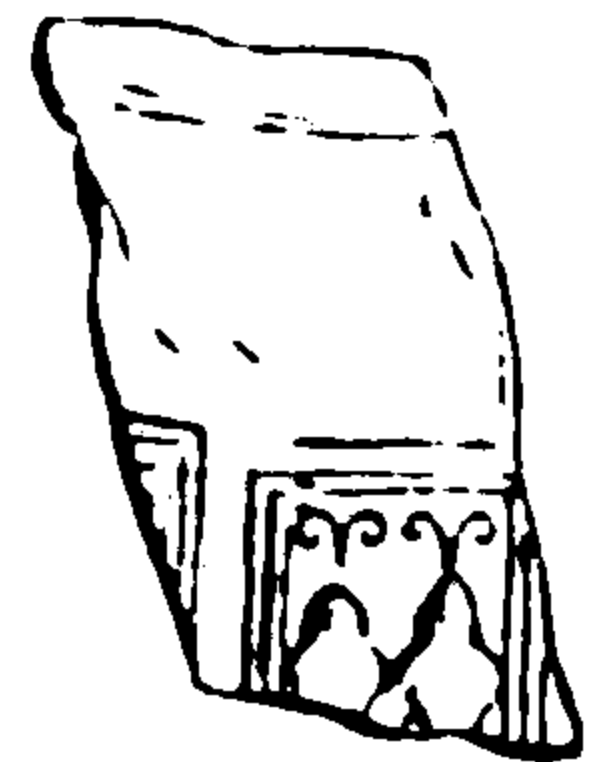
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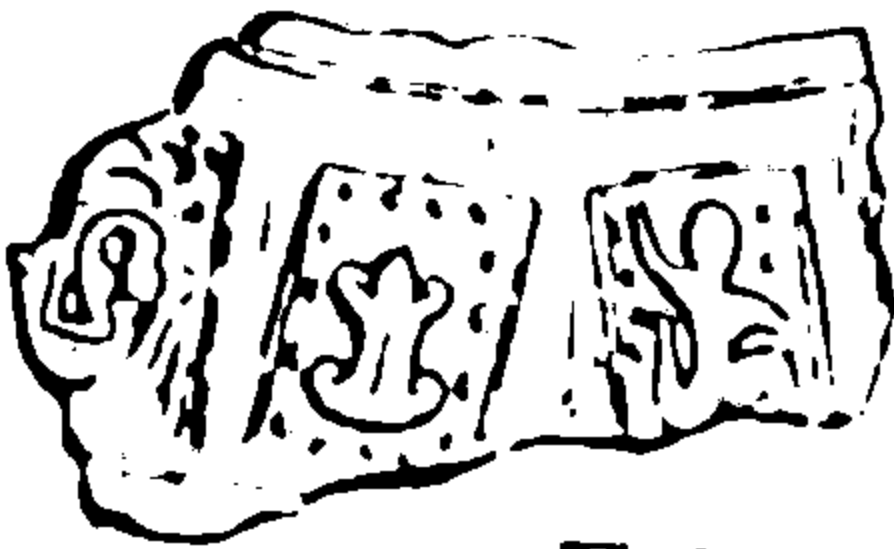
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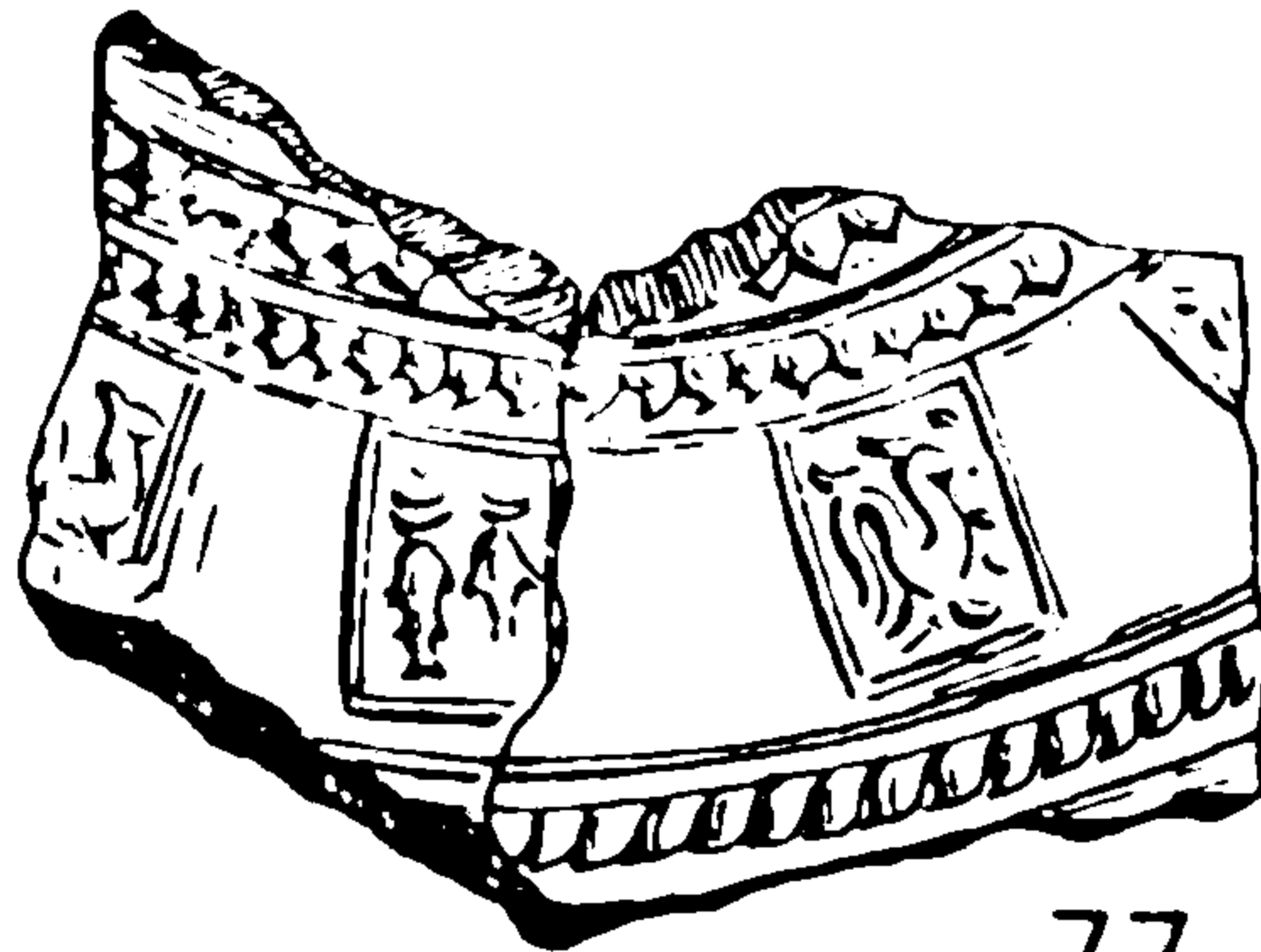
75



75a



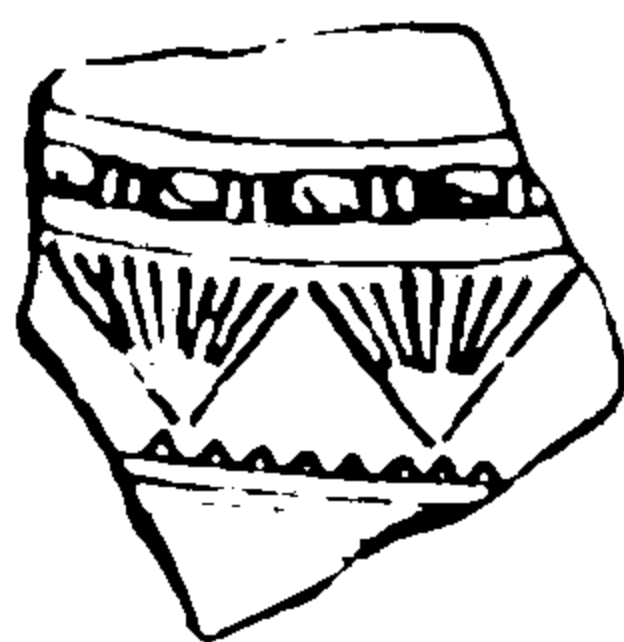
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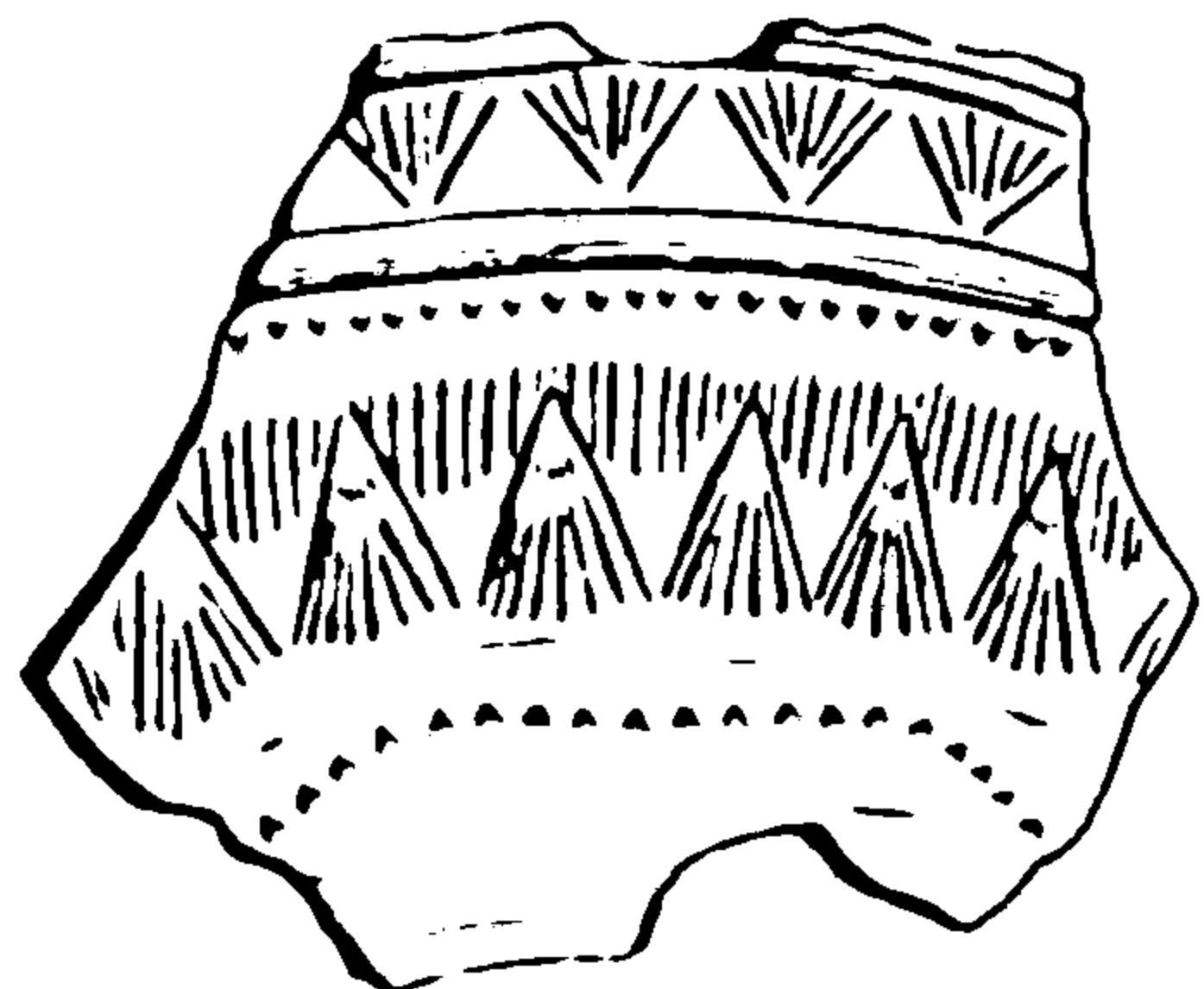
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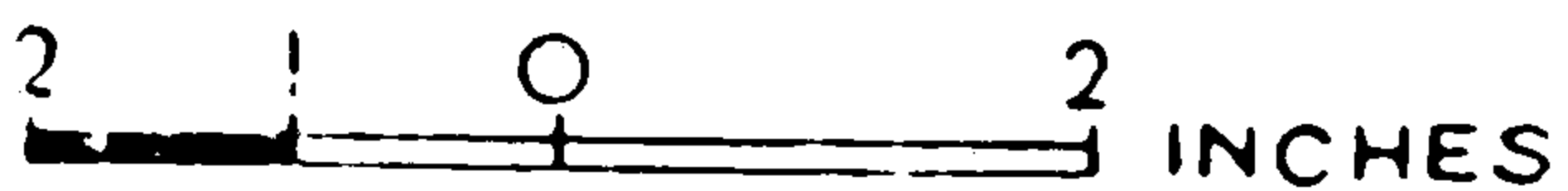


Fig. 71.—Decorated sherda.

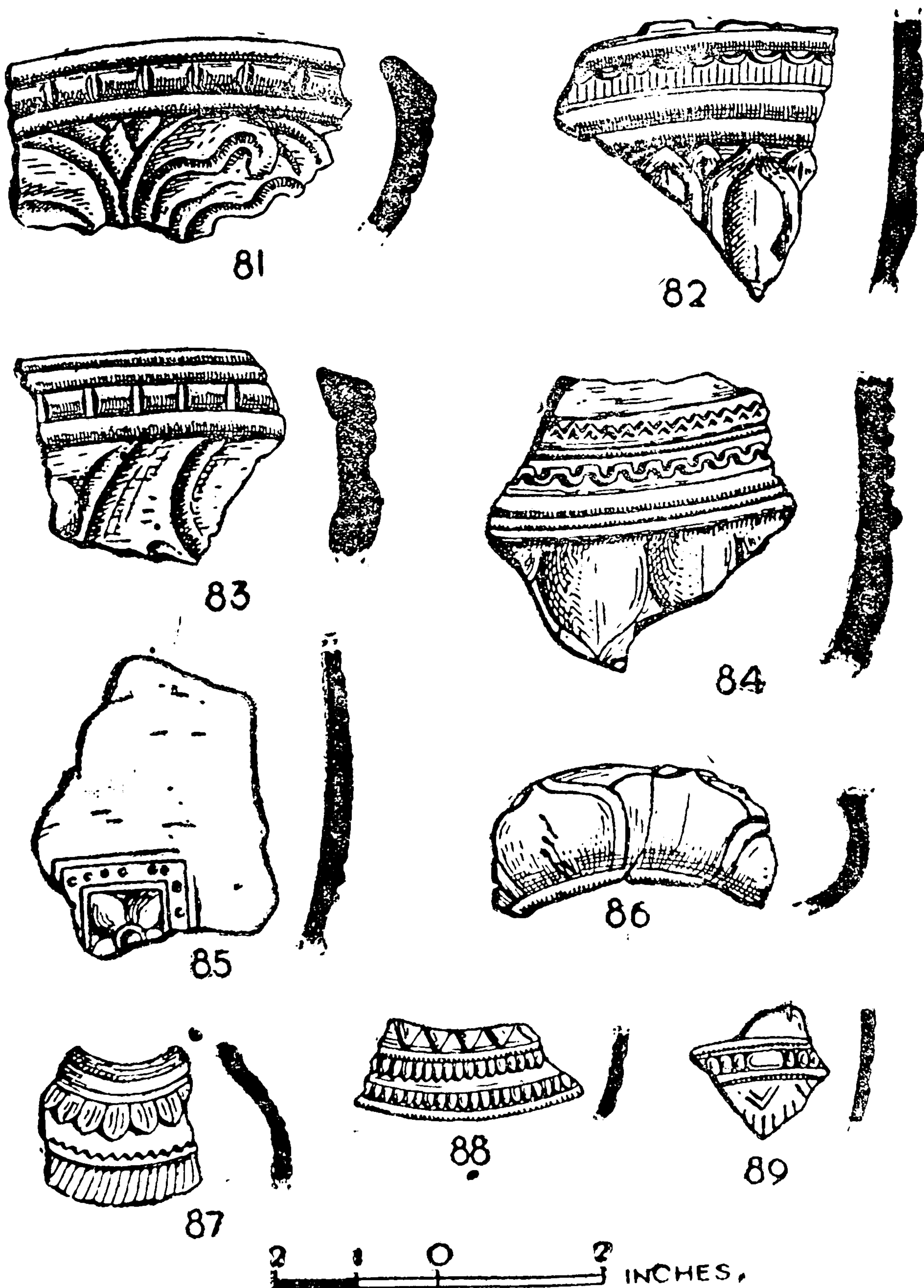


Fig. 72. - Decorated sherds.

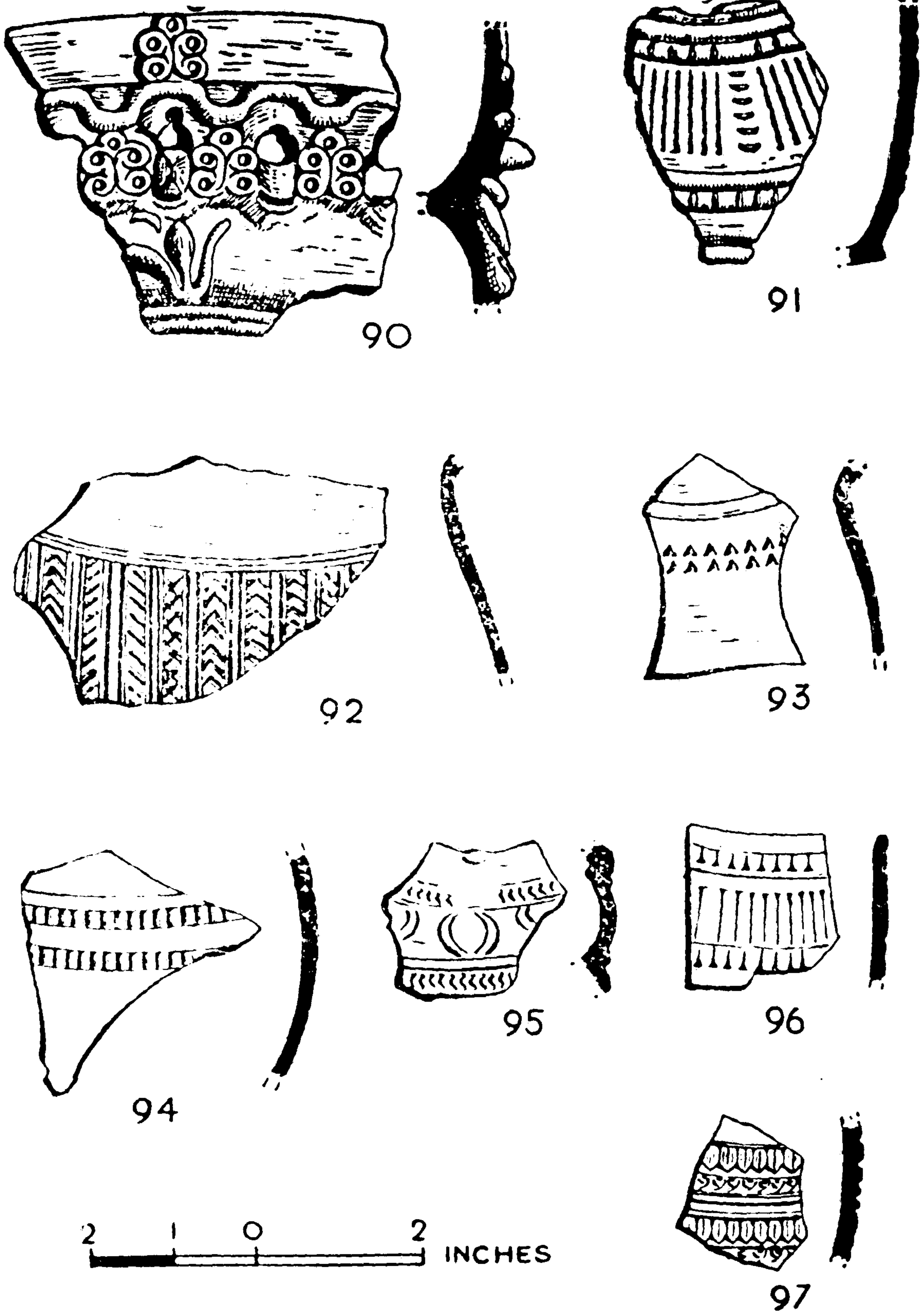
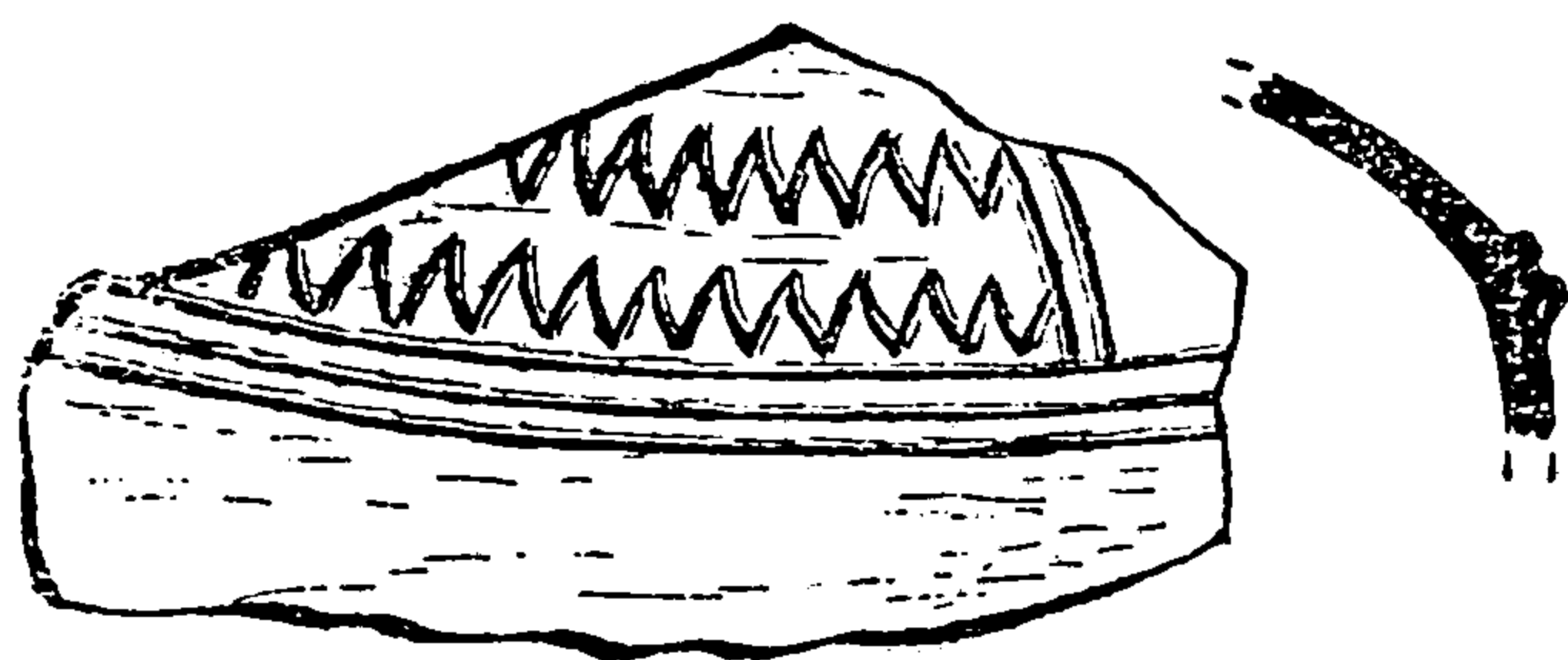
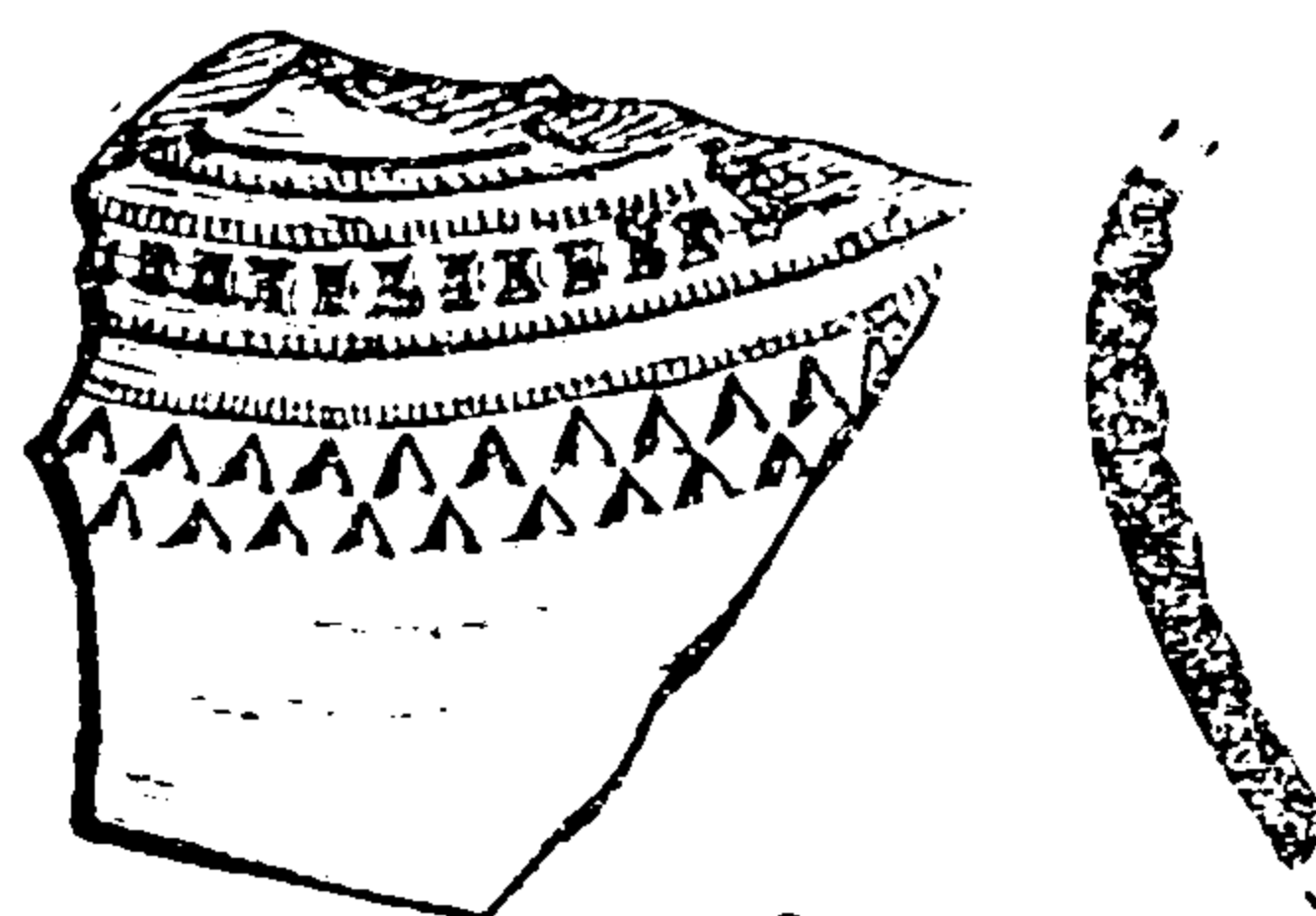


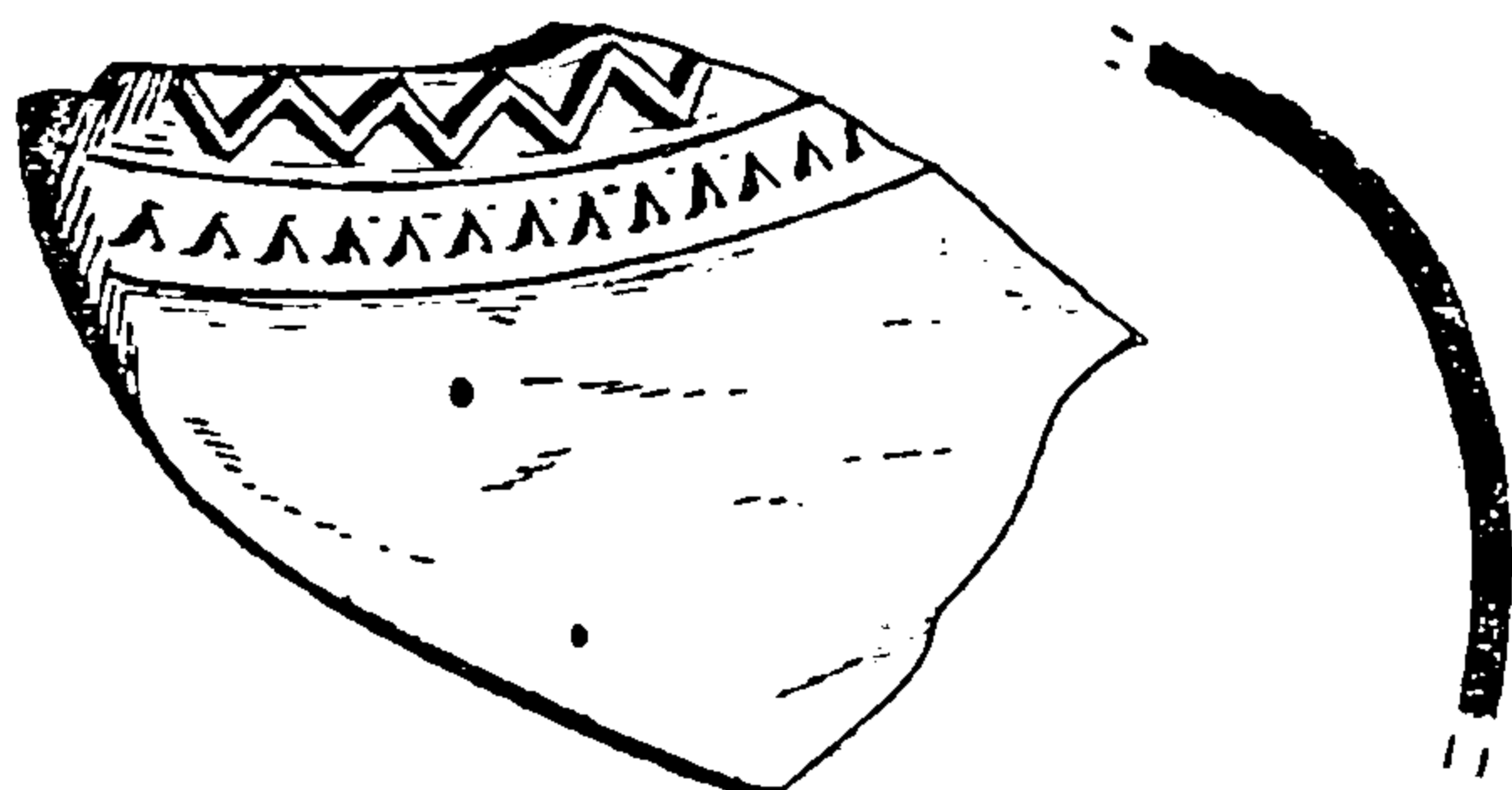
Fig. 73.—Decorated sherds.



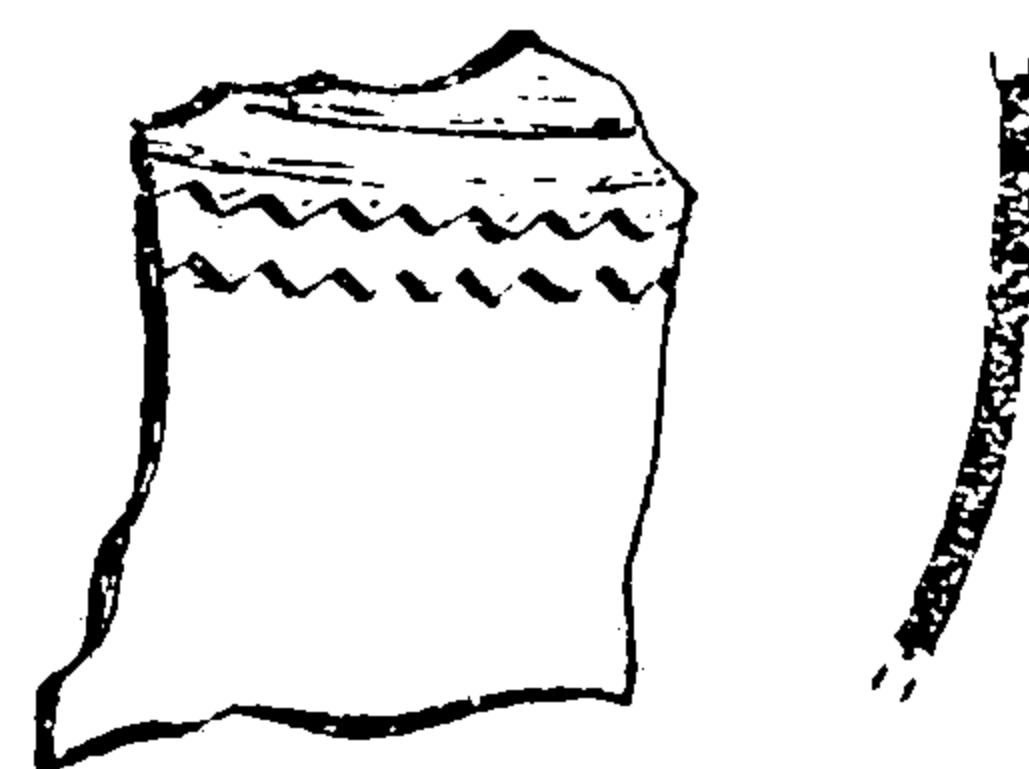
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99



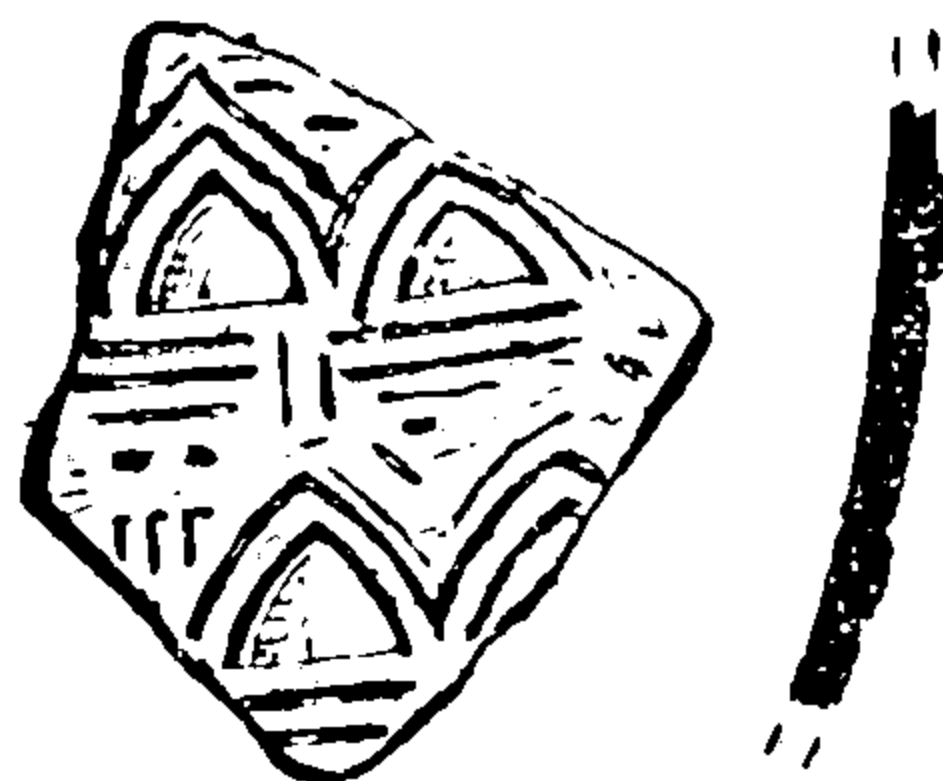
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101



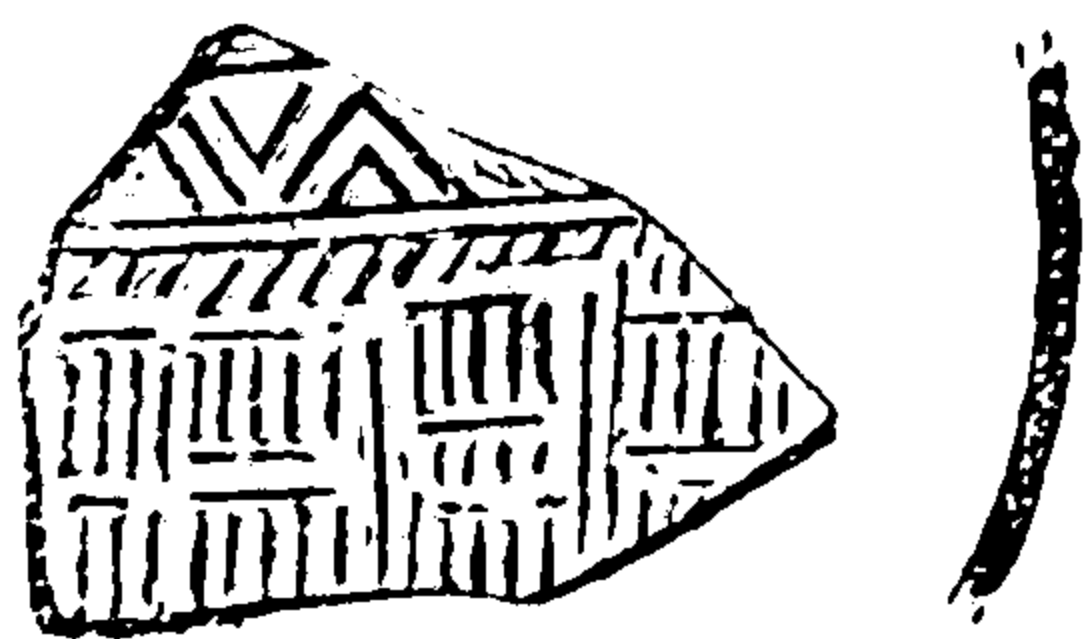
102



103



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107



Fig. 74.—Decorated sherds.

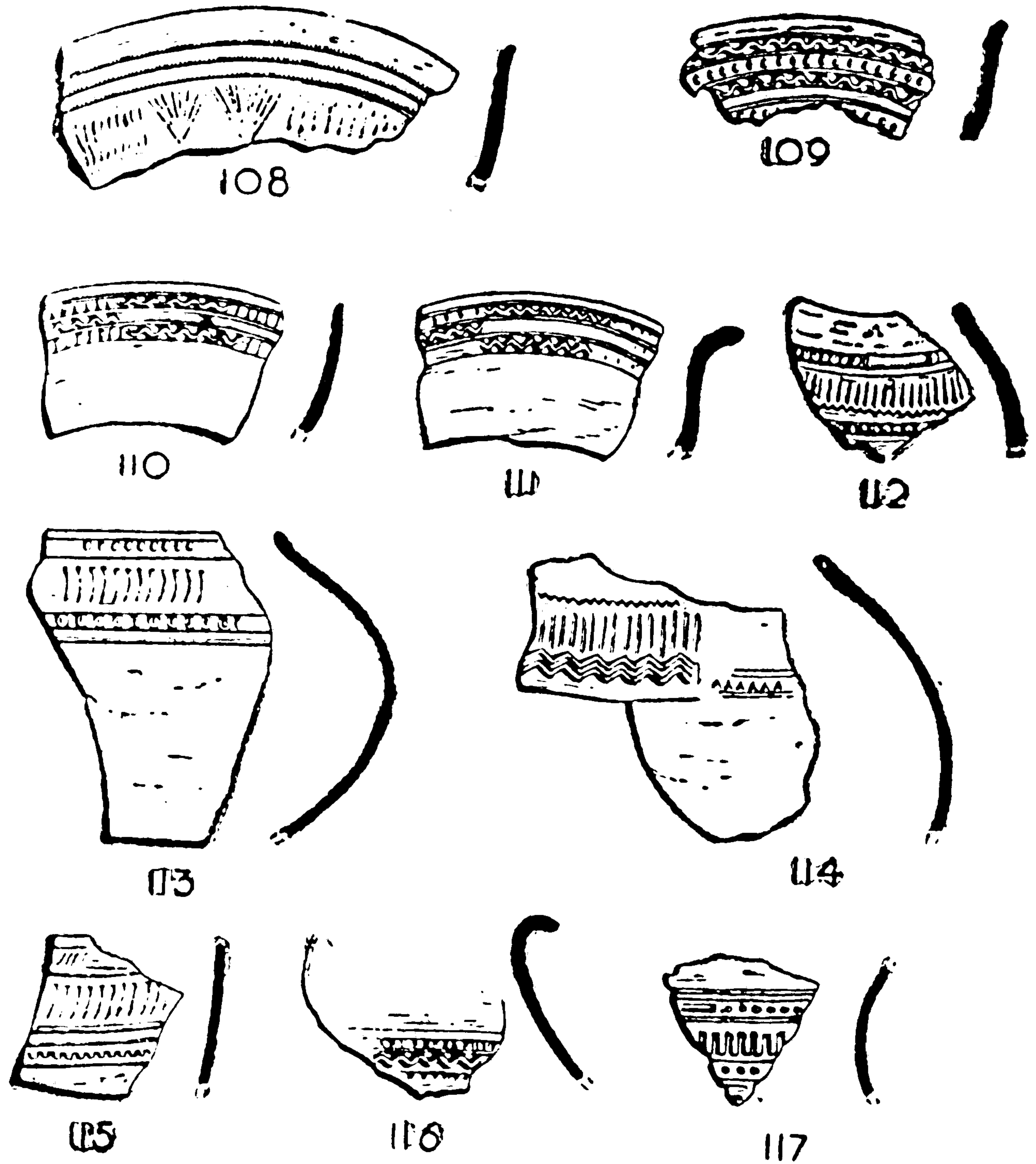


Fig. 75.—Decorated sherds.

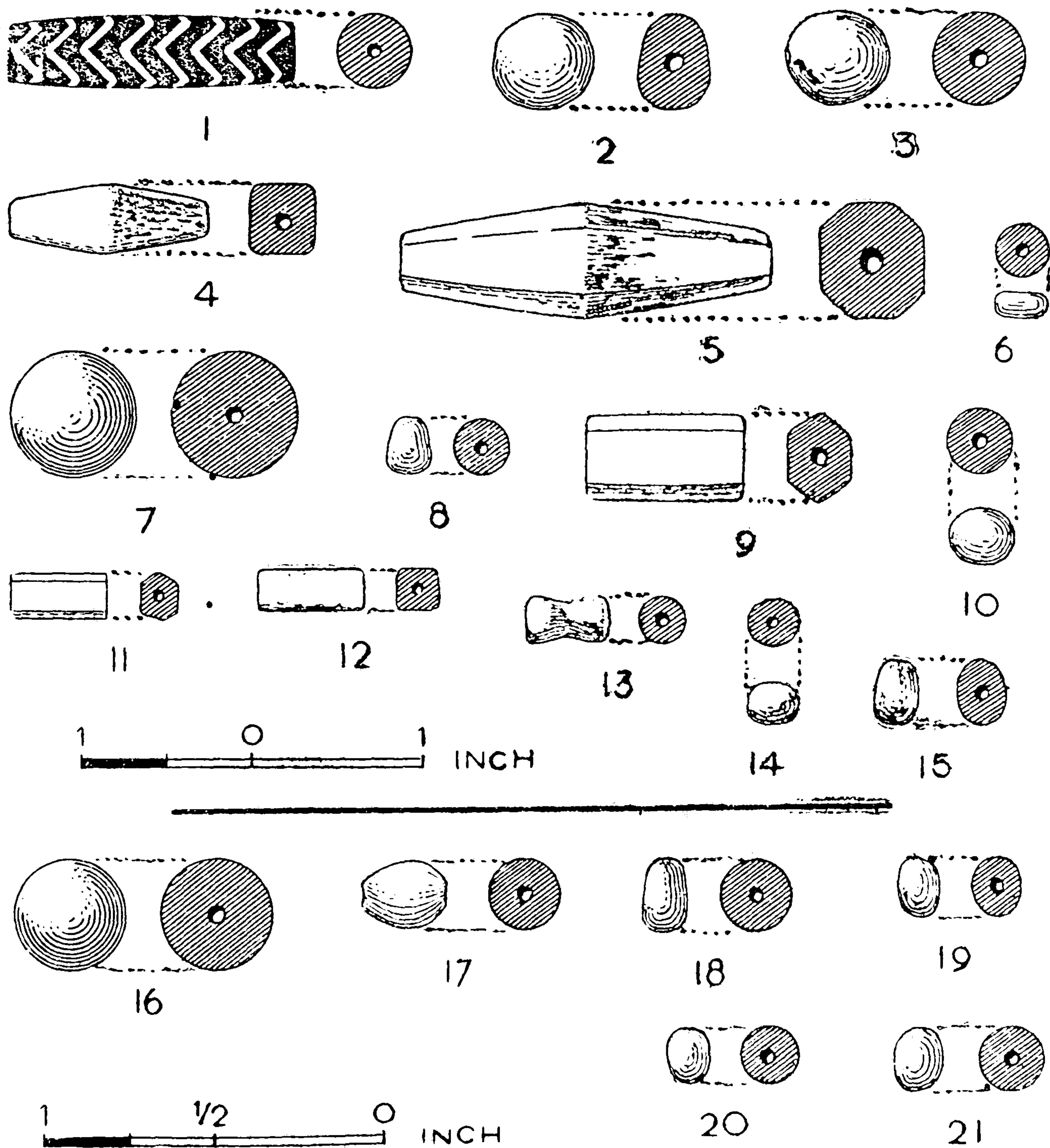


Fig. 76.—Beads, semi-precious stones.

