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RESEARCHES IN ANATOLIA—VOLUME VIII

THE ALISHAR HÜYÜK

SEASONS OF 1930–32

PART II

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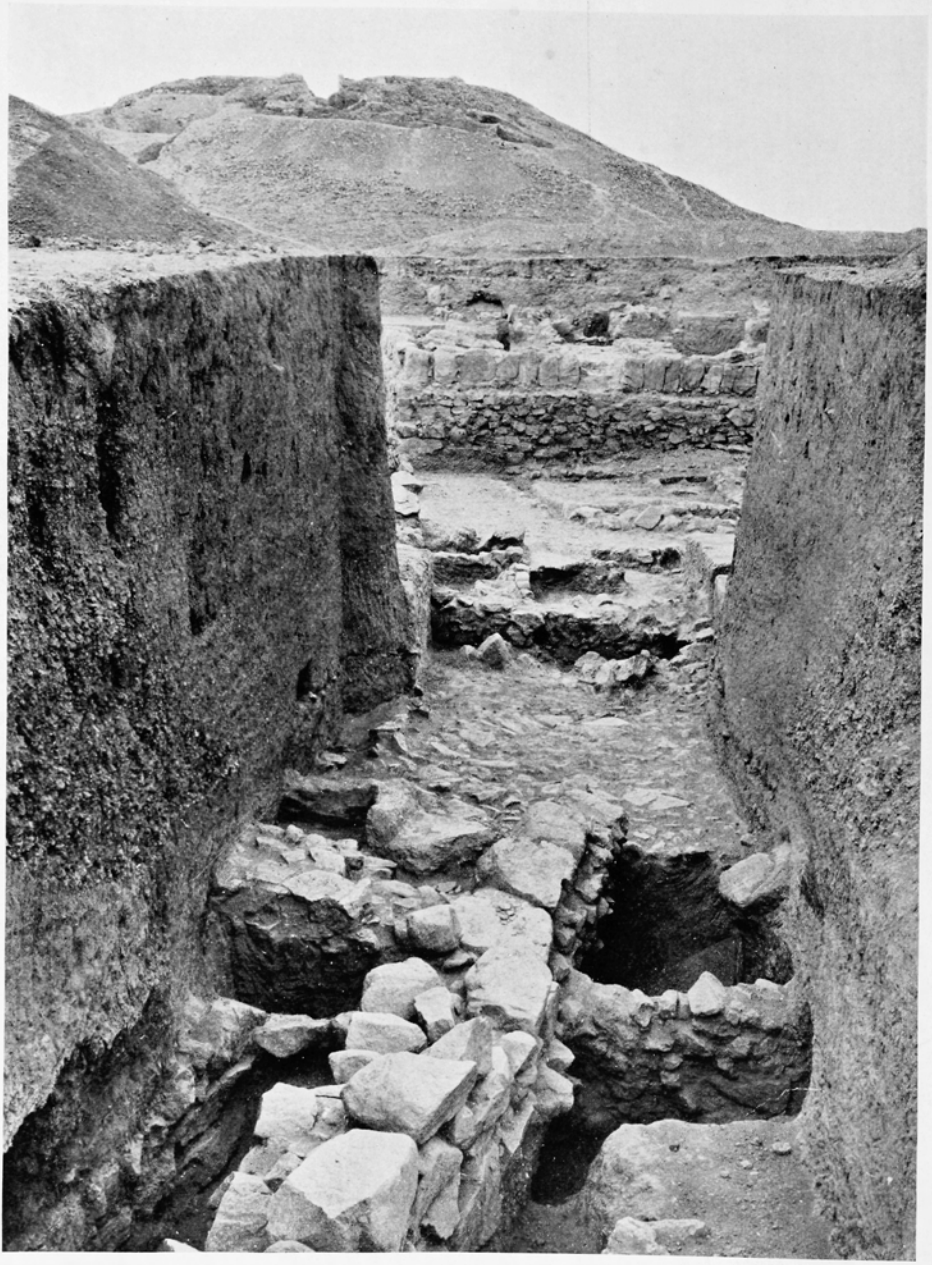

View Northward from Q 33, Showing the Mansion of the Period of the Hittite Empires in the Middle Distance and the Citadel Mound in the Background

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VOLUME XXIX

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THE ALISHAR HÜYÜK

SEASONS OF 1930-32

PART II

By
HANS HENNING VON DER OSTEN
Field Director of the Anatolian Expedition

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LIST OF ABBREVIATIONS

MDOG	Deutsche Orient-Gesellschaft, *Berlin*. Mitteilungen (Berlin, 1899——).
OIC	Chicago. University. The Oriental Institute. Oriental Institute communications (Chicago, 1922——).
OIC No. 14	Osten, H. H. von der. Discoveries in Anatolia, 1930–31 (1932).
OIP	Chicago. University. The Oriental Institute. Oriental Institute publications (Chicago, 1924——).
OIP VI–VII	Osten, H. H. von der, and Schmidt, Erich F. The Alishar Hüyük, season of 1927. Parts I–II (1930–32).
OIP XIX–XX	Schmidt, Erich F. The Alishar Hüyük, seasons of 1928 and 1929. Parts I–II (1932–33).
OIP XXVII	Gelb, Ignace J. Inscriptions from Alishar and vicinity (1935).
OIP XXVIII and XXX	Osten, H. H. von der. The Alishar Hüyük, seasons of 1930–32. Parts I and III (1937).
WVDOG	Deutsche Orient-Gesellschaft, *Berlin*. Wissenschaftliche Veröffentlichungen (Leipzig, 1900——).

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TERMINOLOGY[1]

The various levels and periods are designated as shown in Figure 513. Since the cultural sequence on the citadel mound and its western spurs differs from that on the city terrace, the building levels on the citadel mound are distinguished where necessary by the addition of an "M" and those on the terrace by addition of "T."

Objects found in 1927 have only numbers for identification, whereas for succeeding years letters were prefixed to numbers (1928, "a"; 1929, "b"; 1930, "c"; etc.). Skeletons are numbered in separate series including an "X" (e.g., e X1).

For Turkish words and names we endeavor to use the romanized Turkish spelling. The chief differences occur in the cases of *j*, *ch*, *gh* (mute), *zh*, *sh*, and *ı* in diphthongs, for which the Turkish uses *c*, *ç*, *ğ*, *j*, *ş*, and *y* respectively. Undotted *ı* stands for the indefinite vowel.

The word "meter(s)" is to be understood with all measurements.

DEFINITIONS

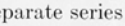
Axhead with lugs (*herminette, Ärmchenbeil*).

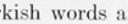
Axhead with socket (*ciseau à douille, Lappenbeil*).

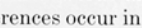
Kerpiç (adobe, *pisé*, Arabic *libn*). Mud tempered with chaff and dried in the sun.

"Whorls."—Circular objects perforated in the center. Some of them were probably used as spindle whorls.

Corrugated.— .

Fluted.—  .

Grooved.—  .

Scalloped.—  .

POTTERY

Burnished (*lissé, poliert*).—Rubbed with a pebble or bone to produce a glossy finish. Tool marks are definitely visible.

Frit (*fritte, Fritte*).—A siliceous paste incompletely vitrified.

Glazed (*émaillé, glasiert*).—Covered by a vitrified siliceous paste.

"Glazed" (*verni, mit Firnis überzogen*).—Having the more or less glossy coating characteristic of Greek and Roman pottery (cf. *OIP* XXX 74, n. 35).

Mat paint (*peinture mate, Mattmalerei*).—Flat or non-glossy paint. When not otherwise stated, mat paint was used.

Polished (*polis, frottiert*).—Rubbed to a gloss in which no tool marks are visible. This term is often used arbitrarily. Undoubtedly most of the pottery, if it shows any polishing, was polished with a hard tool.

Punctated-incised (*Furchenstich*).—Decorated with incised line or lines deepened at frequent intervals by pressure on the instrument.

Slip (*engobe, Engobe*).—A paste of fine clay added after the shaping of the vessel.

Tempering (*dégraissure, Entfettung*).—Addition of a non-argillaceous material to pure clay to counteract the tendency of the latter to shrink and to serve as a binder.

Grit-tempering.—Addition of coarse sand or other non-vegetable matter to clay as a temper.

Plant-tempering.—Addition of vegetable matter to clay as a temper.

Wash (*enduit coloré non argileux, Farb-Überzug*).—A coloring matter with little or no clay, added after the shaping of the vessel.

Wet-smoothed[2] (*mouillé, geglättet*).—Rubbed with the wet hand to bring the fine clay to the surface of the vessel.

[1] For assistance in the wording of these explanations I am indebted to Dr. Kurt Bittel and Dr. N. C. Debevoise. Cf. the definitions adopted by a Baghdad conference of archeologists working in Iraq (*Syria* XI [1930] 307–8 and *Archiv für Orientforschung* VII [1931–32] 303–4). Terms not explained here are used according to the definitions given in *Webster's New International Dictionary*.

[2] Called "wheel-finished" in the Baghdad conference report.

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Texture is more or less arbitrarily described as "coarse," "medium," or "fine."

Terms such as "bowl," "cup," "jar," and "flask" are used somewhat arbitrarily to suggest the type of vessel. Description of details will be clarified by examination of the following examples:

Button base (c 799 and d 2456, Fig. 175)
Pedestal base (Figs. 177 and 187)
Ring base (d 1935, Fig. 189, and d 925, Fig. 406)
Semi-pedestal base (d 2268, Fig. 189)
Bell-shaped cup (lower part of Fig. 174)
Band handle (e 2300, Fig. 424)
Knob handle (d 1173 and e 872, Fig. 418)
Ledge handle (d 2282, Fig. 157, and Fig. 420)
Lug handle (Fig. 218 31–34)
V-shaped handle (Figs. 219–22)
Flaring rim (Figs. 195–98 and 434–35)
Rim rolled inward (c 1057, Fig. 168)
Rim rolled outward (c 1096, Fig. 168)
Simple rim (Fig. 440)
Thickened rim (Fig. 432)
Beak-spout (Figs. 184–88)
Lateral strainer-spout (Figs. 414–15)

Color designations are illustrated by the following examples:[3]

BLACK
Brownish black (Pl. III 1, 7, and 9–10)

BROWN
Blackish brown (Pl. III 2)
Dark brown (*OIP* XXVIII, Pl. III 4)
Light brown (Pl. III 6)
Purplish brown (Pl. III 4)
Reddish brown (Pls. II 1–6 and III 3–6 and 8)

BUFF (Pls. I 2, II 1, and III 5 and 8)
Grayish buff (*OIP* XXVIII, Pls. I 3 and II 5)
Light brownish buff (*OIP* XXX, Pl. IV 6)
Light buff (Pls. II 2 and III 4, 6–7, and 9)
Orange-buff (Pl. II 5)
Reddish buff (Pl. II 3–4)
Whitish buff (Pls. II 6 and III 2–3)
Yellowish buff (*OIP* XXVIII, Pls. IV 4 and VI 1 and 6)

CREAM-COLORED (Pl. I 6)

CREAMY WHITE (*OIP* XXVIII, Pls. II 2 and IV 1)
Creamy white slip discolored by heat (Pl. III 1 and 10)

GRAY (*OIP* XXX, Pls. VI 7 and VII 4 and 11)

GREEN (Pl. I 4)

RED (Pls. I 5 and III 3 and 7)
Brownish red (Pls. I 6, II 6, and III 5)
Reddish (Pl. I 1)
Yellowish red (Pl. I 7)

YELLOW
Reddish yellow (Pl. I 3)

[3] The color plates referred to have all been reproduced directly from, and carefully checked with, the original objects.

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I

THE PERIOD OF THE HITTITE EMPIRES

With this period we reach definitely known historical times in Asia Minor. Its attribution to the time of the Hittite Empires is based on its association with cuneiform tablets of the Cappadocian type found on the Alişar mound in the second main building level of this period. On the Büyük Kale at Boğazköy tablets which dated from the end of the New Hittite Empire were associated with cultural remains of the same style as those associated on the Alişar mound with tablets of the Cappadocian type. Hence this cultural period began around the 20th century B.C., probably earlier, and ended approximately within the 12th century B.C.[1]

No building layer of the period of the Hittite Empires has been unearthed on the citadel mound. It is apparent, however, that the large citadel wall constructed during the later building period of the Early Bronze Age (Level 5 M)[2] was used during the Hittite period.[3] In the few places within[4] the citadel where we excavated below the post-Hittite remains, we found in and above Level 5 M a large admixture of monochrome wheelmade pottery and of small objects typical of the Hittite period with the Early Bronze Age remains, suggesting that the Early Bronze Age culture overlapped the beginning of the Hittite period on the citadel mound even though on the terrace only the unmixed remains of the Hittite period appear.

On most parts of the city terrace the deposit of the Hittite Empires followed that of the Copper Age, although a film of Early Bronze Age sherds nearly always appeared between the two. These Early Bronze Age sherds are mostly of the "intermediate" ware which appeared with the end of the Copper Age culture and overlapped the typical Early Bronze Age ware in the older building level (6 M) of that period on the citadel mound, disappearing completely in Level 5 M. In two areas only (I–J 25–26 and GG–II 9) is the cultural deposit of the Hittite Empires preceded by a definite Early Bronze Age building level (12 T). In the eastern part of the large complex unearthed during 1931 the evidence could be interpreted to indicate that a building level of the period of the Hittite Empires was contemporaneous with the latest building level of the Copper Age; but just here the stratification was greatly disturbed through a leveling which seems to have taken place in the second main building level (10 T) of the Hittite period (cf. pp. 19–20). The city terrace was almost entirely occupied during the Hittite period and was protected by a strong outer defense wall. On the southern part of the terrace the deposit of this period has an average thickness of 3.50–4.00 and appears 2–4 meters below the surface, with several deposits of later periods above it; on the eastern part it appears frequently in the same average thickness and often directly beneath the surface or beneath buildings of the Turkish period. Very little is known about the settlement in the area covered by the western spurs of the citadel mound, but in the only places where the excavations went deep enough (A–E 8 and F 14) scanty remains of this period were found.

[1] Cf. *OIP* XXX 434.

[2] Levels on the citadel mound and those on the terrace are now numbered in two independent series. The series to which a level belongs is designated by M ("mound") or T ("terrace") following the number. The present level numbers do not always agree with those used in previous reports (cf. Fig. 513).

[3] For the sake of brevity this term is used interchangeably with "period of the Hittite Empires."

[4] Possibly outside also; see p. 3, n. 6.

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Two main building levels (10–11 T) in the settlement remains on the terrace and corresponding alterations in the city wall could be distinguished. Naturally, there were several secondary levels, due to renovation or rebuilding, for this culture was of long duration. The first settlement (Pl. XII), which seems to have been by far the more important, apparently covered the whole city terrace with the exception of a depression in the western portion. In the second main building level (10 T, Pl. XIII) the remains on the southern part of the terrace were very scanty, with the exception of a gateway and a large mansion, and the settlement seems to have been concentrated on the eastern part of the terrace. The latest sublevel of Level 10 T (Pl. XIV) comprises the remains of miserable dwellings, built in part within the broken-down city wall; they probably belonged to the survivors of the catastrophe which brought the New Hittite Empire to a sudden end.

We have naturally much more information about the settlement of this cultural period than we have for the previous periods. The settlement seems to have been planned, with houses roughly parallel to the city wall and streets radiating from the citadel. Although the houses generally consist of several approximately rectangular rooms, no standard house plan could be recognized; one is reminded of the very irregular house forms in modern Anatolian villages

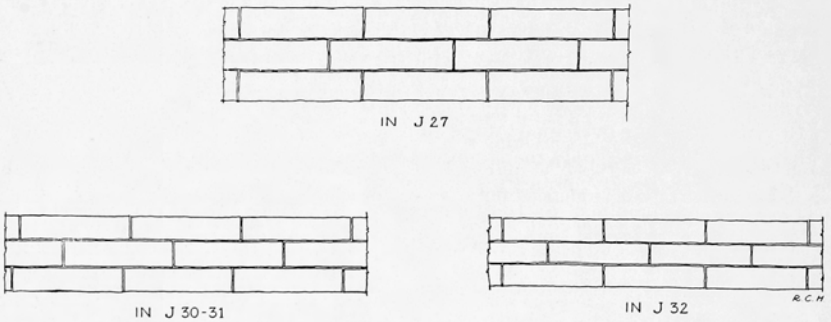

Fig. 1.—Drawings of Measured Bricks in Three Walls of Level 10 T. Scale, 1:20

and towns. The architectural details show no great innovations or improvements. The sun-dried mud-brick wall (Fig. 1) on a stone foundation remains the typical wall construction. In the large mansion of Level 10 T dado slabs appear on the façade of the stone socle, above a deep stone foundation; the *kerpiç* superstructure had been erected on a wooden grill. The city defense wall, averaging 5–6 meters in width, is of box construction: a series of compartments in saw-tooth arrangement, each surrounded by *kerpiç* walls on stone foundations and each filled with packed earth. A postern at the northeast and the large gateway at the south resemble those of Boğazköy.

The other remains of material culture are definitely superior to those of the previous period and entirely different. The monochrome wheelmade pottery shows a great variety of forms, some of which are exceedingly beautiful. Bronze or copper is the metal most commonly used in all kinds of objects. Iron starts to appear sporadically. Seals with very well executed designs are numerous; imported cylinder seals, figurines of various materials, and bone and ivory objects in great variety are common. A great innovation in the cultural development is the appearance of written documents—cuneiform tablets of the Cappadocian type. The population seems to have been engaged in trade, agriculture, and cattle- and sheep-raising. Horses and asses apparently were well known, for the typical awls of this period were made predominantly of bones of such animals.

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Intramural burials still appear. Although a few of the bodies are in contracted positions, most of them are now extended and covered by two or three large jars. Single-pot burials, stone-box burials, and earth burials also occur. Mortuary gifts are now more common; in fact, the best specimens of pottery were found in burials. Gold and silver rings, as well as bronze or copper bracelets, rings, pins, and necklaces, were found with skeletons.

SETTLEMENT REMAINS

ON THE CITADEL MOUND

We could not clear a sufficiently large area to the depth of the Hittite deposit on the citadel mound to learn much about the settlement there. There is definite evidence that the first alteration of the citadel wall was made just before or during the Hittite period. On the floor level of the ramp included in the first rebuilding of the southern gateway many sherds of monochrome wheelmade ware and many small objects typical of the Hittite period were mixed with Early Bronze Age sherds, whereas only Early Bronze Age remains appeared on the floor level of the earliest gateway structure.[5] At only two places within the citadel (L 11–12 and O 10–11) and at two places just outside (L 14–15 and J–K 13–14)[6] did we reach building levels older than the first post-Hittite level (4*c* M). Below Level 4*c* in L 11–12 and O 10–11 (see Pl. XXIV) we found a refuse layer 1.50–2.00 thick in which pottery and small objects typical of the Hittite period were mixed with large quantities of typical Early Bronze Age sherds. Beneath this refuse layer we found scanty remains of the second Early Bronze Age building level (5 M), which also contained cultural remains of both periods.

Although it was impossible to distinguish a building layer containing only remains of the Hittite period between Levels 5 M and 4*c* M, it seems certain that the citadel was occupied during this period. This is evidenced not only by the objects found there but also by the fact that the whole city terrace was densely settled at this time and surrounded by a city wall. It seems very unlikely that one people with an earlier culture would have lived for a long time within the citadel while another people with a later, superior culture lived between the citadel and the city wall, although the two cultures overlapped at the beginning of the Hittite period. Considering the known facts, I am convinced that there was on the citadel mound an actual layer or layers of the period of the Hittite Empires; and I think it probable that the fortress of that period was destroyed completely and the area leveled by the conquerors in order that they might rebuild.[7] Such a radical leveling would explain the mixed appearance of the cultural remains in the thick refuse layer above Level 5 M. The question, of course, can be clarified only by the complete clearance of the interior of the citadel down to at least the later building level (5 M) of the Early Bronze Age.

ON THE CITY TERRACE

Of the two main building levels of this period on the city terrace, the earlier, Level 11 T (Pl. XII), showed three definite sublevels; and Level 10 T (Pl. XIII) also had at least three sublevels in some places. The settlement seems to have been planned, and streets could be identified in the few large areas that were excavated. An important building and a large gateway on the south part of the terrace, belonging to a sublevel of Level 10 T, are probably approximately contemporaneous with the settlement of the Büyük Kale in Boğazköy.[7a] It must

[5] Cf. p. 296 and *OIP* XXVIII 214.

[6] Since I was not present in 1928 and 1929, conditions in L 14–15 are unknown to me, and it is not quite clear from the publications of Dr. E. F. Schmidt where, or whether, small objects of the Hittite period had been admixed. Nor are the conditions in J–K 13–14 (1927) clear.

[7] *OIP* XXX 429 f.

[7a] [The New Hittite phase is meant. Cf. *OIP* XXX 434, n. 11.—Editor.]

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be accepted that the entire city terrace, with the exception of the depression extending about 150 meters eastward from the western edge of the terrace in an average width of 60 meters, was settled during the period of the Hittite Empires. Along the eastern stretch of the city wall there may be a fourth, very scanty, sublevel of Level 10 T (Pl. XIV), often only a few centimeters below the mound surface (see Fig. 41). Parts of that stretch of the city wall definitely show three building periods.

The City Wall

One of our main projects in 1932 was the tracing of the city wall of the period of the Hittite Empires. Mr. Curt Stein, who was in charge of this work, was especially well qualified, having been in 1931 the architect of the first post-war German expedition to Boğazköy. The following description is based on his report.

Approximately half of the circumference of the outer face of the city wall was excavated in two long stretches on the east and west sides (Figs. 19–24)[8] and two small sectors on the north side (Figs. 112 and 116). It was necessary to trace this wall in long strips, as its form and construction proved to be different from what had been expected. A city wall similar to that of Boğazköy had been anticipated, especially since in 1930 a gateway had been found (in J–M 33–35) and in 1927 a postern (in FF–JJ 4–5) both of which were on the same plan as those of Boğazköy. But the city wall at Alişar was of a type seldom found thus far. The exact reason for its form cannot yet be explained.

All of the wall which we cleared consisted of nearly rectangular boxes made of *kerpiç* walls on stone foundations and filled with packed earth. With the exception of a stretch in the northeast (see Fig. 19 and p. 6), the boxes are staggered in saw-tooth fashion, with "teeth" about .30 wide and generally facing in the same direction. The purpose of this may have been to control the flanks or to make the wall less vulnerable by dividing its face into smaller units; in case of breaching, this construction guarantees that only a relatively small breach would result. Unfortunately, none of the *kerpiç* superstructure is sufficiently preserved for us to recognize the construction of the *chemin de ronde* and parapet. The width of the wall is between 5 and 6 meters, the sizes of the boxes varying accordingly (Fig. 52).

The saw-tooth wall follows the contour of the mound from GG–HH 14 southward to CC–DD 23–24 (Figs. 19–21). It then turns sharply southeast for nearly 25 meters, to turn southwest again at nearly a right angle in EE 25 (Fig. 21). In GG 17 an entire box of the wall was freed (Figs. 20 and 42–45). The stone portion of the front wall of the box, 3.20 high, was completely preserved. It was built of unworked large and medium-sized stones, the crevices between which were filled with smaller stones and *kerpiç* (Fig. 43 *A*). The stone foundation of the rear wall began almost as high as the top of the stone masonry in the front wall and was built only one or two courses high (.25–.50). The inner face of the front wall is sloping (Figs. 20 and 43 *B*). Of the superstructure two, sometimes three, courses of *kerpiç* bricks were preserved. The box was filled with packed earth. The northern profile of GG–HH 17 (Figs. 43 *B* and 45) shows that earth was banked at the base of the outer face originally (*A* in Fig. 43 *B*) and that more earth was later banked on top of this reinforcement. The two stages probably correspond to the two main building levels (10–11 T).

In HH 17 a wall fragment with a foundation .80 wide was unearthed 7.00–7.50 from the outer face of the city wall and parallel to it. Similar wall fragments were found in II 14, 9.50 before the outer face of the city wall, and in JJ 13 and JJ 12, 10–12 meters outside of the later retaining walls (cf. p. 6). It is possible that these walls were parts of a lower outer wall. The

[8] Figs. 19–119 are grouped on pp. 25–83. Figs. 19–24 are plans of the city wall; Figs. 25–119 are arranged to show the architectural remains in sequence, starting with the northeast corner of the mound.

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narrow wall 1.50 in front of the outer face of the city wall in HH 17 may have been a small retaining wall to strengthen the embankment.

As far south as GG 18 the only indication of a rebuilding is the double embankment against the outer face. But from FF 19 to DD 22, about 2 meters above the upper edge of the stone foundation and following exactly the same course, appears a second foundation about .50–.60 high which belongs to the city wall of Level 10 T (Figs. 46–47). The part from FF 19 to EE 21 had been freed in 1929 and called "Complex II" (Fig. 49).[9] Because of our limited time in 1932, we were unable to investigate this complex again. It is evident that many walls behind the city wall were secondary and that the inner face of the actual city wall is hidden among them. In Plate XIII the walls in this section most probably belonging to the city wall are

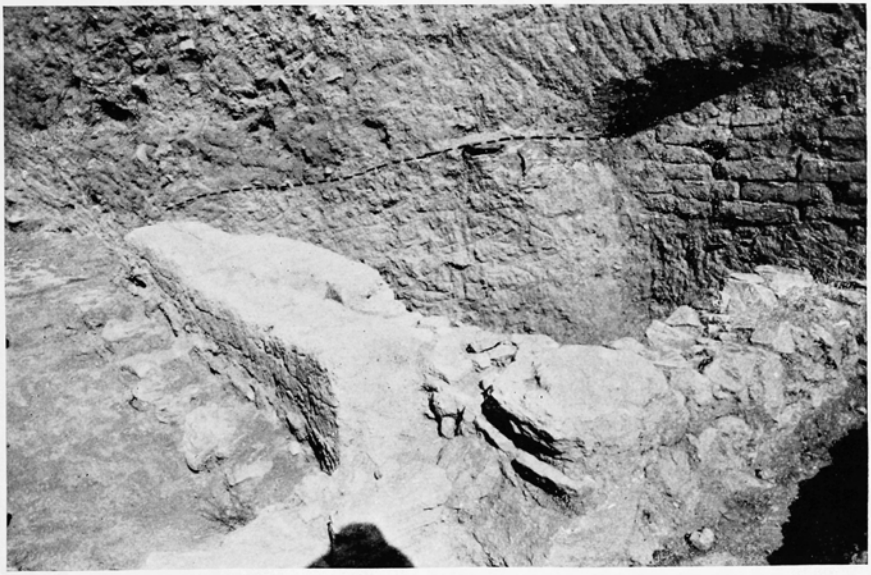

FIG. 2.—SECTION OF THE CITY WALL IN EE 21. DOTTED LINE SHOWS SURFACE OF FILLING AS PRESERVED ON THE SOUTHERN WALL OF THE PLOT

shown in black, whereas all others are stippled. The city wall of the second building period exactly follows the original course of the wall as far as DD 22. In DD 23 its stone foundation increases in height to about 2 meters. Departing from the original course it turns slightly westward and forms what seems to have been a tower (Fig. 21). Beyond the angle of the original wall in CC–DD 24 a small gateway was constructed (Figs. 50–51 and 55 *A–B*). The remains southeast of the gateway are poorly preserved, but here also the wall seemingly follows the general direction of the older wall.

About 1–2 meters higher than the base of the first rebuilding, the remains of a second reconstruction can be recognized from EE 21 to DD 25 (Figs. 48 and 53). The stone foundations

[9] *OIP* XIX 101–5. The architectural remains of the lower level unearthed in Complex II (cf. p. 22) were interpreted by Dr. Schmidt as the remains of a community storehouse, whereas I am inclined to believe that for the most part the walls belong to the inner face of the city wall. Some of them are later additions built to change the one-time defense wall into dwellings. The absence of objects and the filling of Sections 1 and 2 with packed earth (Fig. 2), brought probably from outside the mound, corroborate this point of view.

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of this reconstruction follow directly the course of the first reconstruction, separated from it only by a thin layer of débris. The gateway seems to have been closed and the walls of the gate chamber reinforced on the inside by buttresses consisting of two or three large bowlders (Fig. 54). The gate chamber had then been filled with earth. East and west of the gateway fragments of a sloping pavement appear (Fig. 55 *C*). The remains southeast of the gateway were fragmentary.

On the west side of the site the outer face of the city wall was traced from VV 32 to B–C 8 (Figs. 22–24 and 99–110). Throughout this stretch we found the same saw-tooth construction as on the east side. In VV 31–32 the foundation was found to rest on bed rock; after jutting forward 4.20 the wall disappeared in VV 32 (Fig. 99). Its southern section was not traced. In TT–UU 24 (Figs. 23 and 100) the entire width of the wall was uncovered. Its character was much the same as in GG 17. The stone foundation in TT 24 was excavated to a depth of 2.30 from its top. Steadily increasing ground water made it impossible to reach the bottom, but I believe that it could not have been very much deeper. From TT–UU 24 the wall was traced northeastward as far as B–C 8 (Figs. 102 and 107–8). In XX–YY 16 remains appeared which suggested a gateway structure (cf. p. 8). A cut in A–E 8 (Figs. 109–10) showed the relationship of the Hittite city wall to the Phrygian fortification.

On the north side a gateway structure, described on pages 8–9, was found in R–T 0–2 (Figs. 111–14). Its connections with the wall could not be defined with certainty. West of this gateway the wall seems to have been washed away. Part of the city wall was found in W–Z 1–2 (Figs. 115–18), but in a very poor state of preservation, and it completely disappeared on the east and west. Above this part was built a later defense wall (*b* in Fig. 115).[10] In FF–GG 3 again small fragments of the wall were preserved. The profiles showed that in later times great excavations and levelings had taken place here (Fig. 119).

As already mentioned, the northeast part of the city wall from II 4 to HH 14 showed a different form (Fig. 19). In HH 14 the wall projected 1.80 forward. From this point to II 7 the wall had a straight outer face reinforced by pilasters about 4 meters apart (Fig. 37). The interior boxes were of varying sizes. Here again the remains of the *kerpiç* superstructure were very fragmentary. No explanation for the change in the form of the city wall here can be given. Nevertheless, this part of the city wall was built at the same time as the saw-tooth wall, for the forward-springing box in HH 14 was bound into the saw-tooth construction. Along the outer face of the wall an embankment of earth can be recognized.

This northeast part of the city wall shows at least one major alteration: where the construction of the wall changes (HH 14) an extension projects eastward. From this projecting wall two other walls extend northward approximately parallel to the wall strengthened with pilasters (Fig. 39). They seem to have been retaining walls for an embankment. These additions were apparently all built at the same time.

A large section of building remains adjoining the northeast stretch of the city wall had been cleared in 1929 as "Complex I."[11] The inner face of the rebuilt city wall is known to us from that excavation ("Level 1"; see Fig. 36 and cf. pp. 22–24). In 1932 "Level 2" of this area was again carefully investigated, and the original inner face of the city wall was freed (Figs. 35 and 38). The walls projecting inward from it[12] belong to a period when this part of the city wall had been converted into living-quarters, a reconstruction indicated by pits (e.g., Fig. 3), fireplaces (e.g., Fig. 4), and pottery remains within the boxes. Below the floor level of this later occupation, which is about level with the upper edge of the stone foundation of the outer face, the boxes are filled with tamped earth.

[10] *OIP* XXX 2. [11] *OIP* XIX 82–98. [12] See *OIP* XIX, Fig. 106.

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In FF–JJ 4–5 the remains of a postern which leads under the city wall were unearthed (Figs. 25–33).[13] This part of the city fortification is very fragmentary, and the outer end of the postern was largely destroyed. Nevertheless, it could be seen that the plan was similar to that of the posterns at Boğazköy. The underground passage was constructed in the manner of a false

Fig. 3.—*Kerpiç*-lined Pit in a Box of the City Wall in GG–HH 13–14

vault and covered with large stone slabs, differing from the posterns at Boğazköy, where keystones were used. Within the city the end of the south wall of the passage was broken away, but the end of the north wall was preserved and showed a battered front. There seem to have been entrances from west, north, and south; the latter two were connected by a pavement. It is apparent that the north and south entrances were roofed with false vaults like that of the

[13] Cf. *OIP* VI 182–89. Dr. Schmidt, in *OIP* XIX 18 and *OIP* XX 2 and 4, is inclined to attribute this postern, which he calls a "town wall," to "Period V," our period of the second half of the first millennium B.C. The excavations of 1930 and 1932 have proved definitely that this structure dates from the Hittite period and is an integral part of the city fortification (cf. *OIC* No. 14, p. 13).

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passageway, and it is reasonable to assume that the west entrance was constructed in the same way. The passage seems to have run between two towers, of which the northern one probably formed the northeast corner of the city wall also (Fig. 30). The construction of the city wall toward the west is problematical.

The postern shows an alteration (Figs. 28 and 31). Through the south wall of its tunnel was cut an entrance for a new approach which descended gradually to abut diagonally on the older passage. The two towers flanking the exit also were rebuilt. The remains are very scanty with the exception of two drains (Figs. 32–33), that in the southern tower being especially well preserved. The abutment of the city wall on the southern tower is not clear, nor is the westward continuation from the northern tower.

Fig. 4.—Fireplace and Tamped *Kerpiç* Floor in a Box of the City Wall in GG 17

Besides the small gateway of the second building level in CC–DD 24 (cf. p. 5), we have remains of two more gateway structures within the circuit of the city wall. In XX–YY 15–16 foundations of what seems to have been a tower were partly cleared (Fig. 24 *A*). A large, carefully worked monolith was lying on the floor of what may once have been a gateway (Figs. 104–6). This monolith may have been set up as a stela or used as a doorjamb or lintel. That no more vestiges of the actual doorway construction have been found is not surprising. The presumably well worked doorjambs and lintels must have been very attractive to later stone-robbers (cf. p. 302). Excavation was especially difficult here because of high ground water and a hard alluvial layer, and it was not possible to free this structure completely.

A large, well preserved gateway within a large angle of the city wall was partly cleared in R–T 0–2 (Figs. 111–14). The gateway consisted of a court with an inner and an outer doorway. To the east we could discern a tower of the type known from Boğazköy (cf. the southern gateway of Alişar). East of the tower the wall foundations were deep below masses of fallen and burned *kerpiç*, and the course of the wall could not be traced. The western flank of the

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gateway was the city wall itself (Figs. 113–14), since here the wall turned northward sharply. With this exception the gateway was in principle similar in form to the gateways of Boğazköy. A tower 15 meters farther north forms a corner. On the west the foundations of the city wall have probably been washed away and destroyed completely, as we have here a deep depression leading from the city terrace down to the Alişar Özü. Above this gateway could be recognized a second structure following in general the older foundation. In S 1 the excavation was deepened, and a wall with a slightly different orientation from the western flank of the gateway was unearthed. The deeper wall may be the actual foundation of this flank or the foundation of an earlier gateway structure of the Hittite period. At some time during the Hittite period, probably at its end, the gateway was closed by two walls (Fig. 113).

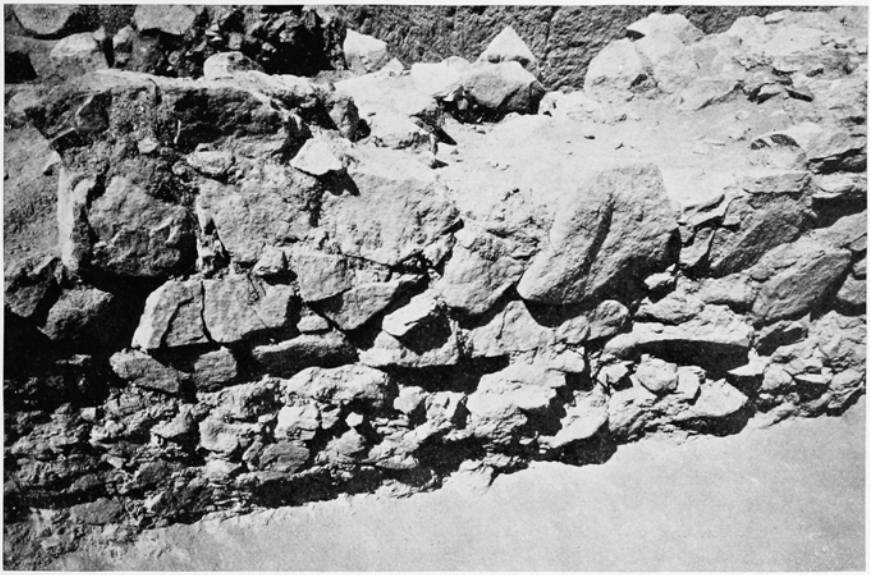

Fig. 5.—An Outer Wall of the West Tower of the Southern Gateway in Level 10 T

In 1930 a large gateway structure of almost the same dimensions and plan as the lower west gate of Boğazköy was unearthed in J–M 33–35 (Figs. 83 and 88–91). This gateway showed no evidence of having been connected with a city wall and was inside the probable circuit of the city wall. It is impossible to say whether it was part of an unfinished outer defense or whether it was a kind of triumphal arch. It belonged undoubtedly to the second main building level of the period of the Hittite Empires and to the same sublevel as the large mansion in P–R 26–30 (cf. pp. 18–20). The remains of this gateway appeared about 2.30 below the surface. The gateway consisted of a small court flanked by two large towers, each 9.30 by about 15 meters. The walls of the towers were built of large stones and were 2 meters thick, with the exception of a partition wall in each which was .20 narrower. A detailed view of an outer wall (Fig. 5) shows clearly the foundation and the stone superstructure which served as a base for the *kerpiç* wall. A section of the partition wall in the eastern tower had been destroyed to make

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room for a Roman-Byzantine structure. The foundations sloped upward from north to south. The southern ends of the walls apparently were torn out by later inhabitants. Entrance was presumably through an outer doorway (nothing of which remains) into a court 6.60 wide and perhaps 7 meters long and then through another doorway into the city itself. The inner doorway is 2.85 wide and is .42 off the center line of the court.[13a]

As stated before, only a little of the upper structure of the fortification was preserved. That part of the stone structure was originally exposed was proved by the easily recognizable earth embankment before it in GG–HH 17. On the wall itself the *kerpiç* superstructure was built directly upon the stone; but in the destruction refuse surrounding the northern gateway in R–T 0–2 (cf. p. 8) masses of charcoal were found which seem to suggest that here the *kerpiç* superstructure was resting on a wooden grill above the stone socle. For the original height of the city wall and the form of its parapet and *chemin de ronde* we have, of course, no data whatever. Neither do we know what kinds of ascents this fortification had—stairways, ramps, or ladders; but it is probable that some of them were ramps to facilitate the handling of large stones to be used as missiles by the defenders. A ramp leading up to the *chemin de ronde* has been added in the tentative reconstruction of the northeast corner of the city wall (Fig. 30).

It is interesting to note that the whole western stretch of the city wall as far as it has been traced does not show any rebuilding or major repairs, whereas the eastern tract shows several. This can be easily understood if we consider that the eastern part was the better place for an enemy to attack, since the west side was naturally protected by the swampy Alişar Özü.

The Buildings

Two large complexes of building remains were excavated in 1929 and one in 1931, as well as trenches (usually 5 meters wide) in the eastern and southern parts of the city terrace. In 1927 the northeast part of the terrace had yielded fragmentary remains; some of these were tied up in 1932 with Complex I of 1929, and several 10-meter squares of 1929 in which remains of this cultural period had been found were connected by trenches.[14] Two definite building levels of this period could be recognized, Levels 10–11 T (Pls. XII–XIII). In the three larger areas sublevels could be distinguished, and, of course, in several places minor alterations within the sublevels were discerned. In the complex of 1931 (P–T 26–31) we differentiated three sublevels of Level 11 T; in the area southwest of this complex (L–Q 32–34), which is near the edge of the mound, three sublevels of Level 11 could again be discerned. The oldest sublevel in the latter area is contemporaneous with the middle sublevel of the large complex, as is proved by the connecting pavement (cf. Fig. 82 and Pls. XV–XVI and XXIII). Of the two later sublevels in the area L–Q 32–34, one may be nothing but a rebuilding.

In Complex I of 1929 two main building levels were discovered. Level 1 of Complex I of 1929 corresponds to Level 10 T in the complex of 1931; and Level 2 of Complex I, to Level 11 T. Both of the 1929 levels showed alterations and later additions, but it is impossible to show a relationship between these sublevels and the sublevels in the complex of 1931.

The situation in Complex II of 1929 is not clear, as we were unable to reinvestigate this area in 1932. Nevertheless, it seems assured that here not Level 1 but Level 2 corresponds generally with Level 10 T of 1931, although a few of its deeper walls probably belong to Level 11 T. Level 1 of Complex II might be contemporaneous with the highest sublevel of Level 10 T in the complex of 1931; but it is quite possible that this layer belongs to the very end of the Hittite period, when only the eastern part of the terrace along the city wall was occupied (see p. 24 and Pl. XIV), and so could be considered as a fourth sublevel of Level 10 T. We found no

[13a] In Dr. Bittel's opinion the arrangement of the border stones suggests that there was only this one doorway.

[14] Cf. *OIP* XXVIII, Fig. 1.

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other building remains which might belong to this layer except a few fragmentary walls in Complex I of 1929 and in EE 17.

The two main building levels of this period on the terrace correspond to the two building periods which could be recognized in the city wall. A second rebuilding of the city wall which we found in EE 21–DD 25 probably belongs to the last Hittite settlement layer.

As far as we can recognize the plan of the settlement, it seems to have been built parallel to the city wall with streets radiating from the citadel. Behind the inner face of the city wall there seems to have been a street; it was found in Complex I and Complex II of 1929. Into this street along the wall lead the passages or streets coming from the direction of the citadel. The width of the wall street varies in the different building periods. It was narrowed and entirely overbuilt with additions to the houses or to the city wall when the latter was rebuilt or re-used for dwellings.

LEVEL 11 T

The largest area in which remains of Level 11 T were found was the large complex P–T 26–31, excavated in 1931–32 (Pls. XV–XVI, XIX–XX, and XXIII). In S–T 27 the excavations were not carried below Level 10 T. Although, especially beneath the large mansion of Level 10 T, we were not able to uncover the whole area, nevertheless the ruins show that the buildings were not placed haphazardly and that some thought was given to traffic; in the western part a street leading toward the city wall could be identified (Fig. 66). Almost all the walls were between .45 and .50 in thickness. The heights of the stone foundations vary, usually being between .30 and .50; the walls above the foundations were of *kerpiç*. However, we found little of the *kerpiç* preserved, and often the stone foundations survived to a greater height than .50. In the northern part of the area were found walls which showed the presence of at least three sublevels (Pl. XVI). In the eastern part architectural remains of Level 11 were either very fragmentary or completely absent. Here appeared, on the same level, building remains associated with the typical pottery of the Copper Age (*a* in Fig. 62).[15] The excavated remains in the complex as a whole show that the surface at that time sloped up from south to north and from west to east.

Only very fragmentary remains of the oldest sublevel were found, and they were in limited areas. The walls resemble in construction those of the sublevel above. In R 28–29 two parallel walls ran close together. A pavement of large slabs in Q 31–32 may belong to this sublevel but more probably belongs to the second one.

The second sublevel is by far the most important of the three. It is 5.50 below the surface in the north central part and 5.80 in the southwest corner. We were able to identify a principal street that runs through this complex from P 26 in a south-southeasterly direction, sloping gradually downward (Fig. 66). Near its upper end small bits of pavement were found. In Q–R 30–31 the street forms almost a semicircle and turns in a northeasterly direction (Fig. 72), sloping upward again. The southern and almost all of the eastern parts of the street were paved with rubble, potsherds, and earth packed into a smooth, hard surface. In the northeast part of the complex a street similarly paved emerges from the north wall of the excavated area. The pavements were very helpful in determining the actual surface of the settlement of that time and in checking the sublevels of the main building period. East of the principal street is an oval area carefully paved with larger stones.

At the south end of the principal street is a building complex of which only a small part (in P–Q 30–31) has been uncovered. The foundations slope downward from the street level to a pavement of large stones in Q 31–32 (frontispiece). About 1 meter above it a second pavement appears which may belong either to this sublevel or to the latest sublevel (cf. Pl. XXIII). The

[15] Cf. *OIP* XXVIII, Fig. 124.

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walls near the south edge of P 30 are well built with large facing-stones. By means of a tunnel the western one was followed for 7 meters beyond the west boundary of the excavated area. At that point the wall seemed to stop; it may end there, or it may turn to the south at a right angle. In P 29–30 parallel walls about .05 apart were uncovered. They probably belong to two adjacent houses. On the same side of the street, in P 27–28, was a room which seemed to have been paved with relatively large stones. This may have been a court.

In the complex of buildings on the east side of the street a small paved room, .90×1.10, was found in P 27. Rooms similar to this in size, but not paved, appeared in R 29 and Q 31. In P 27 three burials (e X5–7, Figs. 75–76) were found below the floor level of a room which contained a fireplace. A fireplace of another type was found in Q 30. Part of a tamped *kerpiç* floor appeared in an adjoining room (in Q–R 30) with two hearths and a refuse pit (Fig. 72). In R 29 a large stone doorsill was found on top of a stone foundation.

Except for a few wall fragments, the only remains of the last sublevel of Level 11 T were found in Q–T 28, about 5.20 below the surface. These walls were too few and fragmentary to enable us to obtain any kind of building plan. They may have been later additions, changes, or repairs of earlier buildings. They were not especially interesting architecturally.

A large building in S–T 31 (Pl. XV and Figs. 61–62) belonging to Levels 13–14 T of the Copper Age[16] was apparently re-used at one time or another during the Hittite period, for typical monochrome wheelmade sherds were numerous in its interior.

In connection with the excavation of the large gateway in J–M 33–35 (cf. pp. 9–10) some walls belonging to Level 11 T were uncovered (Figs. 82 and 85 and Pls. XX and XXIII); these we joined by a series of trenches with the large complex of 1931. Here again three distinct sublevels could be differentiated. The remains of the oldest sublevel were reached in this group of trenches at an average depth of 5.30 below the surface. In deepening the western half of Q 33[17] a wall built of large, roughly squared bowlders was uncovered (frontispiece). The width of this wall varies; at its broadest point it is 1 meter. Only the outer face is carefully laid. The wall runs in a northerly direction into Q 32, using part of the Copper Age city wall as foundation. It disappears 3.50 north of the southern boundary of Q 32. In this plot the continuation of the pavement found in Q 31, with its rebuilding, connects the sublevels of this area with those in the large complex of 1931 (cf. pp. 10–11). Besides this there was only a fragmentary corner of a building.

From Q 33 the wall turned westward. In P 33 we followed it by means of a tunnel (Fig. 81). After a small outward jog in P 33 a second wall was discovered in front of the first, parallel to it and connected by cross walls. After two outward jogs in this second wall, it disappeared in N 34. Considering the breadth and strength of the stone foundation, we at first assumed that this was a part of the city wall, but a carefully laid pavement unearthed in the chamber between the walls in O 33 (Fig. 84) makes this assumption improbable. Nevertheless, this structure could possibly be a fortified building or a secondary fortification wall, with the actual city wall situated farther south. Only future excavations can clear up this point. A few other fragmentary wall remains belonging to this sublevel were found in N–P 34.

Remains of the second sublevel of Level 11 T in L–Q 32–34 were generally found at a depth of 3.70 below the surface. It was impossible to tell much about the general plan, although it is fairly certain that the walls belonged to two different structures. In O 33 two parallel walls .10 apart were unearthed. The upper pavement in Q 32 probably belongs to this sublevel.

At 3.25 below the surface fragmentary remains of the latest sublevel appeared. Only a few could be identified. One of these fragmentary walls in M 34 showed an interesting construction.

[16] See *OIP* XXVIII 120–22.

[17] A test plot of 1929.

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One face was built entirely of stretchers, the other of headers. The *kerpiç* bricks were about .30 broad and .45 long, making the wall .75 broad. Just south of this wall an earth burial (d X32) was found.

The long north-south trench in I–J 22–33 is connected with the complex of 1931 by an east-west trench in J–O 29, which was deepened in L–M 29 to the depth of Level 11 T. Here parts of buildings appear (Figs. 97–98 *A* and Pl. XX) which do not show any particularly interesting features, although a definite orientation was observed. In I–J 22–33 we found that the depression extending eastward from the western periphery of the mound had not been occupied during this period; buildings of Level 11 T were found from I–J 25 southward (Figs. 93–95 *A* and Pl. XXIII). We could recognize remains of at least three building complexes which are fairly well preserved. The rooms are of about the same size as those in the complex of 1931. In I–J 26–27 two parallel walls with only a few centimeters between them undoubtedly belonged to adjacent buildings. In I–J 28 a two-room building, seemingly constructed entirely of stone, was unearthed (Fig. 94). Neither in L–M 29 nor in I–J 25–33 could sublevels of Level 11 T be recognized.

In 1932 a north-south trench was excavated in S 17–24[18] in order to determine the settlement distribution at the foot of the citadel mound. In S 20–23 this trench was deepened to a building layer of the Hittite period (Fig. 95 *C* and Pl. XXIII). It could not be determined to which level (10 or 11) these remains belong, but it seems probable that at least their lower part belongs to Level 11 T. Again the remains were very fragmentary. There was a well preserved fireplace in S 20, and in S 21 the lower part of a large storage vessel had been set in the floor.

Similar were the conditions in U 25–26 (Fig. 60), a north-south trench connecting the complex of 1931 with an east-west trench in U–DD 24. In U 25–26 we were unable, because of lack of time, to go deep enough to determine whether we had one or two main building levels, but the very fragmentary remains freed here seem to belong to Level 10 T.

In U–DD 24 the remains were better preserved; no complete buildings could be recognized, but the walls, like those in I–J 25–33 and L–M 29, showed a definite orientation. Although two levels belonging to the Hittite period appeared in the trench as a whole (Fig. 55 *A–B*), while a lower sublevel in W 24 and a higher sublevel in BB–DD 24 could be distinguished, it was difficult to connect these remains with those in the complex of 1931. The remains shown in Figure 55 *B–C* surely belong to Level 10 T (cf. pp. 22 and 24). The lower level in U–DD 24 (Figs. 55 *A* and 59) may be contemporaneous with one of the later sublevels of Level 11 T in the complex of 1931 or possibly with the oldest sublevel of Level 10 T. The latter solution is attractive because the general level line of the remains in the lowest sublevel of Level 10 T in U 24–31 (cf. Pls. XVIII and XXIII) seems to agree with the lower level in U–DD 24. In CC–DD 24 we struck the outer face of the original city wall (Fig. 55 *A*); the inner face was not freed, as we did not demolish the gateway structure of Level 10 T. In CC 24, between the settlement remains and the city wall, there seems to have been a free space, probably corresponding to the wall street in Complex I of 1929. In BB–DD 24 the ground seems to have been leveled at least twice, as indicated by earth brought from outside the mound (Fig. 56). Above the fill in BB–CC 24 was a corner of a building which probably belonged to the latest sublevel of Level 11 T or to the earliest sublevel of Level 10. In BB 24 a hearth was found (Fig. 6). Two skeletons were found close together in X 24. In W 24 there was a circular floor of carefully tamped *kerpiç*, surrounded by a low *kerpiç*-brick wall with one outlet. This floor may have been used for threshing or for spreading out washed wheat to dry. Similar structures are used for these purposes by modern Anatolian peasants. In excavating down to the

[18] S 23 had been excavated in 1929.

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Copper Age deposit in W 24 we found a lower sublevel belonging to the Hittite period (Fig. 58); it was probably contemporaneous with one of the sublevels of Level 11 T in the complex of 1931.

A short north-south trench in Z 24–29 showed fragmentary remains in Z 24–26 probably belonging to this building level (Pl. XII).

In Complex II of 1929 (BB–FF 19–21) no wall remains could be attributed definitely to Level 11 T with the exception of a small part of the inner face of the city wall in EE 21; but further investigation would perhaps contribute more information. In EE–GG 17 (Fig. 40) we penetrated Level 11 T in only a small area. A few wall fragments of this level were found adjoining the inner face of the city wall (Fig. 42). These small wall fragments as well as a

FIG. 6.—HEARTH IN LEVEL 11 T IN BB 24

fireplace and part of a tamped *kerpiç* floor within a box of the city wall (see Fig. 4) belong most probably to the latest building layer of Level 11 T.

To the north other remains of Level 11 T were found in an area including Complex I of 1929[19] and part of the 1927 excavation,[20] connected by additional excavation in 1932 (Fig. 35). Complex I of 1929 was reinvestigated in 1932 and the original forms of the buildings clarified. The wall street of Level 11 T ("Level 2" of 1929) can be easily recognized (Figs. 37–38); and extending from it there is a small passage in EE–FF 11 leading to the interior of the city (Fig. 34). Parts of at least eight houses were found, each one consisting of several rooms. The plan of "Level 2" of this complex published previously[21] includes many later alterations and small additions. Nearly all of the city wall boxes have fireplaces or other vestiges of habitation (cf. Figs. 3–4). It therefore seems to me that all these alterations and additions and those in GG 17 and BB–CC 24 belong to the same period as the latest sublevel of Level 11 T in the

[19] *OIP* XIX 92–98. [20] *OIP* VI 120–22 and 124–30. [21] *OIP* XIX, Fig. 106.

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complex of 1931, and that this latest sublevel was probably intermediate between the two main building periods of the city wall. Probably the city of the second sublevel of Level 11 had been destroyed and the ruins repaired by the survivors and used as temporary dwellings until the city and fortification were rebuilt.

A few walls within the 1927 excavation on the northeast part of the city terrace, in Y–CC 12–15,[22] can be attributed to Level 11 T. Wall fragments of this period were unearthed in 1929 in R 6, Y 7, AA 16, and X 19, but on account of the scantiness of the remains they cannot be definitely attributed to either main building level. On the western part of the mound only a small wall fragment in XX 24 and part of a pavement in WW 24 can be assigned to the Hittite period; it is uncertain to which building period they belong, although it is probable that

FIG. 7.—ROOM IN LEVEL 10 T IN P 27 CONTAINING A FIREPLACE AND A LARGE VESSEL

they are contemporaneous with Level 10 T. In this trench nearly the whole deposit, 4 meters in depth, showed mixed Post-Hittite and monochrome wheelmade ware, but the building layers above the pavement and wall fragment belong definitely to the Post-Hittite period. The presence of mixed pottery in such quantities may be a result of the excavation for the large building of the Post-Hittite period in YY–ZZ 24–26 (cf. pp. 342–44).

LEVEL 10 T

The most important remains of the later main building level (10 T) were the foundation of a large gateway in J–M 33–35 and walls uncovered in the complex of 1931 in P–U 26–31 (Pls. XVII–XVIII and XXI–XXIII). Generally the walls were as before of *kerpiç* with stone foundation, in many places resembling those of Level 11 T. However, as a rule they were thicker and the foundations were built of larger stones, but not so uniformly laid out. Group-

[22] *OIP* VI 131–43 and 148–49.

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ing together the walls which from the depths of their foundations and floor levels seemed to be contemporaneous, we could distinguish three sublevels.

Of the oldest sublevel of Level 10 T remains were found covering the entire surface of the large complex. They appeared at an average depth of 3 meters at the west (Fig. 68) and 5.75 at the east. In P 30 a wall with large exterior facing-stones was resting directly on a wall of the older main building level (11 T). As this was the only indication of a building belonging to Level 10 T in the southwest part of this excavated area, it is very unfortunate that more of it was not preserved. On the floor level of a room in P 27 were a circular patch of tamped *kerpiç*, a fireplace, and a large vessel (Fig. 7). This room was especially interesting since a

Fig. 8.—*Kerpiç* Wall in the Oldest Sublevel of Level 10 T in S 28 and Superimposed Wall of the Latest Sublevel of Level 10 T, from West of North

hoard of unbaked cuneiform tablets (d 2860) was found on the floor, covered by débris of the superstructure (cf. Fig. 152).

Numerous walls of the earliest sublevel of Level 10 T appeared in the northern half of the excavated area east of the Q line. The foundations were of stone, and the *kerpiç* bricks of the superstructure were preserved in many places (Fig. 8). In R 28 a roughly oval fireplace was preserved (Fig. 9). It had a tamped *kerpiç* floor, and the sides were formed by *kerpiç* bricks placed upright. Inside, the floor and sides show remains of plastering. In T 28 were remains of a building which seems to have had a paved porch with entrance at the north end (Fig. 79). The northwest wall of this building originated in Level 11 T and was re-used here. In S 29 a doorsill was found with two small stones forming the beginnings of the jambs (Fig. 77).

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Fig 9.—Fireplace in Level 10 T in R 28

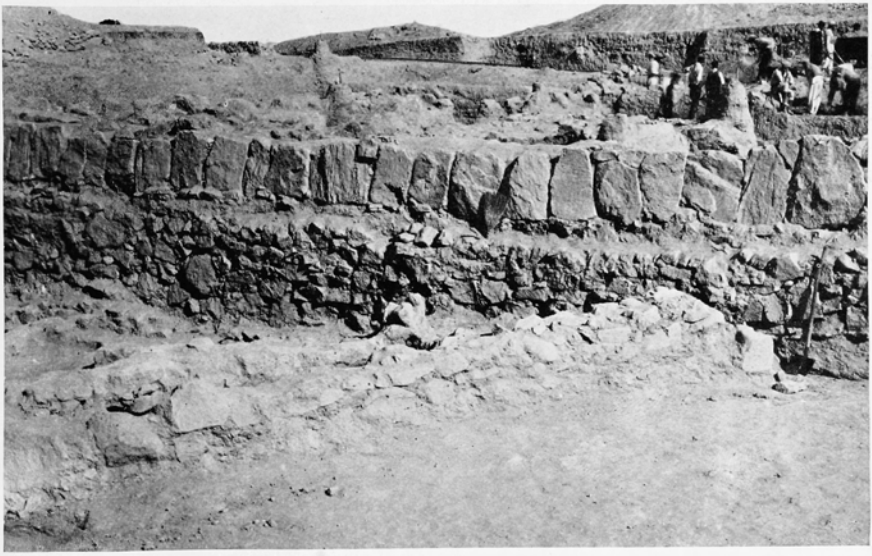

Fig. 10.—Dado Slabs on the Southern Façade of the Mansion of Level 10 T

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In excavating P–R 29 in 1930 we uncovered broad north-south walls which seemed to belong to some important building. In 1931 this building was unearthed completely and proved to belong to the middle sublevel of Level 10 T. On the south (Fig. 65) it extended into P–R 30. The east wall disappeared in the north part of R 29 (Figs. 63–64), but other traces of the poorly preserved eastern section of the structure were found in R 27–28 and S 27.

The western façade, in a much better state of preservation, was completely uncovered (Figs. 66–68). It was built in saw-tooth fashion, running in a northerly direction for 11 meters, east for 2.30, north for 7.70, east for 2.50, north for 7.40, then west for .85, north for 6.30, west for 1.95, and finally north again for 7 meters. Above the foundation of small stones the socle of this entire façade, as far as the point where it jogged westward, was faced with a row

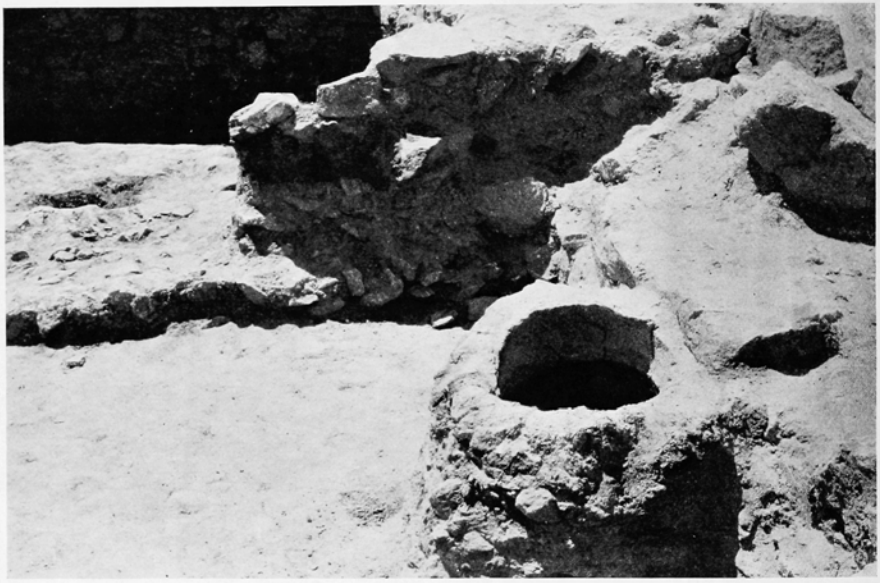

Fig. 11.—Fire Pot in Mansion of Level 10 T (in P 29)

of stones set in dado-slab fashion. The foundation wall, varying in height from .70 to 1.70, was nearly level on top. The dado slabs varied in size, the largest being about .70 high and 1 meter long. This facing of dado slabs continued along the entire south façade, 18.65 long (Figs. 10, 65, and 69–71), but not along the east part of the building. Whether the east wall was not an exterior wall, or whether dado slabs are lacking there for some other reason, it is impossible to determine.

Several interior partitions remain, so that along the west and south sides the disposition of the rooms is known. In many instances the direction of the foundation wall is slightly different from that of the superstructure. The foundations may have been put in and the floor leveled before the walls proper were laid out and erected. In many cases the foundation walls cut through or rested on walls of the oldest sublevel of Level 10 T or on walls of Level 11 T. At the floor level the walls, both interior and exterior, are almost uniformly 1.20 thick. The rooms are not exactly rectangular in shape. In the southeast corner of the building is a complete

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room 4.60×8.50, in which a cuneiform tablet (d 2501) was found. West of this room are two smaller rooms; the southern one measures 3.50×3.50, and the northern one, entirely paved with large stones, measures 3.65×3.90. The room in the southwest corner (Fig. 73) is 5.80×3.70. Here were found a *kerpiç* fireplace, a hearth, and three pots (d 2343–44 and d 2466). The fireplace had a tamped *kerpiç* floor and curved sides .17 thick and preserved to the same height. North of this room another partially paved room was unearthed, in which a fire pot was built against the west wall (Fig. 11). The third room to the north along the west side was larger (4.50×6.50) and was almost entirely paved with stones (Fig. 74). North of this room were four smaller ones.

FIG. 12.—REMAINS OF *Kerpiç* AND CHARRED WOOD FALLEN FROM CEILING(?) IN MANSION OF LEVEL 10 T

In excavating the southern part of this building we found traces of charred wood above the floor level (Fig. 12). Probably these were remains of the roof; but unfortunately, although we worked carefully with trowels and brooms, nothing could be found to enlighten us on the actual method of its construction. Nevertheless, above the charred wood was a layer of *kerpiç*, suggesting that the roof was built of wood with *kerpiç* covering. On top of the stone socle on the south wall more traces of charred wood appeared (Fig. 13). Only a little remained, but it could be seen that the wood was laid in grill fashion. The lower course ran parallel to the wall, while the second course was at right angles to it. The wood was probably placed there to give a level surface on which to build the *kerpiç* superstructure.

In S 29–31 remains of a large wall appeared (Figs. 61–62 and 77). Only the western facing-stones were preserved. Since leveling seems to have taken place here, it may have been a retaining wall, and therefore the east side may never have been laid regularly. The wall ranged in height from .70 to 1 meter, and on top of it were found large bowlders, in one case as large

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as 1.90×1.20×.40. At the south end were vestiges of a doorway. Since the orientation of this wall was the same as that of the eastern façade of the mansion, it probably had some connection with the mansion. Possibly this part of the mound was terraced so that the ground around the mansion would be flat. In the extreme southeast corner of the excavated area there was part of a pavement belonging to this sublevel.

South of the mansion two cuneiform tablets (d 2557 and d 2606) were found. Nine pot burials (d X36–44) here (e.g., Figs. 70–71), with five (d X50–54) beneath the floor of the southwest room and five more (c X23–27, Figs. 122–23) below the floor level of the adjoining room to the east, make a total of nineteen burials discovered in this area. At the north end of P 28 another pot burial with two skeletons (d X33–34) and exceedingly fine mortuary gifts was

Fig. 13.—Charred Remains of Wooden Grill Used in Construction of Southern Wall of Mansion of Level 10 T

found just west of the mansion, at the base of its foundation. In P 27 an earth burial (d X55) appeared. These burials most probably belong to the oldest sublevel of Level 10 T.

The walls that may be attributed to the highest sublevel are few. The depth at which they were found averages 4.25 at the north boundary of the complex and 5.10 at the east boundary. The large mansion seems to have been re-used and several walls with shallow foundations added to it. In R–S 28 several walls of this sublevel were found (Fig. 63). One wall was placed directly above an older wall with a very slightly different orientation (Fig. 80). South of this wall part of a rubble pavement was found in S 28–29 (Fig. 14). In the northeast part of this complex are the remains of a group of buildings belonging to the oldest sublevel which were re-used, with many additions, during this latest phase. In U 30–31 several *kerpiç* walls without the usual vertical joints were found, with two door sockets *in situ*. One door socket, that in U 30, had only a small stone at the bottom, the sides being built up of *kerpiç* (Fig. 15). This socket appeared at the end of a *kerpiç* wall and in connection with a piece of tamped *kerpiç* floor. The other

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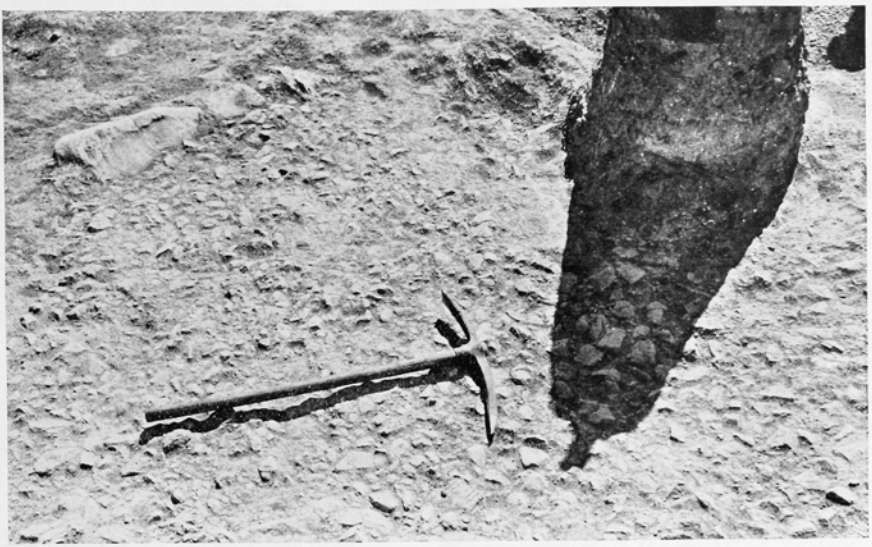

Fig. 14.—Rubble Pavement in Latest Sublevel of Level 10 T in S 28–29

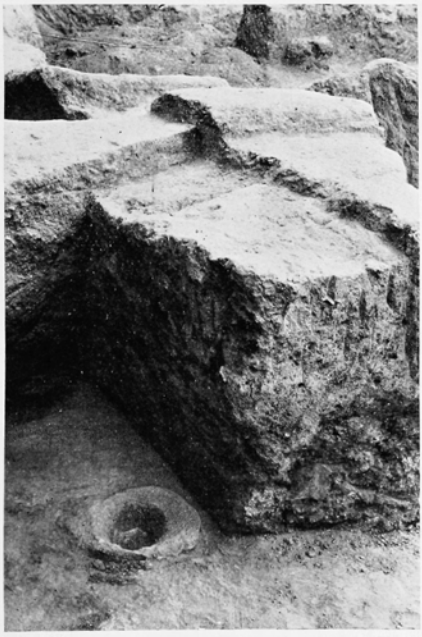

Fig. 15.—*Kerpiç* Door Socket with Stone Center in Level 10 T in U 30

Fig. 16.—Marble Door Socket in Level 10 T in U 31

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socket, in U 31, is of marble. It had been worn through; then a larger pivot had been substituted so that the socket could be re-used (Fig. 16). In connection with this group of walls a stone-box burial was found (d X30, Fig. 78). A cuneiform tablet (d 1776) was found near by.

In the areas excavated southwest of the large complex of 1931, remains of the three sublevels of Level 10 T were found again (Figs. 83 and 85 and Pls. XXII–XXIII). The remains belonging to the oldest sublevel appeared about 3 meters below the surface. Part of the south side of a building or complex was found in M–O 33–34. Two tablet hoards, Nos. d 2200 and d 2500 (Fig. 86), and one pot burial (d X35, Fig. 87) were unearthed here. In L 34 a few fragmentary walls and a very well preserved fireplace of this sublevel were found beneath the eastern tower of the large gate of the middle sublevel. The *kerpiç* fireplace (Figs. 17 and 92) is 1.20 long, .55 wide, and .50 high. Its northern face is pierced by an opening in the center, and the top by two holes about .30 in diameter.

The remains of the middle sublevel were the most important. In J–M 33–35 at a depth of about 2.30 we unearthed the foundation of a large gateway. Since the orientation of this structure is exactly the same as that of the large mansion in the complex of 1931, its attribution to the middle sublevel of Level 10 T can hardly be doubted. The plan and dimensions (cf. pp. 9–10) are almost exactly the same as those of the lower west gate of Boğazköy. A large piece of *kerpiç* wall that had fallen and was lying horizontally in M 33 (Fig. 18) and a hearth in M 34 also belong to the middle sublevel.

Only fragmentary walls, about 1.50 below the surface, belong to the latest sublevel of Level 10 T. In O 33 a wall .80 wide, built of large stones, was found.

Level 10 T was reached in L–N 29, but only unimportant building remains were uncovered there (Figs. 97 and 98 *B* and Pl. XXII). In I–J 25–33 also the remains were very scanty (Fig. 95 *B* and Pl. XXIII). Interesting was the fact that here we found no remains of buildings consisting of several rooms, but parts of five nearly square one-room dwellings (e.g., Fig. 96). Associated with these remains were parts of a skeleton (c X3) in J 32 and a skull (c X13) in I 33.

The attribution of any of the building remains in S 20–23 (Fig. 95 *C* and Pl. XXIII; cf. p. 13) to Level 10 T is uncertain. The very fragmentary remains in U 25–26 (Pls. XVII–XVIII and XXIII and Fig. 60) may belong to this level, probably to its oldest sublevel. In U–DD 24 (Figs. 55 *B* and 57) and Z 25–26 there were only fragmentary remains belonging to Level 10 T (cf. p. 13). In X–Y 24 a few *kerpiç*-lined pits were found, and in BB–CC 24 a building of the earlier level was partly re-used. In one of the rooms of this building were some large slabs, probably remains of a pavement. In CC–DD 23–24 a gateway structure belonging to this building level was unearthed (cf. p. 5).

The greater part of "Level 2" in Complex II of 1929 belongs to Level 10 T, but we are unable to distinguish clearly between house walls and parts of the inner face of the first rebuilding of the city wall (cf. p. 5). In 1932 we did not have time to reinvestigate this complex. Nevertheless, I cannot agree with the interpretation of Dr. Schmidt, who saw in these walls the remains of a community storehouse.[23]

Remains belonging to Level 10 T were uncovered in FF–GG 17 (Fig. 40). They were parts of a building which seems to have abutted the inner face of the now missing city wall of this building period.

In the areas unearthed on the northeast corner of the terrace (Fig. 36)[24] parts of at least three buildings were found, one of which was especially interesting as it had a room (in GG 10) in which several large storage vessels were standing in a row. Beneath Room 9 of Building *B* in FF 10–11 sixteen burials were found[25] (see Fig. 120). The structures called on the plan of 1929 "Buildings *C* and *D*" I regard as having been originally parts of the inner face of the

[23] Cf. p. 5, n. 9, and *OIP* XIX 101–5. [24] See *OIP* XIX 82–92 and *OIP* VI 120–30. [25] See *OIP* XIX 181–82.

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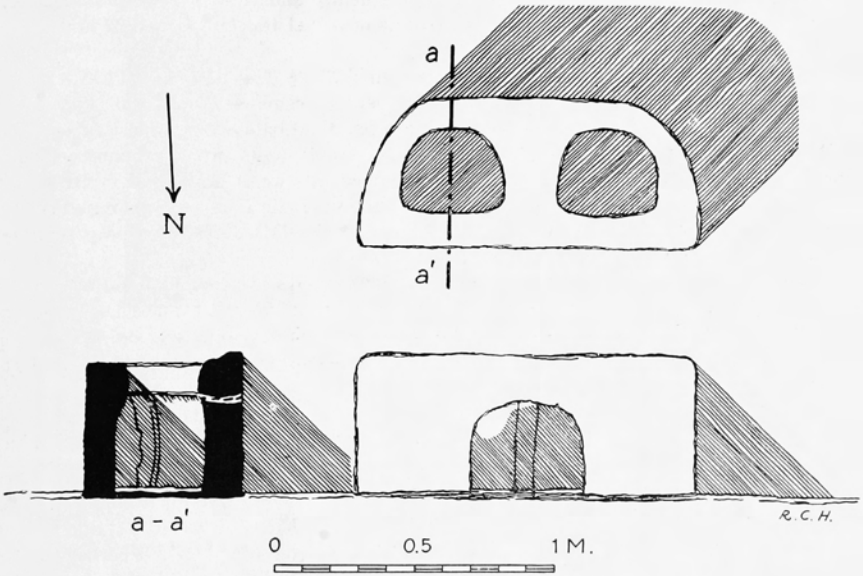

Fig. 17.—Fireplace in Level 10 T in L 34. Scale of Drawings, 1:20

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city wall. The cultural remains within the boxes belong to an occupation after the second city of the period of the Hittite Empires had been destroyed. A few fragmentary remains in AA–BB 12–14,[26] excavated in 1927, can be attributed to Level 10 T. Remains of this period in R 6, Y 7, AA 16, and X 19 were so scanty that they cannot be definitely identified with either of the main building levels. A trench in A–E 8 (Figs. 109–10) revealed behind the city wall only fragmentary building remains of Level 10 T. Otherwise, no excavations on this part of the mound were carried to this level.

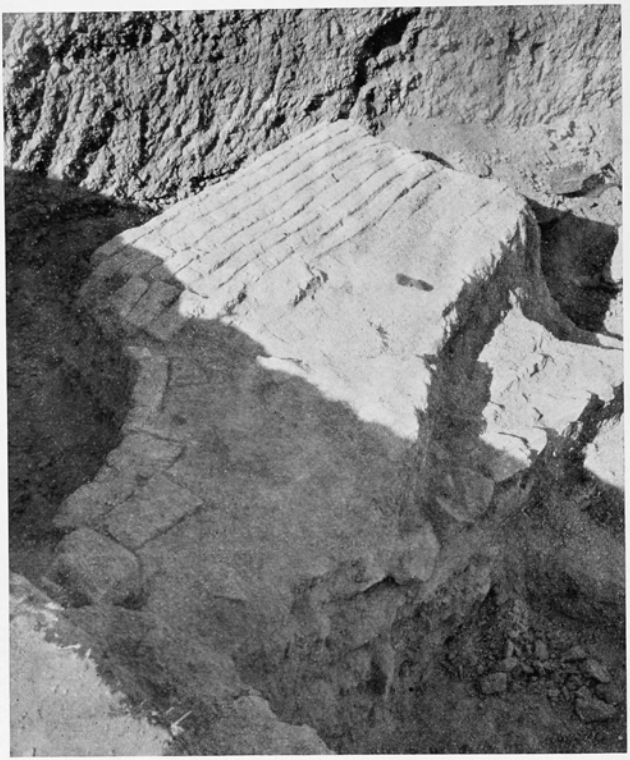

FIG. 18.—FALLEN *Kerpiç* WALL IN LEVEL 10 T IN M 33

In Complex II of 1929 a definite building level of the Hittite period could be distinguished which was probably still higher than the latest of the three sublevels of Level 10 T in the complex of 1931 (Pl. XIV). This building level seems to me to belong to a period when the city was no longer fortified, and I am inclined to see in these remains dwellings of the survivors of the catastrophe which brought the domination of the Hittites to an end in Asia Minor. To this same period may belong the occupation of the city wall for dwellings and the highest building remains in Complex I of 1929. Remains in EE 17 (Figs. 40–41) and the last rebuilding in CC–DD 23–24 (Fig. 55 *C*) seem to belong to the same level. Whether the last sublevel of Level 10 T in the complex of 1931 and in the excavated areas southwest of it belongs to this building period or is earlier cannot be determined.

[26] See *OIP* VI 133–40 and 217–18 and Figs. 203–4.

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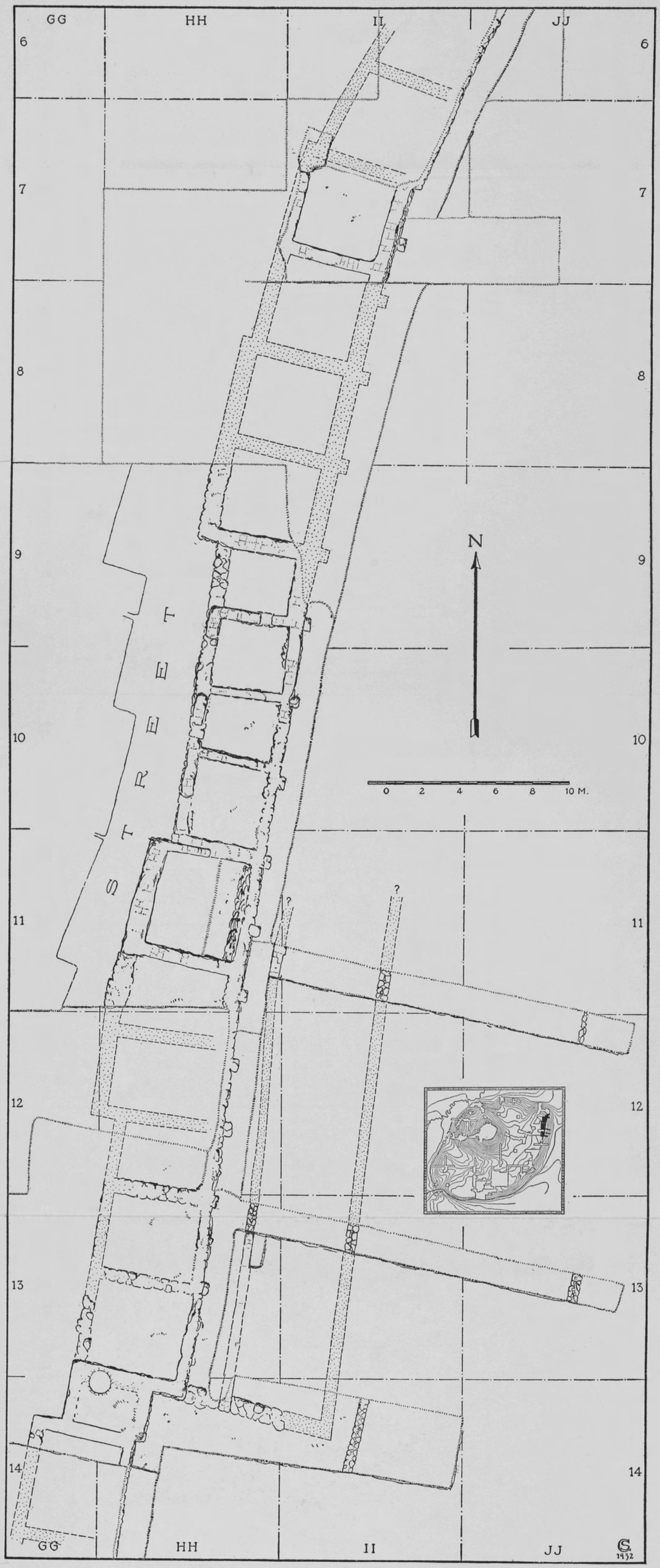

Fig. 19.—Plan of City Wall of the Period of the Hittite Empires in JJ 6—GG–HH 14. Reconstructed Parts Stippled. Scale, 1:200

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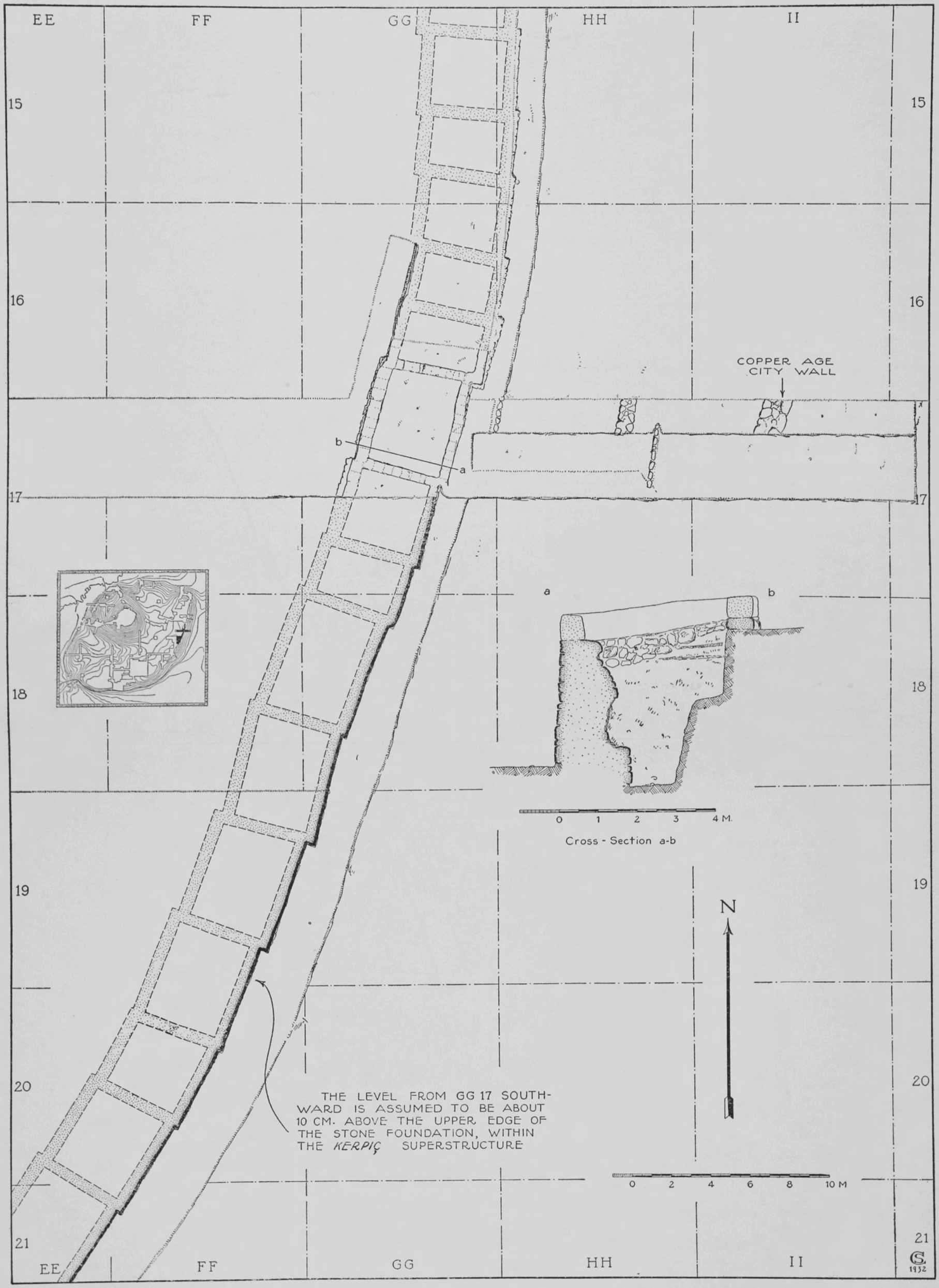

Fig. 20.—Plan of City Wall in HH 15—EE–FF 21. Reconstructed Parts Stippled. Scale, 1:200. Section *a–b* through GG 17 Is Shown at 1:100

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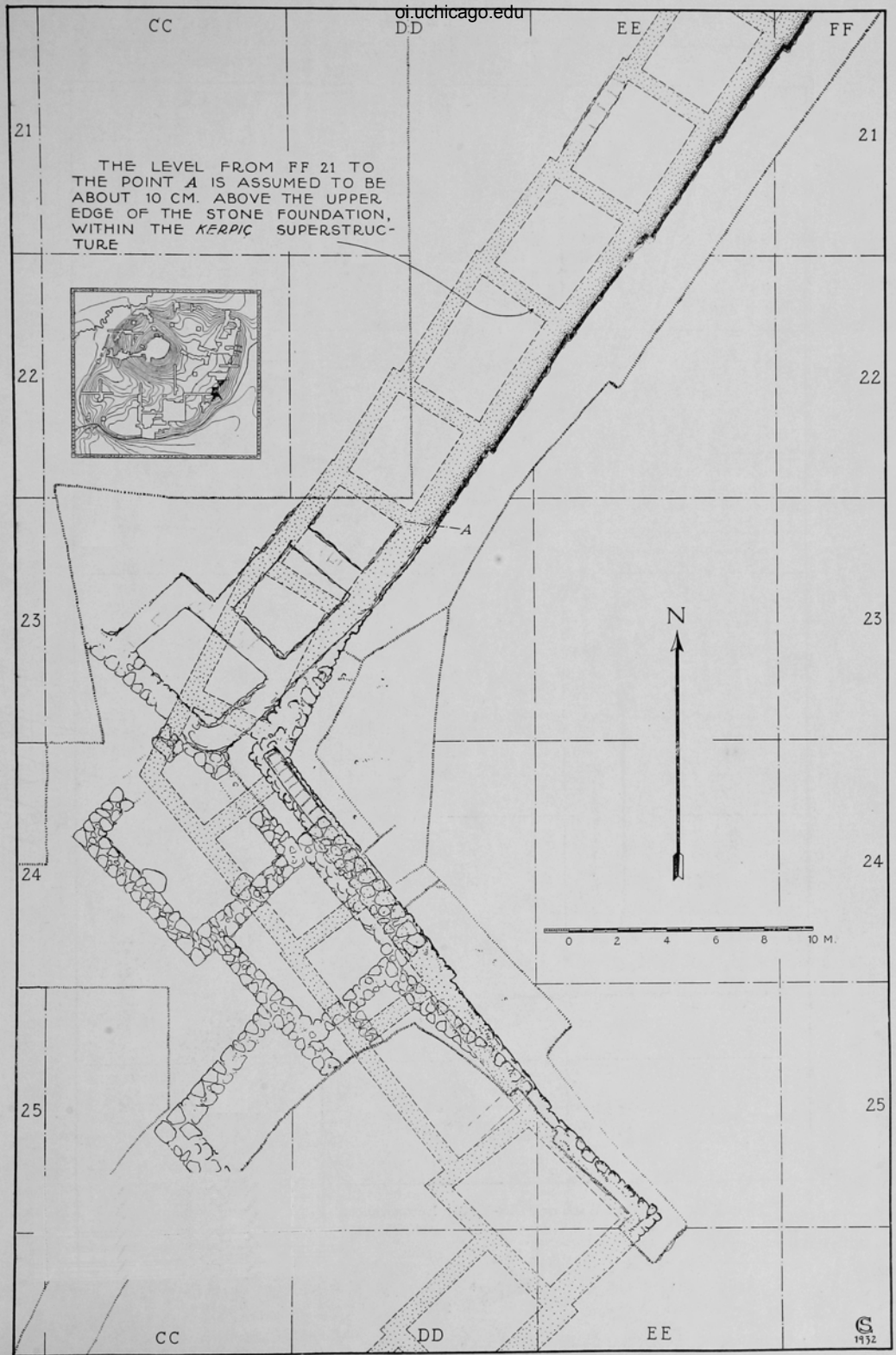

Fig. 21.—Plan of City Wall in EE–FF 21—EE 26 (cf. Fig. 55). Reconstructed Parts Stippled. Scale, 1:200

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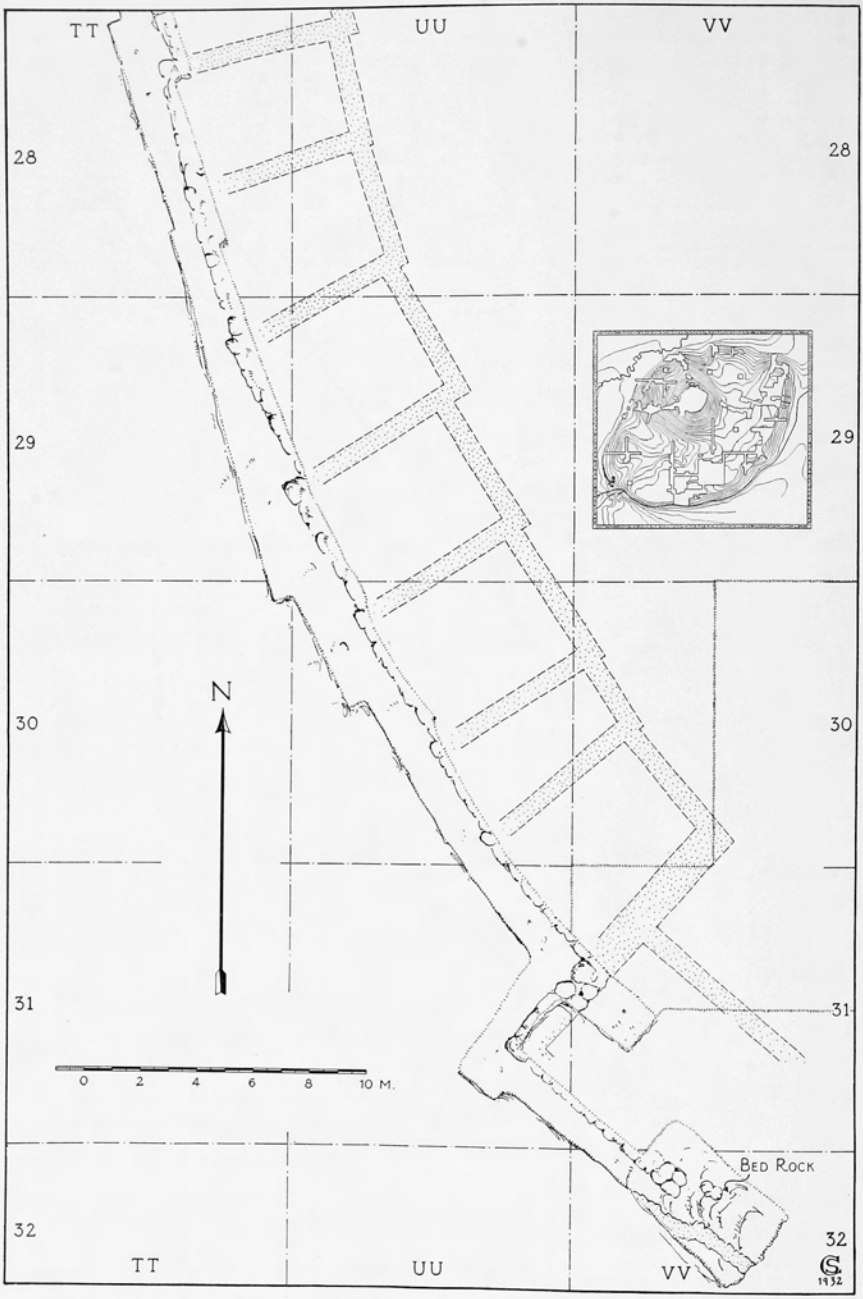

FIG. 22.—PLAN OF CITY WALL IN TT 28–VV 32. RECONSTRUCTED PARTS STIPPLED. SCALE, 1:200

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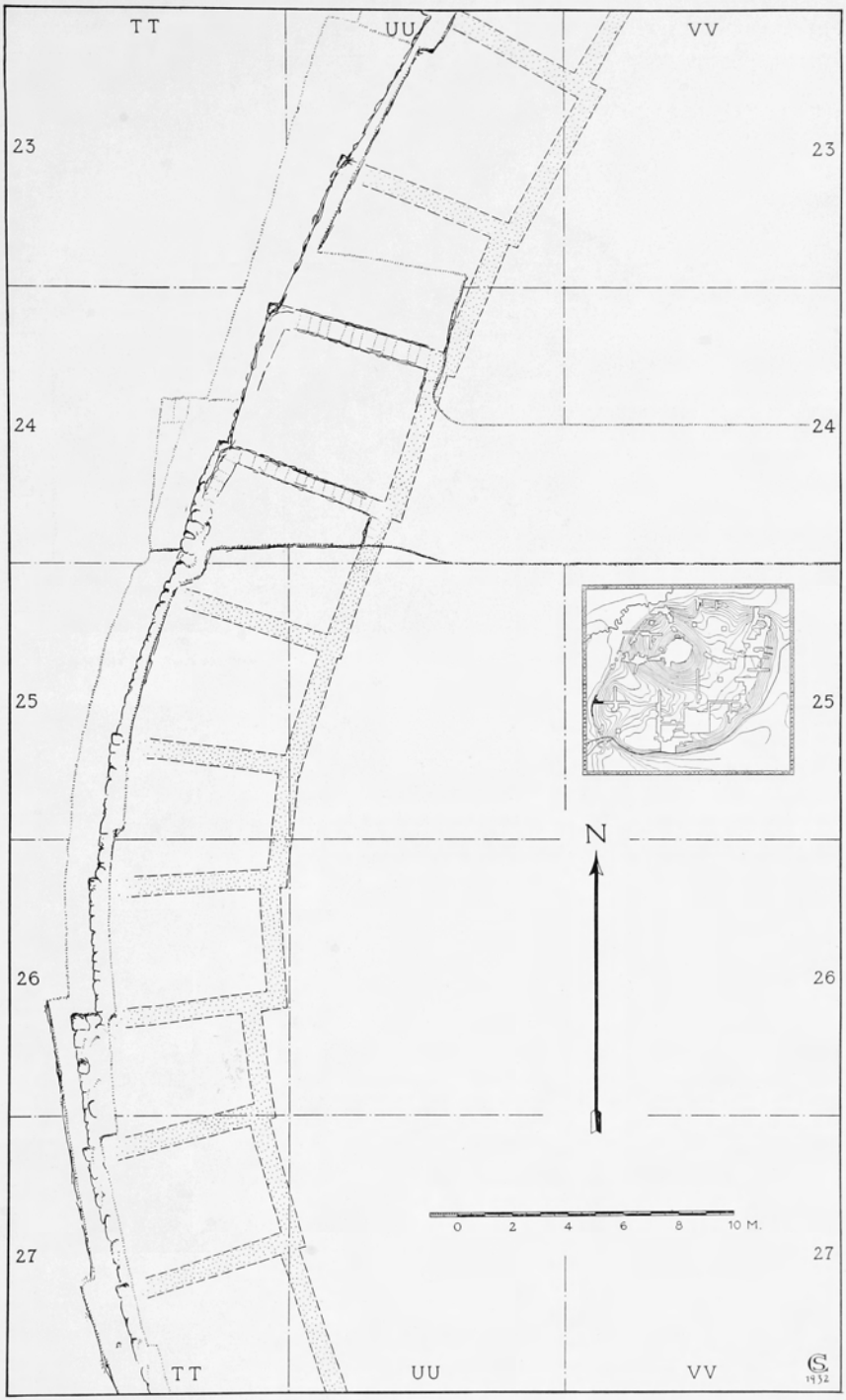

Fig. 23.—Plan of City Wall in UU 23–TT 27. Reconstructed Parts Stippled. Scale, 1:200

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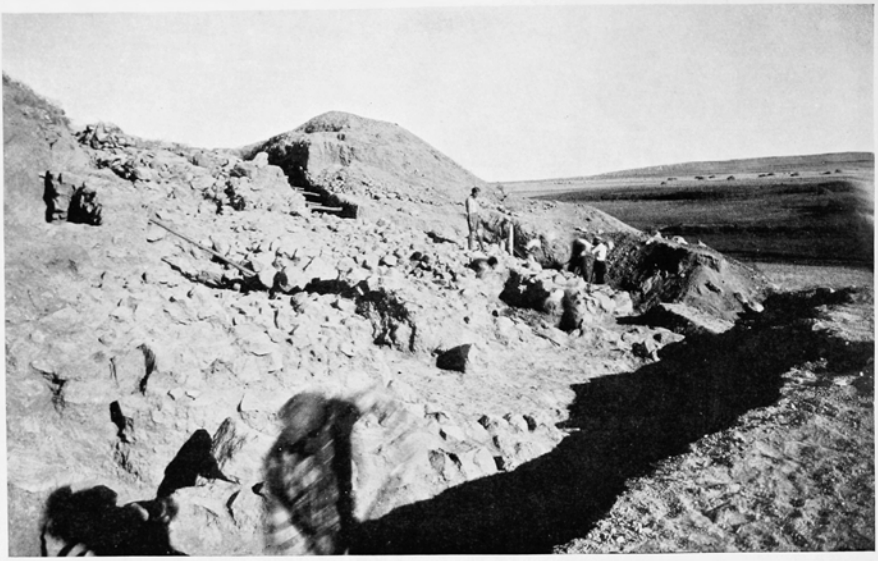

Fig. 25.—Postern in Northeast Part of the City Terrace, Seen from East-Southeast

Fig. 26.—Uncovered Postern, Seen from West

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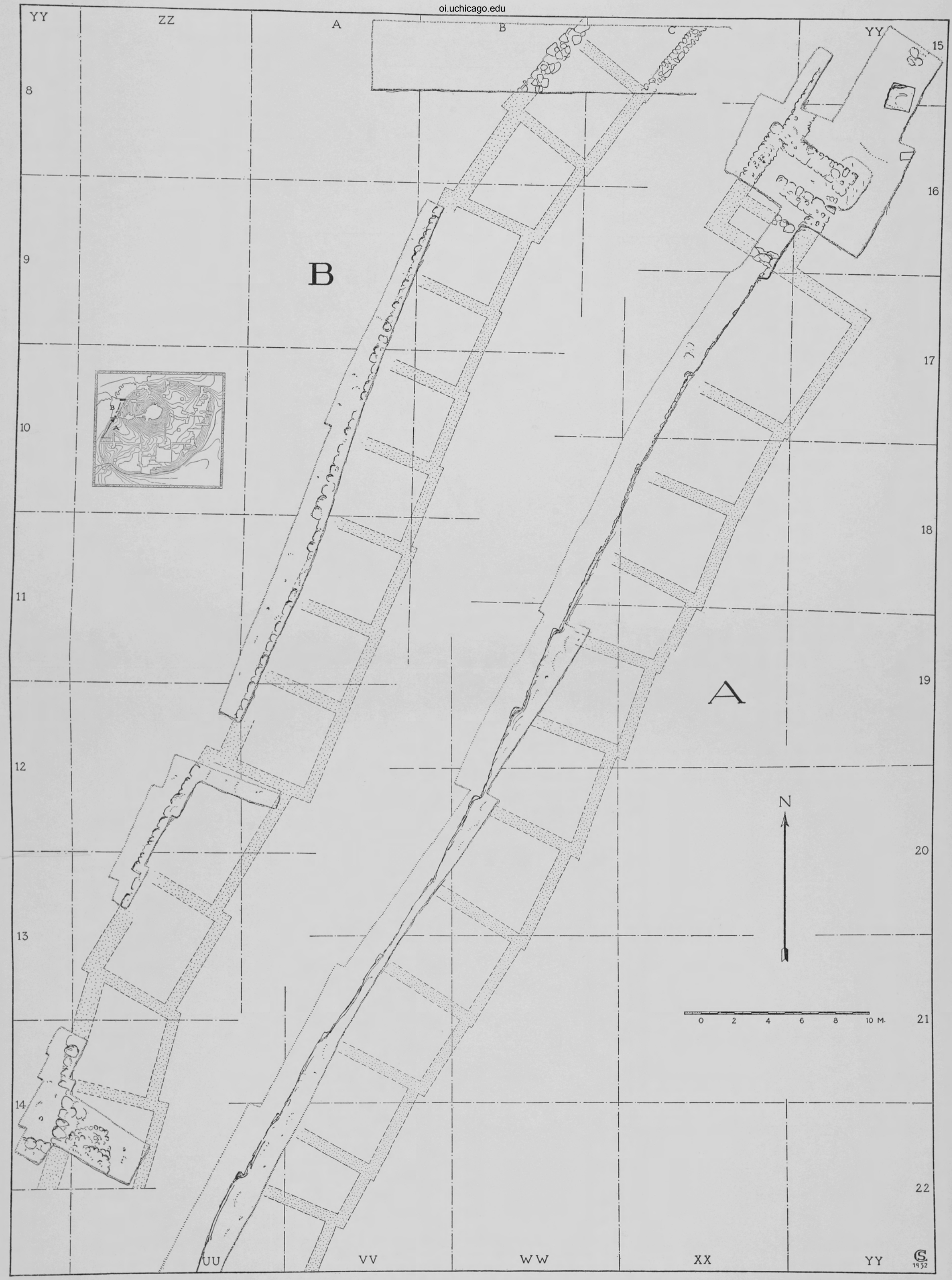

Fig. 24.—*A*. Plan of City Wall in YY 15–UU 22. *B*. Plan of City Wall in B–C 8—YY–ZZ 14. Reconstructed Parts Stippled. Scale, 1:200

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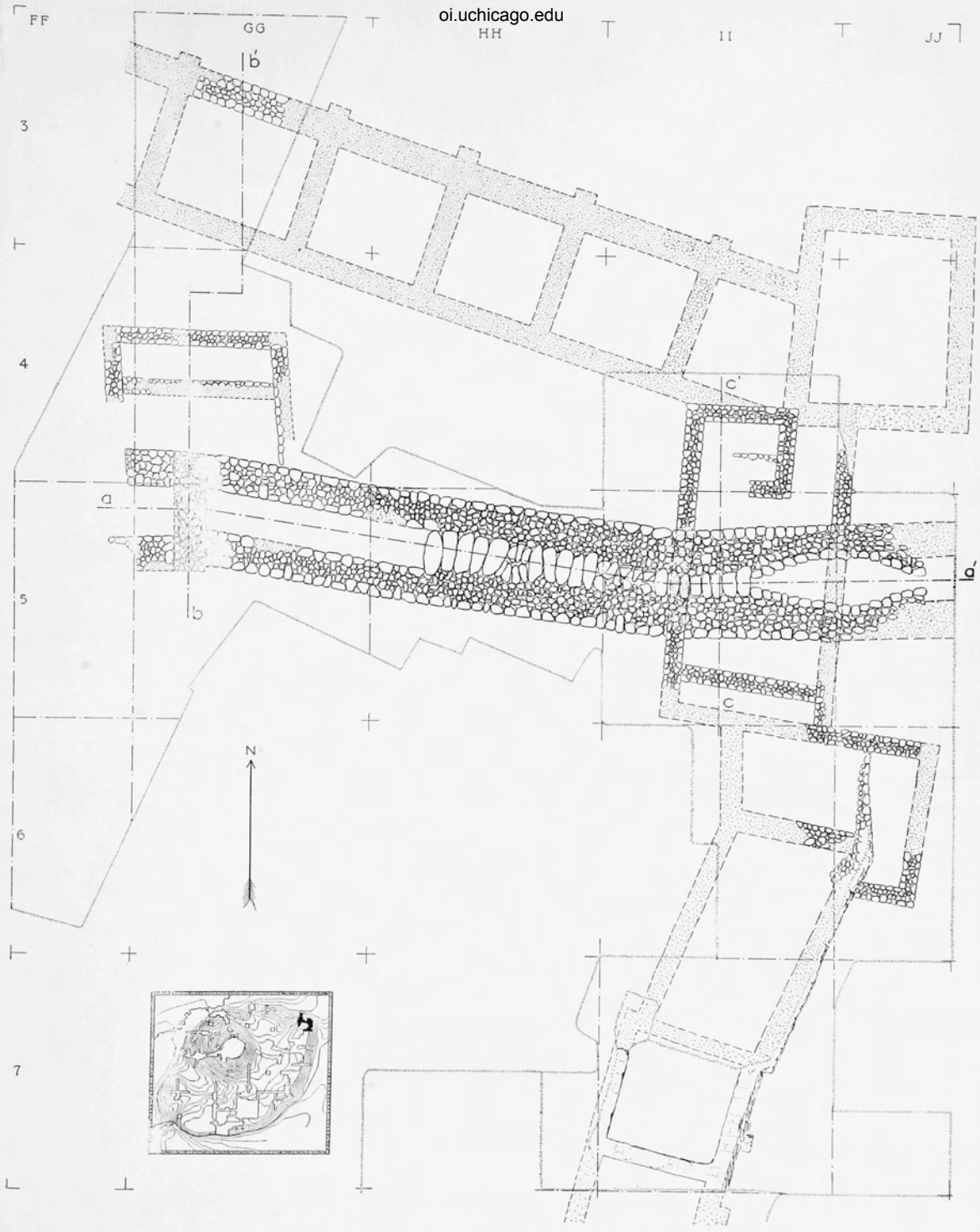

Fig. 27.—Plan of the Postern, Level 11 T. Reconstructed Parts Stippled. Scale, 1:200

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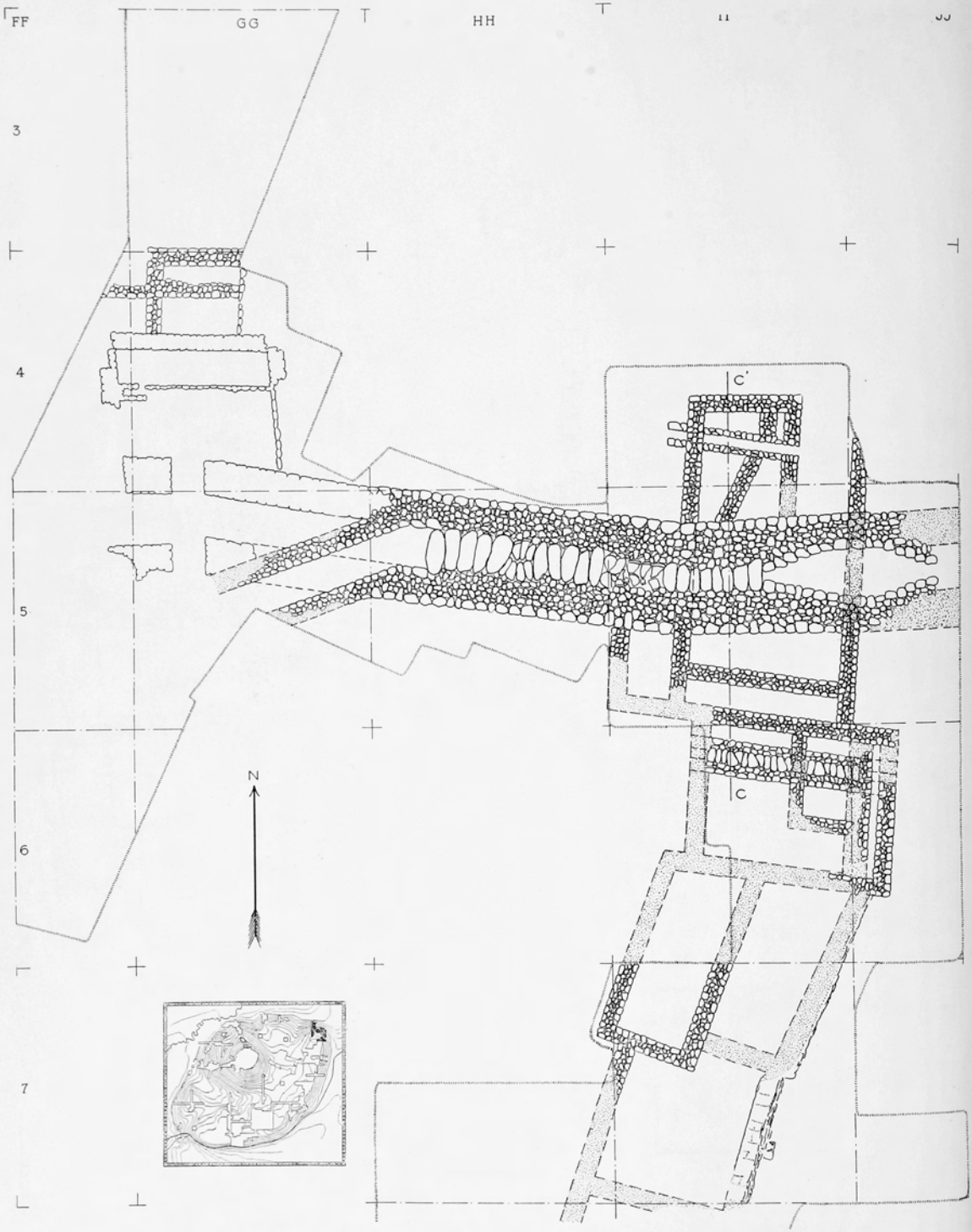

Fig. 28.—Plan of the Postern, Level 10 T. Reconstructed Parts Stippled. Scale, 1:200

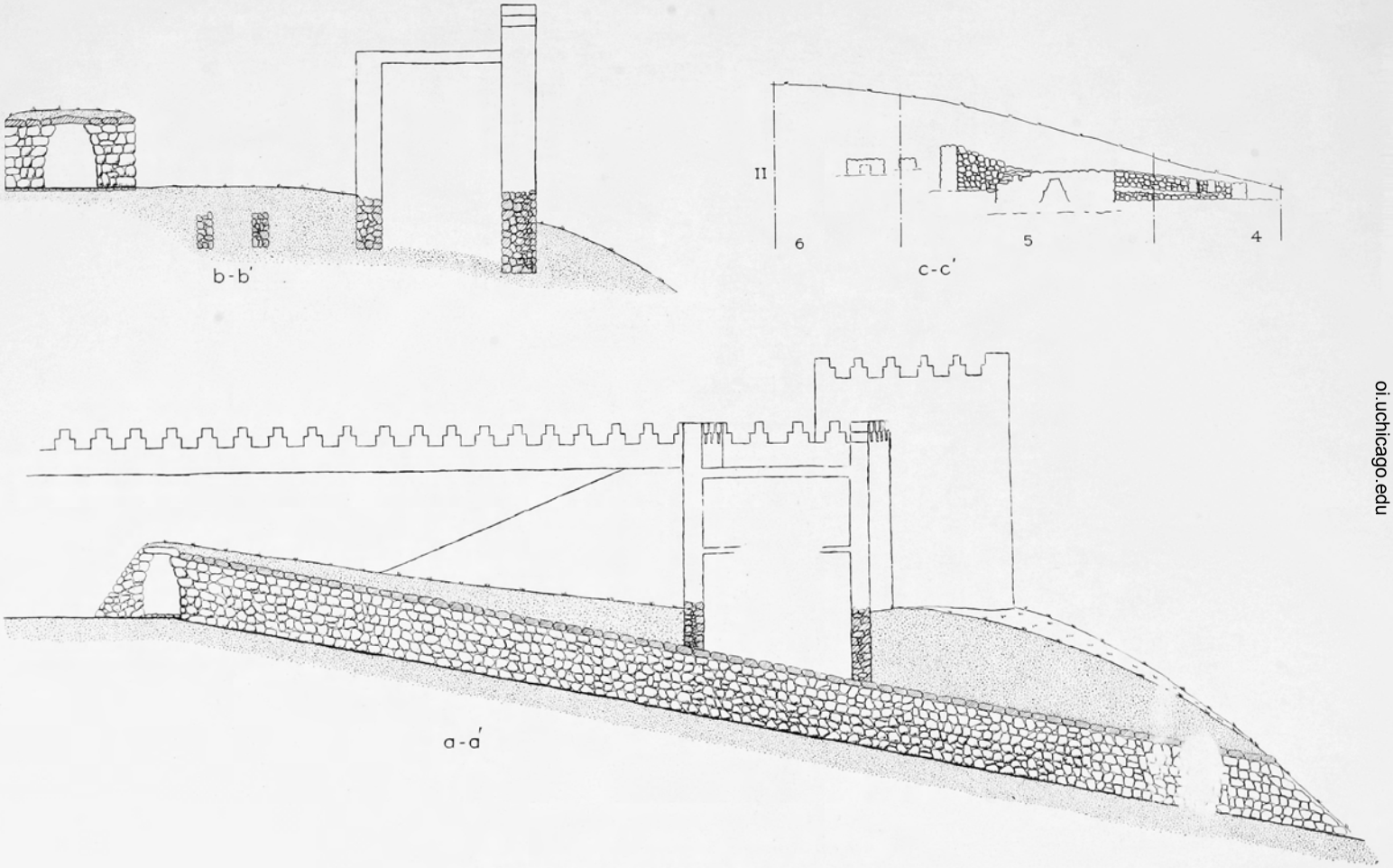

Fig. 29.—Sections through the Postern. Scale, 1:200

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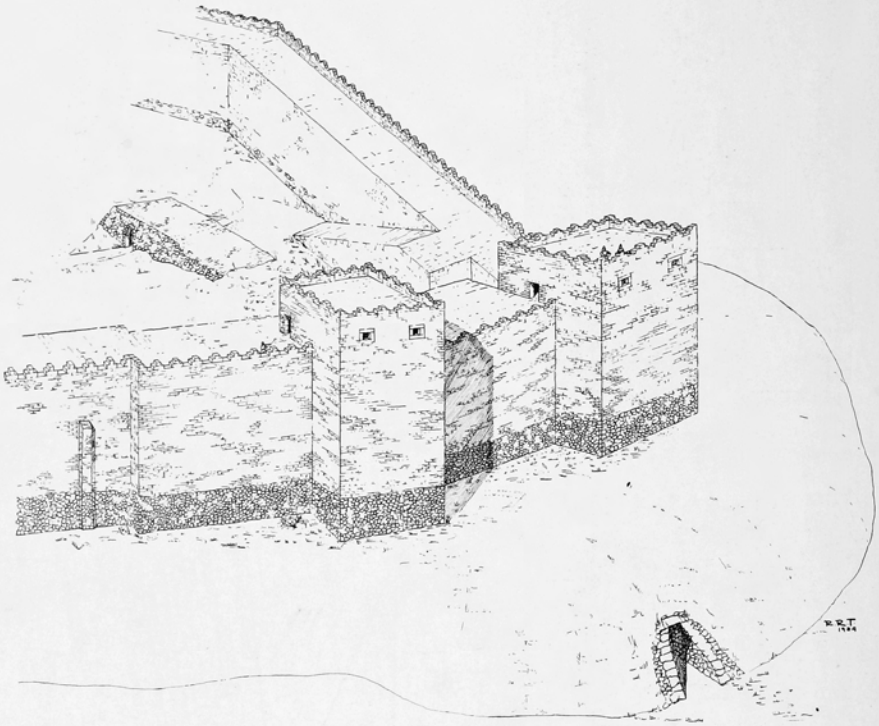

FIG. 30.—RECONSTRUCTION OF THE NORTHEAST CORNER OF THE CITY FORTIFICATION, INCLUDING POSTERN OF LEVEL 11 T

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Fig. 31.—Postern from East-Northeast, Showing New Entrance Cut in South Wall of Passage during Period of Level 10 T

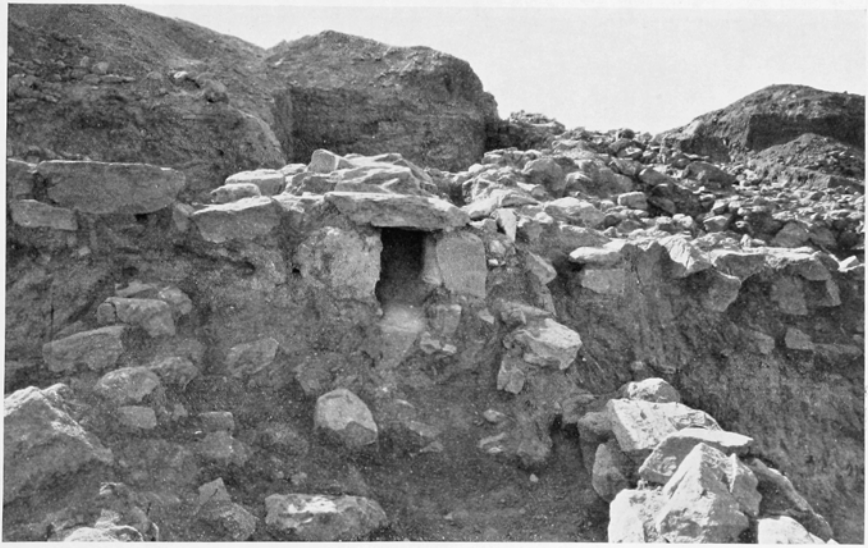

Fig. 32.—Drain in Southern Tower of Postern

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FIG. 33.—DRAIN IN NORTHERN TOWER OF POSTERN

FIG. 34.—STREET LEADING TOWARD THE WALL STREET IN COMPLEX I OF 1929

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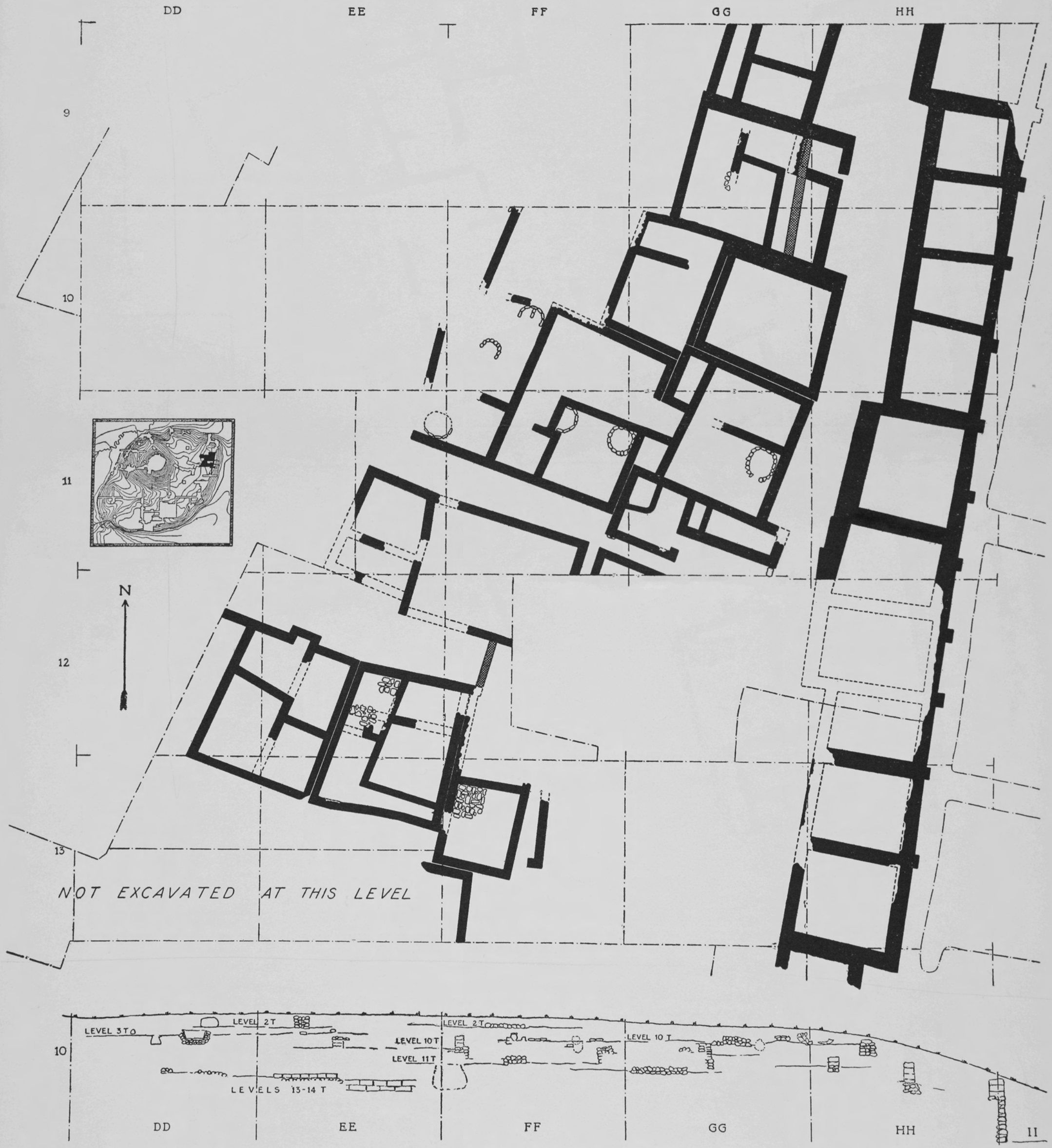

FIG. 35.—*A*. PLAN OF LEVEL 11 T ("LEVEL 2" OF 1929) IN COMPLEX I OF 1929 AND IN PLOTS II–VII OF 1927. *B*. CROSS-SECTION OF COMPLEX I OF 1929, SHOWING ALL THE LEVELS FOUND THERE. SCALE, 1:200

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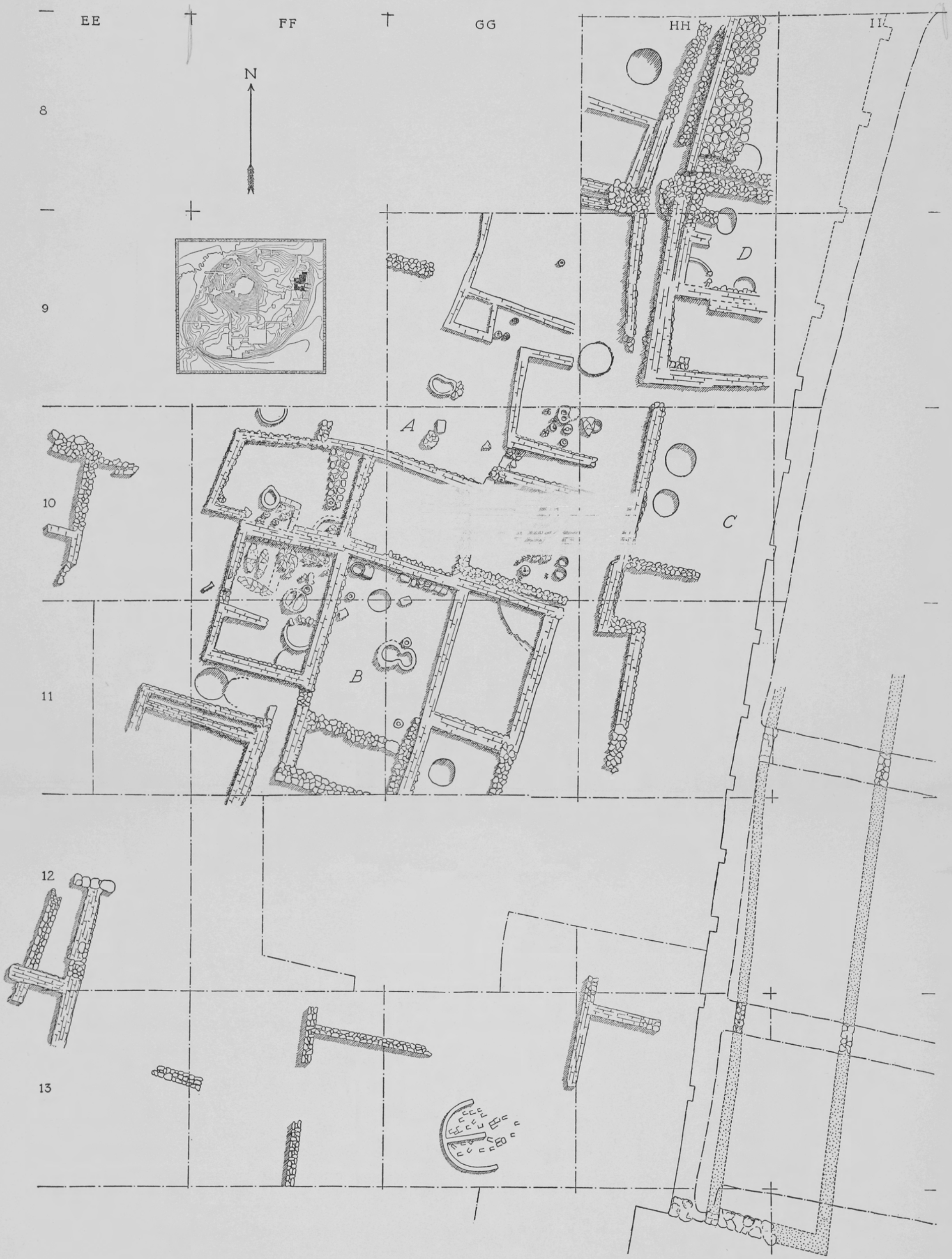

Fig. 36.—Plan of Level 10 T ("Level 1" of 1929) in Complex I of 1929 and in Plots II–VI of 1927. Scale, 1:200

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Fig. 37.—Complex I of 1929 after Foundations of City Wall Had Been Freed in 1932, Seen from North. Cf. *OIP* XXVIII, Fig. 5

Fig. 38.—Complex I of 1929 after Foundations of City Wall Had Been Freed in 1932, Seen from Northwest

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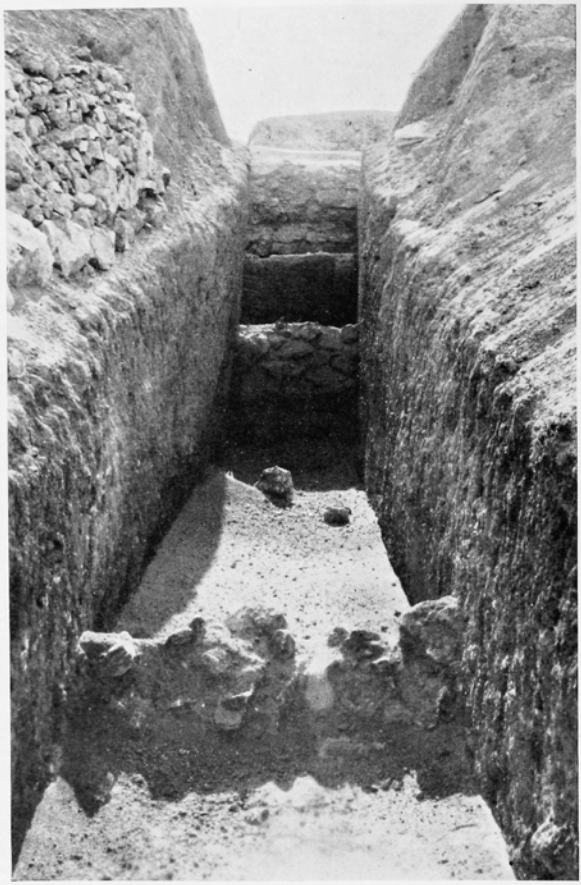

Fig. 39.—Cut in HH–JJ 11–12, from East

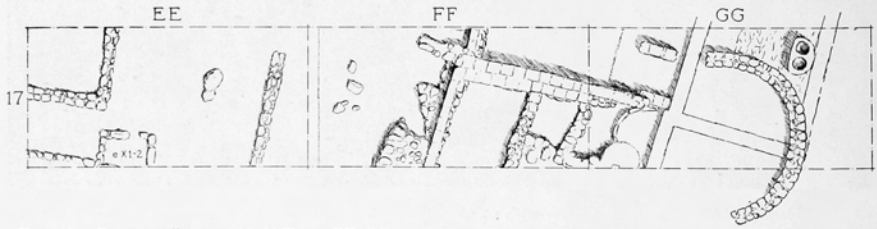

Fig. 40.—Plan of Levels 10–11 T in EE–GG 17. The Semicircular Wall Belongs to a Later Period. Scale, 1:200

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FIG. 41.—EE 17 FROM WEST. LATEST SUBLEVEL OF LEVEL 10 T APPEARS JUST BELOW SURFACE

FIG. 42.—BUILDING REMAINS OF LEVEL 11 T AND A BOX OF THE CITY WALL IN FF–GG 17

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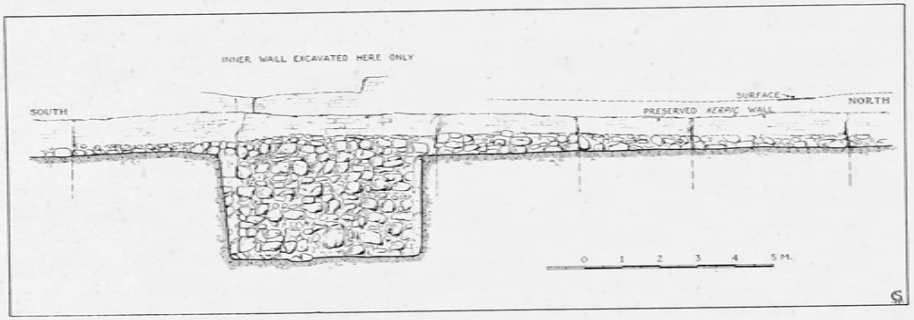

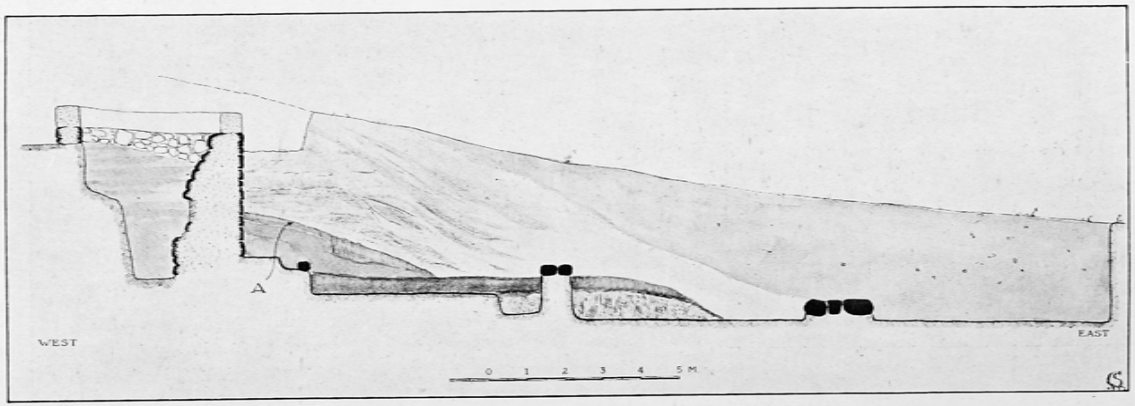

FIG. 43.—*A*. FRONT OF CITY WALL IN GG–HH 15–17. *B*. CROSS-SECTION OF GG–II 17, SHOWING COPPER AGE CITY WALL AT RIGHT. SCALE, 1:150

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Fig. 44.—Box of City Wall in GG 17 with Fireplace and Later Structures

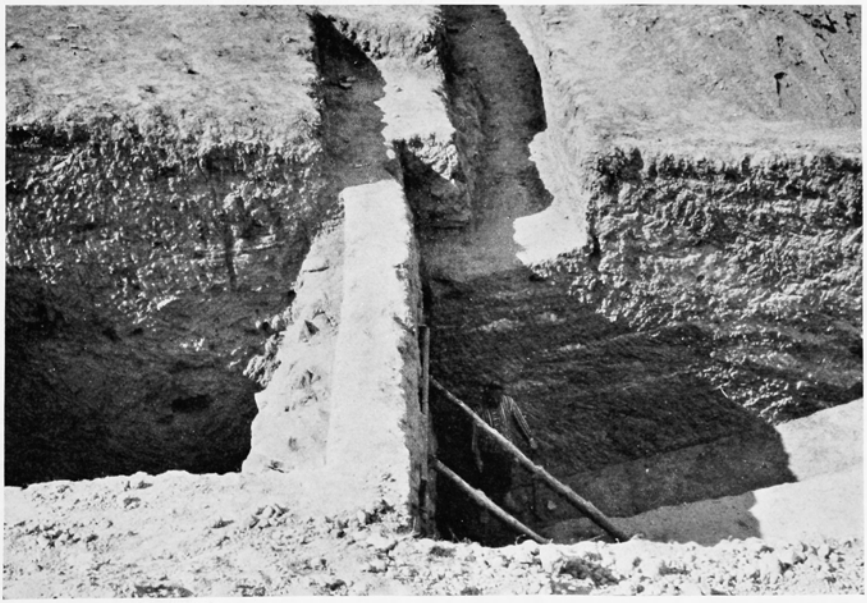

Fig. 45.—Front Wall of the Box in GG 17 after Emptying of Box, Showing Embankment before It

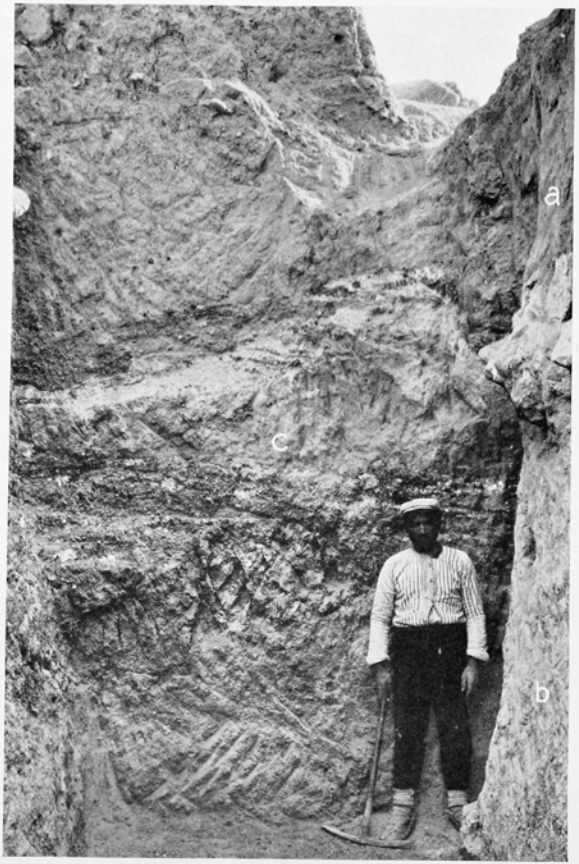

FIG. 46.—ORIGINAL CITY WALL (*b*), FIRST REBUILDING (*a*), AND EMBANKMENT (*c*) BEFORE LATTER IN EE 22, SEEN FROM NORTH

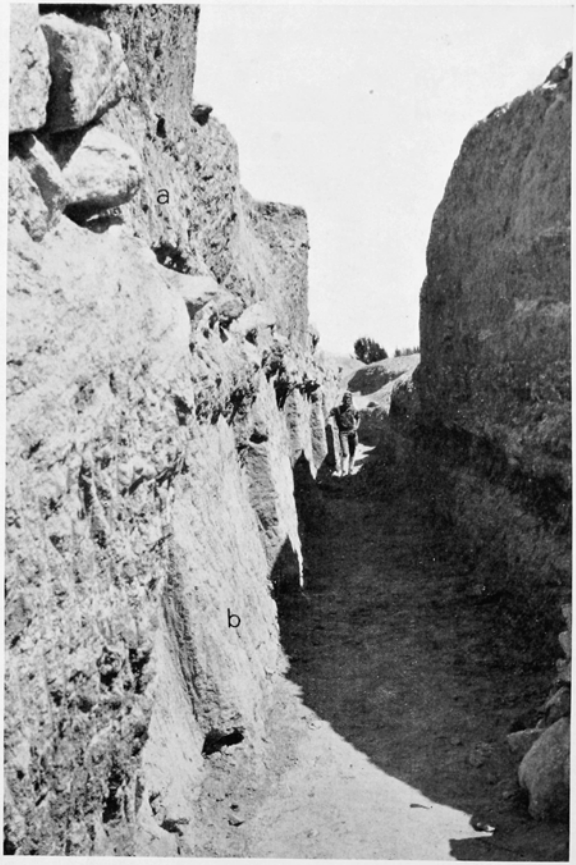

FIG. 47.—ORIGINAL CITY WALL (*b*) AND A REBUILDING (*a*) IN DD–EE 21–22

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Fig. 48.—Original City Wall (*c*) and Two Rebuildings (*a–b*) in EE 21–22, with First Box of the First Rebuilding in Complex II of 1929 in Background, Seen from South

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Fig. 49.—Original Outer Face of City Wall (*c*) and Two Rebuildings (*a–b*) along Complex II of 1929 (FF 19–EE 21), Seen from South

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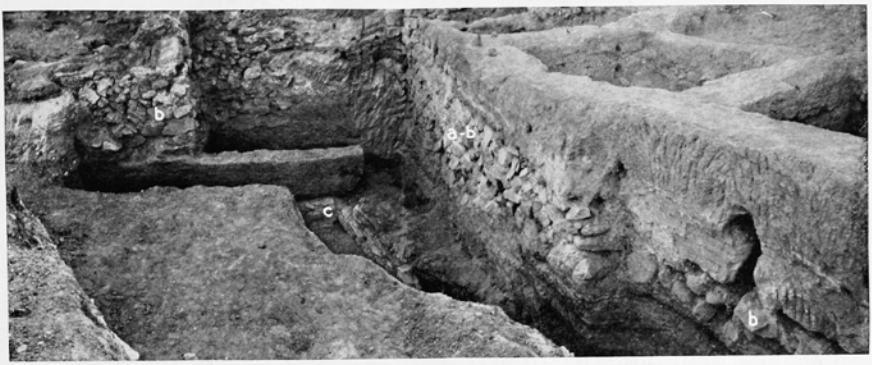

FIG. 50.—CORNER OF FIRST CITY WALL (*c*) AND TWO REBUILDINGS (*a–b*) IN CC–DD 23–24, SEEN FROM NORTHEAST

FIG. 51.—GATEWAY STRUCTURE (*b*) IN CC–DD 23–24 WITH LATER ALTERATION (*a*), SEEN FROM NORTHEAST. FIRST CITY WALL (*c*) IN CENTER FOREGROUND

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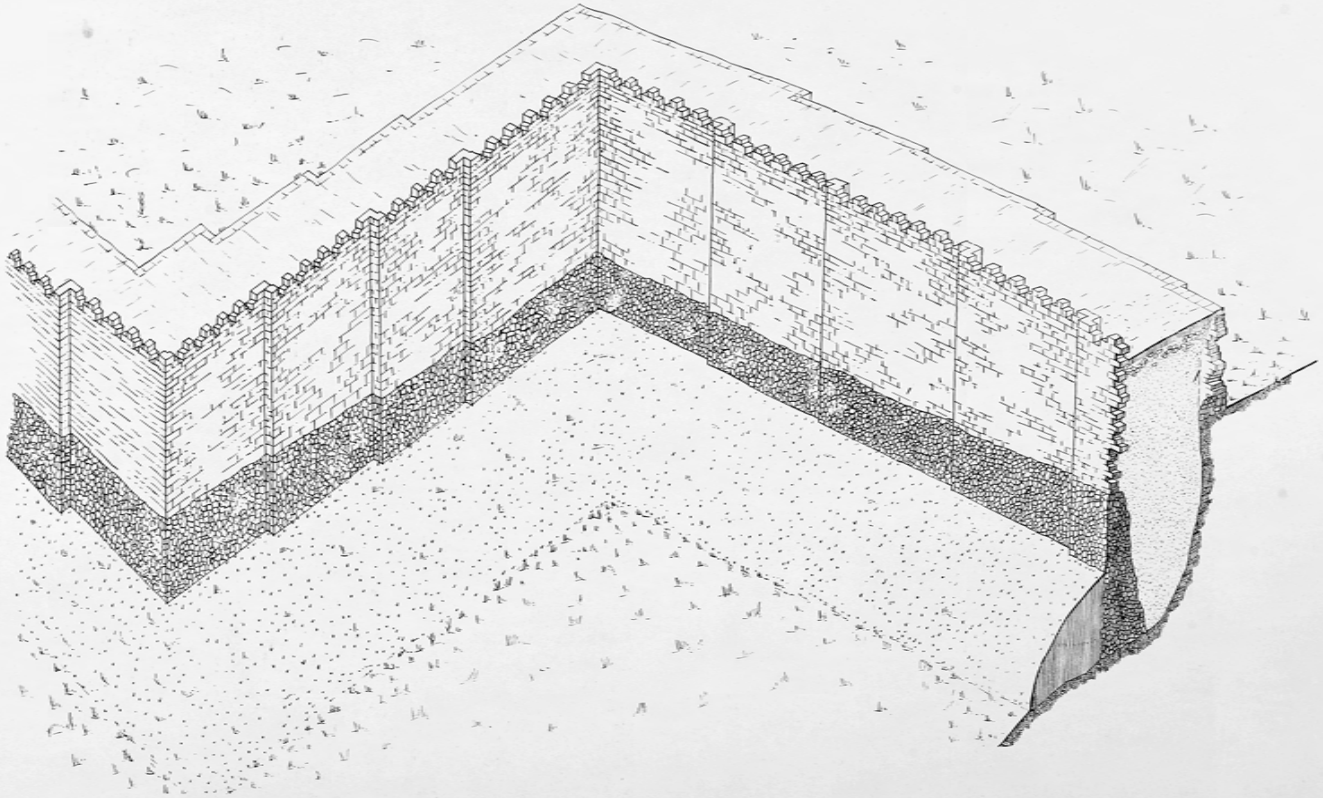

Fig. 52.—Tentative Reconstruction of Original City Wall in EE 26–EE 22

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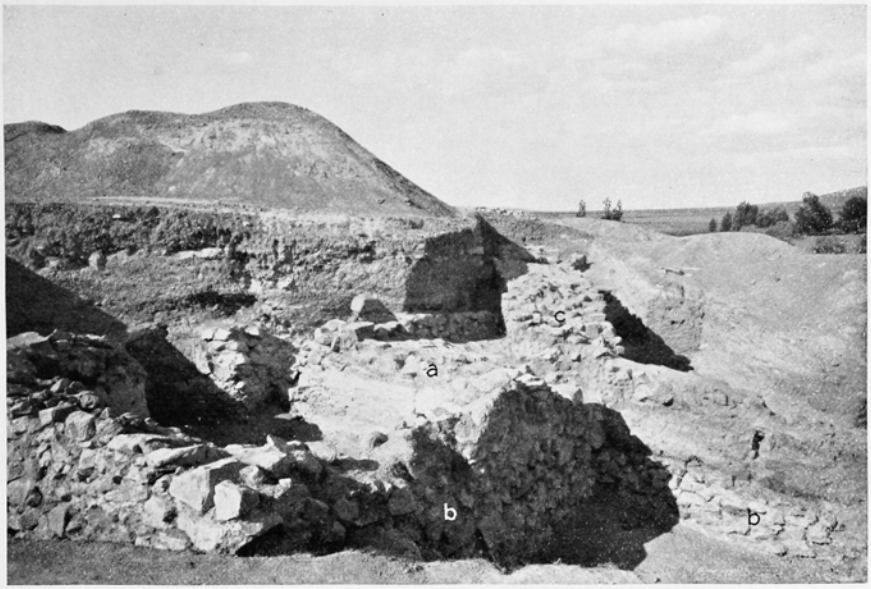

Fig. 53.—Two Rebuildings (*a–b*) of City Wall in CC–DD 23–25, from South. Part of a Later City Wall (*c*) in Middle Background

Fig. 54.—Alteration of Gateway in CC 24, Showing Buttresses, from North

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FIG. 56.—SOUTHERN TRENCH WALL OF BB–CC 24, SHOWING FILL

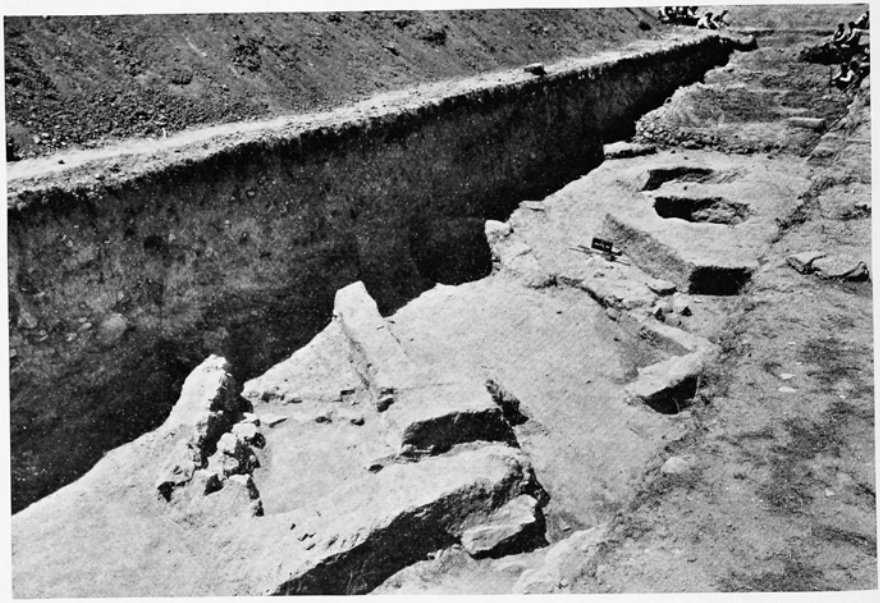

FIG. 57.—LEVEL 10 T IN X–Y 24, FROM EAST

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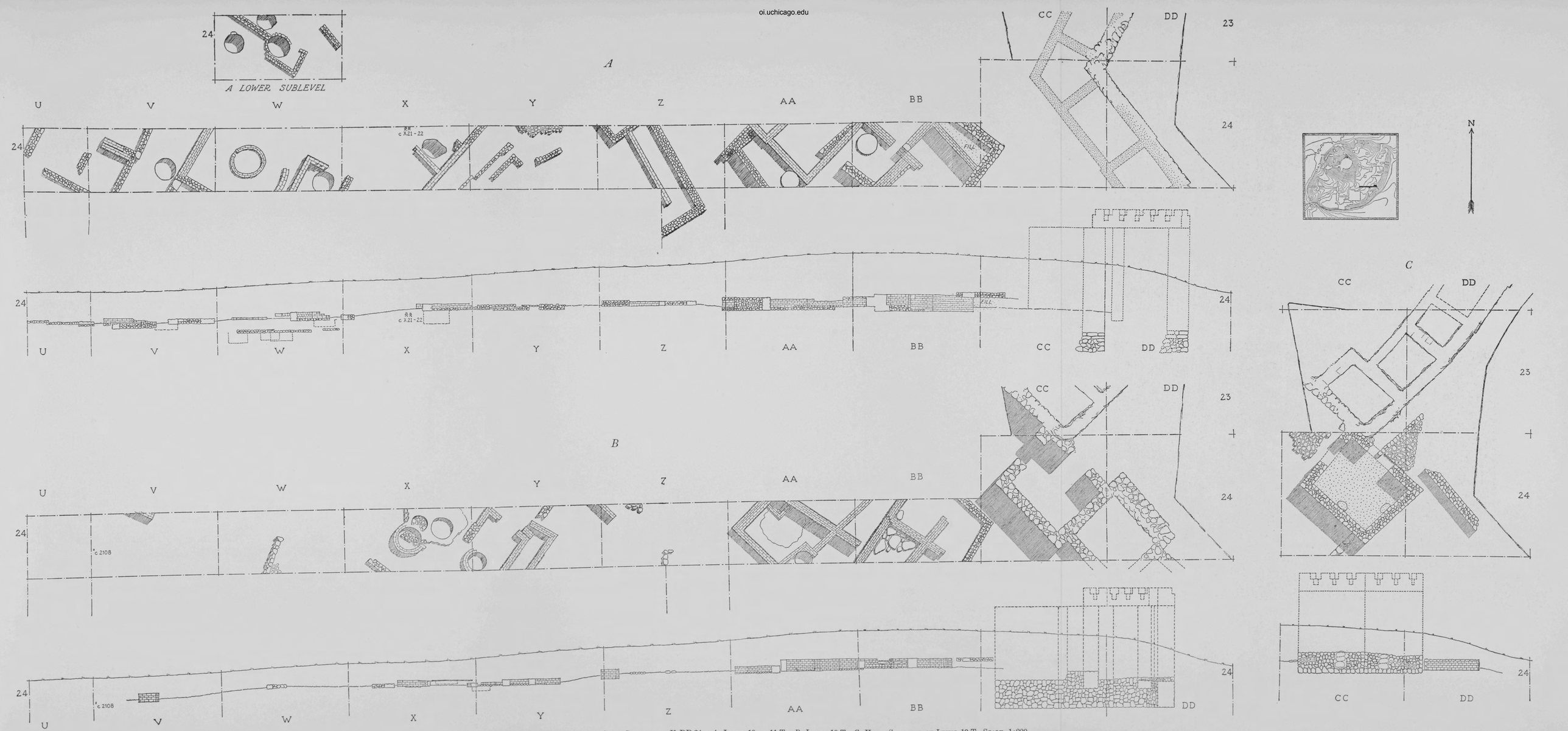

Fig. 55.—Plans and Cross-Sections of U–DD 24. *A*. Level 10 or 11 T. *B*. Level 10 T. *C*. High Sublevel of Level 10 T. Scale, 1:200

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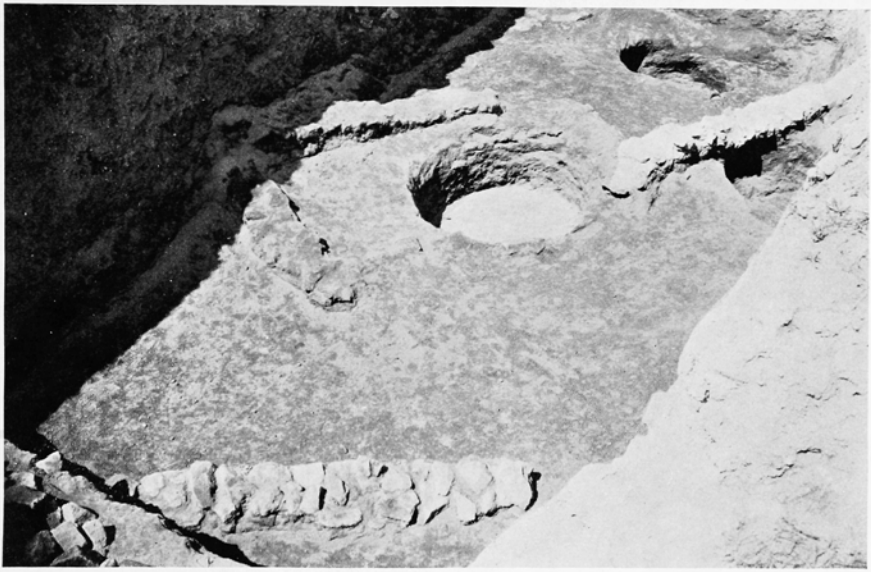

FIG. 58.—EARLIEST SUBLEVEL OF THE PERIOD OF THE HITTITE EMPIRES IN W 24, FROM NORTHEAST

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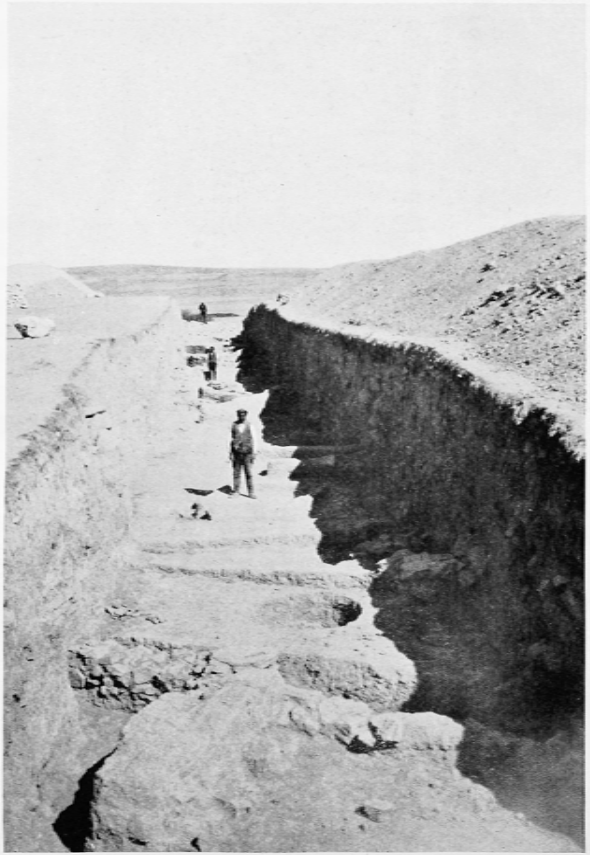

FIG. 59.—LEVEL 10 OR 11 T IN V–CC 24, FROM WEST (CF. FIG. 55 *A*)

FIG. 60.—REMAINS OF THE PERIOD OF THE HITTITE EMPIRES AND A WALL (*a*) OF LEVELS 8–9 T IN U 24–31, FROM NORTH

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FIG. 61.—MANSION OF LEVEL 10 T IN THE COMPLEX OF 1931, FROM SOUTHEAST. IN LEFT FOREGROUND A RE-USED COPPER AGE BUILDING (*a*)

FIG. 62.—VIEW OF LEVELS 10–11 T IN S–U 29–31 FROM NORTH, INCLUDING COPPER AGE REMAINS (*a*), THE RE-USED COPPER AGE BUILDING SHOWN IN FIG. 61 (*b*), A LARGE WALL OF LEVEL 10 T (*c*), AND A LARGE WALL OF LEVELS 8–9 T (*d*)

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FIG. 63.—REMAINS OF THE MANSION (*b*) AND OF THE EARLIEST (*c*) AND LATEST (*a*) SUBLEVELS OF LEVEL 10 T IN R–S 28–29, FROM NORTHEAST

FIG. 64.—MANSION OF LEVEL 10 T IN THE COMPLEX OF 1931, FROM EAST

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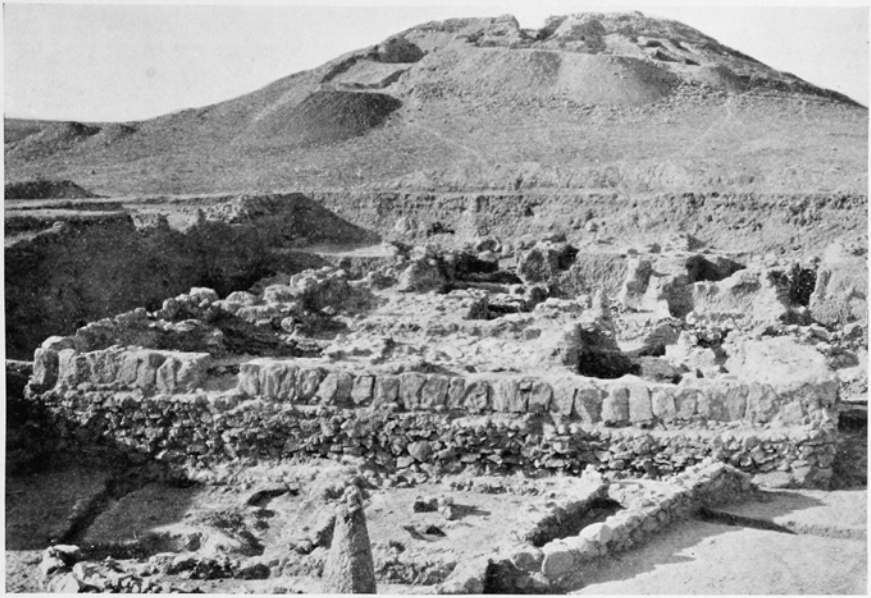

Fig. 65.—Southern Façade of the Mansion

Fig. 66.—Street of Level 11 T in P 27–29, Disappearing under the Mansion of Level 10 T, Seen from North

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Fig. 67.—Western Façade of the Mansion in P 28–30, Built above the Street of Level 11 T, Seen from Southwest

Fig. 68.—Building Remains of the Earliest Sublevel of Level 10 T West of the Mansion, from South

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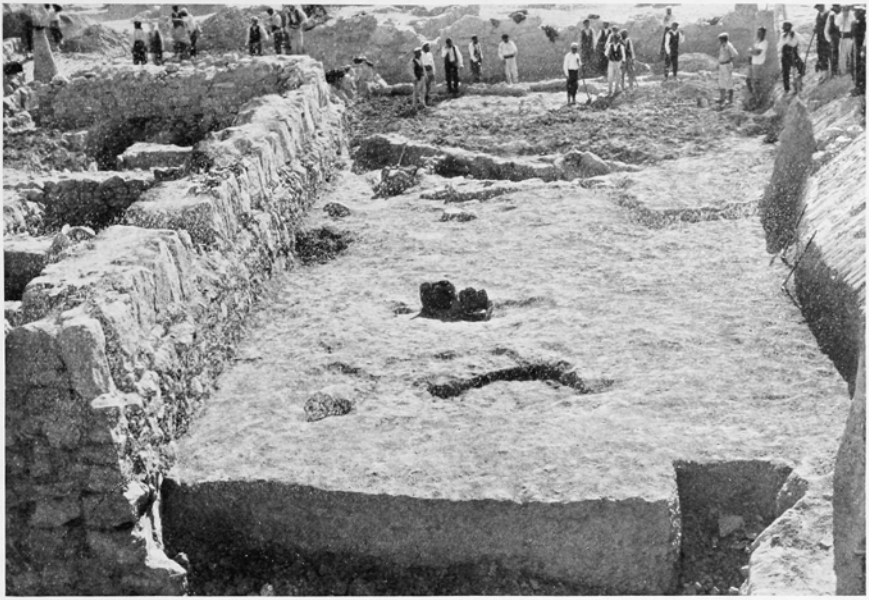

Fig. 69.—Earliest Sublevel of Level 10 T South of the Mansion

Fig. 70.—Burials d X36 and d X39 of the Earliest Sublevel of Level 10 T, South of the Mansion

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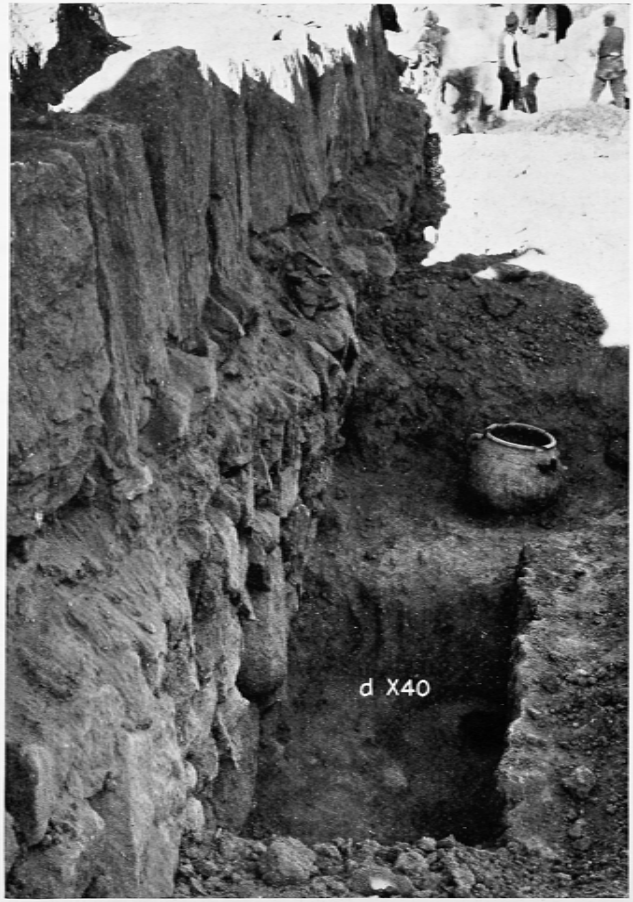

FIG. 71.—SOUTHERN FAÇADE OF MANSION (AT LEFT) AND EARLIEST SUBLEVEL OF LEVEL 10 T

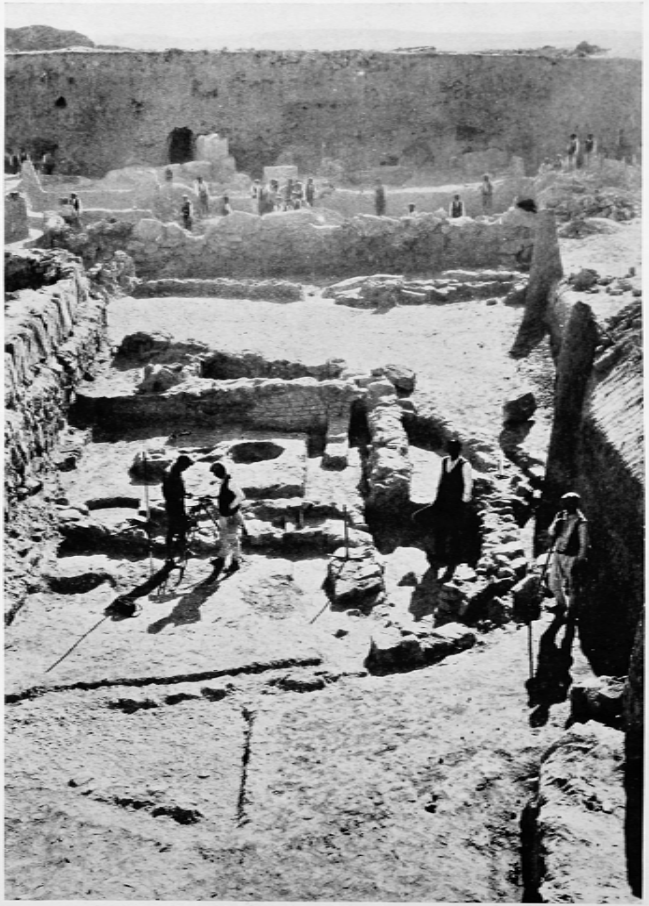

FIG. 72.—STREET AND BUILDING REMAINS OF LEVEL 11 T SOUTH OF MANSION OF LEVEL 10 T, SEEN FROM WEST

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Fig. 73.—Southwest Room in Mansion, from Northeast

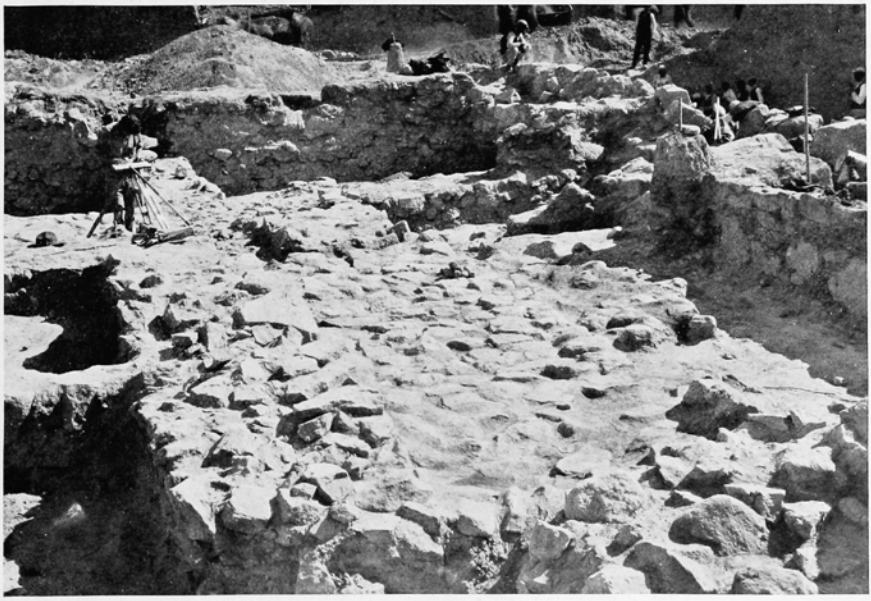

Fig. 74.—Stone-paved Room in Mansion, from North

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Fig. 75.—Room of Level 11 T in P 27 Containing Burials e X5–7, from West

Fig. 76.—Room in P 27 with Burials e X5–7 Uncovered, from West

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Fig. 77.—Stone Doorsill in the Earliest Sublevel of Level 10 T in S 29 and (behind it) a Large Wall in the Middle Sublevel of Level 10 in S 29–31

Fig. 78.—Level 10 T in U 29–31, from Southwest

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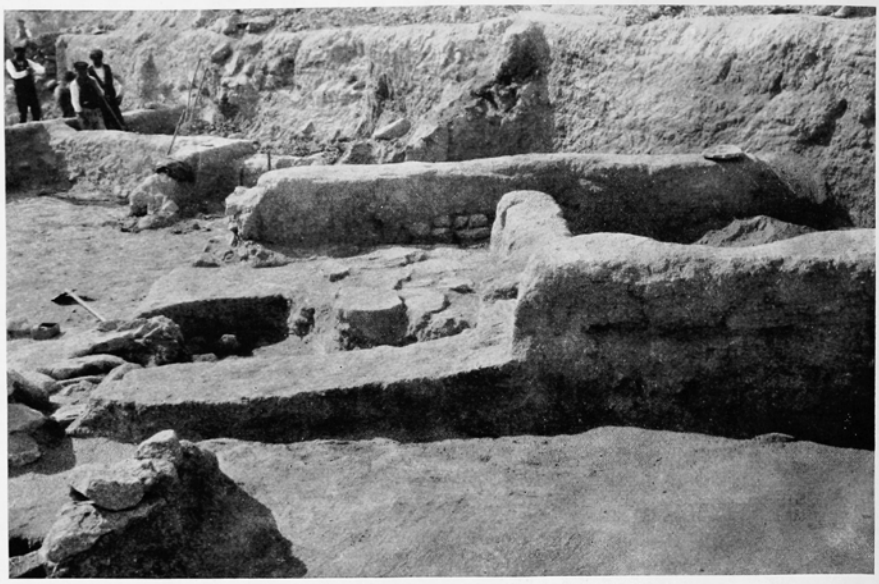

Fig. 79.—Walls and Pavement in Earliest Sublevel of Level 10 T in T 28, from Southeast

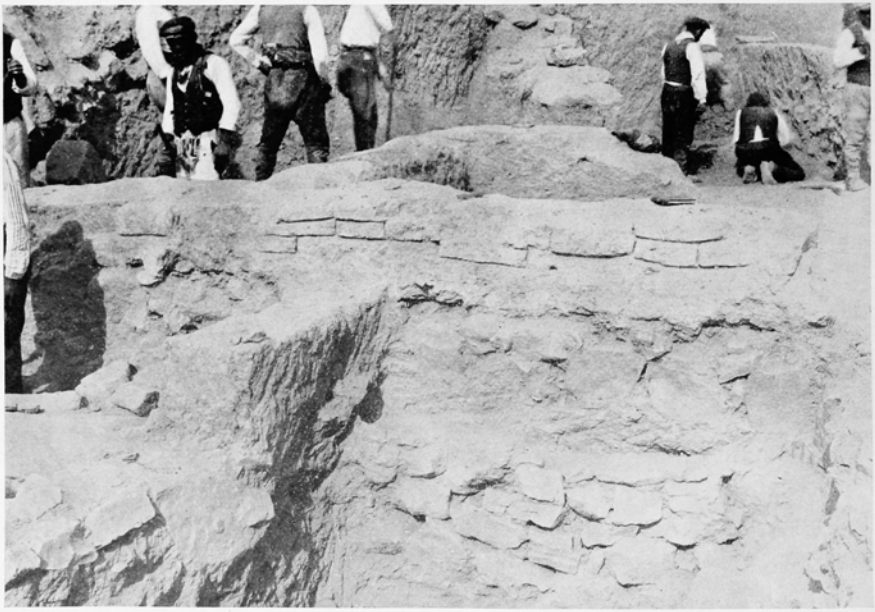

Fig. 80.—Details of Latest Sublevel of Level 10 T in S 28, from West

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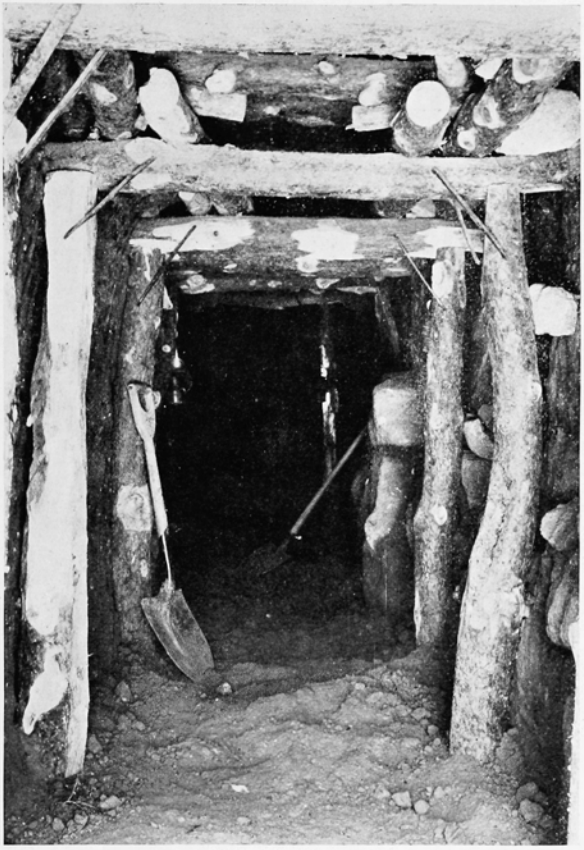

Fig. 81.—Following a Large Wall in P 33

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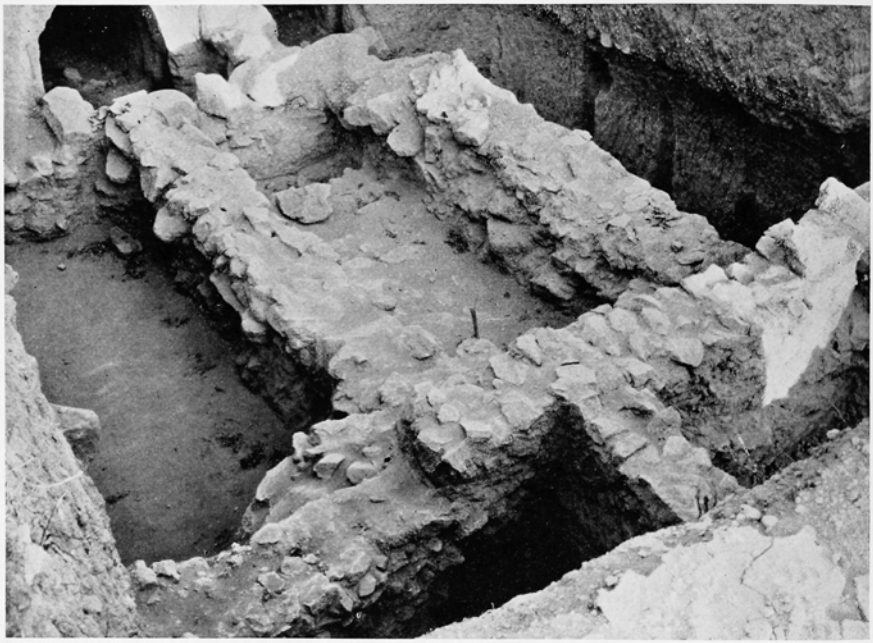

Fig. 84.—Paved Room of Level 11 T in O 33, from Northwest

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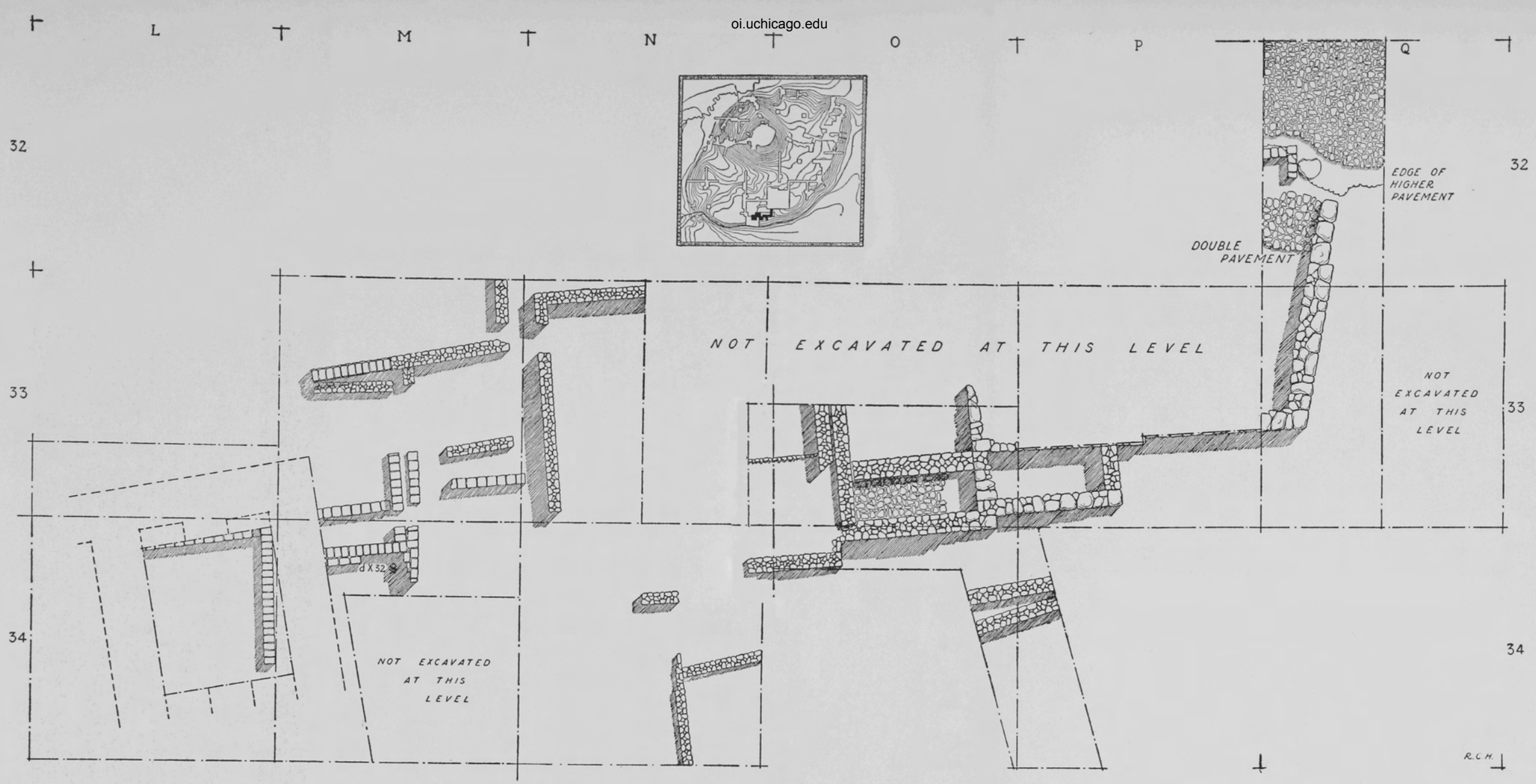

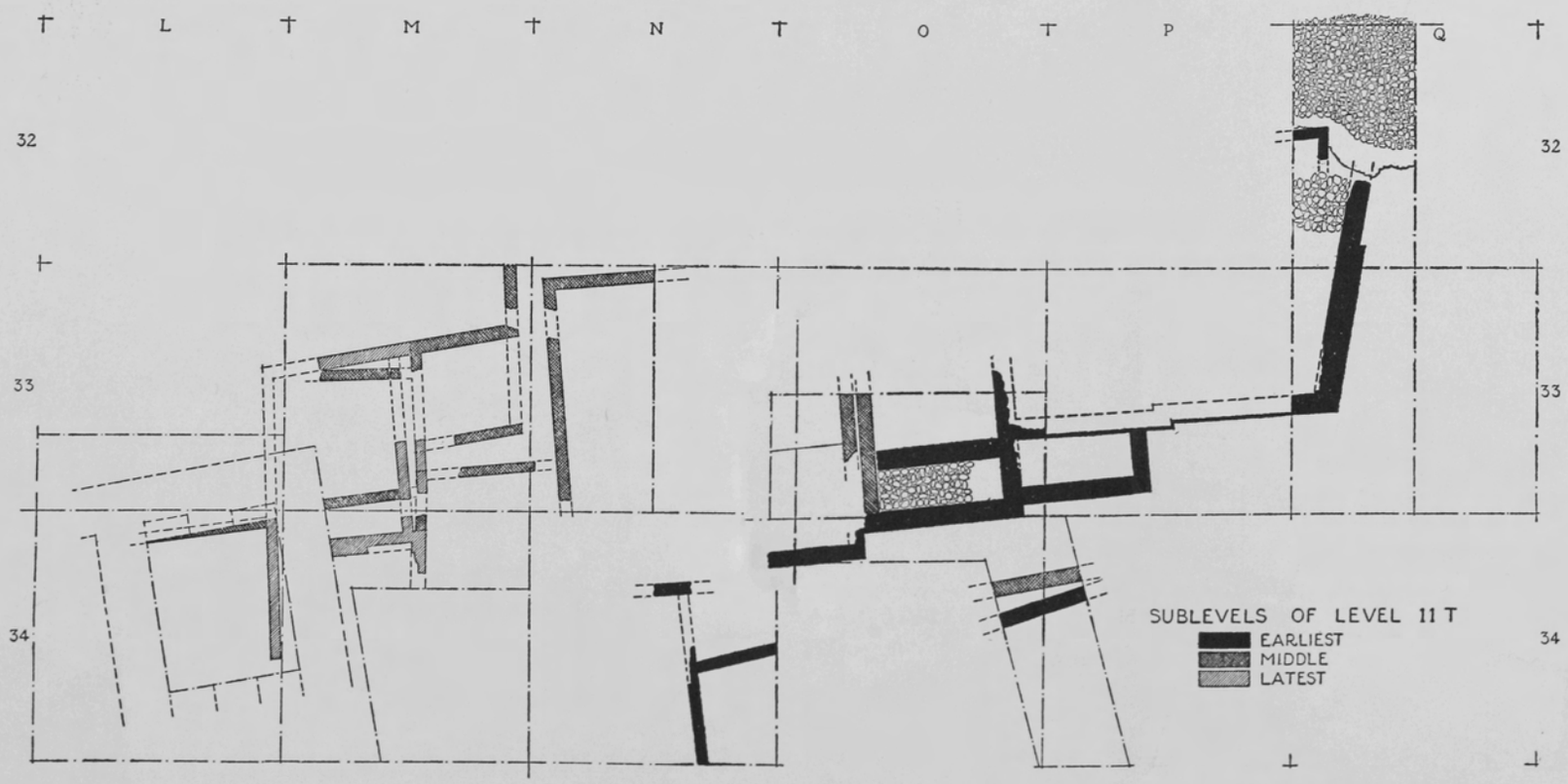

FIG. 82.—THE EXCAVATED AREAS OF LEVEL 11 T IN L–Q 32–34 SOUTHWEST OF THE COMPLEX OF 1931. . *A*. PLAN. SCALE, 1:200. *B*. KEY TO THE SUBLEVELS. SCALE, 1:300

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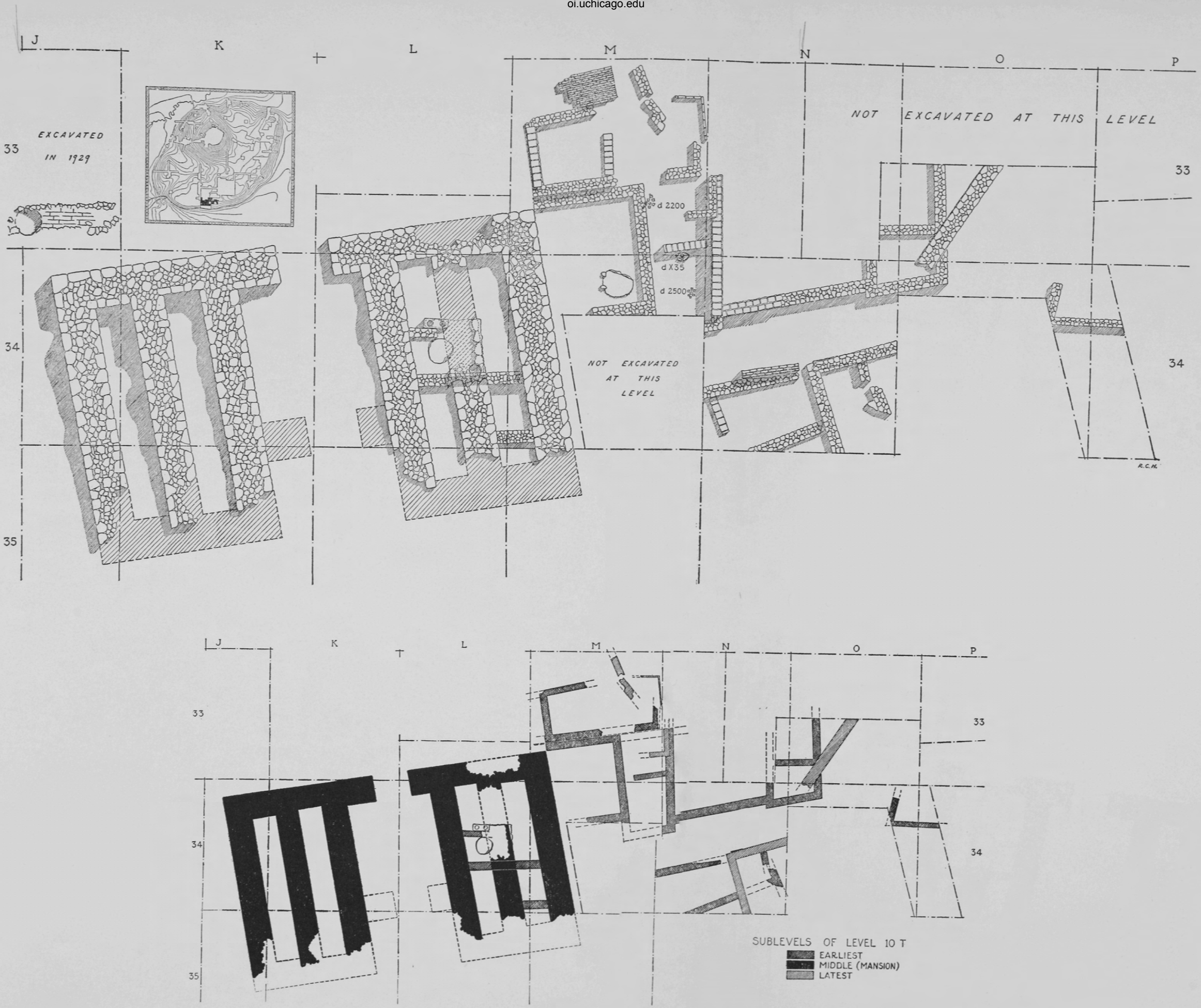

FIG. 83.—THE EXCAVATED AREAS OF LEVEL 10 T IN J–P 33–35 SOUTHWEST OF THE COMPLEX OF 1931. PLAN. SCALE, 1:200. *B*. KEY TO THE SUBLEVELS. SCALE, 1:300

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FIG. 85.—LEVELS 10 T (*a*) AND 11 T (*b*) IN M–N 33–34, FROM NORTHWEST

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Fig. 86.—Find-Spot (in M 34) of Cuneiform Tablet Hoard d 2500, from South

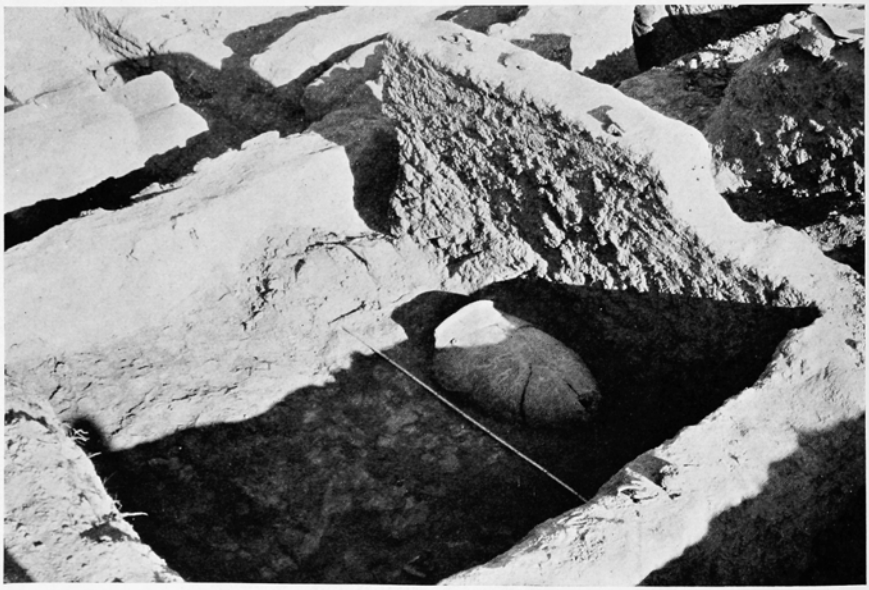

Fig. 87.—Burial d X35 in M 33–34, from Southeast

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FIG. 88.—SOUTHERN GATEWAY OF LEVEL 10 T, FROM SOUTH

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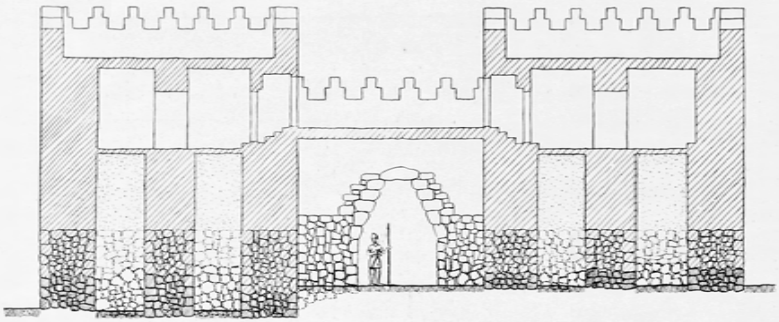
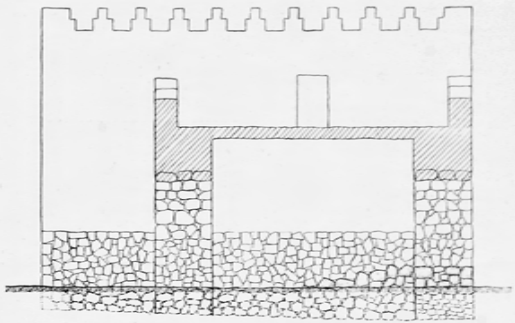


A



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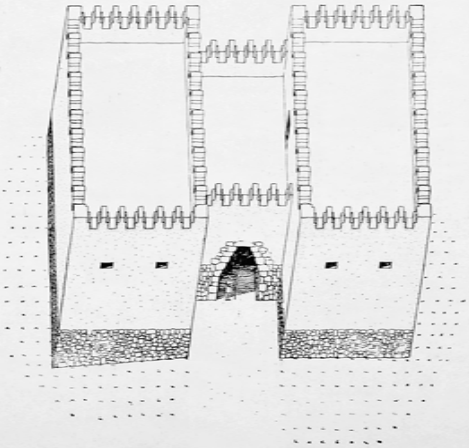

C

Fig. 89.—Southern Gateway of Level 10 T. *A*. Cross-Section, West–East. *B*. Cross-Section, South–North. *C*. Reconstruction. Scale of *A–B*, 1:200

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Fig. 90.—Southern Gateway of Level 10 T, from West

Fig. 91.—Western Tower of Southern Gateway, from North

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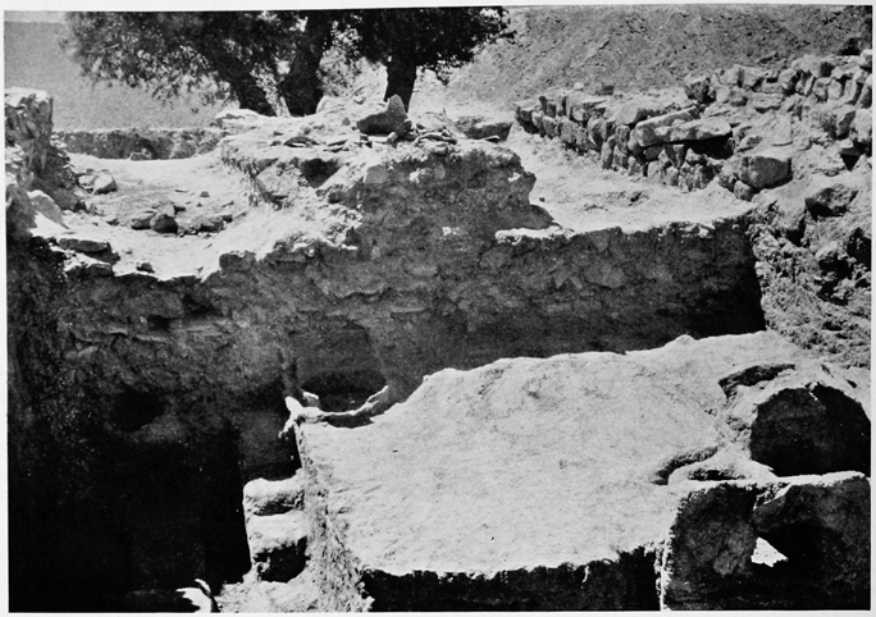

Fig. 92.—Room in L 34, below Eastern Tower of Southern Gateway; Fireplace of the Earliest Sublevel of Level 10 T in Right Foreground

Fig. 93.—View of Level 11 T, Looking North from I–J 33

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Fig. 94.—Level 11 T in I–J 28, from Northwest

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FIG. 96.—LEVEL 10 T IN I–J 30–31, FROM SOUTH

FIG. 97.—M 29 FROM NORTH, SHOWING REMAINS OF LEVELS 10 T (*a*) AND 11 T (*b*)

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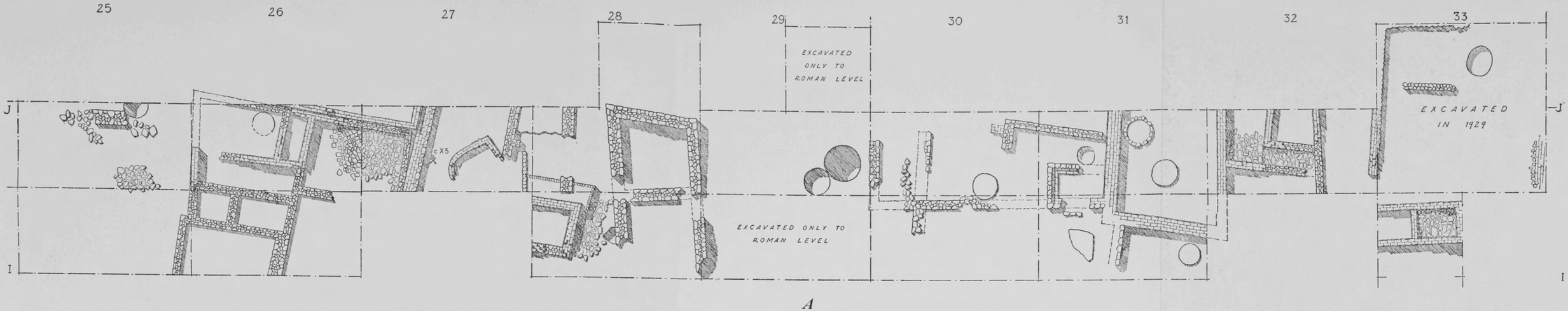
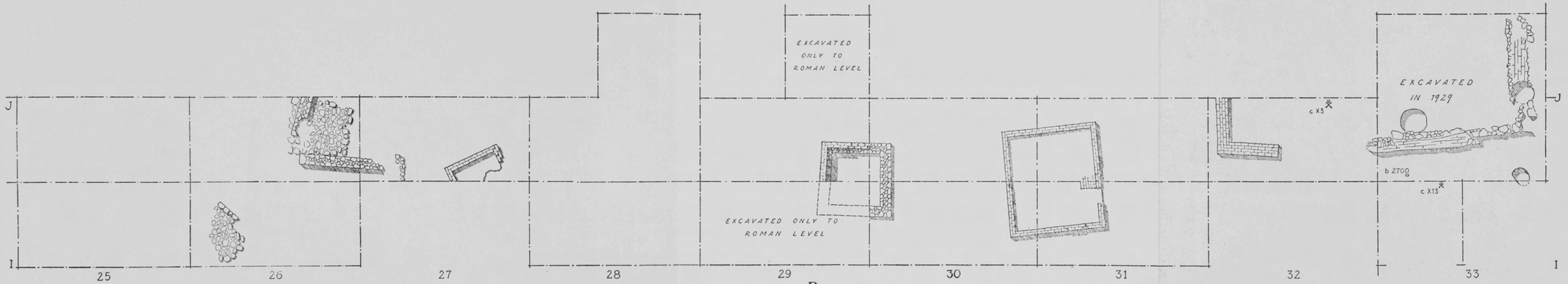
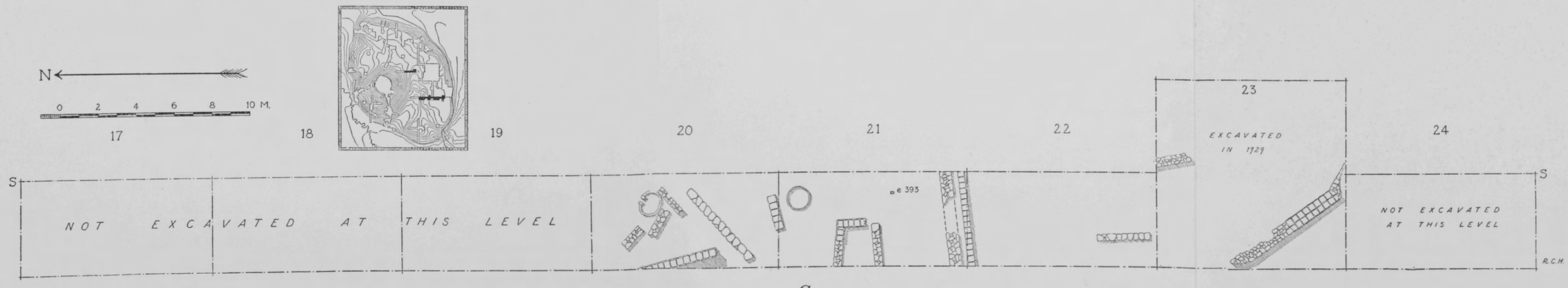


A



B



C

FIG. 95.—*A*. PLAN OF LEVEL 11 T IN I–J 25–33. *B*. PLAN OF LEVEL 10 T IN I–J 25–33. *C*. PLAN OF LEVELS 10–11 T IN S 20–23. SCALE, 1:200

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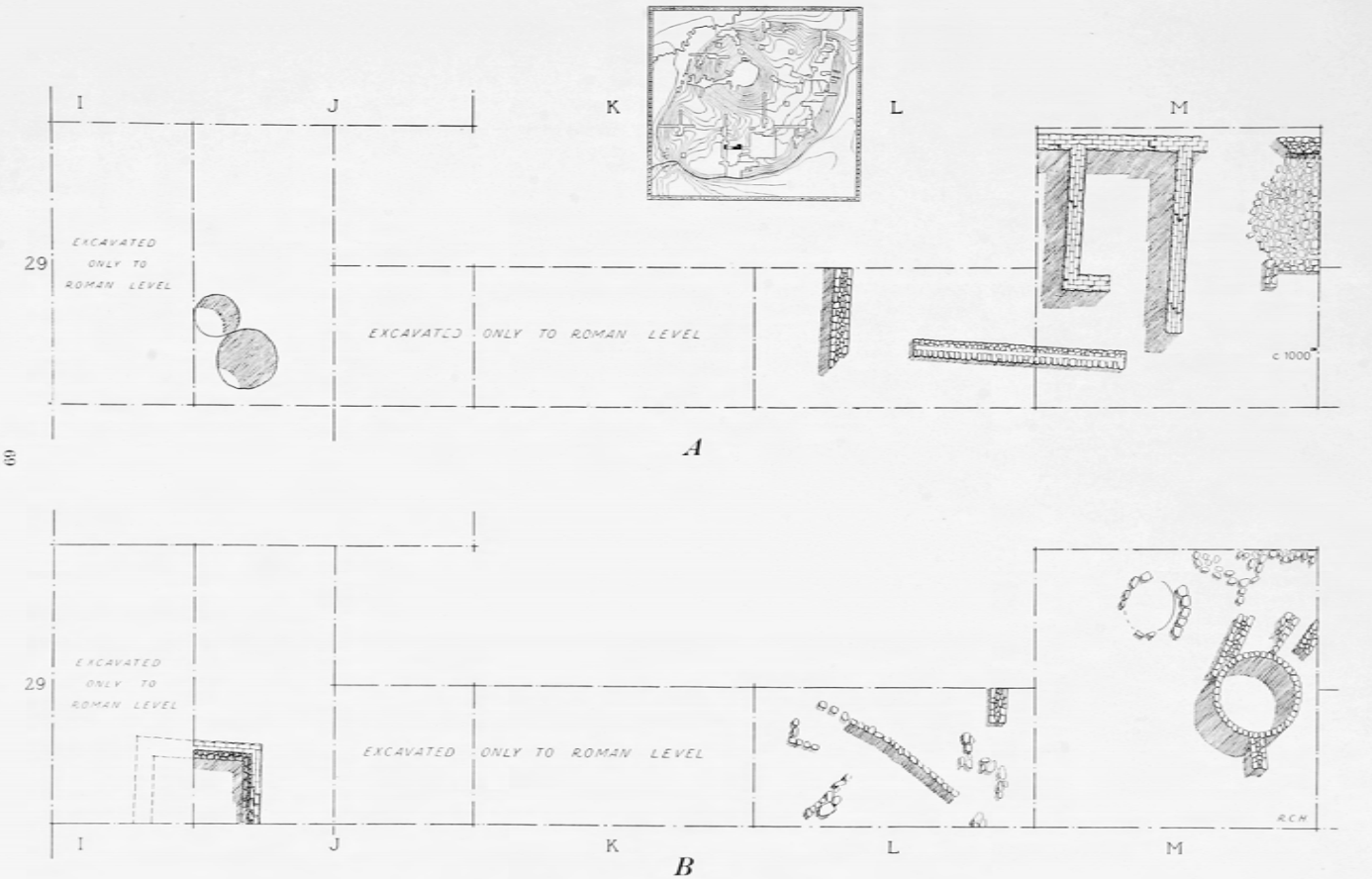

FIG. 98.—PLANS OF J–M 29. *A*. LEVEL 11 T. *B*. LEVEL 10 T. SCALE, 1:200

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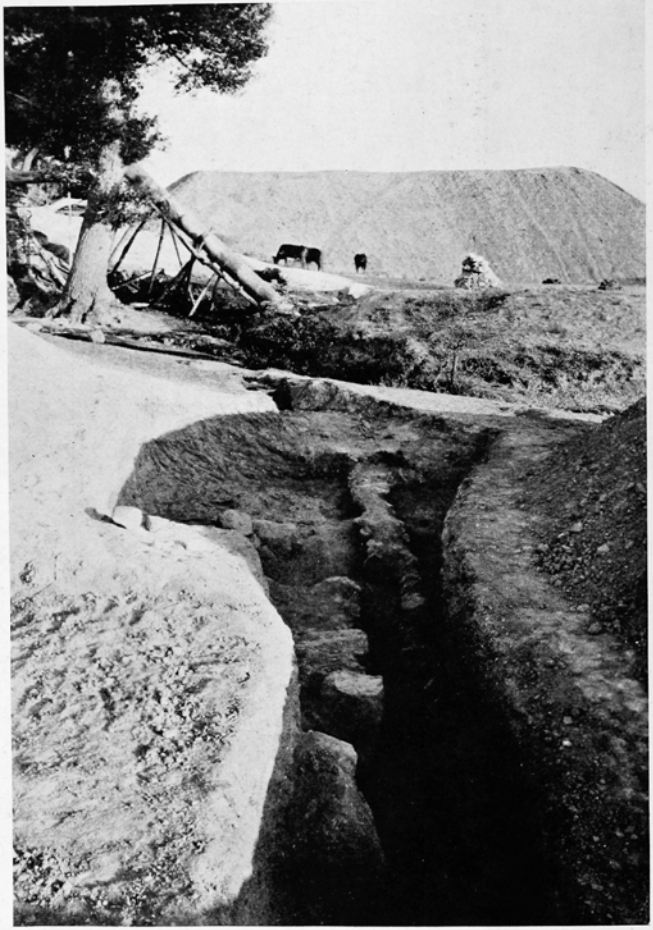

Fig. 99.—City Wall in UU–VV 31–32, from Northwest

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Fig. 100.—City Wall in TT-UU 24, from Northwest

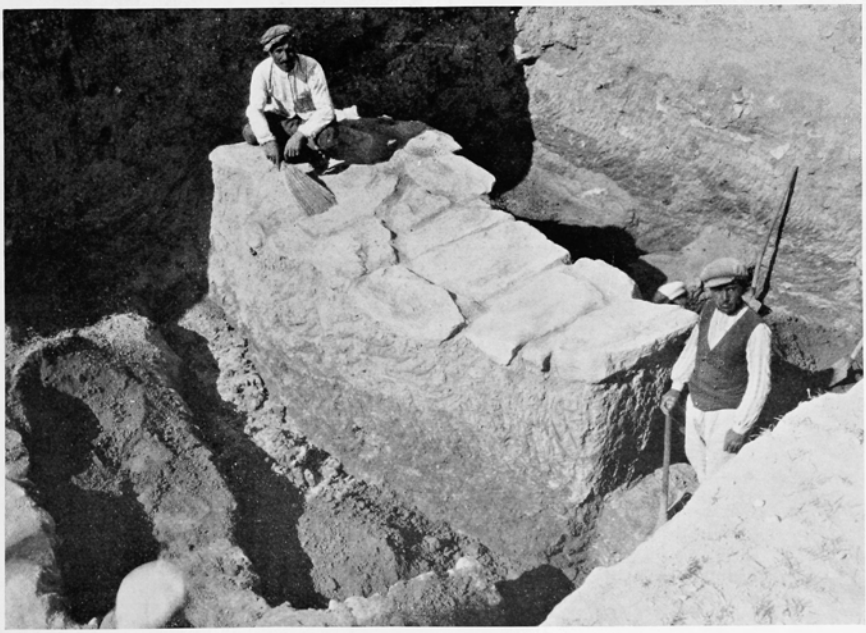

Fig. 101.—Pavement above City Wall in UU 24

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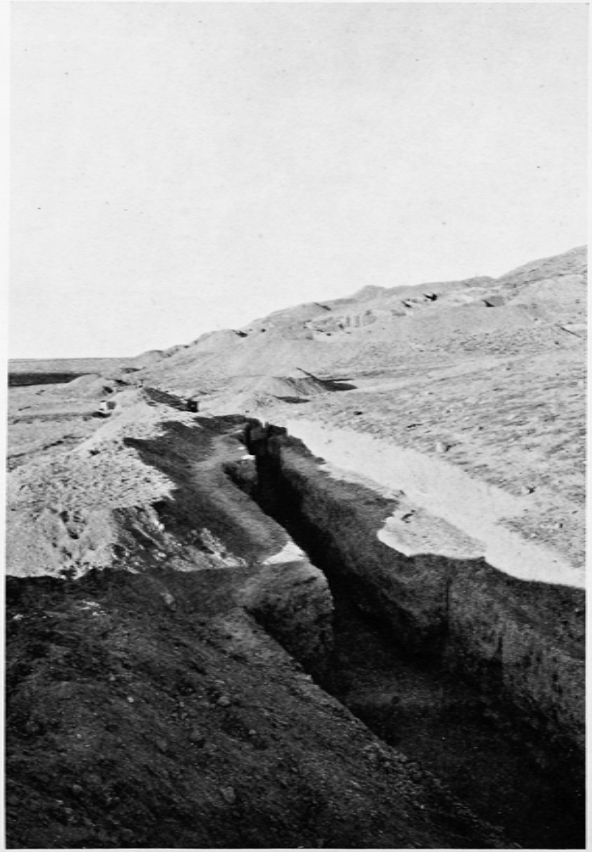

Fig. 102.—City Wall between UU 23 and XX 16, from South

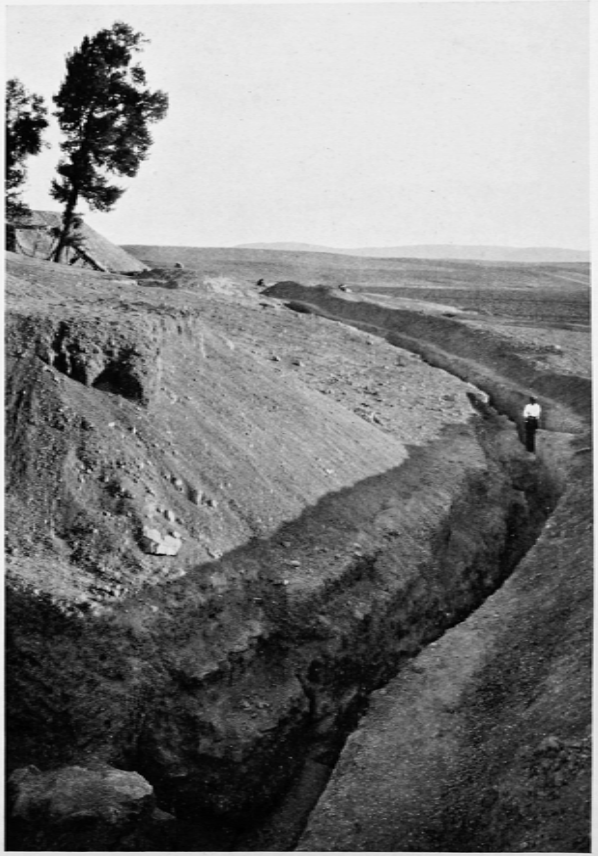

Fig. 103.—City Wall from TT–UU 24 Southward

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Fig. 104.—Gateway Structure in XX–YY 15–16, from Northeast

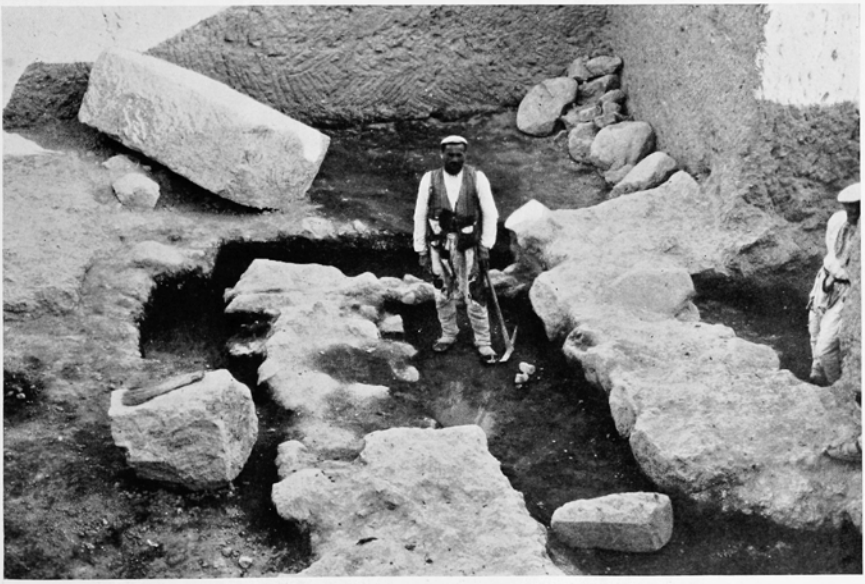

Fig. 105.—Gateway Structure in XX–YY 15–16, from Northwest

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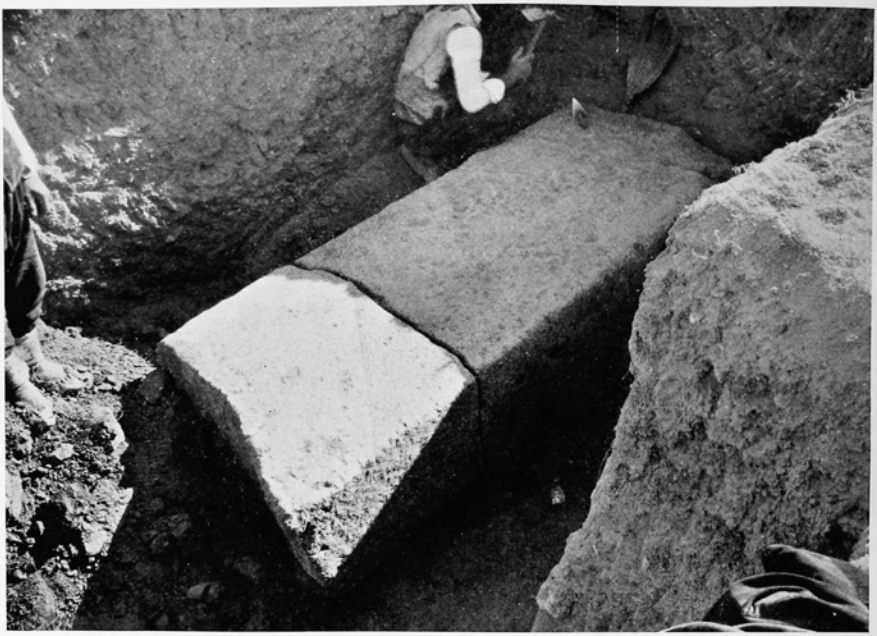

Fig. 106.—Monolith in XX–YY 15–16

Fig. 107.—City Wall from XX–YY 15–16 Southward

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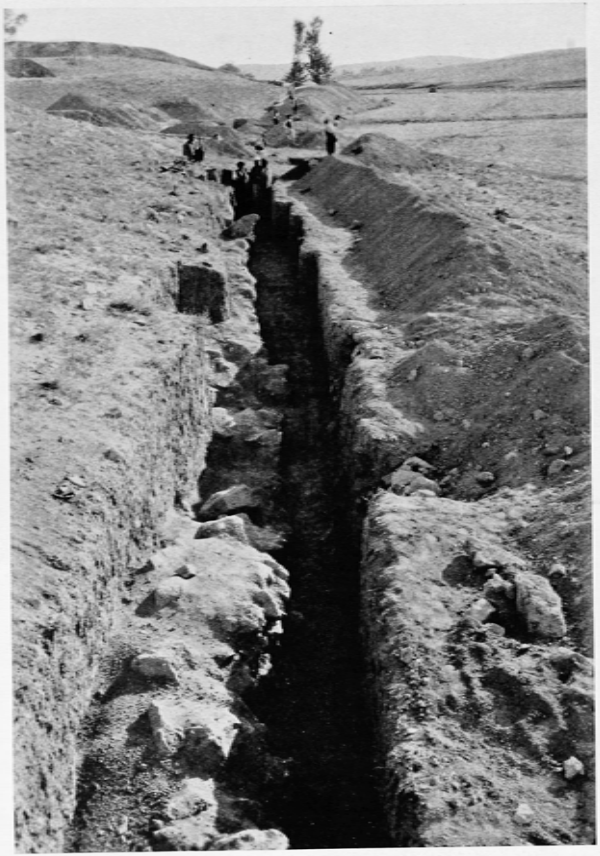

Fig. 108.—City Wall from B 9 to A 12, Seen from Northeast

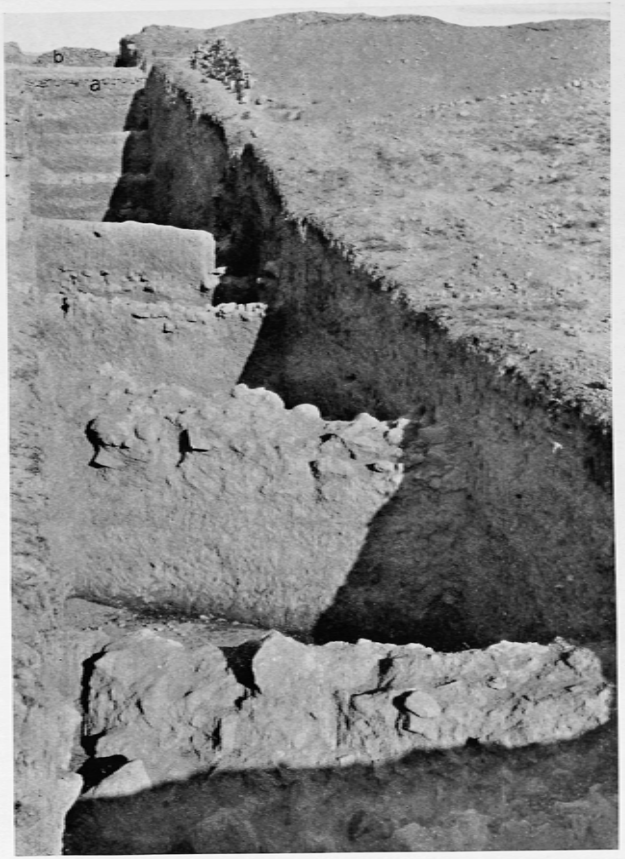

Fig. 109.—Cut in A–E 8, from West, Showing Wall Remains of the Period of the Hittite Empires and (in background) the Phrygian Defense Wall (*a*) and Roman-Byzantine Remains (*b*)

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FIG. 110.—PLAN AND CROSS-SECTION OF A–E S. SCALE, 1:200

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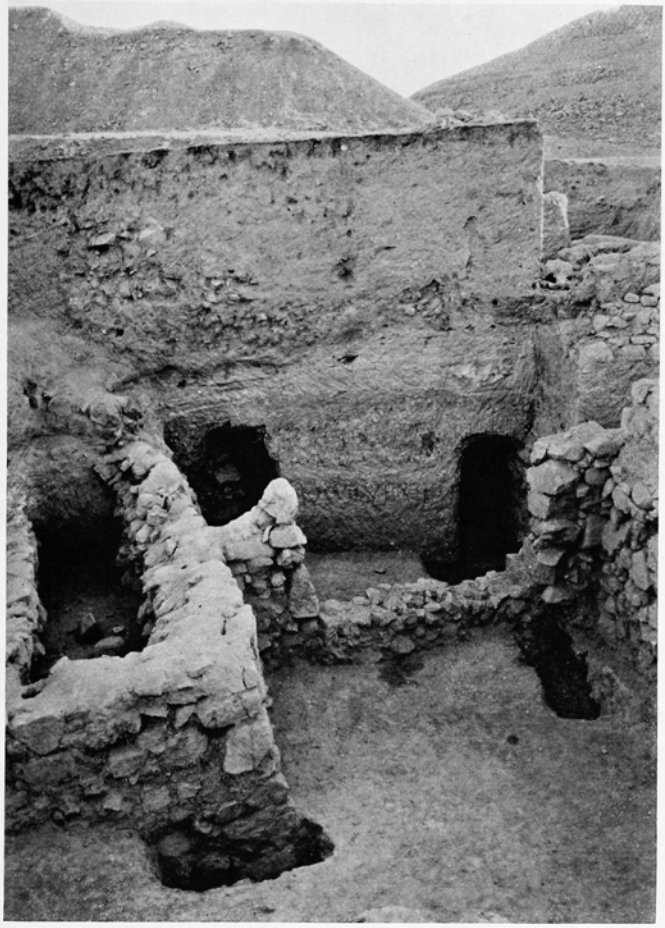

Fig. 111.—Northern Gateway in R–T 0–2, from North

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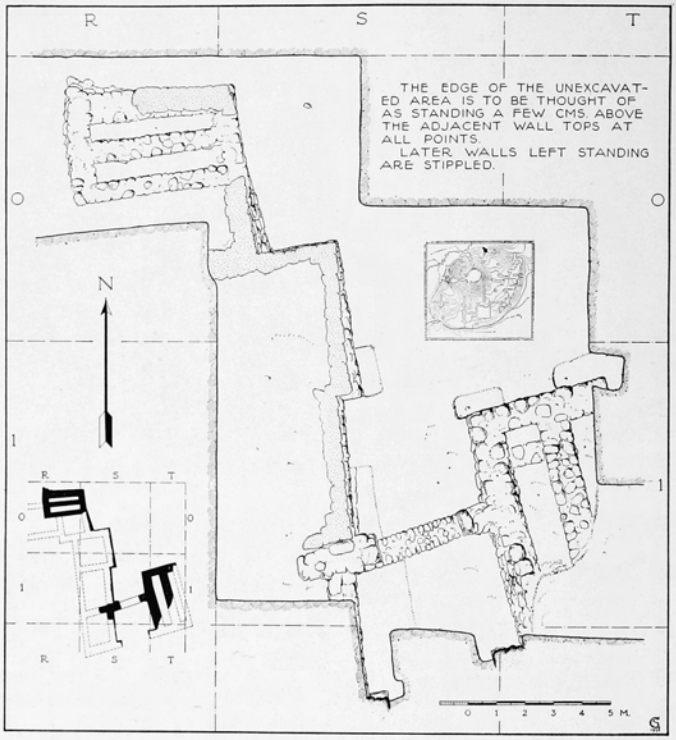

Fig. 112.—Plan of Northern Gateway in R–T 0–2. Scale, 1:200. *Inset.* Tentative Reconstruction of the Gateway

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Fig. 113.—Northern Gateway Closed by a Wall (*a*) between the Flanking Wall on the West and the Eastern Tower (*b*), Seen from Northeast

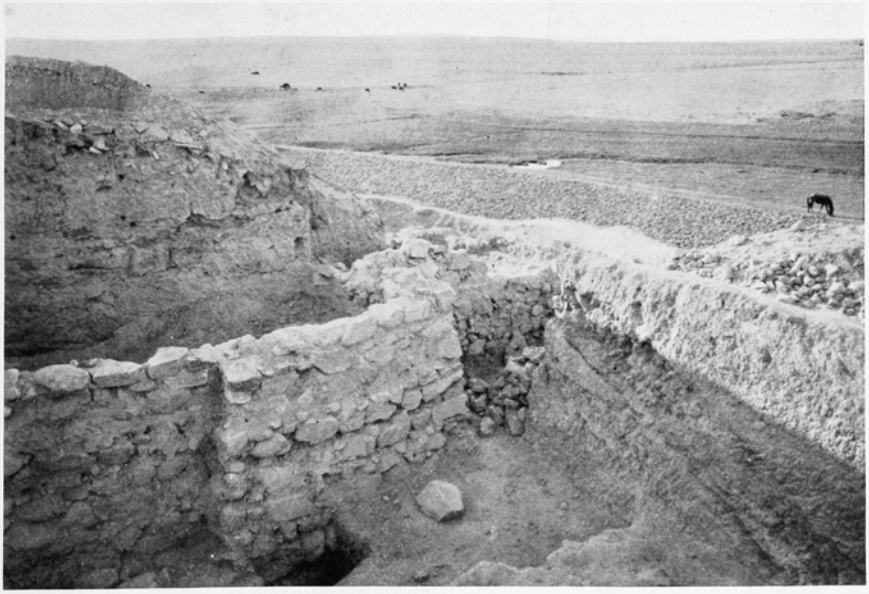

Fig. 114.—Western Flank of Northern Gateway

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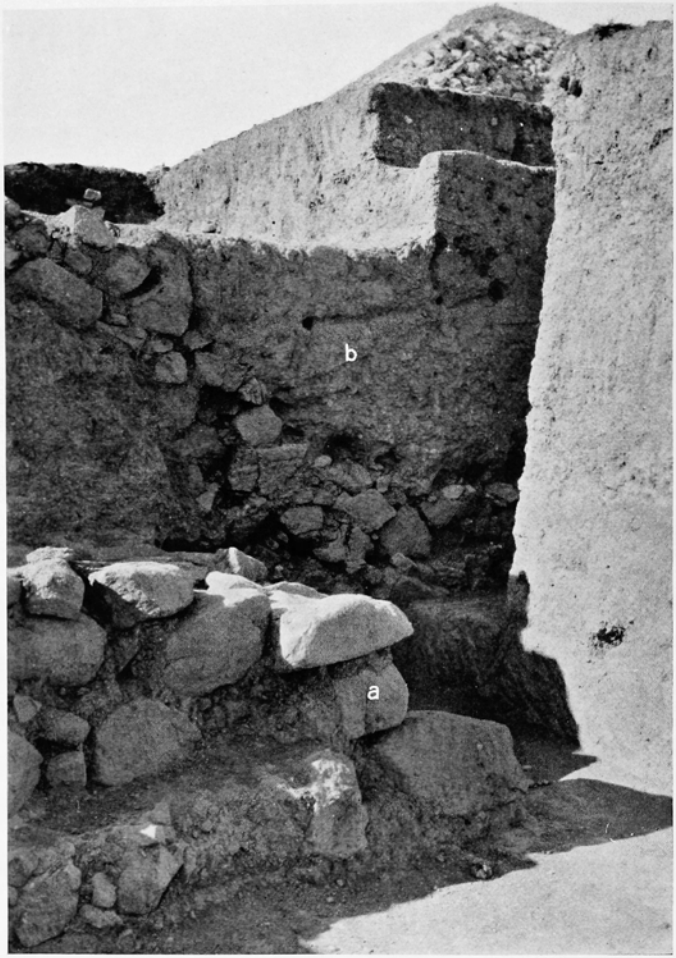

FIG. 115.—CITY WALL OF THE PERIOD OF THE HITTITE EMPIRES (*a*) AND A LATER DEFENSE WALL (*b*) IN W 2 FROM NORTHEAST

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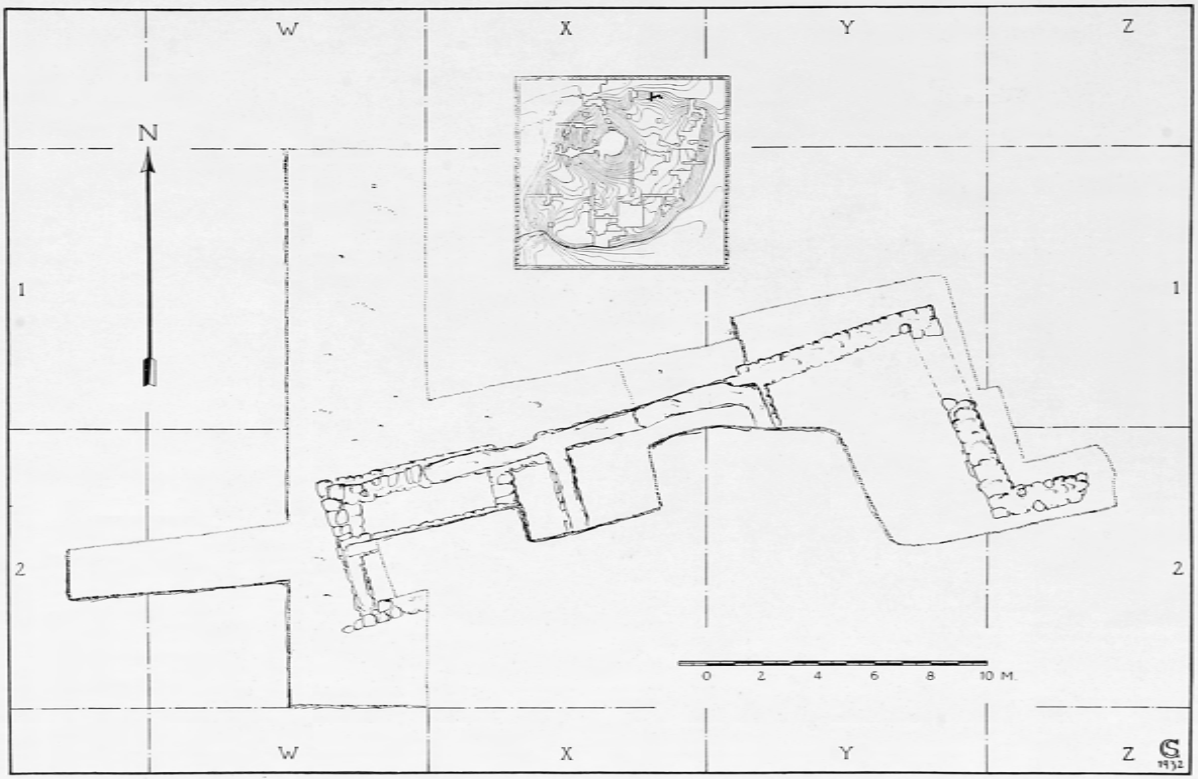

Fig. 116.—Plan of City Wall in W–Z 1–2. Scale, 1:200

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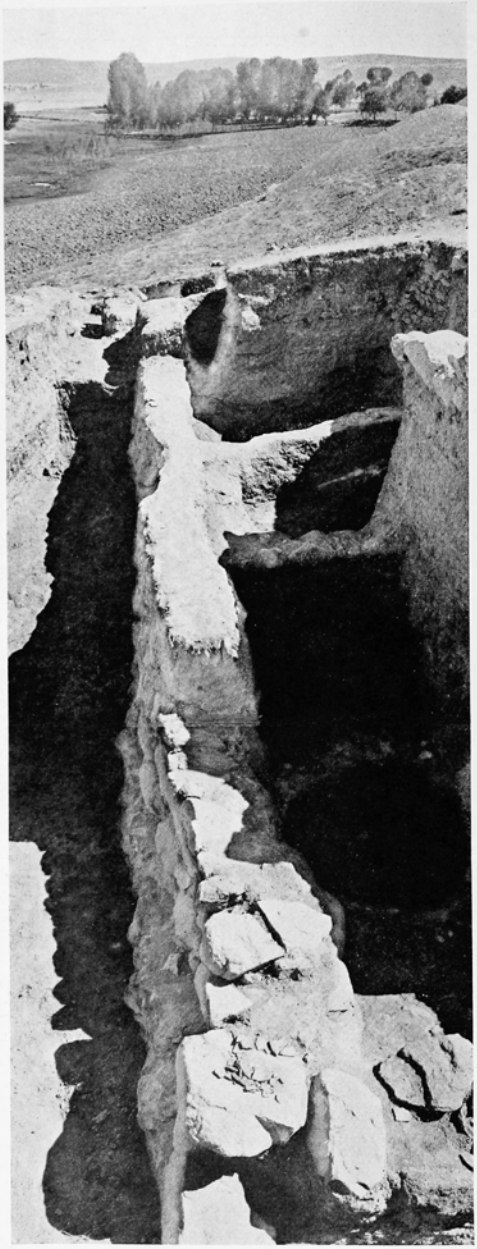

Fig. 117.—City Wall in W–Y 1–2, from West

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FIG. 118.—CITY WALL IN Y–Z 1–2, FROM NORTH

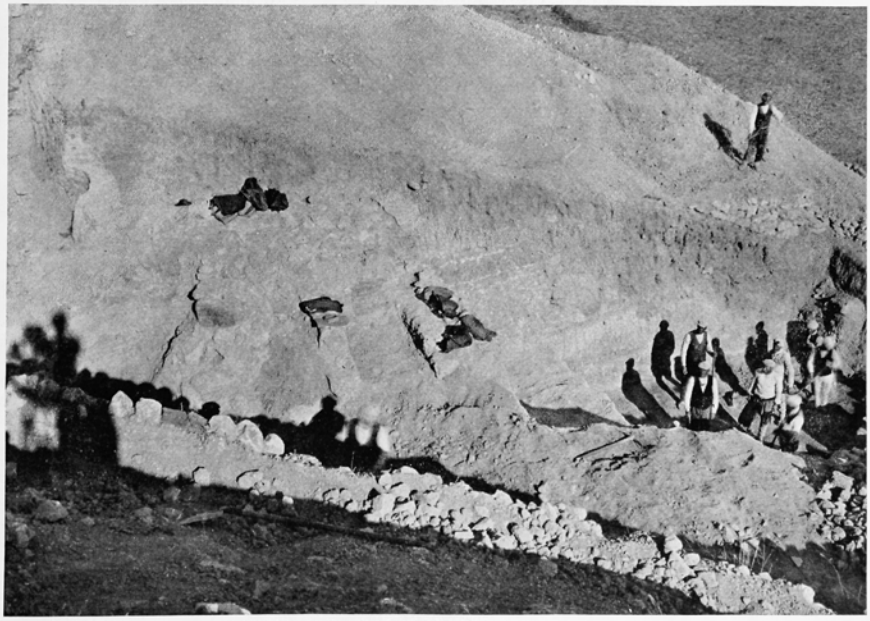

FIG. 119.—WESTERN PROFILE OF GG 2–3

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BURIALS

From 1929 to 1932 seventy-four skeletons which could be attributed to this cultural period were found. Two of this period found in 1929 could not be recorded, and only a few of those found in 1927 could be attributed to any period with assurance. All these burials were intramural, often in groups below the floor levels of rooms. Sixteen burials were found in 1929 beneath the floor level of one room in FF 10–11 (see Fig. 120). In 1930–31 ten were found in P–Q 29–30 below the floors of two rooms of the large mansion (Pl. XVII); but these, as well as nine others found directly south of the mansion, probably belong to the building level preceding the construction of the mansion (oldest sublevel of Level 10 T). Most of the other burials were found in groups of two or three.

Thirty-four of the seventy-two recorded skeletons were deposited directly in the earth. The bodies usually lay in dorsal extended or in lateral flexed positions. No favored orientation could be recognized, nor, seemingly, were the positions of the bodies due to age or sex. Skeleton b X30 was covered with fragments of a pot, and it is possible that the head of No. b X27 had been inclosed in a vessel of medium size. Skeletons 3214–16 were in a cist which was probably a refuse pit re-used. Nos. e X1–2 were found only a few centimeters below the surface of the mound; they lay on their backs, side by side, and were surrounded by a small rectangular inclosure one stone thick. No cover remained. Skeletons b X18–21 are those of a woman and three children probably killed accidentally, as they were found in a room covered with *kerpiç* débris, probably the remains of a fallen roof. It is impossible to determine whether seven other burials were so intended or were accidental.

Thirty-six skeletons were buried in pots. In most of the pot burials of adults the bodies, with legs extended, were inclosed in two large vessels placed orifice to orifice. In a few cases the bottom of one vessel had been broken off and a third vessel added in order to cover the extended legs. In burial b X23 (see Fig. 120) the lower extremities seem to have been cut off and put into a third pot, the orifice of which was shoved over the bottom of one of the vessels in which the remainder of the body had been deposited.[27] The extended skeleton d X39 (see Figs. 136 and 138) had been buried in three small pots. Contrary to the customs of the preceding periods, many of the single-pot burials show that the bodies had been deposited in the urns head first. The pots in which children were buried were usually medium-sized storage vessels with flaring rims and pointed bottoms (cf. Figs. 195–98), standing upright or tipped; the orifice of such a jar was covered with a large stone slab. In some instances children were buried in the same vessels with adults. In a few cases indications were found that the burial jars had been covered with *kerpiç*.

Only one actual stone-box burial has been found belonging to this period. Skeleton d X30 lay on its right side, flexed, in a well set stone box covered with stone slabs and one sherd of a large vessel (see Figs. 129–30). Nos. e X1–2, included above with the earth burials, were surrounded by a low stone wall.

For skeleton b X43 we have no data except the craniological measurements published by Dr. W. M. Krogman.[28]

Burial gifts had now become frequent, among them especially fine vessels. Bronze or copper earrings, pins, and bracelets were numerous; in a few instances necklaces were found. Sometimes the bronze or copper objects had so deteriorated as to make their identification impossible. The richest mortuary gifts were found with Nos. c X26–27, where, besides vessels and bronze or copper pins and bracelets, three gold rings and one silver ring were unearthed. With two skeletons, d X33 and d X36, small stamp seals were found. In addition beads, bone tubes,

[27] *OIP* XIX 182.

[28] *OIP* XX, Tables I–II.

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small lead rings, bone points, and various small stone objects appeared with the burials. With skeleton c X3 were found bones of a boar; it is more probable that the person was killed accidentally than that this was a real burial.

For the craniological material see *OIP* XXX.

LIST OF BURIALS

3201 Earth burial(?) in CC 13 (*OIP* VII 3, Skeleton X_2 in Plot IX[29]). A few fragmentary remains of a skeleton were found in a pit. The attribution of this skeleton is uncertain, but perhaps it belongs to this period.

3211 Earth burial(?) in BB 14 (*OIP* VII 6–7, Skeleton X_3 in Plot X Stratigraphic Annex). The child's skeleton was very fragmentary. It is possible that it had been disturbed by the digging of a pit; therefore its attribution to this period is uncertain.

3211*b* Earth burial(?) in AA 12 (*OIP* VII 12, Skeleton X_1 in Plot XI). Only a few fragmentary remains of the adult skeleton were found. The original position could not be recognized, but it was probably flexed. The skull probably pointed south.

3214–16 Earth burials(?) in GG 3 (*OIP* VII 23–26, Skeletons X_{2-4} in Plot XXV). The three skeletons of small children (infans I) were found in a refuse pit or cist. Skeletons 3214 and 3215 were lying almost head to head. No. 3214 was oriented south-north, the skull being north. The position of the body was dorsal, the legs flexed. No. 3215 was oriented northeast-southwest with skull southwest and facing east; it lay on its right side, flexed. No. 3216 was oriented southeast-northwest, with skull northwest and facing southwest. It lay on its right side, flexed. The attribution of these skeletons to this period is uncertain.

3225 Earth burial in Z 14 (*OIP* VII 15, Skeleton X_1 in Plot XVII). The skeleton was that of an adult-mature male. Though its original position could not be determined, the legs seem to have been flexed. The body was in a dorsal position, the skull pointing east and the face turned north. The direction of the vertebral column was 35° south of east. Near the skull were found two pitchers, probably mortuary gifts.

3225*a* Earth burial(?) in Z 15 (*OIP* VII 17, Skeleton X_2 in Plot XVII). The remains of the child's skeleton were so badly disintegrated that its position and direction were indeterminable. The attribution of the skeleton to this period is uncertain.

b X2 Single-pot burial in X 19 (*OIP* XIX 190). The skeleton of an adult or senile person, very poorly preserved, was in a flexed position. The direction of the pot was 15° east of north. The head was at the orifice.

b X18 Earth burial(?) in DD 20 (*OIP* XIX 190). The infans I skeleton lay on its right side, flexed. The general direction of the body was 10° north of east. Two bronze earrings were found beside the skull. This skeleton, as well as b X19, was covered with a mass of *kerpiç*, and it is probable that the two children were killed by a falling wall or roof.

b X19 Earth burial(?) in DD 20 (*OIP* XIX 190). The infans I skeleton lay on its right side, flexed. The body had a general direction of 10° north of east (cf. b X18).

b X20 Earth burial(?) in DD 20 (*OIP* XIX 190; *OIP* XX, Tables I–II). The fragmentary remains of a senile female were in a three-quarters ventral position, arms akimbo, legs extended. The direction from saerum to atlas was 42° east of south. This does not seem a normal burial, but rather a position of violent death.

b X21 Earth burial(?) in DD 20 (*OIP* XIX 190). The infans I skeleton had a general direction of 10° north of west. This skeleton was found with b X20 and likewise shows a position which suggests an accidental burial rather than a normal one.

b X22 Single-pot burial in DD 20 (*OIP* XIX 190). The skeleton lay on its left side, flexed, with head protruding beyond the orifice. An incised serpentine "whorl," eight knucklebones, a bowl, and a pitcher were found as burial gifts.

b X23 Triple-pot burial in FF 10 (Fig. 120; *OIP* XIX 182). The skeleton of an adult male was in a dorsal position. The lower legs were severed from the femora and placed in the third pot. The orientation of this skeleton was 10° east of north, the skull being north. An earring at each ear and three vessels were found as mortuary gifts. This skeleton was found with skeletons b X24–35 and b X40–42 in what seems to have been a burial ground below the floor of a room in Complex I of 1929.

b X24 Double-pot burial in FF 10 (Fig. 120; *OIP* XIX 182). The skeleton lay in a dorsal position with legs extended. Two vessels and a bronze or copper pin were mortuary gifts.

b X25 Pot burial in FF 10 (Fig. 120; *OIP* XIX 182). The child's skeleton was buried in the lower pot of b X24.

b X26 Single-pot burial in FF 10 (Fig. 120; *OIP* XIX 185). The infans I skeleton lay on its right side, flexed. The now completely broken burial pot may have been standing upright originally.

[29] For the location of the 1927 plots on the later net see Fig. 512.

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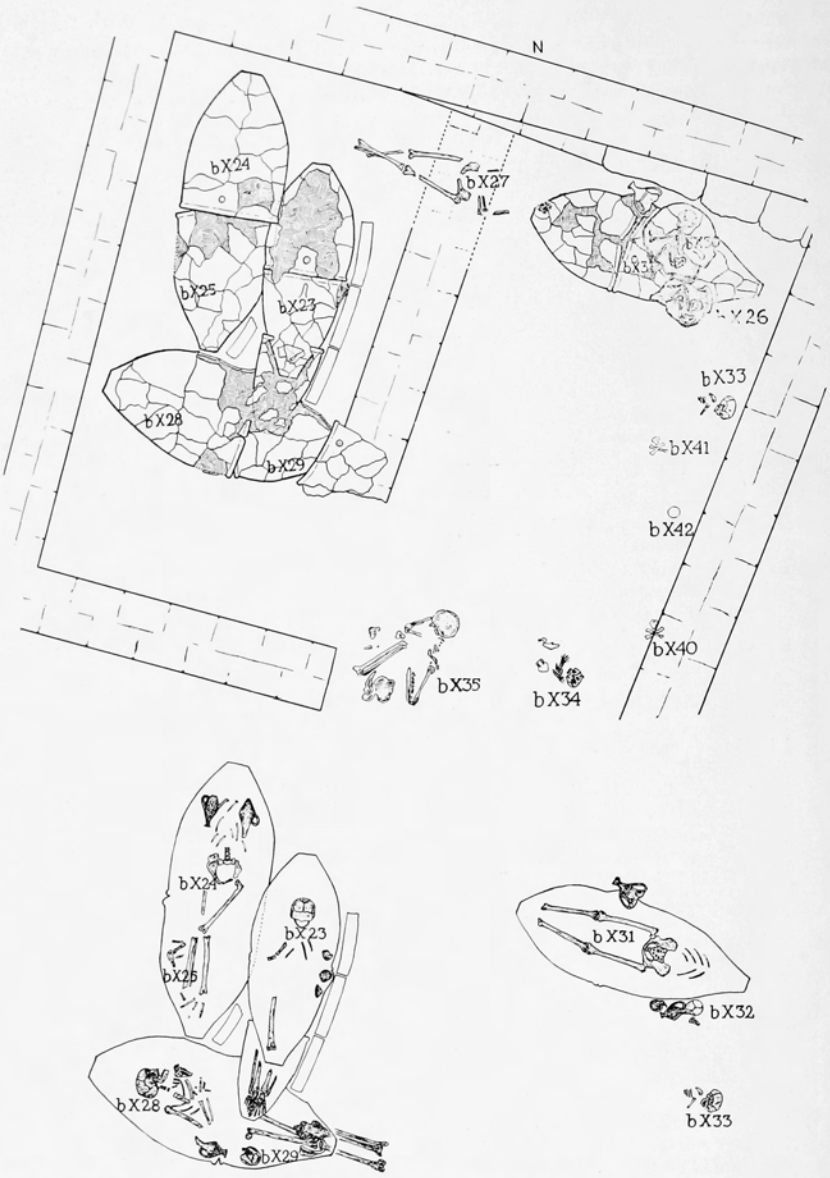

Fig. 120.—Plans of Burials Found in One Room in FF 10–11 in 1929. Scale, 1:40. Reprinted from *OIP* XIX, Fig. 235

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b X27 Earth burial in FF 10 (Fig. 120; *OIP* XIX 185). The skeleton of a senile male(?) was in a dorsal extended position. The direction from sacrum to atlas was 20° south of east. Arrangement of pottery fragments suggests that the skull may have been inclosed in a vessel of medium size.

b X28 Triple-pot burial in FF 10 (Fig. 120; *OIP* XIX 182). The skeleton of an adult male was in a dorsal extended position; the skull lay on its left side. The direction from sacrum to atlas was 20° north of west. The skeleton was deposited in two large vessels placed mouth to mouth. The feet and lower legs were covered with part of a third vessel. Vestiges of *kerpiç* covering the pots could be seen. As mortuary gifts a bronze or copper pin and a pitcher were found.

b X29 Pot burial in FF 10 (Fig. 120; *OIP* XIX 182). The fragmentary remains of an infans I skeleton were found in the middle pot of skeleton b X28.

b X30 Earth(?) burial in FF 10 (Fig. 120; *OIP* XIX 185). The fragmentary infans I skeleton was covered with pieces of a pot.

b X31 Double-pot burial in FF 10 (Fig. 120; *OIP* XIX 182). The skeleton of an adult female(?) in a dorsal extended position was in two burial jars placed mouth to mouth. The direction from sacrum to atlas was 10° south of east. The burial pots had apparently been covered with *kerpiç*. As burial gifts were found a bronze or copper pin on the chest near the right clavicle, one bronze or copper earring at the left side of the skull, a bronze or copper blade fragment, the point of a polished and incised bone awl(?), and a vessel. Two more vessels were leaning against the outside of the eastern burial jar; they may have been mortuary gifts of either b X31 or b X32.

b X32 Earth burial in FF 10 (Fig. 120; *OIP* XIX 182 and 185; *OIP* XX 128–29 and Tables I–II). The skeleton of an adult male had apparently been pushed aside and much disturbed during the interment of b X31.

b X33 Earth burial in FF 10 (Fig. 120; *OIP* XIX 185). The skeleton of a small child lay in a contracted position.

b X34 Earth burial in FF 11 (Fig. 120; *OIP* XIX 185). The infans I skeleton lay in a contracted position. Two vessels may have been mortuary gifts.

b X35 Earth burial in FF 11 (Fig. 120; *OIP* XIX 185; *OIP* XX 128–30 and Tables I–II). The skeleton of an adult female lay on its right side, flexed.

b X36 Single-pot burial in CC 19 (*OIP* XIX 190). The infans I skeleton lay on its left side, flexed. The orifice of the jar pointed southwest and was closed by a large slab. A small lead ring was found near the left side of the head.

b X37 Earth burial in EE 19 (*OIP* XIX 190; *OIP* XX, Tables I–II). The skeleton of an adult male lay on its right side, flexed. Fragments of a bowl were close by; it may have been a mortuary gift.

b X39 Earth burial(?) in FF 10. Fragmentary skeleton.

b X40 Earth burial in FF 11 (Fig. 120; *OIP* XIX 185–88). The infans I skeleton lay on its right side, flexed. The direction from sacrum to atlas was 30° north of east.

b X41 Earth burial in FF 10 (Fig. 120; *OIP* XIX 188). The infans II skeleton lay on its left side, flexed. The general direction was 40° east of south. Two bronze or copper earrings were found near the left ear.

b X42 Earth burial in FF 11 (Fig. 120; *OIP* XIX 188). Fragmentary remains of an infans I skeleton.

b X43 No data except on cranium (*OIP* XX, Tables I–II).

b X44 Single-pot burial in CC 19 (*OIP* XX 128–30 and Tables I–II). The skeleton of an adult male was in a flexed position. It was very much disturbed.

b X45 Double-pot burial in DD 10 (*OIP* XX, Tables I–II). The skeleton of a mature female was in a dorsal extended position. A bronze or copper pin was found on the chest.

b X70 Earth burial in HH 10. The fragmentary infans I skeleton probably lay on the left side, flexed, with a general direction of 30° north of west.

c X3 Earth burial(?) in J 32 (cf. Fig. 95 *B* and Pl. XXIII). The fragmentary skeleton of an adult was found 2.70 deep, associated with parts of a boar's skeleton.

c X5 Earth burial in J 27 (cf. Fig. 95 *A* and Pl. XXIII). The infans I skeleton was found 2.40 deep. It lay on its right side, flexed. The direction from sacrum to atlas was 40° east of north.

c X13 Earth burial(?) in I 33 (cf. Fig. 95 *B* and Pl. XXIII; *OIP* XX, Tables I–II). The skull of an adult male on its right side and pointing north was found 2.80 deep.

c X21 Earth burial in X 24 (Fig. 121; cf. Fig. 55 *A*). The juvenile skeleton was found 2.80 deep, lying in a dorsal position. The skull lay on its left side. The right leg was extended, the left bent outward at the knee. The right arm extended above the head with elbow bent and pointing to the left. The humerus of the left arm lay straight at the side, whereas the lower arm was bent at right angles toward the left. The direction from sacrum to atlas was 37° west of north. The skeleton was in close association with c X22 and with many fragmentary pots (including c 2386–88) and loose sherds.

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c X22 Earth burial in X 24 (Fig. 121; cf. Fig. 55 *A*). The skeleton of a child was found 2.80 deep. It lay in a dorsal position. The direction from sacrum to atlas was roughly south. The skull was on its left side. The right arm was extended at the side; the left was bent outward at the elbow. The legs were displaced. The skeleton was in close association with c X21.

c X23 Pot burial in Q 29 (Figs. 122–25; cf. Pls. XVII and XXII; *OIP* XX 136–37 and Tables I–II). The skeleton of an adult male was found 4.90 deep. The bones were in a formless jumble, some connected, but in no particular position or orientation. Skeletons c X23–25 were buried in one set of pots near the west wall and below the floor level of a room in the mansion of Level 10 T. Slightly below these was a single pot containing skeletons c X26–27.

Fig. 121.—Burials c X21–22 in X 24

c X24 Pot burial in Q 29 (Figs. 122–26; cf. Pls. XVII and XXII). The skeleton of an adult, found 5 meters deep, was in a dorsal extended position. The skull, separated from the vertebral column, was tipped forward and displaced to the right of its normal position and lay under the skull of c X23. The direction from sacrum to atlas was 10° west of north. Near the skulls of c X23–24 were found vessels c 2733–34. Other burial gifts were bone tubes c 2720–21 (cf. e 1221, Fig. 273), bronze or copper pins c 2723–25 (Fig. 127), and hematite plummet c 2722 (cf. e 810, Fig. 264).

c X25 Pot burial in Q 29 (Figs. 122–25; cf. Pls. XVII and XXII). The skeleton of an adult was found 5.10 deep. It lay in a dorsal extended position. The direction from sacrum to atlas was 15° west of north. The skull was cradled on the pelvis of c X24. The lower legs were lying on the far side of the burial jar containing skeletons c X26–27. Near skeleton c X25 were found three human teeth, a boar's tusk, and a piece of red ocher; vessel c 2735 was found above the feet.

c X26 Single-pot burial in Q 29 (Figs. 122–25 and 128; cf. Pls. XVII and XXII). The infans II skeleton, found 5.50 deep, lay on its right side, slightly flexed. The direction from sacrum to atlas was 35° north of east. In the same burial jar was skeleton c X27. The very rich mortuary gifts (Fig. 127) consisted of three gold rings (c 2715–17), one silver ring (c 2718), one lead ring (c 2719), seven bronze or copper bracelets (c 2726–32), and vessels c 2736–38.

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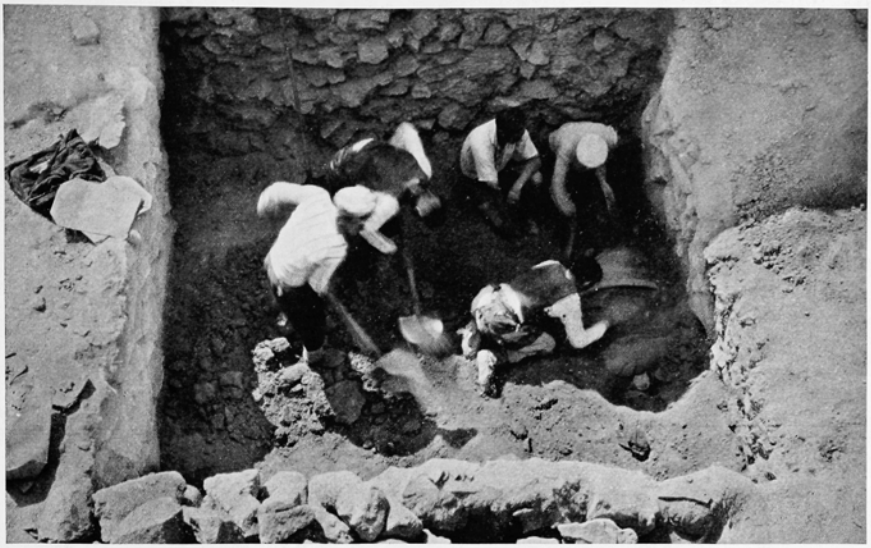

FIG. 122.—UNCOVERING BURIALS c X23–27 BELOW A ROOM (IN Q 29) OF THE MANSION OF LEVEL 10 T

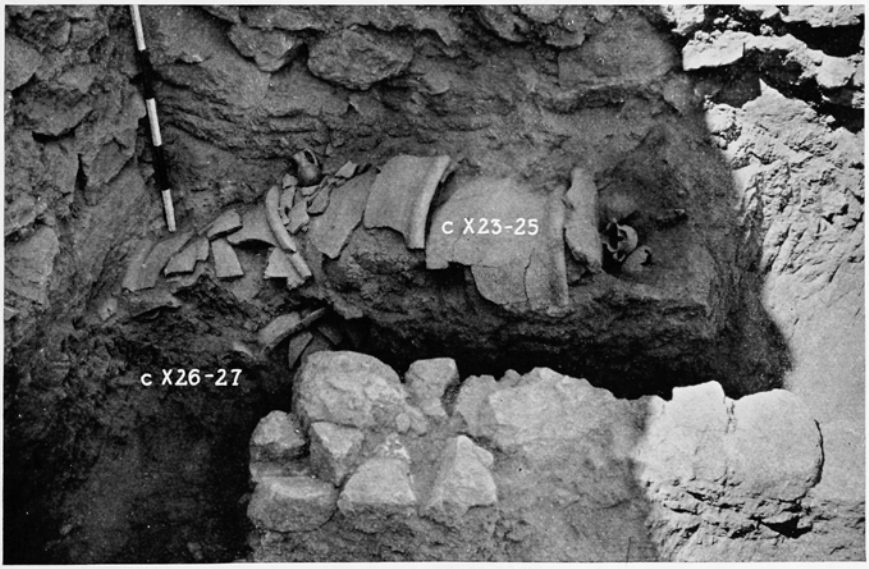

FIG. 123.—THE BURIAL POTS OF c X23–27 BEFORE OPENING

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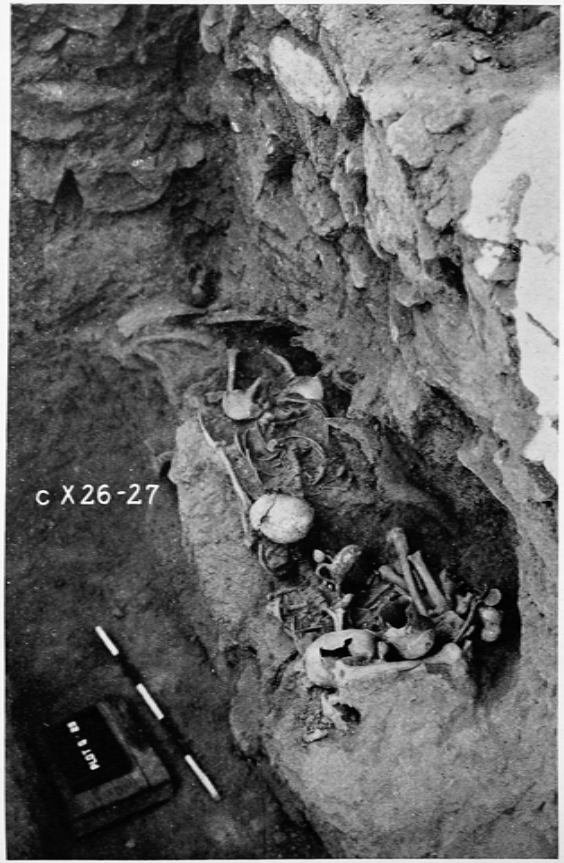

Fig. 124.—Burials c X23–27 Uncovered, from North

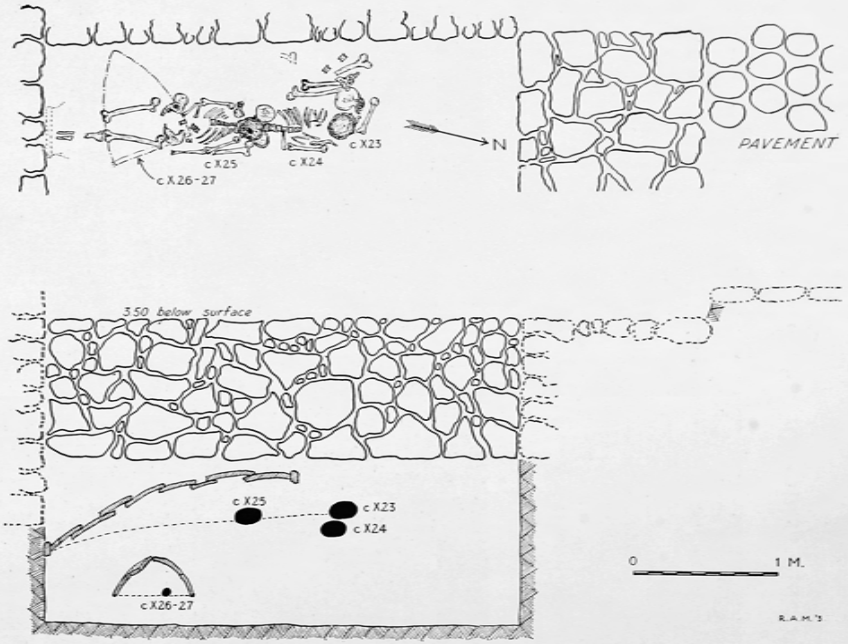

Fig. 125.—Plan and Cross-Section of Burials c X23–27. Scale, 1:40

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c X27 Single-pot burial in Q 29 (Figs. 122–25 and 128; cf. Pls. XVII and XXII). The scattered bones of a child were found among those of skeleton c X26 in the same burial jar. It is quite possible that the rich mortuary gifts enumerated under c X26 belong in part to this skeleton.

d X30 Stone-box burial in U 31 (Figs. 129–30; cf. Fig. 78 and Pls. XVII and XXII–XXIII). The fragmentary and very fragile skeleton, found 4.75 deep, lay on its right side, flexed. The direction from sacrum to atlas was 40° west of north. The skeleton was deposited in a well set stone box covered with stone slabs and one sherd of a large vessel. A bronze or copper pin (d 2270) lying in front of the face was a mortuary gift.

d X32 Earth burial in M 34 (Fig. 131; cf. Fig. 82 and Pl. XX; *OIP* XX, Tables I–II). The adult male skeleton was found 3.20 deep. It lay in a dorsal extended position; the arms were folded on the chest. The direction from sacrum to atlas was 5° south of west. Vessels d 2267–68, bronze or copper needle d 2299, and a disintegrated bronze or copper necklace (d 2300) were mortuary gifts.

Fig. 126.—Skeleton c X24

d X33 Single-pot burial in P 28 (Figs. 132–33; cf. Pls. XVII and XXI). The juvenile skeleton in a dorsal extended position was found 4.70 deep. The direction of the pot was 17° west of south. The pot was covered with *kerpiç*. Skeleton d X34 was buried in the same pot. The mortuary gifts (Fig. 134) consisted of a bronze or copper necklace (d 2417), three bronze or copper pins (d 2418–20), two stone stamp seals (d 2422–23), a stone amulet (d 2424), a bone bead (d 2425), a frit bead (d 2426), fragmentary bronze or copper earrings, and vessel d 2415.

d X34 Single-pot burial in P 28 (Fig. 132; cf. Pls. XVII and XXI). The adult skeleton, almost completely decomposed, lay in a dorsal extended position. The skeleton was buried in the same jar with d X33. Burial gifts were vessels d 2414 and d 2416 and two bronze or copper earrings (d 2421, Fig. 134).

d X35 Single-pot burial in M 33–34 (Fig. 135; cf. Figs. 83 and 87 and Pl. XXII). The adult skeleton was found 2.75 deep, lying on its right side, semiflexed. The feet were toward the orifice of the pot. The direction of the pot was 5° south of west.

d X36 Double-pot burial in R 30 (Fig. 136; cf. Fig. 70 and Pls. XVII and XXII; *OIP* XX, Tables I–II). The skeleton of an adult male, found 5.60 deep, was in a dorsal extended position. The skull was on its right side; the arms were bent, with hands crossed at the chest. The skeleton and the orifices of both pots

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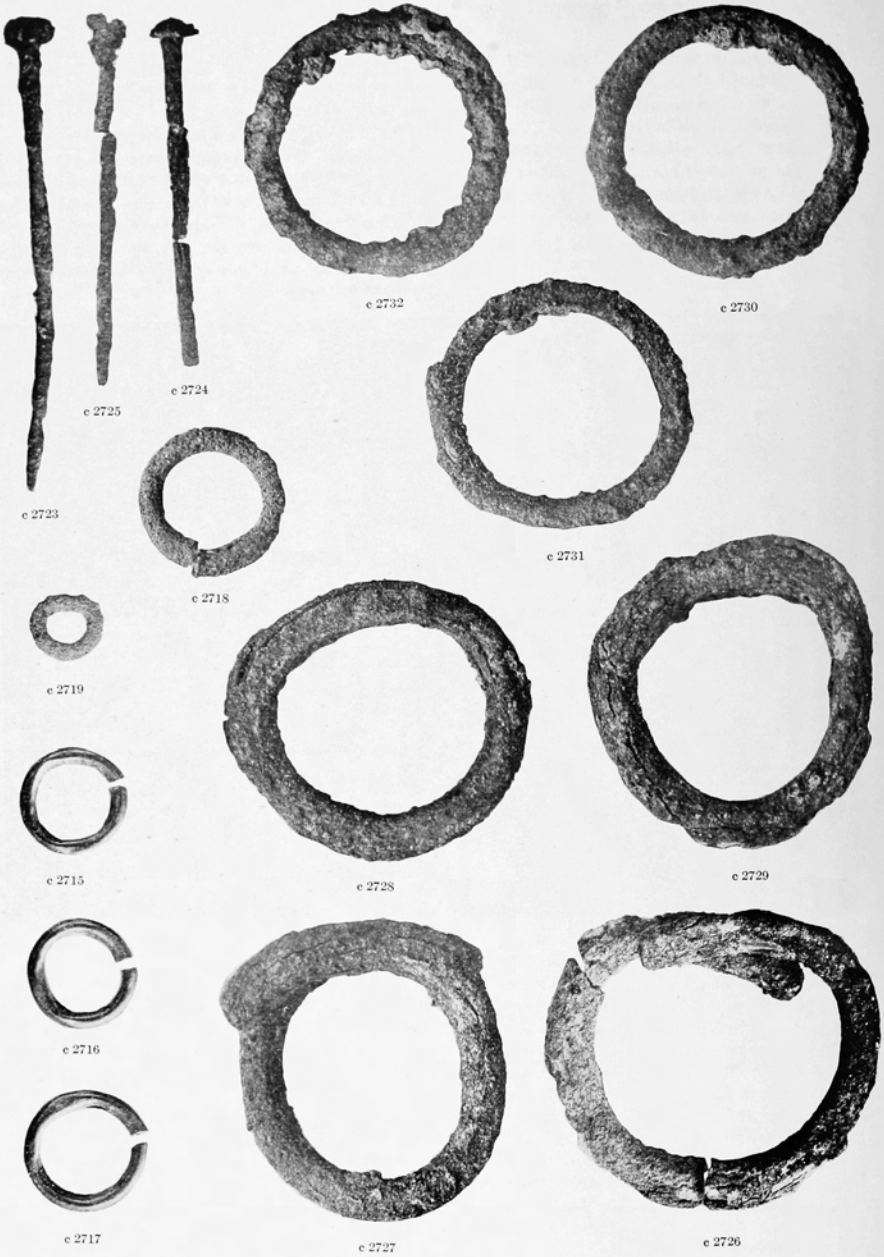

Fig. 127.—Mortuary Gifts of Skeletons c X24 and c X26–27. Actual Size

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pointed north. Stone seal or amulet d 2613, bronze or copper pin d 2614, bronze or copper bracelet d 2615, and pot d 2664 were mortuary gifts. Associated with this skeleton were skeletons d X37–39, and Nos. d X40–44 were near by.

d X37 Single-pot burial in R 30 (Fig. 137; cf. Pls. XVII and XXII). The skeleton of a senile person, found 5.55 deep, was flexed and in a dorsal position. The feet pointed toward the orifice of the pot. The axis of the pot was east-west. This skeleton was so mixed with d X38 that the two were almost indistinguishable.

d X38 Single-pot burial in R 30 (Fig. 137; cf. Pls. XVII and XXII). The skeleton of an adult male in an indistinguishable position, found 5.55 deep, was buried in the same jar with d X37. The bones were very much intermixed.

d X39 Triple-pot burial in R 30 (Figs. 136 and 138; cf. Fig. 70 and Pls. XVII and XXII). The juvenile skeleton was found 5.50 deep, buried in three small pots with orifices all in the same direction. The skeleton was in a dorsal extended position. The direction from sacrum to atlas was 5° east of north.

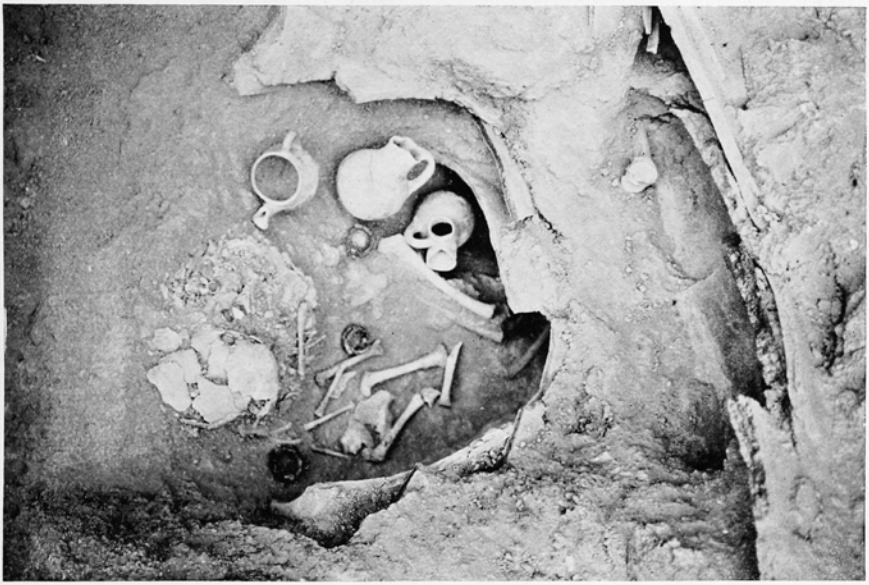

FIG. 128.—BURIAL OF c X26–27

d X40 Single-pot burial in Q 30 (Fig. 139; cf. Fig. 71 and Pls. XVII and XXII). The infans I skeleton, found 5.50 deep, lay on its right side, flexed. The feet were toward the orifice of the pot. The direction from sacrum to atlas was 20° south of west.

d X41 Double-pot burial in Q 30 (Fig. 140; cf. Pls. XVII and XXII). The skeleton of a mature person was found 5.70 deep. It lay in a dorsal extended position. The lower arms were crossed over the body. The skull was tilted forward toward the left. The direction from sacrum to atlas was 15° south of west. The two burial jars were orifice to orifice, and the intervening space was covered with sherds. Vessel d 2660 and several corroded bronze or copper pins were mortuary gifts.

d X42 Double-pot burial in Q 30 (Fig. 141; cf. Pls. XVII and XXII). The adult skeleton, found 5.60 deep, was in a dorsal extended position. The arms were folded across the body, and the skull was tilted forward. The direction from sacrum to atlas was 40° west of north. As mortuary gifts were found vessels d 2661–62 and d 2715–16. The burial jars were arranged orifice to orifice. Skeleton d X43 was buried in the same jars.

d X43 Double-pot burial in Q 30 (Fig. 141; cf. Pls. XVII and XXII). The adult skeleton was buried in the same jars with d X42, at a depth of 5.60. Its position was indeterminable.