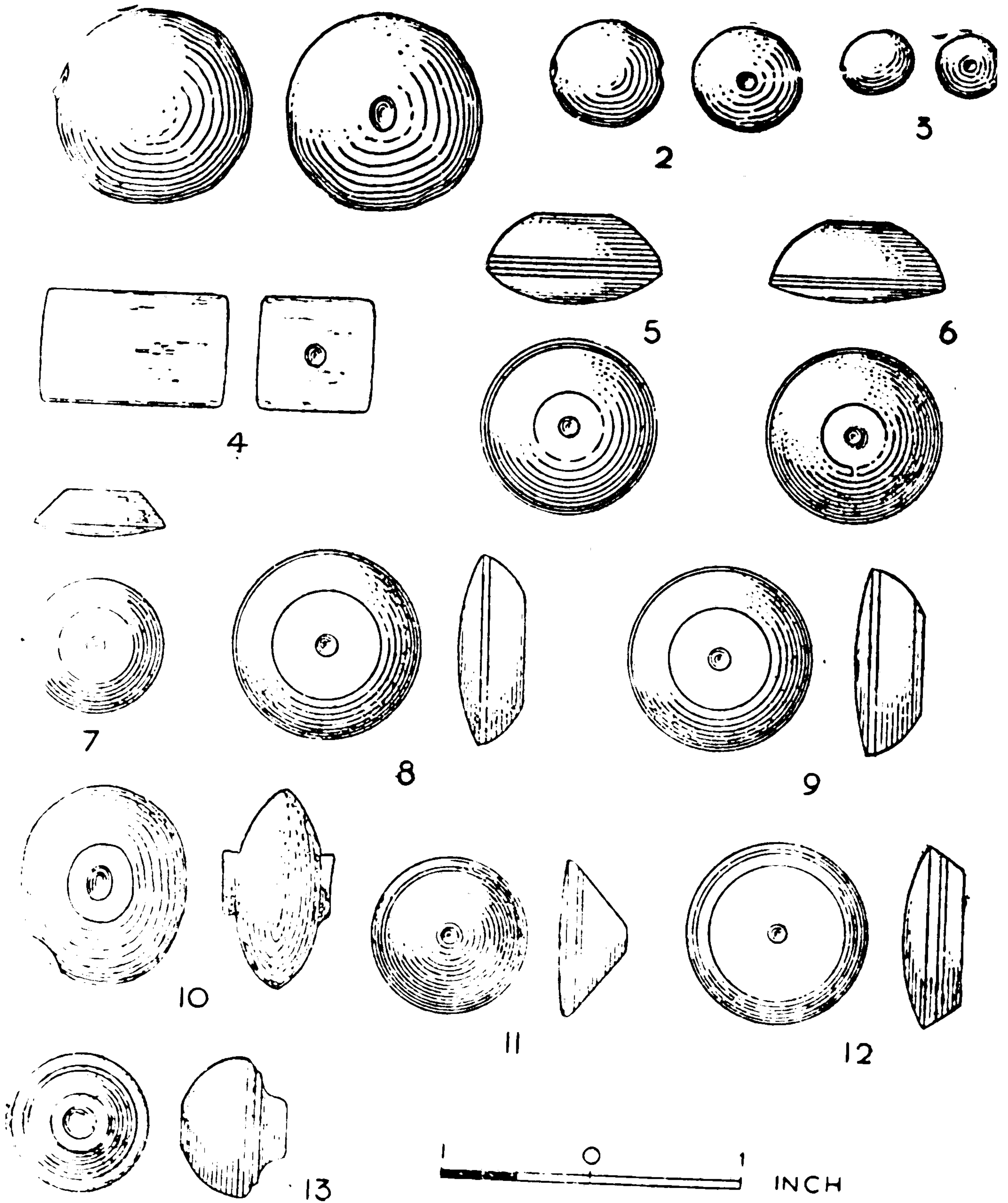


Fig. 77. - Beads, terra cotta.

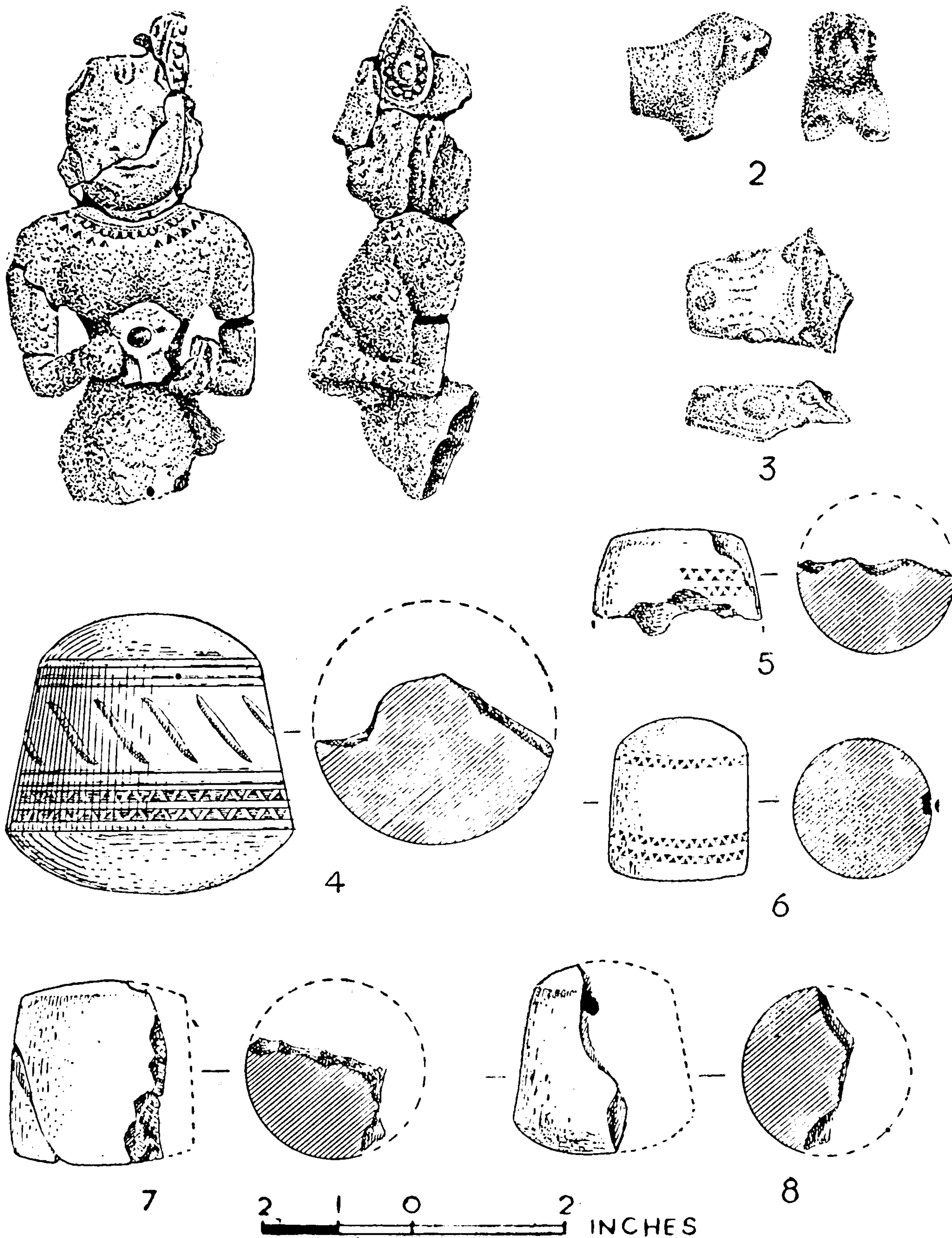


Fig. 28.—Terracotta objects: figurines and dabbers

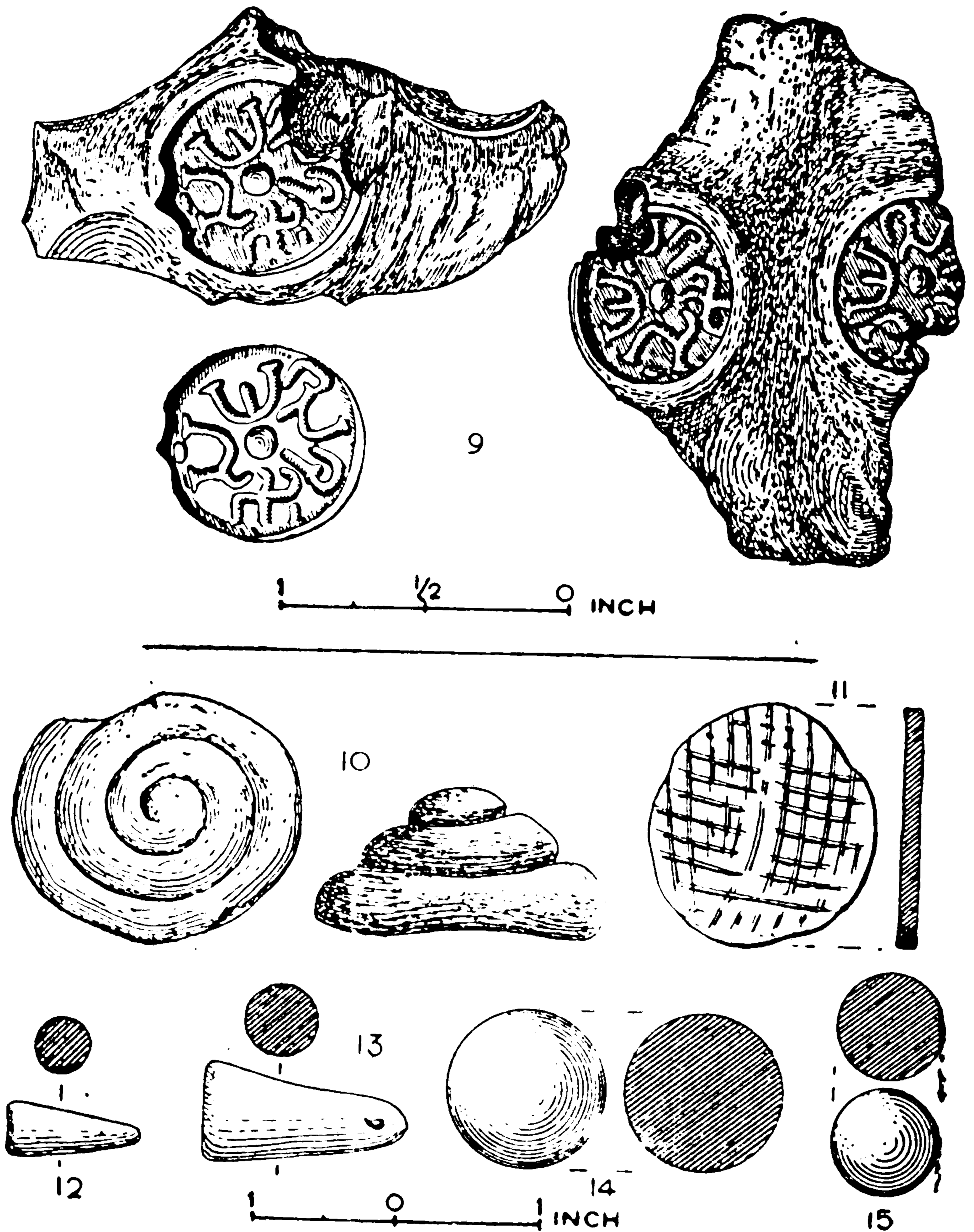
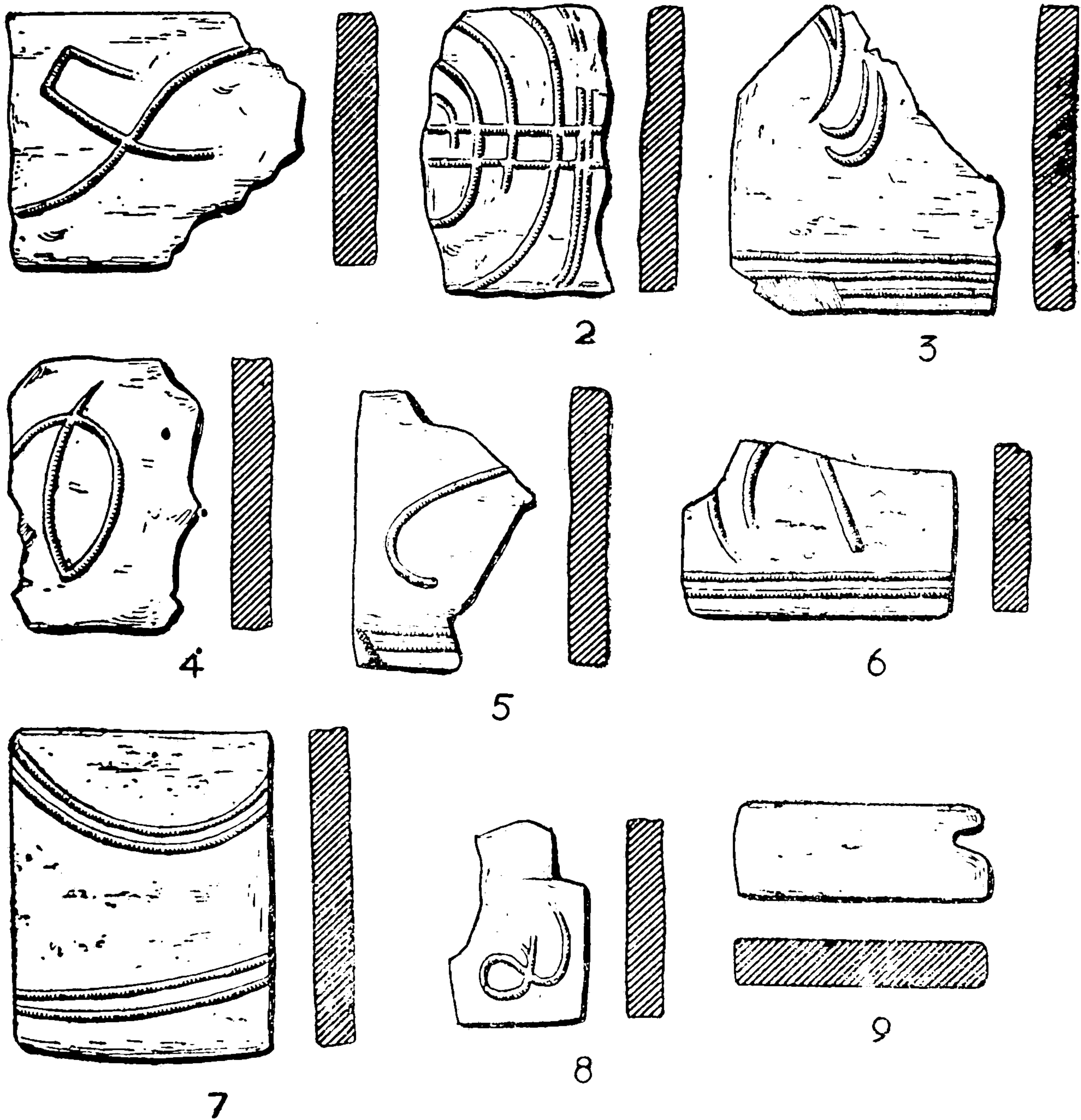
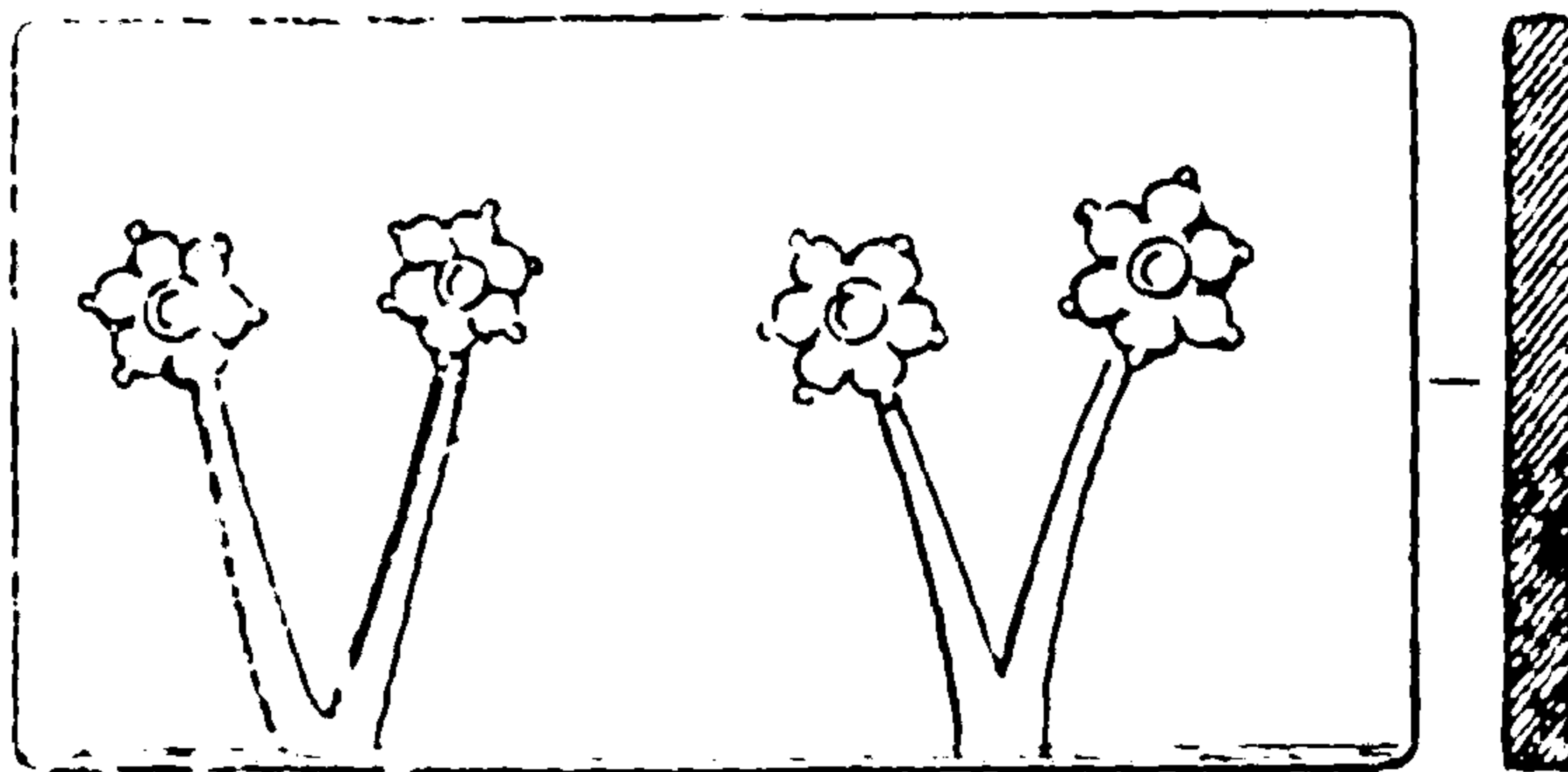
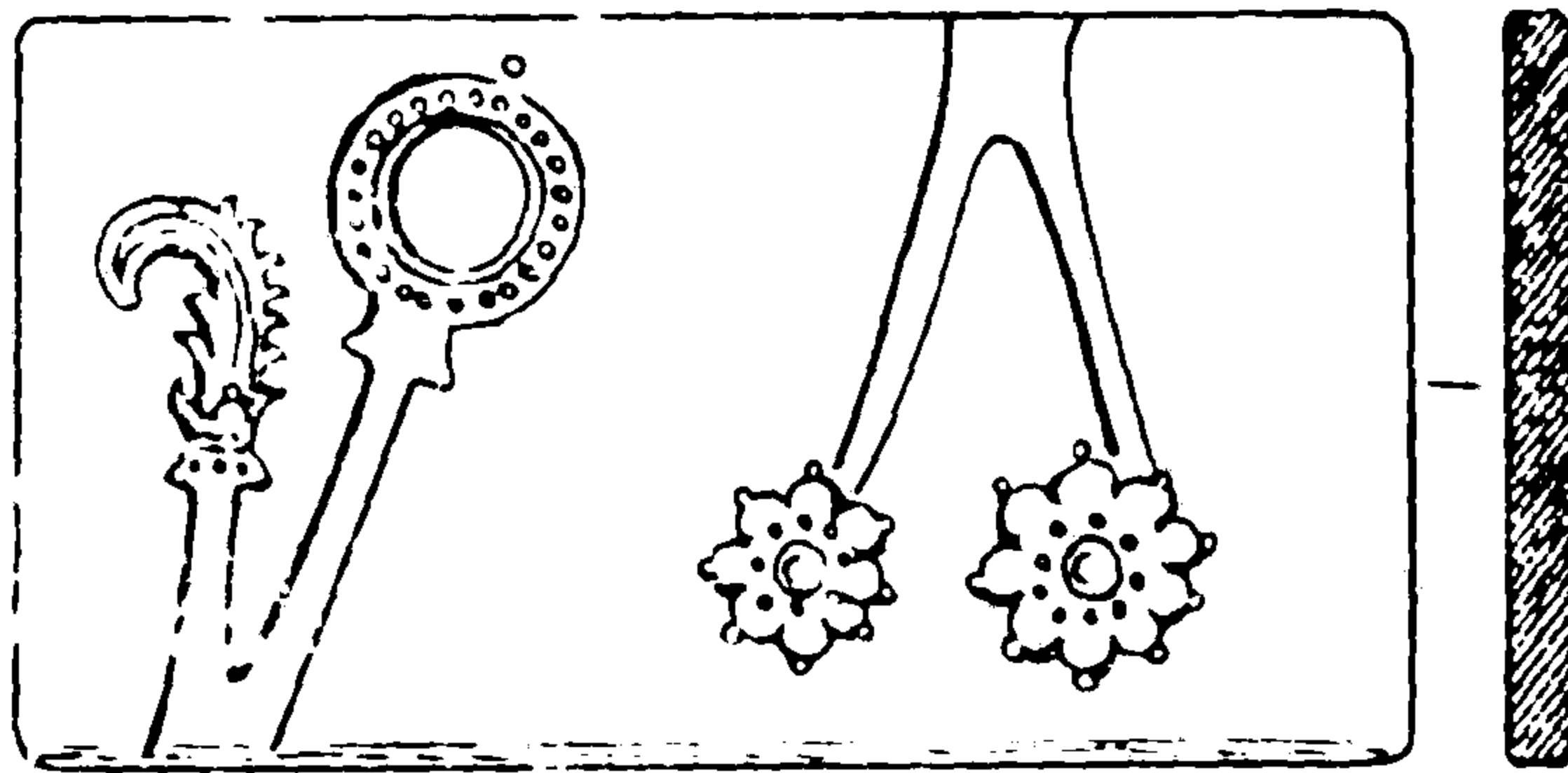
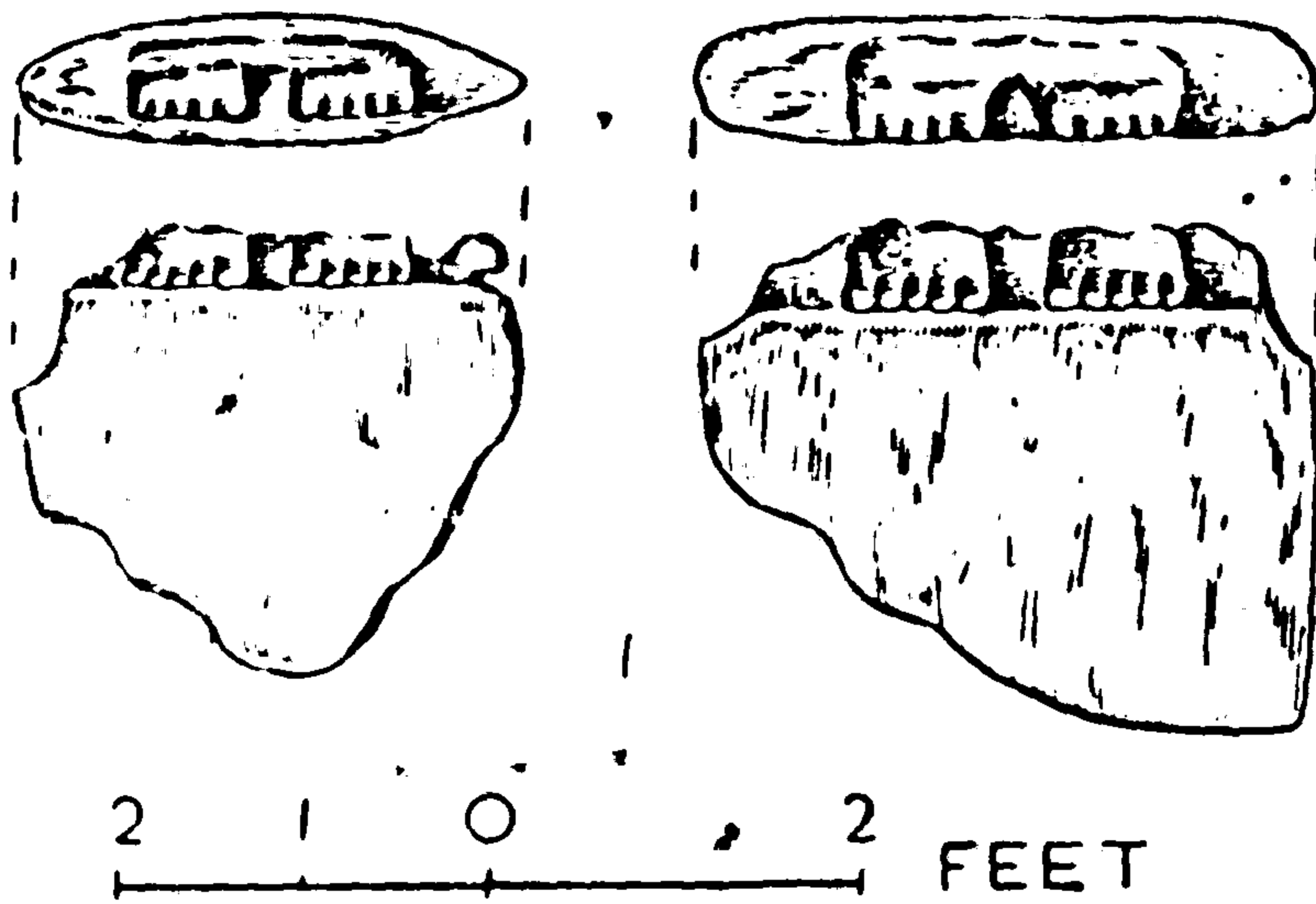


Fig. 79.—Terracotta objects: sealing, spiral lump, hopscotch, pendant, sling balls.



6 3 0 6 INCHES

Fig. 80.—Brick marks.



2

1 0 1 INCH

Fig. 81.—Stone objects. Sculptured slabs and a tablet incised on both sides

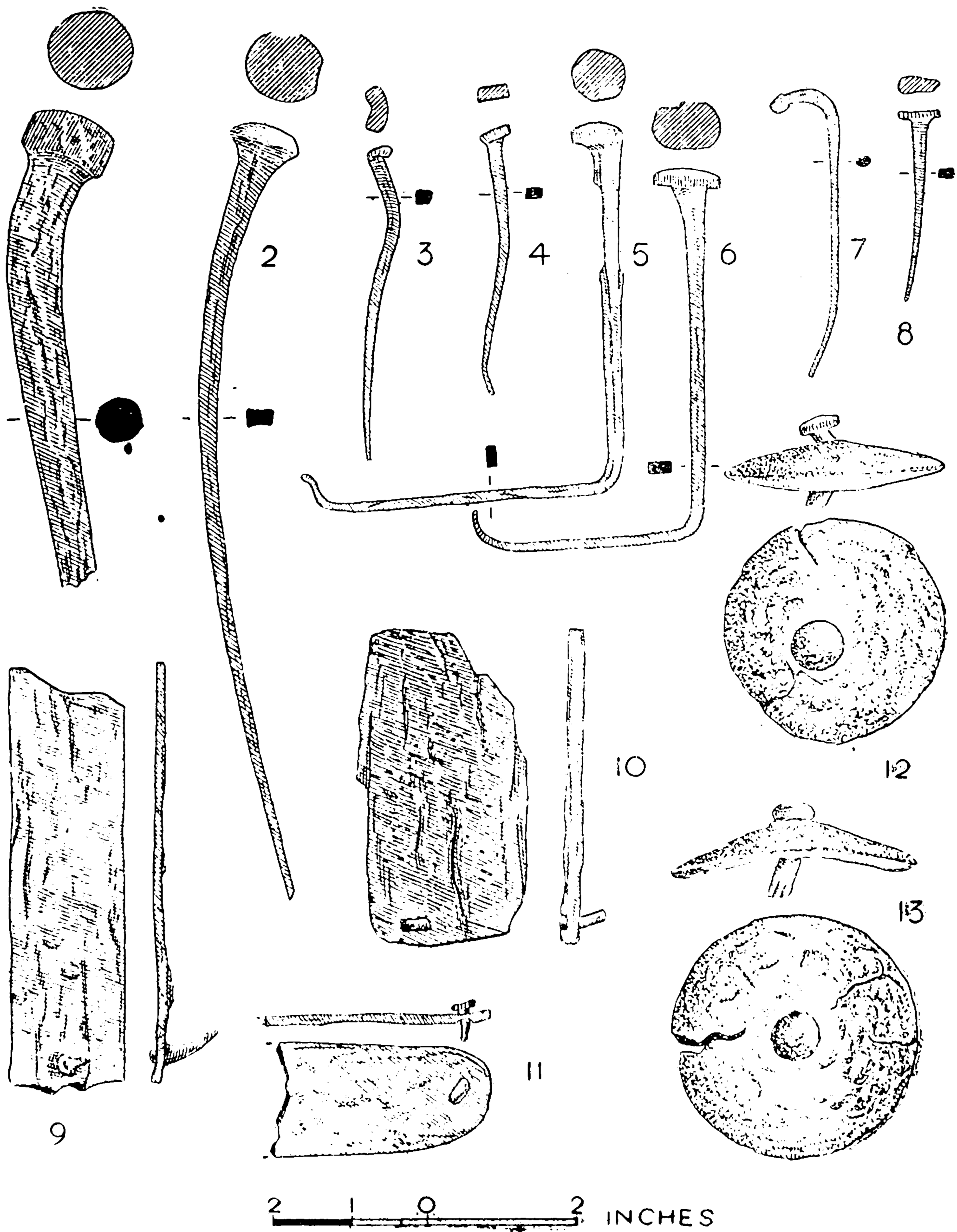


Fig. 82.—Iron objects: nails, strips and bosses

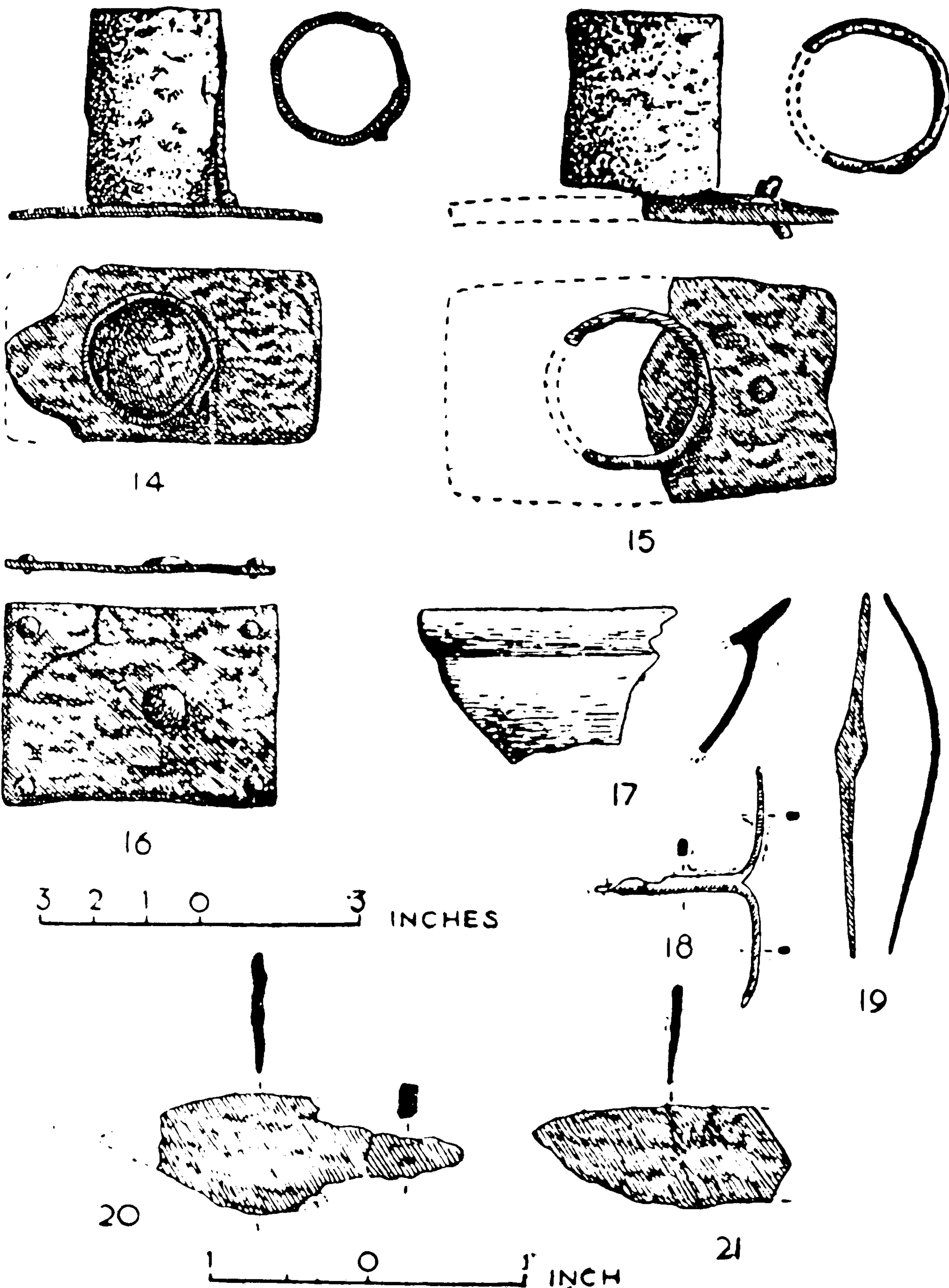


Fig. 83.—Iron objects : sockets, plates, sherd, awl, point and arrow-head.

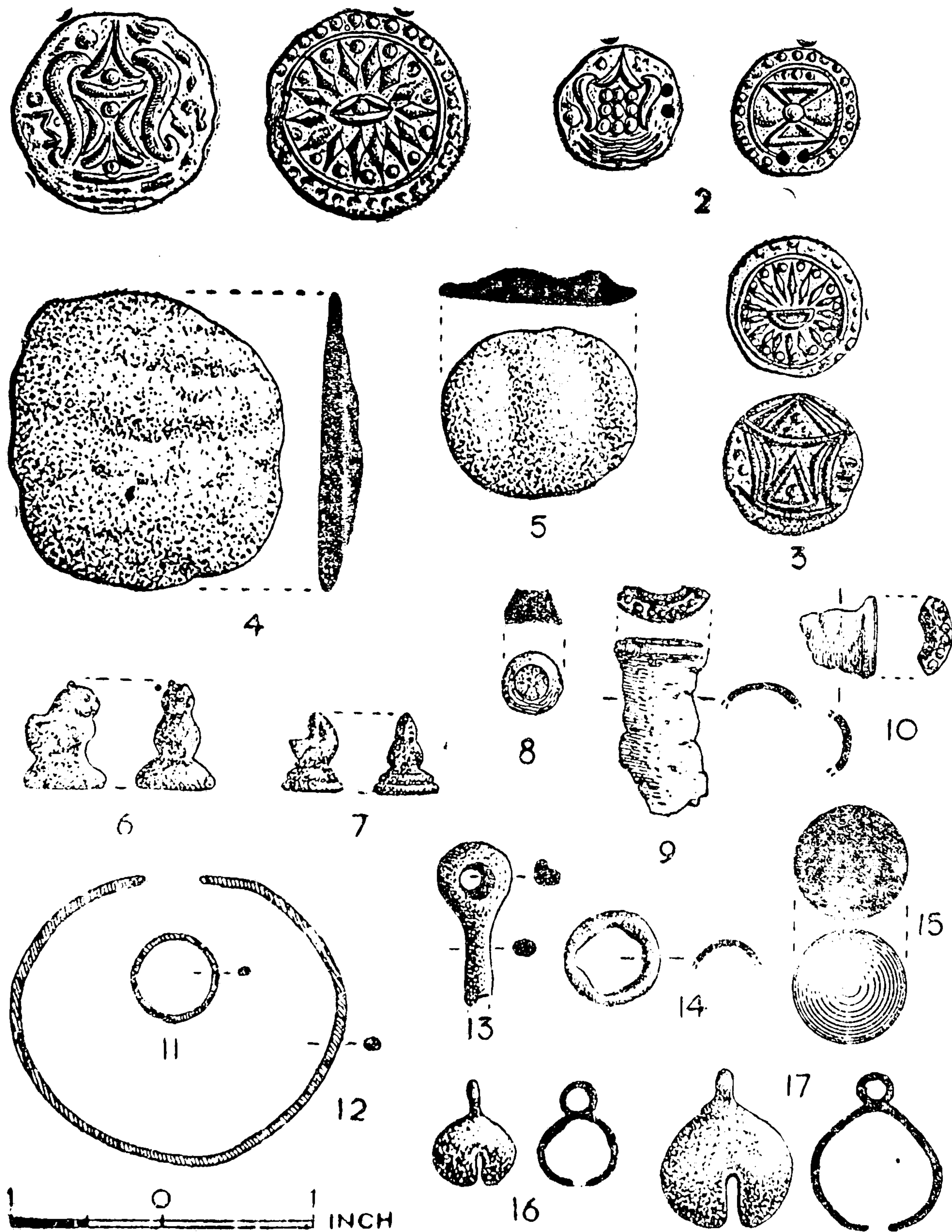
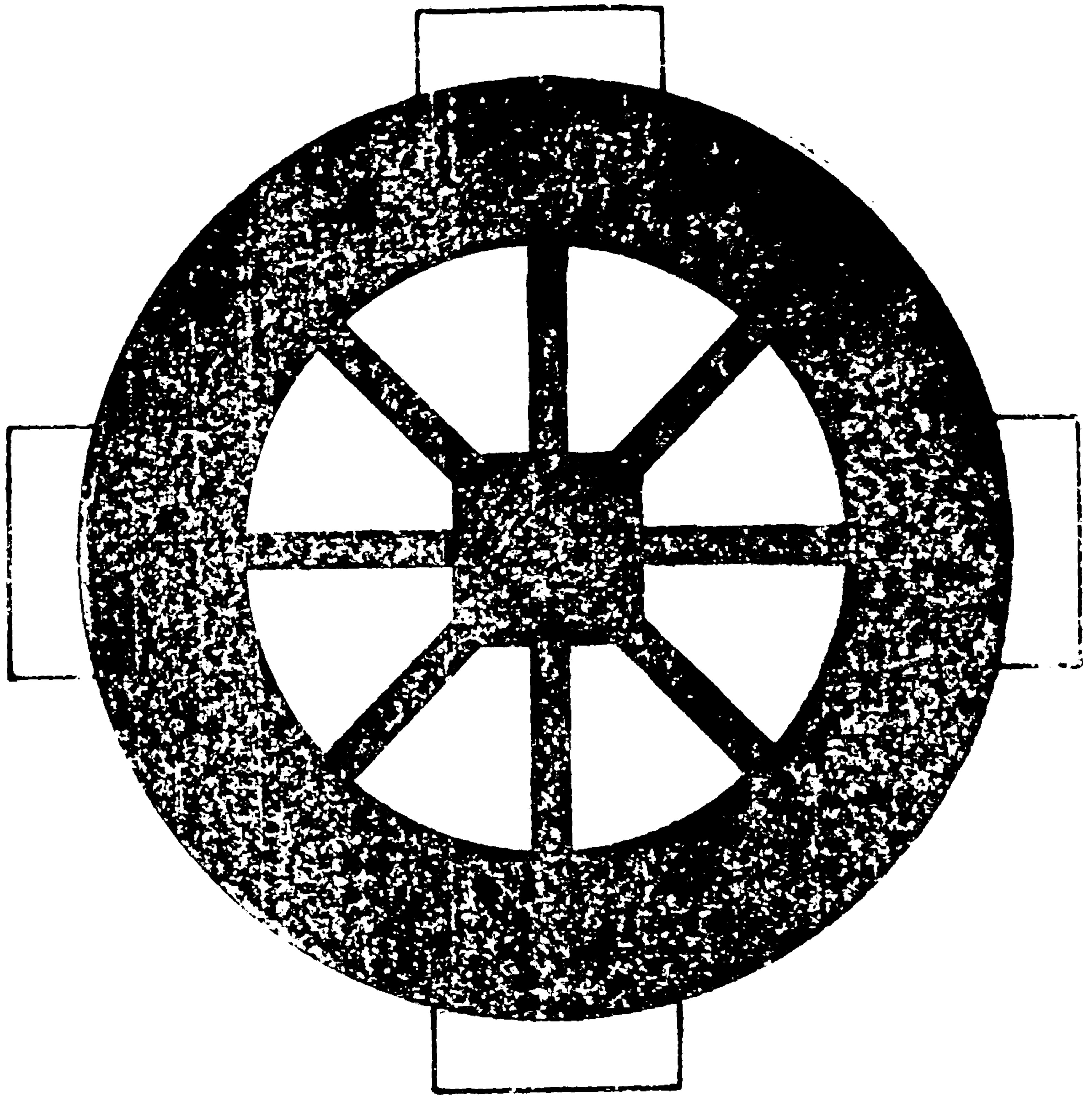
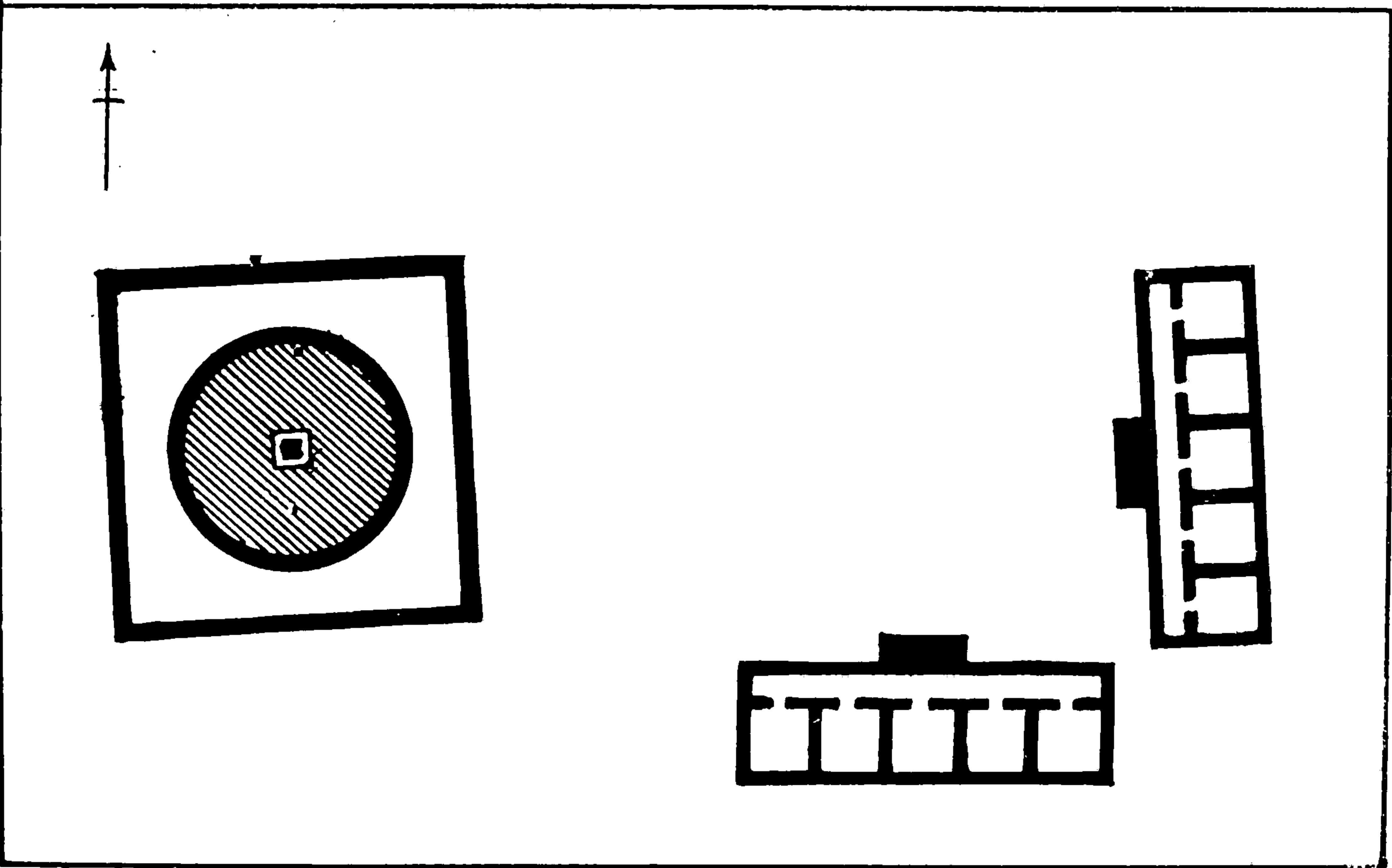


Fig. 84.—Metal objects: 1—3, silver coins; 4—5, lead pieces; 6, bronze miniature lion; 7, bronze hamsa; 8, lead weight; 9—10, Fragments of ear tube; 11, bronze finger ring; 12, bronze bangle; 13, copper latch eye; 14, bronze finger ring; 15, lead ball; 16—17, Copper rattles.



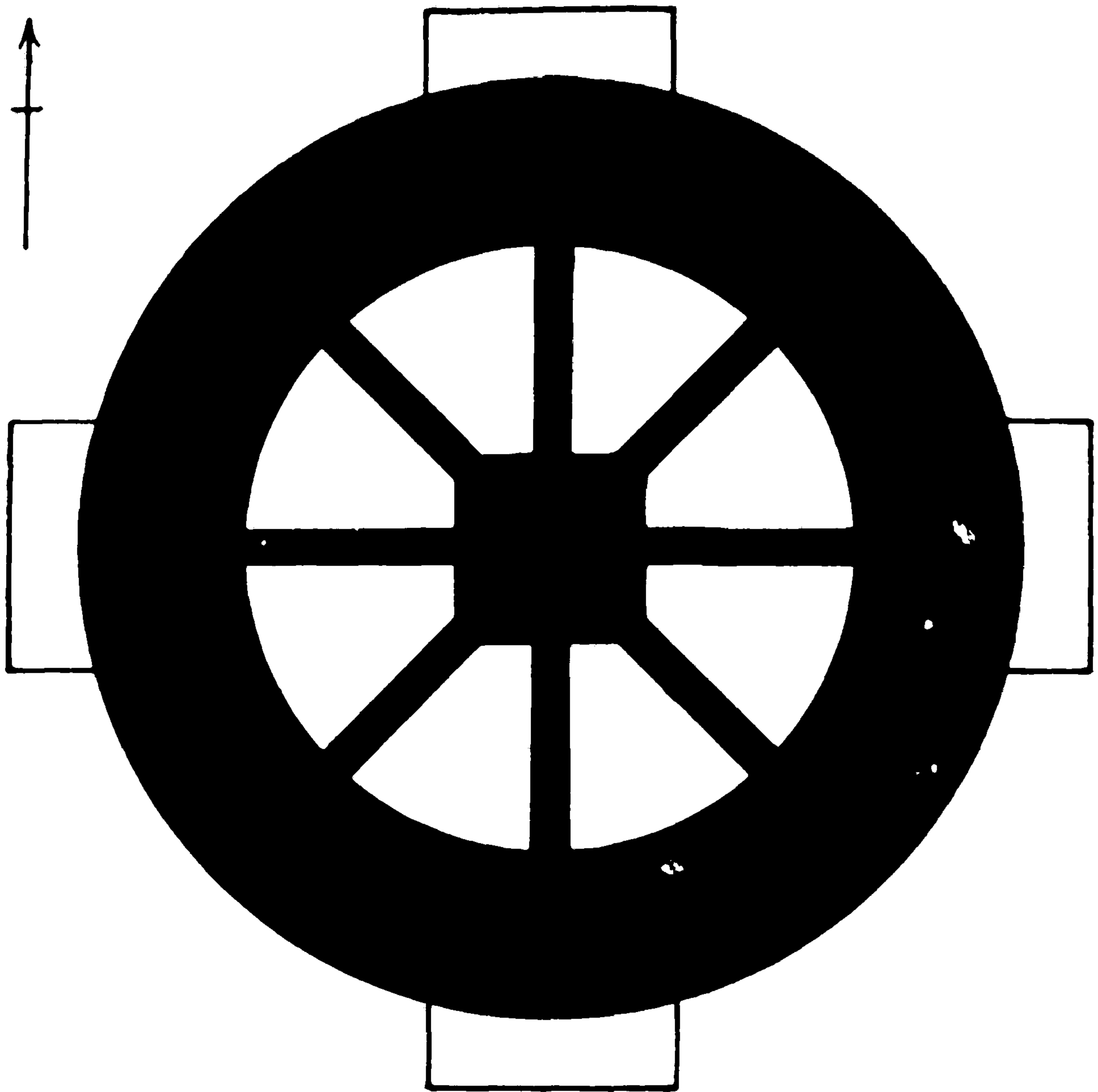
3 0 3 FEET

Fig. 85.—Plan of the Great Stupa, Nagarjunakonda
(Dept. of Archaeology, India.)



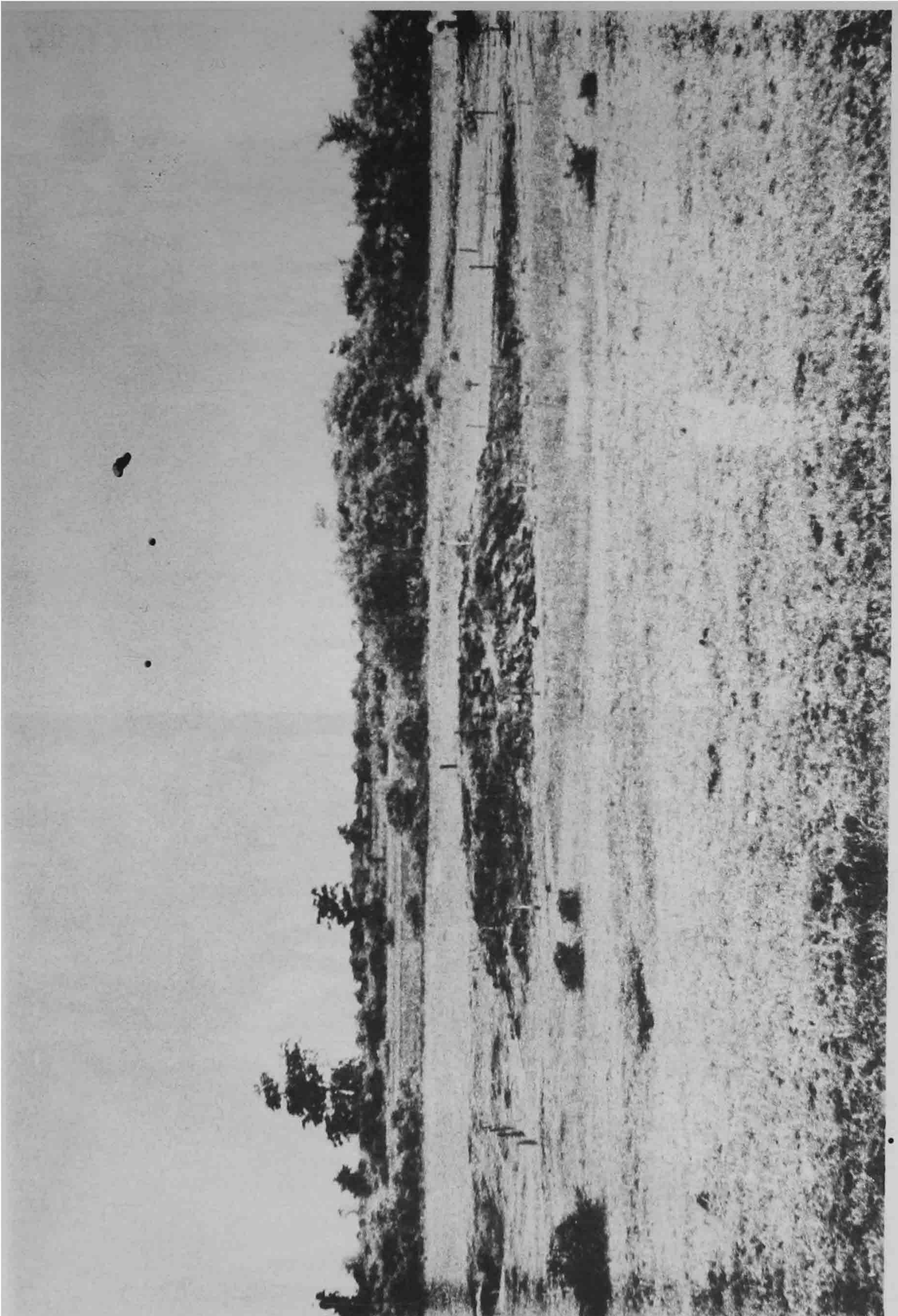
16 8 0 16 FEET

Fig. 86.—Plan of stupa and monasteries, site No. 20, Nagarjunakonda.
(Dept. of Archaeology, India.)



3 0 3 FEET

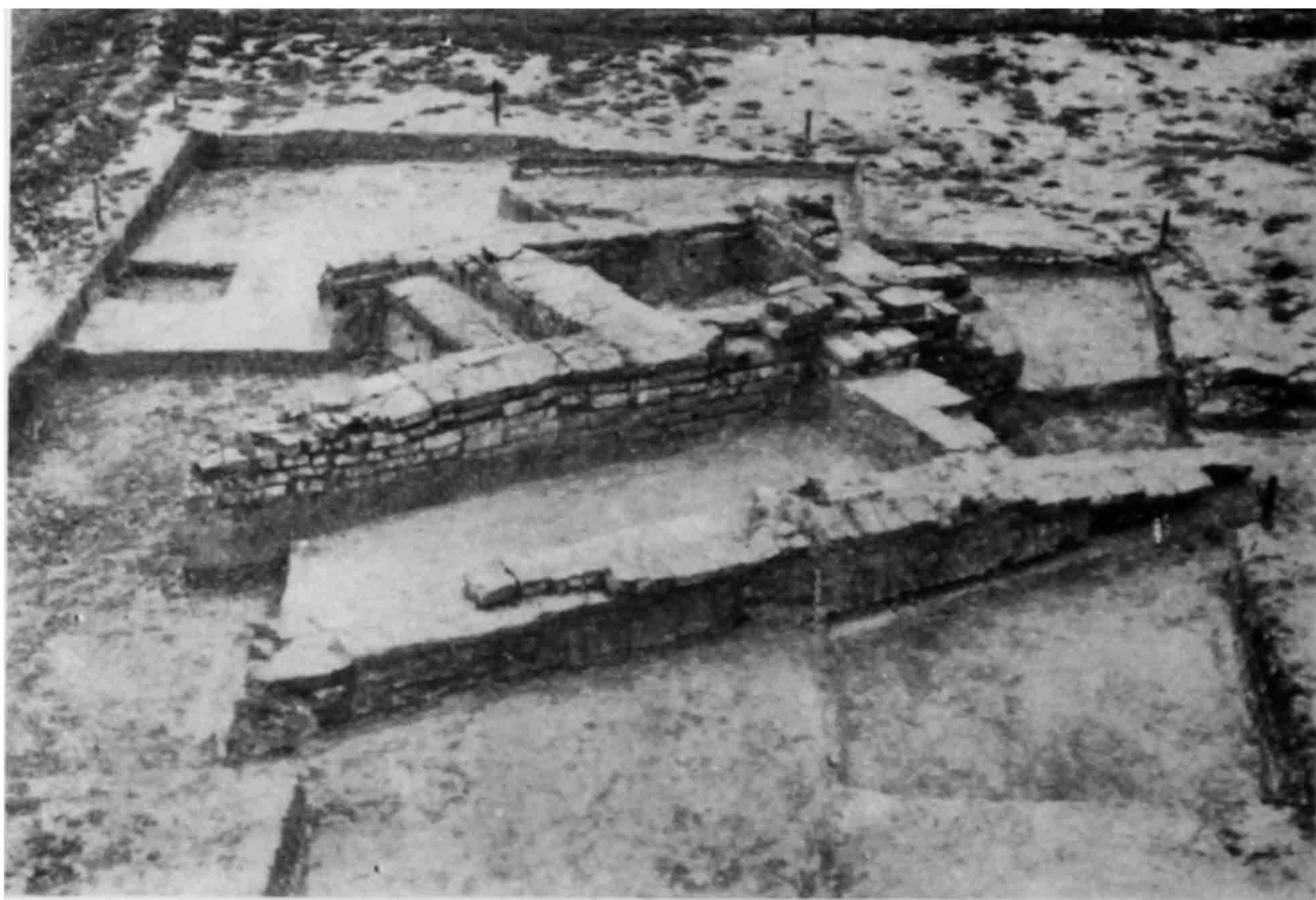
Fig. 87.—Plan of stupa No. 8, Nagarjunakonda.
(Dept. of Archaeology, India.)



Mound KKG 1. before excavation.



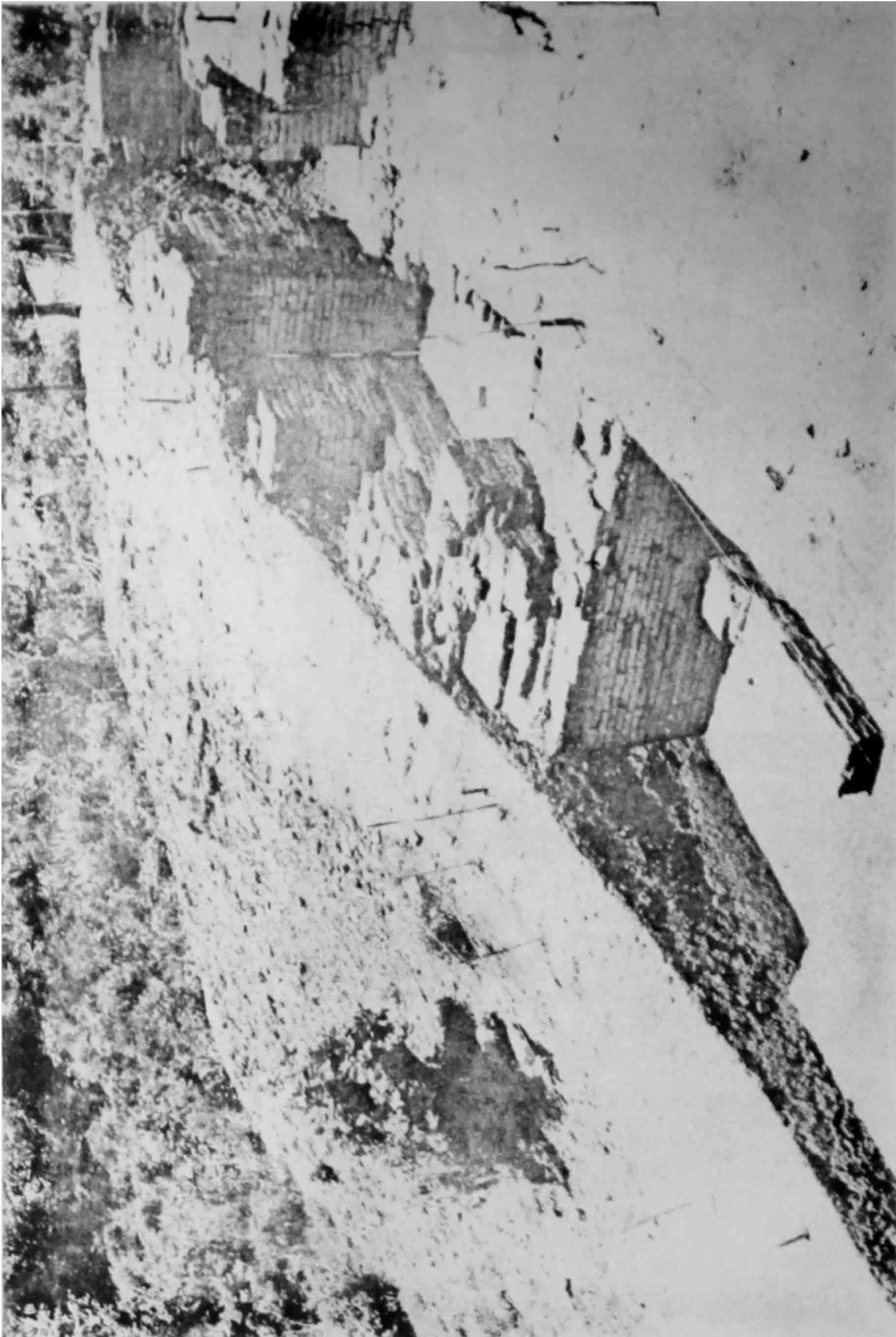
a. Mound KKG 1 during excavation.



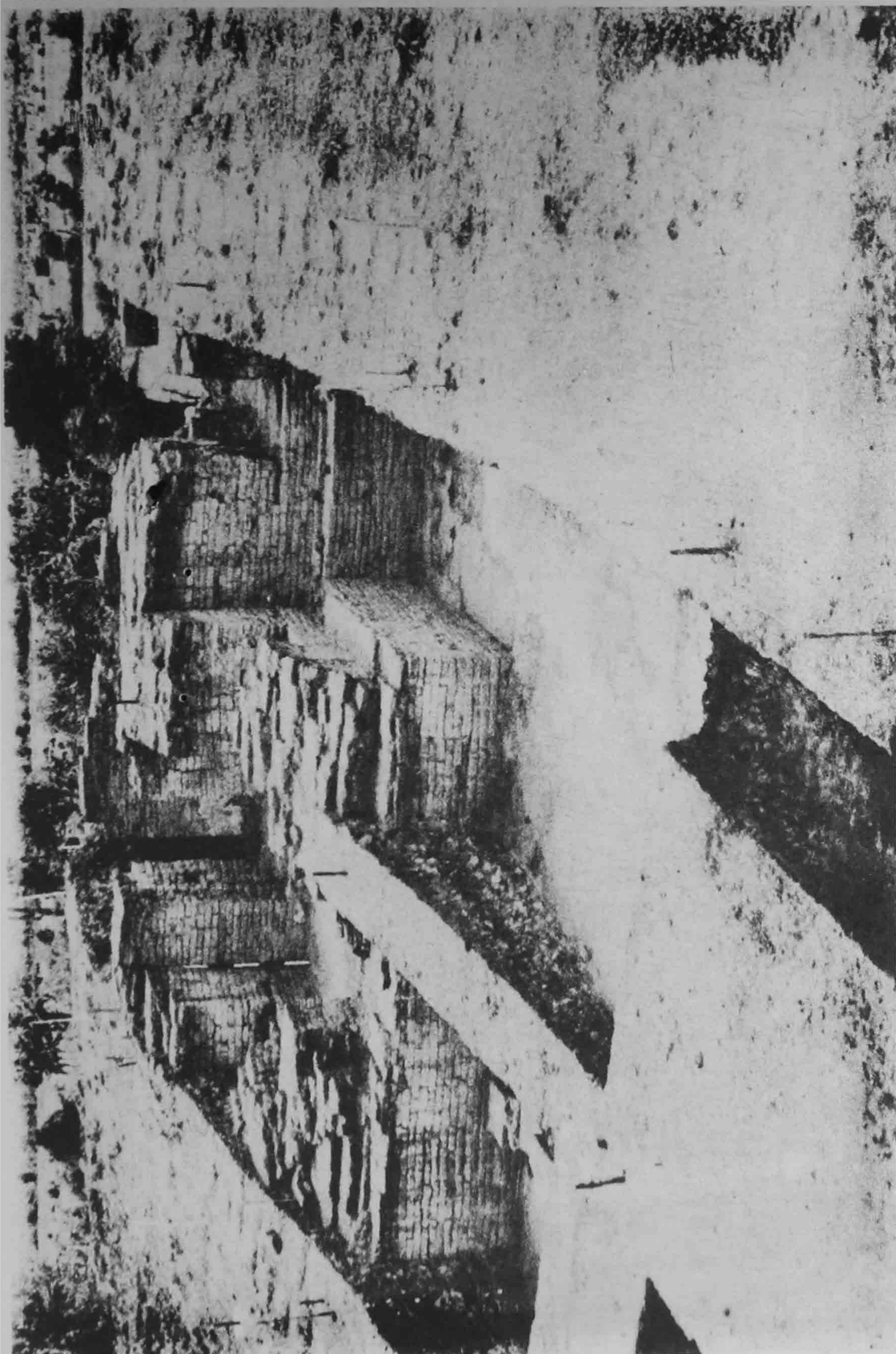
b. Exposed structure at site KKG 1



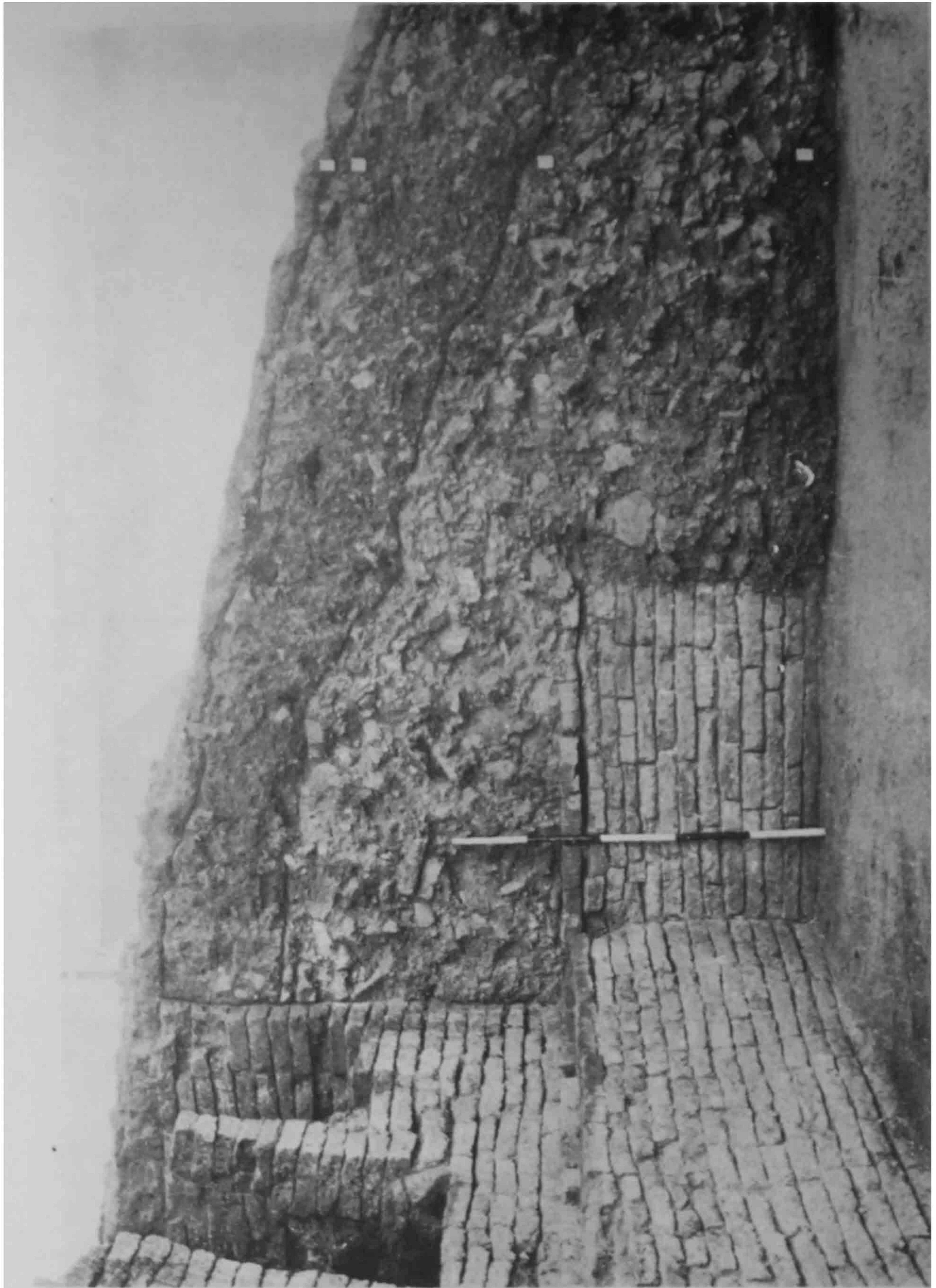
Mound KKG 2 before excavation.



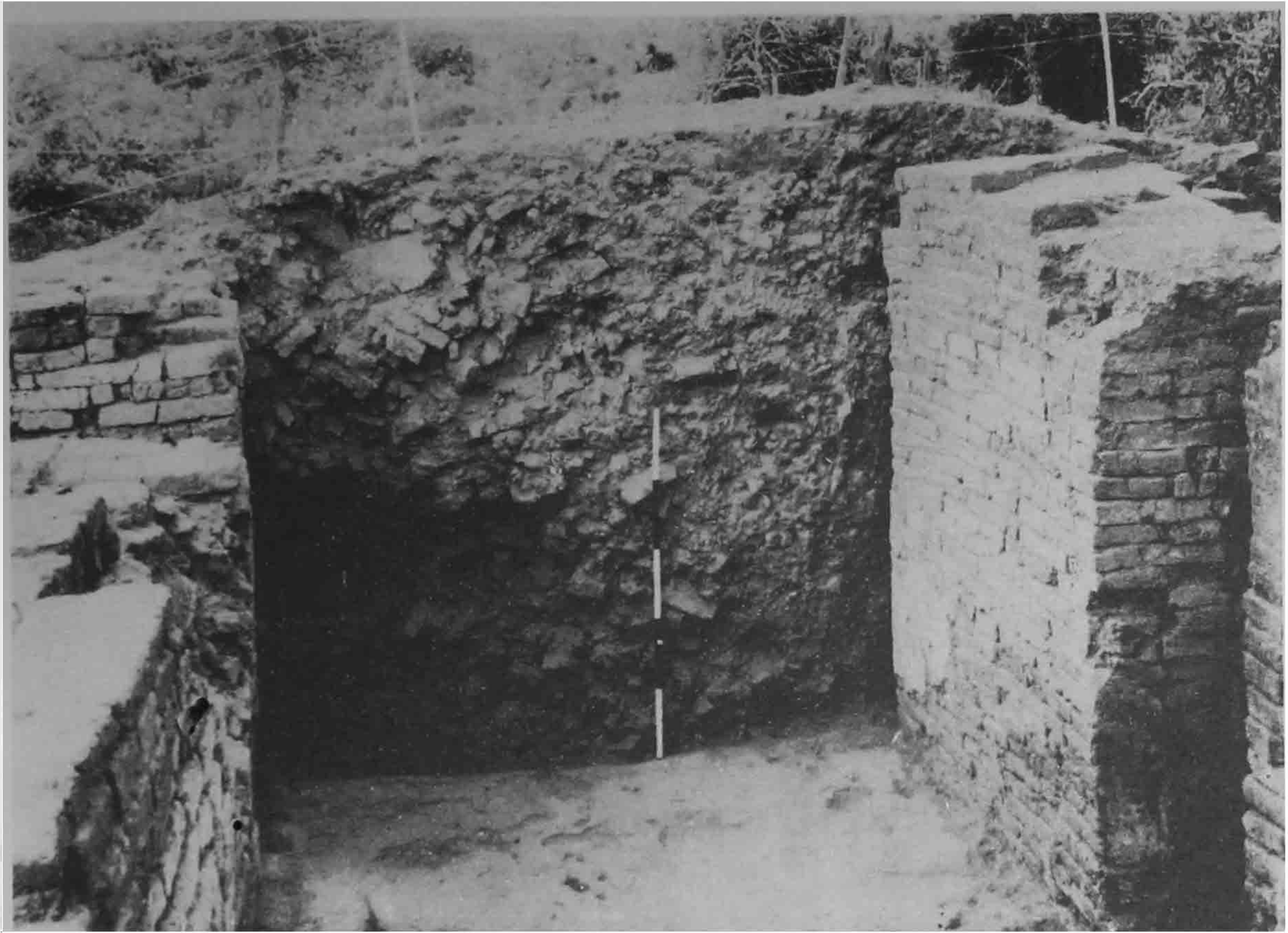
Mound KKG 2 during excavation.



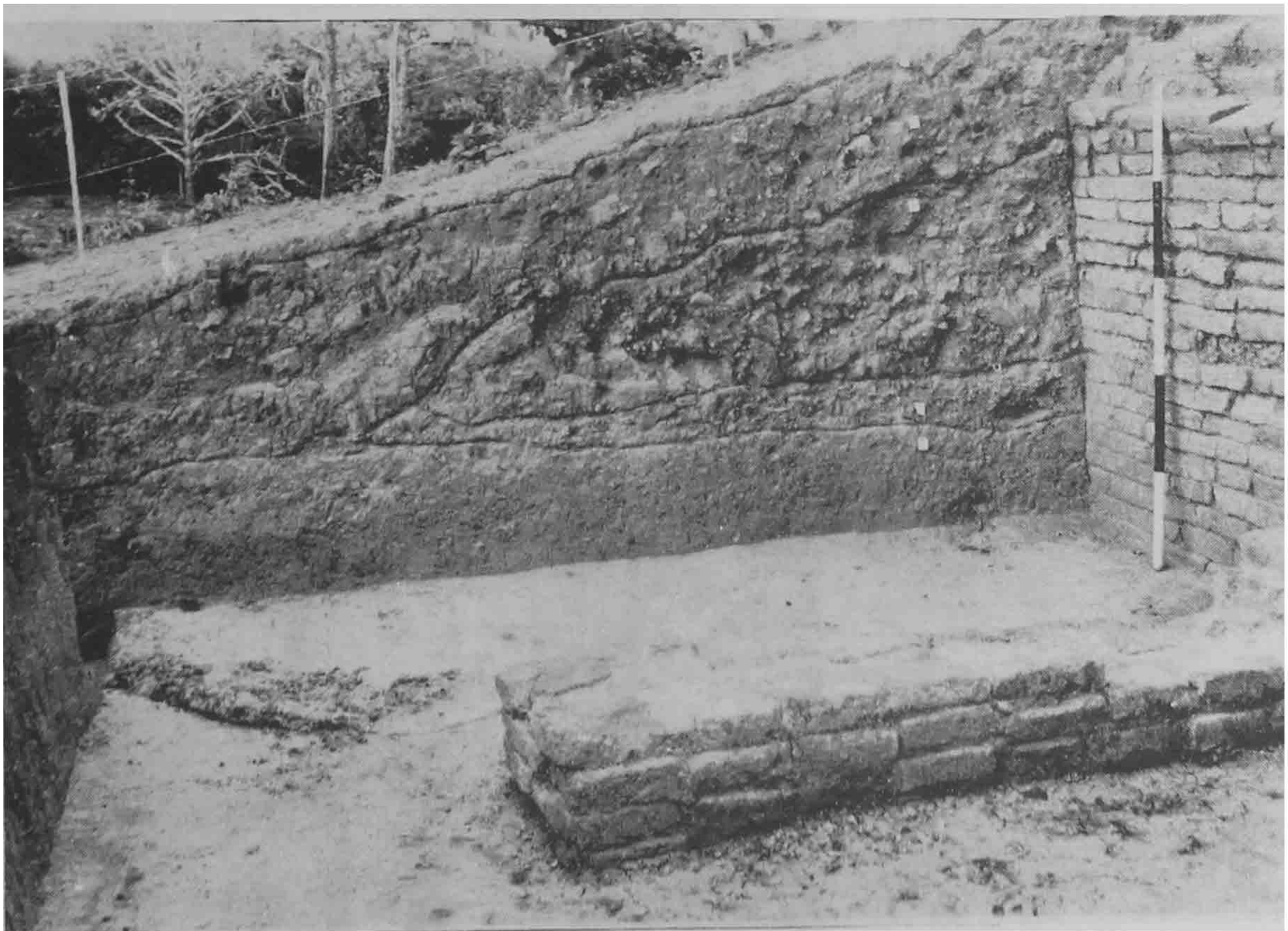
Mound KKG 2 during excavation.



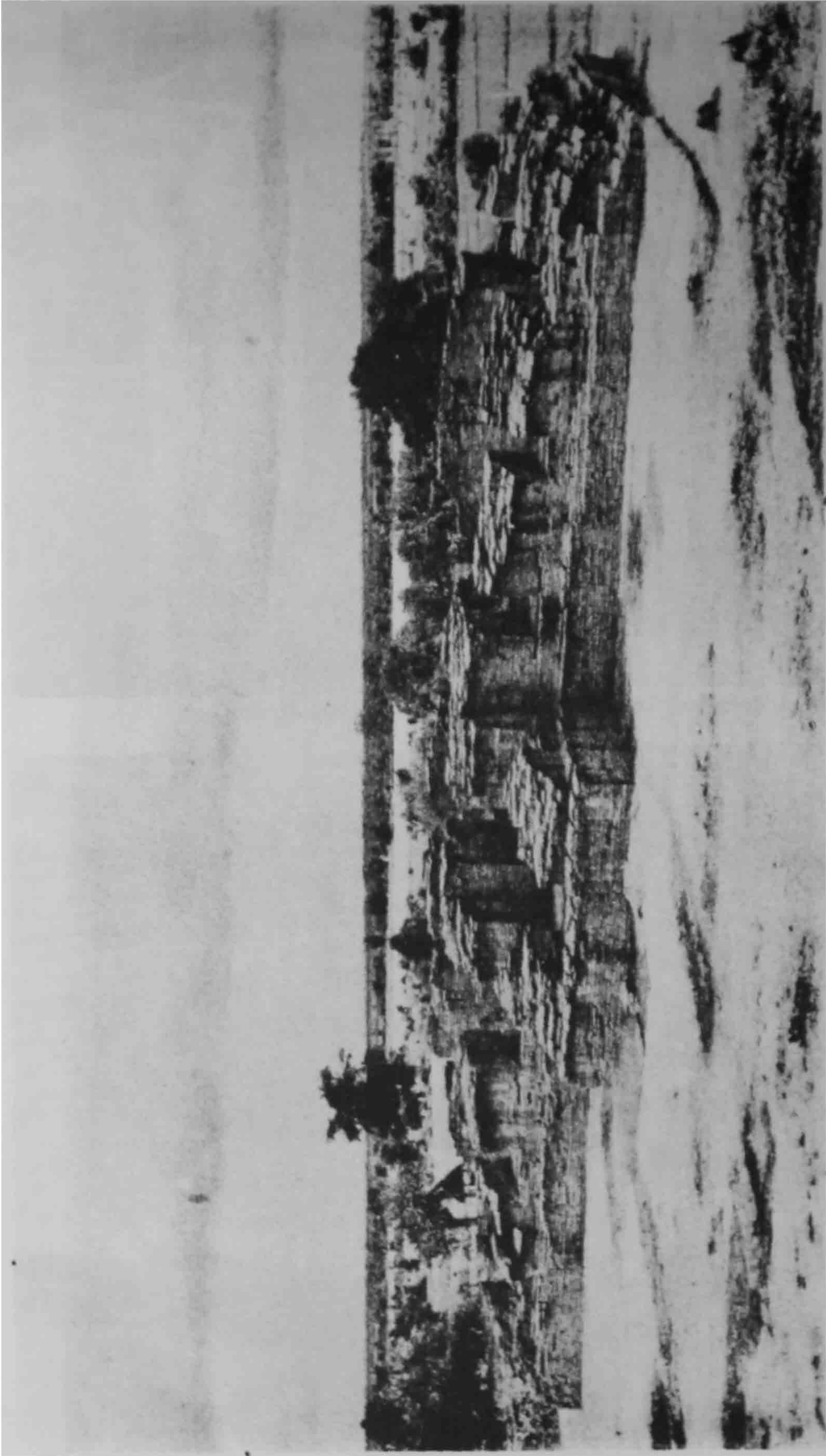
.Section of mound KKG 2.



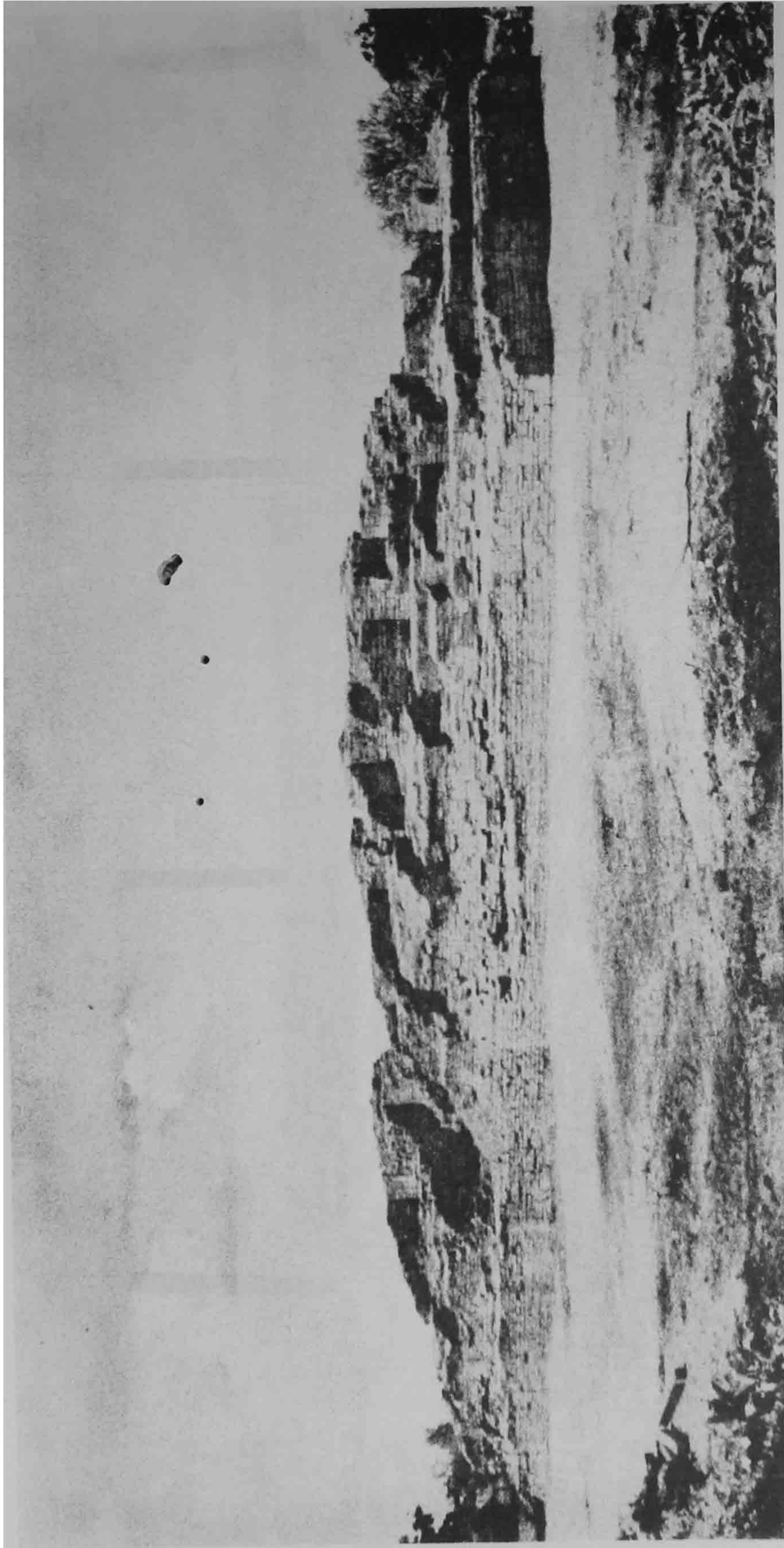
a. Long hall of structure at site KKG 2 during excavation.



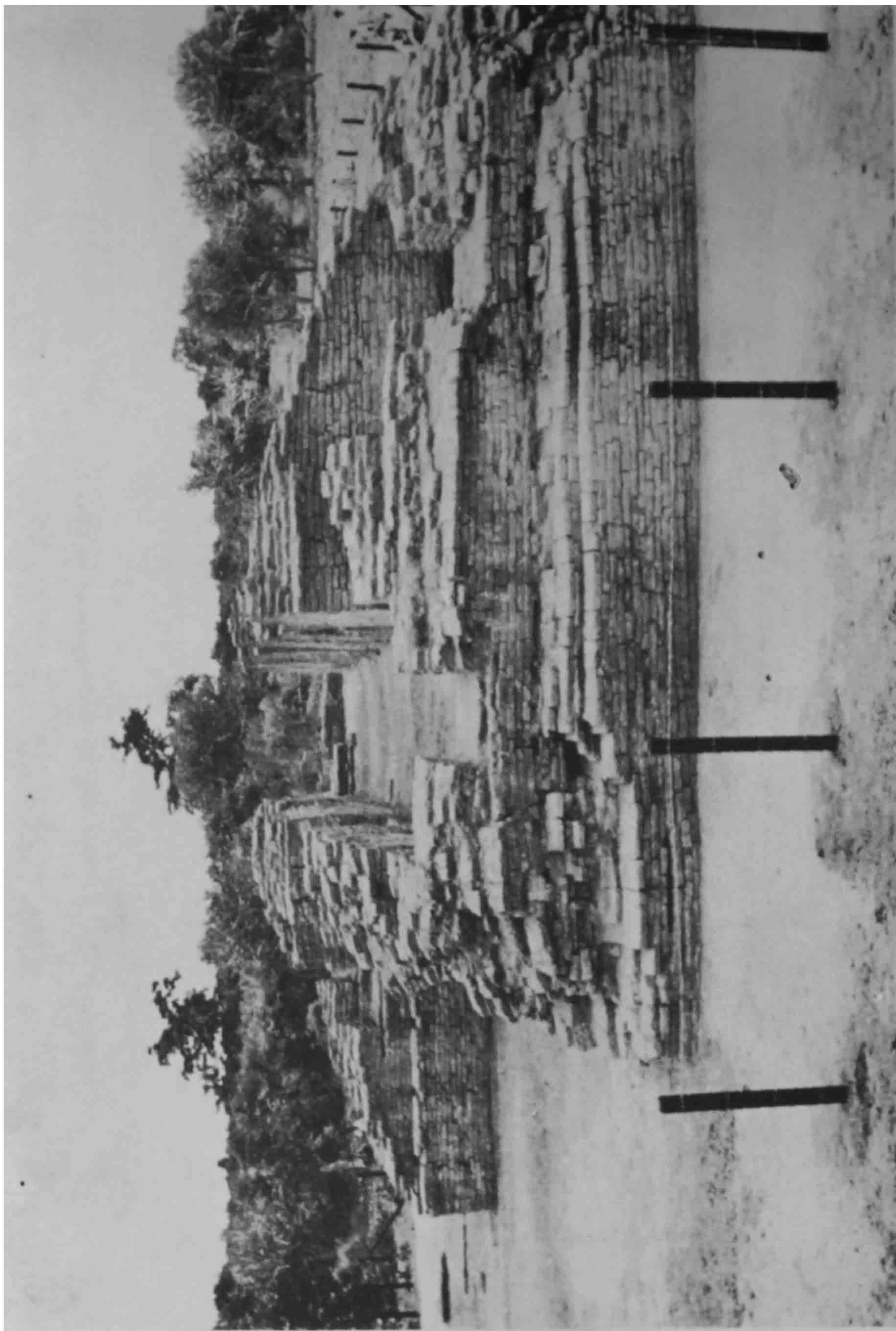
b. Part of section looking south, KKG 2.