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Fig. 129.—Stone-Box Burial d X30 in U 31. The Mortuary Gift Is Shown in Actual Size

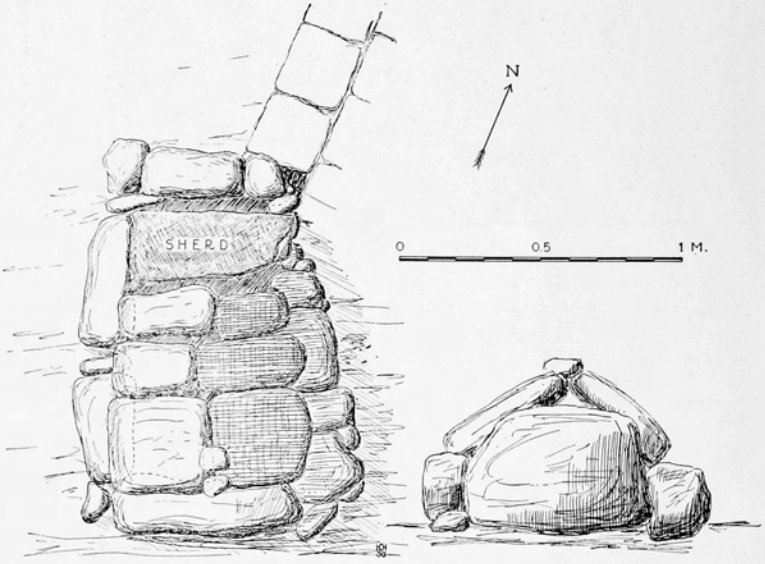

Fig. 130.—Diagram of the Stone-Box Burial d X30. Scale, 1:20

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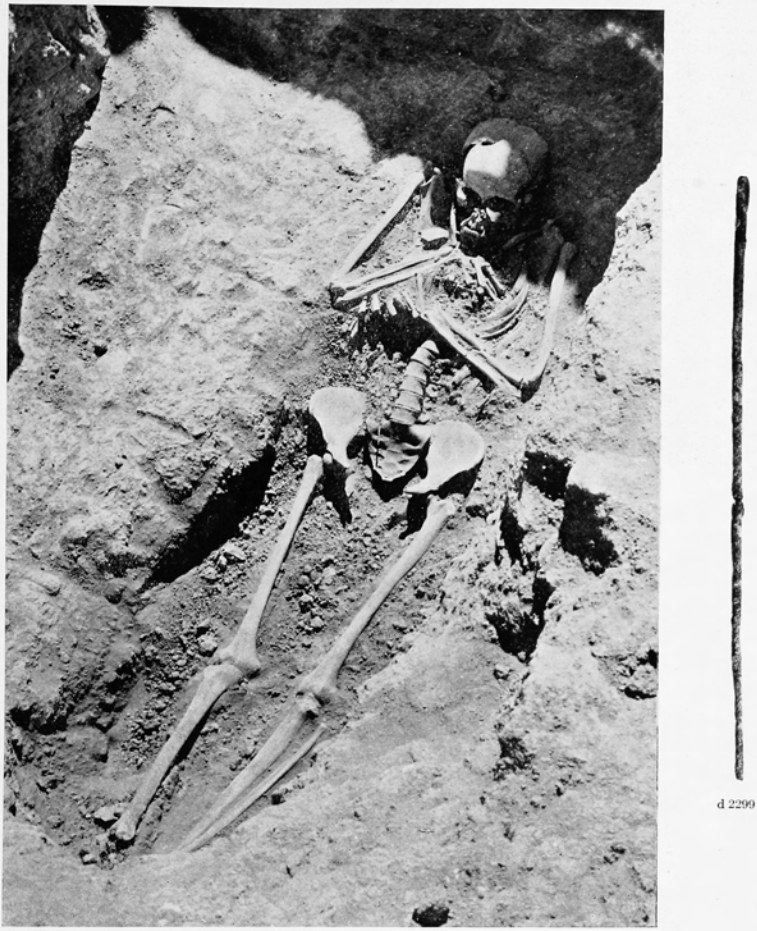

d 2299

Fig. 131.—Burial d X32 in M 34. The Mortuary Gift Is Shown in Half Size

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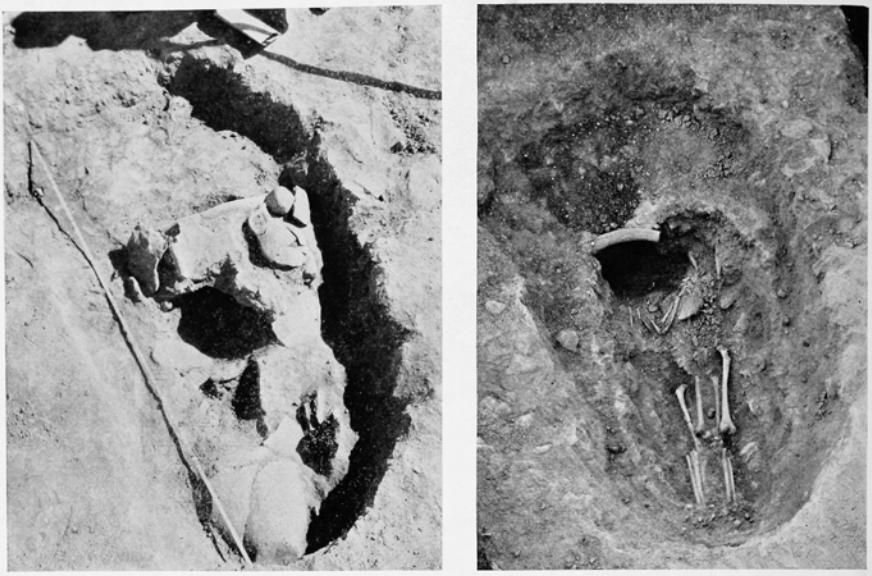

Fig. 132.—Burial of d X33–34

Fig. 133.—Close-up of Skeleton d X33, Showing Jewelry

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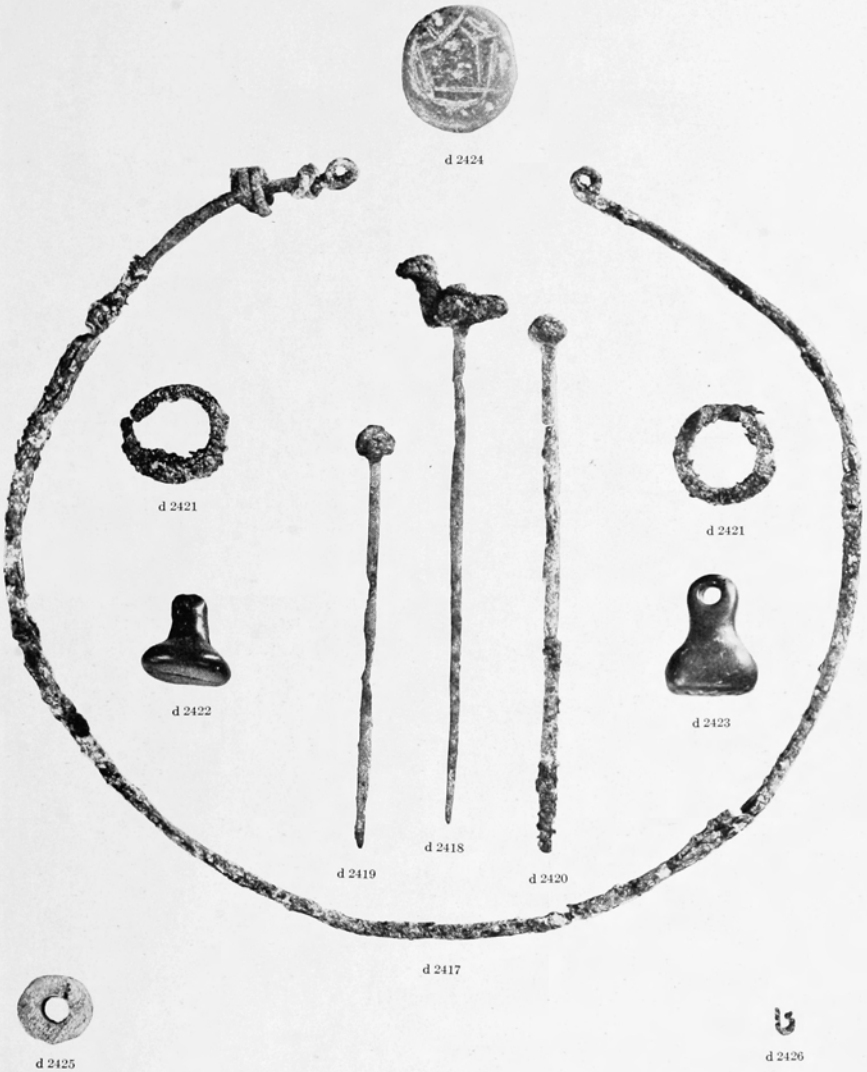

Fig. 134.—Mortuary Gifts of Skeletons d X33–34. Actual Size

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FIG. 135.—BURIAL d X35 IN M 33–34

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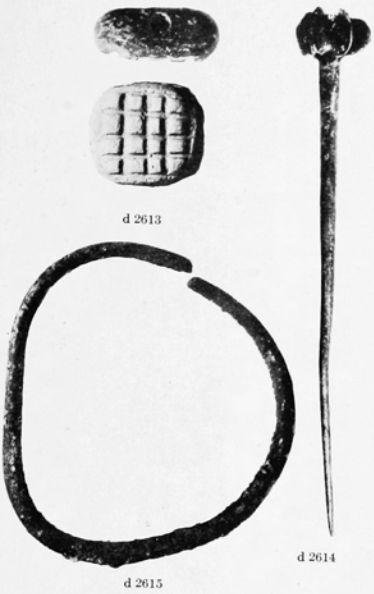

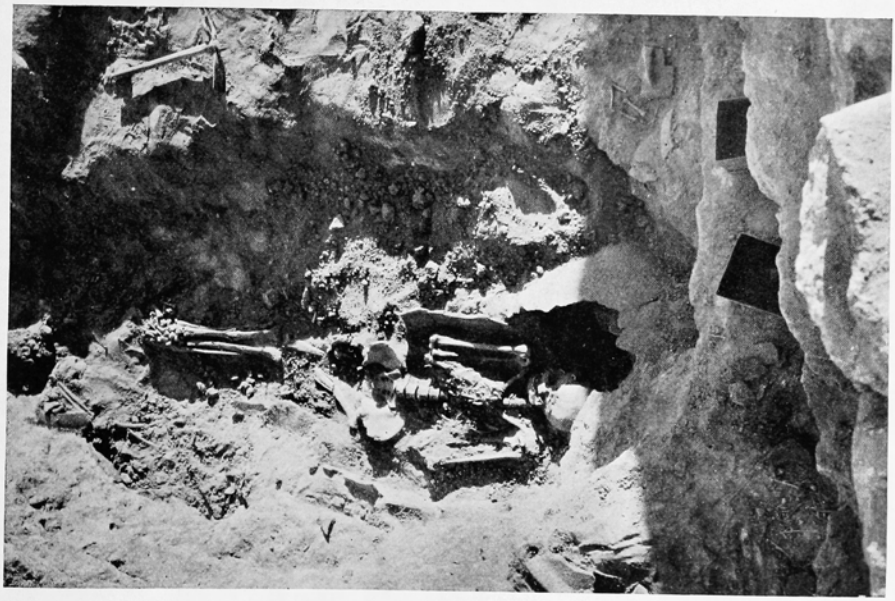

FIG. 136.—BURIALS d X36 AND d X39 IN R 30. THE MORTUARY GIFTS OF SKELETON d X36 ARE SHOWN IN ACTUAL SIZE

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FIG. 137.—BURIAL OF d X37–38 IN R 30

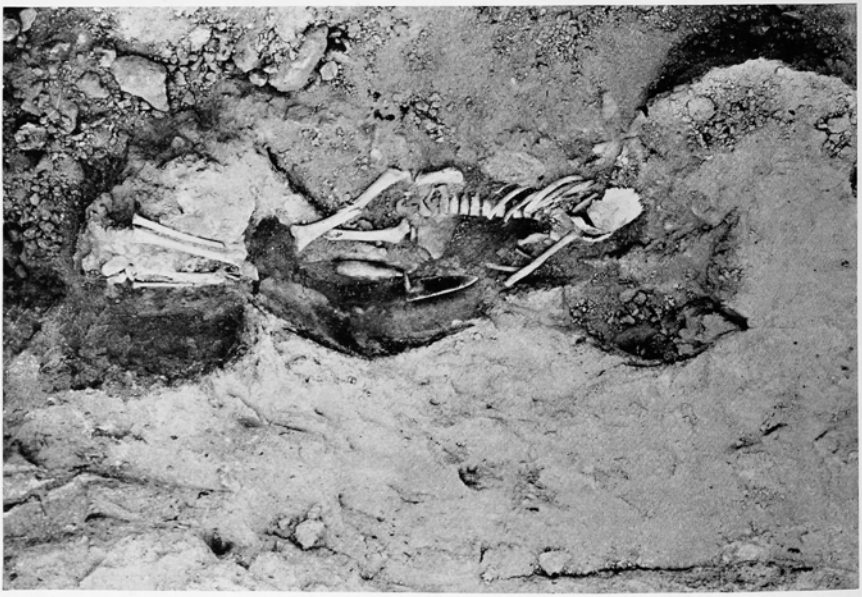

FIG. 138.—SKELETON d X39

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Fig. 139.—Burial d X40 in Q 30

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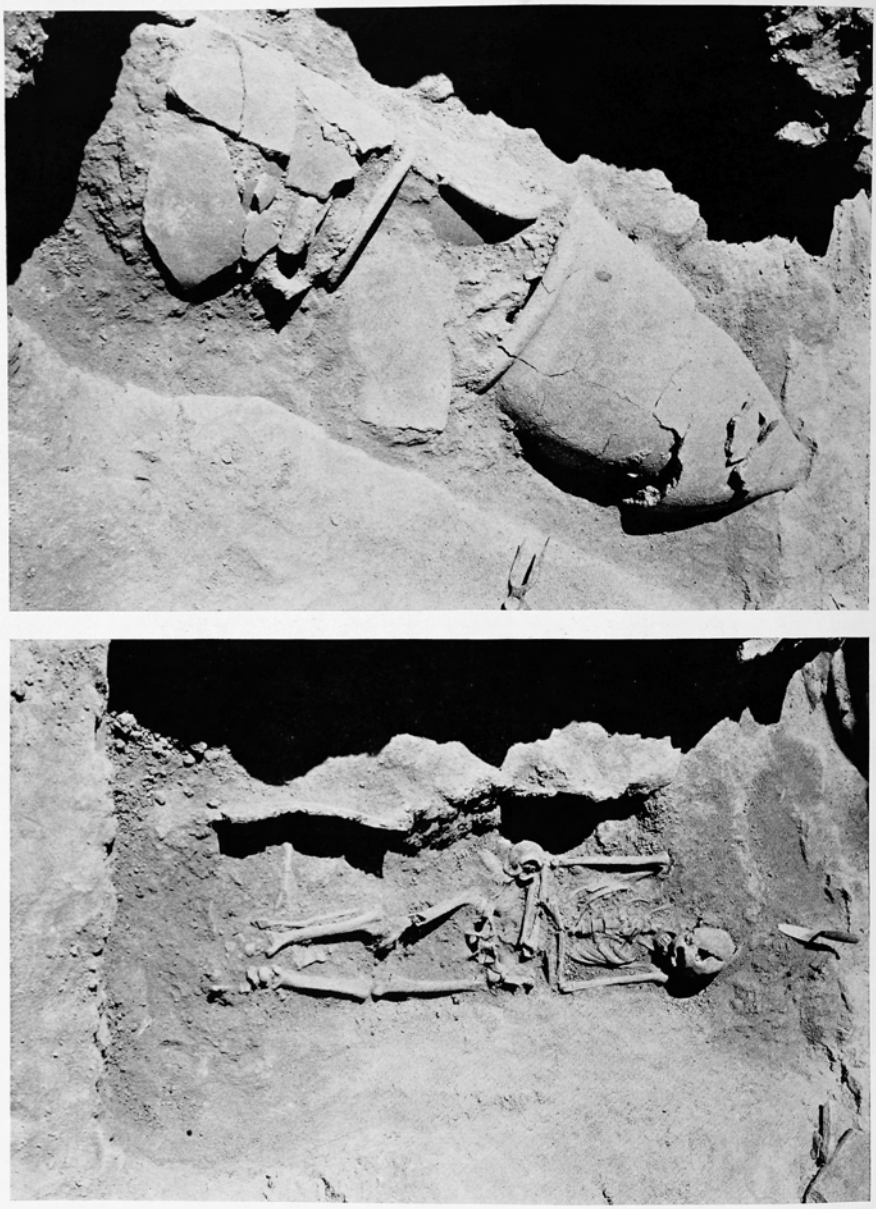

FIG. 140.—BURIAL d X41 IN Q 30

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FIG. 141.—BURIAL OF d X42–43 IN Q 30

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d X44 Single-pot burial in Q 30 (Fig. 142; cf. Pls. XVII and XXII). The infans I skeleton was found 5.65 deep. It lay on its right side, slightly flexed, the hands in front of the face. The skull was toward the orifice. The direction from sacrum to atlas was east. Mortuary gifts were vessel d 2663 and badly corroded fragments of a bronze or copper bracelet.

d X50 Single-pot burial in Q 29 (Fig. 143; cf. Pls. XVII and XXII). The infans I skeleton in an indeterminable position was found 5.30 deep.

d X51 Double-pot burial in Q 29 (Fig. 143; cf. Pls. XVII and XXII). The infans II skeleton was found 5.40 deep, lying on its left side, semiflexed. The direction from sacrum to atlas was 15° south of west. As mortuary gifts (Fig. 144) were found a bronze or copper pin (d 2954), a pair of bronze or copper bracelets (d 2955), and two pots (d 2956–57).

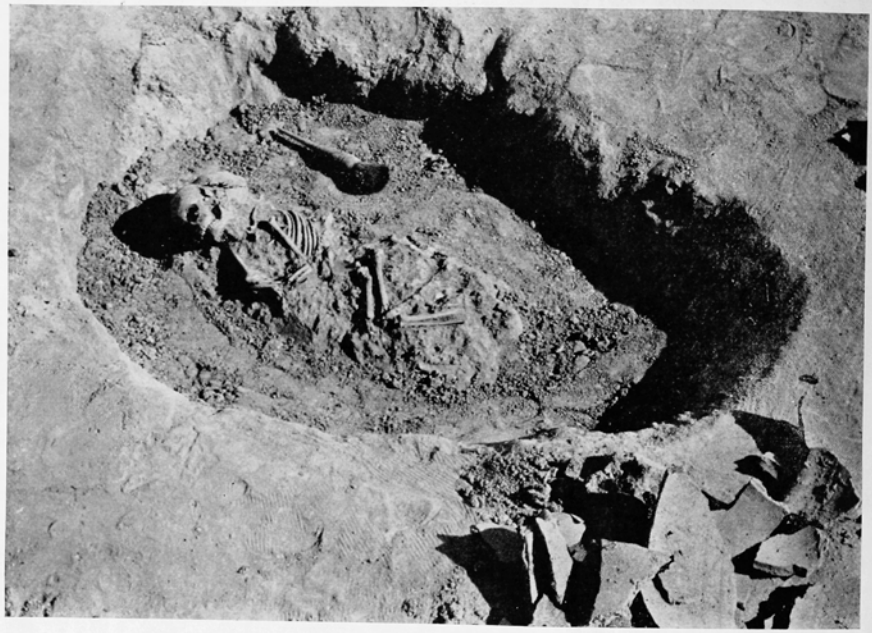

FIG. 142.—BURIAL d X44 IN Q 30

d X52 Double-pot burial in Q 29 (Fig. 143; cf. Pls. XVII and XXII). The completely decomposed skeleton was found 5.40 deep. Its direction was about 15° west of north. Mortuary gifts were vessel d 2958 and fragments of a bone pin. Skeleton d X53 was buried in the same pots.

d X53 Double-pot burial in Q 29 (Fig. 143; cf. Pls. XVII and XXII). The completely decomposed skeleton was buried in the same jars with skeleton d X52.

d X54 Double-pot burial in Q 29 (Fig. 145; cf. Pls. XVII and XXII). The juvenile skeleton was found 5.20 deep. It was in a dorsal position, the knees bent slightly to the right and the arms folded across the chest. The direction from sacrum to atlas was 20° south of west. Vessels d 2959–60, fragments of a bone pin, and a decomposed bronze or copper pin were mortuary gifts.

d X55 Earth burial in P 27 (Fig. 146; cf. Pls. XVII and XXI). The fragmentary remains of a skeleton were found 4.40 deep. It lay in a dorsal position, the head tilted to the right. The direction was roughly east.

e X1 Earth burial in EE 17 (cf. Figs. 40–41). The poorly preserved skeleton of an adult female was found a few centimeters below the mound surface. It lay in a dorsal extended position; the direction from sacrum to atlas was 13° north of west. The skeleton was buried with skeleton e X2 in a small stone inclosure. Vessels e 26–30 accompanied the two as mortuary gifts.

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Fig. 143.—Burials d X50–53 in Q 29

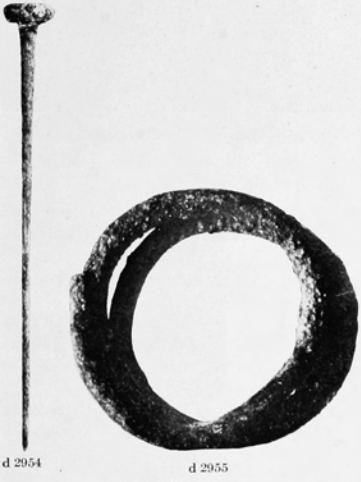

Fig. 144.—Mortuary Gifts of Skeleton d X51. Actual Size

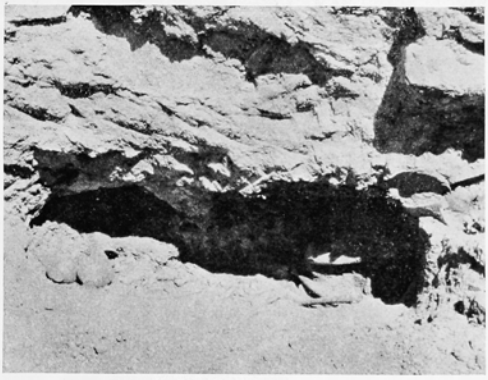

Fig. 145.—Burial d X54 in Q 29

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FIG. 146.—SKELETON d X55 IN P 27

FIG. 147.—SKELETON e X2 IN THE STONE INCLOSURE IN EE 17 AFTER THE REMOVAL OF e X1

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FIG. 148.—SKELETON e X5 IN P 27 AFTER REMOVAL OF POT

FIG. 149.—SKELETON e X6 IN P 27

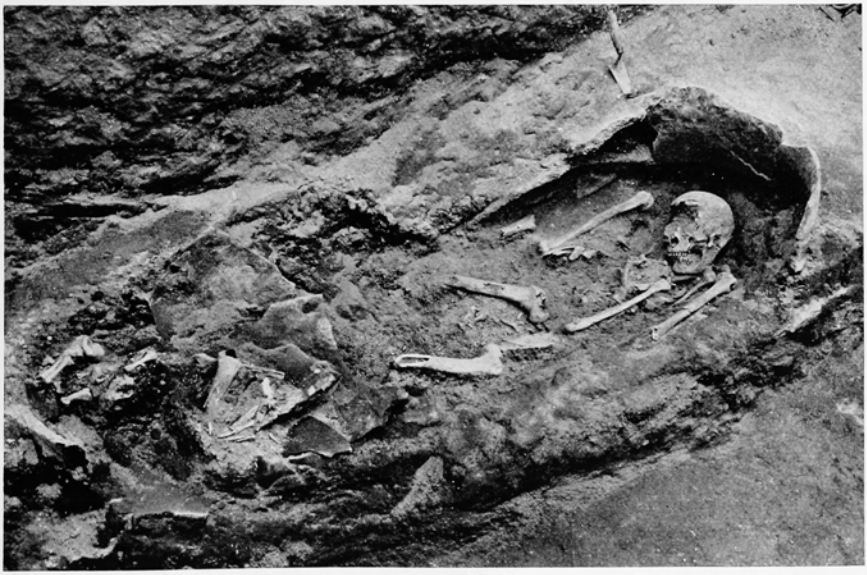

FIG. 150.—SKELETON e X7 IN P 27 AFTER REMOVAL OF POTS

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e X2 Earth burial in EE 17 (Fig. 147; cf. Figs. 40–41). The poorly preserved skeleton of an adult male was buried in the same inclosure with skeleton e X1. It lay in a dorsal extended position; the direction from sacrum to atlas was 13° north of west.

e X5 Single-pot burial in P 27 (Fig. 148; cf. Figs. 67–68 and Pls. XV and XIX). The fragmentary skeleton of a child was found below the floor level of a room of Level 11 T. It lay on its left side, flexed. The direction from sacrum to atlas was 33° north of west. Skeletons e X6–7 were found in the same room.

e X6 Earth burial in P 27 (Fig. 149; cf. Figs. 67–68 and Pls. XV and XIX). The fragmentary skeleton of a child was found below the floor level of a room of Level 11 T. It lay on its right side, flexed. The direction from sacrum to atlas was 35° east of north.

e X7 Double-pot burial in P 27 (Fig. 150; cf. Figs. 67–68 and Pls. XV and XIX). The poorly preserved remains of an adult skeleton in a dorsal extended position were found below the floor level of a room of Level 11 T. The direction from sacrum to atlas was 2° north of east. The skeleton was buried in two pots, the orifices of both pointing in the same direction.

FIND-SPOTS OF CUNEIFORM TABLETS

All cuneiform tablets found on the Alişar mound were on the city terrace; most of them were in refuse of Level 10 T. These tablets include business documents and a few private letters, but no text of a religious or historical nature. The tablets themselves and the texts which they bear are discussed by Dr. Ignace J. Gelb in a separate volume.[30]

In 1929 two tablet fragments were found.[31] No. b 1600 was in refuse of Level 10 in HH 9. Owing to the slope of the mound at this spot remains of Level 11 were mixed with those of Level 10; hence the fragment may belong to Level 11, though I think that is improbable. The second fragment, No. b 2700, appeared 3 meters deep in J 33, in a refuse deposit which surely belongs to Level 10.

The three fragments unearthed in 1930 were likewise found in refuse deposits. No. c 1000 was found 3.70 deep in M 29 in a refuse and destruction layer a little below a floor level of Level 11. No. c 2108 appeared 1.80 deep in V 24, in a refuse layer of Level 10. No. c 2406, found 3.90 deep in R 29 not far from the mansion, was in the refuse and destruction layer of that building, a sublevel of Level 10.

In 1931 the tablets unearthed were far more numerous. Three tablet hoards were on actual floor levels, all belonging to Level 10. One hoard, Nos. d 2200*a–x* and many fragments, was found 2.40 deep, on the floor level and near one wall of a room in M 33 (Fig. 151). Cylinder seal d 2199 (Fig. 246) was found with it. A second hoard, Nos. d 2500*a–c*, appeared at a depth of 2.60 in M 34. Again the tablets lay on a floor level close to the base of a wall (cf. Fig. 86). The third hoard, Nos. d 2860*a–m* and many fragments, appeared at a depth of 2.80–3.10, in the destruction layer of the sublevel beneath the large mansion (Fig. 152). It was on the floor level of a room in P 27, covered with broken and weathered *kerpiç* from the walls and roof.

No. d 1650 was found 2.80 deep in S 27, in the refuse and destruction layer of the highest sublevel of Level 10, in which appeared a large admixture of the pottery typical of the period immediately following that of the Hittite Empires. No. d 1776 appeared 3.60 deep in U 31, in a refuse deposit of the middle or latest sublevel of Level 10. No. d 2501 was found 3.40 deep in R 29, in a refuse and destruction layer within the large mansion. Tablets d 2557 and d 2606 were found 4.60 deep in Q 30, south of the southern façade of the mansion. In dump soil from Level 10 of the large complex of 1931 was found No. d 2711.

Five tablets were found in 1932. No. e 291 was in DD 25 in the highest sublevel of Level 10, above the ruins of the Hittite city wall; .60 below this tablet and not very far from it in DD 25 No. e 292 came to light. No. e 393 was found in S 21 in a refuse layer containing a large admixture of post-Hittite sherds and small objects; this layer surely belongs to Level 10.

[30] *OIP* XXVII.

[31] *OIP* XIX 140–42 and Figs. 121 and 176–78.

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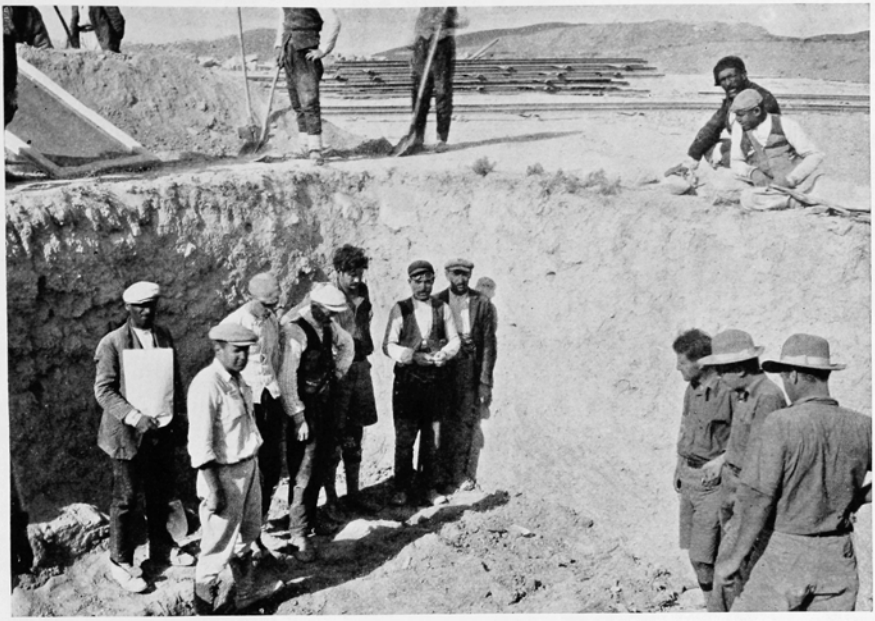

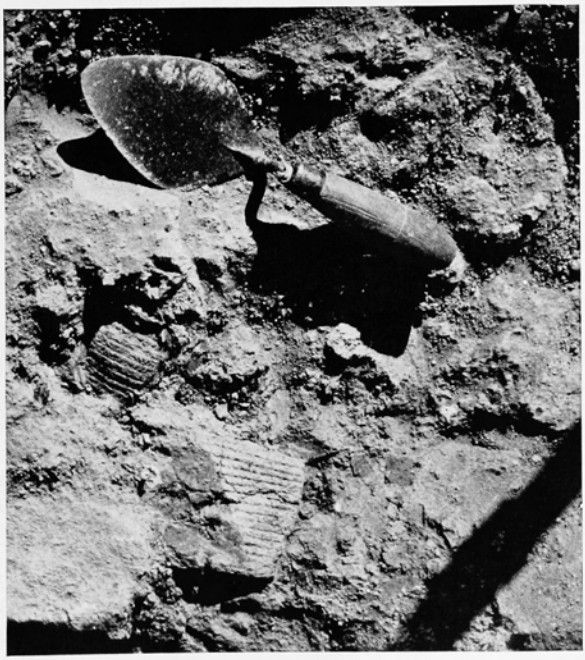

Fig. 151.—Find-Spot in M 33 of Cuneiform Tablet Hoard d 2200*a–x*

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The most important tablet from the Alişar mound is No. e 844, which was found in S 0 in the court of the northern gateway, in the destruction layer of the first rebuilding. No. e 2321 was found in P 26 near the base of the foundation of the large mansion, in the same sublevel as hoard d 2860 and under similar circumstances.

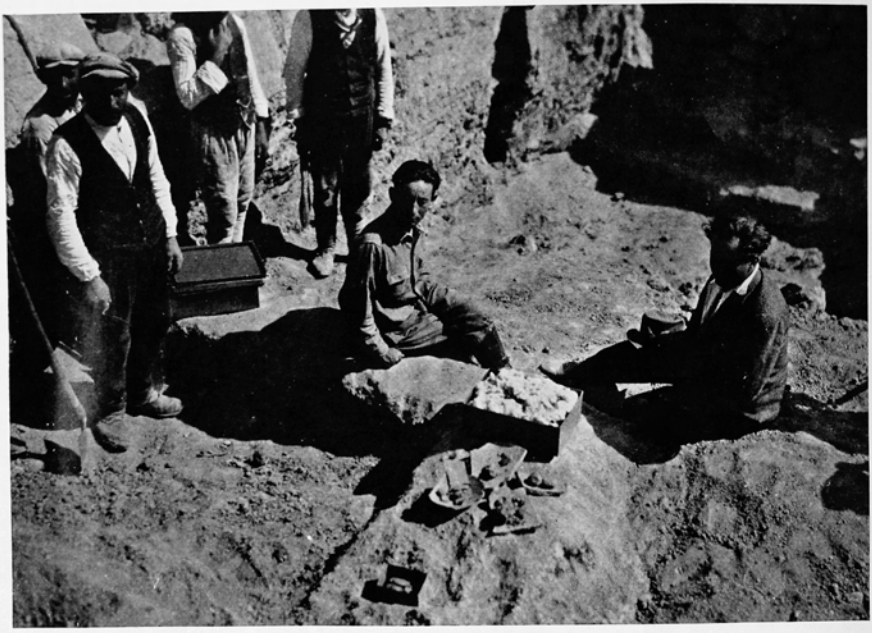

FIG. 152.—FIND-SPOT IN P 27 OF CUNEIFORM TABLET HOARD d 2860*a–m*

POTTERY

All the pottery of this period was wheelmade with the exception of vessels of such irregular forms that the use of the wheel would be impossible. Such vessels as the grape-cluster pitchers d 2343–44 (Fig. 192) were handmade, whereas the majority of the rhytons seem to have been molded (cf. Fig. 212). The vessels are usually wet-smoothed, but washes and slips also occur. The paste is grit-tempered and sometimes well levigated; after firing it turned buff, often showing a gray core. Painted decoration is rare, although a certain type of medium-sized storage vessel with flaring rim and pointed bottom often shows a careless decoration on the upper half of the body. Vessels with decoration in relief are relatively numerous, especially those with spouts or handles representing animals or parts of animals.

Typical forms are a small bowl with pointed bottom, a larger bowl with V-shaped handles, a pitcher with clover-leaf orifice, a pitcher with beak-spout, and a medium-sized storage vessel with flaring rim and pointed bottom. Toward the end of this period a cup with two handles and a pedestal base appears.

We may be able in the future to subdivide the pottery of this period into an earlier and a later group.[32] Although the forms do not vary, the finest vessels have been found in the latest building layers.

[32] See *OIP* XXX 436.

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PLAIN WARE

As stated above, most of the vessels and sherds of this period are plain. The levigation of the grit-tempered clay varies. Generally the vessels are moderately fired.

Most of the pieces were wet-smoothed, and some were carefully polished afterward. The typical small bowls with pointed or rounded bottoms frequently show a very rough finish (e.g., e 879, Fig. 167). The lower part of a certain type of pitcher (e.g., d 2383 and d 2985, Fig. 183) is only roughly finished, whereas the upper part is carefully wet-smoothed. The wet-smoothed ware often has a reddish yellow or yellowish red wash, frequently very carelessly applied (e.g., Pl. I 1). The wash usually extends from just inside the rim to the widest part of the body.

Two types of slipped ware may be differentiated. The more common type has a very fine, carefully applied buff slip which, after firing, shows the same color as the buff part of the paste (e.g., Pl. I 2). This fine slip often has a silvery or golden sheen, giving practically the impression of glaze. The sheen is mostly due to the admixture of mica, which may be artificial but is more probably natural, as mica appears in the paste of the vessels of nearly all periods on the Alişar mound.

The second kind of slipped ware has a yellowish red to red slip which is more or less carefully polished (e.g., Pl. I 5 and 7). Most of this ware is very smooth, but with few exceptions it lacks the luster of the red-slipped Copper Age ware. No. d 2935 (Pl. I 3) is an example of very careful polishing with some soft material such as leather or cloth after burnishing.

DECORATED WARE

Painted ware is rare. One small pitcher (e 1222, Fig. 179) shows a broad reddish stripe around the rim and another around the median body; the fragment of the handle suggests that it also was covered with red paint. No. b 2523 (Pl. V) is decorated in much the same way, but the upper band appears to encircle the base of the neck. Bowl c 652 (Fig. 167) shows traces of five parallel bands of color, probably red, around the upper third of the body. Bowls 1680 and b 2529 (Pl. IV) each have a reddish band around the rim. There are traces of a painted design on cup d 2458 (Fig. 172). Medium-sized storage vessels with large flaring rims sometimes show a broad red stripe covering the rim and a second stripe around the largest dimension of the body, the two stripes being connected by rather carelessly applied vertical or zigzag bands (Figs. 196–98). Relief sherds of a certain type (Fig. 155), a few animal spouts, and a few rhyton fragments show painting. Sometimes the painted surfaces were polished; sometimes they were left dull.

In 1929 a fragmentary cup of frit (b 1868) with light blue glaze and dark brown, almost black, linear decoration was found in the layers of this period. Besides this piece, a few sherds of the same type with greenish to greenish blue glaze were found in 1931 and 1932 (e.g., d 2201, Pl. I 4). This ware is very probably a Mesopotamian import due to relations with "Cappadocian" merchants.

Groups of incised lines sometimes encircle a vessel (e.g., d 2985, Fig. 183, and Figs. 196–98 and 201).

Relief decoration was much more common. A great many sherds show human and animal figures in relief. It is most unfortunate that no complete vessel of that type could be secured, but one vessel could be at least partially reconstructed (Fig. 153). The fragments found seem to have belonged to a large jar with a long, slightly curved neck and a broad, ring-shaped rim. There are parts of three figures in relief. Two of the figures wear sandals and short skirts or tunics with bands of embroidery and fringe (indicated by incisions) on the lower edges (e.g., fragment d 2100, Fig. 154). One of these two stands on a low dais. Another fragment (d 2516*a*, Fig. 154) shows the upper part of a human figure, but unfortunately it is very much

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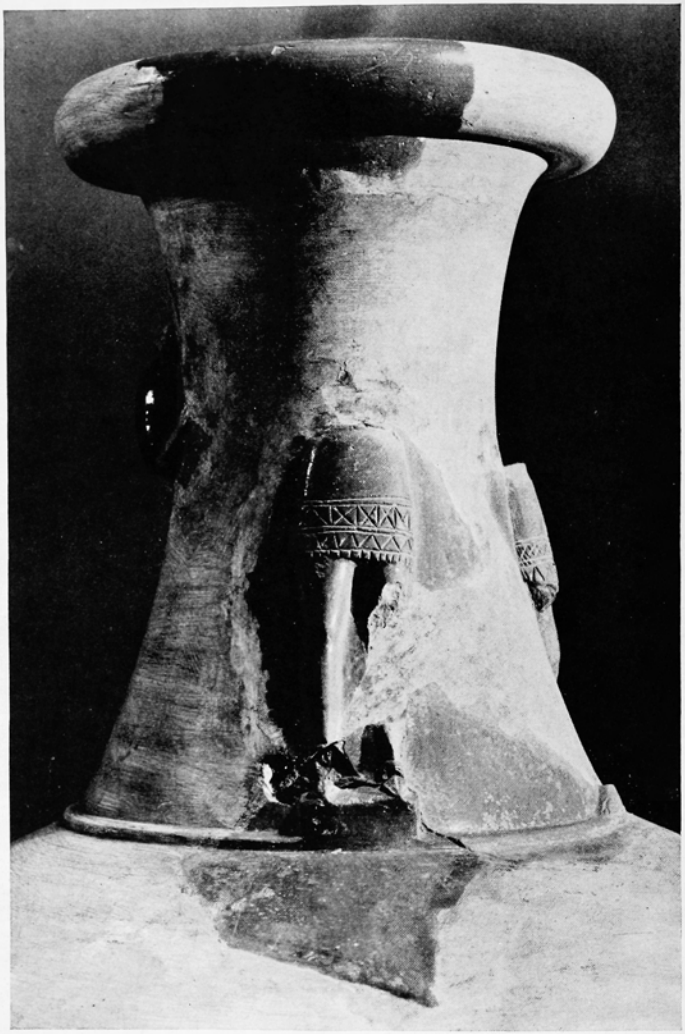

Fig. 153.—Neck of a Large Jar with Parts of Human Figures in Relief, Reconstructed from Fragments by Mr. P. M. J. Bardin. Scale, about 3:5

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d 2516*a*

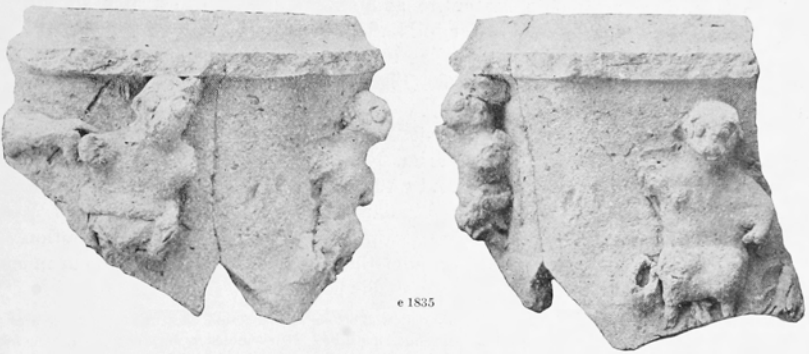
d 2935 (= Pl. I 3)

d 2100

d 1622

d 2402

e 353



e 1835

Fig. 154.—Sherds with Parts of Human Figures in Relief. Scale, 2:3

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defaced. Only the shoulder, upper arm, and a long pigtail can be recognized. The finish was a reddish brown slip, very carefully polished.

Other fragments decorated with human figures in relief are shown in Figure 154. No. d 2935 (Pl. I 3) is a sherd of a very fine vessel similar to that just described, with a smooth, very carefully polished reddish yellow slip. The human figure here, too, wears a pigtail. No. d 1622, of similar ware, shows a human arm wearing bracelets and swinging a spear or lance(?). No. d 2402 represents a woman with her hands folded beneath her chin. Traces of a buff slip remain. No. e 1835 shows figures below the rim of a vessel. The finish and execution are very crude, like those of three relief potsherds (b 767, b 1465, and b 1928)[33] found in 1929. No. c 353 is a very crudely finished sherd with a human face in relief.

Sherds of another type are seen in Figure 155 and Plate I 6. Here the relief figures are colored. The background and the skin are reddish brown, whereas the garments or other now unrecognizable designs appear in creamy white. No. d 2999 seems to give the lower part of a person in a long dress decorated in reddish brown, brownish black, and creamy white. No. d 1620 shows a relief figure walking above a cream-colored band with two rows of triangular ornaments in brownish black. All these pieces are carefully polished with the exception of the painted band on No. d 1620, which is mat.

Animals in relief are illustrated in Figures 156 and 157 4; especially interesting is No. d 1896, which shows two bridled horses. Nos. d 2996 and d 2518 are red-slipped and polished. No. d 1896 has a brown slip, and No. d 2516*b* has a reddish brown slip.

A few sherds with geometrical designs in relief are shown in Figure 224 1–7.

Another type of decoration—relatively rare on Alişar sherds of this period—is stamped in. Several ledge handles are ornamented in this way (e.g., d 2282, Fig. 157). Such stamped ornaments or impressions of actual stamp seals frequently appear just below the handle or on the handle itself (e.g., Fig. 157 2–3 and c 2634, Fig. 252). Stamp seal impressions on pot fragments are illustrated with seals (c 2742, Fig. 252; b 1140, Fig. 253; d 2540, Fig. 254; and Fig. 257). Several large stamps and impressions represent the so-called "royal" symbol,[33a] perhaps a sun symbol; it is applied on the bodies of jars (see Fig. 257). Often the impression shows the color of the paste, whereas the surrounding field shows either a reddish wash (cf. Pl. I 1) or a polished slip.

Many spouts or parts of handles shaped like animal heads were found. Figure 158 shows handles ending or beginning with an animal head; they belonged to medium-sized jars etc. No. d 2998 (Fig. 159) represents the entire animal. Figure 160 illustrates another type of handle, probably used on bowls similar to No. b 1673 (Pl. IV). Nos. d 2332, e 914, e 434, and c 2335 (Fig. 161) are handles shaped like reclining animals; they were attached to the rims of bowls. Nos. c 888, c 745, and d 2926 (Fig. 162) show little figures of horses attached to the tops of handles.

Spouts representing animal heads are illustrated in Figures 163–65. Nos. e 1721 and e 330 show interesting combinations of spout and rim. No. d 1806 (Fig. 164), the head of a leopard, shows traces of paint, as do Nos. e 1995 and e 1962 (Fig. 165), representations of monsters. The scales of these monsters are represented in dark brown on a creamy white slip. A fourth painted animal-head spout (b 1249, Fig. 164)[34] was found in 1929. With the exception of the four painted spouts the finish is either wet-smoothed or slipped and polished, in much the same color schemes as the typical plain ware of this period.

[33] *OIP* XIX 132–33. Sherd b 2277 (*OIP* XX, Fig. 86) may well belong to this period, as it was found in an area where the layers above the last Hittite building level had been much disturbed. It resembles in ware and quality the four last named sherds. I am indebted to Dr. Bittel for calling my attention to this possibility.

[33a] Cf. H. de Genouillac, *Céramique cappadocienne* (Musée du Louvre. Dépt. des antiquités orientales, *Série archéologique* I [Paris, 1926]) pp. 33–34; K. Bittel in *MDOG* Nr. 74 (1936) pp. 62 f.

[34] *OIP* XIX 136–38.

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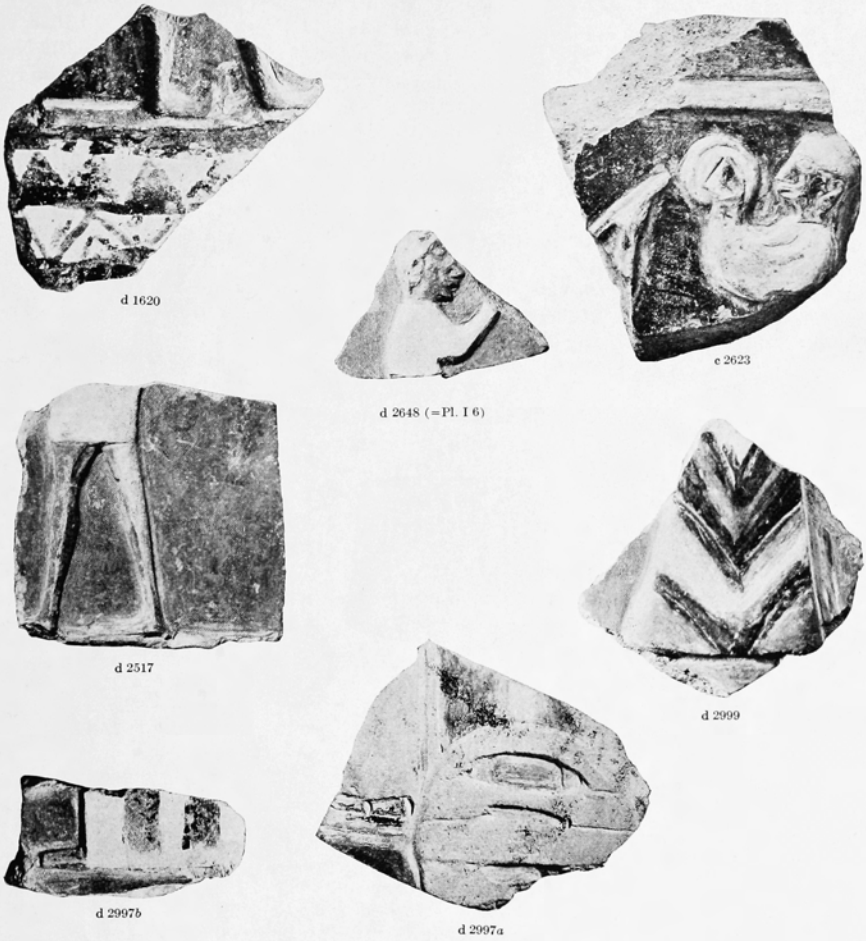

Fig. 155.—Sherds with Painted Relief Decoration. Scale, 2:3

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FIG. 156.—SHERDS WITH ANIMAL REPRESENTATIONS IN RELIEF. SCALE, 2:3

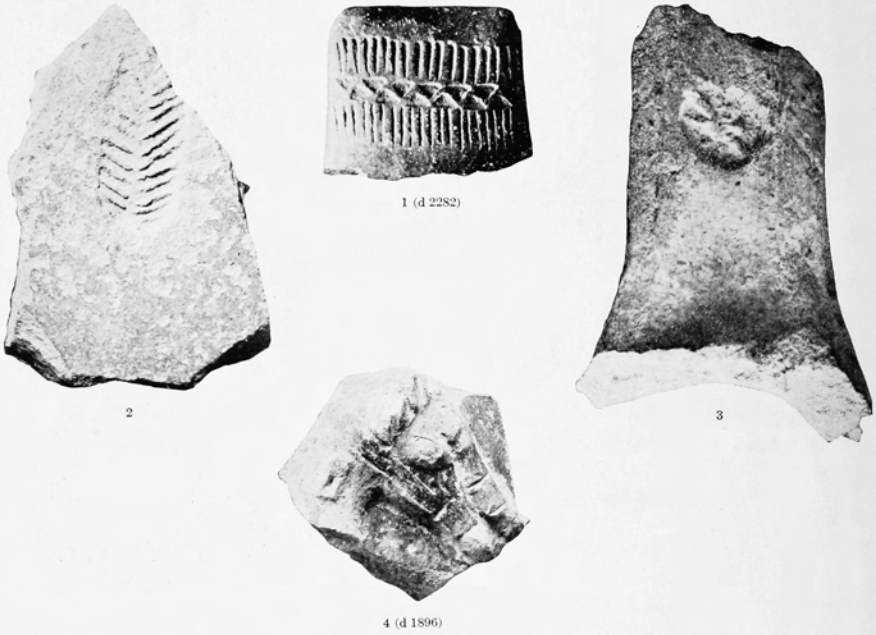

FIG. 157.—SHERDS WITH STAMPED ORNAMENTATION (1–3) AND A SHERD WITH HORSES' HEADS IN RELIEF (4). ACTUAL SIZE

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Fig. 158.—Handles Representing Animal Heads. Scale, 2:3

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Fig. 159.—Handle in the Form of an Animal. Scale, 2:3

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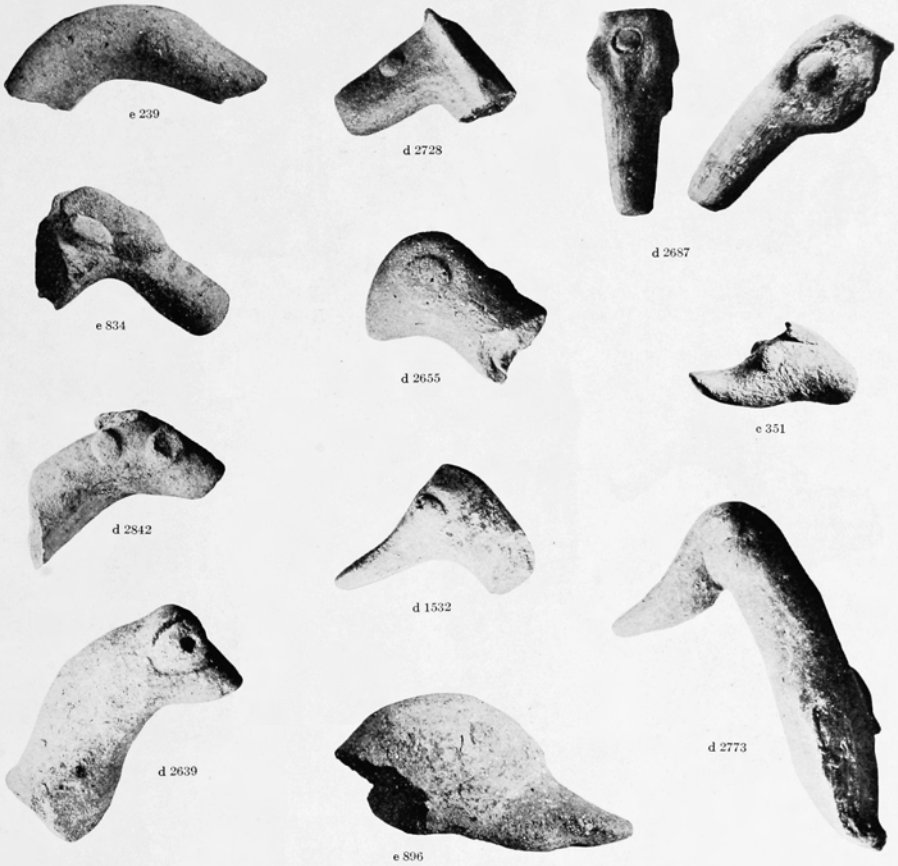

Fig. 160.—Handles Representing Animal Heads. Actual Size

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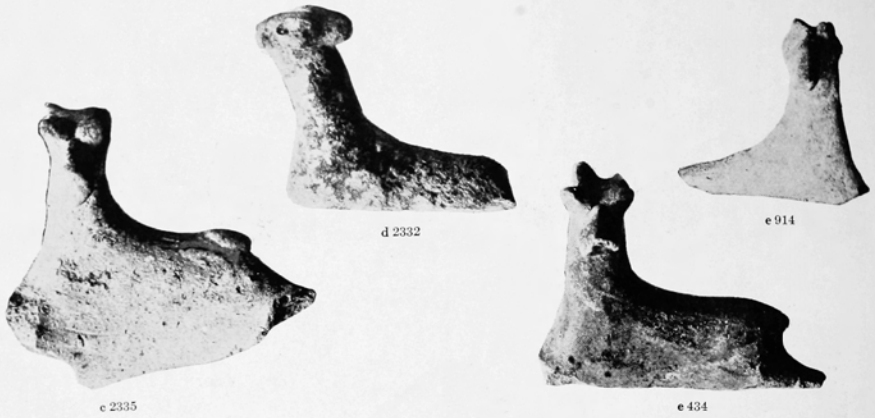

Fig. 161.—Handles Representing Reclining Animals. Actual Size

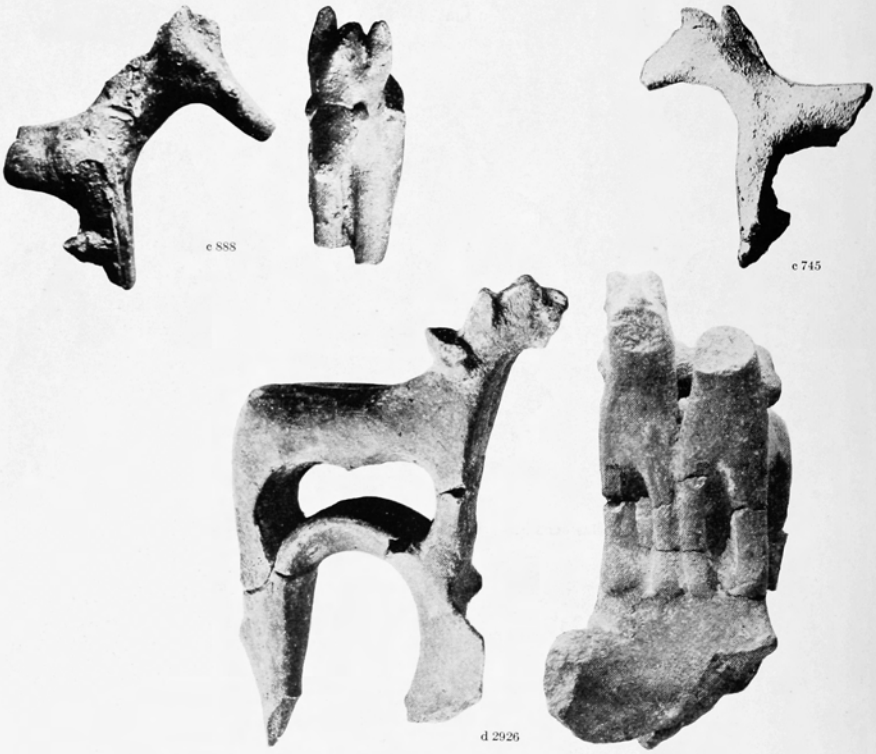

Fig. 162.—Figures of Horses Attached to Handles. Actual Size

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e 1721

e 330

e 162

d 2965

d 1740

e 1718

e 364

d 1991

d 1870

Fig. 163.—Spouts Representing Animal Heads. Actual Size

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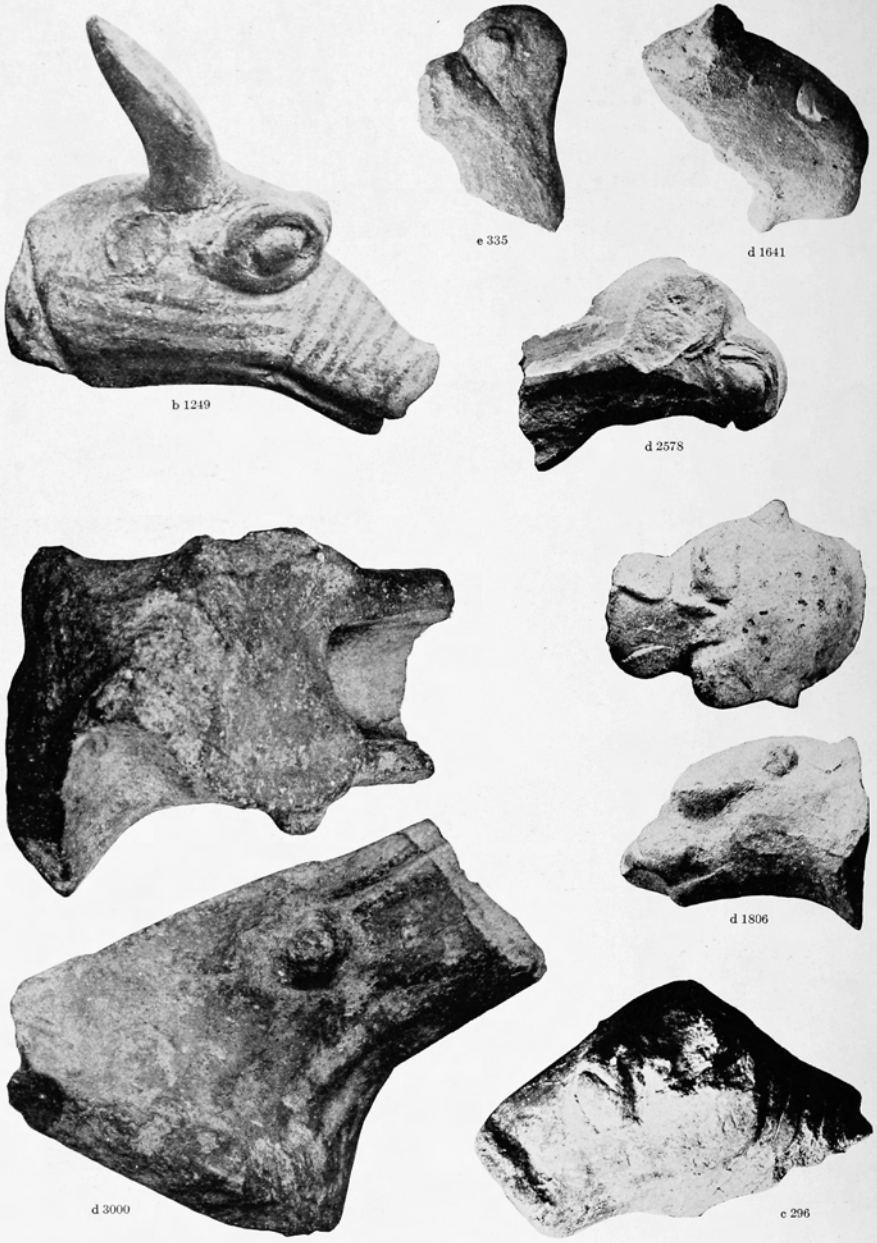

Fig. 164.—Spouts Representing Animal Heads. Actual Size

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e 74

e 1995

e 1962

e 738

e 1316

e 101

e 812

e 1070

Fig. 165.—Spouts Representing Animal Heads. Actual Size

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FORMS

Although there is a great variety of forms, they all show clearly a stylistic relationship. Most characteristic are small bowls with pointed or rounded bottoms, larger bowls with V-shaped handles, pitchers with clover-leaf orifices or beak-spouts, and a certain type of medium-sized storage vessel.

Bowls with pointed or rounded bottoms and simple rims are common, and most of the sherds belong to such vessels. Their finish varies from rough wet-smoothing to carefully slipped and polished surfaces. Their principal forms are illustrated in Figures 166–67. A few bowls of approximately the same size had ring bases (e.g., c 69 and d 622, Fig. 168). In both types the rim is sometimes rolled inward. A bowl with a flat bottom (c 1057, Fig. 168) was found in a refuse layer where remains of the Hittite period and those of the first post-Hittite period were mixed; therefore its attribution is uncertain. Other flat-bottomed bowls are No. d 2679 (Fig. 168) and Nos. b 1430[35] and b 825 (Pl. IV). No. d 2678 (Fig. 167) is a shallow bowl or plate made very carefully of fine paste; it shows mending-holes (cf. p. 273). No. c 272 (Fig. 167) is an extremely fine bowl, slipped and carefully burnished. Nos. c 1096 and d 2829 (Fig. 168) are deep bowls with ring bases.

The bowls with V-shaped handles, more or less sharply pointed (Figs. 169–71), are generally larger than those of the previous type. The greatest body diameter is in most cases sharply accentuated; from that point the handles rise at various angles, usually extending higher than the rim. Ring bases and flat bottoms predominate. Nos. e 1508 (Fig. 171) and d 2355 (Pl. IV) each have two vertical handles besides the two V-shaped handles. In addition, No. d 2355 has four knobs on the rim. No. e 280 (Fig. 171) seems to have had a pedestal base. No complete bowls with handles or spouts representing animals, such as Nos. b 1673 and b 1466 (Pl. IV), were found in 1930–32, but many fragments of such vessels were unearthed (cf. Figs. 160–65).

Small cups of this period (Figs. 172–73) resemble closely those of the Copper Age or the Early Bronze Age in shape, although the ware is usually much finer. Besides a rounded or pointed bottom, a button base appears frequently. The rim is either straight or curved slightly outward. Nos. c 2131–33 are flat cups with carefully finished red slips.

Nos. c 2126–27 and c 2129 (Fig. 174) have tubular spouts. No. c 2130 (*ibid.*) has the beginning of a tubular spout, but the vessel wall had not been perforated. Figure 174 shows also a series of rather small, roughly bell-shaped cups, usually with ring bases. The bases of some cups of this type are decorated with hemispheric lumps of clay (e.g., d 2800 and e 326). Cup d 1460 had a handle.

Jars are of two types; in both of them the bottom is generally pointed or rounded, but a few specimens have button bases. In Figure 175 three specimens of the first type are shown (c 799, c 2194, and d 2958); one handle extends from just above the greatest body diameter to the straight rim. In the second type, represented by Nos. c 1232 and d 2456 (Fig. 175) and No. d 2416 (Fig. 176), the greatest body diameter is sharply accentuated, and from it a handle extends upward to the slightly flaring rim. Related to this group are two vessels with pedestal bases (d 2415 and d 2934, Fig. 177). No. d 2934 is especially remarkable on account of its fine, very thin ware.

No. c 2737 (Pl. IV) shows the same form as the jars of the second type but has a lateral spout. No. d 2888 (Fig. 176) has an unusual two-lobed orifice. Two vessels with clover-leaf orifices (Fig. 178) can be classified as either jars or pitchers.

Pitchers may be divided into three main groups, besides various special forms. The first

[35] *OIP* XIX 110.

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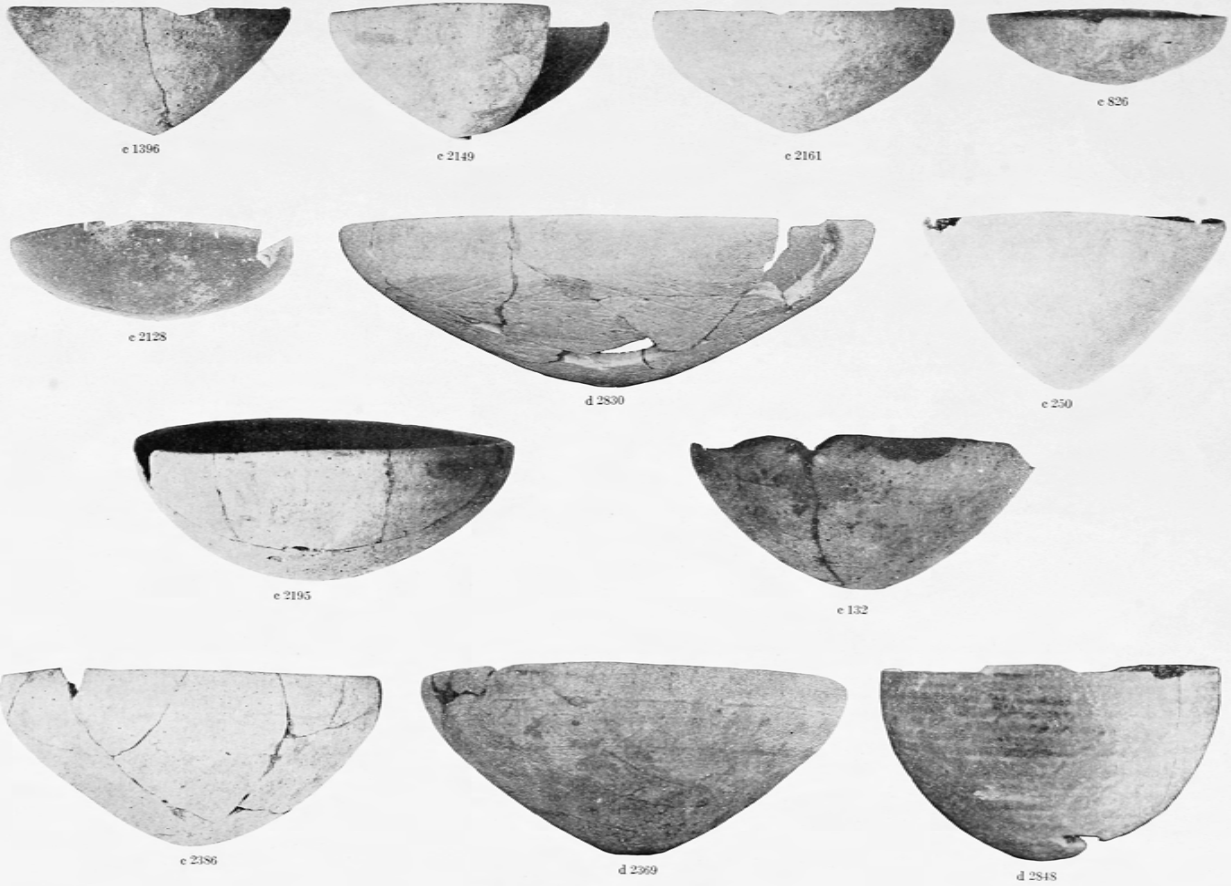

FIG. 166.—BOWLS. SCALE, 2:5

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d 2602

e 75

d 2680

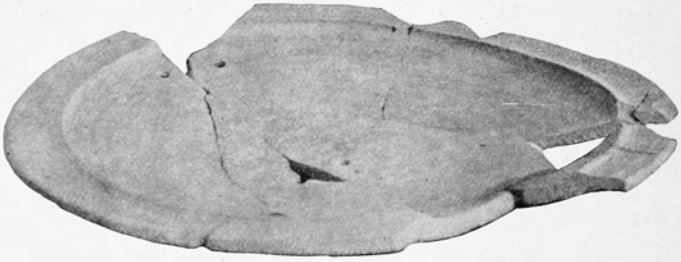
d 2589

d 2664

e 879

c 652

c 272



d 2678

FIG. 167.—BOWLS. SCALE, 2:5

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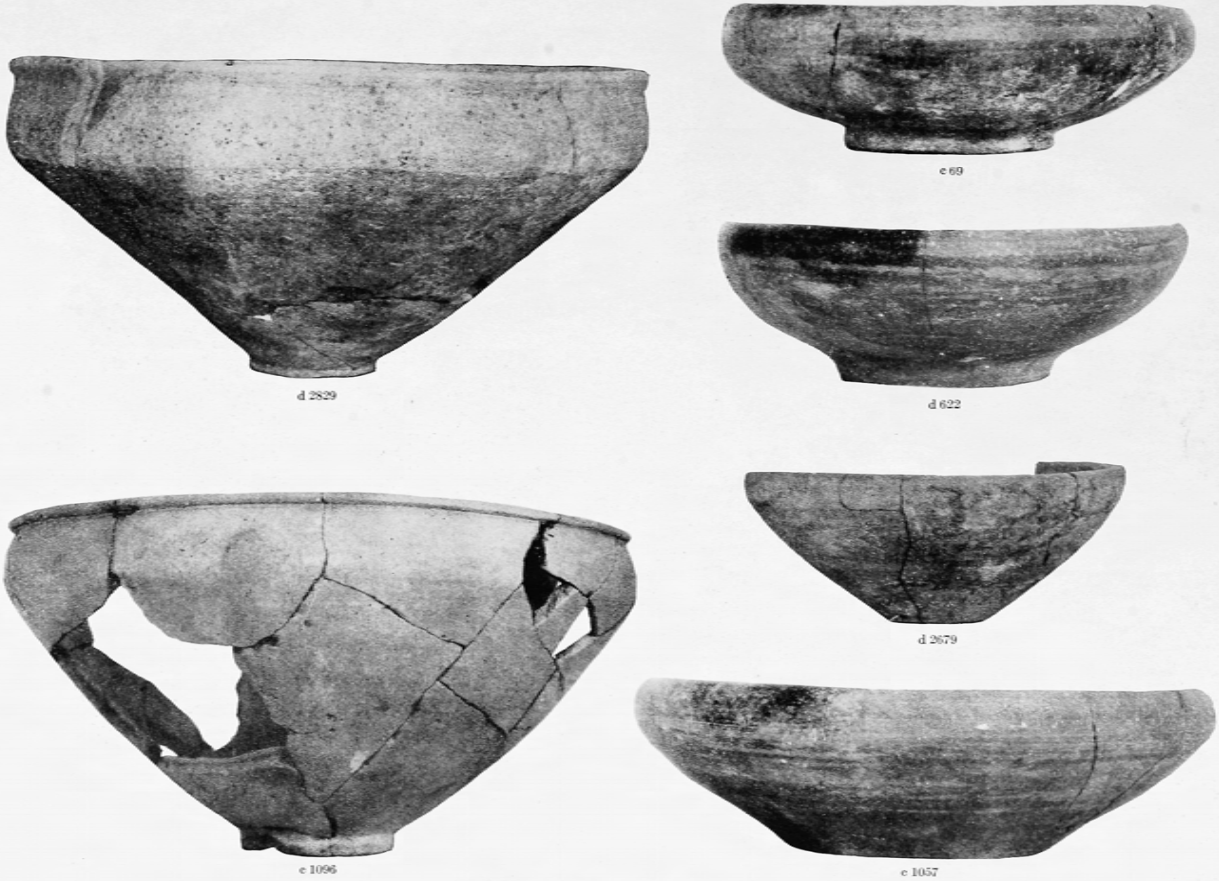

FIG. 168.—BOWLS. SCALE, 2:5

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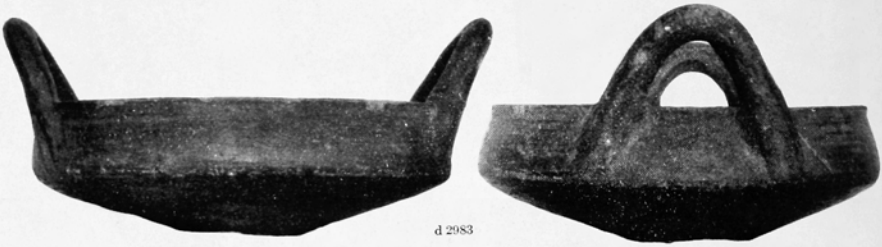
c 2456



d 2983

d 2855

c 302

FIG. 169.—BOWLS WITH V-SHAPED HANDLES. SCALE, 2:5

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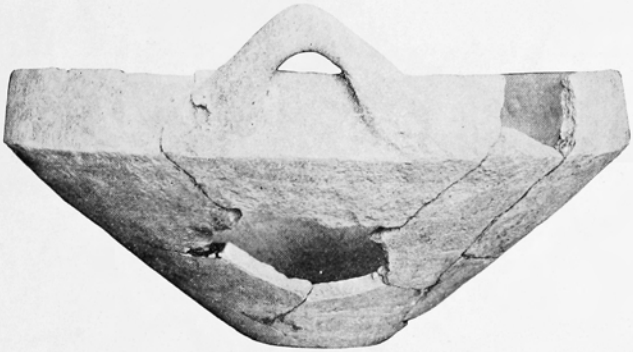
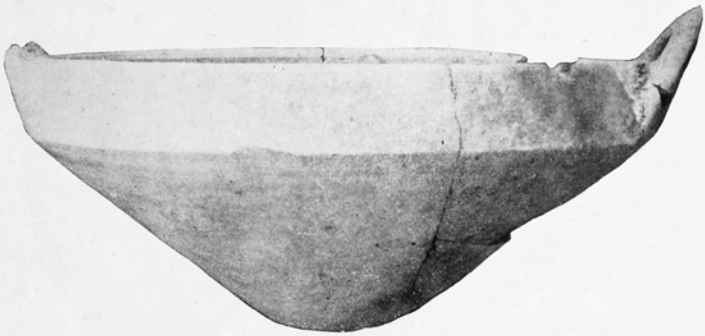
c 2385





d 247

Fig. 170.—Bowls with V-shaped Handles. Scale, about 2:5

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e 1508

e 280

Fig. 171.—Bowls with V-shaped Handles. Scale, 2:5

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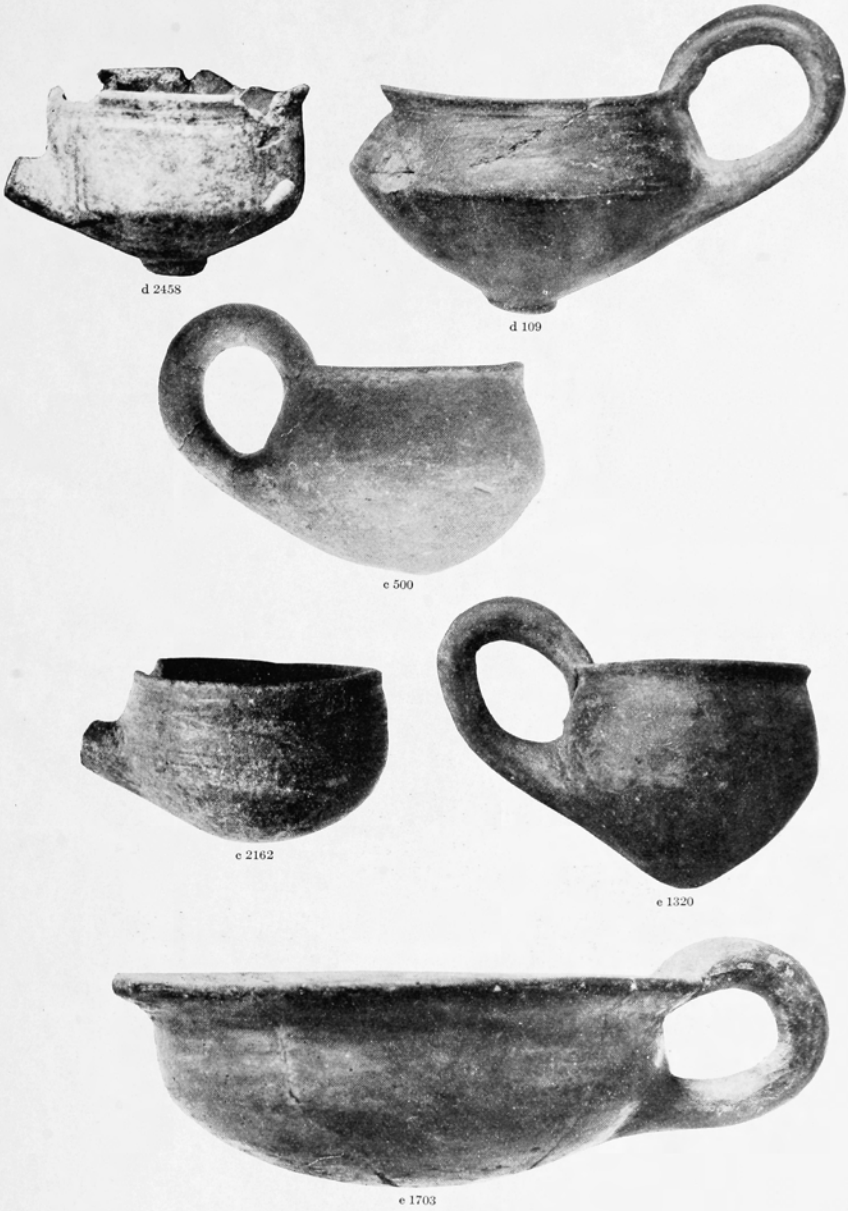

FIG. 172.—CUPS. ACTUAL SIZE

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Fig. 173.—Cups. Scale, 1:2

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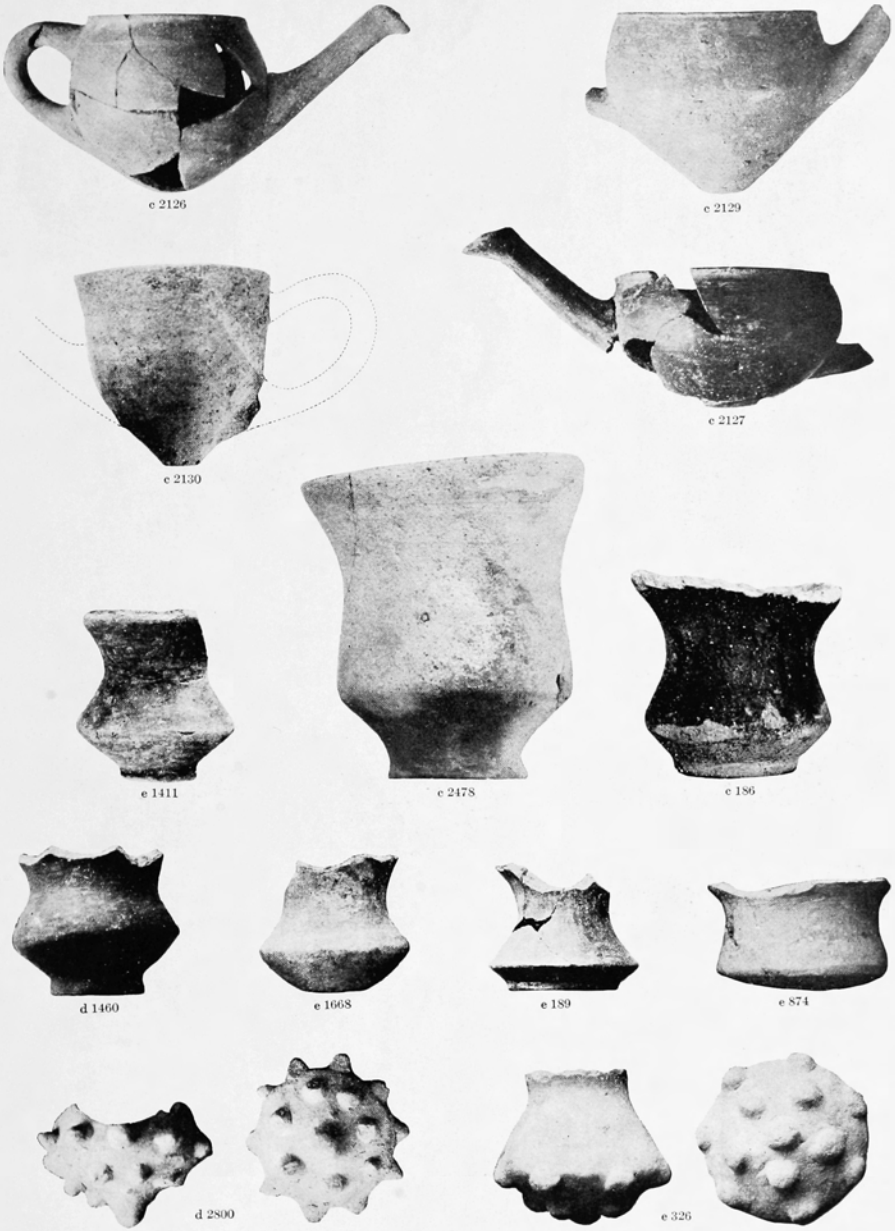

Fig. 174.—Cups with Tubular Spouts and Bell-shaped Cups. Scale, 1:2

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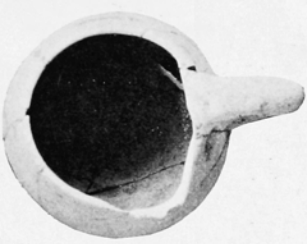

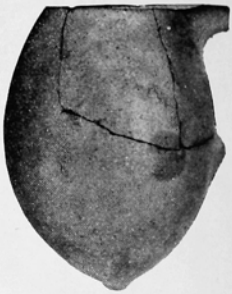

c 799

d 2958

c 2194

c 1232

d 2456

FIG. 175.—JARS. SCALE, 2:5

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FIG. 176.—JARS. SCALE, 2:5

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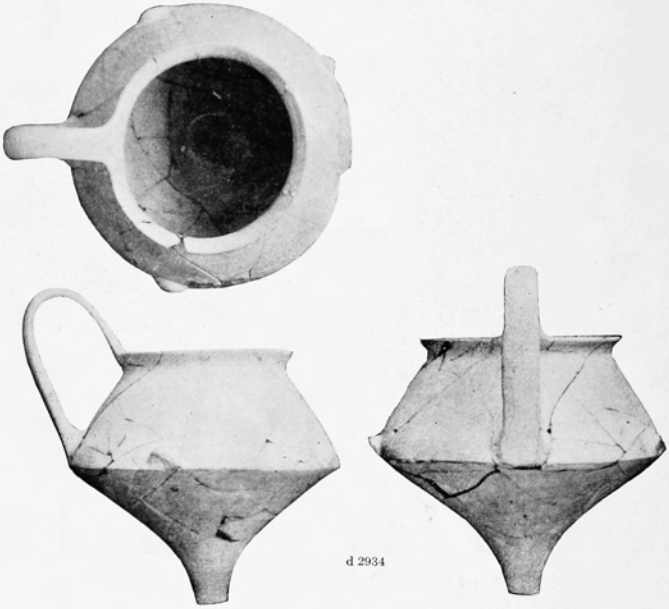
d 2415



d 2934

Fig. 177.—Jars. Scale, 2:5

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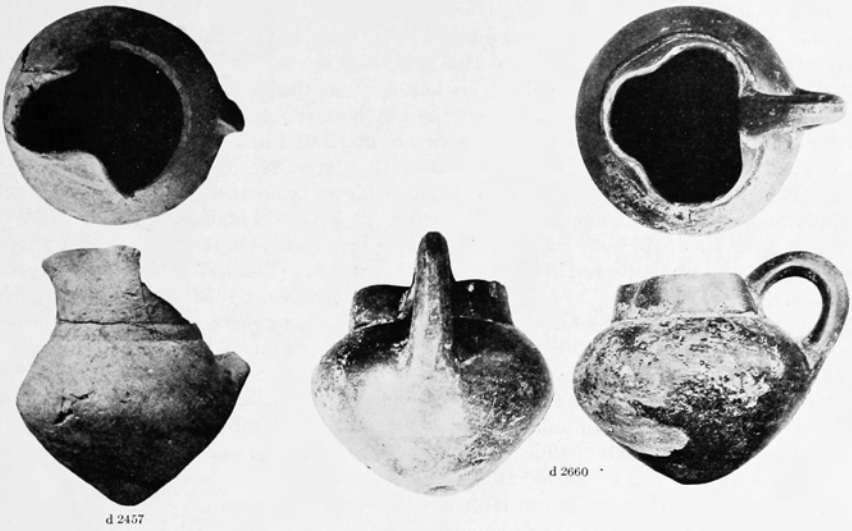

Fig. 178.—Jars or Pitchers. Scale, 2:5

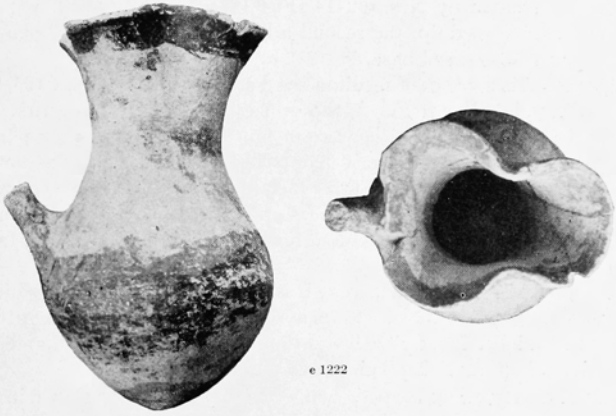

Fig. 179.—Pitcher with Clover-Leaf Orifice. Scale, 1:2

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group is characterized by a clover-leaf orifice. The body is ovoid, the bottom pointed or rounded (Figs. 179–80 and d 2957 and e 1960 in Fig. 181). No. e 1222 (Fig. 179) is decorated with two red stripes (cf. p. 111). No. d 2400 (Fig. 182) is a small pitcher decorated with two small protuberances above the median body line, opposite the handle; it has a button base.

Pitchers of the second group are characterized by beak-spouts. There are various forms of such pitchers. Examples of the common ware are illustrated in Figure 183. The bodies are ovoid, pointed at the bottom; the orifices are rather large. No. c 2736 (Fig. 184) has two beak-spouts. The other pitchers in Figure 184 have higher beak-spouts and pointed or rounded bottoms or ring bases. The pitchers in Figure 185 have still higher spouts; No. e 27 has a button base. Nos. 3155[36] and b 1424[37] (Pl. V) have long vertical beak-spouts. Other pitchers with beak-spouts are illustrated in Figures 186–89. No. e 877 (Fig. 186) probably had a pedestal base. Nos. d 2969 and e 30 (Fig. 188) have strainers. No. e 1353 (Fig. 189) is roughly finished, but shows a pleasing form. Fragments of two large pitchers, each with a beak-spout and three handles, were found (b 2738[38] and e 683, combined on Pl. V).

The third type of pitcher (Fig. 190 and d 2267, Fig. 192) has a lateral tubular spout ending in a beak. Nos. d 2267 and b 1425 (Pl. VI) are very well finished and have pedestal bases. No. b 2010 (Pl. VI) is a small pitcher with an extremely large tubular spout. In Figure 191 are shown two vessels, each of which has a tubular spout at right angles to the handle. No. c 2733 has a lid attached to the handle.

Two pitchers of a very special form are Nos. d 2343–44 (Fig. 192), each representing a bunch of grapes. No. b 2536[38] (Pl. IV) is a unique pitcher found in 1929. No. b 1674[39] (Pl. V) has a two-lobed orifice and two handles.

Figure 193 shows two nearly globular vessels, each with a very slender neck and one handle rising from the body of the vessel to the side of the neck. No. d 2487 has a clover-leaf orifice with the point which is usually the spout turned toward the handle. A type of flask with flattened body is represented by Nos. d 2414 (Fig. 194) and b 1671 (Pl. V); the first has a slender neck and a ring-shaped lip, the second a beak-spout. Figure 194 shows also several smaller flasks, some with flattened base.

Typical of this period is a group of medium-sized storage vessels (Figs. 195–98). The body is ovoid, the bottom pointed or rounded; the orifice has a large flaring rim. On or slightly above the median body line appear either two or four handles. The upper part of the vessel is frequently covered with a red wash or a painted geometric design. The lower part of the neck is sometimes emphasized by two or three incised lines. Jars of this type were frequently used for the burial of children. Other types of storage vessels are illustrated in Figures 199–200. The large storage vessels frequently used for burials are barrel-shaped, tapering toward the bottom (e.g., 3252*a* and b 2550, Pl. VII).

In Figure 201 a group of two-handled vessels is illustrated. The orifice is often four-lobed, and pedestal bases are common. No. c 2734 resembles Nos. b 1670 and b 1676[40] (Pl. VI), but has a strainer in one lobe. No. d 1096 has a similar shape but only one handle. No. b 2545[41] (Pl. VI) has two large handles rising high above the orifice.

Medium-sized vessels of various shapes, each with two handles, are shown in Figures 202–3. No. e 1079 (Fig. 204) has three legs and two lateral handles. No. d 1766 (Fig. 205) is a very unusual rectangular vessel with four handles. No. c 2594 (Fig. 206) is a handleless jar with a long, nearly cylindrical neck, a ring-shaped lip, and a flat base. Figure 153 shows the re-

[36] *OIP* VI 272.
[37] *OIP* XIX 112.
[38] *OIP* XIX 114.
[39] *OIP* XIX 112–13.
[40] *OIP* XIX 111–12.
[41] *OIP* XIX 112.

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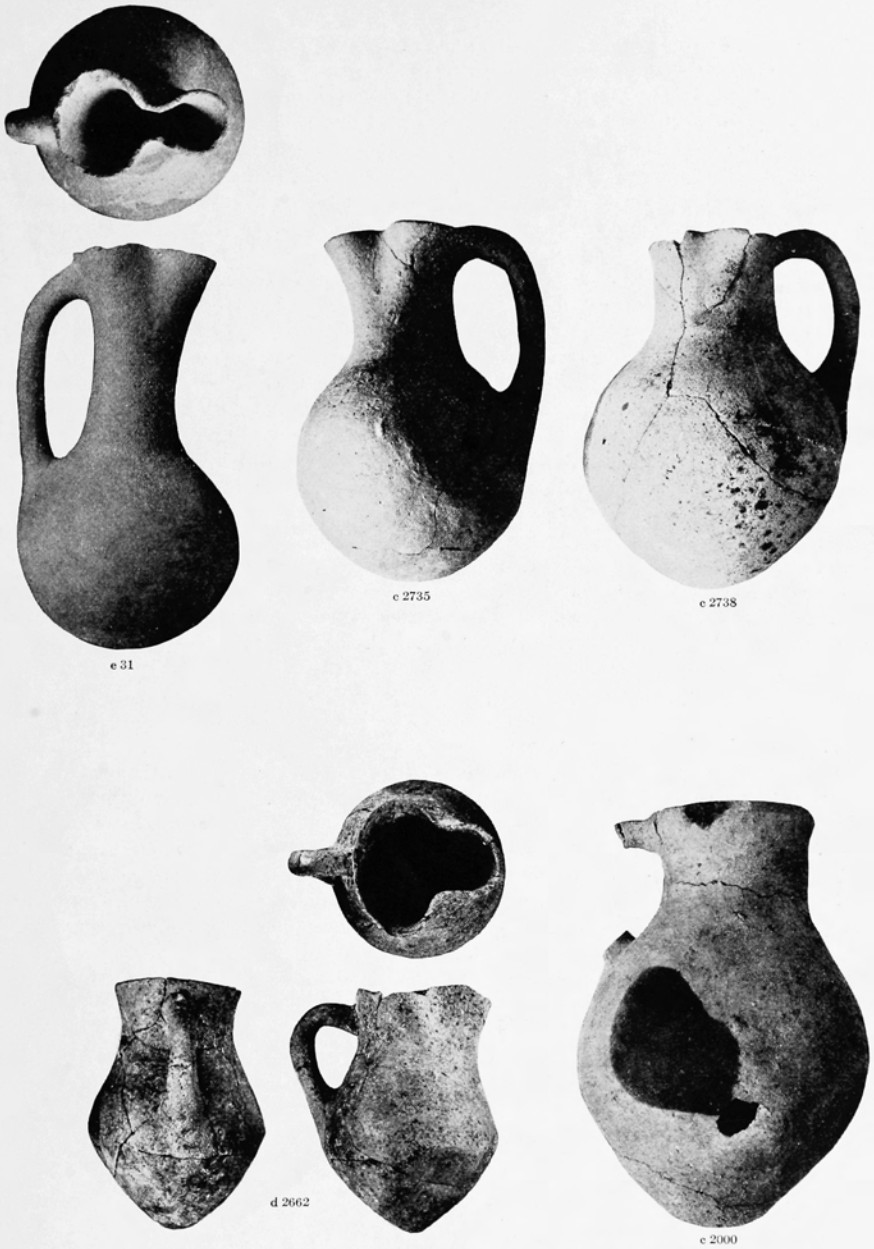

Fig. 180.—Pitchers with Clover-Leaf Orifices. Scale, 2:5

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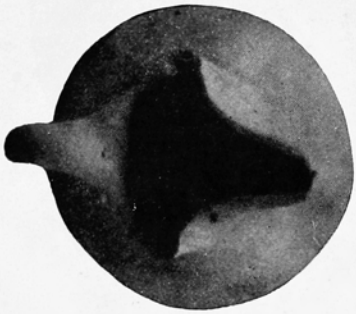
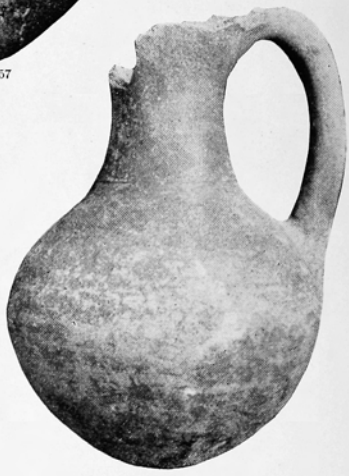
c 2387

d 2806



d 2957

e 1960



d 2439

Fig. 181.—Pitchers. Scale, 2:5

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Fig. 182.—Pitcher with Clover-Leaf Orifice. Actual Size

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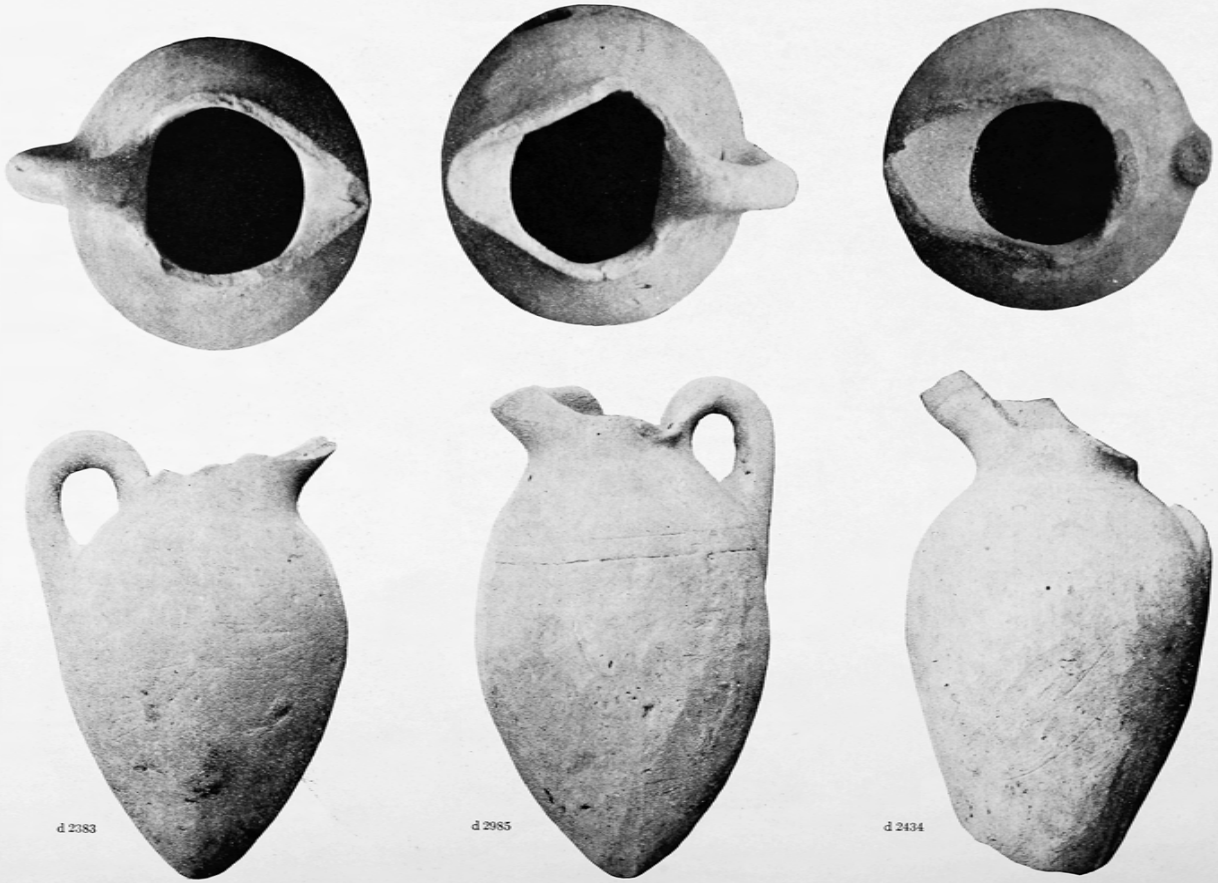

Fig. 183.—Pitchers with Beak-Spouts. Scale, 2:5

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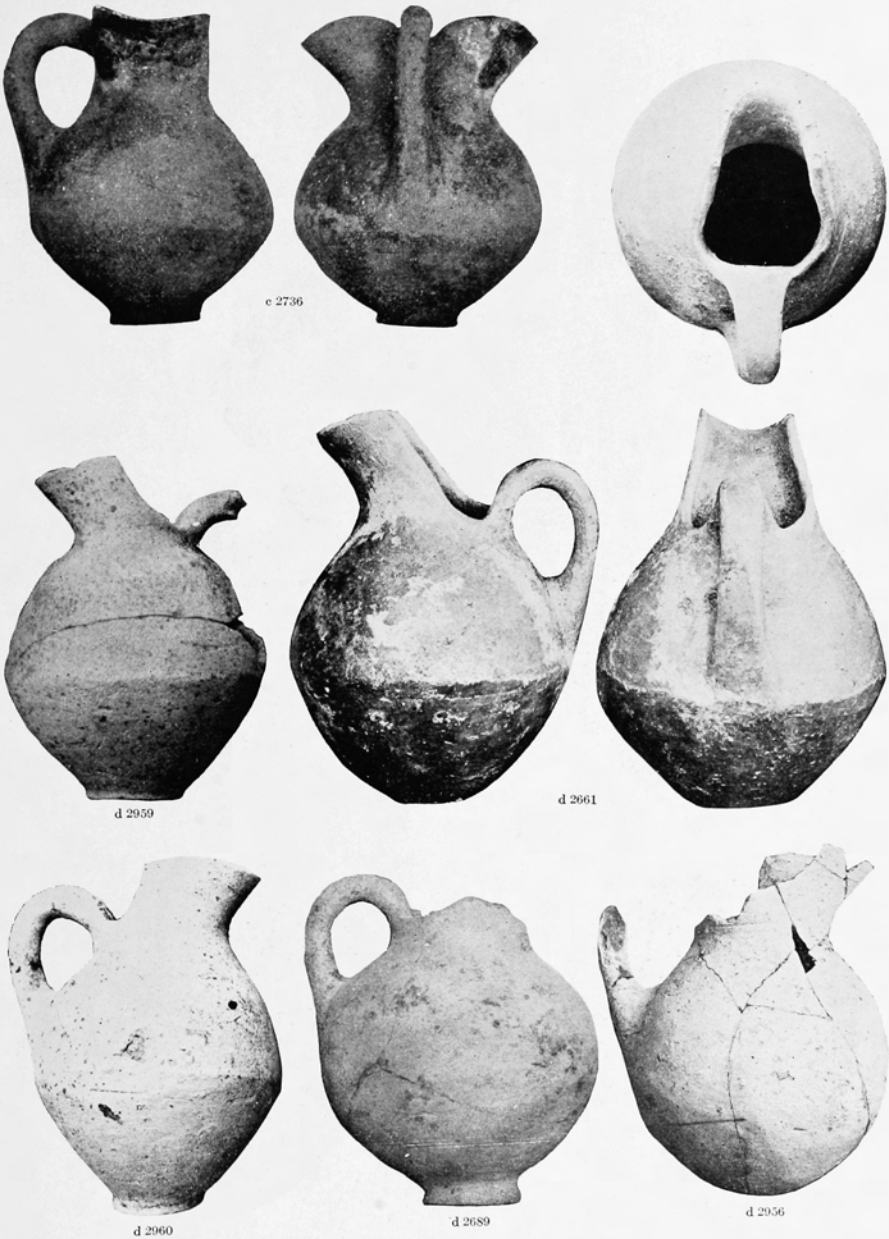

Fig. 184.—Pitchers with Beak-Spouts. Scale, 2:5

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e 684

e 27

Fig. 185.—Pitchers with Beak-Spouts. Scale, 2:5

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Fig. 186.—Pitcher with Beak-Spout. Scale, 1:3

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Fig. 187.—Pitcher with Beak-Spout. Scale, 1:3

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FIG. 188.—PITCHERS WITH BEAK-SPOUTS. SCALE, 2:5

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d 2268

d 1935

e 1353

e 691

Fig. 189.—Pitchers. Scale, 2:5

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c 996

c 1748

d 2854

e 2524

Fig. 190.—Pitchers with Tubular Spouts. Scale, 2:5

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Fig. 191.—Pitchers with Tubular Spouts. Scale, 2:5

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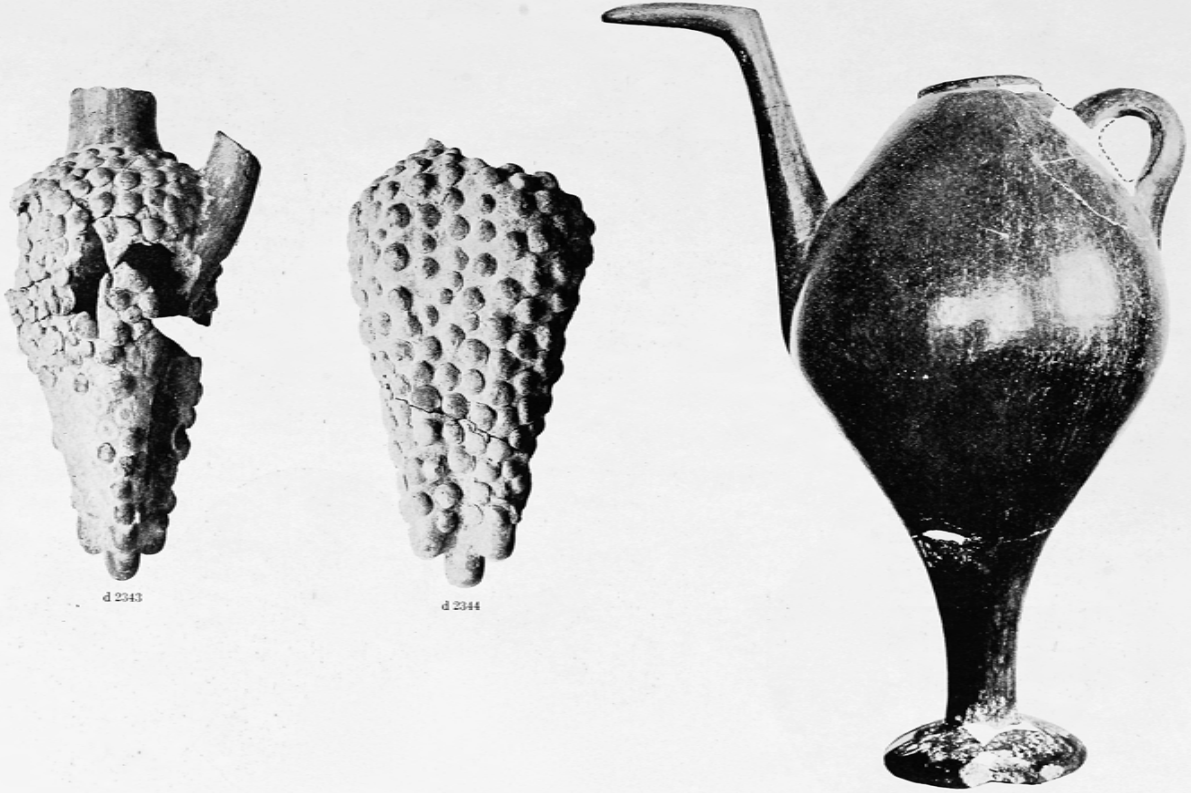

d 2343 d 2344 d 2267

FIG. 192.—PITCHERS REPRESENTING BUNCHES OF GRAPES AND A PITCHER WITH A TUBULAR SPOUT. SCALE, 2:5

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Fig. 193.—Flasks. Scale, 2:5

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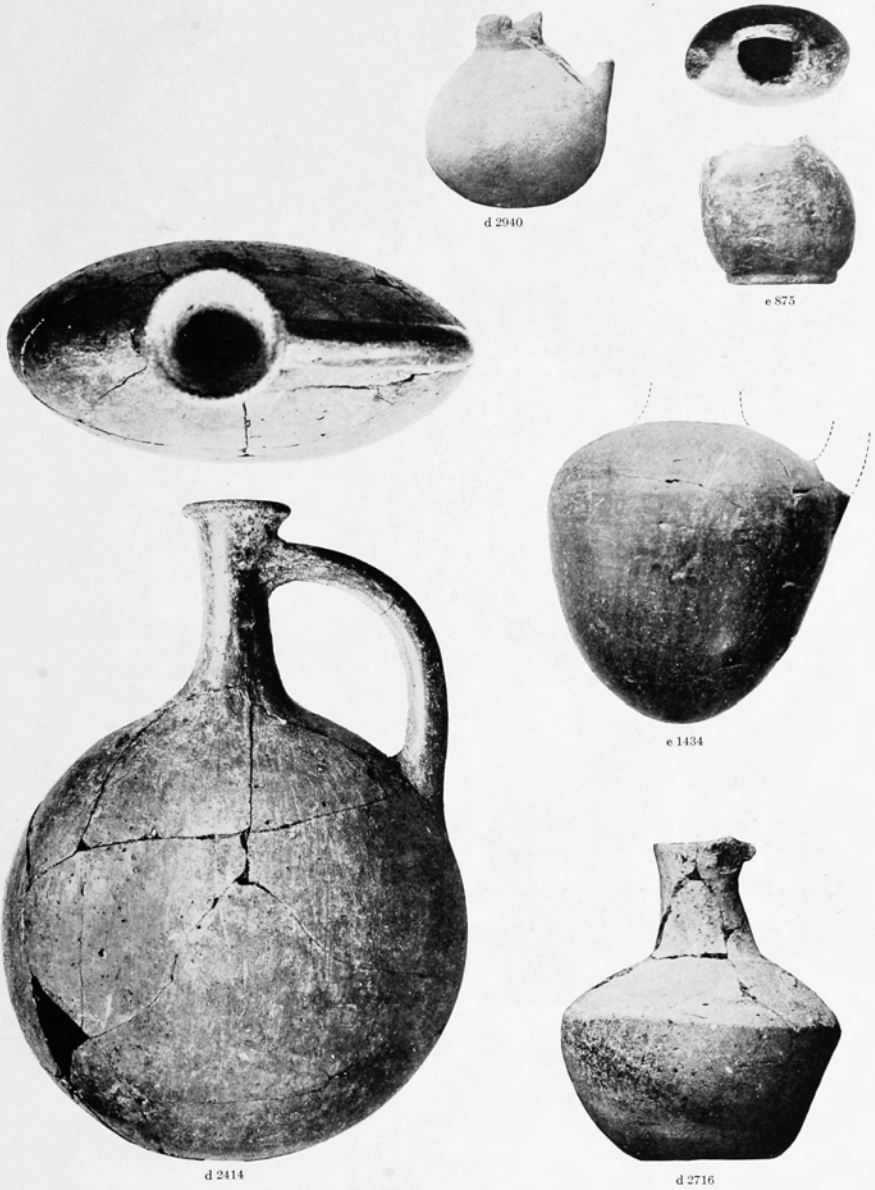

Fig. 194.—Flasks. Scale, 2:5

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c 2695

c 1085

c 1436

d 2382

Fig. 195.—Storage Vessels with Flaring Rims. Scale, about 1:5

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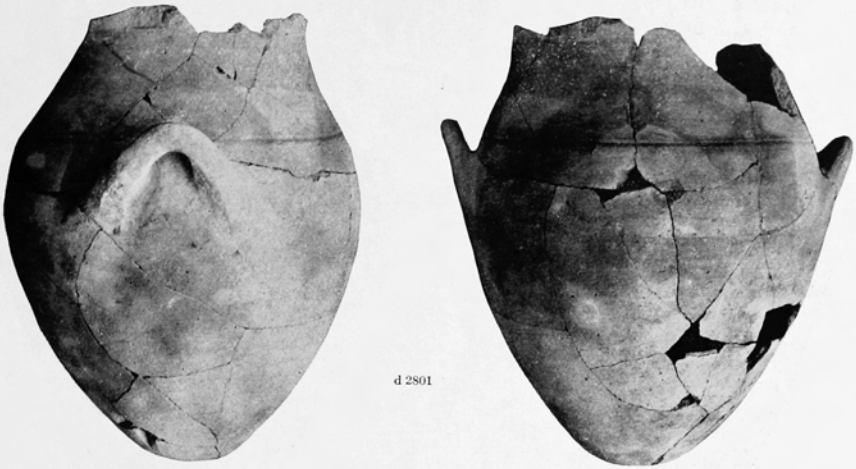
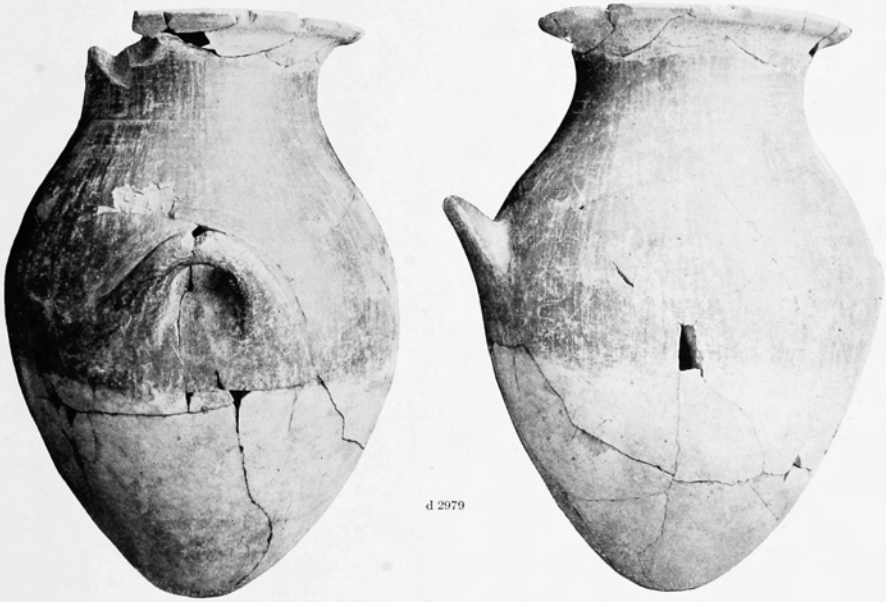


d 2801



d 2979

Fig. 196.—Storage Vessels with Flaring Rims. Scale, about 1:5

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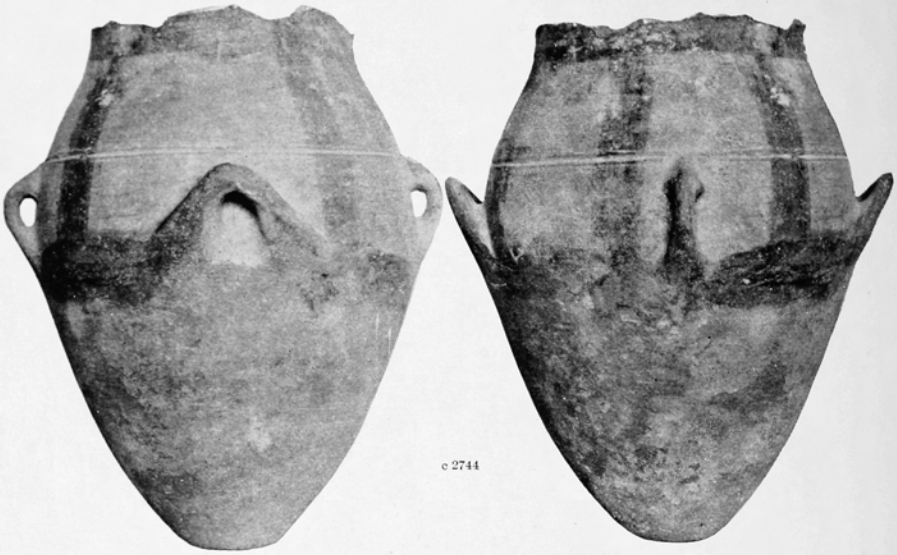

c 2744

c 2377

Fig. 197.—Storage Vessels with Flaring Rims. Scale, 1:5

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e 2302

FIG. 198.—STORAGE VESSEL WITH FLARING RIM. SCALE, 1:5

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e 425

e 1229

e 1503

Fig. 199.—Storage Vessels. Scale, about 1:5

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FIG. 200.—STORAGE VESSEL. SCALE, 1:10

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Fig. 201.—Two-handled Vessels with Pedestal Bases. Scale, 2:5

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d 2543

d 2408

c 130

d 2151

FIG. 202.—TWO-HANDLED VESSELS. SCALE, 2:5

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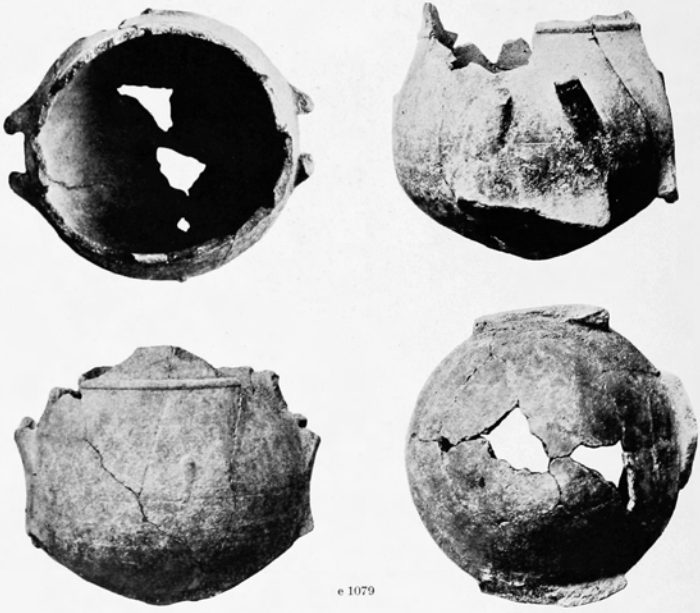
c 723 c 2459

Fig. 203.—Two-handled Vessels. Scale, 1:5



c 1079

Fig. 204.—Vessel with Two Handles and Three Legs. Scale, 1:5

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d 1766

Fig. 205.—Rectangular Vessel with Four Handles. Scale, 1:5

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c 2594

e 1355

e 880

FIG. 206.—HANDLELESS JARS. SCALE, ABOUT 2:5

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construction of the cylindrical neck of a very fine jar with relief decoration (cf. p. 111). Other forms are shown in Figure 207. Because of the pointed bottoms of the majority of vessels of this period, they must have been set either in the ground or in a stand of some kind. Nos. c 119 and c 2763 are such stands. No. c 1230 probably had a high pedestal base (here restored). Nos. c 1276–77 are cylindrical vessels, the upper parts of which are broken off. Other unusual forms are Nos. b 1227 and b 2530 (Pl. VI).[42] A fragmentary small glazed vessel (b 1868) is probably a Mesopotamian import (cf. p. 111).

Several fragmentary rhytons were found. No. c 1776 (Fig. 208), in the form of a cat's head, is well preserved. Nos. c 1740 (Fig. 209) and c 762 (Fig. 210) represent bulls' heads. No. c 964 is shaped like a lion's head (Fig. 211) and No. e 43 like a rabbit's (Fig. 212). Rhytons frequently imitated the heads of birds of prey (Fig. 213). Figures 209, 211, and 213–14 include fragments of other rhytons. In 1929 a great many such fragments were found.[43] Especially interesting is a mold (b 1613, Fig. 212) for forming a rhyton in the shape of a rabbit. No. e 2269 (Fig. 215) may be part of a rhyton, or it may well be the upper part of a rattle (cf. c 1300, Fig. 307). The use of the fine bull's head e 814 (Fig. 215) cannot be determined; it has a highly polished black slip.

Pottery shoes with upturned toes (Fig. 216) were probably used as drinking-vessels. In 1927 an exceptionally well preserved one was found which showed the upper rim.[44]

DETAILS

The rims of this period do not show great variety (Figs. 217–18). Simple rims are common for bowls and a certain kind of jar. Bowls with V-shaped handles and cups often have rims that roll outward. One type of storage vessel has a flaring rim. The lips of storage vessels with flaring rims are sometimes fluted (e.g., b 2546, Pl. VII). A few ring-shaped rims appeared (e.g., Fig. 153).

The characteristic handle of this period is a V-shaped handle common on bowls and larger vessels (Figs. 219–22 4). Knobs on the rim or just below the rim are frequent (Fig. 218). Lug handles appear on a certain type of bowl (Fig. 218 31–34). Handles of pitchers, flasks, and jars extend from the body to the neck (e.g., Fig. 223 1–2); the cross-section of the handle is usually oval or round. Handle shapes common in all periods are shown in Figure 222 5–14. Nos. 8–16 in Figure 224 are unusual handles. No. b 1675[45] (Pl. V) has a loop handle large enough for one finger only. Animal-head handles appear on bowls, sometimes seeming to grow out of the rim; and such animal heads frequently end or begin handles of jars (Figs. 158–62).

Spouts show a great variety of forms (Figs. 225–28). Beak-spouts are characteristic of this period. Tubular spouts are common also, and they sometimes end in beaks. Strainers may be set within the spout or within the body wall. Many spouts imitate animal heads (Figs. 163–65). Figure 228 1 shows a beak-spout decorated to suggest the muzzle of an animal.

Bottoms are usually pointed, sometimes ending in a button. Some are rounded or flattened. Ring bases and pedestal bases also appear (Fig. 223).

Only a very few lids have been found. They consist of slightly concave disks, often with short, stubby handles (e.g., Figs. 223 4 and 229). No. d 2467 has a highly polished dark red slip.

[42] *OIP* XIX 119–20.

[43] *OIP* XIX, Figs. 167 and 169.

[44] No. 1671, *OIP* VII 37 and Fig. 28.

[45] *OIP* XIX 113.

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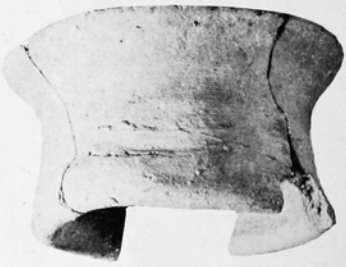
c 119



c 2763

c 1276

c 1230

c 1277

Fig. 207.—Miscellaneous Vessels. Scale, about 2:5

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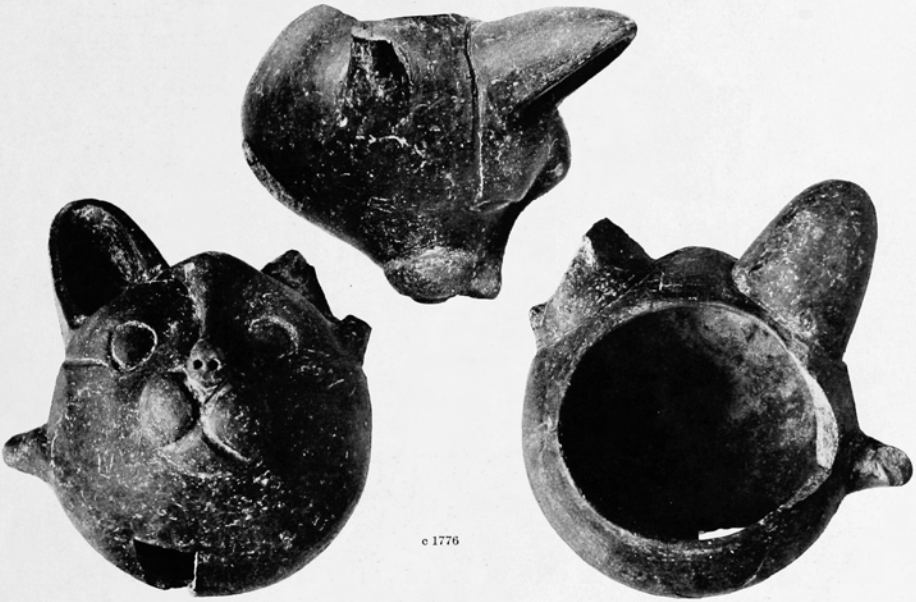

Fig. 208.—Rhyton in the Form of a Cat's Head. Scale 2:3

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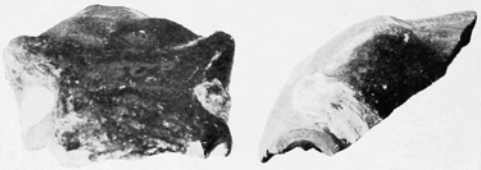
d 1924



d 2541

c 1740

Fig. 209.—Rhytons Representing Bulls' Heads. Scale, 2:3

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c 762

Fig. 210.—Rhyton in the Form of a Bull's Head. Actual Size

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Fig. 211.—Rhytons. Scale, 4:5

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FIG. 212.—RHYTON IN THE FORM OF A RABBIT'S HEAD (e 43) AND PART OF A MOLD (b 1613) FOR A SIMILAR RHYTON, WITH A MODERN CAST. SCALE, 2:3

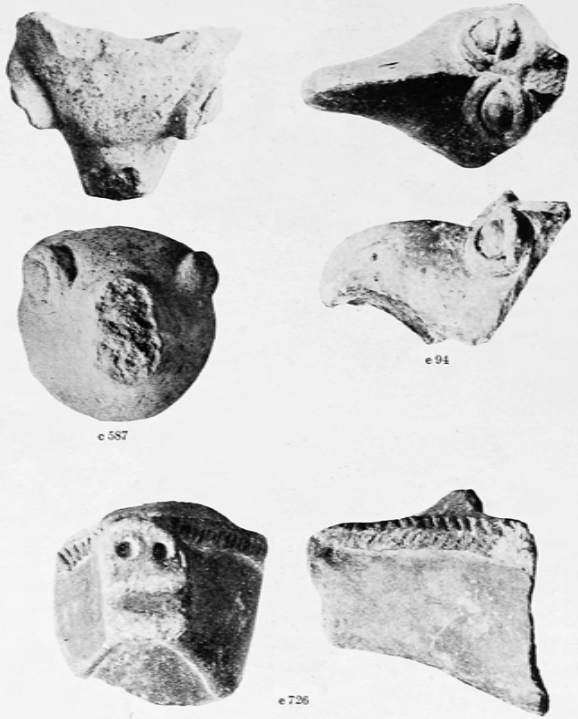

FIG. 213.—RHYTONS. SCALE, 2:3

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e 2045

c 352

Fig. 214.—Rhytons. Actual Size

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e 2269

e 814

Fig. 215.—Animal Heads of Pottery. Actual Size

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Fig. 216.—Drinking-Vessels(?) Shaped like Shoes. Actual Size

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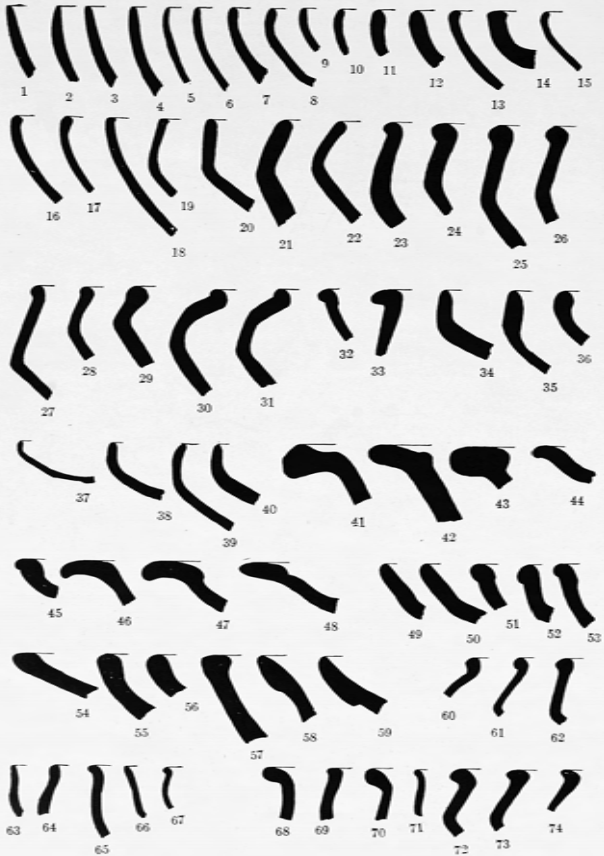

Fig. 217.—Profiles of Rim Pieces. Scale, 1:3

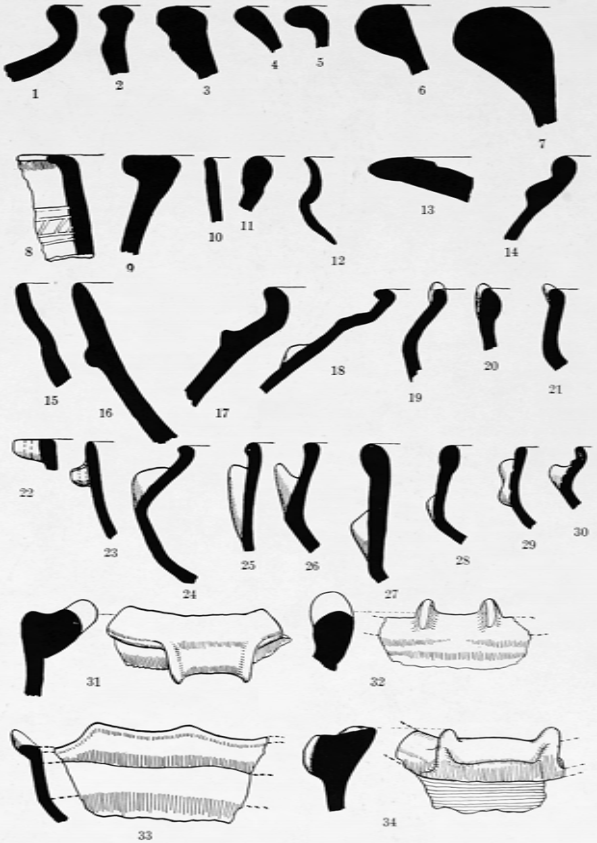

Fig. 218.—Profiles of Rim Pieces and Handles. Scale, 1:3

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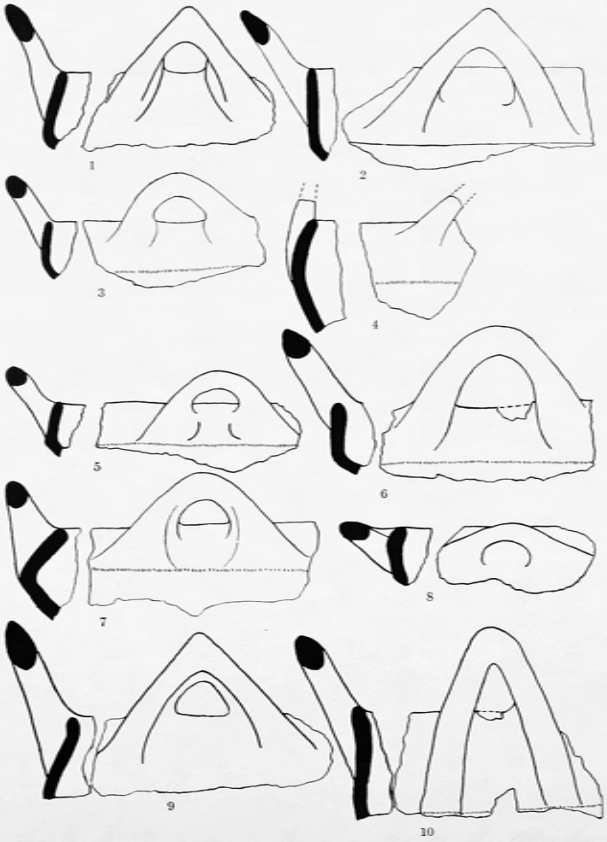

Fig. 219.—V-shaped Handles of Bowls. Scale, 1:3

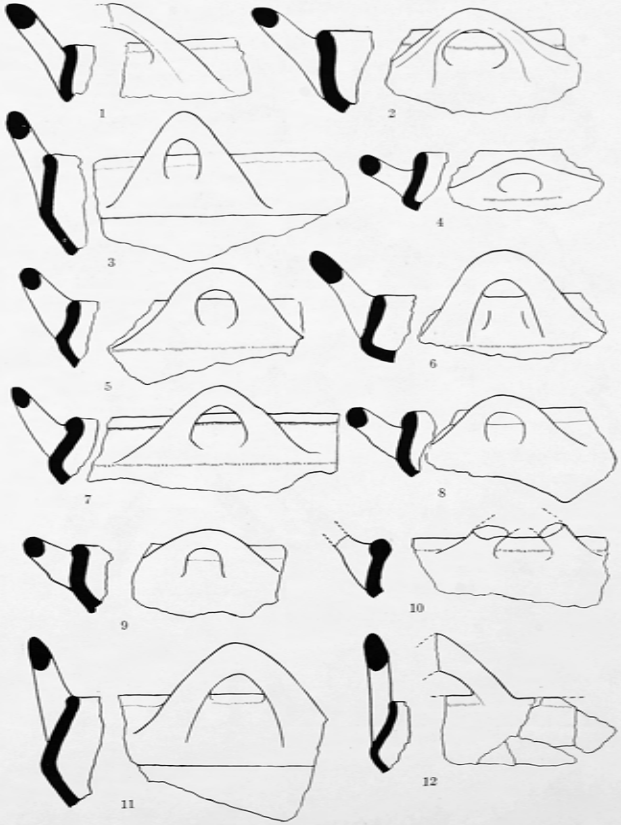

Fig. 220.—V-shaped Handles of Bowls. Scale, 1:3

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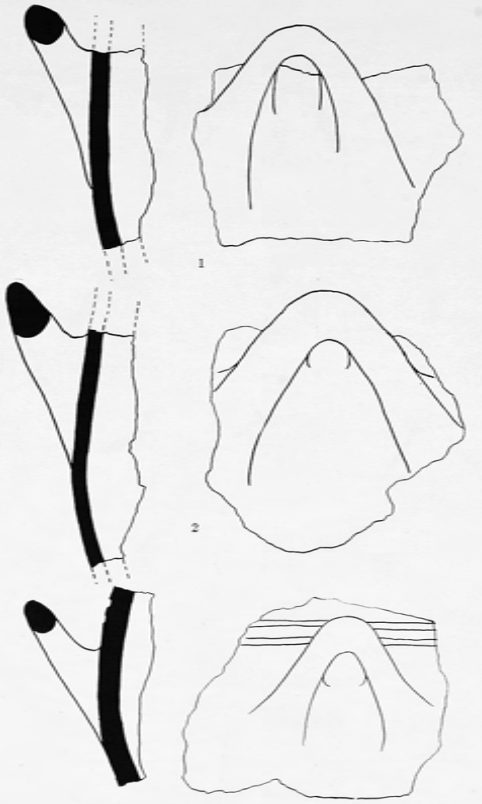

FIG. 221.—V-SHAPED HANDLES OF STORAGE VESSELS. SCALE, 1:3

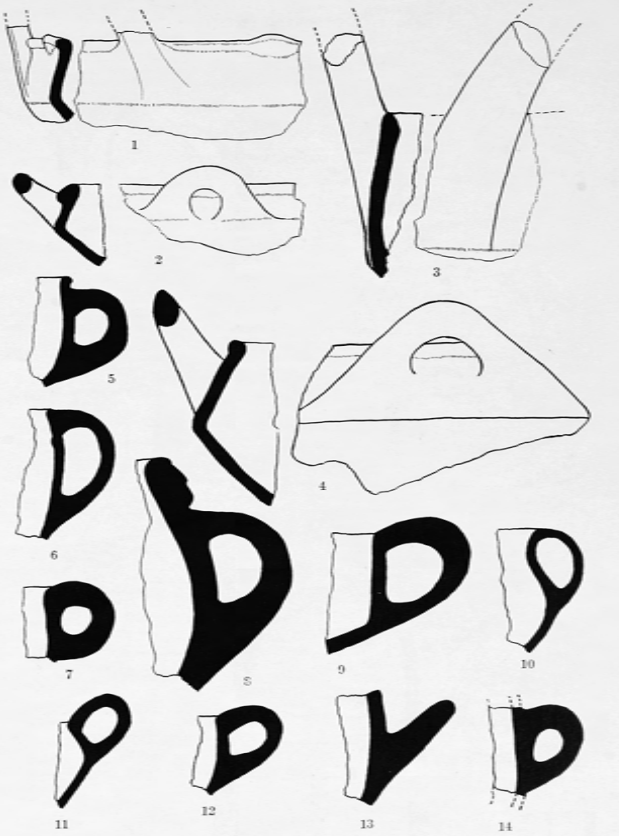

FIG. 222.—HANDLES. SCALE, 1:3

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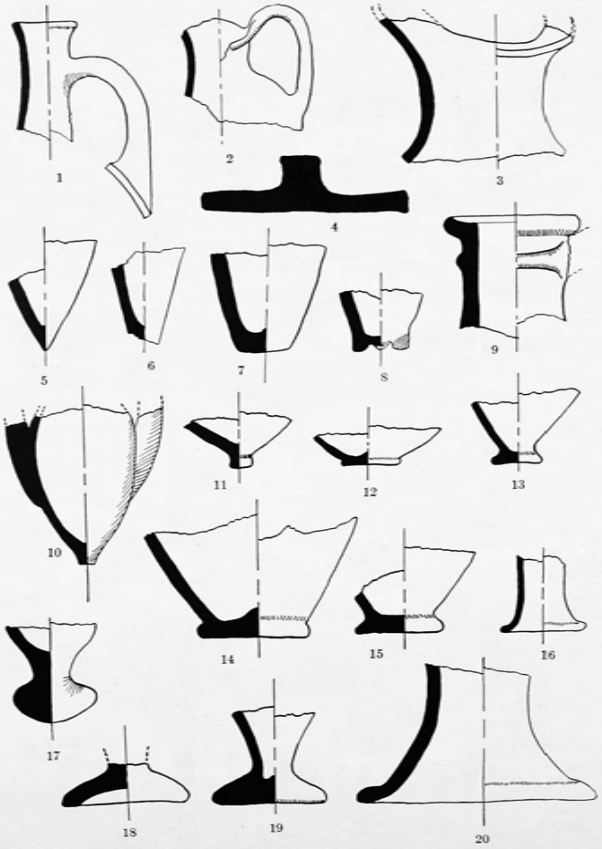

FIG. 223.—HANDLES, ORIFICES, A LID, AND BOTTOM PIECES. SCALE, 1:3 (EXCEPT NOS. 1–2, SHOWN 1:6)

FIG. 224.—RELIEF SHERDS AND HANDLES. SCALE, 1:3

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FIG. 225.—SPOUTS. SCALE, ABOUT 1:3

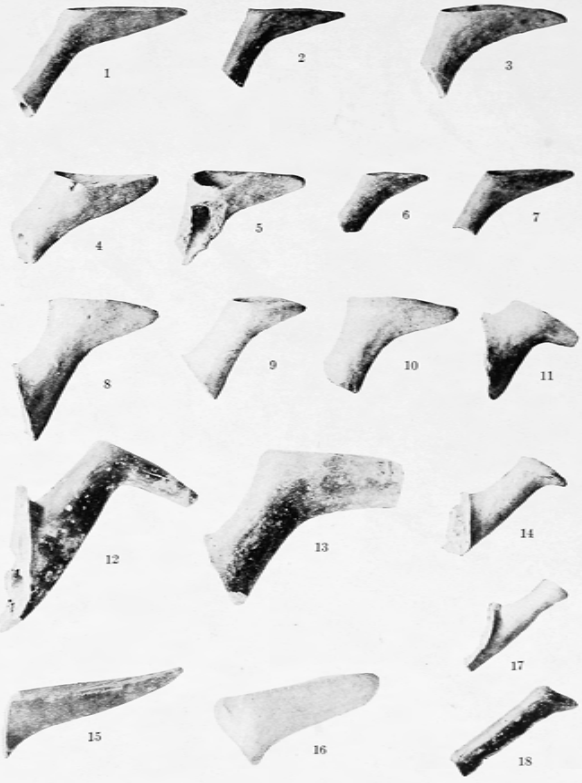

FIG. 226.—SPOUTS. SCALE, ABOUT 1:3

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Fig. 227.—Spouts. Scale, 1:3

Fig. 228.—Spouts. Scale, 1:3

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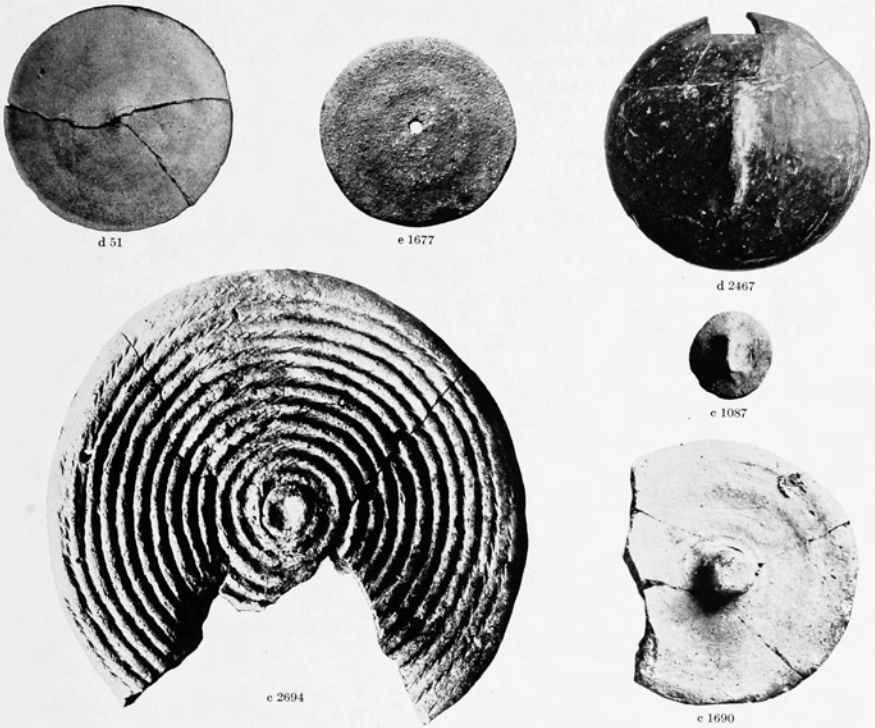

FIG. 229.—LIDS. SCALE, 2:5

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DESCRIPTIONS OF INDIVIDUAL VESSELS[46]

Bowls

c 132 (Fig. 166). Bowl .060 high, .143 in diameter;[47] medium, grit-tempered,[48] fairly well made ware; grayish buff paste; lightly fired; thin buff slip, carelessly smoothed. Found 1.60 deep in J 27 with Nos. c 130–31.

c 250 (Fig. 166). Bowl .079 h., .126 d.; medium, well made ware; buff paste; moderately fired; upper two-thirds wet-smoothed and finished with a hard tool; bottom tied together by hand. Found 1.15 deep in J 25.

c 272 (Fig. 167 and Pl. IV). Shallow bowl .059 h., .318 d.; medium, very well made ware; grayish buff paste; moderately fired; thin buff slip, carefully smoothed. Found 1.25–2.20 deep in M 29.

c 492 (cf. c 1396, Fig. 166). Bowl .045 h., .105 d.; medium, well made ware; buff paste; moderately fired; thin buff slip, carefully smoothed. Found 1.60–2.25 deep in J 25 associated with a great number of Early Bronze Age sherds and the Early Bronze Age vessels c 490–91.

c 652 (Fig. 167 and Pl. IV). Bowl .090 h., .153 d.; fine, well made ware; buff paste; moderately fired; buff slip; traces on upper third of body of five horizontal bands which had at one time apparently been red but are now so faded that one cannot be sure of their original color. Found 2.85–3.70 deep in J 29.

c 826 (Fig. 166). Bowl .028 h., .096 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 2.40–3.20 deep in I 33.

c 1057 (Fig. 168 and Pl. IV). Bowl with slightly concave bottom, .072 h., .273 d.; coarse, well made ware; buff paste with large white grits; moderately fired; buff slip on outside. Found 3 meters deep in A 24.

c 1396 (Fig. 166). Bowl .055 h., .116 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 3.20–3.50 deep in I 33.

c 2128 (Fig. 166). Bowl .030 h., .120(?) d.; fine, very well made ware; buff paste; moderately fired; dark red slip over all; highly polished. Found 2 meters deep in V 24 with vessels c 2126–27 and c 2129–33.

c 2149 (Fig. 166). Bowl .056 h., .114 d.; medium, well made ware; buff paste with gray core; moderately fired; carefully wet-smoothed. Found 2.40–2.60 deep in U 25.

c 2161 (Fig. 166). Bowl .058 h., .128 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 3.60 deep in BB 24.

c 2195 (Fig. 166). Bowl .063 h., .160 d.; medium, fairly well made ware; buff paste with gray core; warped; wet-smoothed. Found 3 meters deep in BB 24.

c 2386 (Fig. 166). Bowl .081 h., .160 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 2.80 deep in X 24 in the mass of pot fragments including c 2387–88 associated with c X21–22.

d 2369 (Fig. 166). Bowl .080 h., .186 d.; coarse, fairly well made ware; buff paste with gray core; moderately fired; rim wet-smoothed, lower body rough. Found in R 28.[49]

d 2589 (Fig. 167 and Pl. IV). Shallow bowl .060 h., .220 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in R 29.

d 2602 (Fig. 167 and Pl. IV). Bowl .070 h., .130 d.; fine, fairly well made ware; buff paste with gray core; moderately fired; very rough finish. Found in U 28.

d 2664 (Fig. 167 and Pl. IV). Bowl .049 h., .136 d.; very fine, well made ware; buff paste with gray core; moderately fired; dark red slip over all. Found as mortuary gift with d X36 in R 30.

d 2679 (Fig. 168 and Pl. IV). Bowl with flat bottom, .069 h., .175 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; rough finish. Found in T 30.

d 2680 (Fig. 167). Bowl .068 h., .093 d.; fine, well made ware; buff paste with gray core; moderately fired; yellowish red slip over all; highly polished. Found in T 30.

d 2830 (Fig. 166 and Pl. IV). Bowl .078 h., .229 d.; medium, fairly well made ware; light buff paste with gray core; moderately fired; rough finish. Found in Q 29.