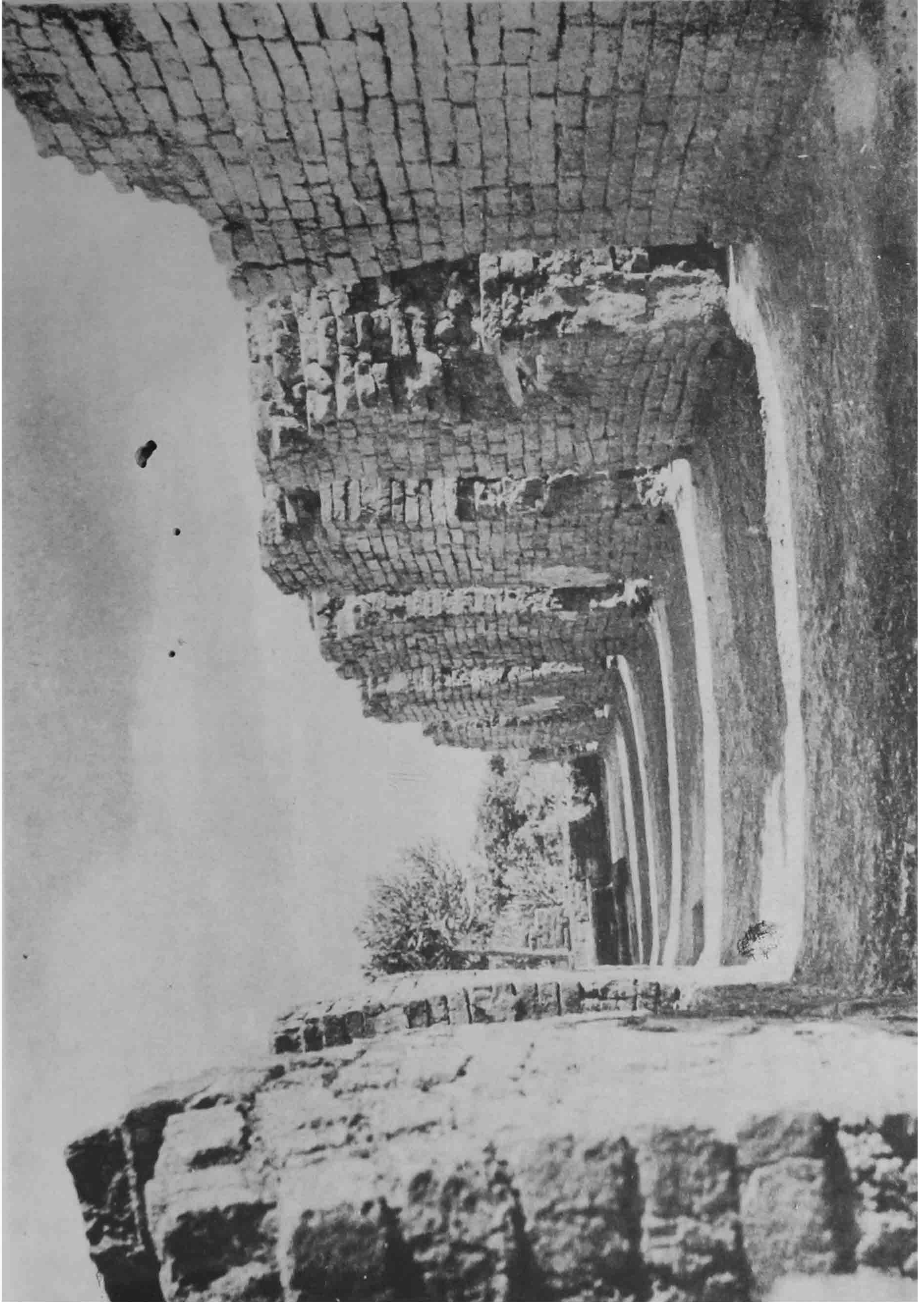
First view of structure exposed at KKG 2.



West view of structure exposed at KKG 2.



North view of structure at KKG 2, before conservation.



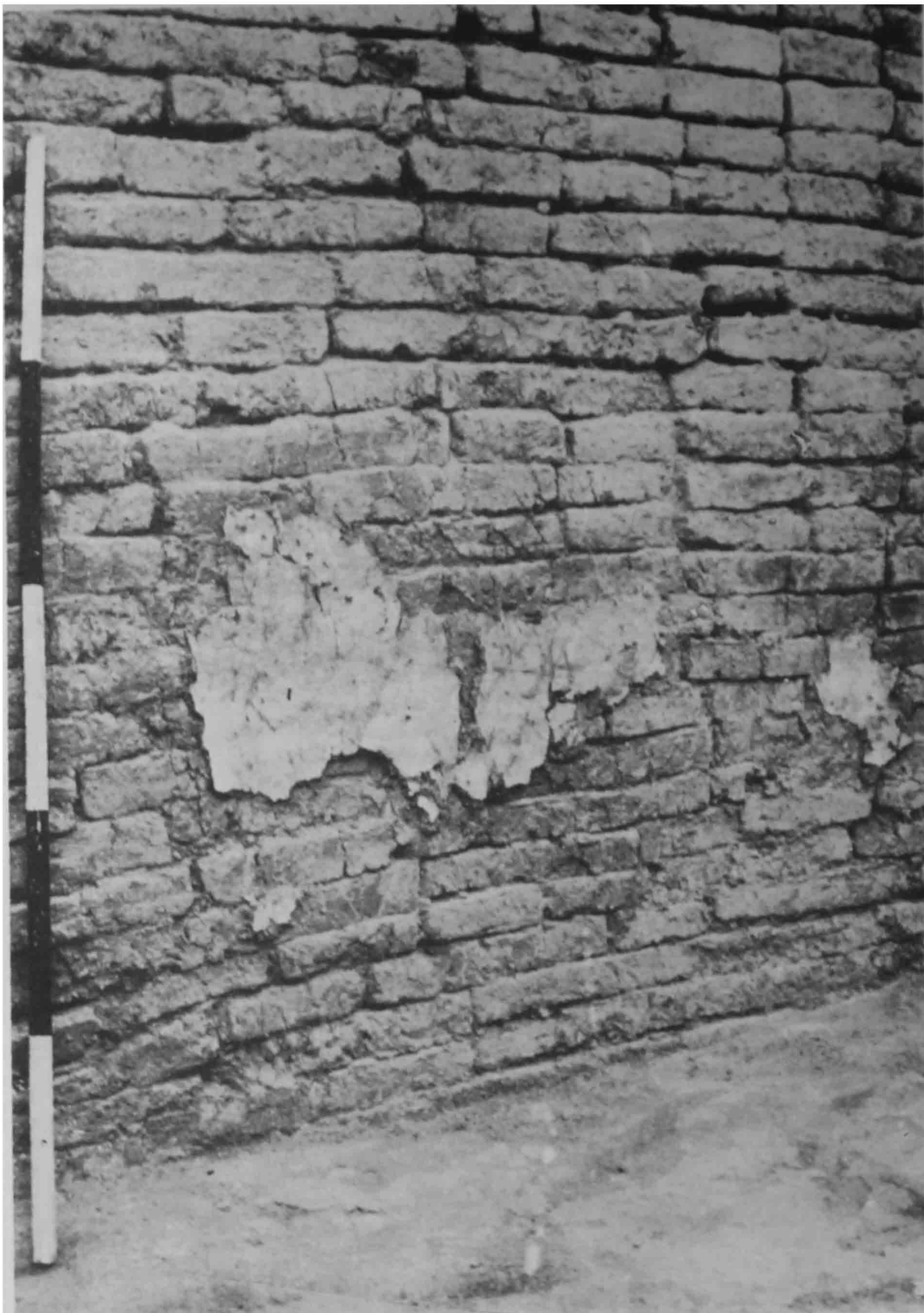
Long hall of structure at KKG 2.



Platform at the southern end of long hall, KKG 2.



Two adjacent walls of structure showing the weak bonds of brickwork, KKG 2.



Remains of plaster on wall, KKG 2.



One of the windows in the structure, KKG 2.



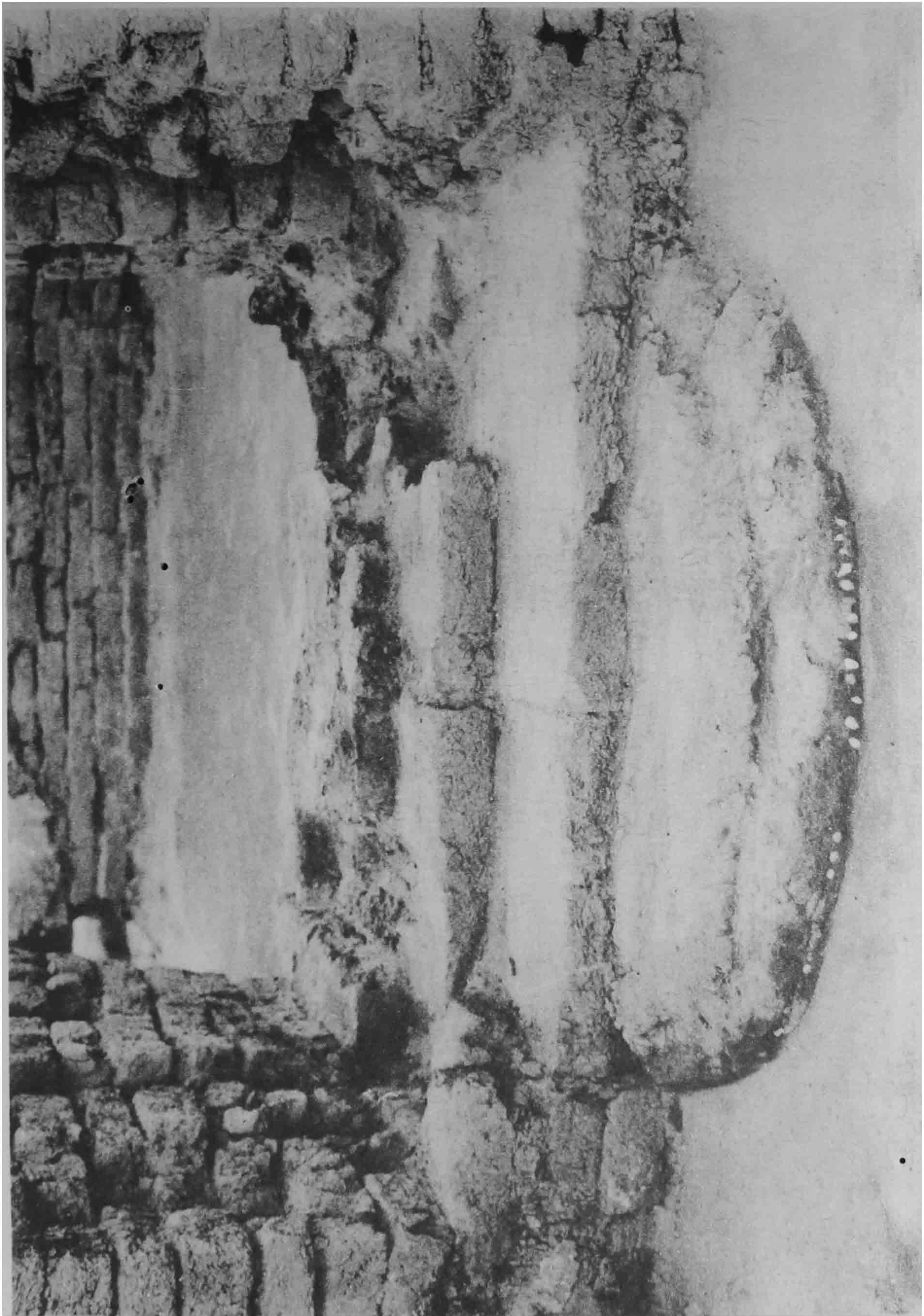
Small rooms in the structure, KKG 2.



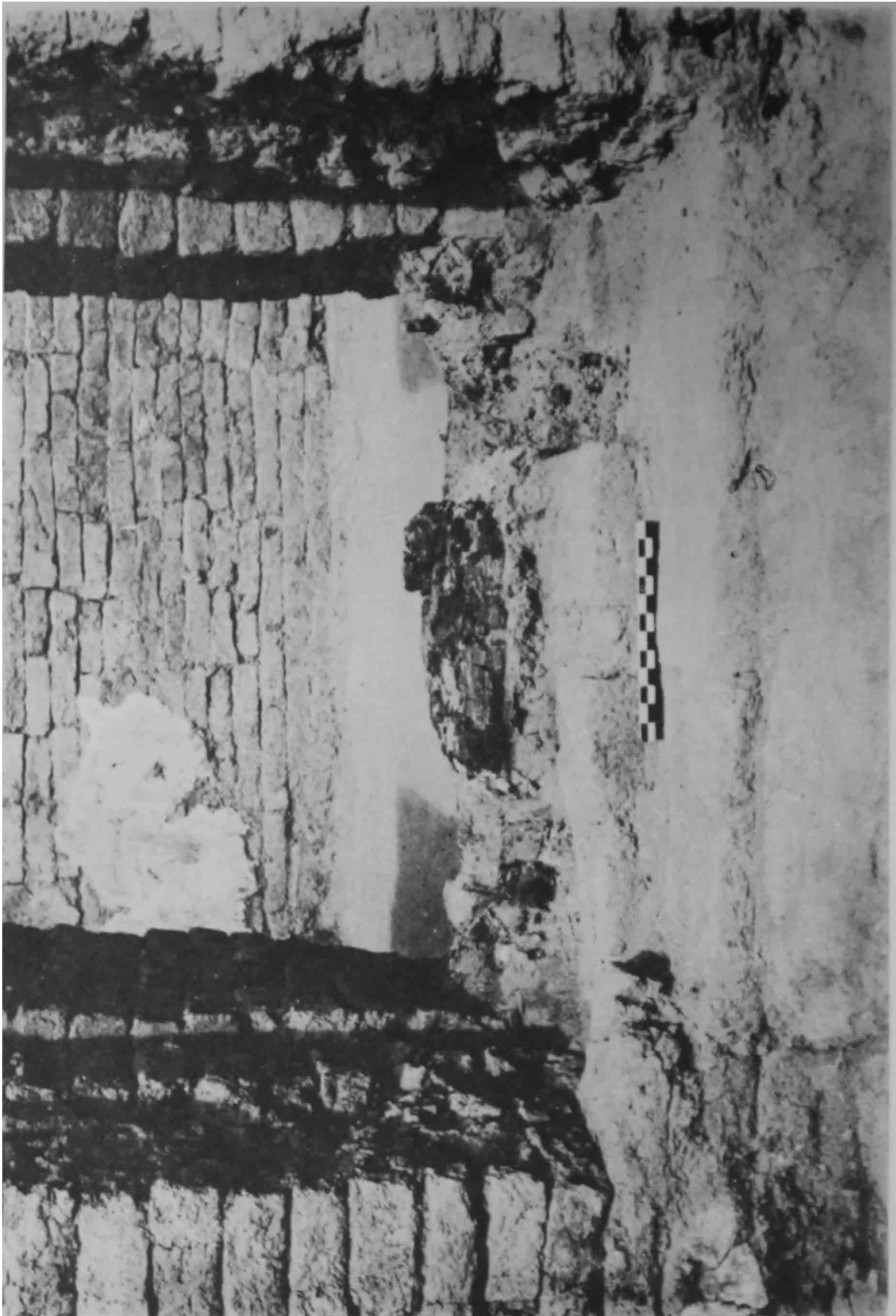
Doorway, Room No. 6, showing the square arch. KKG 2.



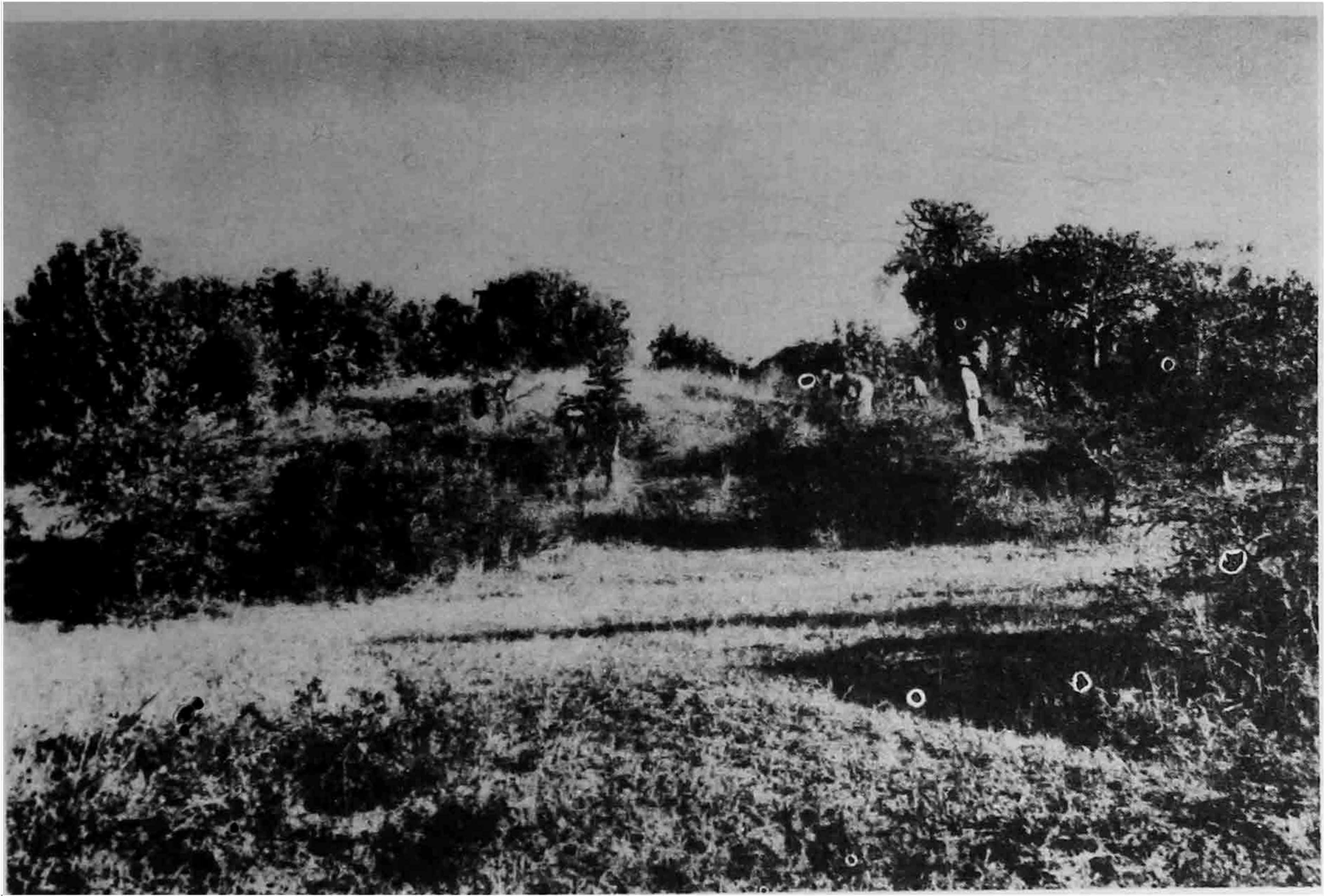
Entrance to Room No. 8. Showing the moonstone. KKG 2.



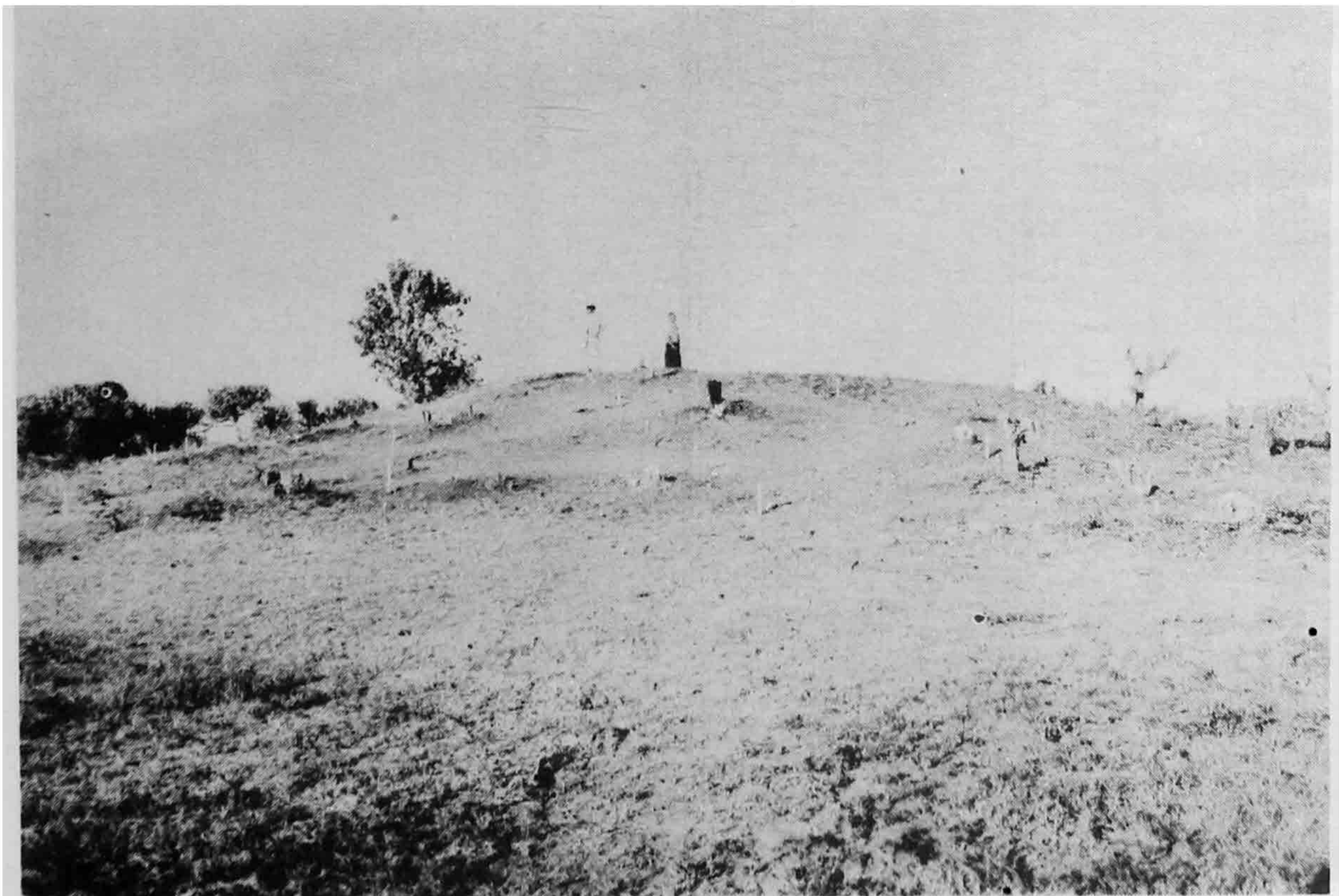
Menstone decorated with pebbles. KKG 2.



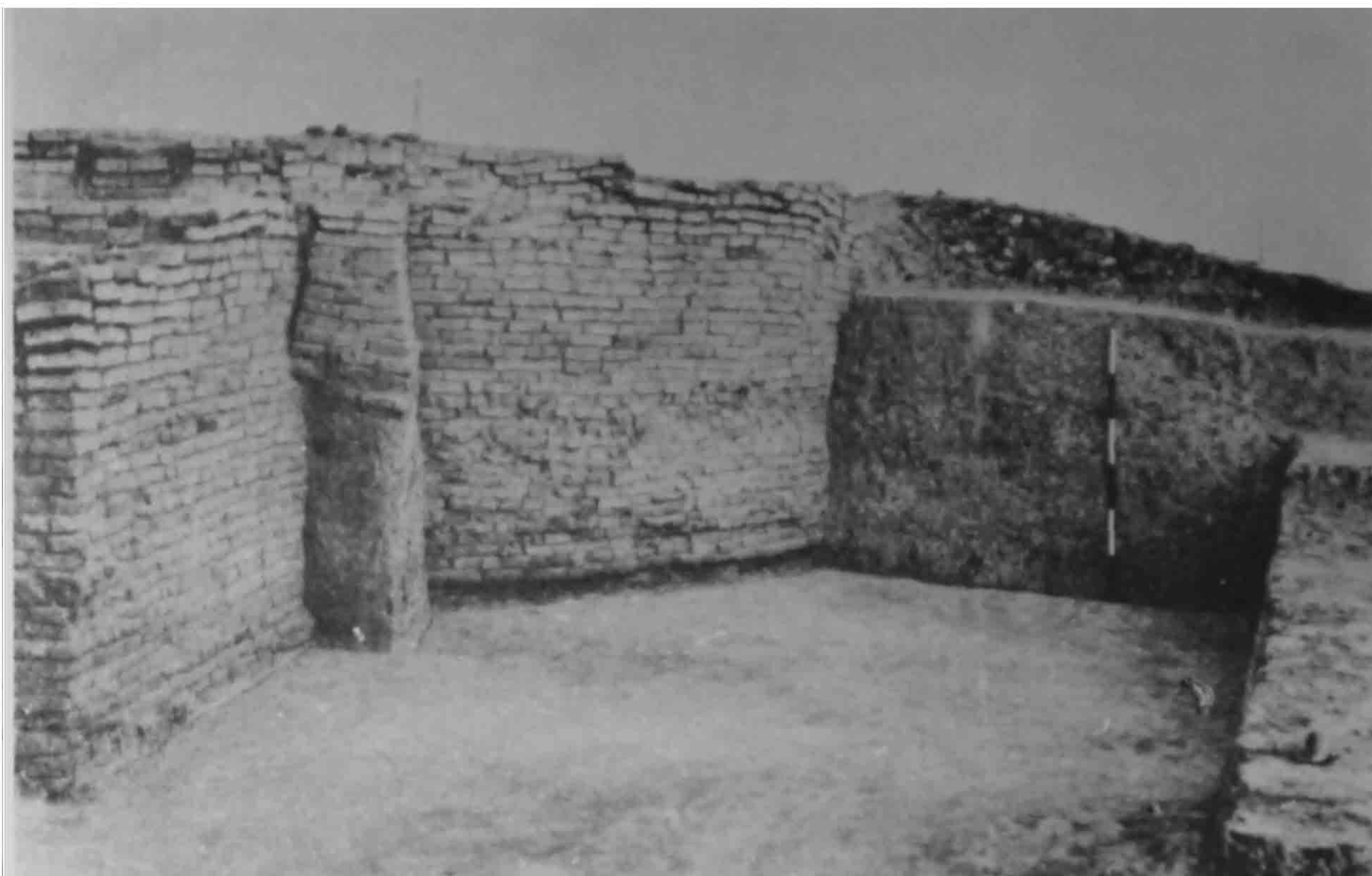
Charred door-sill and whitewashed wall-plaster in the background, KKG 2.



a. Site KKG 3 before clearing.



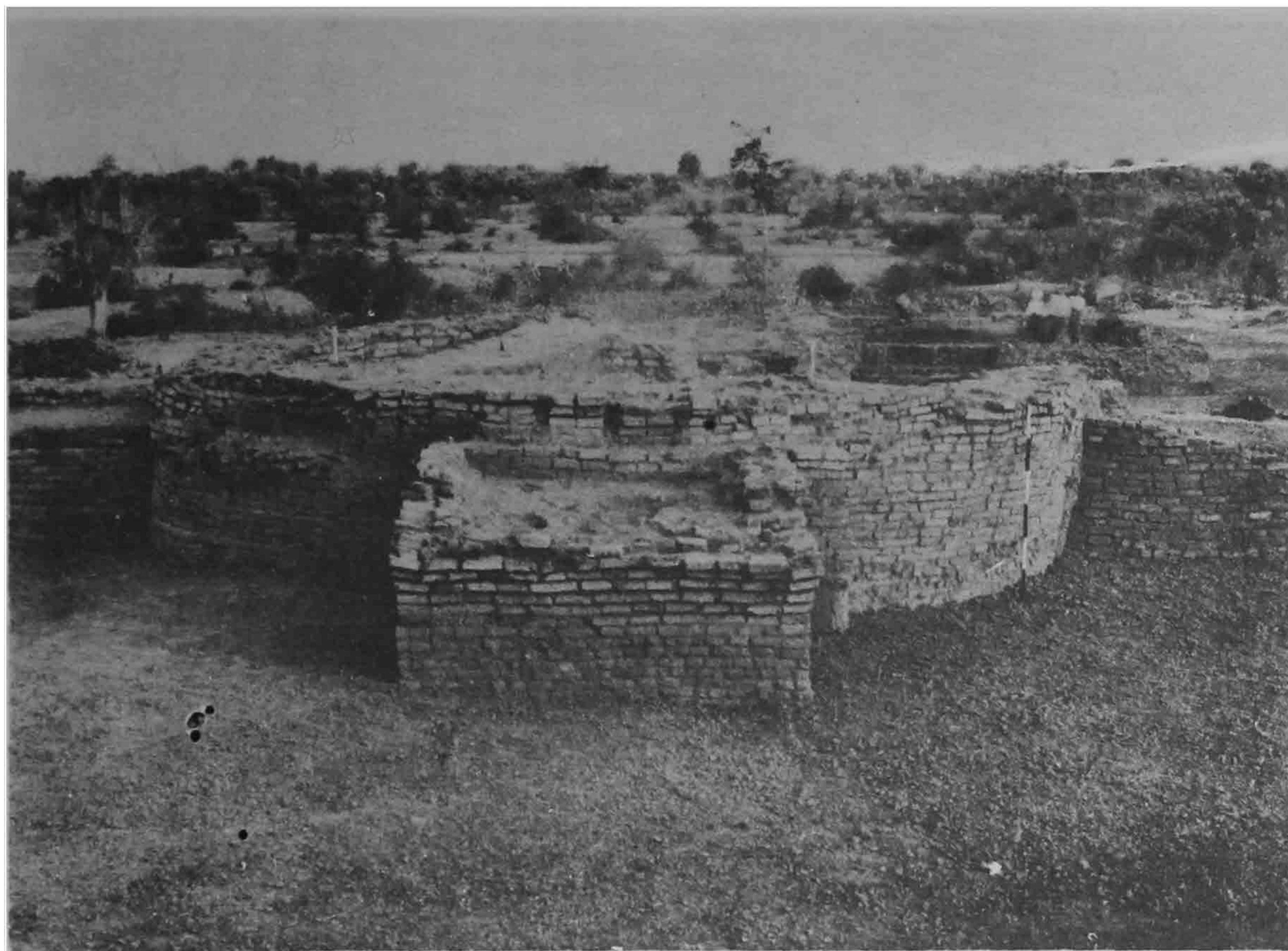
b. Site KKG 3 after clearing.



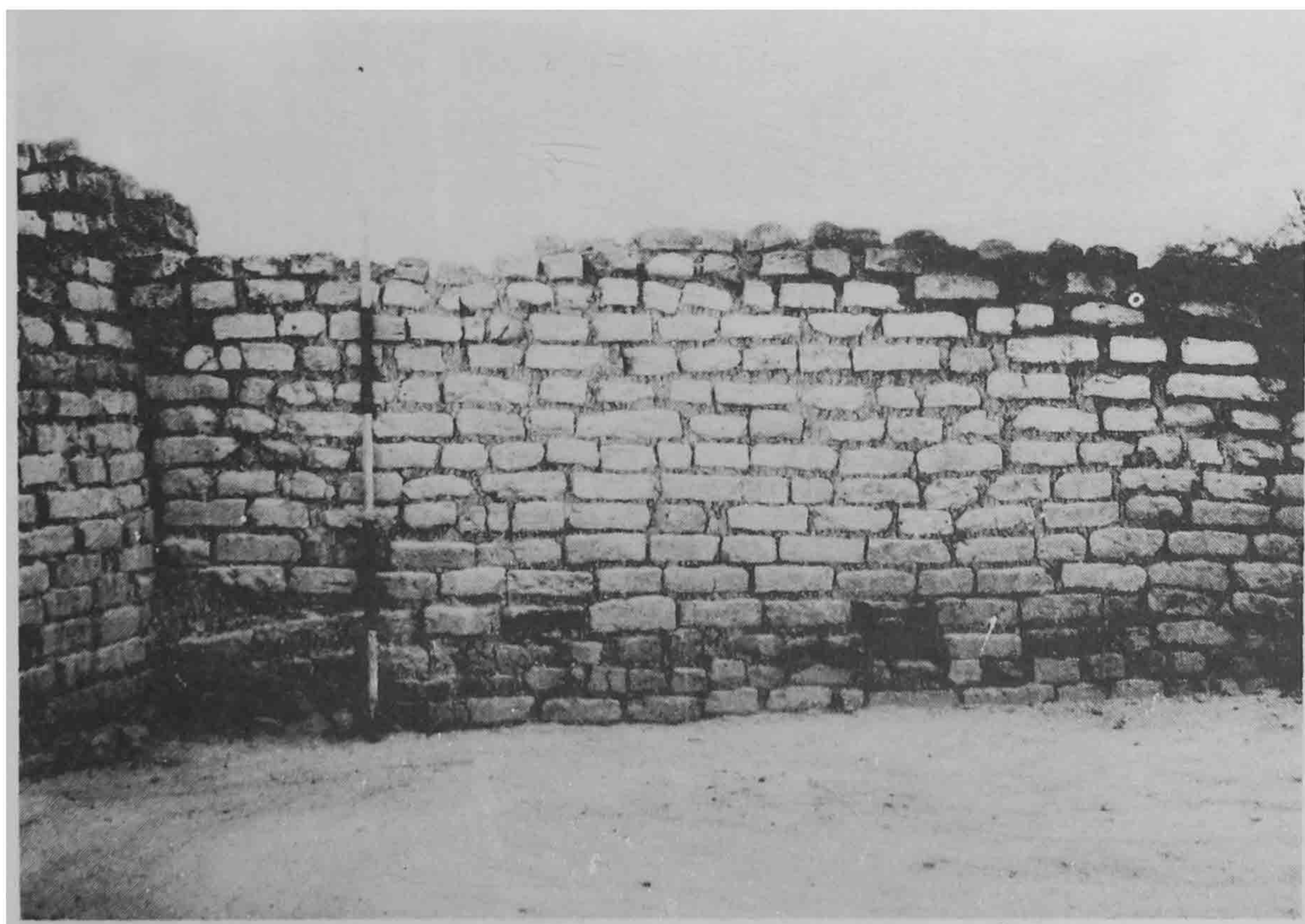
a. Part of structure showing two phases of construction, KKG 3.



b. Part of structure showing earth-filling around it, KKG 3.



a. Close view of structure showing rectangular projections. KKG 3.



b. Close view of projection showing two phases of construction, KKG 3.



a. Steps with two concentric retaining walls partially exposed at KKG 3.



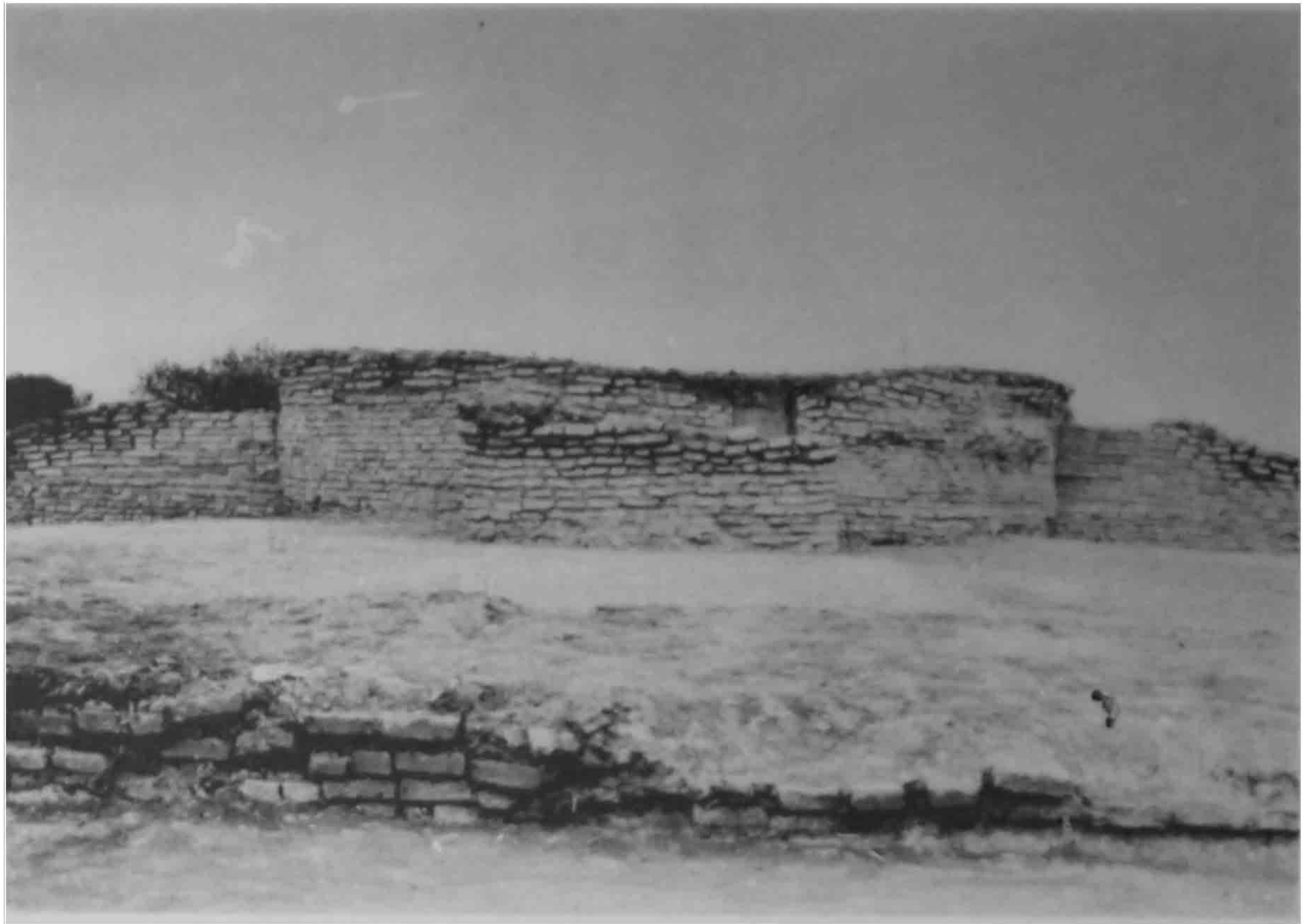
b. Distant view of structure partially exposed, KKG 3.



a. Part of the main section of site KKG 3.



b. Circumambulatory path between the concentric retaining walls, KKG 3.



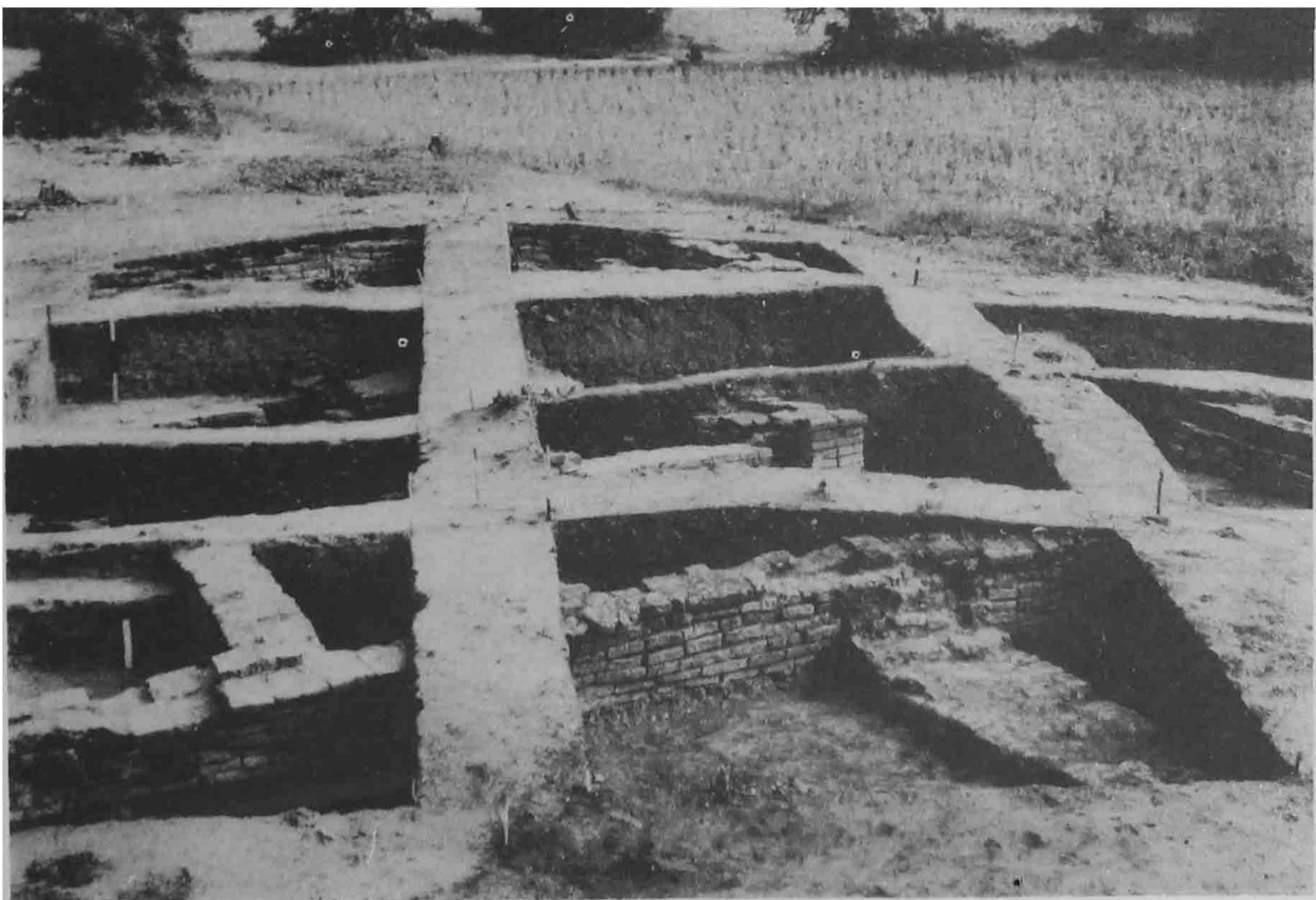
a. Close view of stupa, KKG 3.



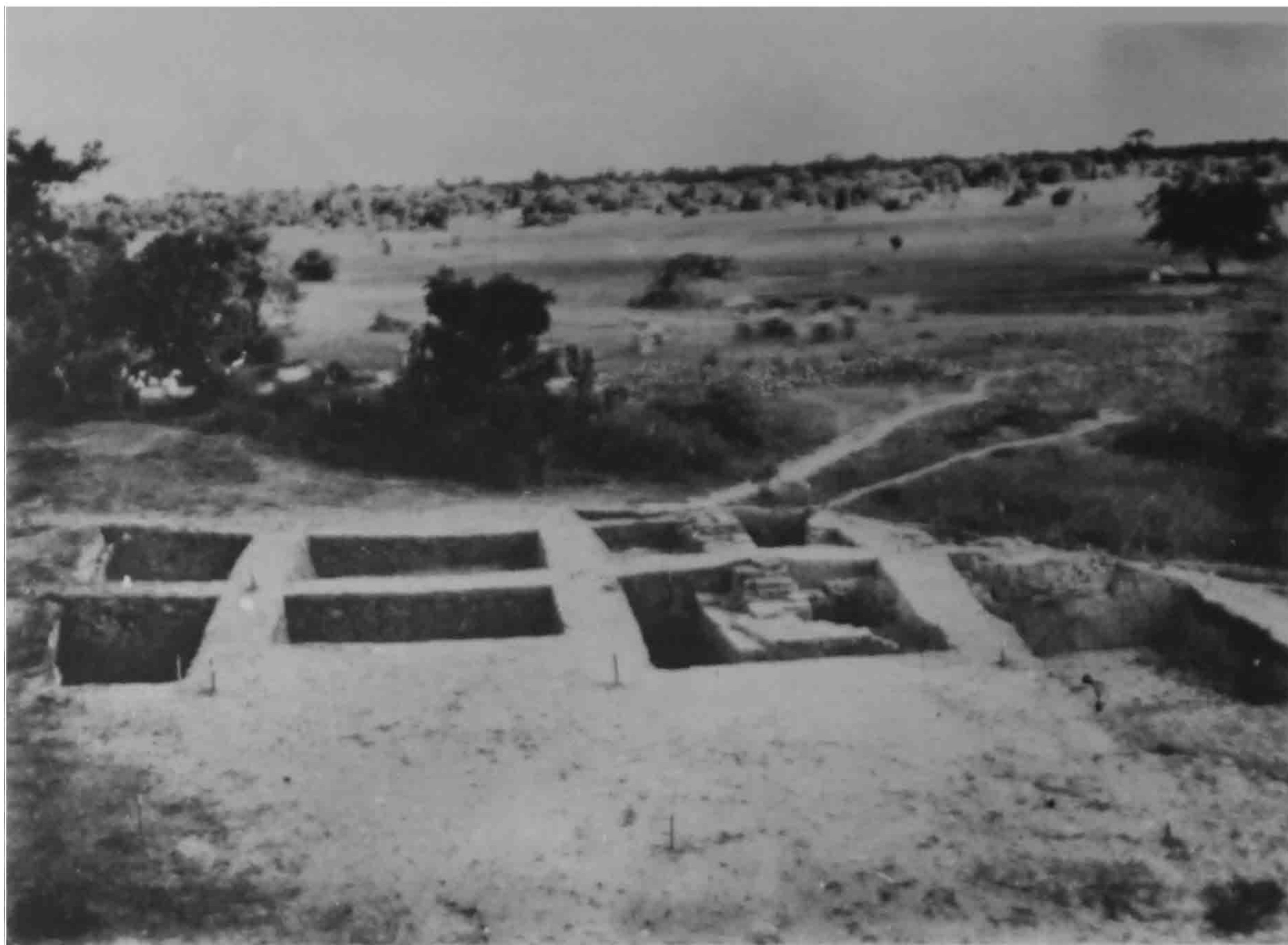
b. Stupa fully exposed, KKG 3.



a. Partially exposed structure at KKG 4.



b. Partially exposed structure at KKG 5.



a. Site KKG 6 during excavation.



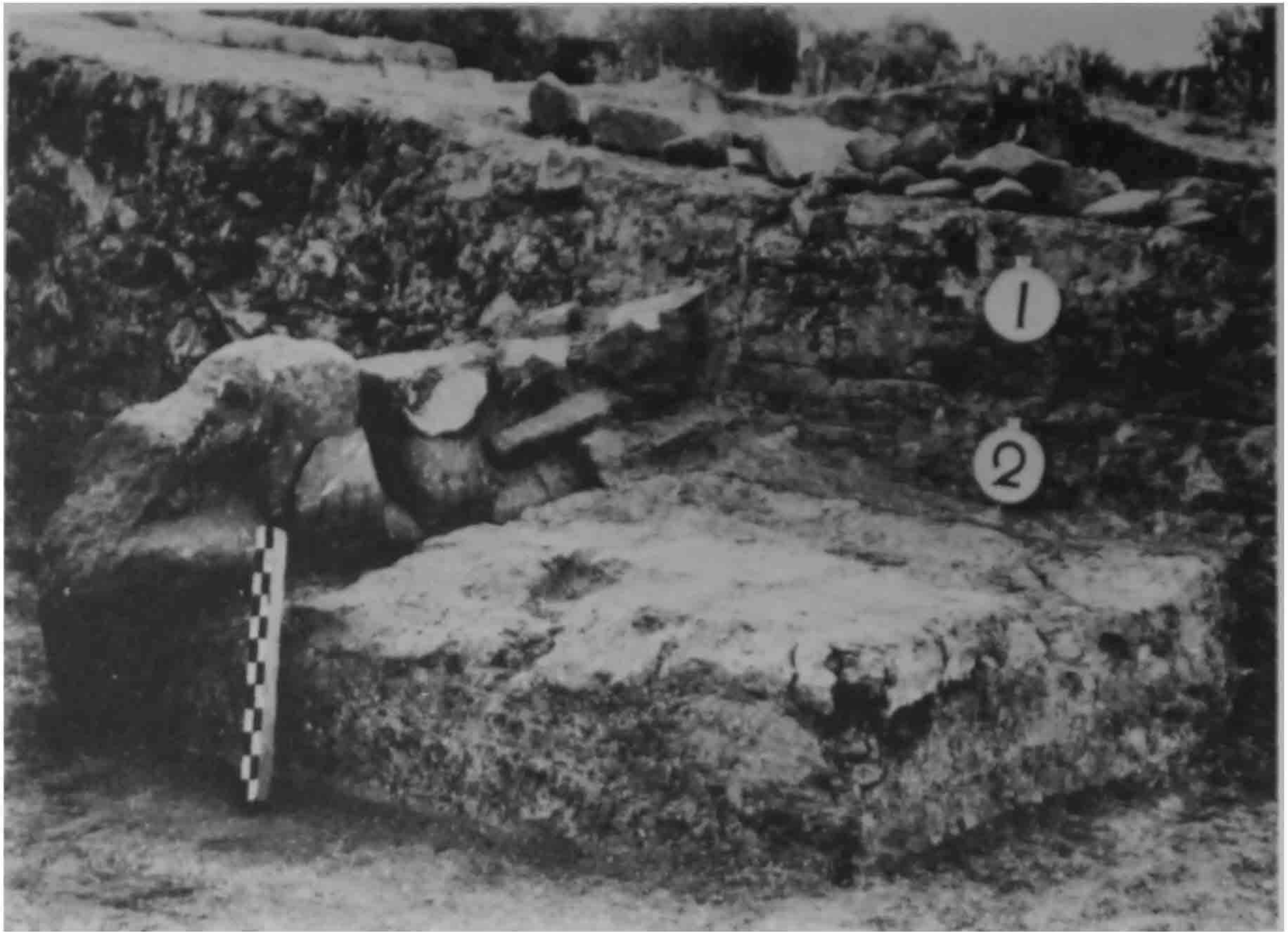
b. Site KKG 7 during excavation.



a. Gateway exposed at site KKG 8, west view.



b. Gateway exposed at site KKG 8, east view.



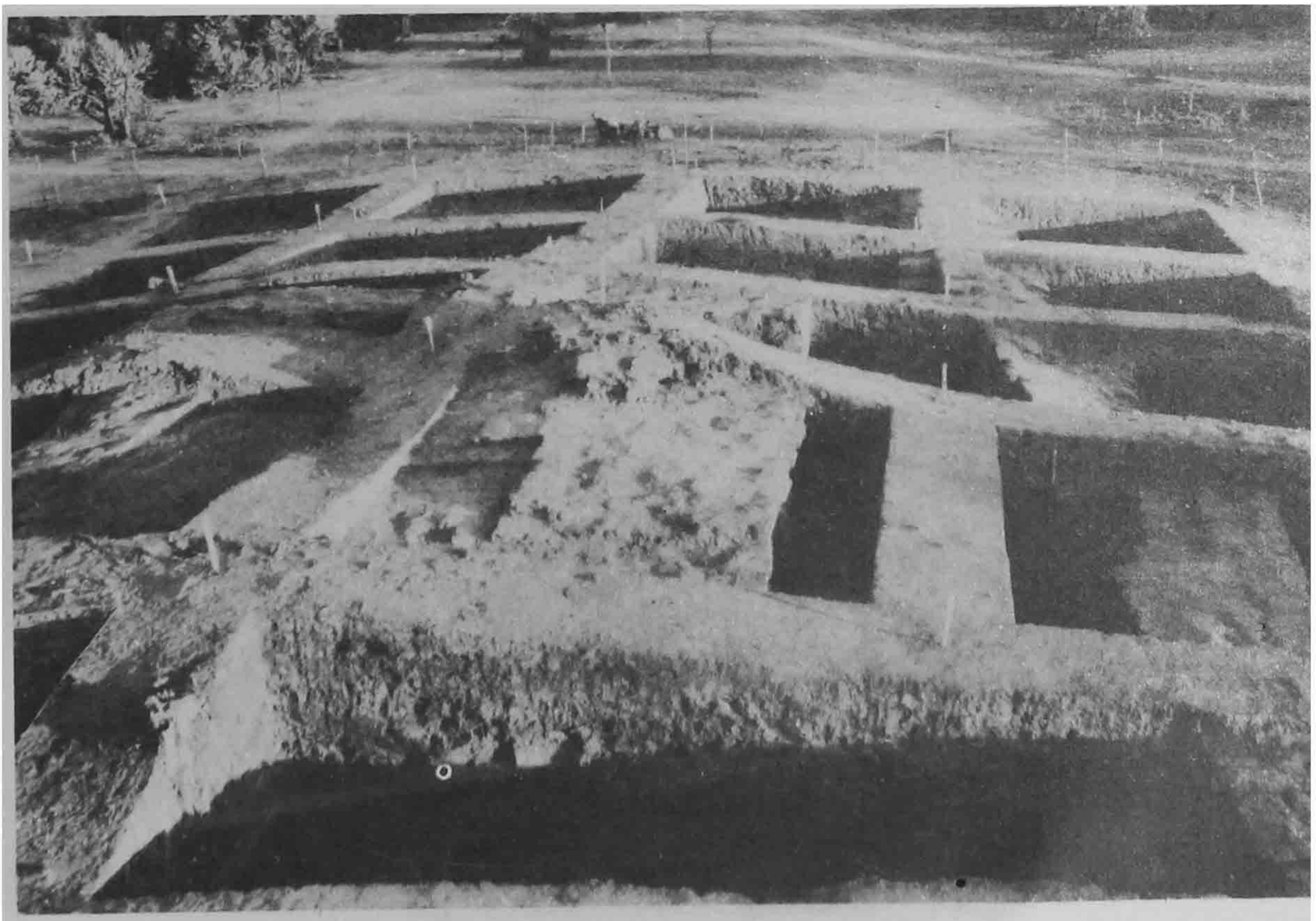
a. Remains of a dvarapala stone slab at the entrance of gateway, KKG 8 : northern stone.



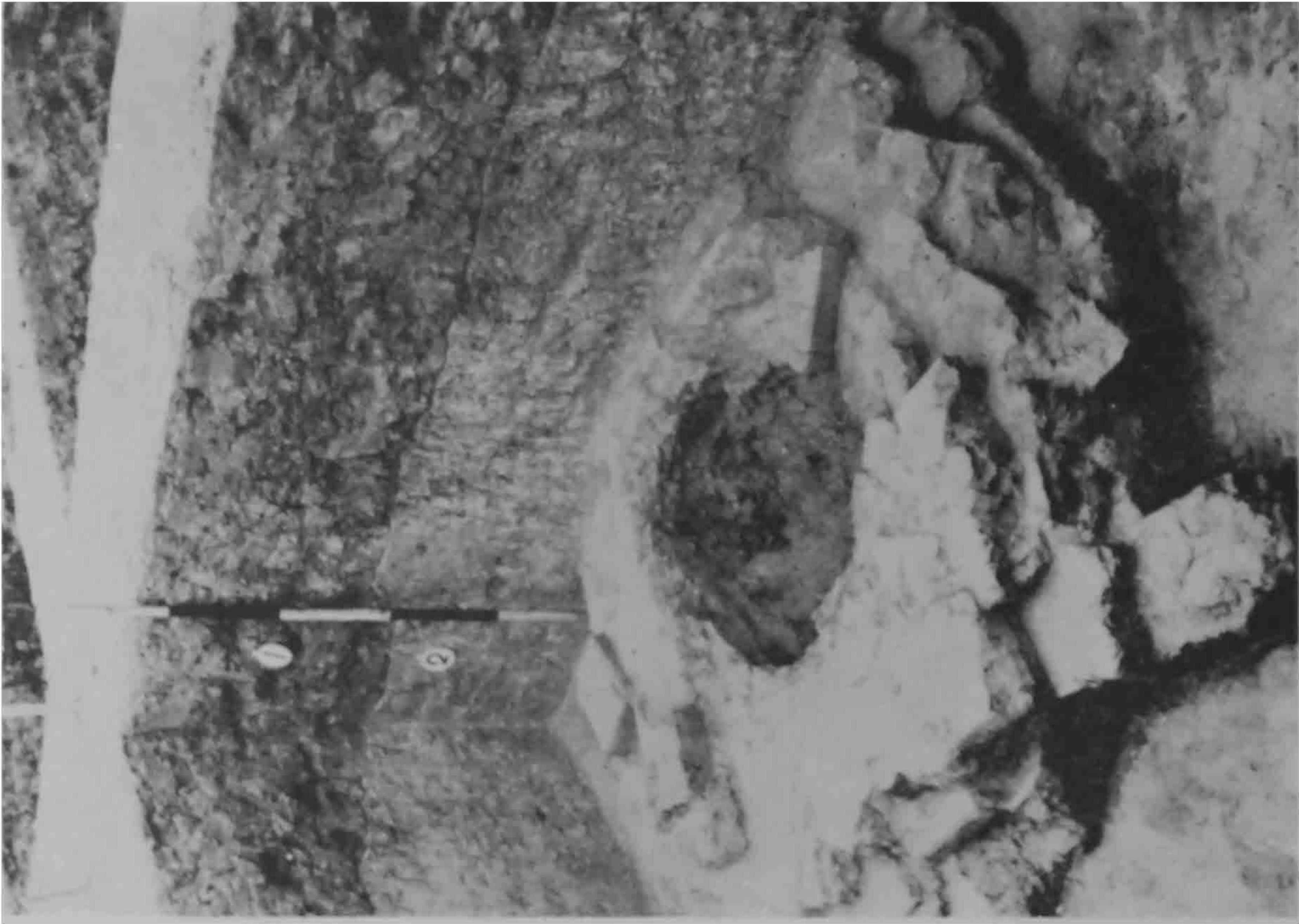
b. Remains of a dvarapala stone slab at the entrance of gateway, KKG 8 : southern stone.



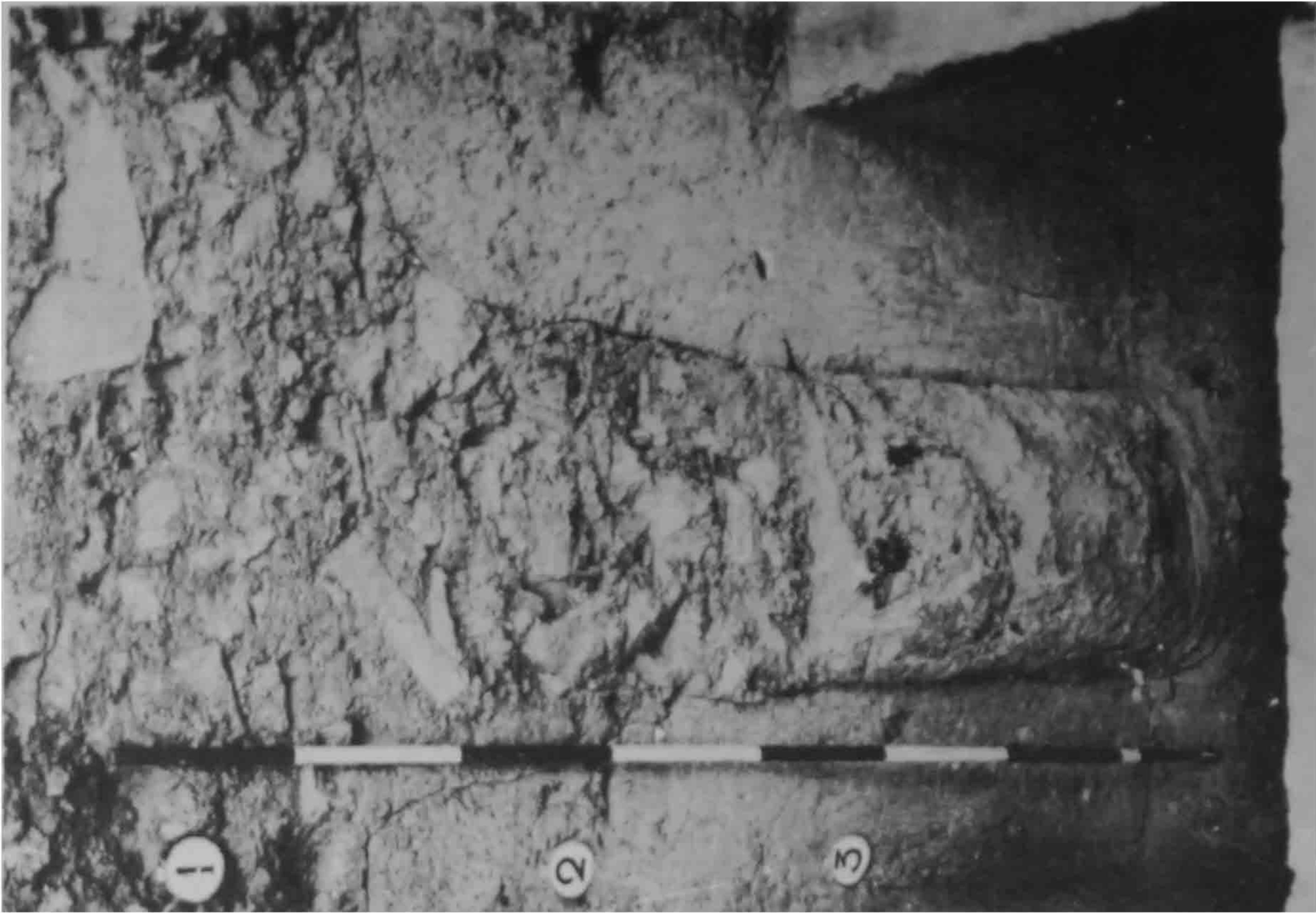
a. South view of gateway of Palace enclosure, KKG 8.



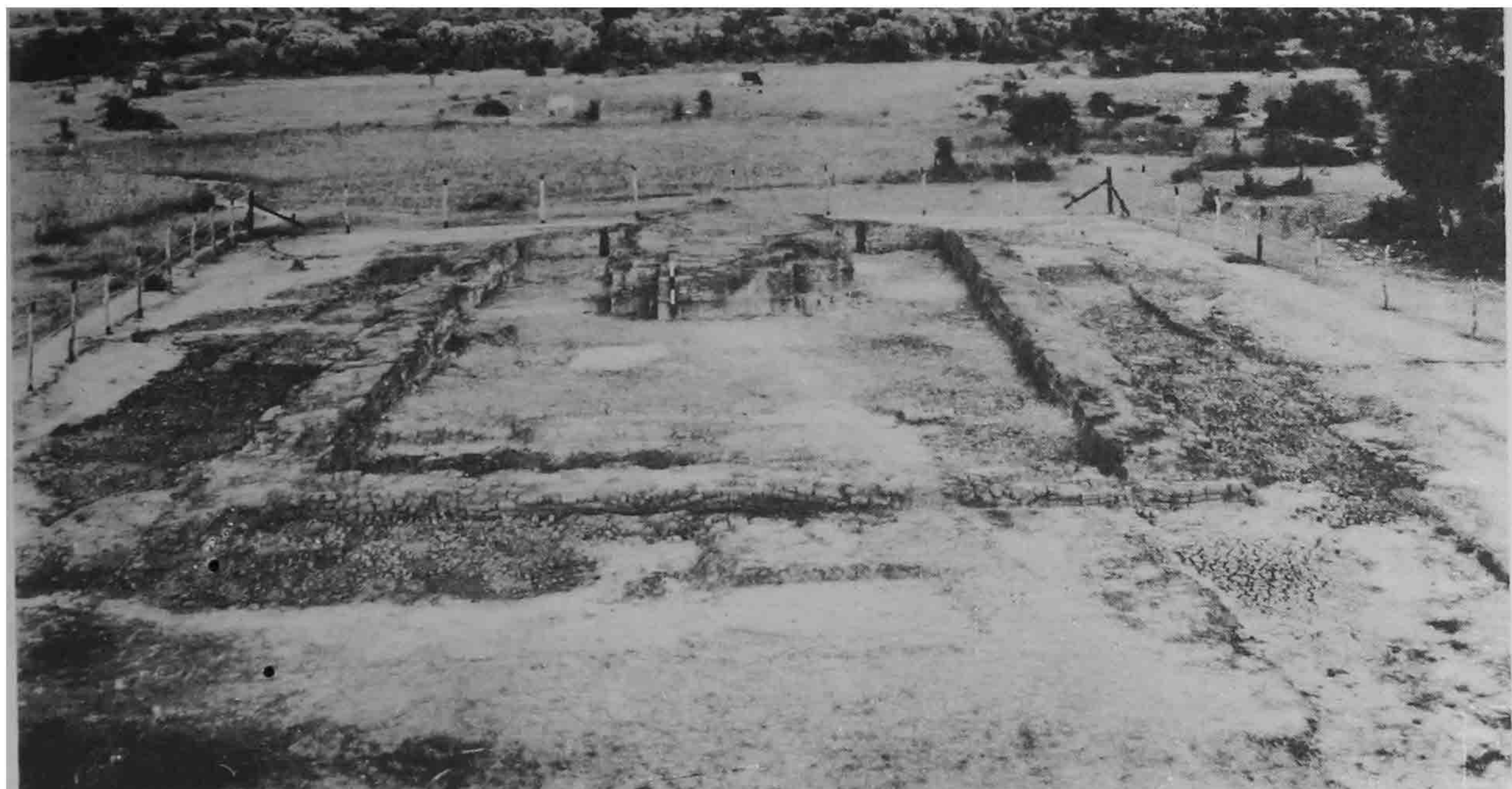
b. Mound KKG 9 during excavation.



a. Brick basement of wooden pillar within the structure. KKG 9.



b. Section showing post-hole filled by debris. KKG 9.



a. Remains of a structure exposed at KKG 11.



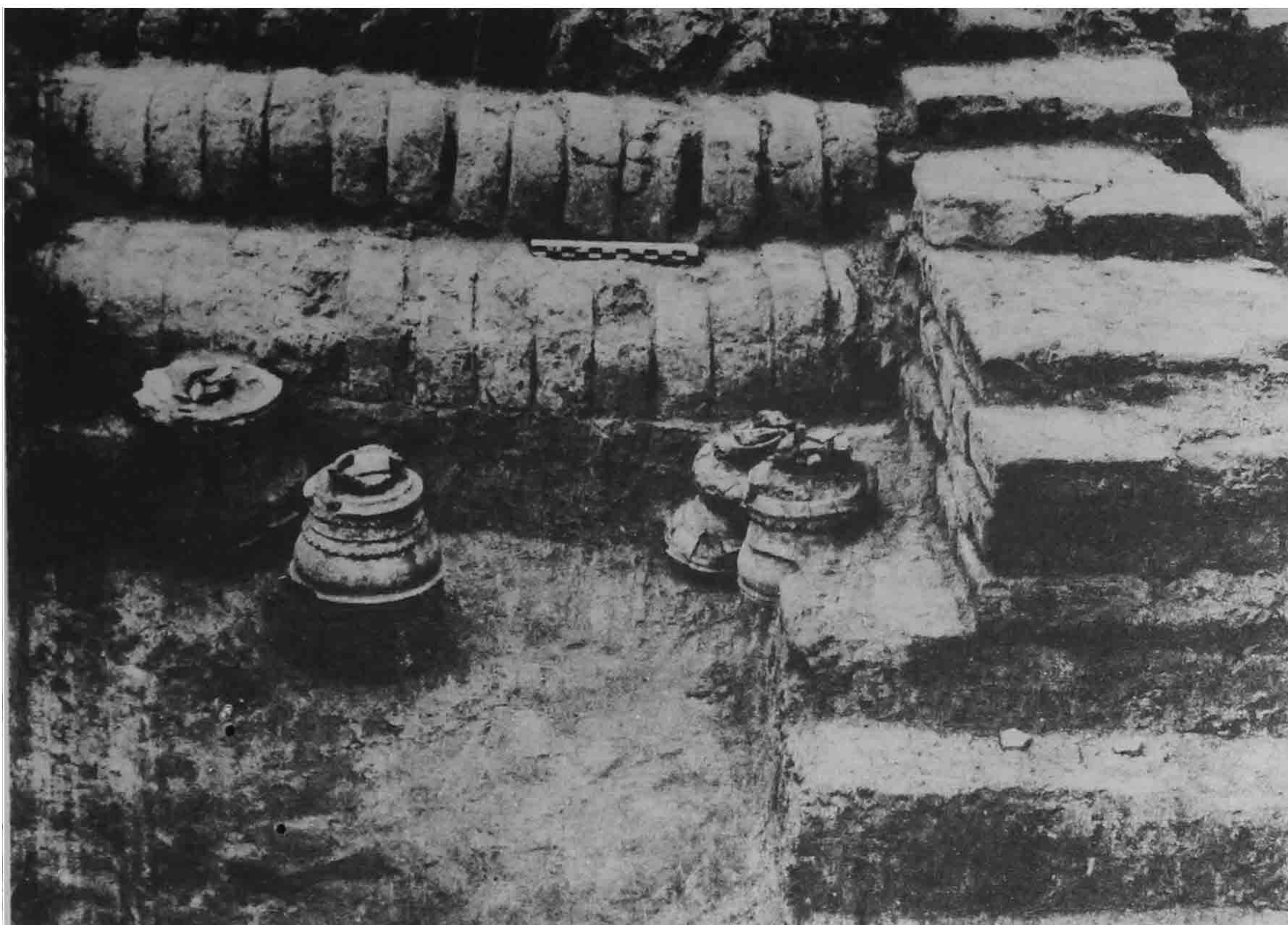
b. Remains of a structure before removal of the main baulk, KKG 12.



a. Details of wall, KKG 12.



b. Structure partially exposed, KKG 12.



a. Burial urns at KKG 12.



b. View of gateway at site KKG 13.



a. Structure partially exposed at KKG 14.



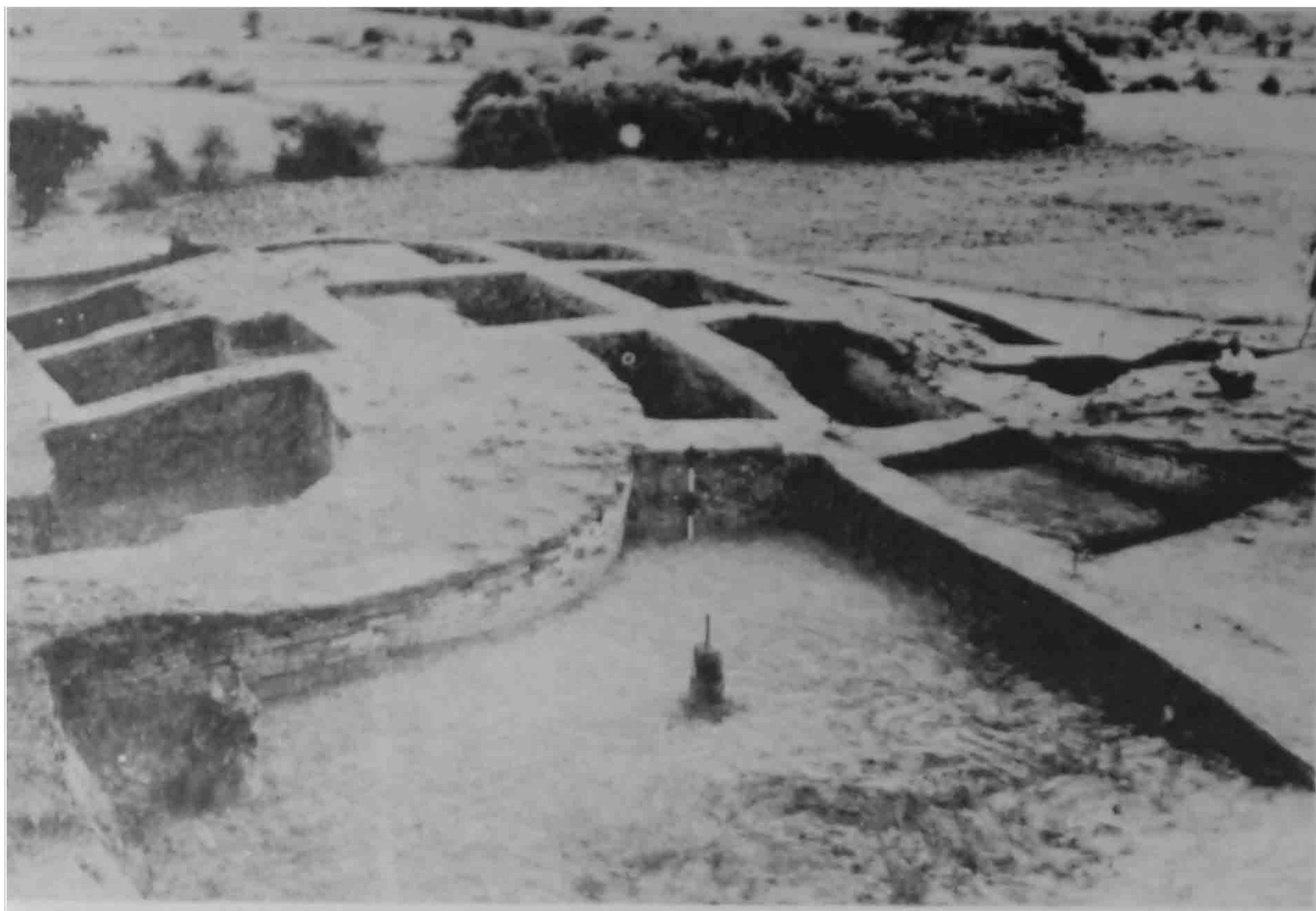
b. East view of structure at KKG 14.



a. Full human skeleton exposed at KKG 14.



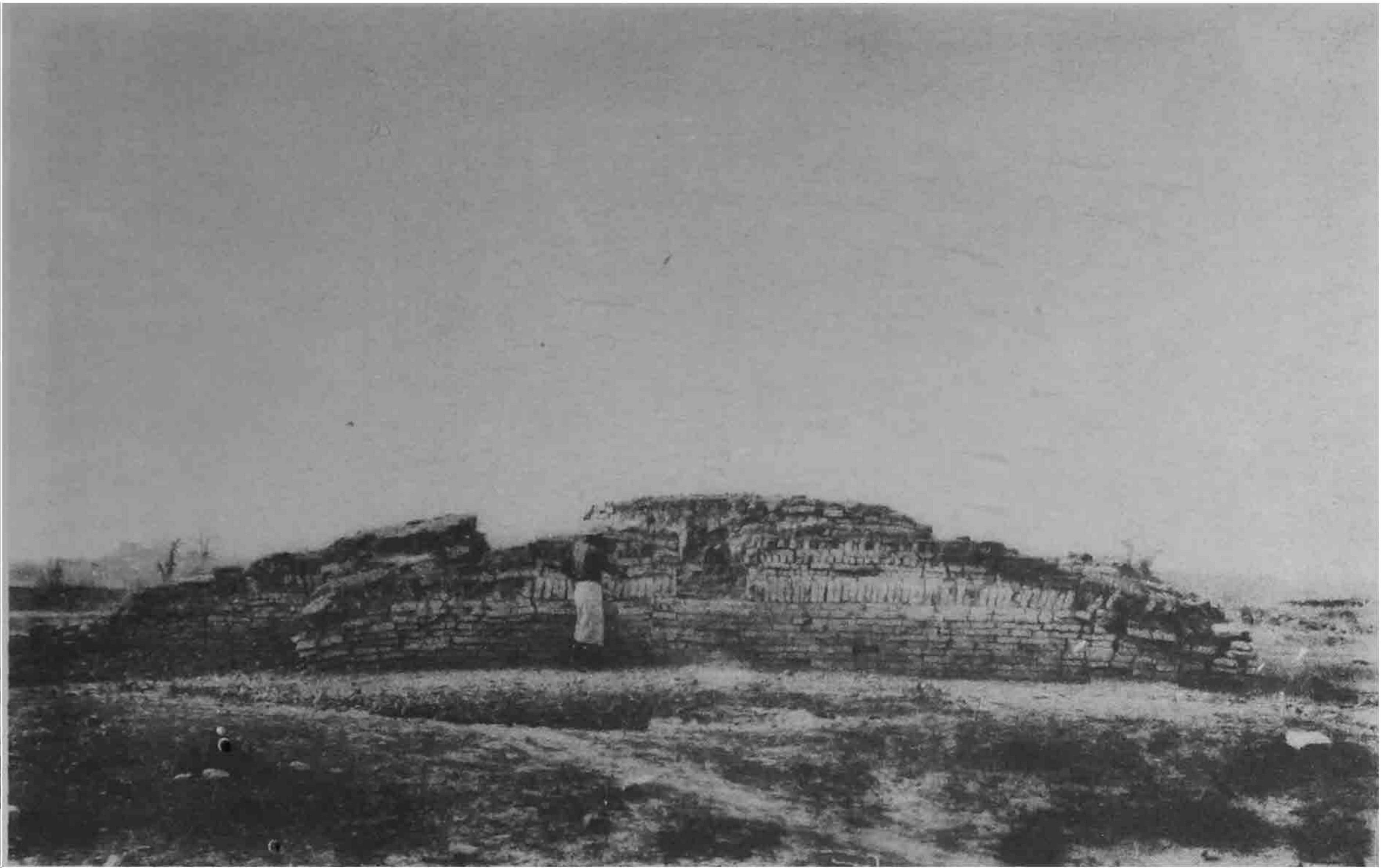
b. Skeletal remains at KKG 14.



a. Gateway at site KKG 15 during excavation.



b. North view of gateway exposed at KKG 15.



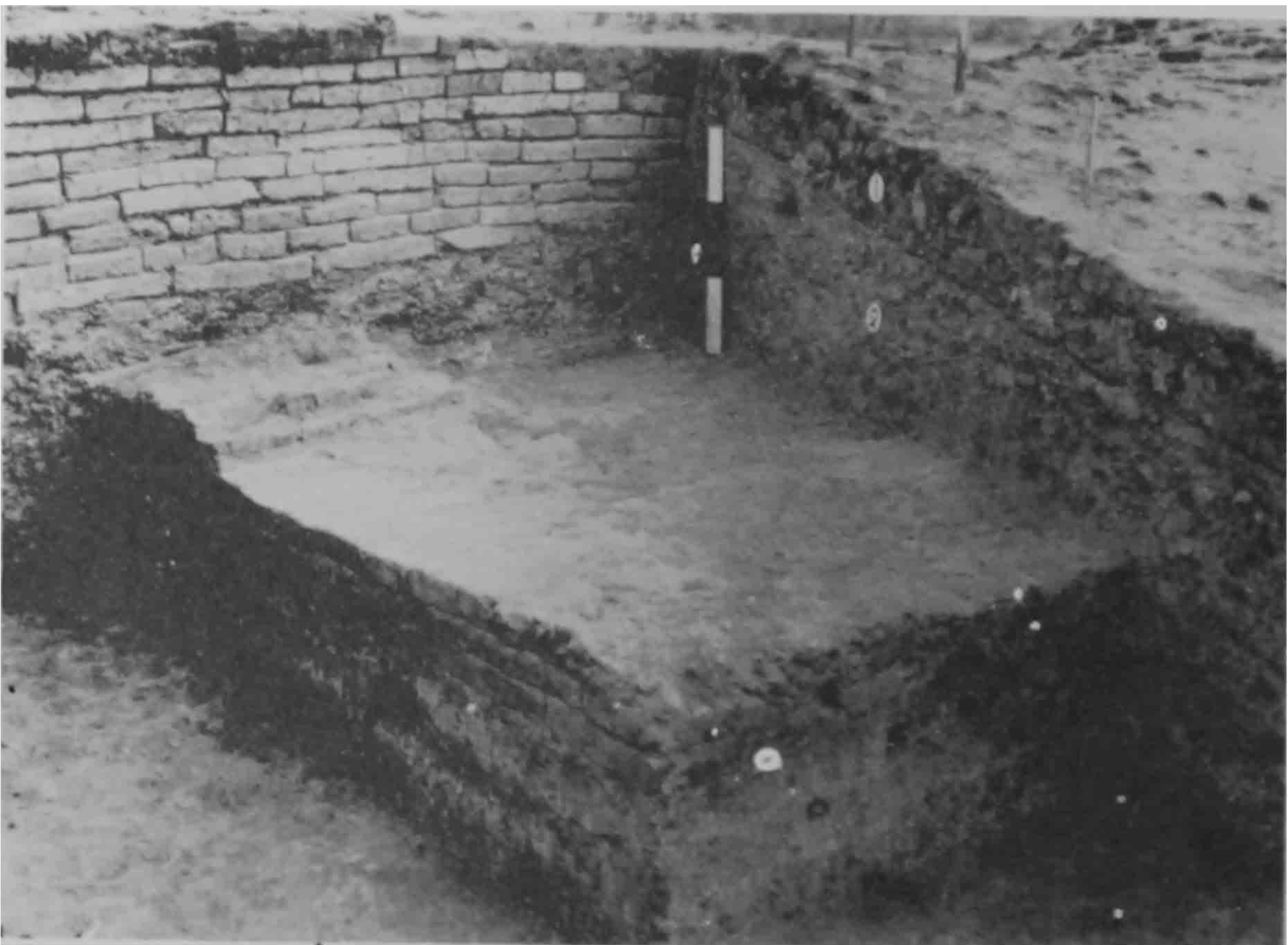
a. View of exposed structure at KKG 18.



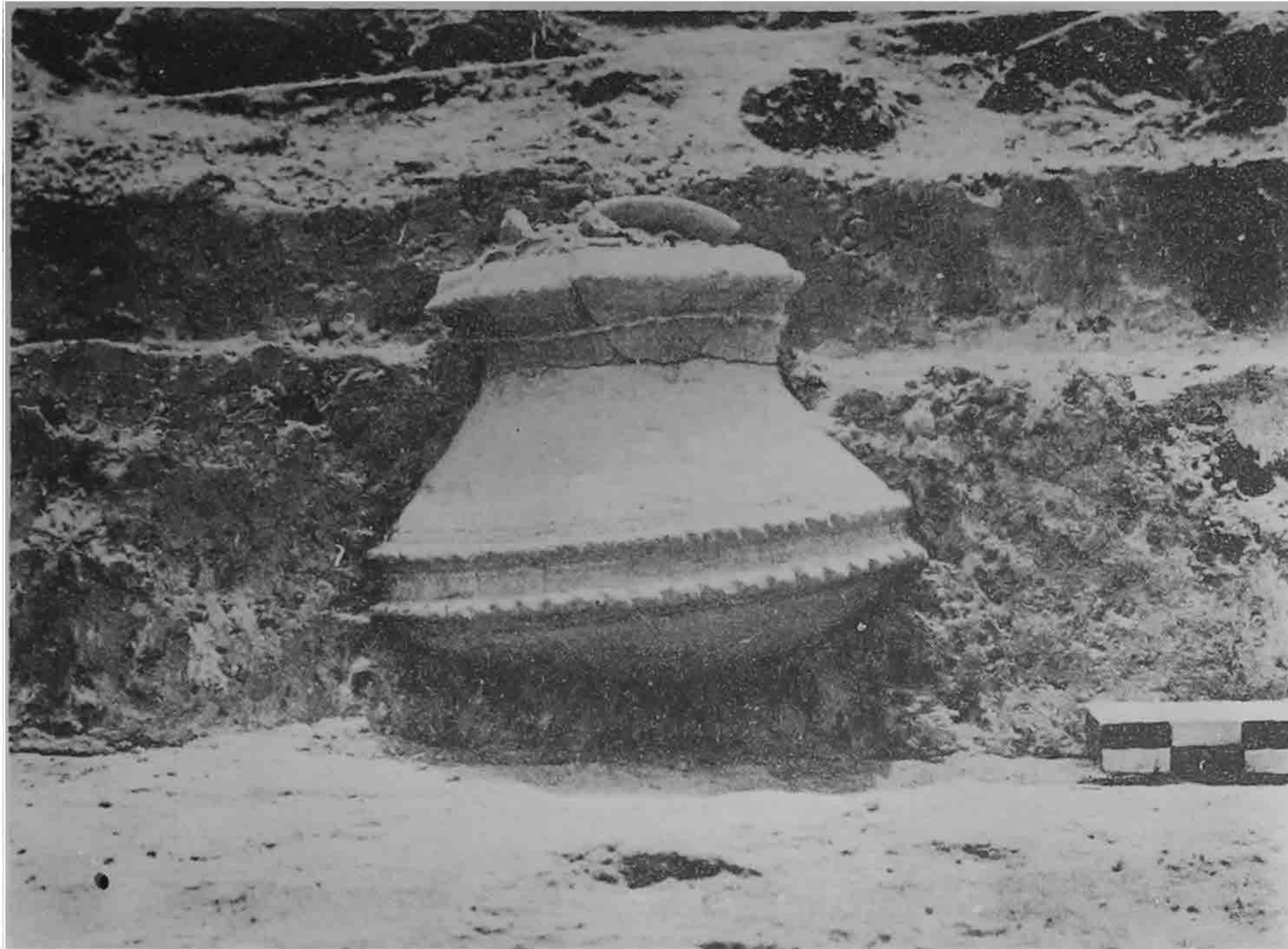
b. Remains of structure at KKG 21.



a. Part of Palace enclosure wall, KKG 25.



b. Two phases of construction of Palace enclosure wall, KKG 25.



a. Burial urn exposed at KKG 1.