[46] Only vessels found from 1930 to 1932 are enumerated here. Vessels of the Hittite period found in previous seasons are described in *OIP* VI 265–75 and *OIP* XIX 108–20. Drawings of typical forms from the excavations of 1927–32 are given in Pls. IV–VII.

[47] The measurements, hereafter abbreviated to the form ".060 h., .143 d.," are given here, as elsewhere, in fractions of meters. The dimensions given are maximal, but in the case of jars, pitchers, etc., are for the body only and do not include handles or spouts. Asterisks distinguish dimensions of preserved portions of incomplete objects. In a very few cases only one dimension or none at all could be given.

[48] With one exception, all the vessels in this list are of grit-tempered paste, and therefore the term is omitted in the following descriptions.

[49] The "d" numbers for which no depth is given were found on the floor level of Level 10 T or between the floor levels of Levels 10 and 11 T in the large complex of 1931.

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d 2848 (Fig. 166 and Pl. IV). Bowl .083 h., .140 d.; very fine, well made ware; buff paste with gray core; moderately fired; red slip on interior of vessel, extending .017 over rim on wet-smoothed exterior. Found in M–N 33.

e 75 (Fig. 167 and Pl. IV). Bowl .052 h., .105 d.; fine, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in R 27.

e 879 (Fig. 167). Bowl .060 h., .148 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed around rim, lower part rough. Found in Q 26.

e 1782 (Pl. IV). Bowl .064 h., .111 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in B 8 in a refuse layer with admixture of Early Bronze Age ware.

e 1961 (Pl. IV). Bowl .065 h., .182 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in X 1.

Bowls with Ring Bases

c 69 (Fig. 168). Bowl with ring base, .060 h., .197 d.; medium, well made ware; grayish buff paste; moderately fired; thin buff slip over all with traces of reddish brown wash on rim. Found .80 deep in J 25.

c 1096 (Fig. 168 and Pl. IV). Large bowl with ring base and two diametrically opposed "buttons" on shoulder, .152 h., .291 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 2.30 deep in I 28.

d 622 (Fig. 168 and Pl. IV). Bowl with ring base, .070 h., .200 d.; medium, well made ware; grayish buff paste; heavily fired; slip over all of varying shades of red due to firing. Found 2.60–2.80 deep in T 30 in a refuse layer with an admixture of numerous post-Hittite potsherds.

d 2678 (Fig. 167 and Pl. IV). Flat bowl or plate with ring base, .055 h., .320 d.; fine, well made ware; buff paste with gray core; heavily fired; light buff slip over all; several holes for mending. Found in R 29.

d 2829 (Fig. 168 and Pl. IV). Large bowl with ring base, .139 h., .288 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in T 28.

Bowls with V-shaped Handles

c 302 (Fig. 169). Fragmentary bowl with ring base and two V-shaped handles, .075 h., .189 d.; medium, very well made ware; buff paste with gray core; moderately fired; reddish wash over all on a buff slip. Found 2.20 deep in M 29.

c 2385 (Fig. 170). Bowl with flat base and two V-shaped handles, .078 h., .181 d.; medium, well made ware; buff paste with thin gray core; moderately fired; polished reddish slip over handles and upper portion of vessel from rim to shoulder; lower part of vessel wet-smoothed. Found 3.80 deep in AA 24.

c 2456 (Fig. 169 and Pl. IV). Bowl with flat base and two V-shaped handles, .078 h., .163 d.; medium, well made ware; buff paste with gray core; moderately fired; on inside of vessel traces of red wash; on outside remains of a reddish slip which covered handles and upper portion of vessel from rim to shoulder; lower part of vessel wet-smoothed. Found 4.75 deep in L 29.

d 77 (Pl. IV). Bowl with two V-shaped handles, .310 d.; medium, well made ware; buff paste with gray core; moderately fired; red slip on handles and rim and extending inside rim; rest of vessel wet-smoothed. Found 2.90 deep in X 24.

d 247 (Fig. 170 and Pl. IV). Bowl with slightly rounded bottom and two V-shaped handles, .115 h., .260 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 2.90 deep in W 24.

d 2355 (Pl. IV). Bowl with two opposed V-shaped handles, two opposed vertical handles, and four protuberances on rim spaced equidistantly from handles, about .325 d.; medium, well made ware; buff paste with gray core; moderately fired; red slip on rim and handles; remainder of vessel wet-smoothed. Found 4.95–5.00 deep in U 30.

d 2855 (Fig. 169 and Pl. IV). Bowl with two V-shaped handles, .070 h., .172 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in U 31.

d 2983 (Fig. 169 and Pl. IV). Bowl with two V-shaped handles, .058* h., .168 d.; medium, well made ware; buff paste with gray core; moderately fired; faded reddish wash on handles and rim extending irregularly onto body both inside and outside; rough finish from somewhat below median body line. Found in P 28.

e 280 (Fig. 171 and Pl. IV). Bowl .094* h., .108 d.; two V-shaped handles, not exactly diametrically opposed, and four almost equidistant protuberances on rim; base, probably a pedestal, missing; fine, well made ware; buff paste with gray core; moderately fired; reddish slip on handles and from inside rim to below median body on outside; lower body wet-smoothed. Found in E 8.

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e 1508 (Fig. 171 and Pl. IV). Bowl with two V-shaped handles and two opposed vertical handles, .077 h., .175 d.; medium, well made ware; buff paste with gray core; moderately fired; yellowish slip over exterior extending over inside of rim. Found in W 1–2.

Cups

c 231 (Fig. 173 and Pl. IV). Cup .066 h., .074 d.; handle broken off; medium, very well made ware; buff paste with gray core; moderately fired; thin buff slip covered by a red wash, extending inside rim. Found 4.30–5.60 deep in M 29.

c 500 (Fig. 172). Cup .037 h., .048 d.; medium, very well made ware; buff paste with gray core; moderately fired; red wash on exterior, extending inside rim; wash absent on underside of handle and on body between handle attachments. Found 4 meters deep in L 29.

c 775 (Fig. 173 and Pl. IV). Cup .046 h., .068 d.; fine, very well made ware; buff paste with thin gray core; moderately fired; buff slip on outside of vessel. Found 3.00–3.55 deep in M 29.

c 1162 (Fig. 173). Cup .047 h., .065 d.; handle broken off; fine, well made ware; buff paste with gray core; lightly fired; wet-smoothed. Found 2.40–2.90 deep in B 24.

c 1233 (Fig. 173 and Pl. IV). Cup .041 h., .068 d.; fine, well made ware; buff paste with occasional gray core streaks; moderately fired. Found in a pit in B 24 with vessels c 1229–32.

c 2131 (Fig. 173 and Pl. IV). Flat cup .017 h., .088 d.; fine, very well made ware; buff paste with thin gray core; moderately fired; highly polished red slip on exterior, extending inside rim; buff slip on interior. Found 2 meters deep in V 24 with vessels c 2126–30 and c 2132–33.

c 2132 (Fig. 173). Flat cup .017 h., .084 d.; fine, very well made ware; buff paste with thin gray core; moderately fired; highly polished red slip on exterior, extending inside rim; buff slip on interior. Found with No. c 2131.

c 2133 (Fig. 173). Flat cup .017 h., .084 d.; fine, very well made ware; buff paste with thin gray core; moderately fired; highly polished red slip on exterior, extending inside rim; buff slip on interior. Found with No. c 2131.

c 2162 (Fig. 172). Cup .029 h., .048 d.; handle broken off; fine, very well made ware; buff paste with thin gray core; moderately fired; reddish wash over exterior. Found 3.60 deep in BB 24.

d 109 (Fig. 172 and Pl. IV). Cup with button base, .041 h., .060 d.; fine, well made ware; buff paste with thin gray core; moderately fired; red slip covers exterior of vessel and handle and extends inside rim. Found 2.90 deep in W 24.

d 1460 (Fig. 174 and Pl. IV). Cup .040* h., .056 d.; bell-shaped, with ring base and handle; fine, well made ware; buff paste with gray core; reddish slip over exterior, extending inside rim. Found in P 33.

d 2458 (Fig. 172 and Pl. IV). Cup with button base and two protuberances at median body line equidistant from handle, .035 h., .045 d.; fine, well made ware; buff paste; moderately fired; over all, a light buff slip now badly faded; traces of painted design above the median body line. Found in P 30.

d 2889 (Fig. 173 and Pl. IV). Cup .045 h., .072 d.; very fine, well made ware; buff paste; moderately fired; rim wet-smoothed; body rough. Found in U 27.

e 984 (Fig. 173 and Pl. IV). Cup with button base, .062 h., .062 d.; very fine, well made ware; buff paste with gray core; moderately fired; very thin slip containing mica; highly polished. Found in S 0, in refuse layer at gateway.

e 1320 (Fig. 172). Cup .041 h., .045 d.; very fine, well made ware; buff paste; moderately fired; micaceous reddish wash over all. Found in C–D 8.

e 1699 (Fig. 172). Cup .043 h., .067 d.; very fine, very well made ware; micaceous buff paste with gray core; moderately fired; wet-smoothed. Found in VV 22.

e 1703 (Fig. 172 and Pl. IV). Flat cup .035 h., .099 d.; medium, well made ware; buff paste with gray core; heavily fired; reddish slip of varying shades due to firing covers exterior and extends inside rim. Found in L 13 just below the oldest post-Hittite building level, associated with Early Bronze Age pottery.

e 2138 (Fig. 173). Cup .056 h., .075 d.; fine, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found outside the eastern part of the city wall.

Cups with Tubular Spouts

c 2126 (Fig. 174 and Pl. IV). Cup with a tubular spout rising from median body opposite handle, .065 h., .075 d.; fine, very well made ware; buff paste with gray core; moderately fired; wet-smoothed; highly polished. Found 2 meters deep in V 24 with vessels c 2127–33.

c 2127 (Fig. 174 and Pl. IV). Cup with a tubular spout opposite handle, .048 h., .087 d.; fine, very well made ware; buff paste with gray core; moderately fired; red wash on outside of vessel, extending inside rim. Found with No. c 2126.

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c 2129 (Fig. 174). Cup with a tubular spout opposite handle, .065 h., .085 d.; fine, very well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found with No. c 2126.

c 2130 (Fig. 174 and Pl. IV). Cup with a tubular spout opposite handle, .065 h., .069 d.; a scratch was made on the inside of the vessel for the spout, but the perforation did not go through; fine, very well made ware; buff paste with thin gray core; moderately fired; wet-smoothed. Found with No. c 2126.

Bell-shaped Cups

c 186 (Fig. 174 and Pl. IV). Bell-shaped cup with ring base, .073* h., .080* d.; medium, well made ware; buff paste with gray core; moderately fired; thin buff slip over all; upper three-fourths of body covered with a reddish wash extending inside rim. Found 2.50 deep in J 27.

c 2478 (Fig. 174 and Pl. IV). Bell-shaped cup with ring base, .102 h., .100 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed; burnished. Found 4.80 deep in R 29.

d 2800 (Fig. 174). Fragmentary small cup, about .050 d.; similar to No. e 326; decorated with protuberances. Found in N 14.

e 189 (Fig. 174 and Pl. IV). Bell-shaped cup with ring base, .047* h., .053 d.; fine, well made ware; buff paste with gray core; moderately fired; reddish slip over exterior, extending inside rim. Found in FF 17.

e 326 (Fig. 174 and Pl. IV). Bell-shaped cup, rim broken off, bottom decorated with hemispherical protuberances, .054* h., .056 d.; fine, well made ware; micaceous buff paste with gray core; moderately fired; wet-smoothed. Found in DD 25.

e 874 (Fig. 174 and Pl. IV). Bell-shaped cup .038 h., .060 d.; fine, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in refuse layer at the northern gateway in S 0.

e 1411 (Fig. 174). Bell-shaped cup with ring base, .060 h., .057 d.; fine, well made ware; buff paste with gray core; moderately fired; reddish slip over exterior, extending inside rim. Found in C 8.

e 1668 (Fig. 174). Fragmentary bell-shaped cup .049* h., .053 d.; similar to No. e 189. Found in V–X 1–2.

Jars

c 799 (Fig. 175 and Pl. IV). One-handled jar with button base, .117 h., .093 d.; fine, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 1.55 deep in I 26.

c 1232 (Fig. 175 and Pl. IV). One-handled jar .120 h., .147 d.; medium, well made ware; buff paste; moderately fired; wet-smoothed. Found in B 24 in a pit with vessels c 1229–31 and c 1233.

c 2194 (Fig. 175 and Pl. IV). One-handled jar .120 h., .106 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. At 90° left of handle the rim bulges outward slightly to form a kind of spout. Found 3 meters deep in BB 24.

d 2416 (Fig. 176 and Pl. IV). One-handled jar .106 h., .108 d.; fine, well made ware; buff paste with gray core; heavily fired; wet-smoothed. Found 4.40 deep in P 28 as a mortuary gift of d X33 with vessels d 2414–15.

d 2456 (Fig. 175 and Pl. IV). One-handled jar with button base, .150* h., .160 d.; fine, well made ware; buff paste with gray core; moderately fired; yellowish red slip over all; highly polished. Found in P 30.

d 2888 (Fig. 176 and Pl. IV). One-handled jar with two-lobed orifice, .104 h., .127 × .113 d.; medium, well made ware; buff paste; moderately fired; remains of reddish wash on exterior above median body and on handle; lower body rough. Found in U 27.

d 2958 (Fig. 175 and Pl. IV). One-handled jar .099 h., .097 d.; fine, well made ware; buff paste; moderately fired; wet-smoothed above median body, rough below. At left of handle the rim bulges outward slightly to form a kind of spout. Found in Q 29 as a mortuary gift of d X52–53.

e 26 (Fig. 176 and Pl. IV). One-handled jar with two protuberances above median body, .093 h., .125 d.; medium, fairly well made ware; buff paste; heavily fired; yellowish red slip of varying shades due to uneven firing. Found in EE 17 as a mortuary gift of e X1–2 with vessels e 27–30.

d 2415 (Fig. 177 and Pl. IV). Jar with pedestal base and three irregularly spaced knobs at median body, .149 h., .114 d.; fine, very well made ware; buff paste; moderately fired; red wash over all; two incised bands below rim. Found 4.40 deep in P 28 as a mortuary gift of d X33 with vessels d 2414 and d 2416.

d 2934 (Fig. 177 and Pl. IV). One-handled jar with pedestal base and four approximately equidistant protuberances at median body line, .107* h., .119 d.; very fine, very well made ware; buff paste; moderately fired; whitish buff slip over exterior, extending inside rim. Found in N 34.

Jars or Pitchers

c 2737 (Pl. IV). Jar or pitcher with one handle, a short, truncated spout, and two small protuberances above median body line, .083 h., .101 d.; medium, very well made ware; buff paste with gray core; wet-smoothed; carefully polished. Found in Q 29 as a mortuary gift of c X26–27 with vessels c 2736 and c 2738.

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d 2457 (Fig. 178 and Pl. IV). Pitcher or jar with clover-leaf orifice and pointed bottom, .109 h., .095 d.; fine, well made ware; buff paste with gray core; moderately fired; faded reddish wash over all. Found in P 30.

d 2660 (Fig. 178 and Pl. IV). Pitcher or jar with clover-leaf orifice and pointed bottom, .090 h., .102 d.; fine, very well made ware; buff paste; moderately fired; dark yellowish red slip over exterior, extending inside rim. Found in Q 30 as a mortuary gift of d X41.

Pitchers with Clover-Leaf Orifices

c 1231 Pitcher with clover-leaf orifice, .378 h., .290 d.; similar to No. e 1960 (Fig. 181). Found in a pit in B 24 with vessels c 1229–30 and c 1232–33.

c 2000 (Fig. 180). Pitcher with clover-leaf orifice, .176 h., .122 d.; coarse, fairly well made ware; buff paste with gray core; lightly fired; wet-smoothed. Found 3.20–3.40 deep in Q 29. Inside this pitcher were fragments of a necklace of gold, silver, bronze or copper, and frit beads (c 2000*a*, Fig. 309).

c 2735 (Fig. 180 and Pl. V). Pitcher with clover-leaf orifice, .155 h., .102 d.; medium, well made ware; buff paste; moderately fired; wet-smoothed; carefully polished to a distinct sheen. Found in Q 29 as a mortuary gift of c X25.

c 2738 (Fig. 180). Pitcher with clover-leaf orifice, .156 h., .116 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in Q 29 as a mortuary gift of c X26–27 with vessels c 2736–37.

d 2400 (Fig. 182 and Pl. V). Small pitcher with clover-leaf orifice, button base, and two protuberances above the median body line, .085 h., .049 d.; fine, well made ware; buff paste with gray core; moderately fired; faded reddish yellow wash over all. Found in M–N 33.

d 2662 (Fig. 180). Pitcher with clover-leaf orifice and pointed bottom, .108 h., .076 d.; fine, well made ware; buff paste; moderately fired; yellowish red wash over exterior, extending inside rim. Found in Q 30 as a mortuary gift of d X42–43 with pitcher d 2661.

d 2957 (Fig. 181 and Pl. IV). Pitcher with clover-leaf orifice and pointed bottom, .106 h., .094 d.; fine, fairly well made ware; buff paste with gray core; lightly fired; rim and upper part of body wet-smoothed; lower part rough. Found in Q 29 as a mortuary gift of d X51 with pitcher d 2956.

e 31 (Fig. 180 and Pl. V). Pitcher with clover-leaf orifice, .181 h., .099 d.; fine, very well made ware; buff paste; moderately fired; very thin yellowish red slip over exterior, apparently originally burnished and now peeling off. Found in P 27 just beneath cuneiform tablet hoard d 2860.

e 1222 (Fig. 179 and Pl. V). Pitcher with clover-leaf orifice, .136 h., .075 d.; fine, well made ware; buff paste; moderately fired; wet-smoothed; one reddish band over rim and a second one around median body at base of handle; the handle also was probably painted red. Found in FF 3 while freeing foundations of postern.

e 1960 (Fig. 181). Pitcher with clover-leaf orifice, .210 h., .135 d.; fine, well made ware; micaceous buff paste with gray core; moderately fired; wet-smoothed. Found in X 1.

Pitchers with Beak-Spouts

c 131 Pitcher similar to those in Figure 183, .190* h., .127 d. Found 1.60 deep in J 27 with vessels c 130 and c 132.

c 690 Pitcher .200* h., .124 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 5.60 deep in J 29 in a pit with pitcher c 691.

c 691 (Fig. 189). Pitcher with ring base, .185* h., .120 d.; fine, well made ware; buff paste with gray core; heavily fired; wet-smoothed. Found with No. c 690.

c 1559 Pitcher .250* h., .129 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 2.40 deep in CC 24.

c 2008 Pitcher .180* h., .126 d.; medium, fairly well made ware; buff paste; moderately fired; wet-smoothed. Found 2.70 deep in X 24.

c 2387 (Fig. 181). Pitcher .130* h., .125 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed; red wash on upper body. Found 2.80 deep in X 24, associated with Nos. c 2386 and c 2388 as a mortuary gift of c X21–22.

c 2388 Similar to No. c 2387 and found with it.

c 2736 (Fig. 184 and Pl. V). Pitcher with two beak-spouts turned in opposite directions and a handle at right angles between them, .132 h., .108 d.; medium, well made ware; buff paste; moderately fired; wet-smoothed with traces of a wash. Found in Q 29 as a mortuary gift of c X26–27 with vessels c 2737–38.

d 1935 (Fig. 189). Pitcher with ring base, .220* h., .169 d.; medium, very well made ware; buff paste; moderately fired; yellowish red slip over all; polished to a sheen. Found .275 deep in S 31.

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d 2268 (Fig. 189 and Pl. V). Pitcher with semi-pedestal base, .188* h., .148 d.; fine, very well made ware; buff paste with gray core; moderately fired; yellowish red slip over exterior, extending inside rim; highly polished. Found 2.90 deep in M 34 as a mortuary gift of d X32 with pitcher d 2267.

d 2383 (Fig. 183). Pitcher with beak-spout, .210* h., .129 d.; fine, well made ware; buff paste with gray core; heavily fired; upper part of body carefully wet-smoothed, lower part roughly finished. Found in U 28 inside storage jar d 2382.

d 2434 (Fig. 183 and Pl. V). Pitcher with beak-spout, .210* h., .135 d.; medium, well made ware; buff paste with gray core; moderately fired; thin yellowish red slip over all. Found in U 28.

d 2439 (Fig. 181). Pitcher .210* h., .135 d.; medium, well made ware; buff paste with gray core; moderately fired; faded reddish wash over all. Found in P 29.

d 2588 Pitcher .186* h., .132 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in S 30.

d 2661 (Fig. 184 and Pl. V). Pitcher with beak-spout, .178 h., .123 d.; fine, very well made ware; buff paste; moderately fired; yellowish red slip over exterior, extending inside spout; highly polished. Found in Q 30 as a mortuary gift of d X42–43 with pitcher d 2662.

d 2689 (Fig. 184 and Pl. V). Pitcher with semi-pedestal base, .140* h., .128 d.; fine, well made ware; buff paste with gray core; moderately fired; yellowish red slip varying in color through firing covers exterior. Found in U 28.

d 2806 (Fig. 181). Pitcher with pointed bottom, .200* h., .140 d.; medium, very well made ware; buff paste; moderately fired; yellowish red slip over all; carefully polished. Found in U 27.

d 2956 (Fig. 184 and Pl. V). Pitcher with beak-spout, .135 h., .105 d.; fine, fairly well made ware; buff paste with gray core; lightly fired; wet-smoothed. Found in Q 29 as a mortuary gift of d X51 with pitcher d 2957.

d 2959 (Fig. 184). Pitcher with beak-spout and ring base, .150 h., .111 d.; fine, fairly well made ware; buff paste with gray core; lightly fired; wet-smoothed. Found in Q 29 as a mortuary gift of d X54 with pitcher d 2960.

d 2960 (Fig. 184 and Pl. V). Pitcher with beak-spout and ring base, .143 h., .097 d.; fine, well made ware; buff paste; moderately fired; yellowish red slip over all; carefully polished to a sheen. Found with No. d 2959.

d 2969 (Fig. 188 and Pl. V). Pitcher with beak-spout, strainer, and semi-pedestal base, .304 h., .163 d.; fine, very well made ware; buff paste; moderately fired; reddish slip over exterior, extending inside spout; carefully burnished. Found in Q 31.

d 2985 (Fig. 183). Pitcher with beak-spout, .220 h., .132 d.; fine, fairly well made ware; buff paste with gray core; moderately fired; upper part of body wet-smoothed, lower part rough. Found in T 27.

e 27 (Fig. 185 and Pl. V). Pitcher with beak-spout and button base, .250 h., .151 d.; fine, well made ware; buff paste with gray core; moderately fired; yellowish red slip over exterior. Found in EE 17 as a mortuary gift of e X1–2 with vessels e 26 and e 28–30.

e 29 (Fig. 187 and Pl. V). Pitcher with beak-spout, pedestal base, and two upward-slanting protuberances, .372 h., .198 d.; medium, well made ware; buff paste with gray core; moderately fired; reddish slip over all. Found with No. e 27.

e 30 (Fig. 188 and Pl. V). Pitcher with beak-spout, strainer, and pedestal base, .310* h., .147 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found with No. e 27.

e 683 (Pl. V). Fragment of large pitcher with beak-spout and three handles, .355 d.; medium, well made ware; buff paste; moderately fired; reddish wash on upper part of body. Found in a box of the city wall in GG 14.

e 684 (Fig. 185). Pitcher with beak-spout, .237* h., .180 d.; medium, well made ware; buff paste with gray core; moderately fired; yellowish red slip over exterior. Found in a box of the city wall in GG 14.

e 877 (Fig. 186 and Pl. V). Pitcher with beak-spout and three protuberances, the bottom missing, .308* h., .230 d.; fine, very well made ware; buff paste with gray core; moderately fired; reddish slip over exterior; carefully burnished. Found in Q 26.

e 1353 (Fig. 189). Pitcher with beak-spout, .359 h., .210 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in S 20.

Pitchers with Tubular Spouts

c 996 (Fig. 190 and Pl. VI). Pitcher with tubular spout, .170* h., .154 d.; medium, very well made ware; buff paste with gray core; moderately fired; reddish slip over exterior; carefully polished. Found 1.60 deep in I 26.

c 1748 (Fig. 190 and Pl. VI). Pitcher with stubby tubular spout, .124 h.; medium, very well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in Level 5 M in L 12.

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c 2524 (Fig. 190 and Pl. VI). Pitcher with tubular spout, .157 h., .134 d.; medium, very well made ware; buff paste with gray core; moderately fired; wet-smoothed; upper part of body covered with a reddish slip; polished. Found 3.20 deep in U 25.

c 2733 (Fig. 191 and Pl. VI). Pitcher with slightly tapering tubular spout set at right angles to plane of handle, .124 h., .128 d.; along an extension from top of handle to rim slides a perforated convex lid; fine, very well made ware; buff paste with gray core; moderately fired; yellowish red slip on exterior. Found in Q 29 as a mortuary gift of c X23–24.

d 2267 (Fig. 192 and Pl. VI). Pitcher with lateral tubular spout and pedestal base, .288 h., .161 d.; fine, very well made ware; moderately fired; yellowish red slip over all; carefully polished. Found 2.90 deep in M 34 as a mortuary gift of d X32 with pitcher d 2268.

d 2663 (Fig. 191 and Pl. VI). Pitcher with lateral, slightly tapering tubular spout, set at right angles to plane of handle, and ring base, .137 h., .134 d.; fine, very well made ware; buff paste with gray core; moderately fired; reddish slip over exterior. Found in Q 30 as a mortuary gift of d X44.

d 2854 (Fig. 190 and Pl. VI). Pitcher with lateral tubular spout, .170 h., .139 d.; fine, well made ware; buff paste; moderately fired; wet-smoothed; reddish wash on upper body. Found in O 33–34.

Grape-Cluster Pitchers

d 2343 (Fig. 192 and Pl. VI). Pitcher in the form of a bunch of grapes, with lateral tubular spout, .215* h.; fine, very well made ware; handmade; buff paste with gray core; moderately fired; much faded reddish wash on exterior. Found in Q 29 with No. d 2344.

d 2344 (Fig. 192). Pitcher similar to No. d 2343, .200* h.

Flasks

d 2414 (Fig. 194 and Pl. V). Flask(?) with oval cross-section and one handle, .285 h., .200 × .094 d.; fine, very well made ware; handmade; grayish buff paste; moderately fired; gray slip on body, apparently reddish slip on handle, neck, and rim. Found 4.40 deep in P 28 with vessels d 2415–16 as a mortuary gift of d X33.

d 2487 (Fig. 193 and Pl. V). Flask with a clover-leaf orifice turned toward the handle, .250 h., .167 d.; medium, well made ware; grayish buff paste; moderately fired; yellowish red slip over exterior, extending inside spout; polished. Found in P 30.

d 2716 (Fig. 194 and Pl. V). Flask with handle and flat base, .135 h., .120 d.; medium, fairly well made ware; buff paste; heavily fired; on exterior a buff slip of varying color due to firing. Found in Q 30 with d X42–43.

d 2940 (Fig. 194). Flask with handle, .090 h., .086 d.; fine, poorly made ware; handmade; gray paste; lightly fired; traces of grayish slip. Found in T 27.

e 28 (Fig. 193 and Pl. V). Flask with handle, .190* h., .146 d.; fine, very well made ware; buff paste with gray core; moderately fired; reddish slip over exterior; carefully polished. Found in EE 17 as a mortuary gift of e X1–2 with vessels e 26–27 and e 29–30.

e 875 (Fig. 194). Small flask with oval cross-section and one handle, .064* h., .069 × .042 d.; fine, fairly well made ware; handmade; buff paste; moderately fired; reddish slip over exterior. Found in S 0.

e 1434 (Fig. 194). Flask(?) with handle, .138* h., .127 d.; fine, well made ware; buff paste with gray core; moderately fired; reddish slip over exterior; carefully polished. Found in FF 17.

Storage Vessels with Flaring Rims

c 1085 (Fig. 195). Storage vessel with flaring rim, pointed bottom, and two vertical handles at median body, .470 h., .305 d.; coarse, fairly well made ware; buff paste with gray core; moderately fired; red wash on upper half of vessel but not on handles; lower part wet-smoothed. Found 2.85 deep in I 31.

c 2377 (Fig. 197 and Pl. VII). Storage vessel with flaring rim, two V-shaped handles, and a pointed bottom, .440 h., .320 d.; coarse, well made ware; buff paste with gray core; moderately fired; buff slip on upper part, lower part roughly finished; two large red bands, one below rim, the other at greatest body diameter, connected by diagonals; outsides of handles painted. Found 4.00–4.50 deep in U 27.

c 2695 (Fig. 195). Storage vessel with flaring rim, two V-shaped handles, and a pointed bottom, .450* h., .270 d.; coarse, well made ware; buff paste with gray core; moderately fired; buff slip over exterior; upper third of body had a reddish wash. Found 4.30 deep in CC 24.

c 2744 (Fig. 197). Storage vessel with flaring rim, two V-shaped and two vertical handles, and a pointed bottom, .453* h., .330 d.; coarse, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed; broad yellowish red bands at neck and greatest body diameter with six broad bands joining them; incised line above handles. Found 5.80 deep in S 29.

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d 2309 (Pl. VII). Storage vessel with flaring rim, two vertical handles, and a pointed bottom, .430 h., .324 d.; medium, fairly well made ware; buff paste with gray core; heavily fired; wet-smoothed with traces of buff slip on rim. Found 1.30 deep in L 34.

d 2310 (Pl. VII). Storage vessel with flaring rim, two vertical handles, two knobs equidistant between the handles, and a rounded bottom, .460 h., .380 d.; coarse, well made ware; buff paste with gray core; moderately fired; yellowish red slip over exterior; incised band at handle line. Found 1.30 deep in L 34.

d 2382 (Fig. 195). Storage vessel with flaring rim, two vertical handles, and a rounded bottom, .440* h., .250 d.; coarse, well made ware; buff paste with gray core; moderately fired; wet-smoothed; remains of red wash above median body line. Contained pitcher d 2383. Found in U 28.

d 2466 (Pl. VII). Storage vessel with probably flaring rim, two vertical handles, two knobs equidistant between handles, and a rounded bottom, .400* h., .305 d.; medium, well made ware; buff paste with gray core; moderately fired; yellowish red slip over exterior. Found in Q 29.

d 2647 (cf. shape of c 2695, Fig. 195). Storage vessel with flaring rim, two V-shaped handles, and a pointed bottom, .430 h., .303 d.; coarse, well made ware; buff paste with gray core; moderately fired; remains of reddish wash over exterior; incised band around circumference above handles. Found in U 28.

d 2801 (Fig. 196). Storage vessel with flaring rim, two V-shaped handles, and a pointed bottom, .410* h., .310 d.; coarse, well made ware; buff paste with gray core; moderately fired; yellowish red slip over exterior; faded remains of two broad bands, one below rim and one at median body, connected by diagonal bands; incised line above handles. Found in R 28.

d 2979 (Fig. 196 and Pl. VII). Storage vessel with flaring rim, two V-shaped handles, and a pointed bottom, .505 h., .350 d.; coarse, well made ware; buff paste with gray core; moderately fired; wet-smoothed with reddish slip over rim and body to median line. Found in R 28 below foundation of the mansion.

e 1436 (Fig. 195). Storage vessel with flaring rim, two vertical handles, and a pointed bottom, .510 h., .345 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in VV 24.

e 2302 (Fig. 198 and Pl. VII). Storage vessel with flaring rim, two vertical and two V-shaped handles, and probably a pointed bottom, .300* h., .340 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed; red wash around rim and two broad stripes, one at median body and one at rim, connected by broad diagonal lines; incised lines at handle line. Found at northern gateway.

Other Storage Vessels

c 425 (Fig. 199). Large jar with small neck, .540* h., .370 d.; coarse, fairly well made ware; reddish paste; warped; yellowish red slip over exterior. Found 1.10 deep in J 25.

c 1229 (Fig. 199). Fragmentary large jar with three handles (one broken off), .430 d.; coarse, well made ware; buff paste with gray core; moderately fired; buff slip. Found in a pit in B 24 with vessels c 1230–33.

c 1503 (Fig. 199). Two-handled storage vessel, .640 h., .520 d.; coarse, well made ware; buff paste with gray core; moderately fired; slip varying in color from buff to red due to firing; on upper sides between handles two small knobs with recessed centers. Found in L 34.

c 2459 (Fig. 203 and Pl. VI). Large two-handled jar .370 h., .350 d.; coarse, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 4.40 deep in U 27.

e 1352 (Fig. 200 and Pl. VII). Large storage vessel with two V-shaped handles, .600 h., .650 d.; very coarse, grit- and plant-tempered ware; handmade; buff paste; moderately fired; originally perhaps covered with a wash, now rough-finished. Found in P 31.

e 2318 (Pl. VII). Storage vessel .650 h., .500 d.; two knobs opposite each other near rim, each with a depression in the middle; very coarse, well made ware; moderately fired; rough finish. Found in VV 24.

Miscellaneous Vessels

c 119 (Fig. 207 and Pl. VI). Pot stand .200 h., .212 d.; medium, well made ware; reddish paste; moderately fired; wet-smoothed. Found 2 meters deep in M 29 with fragments of a large jar with pointed bottom.

c 130 (Fig. 202). Jar with two lateral handles, .160 h., .162 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found 1.60 deep in J 27 with vessels c 131–32.

c 227 Fragmentary pot stand .110* h., .116* d.; coarse, fairly well made ware; reddish paste; moderately fired; thin buff slip. Found 2.00–2.35 deep in J 29.

c 723 (Fig. 203 and Pl. VI). Large two-handled jar .232 h., .293 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found .80 deep in I 26.

c 1230 (Fig. 207). Bowl with remains of a pedestal base,[50] .195 h. (restored), .250 d.; medium, well made ware;

[50] Several pedestal bases of this type have been found; some of them showed a yellowish red to red wash on the outer margin of the base.

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buff paste with gray core; warped; wet-smoothed with a yellowish red wash on rim and over upper third of body. Found in B 24 with vessels c 1229 and c 1231–33.

c 1276 (Fig. 207 and Pl. VI). Small cylindrical vessel with a ring base, .114* h., .079 d.; fine, very well made ware; reddish paste; lightly fired; reddish slip over exterior; carefully polished. Found 3.20 deep in I 30.

c 1277 (Fig. 207). Small cylindrical vessel with a ring base, now ground off, .122* h., .072 d.; fine, well made ware; grayish paste; moderately fired; reddish slip over exterior; highly polished. Found 3.20 deep in I 30.

c 2594 (Fig. 206 and Pl. VI). Jar .134 h., .119 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed; carefully polished. Found 4.50 deep in Q 29.

c 2734 (Fig. 201 and Pl. VI). Goblet with quatrefoil orifice with strainer set within one lobe, two lateral handles, and a pedestal base, .193* h., .119 d.; medium, well made ware; buff paste with gray core; moderately fired; light reddish buff slip over all. Two sets of three incised lines encircle the vessel, one at the greatest body diameter and the other just above. Found in Q 29 as a mortuary gift with c X23–24.

c 2763 (Fig. 207 and Pl. VI). Pot stand .088 h., .170 d.; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in refuse of Level 10 T.

d 1096 (Fig. 201 and Pl. VI). Small vessel with one handle, two knobs just above median body opposite handle, and a pedestal base, .149* h., .076 d.; fine, very well made ware; buff paste; moderately fired; whitish buff slip over exterior; incised lines at the base of the neck. Found 2 meters deep in O 33–34.

d 1766 (Fig. 205 and Pl. VI). Large rectangular vessel with two handles on each end, .290 h., .390 long, .320 wide; coarse, well made ware; buff paste with gray core; moderately fired; reddish wash over the exterior to the median body, including the top of the rim; below the median body line the vessel is wet-smoothed; on each long side appear two eyes, which were not covered by the wash. Found 1.50–2.00 deep in O 33.

d 2100 and d 2516 (Figs. 153–54). Fragments of a large vessel with human figures in relief; medium, very well made ware; buff paste; moderately fired; reddish slip over exterior, extending inside rim; carefully polished. Found 3.95–4.50 deep in T 28.

d 2151 (Fig. 202 and Pl. VI). Two-handled jar with ring base, .230 h., .214 d.; medium, well made ware; buff paste; moderately fired; reddish slip over exterior to median body; lower part wet-smoothed. Found in P 28.

d 2408 (Fig. 202 and Pl. VI). Two-handled jar .160 h., .187 d.; medium, poorly made ware; grayish paste; heavily fired; wet-smoothed. Found in R 28.

d 2448 (Fig. 201). Fragment of small vessel with two handles and a pedestal base, .071* h., .064 d.; medium, well made ware; grayish buff paste with gray core; moderately fired; dark yellowish red slip over all; two shallow grooves at neck. Found in T 29.

d 2543 (Fig. 202 and Pl. VI). Cup with two lateral handles, .053 h., .062 d.; fine, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in R 28.

d 2715 (Fig. 201 and Pl. VI). Vessel with a quatrefoil orifice, two lateral handles, and a button base, .098 h., .085 d.; medium, well made ware; buff paste with gray core; moderately fired; yellowish red slip over all. Found in Q 30 as a mortuary gift with d X42–43.

d 2982 (Pl. VI). Vessel with two lateral handles, .160* h., .128 d.; medium, fairly well made ware; buff paste with gray core; moderately fired; rough finish. Found in M–N 33.

d 2991 (Fig. 201 and Pl. VI). Small vessel, originally with two lateral handles and a pedestal base, .125* h., .061 d.; medium, well made ware; buff paste with gray core; moderately fired; reddish slip over all. Found in P 31.

e 880 (Fig. 206 and Pl. VI). Jar with ring base, .275 h., .235 d.; fine, well made ware; micaceous buff paste with gray core; moderately fired; wet-smoothed. Found in P 25.

e 1079 (Fig. 204 and Pl. VI). Jar with two V-shaped handles, two knobs equally spaced between the handles, and three feet, .220 h., .245 d.; coarse; well made ware; buff paste; moderately fired; wash or slip blackened by fire. Found in Z 26.

e 1355 (Fig. 206 and Pl. VI). Jar .175 h., .196 d.; coarse, fairly well made ware; buff paste; moderately fired; grayish slip over all. Found in VV 24.

e 1581 (Fig. 201). Small vessel with two lateral handles and a button base, .085* h., .065 d.; fine, well made ware; buff paste with gray core; moderately fired; reddish slip over exterior and yellowish red slip on interior; two deeply incised grooves above median body line. Found in CC 23.

Rhytons

c 352 (Fig. 214). Fragmentary rhyton; part of an animal's muzzle showing nostrils, mouth, and one eye; medium, well made ware; buff paste; moderately fired; red slip; polished. Found 2.20–3.00 deep in M 29.

c 439 (Fig. 211). Fragmentary rhyton; upper part of a lion's muzzle with nostrils and protruding canines; medium, well made ware; buff paste; moderately fired; wet-smoothed. Found 2.95 deep in L 29.

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c 587 (Fig. 213). Fragmentary rhyton; animal's head with protruding eyes; medium, well made ware; buff paste with gray core; brownish slip; polished. Found 4 meters deep in J 23.

c 762 (Fig. 210). Rhyton; bull's head with eyes in relief and with attachment of a handle on one side; very well executed; fine, very well made ware; buff paste; moderately fired; brownish red slip over exterior; highly burnished. In the middle of the forehead is an incised and punctated triangle; a small incised circle with a dot in the center appears at each side of the triangle, and below its lower point is a third incised circle with rays around it and a short horizontal line in the middle. Around the eyes are incised bands, and the torus is decorated with a herringbone design. A bridle(?) seems to be indicated. Found 1.65–2.50 deep in I 31.

c 964 (Fig. 211). Fragmentary rhyton; lion's head, with mane indicated by triangular incisions; very well modeled; fine, very well made ware; grayish black paste; moderately fired; brownish slip; highly burnished. Found within the foundation of the southern gateway in J 35.

c 1740 (Fig. 209). Fragmentary rhyton; bull's head; fine, very well made ware; buff paste with gray core; moderately fired; buff slip over exterior; highly polished. On the forehead is an incised and punctated triangle; the rest of the forehead is covered with incised crosshatching, and the space between the eyes is filled with a number of incised bands and one punctated band. Incised bands surround the eyes; the pupil is indicated by a small circle. The torus also is decorated with incisions. A bridle(?) seems to be indicated by a crudely incised spiral motive. Found 2.10 deep in CC 24.

c 1776 (Fig. 208). Rhyton; cat's head; part of rim and handle attachment preserved; medium, very well made ware; grayish paste; moderately fired; brownish black slip over all; highly polished. Found 1.70 deep in W 24.

c 2007 (Fig. 211). Fragmentary rhyton, including attachment of handle; part of an unrecognizable animal's head with open mouth, showing small back teeth and two small holes at front, perhaps for insertion of canines of another material; medium, well made ware; grayish buff paste; moderately fired; red slip on exterior; polished. Found 2.70 deep in X 24.

d 1924 (Fig. 209). Fragmentary rhyton; upper part of a bull's head; fine, very well made ware; buff paste; moderately fired; reddish brown slip over exterior. Two deeply incised concentric circles appear on the forehead. Found 3.55–3.90 deep in T 31.

d 2541 (Fig. 209). Fragmentary rhyton; upper part of a bull's head; medium, well made ware; buff paste; moderately fired; brownish red slip; polished. There is a white band above each eye. Found in R 28.

e 43 (Fig. 212). Rhyton; rabbit with forelegs lying close to the chin; medium, well made ware; grayish buff paste; moderately fired; slip of varied color due to firing. Found in Level 11 T in P 27.

e 94 (Fig. 213). Fragmentary rhyton; fantastic bird's head with long beak; fine, very well made ware; grayish buff paste; moderately fired; yellowish red slip over exterior; highly polished. Found in Level 11 T in Q 27.

e 726 (Fig. 213). Fragmentary rhyton; part of an animal's head showing nostrils and mouth; fine, well made ware; grayish buff paste; moderately fired; slip discolored by heat. Found in Level 11 T in R 26.

e 2045 (Fig. 214). Rhyton; bull's head; medium, very well made ware; buff paste; moderately fired; yellowish red slip over exterior; highly polished. On the forehead appears a creamy white triangle; the horns, the eyes, and a bridle also seem to have been painted creamy white. Found in refuse of the northern gateway in S 1.

Pottery figurines are described below; pottery seals, on pages 221–29; minor pottery objects, including "whorls," on pages 273–84. For chemical analyses of pottery see *OIP* XXX 336 f.

FIGURINES

Characteristic for this period are flat lead figurines of human beings (Fig. 230). No. d 154 is a diorite mold for casting such figures. It shows a woman wearing a long garment and a necklace and carrying a child. Beside her stands a bearded man wearing a similar garment and a high conical headdress and carrying a lance or spear. They are most probably a divine couple. In No. e 916, a similar double figure, the bearded god carries an ax; the goddess clasps her breasts. The conical headdress of the god is broken off. The much deteriorated figure e 672 probably represents a god; he resembles very closely No. b 2243.[51] No. d 2638 may be a fragment of an idol similar to No. b 1599;[51] but the headdress here is conical, whereas No. b 1599

[51] *OIP* XIX 128.

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Fig. 230.—Human Figurines of Metal, Frit, and Stone. Actual Size

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has a bird as headdress. No. c 1315 shows a woman dressed in a *kaunakēs* and wearing a necklace. This figurine is similar to No. b 1445,[51] in which the headdress is better preserved and the garment leaves the upper part of the body bare. Nos. e 2317 and e 1295 are figures of women, one in a long, elaborately decorated dress, the other naked. Both wear necklaces and both clasp their breasts.

No. e 1612, a bronze figure found in B 8, was in a very much disturbed layer in which the monochrome wheelmade ware predominated, although there was an admixture of typical Early Bronze Age ware. Two frit figurines with light blue glaze (d 2971 and d 2966) are probably representations of Ishtar imported from Mesopotamia. A fragment of a similar figurine (2296)[52] was found in 1927. No. c 479 is a small stone figurine.

Figures 231–33 show typical pottery figurines of human beings. Nos. e 132 and c 634 (Fig. 231) are developments of the Copper Age "Geigenidol"; No. e 132 shows an indication of legs. No. c 677 presumably represents a woman wearing a cylindrical headdress. No. c 1917 (Fig. 233) is the head of a figurine with a prominent nose and indications of a broad necklace. Another type of figurine, one in which the lower part was widened to form a pedestal, is shown in Figure 232. The arms seem usually to have been outstretched; on No. c 2430 the lower extremities are indicated. Most of the figures seem to be female; Nos. c 596 and e 631 (Fig. 231), however, are phallic figures wearing pointed headdresses like that on No. e 917. No. e 631 has one arm bent and resting on the side, while the other arm seems to have been raised. It is presumably of the same type as a better preserved piece found in 1929 (b 2447)[53] which shows one arm raised with the hand touching the head, while the other arm is folded across the chest. Nos. e 1442, e 583, and c 2052 (Fig. 234) seem to be heads of larger figurines. No. c 2052 shows three perforations in the ear, probably to attach earrings of metal. With the exception of Nos. e 583 and c 2052, which show remains of polished slips, the finish of the pottery figurines is very crude.

The animal figurines are nearly all of pottery. Figure 235 shows several representations of horses. No. c 216, the head of a horse with a bridle, is of the typical buff ware of this period with a gray core and is rather carefully wet-smoothed. No. e 761 has traces of a painted bridle. The identification of the animals in Figures 236–37 (except b 1437, described below) is very difficult. They are similar to those of the Copper Age and the Chalcolithic period, but they are less block-shaped, as the legs are now freed. Nos. d 792 and c 1219 are bulls or cows; Nos. d 798 and b 1866 are a sheep and a goat respectively; and Nos. c 1042 and d 2941 represent rams. No. e 835 is probably the head of a water buffalo, the animal called *manda* or *camus* by the Turks. Nos. c 2587 and e 110 are pigs. No. d 137 is a dog, and Nos. e 763 and e 435 also may be dogs. No. e 163 seems to represent a skin. The creatures shown in Figures 238–40 are mostly indeterminable.

Of better paste and workmanship are the figurines in Figures 241–42. No. d 110 (Fig. 241) is hollow and, like No. c 139, seems to be a monster. No. e 2262 (Fig. 242), a bull's head, shows remains of painted decoration. The triangular design on the forehead is similar to that on the bull's-head rhytons c 762, c 1740, and e 2045. Another animal head which also shows traces of painted ornamentation is No. b 2508.[54] One of the best figurines is the bull's head b 1437,[55] covered with a carefully polished slip (Fig. 237).

The legs in Figure 243 probably belonged to large animal figurines. No. d 165 might be the paw of a lion; No. e 108, the leg of a bull; and No. e 201, the claw of a bird of prey. No.

[52] *OIP* VII 37 and Fig. 27.

[53] *OIP* XIX 132.

[54] *OIP* XIX, Fig. 166.

[55] *OIP* XIX, frontispiece and Fig. 165.

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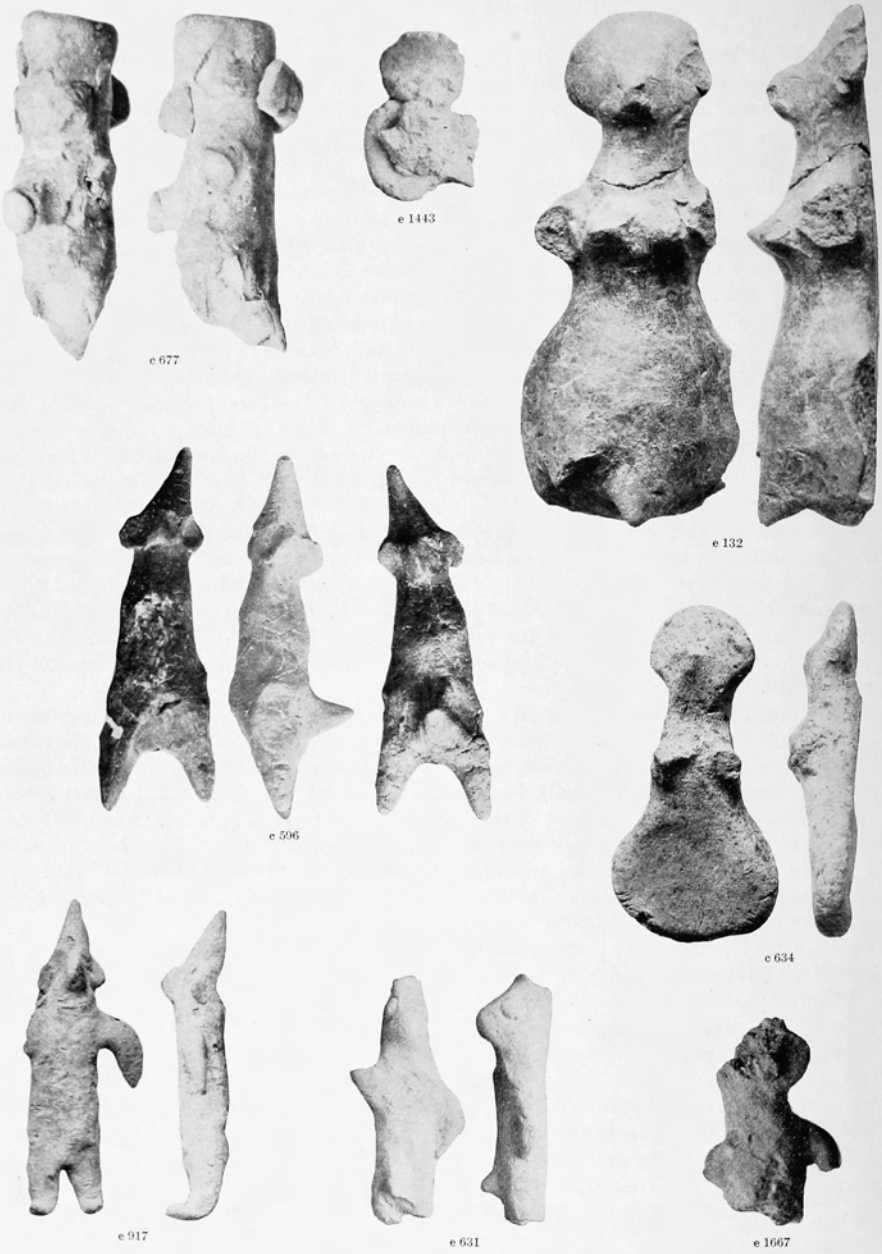

Fig. 231.—Human Figurines of Pottery. Actual Size

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d 2474

c 1806

c 454

c 2430

d 919

d 2696

c 898

Fig. 232.—Human Figurines of Pottery. Actual Size

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e 1917 e 1314

Fig. 233.—Heads of Pottery Figurines. Actual Size

e 1442 e 583

e 2052

Fig. 234.—Heads of Pottery Figurines. Actual Size

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Fig. 235.—Pottery Figurines of Horses. Actual Size

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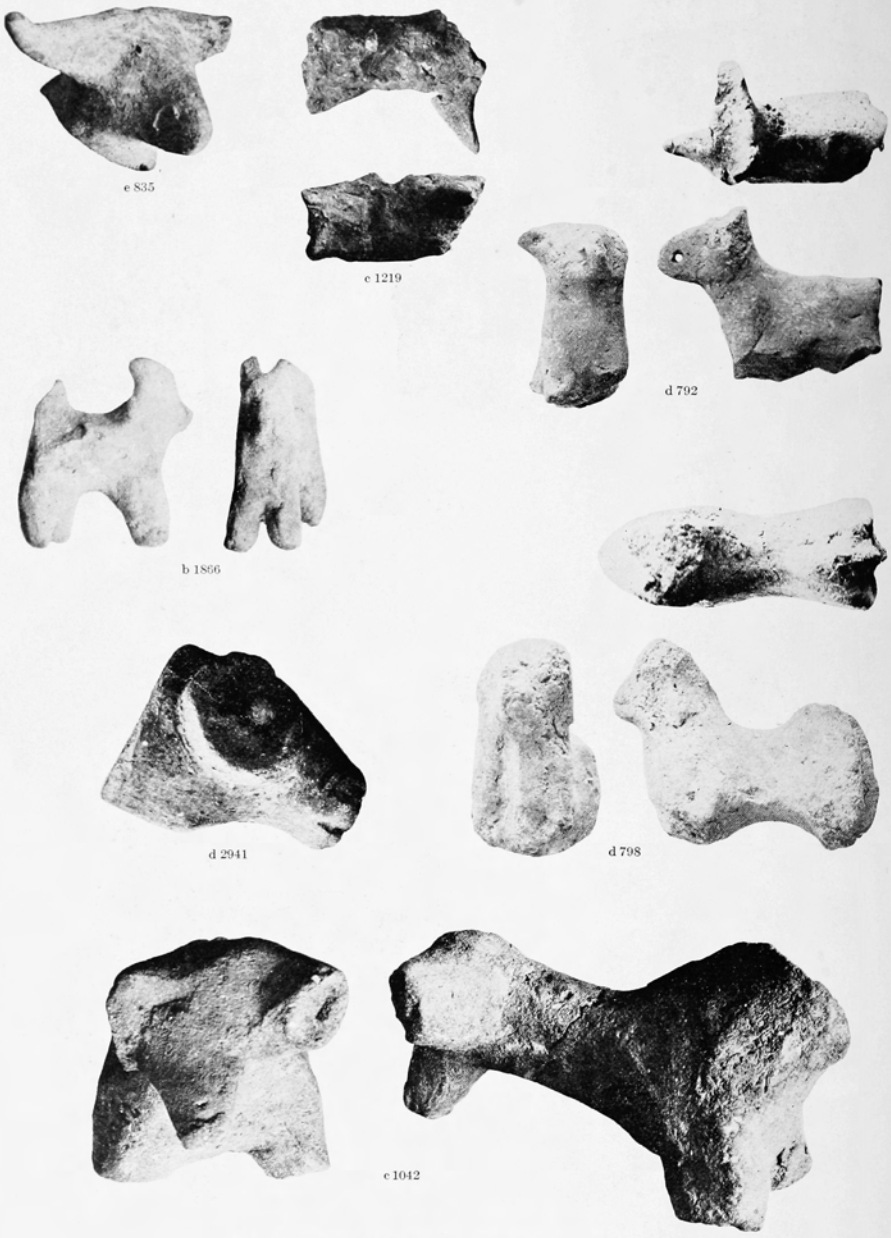

Fig. 236.—Pottery Figurines of Animals. Actual Size

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Fig. 237.—Pottery Figurines of Animals. Actual Size

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FIG. 238.—POTTERY FIGURINES OF ANIMALS. SCALE, 2:3

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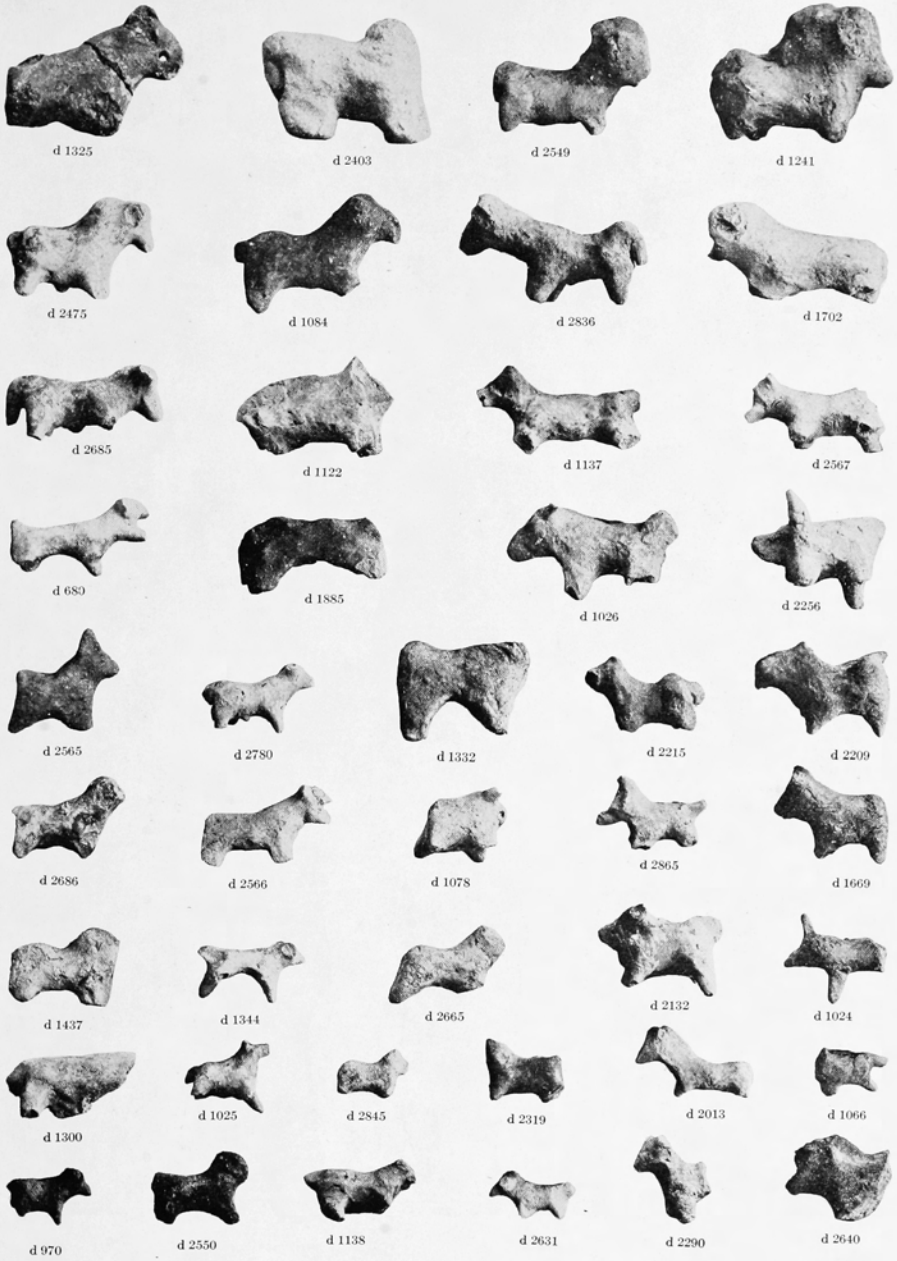

FIG. 239.—POTTERY FIGURINES OF ANIMALS. SCALE, 2:5

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Fig. 240.—Pottery Figurines of Animals. Scale, 2:3

Fig. 241.—Pottery Figurines of Monsters. Scale, 2:3

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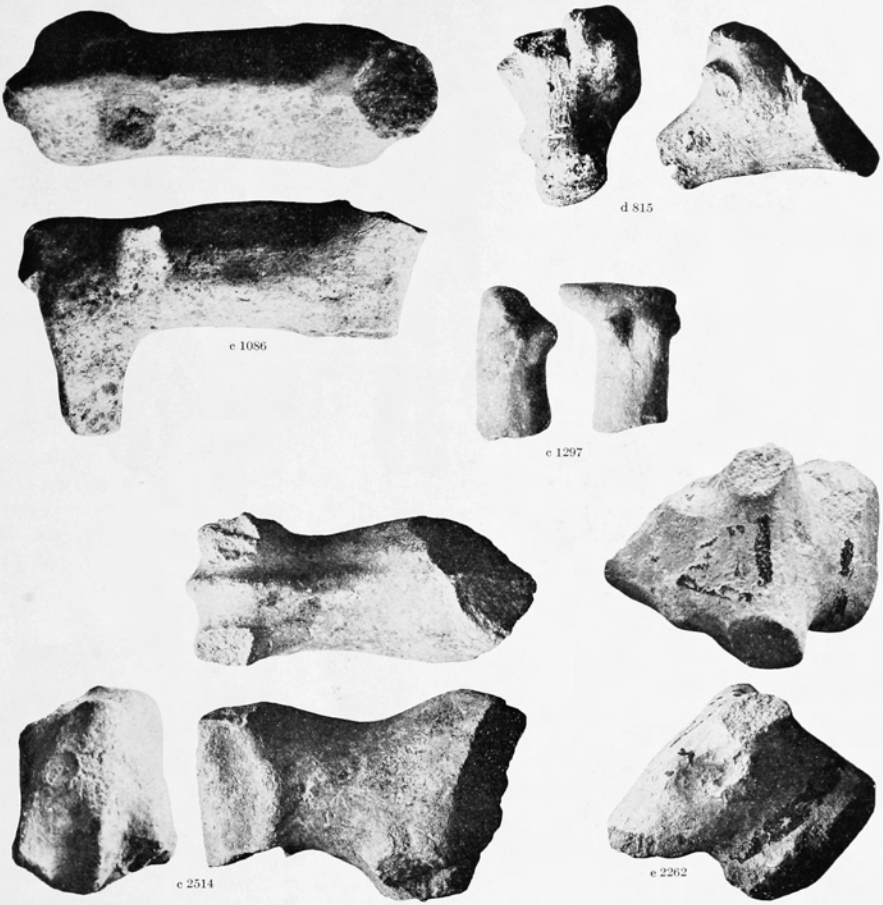

Fig. 242.—Pottery Figurines of Animals. Scale, 2:3

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Fig. 243.—Legs of Animal Figurines of Pottery and Frit. Actual Size

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e 2331 (Fig. 244) is a fragment of a very well made bull's leg. The ware is fine and has a highly polished yellowish brown slip. Nos. d 2210 and e 1631 are two forepaws of frit with a light blue glaze. No. d 2406 (Fig. 244) is the hind part of an animal which apparently had been mounted on wheels. Heads d 2732 and e 677 (Fig. 245) are decorated by very deep incisions which were probably filled with other material. No. d 2289 is an eagle, the legs of which form a hollow shaft. No. e 867, of greenish diorite, is a duck with neck bent backward, probably a weight. No. c 2029, of reddish serpentine, is a fragmentary head of a fabulous animal.

Sherds showing human beings or animals in relief are described on pages 111–14; animal heads as handles or spouts, on page 114; rhytons on pages 165 and 190–91. Bone pinheads imitating birds' heads and a lion's head are described on page 237; metal pinheads imitating birds, on page 253. Representations of human beings, animals, and birds on seals are described below.

SEALS

A few cylinder seals, a great number of stamp seals (mostly of stone), and some large pottery stamps belong to the Hittite period. Impressions of stamp seals and cylinder seals used during this period were found on tablets, "labels," stoppers, sherds, and various other pottery objects.

CYLINDER SEALS AND IMPRESSIONS OF CYLINDERS

The cylinder seals (Figs. 246 and 248) may be divided into two main types. The first consists of seals introduced with the cuneiform writing system from Mesopotamia. No. e 1036, found in C–D 6–7, is a much worn serpentine cylinder seal with a typical Mesopotamian scene depicting an animal contest. No. c 350,[56] of hematite, was found in a refuse deposit of the Roman-Byzantine period in V 25. It is of late Sumero-Akkadian type. Before a god wearing a long garment open in front and holding a "saw" stands a goddess in a *kaunakēs*. Both deities wear horned crowns. Between them is a long-legged bird; behind the god is a comb-shaped design above a libra-shaped object. At the end of the scene is an inscription reading "Shamash." No. d 2199, also of hematite, was found in M 33–34 on the floor of the same room as the cuneiform tablet hoard d 2200. It is an excellent specimen of late Sumero-Akkadian or Babylonian (1st dynasty of Babylon) style. A bearded god wearing a *kaunakēs* thrown over one shoulder, an elaborate horned crown, a necklace, and bracelets is enthroned on a boat. He holds in one hand a staff and a whiplike object. His feet rest on a reclining, bearded, human-headed bull which wears an elaborate horned crown. Behind the seated god stands an "Engidu" figure wearing an elaborate horned crown, who holds before him with both hands a kind of standard. A similar figure approaches the seated deity from the front, carrying a small short-horned animal. Two tightly girded "Gilgamesh" figures stand, one at each high end of the boat, rowing. Beneath the boat water is indicated by a wavy band terminating at either end in the bust of a bearded man who seems to support the boat with his hands. No. d 2235, of banded agate, is of Kassite style;[57] it was found in Q 28 on the floor level of the large mansion of Level 10 T. Impressions of imported cylinder seals are shown in Figure 247. On the fragmentary tablet envelope c 1000 (Pl. XXV), found 3.70 deep in a refuse deposit in M 29, is an impression showing the upper part of a bearded deity wearing an elaborate horned crown and a *kaunakēs* thrown over one shoulder. An impression on fragment e 2311 (Pl. XXV), found close to the foundation of the mansion, shows a seated deity in a long mantle, who is approached by a goddess wearing a *kaunakēs* thrown over one shoulder.

[56] *OIP* XXVII, No. 63.

[57] *OIP* XXVII, No. 64.

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e 2331 d 2406

Fig. 244.—Leg of a Large Animal Figurine and Hind Part of an Animal Figurine. Scale, 1:2

d 2732 e 677

e 867 d 2289 e 2029

Fig. 245.—Animal Figurines of Pottery and Stone. Actual Size

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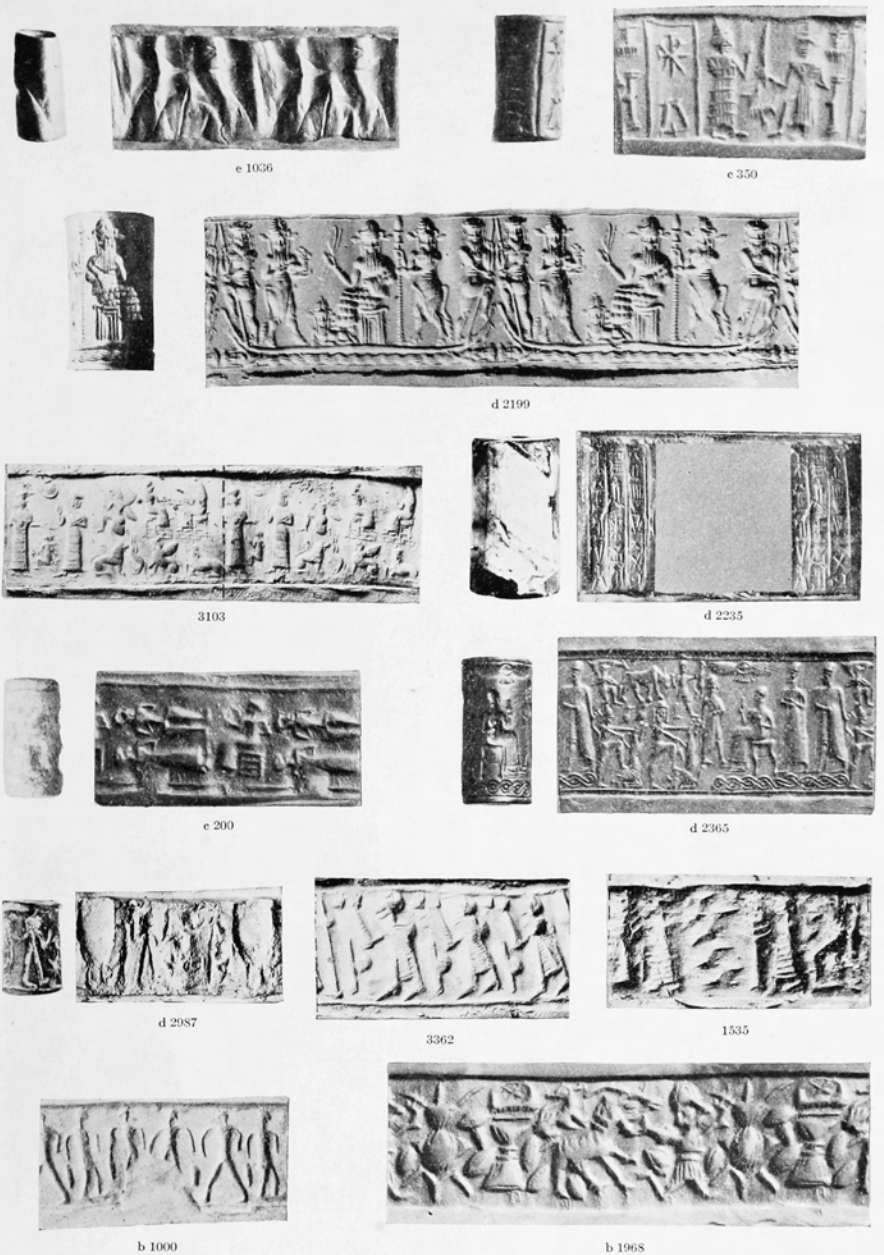

e 1036 c 350

d 2199

3103 d 2235

c 200 d 2365

d 2087 3362 1535

b 1000 b 1968

FIG. 246.—CYLINDER SEALS AND MODERN IMPRESSIONS. ACTUAL SIZE

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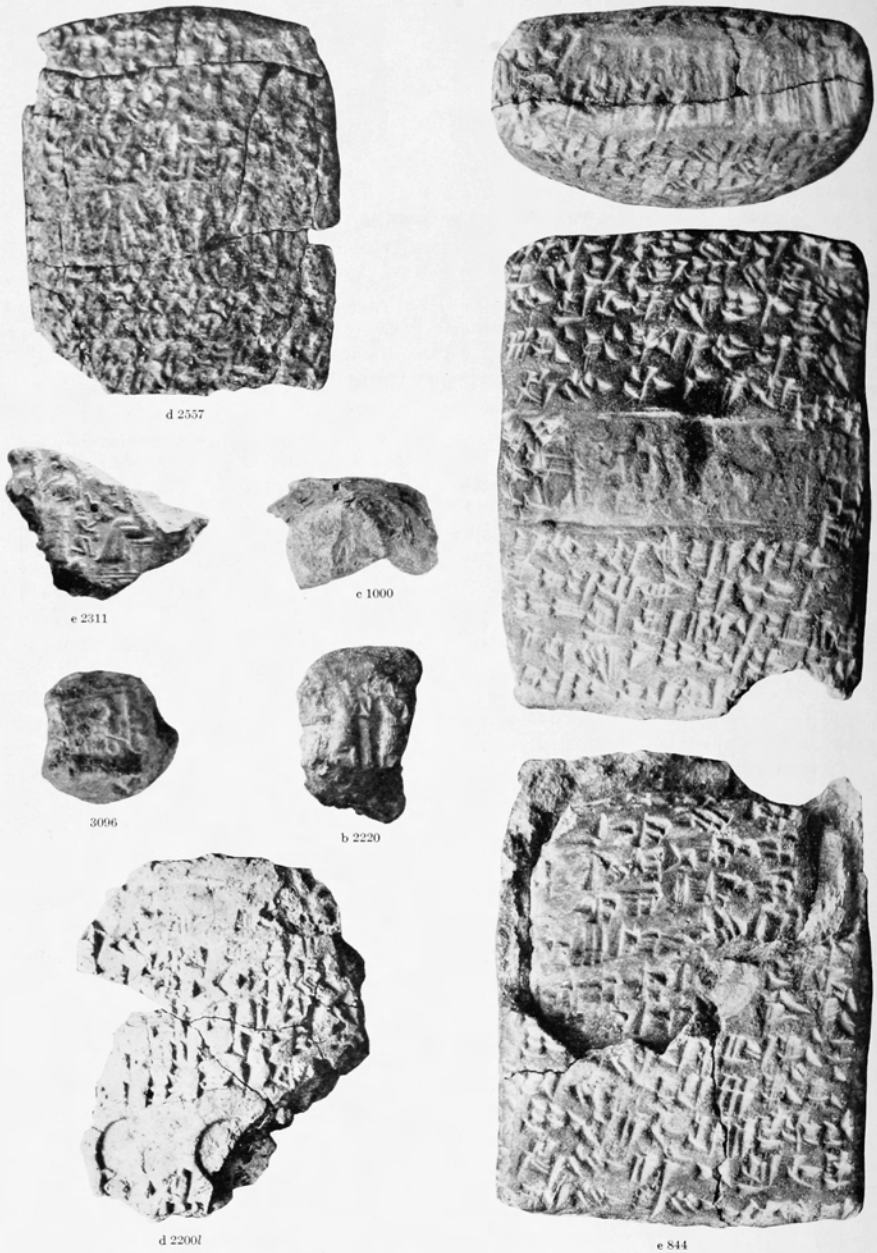

Fig. 247.—Ancient Impressions of Cylinder Seals and Stamp Seals. Actual Size

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She leads a human figure wearing a long mantle. Between the two deities appears a small kneeling figure holding a vase; the traces above him are obscure.

The second type of cylinder seals of this period found at the Alişar mound may be subdivided into two groups. Seals of the first group show marked Mesopotamian influence, although in composition and detail they are un-Mesopotamian. No. 3103 (Fig. 246),[58] of red jasper, was found in a refuse pit in Y 15. It shows two figures facing each other, each dressed in a *kaunakēs*. One wears a round cap, the other a headdress which is possibly a misunderstood representation of a horned crown. Between them is a small crouching "monkey," and above it is a disk with an inscribed star set in a crescent. Behind the figure with the round cap kneels a winged, animal-headed demon wearing a long garment open in front. Below the demon and facing in the opposite direction is a seated lion facing a seated winged sphinx. Between them is a small antelope apparently standing on its head. Behind the sphinx reclines a bearded, human-headed bull. Above the sphinx and bull sit two human figures at table, their chairs placed on low daises. Each figure wears a *kaunakēs* and has the hair carefully dressed or wears a large wig. On the table appear three small globular objects. No. d 2365, of hematite, was found in R 28. Four large figures appear above a guilloche. The main figure, a bearded god wearing a long garment and a round cap, is seated on a stool with bulls' legs; his feet rest on a footstool. In one hand he holds a vessel, in the other, a scepter or mace. Before him stands a bearded human figure wearing a round cap and a long mantle over a short skirt and holding a sickle-sword. Above these two figures hovers a winged disk. Behind the seated god stand two bearded men who wear round caps. The first is dressed in a long garment and has his arms folded across his chest. The second wears a short skirt beneath a long mantle and carries a sickle-sword. The rest of the design is made up of groups of smaller figures. A figure probably derived from that of "Gilgamesh" and a nude hero wearing a high conical headdress are vanquishing a bull and a lion respectively; each holds his animal by its hind legs and tail and steps upon its neck. Above these figures appear a kneeling hero holding a horned animal above his head, a walking humped bull, two birds, and a standing hero holding a horned animal by its hind legs. Single lines form borders at top and bottom. Two impressions of cylinder seals of this type are illustrated in Figure 247. Fragment b 2220 (Pl. XXV),[59] found in CC 19, shows a bearded man in a mantle following a deity wearing a *kaunakēs*. The man's mantle is shorter and wider than that usually worn by figures on cylinders from Mesopotamia proper. Between the two figures appears a symbol, and behind the man are remains of designs in two registers. The much worn impression of a cylinder seal on the reverse of the envelope of tablet e 844 (Pl. XXV)[60] shows a seated deity, before whom are a small crouching "monkey," a disk set in a crescent, and a human figure. Behind the deity a lion wrestles with an antelope. Adjoining this there are traces of a repetition of the same design. On the broken end of this envelope appear remains of an impression probably made by the same seal (Pl. XXV).

The second group of the second main type must be considered essentially "Cappadocian" in composition and technique, although a certain Mesopotamian influence also is recognizable. No. 3362 (Fig. 246),[61] found in a refuse deposit in GG 13, is of serpentine deeply cut in a rather crude technique. It shows three human figures in long garments walking one behind another; they seem to hold small triangular objects in their very long raised arms. Between them appear libra-shaped designs, and before one of them is a long staff with a globe near its upper end. Single lines form borders at top and bottom. No. 1535,[61] of serpentine, found in FF 13, is cut in a similar crude technique. Two human figures, each in a long garment and standing

[58] *OIP* VII 43–44.

[59] *OIP* XIX 150.

[60] *OIP* XXVII, No. 49 *B*, Pl. XXIX.

[61] *OIP* VII 44 and Fig. 34.

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before a tree, are separated on one side by four birds(?) arranged one above another and on the other side by a rampant lion with head turned backward. As deeply engraved, but in a different style, is No. b 1968,[62] of brownish limestone, found in DD 19. A human figure in a running posture, wearing a short pleated and girded skirt, leads a horned animal, above the back of which is a smaller animal with head turned backward. Before him is a horned(?) altar.[63] Between the "horns" are two crossed lines. On a stand between the man and the altar is a large vessel from which protrude three sucking-tubes. In the field appear oval objects.

Another type of engraving is seen on No. d 2987, of steatite, found in M–N 33. It shows a human figure with both arms raised and a star. The rest of the design cannot be recognized. At top and bottom single lines form borders. Serpentine seal b 1000,[62] found in EE 20, shows the same technique. Two pairs of human figures face each other; between the figures are oblong objects. The envelope of tablet d 2557 (Fig. 247), found in Q 30, shows a very worn and obscure impression of such a cylinder. An impression on one end of the envelope of tablet e 844 (Fig. 247 and Pl. XXV)[64] shows two long-robed figures facing each other, each holding a staff. Between the staves a snake(?) stands on its tail. Above the arm of the man at the right appears an elongated object, below his arm a fish. Behind this man stand two more long-robed figures, one holding a jar, the other a staff with vase-shaped top(?). Behind the last man appears a fish.

No. c 200 (Fig. 246), of frit, found in J 31, has traces of a greenish glaze. Before a long-robed seated figure lie a nude woman and a man in a long garment. At top and bottom single lines form borders. No. b 1630 (Fig. 248),[65] of serpentine, was found in EE 20. It has a shallow linear design very crudely engraved. Only a standing human figure and a quadruped can be recognized. The cylinder is particularly interesting as it is not perforated and has at one end a linear design, at the other remains of a perforated knob. No. d 2907 (Fig. 248), of blackish limestone, found in M–N 33, shows a shallow linear design. The borders around the perforation are decorated with crudely engraved lines and dots.

Three cylinder impressions appeared on a fragment of a pottery "label" or stopper, No. 3096 (Fig. 247 and Pl. XXV),[66] found 1.20 deep in AA 15. One impression is unrecognizable. Each of the other two, only partly preserved, shows a standing animal and below it a smaller animal.

STAMP SEALS AND IMPRESSIONS OF STAMPS

By far the greater part of the glyptic objects are stamp seals (Figs. 248–52) and impressions of stamp seals (Figs. 247 and 252–57). Seven groups may be formally differentiated:

1. No. d 1822 (Fig. 248) is a combined stamp and cylinder seal.
2. Most common is the stamp seal with a conical handle ending in a perforated knob (e.g., d 2222, Fig. 249). The base is usually circular and broader than the bottom of the handle. No. d 2952 (Fig. 249) has a four-lobed base; the base of No. d 1523 is rectangular. The conical part of the handle is encircled by parallel incisions on Nos. d 2307, d 1523, and c 2656 (Fig. 249) and d 1906, d 2535, and d 2878 (Fig. 251). The handle of No. d 2970 (Fig. 249) grows directly out of the rectangular base. No. d 975 (Fig. 251) has a hammer-shaped knob, perforated lengthwise.
3. A related type, usually with circular base, has a comparatively long cylindrical stem rising from the center of the back; the stem is perforated near the top (e.g., d 2822, Fig. 250). The stem of No. d 745 (Fig. 250) is encircled by parallel incisions. No. d 747 (Fig. 250), of bronze or copper, has a knob above the perforation.
4. Stamp seals with circular or rectangular bases and shorter perforated stems or knobs, such as Nos. e 293 and d 1221 (Fig. 250), also appear.

[62] *OIP* XIX 142–43.

[63] The "horns" resemble the Early Bronze Age andirons or spit-supports shown in *OIP* XXVIII, Fig. 278.

[64] *OIP* XXVII, No. 49 *B*, Pl. XXVIII.

[65] *OIP* XIX 142.

[66] *OIP* VII 50 and Fig. 44.

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Fig. 248.—Cylinder Seals and Stamp Seals. Actual Size

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Fig. 249.—Stamp Seals. Actual Size

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FIG. 250.—STAMP SEALS. ACTUAL SIZE

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Fig. 251.—Stamp Seals. Actual Size

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c 2634

e 1047

e 2221

c 2742

e 1305

e 1304

Fig. 252.—Stamp Seals and Ancient Impressions. Actual Size

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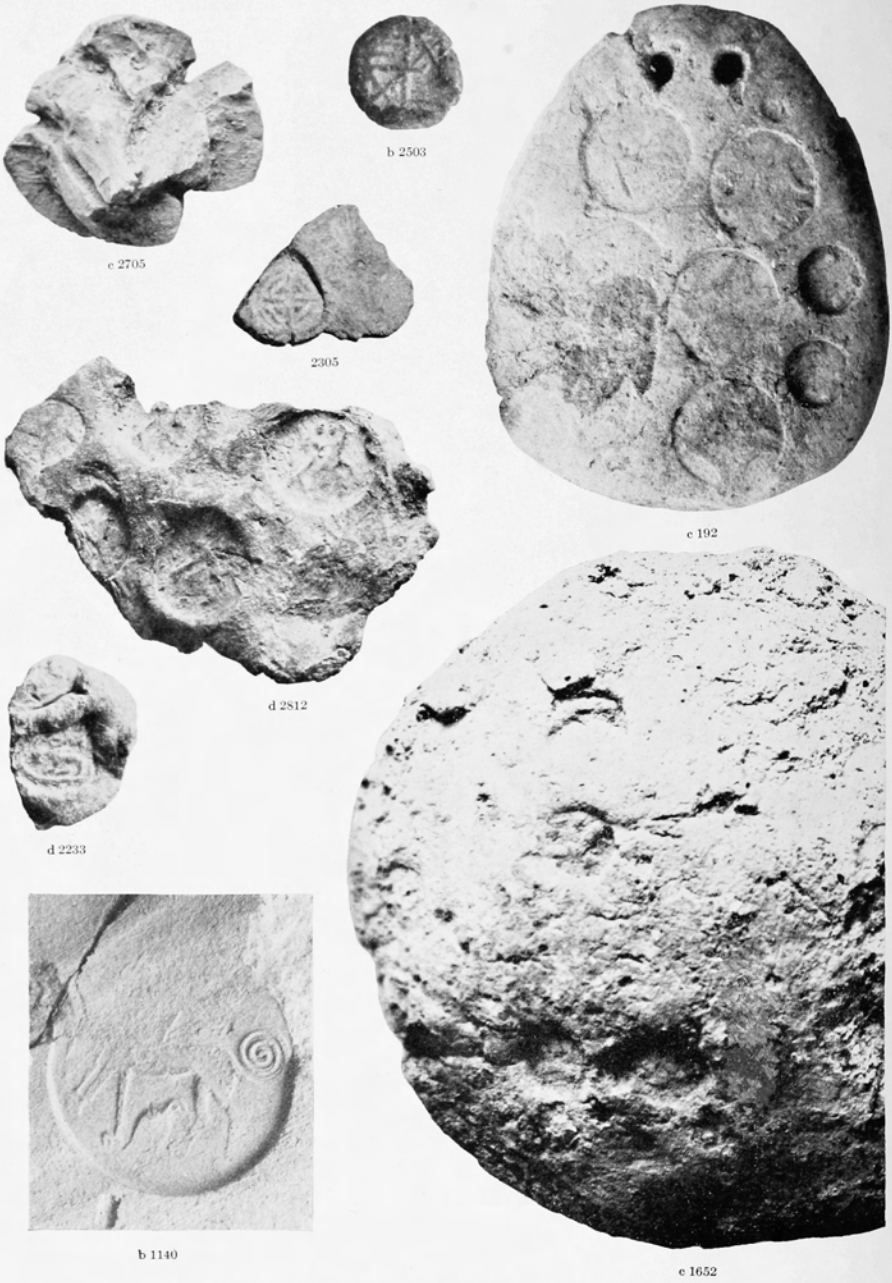

Fig. 253.—Ancient Impressions of Stamp Seals. Actual Size

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Fig. 254.—Ancient Impressions of Stamp Seals. Actual Size

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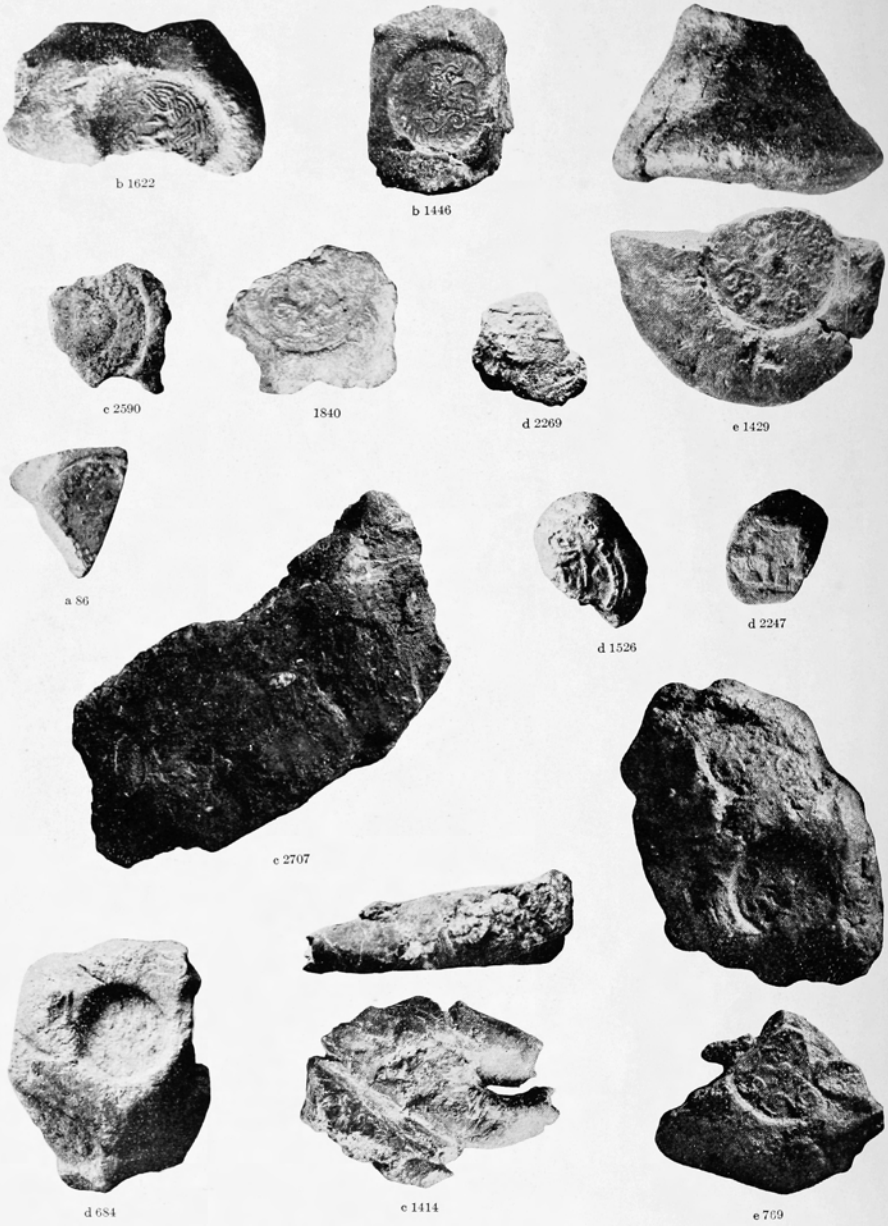

Fig. 255.—Ancient Impressions of Stamp Seals. Actual Size

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d 2231

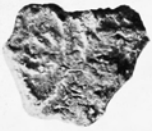
d 2508

d 2616

e 768

e 1306

d 2101



d 1987

d 2246

e 2658

e 1145

d 1925

e 1665

Fig. 256.—Ancient Impressions of Stamp Seals. Actual Size

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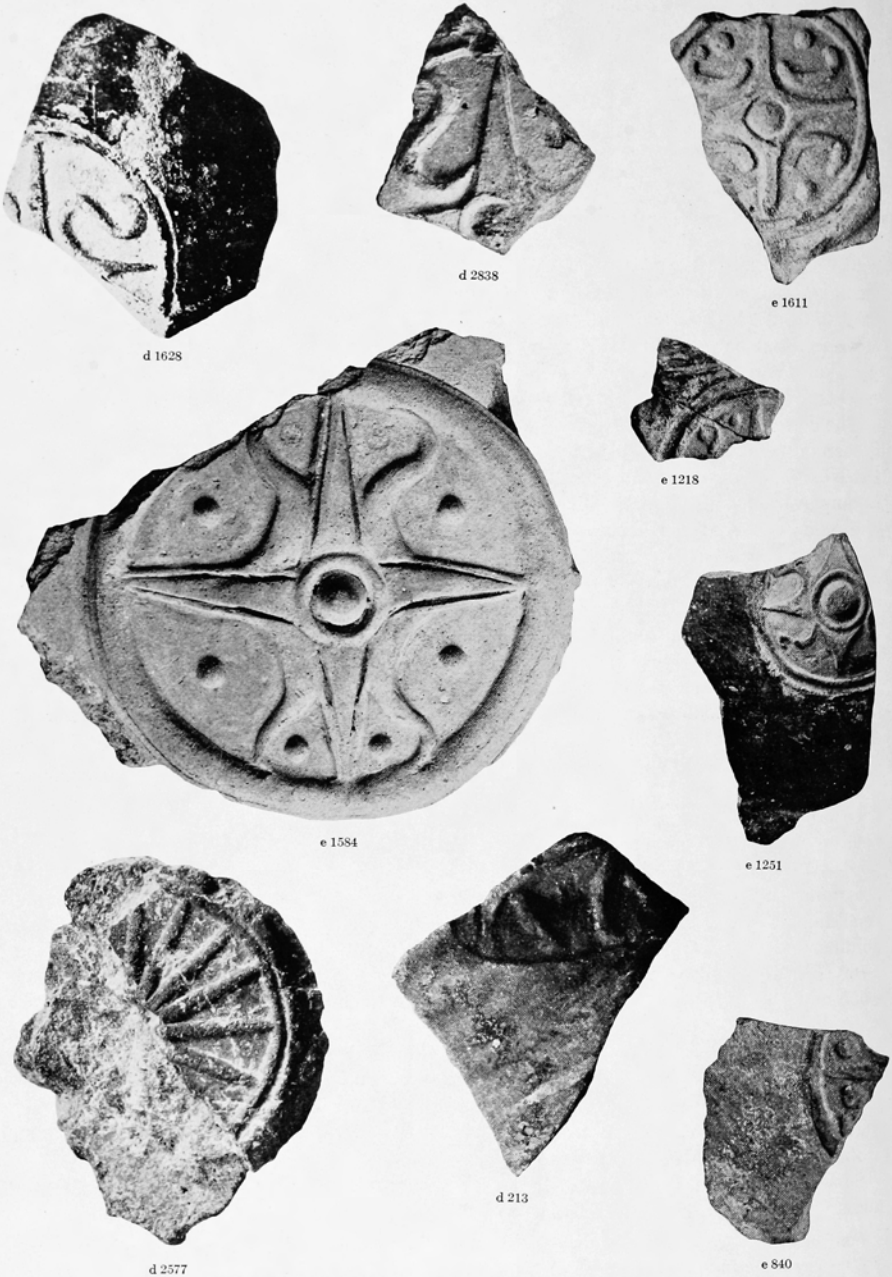

Fig. 257.—Ancient Impressions of Stamp Seals. Scale, 1:2

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5. Such examples as Nos. d 2046, d 2242, and d 2422 (Fig. 249) are derivatives from types 2–4. No. b 2593 (Fig. 248) has a triangular base.
6. Stamp seals in the form of a shoe (d 871 and a 430) and in the form of a hoof (d 2712) are rare (Fig. 248). No. b 1651 is in the form of a turtle's head. No. e 1670 is unfinished.
7. Large pottery stamps with conical handles perforated at the top are shown in Figure 258.

The materials used for stamp seals are predominantly such stones as serpentine, jasper, limestone, diorite, and alabaster. Bronze stamps are rare (e.g., d 747, Fig. 250). Nos. b 1045, b 2102, and d 2046 (Fig. 249) and b 1232 (Fig. 251) are of bone; Nos. a 430 (Fig. 248) and c 2656 (Fig. 249) are of ivory. Large stamps (Fig. 258) are made of pottery, but only a few small stamps are of this material: Nos. b 2593 and d 871 (Fig. 248), c 666 (Fig. 249), e 1520 (Fig. 250), d 2271, d 2878, and e 555 (Fig. 251), and e 1047, e 1304–5, and e 2221 (Fig. 252). With the exception of No. d 2878 they are very crude. Several small stamplike pottery objects, mostly with base plain or showing only a few scratches, are illustrated with small pottery objects in Figure 308. A stone seal or amulet (d 2613, Fig. 136) was found with skeleton d X36.

The designs show great variety. Various birds and animals appear in Figure 249. An eagle is seen on Nos. d 2681, d 1140, and d 2970. No. d 2307 shows an eagle within a rope border. On Nos. d 1523 and d 2216 an eagle appears above two animals. The eagle on No. e 2310 is human-headed. A double eagle appears above two animals on No. c 385; on No. b 1854 one holds two snakes(?). Impression e 333 (Fig. 254 and Pl. XXV) shows a double eagle with an animal in each talon, a third animal lying on its back beneath the eagle, and traces of a winged disk(?) above. No. d 2222 (Fig. 249) shows a flying bird. No. c 2656 has four birds' heads arranged like spokes in a wheel; the design on No. d 2952 is similar. On No. 3097 a bird of prey appears to have alighted on the back of a rabbit. No. b 1478 shows a seated griffin within a rope border. The horned animal on No. c 666 cannot be identified.

Animal representations cut in another technique appear on Nos. b 2187 (animal contest), d 745, d 2509, e 632, e 1108, and e 1787 (Fig. 250). On impression c 2407 (Fig. 254 and Pl. XXV) appears an animal with its neck pierced by two arrows. Nos. e 112 (Fig. 254 and Pl. XXV) and d 2812 (Fig. 253) also seem to belong to this group, although these impressions are not clear.

Ornamental designs are very frequent. Examples are given in Figure 251. Star shapes appear on Nos. d 2067 and d 2535, rosettes on Nos. d 2459 and b 1462. On No. b 2439 a rosette is bordered by a looped band. No. d 975 has in the center a rosette formed by eight circular depressions; the border consists of two interlaced band motives separated on one side by a small human figure seated before a vessel with a sucking-tube, on the other by a seated figure holding a triangular object. Impressions d 2769 (Fig. 254 and Pl. XXV) and b 1446 and e 769 (Fig. 255 and Pl. XXV) show rosettes surrounded by scrolls. Guilloches occur on Nos. e 555 and e 1303 (Fig. 251) and on impressions c 1456 (Fig. 254 and Pl. XXV), d 2281 (Fig. 254), and a 86,[67] b 1622, and c 2590 (Fig. 255 and Pl. XXV).

No. d 1906 (Fig. 251) bears the so-called "royal" or "Cappadocian" symbol—a four-pointed star with a disk in the center and two pairs of recurved elements. This design, enlarged, appears frequently on sherds. A few of the sherds so stamped, found in 1930–32, are shown in Figure 257. In 1929 a large pottery stamp (b 1529)[68] with such a design was found; it had probably been used to decorate vessels.

Seals b 2240, b 2102, and b 1045 (Fig. 249) with crude, deeply engraved representations of human faces form a group by themselves.

[67] No. a 86 was found in a refuse deposit of Level 2*a* M (*OIP* XX 65) but undoubtedly originated in the Hittite period and is therefore listed here.

[68] *OIP* XIX 146–47.

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Fig. 258.—Large Pottery Stamps. Scale, 1:2

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A few other designs deserve special mention. No. b 2285 (Fig. 249) shows a man between two branches or trees. On impression d 2247 (Fig. 255 and Pl. XXV) a seated deity faces a bull on a dais; over the altar between them hovers the winged sun disk. Impressions c 1456 (Fig. 254 and Pl. XXV) and d 1526 (Fig. 255 and Pl. XXV) bear "Hittite" hieroglyphic signs; the marks on seals a 430 and d 871 (Fig. 248) are unintelligible. Seals d 746–47 and d 1221 (Fig. 250), b 1921 and b 2427, and impression b 2503 (Fig. 253 and Pl. XXV), all with geometrical designs, possibly belong instead to the Copper Age or the Early Bronze Age.

Most of the large and rather crude pottery stamps in Figure 258 have designs of concentric rings, sometimes crossed by short strokes. They were probably used not for sealing but for stamping ornaments.

Nos. a 430 and d 871 (Fig. 248), e 1787 (Fig. 250), and e 2221 (Fig. 252) were found on the citadel mound under conditions which make it possible that they belong to the first post-Hittite period (cf. p. 420). Find-spots of stamp seals, large pottery stamps, and impressions of stamp seals are given in the following lists.

List of Stamp Seals

1536 (Fig. 251; *OIP* VII 45). Grayish limestone; handle decorated with parallel incisions and ending in a perforated knob; base shows a rosette within a rope border. Found .70 deep in FF 12–13.

3097 (Fig. 249; *OIP* VII 45). Brownish limestone; handle like that of No. 1536, but top is broken off; base shows a bird of prey above a crouching rabbit, encircled by a rope border. Found in refuse from a depth of 2.00–2.80 in GG–HH 4–5.

a 430 (Fig. 248; *OIP* XIX 148; *OIP* XXVII, No. 90). Ivory shoe with upturned toe and lateral perforation; incised linear ornamentation over all; rosette on top; design on sole is abraded, but rows of dashes and two series of three wedges each can be recognized. Found in L 14 in an Early Bronze Age layer.

b 1045 (Fig. 249; *OIP* XIX 148). Bone; handle with rectangular cross-section and rounded top, perforated about halfway up; preserved half of the base shows part of a crudely engraved human face. Found 1.20–1.40 deep in S 23.

b 1232 (Fig. 251; *OIP* XIX 148). Bone with polished surface; handle and base made separately and joined; handle nearly circular at foot and hexagonal at the squared-off top, decorated with a spiral incision from foot to perforation; base shows a cross-shaped design formed by four wings, in the angles of which are circles with centered dots. Found in DD 20.

b 1462 (Fig. 251; *OIP* XIX 143). Black serpentine; convexly conoid knob handle, apparently unperforated; base has a rosette design with eight petals radiating from a central disk. Found less than .50 deep in GG 11.

b 1478 (Fig. 249; *OIP* XIX 144–45). Limestone, discolored by heat; the handle, encircled by fine incisions, was broken during the process of perforation, the bore being left unfinished; base shows within a rope border a seated winged griffin with one foreleg raised; very well executed. Found .60 deep in FF 11.

b 1651 (Fig. 248; *OIP* XIX 144). Greenish serpentine; stamp seal in the form of a turtle's head with squared-off neck; the eyes were probably inlaid; on either side of the face appears a crudely incised, long-legged bird; design on the neck shows curved lines within an irregular circle. Found in Level 10 T in HH 9.

b 1699 (Fig. 249; *OIP* XIX 143). Serpentine; oval base merges into a handle with perforation near top; cross-shaped design with the four divisions filled with small circular depressions. Found in refuse layer of Level 10 T in HH 9.

b 1854 (Fig. 249; *OIP* XIX 145). Light gray alabaster(?) with smooth surface; handle is slightly flattened at the perforation; design consists of a double eagle; undulating lines at ends of legs may represent snakes. Found 1.30 deep in HH 8.

b 1921 (*OIP* XIX 148). Bronze or copper; flattened handle, perforated through its expanded center; the much corroded square base shows eight parallel lines crossed by others at right angles. Found .50–.90 deep in DD 19.

b 2102 (Fig. 249; *OIP* XIX 148). Bone; base shows four perforations and a crudely engraved human face. Found in Level 11 T in GG 11.

b 2187 (Fig. 250; *OIP* XIX 146). Black serpentine; design shows two beasts of prey in fighting attitudes, the larger certainly a lion, the smaller perhaps also a lion; a small horned animal crouches between them; traces of unrecognizable designs. Found in refuse between Levels 10 T and 11 T in HH 11.

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b 2240 (Fig. 249; *OIP* XIX 143–44). Gneiss; perforated knob handle; rectangular base shows a crude face. Found in refuse of Level 11 T in HH 9.

b 2285 (Fig. 249; *OIP* XIX 146). Limestone, discolored by heat; handle circular at foot, flattened at top, with a perforation through the narrow axis; base shows a man with a bird's head and a garment ending at the thighs; he has both arms raised; at each side is a tree-shaped design. Found .30–.80 deep in BB 19.

b 2427 (*OIP* XIX 143). Serpentine; handle with roughly rectangular cross-section, flattened toward the top and perforated; design is the same as that of No. d 746. Found in refuse layer of Level 11 T in DD–EE 10.

b 2439 (Fig. 251; *OIP* XIX 144). Light gray burned limestone(?); handle broken at the perforation; design consists of a rosette encircled by a band of three lines, forming six loops. Found in Level 10 T in GG 9.

b 2559 (Fig. 251; *OIP* XIX 144). Gray serpentine; handle broken, circular in cross-section; design consists of five circular depressions around a plain center, forming a kind of rosette. Found 1.50–1.80 deep in J 33.

b 2593 (Fig. 248; *OIP* XIX 146). Gray-brown and gray pottery with smooth and granular surface which shows some powdered mica; pentagonal handle; triangular base shows a crudely incised male horned animal (stag?); six short dashes are above the back of the animal, several more below and in front of him; the corners, cut off by lines, are filled with irregular parallel lines. Found 1.70–2.20 deep in J 33.

c 385 (Fig. 249). Steatite; conical handle, upper part of which is broken off; nearly circular base shows a double eagle above two horned animals with heads turned backward. This piece must have been found in a secondary position, as it appeared within the Roman layer (.40–1.20 deep) in U 26.

c 475 (Fig. 250). Steatite; perforated handle, broken; nearly circular, slightly convex base, chipped; design shows a man standing on the back of one animal, holding another by its horn and menacing it with a weapon; behind the man are two short crossed lines; above the second animal are a crescent and a disk. Found 2.95–3.95 deep in L 29.

c 666 (Fig. 249). Pottery; large conical handle with a hammer-shaped end perforated lengthwise; circular base shows a horned animal with head turned backward; between its body and its neck are an unrecognizable object and a small branch(?); the design is surrounded by a rope border. Found 1.40–2.50 deep in VV 24.

c 2656 (Fig. 249). Ivory; conical handle encircled by parallel incisions and ending in a perforated knob; circular base; four birds' heads arranged like spokes in a wheel are encircled by a linear border consisting of three lines crossed by short slanting lines. Found 3.50 deep in U 28.

d 347 (Fig. 250). Serpentine; handle broken; circular base shows a long-horned animal; above its back appear a disk and an unrecognizable object, probably a bird or the end of an arrow; below the animal is another disk. Found 1.80–2.10 deep in T 27.

d 745 (Fig. 250). Steatite; handle is encircled by parallel incisions and has two perforations, the upper one broken off; circular base shows two bull-men set heraldically across each other; above them there seems to have been a winged disk; below them two crouching animals face each other. Found 3.95–4.10 deep in U 30.

d 746 (Fig. 250). Serpentine; handle broken at perforation; slightly convex rectangular base with rounded corners; in each of the four angles of the cross-shaped design are two parallel lines, vertical in two quadrants and horizontal in two. Found 3.95–4.10 deep in U 30.

d 747 (Fig. 250). Bronze or copper; corroded; perforated handle; rectangular base; design like that of No. d 746. Found 3.95–4.10 deep in U 30.

d 871 (Fig. 248; *OIP* XXVII, No. 92). Pottery shoe with upturned toe, perforated at ankle; the "sole" shows a number of unrecognizable designs. Found while clearing O 11.

d 975 (Fig. 251). Diorite; shaft of handle has several facets; top is hammer-shaped, perforated lengthwise; circular base; within a single-line border appear two interlaced band motives; facing one band is a human figure wearing a conical headdress, seated before a large vessel with a tube; diametrically opposite him and facing the other interlaced band is a second seated figure, holding a triangular object in one hand; in the center, surrounded by a single line, are eight circular depressions arranged in the form of a rosette. Found 3.10–3.80 deep in U 31.

d 1079 (Fig. 250). Serpentine; fragmentary conical handle with perforated knob. Found 3.00–3.20 deep in T 31.

d 1140 (Fig. 249). Serpentine; conical handle with perforated knob; circular base, part of which is broken away, shows an eagle with outspread wings. Found 2.90–3.25 deep in U 31.

d 1221 (Fig. 250). Diorite; short round handle, perforated halfway up; slightly convex rectangular base; design like that of No. d 746. Found 3.50–3.80 deep in T 28.

d 1378 (Fig. 250). Serpentine; perforated knob of handle of a stamp seal. Found 3.50–3.80 deep in S 28.

d 1523 (Fig. 249). Serpentine; conical handle encircled by parallel incisions, broken; rectangular base with one corner broken shows an eagle with outspread wings above two quadrupeds; the preserved animal is short-horned. Found 2.80–3.30 deep in T–U 27.

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d 1822 (Fig. 248). Steatite; faceted handle ending in a perforated knob; combination cylinder and stamp seal; base shows a seven-pointed star encircled by a rope border; design around cylinder unintelligible. Found 4 meters deep in O 33–34.

d 1906 (Fig. 251). Serpentine; conical handle decorated with parallel incisions and ending in a perforated knob; circular base shows the so-called "royal" symbol surrounded by a rope border. Found 2.50–2.90 deep in Q 31.

d 2029 (Fig. 251). Serpentine; handle broken off near base; circular base, so worn that the design is unrecognizable. Found 4.40–4.85 deep in U 28.

d 2046 (Fig. 249). Bone; flat, perforated handle; rectangular base shows three diagonal lines in each of the angles of a cross-shaped design. Found 2.70 deep in R 28.

d 2067 (Fig. 251). Limestone; conical handle ending in a perforated knob; circular base; a seven-pointed star is surrounded by a rope border; a single-line border encircles the whole design. Found 2.50 deep in P 28.

d 2216 (Fig. 249). Limestone; handle broken off near base; circular base shows an eagle with outspread wings above two rabbits. Found 4.50 deep in P 30.

d 2222 (Fig. 249). Limestone; conical handle ending in a perforated knob; roughly circular base shows a flying bird, probably an eagle. Found 2.40–2.60 deep in M 33–34.

d 2242 (Fig. 249). Tufa; gable-shaped handle, perforated lengthwise; square base; deeply incised ornamental design. Found 3.00–3.10 deep, on the floor level of the mansion in R 28.

d 2271 (Fig. 251). Pottery; handle broken off; circular base with four crudely incised concentric rings and a center dot. Found on the floor level of the mansion in Q 28.

d 2307 (Fig. 249). Limestone; part of conical handle and of circular base broken away; handle encircled by parallel incisions; on base an eagle with outspread wings is surrounded by a rope border. Found in the tunnel in P 33.

d 2389 (Fig. 250). Serpentine; fragmentary conical handle of a stamp seal with a perforated knob at the top. Found in P 30.

d 2422 (Fig. 249). Reddish jasper; rounded handle, perforated at top; rectangular base with rounded corners shows a very much worn herringbone design. Found with skeleton d X33, 4.70 deep in P 28 (cf. p. 91).

d 2423 (Fig. 250). Serpentine; rounded handle perforated near the top; circular base, broken, shows crudely incised lines; very much worn. Found with skeleton d X33, 4.70 deep in P 28 (cf. p. 91).

d 2459 (Fig. 251). Serpentine; faceted handle ending in a perforated knob; nearly circular base; rosette-shaped design. Found in M–N 33.

d 2509 (Fig. 250). Serpentine; handle broken off; nearly circular base shows a winged monster and a snake. Found in S 28.

d 2535 (Fig. 251). Limestone; conical handle decorated with incisions, broken; circular base, chipped; an eight-pointed star is surrounded by a rope border. Found in dump soil.

d 2613 (Fig. 136). Serpentine; flat rectangular seal or amulet with rounded corners, perforated; one face shows horizontal lines crossed by vertical lines. Found with skeleton d X36, 5.60 deep in R 30.

d 2681 (Fig. 249). Serpentine; conical handle ending in a perforated knob; circular base shows an eagle with outspread wings surrounded by a border of dots. Found in U 27.

d 2709 (Fig. 251). Serpentine; handle broken at the perforation; circular base; roughly incised linear design within a single-line border. Found in N 34.

d 2712 (Fig. 248). Burned limestone; fragmentary stamp seal, probably in the shape of a bull's hoof; handle ends in a hammer-shaped knob, perforated lengthwise; preserved base shows a herringbone design at each side of the groove of the hoof. Found in dump soil.

d 2822 (Fig. 250). Serpentine; handle perforated near top; nearly circular base; linear design. Found in M–N 33.

d 2878 (Fig. 251). Pottery; conical handle encircled by parallel incisions and ending in a perforated knob; circular base, about half broken away, shows a border consisting of a looped band of three strands. Found in M–N 33.

d 2952 (Fig. 249). Limestone; conical handle, perforated knob of which is broken off; four-lobed base, chipped; gridiron pattern in center, from the corners of which extend birds' heads and necks; between them are designs which may be wings. Found in T 27.

d 2970 (Fig. 249). Serpentine; conical handle ending in a perforated knob, part of which is broken off; nearly square base with rounded corners shows an eagle with outspread wings, holding oblong objects in its talons. Found in S 31.

e 12 (Fig. 251). Serpentine; short conical handle perforated near the top; circular base shows a linear design within a border. Found in EE–FF 17.

e 177 (Fig. 251). Serpentine; perforated handle is almost entirely broken away; nearly circular base, chipped and much worn; traces of a now unrecognizable design. Found in S 19.

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e 293 (Fig. 250). Steatite; short handle perforated at the top; nearly circular base shows a roughly incised human figure surrounded by a single-line border. Found in DD 25.

e 327 (Fig. 250). Steatite; small handle perforated near the top; nearly circular base, broken; unrecognizable design. Found in DD 25.

e 555 (Fig. 251). Pottery; conical handle ends in a perforated knob; about half of the circular base is broken off; the design is much worn but shows a guilloche as border. Found in S 20.

e 606 (Fig. 250). Serpentine; probably unfinished stamp seal with rectangular base. Found in P 25.

e 632 (Fig. 250). Steatite; conical handle ends in a perforated knob; circular base, broken; crudely engraved design shows unrecognizable animals. Found in EE 13.

e 1047 (Fig. 252). Pottery stamp seal(?); small conical handle perforated near the top; nearly circular base, much worn; crudely incised design. Found in refuse.

e 1108 (Fig. 250). Steatite; conical handle, broken near top; nearly circular base, chipped and worn; design shows unrecognizable animals. Found in R 0.

e 1303 (Fig. 251). Serpentine; conical handle ends in an oblong knob perforated lengthwise; circular base; unrecognizable design within a border probably consisting of a twisted band. Found in S 0.

e 1304 (Fig. 252). Pottery; perforated knob handle; circular base with roughly incised linear design. Found in S 0.

e 1305 (Fig. 252). Pottery; handle ending in perforated knob; nearly circular base; rosette-shaped design. Found in S 0.

e 1520 (Fig. 250). Pottery; conical handle ending in a knob; circular base, very much worn; of the design only traces of an interlaced band forming a border can be distinguished. Found in HH 8.

e 1670 (Fig. 248). Serpentine; unfinished stamp seal of irregular shape; base divided by an incised line. Found in V–X 1–2.

e 1787 (Fig. 250). Greenish limestone; handle perforated at top; circular base, much worn, shows two quadrupeds, one above the other. Found in O 12.

e 2221 (Fig. 252). Pottery stamp seal(?); handle broken; squarish base, chipped; incised border incloses quadrants containing punctate and incised designs. Found in M 11 in a refuse layer containing remains of the Early Bronze Age and of the Hittite period.

e 2310 (Fig. 249). Limestone; cylindrical stamp seal, probably with a perforated loop at top; side decorated by fine lines crossing diagonally; base shows an eagle with human head. Found near the foundation of the mansion of Level 10 T in the complex of 1931.

List of Stamp Seal Impressions[69]

1458 (Fig. 254 and Pl. XXV; *OIP* VII 50). Fragment of a pottery "label" or stopper with an impression of a stamp seal with circular base; between two rampant lions which face each other appears a rosette. Found in a refuse deposit of the Hittite period in FF 13.

1840 (Fig. 255 and Pl. XXV; *OIP* VII 48). Fragment of a pottery "label" or stopper with a partly preserved impression of a stamp seal with circular base; remains of a looped band within a rope border. Found 1.10 deep in CC 13.

2305 (Fig. 253 and Pl. XXV; *OIP* VII 48). Fragment of a pottery "label" or stopper with an impression of a circular stamp seal; the design shows two lines crossed at right angles, superimposed on three concentric rings. Found in a refuse deposit of the Hittite period in Y 12.

3081 (*OIP* VII 49 and Fig. 44). Sherd of the typical ware of the Hittite period with an impression of a stamp seal with circular base; design unrecognizable. Found 2 meters deep in HH 4.

3098 (Fig. 254 and Pl. XXV; *OIP* VII 50). Fragment of a pottery "label" or stopper with three impressions of stamp seals with oval bases; two of them, identical, show within a single-line border a recumbent animal, perhaps a stag, with a small branch behind it; the third, broken, shows within a single-line border a winged animal over two lines. Found in a refuse deposit at a depth of 3.00–4.50 in P 10 near the foundation of the Early Bronze Age citadel wall.

a 86 (Fig. 255 and Pl. XXV; *OIP* XX 65). Fragmentary clay "label" with an impression of a stamp seal with circular base; a guilloche border encircles faint remains of "Hittite" hieroglyphs (cf. c 2590). Found in refuse of Level 2*a* M in M 12.

b 1140 (Fig. 253 and Pl. XXV; *OIP* XIX 150). Fragment of a large jar of the typical ware of the Hittite period; the impression of a stamp seal with circular base shows a winged quadruped with claws and a curled tail; below the belly of the monster sits a bird. Found in Level 10 T in EE 20.

b 1446 (Fig. 255 and Pl. XXV; *OIP* XIX 149). Fragment of a "label" or stopper of gray clay showing some evi-

[69] For impressions on crescent-shaped loom weights see p. 273.

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dence of firing; it bears one complete impression, two fragmentary impressions of the same stamp seal, and some faint finger prints; the design, resembling that of seal b 2439 (Fig. 251), consists of a rope border inclosing a scroll border encircling a rosette. Found high in the deposit of the Hittite period in FF 10.

b 1622 (Fig. 255 and Pl. XXV; *OIP* XIX 149). Fragment of a "label" or stopper of gray clay showing some evidence of firing, the surface rough and irregular; its somewhat concave base has a lengthwise depression, perhaps left by the object to which the clay was attached; the circular stamp seal design shows two three-stranded twisted bands encircling a horned(?) animal. Found in refuse of the later level of the Hittite period in FF 11.

b 2503 (Fig. 253 and Pl. XXV; *OIP* XIX 149–50). "Label" with an impression of a stamp seal with rectangular base; the base is quartered by two lines crossed at right angles; two quarters are filled with crossed lines and two with parallel lines; the design is similar to that of No. e 560[70] found in a deposit of the Copper Age. Found in Level 10 T in DD 19.

c 192 (Fig. 253 and Pl. XXV). Flat clay object with two perforations at the smaller end, bearing twenty-one impressions of stamp seals. Fourteen impressions are of a stamp seal with a circular base .019 in diameter; of the design only four crescents forming a border can be recognized. Seven impressions are of a seal with circular base .010 in diameter, showing two horned animals standing on their hind legs, back to back, with heads turned backward; between them perhaps a conventionalized sacred tree. On the reverse impressions of the smaller seal overlap five impressions of the larger seal. Found 1.80 deep in J 31.

c 1414 (Fig. 255). Fragment of a clay "label" showing impressions of strings on one side and what seem to be impressions of stamp seals or a cylinder seal on the other. Found at the southern gateway of Level 10 T in J 35.

c 1456 (Fig. 254 and Pl. XXV; *OIP* XXVII, No. 77). Fragment of a clay "label" with impressions of strings on one side and an impression of a circular stamp seal on the other; outer border of the design consists of two twisted bands; within it is a second border consisting of wedges between two lines; in the center are three or four hieroglyphic signs. Found at the southern gateway of Level 10 T in K 35.

c 1652 (Fig. 253). Clay mold with several worn impressions of a stamp seal with circular base .012 in diameter. Found .70–1.30 deep in CC 24.

c 2407 (Fig. 254 and Pl. XXV). Fragment of a clay "label" or stopper with part of an impression of a stamp seal with circular base; design shows a standing quadruped with two arrows piercing its neck; before it are the remains of what may have been a tree or branch. Found 4.40 deep in R 29 in a building level of the Hittite period.

c 2589 (Fig. 254 and Pl. XXV). Fragment of a pottery "label" or stopper bearing part of an impression of a stamp seal with circular base; the border consists of six-pointed stars or rosettes between two parallel lines; of the worn central design only a hieroglyph resembling a double ax is recognizable. Found 4.50 deep in Q 29.

c 2590 (Fig. 255 and Pl. XXV). Fragment of a pottery "label" or stopper showing part of an impression of a stamp seal with circular base; only the very elaborate interlaced border can be recognized (cf. a 86). Found 4.50 deep in Q 29.

c 2634 (Fig. 252 and Pl. XXV). Sherd showing a broken handle and two impressions of a stamp seal with circular base probably showing an animal. Found 5 meters deep in Q 29.

c 2658 (Fig. 256 and Pl. XXV). Fragment of a pottery "label" or stopper with three impressions of a stamp seal with an oval base, perhaps a scarab or scaraboid; cross-shaped design. Found 2.50 deep in N 29.

c 2698 (Fig. 254 and Pl. XXV). Nearly cylindrical pottery object with rounded top and flattened base, showing incomplete impression of a stamp seal with circular base; large star with unrecognizable designs in the angles, and in the center a circle containing a diamond-shaped motive (cf. d 2548 and d 1343). Found 5.20 deep in T 29.

c 2705 (Fig. 253). Fragment of a pottery stopper with string marks and part of an impression of a stamp seal with circular base; design unrecognizable. Found 5.20 deep in T 29.

c 2707 (Fig. 255). Fragment of a pottery "label" with several seal impressions; none of the designs is recognizable. Found 5.20 deep in T 29.

c 2742 (Fig. 252 and Pl. XXV). Fragment of the neck of a large pot bearing an impression of a stamp seal with circular base; star-shaped design. Found in CC 23.

d 213 (Fig. 257). Sherd of buff ware with gray core and yellowish red slip; impression of a stamp showing a bull. Found 3.10–4.50 deep in Q 33.

d 684 (Fig. 255). Clay "label" or stopper showing marks of string and of a basket, and three impressions of a stamp seal with circular base. Found 3.30–3.95 deep in U 30.

[70] *OIP* XXVIII, Fig. 186.

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d 1139 (Fig. 254 and Pl. XXV). Fragment of a pottery "label" or stopper with part of an impression of a stamp seal with circular base; border consisting of three parallel lines joined by short lines encircles a cross-shaped design. Found 2.90–3.25 deep in U 31.

d 1343 (Fig. 254 and Pl. XXV). Fragment of a pottery "label" or stopper with part of an impression of a stamp seal with circular base; design shows a large star with a decorated center, possibly a double eagle, and a decorated background. Found 4.05–4.15 deep in T 28.

d 1526 (Fig. 255 and Pl. XXV; *OIP* XXVII, No. 81). Part of a pottery "label" or stopper bearing string marks and part of an impression of a stamp seal with circular base showing "Hittite" hieroglyphs. Found 4.25–4.35 deep in R 30.

d 1628 (Fig. 257). Sherd of fine buff ware with gray core and typical red slip of the Hittite period, showing part of the so-called "royal" symbol (cf. seal d 1906).[71] Found in O 33–34.

d 1925 (Fig. 256 and Pl. XXV). Fragment of a clay "label" or stopper showing parts of two impressions of a stamp seal with rectangular base; rosette design. Found 3.55–3.90 deep in T 31.

d 1987 (Fig. 256). Fragment of a pottery "label" or stopper with part of an impression of a stamp seal with circular base. Found 3 meters deep in R 31.

d 2101 (Fig. 256). Fragment of a pottery stopper showing string marks and impressions of three different stamp seals with circular bases; the largest shows a rosette design; the designs of the other two are unrecognizable. Found 5.00–5.10 deep in U 28.

d 2200*l* (Fig. 247; *OIP* XXVII, No. 19). Unbaked cuneiform tablet and envelope, the latter showing one complete and one fragmentary impression of a stamp seal with circular base; design unrecognizable. Found 2.40 deep in M 33.

d 2231 (Fig. 256 and Pl. XXV). Fragment of a pottery "label" or stopper with an impression of a stamp seal with circular base; star-shaped design. Found in T 30.

d 2233 (Fig. 253 and Pl. XXV). Fragment of a pottery "label" or stopper with an impression of a stamp seal with horseshoe-shaped base; design seems to show a quadruped below a twisted band. Found in dump soil from U 30.

d 2246 (Fig. 256 and Pl. XXV). Fragment of a pottery "label" or stopper showing three impressions of a stamp seal with horseshoe-shaped base; linear design. Found in R 28.

d 2247 (Fig. 255 and Pl. XXV). Fragment of a pottery "label" or stopper showing an impression of a stamp seal with circular base; design shows a deity seated before a bull standing on two pedestals; between them is an altar; above the group hovers a winged disk. Found 3.85 deep in S 28.

d 2269 (Fig. 255). Fragment of a pottery "label" or stopper with part of an impression of a stamp seal. Found 0–.40 deep in M–N 33.

d 2281 (Fig. 254). Sherd with part of an impression of a stamp seal with circular base; much worn guilloche as a border. Found 3.95 deep in S 28.

d 2508 (Fig. 256). Fragment of a pottery stopper with string marks and part of an impression of a stamp seal with circular base; star-shaped design with inscribed disk (cf. d 2231). Found in the deposit of the Hittite period in S 28.

d 2540 (Fig. 254 and Pl. XXV). Sherd of fine buff ware with gray core bearing impression of a stamp seal with circular base showing traces of a quadruped. Found in R 28.

d 2548 (Fig. 254 and Pl. XXV). Fragment of a pottery "label" or stopper with an impression of a stamp seal with circular base; design shows a large star with a disk in the center and decorated angles. Found in a deposit of the Hittite period in S 28.

d 2577 (Fig. 257). Sherd with part of an impression of a stamp seal with circular base; probably a star-shaped design. Found in the deposit of the Hittite period in Q 32.

d 2616 (Fig. 256 and Pl. XXV). Fragment of a pottery "label" with part of an impression of a stamp seal; linear design. Found in the deposit of the Hittite period in T 30.

d 2769 (Fig. 254 and Pl. XXV). Fragment of a pottery "label" or stopper with part of an impression of a stamp seal with circular base; design shows a rosette in the center, surrounded by a scroll border. Found in the deposit of the Hittite period in U 31.

d 2812 (Fig. 253). Fragment of a pottery "label" or stopper with string marks and parts of five impressions of a stamp seal with circular base; design perhaps shows animals. Found in the deposit of the Hittite period in S 31.

d 2838 (Fig. 257). Sherd showing part of the so-called "royal" symbol. Found in the deposit of the Hittite period in R 31.

[71] Only a few examples of sherds showing this particular design are illustrated, and only these are enumerated.