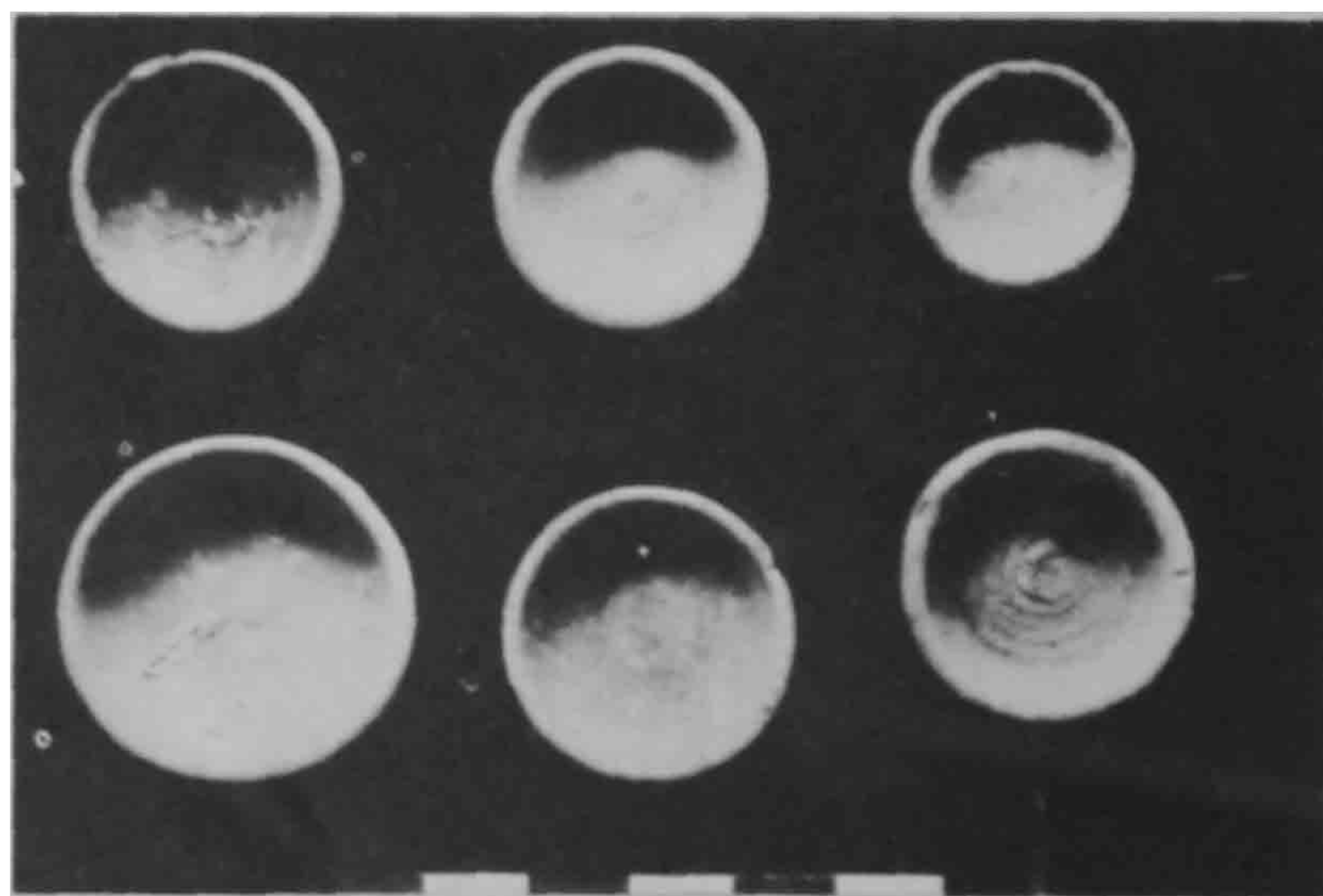
b. Burial urn with lid from KKG 1.



a. Burial urn from KKG 14.



b. Decorated pot with a hole (for spout?) from KKG 5.



c. Shallow cups or lamps from KKG 5.



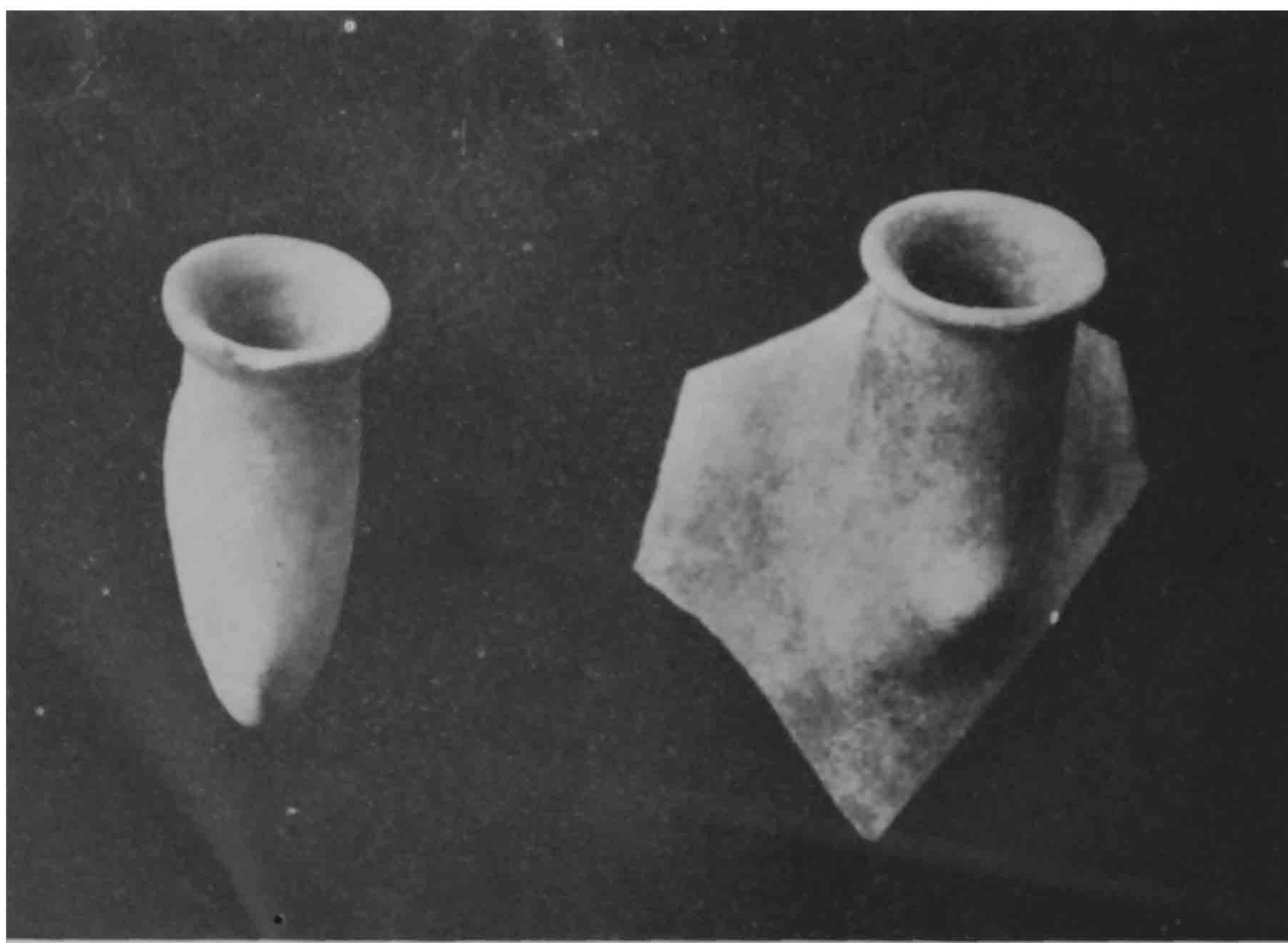
a. Pottery exposed in a corner of a room, KKG 2.



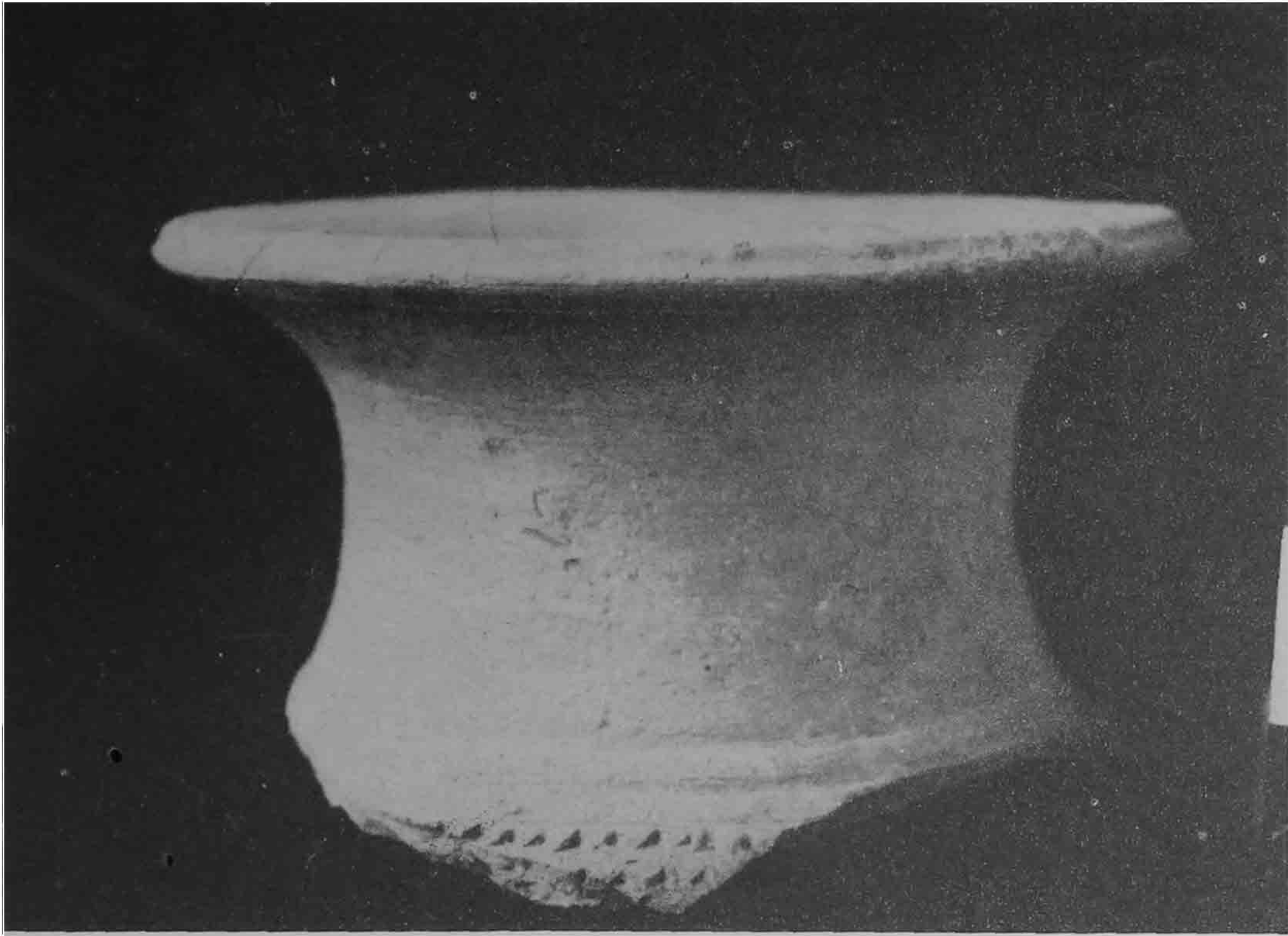
b. Spouted vessel after piecing up, KKG 2.



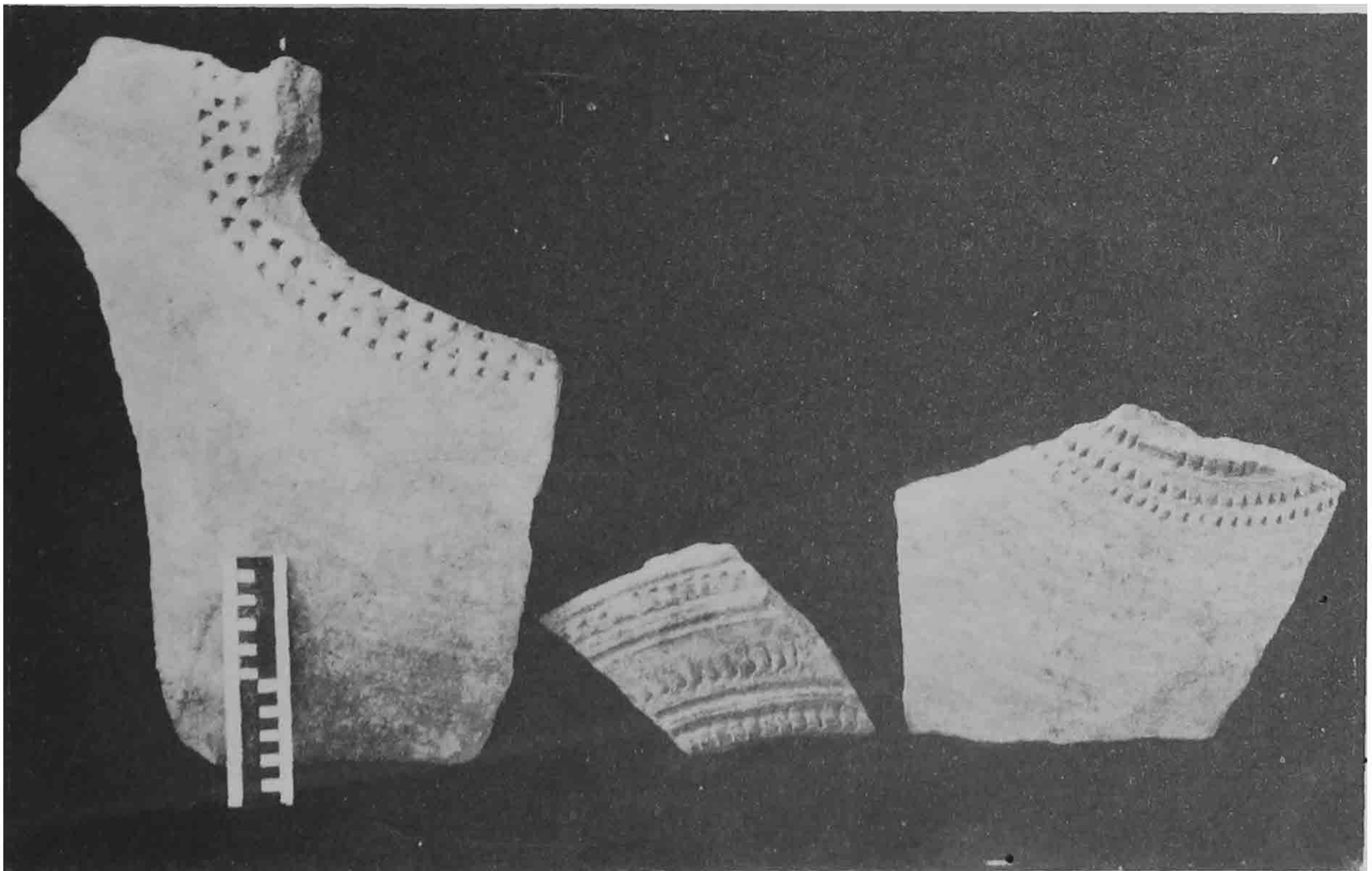
a. Burial urns from KKG 12.



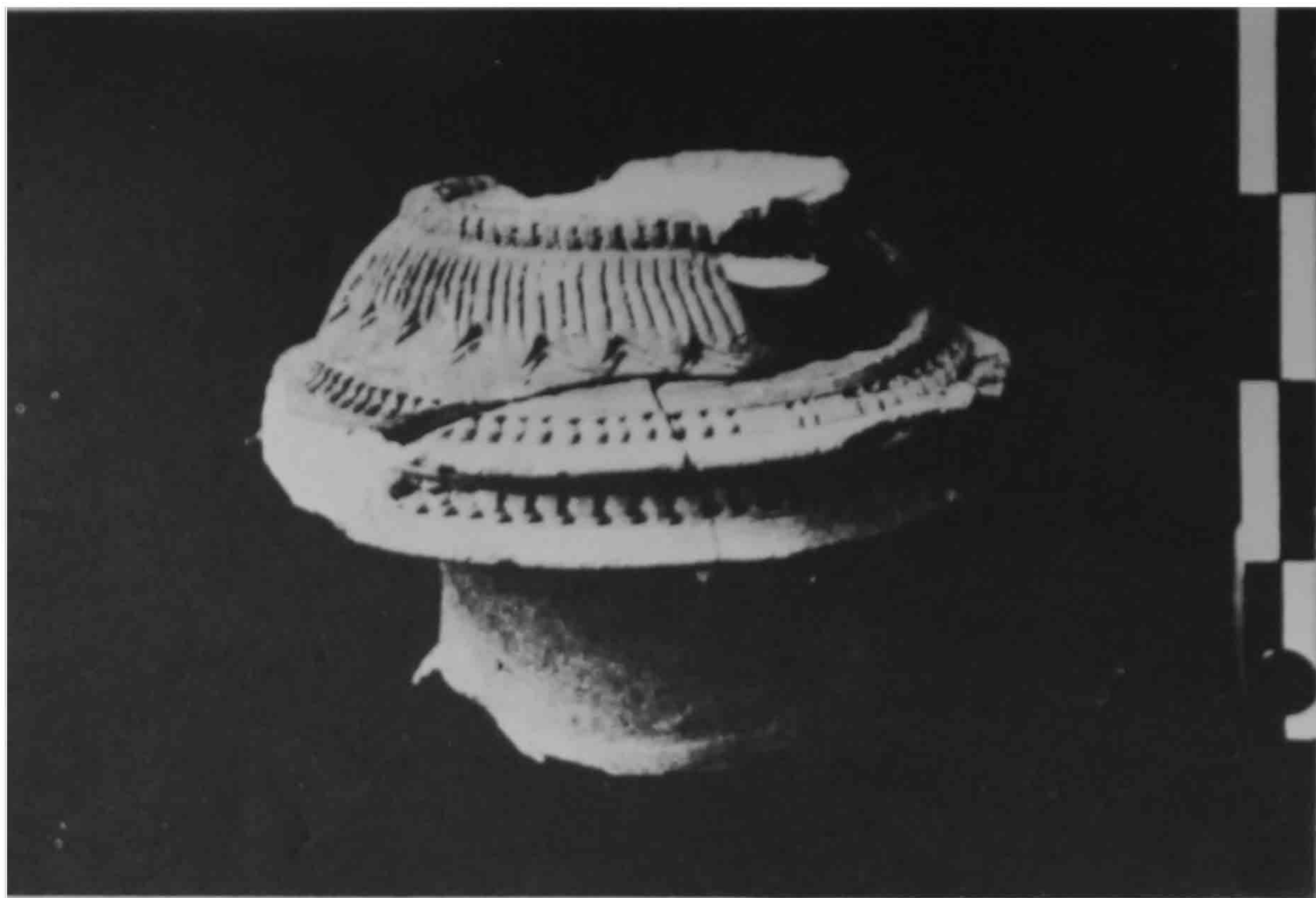
b. Spouts with pouch-like bulge. KKG 2.



a. Fragment of pot with rouletted shoulder, KKG 2.



b. Sherds with rouletted patterns, KKG 2.



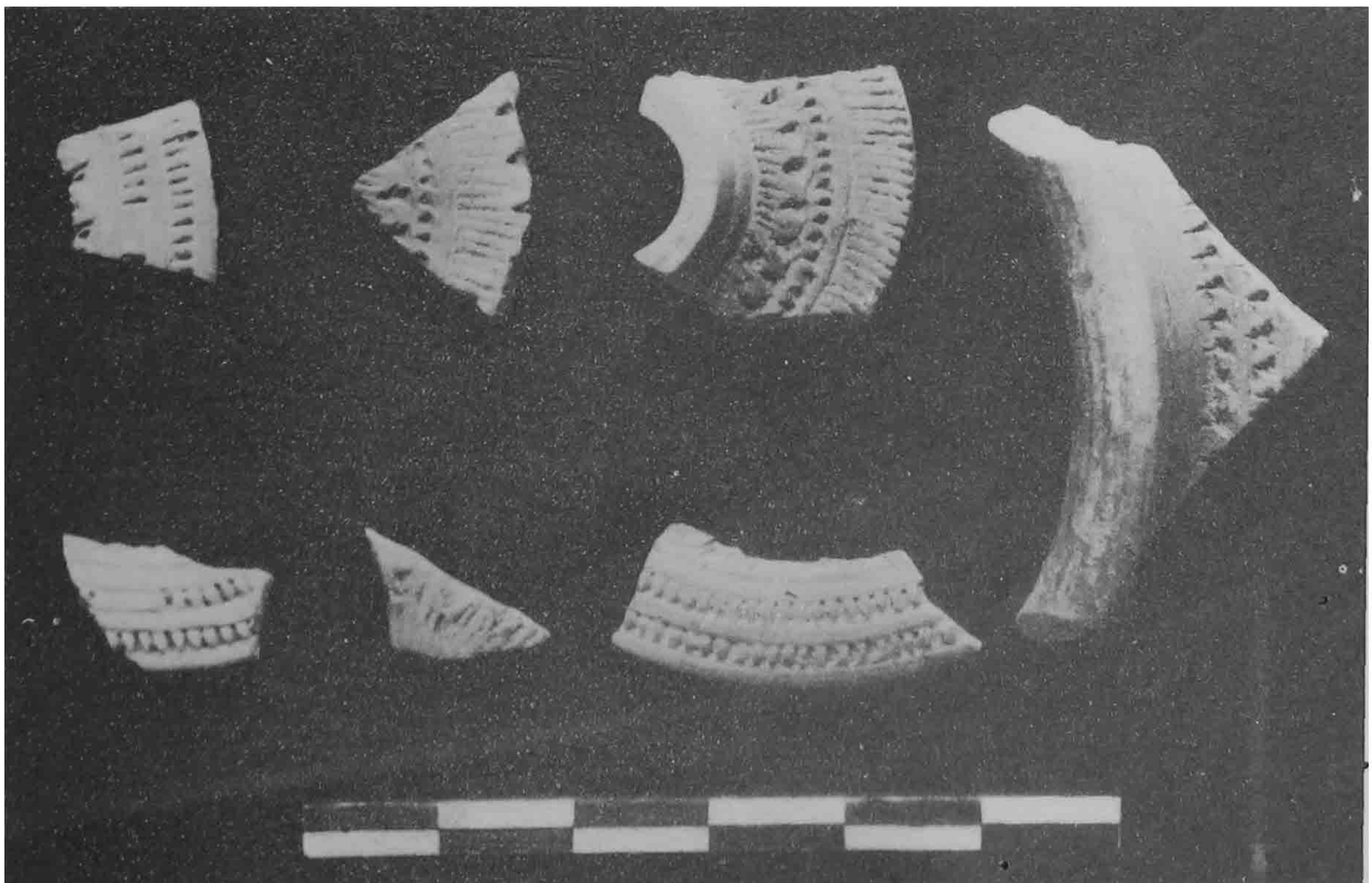
a. Pot with incised patterns, KKG 2.



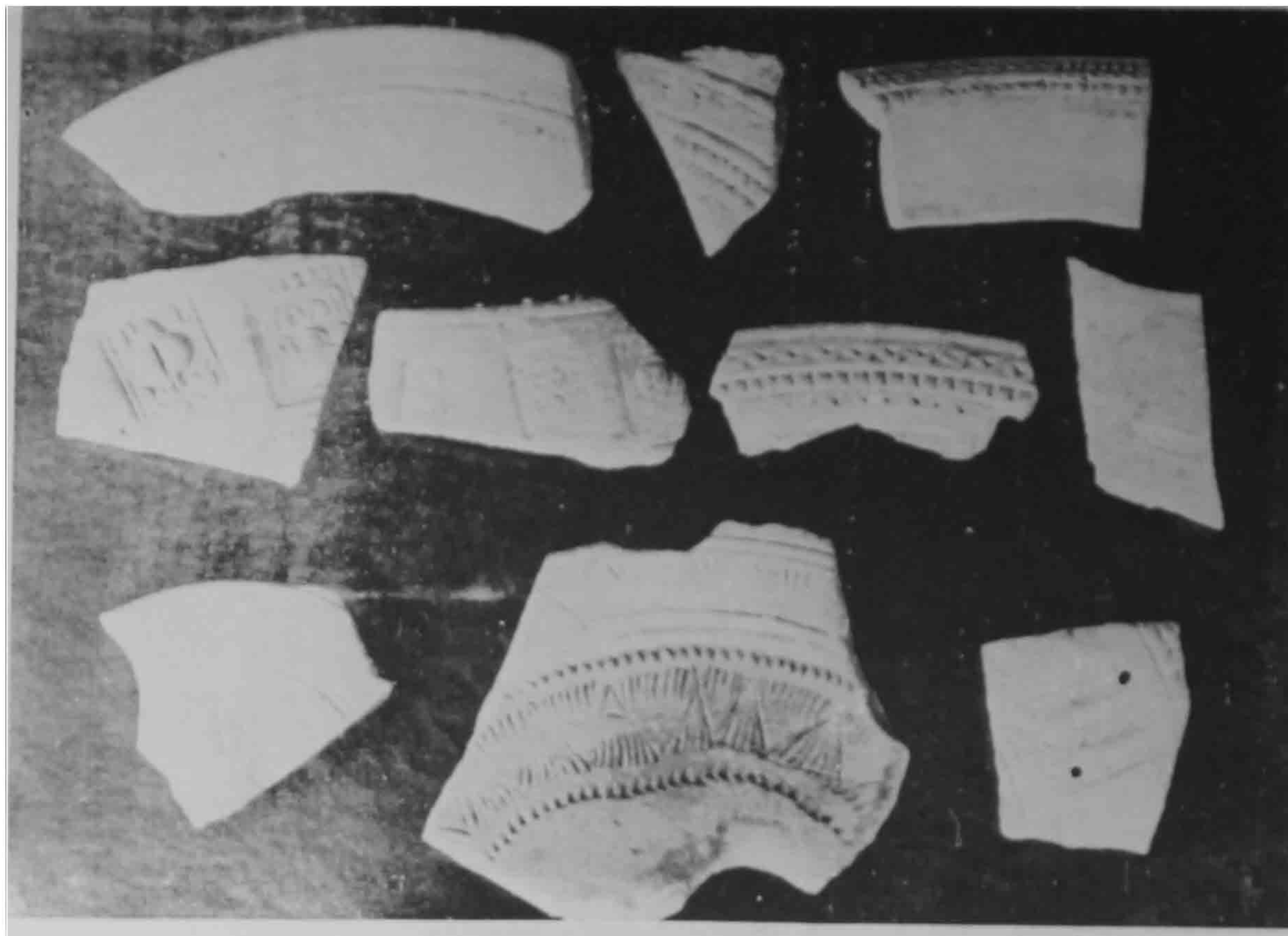
b. Sprinkler necks and spout, KKG 5



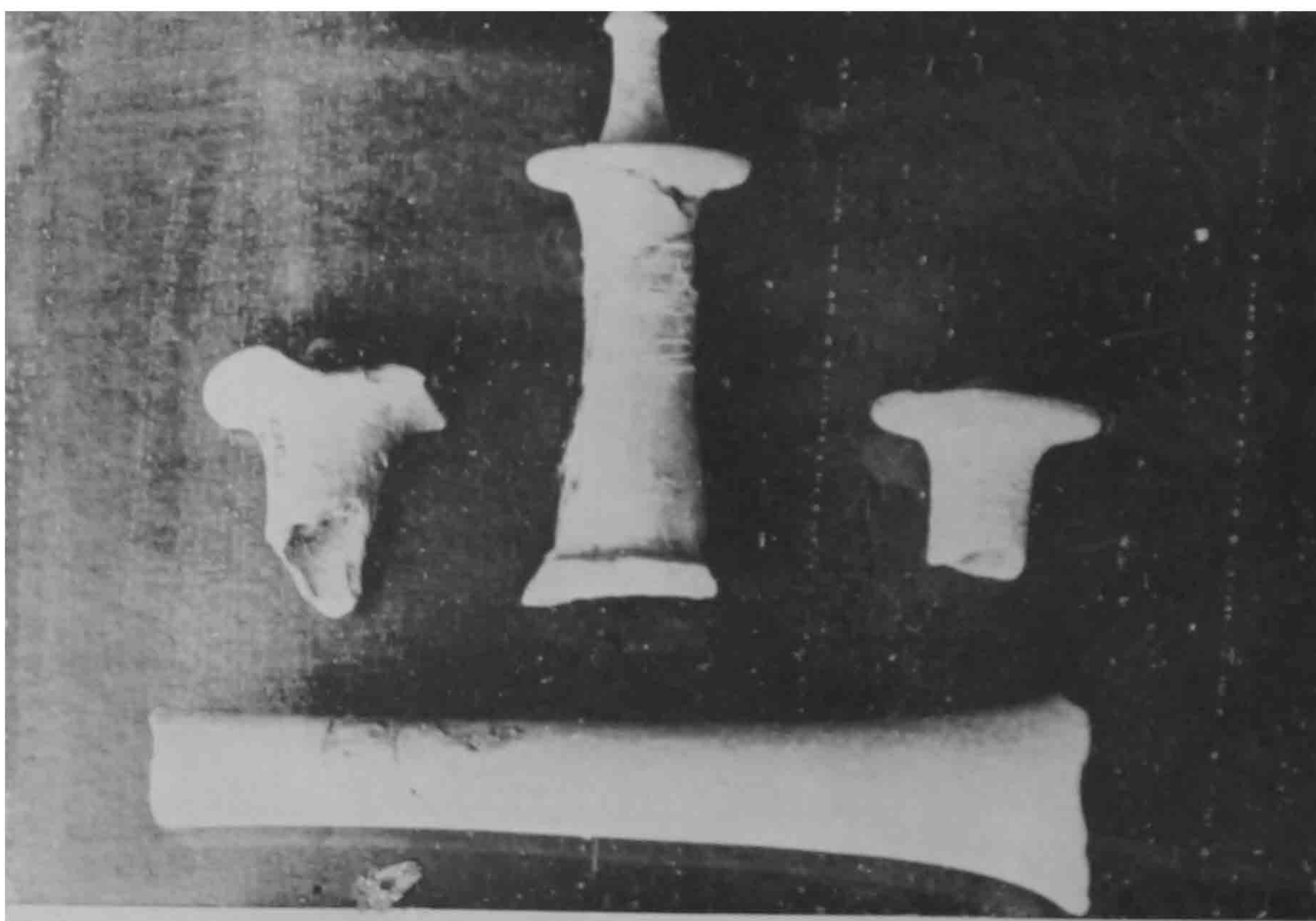
a. Decorated sherds, KKG 5.



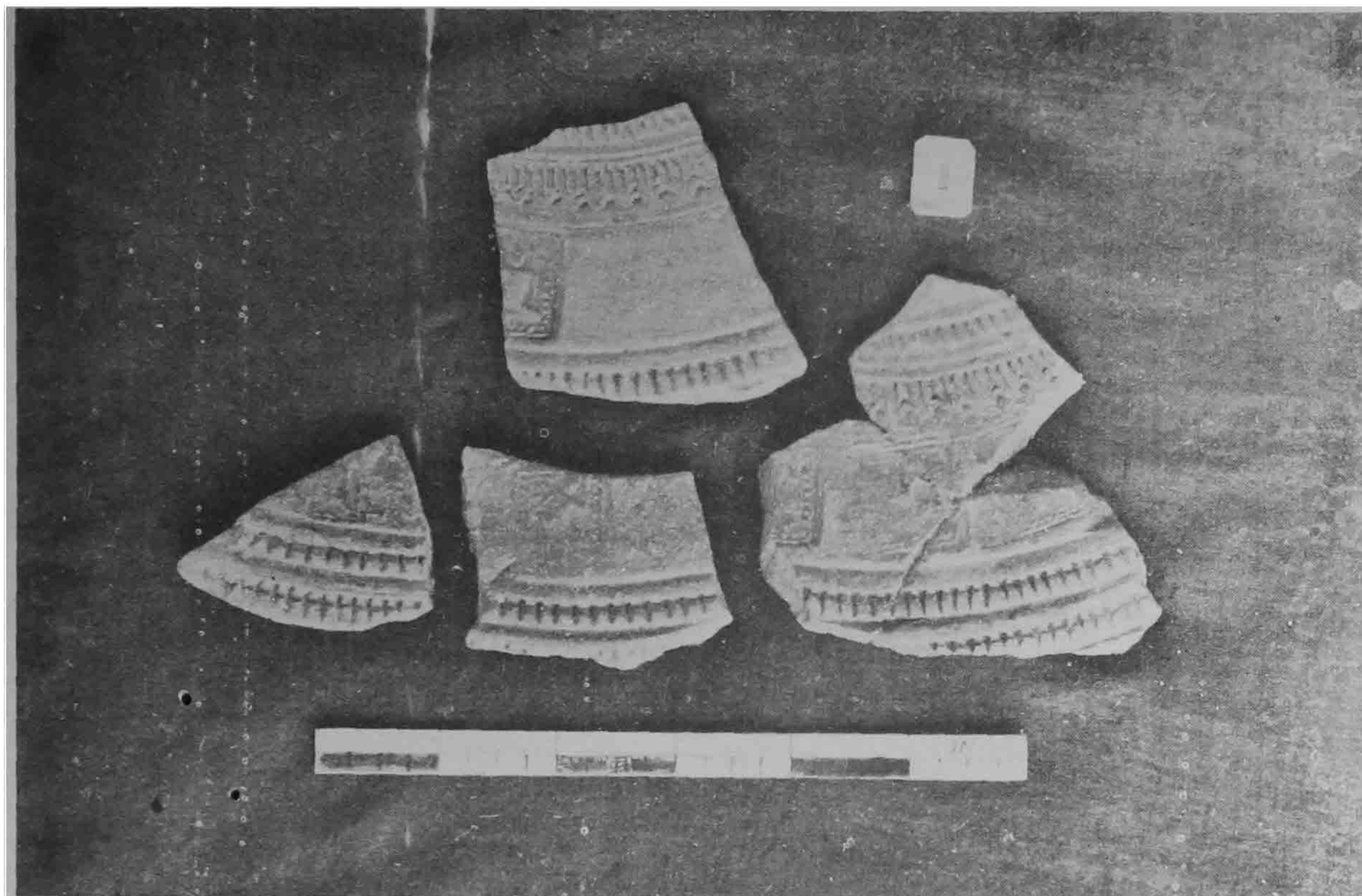
b. Decorated sherds, KKG 5.



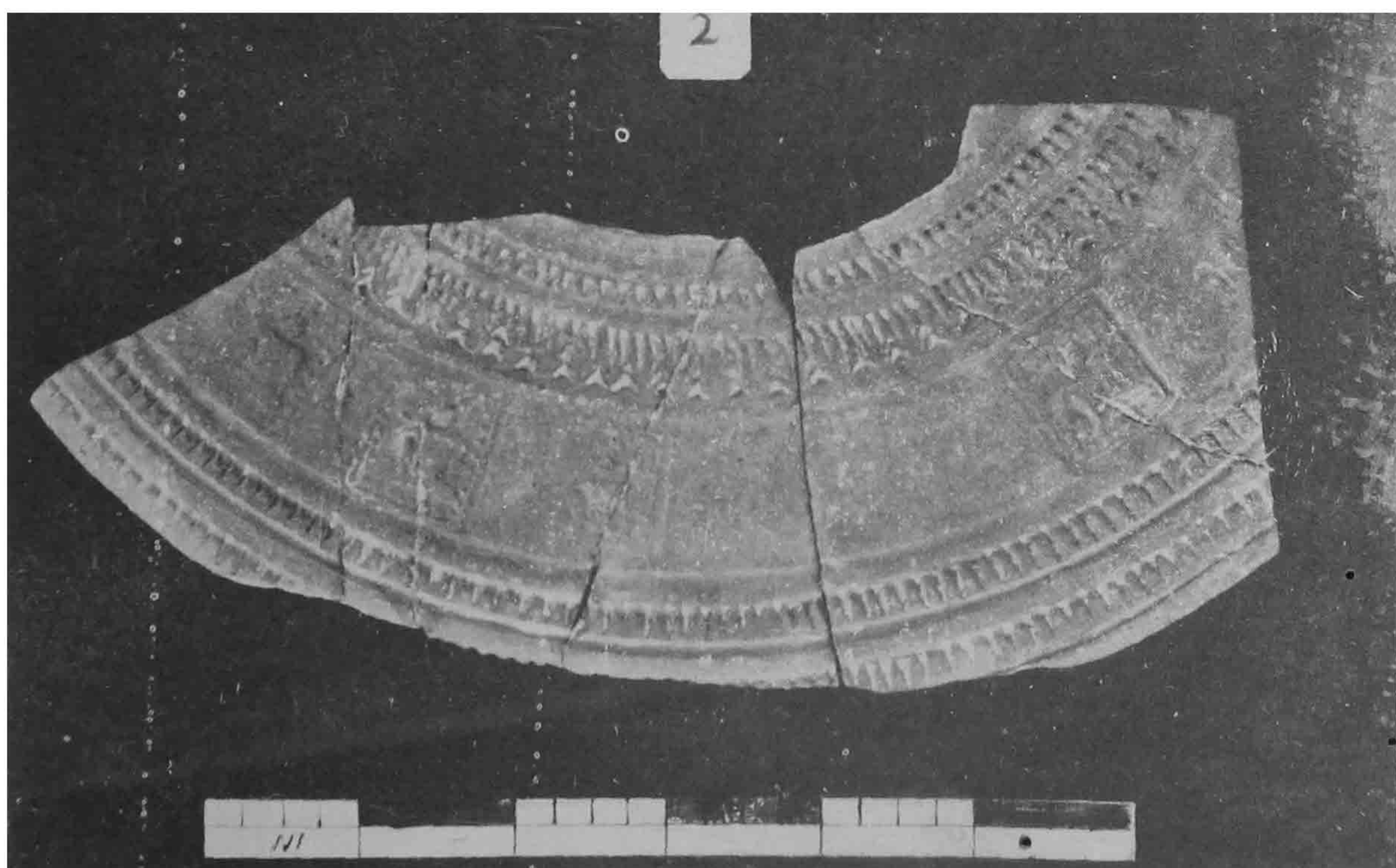
a. Decorated sherds, KKG 3.



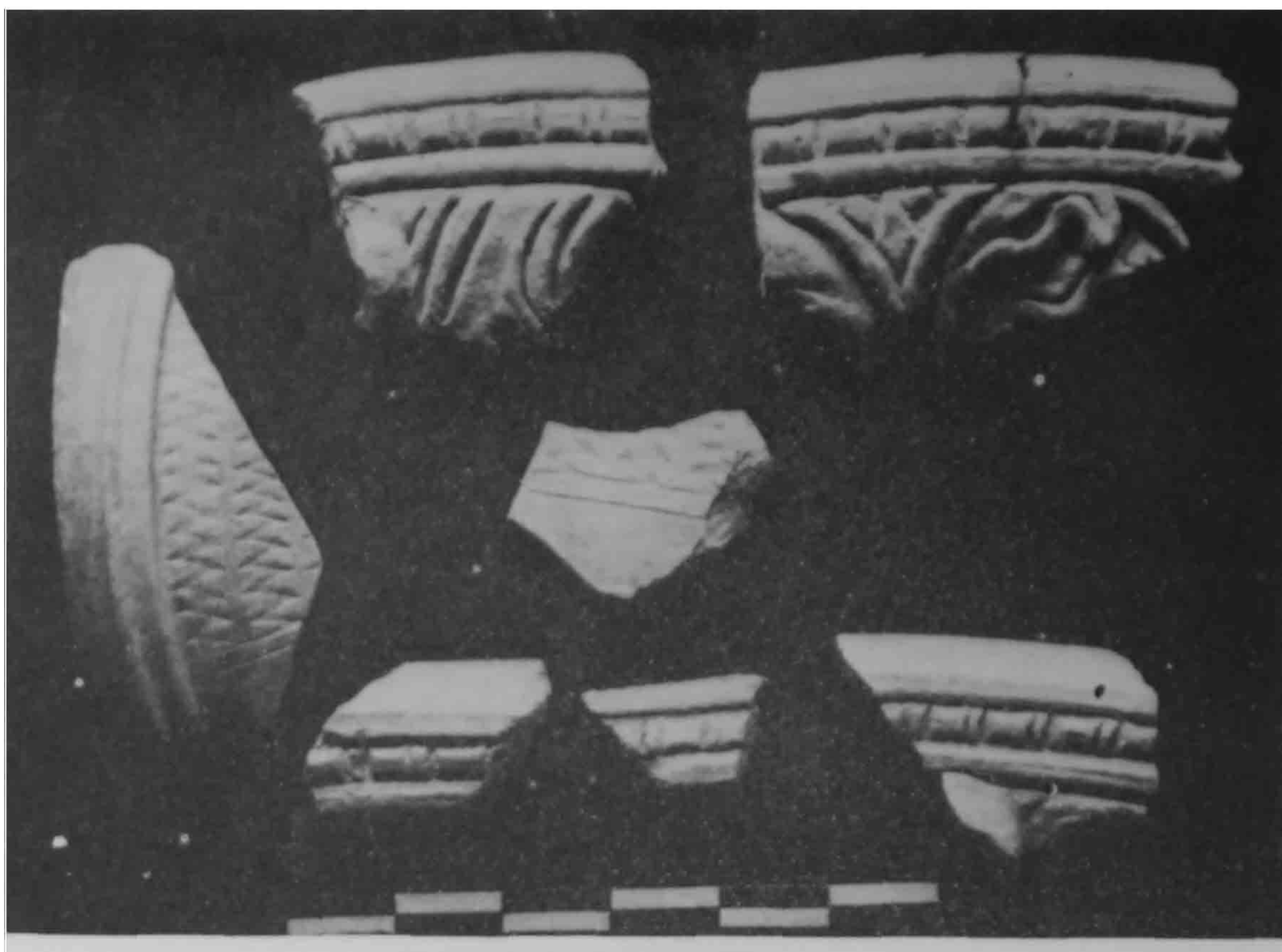
b. Sprinkler vessel necks, KKG 3



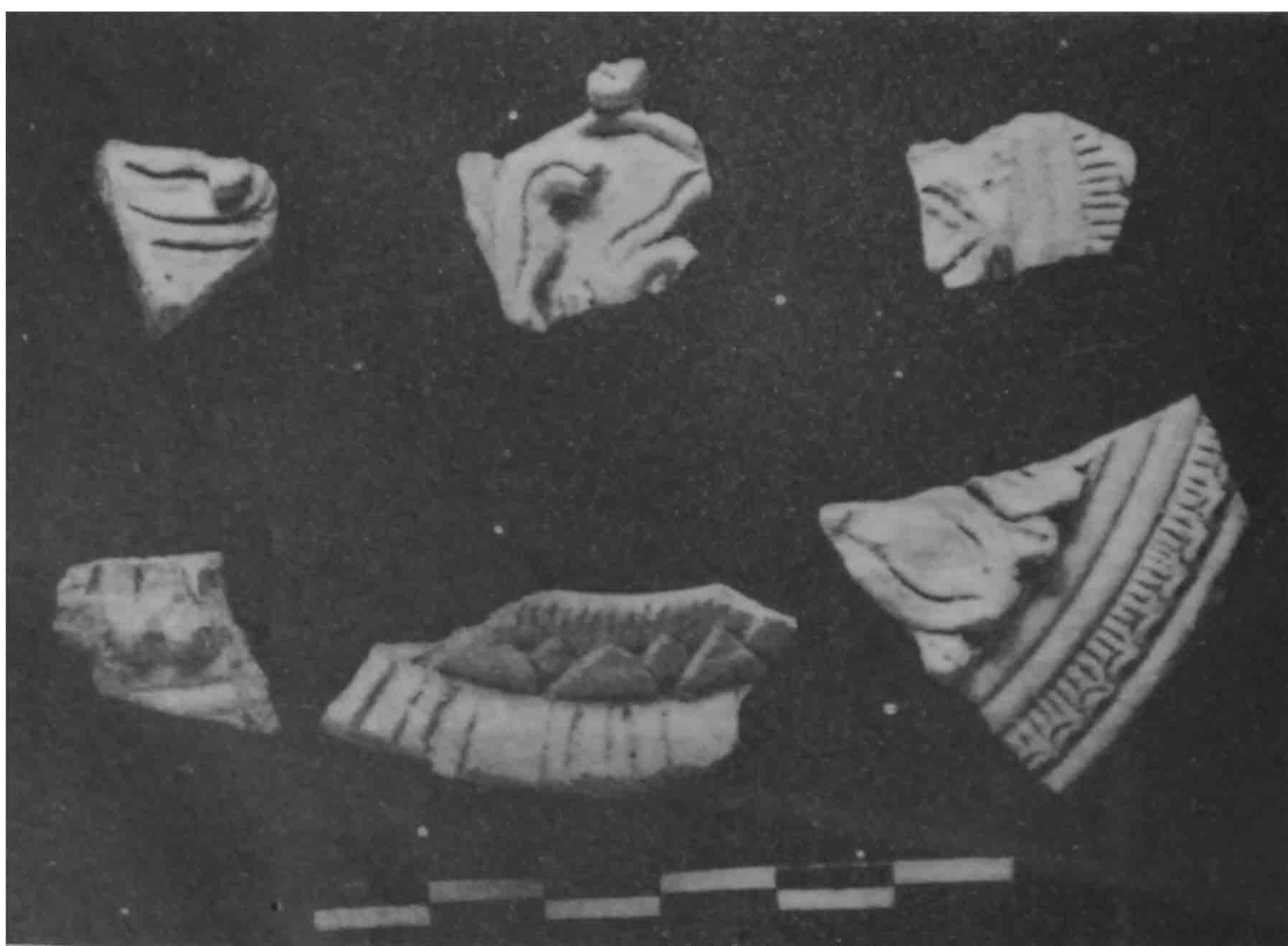
a. Decorated sherds, KKG 17.



b. Decorated sherds, KKG 17.



a. Decorated sherds, KKG 5.