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e 112 (Fig. 254 and Pl. XXV). Fragment of a pottery "label" or stopper with one nearly complete and one fragmentary impression of a stamp seal with circular base; design shows a quadruped within a ladder border. Found in O 33.

e 244 (Fig. 254 and Pl. XXV). Fragment of a pottery stopper with parts of two impressions of a stamp seal with circular base; unrecognizable design within a border of wedges. Found in DD 25.

e 333 (Fig. 254 and Pl. XXV). Fragment of a pottery stopper with three incomplete impressions of a stamp seal with a circular base; a double eagle seems to hold in each talon a quadruped; below it is a horned animal; above, traces of what may have been a winged disk. Found in Level 10 T in Q 26.

e 768 (Fig. 256 and Pl. XXV). Fragment of a pottery stopper with part of an impression of a stamp seal with cross-shaped base. Found in R 26.

e 769 (Fig. 255 and Pl. XXV). Piece of clay with parts of three impressions of a stamp seal with circular base; design shows a rosette within a scroll border. Found in R 26.

e 840 (Fig. 257). Sherd of medium, gray ware with brownish slip, showing part of the so-called "royal" symbol. Found along the eastern part of the city wall of the Hittite period.

e 844 (Fig. 247; *OIP* XXVII, No. 49). Baked cuneiform tablet of Cappadocian type, with envelope; the broken side of the envelope bears a fragmentary impression of a stamp seal with circular base. Found in a refuse layer at the northern gateway in S 0.

e 1145 (Fig. 256). Pottery "label" showing a complete impression of a stamp seal with an oval base .015×.018, with an unrecognizable design, and parts of impressions of a second stamp seal with oval base and of a cylinder(?) seal. Found in refuse before the city wall of the Hittite period in W 1–2.

e 1218 (Fig. 257). Sherd showing part of the so-called "royal" symbol; it shows the same technique as No. e 1251, though it is not from the same vessel. Found near the Hittite city wall in W 1–2.

e 1251 (Fig. 257). Sherd of medium, buff ware, red-slipped, with molded or stamped "royal" symbol; symbol is in low relief and without slip. Found near the Hittite city wall in W 1–2.

e 1306 (Fig. 256 and Pl. XXV). Fragment of a pottery "label" or stopper bearing four impressions of a stamp seal with circular base; rosette design. Found in S 0.

e 1429 (Fig. 255 and Pl. XXV). Fragment of a pottery stopper with an impression of a stamp seal with circular base; twisted bands border an unrecognizable design. Found in CC 23.

e 1584 (Fig. 257). Sherd of a large vessel of buff ware with gray core, bearing the "royal" symbol, which was molded and probably retouched by hand. Found south of the postern in HH–II 7. This is the largest example of this symbol from the Alişar mound.

e 1611 (Fig. 257). Sherd of buff ware with gray core bearing the "royal" symbol. Found in dump soil.

e 1665 (Fig. 256). Pottery "label" bearing two impressions of a stamp seal with circular base which seems to show a quadruped above a scorpion; there is a third impression of a smaller seal with an unrecognizable design. Found in CC 23.

List of Large Pottery Stamps (Fig. 258)[72]

c 258 Handle broken; nearly circular base shows a rough linear design. Found 2.85–3.90 deep in J 29.

c 408 Handle broken; nearly circular base shows two concentric rings and a scalloped border. Found .80 deep in L 29.

c 701 Handle broken; nearly circular base shows in relief a rosette within two circles, the outer of which is chipped. Found in the first .90 in I 26.

c 1338 Handle broken near top; nearly circular base shows four concentric rings. Found in the first .20 in AA 24.

c 1433 Handle broken at perforation; nearly circular base shows three concentric rings and a central dot. Found .80–1.60 deep in X 24.

c 2479 Handle broken; edges of nearly circular base chipped; base shows three concentric rings and a central dot; crude. Found 1.30–2.00 deep in S 29.

c 2533 Short perforated handle; nearly circular base shows three concentric rings, each incised in rope pattern, and a plain central dot; outer ring badly chipped; apparently accidentally burned. Found at the postern.

d 147 Handle broken off; circular base shows four concentric rings and a central dot. Found in I–J 28.

e 25 Handle perforated near top; broken, nearly circular base shows two concentric rings, each crossed by short incisions. Found in Z 26.

e 440 Both handle and base broken; base shows three concentric rings, each incised in rope pattern. Found in Q 26.

e 1291 Handle broken; nearly circular base shows three concentric rings, each incised in rope pattern. Found in L 15–16.

[72] Only objects found in 1930–32 are enumerated here.

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STONE OBJECTS

Blades, scrapers, and flakes of flint and obsidian similar to those of the previous periods were frequent.

A great many maceheads and their fragments were unearthed. All the types of the previous periods appear, but pear-shaped maceheads are now predominant (Fig. 259). Diorite and serpentine were the most common materials. No. e 1282*a* is of marble. No. d 2633, probably an unfinished macehead, is of hematite, and a pear-shaped macehead of hematite (b 1810)[73] was found in 1929.

Nos. c 1419 and d 2876 (Fig. 261), both of whitish marble, were probably pommels of daggers or swords.

Several flat axes were found in the cultural deposit of this period (e.g., d 1461, d 2335, and e 433, Fig. 261). No. e 433 is an especially fine piece, made of serpentine. Nos. d 2104, d 1915, and d 1809 are unfinished axes the cutting edges of which have not been ground.

Two hammers, Nos. 1924 (Fig. 259)[74] and b 1608,[75] have unusual forms. Other hammers (c 636 and c 1440) and hammer axes are shown in Figure 260; they are all of previously known types. The hammer axes usually have one cutting edge parallel to the bore and one blunt end. The materials are mainly diorite and serpentine; basalt and porphyry appear to have been used less frequently.

Oblong objects with rectangular, circular, or oval cross-section, made of limestone, slate, or sandstone, were found in great numbers (Figs. 261–62). They were obviously used for sharpening or polishing. Most of them were perforated near one end. In several the end opposite the perforation is broader and has a depression (Fig. 262); these seem to have been used as handles for bow drills. No. d 2504 (Fig. 261) is a drill core re-used for polishing. Flat stones, mostly perforated at one end (e.g., d 1695, d 2529, e 398, and e 1115, Fig. 262), seem to have been used as whetstones or polishing stones. No. d 2320 is similar in form but was probably a pendant (see below). No. d 2634 seems to have been used for polishing round objects, perhaps arrow shafts or the like. No. d 2379 was apparently used to polish small round objects and as a whetstone. No. d 2491 shows clearly its use for polishing objects of various shapes. No. d 1362 is a polishing implement of tufa. Small polishing stones (pebbles) were abundant throughout the deposits of this period. Nos. d 2341 and e 16 (Fig. 259) are typical pestles.

Several molds, mostly of serpentine, were found (Fig. 263). No. d 2016 is a mold for jewelry, probably pendants or earrings. No. e 2316 is a mold for a flat circular ornament. No. d 294, of sandstone, seems to be part of a mold for a pin or nail. No. d 2852 (Fig. 262) shows forms for an ax and a chisel. Nos. c 2408 and d 2776 (Fig. 262) and e 2155 (Fig. 263) are molds for unidentified objects. No. e 809 either is a fragment of a mold or was used for polishing round objects. No. d 2342 is the cover of a mold. No. d 154 (Fig. 230) is a diorite mold for flat lead figurines.

No. c 317 (Fig. 263) is a fragment of a fine serpentine vessel. The depressions were probably filled with another material.

"Whorls" of the Copper Age type were found frequently in the deposits of this period.[76]

A representative collection of small stone objects is shown in Figure 264. Nos. d 2887, e 810, e 950, and d 1962 are hematite amulets of a type known in previous periods. No. d 2887 is especially interesting as it has a piece of bronze or copper wire inserted in the middle. The toggles of diorite or serpentine show in general the same forms as those of the earlier periods. No. d 1527 is a small serpentine bottle, carefully cut. No. c 1156 seems to have

[73] *OIP* XIX 165.

[74] *OIP* VII 77; wrongly numbered 3289 in *OIP* XIX 166.

[75] *OIP* XIX 166.

[76] Cf. *OIP* XXVIII 185–89.

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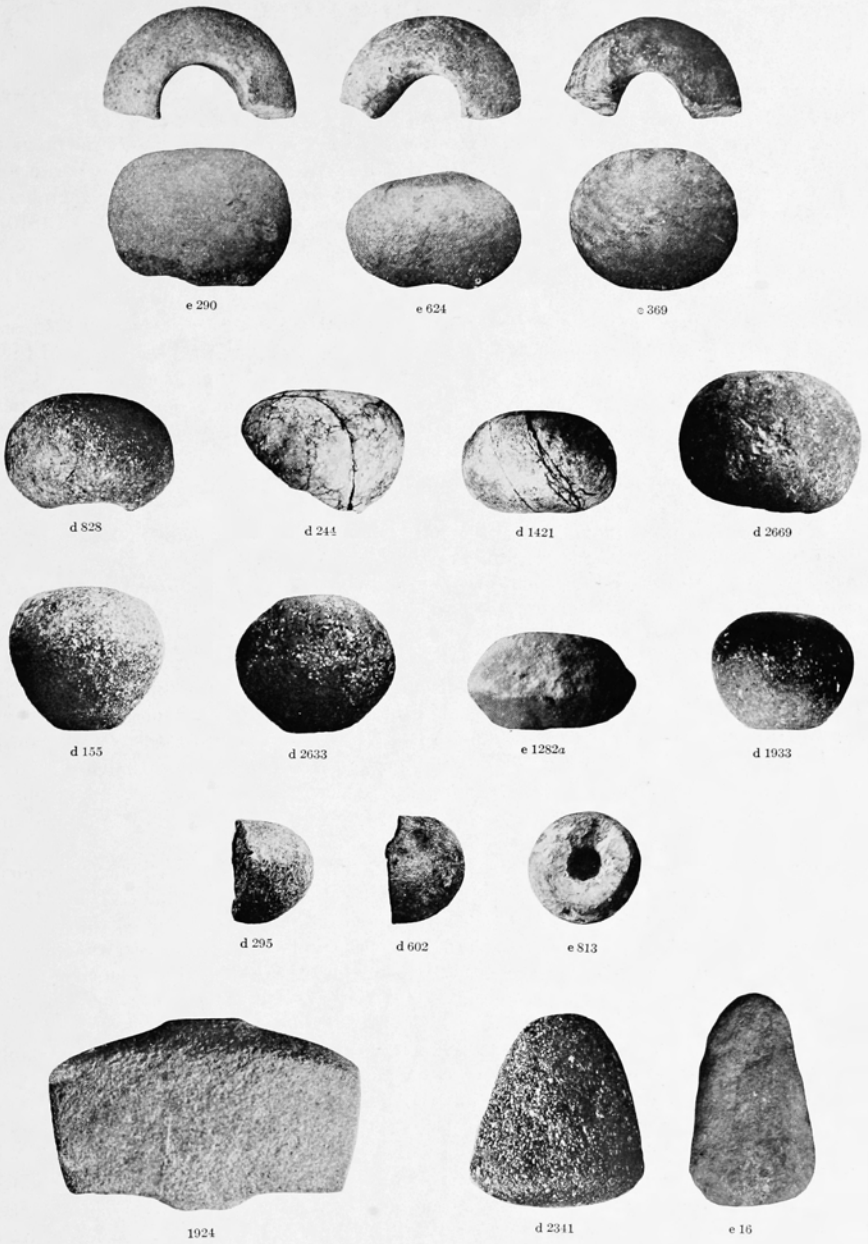

Fig. 259.—Maceheads, Pestles, and a Hammer. Scale, 1:2

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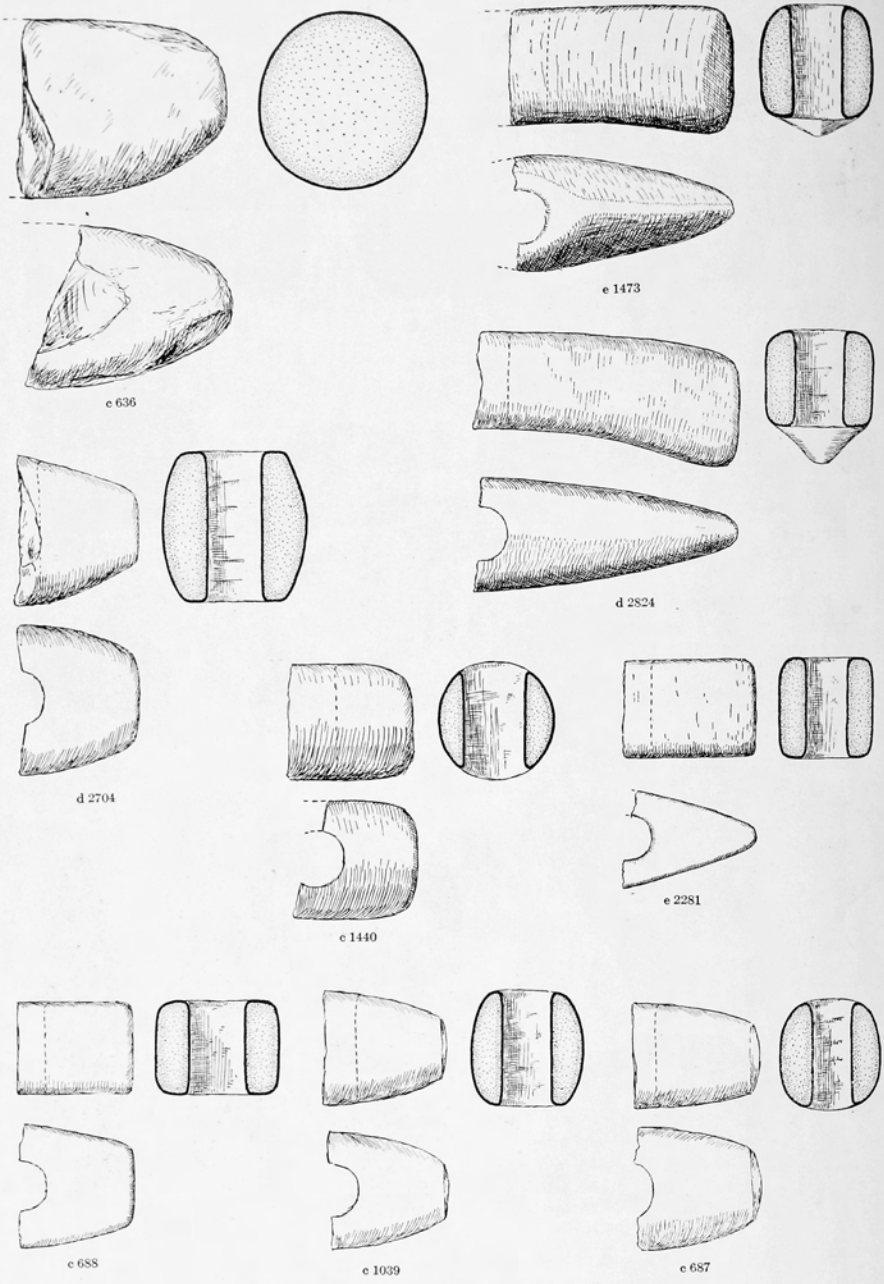

Fig. 260.—Hammers and Hammer Axes. Scale, 1:2

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Fig. 261.—Axes, Pommels, and Polishing Stones. Actual Size

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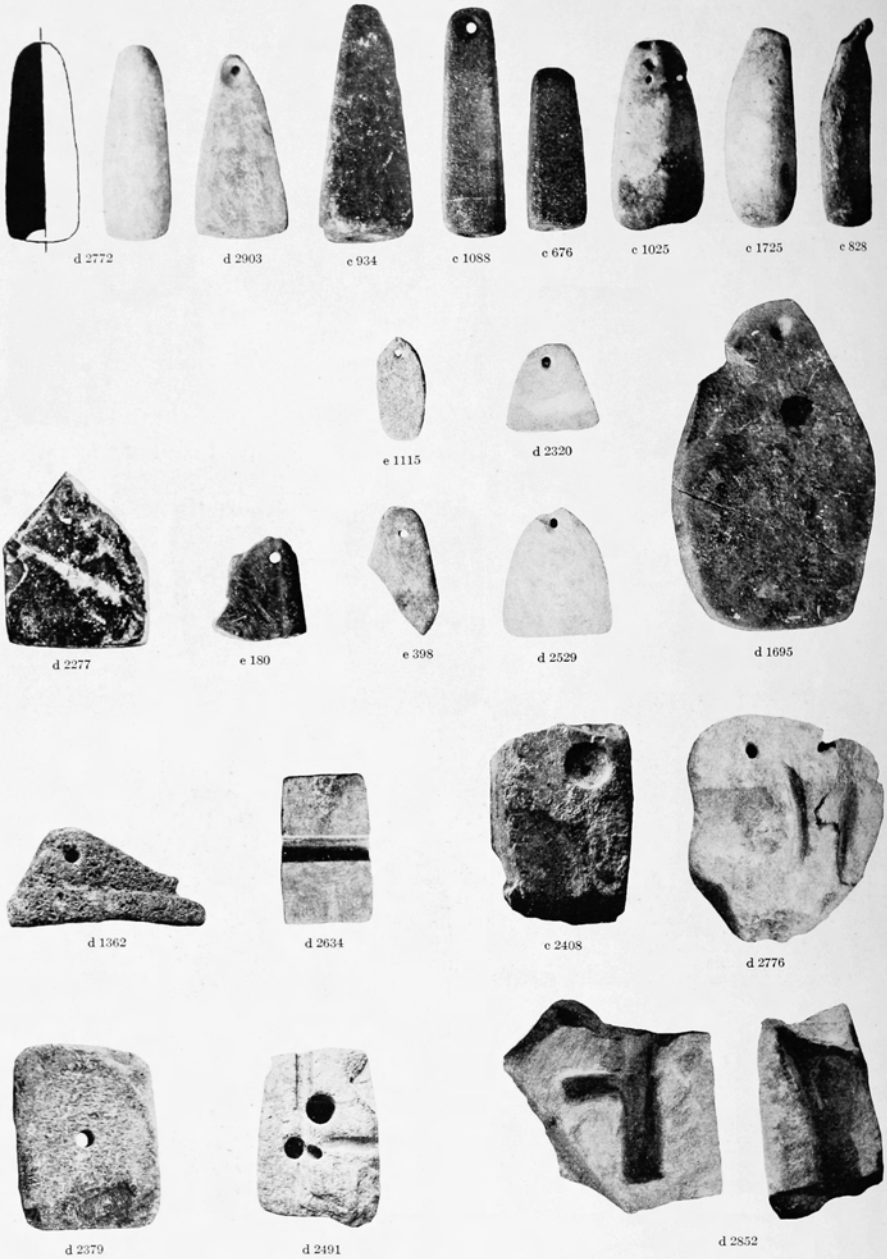

Fig. 262.—Polishing Stones and Molds. Scale, 2:5

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d 2016

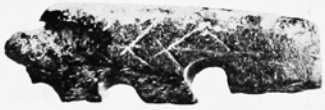
d 294

e 2155

e 2316

d 2342

e 317



e 809

Fig. 263.—Molds and a Fragment of a Stone Vessel. Scale, 2:3

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Fig. 264.—Miscellaneous Stone Objects. Actual Size

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been part of an inlay. Perhaps the little foot c 2001 of red jasper was likewise part of an inlay. The other objects shown in Figure 264 are beads or pendants. Nos. d 2371 and e 1256 are of alabaster; Nos. d 541, d 2657, and c 728, of rock crystal; Nos. d 2623 and e 83, of carnelian. Serpentine, diorite, and various kinds of limestone were used for the others. No. d 2320, of shale(?) (Fig. 262), is probably a pendant, for it is very carefully worked. A hematite plummet (c 2722) was a mortuary gift with skeleton c X24. Stone amulet d 2424 (Fig. 134) was with skeleton d X33, and a stone seal or amulet (d 2613, Fig. 136) was found with skeleton d X36. In 1930 several small pieces of amber were found in J 31 in a refuse layer of this period, and an amber "whorl" (c 1234, Fig. 264) was found 1.40–2.00 deep in Y 24 with remains of the Hittite period. The form of hand mill used from the Chalcolithic period on persists. Door sockets and simple hammerstones were frequent.

For figurines and seals of stone see pages 193 and 205–26; for stone heads on pins of bone or metal see below and page 253.

BONE OBJECTS

The typical awls of this period, as represented by Nos. d 40, d 646, d 533, d 834, and d 1180 (Fig. 265), are made from metatarsals of horses or asses. Nos. e 1179, d 2107, and d 153 also are probably awls; they were found in undisturbed layers of the Hittite period, although implements of this type appear more frequently in the deposits of the second half of the first millennium B.C. The remaining objects in Figure 265 may be either awls or crude pins. A few awls made of sheep bone, typical of the Copper Age, also occurred. Besides these types there were various bone splinters pointed at one end.

Characteristic of this period were bone pins, which were found in great numbers and show a variety of heads (Figs. 266–68). Sometimes a few incised lines appear a little below the head. Most common were disk-shaped heads, which were occasionally fluted or corrugated. Lenticular heads were next in frequency. Conical, globular, and ovoid heads were less numerous. A few of these also were fluted, corrugated, or scalloped. The heads of Nos. e 489, e 451, and e 97 (Fig. 267) show raylike incisions. Nos. d 1736, d 2753, and d 2477 (Fig. 267) have heads with squarish tops.

Figure 268 shows a representative collection of the best carved pins. No. e 1715 is probably an unfinished pin. A rectangular head with a groove at the top and crossed diagonal lines incised in the sides appears on Nos. c 550 and c 2373. Nos. d 2778, e 105, and e 105*a* have very elaborately carved heads. Another type of pinhead, originally representing two long-necked birds' heads (e.g., c 448), shows many variations and finally developed forms such as Nos. d 634, e 323, and e 989. The best piece in the collection is pin d 1166, with a carefully executed lion's head. Nos. d 2950 and d 2650 show birds of prey as pinheads. Although pin b 409,[77] the head of which represents a bird perched on a cube, was found in a deposit of the Post-Hittite–Phrygian period, it probably originated during the Hittite period. No similar pieces have been found so far in the deposits of the first millennium B.C. No. e 2309 is a bone pin with a globular head of serpentine. No. e 84 is a pin to which a head of another material was probably attached. The delicate object c 2301 may have been, by present-day analogy, a toilet instrument for painting the eyelashes. Only three bone needles were found (d 2470, d 2498, and d 2844).

In Figure 269 are illustrated objects tapering to a point at one end. Many of these "styli" are decorated with finely incised linear patterns or with circles with centered dots. Several have tangs for insertion into handles. No. c 2300 has a socket, in one side of which is a small perforation in which a piece of bronze or copper wire remained.

[77] *OIP* XX 82–83.

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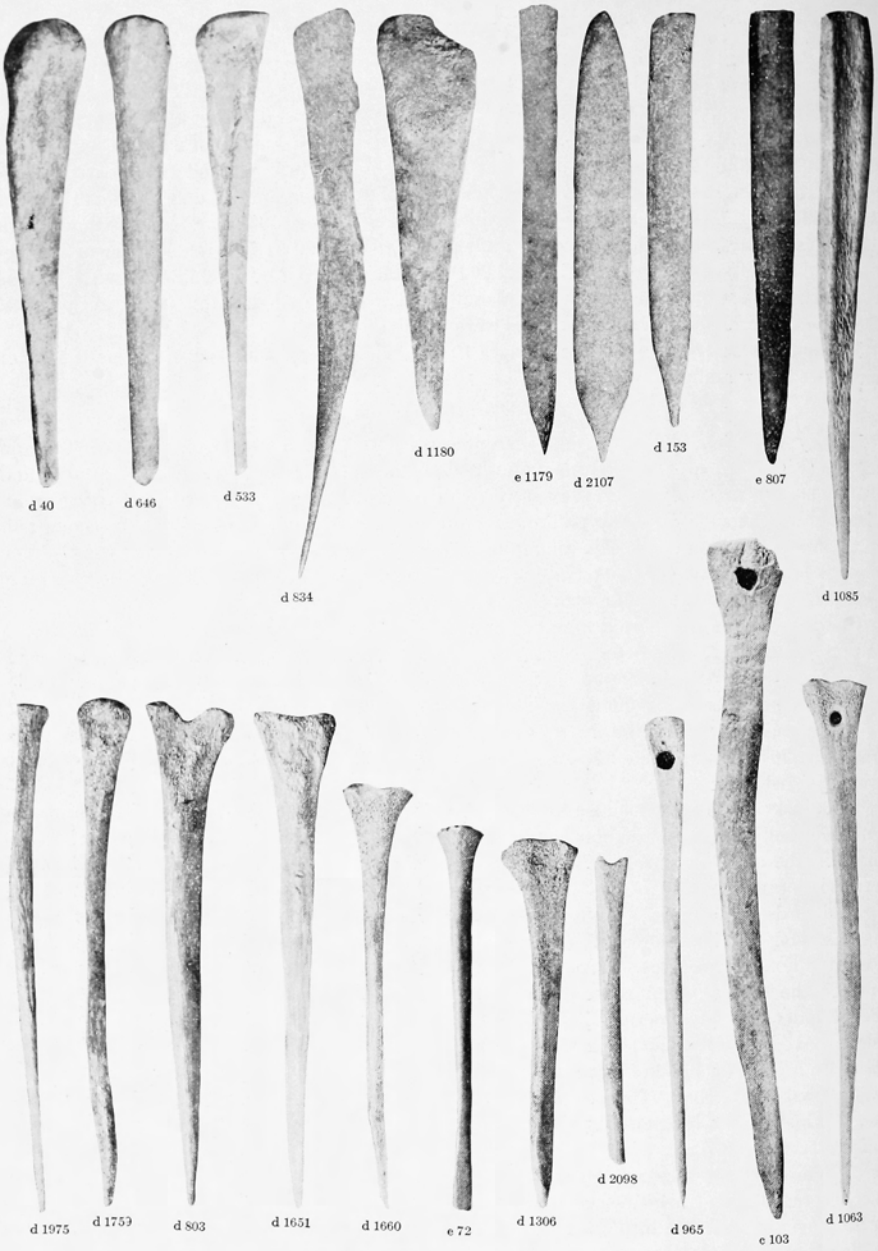

Fig. 265.—Bone Awls. Actual Size

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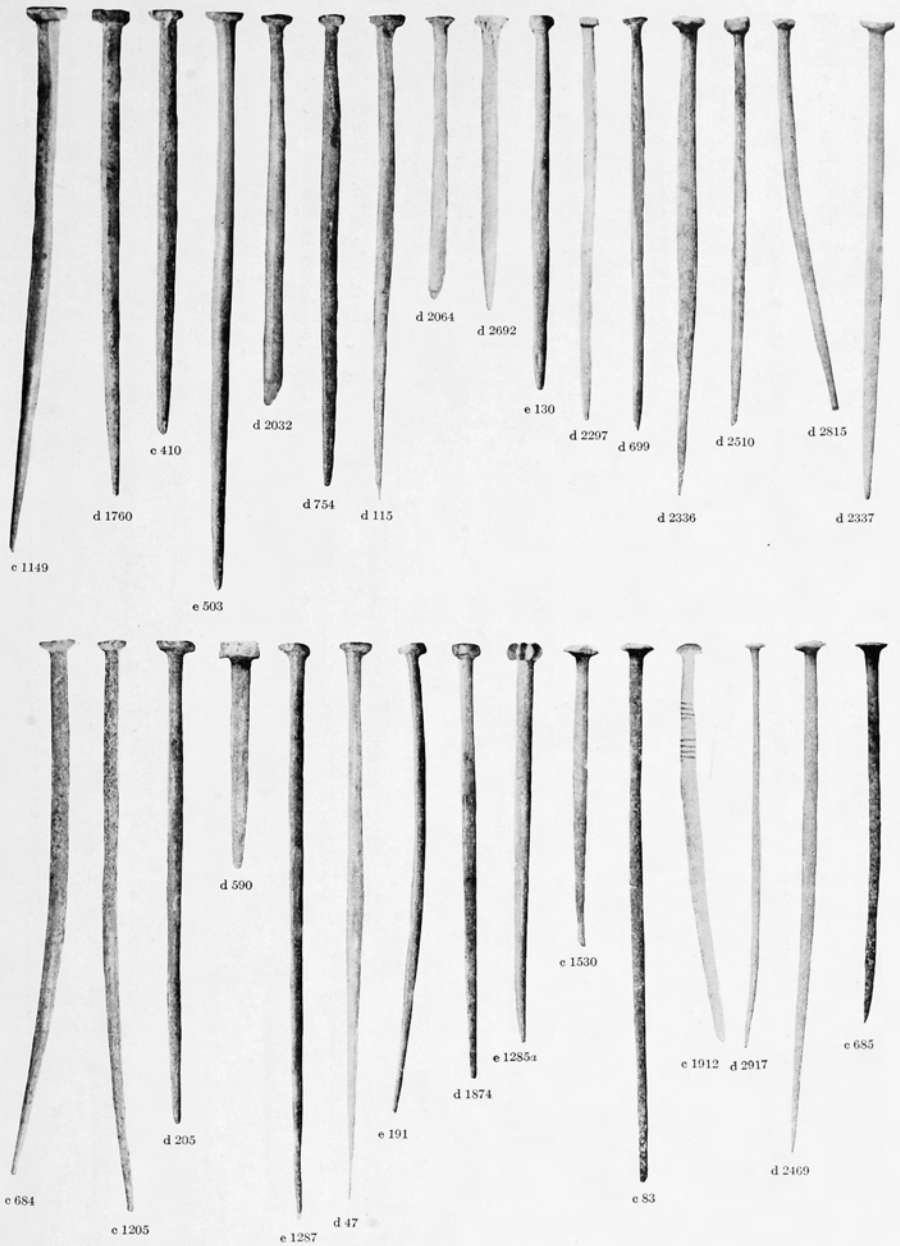

Fig. 266.—Bone Pins. Actual Size

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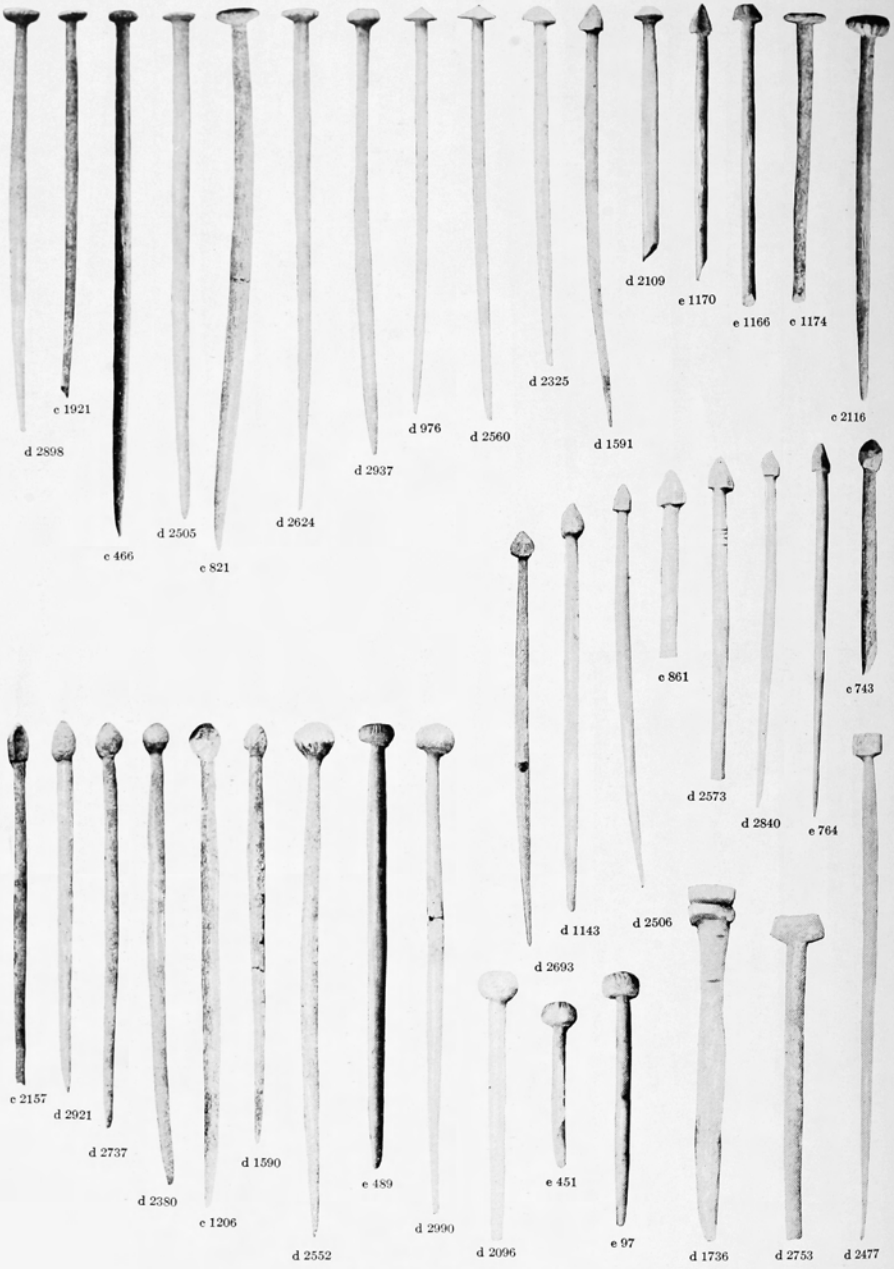

Fig. 267.—Bone Pins. Actual Size

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FIG. 268.—ELABORATE BONE PINS. ACTUAL SIZE

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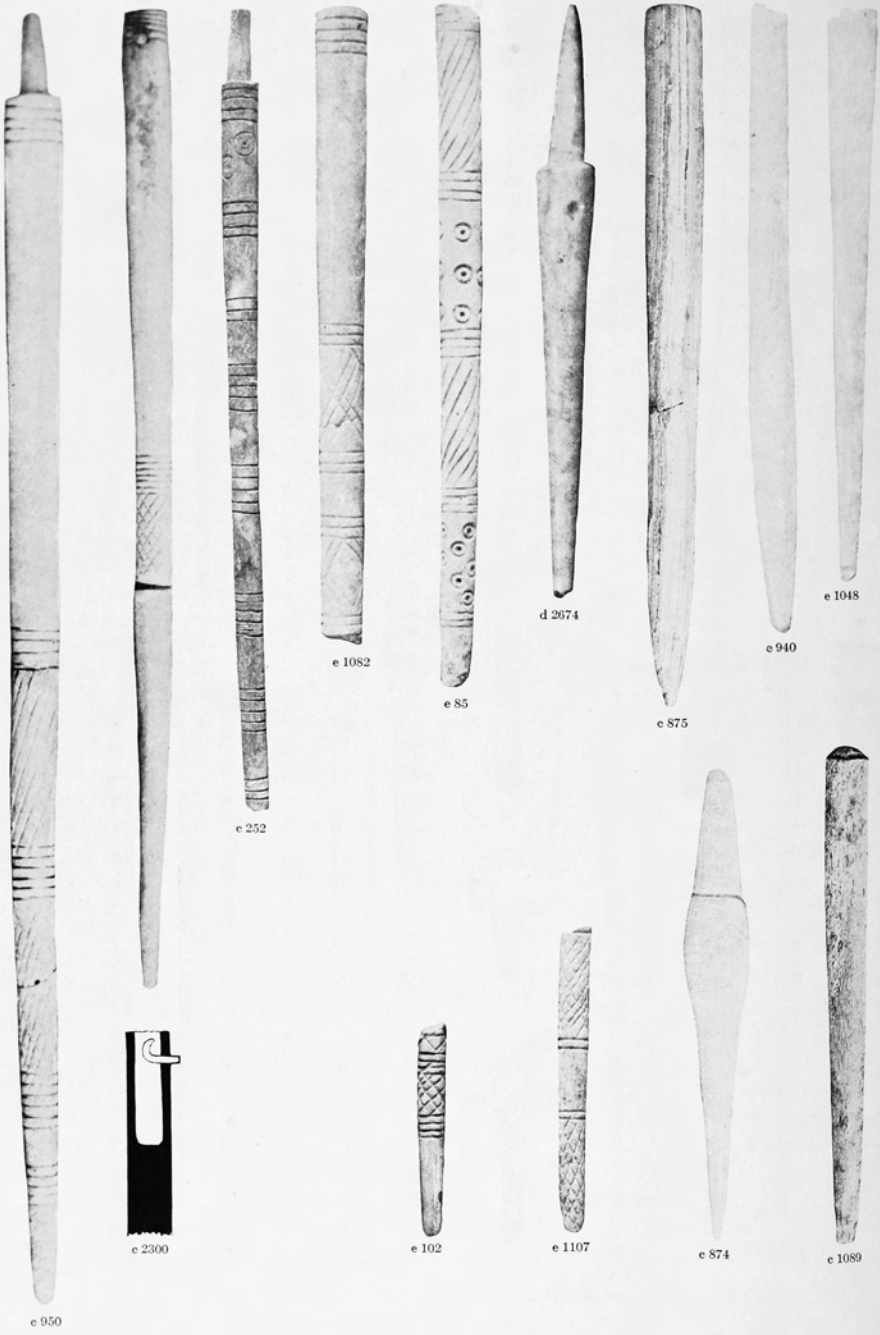

Fig. 269.—Bone "Styli." Actual Size

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Another typical form of bone implement of this period is the arrowhead (Fig. 270). No. e 156 is an exceptional piece with a socket and two barbs. Four main types are common. The first has its greatest diameter just a little nearer to the tip than to the middle; that is, the shaft is slightly longer than the point (row 1). The second type has a shaft much longer than the point (rows 2–3). The third type has an accentuated head (first group in row 4), and the fourth type emphasizes one wing (second group in row 4).

Spatulate objects are illustrated in Figure 271. Nos. d 2826 and d 2754 are flat pieces of bone, the edges of which are sharpened. Fragments of spatulate objects with stems, such as No. d 2611, were numerous. No. d 2963 resembles a small spoon. Nos. c 727 and c 1858 are probably fragments of objects like No. c 94, which ends in a small flat spoon. No. d 1171 may have been a comb.

Socketed handles (Fig. 272) were sometimes decorated with incised lines or with circles around centered dots. The heads are usually ovoid (e.g., d 1835) or flat and circular (e.g., e 22). Such a handle, with a flat top and a tang for attachment instead of a socket, was found in 1929 (b 1873).[78] Nos. d 1580 and e 508 illustrate another type of handle, probably for large blades. No. e 970 is half of a hollow cylinder.

A great many tubes were found (Fig. 273). Several were carefully decorated with incised lines or with circles around centered dots; many had serrated ends, looking as though cords had been pulled through them. Two bone tubes (c 2720–21) were found with skeleton c X24.

Nos. d 186 and d 370 (Fig. 274) are fragments of round bone boxes. Although only two complete specimens have been found at Alişar (2489[79] and b 1929[80]), such objects must have been fairly common, for a number of very fine decorated lids of such boxes came to light every year. There are two principal types of lids. One is oval with a small ring at one end; it is interesting to note that nearly every such lid shows a transverse perforation through the rough boss on the inside (e.g., c 1919). The second type is circular, usually with one or two perforations. The circular group also includes a few specimens with the ring feature (e.g., d 1816). No. c 2574, of ivory, is unique at Alişar.

Bone slips with incised decoration, sometimes with one or more perforations, seem to have been used as inlays for furniture or other objects (Fig. 275). The ornamentation consists of straight lines, concentric rings, or circles with centered dots. The purpose of spool-shaped objects such as Nos. c 2713, e 895, and e 910 (Fig. 275) is unknown. No. d 2221 is a small hollow cylinder with incised ornamentation. Nos. c 447 and d 1610 seem to be wrist guards. No. e 1337 may be a seal; but I rather believe it to be a pendant, as is No. e 919. Nos. e 1629 and e 1899 are rings; each has a perforation to attach it to some other object. No. e 1845 is a perforated tooth of a dog. No. d 2748 is a fragmentary ring of shell. No. c 2573+ d 800 is of ivory; its purpose is unknown, but small perforations along the sides suggest that it may have been part of a stringed musical instrument.

Miscellaneous bone objects are shown in Figure 276. The toggles in the second row (d 2443 to d 1818) and the knucklebones showing perforations filled with lead (d 2645, d 2717, and e 199) are especially interesting. The two "clock hands" (e 1015–16) are interesting too, but their use is at present unknown. No. e 1802 may be the end of a handle. A bone bead (d 2425, Fig. 134) was found with skeleton d X33. Parts of femur heads, perforated or unperforated, are shown in Figure 277. No. d 2194 has been cut with two flat sides. No. d 1983 is a ring.

Objects of staghorn (Fig. 278) were numerous, but the uses of only a few could be determined. Two pieces (e 10 and e 1926) seem to have been used to attach handles to axes. There were several pointed objects. No. e 2278 may be a fragment of a pick. No. e 2264 is

[78] *OIP* XIX, Fig. 227. [79] *OIP* VII 122. [80] *OIP* XIX 173.

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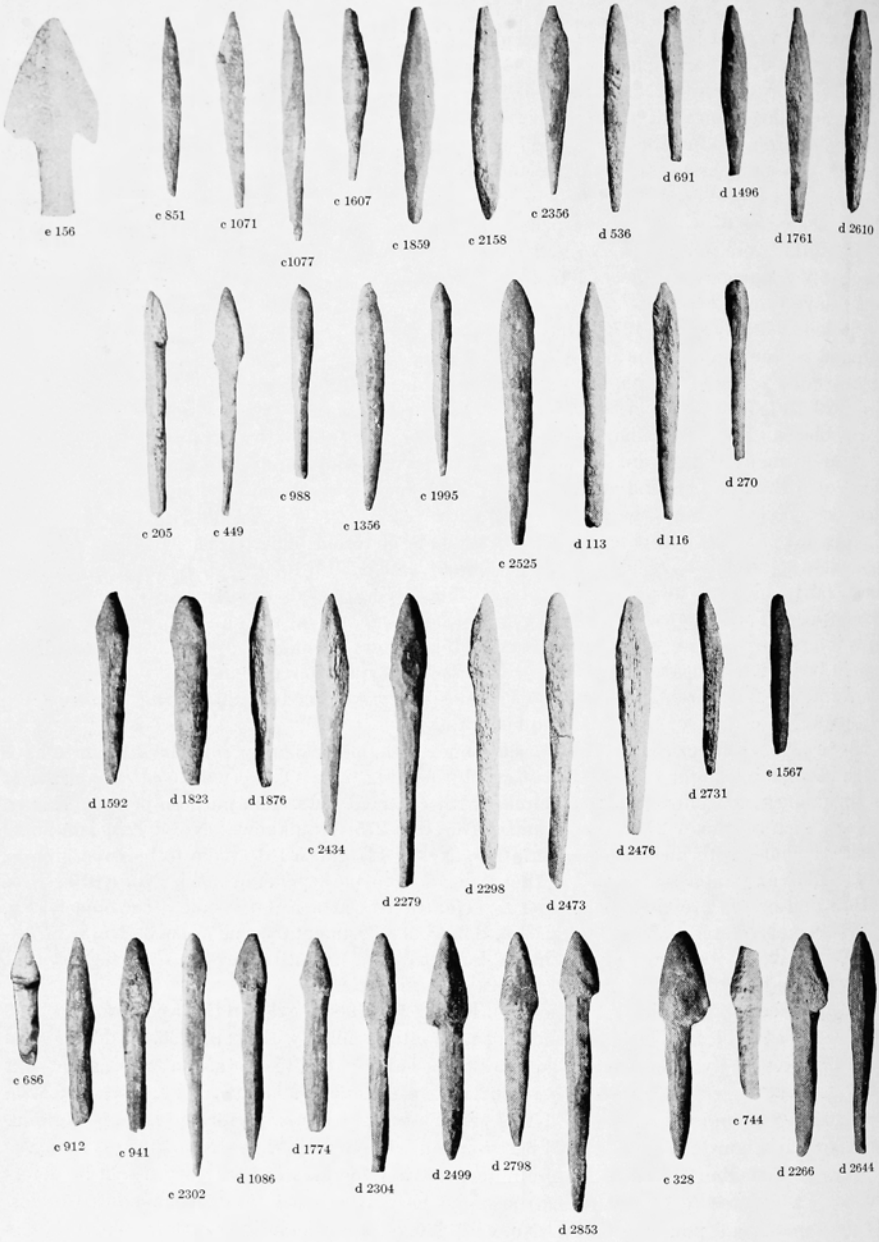

Fig. 270.—Bone Arrowheads. Actual Size

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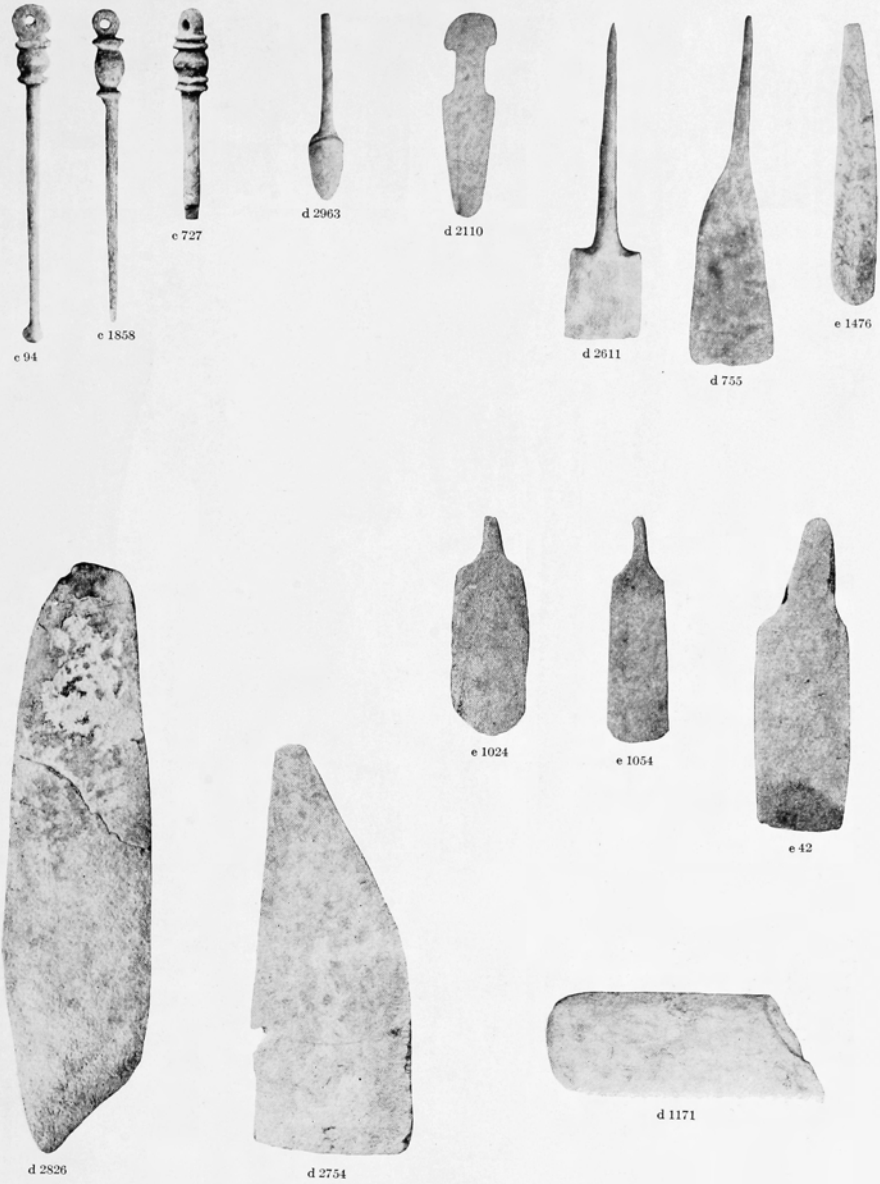

FIG. 271.—SPATULATE OBJECTS OF BONE. ACTUAL SIZE

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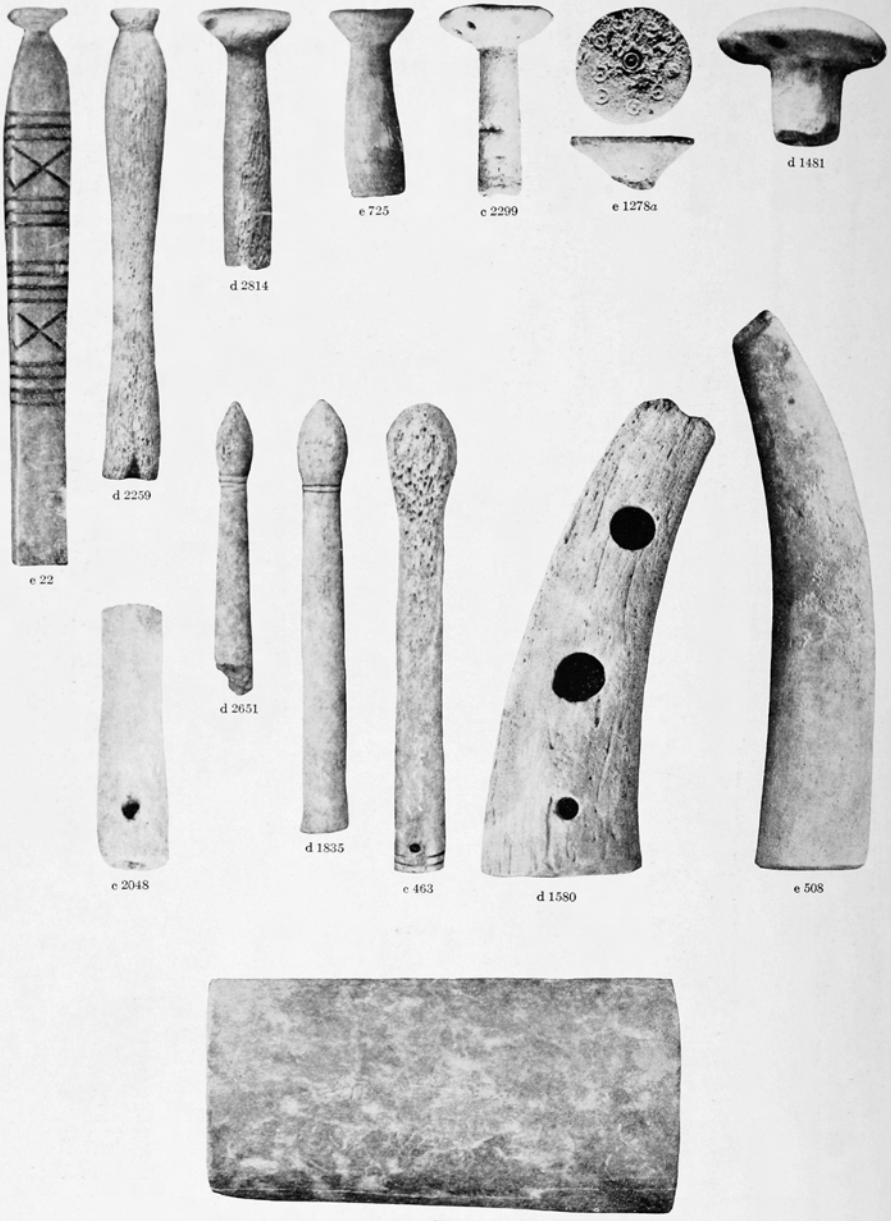

FIG. 272.—BONE HANDLES. ACTUAL SIZE

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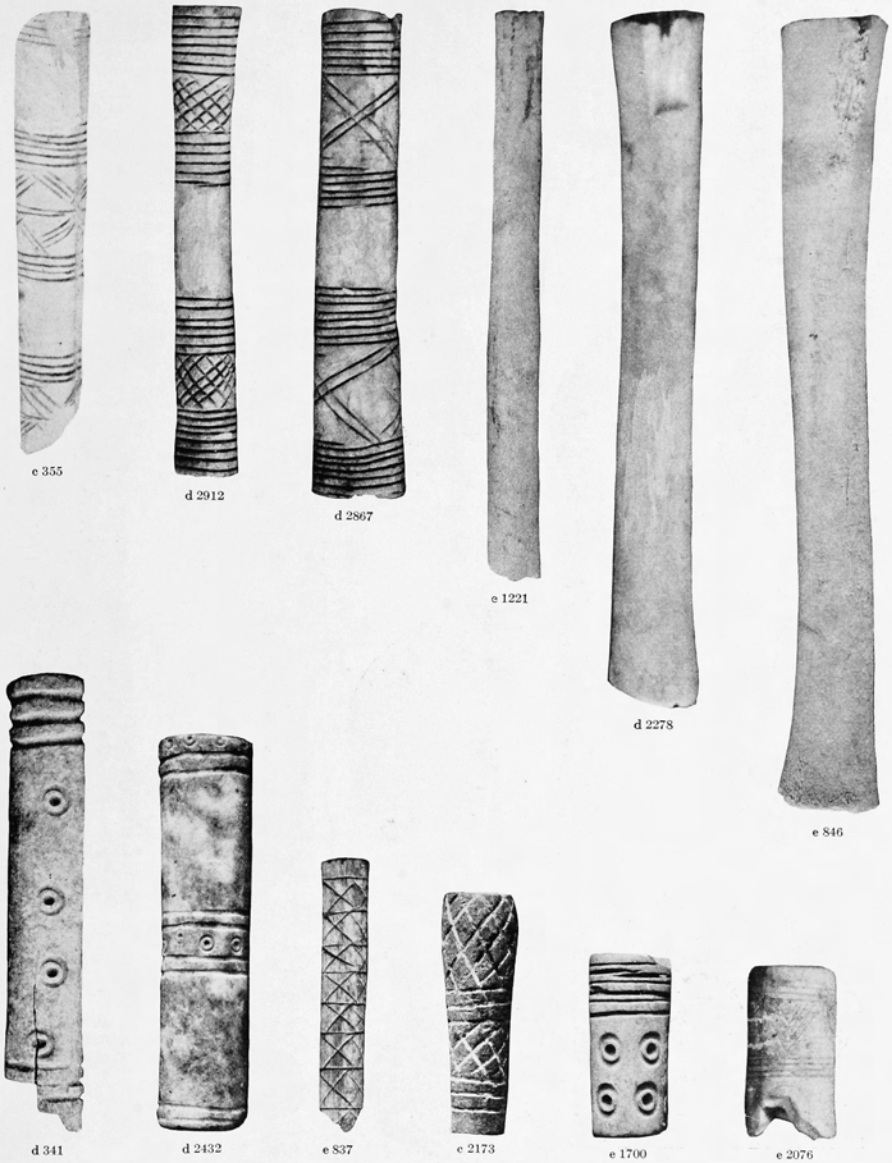

FIG. 273.—BONE TUBES. ACTUAL SIZE

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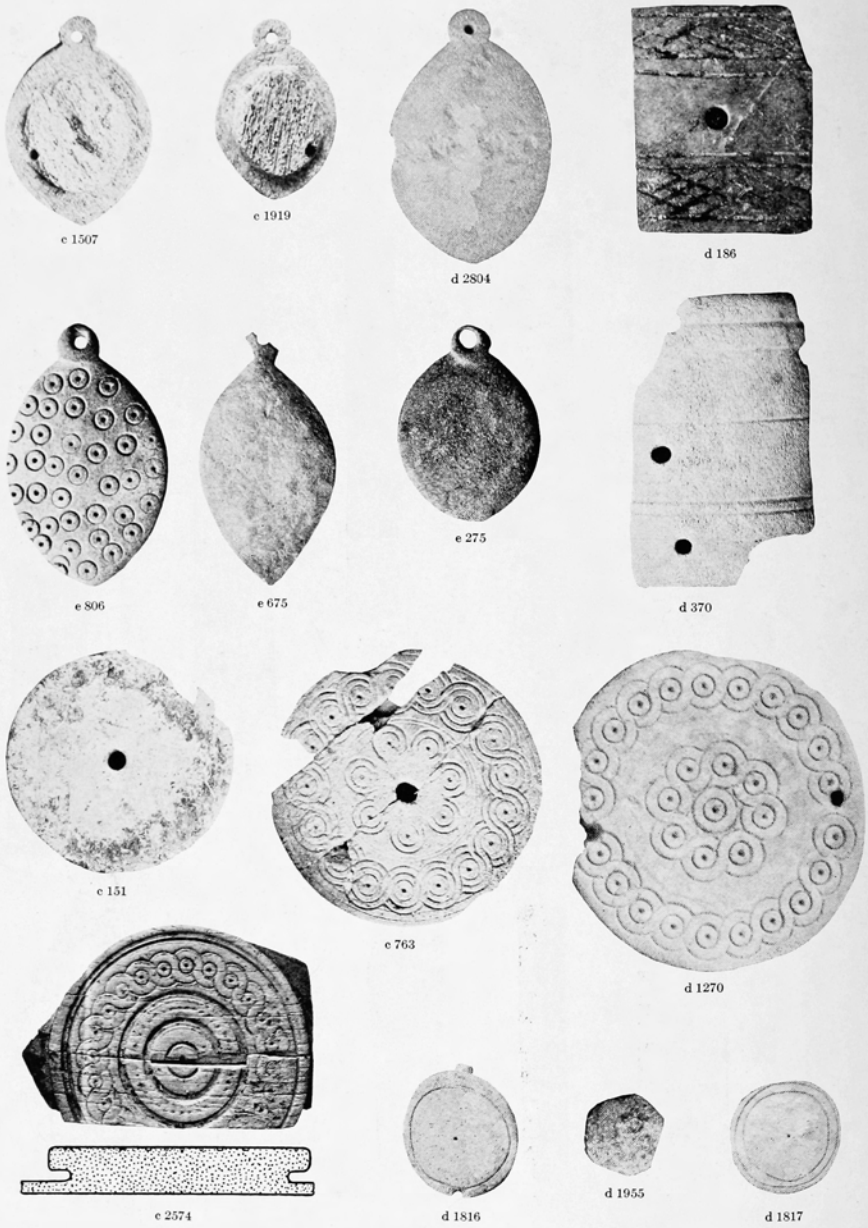

Fig. 274.—Bone Boxes and Lids. Actual Size

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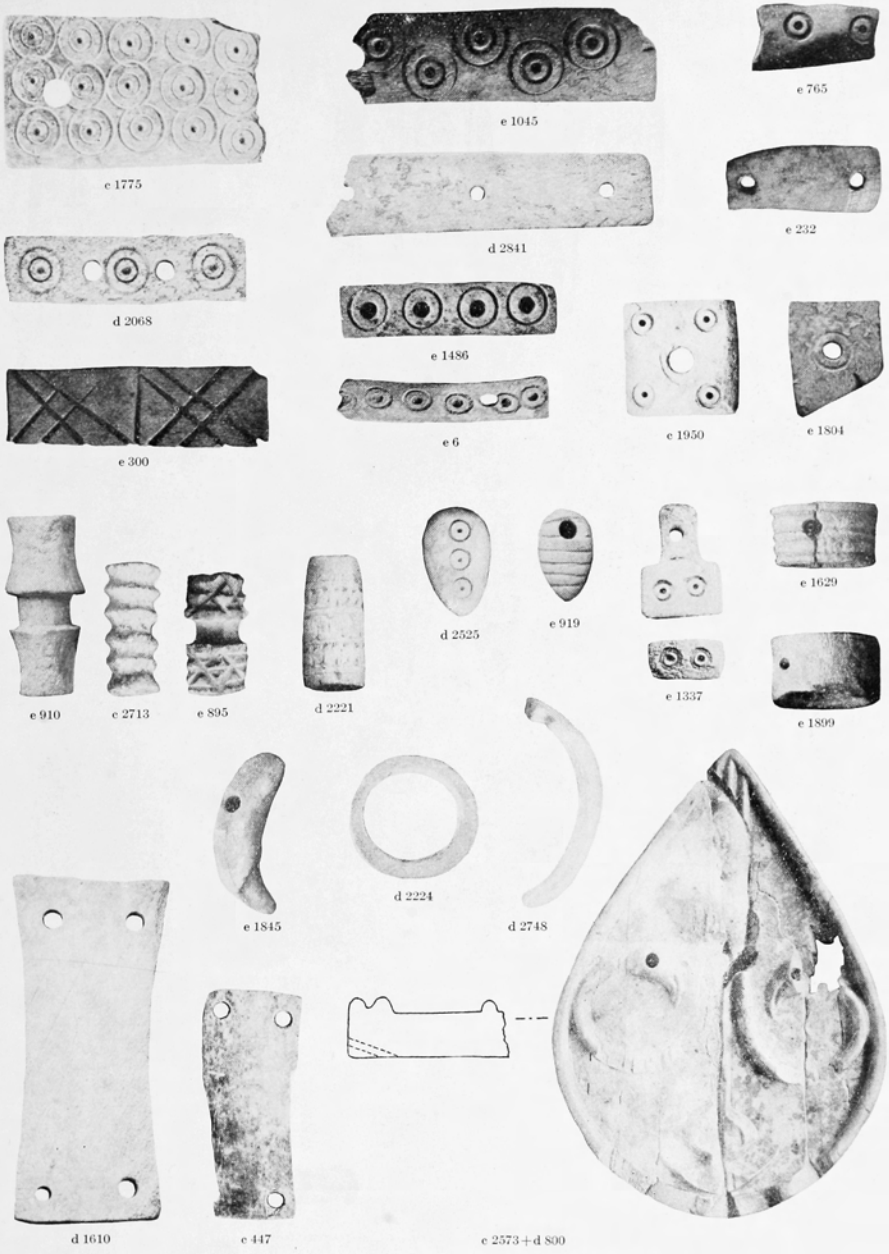

Fig. 275.—Miscellaneous Bone Objects. Actual Size

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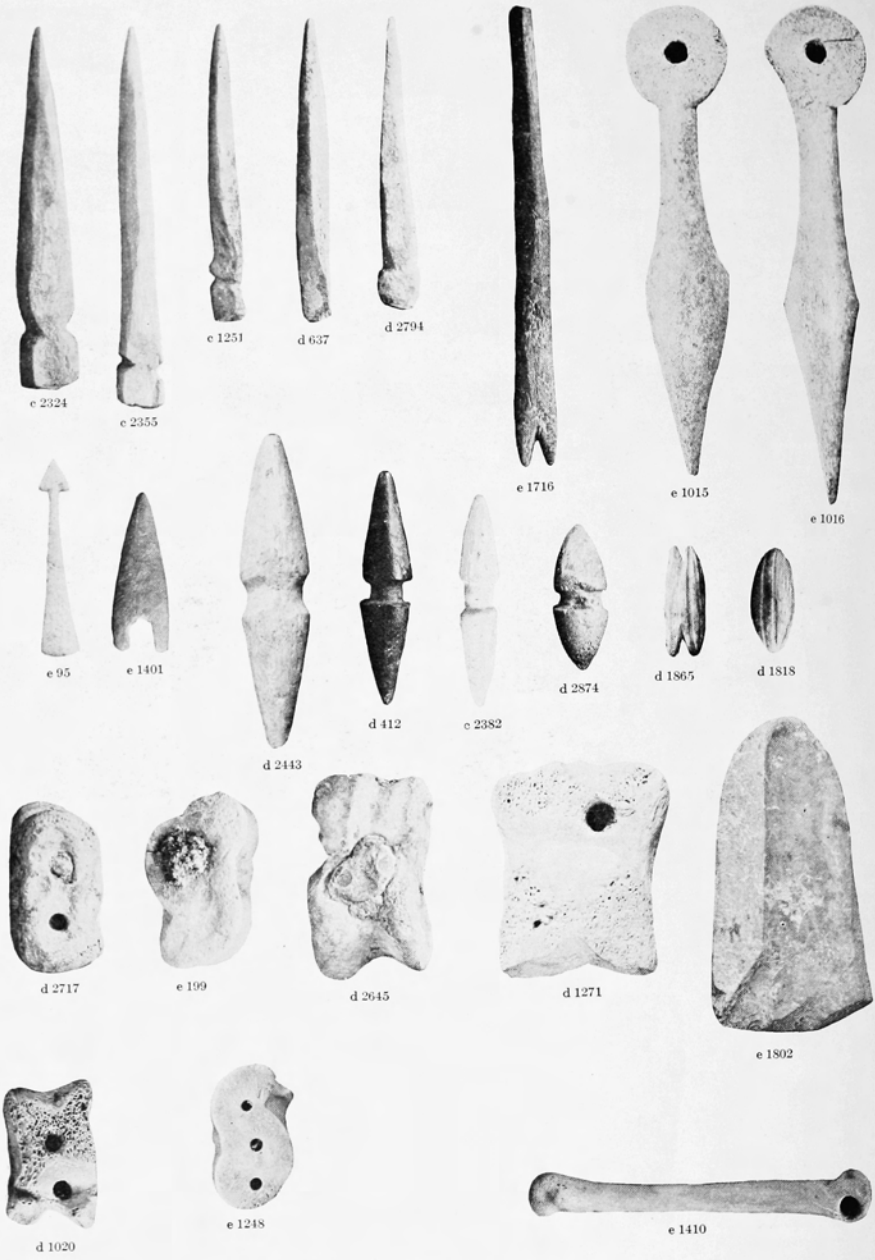

Fig. 276.—Miscellaneous Bone Objects. Actual Size

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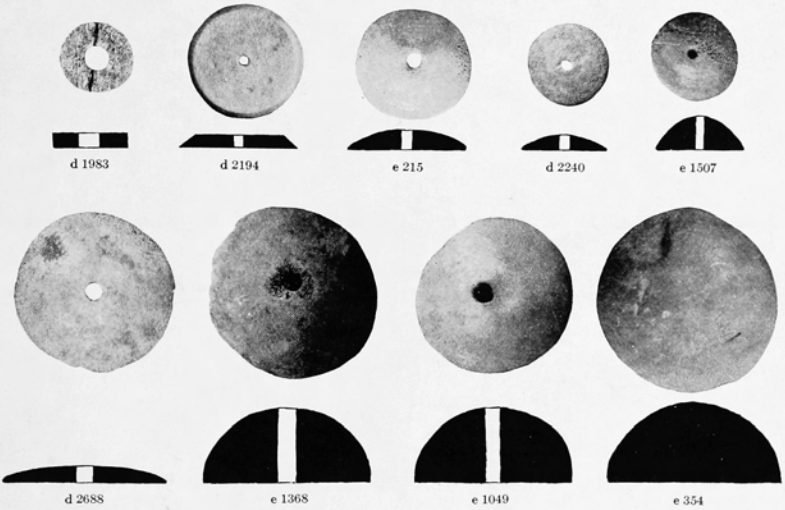

Fig. 277.—Femur Heads. Scale, 2:3

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Fig. 278.—Objects of Staghorn. Scale, about 1:2

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a boar's tusk, probably used as an amulet. A boar's tusk and three human teeth were found near skeleton c X25.

Bone and ivory seals are described on pages 221–25. For unwrought animal bones and shells see *OIP* XXX 294–309 and 324–27.

METAL OBJECTS

BRONZE OR COPPER

It is necessary to use the term "bronze or copper" because only an analysis of each individual piece would determine which it is.

The pinheads again show an amazing variety of forms (Figs. 279–84), most of which first appeared in previous periods. Scalloped, corrugated, fluted, and star-shaped heads are now more frequent (Fig. 282). Some of the heads, for example the first group in Figure 283, resemble those of bone pins; Nos. e 1652, e 1069, and e 1745 (Fig. 283) may have been copied from debased forms of bone pinheads which originally represented two long-necked birds' heads (cf. Fig. 268). The head of pin e 945 (Fig. 283) is in the shape of a bird, as is the head of pin d 2418 (Fig. 134), which was found as a mortuary gift of skeleton d X33. Pins d 44, d 878, and c 129 (Fig. 283) are flattened and perforated below the head. Pinheads with two scrolls turned outward (e.g., e 669, Fig. 283) are typical for this period. The bronze or copper pins in the upper row of Figure 284 have separate heads, in most cases of stone or frit. No. e 1555 has a separate head of bronze or copper with small pieces of iron inlay. No. d 2596 is a separate star-shaped pinhead of stone; Nos. c 969, d 1969, e 111, and e 946 are heads of bronze or copper. No. d 1940 is a bronze pin with a conical head of frit. Finally, a group of pins with ovoid heads and a group with scrolled heads are illustrated in Figure 284. In 1929 a pin was found the head of which is shaped like the fore part of an animal (b 2206);[81] its shaft has a rectangular cross-section. Bronze or copper pins were found as mortuary gifts with skeletons c X23–24, d X30, d X33, d X36, and d X51 (cf. Figs. 127, 129, 134, 136, and 144).

Figure 285 shows needles and one hairpin (e 1778). Two types of needles can be differentiated: one has an eye made by slitting one end (d 1914, d 2042, d 1756, and d 2077); the eye of the other type is made by flattening, bending back, and soldering one end. Needle d 2299 (Fig. 131) was a mortuary gift with skeleton d X32.

Three principal types of axes can be differentiated. Now for the first time in Alişar, as far as we know, appears the axhead with lugs ("Ärmchenbeil"; e.g., c 1093, c 1648, and c 1741, Fig. 286). In a less elongated form this becomes typical for the later periods. The second type of axhead has a socket and often a perforation through which it can be secured to the haft ("Lappenbeil"; e.g., d 2452, d 2033, and d 2974, Fig. 286). Finally, flat axes were found (Fig. 287); most of them were rather small.

Blades were numerous, though most of them were in a poor state of preservation. Two-edged blades were probably daggers. One form of dagger blade has a wide, often rounded, upper end to which the handle was attached with rivets (e.g., d 2480 and d 2111, Fig. 287). The upper end of No. d 1499 is broken off; it was probably of this type. The upper part of the blade d 2564 is flanged along both edges, apparently to grip the handle. Another type of dagger blade tapers to a tang, to which the handle was riveted (Fig. 288). Figure 289 illustrates curved blades, all of which seem to have had tangs. On Nos. c 1209 and e 1500 the convex side is sharpened; on the others the concave side is the cutting edge. A derivative of this type, with the inner edge serrated (Fig. 290), continued to be used until the Roman-Byzantine period.

[81] *OIP* XIX 162.

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Fig. 279.—Bronze or Copper Pins. Actual Size

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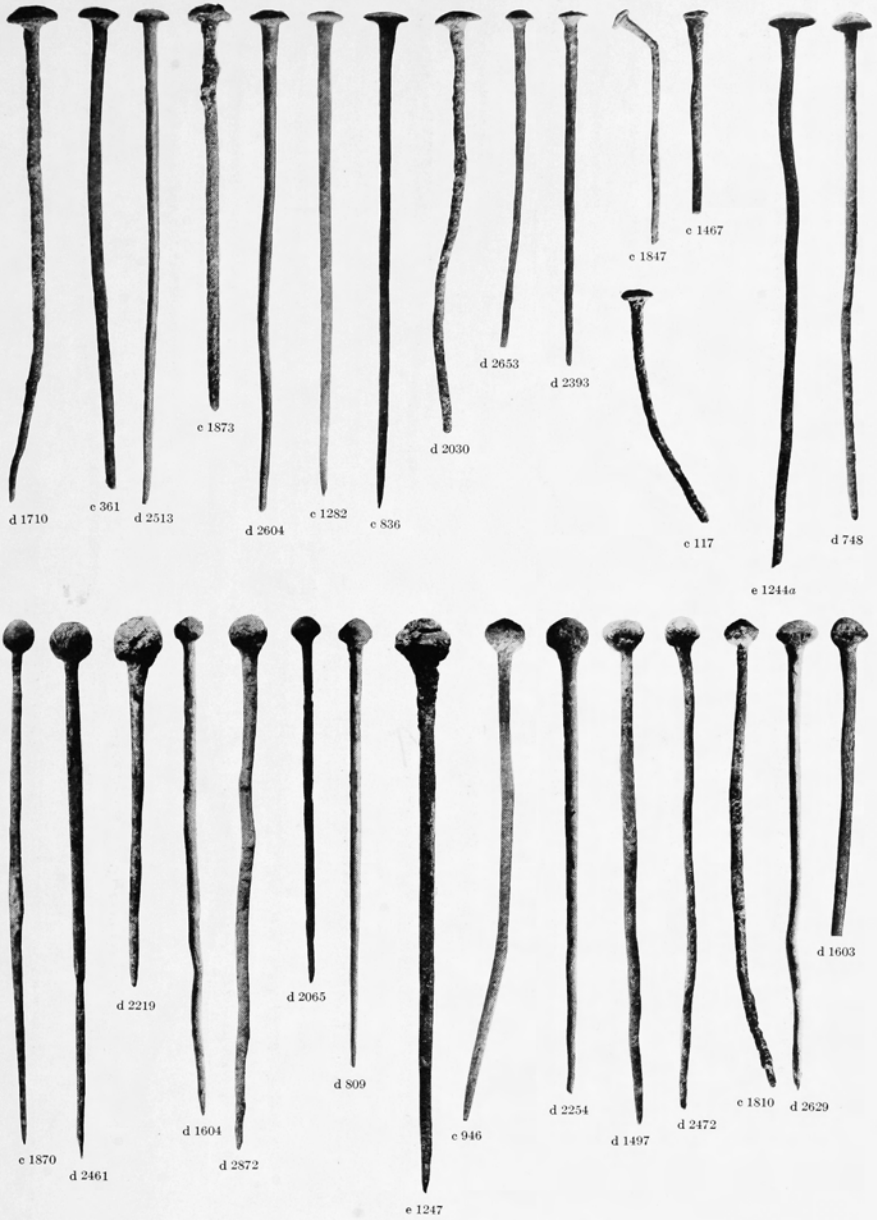

Fig. 280.—Bronze or Copper Pins. Actual Size

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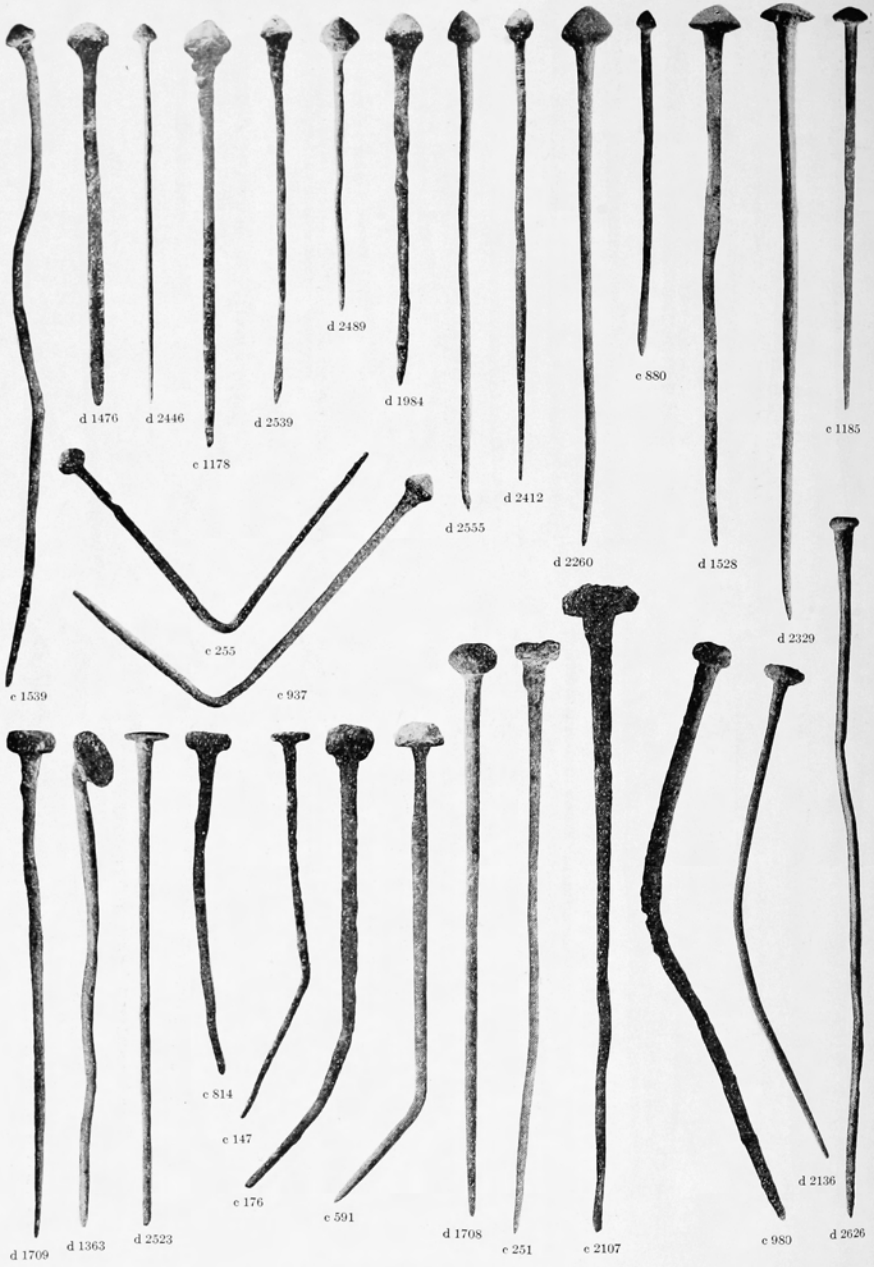

Fig. 281.—Bronze or Copper Pins. Actual Size

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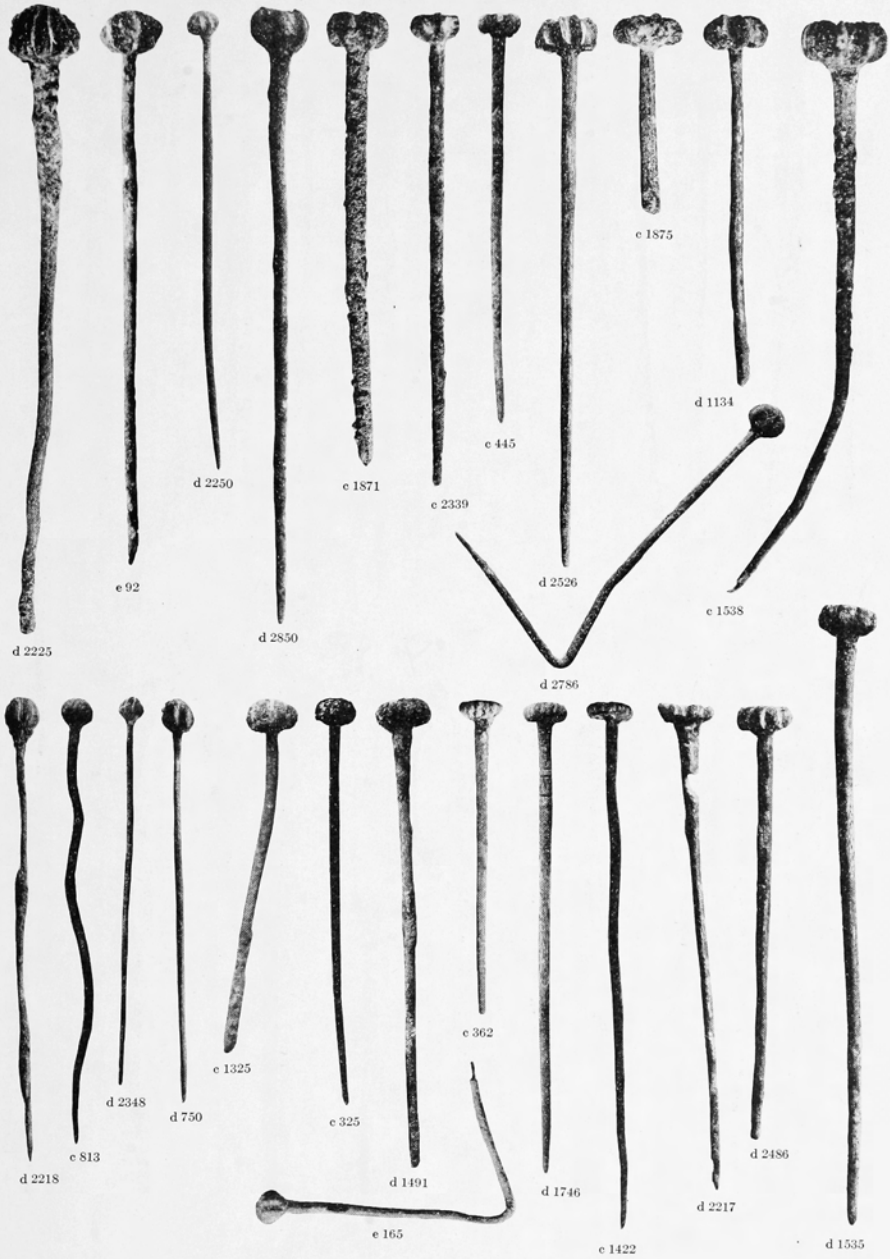

Fig. 282.—Bronze or Copper Pins. Actual Size

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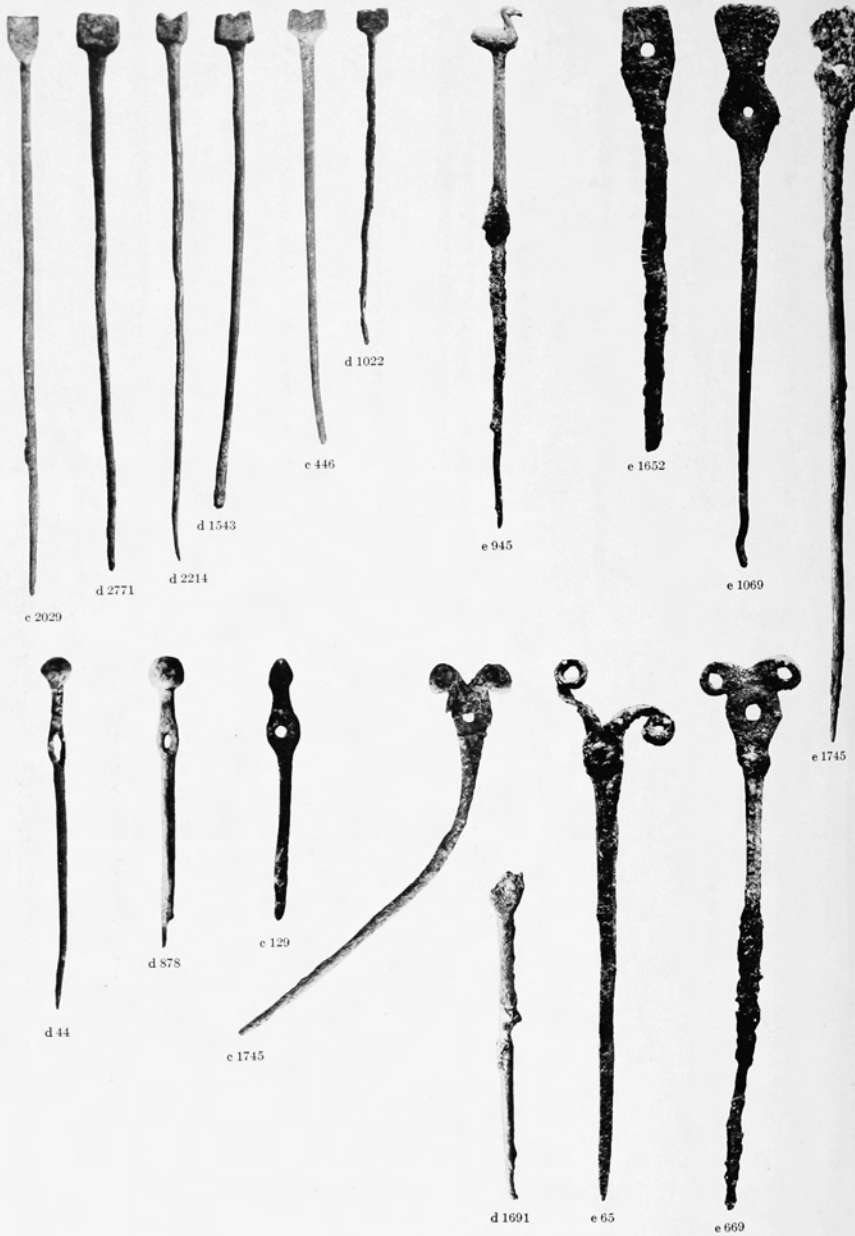

Fig. 283.—Bronze or Copper Pins. Actual Size

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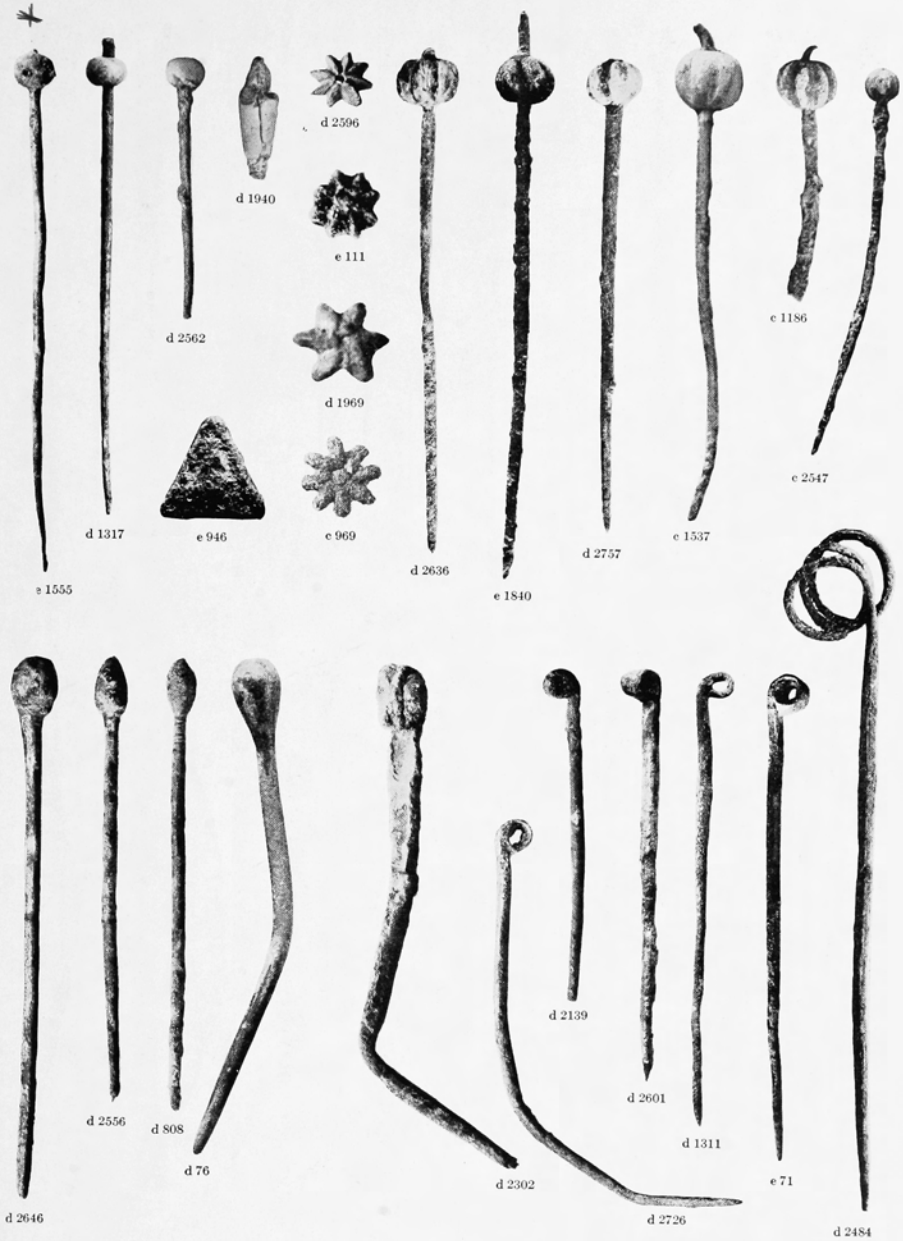

FIG. 284.—BRONZE OR COPPER PINS. ACTUAL SIZE

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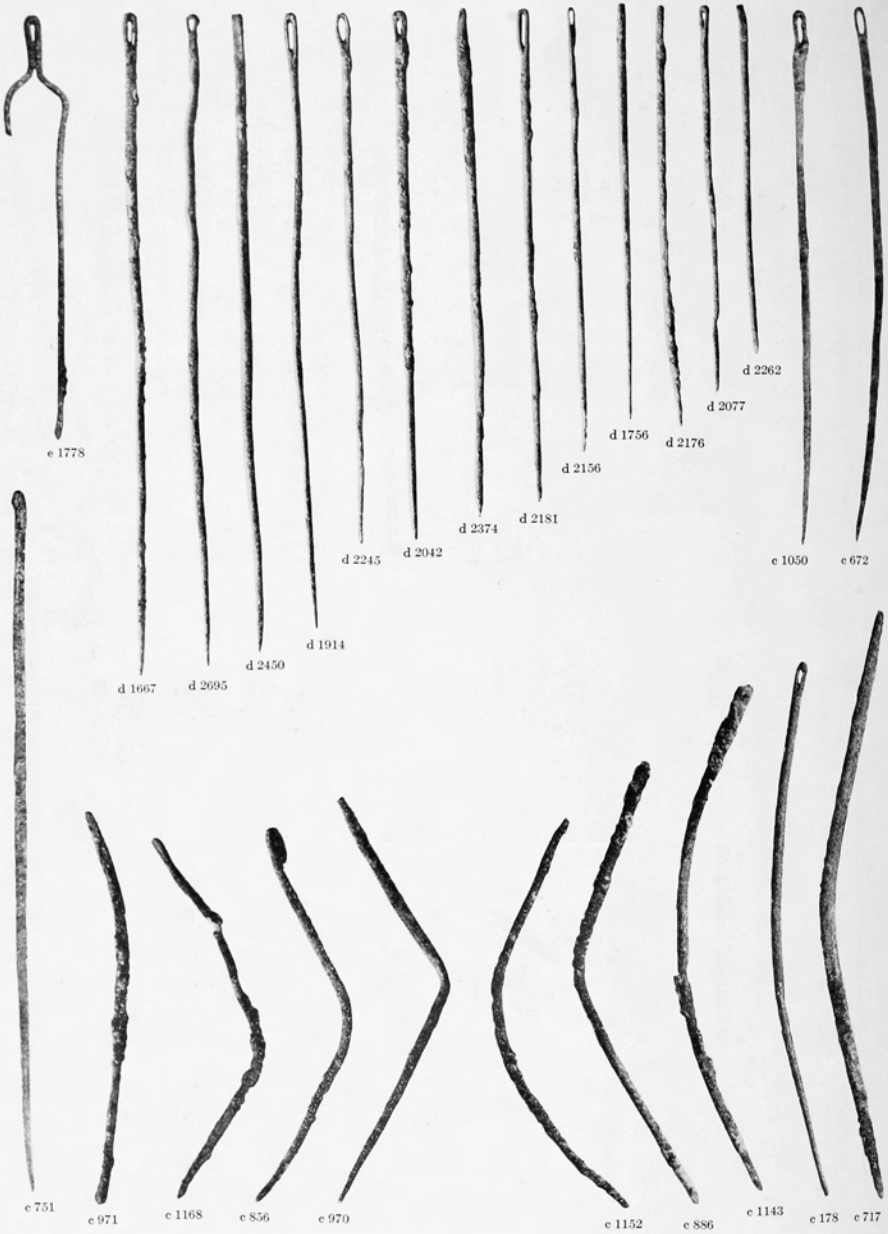

Fig. 285.—Bronze or Copper Needles. Actual Size

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c 1741

c 1648

c 1093

d 2452

d 2033

d 2974

FIG. 286.—BRONZE OR COPPER AXES. ACTUAL SIZE

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Fig. 287.—Bronze or Copper Flat Axes and Blades. Actual Size

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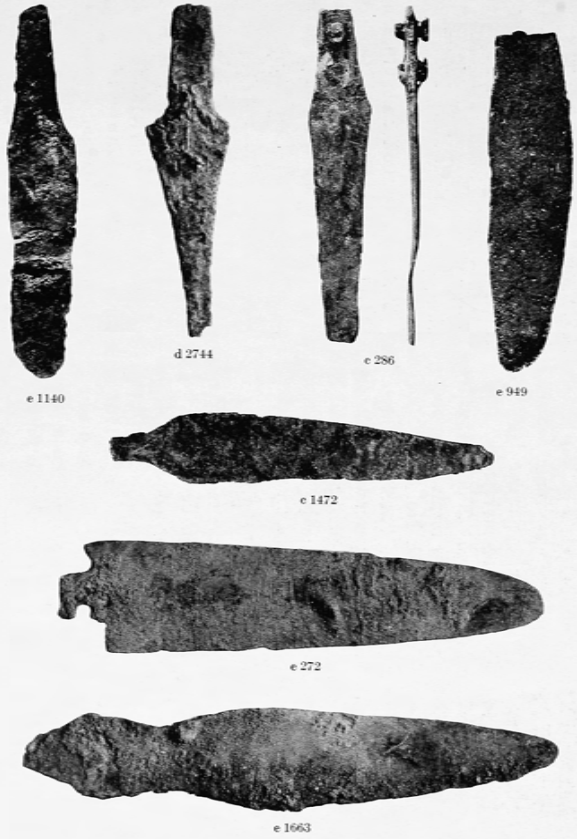

FIG. 288.—BRONZE OR COPPER BLADES. SCALE, 2:3

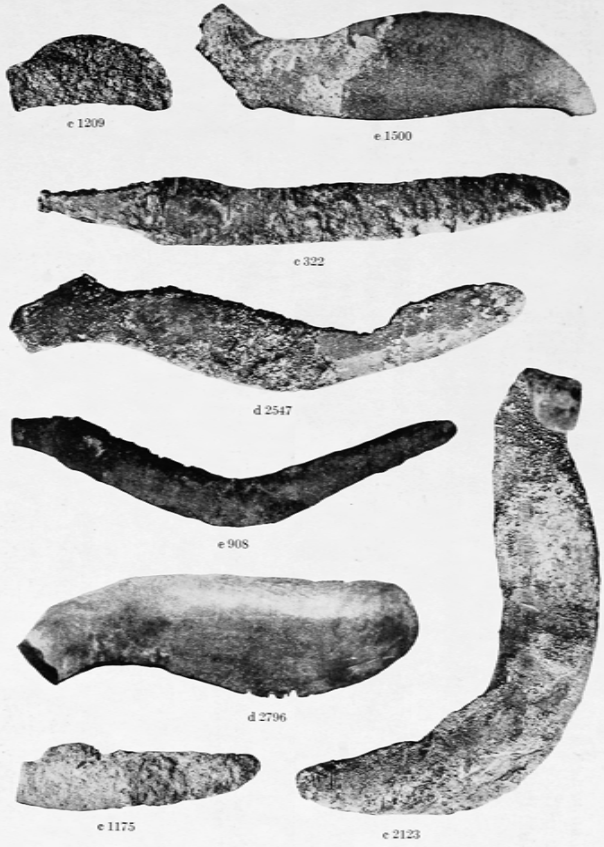

FIG. 289.—BRONZE OR COPPER BLADES. SCALE, 2:3

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The arrowheads of this period (Fig. 290) show the same general form as in the preceding two periods. No. d 2948 has a small perforation containing a piece of iron wire which had probably been used to secure the arrowhead to the shaft. Two exceptional forms are Nos. c 1464 and b 2151,[82] each with two wings. Lance- or spearheads show a great variety of forms (Fig. 291). They were attached either by sockets with transverse perforations or by tangs. The head was usually lanceolate, sometimes with a pronounced rib in the middle (e.g., d 2255). Nos. d 2462 and d 2791 each have two barbs.

In Figure 292 are illustrated chisels with sockets (e 2070 and e 2136) or tangs (c 213, c 1084, e 1106, and e 1334). The upper part of No. e 1334 is broken off. The remaining objects in Figure 292 and those in Figure 293 are fusiform points, very common in this period. They have either circular or rectangular cross-sections. The longer, pointed end may have a circular cross-section and the shorter, sometimes blunt, end a rectangular cross-section. The use of these objects is not certain, but most of them were probably drill points.

Numerous bracelets and earrings or finger rings of bronze or copper were unearthed (Figs. 294–95). Their cross-sections are usually circular (e.g., e 589 and e 2071), but are sometimes square (e.g., d 2142), rectangular (e.g., d 1353), or diamond-shaped (e.g., d 2779). The rings may be open, with beveled (e.g., e 450 and e 921) or squared ends (e.g., c 1425 and c 2681). The ends may meet exactly (e.g., c 1153) or overlap (e.g., c 1200, c 1489, d 1997, and e 1081). Sometimes no joint is visible (e.g., e 2042). Nos. d 1967, c 1975, d 1970, c 1377, and d 2190 each have one oblanceolate end meeting the other end in such a way as to give the impression of a snake swallowing its tail. Both ends of No. c 1169 are formed into eyes, and there was apparently a tie pin to join them. No. c 593 has flaring, rounded ends. No. d 2186 consists of two rings, one with lenticular and one with rectangular cross-section. No. d 2873 (see Fig. 309) is a bronze or copper earring decorated with frit beads, and No. d 2519 (see Fig. 298) has a small gold disk attached. Bronze or copper earrings d 2421 (Fig. 134) were found with skeleton d X34. Seven bracelets (c 2726–32, Fig. 127) were among the mortuary gifts of skeletons c X26–27; bracelets were found with skeletons d X36 and d X51 also (Figs. 136 and 144). A complete bronze or copper necklace (d 2417, Figs. 133–34) was found with skeleton d X33, and fragments of a second one (d 2300) appeared with skeleton d X32. There are bronze or copper beads in necklace c 2000*a* (cf. p. 186 and Fig. 309).

In Figures 295–96 various other bronze or copper objects are illustrated. No. c 1104 seems to be part of a handle of a vessel. No. c 943 is a rivet, and No. d 2163 is a link of a chain. No. e 55 is perhaps a mirror. No. d 2182 is a boss. No. d 2276 may be the ferrule of a lance shaft. No. e 109 is an elongated spoon with a long tang. The double hook d 2683 is too large to be a fishhook. No. c 1541 is a small blade, and No. d 2817 is a pair of tweezers. The uses of the other objects are indeterminable. A bronze or copper figurine is described on page 193; bronze or copper seals are described on pages 223–24.

LEAD

Lead is second in frequency of the metals used during the Hittite period. A characteristic object of the period is a small ring made of lead wire, usually with overlapping ends (Fig. 297). Sometimes the joints are beveled or meet with straight ends. These rings vary in size; nevertheless they may very well be currency. A lead ring (c 2719, Fig. 127) was a mortuary gift with skeletons c X26–27. Nos. e 1686 and e 1702 each consist of three lead rings forming a chain. Nos. d 1558 and c 416 are coils of lead wire. No. c 357 is a tapering piece of lead, the finer end of which was coiled. No. d 1060 is a piece of twisted wire.

Various other lead objects are shown in Figure 298 *A*. No. e 911 may be a weight. Nos.

[82] *OIP* XIX 151.

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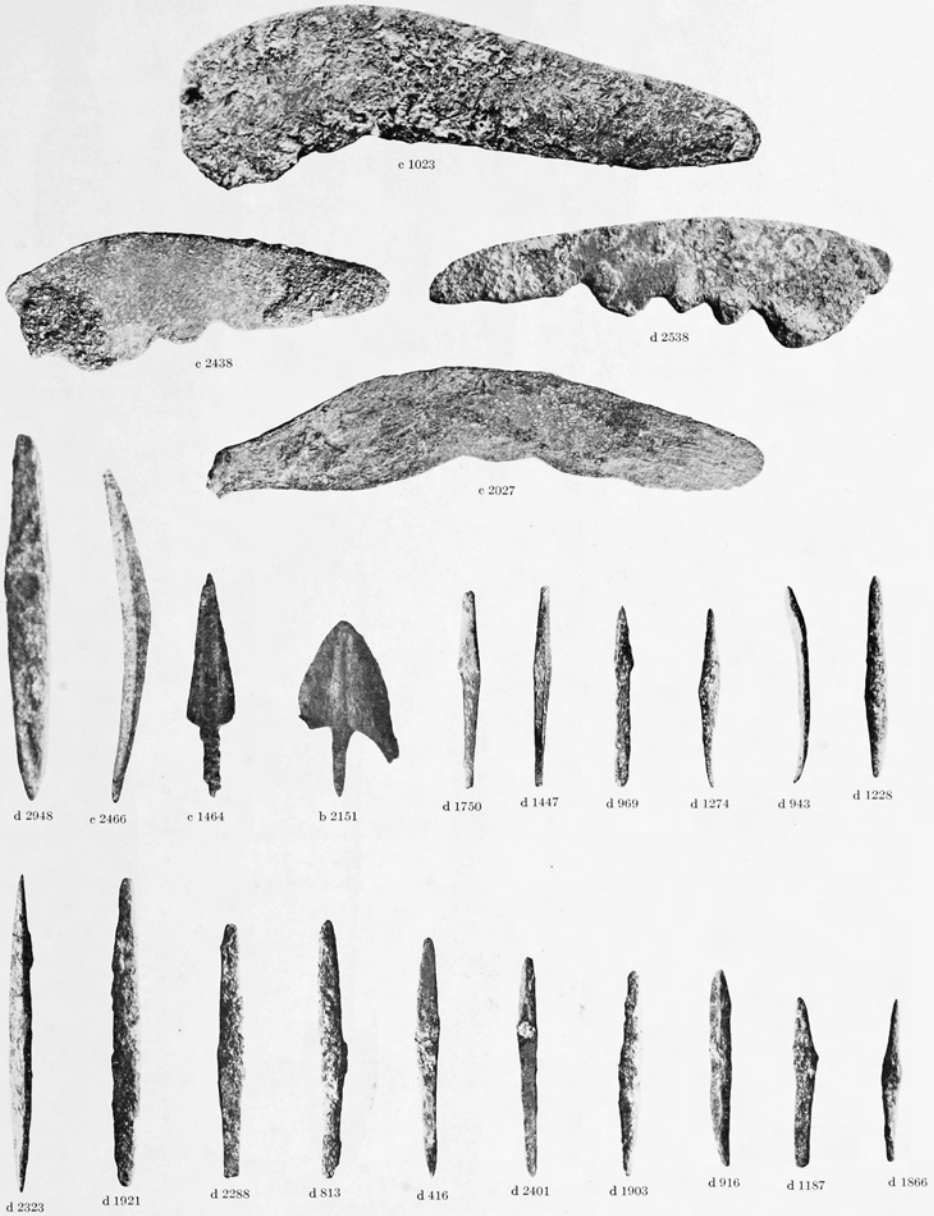

Fig. 290.—Bronze or Copper Blades and Arrowheads. Actual Size

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Fig. 291.—Bronze or Copper Lance- or Spearheads. Actual Size (except d 2447, 2:3)

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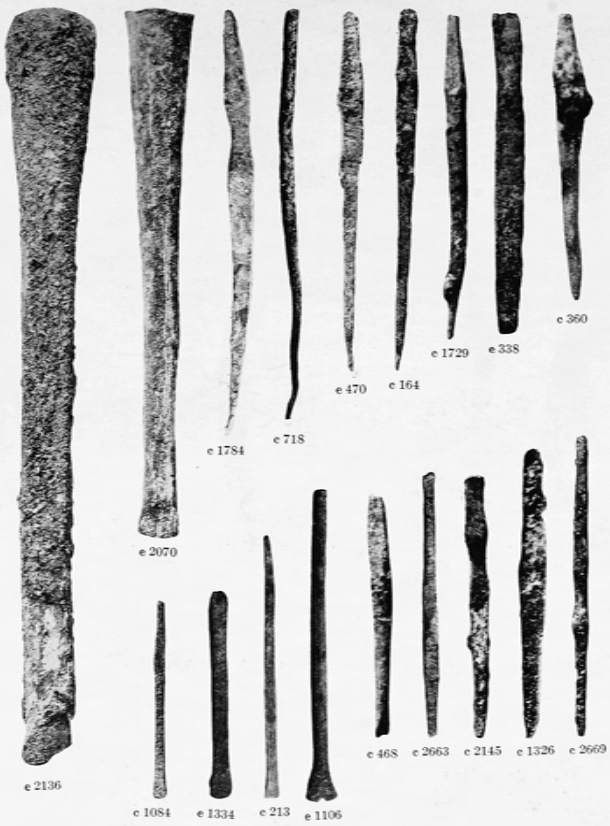

Fig. 292.—Bronze or Copper Chisels and Points. Scale, 2:3

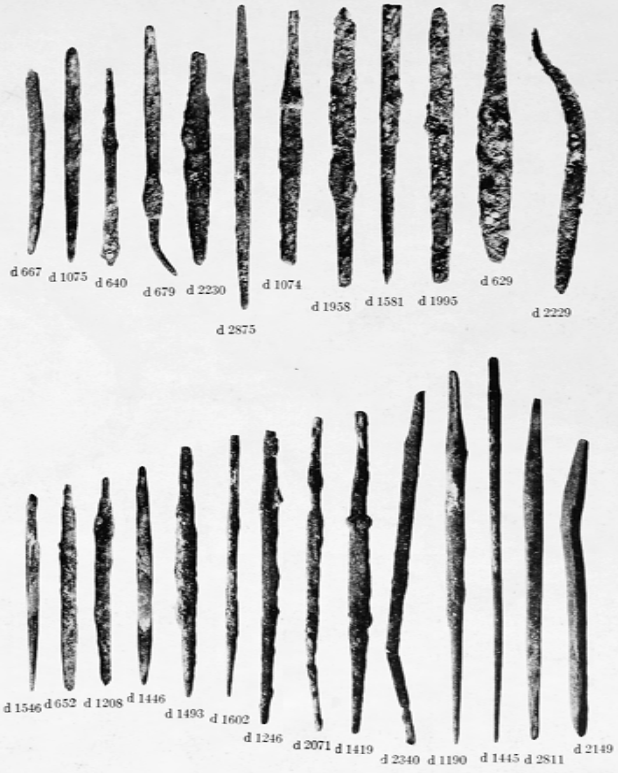

Fig. 293.—Bronze or Copper Points. Scale, 2:3

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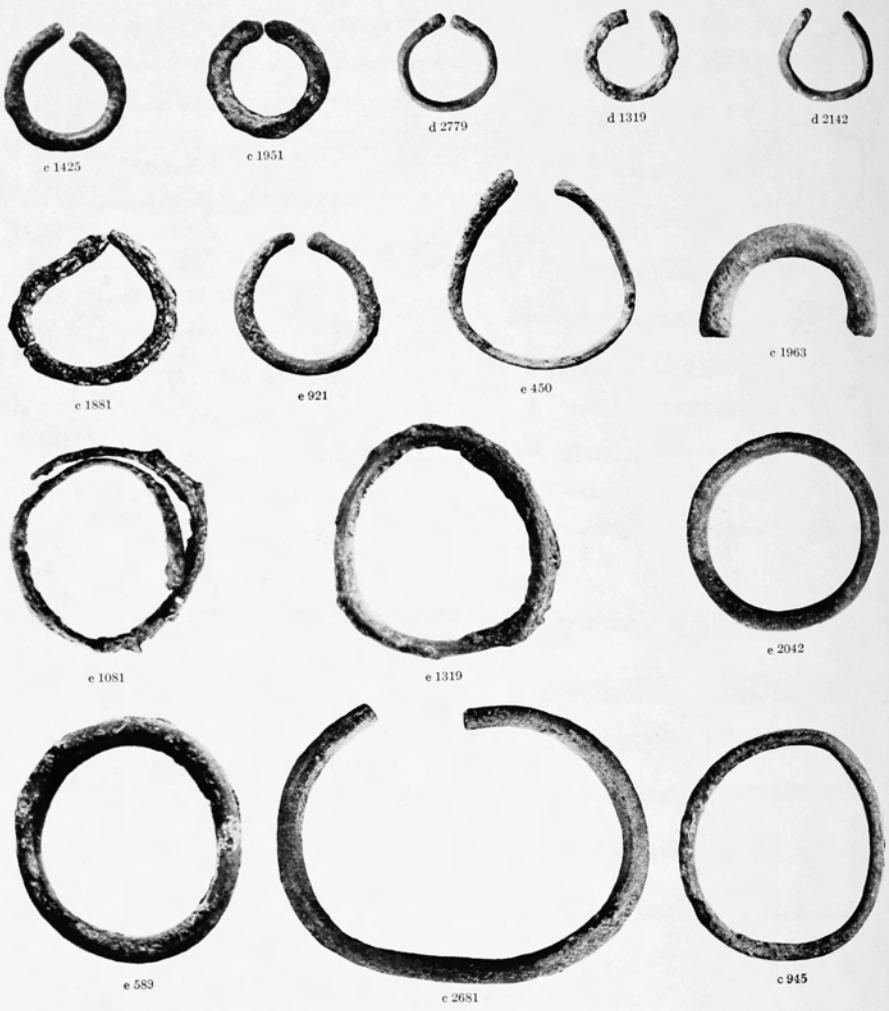

Fig. 294.—Bronze or Copper Rings and Bracelets. Actual Size

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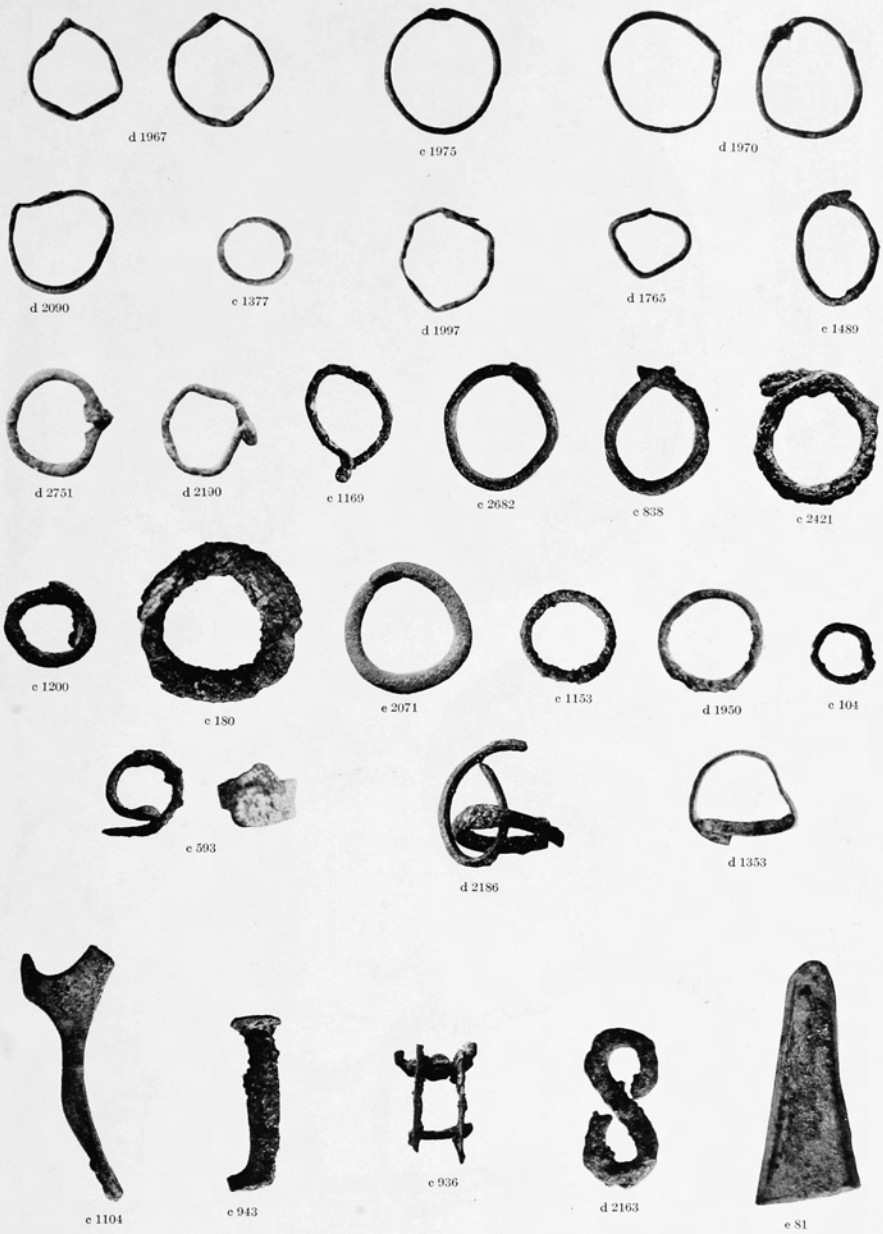

Fig. 295.—Bronze or Copper Rings and Miscellaneous Objects. Actual Size

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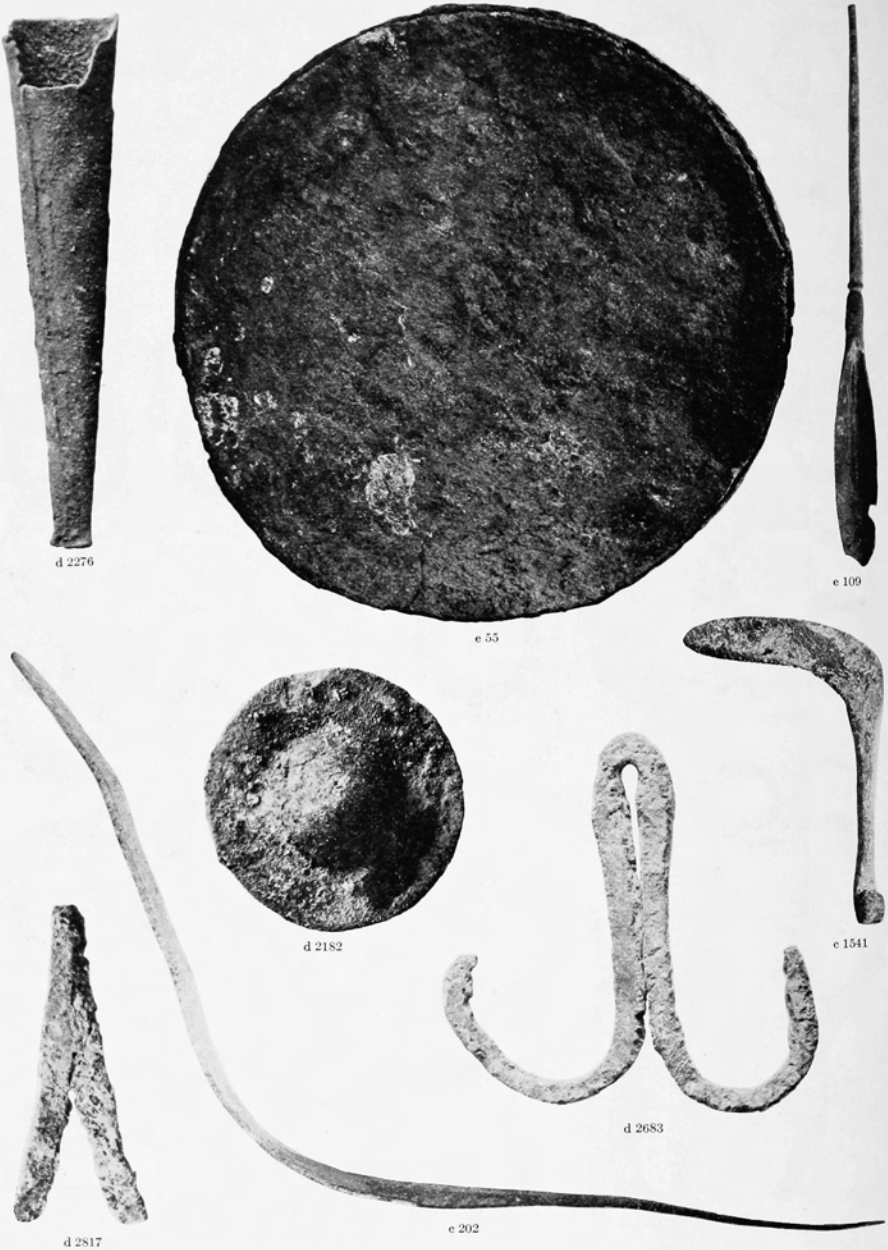

Fig. 296.—Miscellaneous Bronze or Copper Objects. Actual Size

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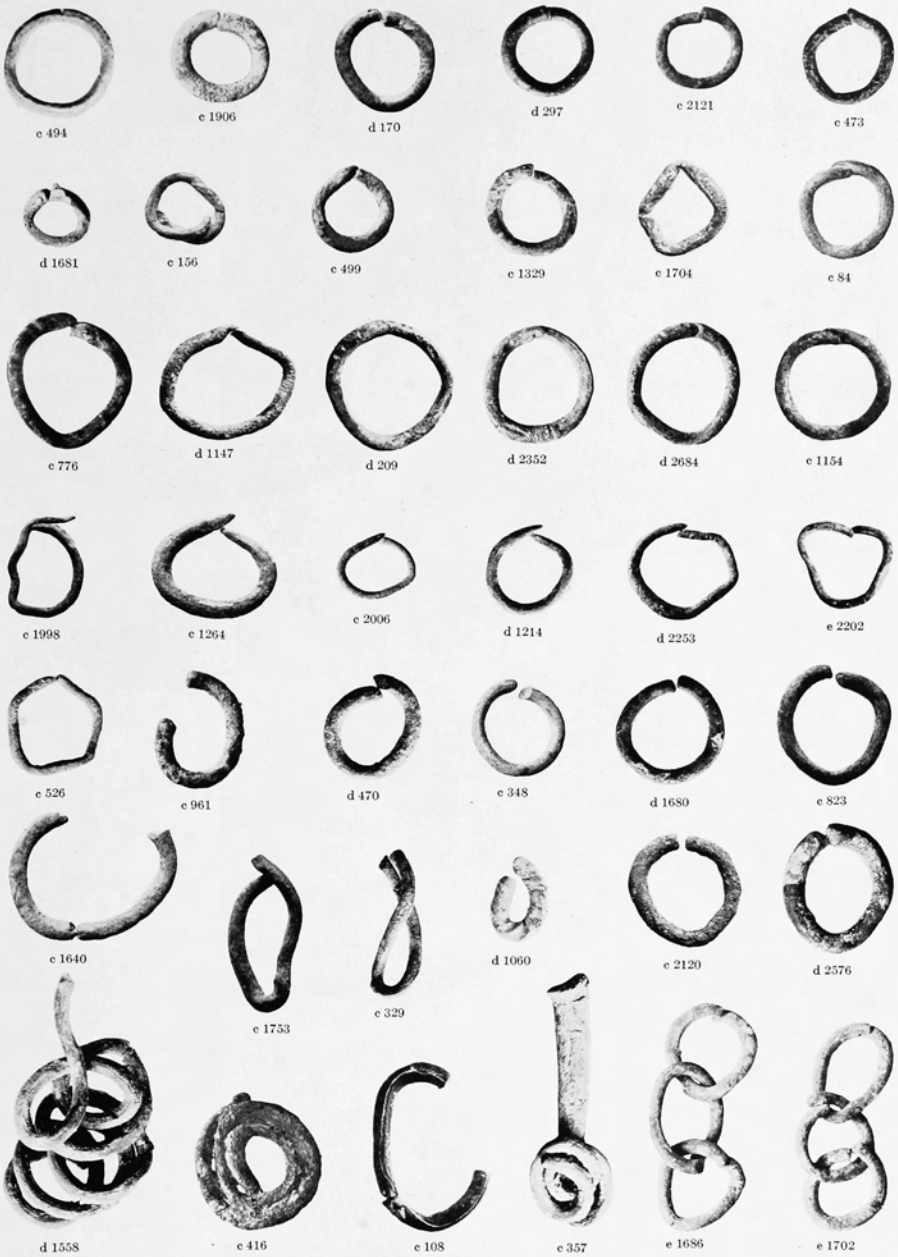

FIG. 297.—LEAD RINGS AND COILS. ACTUAL SIZE

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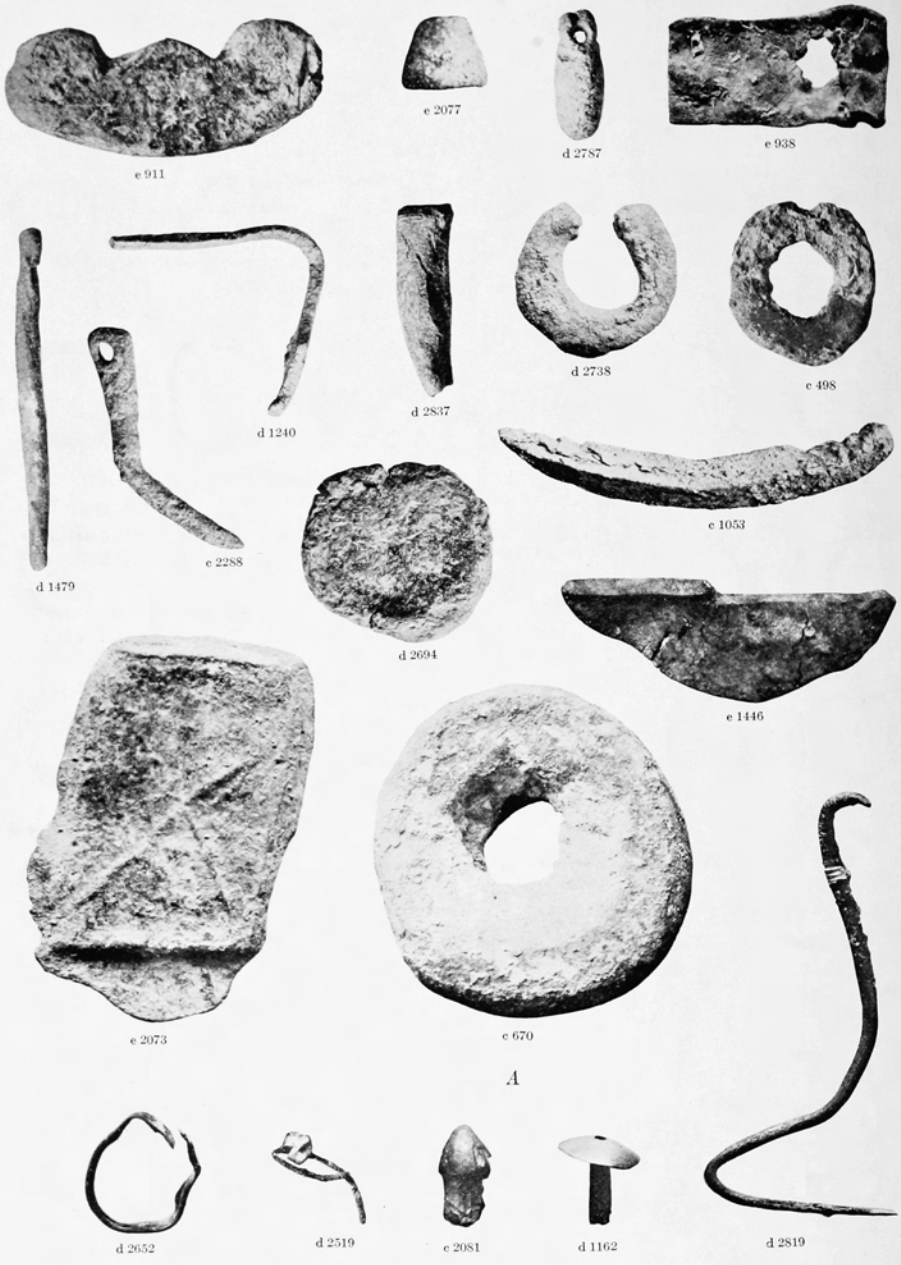

Fig. 298.—Miscellaneous Objects (*A*) of Lead and (*B*) of Gold. Actual Size

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d 1240 and c 2288 are lead "needles." No. e 938 was rolled up when found, but after unrolling it proved to be just a thin rectangular piece of lead without designs or writing. Of this type of object several specimens were found. No. e 2073 may have been part of a container or a lid. No. c 670 may be a macehead. No. d 2787 is a plummet or pendant, and No. e 2077 is a lead bead of truncated conical form. The uses of the remaining pieces are indeterminable. Lead ties were used for the mending of broken pots (cf. Fig. 503). Lead figurines are described on pages 191–93.

IRON

Within the deposit of this period we have the first appearance of iron in the cultural sequence of the Alişar mound; but we found only small fragments, so much corroded that not one object could be recognized. Iron must still have been a very precious metal, for on the head of pin e 1555 iron was used as a decorative inlay (Fig. 284). Small pieces of iron wire seem to have been used for fastening weapon heads or tools to their handles (e.g., d 2948, Fig. 290).

GOLD AND SILVER

Three hollow gold rings and one silver ring (c 2715–18, Fig. 127) were found with skeletons c X26–27, evidently as mortuary gifts. No. d 1162 (Fig. 298 *B*) is evidently the upper part of a bronze or copper pin with a gold head. A small tack with a gold head was found in 1929 (b 1339).[83] No. d 2819 (Fig. 298 *B*) is a bronze or copper pin which had been partly covered with gold. No. c 2081 is a small cap made of thin gold sheet. No. d 2519 is a bronze or copper earring with a small gold disk attached. There are traces of gold plating on bronze or copper ring d 2652. In a small pitcher (c 2000) were found fragments of a necklace (c 2000*a*, Fig. 309) consisting of bronze or copper, gold, silver, and frit beads.

MINOR OBJECTS OF POTTERY OR CLAY

Miniature vessels were very poorly made and showed no particularly interesting forms (Fig. 299). No. e 918 resembles a small ladle, and No. e 1807 may have been a pedestal base.

No characteristic form of pottery "whorl" could be identified, although "whorls" of various types were found (see Fig. 307). Certain types of "whorls" typical of the Copper Age and the Early Bronze Age continued to appear.[84] Crescent-shaped loom weights perforated at each end are characteristic of the Hittite period (Fig. 300); several of these loom weights show impressions (e.g., 1468, c 1117, e 588, and e 1451 in Pl. XXV and e 1630). Pyramidal and oval loom weights also were found.

Small pottery or clay objects typical of this period are the so-called "cakes," the use of which is entirely problematical. They show a great variety of forms and ornamentation (Figs. 301–4). Four-, five-, and six-pointed stars, each with a large smooth hole in the center, were probably amulets (Fig. 305). They seem to have been worn on a cord run through a hole in one point of the star.

Several complete ladles and a number of fragments were unearthed of a type similar to Nos. c 1840 and e 2255,[85] found in Level 5 M in a layer where objects of the Early Bronze Age and the Hittite period were mixed. No. c 501 (Fig. 306) is a ladle of a different type. Pottery molds for a series of bars were found (e.g., e 674, Fig. 306). Nos. c 916 and c 2431 (Fig. 306) seem to be lamps.

No. c 1300 (Fig. 307) is a rattle, and No. d 2690 is probably part of a rattle. Spool-shaped

[83] *OIP* XIX 165.

[84] Cf. *OIP* XXVIII 200 and 270 and Figs. 198–203 and 273–76.

[85] *OIP* XXVIII 270; cf. *OIP* XIX, Fig. 144.

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Fig. 299.—Miniature Vessels of Pottery. Actual Size

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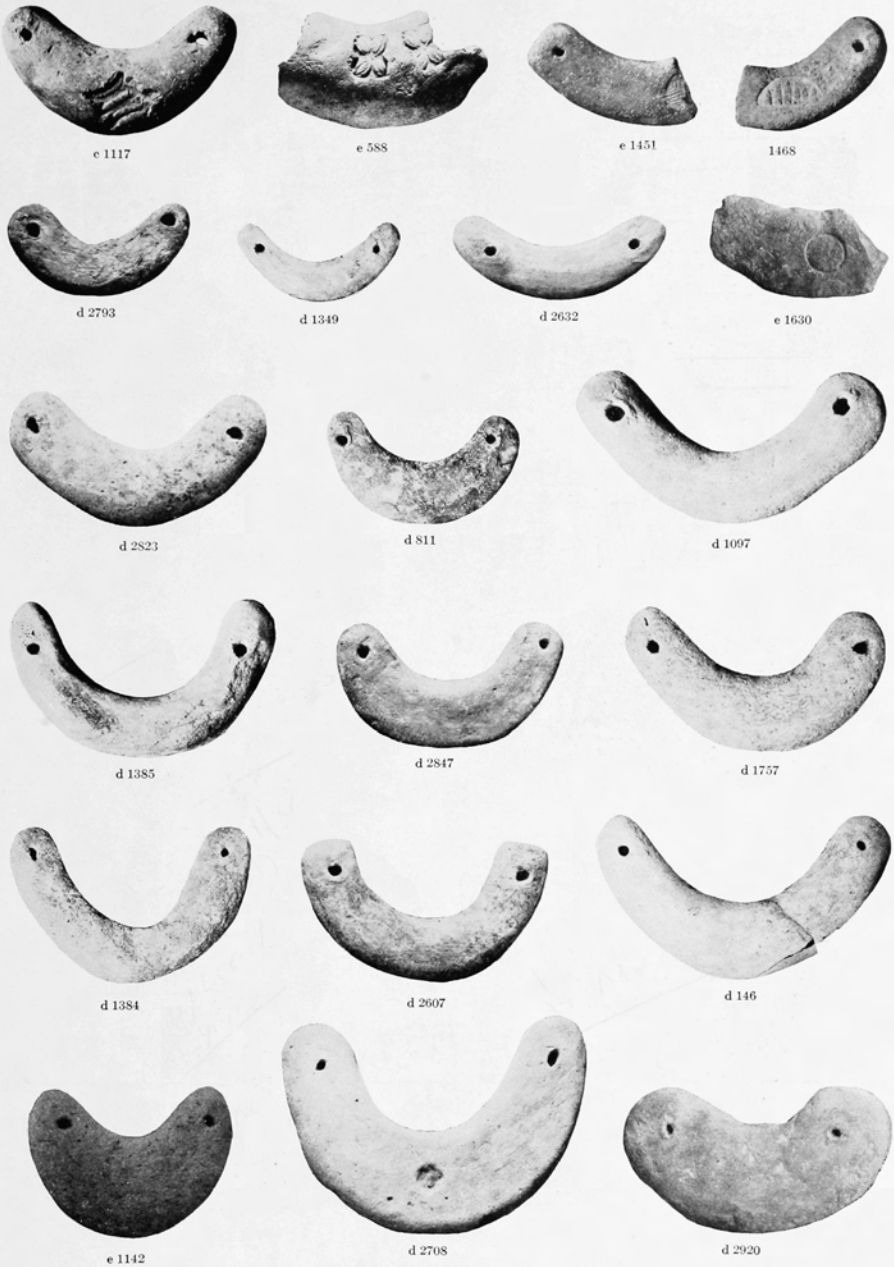

FIG. 300.—POTTERY LOOM WEIGHTS. SCALE, 2:5

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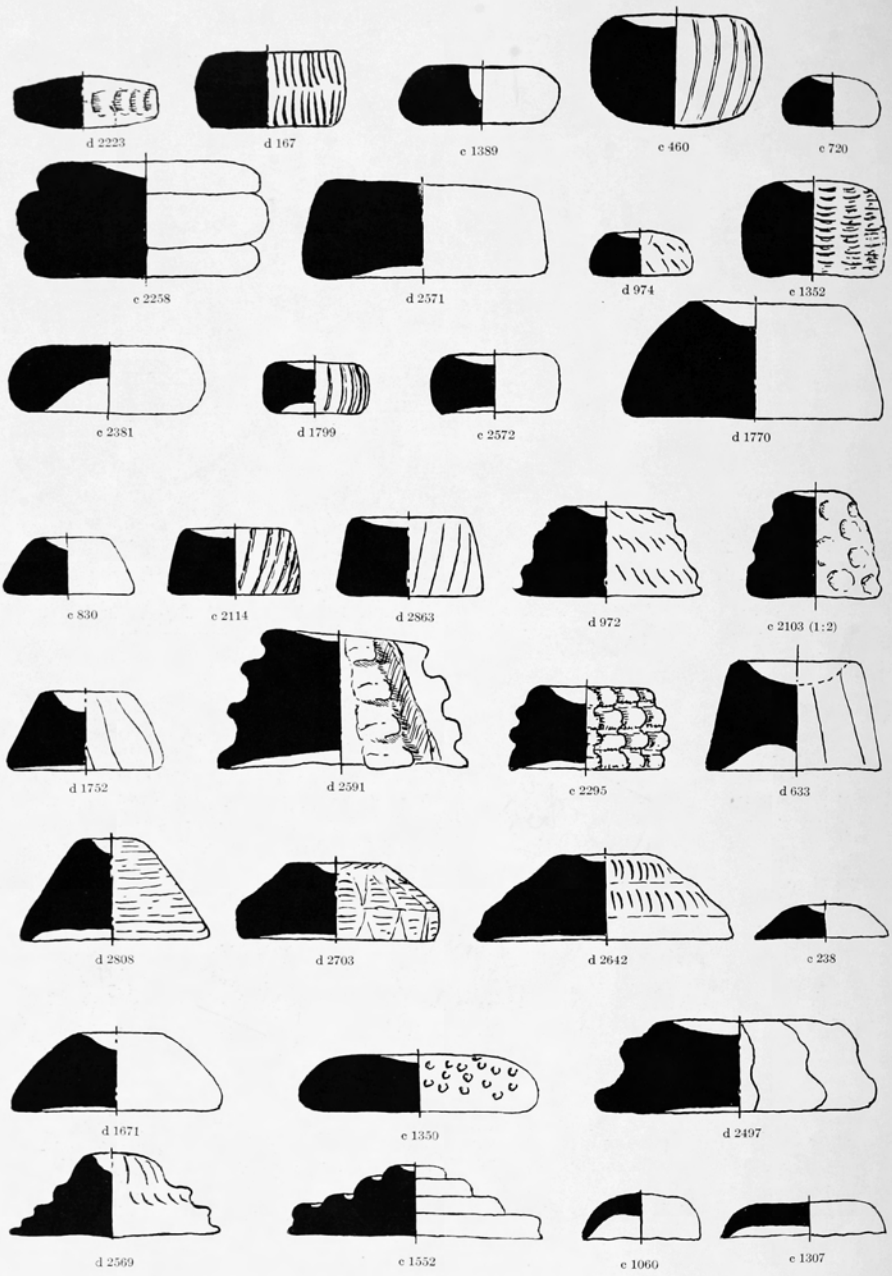

Fig. 301.—Cross-Sections of Pottery "Cakes." Actual Size (except c 2103, 1:2)

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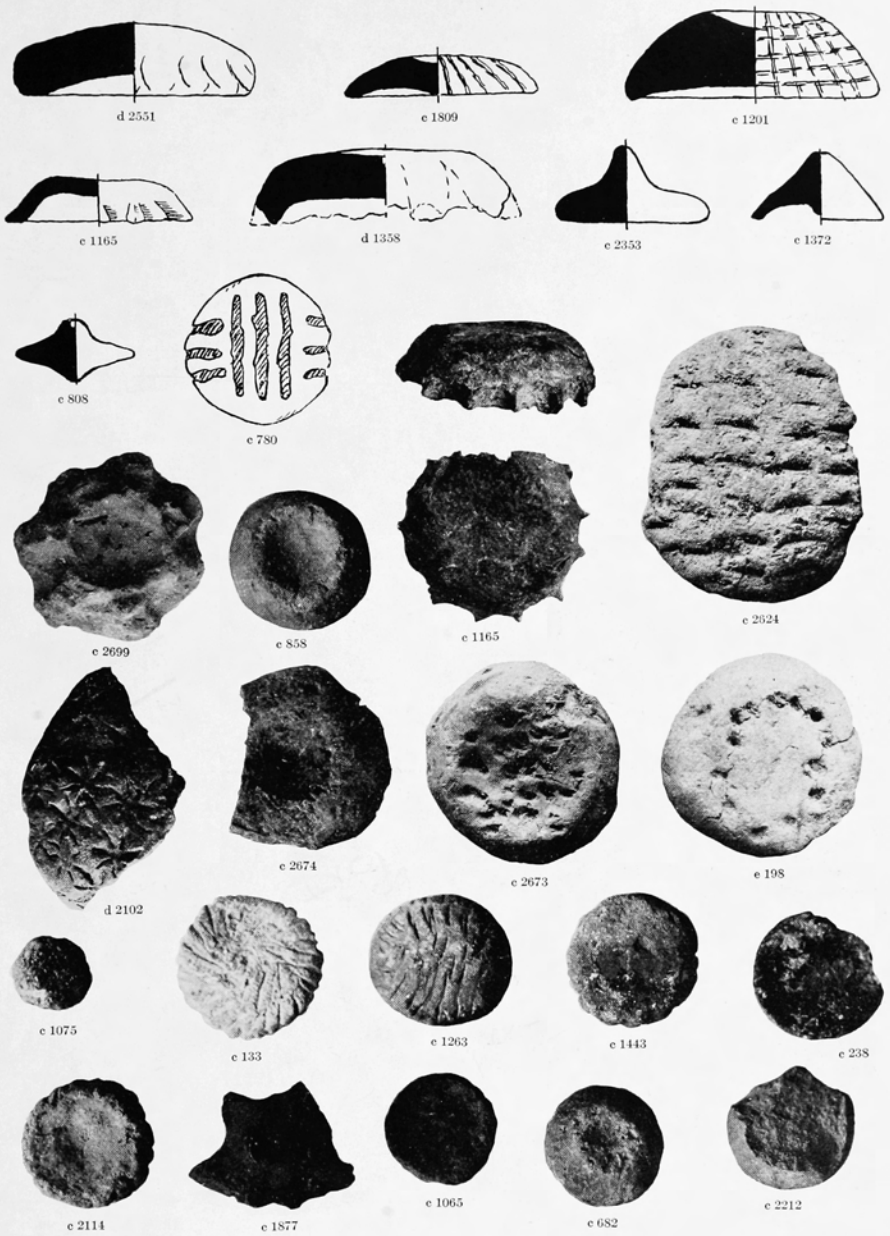

Fig. 302.—Pottery "Cakes." Actual Size

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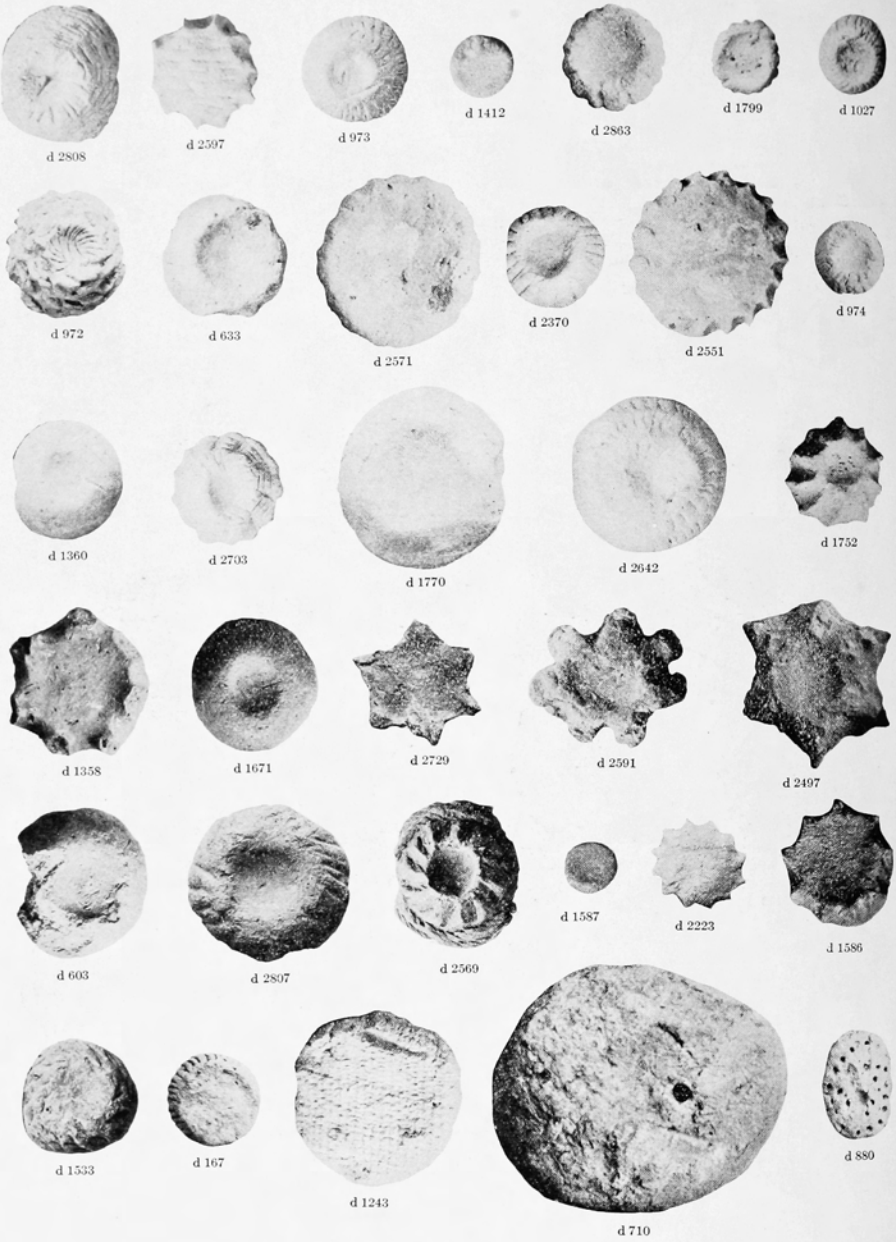

FIG. 303.—POTTERY "CAKES." SCALE, ABOUT 2:3

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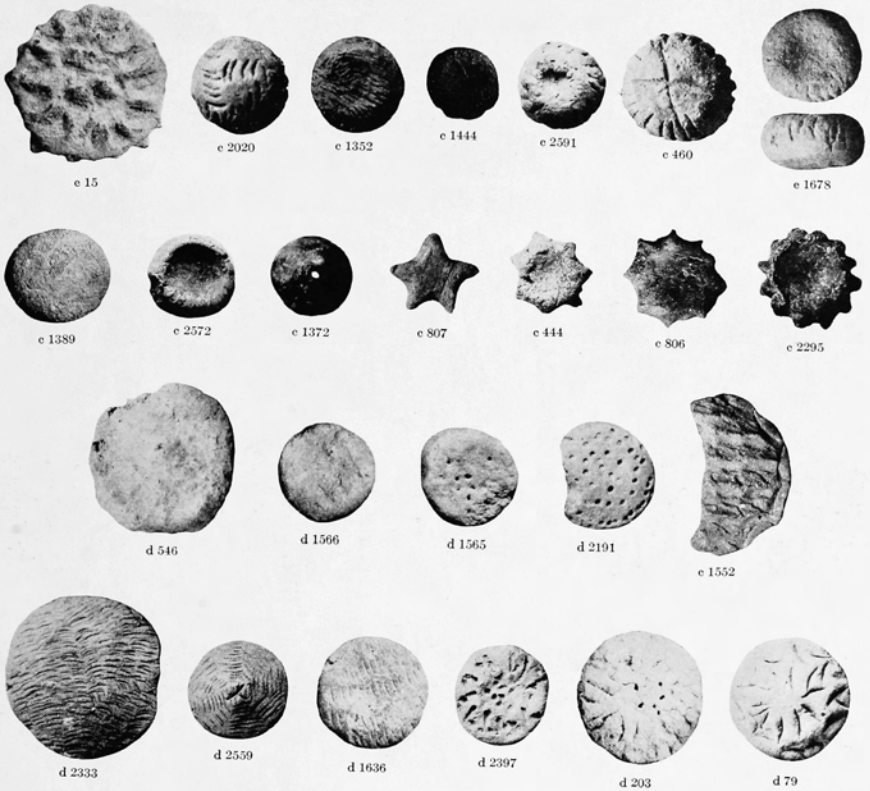

FIG. 304.—POTTERY "CAKES." SCALE, ABOUT 2:3

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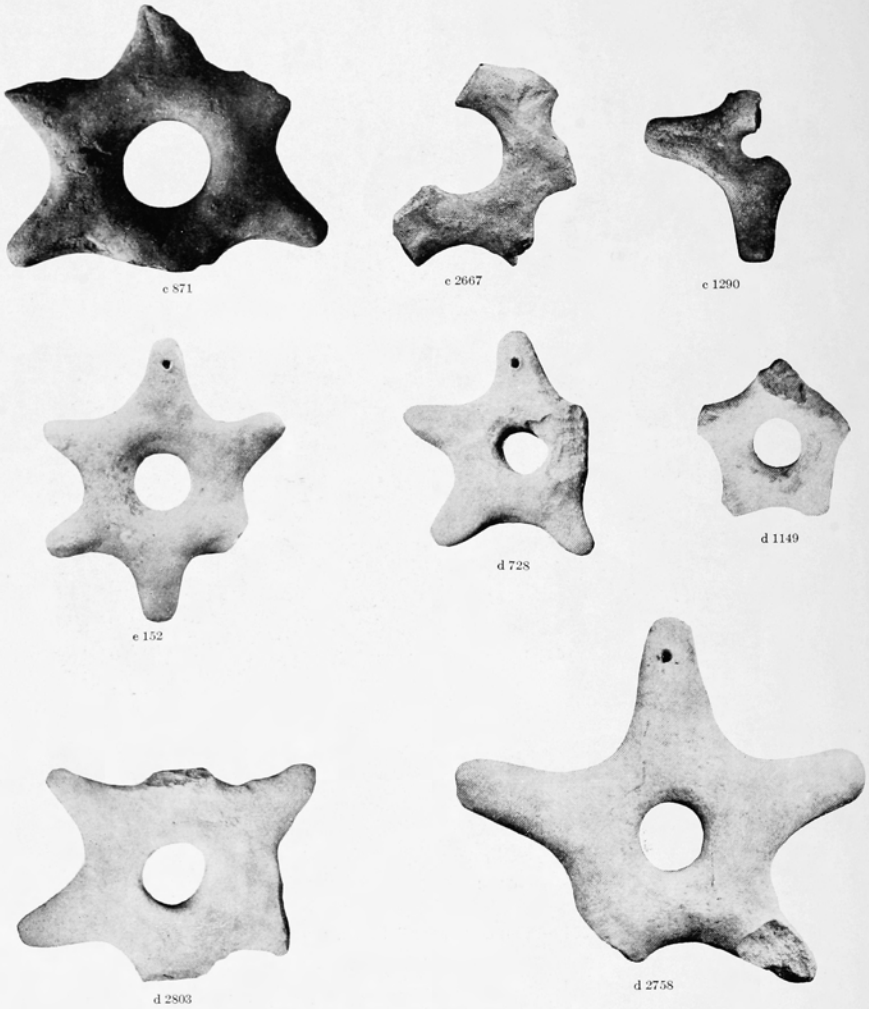

Fig. 305.—Pottery "Stars." Scale, 1:2

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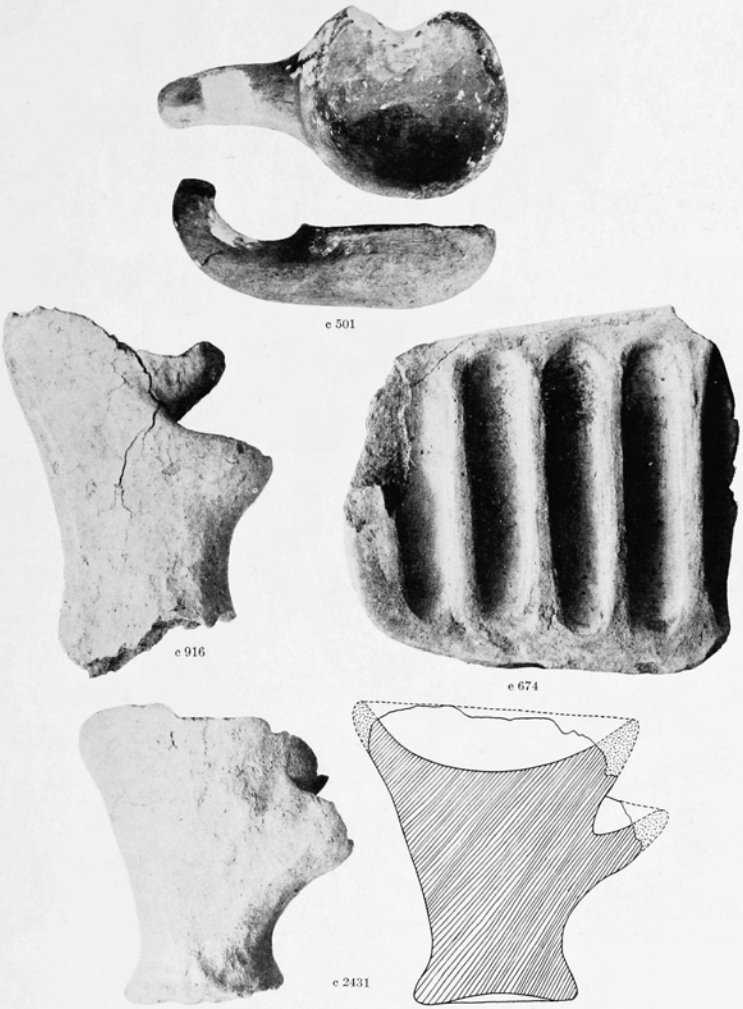

Fig. 306.—A Ladle, a Mold, and Lamps of Pottery. Scale, 1:2

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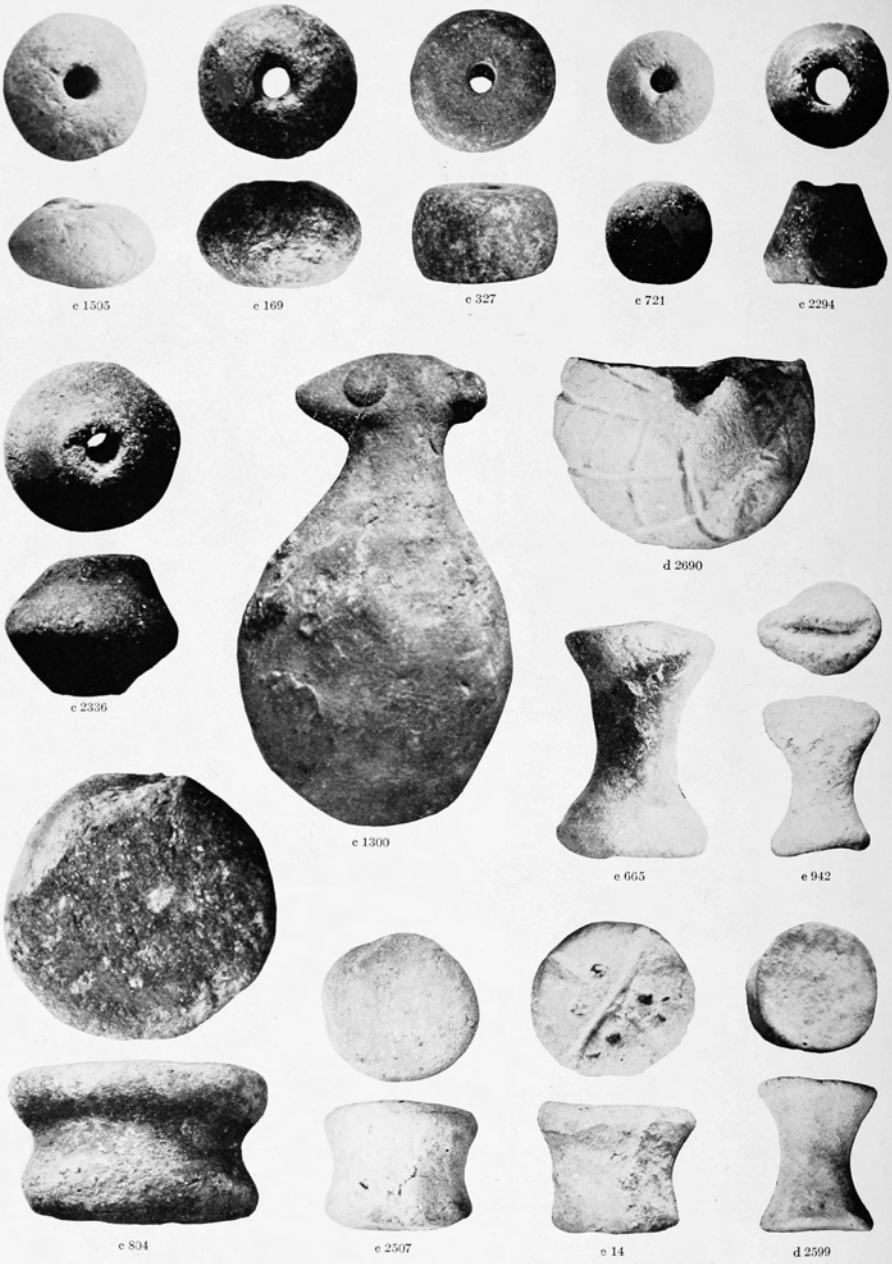

Fig. 307.—Miscellaneous Pottery Objects. Actual Size

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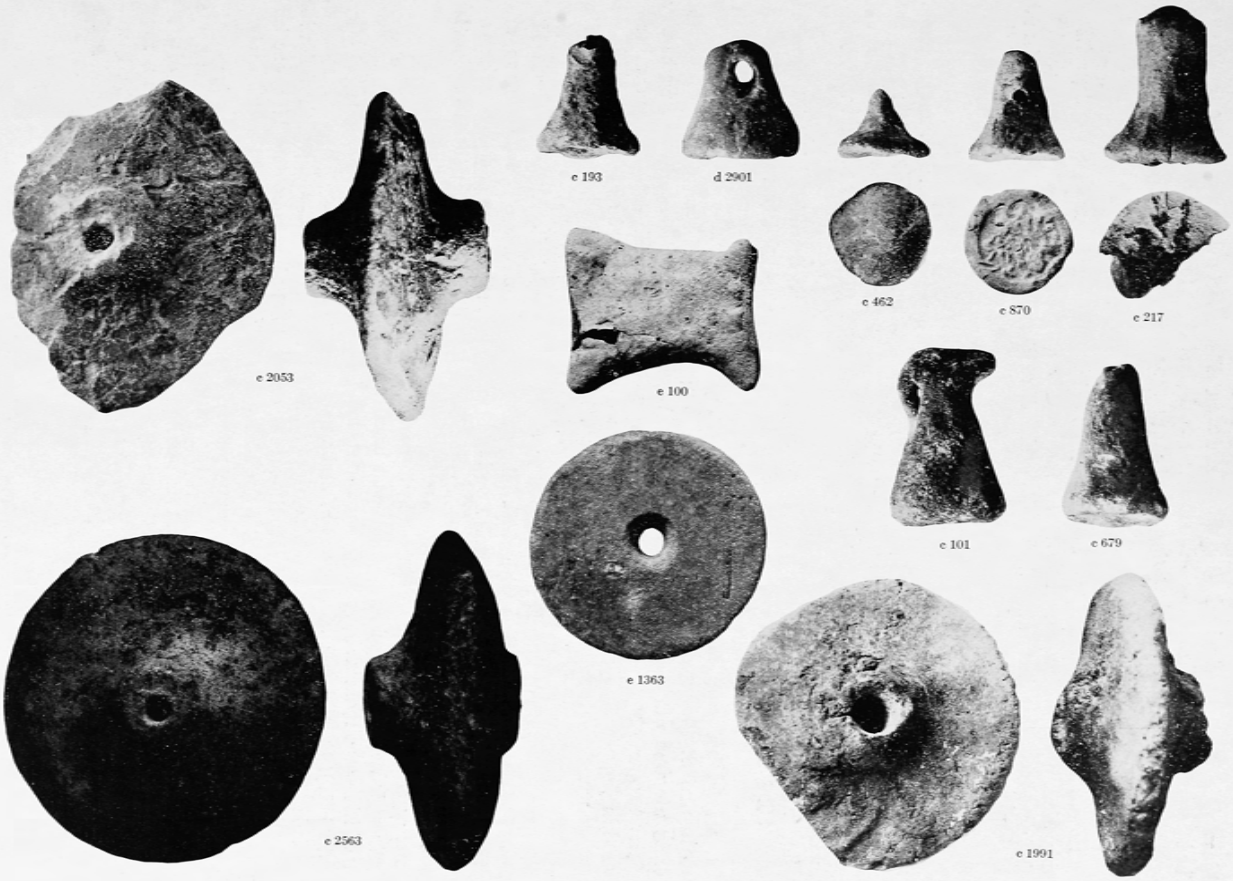

FIG. 308.—MISCELLANEOUS POTTERY OBJECTS. ACTUAL SIZE

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objects (Fig. 307), small wheels (Fig. 308), and stamplike objects (Fig. 308) were numerous. The bases of the stamplike objects usually show no design, but a few scratches appear on some. Reworked potsherds of various forms were common (e.g., e 1363, Fig. 308).

FRIT AND GLASS OBJECTS

Frit and glass beads of various sizes and colors (Fig. 309) were common in the deposits of this period, but unfortunately not a single form can be called typical.[86]

It is a curious fact that no small disk-shaped beads of light bluish green frit like those found from Chalcolithic to Roman-Byzantine times have been discovered in Hittite layers, but this may be sheer accident. In the first row of Figure 309 are shown three scalloped globular beads of greenish blue frit (e 1105, e 1477, and e 438) which came from definitely Hittite deposits. Such beads were often used as heads of bronze or copper pins (cf. Fig. 284). Simple globular frit beads also were used as pinheads (e.g., d 1317 and d 2562, Fig. 284); some are greenish blue, others have lost their color by heat. No. e 2072 (Fig. 309) is a discolored frit cylinder. A very small, much deteriorated frit bead (d 2426, Fig. 134) was found with skeleton d X33.

Small globular frit beads with bluish green glaze were used during the Hittite Empires (e.g., d 806, Fig. 309). Two rather large cylindrical beads with bluish green to greenish blue glaze and incised ornamentation below the glaze (c 631 and d 2239) belong to this period.

Large eye beads of glass with three sets of inlaid concentric rings were numerous in the Hittite period. They seem to have had their origin in the globular pottery objects with inlaid concentric rings which appeared in the Chalcolithic age.[87] Similar objects appeared frequently in the Copper Age,[88] although their inlays were seldom preserved. A few paste eye beads found in Copper Age deposits[89] may have been intrusive. In the case of the glass beads the body is usually greenish black with white inlay. The brown surface coloring of No. d 2129 and the iridescence of No. d 2593 are due to accidental heating.

A few other inlaid glass beads occurred in deposits of the Hittite Empires. Nos. c 1427 and c 2005 are of black glass with thick inlay; the inlay in the former is yellow, green, and white, in the latter yellow and green. Two beads with alternating dark and light stripes are Nos. c 769, dark brown with white and yellow inlay, and d 1963, discolored. Two globular beads with carefully smoothed inlay[90] were found in refuse deposits containing remains of the Hittite period, but must be considered as intrusive from a Hellenistic deposit.

More or less ring-shaped or globular glass beads of various sizes, discolored and sometimes made iridescent by heat, have been found in this and later periods (e.g., c 882, c 1455, c 1426, and c 1319). Small beads of this sort in various colors were found in deposits of this period, but it is possible that they are intrusive, since such beads are more numerous in the following period. Of four found in definitely Hittite layers, one was light blue, one dark blue, one turquoise, and one brown. Of the eight from mixed Hittite and Post-Hittite–Phrygian refuse, three were dark brown, two red, one canary yellow, one milky white, and one discolored. The turquoise glass bead might be modern, as the workmen wore such beads on their garments. A faceted bead of dark green glass (c 770, not illustrated) was in a Hittite deposit. A larger faceted bead, now discolored (c 2035, Fig. 510), was in mixed refuse of this and the next period. Three roughly pear-shaped glass beads were found in refuse outside the Hittite city wall. Their attribution is very uncertain; they are illustrated in the chapter on the second half of

[86] Cf. *OIP* XXX, Fig. 268.

[87] E.g., e 1824 (*OIP* XXVIII, Fig. 100).

[88] *OIP* XXVIII 206.

[89] E.g., c 1820 (*OIP* XXVIII, Fig. 197).

[90] Nos. c 1390 and c 2087 (*OIP* XXX, Fig. 120).

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Fig. 309.—Frit and Glass Objects. Actual Size

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the first millennium B.C.[91] A discolored pear-shaped bead (c 883) was found in a Hittite deposit.

No. d 1289, of frit with a rich blue glaze, seems to be a kind of amulet. No. c 2000*a* includes fragments of a necklace consisting of gold, silver, bronze or copper, and frit beads. No. d 2873 is a bronze or copper earring with alternating white and blue frit beads. A conical head of frit appears on bronze or copper pin d 1940 (Fig. 284). No. e 1050 (Fig. 309) seems to have been a small glass cover.

In 1929 and 1931–32 one fragmentary frit cup and several sherds of frit vessels were found. They show on the outside a greenish to greenish blue glaze, whereas the inside is sometimes dark brown, almost black. The rim piece d 2201 (Pl. I 4) was found in M 33–34 in close association with cuneiform tablet hoard d 2200.

Figurines of frit are described on pages 193 and 205, a frit seal on page 210.

[91] Nos. e 893–94 and e 1182 (*OIP* XXX, Fig. 120).

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II

THE POST-HITTITE–PHRYGIAN PERIOD

After the destruction of the fortified city of the Hittite Empires, the settlement on the Alişar mound lost its importance. The citadel was rebuilt, using the foundations of the old

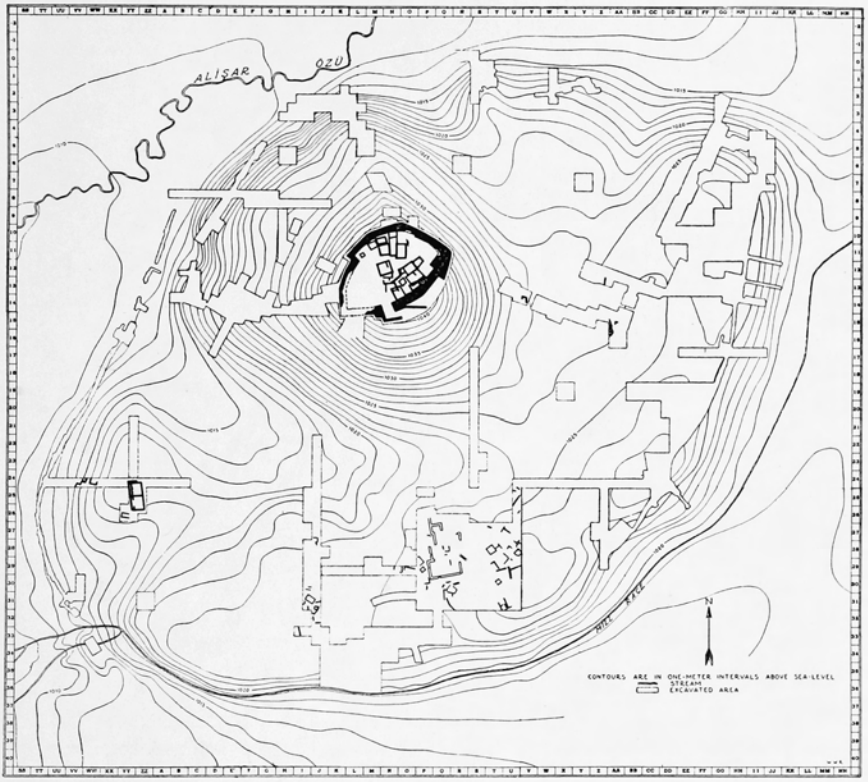

FIG. 310.—PLAN OF THE ALIŞAR MOUND, SHOWING BUILDING REMAINS OF THE FIRST PART OF THE POST-HITTITE–PHRYGIAN PERIOD ON THE CITADEL MOUND (LEVEL 4c) AND OF THE WHOLE PERIOD (LEVELS 8–9) ON THE TERRACE. SCALE, ABOUT 3:10,000

fortification; but the terrace was no longer fortified, though parts of it were sparsely resettled (Fig. 310). In the second and third phases of the Post-Hittite–Phrygian period the area west of the citadel mound was densely settled and surrounded by a fortification connected with the

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citadel (Fig. 311). The remains of these second and third phases now form the western spurs of the citadel mound.

On the citadel mound the cultural remains of this period, Levels 4*a–c* M, followed Level 5 M, in which appeared mixed remains of the Early Bronze Age and the period of the Hittite

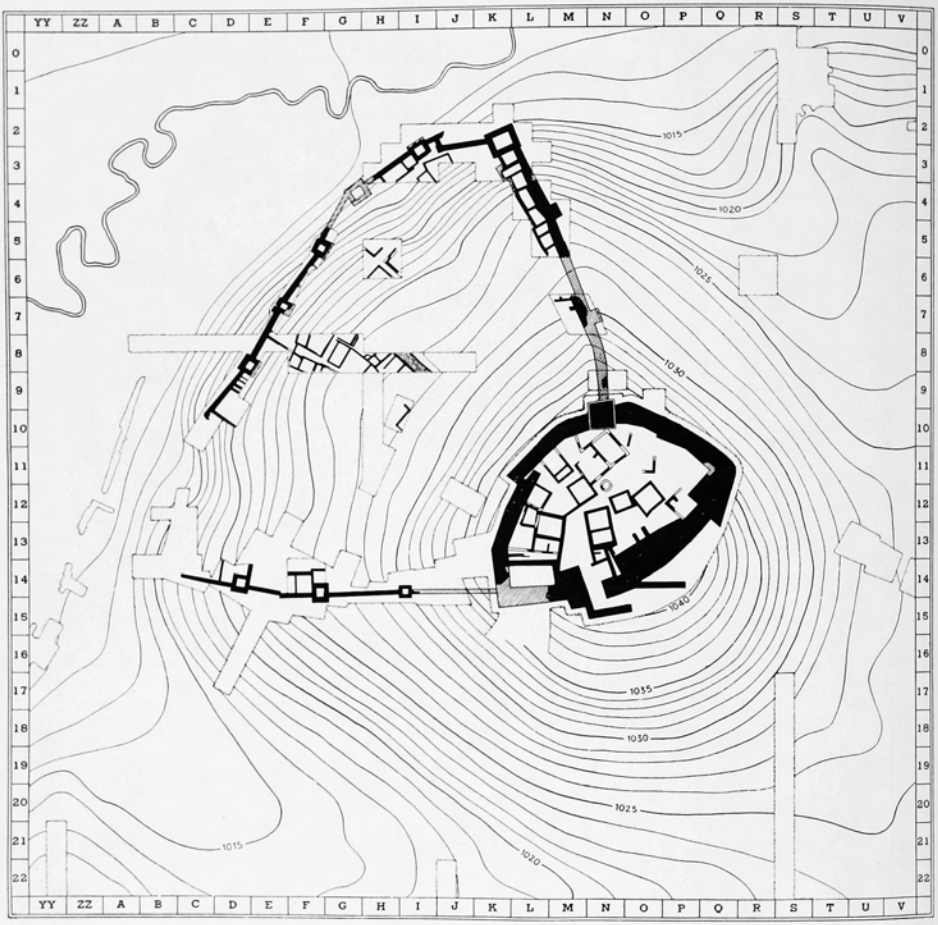

Fig. 311.—Plan of the Citadel and Lower Fortress during the Time of Level 4*a* M. Scale, 1:1500

Empires. The deposit averaged 3.10 in thickness, of which the upper 2.35 was a destruction layer including the remains of Level 4*a* M (Fig. 312 and Pl. XXIV); this destruction layer definitely separated the remains of this period from those of the next. All three of the building layers 4*a–c* M were entirely freed.

On the western spurs that part of the outer face of the fortification wall which had not been previously excavated was cleared in 1932 as far as it was still preserved. In the interior only a

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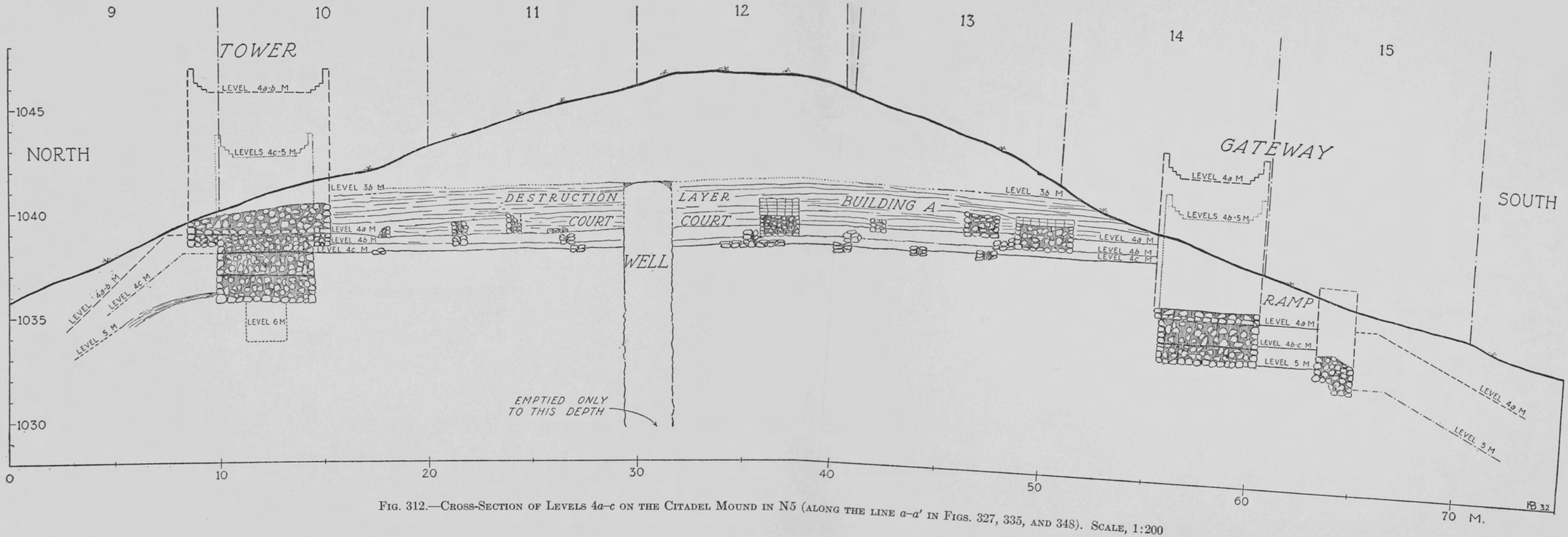

Fig. 312.—Cross-Section of Levels 4*a–c* on the Citadel Mound in N5 (along the line *a–a'* in Figs. 327, 335, and 348). Scale, 1:200

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limited area of a deposit corresponding to Level 4*a* M was freed. Above this level were remains of the Hellenistic period. It is very probable that below it is a cultural deposit corresponding to Level 4*b* M, as the structure of the citadel shows that even then the western slope was probably fortified and connected with the citadel. Outside the southern wall of the lower fortress two or three superimposed revetments could be distinguished, one or two of which may be contemporary with Level 4*b* M.

In nearly all plots and trenches on the city terrace remains of this period as a whole were unearthed above the deposits of the Hittite period. Even where no architectural remains were found, typical Post-Hittite–Phrygian potsherds appeared. Attribution to this period of building remains on the terrace must in some cases be merely tentative, for the remains were very shallow and mostly very fragmentary (Fig. 310). Here, at best, two building layers of this period (Levels 8–9 T) may be differentiated. In I–J 25–33 and S 20–24 they were followed by Roman-Byzantine deposits; elsewhere, by Hellenistic remains. In two places (W–X 1–2 and BB–CC 23–24) fragmentary remains of an outer defense wall were uncovered, but since this wall may well belong to the next period it is described therewith.

This period must have begun shortly after the destruction of the New Hittite Empire in Asia Minor. The culture belongs to the peoples swept thither by the Aegean migration. The end came within the 7th century B.C.;[1] it was perhaps due to the Cimmerian invasion which destroyed the Phrygian Empire.[2] From the pottery remains of this period on the citadel mound an older phase may be recognized, though indistinctly, in Level 4*c* M and a later one in Levels 4*a–b* M. Attribution of Levels 4*a–b* M to the time of the Phrygian Empire seems assured by comparison with finds made at Gordion and Ankara.[3] I am inclined to believe that Level 4*c* M was built by people who used "Hittite" hieroglyphic writing and that they played an important part in the destruction of the New Hittite Empire.[4] These people, who seem to have been closely related ethnically and culturally to the Phrygians, preceded the Phrygians at Alişar.

The architecture does not show any new features, although the careful planning of the latest building layer of the settlement west of the citadel is noteworthy.

The two principal types of wheelmade pottery of this period have in common very fine forms and elaborate ornamentation. Characteristic of the older phase are large vessels with large orifices and geometrical designs or stag designs with concentric rings. The characteristic pottery of the later phase is a fine ware, plain or with carefully drawn geometrical designs. The two wares show a definite stylistic relationship and frequently overlap; nevertheless, the coarser ware of the older phase with its larger forms diminished noticeably in Levels 4*a–b* in favor of the finer ware with its smaller forms. Besides these decorated wares a fine grayish black or brownish buff ware was not infrequent.

Bronze or copper objects were common, and iron appeared in large quantities. As a whole the small objects do not have the great variety found among those of the previous period, and in many instances they differ but little from those of the next two periods. Noteworthy is the frequent appearance of fibulae, of a new type of arrowheads, and of seals with "Hittite" hieroglyphic inscriptions. Two potsherds with crudely incised "Hittite" hieroglyphs were found.

Only a few skeletons could be attributed with any certainty to this period. Seemingly the custom now was to cremate the bodies and bury the ashes outside the settlement.[5]

[1] See *OIP* XXX 448.

[2] See *OIP* XXX 367.

[3] See *OIP* XXX 453 f.

[4] See *OIP* XXX 448–52.

[5] See *OIP* XXX 453.

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THE CITADEL AND THE LOWER FORTRESS

By Kurt Bittel

THE CITADEL

The writer of this report was engaged in 1932 by the Anatolian Expedition of the Oriental Institute of the University of Chicago to investigate the fortifications and building remains on the citadel mound and its western spurs. For this purpose he stayed at Alişar from May to the end of October, 1932.

Excavations had been conducted here in 1927 and 1928 by H. H. von der Osten and E. F. Schmidt. A minor investigation of the cultural deposits just inside of the citadel wall in M 13 had been made in 1929[6] and one in L 11–12 in 1930. The systematic freeing of the entire surface of the citadel, which had been started in 1927–28, had been discontinued. The results of these previous excavations are known to the writer only through the reports published to date.[7] In 1931 the writer investigated the southern part of the citadel wall during a visit in Alişar, freeing the southern gateway of the fortress. He also studied a cut which had been made through the citadel wall in the north (O 10–11).[8] Before work began in 1932, Level 3*b* in the interior of the citadel had been freed. Of the next level (4*a*) the buildings on the west and south within the citadel had been excavated, while those of the same level in the northeast were still covered.

Before proceeding with the report on the campaign of 1932 a survey of the history of the fortifications seems appropriate. Though we have no information as to those of the oldest period on the citadel mound, we must undoubtedly assume the presence of fortifications in the Chalcolithic period, to which belong the deposits resting on virgin soil in L 14–15.[9]

For the following Copper Age the presence of a fortified settlement on the citadel mound is assured. On the north side of the mound, in O 10–11 (Fig. 313), a cyclopic stone wall was uncovered in 1931 which undoubtedly must be regarded as a fortification wall. The upper structure, probably of sun-dried mud bricks, had been destroyed. Above it remains of a later fortification wall of the same period were encountered.[10] Of the extent and form of these Copper Age fortifications we know nothing as yet, for these walls have not been reached anywhere else. In spite of its narrowness the cut in O 10–11 gave interesting information as to the history of the fortifications on the Alişar mound. Figure 313 shows the eastern profile of this cut. Tufts of grass are represented on the modern surface of the north slope of the mound. The broken line at the bottom of the drawing shows the lower limit of the excavation. The gray earth of the mound, mostly débris of sun-dried mud bricks, is indicated by vertical shading. The Copper Age fortification walls are to be seen in the lower right corner.

The cut revealed later fortifications also, with several alterations. Those of the Copper Age were followed by a fortress wall (marked I in Fig. 313) which according to the pottery belongs to the Early Bronze Age.[11] The inner and outer faces of this wall were carefully set, the space between being filled with small stones with occasional wooden bonds (Fig. 314). The charred wood (shown in black in Fig. 313) proves that this fortification was destroyed by

[6] *OIP* XIX 22.

[7] *OIP* VI 100–118 and 199–213; *OIP* XIX 216–37; *OIP* XX 5–19 and 92.

[8] See *OIC* No. 14, pp. 40–44.

[9] See *OIP* XXVIII 28–32.

[10] See *OIP* XXVIII 116.

[11] [The ware called in this report (cf. *OIP* XXVIII 230 ff.) "typical Early Bronze Age ware" is often called "Cappadocian."—H. H. v. d. O.]

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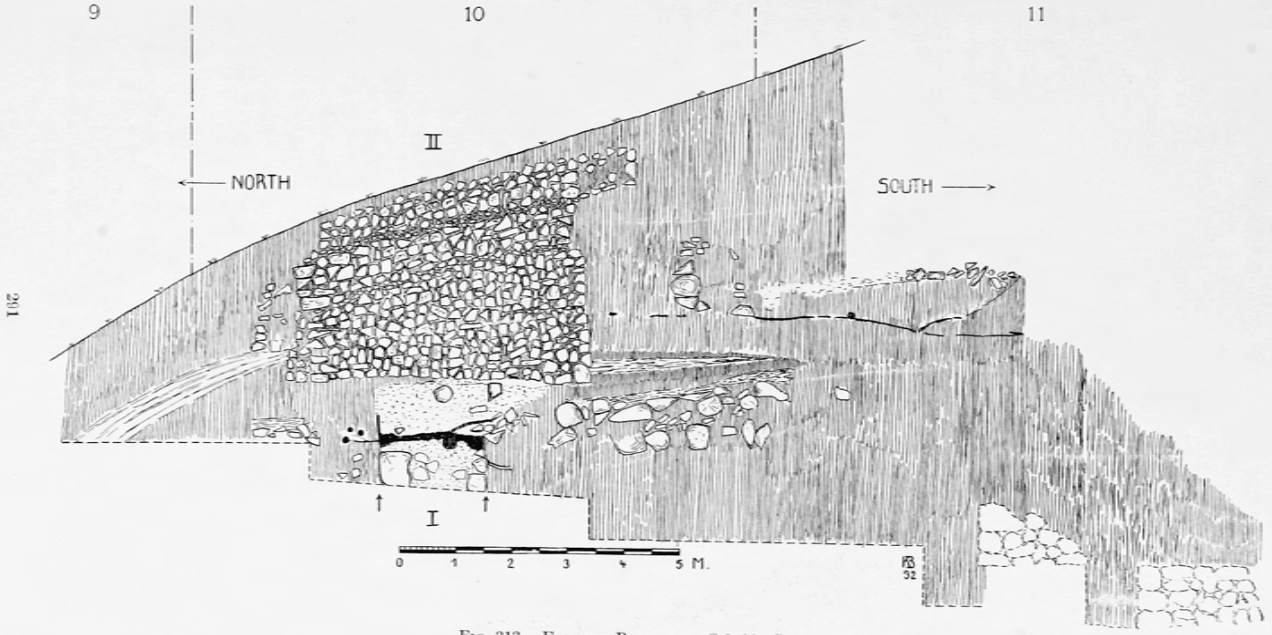

FIG. 313.—EASTERN PROFILE OF O 9–11. SCALE, 1:100

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fire.[12] The heat of the burning wood had burned and cracked the limestone. Later on, rains had converted the whole mass into slaked lime. Of the extent and form of this Early Bronze Age fortification also we have no further information. Behind it, at a slightly higher level, were set stones forming a wall 3 meters broad. In its construction also wood was used; a few traces were still *in situ* (marked in Fig. 313 by closer vertical shading). This wall may be part of the fortification, or it may have belonged to a building inside with an accidentally sloping wall. Only further excavation could clarify this point.

FIG. 314.—THE OLDER EARLY BRONZE AGE FORTIFICATION WALL (LEVEL 6 M) IN O 10, SEEN FROM WEST (CF. *OIP* XXVIII, FIG. 209)

After the destruction of these walls (at some time within the Early Bronze Age, probably as late as the older Hittite Empire)[13] a much larger and stronger fortification was erected. This was traced in its later phases around the whole citadel mound. In Figure 313, where it is marked II, its construction is easily recognizable. It consists of stones up to .50 wide which are carefully set on the outer and inner faces (Figs. 315–16), whereas the interior is filled in carelessly (Fig. 317). Only limestone was used. No reinforcements of wood could be observed in O 10, but on the east and west it could be seen that wooden beams .25–.30 thick had been let in horizontally along both the outer and the inner face (e.g., Fig. 318). On the outer face of the eastern stretch of the citadel wall, especially in P 13, vestiges of occasional wooden bonds ap-

[12] Cf. *OIP* XXVIII 210.

[13] [Dr. Bittel is inclined to attribute the culture called in this publication "the Early Bronze Age" to the early Hittites, the founders of the first Hittite Empire; see his *Prähistorische Forschung in Kleinasien* ("Istanbuler Forschungen" VI [1934]) p. 118; see also A. Götze, *Kleinasien* ("Handbuch der Altertumswissenschaft," begründet von Iwan von Müller, hrsg. von W. Otto, 3. Abt., 1. Teil, 3. Bd.: *Kulturgeschichte des alten Orients*, 3. Abschnitt, 1. Lfg. [München, 1933]) p. 46, and *OIP* XXX 432.—H. H. v. D. O.].

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Fig. 315.—Outer Face of the Citadel Wall in K 14, from West

Fig. 316.—Inner Face of the Citadel Wall in P 11, from Southwest

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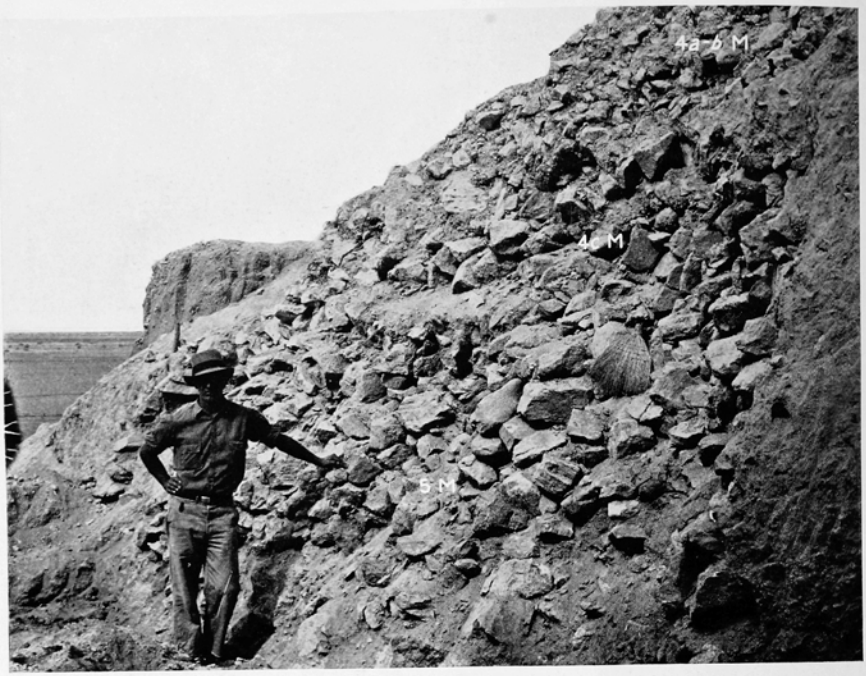

Fig. 317.—Section through the Citadel Wall in O 10, Seen from West

Fig. 318.—Inner Face of the Citadel Wall in P 12, Showing Vestiges of Horizontal Beams (a–a') and Remains of the *Kerpiç* Superstructure (b)

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pear (Fig. 319). Since this kind of construction was not encountered everywhere, it is possible that wood was used only for repairs. The eastern profile of O 9–10 shows clearly the old slope of the citadel mound outside the fortification; it is indicated in Figure 313 by a light band. This slope was probably especially constructed to make the approach more difficult. Perhaps here

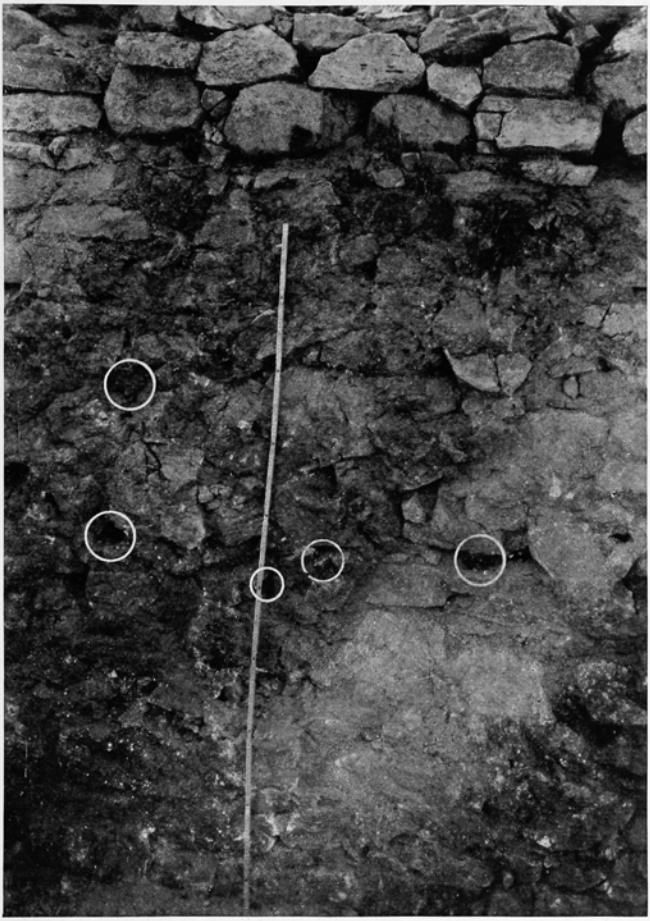

FIG. 319.—REMAINS OF WOODEN BONDS IN THE OUTER FACE OF THE CITADEL WALL IN P 13

a carefully tamped clay layer was used instead of the pavement often found on the outer slopes of other fortresses.[14] The old slope is furthermore marked by fallen stones resting on its surface. The excavations in O 10 showed that this fortification was altered three times (Fig. 320).[15]

[14] At Boğazköy (*MDOG* Nr. 72 [1933] p. 5), Akalan (Th. Macridy in *Mitteilungen der Vorderasiatisch-aegyptischen Gesellschaft* XII 4 [1907] Pl. III), and Zincirli (Orient-Comité zu Berlin, *Ausgrabungen in Sendschirli* II [Berlin, 1898] 117 and Fig. 28). The same construction was still in use much later, e.g., on the citadel mound of Aleppo (R. Dussaud, P. Deschamps, and H. Seyrig, *La Syrie antique et médiévale illustrée* [Paris, 1931] Pl. 96).

[15] Cf. *OIP* XXVIII, Figs. 220–22.

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The first alteration took place within the Early Bronze Age (Level 5 M) but during the latter part of it; typical Early Bronze Age pottery was found here with a large admixture of the monochrome wheelmade ware of the period of the Hittite Empires.

In 1931 the gateway at the south side of the citadel was freed. The oldest gateway structure so far unearthed was proved by potsherds to belong to the time of the oldest phase of fortification II (Fig. 313). Only pottery of the handmade painted ware typical of the Early Bronze Age was found here. The gateway consisted of a paved opening in the wall, flanked on each side by a tower (Figs. 321–24).[16] The next phase of the gateway construction showed an addition of two sloping retaining walls which formed a ramp leading up to the gateway itself.[17]

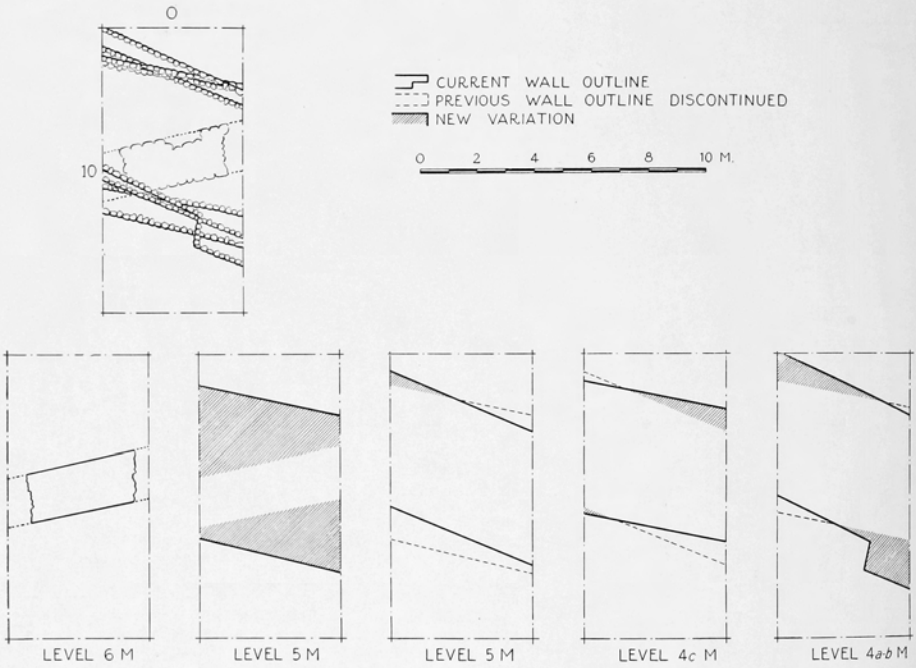

Fig. 320.—Plan of the Citadel Walls of Levels 5–6 M in O 10, Including Three Later Alterations of the Broad Wall Founded in Level 5. Scale, 1:200

This addition belongs to the same level as the first reconstruction of the citadel wall in O 10, for here also typical Early Bronze Age ware was found with a large admixture of the typical ware of the Hittite Empires. The alterations which followed are discussed in detail in this report. In 1931 the writer investigated also the jog in the citadel wall in L 11–12, clearing here the various rebuildings (Figs. 325–26).

From 1927 to 1932 the later forms of this fortification with its towers, gates, and bastions were completely bared; on account of the limited time at our disposal the earliest forms could not be investigated thoroughly. Here follows a detailed report of the various building layers cleared in 1932.

[16] Cf. *OIP* XXVIII, Fig. 212.

[17] Cf. *OIP* XXVIII, Fig. 214.

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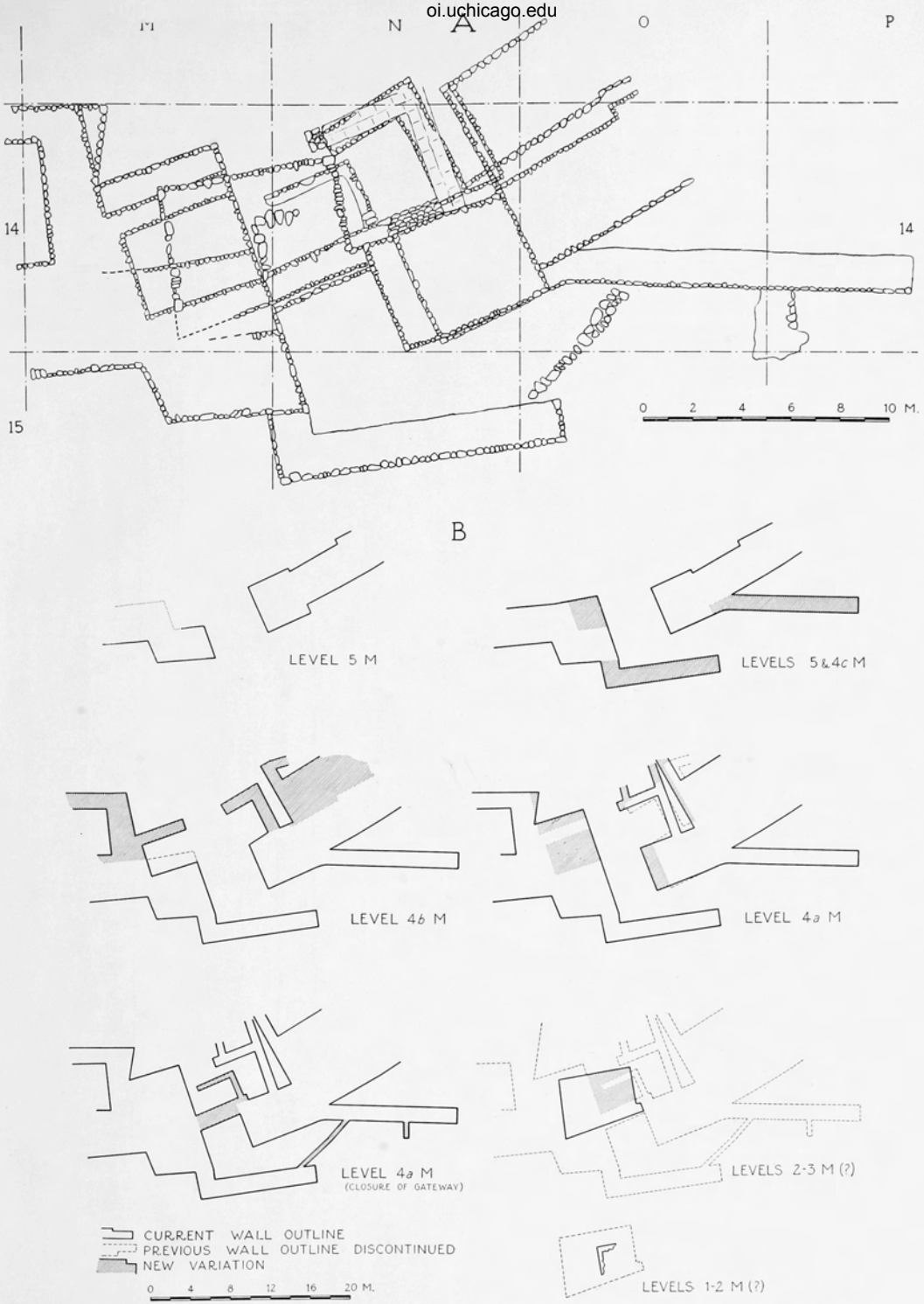

FIG. 321.—*A*. PLAN OF THE SOUTHERN GATEWAY OF THE CITADEL IN ITS VARIOUS PHASES. SCALE, 1:200. *B*. THE FORMS OF THE GATEWAY IN THE VARIOUS LEVELS, OF WHICH 5 M IS THE EARLIEST. SCALE, 1:500

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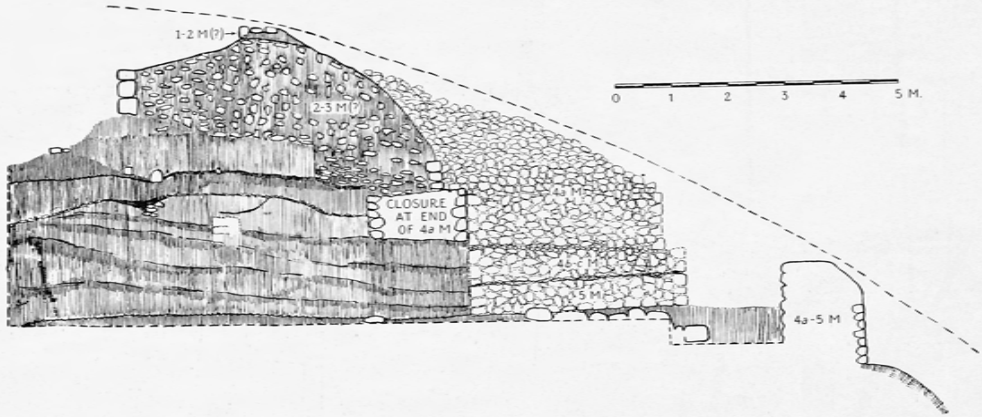

FIG. 322.—EASTERN PROFILE OF THE SOUTHERN GATEWAY OF THE CITADEL. SCALE, 1:100

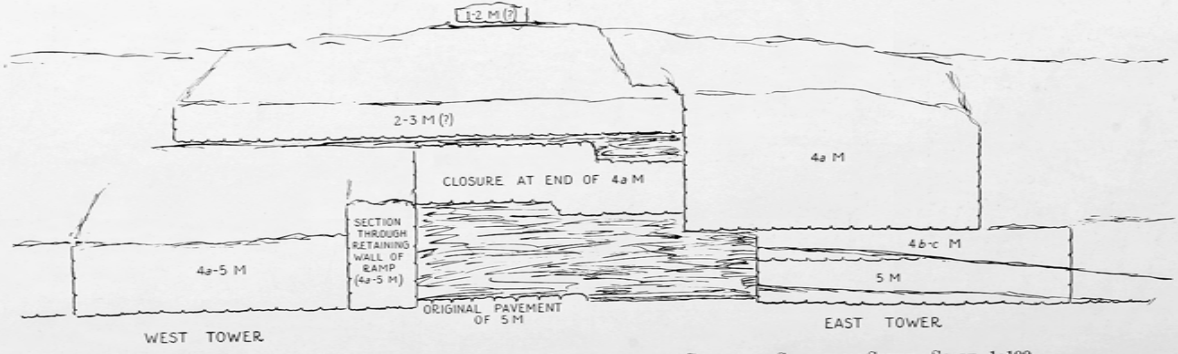

FIG. 323.—SCHEMATIC DRAWING OF THE SOUTHERN GATEWAY OF THE CITADEL AS SEEN FROM SOUTH. SCALE, 1:100

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FIG. 324.—WESTERN PROFILE OF THE SOUTHERN GATEWAY OF THE CITADEL

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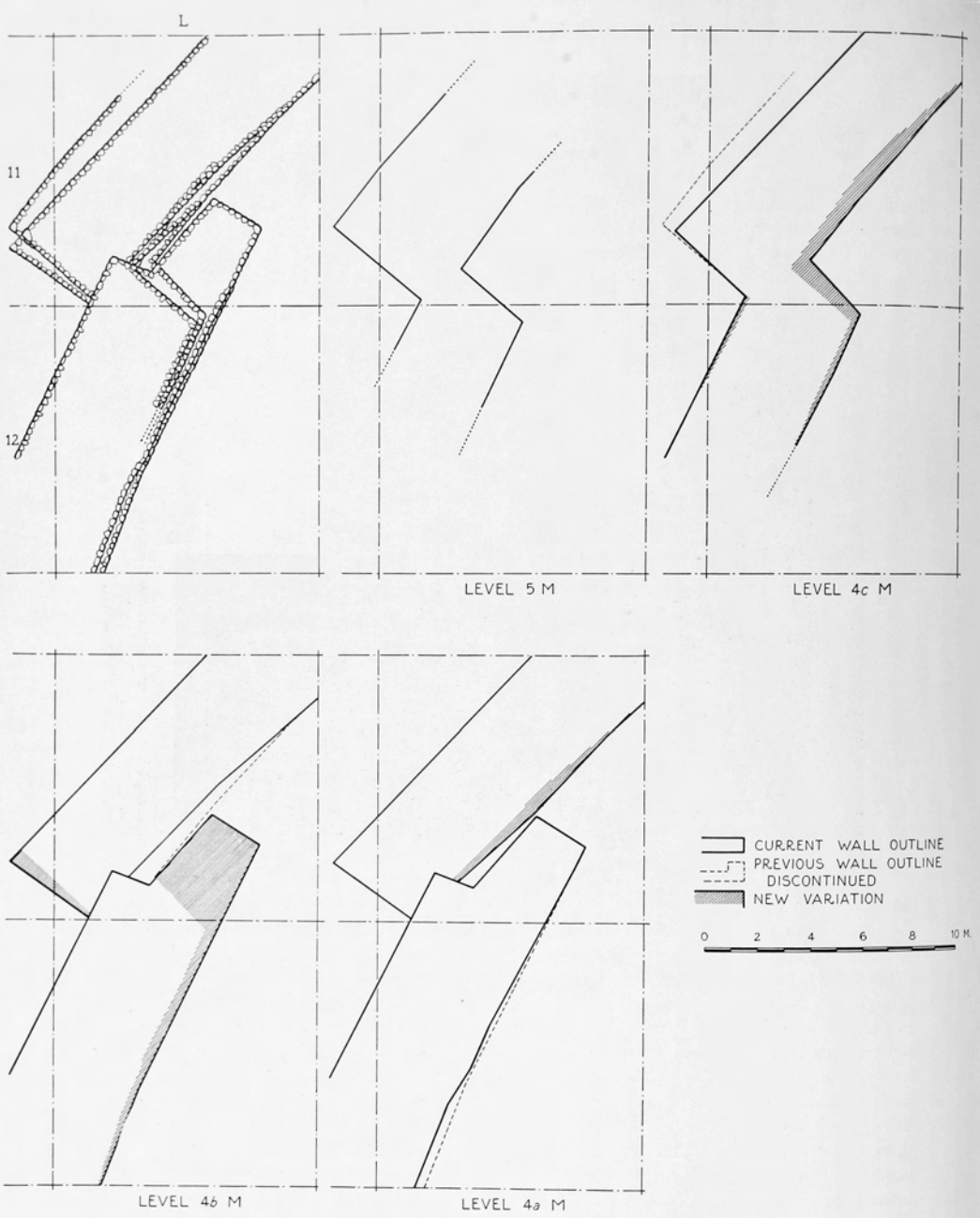

FIG. 325.—PLAN OF THE CITADEL WALL IN L 11–12 WITH ITS VARIOUS BUILDING PHASES. SCALE, 1:200

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LEVEL 4*c* M

The approximately oval form of the citadel wall (Fig. 327) was probably due not wholly to conscious planning but also to the character of the refuse deposits and remains of the previous fortifications. The citadel wall was not everywhere of the same width. The outer face was set back at two points, one on the east side and one on the west. This was probably a device for flanking. On the west side the outer face is set back about 3.80, and the setback of the inner face corresponds roughly (Fig. 325). The southwest corner was not entirely excavated, as we did not wish to remove the higher, later structures. At the east the wall was broadened about 3.50 on both the inner and outer faces (Fig. 327). Undoubtedly this section formed a

FIG. 326.—THE JOG IN THE WESTERN PART OF THE CITADEL WALL, FROM NORTHEAST

foundation for a bastion dominating this important corner and flanking the southeast part of the citadel wall (Fig. 328). The superstructure must have consisted of mud bricks, although no evidence of them remains.

The gateway of the citadel (Figs. 321 and 329) was situated on the south side. Probably the approach to the citadel was not actually paved but consisted of an ordinary dirt road zigzagging up the slope. Two sloping walls bordered the approach to the actual gateway; these walls had been built in the later phase of Level 5 M, when parts of the fortification seem to have been remodeled (cf. Fig. 320). From the construction of these two walls it is possible to recognize the form of an earlier gateway structure of Level 5 M (cf. Fig. 321). That the outer faces and ends of these walls were well finished, whereas the inner faces were not,[18] indicated their purpose as retaining walls. How can one explain the presence here of the masses of earth which they imply? These masses can only be the débris of the older fortification which had fallen down in front of the outer face of the wall and gateway. When the reconstruction of the

[18] Cf. *OIP* XXVIII, Fig. 215.

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wall and gateway was undertaken, possibly the gateway was not raised but its well laid older pavement continued to be used. Both flanking walls were constructed as retaining walls, one to hold the mud-brick débris in place, the other to form a ramp by which the level of the gateway could be reached (Fig. 330). To right and left of the gateway, which is barely 5.50 wide, the citadel wall becomes thicker, suggesting the presence on each side of a tower flanking the entrance. It is by no means certain that the gateway was originally the full 5.50 in width. The actual door frame may have been of wood, which could not have been expected to survive,

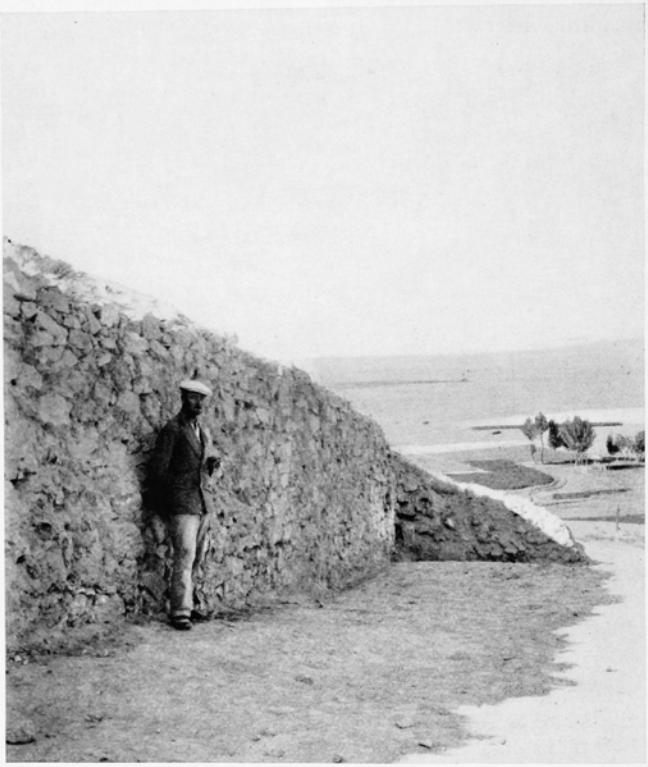

Fig. 328.—Outer Face of the Citadel Wall and the Southwest Face of the Bastion in P–Q 12–13

or more probably of very large cut stones which would naturally be attractive to stone-robbers of later times. Of the pavement in the gateway only a few well worn stones remained *in situ*.

Passing through the gateway one entered first a large unpaved court comprising the whole southwestern corner of the citadel, which was free of buildings (Fig. 327). The section east of the axis of the gateway, however, revealed many buildings. Two main complexes can be distinguished, a northern and a southern, both joined to the inner face of the fortification wall. Only the northern building complex presents a somewhat intelligible plan. From east to west there are three sections (their north-south sides adjoining) with a small addition to the west. The southern wall of the complex is staggered. All the stone foundations were con-

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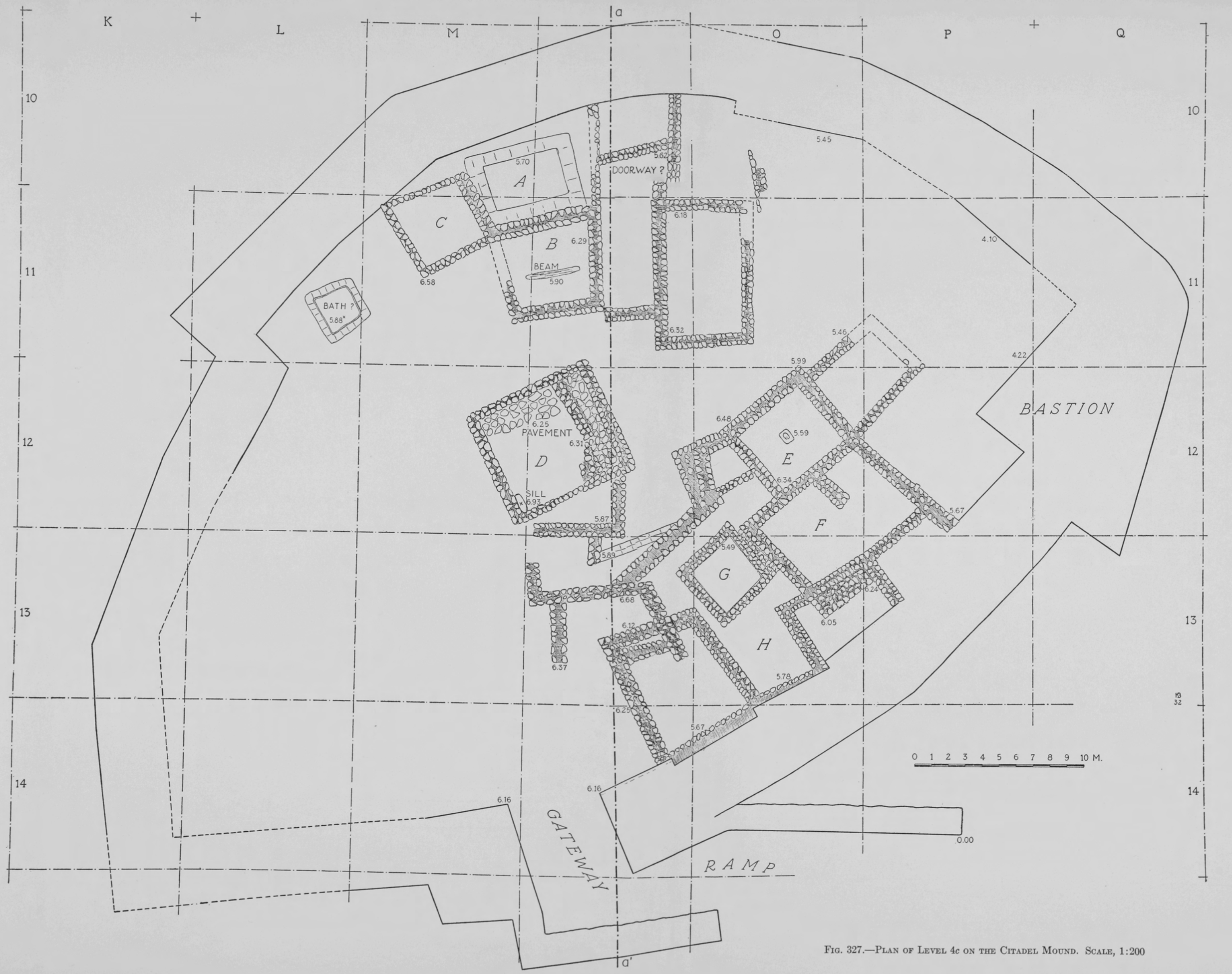

FIG. 327.—PLAN OF LEVEL 4c ON THE CITADEL MOUND. SCALE, 1:200

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FIG. 329.—REMAINS OF THE SOUTHERN GATEWAY OF THE CITADEL

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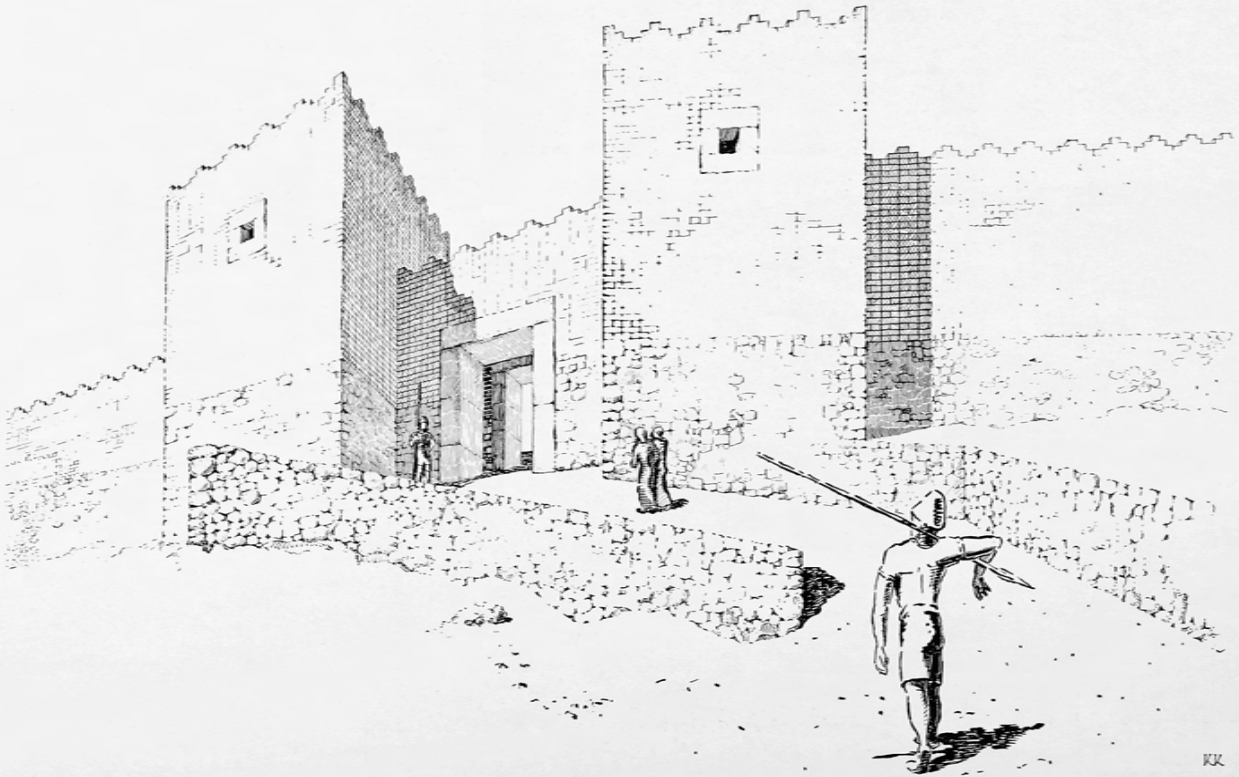

Fig. 330.—Tentative Reconstruction of the Southern Gateway of the Citadel at the Time of Level 4c M

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structed with carefully set outer and inner faces of unworked stones with a filling of rubble or loose débris. The stones of the outer face were probably set in mud, traces of which could still be observed in places—a technique practiced today in Anatolia. In Room *A* the superstructure of rectangular *kerpiç* bricks (.31×.07×.08) is partially preserved. Important evidence dealing with roof construction was uncovered in Room *B*, where a large wooden beam was found lying parallel to the southern wall, imbedded in *kerpiç* refuse. The rooms, as still today in this country, were undoubtedly covered with flat roofs constructed of wooden beams with clay coating. The small trapezoidal Room *C* was a later addition, the walls of which partly overlay those of the older rooms, presupposing the previous destruction or removal of

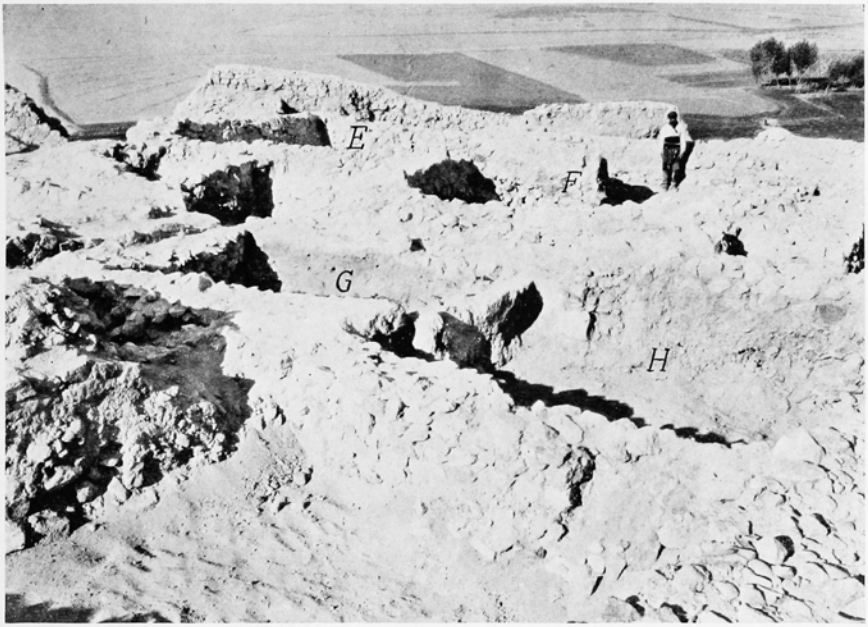

Fig. 331.—Part of the Southern Building Complex in Level 4*c* on the Citadel Mound, Seen from South

the older walls. No preserved doorways were found. The doorways which must have been in use were probably constructed only above the level of the stone foundations and are therefore non-existent today. It is problematical whether there was a separate doorway for each of the three sections or only one common entrance, the three sections being interconnected. What may have been a doorsill was discovered in the eastern wall of the middle section. The whole complex exceeds neither in size nor in building technique the average dwelling of the modern Anatolian peasant.

The plan of the large southern complex cannot be clearly recognized. Major alterations following each other in quick succession and the disappearance of walls as the result of searches for building material by settlers of later levels have changed the original plan very much. Only a number of nearly rectangular rooms can be recognized, often adjoining one another (Figs. 331–32). Remains of stone pavements within these rooms show that a better floor than

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tamped earth was known and used. In O–P 13 appears the foundation of what may have been a ramp leading up to the *chemin de ronde* (Fig. 333). In M–N 12 appeared a large, approximately square room (*D*) in which a pavement and a small partition wall remained.

Close to the inner face of the citadel wall in L 11, slightly northeast of the jog, stood a peculiar small structure (Fig. 334). It was roughly trapezoidal, built of mud bricks .31×.07×.08 with no stone foundation; the corners were not sharp. The floor and walls were carefully covered with a thick white plaster (gypsum?). It is not impossible that this may have been a bath, that is, a basin to be entered from above. Since it has no drain, it is also quite possible that it was used as a water reservoir.

FIG. 332.—WALLS OF LEVEL 4*c* M NORTH OF THE EASTERN TOWER OF THE GATEWAY

All these buildings contrast noticeably with the citadel wall. The latter, with its bastion and gateway, is, in execution and arrangement, witness to a much further advanced building technique than the poor buildings in the interior. The only explanation is that the fortification of the Early Bronze Age was found standing by later settlers, who repaired it, added minor alterations in a few places, and re-used it. The buildings in the interior, their own handiwork, show that the newcomers were inferior in architecture to their predecessors.[18a]

As to the date, no doubt can remain that this building level belongs to the time after the destruction of the New Hittite Empire, that is, after 1200 B.C. The painted ware found with it shows only the designs of the oldest phase of the new period ("tongues," stags, concentric rings, and lattice and checkerboard patterns).[19] The frequent appearance of bronze fibulae

[18a] The buildings of Level II at Boğazköy (12/11–8th century B.C.) are of the same primitive construction and differ very much from the older Hittite architectural remains (see *MDOG* Nr. 73 [1935] p. 27).

[19] But cf. also pp. 350–51.

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Fig. 333.—Foundation of a Possible Ascent to the *Chemin de Ronde* in O–P 13, from South

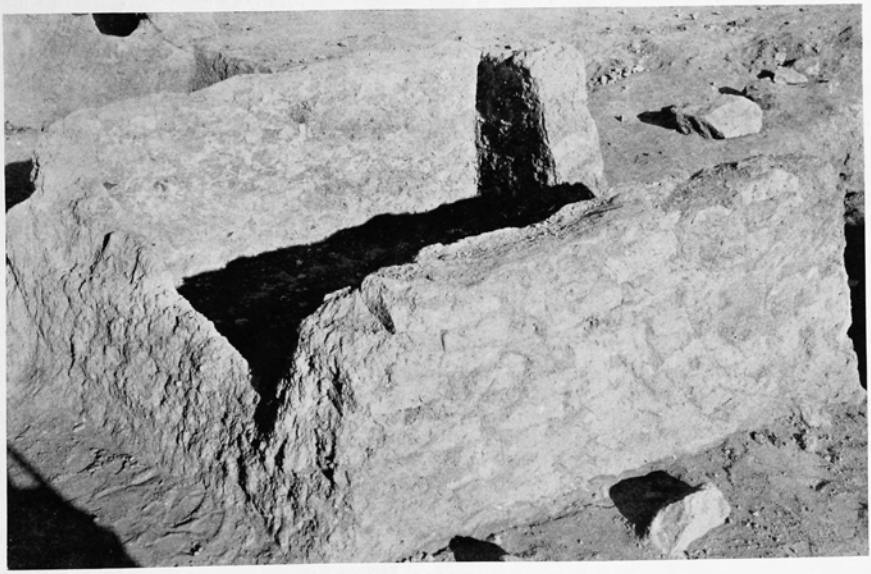

Fig. 334.—Structure Belonging to Level 4c M in L 11, from South

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similar in form to those recovered in Gordion and Carchemish indicates that a date earlier than the 12th century B.C. is impossible; for before that time, as far as we now know, this type of fibula had not yet come into use.[19a] A few seals and seal impressions with "Hittite" hieroglyphs were found here. This is not surprising; for, although the use of this system of writing from about 1500 B.C. or even before is documented for Asia Minor by finds at Boğazköy,[20] it has become more and more evident that it had its greatest expansion between the 11th and the 8th century B.C. Traces of fire and layers of ashes everywhere show definitely that the fortress of this stage was destroyed by a violent conflagration. It is impossible to give the exact date or the cause of this destruction, since we have no unambiguous documents for this dark period in Anatolian history.

Level 4*b* M

It appears that after the destruction just described the citadel was soon rebuilt. However, considerable changes were made not only in the wall but also in the buildings inside the citadel (Fig. 335).

Let us first consider the citadel wall. The approach and the diagonal ramp in front of the gateway were used again in this rebuilding. The gateway, formerly rather simply built, was changed appreciably (Fig. 321), for a gate chamber was added (Fig. 336). A powerful bastion, which flanked and thus commanded the gateway, was built within the southwest corner of the citadel. To be sure, only the substructure of this bastion remained. Walls connected with the inner face of the citadel wall and inclosing a space filled with rubble and débris served as foundations for the bastion. This reconstruction of the gateway recalls the city gates of Assur in the time of Shalmaneser III;[21] both appear to be of approximately the same date. It is probable that some relationship exists between the two, and very likely the Alişar gateway reflects Assyrian influence.

Between the gateway and the east bastion (which was rebuilt) the thickness of the wall was almost doubled: a thick new section of crude masonry was added against the inner face of the wall (Figs. 337–38). This measure was probably made necessary by the accumulation of débris from earlier buildings, resulting in the gradual rise of the ground level within the fortress and a greatly increased pressure on the citadel wall. The northern stretch of the wall between the east bastion and the jog on the west side, until now unbroken, was strengthened with a tower providing much better protection and permitting the defense to flank the wall. The tower, of which only the foundations remain, is almost square and projects slightly from the outer face of the wall (Figs. 339–40). The superstructure was of mud bricks, to judge from the débris outside the wall.

The jog on the west side of the citadel was completely reconstructed. At this time the area on the terrace west of the citadel was densely settled and fortified with an outer defense wall connected to the citadel wall. To permit communication between the citadel and the western settlement without leaving the shelter of the fortifications, a small gateway for pedestrians was constructed where the western jog had been (Fig. 341; cf. Fig. 325). The two sections of the

[19a] C. Blinkenberg, *Fibules grecques et orientales* (København, 1926) pp. 204 ff.; J. L. Myres in *Annals of Archaeology and Anthropology* III (Liverpool, 1910) 140, n. 3; M. Ebert, *Reallexikon der Vorgeschichte* III (Berlin, 1925) 314 f.; F. Schachermeyr, *Etruskische Frühgeschichte* (Berlin, 1929) Skizzenblatt VI. [But see *OIP* XXX 453, n. 67.—H. H. v. D. O.]

[20] *MDOG* Nr. 73 (1935) pp. 34 ff.; *MDOG* Nr. 74 (1936) pp. 66 ff. [See also *OIP* XXX 450–52.—H. H. v. D. O.]

[21] W. Andrae, *Die Festungswerke von Assur* (*WVDOG* XXIII [1913]) Pl. XLI. Of somewhat the same type are some of the gates at Zincirli (Orient-Comité zu Berlin, *Ausgrabungen in Sendschirli* II, Pls. XI–XII).

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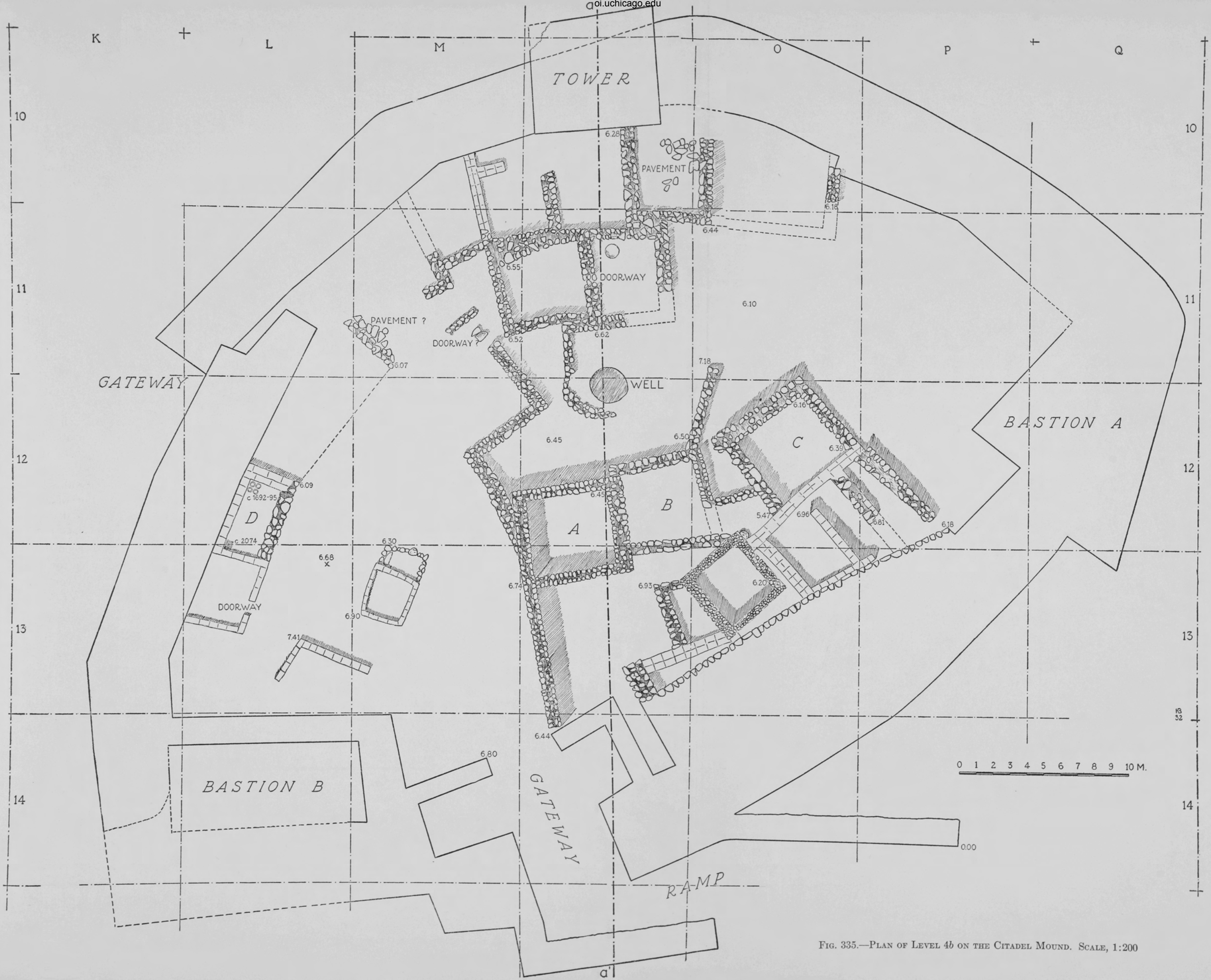

FIG. 335.—PLAN OF LEVEL 4*b* ON THE CITADEL MOUND. SCALE, 1:200

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Fig. 336.—The Western Part of the Gate Chamber in Level 4*b* M, from East

Fig. 337.—Inner Face of the Reinforcement in O–P 12–13, from West

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wall, instead of coming together as before, were now so constructed as to overlap. The actual passageway can no longer be exactly determined, as no brickwork remains and the stone foundations were laid so close together that they served as pavement also.

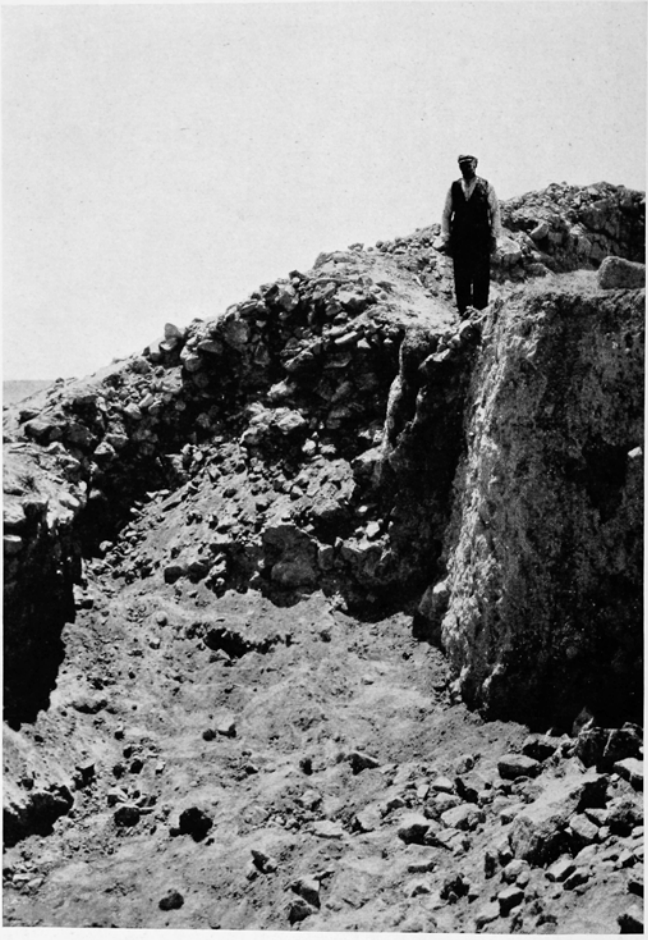

Fig. 338.—Section through the Reinforcement in P 12–13, from Northeast

Unfortunately, the buildings in the interior of the citadel are as poorly preserved as those of Level 4*c*. Later reconstructions were unfavorable to the preservation of the building plans of Level 4*b*, because in many cases walls which were in the way were destroyed. The open space in the southwest corner of the citadel remained comparatively clear. However, various unconnected walls indicate the presence of stables or other small buildings. In Room *D* in

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Fig. 339.—Southern Face of the Northern Tower of Levels 4*a–b* M in N 10

Fig. 340.—Western Face of the Northern Tower of Levels 4*a–b* M in N 10, from Northwest

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L 12–13 four large vessels, three of which were ornamented with stags and concentric rings, were found in 1930 (c 1692–95, Fig. 342). In the southwest corner of the room a hoard of thirty

FIG. 341.—SMALL GATEWAY OF LEVEL 4*b* M IN K–L 11–12, FROM WEST

FIG. 342.—VESSELS c 1692–95 AS FOUND IN ROOM *D* OF LEVEL 4*b* M IN L 12

loom weights (c 2074) was uncovered. In another corner lay fragments of roofing material and a charred wooden beam, probably part of the roof support (Fig. 343; cf. *OIP* XXX 332).

As in the preceding sublevel, the principal buildings stood on the north and south sides of a

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court and were built against the citadel wall (Fig. 344). As before, the buildings on the north side were the better preserved. They consisted of a number of rather small rooms; however, it was impossible to reconstruct from them an exact floor plan. The buildings to the south are in such a poor state of preservation that, although a few approximately rectangular rooms are

Fig. 343.—Wooden Beam Which Probably Served as Roof Support of Room *D* of Level 4*b* M in L 12–13

discernible (e.g., Rooms *A*–*B*, Figs. 345–46), it is again impossible to determine the plan of the entire complex. In Room *C* were found a number of pots and many sherds. A well (Fig. 347) had been dug between the north and south complexes. This well was cleared to a depth of about 7 meters; it extended deeper, and ground water would undoubtedly have been reached if the excavation had been continued. If this were a cistern, it would in all probability have been dug

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Fig. 344.—Rooms of Level 4*b* M along the Inner Face of the Southern Wall of the Citadel

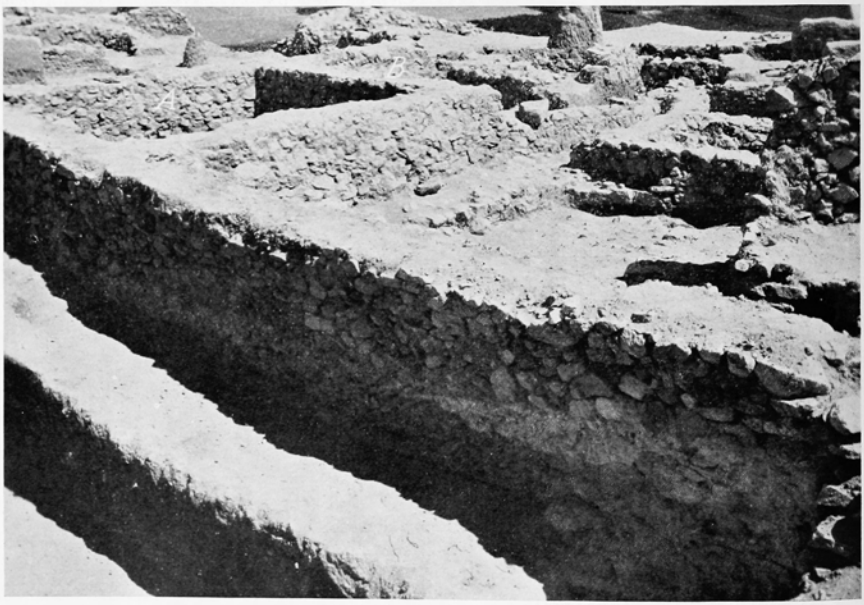

Fig. 345.—Room *A* of Level 4*b* M in N 12–13, from Southwest

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FIG. 346.—ROOMS *A* AND *B* OF LEVEL 4*b* M IN N–O 12–13, FROM EAST

FIG. 347.—THE WELL OF LEVEL 4*b* M IN N 11–12

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shallower, but with a greater diameter. In all likelihood the well was originally lined with masonry, which has all fallen into the shaft. A small semicircular wall served as a parapet, rather than as a foundation for a house over the well.

The Level 4*b* fortress also was destroyed by fire. Because more or less destruction of the citadel wall accompanied each of these catastrophes, one is led to believe that this destruction was brought about not only by fire but by warfare. The small objects found differ very little from those of the earlier building level of this period, but now there are fewer large painted vessels with sharply profiled rims. It seems to the writer that this settlement must belong within the 9th or 8th century B.C., although no datable finds corroborate this belief.

FIG. 349.—FOUNDATIONS OF A POSSIBLE ASCENT TO THE *Chemin de Ronde* IN O 13

LEVEL 4*a* M

Since little separates Levels 4*a* and 4*b*, it may be assumed that the reconstruction took place shortly after Level 4*b* was destroyed. The citadel wall shows practically the same plan (Fig. 348) as in Level 4*b*. Both large bastions, the northern tower, and the small gateway leading to the settlement on the west were still in use at this time. The only considerable changes were those made at the southern gateway.

The western tower of the gateway was enlarged on the inner side, stone foundations being laid over the western part of the former gate chamber (Fig. 321). The eastern tower was rebuilt as before. The ramp and its walls remained unchanged. Two short, rather strongly built walls projecting almost perpendicularly from the inner face of the citadel wall in O 13 (Fig. 349) may well have served as parts of a ramp leading to the *chemin de ronde*. At this spot part of the mud-brick superstructure, resting originally on a wooden grill, was preserved (Figs. 350–51).[22]

[22] *OIP* XIX 225 and Figs. 290–91. I observed the same construction in Hittite buildings of the 14th and 13th centuries B.C. at Boğazköy; see *MDOG* Nr. 74 (1936) pp. 22 f.

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K L M O P Q

10 11 12 13 14

TOWER

× 1.47

6.44

4.34

6.48

6.36

6.39

COURT

GATEWAY

6.68

7.00

TROUGH

WELL

6.90

6.79

6.97

e 1092-93

BASTION A

6.65

5.46

6.71

7.20

6.94

6.87

6.61

6.06

6.83

7.20

6.60

A

7.30

6.99

7.44

6.78

6.96

6.35

a 1069

976

a 1070

a 1068

6.52

6.10

6.32

BASTION B

GATEWAY

RAMP

0.00

0 1 2 3 4 5 6 7 8 9 10 M.

K3 32

a

a'

FIG. 348.—PLAN OF LEVEL 4*a* ON THE CITADEL MOUND. SCALE, 1:200

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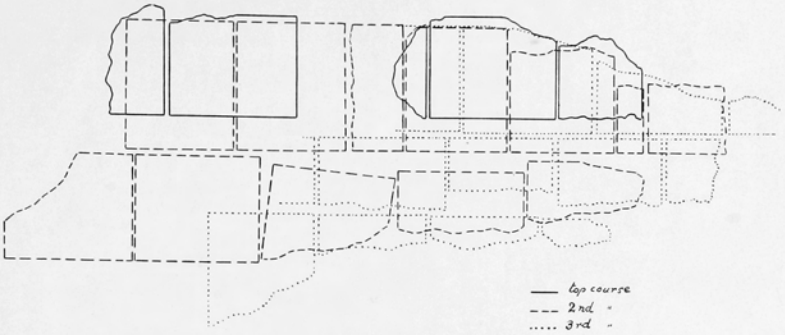

Fig. 350.—Diagram of Mud-Brick Superstructure in O 13. Reprinted from *OIP* XIX, Fig. 291

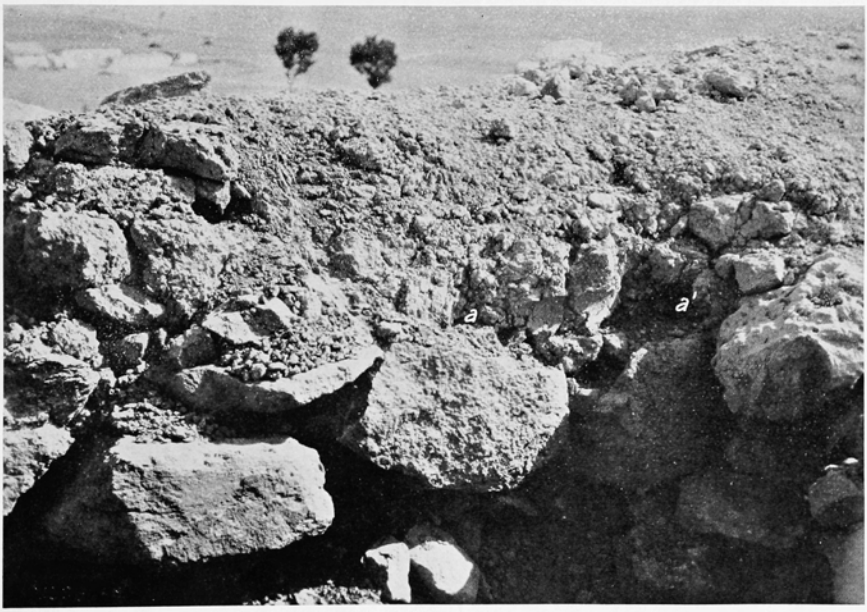

Fig. 351.—Remains of Wooden Grill (a–a') in O 13 between the Stone Foundation and the Mud-Brick Superstructure

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Fig. 352.—Part of the Wall Forming the East Side of the Street within the Citadel, Showing (in upper right corner) the Level 4*a* Rebuilding

Fig. 353.—Street within the Citadel, Seen from Southwest; Site of Barricade in Center

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In this level we can clearly distinguish for the first time the plan of the buildings inside the citadel. After passing through the gateway one comes into a street bordered by long walls (Figs. 352–53). This passageway grows narrower, then turns to the right and opens into a court. The well from the earlier level, situated in this area, was re-used. Traces of *kerpiç* brickwork on the southwest edge of the well indicate that a parapet may have existed during this period also. Near by was a basalt trough (Fig. 354) which may have been filled by means of a bucket and sweep.

The buildings within the citadel are arranged on both sides of the street and of the court. The largest building east of the street and south of the court (*A* in Fig. 348) is a rectangular

Fig. 354.—Well and Trough of Level 4*a* M in N 11–12

house of two rooms. The room to the north is the larger. In the southern room four large storage vessels were found (976 and a 1068–70).[23] On the south the building either abutted the east wall of the gate chamber or was joined to it by small connecting walls. The foundation of the building consisted of the usual stonework. The inner and outer faces, as in all the buildings of this period, are very carefully and accurately laid and coated with mud; the interiors of the walls consist of loosely packed rubble. Originally the stonework rose about 1 meter above the ground level, and on this stone base a brick wall was built. The bricks, of mud with a small admixture of chaff, were rectangular; but they were so poorly preserved that no exact measurements could be taken. The brickwork on the east side was well preserved, on the north side fairly well, on the west side only in part, while that on the south wall and on the partition wall was no longer recognizable. The outer walls of the northern room, where the construction

[23] *OIP* XIX 221–22.

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Fig. 355.—Two Rooms in N–O 12, from East

Fig. 356.—Room in P 12

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of the upper portions of the wall could be observed, showed that no entrance had existed on the ground floor.[24] Had there been one, the stone base would have displayed a gap. On the other hand, had steps been used, evidence of the doorway would have been observed in the brick wall. A possible explanation of this apparent lack of an entrance may be found by observing the houses in the villages of this region today. They are often two stories high. The lower story of such a building has no entrance from the outside, but is reached only by means of an inside stairway or ladder from the second floor of the house. The rooms on the ground floor are lighted by narrow slits in the walls. The upper story is encircled by a wooden gallery which one may reach from the village street by means of a stairway. The roof is flat. In the opinion of the writer not only *A*, but most of the other structures of this period, should be reconstructed in this fashion.

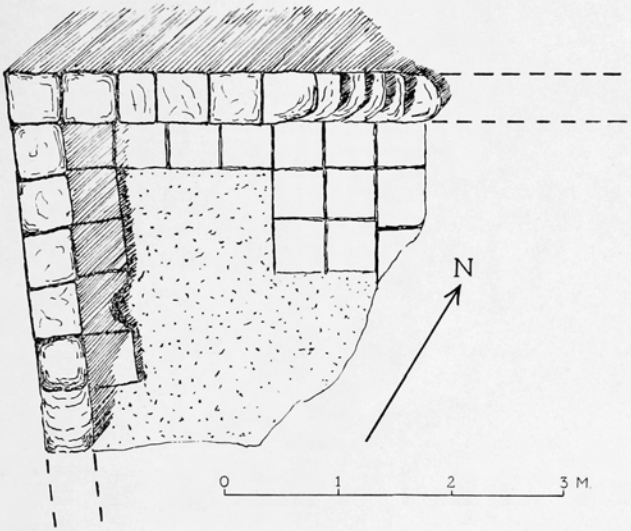

Fig. 357.—Sketch of the Room in P 12. Scale, 1:50

Northeast of the building just described two small rectangular rooms were excavated (Fig. 355). Each lies with its four corners approximately east, north, west, and south, although the orientation of the two rooms is not exactly the same. The northeast wall of one merges with the southwest wall of the other for part of its length. Only the stone foundations remain. Inasmuch as here also there was no gap in the foundation, the writer believes it probable that these rooms had superstructures similar to that of *A*.

Between these rooms and Bastion *A* was uncovered a small structure built entirely of brick without the use of a stone foundation (Figs. 356–57). The bricks were rectangular in shape, .45×.45×.08; half-bricks also were used. The floor was paved with bricks of the same type laid on a base of tamped earth consisting of a mixture of clay and a white gypsum-like material. Remains of another building of similar construction were found in O 11.

[24] According to *OIP* XIX 223 and Figs. 286–88 a doorway was found in 1928 in the east wall of the south room of *A* (cf. our Fig. 348). This doorway had of course so deteriorated by 1932 that recognition was impossible.

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To the left of the street as one enters the citadel there is an almost rectangular building connected with Bastion *B* by a wall. This building consists of two rooms, and its walls are similar to those of *A*. However, only a small portion of the superstructure remains, and that only on the wall between the rooms. In the southwest corner of the north room there was found a circle of pieces of limestone set in the floor with a shallow clay-lined depression in the center. This structure does not seem to have been a hearth; it may have served the same purpose as similar clay-lined depressions in which the four large storage vessels in the southern room of *A* were set.

North of *A* and directly west of the well another almost rectangular building was freed. A wall bordering the street connected this building with the northeast corner of the building just

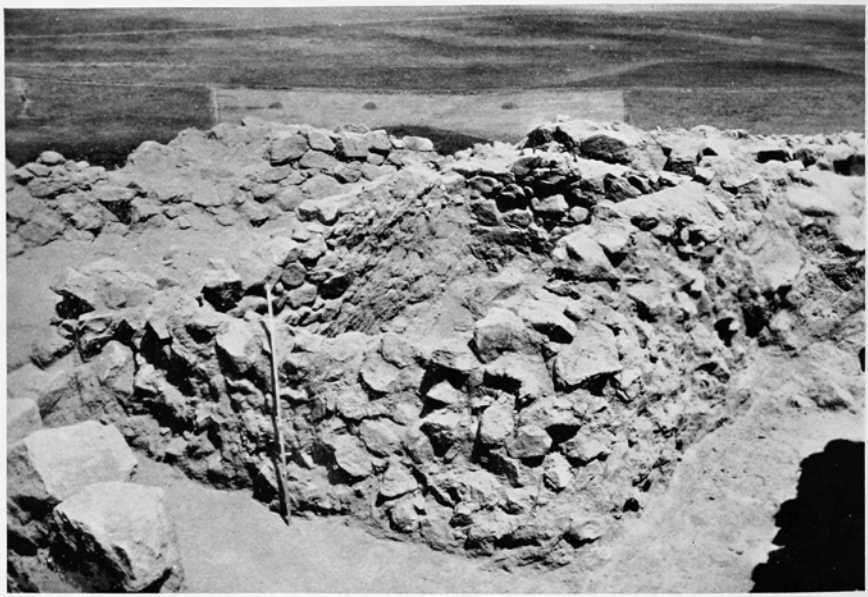

Fig. 358.—Cellar in L 13, from Southeast

described. In this case the mud-brick superstructure had totally disappeared. Between this building and the northern tower of the citadel several other walls were excavated. A possible reconstruction is shown in Figure 348 by broken lines.

Abutting the inner face of the western portion of the citadel wall there must have been a number of smaller buildings; only the stone foundations remain. In a room in L 12–13 three fire pots were uncovered.[25] A wall projecting from the inner face of the citadel wall in K–L 13 may be the remains of a flanking wall or of a stairway or ramp leading either to the *chemin de ronde* of the citadel wall or to a platform on the bastion.

In L 13 an almost rectangular structure with a stone wall, smooth on the inside, may be called a cellar, for the stones were set against earth, indicating that the room must have been below ground when built (Fig. 358). A square cellar of exactly the same construction was found

[25] *OIP* XIX 230.

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in M 12, situated in what may have been an open court. A small rectangular room in N 11 and a structure of irregular shape in N 10–11 were probably similar cellars.

The principal living-quarters were probably in the buildings west of the street and north of the open court. From there one could at any time reach the settlement on the western terrace through the small gateway in the citadel wall. Apparently no direct connection existed between the open court and this small gateway.

In the western and southern parts of the citadel area fragmentary remains of minor later alterations were found. Probably during the siege which ended with the complete destruction of this last settlement of the Post-Hittite–Phrygian period the gateway was blocked (Figs. 359–

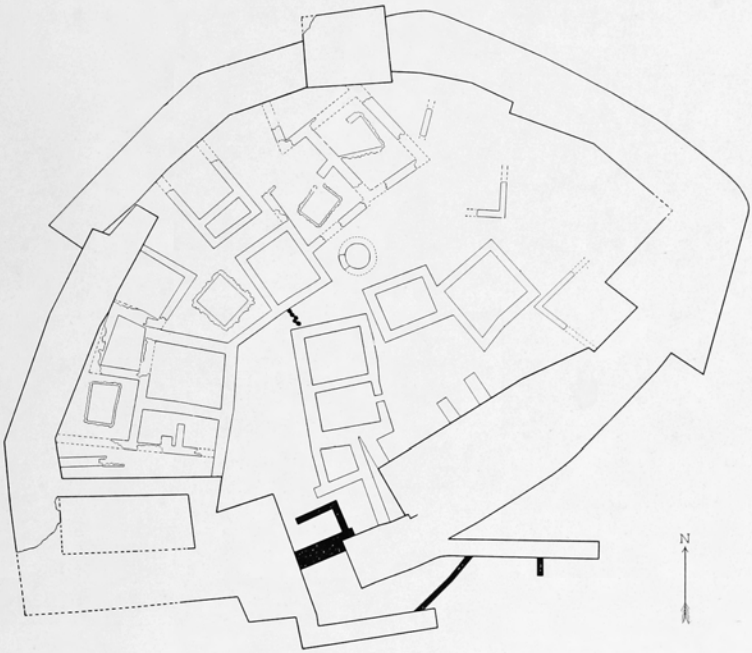

Fig. 359.—Plan of Level 4*a* M Showing the Blocking of the Ramp, the Southern Gateway, and the Street. Scale, 1:500

61; cf. Fig. 321), and the citadel street was barricaded with large round bowlders (Fig. 362) where it bent sharply to the right around the corner of *A*. The remains of the settlement are imbedded in a destruction layer 2.35 thick, indicating the end of this period on the citadel mound. Minor rebuildings on the ruins of this building level were unearthed in 1928;[26] none of them can be ascribed definitely either to a late phase of Level 4*a* M or to a later level.

In Level 4*a* M also no buildings constructed on a large scale or monumental plan were found within the citadel. However, the larger buildings show a remarkable similarity to buildings found even today in central Anatolia.

The pottery of Level 4*a* was scarcely different from that of Levels 4*b–c*. As before, the painted ware has checkerboard, lattice, hourglass, and similar geometrical designs; the forms

[26] *OIP* XIX, Fig. 277.

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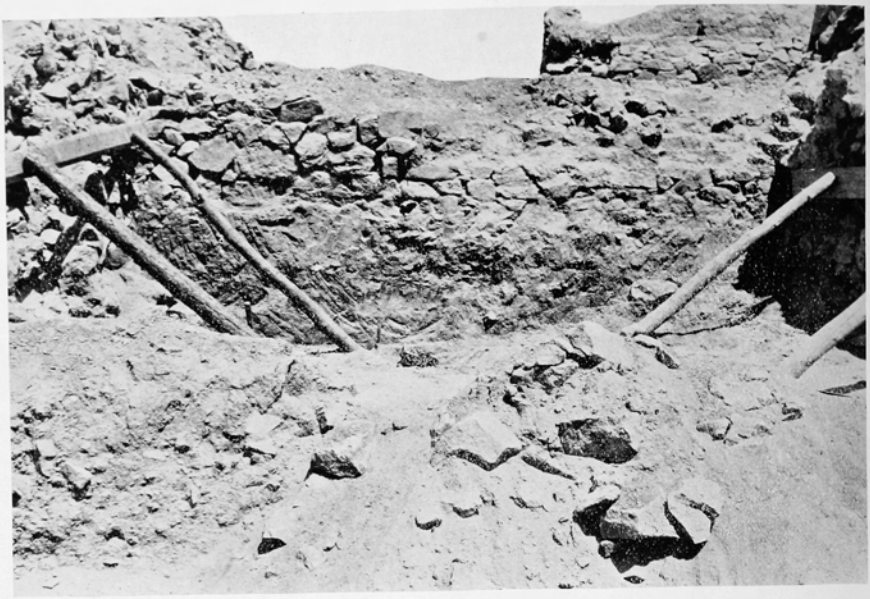

Fig. 360.—Wall Closing the Southern Gateway of Level 4*a* M, Seen from East of South

Fig. 361.—Wall Closing the Southern Gateway of Level 4*a* M. Detail at Eastern Corner

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of the vessels are also practically identical, but the finer ware is more prevalent than in the earlier sublevels. The date of this sublevel must at the latest be previous to the middle or end of the 6th century B.C.; had it been later, we should expect to find imports from Greece as in the case of the finds within the tumuli of Gordion. It may be objected that it would not be surprising to find objects imported from Greece in royal tombs, whereas one would scarcely expect to find such objects in the citadel of some Phrygian feudal lord. However, in another small fortress of this time, Akalan near Samsun, Ionic imports were found in large numbers, although that fortress lies at a considerable distance from the coast and was not on the direct trade

FIG. 362.—THE BARRICADE IN M 12

route.[27] On the other hand, in this level appear iron fibulae which seem to demand a fairly late date.

CULTURAL IMPLICATIONS

In none of the three building periods which we may date between the 12th and the 7th century B.C. was there any evidence that Alişar was in any way a political or cultural center. There were no palaces with reliefs, no monumental gateways, no buildings distinguished in any way! With the exception of the painted pottery, there were found no objects of special value, no objects which show any high artistic or technical ability or pronounced style.

However, it would be wrong, merely on the grounds of the poor standard of architecture and the lack of a highly developed material culture, to assume a marked retrogression as compared with the period of the Hittite Empires. The seats of the city rulers or petty kings between 1900 and 1200 B.C. were certainly no more monumental or interesting. The excavation of Alişar itself proves this. Although the city wall of the period of the Hittite Empires was built to take

[27] Cf. *OIP* XXX 453 and 458.

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advantage of the terrain, the construction technique and materials employed were both of the simplest. A comparison of this Hittite fortification with the contemporaneous defenses of Boğazköy and Troy shows a marked difference, for in Boğazköy and Troy we have the remains of capitals or commercial centers where the political and financial situations were of course quite different.

It would be ridiculous to assume a generally low standard for Phrygian culture as a whole on the basis of the primitive character of the Alişar citadel; we should be judging the culture of an empire merely by the standards of a village, a small city, or the fortress of a feudal lord.

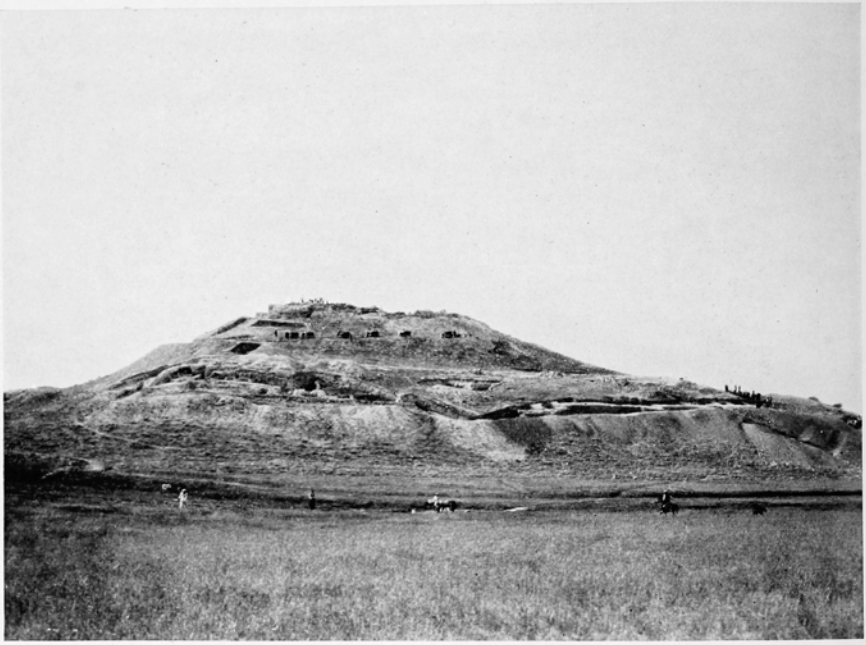

Fig. 363.—The Lower Fortress and the Citadel Mound, Seen from Northwest

THE LOWER FORTRESS

The excavations of 1932 showed that the whole city terrace had been settled during the period of the Hittite Empires and that this settlement had been surrounded by a city wall. In Phrygian times—this designation is used arbitrarily, as the ethnical conditions between 1200 and 700 B.C. are not yet clear—the area of the city was noticeably restricted; only the area west of the fortress was specially fortified (Figs. 311 and 363). This area now forms an elevated terrace west of the citadel mound.[28] Excavations were made here in 1927, at which time part of the southern wall of the fortress was cleared (C–H 14).[29] In 1929 a northern section of the fortress wall was excavated (H–L 2–3 and L–M 4–5);[30] in the interior building remains were cleared in H 5–6, in F–G 8, and in a few other places to the southeast. Further work was undertaken in the summer of 1932.

[28] Called "Mounds B, C, and D" in 1927–29: *OIP* VI 44; *OIP* XX 19–40.

[29] *OIP* VI 73–79, 83–89, and 195–99.

[30] *OIP* XX 19–34.

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The Fortress Wall

First we tried to determine at what point this wall joined the citadel wall. For this purpose a cut was made in M–N 7 (Fig. 364), where the wall showed the same direction as the previously excavated sections to the northwest. A second cut was made in N 9, farther upward

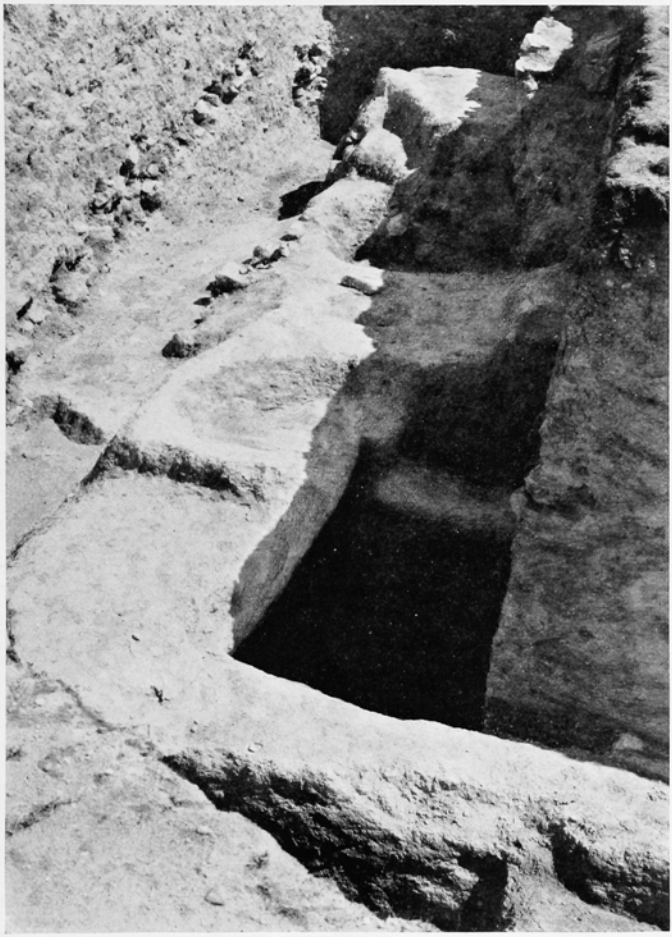

Fig. 364.—The Fortress Wall in M 7, from North

toward the citadel, in order to strike the wall again; but there, unfortunately, we found only scanty remains of a mud-brick superstructure which cannot be identified with certainty as part of the fortress wall. However, the topography of the mound aided in determining the original course of the wall; it could have been constructed only on the marked shoulder in M–N 8–9, as this offered the one possibility for domination of the northeast slope. The wall,

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therefore, must have abutted the citadel wall at its north tower. The *chemin de ronde* of the fortress wall could probably be reached directly from the platform of this tower.

The construction of the fortress wall on the northeast side (Fig. 365)[31] differs in important points from that on the west side. The outer facing wall consists of a limestone foundation of unworked medium-sized stones and a mud-brick superstructure; scanty remains of a grayish white coating appeared on the outer face. The bricks measured about .45×.45×.12. The outer face of the wall was battered, not by chamfering the bricks but by building the whole face at an angle. This means that the wall was constructed in small sections and the earth filling of the interior added immediately, for such a sloping wall could not have been built without such support. The inner facing wall was considerably thinner, but this also consisted of a mud-brick superstructure resting on a stone foundation. As we know the ground level of

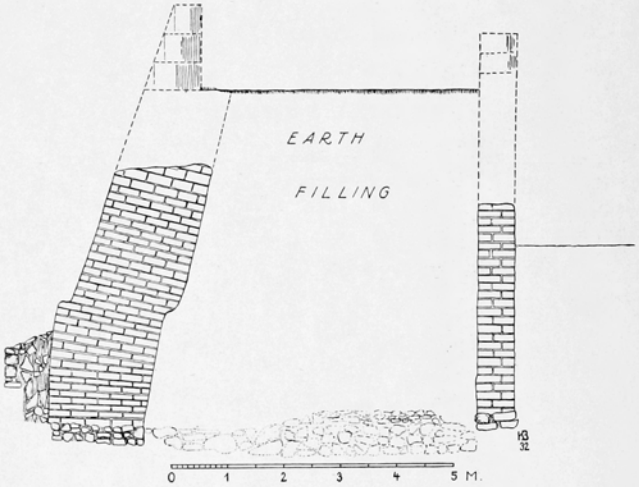

Fig. 365.—Cut through the Northeast Section of the Fortress Wall. Scale, 1:100

the interior of the settlement, we can picture the details of the method followed. A sector was cut out of the slope of the mound to obtain an even surface with a perpendicular face toward the higher portion of the mound. The wall was built on this level space, the weaker inner wall being built against the perpendicular face of the cut. The space between the inner and outer walls was filled with earth and débris, producing a compact wall more than 8 meters broad at the base. In order to reinforce the earth filling, transverse walls were built at irregular intervals, forming a boxlike construction. The base of the outer face was protected by a stone wall (*a* in Fig. 366), the lower part of which recedes with an irregular front, suggesting that it rested on a bank of earth thrown out from the trench dug for the foundation of the fortress wall.[32] An irregular four-cornered tower in K–L 2–3 projected slightly from the outer face of the wall at the north corner. In L–M 4 a rectangular mass protruded from the outer face of the wall, probably serving as the base of some intermediate structure (Fig. 366).

[31] Cf. *OIP* XX, Figs. 17–22.

[32] Cf. *OIP* XX, Figs. 19 and 21–22.