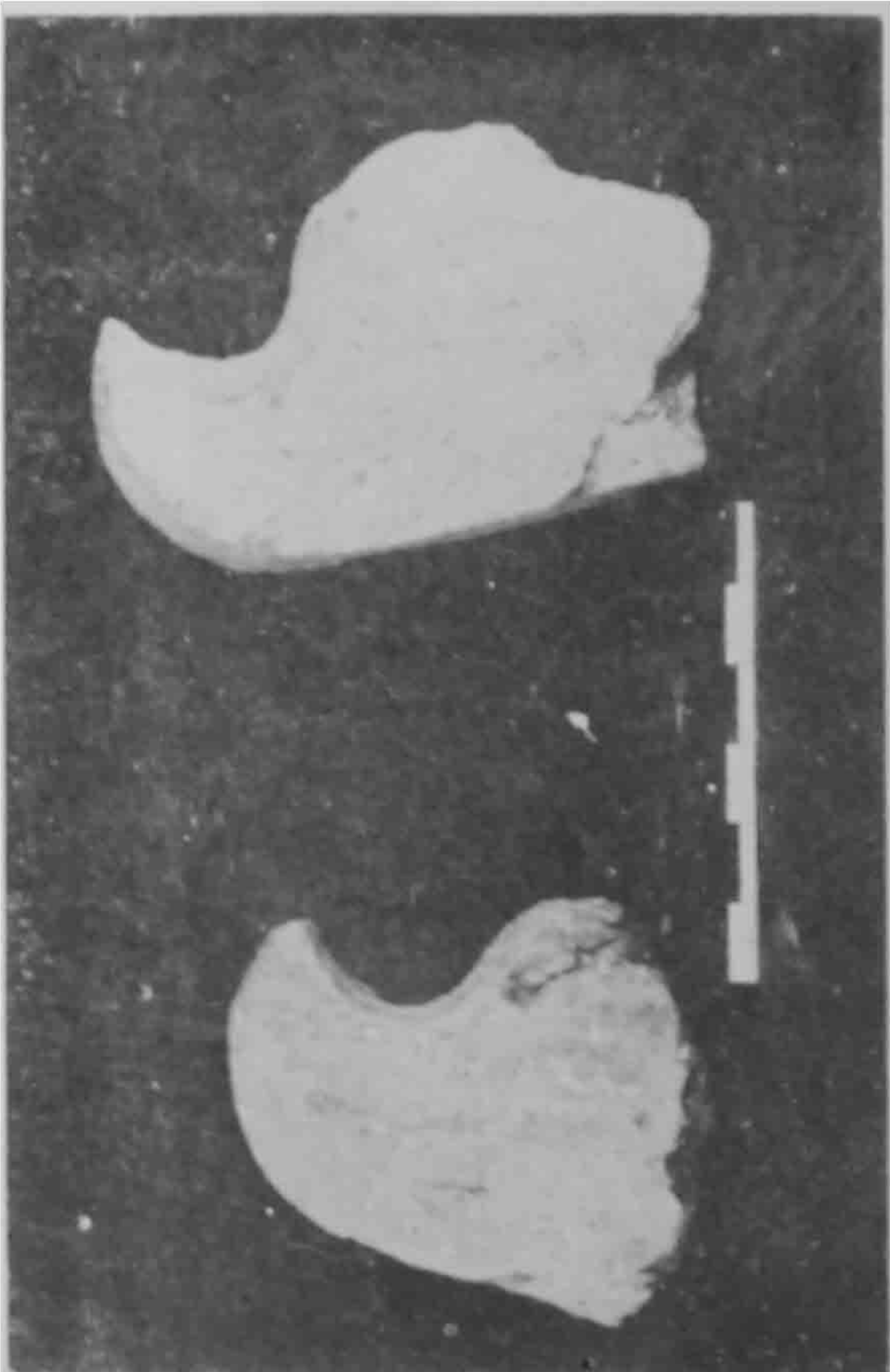
b. Decorated sherds, KKG 5.



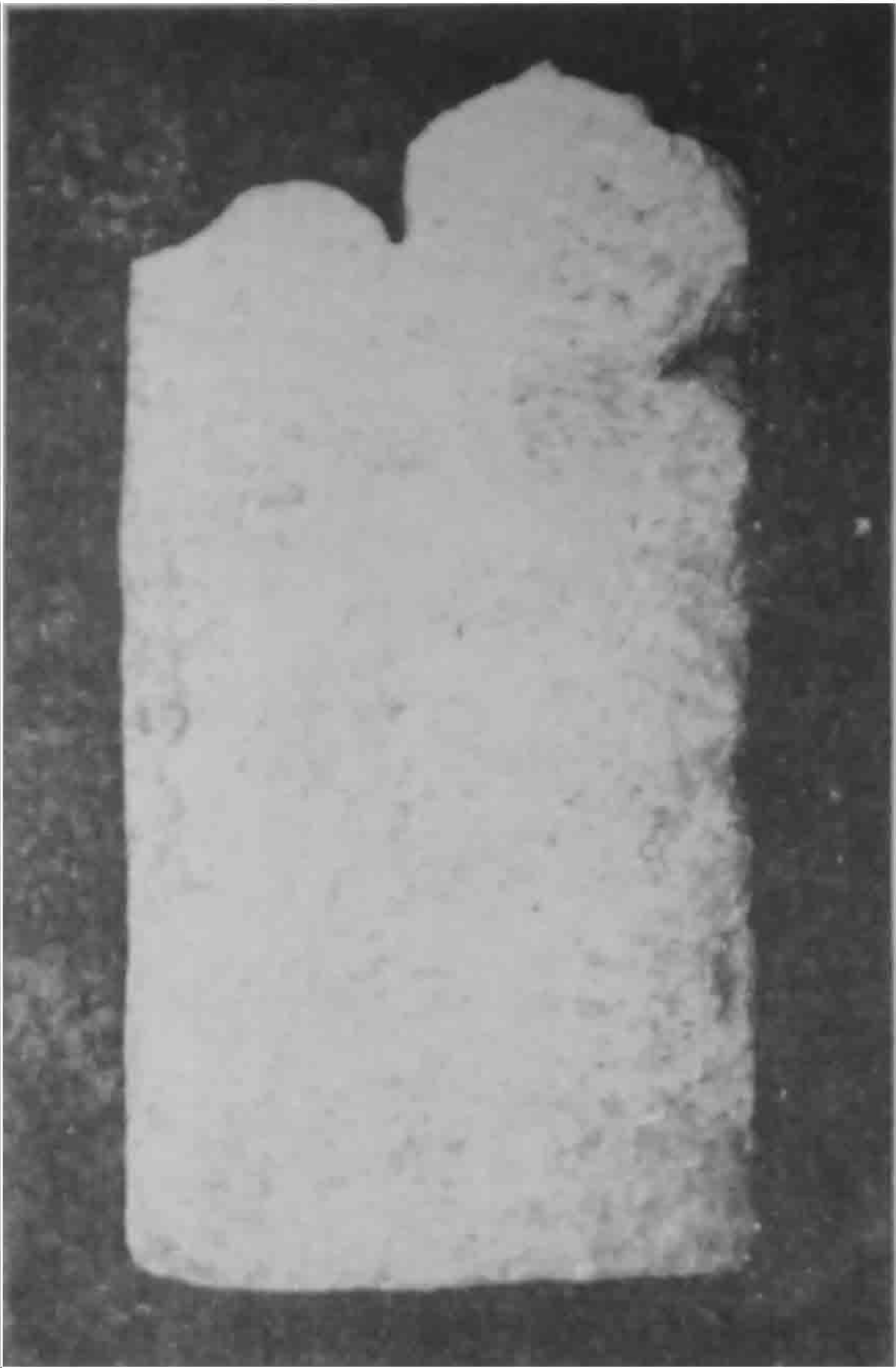
a. Decorated sherds, KKG 17.



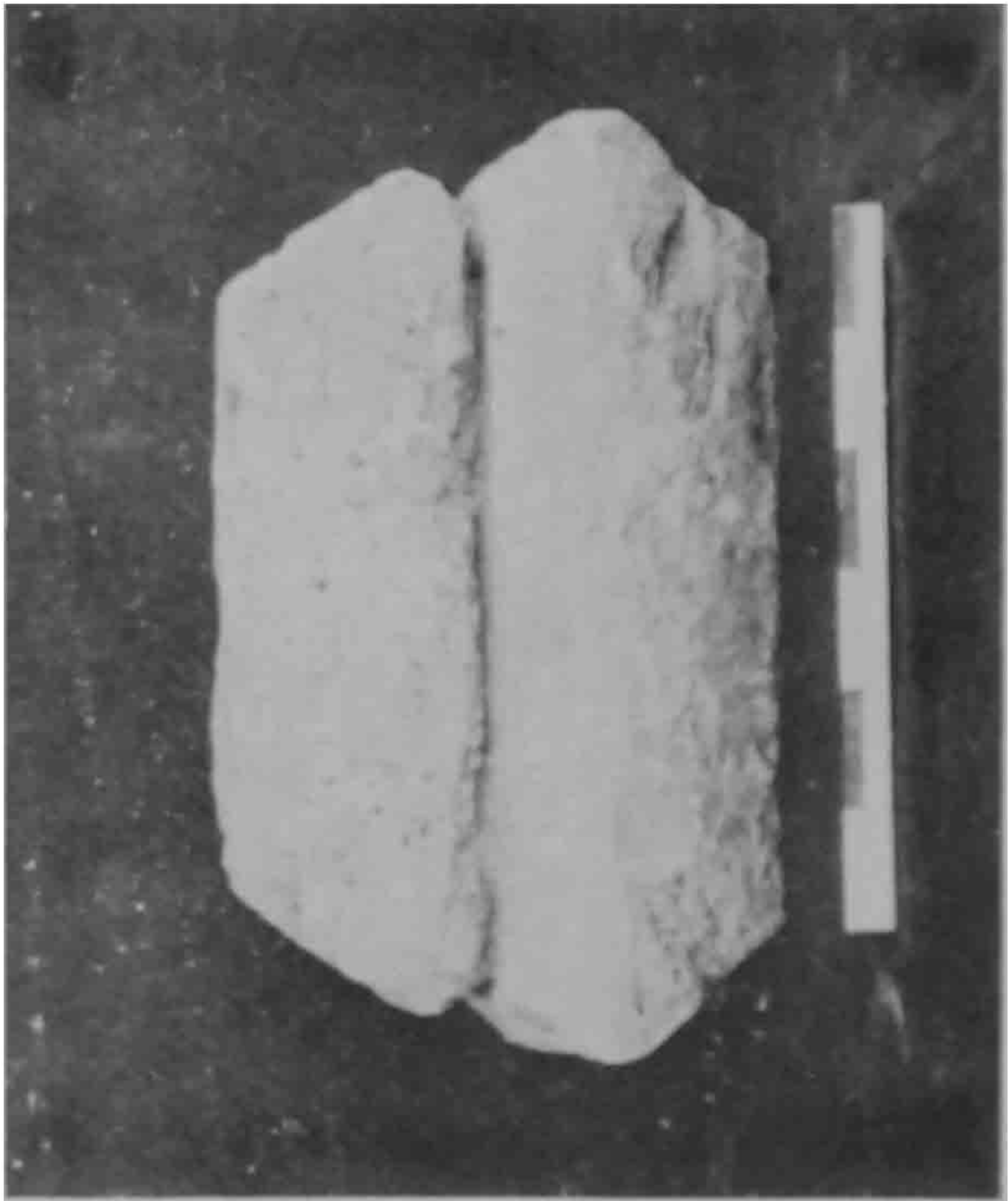
b. Decorated sherds, KKG 17.



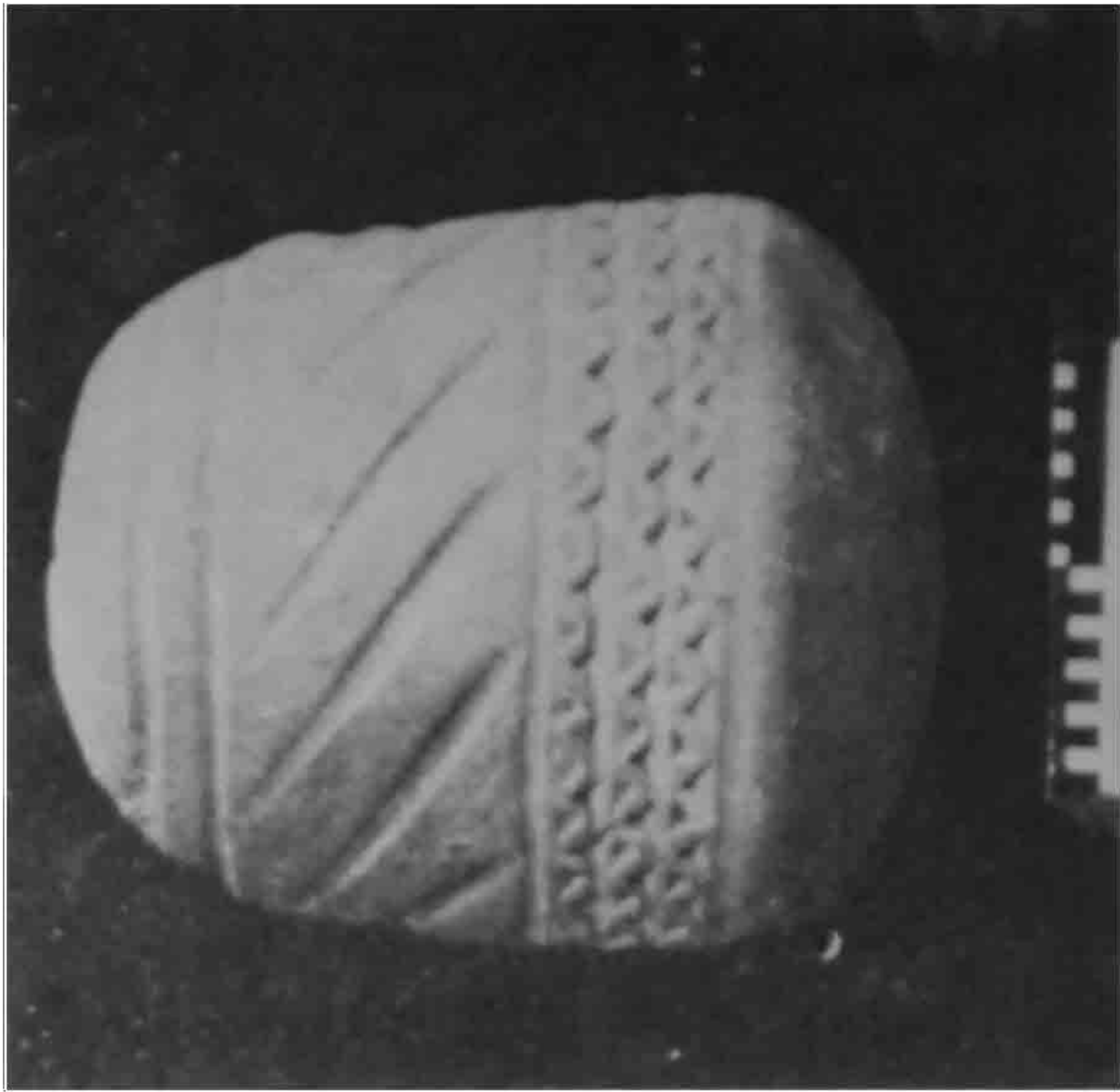
Moulded bricks in the shape of mango sprout, KKG 9.



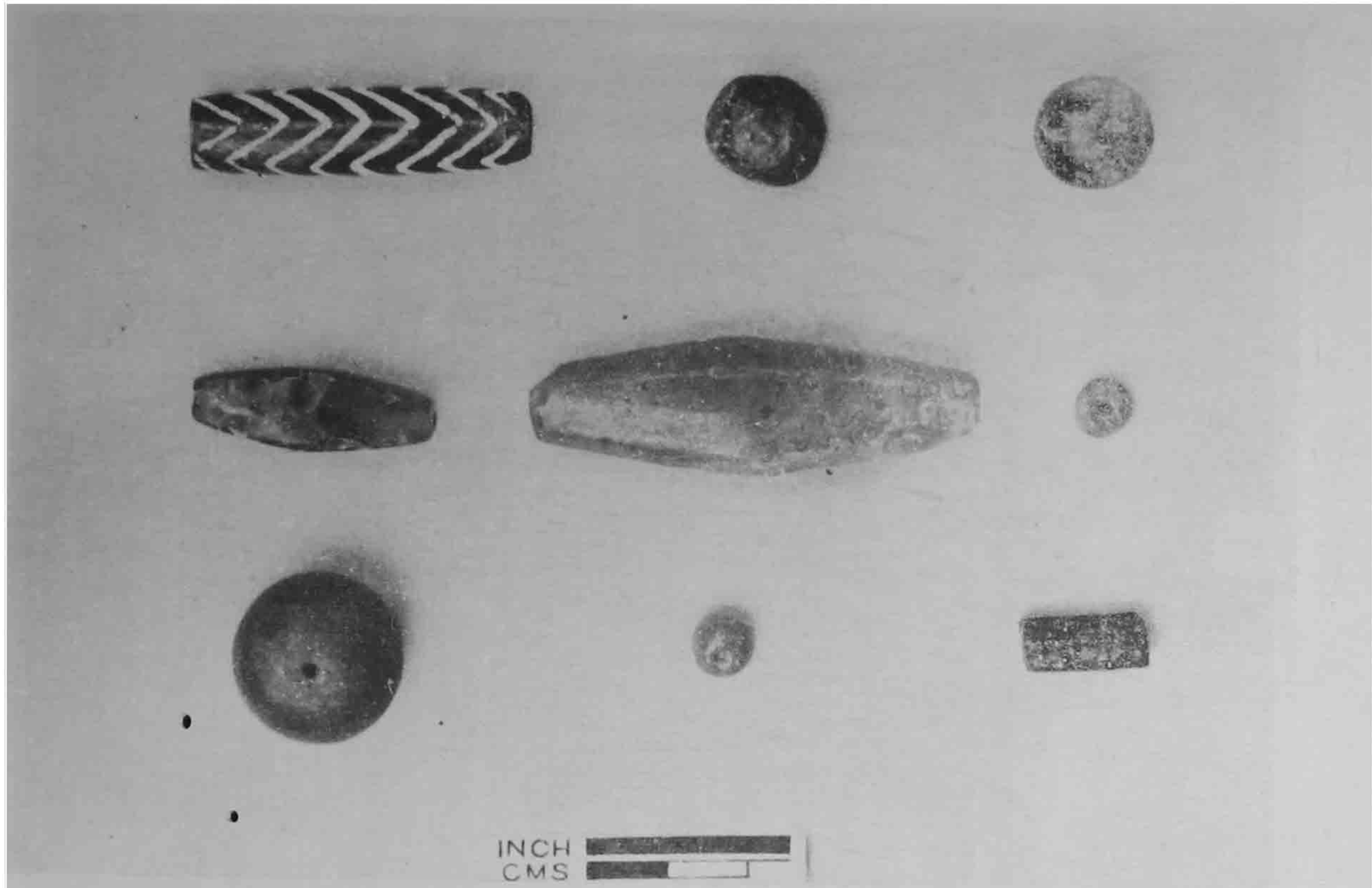
c. Gadrooned brick. side view, KKG 9.



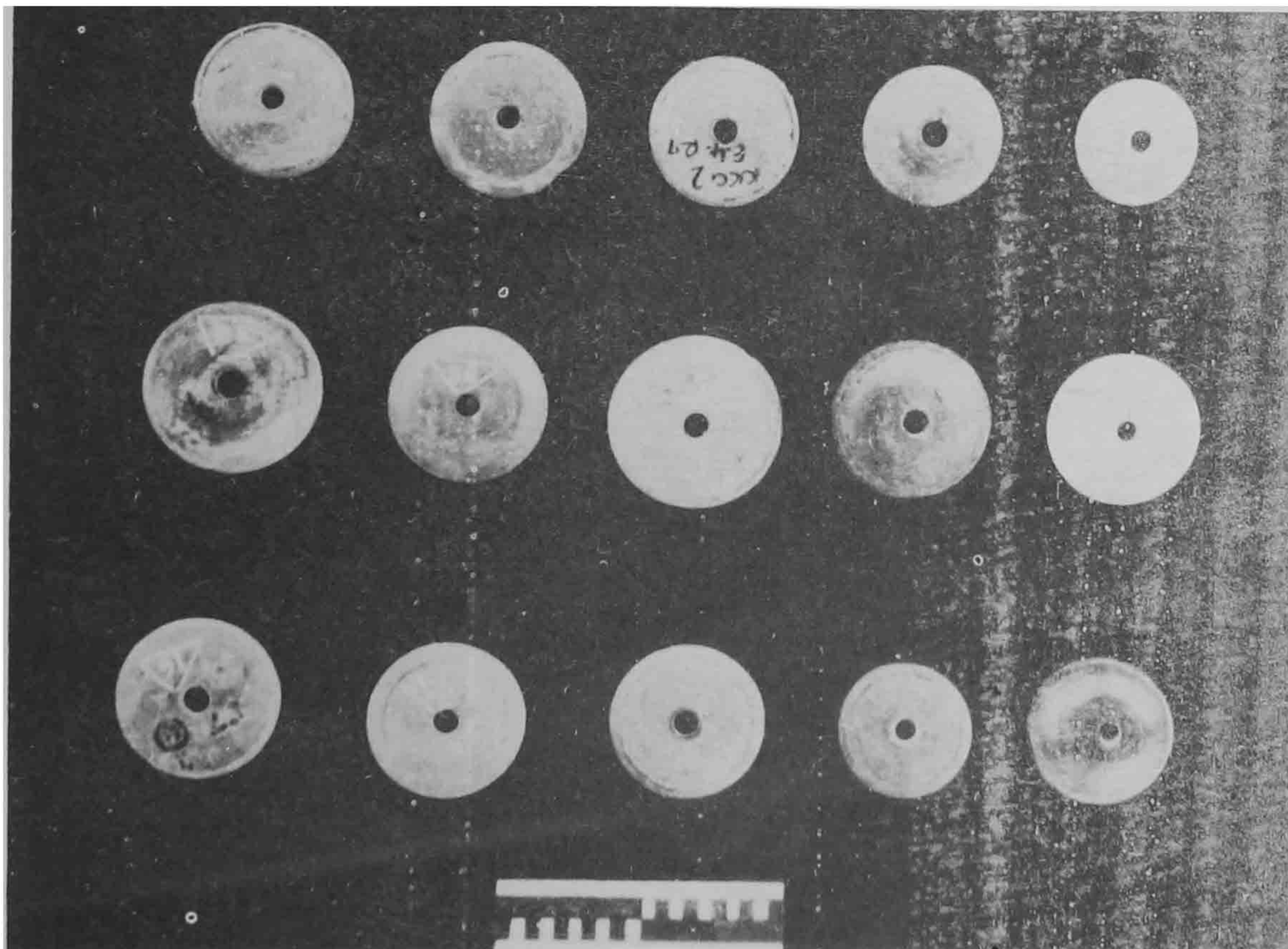
b. Gadrooned brick, front view, KKG 9.



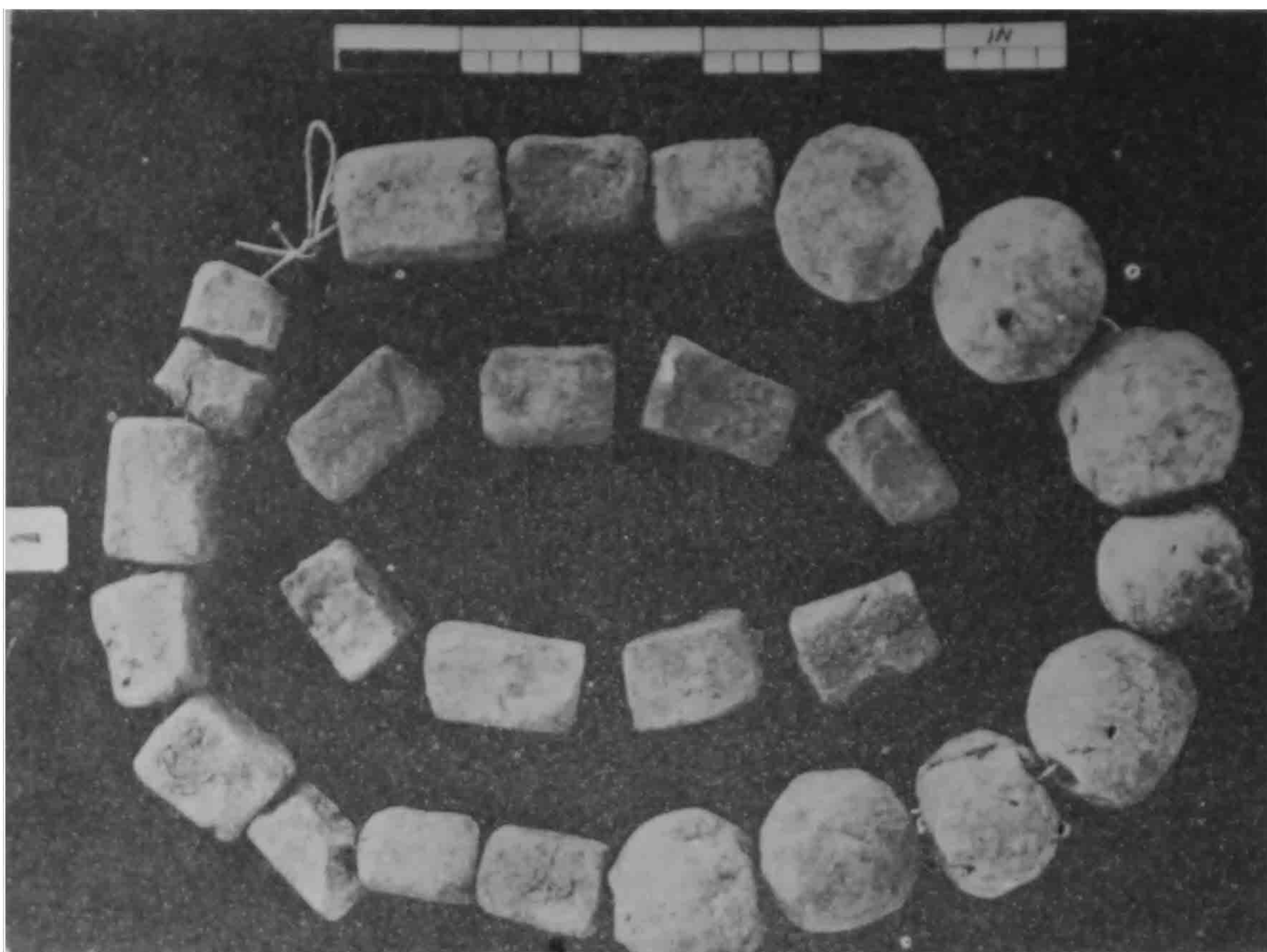
d. Clay dabber, KKG 2.



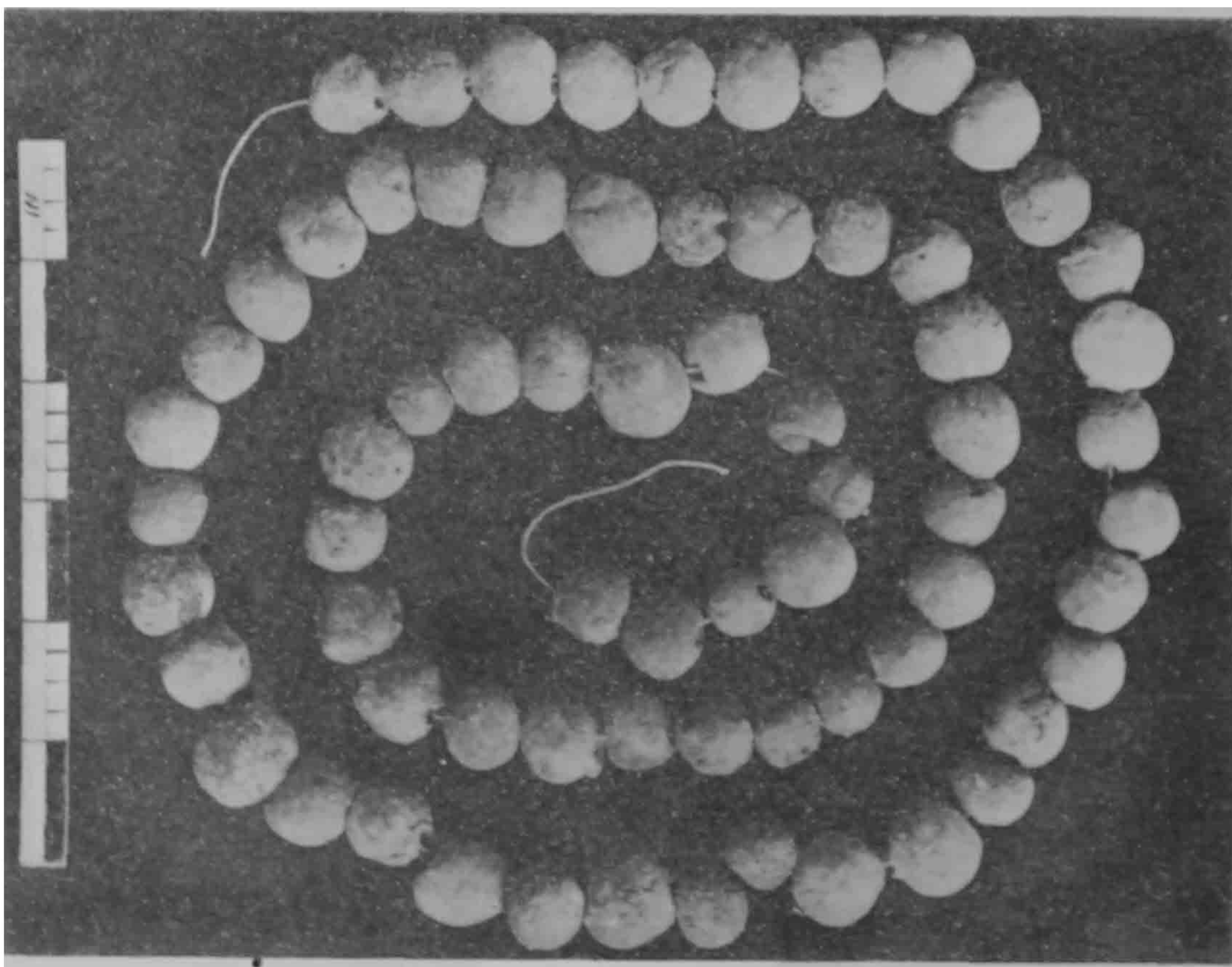
a. Beads of semi-precious stones.



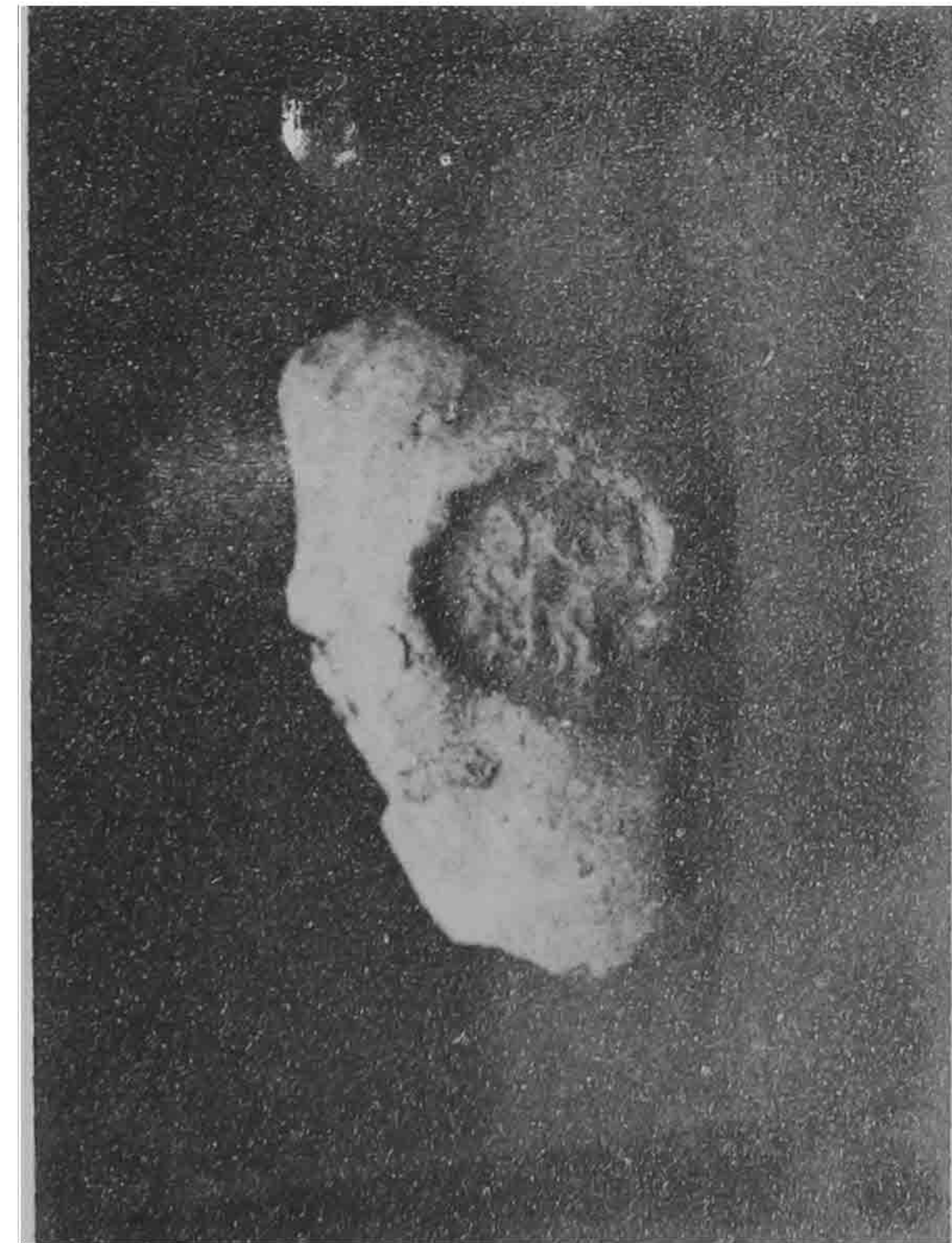
b. Terracotta beads.



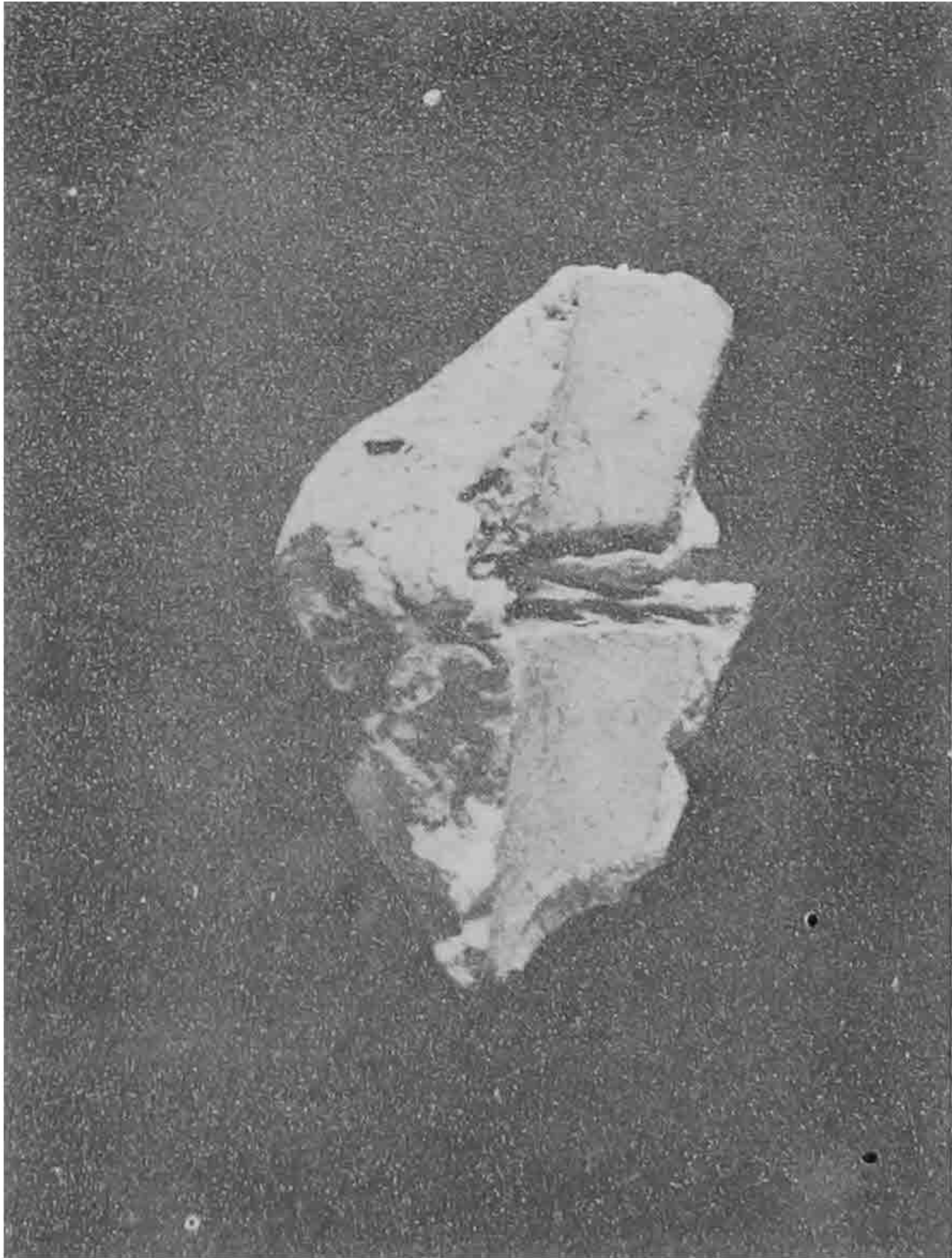
a. Terracotta beads, round and rectangular, KKG 17.



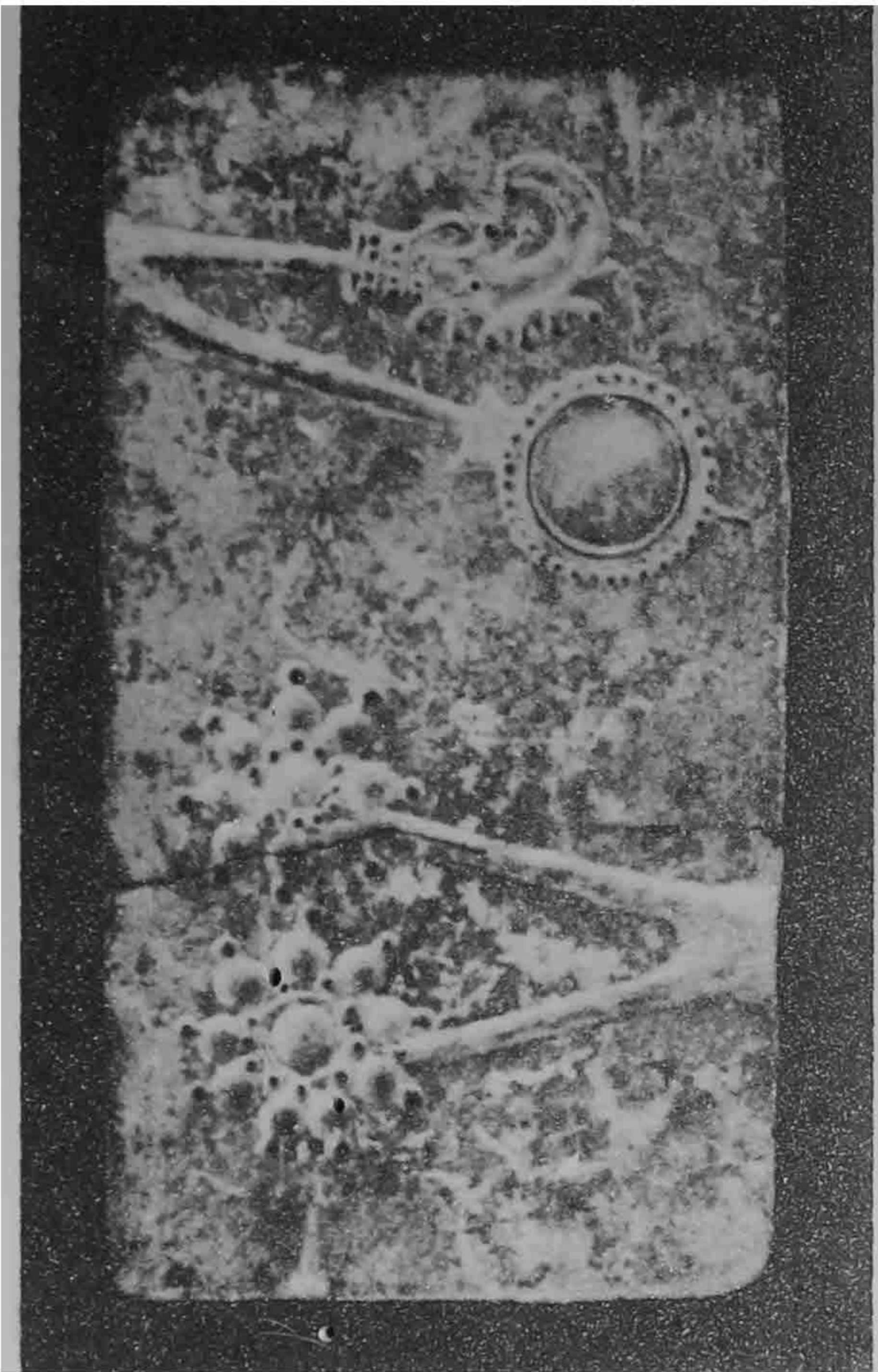
b. Round terracotta beads, KKG 17.



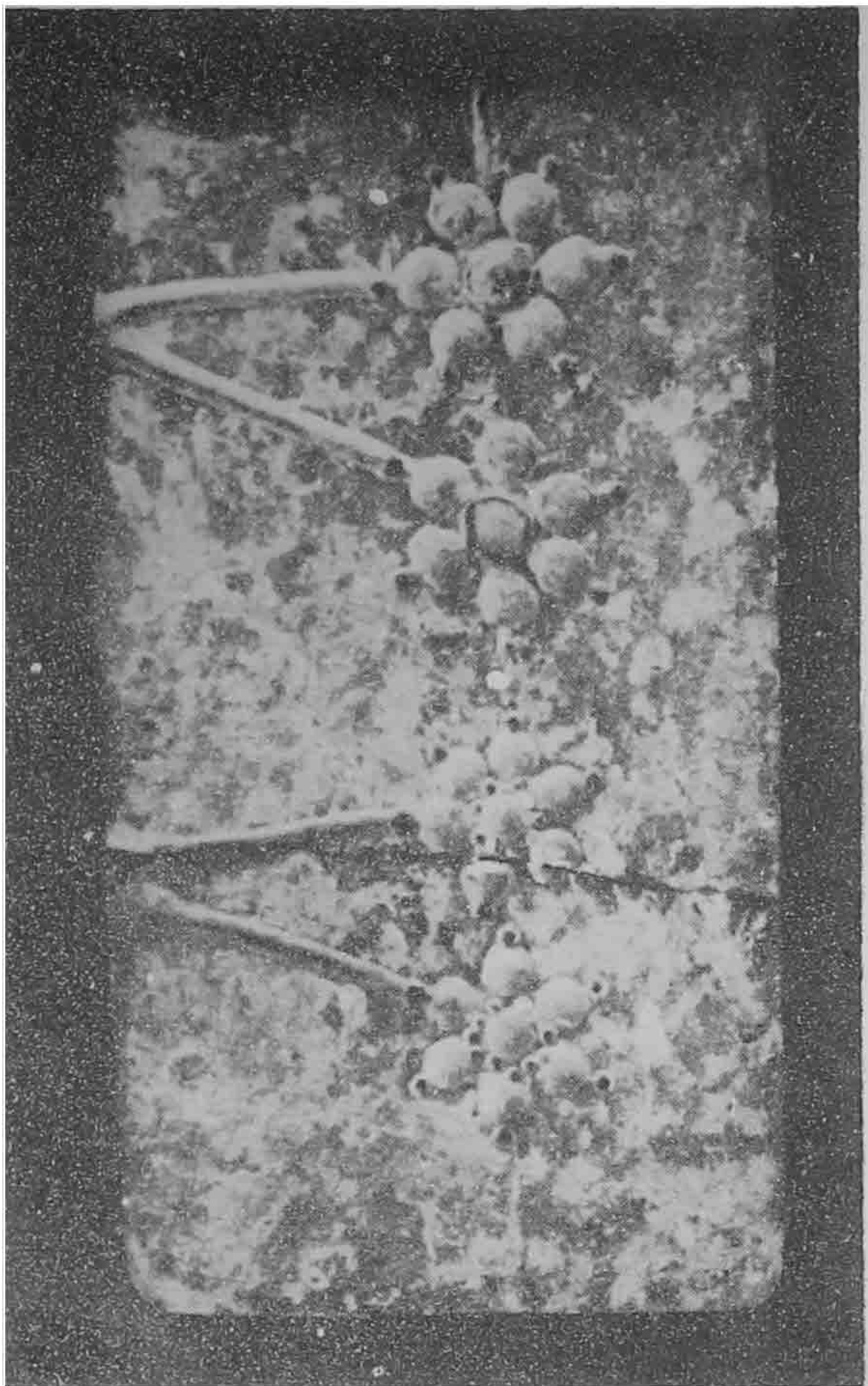
a. Clay sealing, exterior, KKG 2.



b. Clay sealing, interior, KKG 2.



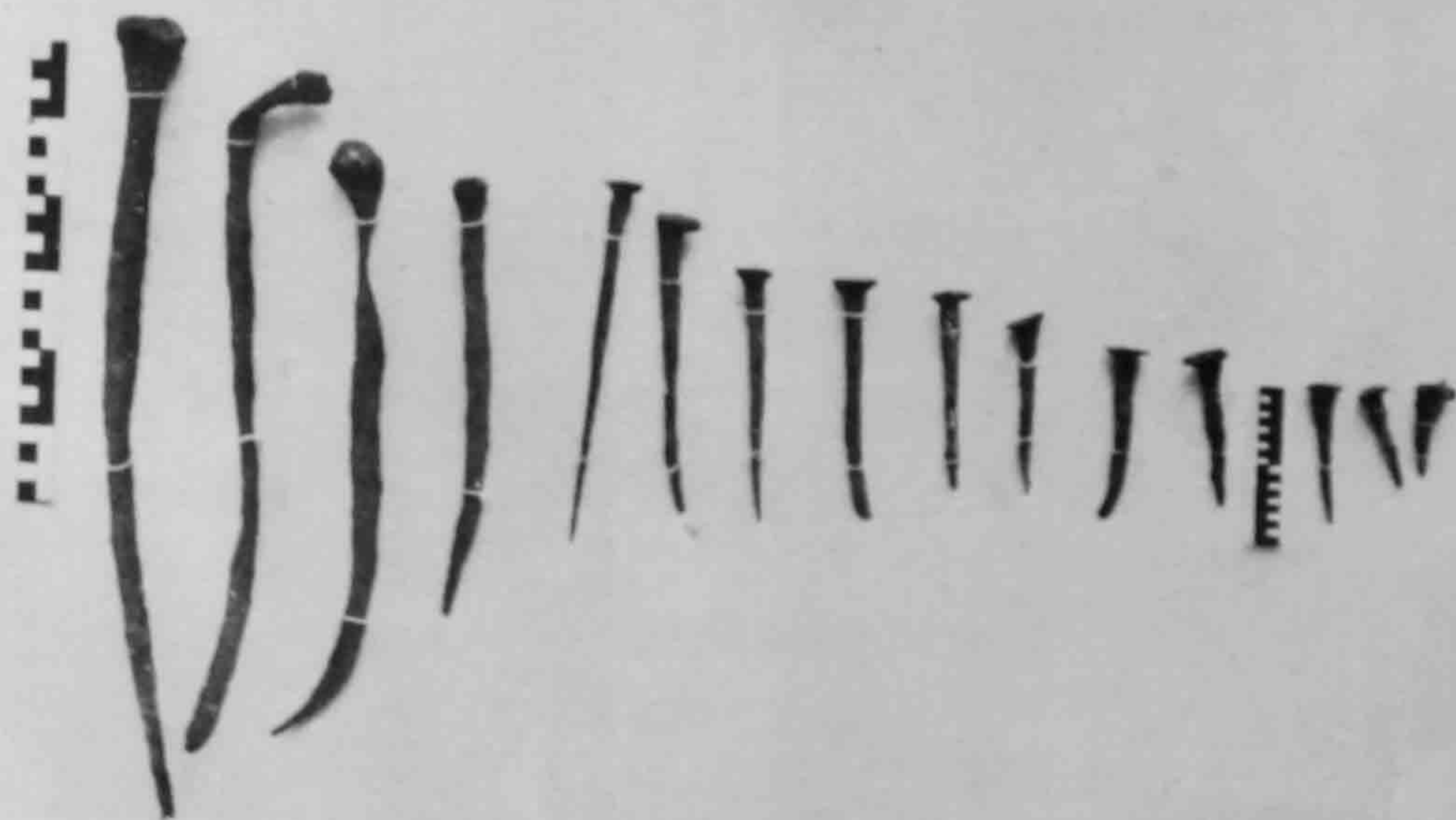
c. Stone tablet, obverse, KKG 2.



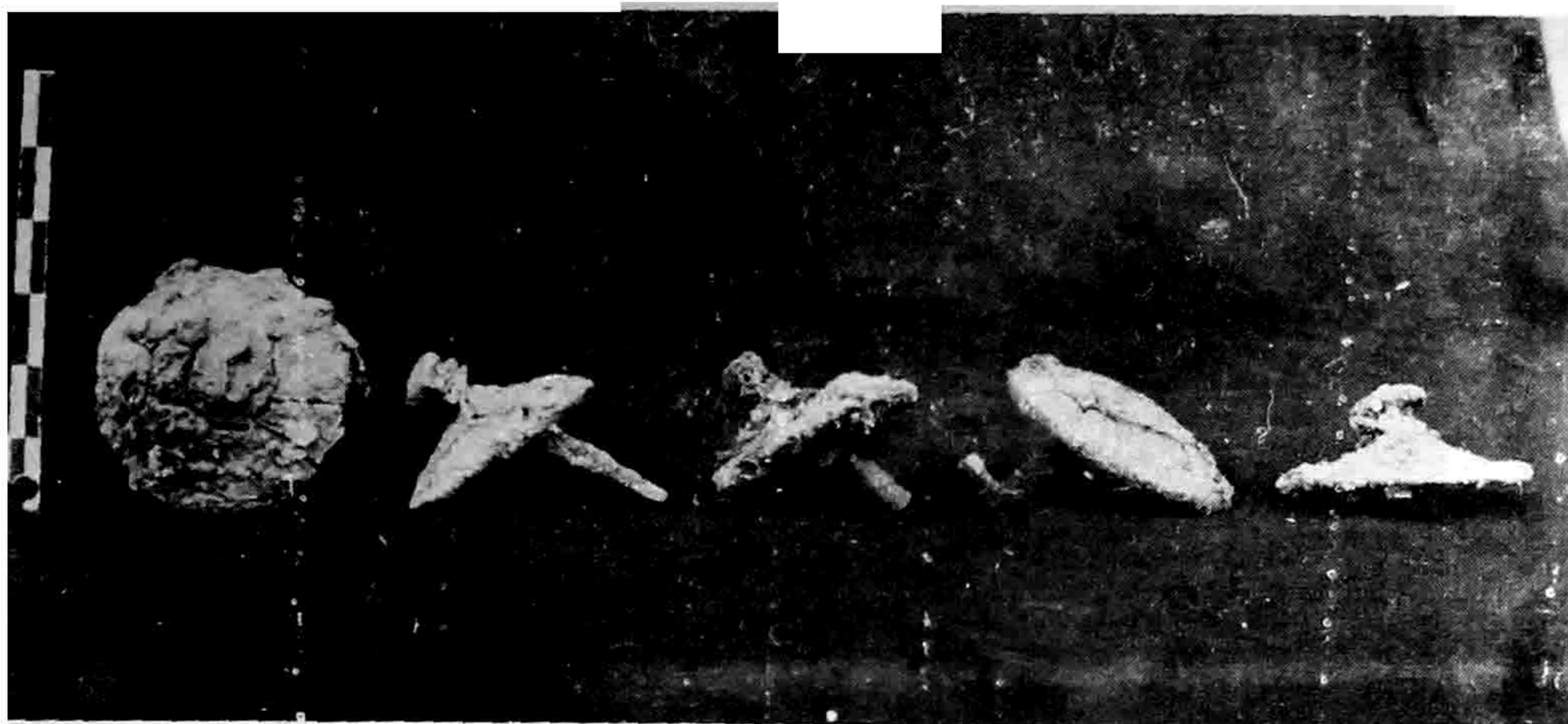
d. Stone tablet, reverse, KKG 2.



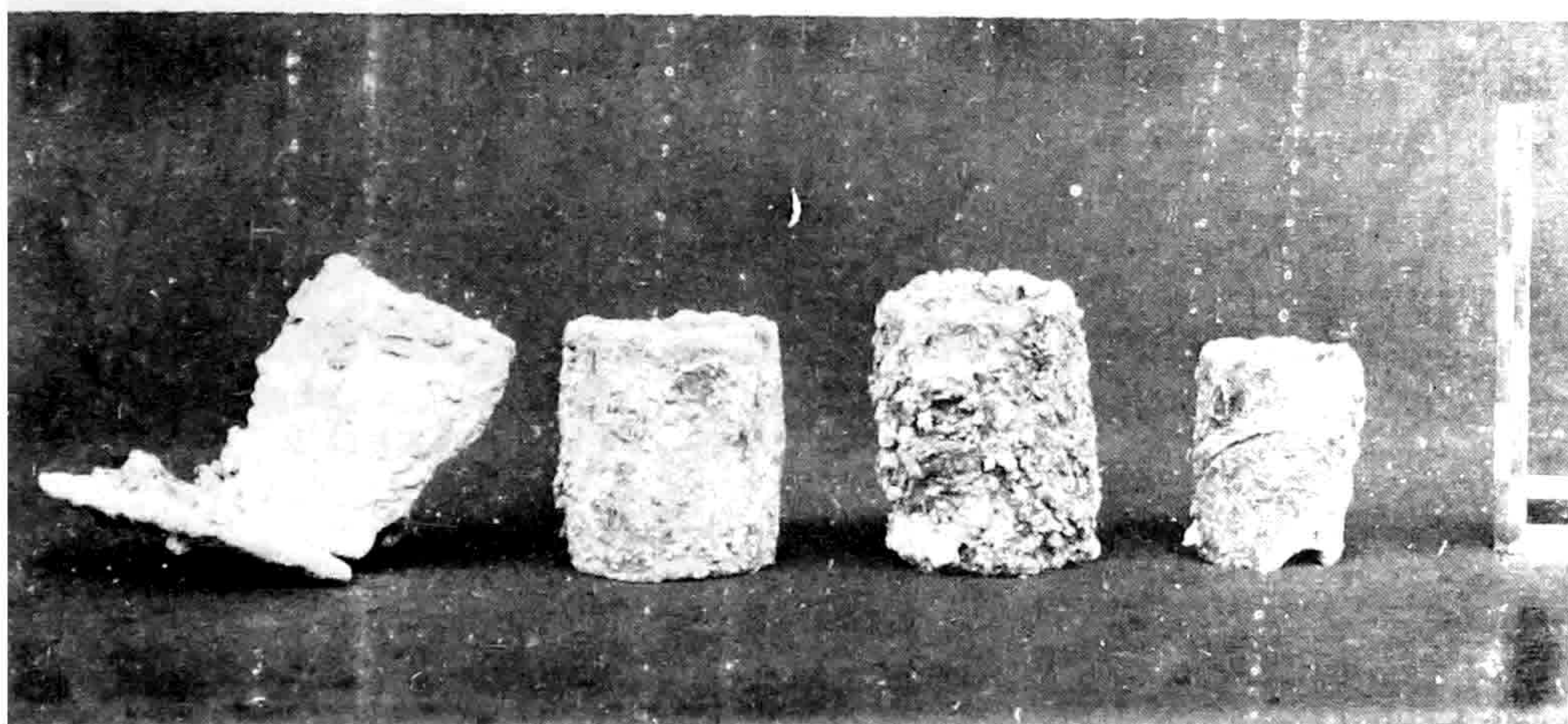
a. Clay figurine of a kinnari, KKG 5.



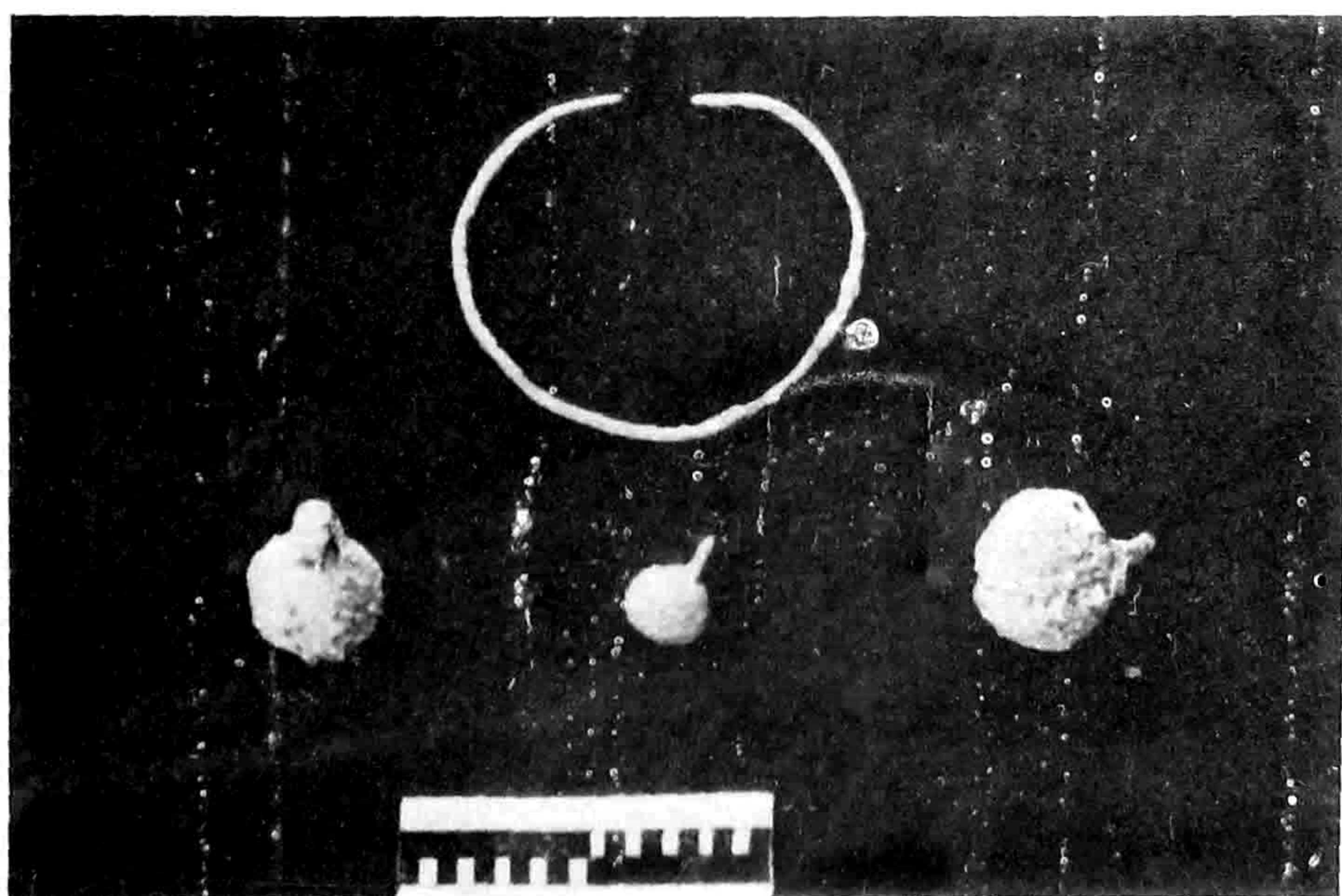
b. Iron nails.



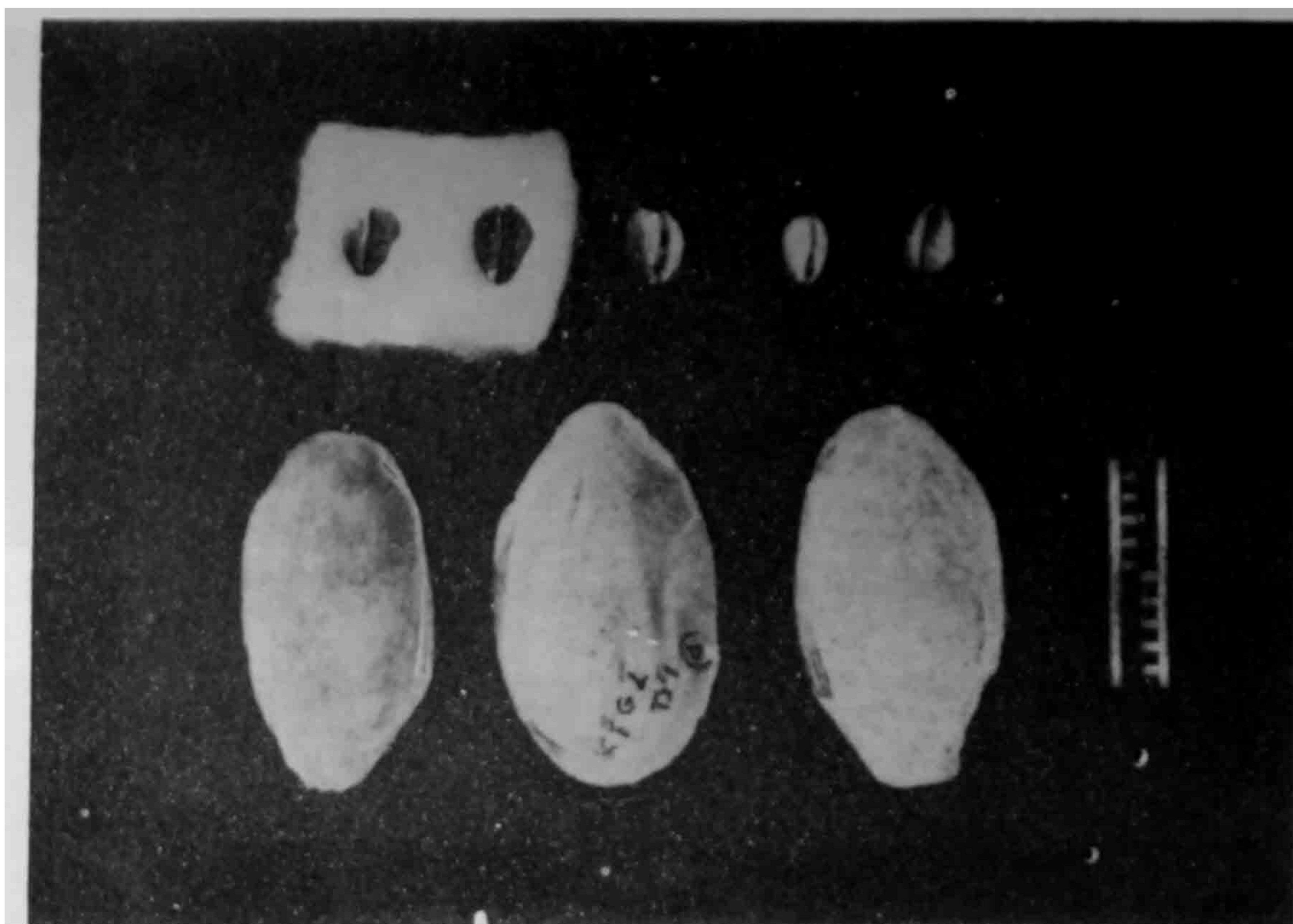
a. Iron bosses, KKG 2.



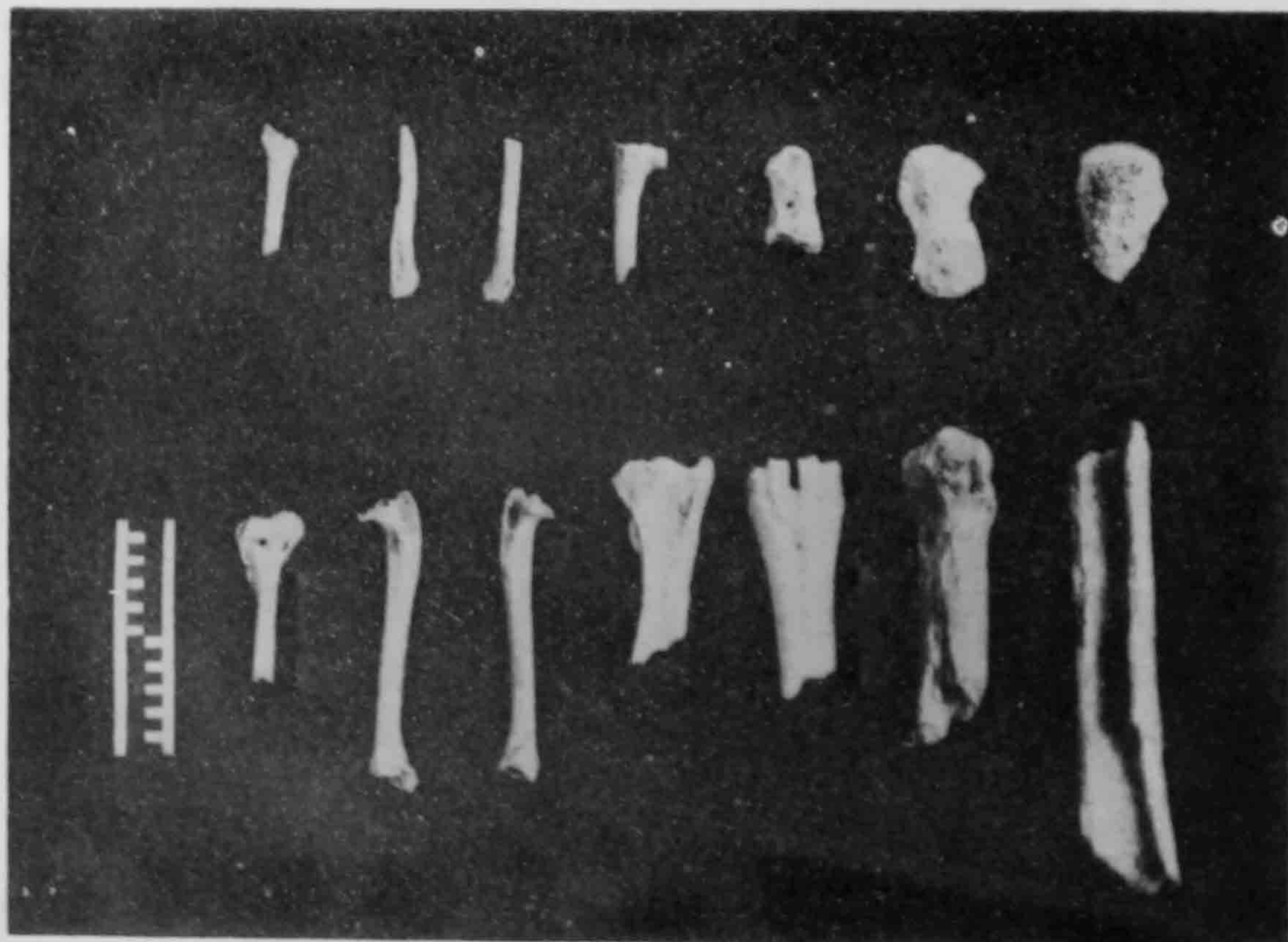
b. Iron sockets, KKG 2.



c. Copper bangle and rattles.



a. Cowries and shells, KKG 2



b. Bone fragments, KKG 2



a. Uninscribed (symbolical) silver coins, KKG 15 (large), KKG 3 (smaller ones).



b. Uninscribed (symbolical) silver coins, surface finds.



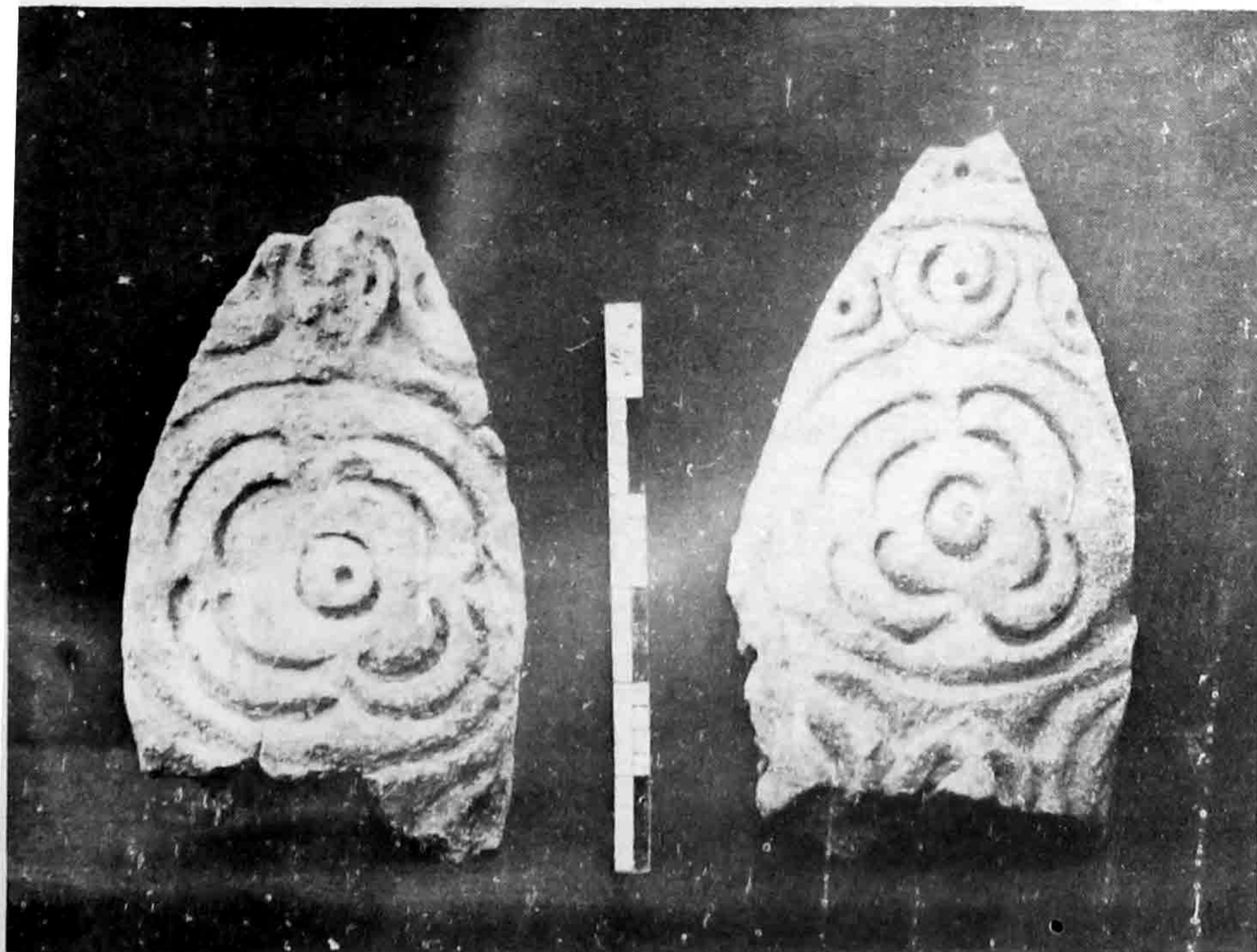
a. Stucco : Couchant lion, KKG 21, Period II.



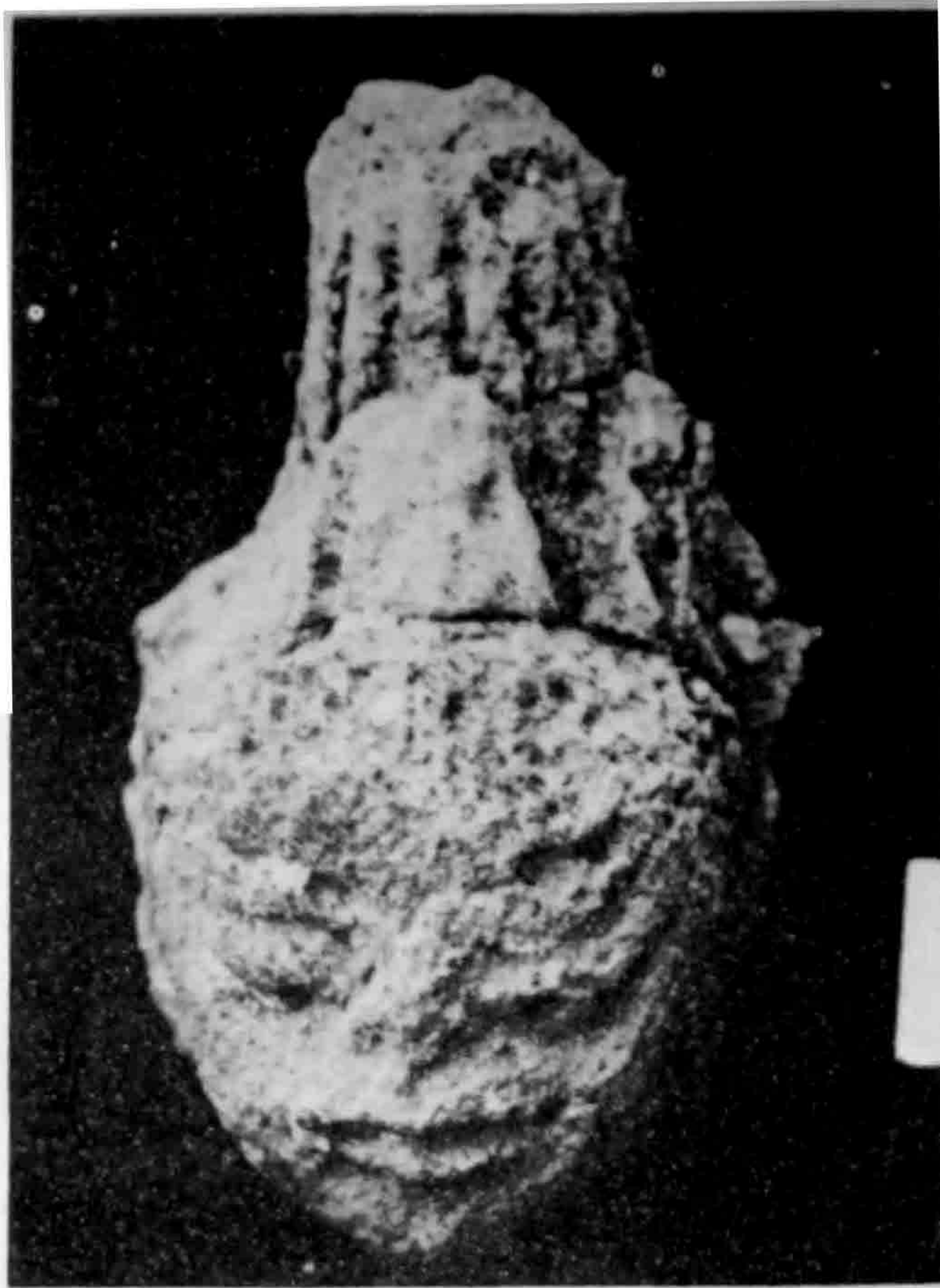
b. Stucco : Couchant lion, KKG 21, Period II.



a. Stucco : Corner merlon, KKG 21, Period II.



b. Stucco : flamboyant ornaments of arch-pediments, KKG 21, Period II.



a. Stucco : head of a deva, KKG 21, Period II.



b. Stucco : head of a demon, KKG 21, Period II.



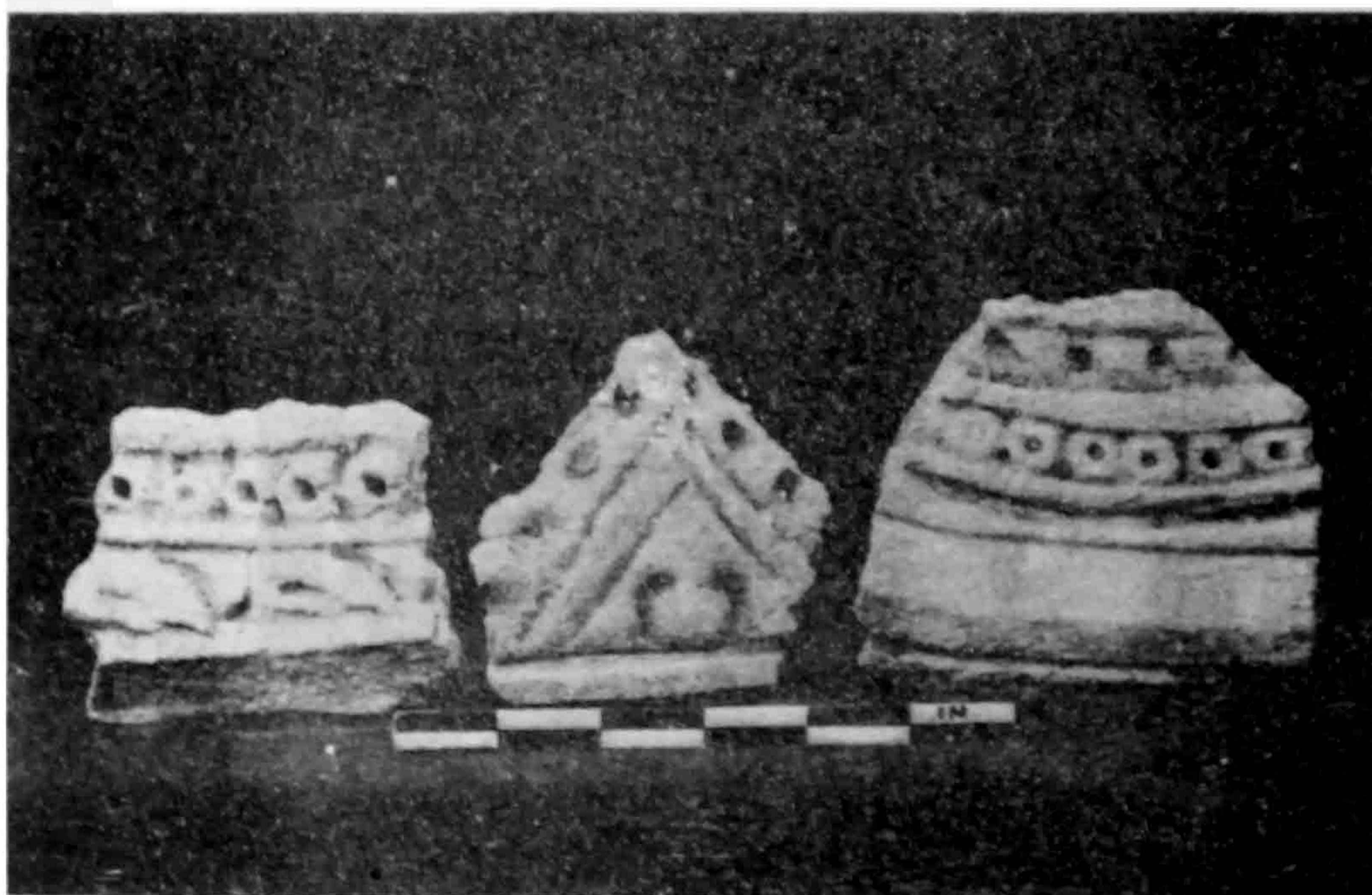
Stucco : Bust, headless, probably of a woman with hands in adoration attitude, KKG
Period II.



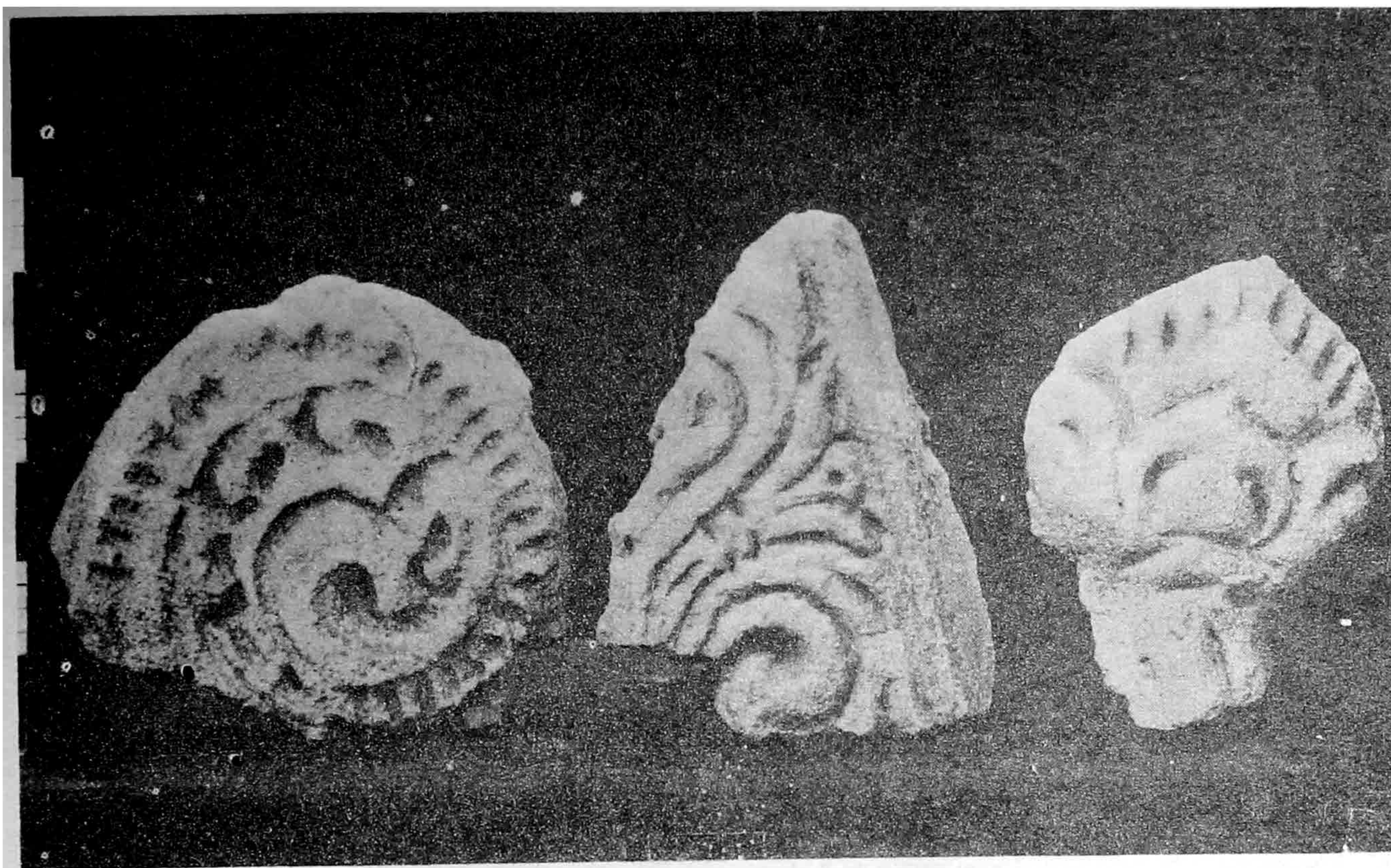
Stucco : head of a demon with three eyes, KKG 21, Period II.



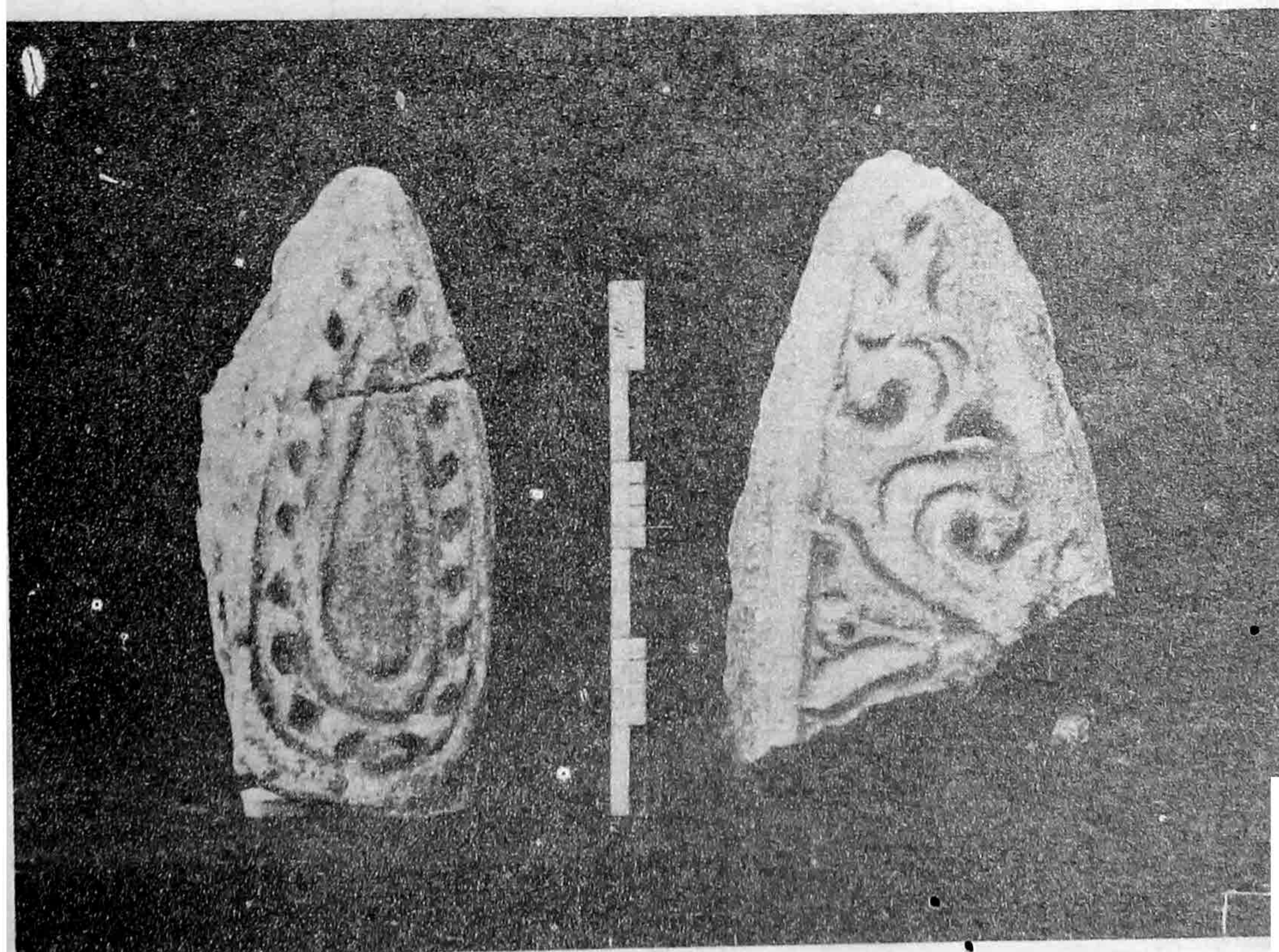
a. Stucco : a deva in adoration attitude, KKG 21, Period II.



b. Stucco : base and cornice mouldings, KKG 21, Period II.



• a. Stucco : spiral, leaf and lotus bud mouldings, KKG 21, Period II.



b. Stucco : flamboyant ornaments of arch-pediments, KKG 21, Period II.



a. Stupa No. 9, Nagarjunakonda, South India.
(Dept. of Archaeology, India.)



b. Stupa No. 85, Nagarjunakonda, South India.
(Dept. of Archaeology, India.)

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