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Fig. 366.—Fortress Wall and Rectangular Projection in L–M 4, Showing the Stone Protecting Wall (*a*) and the Batter of the *Kerpiç* Superstructure (*b*)

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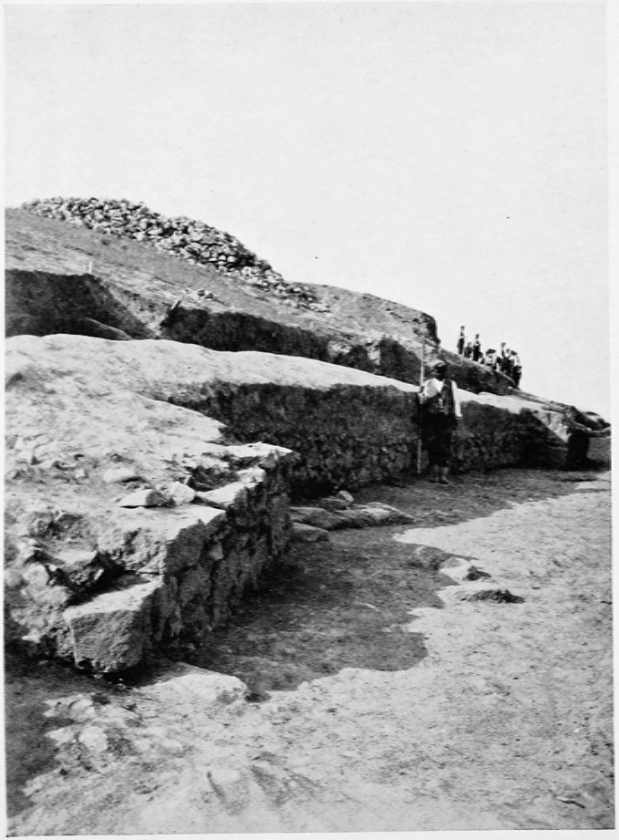

Fig. 368.—Towers in F 5 and E 6–7, from North

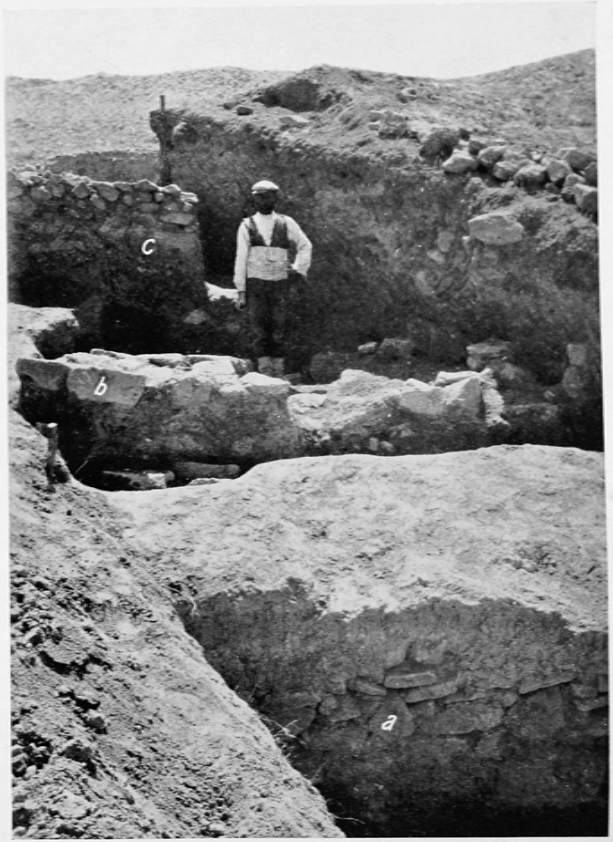

Fig. 369.—The Phrygian Fortress Wall (*a*) in E 8, from North of West. Behind It a Hellenistic Pavement (*b*) and a Roman-Byzantine Wall (*c*)

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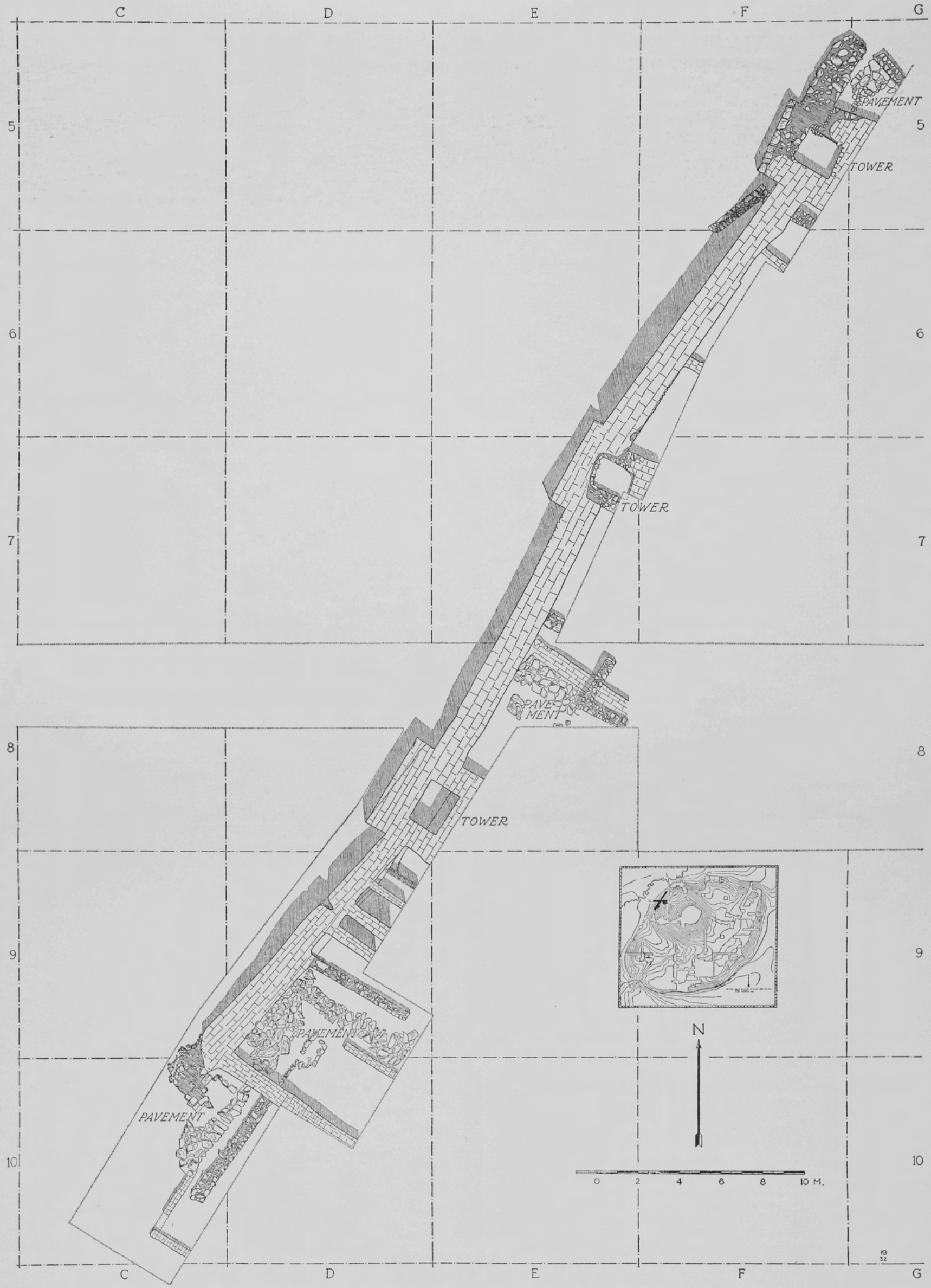

Fig. 367.—Plan of the Western Part of the Fortress Wall. Scale, 1:200

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The west side of the fortress wall was excavated in 1932 (Fig. 367). Unfortunately in G–H 3–5 and C 10–14 the wall had been completely destroyed. The topography explains this. At those points ravines extend across the line of the wall. These ravines, which now drain most of this section, may conceivably have originated in pathways leading into the lower fortress. It is, therefore, possible that gateways existed in both places. However, such a small area would scarcely need two gateways; probably there was a gateway in C 11–12.

The fortress wall was found only a short distance below the surface of the ground. The stone foundation had a neat and accurately worked outer face; the cornerstones of the rectangular towers were particularly large, and generally had a smooth surface on the outside (Fig. 368;

Fig. 370.—Tower (*a*) in D–E 8, from Northeast

cf. Fig. 372). The superstructure consisted of mud bricks showing traces of a grayish white coating on the outer face; but their remains today rise at no point more than .50 above the foundation. There was no box construction on the west side; the single wall (Fig. 369) was no doubt backed by earth. The wall does not follow a straight line, but each section between the rather regularly placed towers takes a different direction. In 1929 and 1932 four towers were excavated; the presence of two others may be inferred. In all cases the towers project more on the inside than on the outside (e.g., Fig. 370).

The plan of the west wall between the tower in I 2–3 and the tower at the north corner remains questionable, for when cleared in 1929 it was already so disintegrated that it was impossible to recognize its original form,[33] and the disintegration has since proceeded further.

[33] Cf. *OIP* XX 26–27.

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On the south side of the lower fortress considerable portions of the defense wall had been excavated in 1927.[34] Two towers of the same construction as those on the west were cleared, one in D 14 (see Fig. 372) and one in F–G 14–15.[35] They project more than twice as far on the

FIG. 371.—TOWER IN H–I 14 (*a*) AND REMAINS OF THE FORTRESS WALL (*b*), SEEN FROM WEST. THE CITADEL WALL (*c*) APPEARS IN THE BACKGROUND

inside as on the outside. In one place between these two towers the wall has a saw-tooth break. In 1932 we first tried to establish the point at which the lower fortress wall joined the citadel wall. The outer face of the fortress wall could be followed as far as I 14; walls in H–I 14, par-

[34] Cf. *OIP* VI 73–79, 83–89, and 195–99.

[35] Cf. *OIP* XX, Figs. 41–42. Levels 3*a–c* correspond to our Post-Hittite–Phrygian levels; Level 2, to our Hellenistic; and Level 1, to our Roman-Byzantine.

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tially excavated in 1927, proved to be another tower (*a* in Fig. 371). The sections lying higher in J–K 14 had disappeared completely; probably they had been washed away or covered by

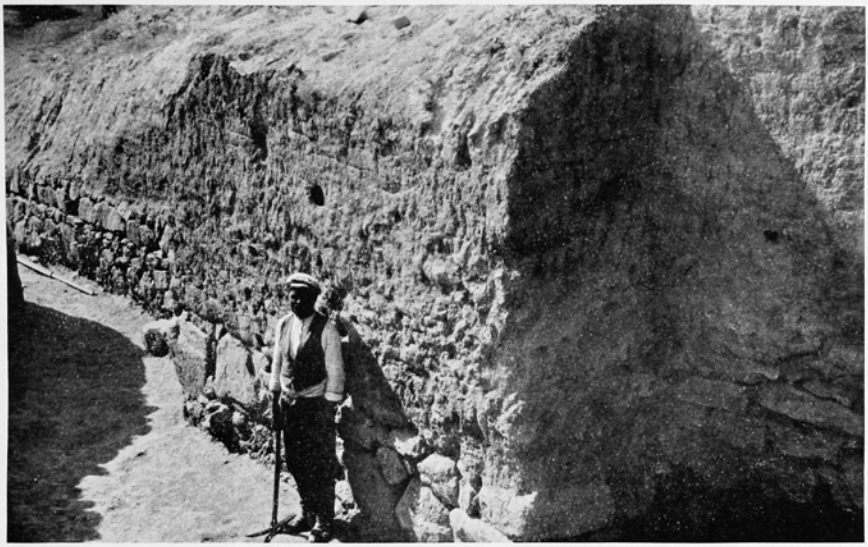

FIG. 372.—TOWER IN D 14, FROM SOUTHEAST

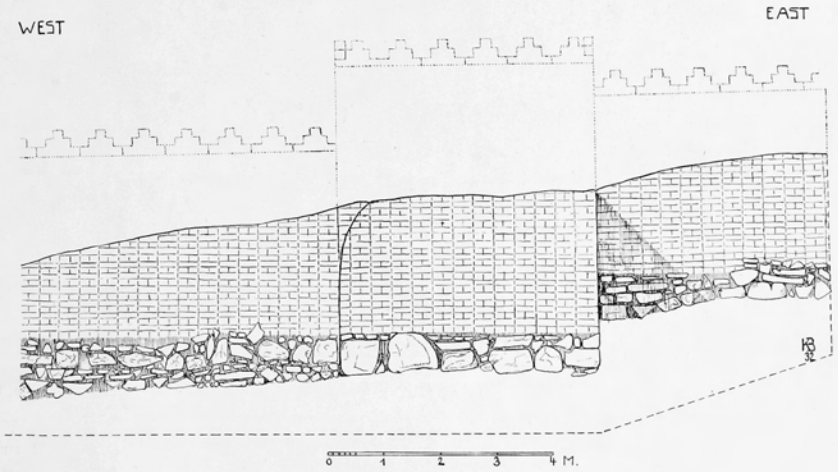

FIG. 373.—RECONSTRUCTION OF TOWER IN D 14. SCALE, 1:100

later structures (Fig. 371). However, there is no doubt that the wall joined the citadel at a point dominated by Bastion *B* (Figs. 335 and 348), thus providing the simplest defense for this vulnerable spot. Apparently the same construction was used as in the northeast wall (cf. p.

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328), with the exception that the outer face was not battered. This presumption is based on finds in F 14 and C–D 14, the only two places where we excavated down to the foundation on the inside of the wall. Figures 372–73 show the outer face of the tower in D 14 and of the walls adjoining. An irregular stone foundation, consisting of somewhat larger stones for the base of the tower than for the intermediate sections of the wall, may be clearly recognized.

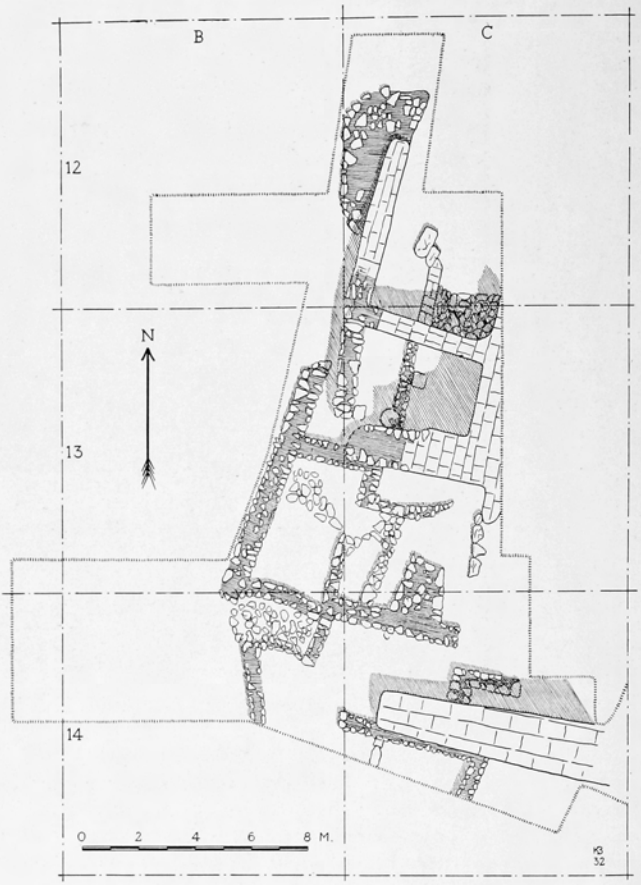

Fig. 374.—Plan of B–C 12–14. Scale, 1:200

At this place, and also farther to the east, the mud-brick wall was found intact to a height of 2.50, so that one could gain a clear impression of the construction of the wall. The rectangular bricks are .30×.15×.12 and are laid in a header-and-stretcher style. No evidence was found of any substance used to bind the bricks together, but there seemed to be faint traces of a grayish white coating such as occurred on the outer faces of both the west and northeast walls. That this defense wall was used during the period following the Post-Hittite–Phrygian period

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is indicated by the several stone revetments before the southern part of the wall;[36] the uppermost of these belongs to the Hellenistic period.

We tried particularly to locate the southwest corner of the fortress, for there we expected to find a large and dominating tower. Unfortunately this section of the wall was so disintegrated that no clear ground plan could be seen (Fig. 374). The walls excavated in B–C 12–14 (Figs. 375–77) were probably built after the fortress wall had been destroyed.

Fig. 375.—Remains in B–C 13–14, Including End of Phrygian Fortress Wall (*a*), Seen from Northeast

The Settlement Buildings

The buildings within the lower fortress which were excavated during previous seasons were still well preserved, and we could study them before we started new work. The axes of the various buildings showed more or less parallelism; part of a building freed in H–I 9–10[37] was oriented roughly the same as those in F–G 8[38] and H 5–6 (see Fig. 311). From this it could be assumed that the entire lower settlement had been laid out in accordance with a uniform plan. We enlarged the excavation area F–G 8 by a trench 5 meters wide in H–J 8. There we struck first a settlement layer of the Roman-Byzantine period (Figs. 378 *A* and *D* and 379–80). Quantities of red-"glazed" ware found here[39] enable us to date this level[40] with reasonable accuracy within the first or second century after Christ. The trench could, of course, take in only parts of buildings; however, part of a large building was found in H–I 8 and part of

[36] *OIP* VI, Figs. 178–80. [37] Plot 32 of 1927 (cf. Fig. 512); *OIP* VI 99–100. [38] *OIP* XX 34–39.

[39] The fine wares of the Hellenistic and Roman-Byzantine periods are discussed by F. O. Waagé in *OIP* XXX 74–88.

[40] Called "Level 1" in *OIP* XX 36–37.

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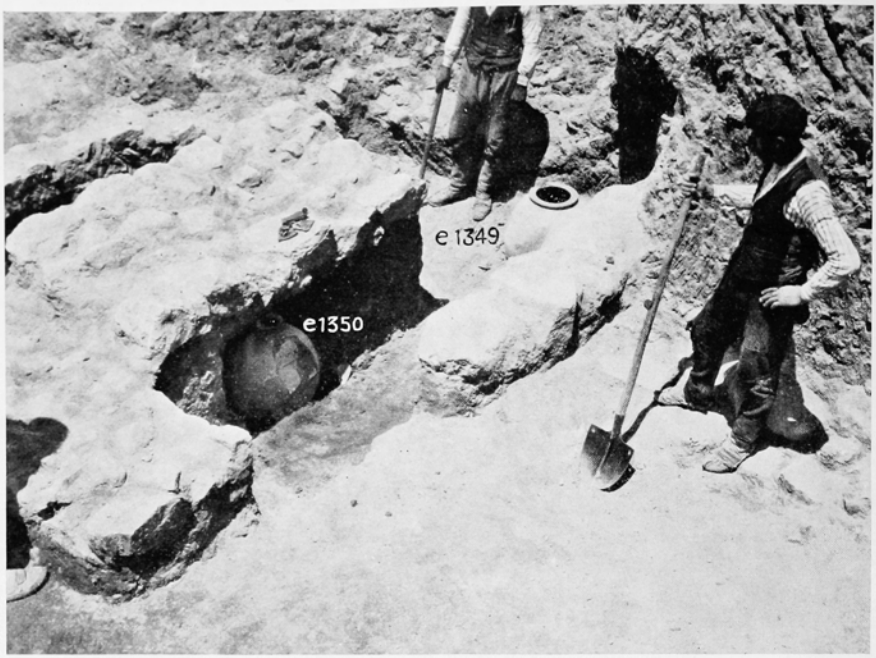

Fig. 376.—Remains in C 13–14, from Southeast. The Vessels are Attributed to the Second Half of the First Millennium B.C.

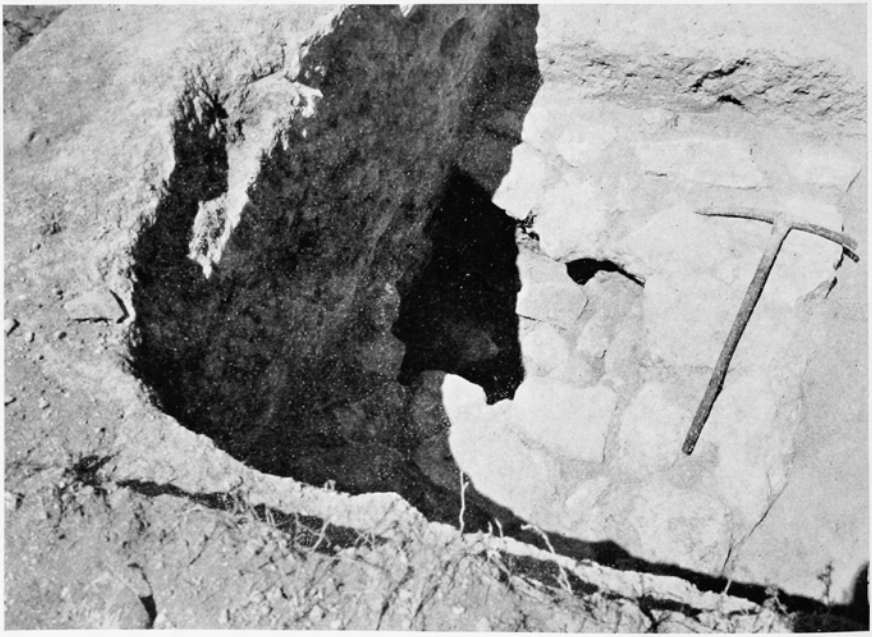

Fig. 377.—Cistern in C 13

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another in I–J 8, each with a floor covered with stone slabs. Of the *kerpiç* superstructures no vestiges remained.

Below this level remains of the Hellenistic period were found[41] (Figs. 378 *B* and *D* and 381). Black-"glazed" ware, red-brown pottery with white stripes and geometrical ornamentation, and fragments of molded bowls, all characteristic of the 2d and 3d centuries B.C., were found. The houses had stone foundations similar to those of the buildings of Roman times; however, the mud bricks resting upon these foundations were in part well preserved. The bricks throughout were square and rather large, reaching in some cases .50 on a side. The axes of these Hellenistic buildings corresponded exactly to those of Roman times. This similarity prevailed to

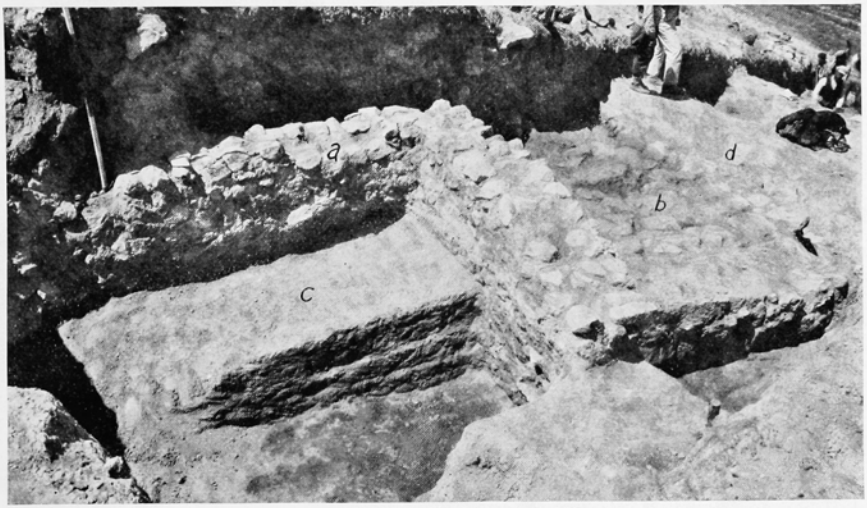

FIG. 379.—VIEW OF E 8 FROM NORTHEAST, SHOWING A WALL OF THE ROMAN-BYZANTINE PERIOD (*a*), A PAVEMENT OF THE HELLENISTIC PERIOD (*b*), A *Kerpiç* WALL OF THE PHRYGIAN PERIOD (*c*), AND THE PHRYGIAN FORTRESS WALL (*d*)

the extent that in F–G 8 parts of a large Roman building lay directly above a Hellenistic building of the same type (cf. Fig. 378 *D*). The broken walls of the Hellenistic building served in part as foundations for the Roman building.

Finally, below the Hellenistic level appeared building remains of the Phrygian period,[42] the small objects of which correspond exactly to those of Levels 4*a–b* on the citadel mound. This is understandable, as we have shown in our discussions of the citadel that during Phrygian times a small gateway formed a connection between the citadel and the western settlement. In all probability this lower city was founded and settled at the time of Level 4*b* M. The Phrygian buildings showed the same orientation as did those of Roman and Hellenistic times (Fig. 378 *C–D*). To a great extent Hellenistic walls covered the Phrygian ones. We may assume an alley in I 8 corresponding to the small alley recognizable between the houses in F–G 8. A hole in the pavement in I 8 was perhaps a drain to a sewer running under the street.[43]

[41] Called "Level 2" in *OIP* XX 37.

[42] Called "Level 3" in *OIP* XX 38–39.

[43] Since the season was too far advanced to permit carrying the excavation in J 8 down to the Phrygian level throughout, no final plan could be made. Nevertheless, enough was freed in the southern part to show that the foundations of the Hellenistic building rested directly on wall remains of the Phrygian period (cf. Fig. 378 *D*).

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Fig. 380.—The Roman-Byzantine Level in H–I 8, from East

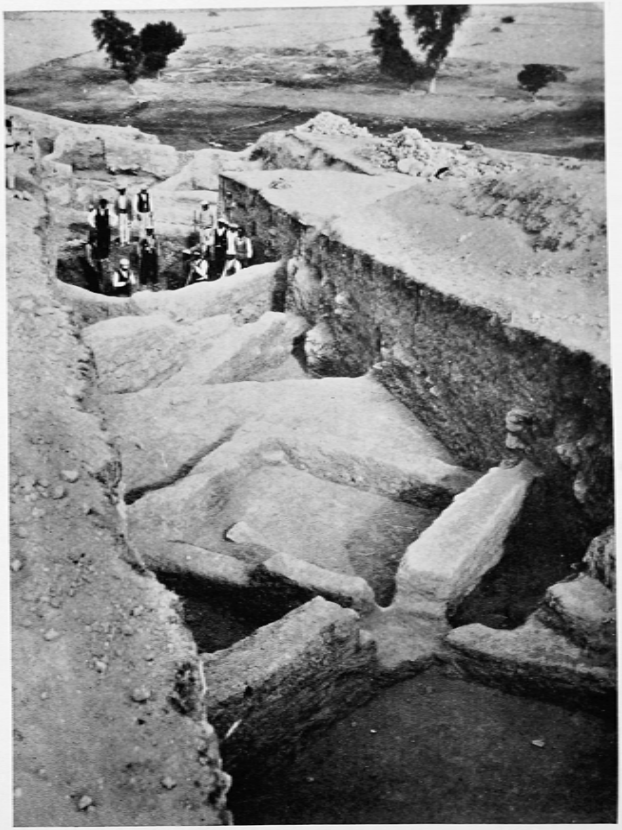

Fig. 381.—The Hellenistic Level in H–J 8, from East

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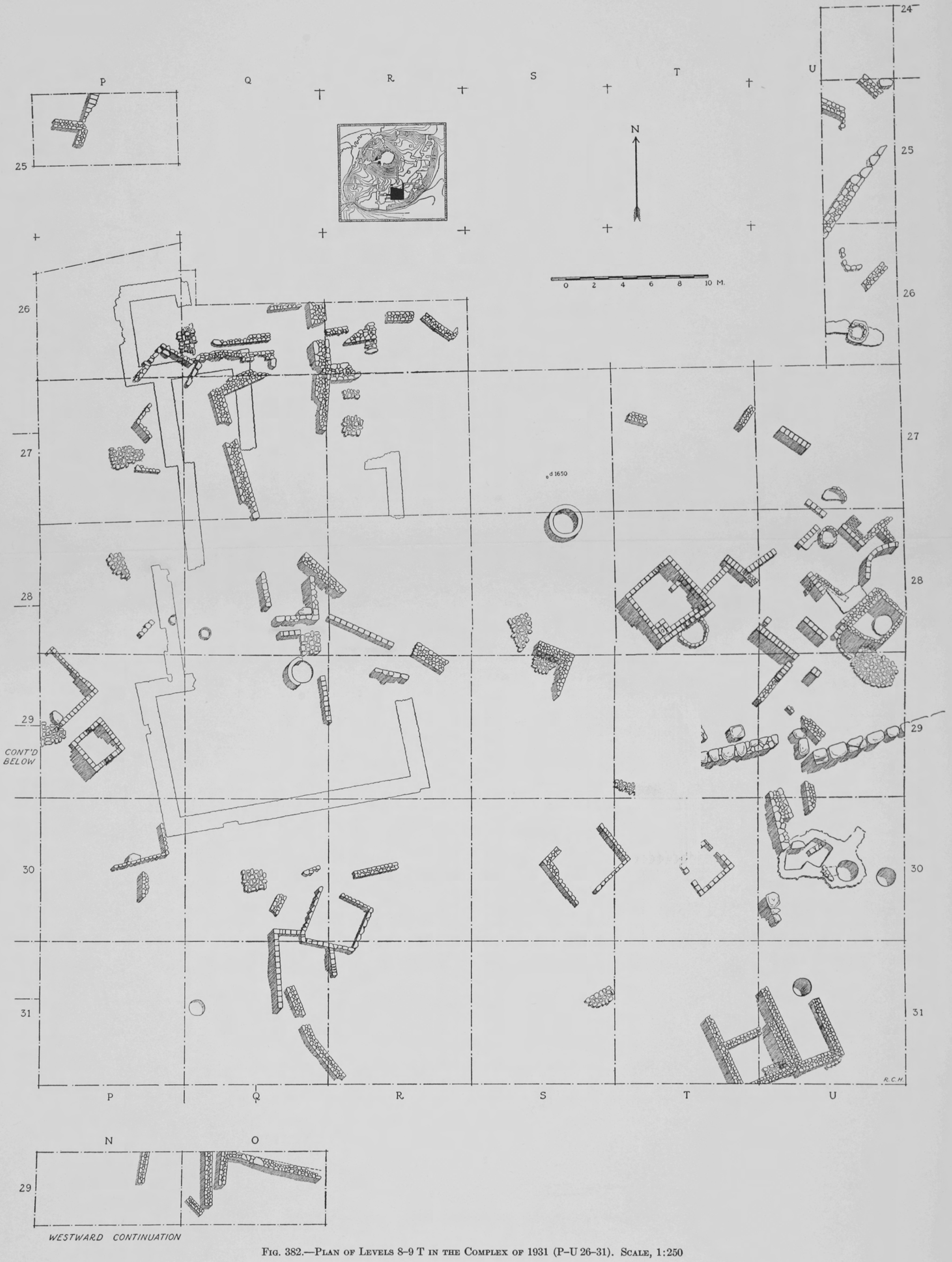

Fig. 382.—Plan of Levels 8–9 T in the Complex of 1931 (P–U 26–31). Scale, 1:250

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Fig. 383.—Key Differentiating Levels 8–9 T in the Complex of 1931. Scale, 1:250

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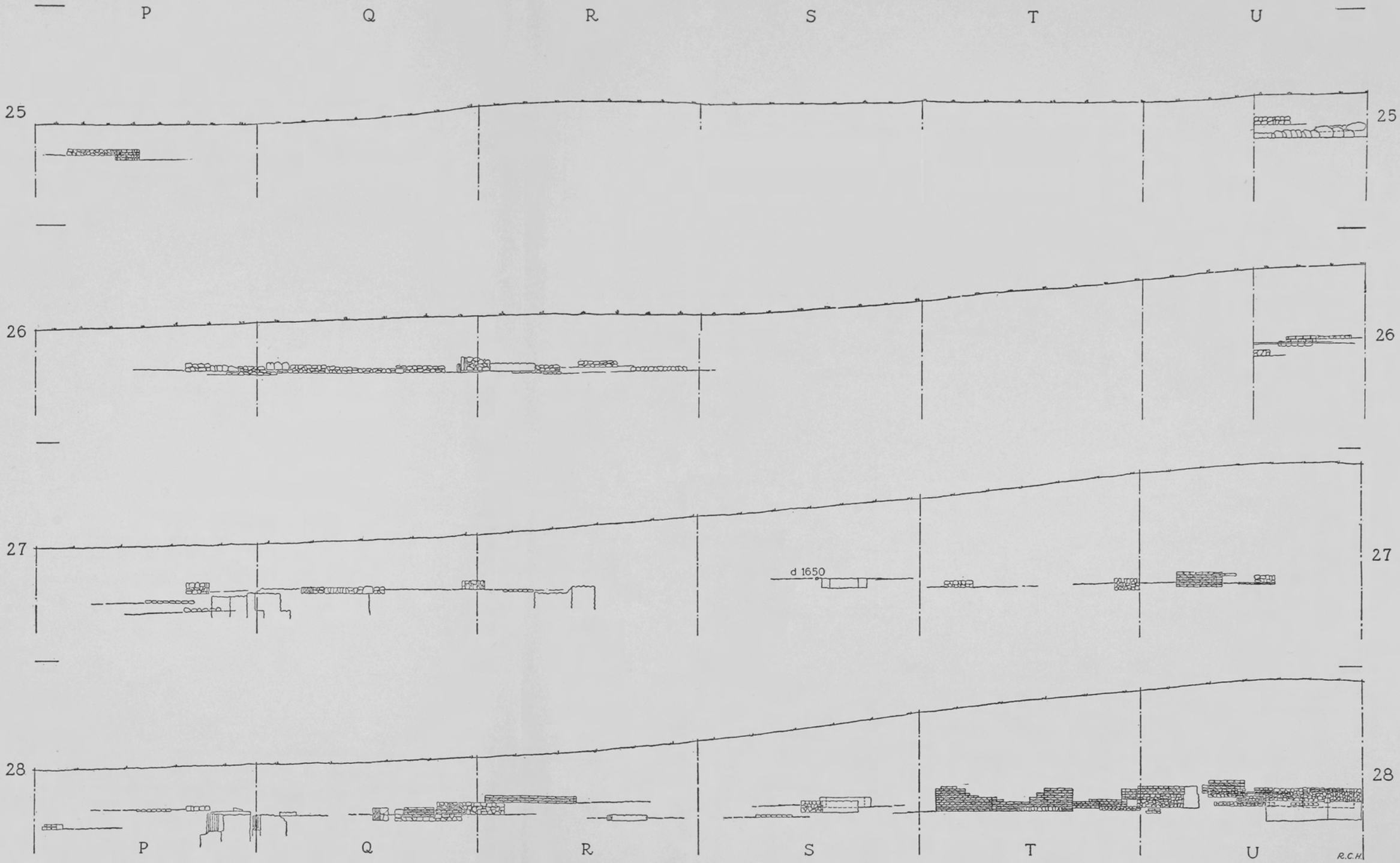

Fig. 384.—*A*. Cross-Sections of Levels 8–9 T in the Complex of 1931. Scale, 1:200

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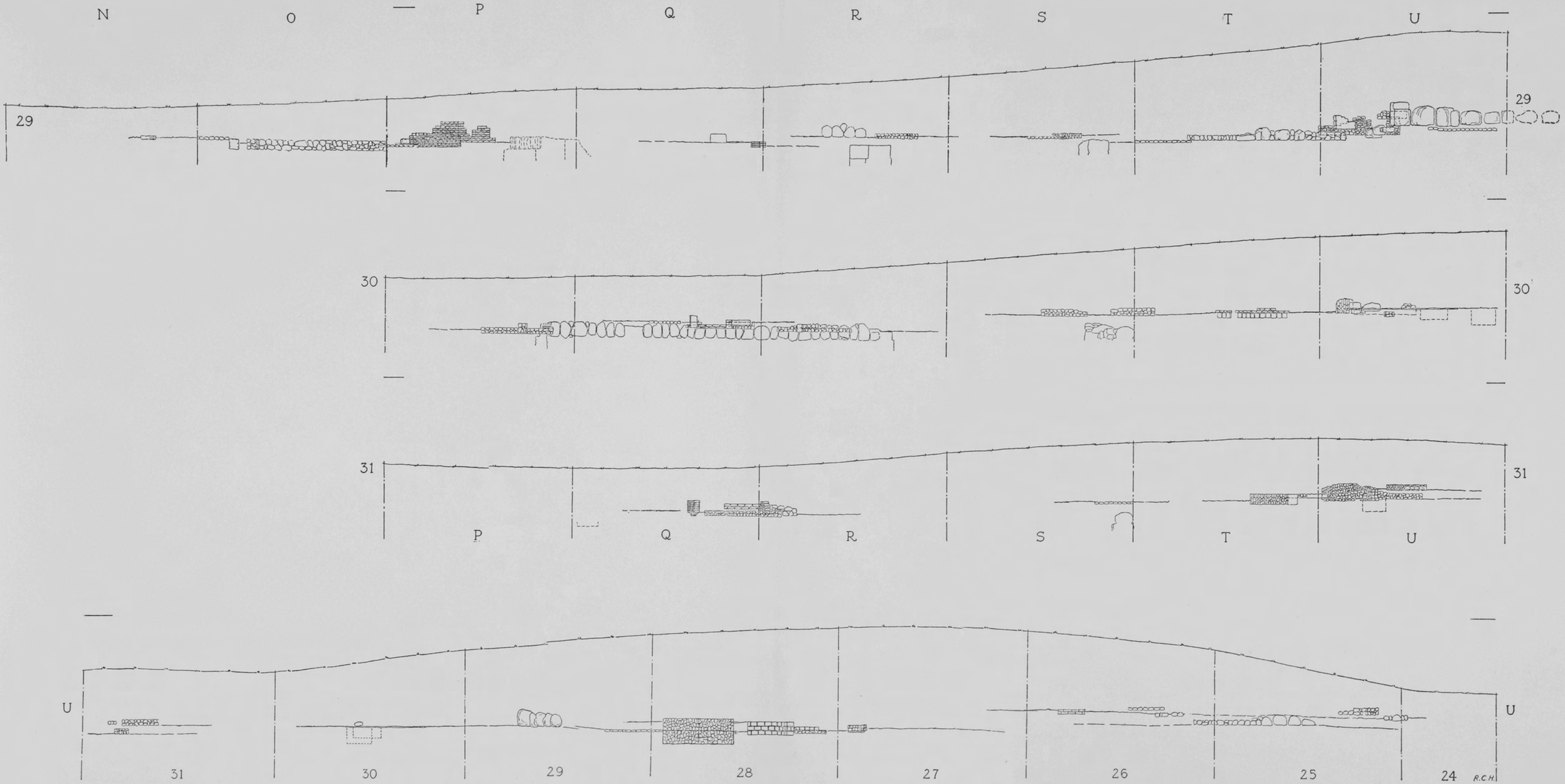

FIG. 384.—*B.* CROSS-SECTIONS OF LEVELS 8–9 T IN THE COMPLEX OF 1931. SCALE, 1:200

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The closing of excavations at Alişar in 1932 left some problems unsolved; but with the help of the levels belonging to the end of the second and to the first millennium B.C., we could refine our knowledge of the material culture of inner Asia Minor during this little known period. It may be useful to review the most important results.

Level 4*c* M (Fig. 327), about 11th–9th centuries B.C.: citadel fortification rebuilt on remains of older fortification; at south, gateway with ramp flanked by two towers; bastion at east; in interior, open court at southwest, building complexes at north and south. This was a fortified castle of feudal lords comparable to noble families in earlier medieval times in central Europe or to the Osmanli *derebey*'s in Asia Minor.

Level 4*b* M (Fig. 335), about 9th–8th centuries B.C.: citadel wall re-used with addition of gate-chambers, bastion at southwest, and flanking tower at north; interior buildings in about the same places as before; well in inner court; gateway at west leading to fortified settlement on western slope, systematically laid out[44] and probably densely populated. It seems likely that this lower settlement was not built up gradually by people who came to live under the protection of the castle and with the permission of its lord, but rather that it was erected all at one time by the will and order of the feudal lord; again one recalls medieval Europe.

Level 4*a* M (Fig. 348), about 7th–6th centuries B.C. or even a little later: citadel wall re-used, only gate-chambers changed; whole interior occupied by rectangular one- and two-room houses grouped into larger complexes; well and trough in inner court; small gateway in west wall leading to lower settlement.

KURT BITTEL

SETTLEMENT REMAINS ON THE CITY TERRACE

With the exception of a building in YY–ZZ 24–26 the architectural remains of this culture period on the terrace are very insignificant. This is understandable because, as was stated before, the actual settlement was then on the citadel mound and its western extension. Although typical sherds of this period were found everywhere above the deposits of the Hittite period, actual settlement remains have been uncovered only in the southwestern and southern parts of the terrace (cf. Fig. 310). A few walls of this period appeared at two or three places within the excavations of 1927 in the northeastern part of the terrace, for example in U 13–14, where five skeletons of this period were found (cf. p. 347).

In the complex of 1931 and adjacent trenches we were able to distinguish two building levels (8–9 T) of the period (Figs. 382–84), whereas in the other areas on the terrace where we struck remains of this period only one building level could be recognized. In the complex of 1931 the building remains were scattered over the entire area and except for a few apparently complete structures were very scanty and fragmentary. Against the central part of the eastern boundary remains of a building or complex of buildings were uncovered. The ruins of the large mansion of Level 10 T must still have been partly above ground, but it is quite evident that its walls were not re-used. In fact, at one place in P 28 a fire pot appeared on top of the earlier stonework. Most of the walls of this building period are of stone and *kerpiç* and are similar to those found in the preceding and succeeding levels.

The earlier building level (9 T) seems to be the more important one. At the western edge of the complex it is 2.60 deep and at the eastern edge 5.30 deep. Some small rooms built of *kerpiç* bricks are the only interesting feature of this building level. One of them, 2.60 deep in P 29, was about 2.60 square (Fig. 385), and in one place its walls were preserved to a height

[44] We cannot expect on a hill slope such a system of straight streets meeting at right angles as became usual in the Greek towns from the time of Hippodamos of Miletos (see Armin von Gerkan, *Griechische Städteanlagen; Untersuchungen zur Entwicklung des Städtebaues im Altertum* [Berlin und Leipzig, 1924] pp. 28 ff.). But the parallelism of the house walls in the lower settlement at Alişar indicates a surprisingly well developed system for such early times which would be worth investigating on a larger scale.

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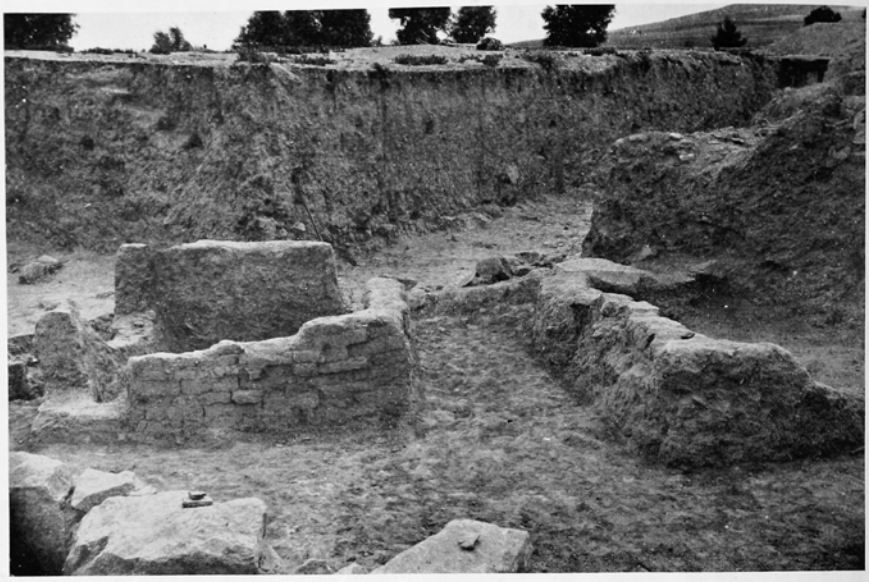

FIG. 385.—SQUARISH ROOM BUILT OF *Kerpiç* BRICKS IN P 29, FROM NORTHEAST

FIG. 386.—SQUARISH ROOM BUILT OF *Kerpiç* BRICKS IN T 30, FROM NORTH

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of 1.20. The bricks were .40×.30×.10. A separate section just north of this room probably belonged to another such structure. In T 30 at a depth of 4.40 a similar room was uncovered (Fig. 386). This structure measured about 3 meters on a side with a .70 gap in the southwestern wall which might have been a doorway. The wall construction here differed from that in other such rooms. The first course of *kerpiç* bricks was placed upright; above this course the bricks were laid flat, the inside of the wall being kept flush (Fig. 387). It is probable that the floor of this room was slightly below the surface, as there was only a dirt filling to compensate for the

Fig. 387.—Brickwork of the Squarish Room in T 30. Scale, 1:40

Fig. 388.—Squarish Room Built of *Kerpiç* Bricks in T 28, from Northwest

variance in width between the bricks laid upright and those laid flat. These bricks, like the others, measured .40×.30×.10. A somewhat larger room of this type was uncovered at a depth of 4.50 in T 28 (Fig. 388). This room measured about 4.50 on a side; the wall is preserved at one place to a height of 1.10. A layer of *kerpiç* bricks at floor level followed the inner face of the wall on two sides. Either the entire floor had consisted of *kerpiç* bricks, or a ledge had been built around the room. A wall joined this room on the northeast, and an almost circular structure of single stones abutted the southeast wall. In U 29 a wall of large squared bowlders appeared (Fig. 389). Within the adjacent trenches in N–O 29 and U 25–26 only fragmentary and unimportant wall remains belonging to this earlier level were unearthed.

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Fragmentary remains of the later building level (8 T, Fig. 390) were found 2.10 deep at the western end of the complex and 4.90 below the surface at the eastern end. Only small pieces of walls and pavements were found. In T–U 31 walls that belonged to Level 9 T were added to and re-used during the building period of Level 8 T.

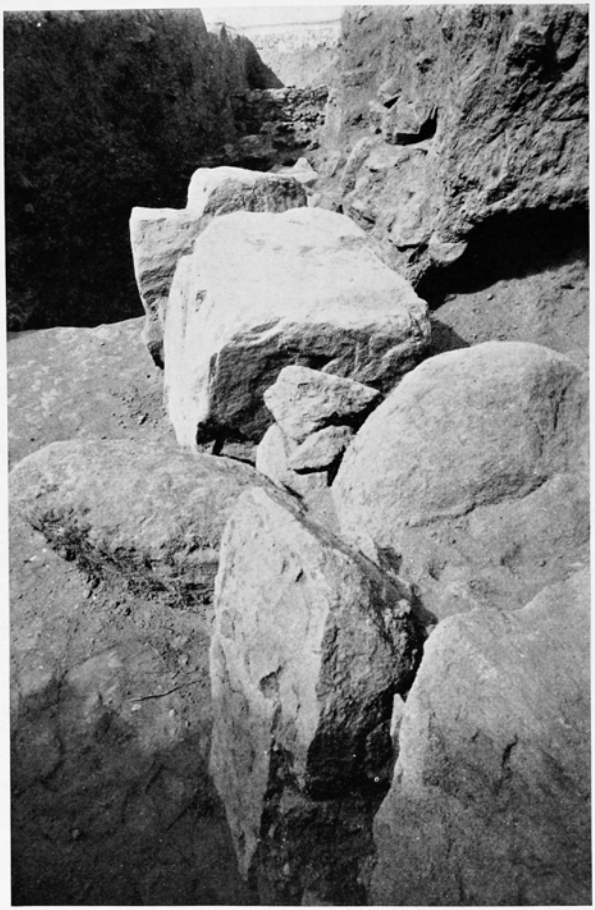

FIG. 389.—WALL OF LARGE BOWLDERS IN U 29, FROM EAST

In the southwestern part of the terrace (in YY–ZZ 24–26) a large building 7.30×17.50 was unearthed in 1930 (Figs. 391–93). A corner of it had been found in 1929.[45] The foundations are 4.60 below the surface of the mound, and the average preserved height of the walls is almost 3 meters. The walls are built in the usual manner, with carefully set outer and inner faces and rubble filling. The nearly rectangular building is divided into two rooms by a *kerpiç* partition

[45] *OIP* XIX 237–38.

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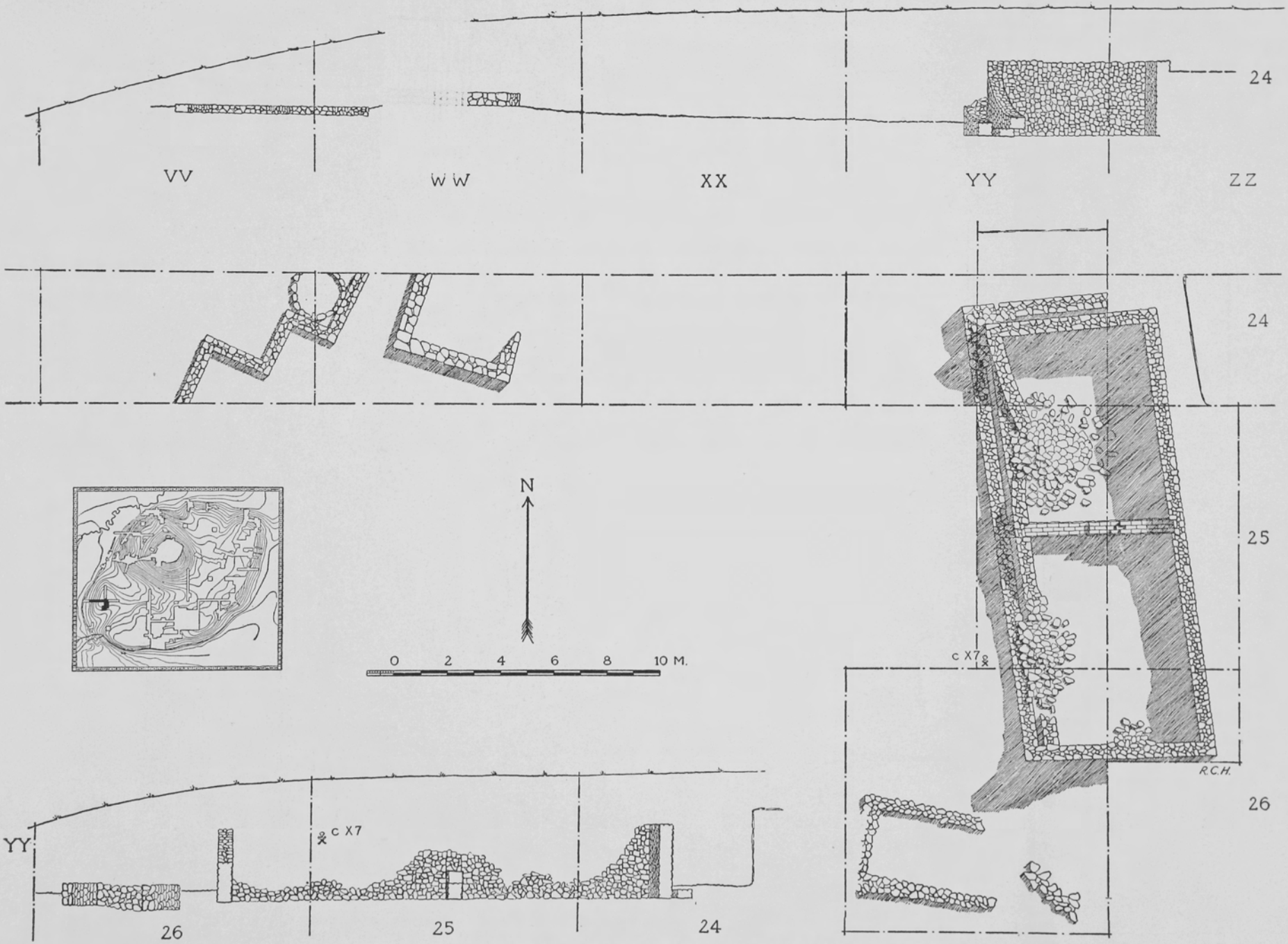

Fig. 391.—Plan and Cross-Sections of Post-Hittite–Phrygian Remains in VV–XX 24 and YY–ZZ 24–26. Scale, 1:200

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Fig. 390.—Excavations in Q–U 30. Remains of Levels 8–9 T Are Left Standing in Center While Level 7 T (*c*) Is Being Removed at Right. At Left Appear Remains of Level 7 T (*a*) and Dado Slabs (*b*) of the Mansion of Level 10 T

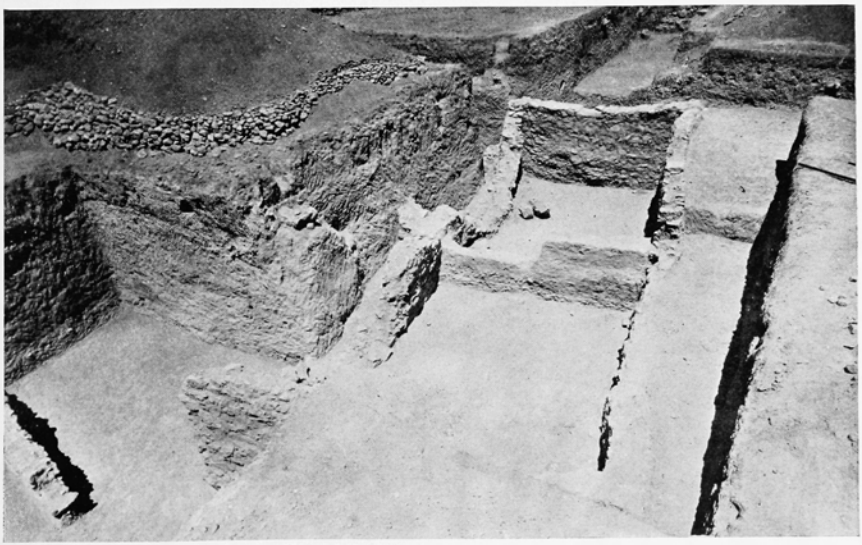

Fig. 392.—Building in YY–ZZ 24–26, from South

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wall with a stone foundation. The long exterior walls were recessed to provide for the *kerpiç* partition. On the north and west sides a second wall—preserved in most places to a height of .50—was discovered .30 outside the main wall. This second wall seemed to have been erected to give added strength. The north, south, and east walls were all preserved to about the same

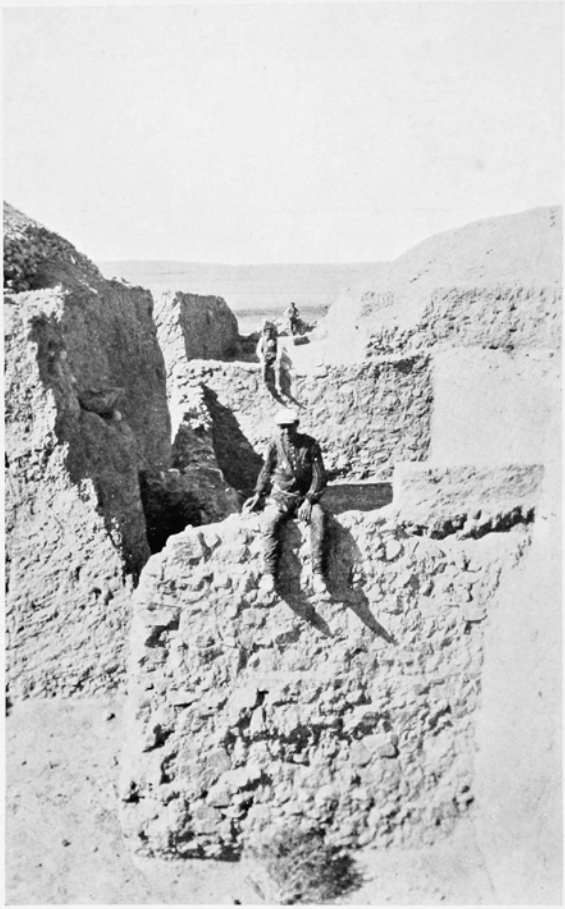

FIG. 393.—BUILDING IN YY–ZZ 24–26, FROM SOUTH

height, but the double west wall had been almost completely demolished at about the center of each room. In one case it certainly had been forcibly pushed in, for the wall was actually sheared at its base and a large pile of stones was found inside (Fig. 394). Since there is no doorway in the other three walls, the doorway, if any, probably occurred at one of the damaged points in the west wall (cf. also pp. 319–21). Whether a doorway in the interior connected the two rooms cannot be determined. Southwest of this building remains of another were un-

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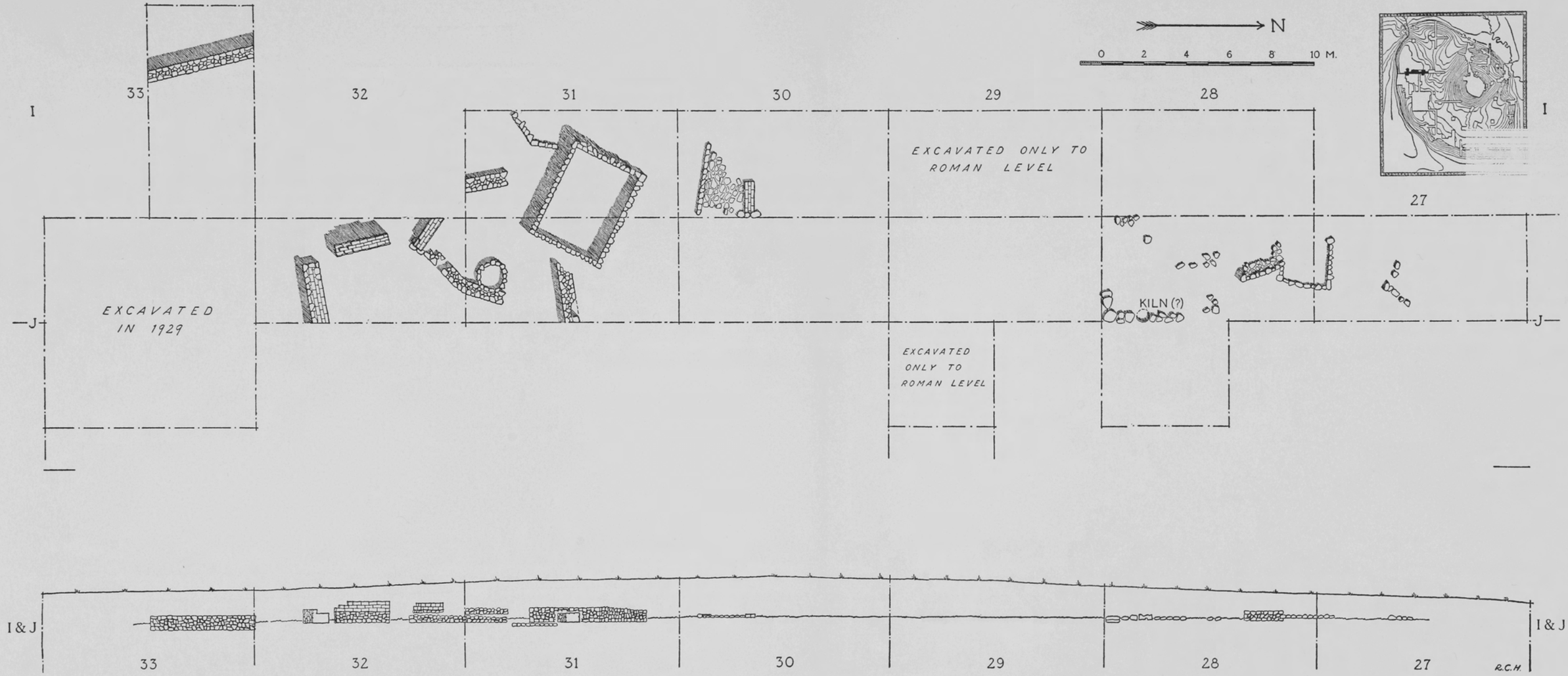

FIG. 395.—PLAN AND CROSS-SECTION OF POST-HITTITE–PHRYGIAN REMAINS IN I–J 27–33. SCALE 1:200

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earthed in 1929. In VV–WW 24, at a depth of 3.20, a zigzag wall was uncovered; in one angle of it appeared a circle of stones set in the floor. Fragments of a rectangular room appeared just to the east.

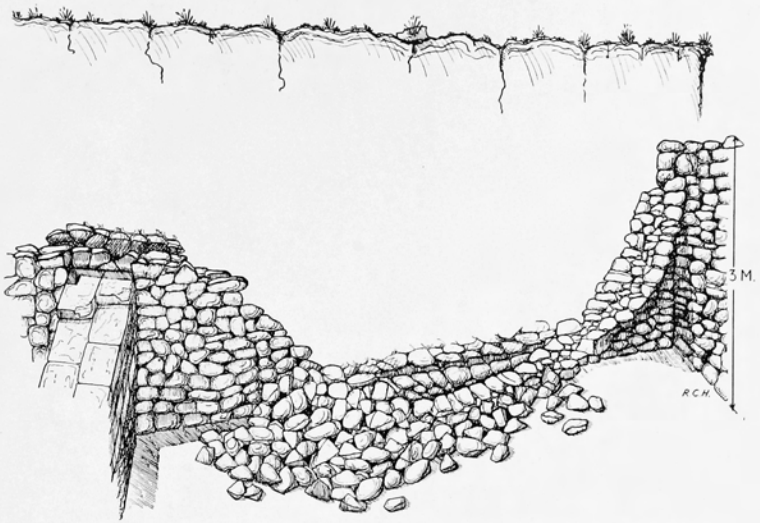

Fig. 394.—West Wall of the North Room of the Building in YY–ZZ 24–26

Fig. 396.—Kiln Containing "Whorls" or Weights in J 28

In I–J 27–33 only fragmentary walls were unearthed, with the exception of a rectangular room in I–J 31 which may have been a cellar (Fig. 395). In J 28 a kiln(?) was uncovered which contained a large number of unbaked clay "whorls" or loom weights (Fig. 396).

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Fig. 397.—Southern Profile of R–T 31

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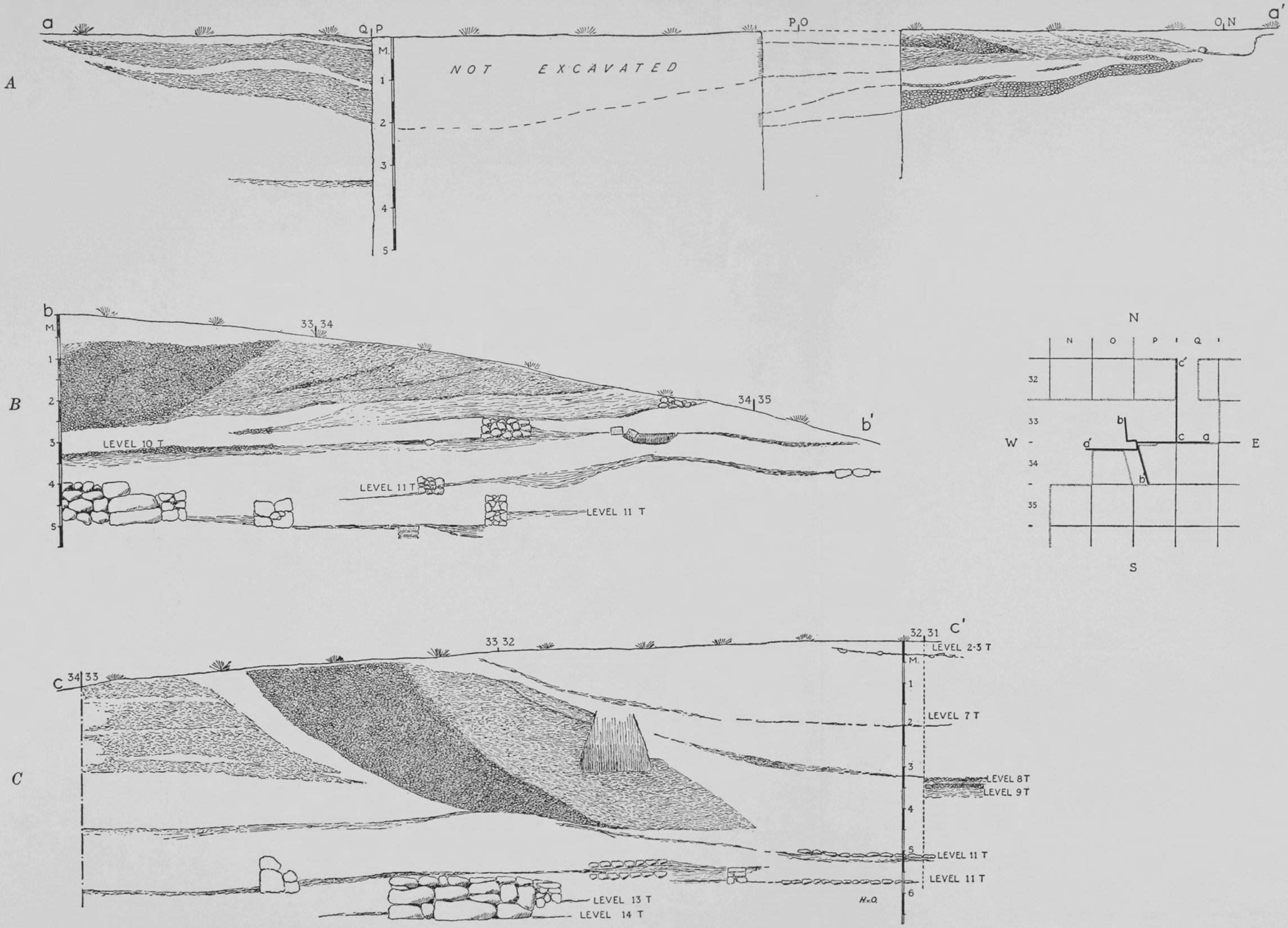

FIG. 398.—PROFILE DRAWINGS OF TRENCH WALLS IN THE SOUTHERN PART OF THE CITY TERRACE. *A*. Q–O 33–34, FROM NORTH. *B*. O–P 33–34, FROM WEST. *C*. Q 32–33, FROM EAST. SCALE, 1:100

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After the destruction of Level 10 T, the last building level of the Hittite period, a great amount of earth was filled in artificially around the southern and eastern edges of the mound. Most of this is typical earth as found outside the mound—clay containing lime or gypsum—with no traces of artifacts. The southern profile in R–T 31 (Fig. 397), as well as the profiles shown in Figure 398, prove that the filling took place before the building activities of either Level 8 or Level 9 T. No explanation can yet be offered.

BURIALS

During 1927–32 only eight skeletons were found which belong to this period.[46] None appears to have been actually buried; all were found in positions seemingly due to violent death. The

FIG. 399.—SKELETON c X2 IN L 29, FROM SOUTH-SOUTHEAST

absence of true burials of this period suggests that it was the custom to bury the dead outside the settlement; and it is possible that the bodies were cremated.[47]

In 1927 the skull of an adult male (3217)[48] was found near the paved floor of a room in U 13–14.[49] A few bones of a child's skeleton (3217*a*) lay below it. Nos. 3218–20 lay outside this room to the west.[49] No. 3218[50] is the skeleton of an adult male who had fallen backward over a rock. No. 3219 is the skeleton of a mature woman; upon it lay No. 3220,[51] the skeleton of a child. Both were covered by fallen rocks, perhaps from the west wall of the paved room. There can be no doubt that these five people were lying in the positions in which they

[46] Skeleton b X16, found in S 23, was attributed in *OIP* XIX 212 to the Early Bronze Age. Excavations of 1932 in the S trench make it highly probable that this skeleton is later, but it is impossible to determine to which later period it belongs.

[47] Cf. *OIP* XXX 453.

[48] *OIP* XX 123 and Tables I–II.

[49] *OIP* VII 26–28; *OIP* VI 156.

[50] *OIP* XX 123, 136–37, and Tables I–II.

[51] *OIP* XX 123 and Tables I–II.

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had fallen, probably after they were slain by an enemy, but perhaps as the result of an accident.

In 1930 two skeletons of this period were found. No. c X2,[52] the skeleton of an adult male, was found under a Roman-Byzantine wall in L 29, 1.70 below the surface of the mound (Figs. 399–400).[53] The head lay on the left side; the spine was bent upward over a sharp rock. The right arm was bent across the chest. The humerus of the left arm was parallel to the body; the radius and ulna were disconnected. The femur of the right leg was in line with the body; the tibia was bent backward; and the fibula was lying below the femur at right angles to it. The femur of the left leg was missing; its tibia pointed at an angle of 45° toward the right; the fibula, at right angles to the tibia, pointed left. The direction from sacrum to atlas was 35°

Fig. 400.—Skeleton c X2 in L 29

west of south. Several sherds were found among the ribs, and several sherds and animal bones were lying in the vicinity. There can be little doubt that the position of the skeleton was due to violent death.

No. c X7[54] is the skeleton of an adult male found in YY 25 at a depth of 2.30 (Fig. 401; cf. Fig. 391). It was lying on its back; the head was bent forward to the right so far that the crown was toward the feet. The right arm was bent across the body, while the left arm extended to the left with slightly bent elbow. The right leg was outstretched with raised knee; the left leg was bent outward at the knee. A small piece of bronze or copper was lying at the throat, but it was so corroded and crumbled that its form could not be recognized. The position of the skeleton was undoubtedly due to violent death, perhaps by an arrow or spear of which the corroded piece of bronze was the point.

In 1932 No. e X10 (Fig. 402), the skeleton of a child which had evidently been thrown out of the citadel, was found in L 13 outside the citadel wall.

[52] *OIP* XX, Tables I–II. [53] Cf. *OIP* XXX, Fig. 151. [54] *OIP* XX 130–31 and Tables I–II.

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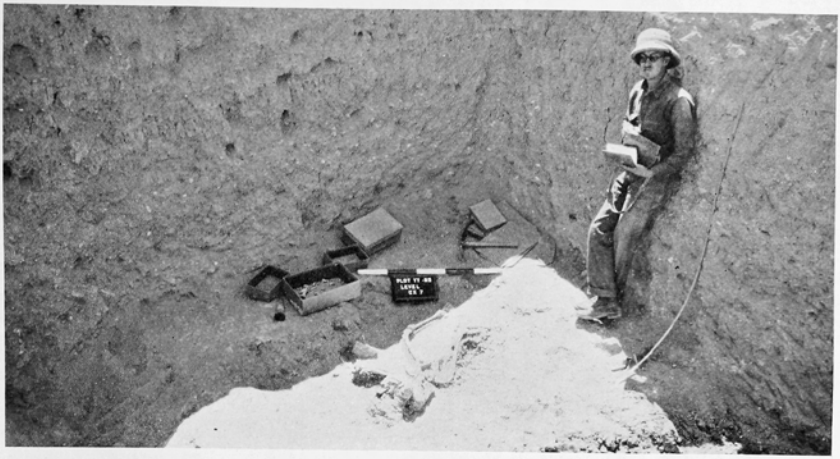

FIG. 401.—SKELETON c X7 IN YY 25, FROM NORTHWEST

FIG. 402.—SKELETON e X10 IN L 13

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POTTERY

The pottery of this period may be roughly divided into three main groups: plain ware, decorated ware, and "kitchen ware." Both the plain and the decorated wares may again be subdivided into coarser and finer groups; the finer may generally be regarded as later than the coarser ware, although the coarser ware appears until the end of this period. The "kitchen ware" continues throughout without change in paste or form. This distribution of the types of pottery is confirmed by the results of the 1932 excavation on the citadel mound. We distinctly observed that the coarser ware appeared predominantly in Level 4*c* M, whereas the finer ware was predominant in Levels 4*a–b* M (cf. pp. 306, 316, 323–25); the "kitchen ware" was equally distributed through all three layers. Since the finer ware is essentially the same as the wares from Gordion, it may be called "Phrygian."[55] It should be noted that, whereas in Gordion the fine plain ware predominated, in Alişar the fine decorated ware was the more frequent. Due to our insufficient knowledge of ethnic conditions in Asia Minor after the downfall of the New Hittite Empire (about 1200 B.C.), we are not able even tentatively to name the manufacturers of the earlier, coarser ware. All that can be said definitely is that they used the "Hittite" hieroglyphs, for many seals bearing hieroglyphic inscriptions have been found in association with this ware.[56]

The vessels of all three main groups are generally wheelmade; exceptions are vessels of shapes such as No. a 132 (Pl. IX) and No. e 2188 (Fig. 430). The paste is grit-tempered. The decorated ware and that which is termed "plain ware" are generally slipped, whereas the "kitchen ware" is generally wet-smoothed or rough-finished. Typical forms of the plain and decorated groups are bowls with thickened or flaring rims, cups with high handles, pitchers with clover-leaf orifices or beak-spouts, pitchers with lateral strainer-spouts, and large two- or four-handled jars with orifices usually about the same in width as the greatest body diameter. The typical "kitchen ware" form is a one- or two-handled jar with a large orifice and a broad, flat base; such vessels are little different from those of the later periods.

PLAIN WARE

The plain ware usually shows a polished reddish buff to light buff slip, the same kind of slip which is often used as a base for ornamentation. Relatively few pieces of the later, finer ware have a black, gray, brownish buff, or reddish brown slip, highly polished (1836, a 516, a 1064, e 1020, e 1286, e 1341, e 1345, and e 1354). Jar a 1064 has two animal-head handles and a number of vertical grooves arranged in groups on the body. Cup fragment e 1345 (Fig. 410) has radiating grooves. There are a few bowls of which the outside is slipped and the inside simply wet-smoothed. Practically all forms typical of this period appear in plain ware.

DECORATED WARE

Almost all the decorated ware is painted. The earlier, coarser group shows a preference for stags and concentric rings arranged in panels around the upper part of the body; but purely geometrical designs appear also. The design is generally applied in reddish brown or blackish brown on a buff slip of varying shades (e.g., Pls. II 1–6 and III 1–2). The later, finer group shows distinctly its evolution from the earlier type; geometrical designs are preferred, and sometimes the whole vessel is covered with a very carefully applied design. The geometric ornamentation includes lozenges, triangles, wavy or zigzag lines, checkerboard designs, concentric rings, "tongues," and crosshatching (Figs. 433, 436–40, 444–45, and 464–71). On this

[55] See *OIP* XXX 448.

[56] Cf. *OIP* XXX 459–52.

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ware brownish red or reddish brown frequently appears as a second color in the design (e.g., Pl. III 3 and 5–7). Especially noteworthy is No. 790 (Pl. X), which is decorated with a kind of vertical meander.

On bowls (e.g., c 995, Fig. 405, and Fig. 433 1–23), pitchers (e.g., e 255, Fig. 411), and large jars (e.g., Figs. 448–50) ornamentation sometimes appears on the lip. Rims of bowls may be ornamented on the inside or the outside or on both (Figs. 433–34 and 436–39). On cups, pitchers, and jars the decoration usually does not extend below the greatest body diameter, which is sometimes accentuated by a ridge (e.g., 3244, Fig. 412); but cups and pitchers sometimes show painted decoration on the lower part of the vessel also. Nos. e 1346 (Fig. 410) and d 2000 (Fig. 412), the lower parts of which are corrugated, show a careful geometric ornamentation of the corrugations. Nos. a 871 (Pl. VIII) and e 1418 (Fig. 410), although not corrugated, show painted patterns imitating corrugations. Several bottom pieces of finer-ware cups show painted ornamentation (e.g., Fig. 442 19–20). Handles of painted vessels are nearly always ornamented (Figs. 441–42 and 453–57).

On large jars the decoration usually consists of several bands composed of various motives. The lowest and broadest band—from the median body line to the beginning of the neck—is often divided into two or four panels by the handles. No. a 1058 (Pl. XI) has three handles and three panels. The panels on No. a 1058, like those on Nos. e 1883, e 1340, and e 2320 (Pl. X) and the band around the neck of No. e 1338 (Pl. X), are subdivided in metope fashion. Stags or other horned animals, with concentric rings and trees, frequently appear in these panels on the large jars (Figs. 458–62) but with two exceptions, described below, have not been found on other types of vessels. Wheel-shaped decorations appear sometimes with stags (Figs. 459 and 461) and sometimes as separate motives (e.g., a 636, Pl. VIII, and a 131, Fig. 426). No. a 131 shows also an element consisting of a circle with an inscribed cross with crosshatching in each quadrant. A typical design for the upper part of a jar neck is a series of "tongues" (e.g., Fig. 450); this design is common on the rims of bowls also (e.g., Fig. 438 7–19). The handles of large jars are often decorated with an hourglass design (e.g., Figs. 453–56).

The stags or other animals on the large jars appear in rows of two or more animals, one behind another. Often the first animal stands before a highly conventionalized tree (e.g., Figs. 421 and 423). A sherd (Fig. 459 8) suggests that the combination of two stags with a tree between them was used. Figure 462 illustrates sherds showing birds. The oddly shaped vessel a 132 has fishes in two panels (Pl. IX). The animal representation on No. 3284 (Pl. X) is not clear. Vessels e 1343 (Fig. 410) and e 284 (Fig. 415), which belong to the finer ware and have forms typical of this later group, are ornamented with stag designs, definitely showing the close relationship between this ware and the earlier, coarser ware. Cup e 2305 (Fig. 409) has a design which may well be a conventionalized animal frieze.

A human being holding an animal by its horns is shown on one sherd (Fig. 459 18). Other representations of human beings appear on sherds 72 and b 419*a–b* (Fig. 463). I believe that these three sherds have heretofore been incorrectly attributed to the Early Bronze Age.[57] Around the upper part of the body of No. a 1050 (Pl. XI) are traces of a design consisting of a human figure and animals combined with concentric rings, crosshatched triangles, and a cross. This design was applied in dark brown on a grayish white panel, a combination which does not appear previous to the Hellenistic period except in the case of certain Early Bronze Age vessels[58] and this one example. According to its associations, this vessel might belong to the Hellenistic deposit.[59] Nevertheless I do not hesitate to attribute it to the Post-Hittite–Phrygian period, since the form of the vessel is assuredly of this period (cf. c 1897, Pl. XI).

[57] Cf. *OIP* XIX 201 and *OIP* XXVIII 241.

[58] See *OIP* XXVIII 240.

[59] *OIP* XIX 246.

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No. 356 (Fig. 463)[60] is a reworked potsherd with a roughly sketched design of a human being holding a goblet.

Bowl 3278 is unusual in shape and ornamentation (Fig. 407 and Pl. VIII). I am inclined to attribute it to the latter part of this period, although its date cannot be ascertained from the find circumstances. The ware is fine, and the shape is one rather common in Gordion. Furthermore, a number of bronze bowls, most probably Phrygian, unearthed in Ankara are of the same shape.[61] The outside of No. 3278 is decorated with a number of parallel bands in blackish brown and reddish brown, an ornamentation typical of later periods. The inside shows two pairs of lions, each facing its fellow across a sun symbol(?). The omphalos is decorated with a four-petaled design. If No. 3278 belongs to the Phrygian period, it is possible that sherd b 742:10[62] also belongs here, though I would still prefer to attribute it to the next period.

Only a few vessels have relief ornamentation. No. a 1059 (Pl. XI) has an animal head, probably molded, on the shoulder between the two handles. Sherd e 1125 (Fig. 443 8) is similar. No. e 2276 (Fig. 443 6) is a spout in the form of an animal head. No. e 1488 (Fig. 443 7), which resembles a duck's head, was perhaps the handle of a small bowl (cf. b 1673, Pl. IV). No. e 1125 has a highly burnished and polished brownish buff slip, whereas Nos. e 1488 and e 2276 each have a buff slip and reddish brown decoration. No. a 1064 (Pl. XI) has conventionalized animal heads as handles,[63] and the lower part of its body is decorated by vertical grooves. Vertical grooves ornament No. e 1354 (Fig. 430) also.[64] The small pitcher No. 1836 (Pl. VIII) shows a simple punctate and incised ornamentation on the lower part of the neck and the shoulder. As stated before (p. 351), the greatest body diameter is often emphasized by a ridge; sometimes a second ridge encircles the neck at the upper end of the handles (e.g., e 1338 and e 2319, Pl. X). The lower parts of Nos. d 2000 (Fig. 412) and e 1346 (Fig. 410) are corrugated. No. e 1344 (Fig. 410) has lozenges in relief. No. e 1345 (Fig. 410) has on the outside grooves radiating from the center of the base.

Two sherds bearing incised hieroglyphic signs are described on page 410.

FORMS

The typical bowl of this period has a flat bottom and either a thickened edge (e.g., c 2755 and c 2762, Fig. 403; cf. Fig. 432) or a flaring rim (e.g., c 2089, Fig. 404; cf. Figs. 434–35). A few bowls have simple rims (e.g., c 1905, Fig. 405). There are a few rounded or concave bottoms (e.g., c 1565 and e 1019, Pl. VIII) and ring bases (e.g., d 925, Fig. 406). Complete bowls and bowl sherds have been found in both the finer and the coarser ware, although those made of the coarser ware predominate. No. 3278 (Fig. 407) is a special form, a bowl with an omphalos.

The orifice of the typical cup of this period (Figs. 408–10; cf. Figs. 440–41) flares slightly, and there is a pronounced demarcation between neck and body. The high handle is often bent sharply at its highest point, where it is emphasized by a ridge slightly thickened and sometimes concave at the ends. The majority of these cups and cup sherds belong to the finer ware. Cup e 1346 (Fig. 410) has a corrugated body. No. c 1567 (Fig. 408) is clearly a survival of the typical cup of the Hittite period.

Small pitchers with clover-leaf orifices or beak-spouts are numerous in both the coarser and

[60] *OIP* XIX 248.

[61] Published by Hâmit Zübeyr in *Türk Tarih, Arkeologya ve Etnografya Dergisi* I (İstanbul, 1933) 12, No. 5; see also *OIP* XXX 454.

[62] *OIP* XIX, Pl. XXXVII; *OIP* XXX, Fig. 75 8.

[63] Cf. No. 1204, a fragmentary handle in the shape of an animal's head found in 1927 (*OIP* VII, Fig. 33).

[64] Cf. *OIP* XXX 76, n. 43.

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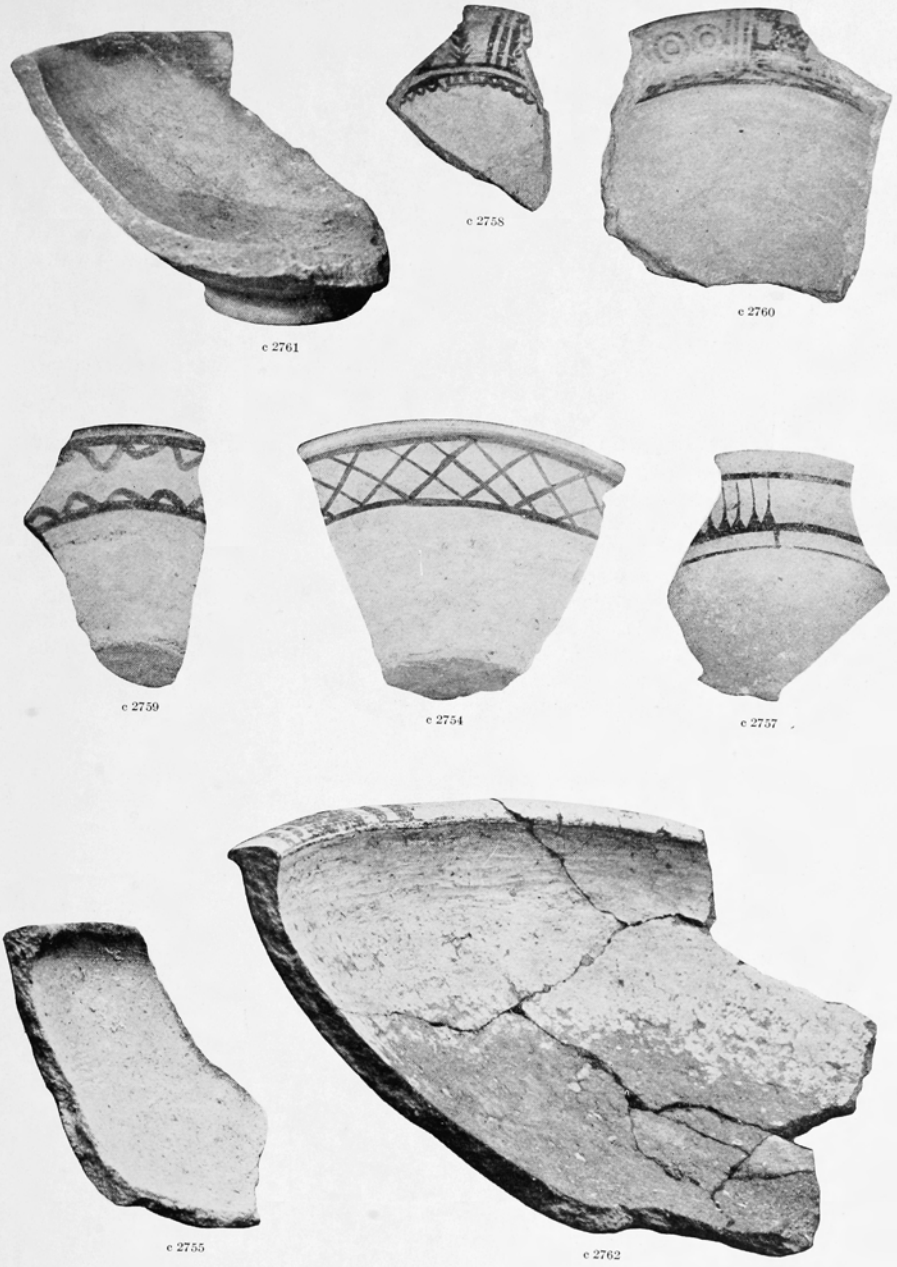

FIG. 403.—BOWL SHERDS. SCALE, 1:2

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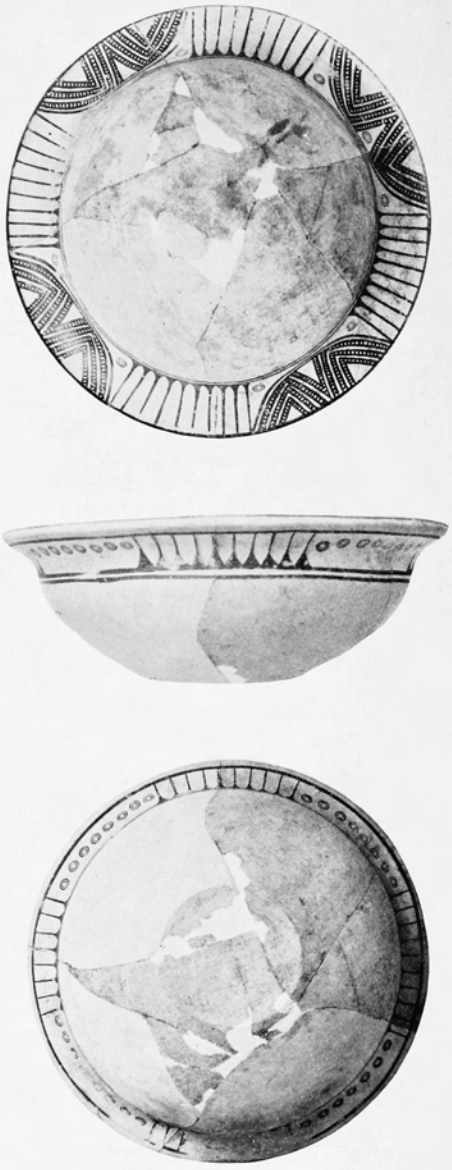

c 2089

Fig. 404.—Bowl. Scale, 2:5

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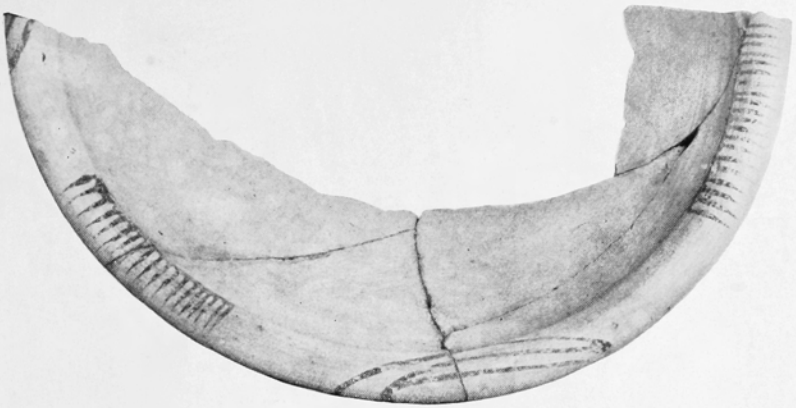

e 995

e 1340*a*

e 1905

e 1019

FIG. 405.—BOWLS. SCALE, 2:5

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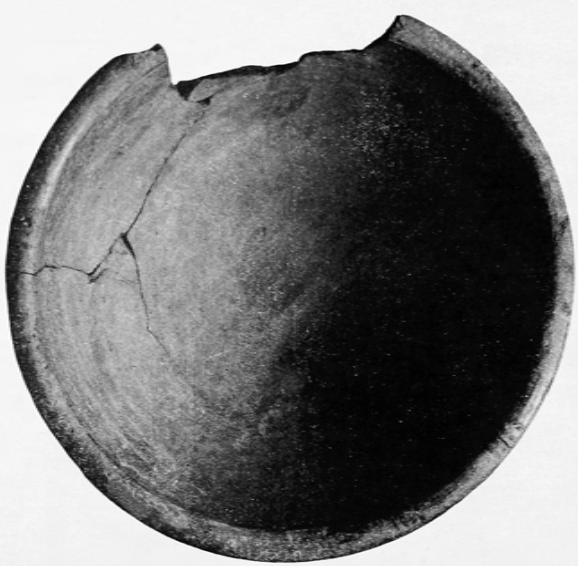
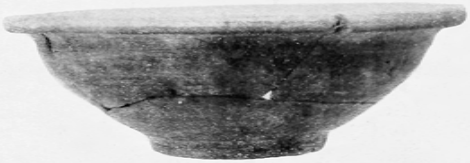


e 1565



e 1882

d 925

e 1691

FIG. 406.—BOWLS. SCALE, 2:5

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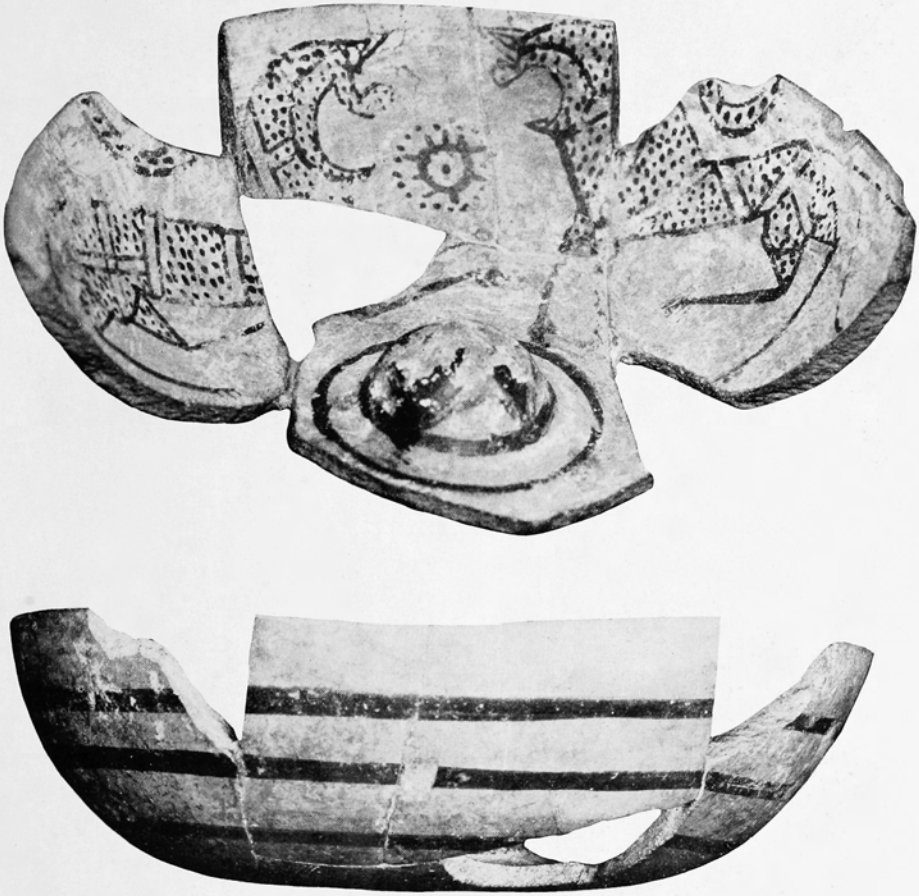

3278

Fig. 407.—Bowl. About Actual Size

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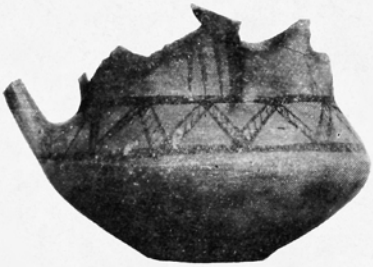
d 701

d 1035

e 1342a

e 1567



d 2001

e 2692

e 2303

e 2327

Fig. 408.—Cups. Scale, 2:5

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d 2020

e 2685

e 2306

e 2305

FIG. 409.—CUPS. SCALE, 1:2

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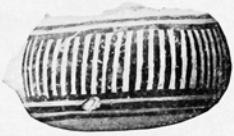
e 873

e 1418

e 871

e 1710



e 870

e 1343

e 1346

e 1345

e 1344

FIG. 410.—CUPS. SCALE, 1:2

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the finer ware (Figs. 411–13). No. 1836 (Pl. VIII) has a carefully burnished grayish slip; No. e 1020 (Fig. 413) has an equally well burnished slip in brownish buff. The latter pitcher has a strainer in one lobe of its orifice. Nos. 3244 and d 2000 (Fig. 412) are very well made pitchers; the lower part of No. d 2000 is corrugated. Pitchers with lateral strainer-spouts (Figs. 414–15) were numerous in the later part of the period. No. e 284 is an interesting form recalling Gordion ware.

Large pitchers of one type have clover-leaf orifices (Fig. 416). No. e 1884 is flattened on one side. No. b 1312 (Pl. IX) has two perforations at the line of greatest body diameter. Several large pitchers with small necks and pointed bottoms have been found also (Figs. 416–17).

Small jars with two perforated knobs on the shoulder were numerous (e.g., d 1173 and e 872, Fig. 418). No. d 595 is a little larger and has no handles. No. e 1341 has two small upturned handles and a carefully burnished brownish buff slip. Larger jars with small orifices and two vertical handles were found in all the layers (Fig. 419). The fragments e 2330 presumably belong to a similar jar with four handles. Nos. d 1633 and e 685 (Fig. 420) are large two-handled jars, each with a ledge below the median body line to facilitate pouring.

A striking type of vessel of this period is a large jar with sharply profiled rim (Figs. 446–47), orifice about as large as the greatest body diameter, two or four handles, and flat or ring base (Figs. 421–26 and Pls. X–XI). The handles (cf. Figs. 453–57) are often decorated with a ridge at the highest point. Most of these jars are elaborately ornamented above the median body line with animals or geometric designs. The median body line may be emphasized by a ridge. Some of these jars must have been of considerable dimensions, as several sherds of this type were found with a thickness up to .018 (e.g., Fig. 459 9).

Another type of jar has an ovoid body and two or four lateral handles (Fig. 427 and Pl. XI). The neck is slightly offset. No. a 1050 is especially interesting because of its ornamentation. The richly decorated jar a 1058 has three handles. Jar a 131 (Fig. 426) is interesting because of its ornamentation and a shape unique in this period.

The "kitchen ware" consists mostly of one- or two-handled jars with slightly accentuated rims (Fig. 428 and Pl. IX). Bowl e 1019 (Fig. 405 and Pl. VIII) is of this ware.

Two types of storage vessels may be differentiated (Fig. 429 and Pl. XI). Nos. c 1695 and e 2312 each have a tapering bottom, an orifice nearly as large as the greatest body diameter, and two vertical handles. Four other vessels, found in one room on the citadel in Building *A* of Level 4*a* M, each have an ovoid body with a relatively small orifice. No. 976 has a little below the median body line a rib out of which are formed four horizontal handles. No. a 1068 (Fig. 429) has a similar rib with four handles around the median body and a second rib below it without handles. Nos. a 1069–70 also each have two ribs, but the handles are formed from the lower one.

Miscellaneous vessels are shown in Figure 430 and Plate IX. No. e 1354 is a fragment of a very fine small jar with a semi-pedestal base and a highly polished black slip; it is decorated with vertical grooves. No. e 1286 is a two-handled jar of a type which appears frequently in the Hellenistic period; but the attribution of this vessel to the Post-Hittite–Phrygian period cannot be doubted, as it was found in Room *C* of Level 4*b* M. A small cylindrical vessel (d 2359) was found in a refuse deposit of this period. A flange around the inside near the rim had probably been used to support a cover. No. c 1977 is a small jar. No. d 2409 may be a crude copy of an Egyptian vessel. No. e 1117 is a small container in the shape of a shoe with a hole at its tip. Nos. e 2188 and e 2304 are small flasks. Particularly interesting is No. a 132 (Pl. IX);[65] it is a low vessel with two lateral handles; a third handle apparently reached from

[65] Described in *OIP* XIX 242–44 as a "decorated zoömorphic(?) jar."

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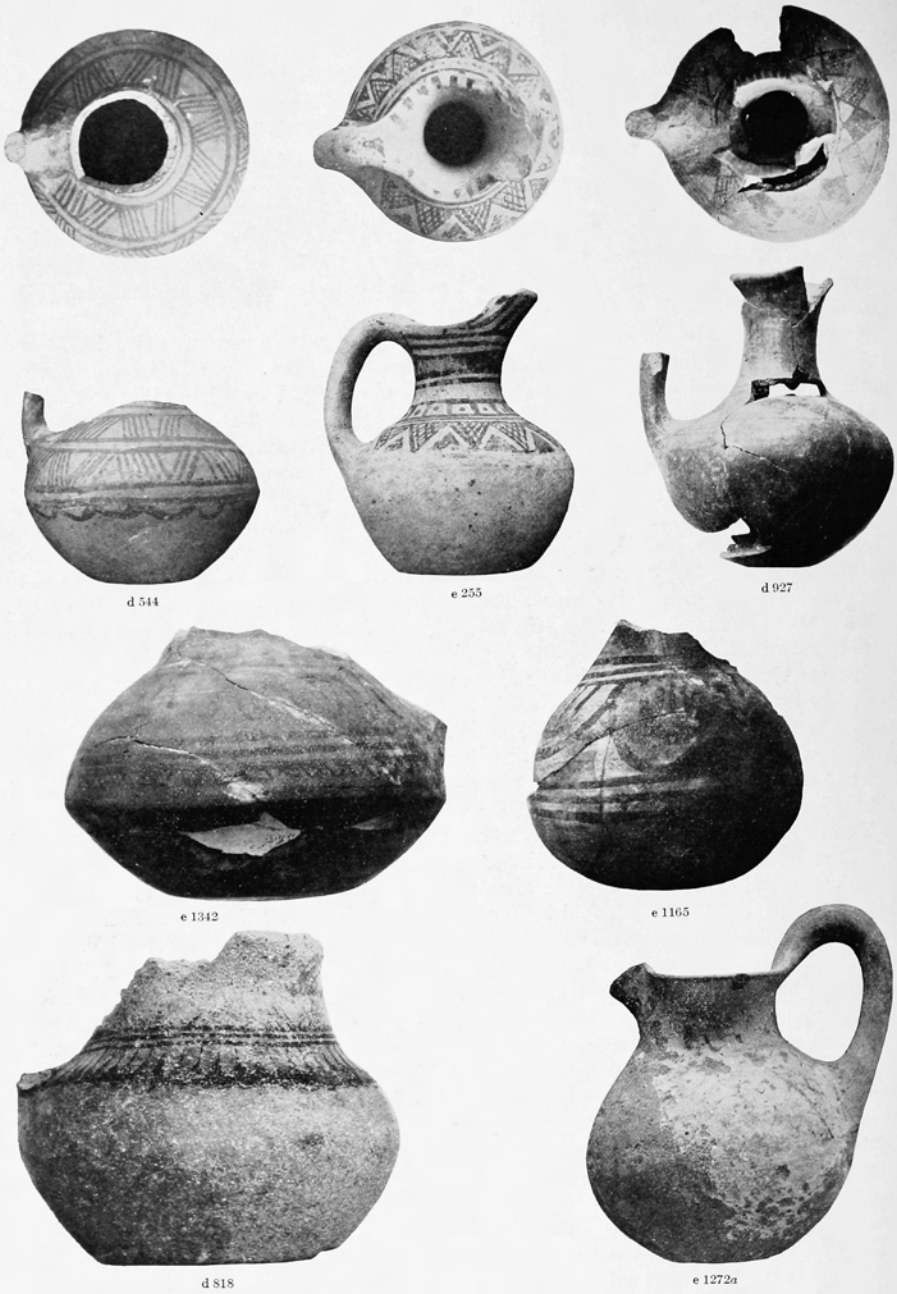

Fig. 411.—Small Pitchers. Scale, 1:2

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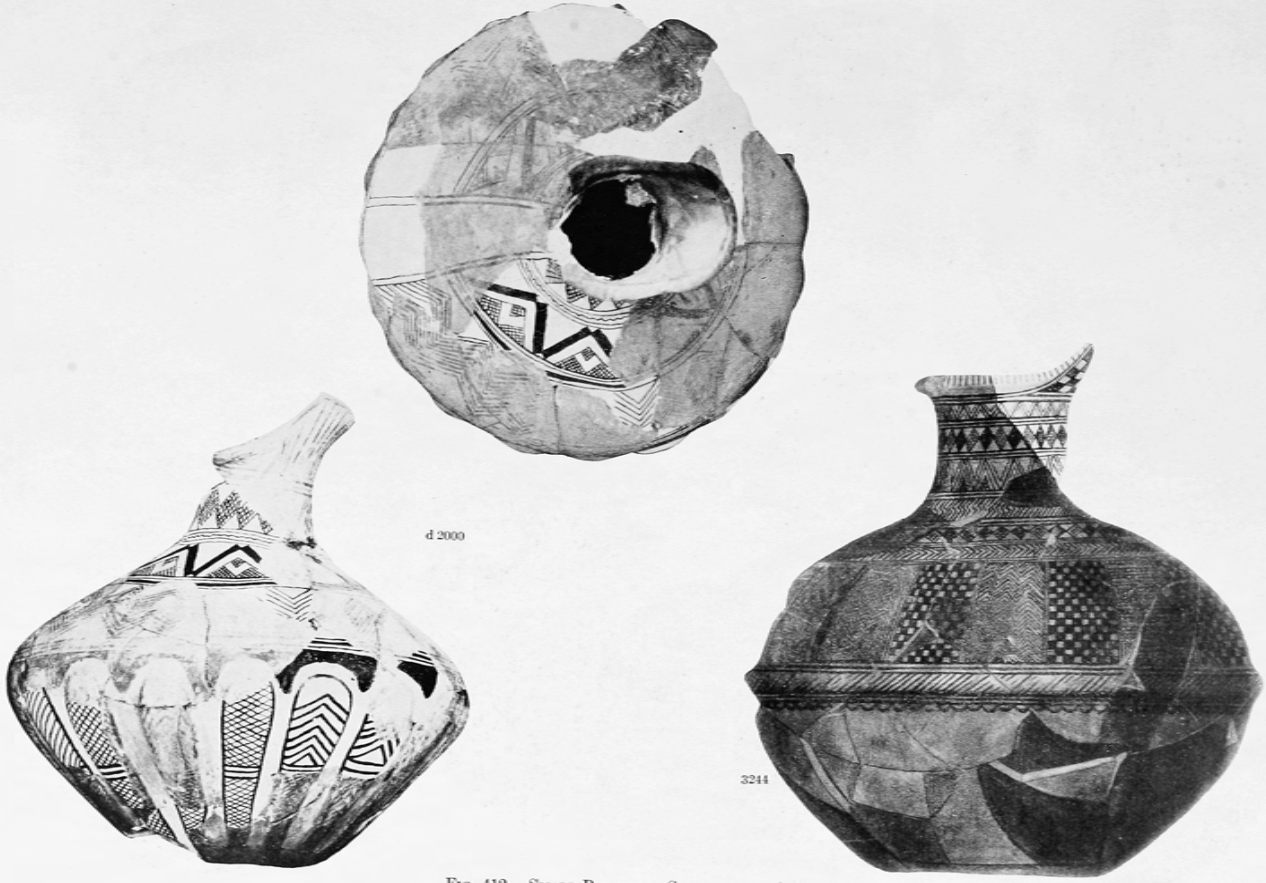

Fig. 412.—Small Pitchers. Scale, about 2:5

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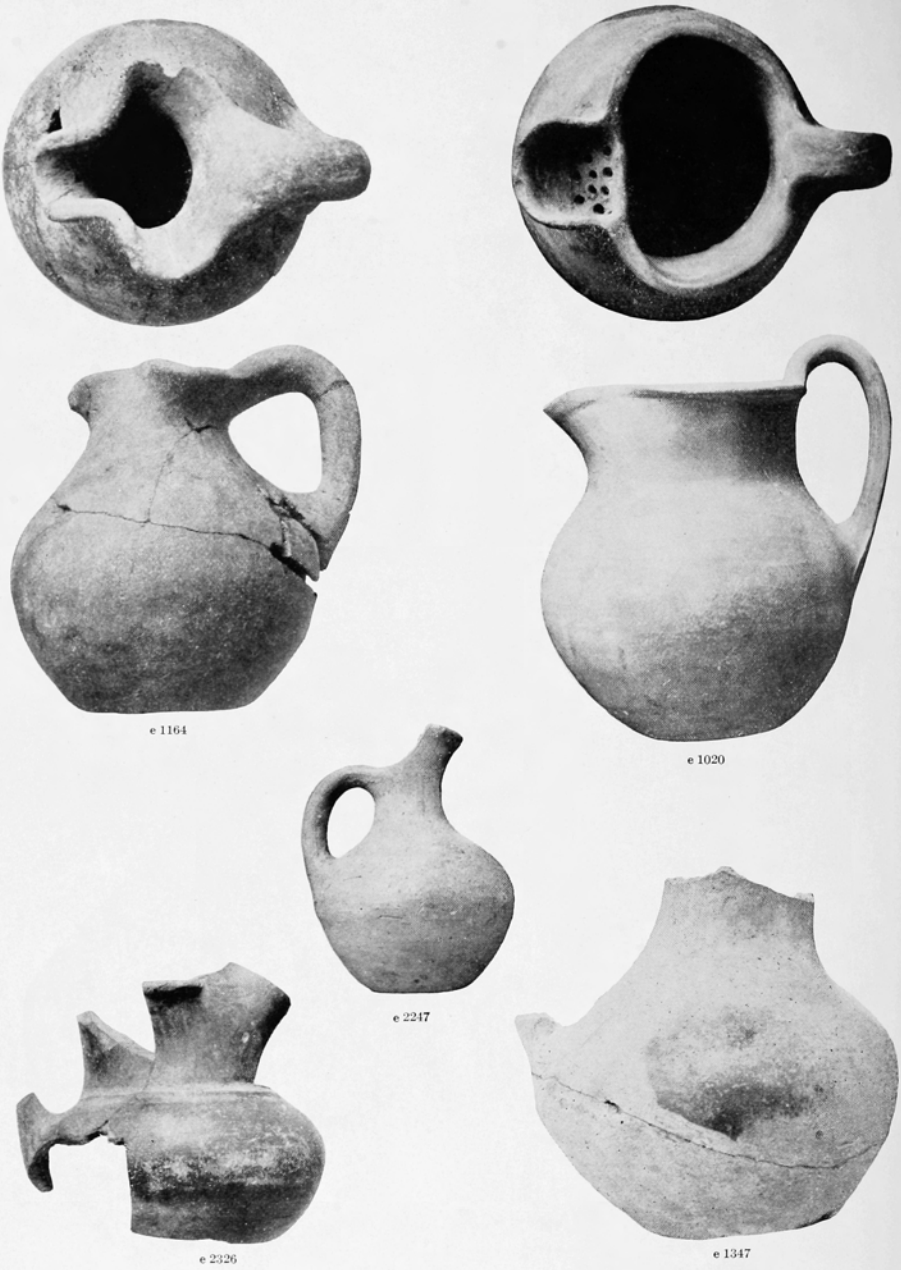

Fig. 413.—Small Pitchers. Scale, 1:2

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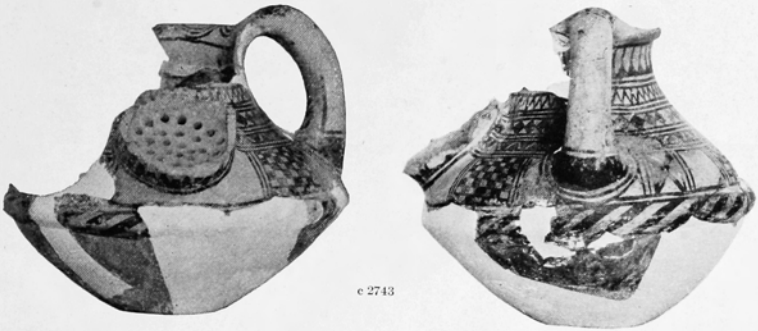
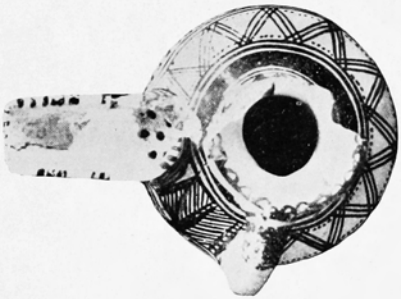
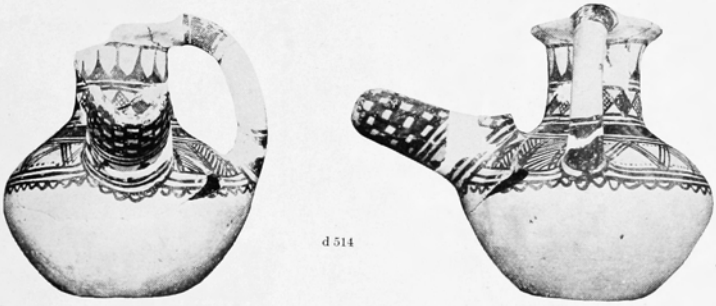


c 2743





d 514

FIG. 414.—SMALL PITCHERS WITH LATERAL STRAINER-SPOUTS. SCALE, 2:5

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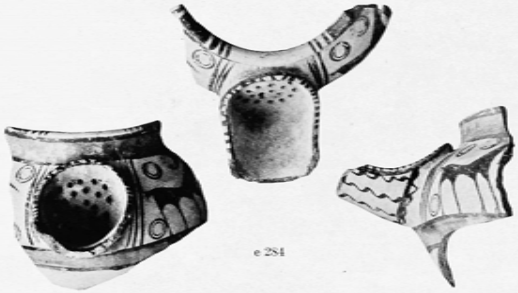
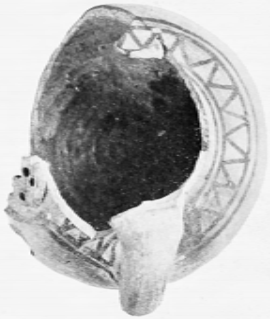
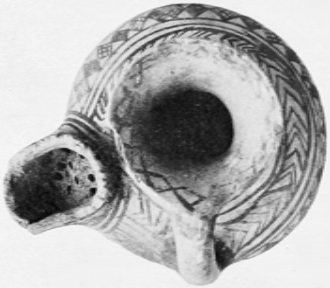


e 284





d 482

e 2249

Fig. 415.—Small Pitchers with Lateral Strainer-Spouts. Scale, 2:5

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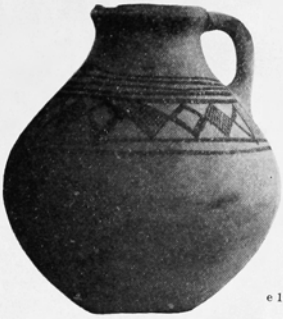
e 1112



e 1339

e 1884

d 1279

d 2361

e 1270a

d 2150

FIG. 416.—LARGE PITCHERS. SCALE, 1:5

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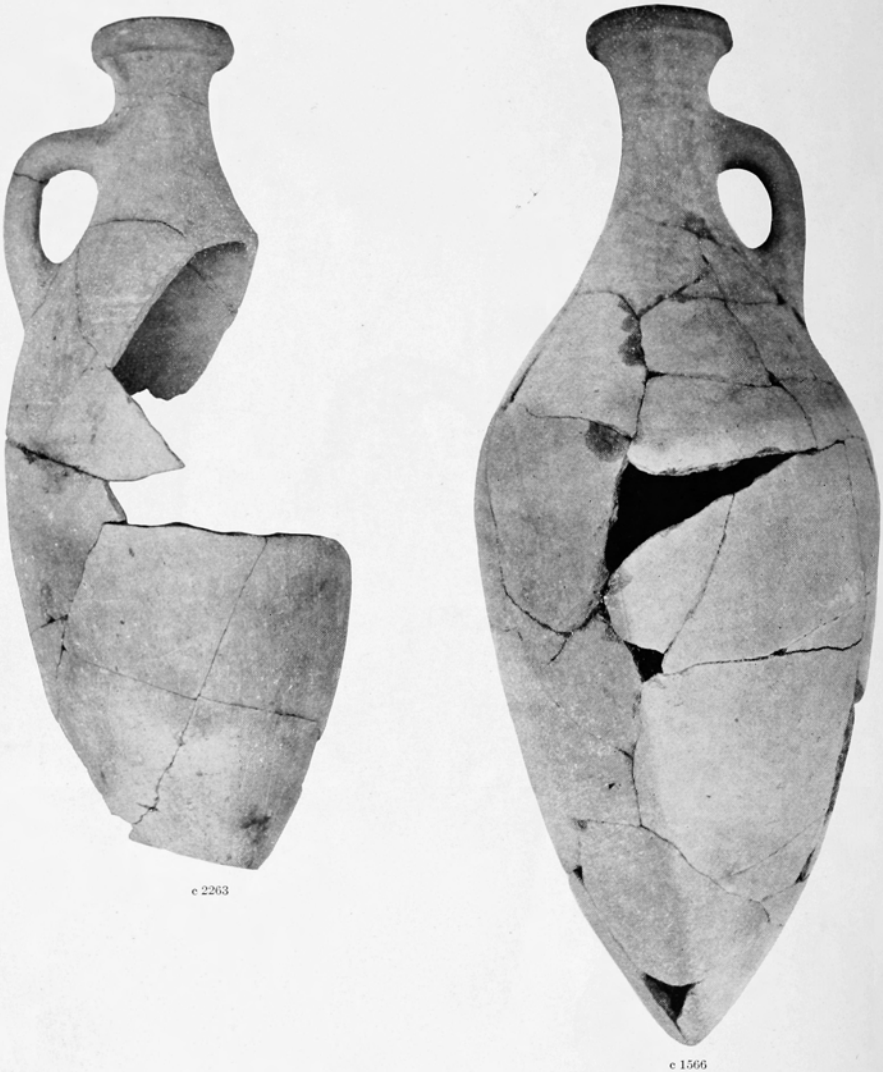

c 2263

c 1566

Fig. 417.—Large Pitchers with Pointed Bottoms. Scale, 1:5

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FIG. 418.—SMALL JARS. SCALE, 1:2

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Fig. 419.—Jars with Handles. Scale, 1:4

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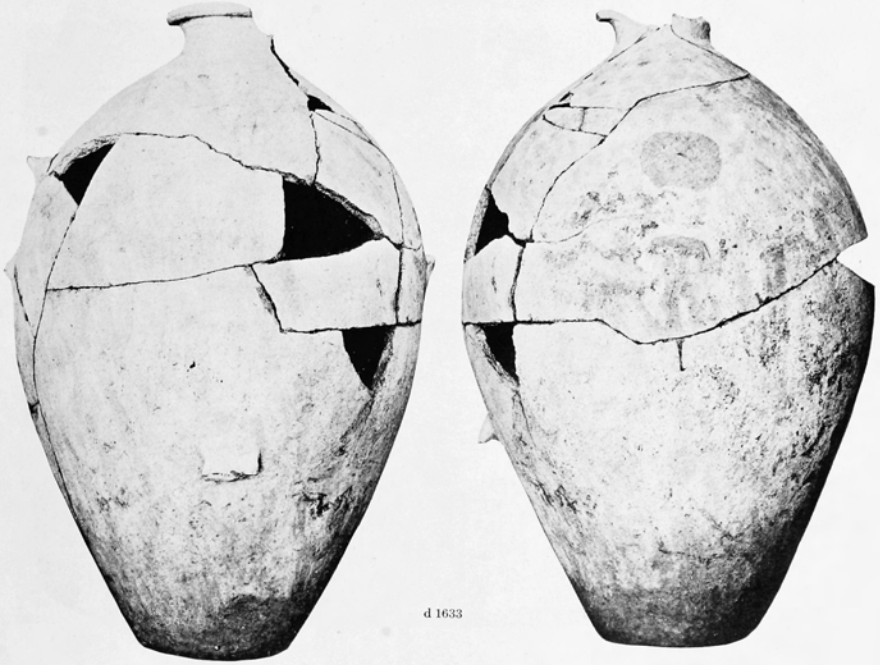
e 685



d 1633

Fig. 420.—Large Two-handled Jars with Additional Ledge Handles. Scale, 1:5

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c 1692

Fig. 421.—Large Decorated Jar. Scale, 1:5. Panel Is Shown at about 2:5

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c 1693

Fig. 422.—Large Decorated Jar. Scale, 1:5. Panel Is Shown at about 2:5

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c 1694

Fig. 423.—Large Decorated Jar. Scale, 1:5. Panel Is Shown at about 2:5

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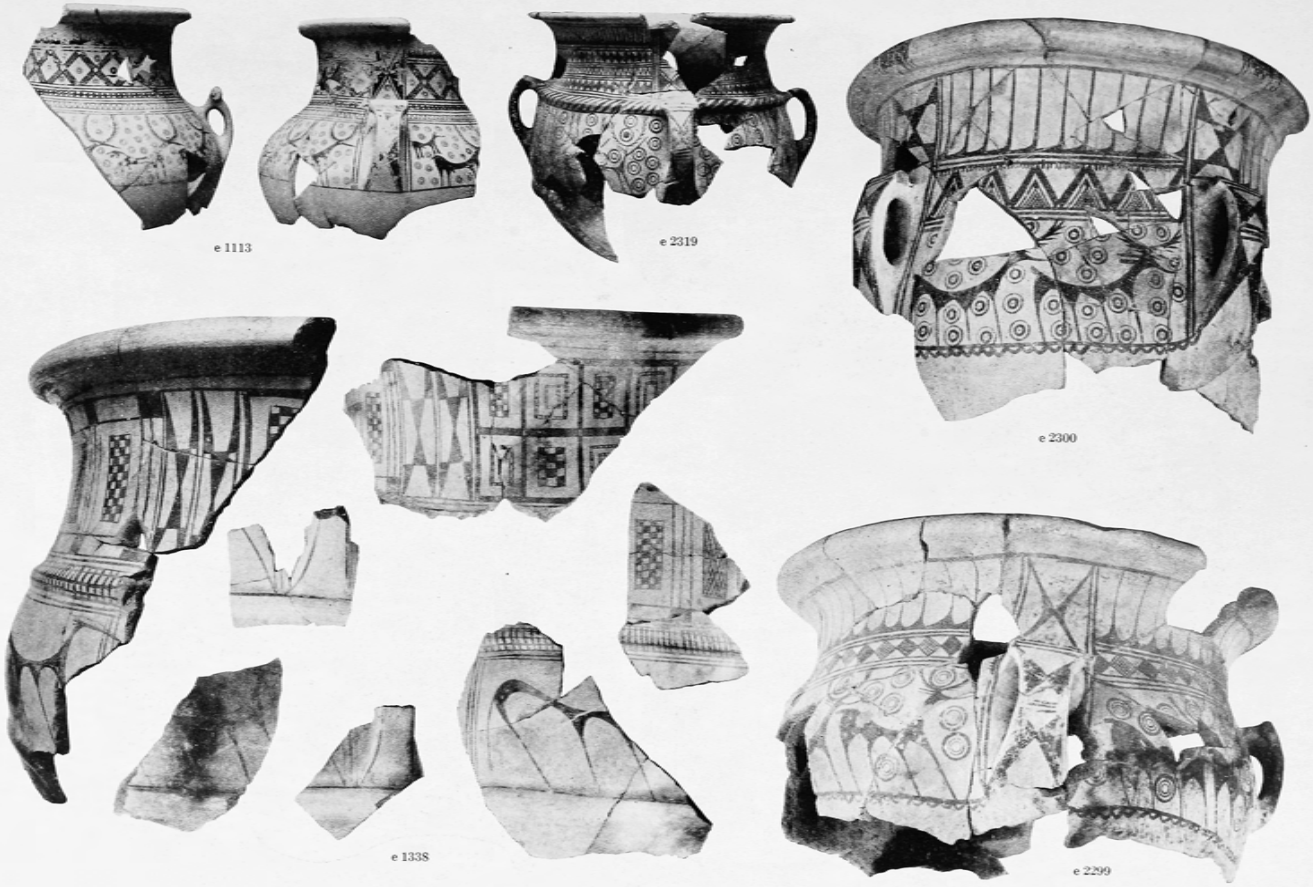

FIG. 424.—SHERDS OF LARGE DECORATED JARS. SCALE, ABOUT 1:5

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Fig. 425.—Large Decorated Jars. Scale, 1:5

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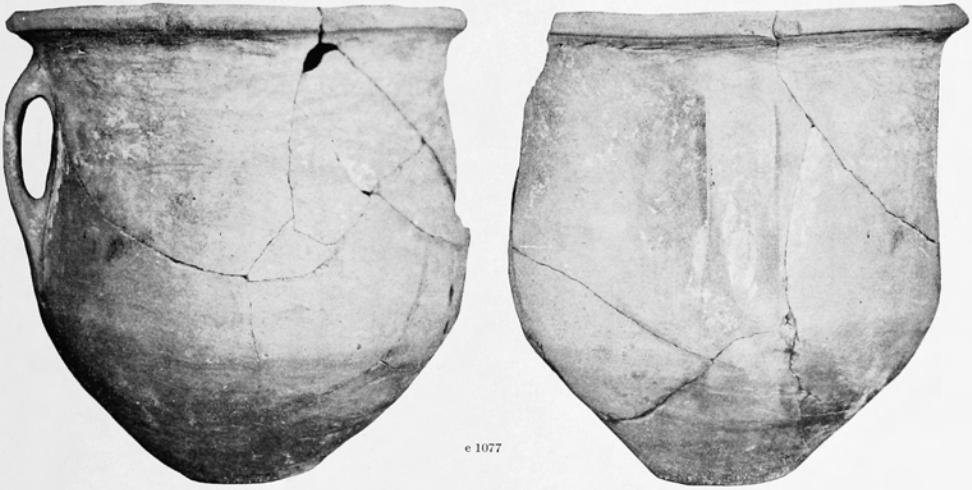
a 131



e 1077

Fig. 426.—Large Jars. Scale, about 1:5

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c 1076

c 1897

c 2440

Fig. 427.—Large Plain Jars. Scale, 1:5

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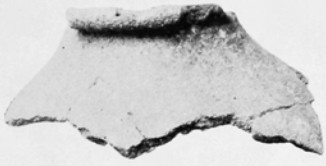

e 2328

e 2329

e 1271*a*

e 1273*a*

e 1296

FIG. 428.—"KITCHEN-WARE" JARS. SCALE, 2:5

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e 2312

e 1695

a 1068

Fig. 429.—Storage Vessels. Scale, about 1:10

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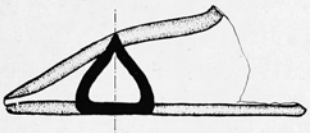
e 1354

e 1286

d 2359

e 2188



e 1117

d 2409

e 2304

e 1977

Fig. 430.—Miscellaneous Vessels. Scale, 2:5

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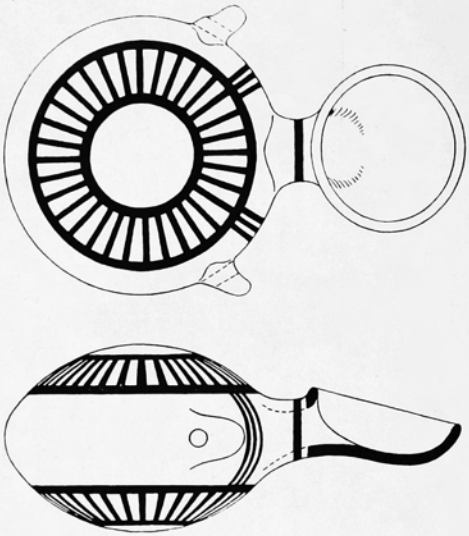
the top to the now lost neck, which probably ended in a small bowl. A similar piece was found complete at Boğazköy,[66] and several vessels of this type, although smaller, were unearthed at Megiddo (e.g., Fig. 431).



Tomb 39:18

FIG. 431.—A VESSEL FROM MEGIDDO. SCALE, 2:5

DETAILS

Most of the bowls of this period have thickened rims or flaring, sometimes overhanging, rims (Figs. 432 and 434–35). A few bowls have simple rims (e.g., b 1687 and c 1905, Pl. VIII). Cups have simple, sometimes flaring, rims (Figs. 440–41). Some jars with small orifices have rims rolled outward (Fig. 451); others have sharply profiled rims like those characteristic of the jars with large orifices (Figs. 446–47).

The typical handles of this period are often bent sharply at the highest point and accentuated there by a ridge slightly thickened and somewhat concave at the ends (Figs. 441–42 and 453–55). Sometimes the lower end of the handle is split (e.g., Fig. 442 14). The cross-section is usually round or oval, but handles with hexagonal cross-section have been found. Other vertical handles of a simpler form are shown in Figures 456–57. Band handles are rather common (e.g., c 1692, Fig. 421); they often have rectangular cross-sections and are sometimes decorated with ridges. A few vessels had semicircular horizontal handles (e.g., e 1341, Fig. 418). Of special interest are the handles of No. a 1064 (Pl. XI) in the form of conventionalized animal heads. On some jars and storage vessels small handles are attached to the shoulder (Pls. IX and XI); a few have a third handle low on the body in the form of a ledge (Fig. 420). On cups and pitchers the handles usually rise from the median body to the rim, the highest point of the handle being considerably above the rim (Pl. VIII). The handles of large pitchers do not rise so high. On large pitchers with pointed bottoms the handle is attached to shoulder and neck (Pl. IX). Large storage vessels have horizontal handles formed from ribs (Pl. XI). Several small jars have perforated knobs on their shoulders (Pl. IX). Nos. 55–57 in Figure 432 illustrate three types of handles which sometimes appear on bowls.

[66] Now in the Asarı Atika Müzeleri at İstanbul.

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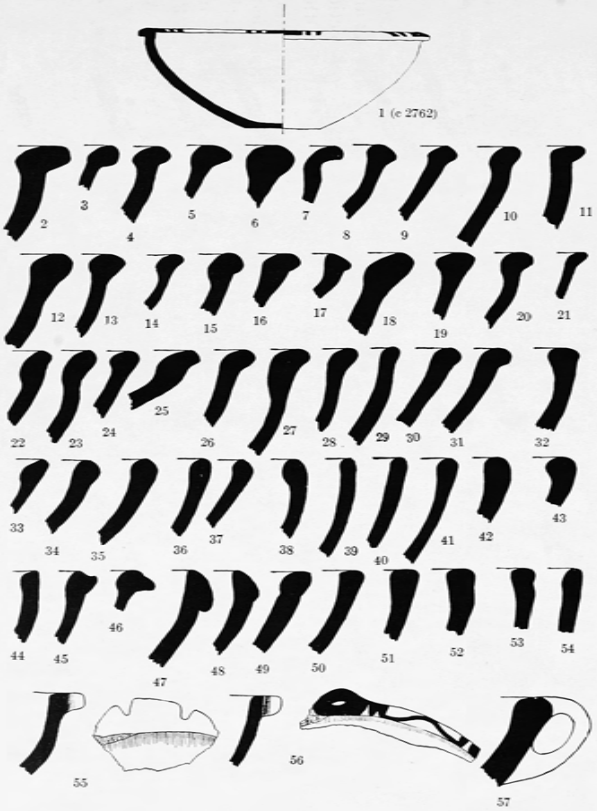

FIG. 432.—PROFILES OF BOWLS WITH THICKENED RIMS. SCALE, 1:3 (BOWL c 2762 SHOWN 1:6)

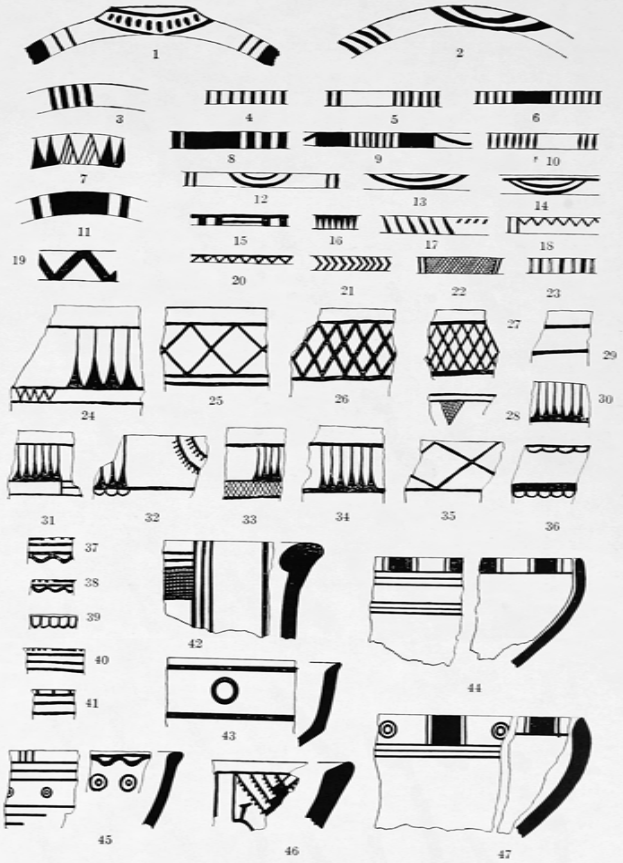

FIG. 433.—DECORATIONS OF BOWLS WITH THICKENED RIMS. 1–23 ON LIP; 24–36, 42–43, AND 46 ON OUTSIDE OF RIM; 37–41 ON INSIDE OF RIM; 44–45 AND 47 ON BOTH INSIDE AND OUTSIDE. SCALE, 1:3

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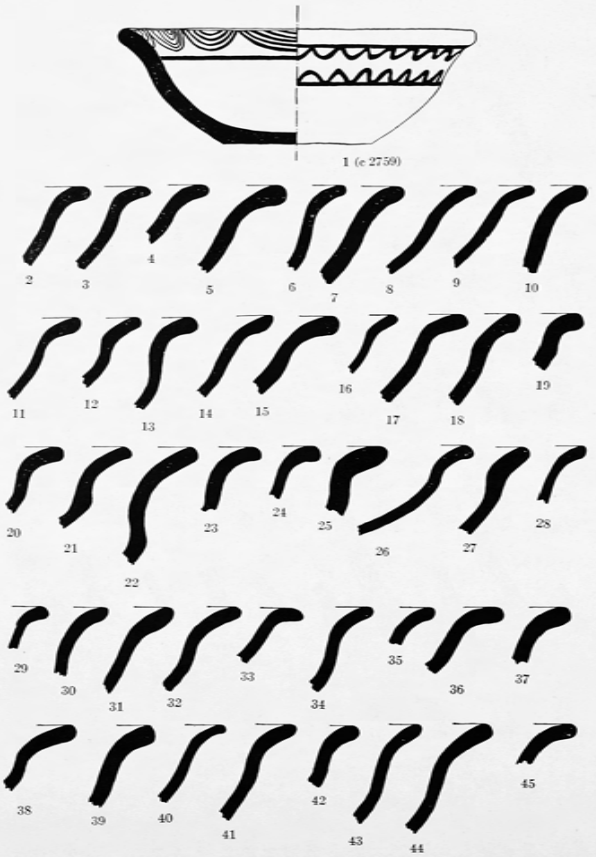

FIG. 434.—PROFILES OF BOWLS WITH FLARING RIMS. SCALE, 1:3

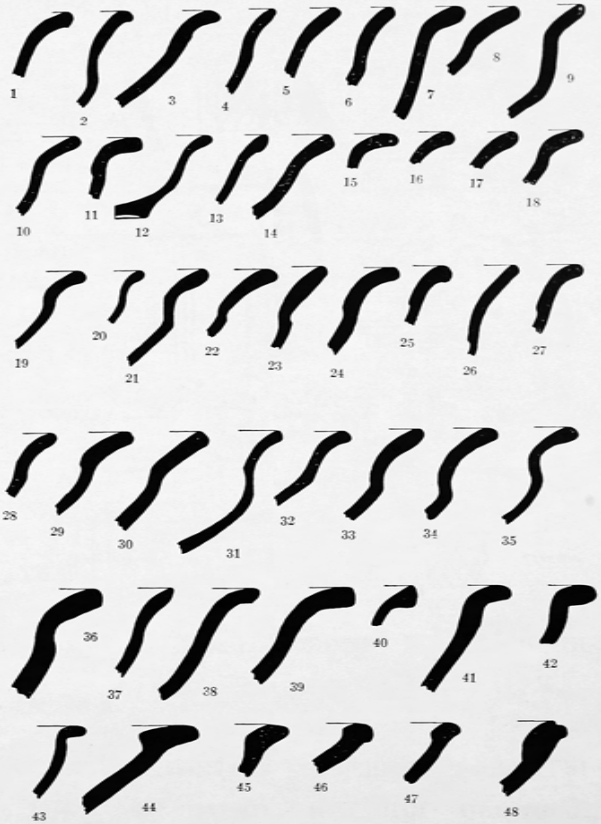

FIG. 435.—PROFILES OF BOWLS WITH FLARING RIMS. SCALE, 1:3

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Bottoms are usually flat, sometimes concave. Semi-pedestal bases and ring bases are relatively rare. One cup and several large pitchers with pointed bottoms have been found, and one bowl has an omphalos.

Lateral strainer-spouts are numerous in this period (Figs. 414–15 and 443). Beak-spouts and clover-leaf orifices are common. No. e 1020 (Pl. VIII) has a strainer in one lobe of the clover-leaf orifice. No pottery lid belonging to this period has been found.

Decorative motives are shown in Figures 432–34, 436–45, 448–50, and 452–71.

DESCRIPTIONS OF INDIVIDUAL VESSELS[67]

Bowls

c 995 (Fig. 405). Fragmentary bowl .345 d.;[68] medium, well made ware;[69] reddish buff paste; moderately fired; light buff slip over all; design in brownish black. Found 1.80–2.60 deep in YY 23.

c 1565 (Fig. 406 and Pl. VIII). Bowl with rounded bottom, .054 h., .246 d.; coarse, well made ware; reddish buff paste; heavily fired; rough finish. Found in Level 4*a* M in L 12 with vessels c 1566–67 and c 2263.

c 1691 (Fig. 406 and Pl. VIII). Bowl with flat bottom, .112 h., .251 d.; medium, well made ware; reddish buff paste; moderately fired; grayish buff slip over exterior. Found in Level 4*a* M in L 12.

c 1905 (Fig. 405 and Pl. VIII). Bowl with rounded bottom, .058 h., .218 d.; coarse, well made ware; reddish buff paste; moderately fired; buff slip over entire vessel. Found 2.30 deep in Q 29.

c 2089 (Fig. 404 and Pl. VIII). Bowl with flat bottom, .060 h., .174 d.; fine, very well made ware; buff paste; moderately fired; whitish buff slip over all; design in brownish black. Found 1.65 deep in U 25.

c 2754 (Fig. 403 and Pl. VIII). Fragmentary bowl with flat bottom, .066 h., .215 d.; medium, well made ware; reddish buff paste; moderately fired; buff slip; design in blackish brown. Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2755 (Fig. 403 and Pl. VIII). Fragmentary bowl with flat bottom, .080 h., .192 d.; coarse, well made ware; reddish buff paste; moderately fired; reddish buff slip on outside, rough finish in interior. Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2756 (Pl. VIII). Fragmentary bowl .061 h., .227 d.; medium, well made ware; reddish buff paste; moderately fired; buff slip over entire vessel; design in brownish black. Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2757 (Fig. 403 and Pl. VIII). Fragmentary bowl .060 h., .204 d.; fine, very well made ware; reddish buff paste; moderately fired; reddish buff slip over entire vessel; carefully polished; design in blackish brown. Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2758 (Fig. 403 and Pl. VIII). Fragmentary bowl with ring base, .040 h., .112 d.; fine, well made ware; buff paste; moderately fired; light buff slip over entire vessel; design in brown. Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2759 (Fig. 403 and Pl. VIII). Fragmentary bowl with flat bottom, .060 h., .177 d.; medium, well made ware; buff paste; moderately fired; buff slip over entire vessel; design in reddish brown (faded?). Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2760 (Fig. 403 and Pl. VIII). Fragmentary bowl with flat bottom, .058 h., .195 d.; medium, well made ware; buff paste; moderately fired; buff slip over entire vessel; inside of rim carefully burnished and darker than the rest of the vessel; design in blackish brown. Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2761 (Fig. 403 and Pl. VIII). Fragmentary bowl with ring base, .068 h., .200 d.; medium, well made ware; reddish buff paste; moderately fired; wet-smoothed; smoke-stained. Found in the refuse deposit of the Post-Hittite period in YY 24.

c 2762 (Fig. 403 and Pl. VIII). Fragmentary bowl with flat bottom, .118 h., .305 d.; medium, well made ware; buff paste with gray core; moderately fired; buff slip on inside and reddish buff slip on outside; design in blackish brown. Found in the refuse deposit of the Post-Hittite period in YY 24.

[67] Only a few of the vessels found from 1927 to 1929 are included here. Other vessels of this period found in those seasons are described in *OIP* VI 254–55 and 258–60, *OIP* XIX 238–56, and *OIP* XX 41–42. Drawings of typical forms from the excavations of 1927–32 are given in Pls. VIII–XI.

[68] The measurements (height and diameter) are given here, as elsewhere, in fractions of meters. The dimensions given are maximal, but in the case of jars, pitchers, etc., are for the body only and do not include handles or spouts. Asterisks distinguish dimensions of preserved portions of incomplete objects. In a very few cases only one dimension or none at all could be given.

[69] All the pottery of this period was grit-tempered.

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d 925 (Fig. 406 and Pl. VIII). Bowl with ring base, .098 h., .247 d.; medium, very well made ware; buff paste with gray core; moderately fired; reddish buff slip over entire vessel; irregular stripes in a faded brownish red around edge of rim. Found in Level 4*b* M in O 11.

e 1340*a* (Fig. 405). Fragment of a small bowl, apparently with a handle; fine, well made ware; buff paste; moderately fired; yellowish buff slip over all. Found in Room *C* of Level 4*b* M in O 12.

e 1882 (Fig. 406 and Pl. VIII). Bowl with ring base, .058 h., .193 d.; very fine, well made ware; buff paste; heavily fired; reddish buff slip over all; carefully polished. Found in Level 4*c* M in O 12.

Cups

c 1567 (Fig. 408 and Pl. VIII). Cup with pointed bottom, .061 h., .076 d.; fine, well made ware; buff paste; moderately fired; buff slip over outside. Found in Level 4*a* M in L 12 with vessels c 1565–66 and c 2263.

c 2685 (Fig. 409 and Pl. VIII). Cup with high handle, .080 h., .107 d.; medium, well made ware; reddish buff paste; moderately fired; orange-buff slip over entire vessel; design in brownish black. Found 4 meters deep in T 29.

c 2692 (Fig. 408 and Pl. VIII). Cup with high handle, .132 h., .137 d.; medium, well made ware; buff paste; moderately fired; reddish buff slip over outside of vessel; design in blackish brown. Found in Level 4*b* M in L 12.

d 701 (Fig. 408 and Pl. VIII). Cup, probably with high handle, .080* h., .109 d.; fine, well made ware; buff paste; moderately fired; buff slip over entire vessel; blackish brown design. Found .90–1.10 deep in S 31.

d 1035 (Fig. 408 and Pl. VIII). Cup, probably with high handle, .120* d.; medium, well made ware; buff paste; moderately fired; orange-buff slip over all, the part below median body line being a little more reddish; design in blackish brown. Found 2.30–2.50 deep in R 31.

d 2001 (Fig. 408 and Pl. VIII). Cup, probably with high handle, .110* h., .139 d.; fine, well made ware; buff paste; heavily fired; uneven yellowish buff slip over entire vessel; design in blackish brown. Found in a refuse deposit in P 29.

d 2020 (Fig. 409 and Pl. VIII). Cup with high handle, .078 h., .095 d.; medium, very well made ware; buff paste; moderately fired; reddish buff slip over all; blackish brown design. Found 3.65 deep in T 28.

e 870 (Fig. 410 and Pl. VIII). Cup, probably with high handle, .040* h., .070 d.; very fine, very well made ware; buff paste; moderately fired; light buff slip over exterior; design in reddish brown and blackish brown. Found in Level 4*a* M in N 12 with Nos. e 871–73.

e 871 (Fig. 410 and Pl. VIII). Cup, probably with high handle, .043* h., .080 d.; very fine, very well made ware; buff paste with gray core; moderately fired; buff slip over exterior; design in brownish red and blackish brown. Found with No. e 870.

e 873 (Fig. 410 and Pl. VIII). Cup, probably with high handle, .082 h., .088 d.; very fine, well made ware; buff paste; moderately fired; dark buff slip; much faded design in blackish brown. Found with No. e 870.

e 1342*a* (Fig. 408). Fragment of a cup; medium, well made ware; buff paste; moderately fired; buff slip over exterior; traces of blackish brown design. Found in Room *C* of Level 4*b* M in O 12.

e 1343 (Fig. 410 and Pl. VIII). Cup with high handle, .080* h., .085 d.; very fine, very well made ware; buff paste; moderately fired; reddish buff slip over all; blackish brown design. Found in Room *C* of Level 4*b* M in O 12.

e 1344 (Fig. 410). Sherd of what appears to have been a cup with high handle; very fine, well made ware; buff paste; moderately fired; probably whitish buff slip much discolored by heat; lozenge ornamentation in relief; traces of painted design. Found in Room *C* of Level 4*b* M in O 12.

e 1345 (Fig. 410). Sherd from a cup or perhaps a bowl; very fine, well made ware; buff paste; moderately fired; brownish slip on inside, extending to shoulder on outside; lower part wet-smoothed and grooved. Found in Room *C* of Level 4*b* M in O 12.

e 1346 (Fig. 410 and Pl. VIII). Fragmentary cup, probably with high handle, .150 h., .192 d.; fine, very well made ware; buff paste; moderately fired; presumably whitish buff slip, much discolored by fire, as is the blackish brown decoration; lower part corrugated. Found in Room *C* of Level 4*b* M in O 12.

e 1418 (Fig. 410 and Pl. VIII). Cup, probably with high handle, .089 h., .095 d.; very fine, very well made ware; buff paste; moderately fired; buff slip over all, much discolored by heat; faint traces of design in blackish brown and red. Found in Level 4*b* M in M 11.

e 1710 (Fig. 410 and Pl. VIII). Cup with high handle, .073 h., .078 d.; very fine, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in Level 4*c* M in N 13 with an iron axhead with lugs (e 1590) and a seal with hieroglyphic signs (e 1591).

e 2303 (Fig. 408 and Pl. VIII). Cup, probably with high handle, .105 h., .140 d.; fine, well made ware; buff paste; moderately fired; reddish buff slip over all. Found in Level 4*a* M in O 12.

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e 2305 (Fig. 409 and Pl. VIII). Cup with high handle, .091 h., .099 d.; fine, very well made ware; buff paste; moderately fired; reddish buff slip over all; blackish brown design. Found in Level 4*b* M in O 12.

e 2306 (Fig. 409 and Pl. VIII). Cup with high handle, .086 h., .102 d.; fine, very well made ware; buff paste; moderately fired; buff slip over all; blackish brown design. Found in Level 4*b* M in O 12.

e 2327 (Fig. 408). Fragmentary cup, probably with high handle, .090* h., .092 d.; fine, very well made ware; buff paste; moderately fired; reddish buff slip over entire vessel; design in blackish brown. Found in Room *C* of Level 4*b* M in O 12.

Small Pitchers

3244 (Fig. 412 and Pl. VIII). Pitcher with beak-spout, handle missing, .210 h., .222 d.; fine, very well made ware; buff paste; moderately fired; buff slip on outside; design in brownish black; ridge around greatest diameter. The entire vessel, with the exception of a small part, is blackened by fire. Found in Level 4*a* M in M 11.[70]

d 544 (Fig. 411 and Pl. VIII). Pitcher .062* h., .081 d.; fine, well made ware; buff paste; moderately fired; yellowish slip on outside; design in blackish brown. Found in Level 4*b* M in O 11.

d 818 (Fig. 411 and Pl. VIII). Pitcher .113* h., .133 d.; coarse, well made ware; reddish buff paste; moderately fired; rough finish; design in blackish brown. Found 2.00–2.70 deep in U 30.

d 927 (Fig. 411 and Pl. VIII). Pitcher .100* h., .077 d.; medium, very well made ware; reddish buff paste; moderately fired; buff slip on outside, extending down inside rim; design in blackish brown. Found in Level 4*a* M in O 11.

d 2000 (Fig. 412 and Pl. VIII). Pitcher with beak-spout, handle missing, .197 h., .188 d.; fine, very well made ware; buff paste; moderately fired; probably slip was originally buff with a design in blackish brown and reddish brown, but all the colors are much faded; lower part of body corrugated. Found in Level 4*a* M in O 11.

e 255 (Fig. 411 and Pl. VIII). Pitcher with beak-spout, .095 h., .077 d.; very fine, very well made ware; buff paste; moderately fired; yellowish buff slip over outside; design in blackish brown. Found in refuse of Level 4*a* M.

e 1020 (Fig. 413 and Pl. VIII). Pitcher with clover-leaf orifice and strainer, .116 h., .108 d.; very fine, very well made ware; buff paste; moderately fired; carefully slipped and burnished exterior, the color of which varies from firing but is generally a brownish buff. Found in Level 4*a* M in O 12.

e 1164 (Fig. 413). Pitcher with clover-leaf orifice, .127 h., .109 d.; medium, fairly well made ware; reddish buff paste; moderately fired; buff slip over all. Found in Level 4*b* M in O 12.

e 1165 (Fig. 411 and Pl. VIII). Pitcher .094* h., .098 d.; fine, well made ware; reddish buff paste; moderately fired; buff slip over all; design in blackish brown. Found in Level 4*b* M in O 12.

e 1272*a* (Fig. 411 and Pl. VIII). Pitcher with clover-leaf orifice, .102 h., .097 d.; fine, well made ware; reddish buff paste; moderately fired; a light buff slip, now mostly chipped off, originally covered the outside; traces of a blackish brown design. Found in Level 4*a* M in N 12.

e 1342 (Fig. 411 and Pl. VIII). Pitcher .089* h., .131 d.; fine, well made ware; buff paste; moderately fired; buff slip over all; design in blackish brown. Found in Room *C* of Level 4*b* M in O 12.

e 1347 (Fig. 413). Pitcher, presumably with clover-leaf orifice, .135* h., .125 d.; medium, well made ware; buff paste; moderately fired; light buff slip over all. Found in the Phrygian deposit in J 8.

e 2246 (Pl. VIII). Pitcher with clover-leaf orifice, .101 h., .093 d.; coarse, fairly well made ware; buff paste; moderately fired; light buff slip over all, now mostly discolored to a grayish shade through accidental burning. Found in Level 4*c* M in M–N 11.

e 2247 (Fig. 413 and Pl. VIII). Pitcher with beak-spout, .092 h., .072 d.; fine, very well made ware; buff paste; moderately fired; buff slip over all. Found in refuse of Levels 4*b–c* M in M–N 11.

e 2326 (Fig. 413). Fragmentary pitcher with beak-spout, .091* h., .103 d.; fine, very well made ware; buff paste; moderately fired; light brownish buff slip over all. Found in Room *C* of Level 4*b* M in O 12.

Small Pitchers with Lateral Spouts

c 2743 (Fig. 414 and Pl. VIII). Pitcher with lateral strainer-spout at right angles to handle, .125 h., .148 d.; fine, very well made ware; buff paste; moderately fired; buff slip over all; design in blackish brown and reddish brown; ridge around greatest diameter. Found .50–2.00 deep in YY 22; the fragments were scattered over a large area and appeared at various depths.

d 482 (Fig. 415 and Pl. VIII). Pitcher with lateral strainer-spout at right angles to handle, .140 h., .122 d.; medium, well made ware; reddish buff paste; moderately fired; buff slip over outside, extending inside rim; design in blackish brown. Found in Level 4*a* M in O 11.

d 514 (Fig. 414 and Pl. VIII). Pitcher with lateral strainer-spout at right angles to handle, .121 h., .109 d.; medium, very well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in blackish brown. Found 1.80–2.35 deep in T 30.

[70] Cf. *OIP* VI 117 and 259.

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e 284 (Fig. 415 and Pl. VIII). Fragmentary pitcher with lateral strainer-spout, .083* h., .129 d.; fine, very well made ware; buff paste; moderately fired; light buff slip over exterior; design in blackish brown and brownish red. Found in the refuse deposit between Levels 7 and 8 T in R 26.

e 2249 (Fig. 415 and Pl. VIII). Pitcher with lateral strainer-spout at right angles to handle, .132 h., .117 d.; fine, well made ware; buff paste; moderately fired; light buff slip over exterior, extending inside rim; design in blackish brown. Found in Level 4c M in M–N 11 with iron sword e 2245.

Large Pitchers

b 1312 (Pl. IX). Fragmentary pitcher .194* h., .188 d.; medium, well made ware; moderately fired; buff paste; wet-smoothed; two perforations at median body line. Found 1.20 deep in AA–BB 12–13.

c 1566 (Fig. 417 and Pl. IX). Pitcher with pointed bottom, .890 h., .360 d.; medium, very well made ware; reddish buff paste; moderately fired; buff slip over exterior. Found with vessels c 1565, c 1567, and c 2263 in Level 4*a* M in L 12.

c 2263 (Fig. 417). Fragmentary pitcher with pointed bottom, .738* h., .306 d.; medium, very well made ware; reddish buff paste; moderately fired; buff slip over exterior. Found with vessels c 1565–67 in Level 4*a* M in L 12.

d 1279 (Fig. 416). Fragmentary pitcher with pointed bottom, .710* h., .278 d.; coarse, well made ware; buff paste; moderately fired; buff slip, of varying shades due to firing and wear, over exterior. Found in Level 4*a* M in O 10.

d 2150 (Fig. 416 and Pl. IX). Fragmentary pitcher with pointed bottom, .355* h., .156 d.; medium, well made ware; buff paste; heavily fired; varying grayish buff slip on exterior. Found on top of mansion wall of Level 10 T in P 28.

d 2361 (Fig. 416). Fragmentary pitcher with pointed bottom, .415* h., .178 d.; medium, well made ware; buff paste; moderately fired; reddish buff slip over exterior. Found on top of mansion wall of Level 10 T in Q 29.

e 1112 (Fig. 416 and Pl. IX). Pitcher .290 h., .235 d.; very coarse, well made ware; buff paste; moderately fired; reddish buff slip over exterior. Found in Level 4*a* M in N 12.

e 1270*a* (Fig. 416 and Pl. IX). Pitcher .320 h., .285 d.; coarse, fairly well made ware; buff paste; moderately fired; buff slip over exterior. Found in Level 4*a* M in N 12.

e 1339 (Fig. 416 and Pl. IX). Pitcher .270 h., .250 d.; fine, fairly well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in blackish brown. Found in Room *C* of Level 4*b* M in O 12.

e 1884 (Fig. 416 and Pl. IX). Pitcher .250 h., .182 d.; side opposite handle is slightly flattened; hand- and wheel-made; fine, well made ware; buff paste; moderately fired; buff slip on exterior varying in shade due to firing. Found in the Phrygian deposit in I 8.

Small Jars

d 595 (Fig. 418 and Pl. IX). Jar .213 h., .212 d.; medium, well made ware; buff paste; moderately fired; yellowish buff slip over exterior, extending inside rim; design in blackish brown. Found in Level 4*b* M in O 11.

d 1173 (Fig. 418 and Pl. IX). Small jar with two perforated knob handles, .088 h., .086 d.; fine, well made ware; buff paste; moderately fired; yellowish buff slip, darker below the median body line; design in blackish brown and brownish red. Found 3.20–3.50 deep in T–U 28.

e 872 (Fig. 418 and Pl. IX). Small jar with two perforated knob handles, .097* h., .101 d.; fine, well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in much faded brownish black. Found in Level 4*a* M in N 12 with Nos. e 870–71 and e 873.

e 1341 (Fig. 418 and Pl. IX). Small jar with two semicircular band handles attached to median body, .064* h., .090 d.; very fine, well made ware; buff paste; moderately fired; heavy brownish buff slip over exterior; carefully burnished. Found in Room *C* of Level 4*b* M in O 12.

Large Jars with Small Orifices

d 1633 (Fig. 420 and Pl. IX). Two-handled jar .560 h., .360 d.; between the handles and below the median body line is a protuberance which appears to be part of a ledge used as a supplementary handle for pouring; coarse, well made ware; buff paste with gray core; moderately fired; buff slip over exterior. Found 4.25–4.40 deep in U 30 in a refuse deposit where remains of the Hittite and Post-Hittite periods were mixed.

e 685 (Fig. 420 and Pl. IX). Two-handled jar .440* h., .380 d.; between the handles and below the median body line is a protuberance which appears to be part of a ledge used as a supplementary handle for pouring; medium, well made ware; buff paste; moderately fired; buff slip over exterior. Found in a Post-Hittite layer in DD 25.

e 1071 (Fig. 419 and Pl. IX). Two-handled jar .218 h., .221 d.; fine, well made ware; reddish buff paste; moderately fired; light buff slip partly preserved on exterior. Found in Level 4*a* M in O 12.

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e 1078 (Fig. 419 and Pl. IX). Fragmentary two-handled jar .220* h., .240 d.; fine, well made ware; buff paste; moderately fired; yellowish buff slip over exterior varying in shade on account of firing; design in brownish black. Found in Level 4*a* M in N 12.

e 1880 (Fig. 419 and Pl. IX). Two-handled jar .178 h., .162 d.; medium, fairly well made ware; gray paste; heavily fired; original buff slip on exterior now shows only at bottom, the rest of the pot having been blackened by fire; contained charcoal and charred grain. Found in Level 4*b* M in L 12.

e 2330 (Fig. 419). Fragments of a four-handled jar; medium, fairly well made ware; reddish buff paste; moderately fired; buff slip over exterior; design in reddish brown. Found in Room *C* of Level 4*b* M in O 12.

Large Jars with Large Orifices

b 2811 (Pl. XI). Two-handled jar with large orifice, .154 h., .183 d.; medium, well made ware; buff paste with gray core; moderately fired; red-brown wash over exterior, extending inside rim. Found in Level 4*a* M in L 12.

c 1692 (Fig. 421 and Pl. X). Four-handled jar .400 h., .425 d.; medium, very well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in reddish brown. Found in Room *D* of Level 4*b* M in L 12 with Nos. c 1693–95 (see Fig. 342).

c 1693 (Fig. 422 and Pl. X). Four-handled jar .400 h., .455 d.; medium, very well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in reddish brown. Found with No. c 1692.

c 1694 (Fig. 423 and Pl. X). Four-handled jar .403 h., .480 d.; medium, very well made ware; reddish buff paste; moderately fired; buff slip over exterior, extending inside rim; design in reddish brown. Found with No. c 1692.

d 926 (Fig. 425 and Pl. XI). Two-handled jar .285 h., .300 d.; medium, well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in blackish brown. Found in the refuse deposit between Levels 3*b* M and 4*a* M in O 11.

d 928 (Fig. 425 and Pl. XI). Fragmentary two-handled jar .190* h., .305 d.; coarse, well made ware; buff paste with gray core; moderately fired; buff slip over entire vessel; design in blackish brown. Found in Level 4*a* M in O 11.

e 1076 (Fig. 427). Fragmentary two-handled jar .381* h., .405 d.; medium, well made ware; buff paste; moderately fired; buff slip over exterior, discolored by fire. Found in Level 4*a* M in N 12.

e 1077 (Fig. 426 and Pl. XI). Two-handled jar .410 h., .400 d.; medium, well made ware; buff paste; heavily fired; reddish buff slip over exterior, extending inside rim. Found in Level 4*b* M in O 12.

e 1113 (Fig. 424 and Pl. X). Fragmentary two-handled jar .170* h., .200 d.; very fine, very well made ware; buff paste; moderately fired; light buff slip over all; design in blackish brown. Found in Level 4*b* M in N 12.

e 1338 (Fig. 424 and Pl. X). Fragments of a four-handled jar .370* h., .625 d.; medium, very well made ware; buff paste with gray core; moderately fired; buff slip over exterior, extending inside rim; design in reddish brown and brownish red. Found in Room *C* of Level 4*b* M in O 12.

e 1340 (Fig. 425 and Pl. X). Fragment of a two-handled jar .259* h., .400 d.; medium, well made ware; reddish buff paste; moderately fired; buff slip over exterior, extending inside rim; design in blackish brown. Found in Room *C* of Level 4*b* M in O 12.

e 1883 (Fig. 425 and Pl. X). Two-handled jar .245 h., .220 d.; fine, very well made ware; buff paste; moderately fired; yellowish buff slip over exterior, extending inside rim; design in reddish brown. Found in Building *A* of Level 4*a* M in N 12.

e 2299 (Fig. 424 and Pl. X). Fragment of a four-handled jar .440 d.; medium, very well made ware; buff paste with gray core; moderately fired; buff slip over exterior, extending inside rim, partly discolored by heat; design in blackish brown. Found in Level 4*c* M.

e 2300 (Fig. 424 and Pl. X). Fragmentary four-handled jar .310* h., .415 d.; fine, well made ware; buff paste with gray core; moderately fired; buff slip over exterior, extending inside rim; design in blackish brown. Found in Level 4*c* M.

e 2319 (Fig. 424 and Pl. X). Fragmentary four-handled jar .220* h., .241 d.; fine, very well made ware; buff paste; moderately fired; originally buff slip and blackish brown design blackened accidentally by fire. Found in Level 4*c* M in M 11.

e 2320 (Fig. 425 and Pl. X). Fragmentary two-handled jar .235* h., .420 d.; medium, well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in blackish brown. Found in Level 4*c* M in O 12.

Large Jars with Ovoid Bodies

c 1897 (Fig. 427 and Pl. XI). Two-handled jar .460 h., .310 d.; medium, well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; design in blackish brown. Found in Level 4*a* M in L 12.

c 2440 (Fig. 427). Two-handled jar .496 h., .335 d.; medium, well made ware; buff paste; moderately fired; buff slip over exterior, extending inside rim; traces of a blackish brown design around neck. Found in Level 4*a* M in L 12.

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"Kitchen Ware"

e 1019 (Fig. 405 and Pl. VIII). Bowl with flat, slightly concave bottom, .130 h., .310 d.; medium, well made ware; buff paste; moderately fired; wet-smoothed. The bowl had been repaired in ancient times. Found in Level 4*a* M in O 12.

e 1271*a* (Fig. 428). One-handled jar .171* h., .225 d.; medium, well made ware; blackish gray paste; moderately fired; blackened by fire. Found in Level 4*a* M in N 12.

e 1273*a* (Fig. 428). One-handled jar .100 h., .122 d.; medium, fairly well made ware; blackish gray paste; moderately fired; blackened by fire. Found in Level 4*a* M in O 12.

e 1296 (Fig. 428 and Pl. IX). Two-handled jar .220 h., .265 d.; medium, well made ware; grayish black paste; moderately fired; wet-smoothed; blackened by fire. Found in Level 4*b* M in N 12.

e 1881 (cf. a 1053 in Pl. IX). One-handled jar .120 h., .130 d.; medium, fairly well made ware; grayish black paste; moderately fired; wet-smoothed; blackened by fire. Found in Level 4*c* M in L 12.

e 1959 (cf. a 1053 in Pl. IX). One-handled jar .110 h., .130 d.; medium, fairly well made ware; grayish black paste; moderately fired; wet-smoothed; blackened by fire. Found in a Phrygian refuse deposit in HH 13.

e 2328 (Fig. 428). Fragment of a jar; coarse, fairly well made ware; reddish buff paste; moderately fired; rough finish. Found in Room *C* of Level 4*b* M in O 12.

e 2329 (Fig. 428). Fragment of a jar .121* h., .159 d.; medium, well made ware; reddish buff paste; moderately fired; wet-smoothed; lower part blackened by fire. Found in Room *C* of Level 4*b* M in O 12.

Storage Vessels

a 1068 (Fig. 429 and Pl. XI). Storage vessel with two supporting ribs and four handles formed from the upper rib, 1.330 h., .930 d.; coarse, well made ware; reddish buff paste; moderately fired; buff slip over exterior, extending inside rim. Found in Building *A* of Level 4*a* M in N 13 with three similar vessels (976 and a 1069–70).

a 1070 Similar to No. a 1068 except that the handles are formed from the lower rib.

c 1695 (Fig. 429 and Pl. XI). Storage vessel with two handles, .450 h., .420 d.; coarse, well made ware; reddish paste with buff core; moderately fired; wet-smoothed. Found in Room *D* of Level 4*b* M in L 12 with Nos. c 1692–94.

e 2312 (Fig. 429 and Pl. XI). Storage vessel with two handles, .660 h., .485 d.; medium, well made ware; reddish buff paste with buff core; heavily fired; wet-smoothed. Found in Level 4*b* M.

Miscellaneous Vessels

c 1977 (Fig. 430 and Pl. IX). Small jar .063 h., .059 d.; handmade; medium, fairly well made ware; heavily fired; reddish buff slip over exterior, of varying shades due to firing. Found 3.10 deep in Q 29.

d 2359 (Fig. 430 and Pl. IX). Cylindrical vessel with a flange near rim, probably for support of a cover, .105 h., .080 d.; medium, well made ware; buff paste; moderately fired; reddish buff slip over all; design in reddish brown. Found 2.10 deep in P 28.

d 2409 (Fig. 430 and Pl. IX). Jar .165 h., .116 d.; handmade; coarse, poorly made ware; buff paste; moderately fired; rough finish. Found level with tops of dado slabs of mansion of Level 10 T in Q 29.

e 1117 (Fig. 430). Pottery "shoe" with a small hole at point of toe, .048* h., .134 long, .053 wide; handmade; fine, well made ware; buff paste; moderately fired; yellowish red slip over exterior; design in reddish brown. Found in a refuse layer in FF 3–4.

e 1286 (Fig. 430 and Pl. IX). Two-handled jar .116 h., .085 d.; very fine, well made ware; buff paste; moderately fired; fine, light brownish buff slip over all. Found in Room *C* of Level 4*b* M in O 12.

e 1354 (Fig. 430 and Pl. IX). Fragmentary jar with semi-pedestal base, .077* h., .085 d.; medium, very well made ware; grayish paste; moderately fired; fine, highly polished black slip over exterior; vertical grooves form a panel around median body. Found in Level 4*b* M in O 12.

e 2188 (Fig. 430). Small flask, one side slightly more convex than the other, neck and handle broken off, .093* h., .096×.075 d.; handmade; medium, well made ware; buff paste with gray core; moderately fired; wet-smoothed. Found in Level 4*a* M in N 14.

e 2304 (Fig. 430). Fragmentary flask, neck and one handle broken off, .135* h.; handmade; medium, well made ware; reddish buff paste; moderately fired; red wash over exterior. Found in the refuse deposit above the northern gateway of the Hittite period in S 1.

Pottery figurines are described on pages 410 and 414; pottery seals, on pages 421–22; minor pottery objects, including "whorls" and reworked potsherds, on page 450. For chemical analyses of pottery see *OIP* XXX 336–38.

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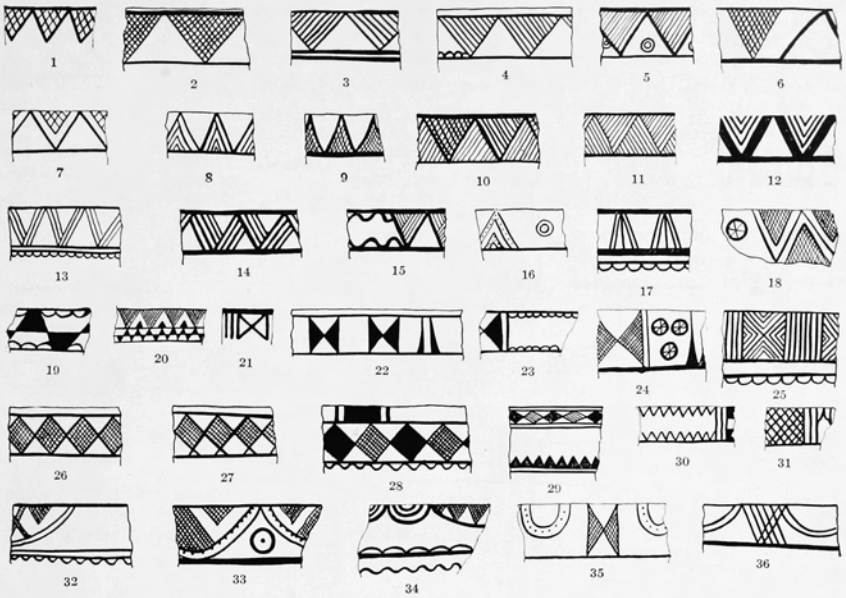

Fig. 436.—Decorations of Bowls with Flaring Rims. Scale, 1:3

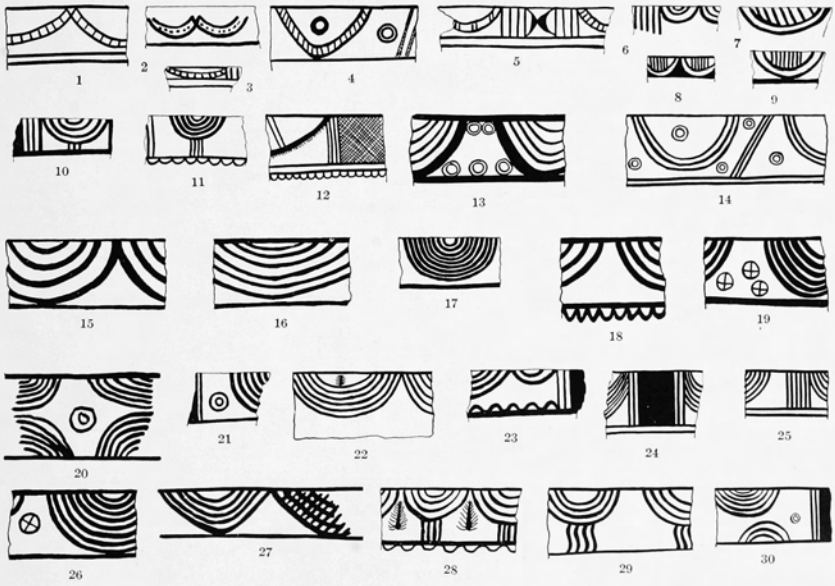

Fig. 437.—Decorations of Bowls with Flaring Rims. Scale, 1:3

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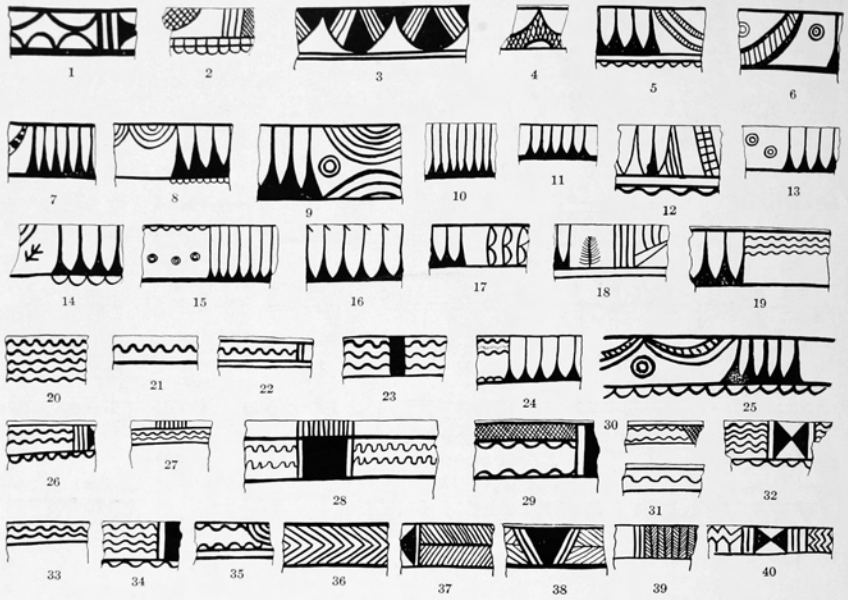

FIG. 438.—DECORATIONS OF BOWLS WITH FLARING RIMS. SCALE, 1:3

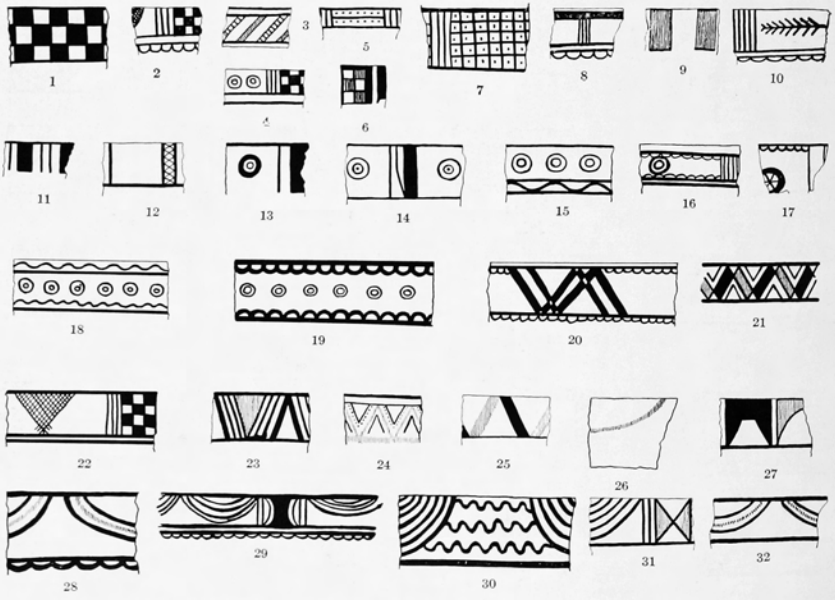

FIG. 439.—DECORATIONS OF BOWLS WITH FLARING RIMS. SCALE, 1:3

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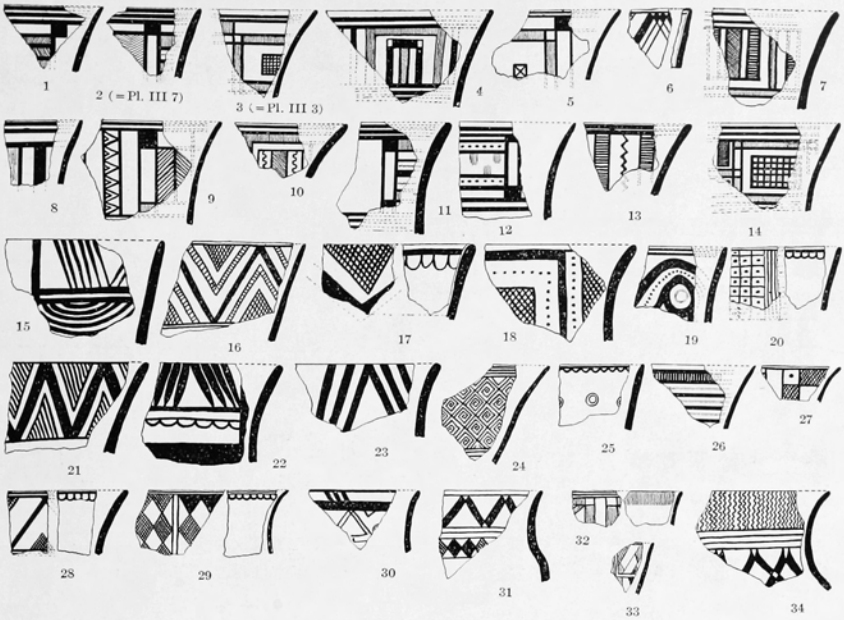

Fig. 440.—Profiles and Decorations of Rims of Fine-Ware Cups. Scale, 1:3

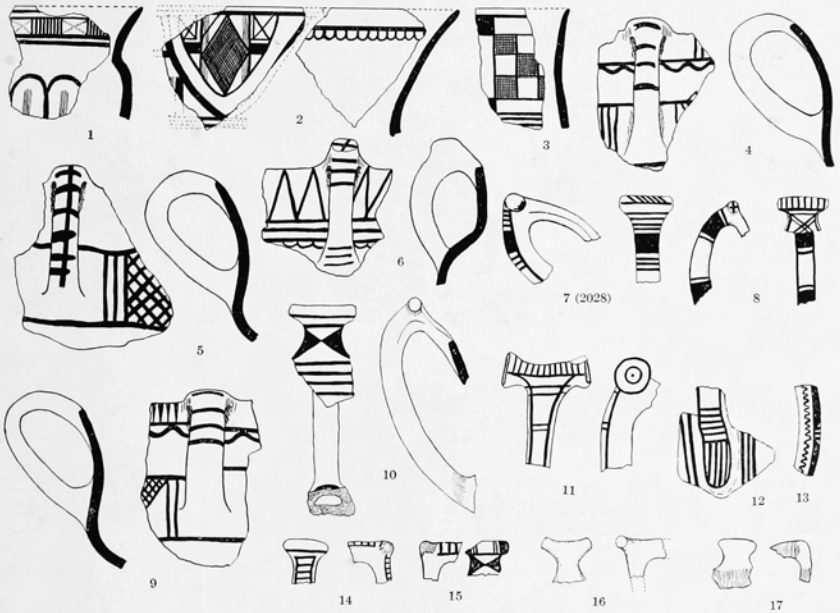

Fig. 441.—Rims and Handles of Fine-Ware Cups. Scale, 1:3

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Fig. 442.—Handles and Bottom Pieces of Fine Ware. Scale, 1:3

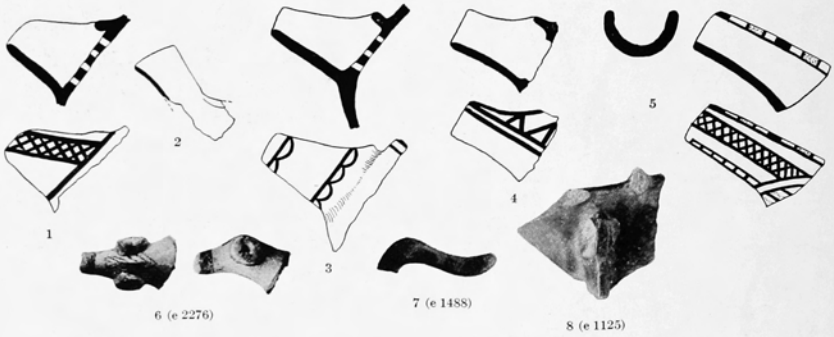

Fig. 443.—Spouts (1–6), a Handle (7), and a Sherd Decorated in Relief (8). Scale, 1:3

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Fig. 444.—Decorated Fine-Ware Sherds. Scale, 1:2

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Fig. 445.—Decorated Fine-Ware Sherds. Scale, 1:2

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Fig. 446.—Profiles of Rims of Large Jars. Scale, 1:3

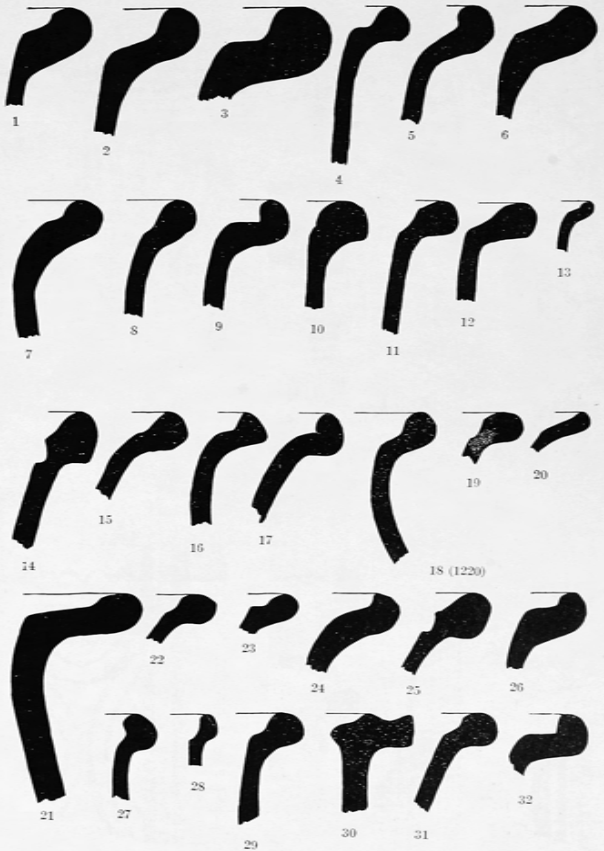

Fig. 447.—Profiles of Rims of Large Jars. Scale, 1:3

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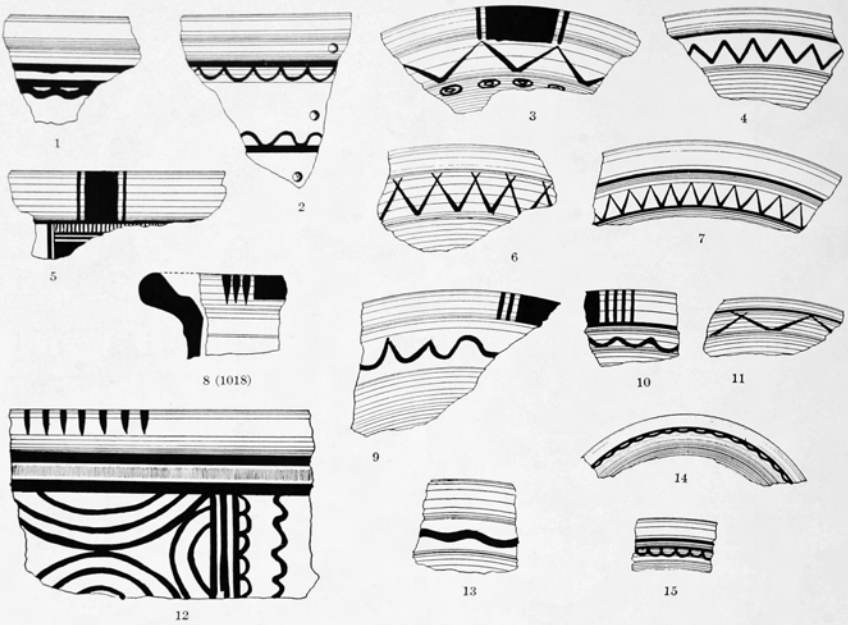

FIG. 448.—DECORATIONS ON RIMS OF LARGE JARS. SCALE, 1:3

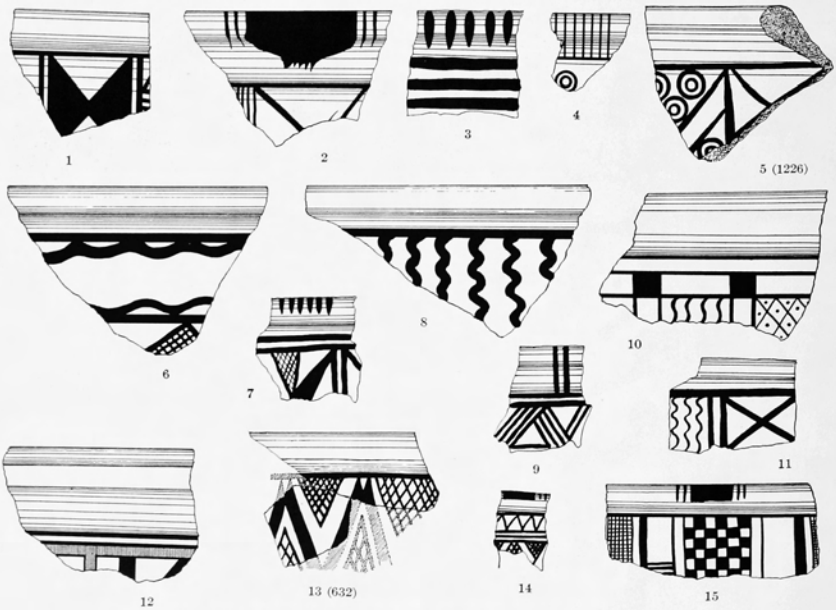

FIG. 449.—DECORATIONS ON RIMS OF LARGE JARS. SCALE, 1:3

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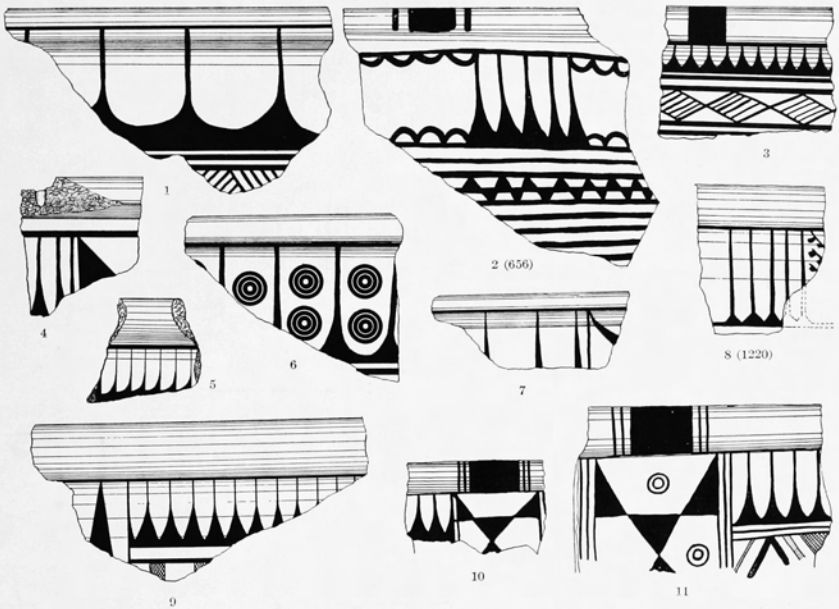

Fig. 450.—Decorations on Rims of Large Jars. Scale, 1:3

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Fig. 451.—Profiles of Rims of Large Jars. Scale, 1:3

Fig. 452.—Decorations on Rims of Large Jars. Scale, 1:3

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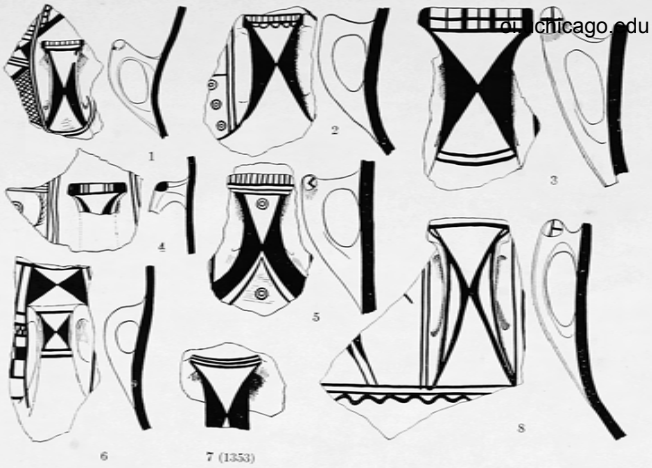

FIG. 453.—HANDLES OF LARGE JARS. SCALE, 1:4

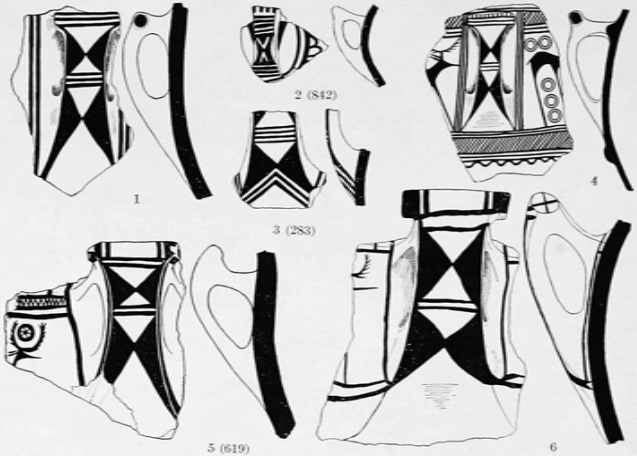

FIG. 454.—HANDLES OF LARGE JARS. SCALE, 1:4

FIG. 455.—HANDLES OF LARGE JARS. SCALE, 1:4

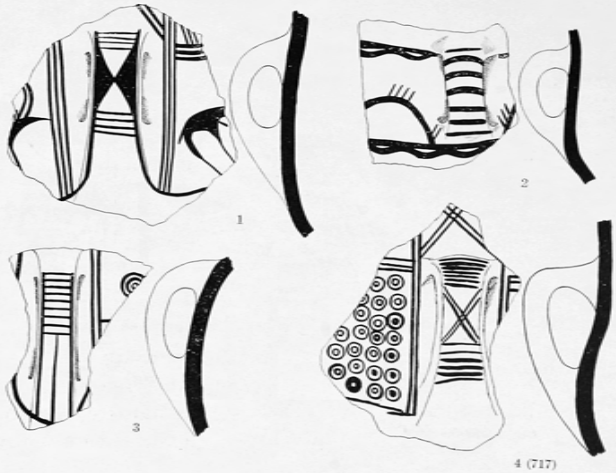

FIG. 456.—HANDLES OF LARGE JARS. SCALE, 1:4

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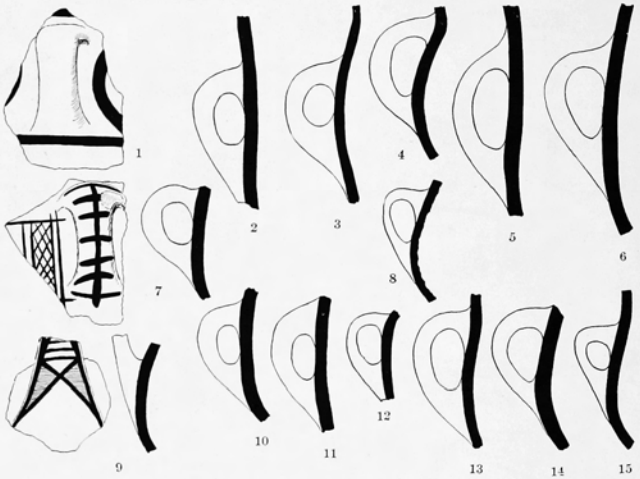

Fig. 457.—Handles of Large Jars. Scale, 1:4

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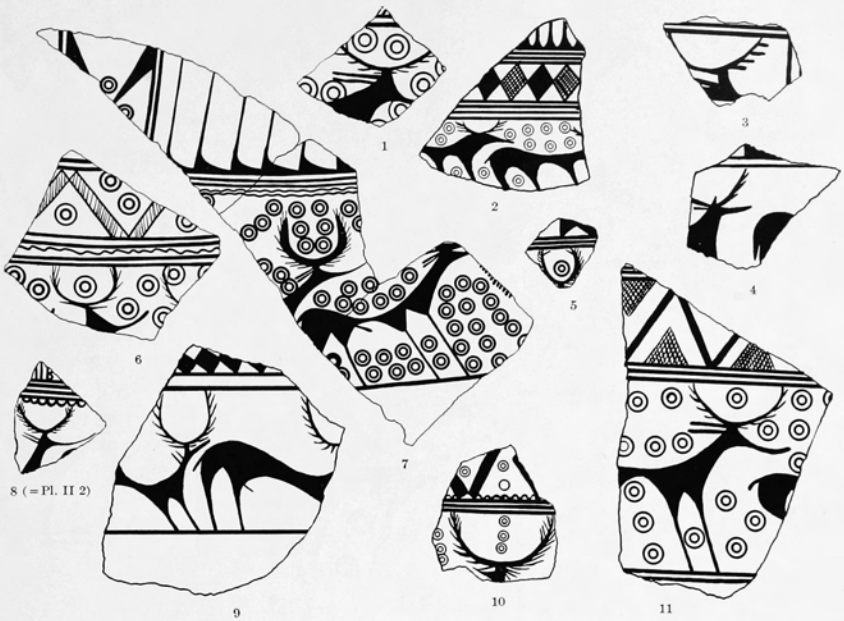

FIG. 458.—BODY PIECES OF LARGE JARS DECORATED WITH ANIMAL DESIGNS. SCALE, 1:3

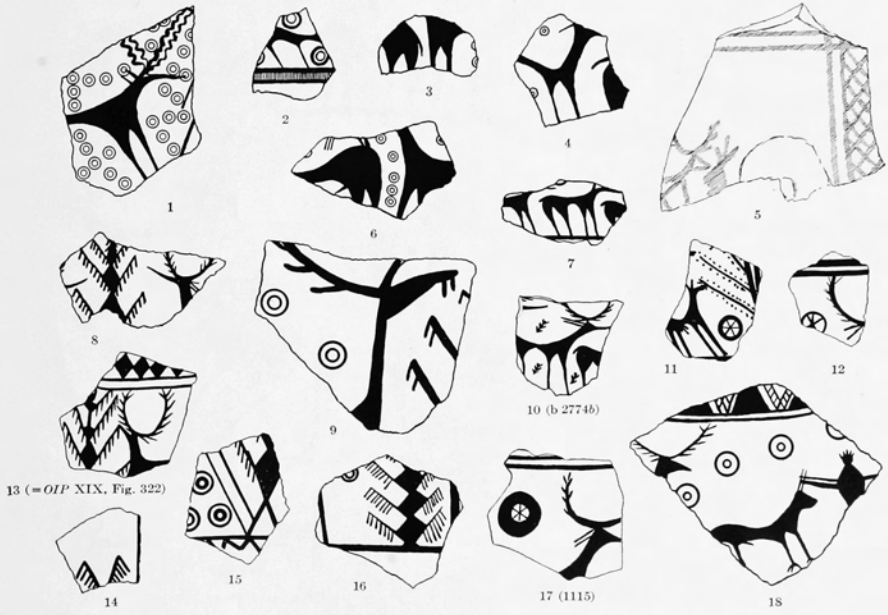

FIG. 459.—BODY PIECES OF LARGE JARS DECORATED WITH ANIMAL DESIGNS. SCALE, 1:3

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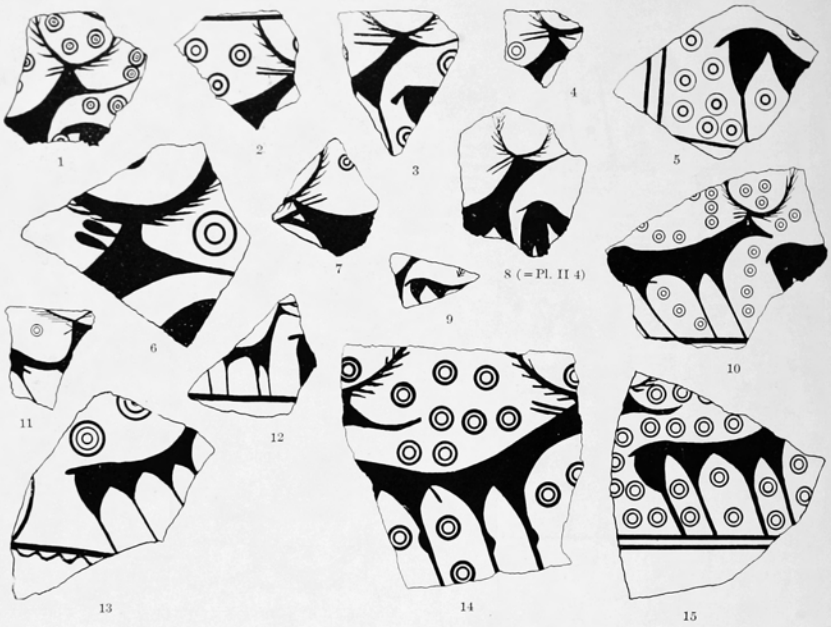

Fig. 460.—Body Pieces of Large Jars Decorated with Animal Designs. Scale, 1:3

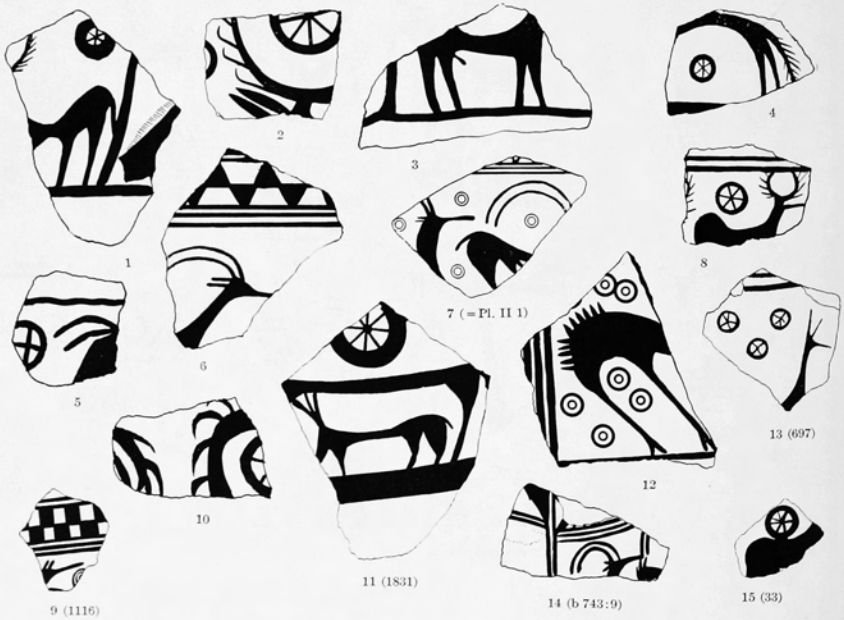

Fig. 461.—Body Pieces of Large Jars Decorated with Animal Designs. Scale, 1:3

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Fig. 462.—Body Pieces of Large Jars Decorated with Animal Designs. Scale, 1:3

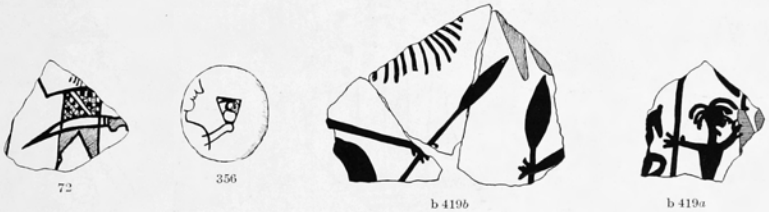

Fig. 463.—Sherds Showing Human Figures. Scale, 1:3

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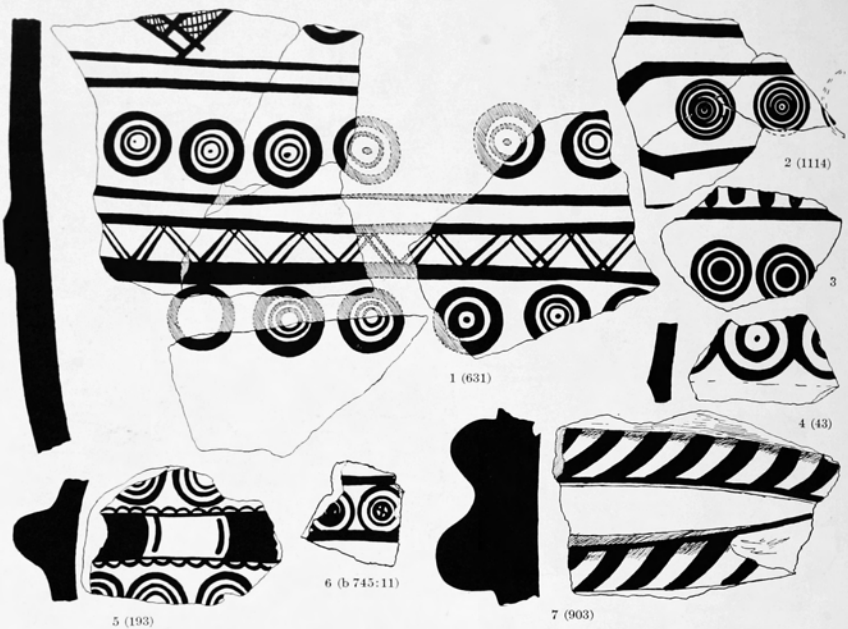

FIG. 464.—BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

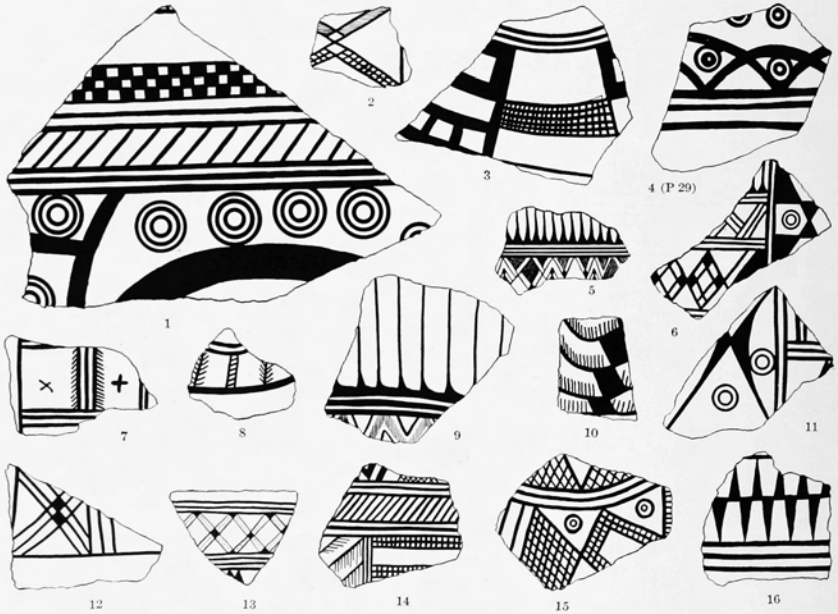

FIG. 465.—BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

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FIG. 466.—BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

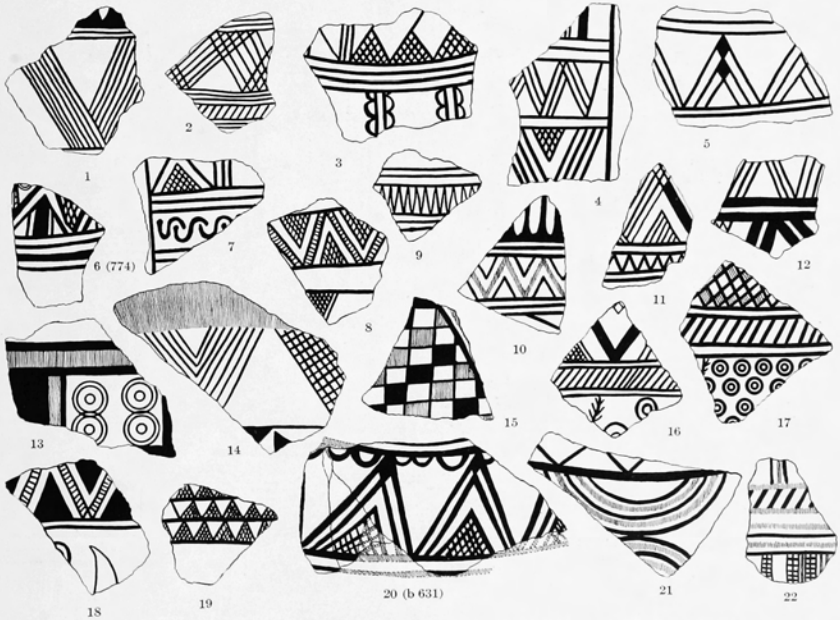

FIG. 467.—BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

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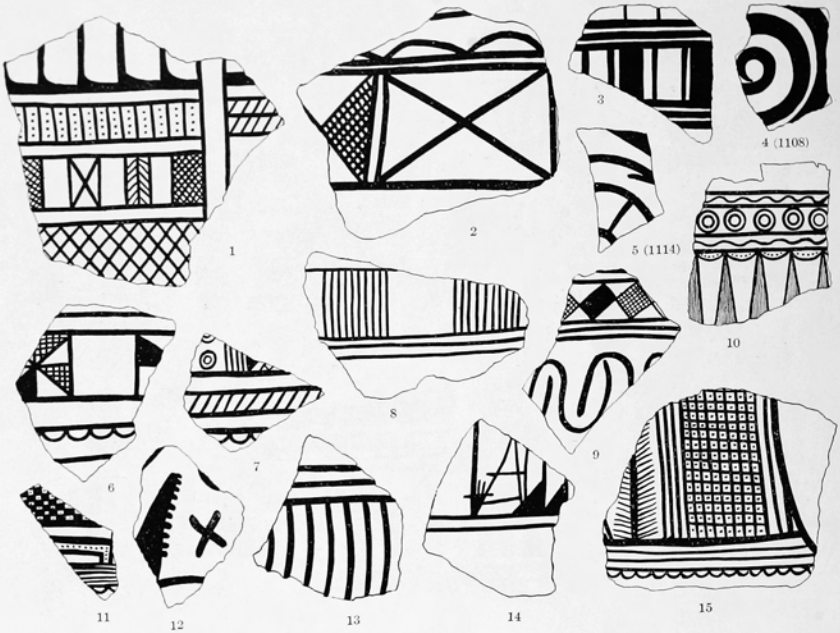

FIG. 468.—BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

FIG. 469.—BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

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FIG. 470.—BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

FIG. 471.—A NECK PIECE AND BODY PIECES OF LARGE JARS WITH GEOMETRIC ORNAMENTATION. SCALE, 1:3

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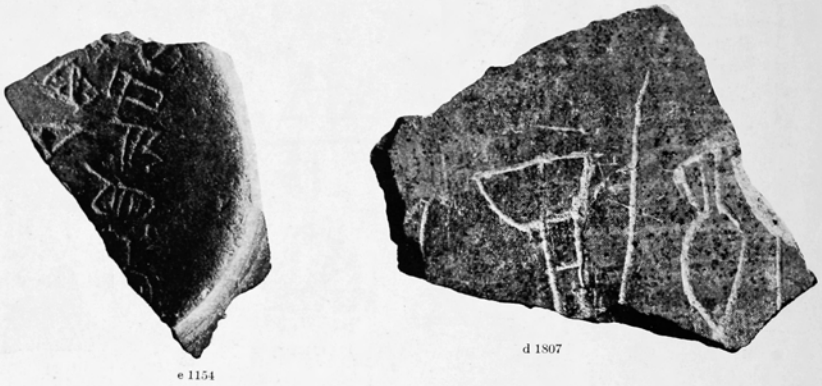
INSCRIBED POTSHERDS

Two sherds bore crudely incised "Hittite" hieroglyphic signs (Fig. 472).[71] No. d 1807 was found 3.30 deep in T 31 in an unmistakable refuse deposit of this period. It is of medium, grit-tempered, buff paste with a red slip. Two hieroglyphic signs seem to have been set in vertical columns marked by straight lines. No. e 1154, found on the floor level of Level 4*b* M in O 12, is part of the bottom of a vessel of medium, grit-tempered, buff paste, wet-smoothed. It shows the remains of two columns of hieroglyphic signs. Both pieces were found under circumstances



e 1154 d 1807

FIG. 472.—SHERDS WITH INCISED HIEROGLYPHS. ACTUAL SIZE

which preclude the possibility of their being intrusions from the layers above or below. Other hieroglyphic inscriptions occurred on seals (see pp. 414–23).

SCULPTURE IN RELIEF

A fragment of a basalt stela (e 285, Fig. 473) represents a so-called "ceremonial feast." The fragment shows the lower parts of two human figures, wearing long garments and shoes with upturned toes, seated on chairs facing each other. The preserved height of the slab is .220, the width .265, and the thickness .100. It was found in refuse of Levels 4*b–c* M.

FIGURINES

Only two unquestionably human figurines (e 1793 and e 1934, Fig. 474) can be attributed to the Post-Hittite–Phrygian period. Both are of pottery. No. e 1934 was found in Level 4*c* M in O 12. The treatment of the body and arms reminds one of certain types of figurines of earlier periods. No. e 1793, found in Level 4*c* M in L 12, is a much abbreviated representation of a human bust, with punctated-incised decoration. No. e 732, from Level 4*a* M in O 11, may be the base of a human figurine, but it is quite possible that it belonged to an animal figurine. It is of limestone, and there is a perforation in the middle. No. d 1618 is a fragment of a pottery leg or boot with carefully applied ornamentation in brownish black on a buff slip. It is similar to No. 3360.[72]

Figurines of animals (Fig. 475) and birds (Fig. 474) were made of various materials. Nos. e 1818 and e 2286 (Fig. 475) are small bulls' heads of bronze or copper, much corroded. The

[71] *OIP* XXVII, Nos. 65–66.

[72] *OIP* VII, frontispiece.

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e 285

Fig. 473.—Basalt Stela with Representation of a "Ceremonial Feast"

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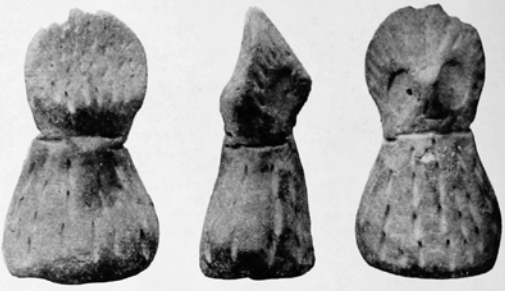
e 1934



e 1793

e 732

d 1618

d 1647

d 1833

e 206

Fig. 474.—Figurines. Actual Size

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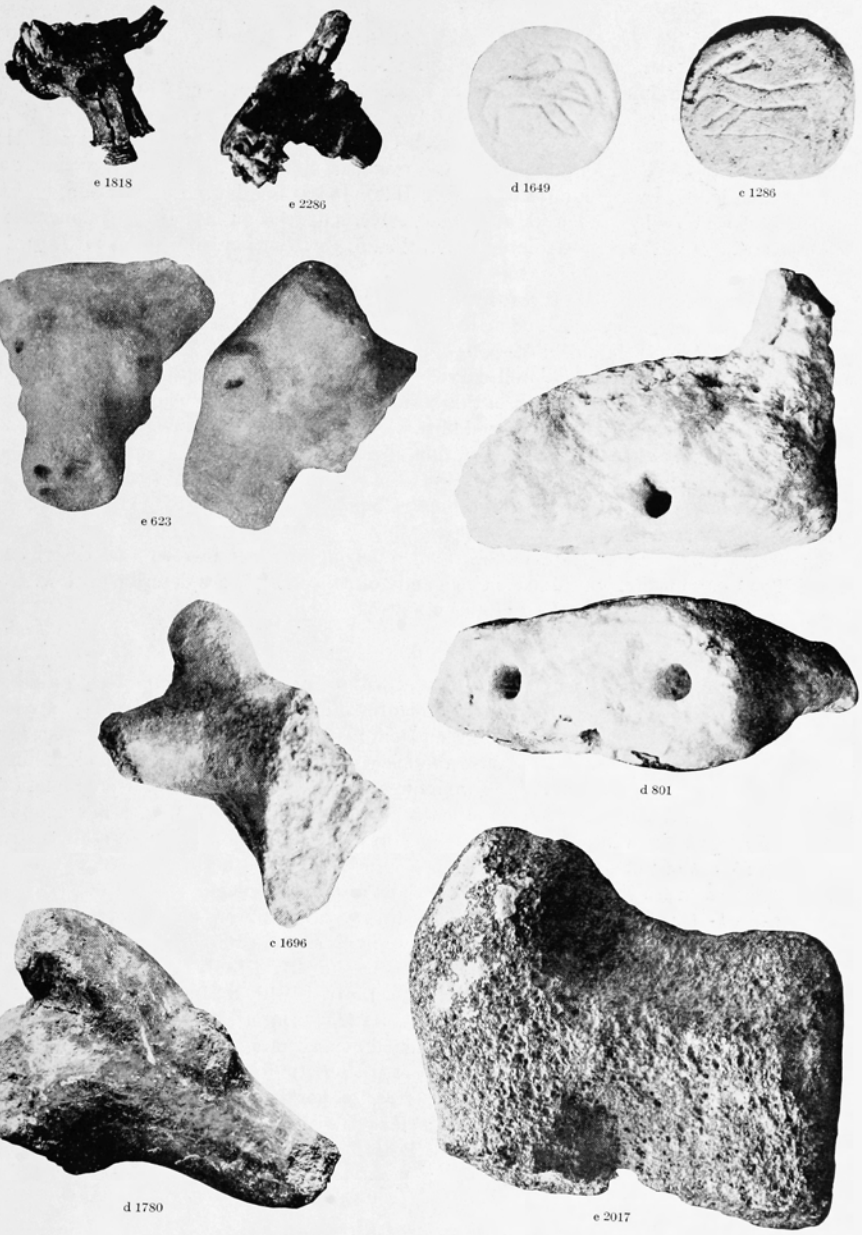

Fig. 475.—Animal Figurines and Engraved Disks. Actual Size

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eyes were filled with a black substance, and the heads seem to have been attached to bodies of some different material. These heads were found in Level 4*c* M in L 12. No. e 2017, of basalt, is the torso of an animal, probably a lion; it was found in Level 4*c* M in O–P 11–12. No. a 249,[73] representing a lion(?) on a pedestal, resembles No. e 2017 in style and is of similar material; since it came from the refuse deposit between Levels 3*b* and 4*a* M, it may well belong to the Post-Hittite–Phrygian period. A much corroded alabaster figurine of a reclining animal (d 801, Fig. 475) was found 4.10 deep in U 30. It has one lateral perforation, and two holes in its base may have been for attachment. No. a 612[74] is an interesting fragment of an animal figurine of pottery with painted decoration. Its attribution is uncertain; it is possible that it belongs to the beginning of the next period. Nos. e 623, c 1696, and d 1780 (Fig. 475), fragmentary animal heads of pottery, may have been parts of figurines or may have been attached to vessels (cf. jars a 1059 and a 1064, Pl. XI, and sherd e 2276, Fig. 443 6).

No. e 206 (Fig. 474), found in M–N 6–7, is a pottery figurine of a bird of prey; it has a socket for attachment. A small, well carved vessel of serpentine in the form of a falcon's head (d 1647) was in a refuse deposit of this period in S 27. No. d 1833 may possibly be a conventionalized representation of a perched bird.[75] It is made of serpentine and was found 2.50 deep in P 31. Since it has a lateral perforation, it may have been used as a bead or pendant.

Nos. d 1649 and c 1286 (Fig. 475), both found in refuse deposits of this period, are roughly worked limestone disks, each showing a horned animal crudely incised. These objects are most probably pieces for a game.

Representations of animals on vessels, as handles or spouts or in relief, are described on page 352; representations of human beings and animals on seals are described below. Compare also painted figures, described on pages 350–52.

SEALS

A typical form of seal in this period is discoid with convex faces and a perforation parallel to the faces (e.g., c 700, Fig. 476). Seals of this form (Fig. 476 and d 2587, Fig. 477) are made of limestone, serpentine, or jasper. All of them bear "Hittite" hieroglyphic inscriptions, usually on both faces. On one face of No. 3095 there is a cross-shaped design with angles filling its corners; one face of No. 3099 is plain. Two impressions of such discoid seals were found (2225 and e 1651, Fig. 477 and Pl. XXV). Serpentine seal d 1361 (Fig. 477), with hieroglyphs on each face, shows a form intermediate between this group and the flat discoid seals described below. The faces of pottery seal c 857 (Fig. 477) are conical rather than convex; the hieroglyphs are surrounded by borders filled with short radiating strokes.

Of the eighteen seals and two impressions of this type which were found between 1927 and 1932,[76] three seals (3099, 3100, and a 385) and one impression (e 1651) came from Level 4*a* M, two seals (d 2587 and e 1591) from Level 4*b* M, three (d 821, d 1881, and e 1993) from Level 4*c* M, eight seals (b 571, c 700, c 857, c 2168, d 1361, d 1840, d 2128, and e 270) and one impression (2225) from Levels 8–9 T, one seal (b 2225) from a refuse layer between Levels 9 and 10 T, and one (3095) from an undetermined deposit of a later period.

A disk with flat faces (Fig. 478) is another characteristic form of seal in this period. The edge is frequently concave, and the disk is perforated parallel to the faces. Nos. e 1645 and e 1783 are each decorated on one face only, the former with a scorpion, the latter with a linear design which probably represents an animal. Both faces of each of the other specimens show

[73] *OIP* XX, Fig. 81.

[74] *OIP* XIX 261.

[75] Cf. the bone pendant a 71 in the form of a perched bird in *OIP* XX, Fig. 83.

[76] *OIP* XXVII, Nos. 67, 69–76, 78–80, and 82–89.

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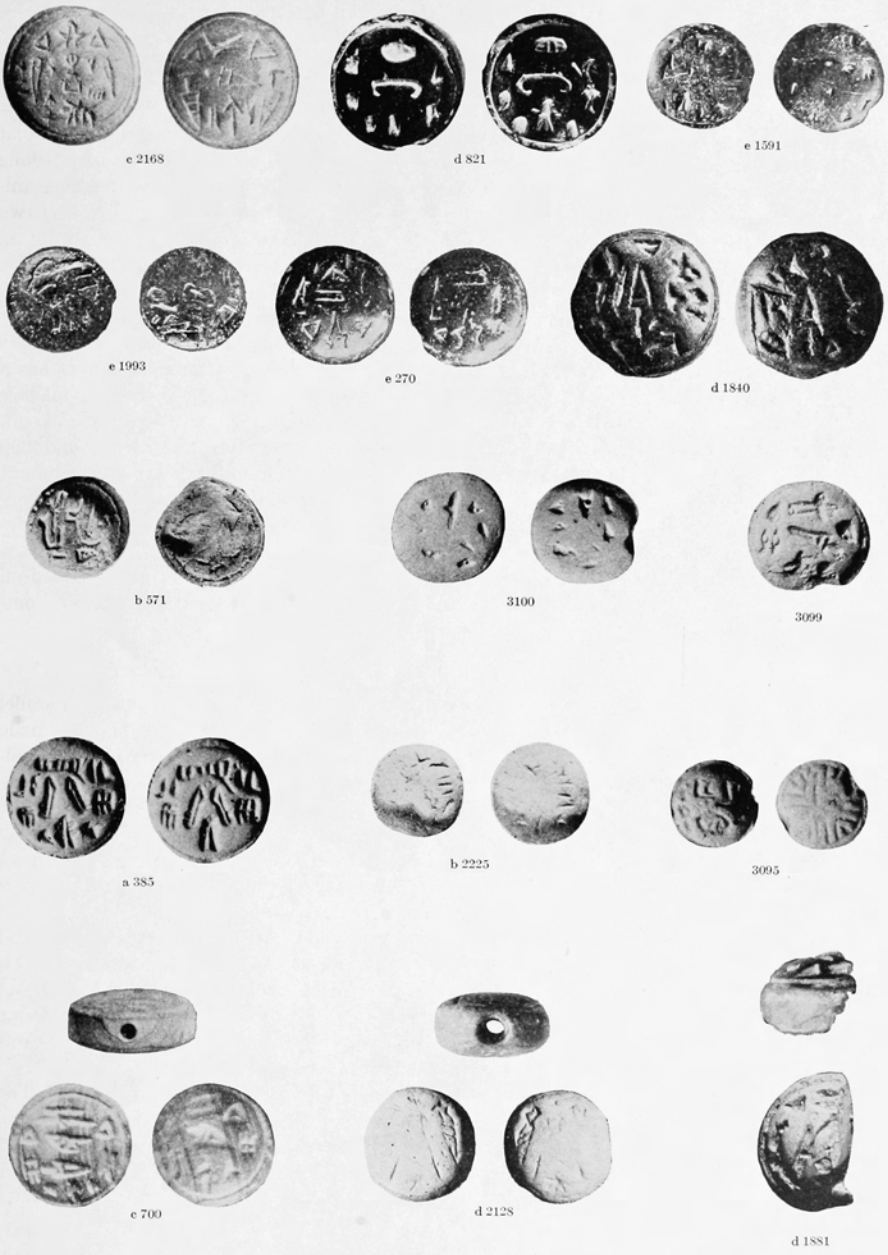

FIG. 476.—DISCOID SEALS WITH CONVEX FACES BEARING HIEROGLYPHIC INSCRIPTIONS. ACTUAL SIZE

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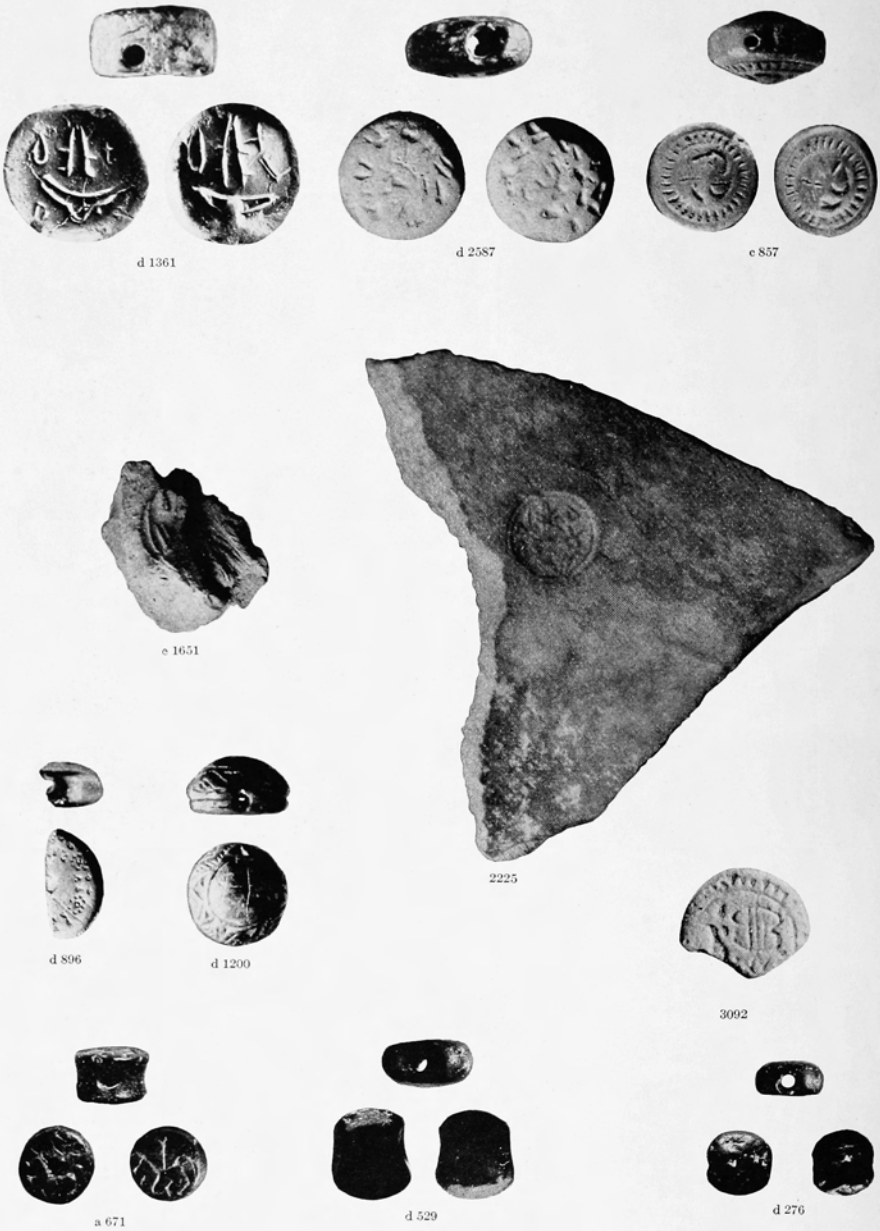

Fig. 477.—Stamp Seals and Impressions. Actual Size

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Fig. 478.—Discoid Seals and Stamp Seals with Handles. Actual Size

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engraving, most of which is purely geometrical ornamentation. No. b 2675[77] has on each face an ornamental border encircling marks which may represent writing of some sort. No. d 72 shows traces of what may possibly be hieroglyphs on each face. Nos. a 671, d 276, and d 529 (Fig. 477) seem to belong to this group. There is an animal on each face of No. a 671; the other two seals are so worn that the original forms are uncertain, and hardly any traces of engraving remain. The materials of the disk-shaped seals are serpentine, steatite, diorite, and limestone.

Of the eleven pieces in this group, one (d 276) was found in Level 4*a* M; two (e 1783 and e 2294) were found in Level 4*c* M; six (b 2675, c 625, d 529, d 1517, and d 1847 on the terrace and e 1645 in the lower fortress) were in refuse layers of the Post-Hittite–Phrygian period; one (a 671) was in a refuse deposit between Levels 3*b* and 4*a* M; and one (d 72) was in an undetermined deposit of a later period.

No. d 1200 (Fig. 477), a reddish jasper seal with circular base and domed back, was found in Levels 8–9 T. It has geometrical ornamentation on both back and base. No. d 896 (Fig. 477), a fragment of an approximately plano-convex seal somewhat similar in shape to No. d 1200, was found in a refuse deposit of a later period on the terrace.

Stamp seals with handles of various shapes (Fig. 478) resemble earlier seals, especially those of the Hittite period. The base of No. c 162 is trifoliate. The bases of Nos. c 1677 and c 1824 are rosette-shaped; a smaller seal of similar form is No. b 2423.[78] The others have rectangular or circular bases. Nos. c 713 and e 1271 are each decorated with a swastika. The base of No. e 1126 is divided into quadrants, filled alternately with horizontal and with vertical lines.[79] The base of No. e 2203 is divided by two lines crossing diagonally; three short lines appear in each angle. An interlaced band forms the design on No. d 2372. On No. c 1824 there is a rosette, on No. c 1677 a horned animal; No. c 162 is so corroded that no traces of the design remain. With the exception of Nos. c 1677 and e 2203, which are of stone, these seals are of bronze or copper.

Of the nine pieces in this group, two (e 1126 and e 2203) were found in Level 4*a* M; one (e 1271) was in Level 4*b* M; three (c 713, c 1677, and c 1824) were in Levels 8–9 T; one (c 162) was in a refuse deposit between Levels 7 and 8 T; one (d 2372) was in a refuse deposit between Levels 9 and 10 T; and one (b 2423) was in a much disturbed deposit of the Hittite period near the edge of the terrace (in GG 9), but was probably intrusive there.

No. e 2258 (Fig. 478), a pyramidal seal of serpentine, was found in a refuse layer between Levels 4*c* and 5 M and may belong to an earlier period. The design resembles that on No. e 2203. Pottery stamp seal e 983 (Fig. 479) and the much worn stone stamp c 1681 (Fig. 479) were found between the Hittite and the Post-Hittite–Phrygian levels on the terrace. Their attribution to this period is not certain. Hematite stamp seal c 2251 was found within a refuse pit of the Roman period, but surely originated during the Post-Hittite–Phrygian period. No. 3092, of reddish serpentine (Fig. 477), a fragment of a stamp seal, bears hieroglyphic signs;[80] it was found on the surface of the mound.

In 1929 an Egyptian scarab of steatite (b 611, Fig. 479) was found in X 19 in a level in which pottery of the Post-Hittite–Phrygian period predominated, but sherds of later periods also appeared. It is difficult to decide to which period the importation of this piece should be attributed, especially since Dr. T. George Allen dates the scarab between 1400 and

[77] *OIP* XXVII, No. 91.

[78] *OIP* XIX, Fig. 187.

[79] No. e 748 (*OIP* XXX 93), showing the same design, was found in a definite deposit of the following period but may well have originated in the Post-Hittite–Phrygian period.

[80] *OIP* XXVII, No. 68.

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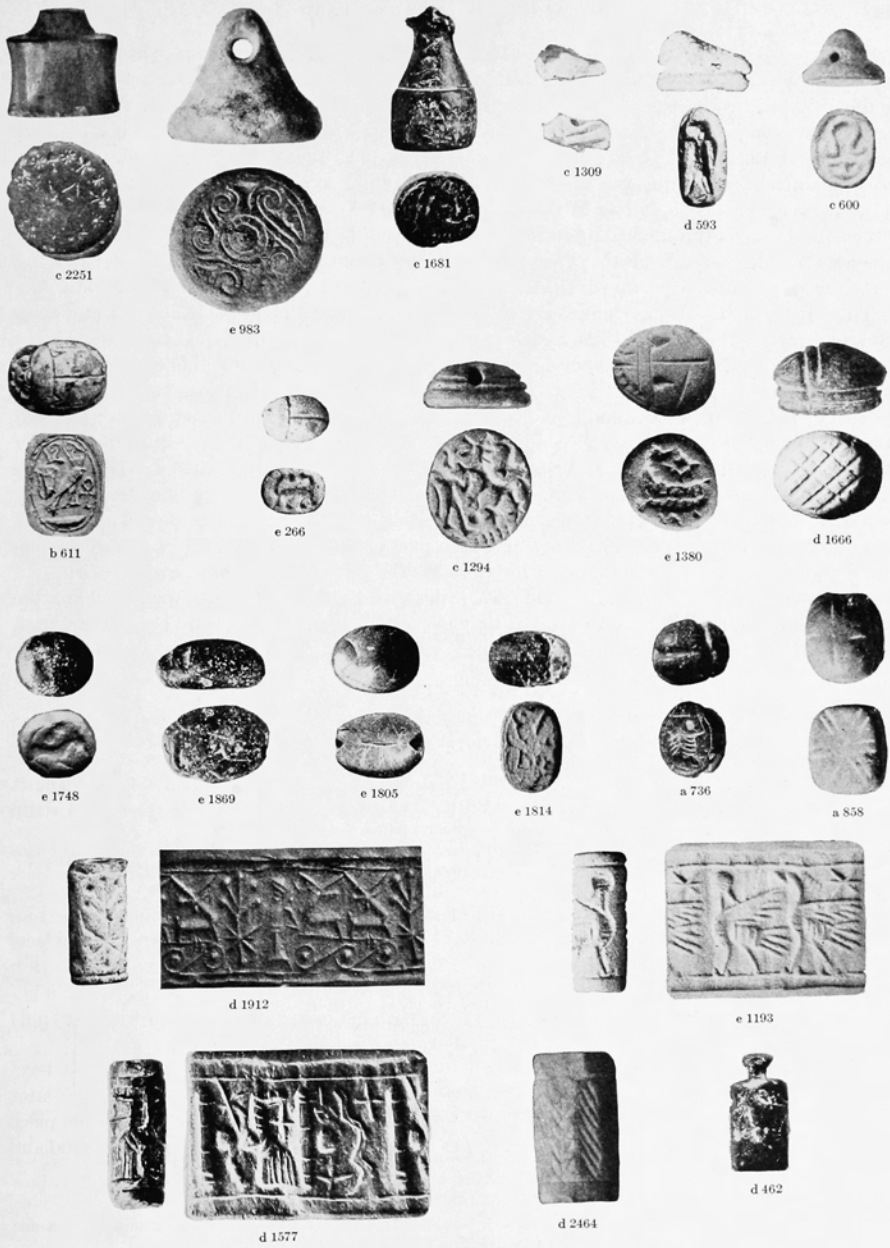

Fig. 479.—Stamp Seals and Cylinder Seals. Actual Size

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1200 B.C.[81] Besides this Egyptian scarab, eleven other scarabs or scaraboids may belong to this period (all but one illustrated in Fig. 479). The material of Nos. a 858, c 1294, e 266, and e 1380 is frit; No. e 1814 is of glass; the others are of chalcedony, diorite, limestone, or serpentine. One (e 1380) was found in Level 4*b* M; two (e 1814 and e 1869) were in Level 4*c* M; two (c 1294 and d 1666) were found in Levels 8–9 T. It is quite possible that the other six originated or were in use in the following period, for No. a 858 was found in a refuse deposit between Levels 3*b* and 4*a* M, Nos. e 266 and e 1748 were found in a refuse deposit between the Post-Hittite–Phrygian and Hellenistic layers in the lower fortress, No. a 736 was among the fallen stones of the Post-Hittite–Phrygian citadel wall, and Nos. b 819[82] and e 1805 were in refuse deposits which may have belonged to an earlier or a later period.

Three frit stamp seals have unusual forms (Fig. 479). No. d 593, in the shape of a crouching lion, and fragmentary seal c 1309, which seems to have had a cross-shaped base, were found in Levels 8–9 T. No. c 600, shaped like a button, was found in a refuse deposit of undetermined period.

Five cylinder seals were found in deposits of this period. Nos. d 1912 and e 1193 are of frit and are undoubtedly imported pieces; No. d 1912 shows definite relationship to the cylinder seals of Kirkuk, and No. e 1193 is Assyrian in style. The steatite cylinder seal d 1577 may have originated in Asia Minor; its design is not recognizable. No. d 2464 is a limestone cylinder seal or bead with a panel of slanting lines alternating with a herringbone design. No. d 462 is a much worn serpentine cylinder seal in which part of the original bronze or copper mounting remains. No. e 1193 was found in Level 4*b* M; the others came from Levels 8–9 T.

Stamp seals a 430, d 871, e 1787, and e 2221, described on pages 223–26, were found on the citadel mound under such conditions that they may well have originated and been used during the Post-Hittite–Phrygian period.

LIST OF STAMP SEALS

3092 (Fig. 477; *OIP* VII 48; *OIP* XXVII, No. 68). Reddish serpentine; fragment of stamp seal with remains of crosswise perforation; "Hittite" hieroglyphs appear within a circular border surrounded by wedges. Found on the surface.

3095 (Fig. 476; *OIP* VII 47; *OIP* XXVII, No. 69). Limestone, discolored by heat; discoid seal or amulet with convex faces; perforated; one face shows "Hittite" hieroglyphs; the other shows a cross-shaped design with angles in its corners. Found in an undetermined refuse deposit of a later period in AA 15.

3099 (Fig. 476; *OIP* VII 47; *OIP* XXVII, No. 70). Limestone, discolored by heat; discoid seal or amulet with convex faces; perforated; one face shows "Hittite" hieroglyphs within a single-line border; the other face is plain. Found in Level 4*a* M in P 10–11.

3100 (Fig. 476; *OIP* VII 47; *OIP* XXVII, No. 71). Black serpentine; discoid seal or amulet with convex faces; perforated; much worn; each face shows "Hittite" hieroglyphs within a single-line border. Found in Level 4*a* M in P–Q 12.

a 385 (Fig. 476; *OIP* XIX 261; *OIP* XXVII, No. 72). Serpentine; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs. Found in Level 4*a* M in M 14.

a 671 (Fig. 477; *OIP* XX 64). Serpentine; discoid seal or amulet with concave edge; perforated; on one face there seems to be a flying bird above a walking animal; the other face shows a walking animal pierced by an arrow. Found in refuse between Levels 3*b* and 4*a* M in M 13.

a 736 (Fig. 479; *OIP* XIX 262). Serpentine; scarab, perforated lengthwise; much worn base seems to show an anthropomorphic design within a linear border. Found among the fallen stones of the Post-Hittite–Phrygian citadel wall in P 13.

a 858 (Fig. 479; *OIP* XIX 262–63). Greenish frit; scaraboid, perforated lengthwise; on the base two pairs of diagonal lines are crossed by a third pair of lines. Found in refuse between Levels 3*b* and 4*a* M in M 12.

b 571 (Fig. 476; *OIP* XIX 261; *OIP* XXVII, No. 73). Dark brown serpentine with reddish shades; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs within a single-line border. Found 1.00–1.30 deep in AA 16, in a Post-Hittite–Phrygian deposit.

[81] *OIP* XIX 263.

[82] *OIP* XIX, Fig. 345.

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b 611 (Fig. 479; *OIP* XIX 263). Steatite; scarab, perforated lengthwise; base shows Horus as a falcon wearing the double crown of Egypt; before him stands an ankh, behind him a uraeus serpent wearing the crown of Lower Egypt. According to Dr. T. George Allen "the back of the scarab fixes its date in general to the period between 1400 and 1200 B.C." Found 1.70 deep in X 19 in a refuse deposit where sherds of the Post-Hittite–Phrygian period prevailed.

b 819 (*OIP* XIX 262). Serpentine; scaraboid, perforated lengthwise; much worn base shows traces which may represent a walking animal with a bird above its back. Found 3.60–3.80 deep in X 19 in a much disturbed refuse layer.

b 2225 (Fig. 476; *OIP* XIX 261; *OIP* XXVII, No. 74). Serpentine; discoid seal or amulet with convex faces; perforated; much worn; each face shows traces of "Hittite" hieroglyphs within a single-line border. Found in mixed refuse of the Hittite and Post-Hittite–Phrygian periods in DD–EE 10.

b 2423 (*OIP* XIX 149). Bronze or copper; the handle, oval in cross-section, narrows toward the top and ends in an expanded, perforated oval; the corroded base is rosette-shaped and shows traces of two concentric circles in the center with six loops radiating from the outer one. Found in GG 9 in a much disturbed deposit of the Hittite period, where it was probably intrusive.

b 2675 (Fig. 478; *OIP* XIX 261; *OIP* XXVII, No. 91). Serpentine; discoid seal or amulet; perforated; each face shows signs which may be meant for writing, surrounded by an ornamental border. Found in a refuse deposit of the Post-Hittite–Phrygian period in YY 26.

c 162 (Fig. 478). Bronze or copper; conical handle ending in a hammer-shaped knob, perforated lengthwise; trifoliate base; much corroded. Found 2 meters deep in J 29, in a refuse deposit of Level 8 T.

c 600 (Fig. 479). Frit; seal or amulet; knob handle, perforated lengthwise; oval base shows a symbol resembling that of Ninḫursag above a semicircle divided into two quadrants. Found in a refuse deposit in L 29.

c 625 (Fig. 478). Steatite; discoid seal or amulet with slightly concave edge; perforated; one face is divided into quadrants, opposite quadrants being decorated alike; on the other face a broad band filled with a motive repeated seven times surrounds a circle from which project short raylike strokes. Found 2.85–3.50 deep in XX 24.

c 700 (Fig. 476; *OIP* XXVII, No. 75). Yellowish limestone; discoid seal or amulet with convex faces; perforated; each face shows a "Hittite" hieroglyphic inscription within a single-line border. Found 0–.90 deep in I 26, in a refuse deposit.

c 713 (Fig. 478). Bronze or copper; slender handle; nearly square base shows a swastika within a single-line border. Found in Levels 8–9 T in VV 24.

c 857 (Fig. 477; *OIP* XXVII, No. 76). Pottery; discoid seal or amulet with conical rather than convex faces; perforated; each face shows "Hittite" hieroglyphs encircled by a border consisting of two lines connected by short lines. Found 0–1.10 deep in I 28.

c 1294 (Fig. 479). Frit; scaraboid, perforated lengthwise; the elliptic base shows a human figure fighting a lion; between them is a disk, and behind the lion is a small bird; below the group is a spraylike design. Found in Levels 8–9 T in J 29.

c 1309 (Fig. 479). Frit; fragment of a stamp seal, probably with a cross-shaped design on a cross-shaped base. Found 2.40–3.00 deep in ZZ 25.

c 1677 (Fig. 478). Diorite; conical handle ending in a perforated knob; rosette-shaped base shows a walking horned animal and linear filling. Found in Levels 8–9 T in CC 24.

c 1681 (Fig. 479). Steatite; conical handle ends in a perforated knob, now broken; nearly oval base shows a roughly engraved design, now unrecognizable; much worn. Found 2.60 deep in AA 24.

c 1824 (Fig. 478). Bronze or copper; handle perforated near top; rosette-shaped base with four crossed lines. Found in Levels 8–9 T in R 29.

c 2168 (Fig. 476; *OIP* XXVII, No. 78). Yellowish limestone; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs within a single-line border. Found 1.80–2.60 deep in R 29.

c 2251 (Fig. 479). Hematite; faceted handle, now broken off; the surface of the fractured handle seems to have been artificially smoothed; circular base, much worn, shows a border of rosettes interspersed with two other elements; in the center, traces of what may have been hieroglyphic signs. Found 2.90–3.30 deep in R 29 in a refuse pit of the Roman-Byzantine period.

d 72 (Fig. 478). Steatite; discoid seal; perforated; on each face appear faint traces of what may have been "Hittite" hieroglyphs. Found .90–1.23 deep in T 28.

d 276 (Fig. 477). Serpentine; much worn discoid seal or amulet; perforated; in the middle of one face there is a hole. Found in Level 4*a* M in O 11.

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d 529 (Fig. 477). Serpentine; discoid seal or amulet; perforated; much worn; since there is no trace of engraving, it may be a bead. Found 2.00–2.70 deep in U 30.

d 593 (Fig. 479). Frit; stamp seal in the form of a crouching lion; perforated lengthwise; base shows a walking human figure. Found 2.70–3.00 deep in U 30.

d 821 (Fig. 476; *OIP* XXVII, No. 79). Yellowish limestone; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs within a single-line border. Found 7.30–7.60 deep in O 11 at the base of the citadel wall (probably Level 4*c* M).

d 896 (Fig. 477). Serpentine; fragment of a discoid seal or amulet with one face convex and a vertical and a horizontal perforation; traces of an ornamental border on each face. Found 1.30–2.10 deep in R 31.

d 1200 (Fig. 477). Reddish jasper; domed back, perforated; circular base much worn; geometric ornamentation on back and base. Found 1.80–2.05 deep in Q 27.

d 1361 (Fig. 477; *OIP* XXVII, No. 80). Serpentine, discolored by heat; discoid seal or amulet; perforated; each face shows "Hittite" hieroglyphs. Found in Level 8 T in U 30.

d 1517 (Fig. 478). Serpentine; discoid seal or amulet; perforated; traces of dissimilar linear designs appear on the two faces. Found 1.80–2.50 deep in S 27.

d 1666 (Fig. 479). Diorite; scaraboid, perforated lengthwise; oval base shows four lines crossed diagonally by four others. Found 4.20–4.60 deep in T 30.

d 1840 (Fig. 476; *OIP* XXVII, No. 82). Serpentine; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs within a single-line border. Found 2.20–2.50 deep in Q 31.

d 1847 (Fig. 478). Diorite; discoid seal or amulet with slightly concave edge; perforated; one face shows a cross-shaped design with decorated angles; the other shows three concentric rings; short slanting lines are attached to the outer two. Found 2.50–2.80 deep in R 31.

d 1881 (Fig. 476; *OIP* XXVII, No. 83). Jasper, discolored by heat; fragment of a discoid seal or amulet with convex sides; perforated; one face shows "Hittite" hieroglyphs within a single-line border. Found in Level 4*c* M in O 10.

d 2128 (Fig. 476; *OIP* XXVII, No. 84). Limestone; discoid seal or amulet with slightly convex faces; perforated; each face shows traces of "Hittite" hieroglyphs within a single-line border. Found 3.65 deep in S 28.

d 2372 (Fig. 478). Bronze or copper; handle perforated at top; circular base, much corroded, shows an interlaced band. Found in Levels 9–10 T in S 28.

d 2587 (Fig. 477; *OIP* XXVII, No. 85). Serpentine; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs. Found in O 9 at the base of the citadel wall, presumably in Level 4*b* M.

e 266 (Fig. 479). Frit; scarab, perforated lengthwise; base shows a quadruped. Found in a refuse deposit between the Post-Hittite–Phrygian and Hellenistic levels in D–E 8.

e 270 (Fig. 476; *OIP* XXVII, No. 86). Serpentine; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs within a single-line border. Found in a refuse deposit above the level of the Hittite period in S 21.

e 983 (Fig. 479). Pottery; conical handle, perforated near the top; circular base shows a border of scrolls around two concentric circles connected by short lines; the center is plain. Found in a refuse deposit above the northern gateway of the Hittite period in S 0.

e 1126 (Fig. 478). Bronze or copper; handle perforated near top; rectangular base is divided into quadrants, each filled with four lines (vertical in two quadrants and horizontal in two). Found in Level 4*a* M in O 12.

e 1271 (Fig. 478). Bronze or copper; handle perforated near top; circular base shows a swastika. Found in Level 4*b* M in O 12.

e 1380 (Fig. 479). Light bluish frit; scarab, perforated lengthwise; on the base appears a reclining quadruped(?) with a six-pointed star above its back. Found in Level 4*b* M in O 12.

e 1591 (Fig. 476; *OIP* XXVII, No. 87). Serpentine; discoid seal or amulet with convex faces; perforated; each face shows traces of "Hittite" hieroglyphs. Found in Level 4*b* M in N 13.

e 1645 (Fig. 478). Serpentine; discoid seal or amulet; perforated; on one face is shown a scorpion(?). Found in a refuse deposit of the Post-Hittite–Phrygian period in C–D 8.

e 1748 (Fig. 479). Yellowish chalcedony; scaraboid, perforated lengthwise; on the much worn base appears a quadruped, seemingly with two disks above its back. Found in a deposit of the Post-Hittite–Phrygian period in I 8.

e 1783 (Fig. 478). Grayish white limestone; discoid seal or amulet; perforated; one face shows a crudely incised linear design, probably an animal motive. Found in Level 4*c* M in O 12.

e 1805 (Fig. 479). Grayish limestone; scaraboid, perforated lengthwise; base much worn. Found in a refuse deposit presumably of the Post-Hittite–Phrygian period in X 1–2.

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e 1814 (Fig. 479). Bluish green glass; scaraboid, perforated lengthwise; the much corroded base seems to show a crowned winged sphinx preceded by a uraeus serpent. Found in Level 4*c* M in O 11.

e 1869 (Fig. 479). Serpentine; scaraboid, perforated lengthwise; oval base shows faint traces of a now unrecognizable design. Found in Level 4*c* M in O 12.

e 1993 (Fig. 476; *OIP* XXVII, No. 89). Serpentine; discoid seal or amulet with convex faces; perforated; each face shows "Hittite" hieroglyphs. Found in Level 4*c* M in O 13.

e 2203 (Fig. 478). Serpentine; handle perforated near top; nearly square base is divided into four parts by two diagonal lines; each part is decorated with three short lines. Found in Level 4*a* M in P 10.

e 2258 (Fig. 478). Serpentine; pyramidal seal with round top and large transverse perforation; nearly square base is divided into four parts by two diagonal lines; each part contains a few short radiating lines. Found beneath the foundations of Level 4*c* M in N 11.

e 2294 (Fig. 478). Serpentine; discoid seal or amulet with concave edge; perforated; each face shows an ornamental border. Found below the foundations of Level 4*c* M in M 11.

LIST OF STAMP SEAL IMPRESSIONS (Fig. 477 and Pl. XXV)

2225 (*OIP* VII 50; *OIP* XXVII, No. 67). Sherd of wet-smoothed buff ware with an impression of a seal or amulet with convex face showing "Hittite" hieroglyphs within a single-line border. Found 1.20–2.50 deep in Z–AA 12–13 in a Post-Hittite–Phrygian deposit.

e 1651 (*OIP* XXVII, No. 88). Fragment of a pottery "label" with part of an impression of a discoid seal with convex faces(?) showing "Hittite" hieroglyphs within a single-line border. Found in Level 4*a* M in L 13.

LIST OF CYLINDER SEALS (Fig. 479)

d 462 Serpentine; much worn and cracked; part of the bronze or copper mounting remains in the perforation. The design shows faint traces of two winged monsters, each with one paw raised, seated one behind the other facing a sacred tree. Found 1.80–2.30 deep in S 30.

d 1577 Steatite; perforated lengthwise. An unrecognizable design appears between single-line borders. Found 3.30–3.50 deep in T–U 27.

d 1912 Frit; perforated lengthwise. A bearded human figure wearing a round cap and a long garment, hands folded on his chest, faces a sacred tree; behind him, above a scroll design, are two reclining long-horned animals, back to back, their heads turned to face each other; at top and bottom single lines form borders. Found 2.90 deep in R 31.

d 2464 Limestone; cylinder seal or bead, perforated lengthwise. Herringbone designs alternate with panels of slanting lines; at top and bottom single lines form borders. Found in a deposit of the Post-Hittite–Phrygian period in Q 32.

e 1193 Frit; perforated lengthwise. A bird-man walks before a bird; above the wings of the bird appears a six-pointed star; at top and bottom single lines form borders. Found in Level 4*b* M in O 11.

STONE OBJECTS

As in the previous periods, many implements of chalcedony, flint, and obsidian were found. They are not different from the implements of the earlier periods. Noteworthy are a carefully worked blade (e 1384, Fig. 480) and two points (c 1111 and e 734, Fig. 480).

The hammer axes and maceheads (Fig. 481) show no new forms. The preferred material seems to have been diorite. Maceheads e 1383, of marble, and d 1657, of porphyry, are crudely worked. No. e 692 is a hammer with two blunt ends and a groove around the middle. The use of the large stone ring e 1382 is problematical.

The trapezoidal flat ax with one cutting edge appeared again in this period (e.g., c 426, c 725, e 408, and e 1209, Fig. 480). No. e 296 is a well worked ax of greenish limestone. A depression to facilitate attachment encircles it near the slightly concave blunt end. A fragmentary mold (d 2682) may have served for a bronze or copper axhead with lugs.

Oblong objects with rectangular or rounded cross-section and with a perforation near one end (Fig. 482) appear very frequently in this period; probably used for sharpening or polishing, they are very similar to those of the previous period (cf. Figs. 261–62). In the perforation of No. d 1379 a small piece of bronze or copper wire was preserved. Drill handles of the same

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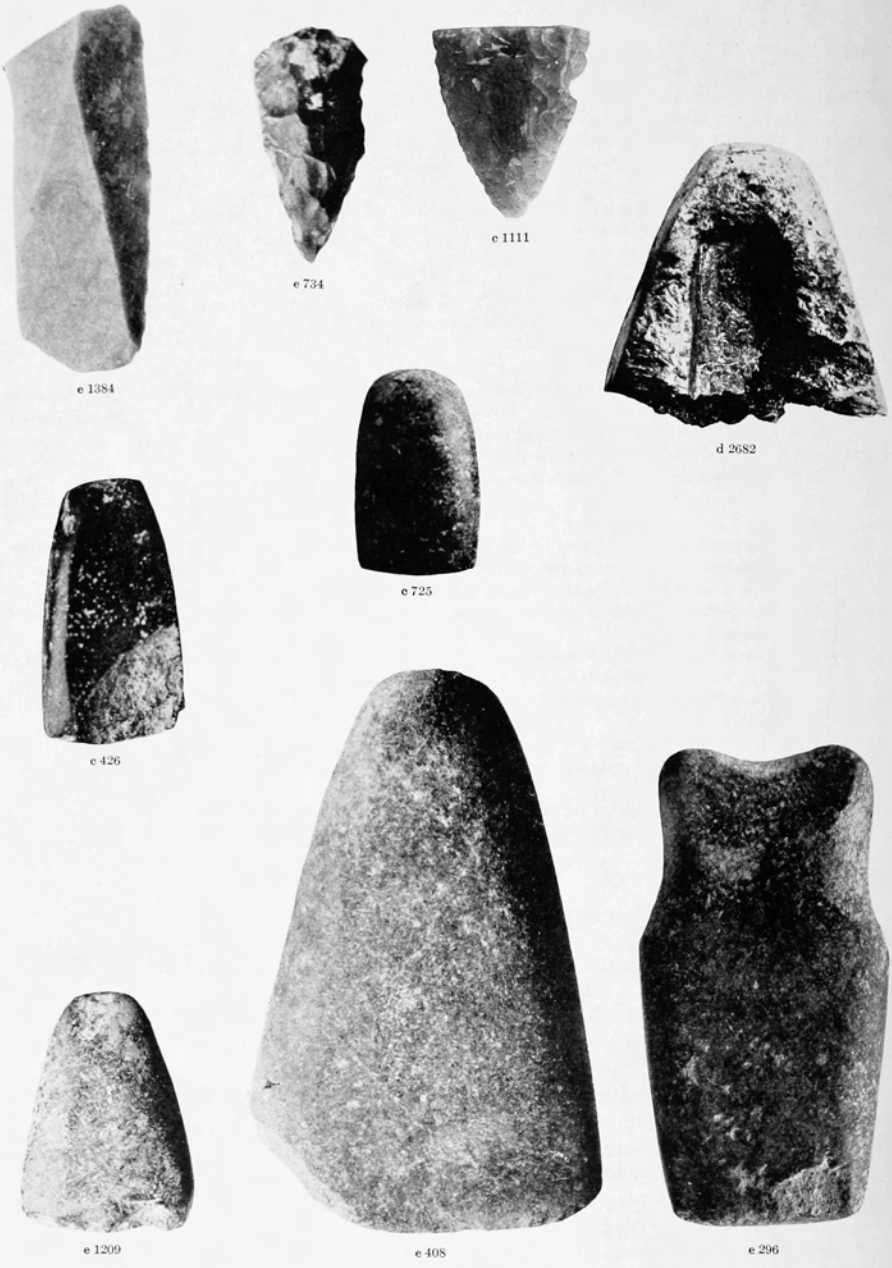

Fig. 480.—Stone Objects. Actual Size

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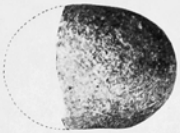
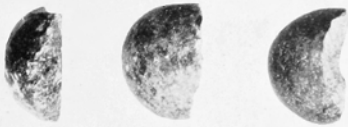
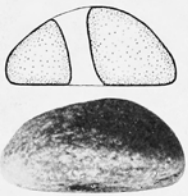
e 847



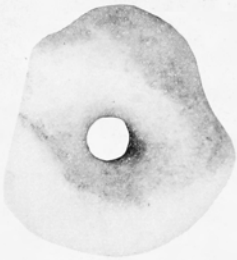
d 1771



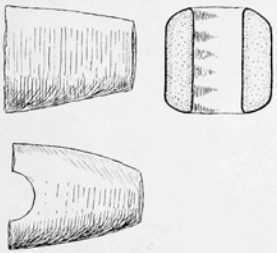
e 1282 e 1240 e 972



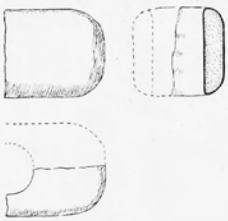
d 1657



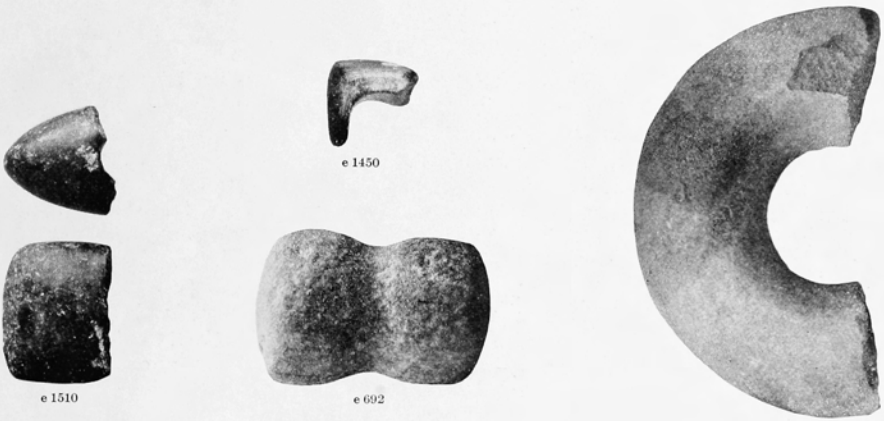
e 1383



e 617



e 337



e 1510 e 1450 e 692 e 1382

Fig. 481.—Stone Maceheads and Hammer Axes. Scale, 1:2

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Fig. 482.—Polishing Stones and a Drill Handle. Actual Size

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type as those of the Hittite period were common (e.g., d 1810, Fig. 482); so also were pebbles for polishing (e.g., d 2735 and e 733).

With this period three-legged vessels of sandstone or basalt begin to appear on the Alişar mound (e.g., d 1973 and e 1275*a*, Fig. 483). No. e 379 is a fragment of a leg of such a vessel which was very carefully worked. Nos. c 2076 and e 1301 may have been lamps.

A form of "whorl" typical of this period is roughly hemispherical and made of anhydrite (Fig. 484). The flat base is often decorated with incised concentric rings or rings with centered dots; around the side of No. e 615, near the base, is a border of rings with centered dots. Another common form of "whorl" is seen in the first two rows of Figure 485. "Whorls" of this shape are usually of serpentine, but No. e 1592 is of onyx. Other types illustrated in Figure 485 are common during the following periods also; in most cases the material is serpentine, diorite, or sandstone. No. e 2180 is of marble, No. e 1753 of slate, No. e 997 of porphyry, and No. d 1689 of alabaster. Two "whorls" in hoard e 2002–13 (Fig. 506) are of stone. Stone "whorls" of truncated conical form were found in the destruction layer above Level 4*a* on the citadel mound, but they most probably belong to the following period.[83]

Stone disks with concave edges were common (e.g., c 273, c 624, and e 204, Fig. 486). No. c 273 is decorated on one face with a crudely engraved design. Nos. d 2006 (nummulitic limestone) and d 2314 (marble) may have been lids. Serpentine disk d 1222, with a cross-shaped design on each face, may have been a pendant or an amulet. The use of No. d 1899, an object made of tufa, is problematical. No. c 70 is a carefully faceted hematite object, perhaps a weight or an amulet.

Other stone objects are shown in Figure 487; those in the last row have the form of knobs but served perhaps as gaming pieces. Beads and small pendants were numerous; most of them are of white limestone, serpentine, or diorite. The carefully scalloped bead d 937 is of rock crystal. No. d 1791 and the faceted bead c 2512 are of reddish chalcedony. Nos. d 1262 and d 518 are of banded agate, and Nos. d 914 and e 496 are of mottled jasper. No. d 627 is a serpentine bead with yellow and white inlays.

The form of hand mill used from the Chalcolithic period on persisted. Door sockets and simple hammerstones were common.

Stone figurines are described on pages 410–14; stone seals, on pages 414–23.

BONE OBJECTS

With few exceptions the bone objects of this period are very uninteresting. Many awls were found (e.g., Fig. 488), all of types which have been recognized in earlier periods. No. d 688 is a fragment of a handle. Only one fragmentary pin was found (c 1675). Although pin b 409,[84] with a head in the form of a bird perched on a cube, was found in a definite deposit of this period, it most probably originated during the Hittite period. No similar pieces have been found so far in Post-Hittite–Phrygian deposits. Knucklebones with from one to three perforations were numerous. No. e 999 was "loaded" with iron. Perforated human finger bones also were found (e.g., e 225).

The use of two carefully worked bone points (e 1650 and e 2253, Fig. 489) is problematical. The small bone point e 1289*a* is notched at its upper end. Nos. e 315 and e 1183 are bone tubes of types well known from the Hittite period. No. e 1585, probably a handle, is very carefully worked. Each of the four sides has a different decoration; one side shows three birds. Nos. c 2511, e 350, and e 1066 may have been lids for boxes. Nos. e 2250, e 2251, and e 2251*a* were perhaps pieces of inlay. No. e 1266 is a spatulate object. The small piece of bone No.

[83] *OIP* XXX 101.

[84] *OIP* XX 82–83.

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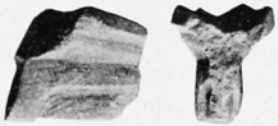
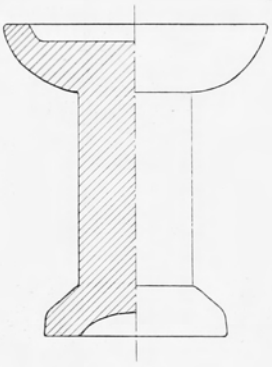


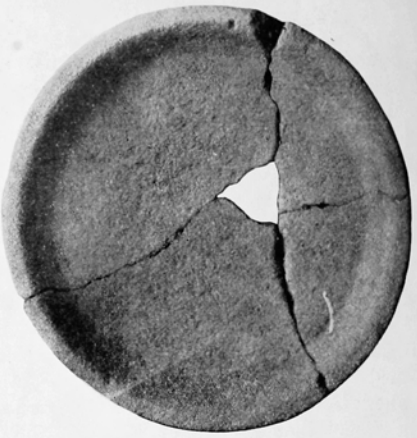
e 379

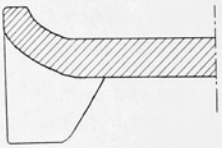
e 1275a

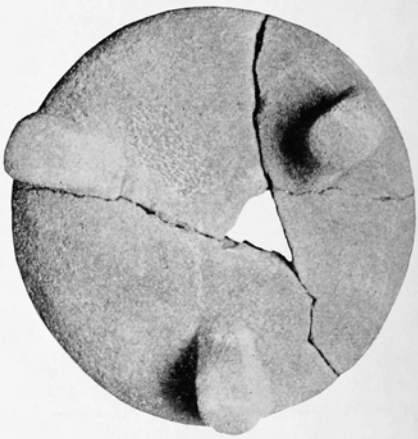
e 1301



e 2076







d 1973

Fig. 483.—Stone Vessels. Scale, 2:5

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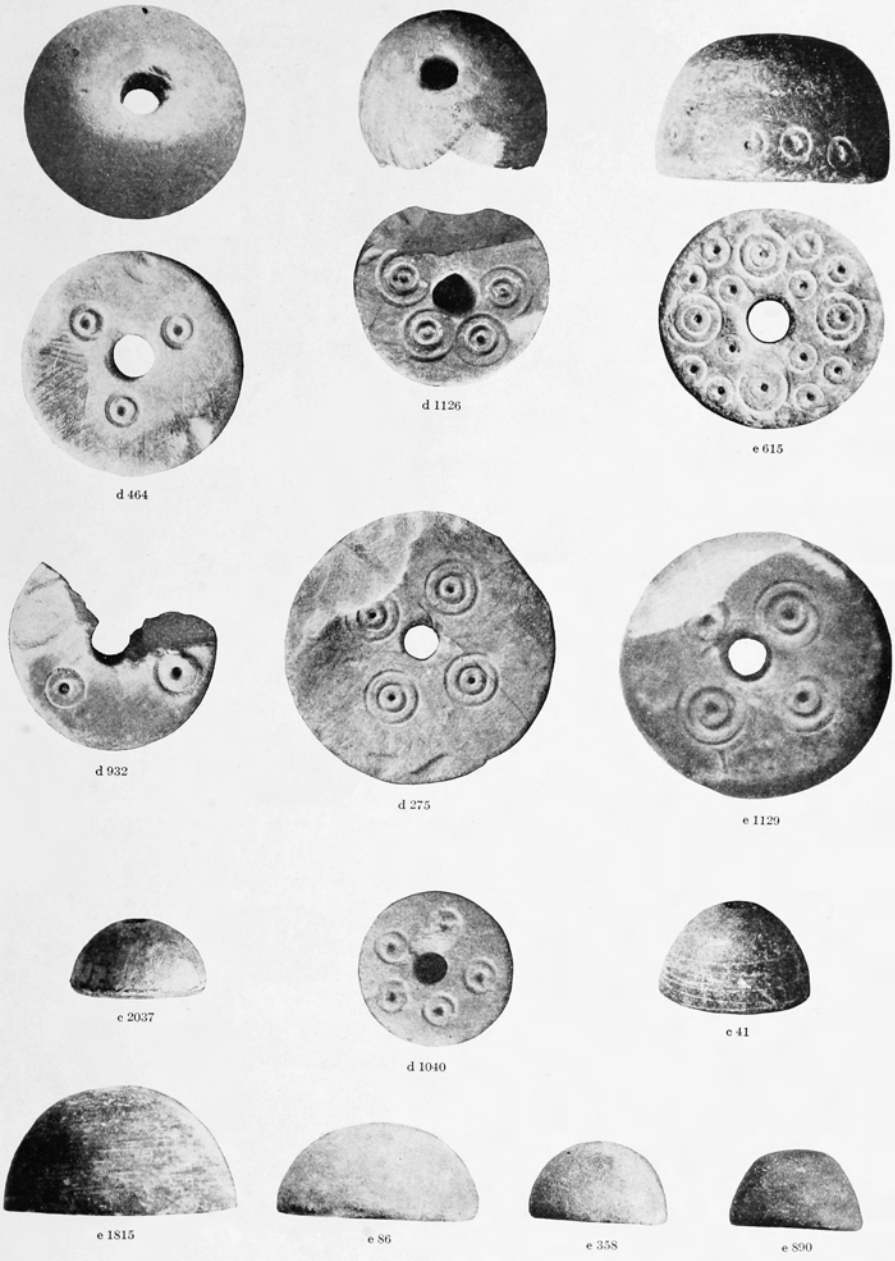

Fig. 484.—Typical Stone "Whorls." Actual Size

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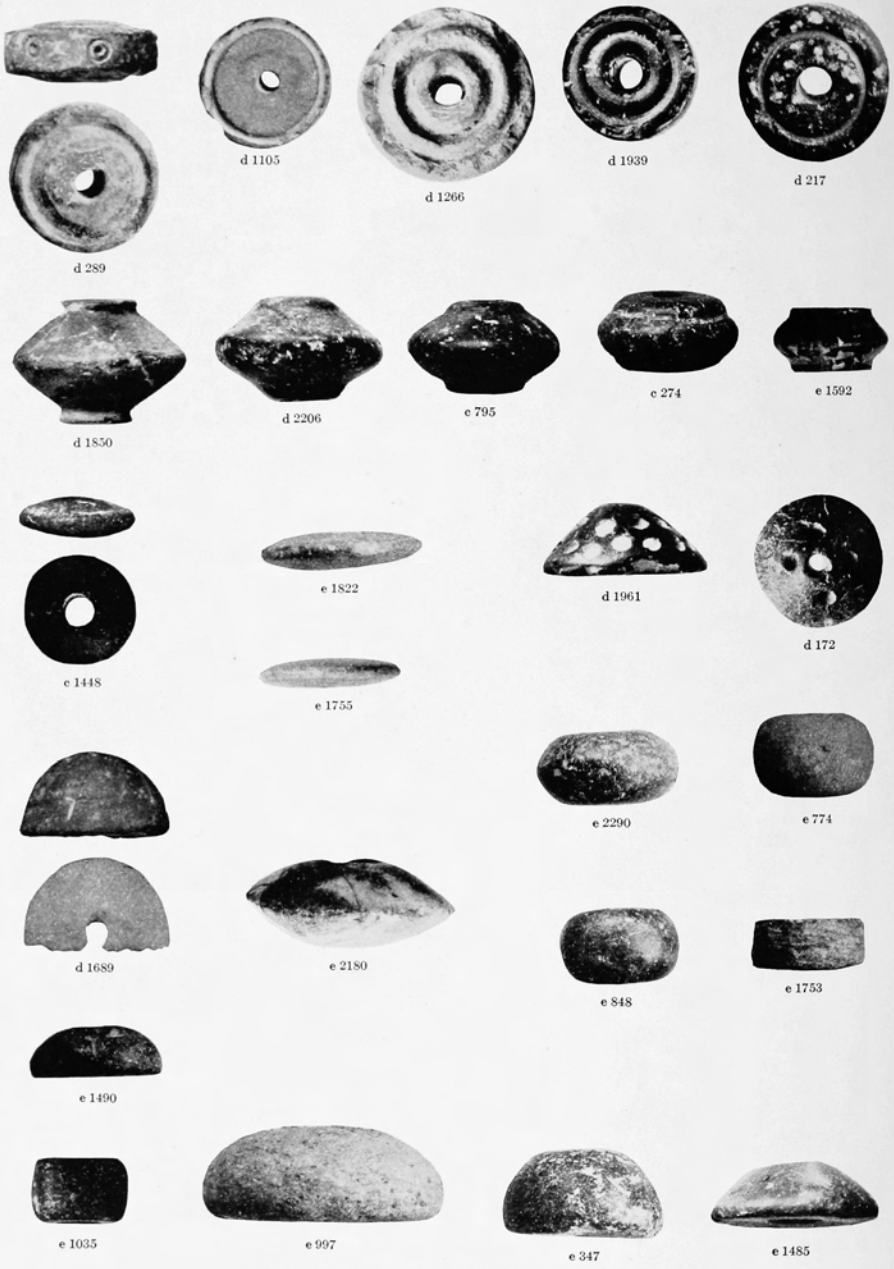

Fig. 485.—Stone "Whorls." About Actual Size

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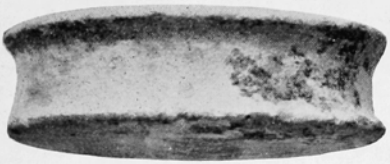
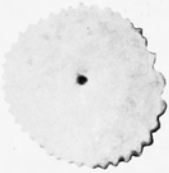


e 273

e 624

e 204

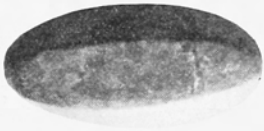


d 2314

d 2006

d 1222

d 1899



e 70

Fig. 486.—Miscellaneous Stone Objects. Actual Size

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Fig. 487.—Stone Beads and Gaming Pieces(?). Actual Size

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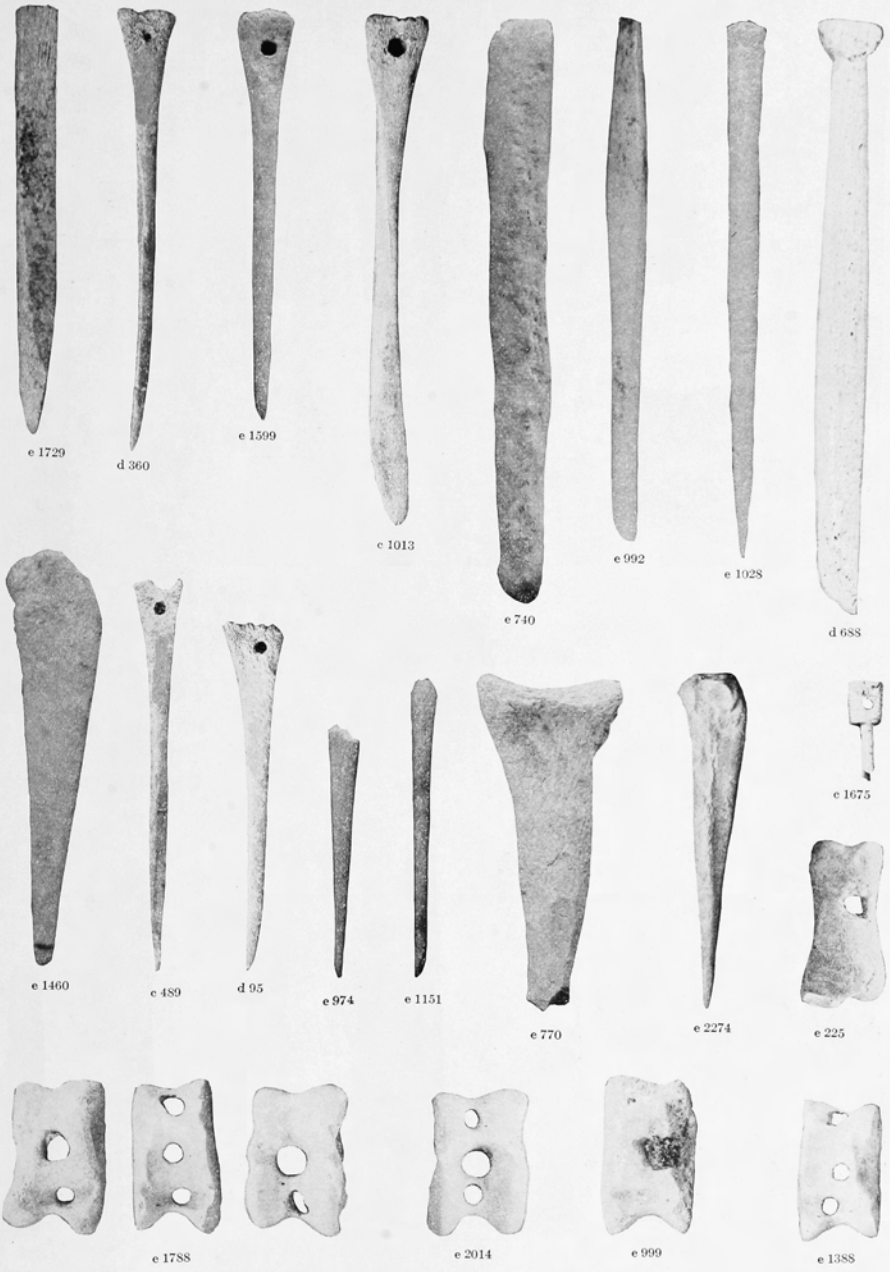

Fig. 488.—Bone Objects. Actual Size

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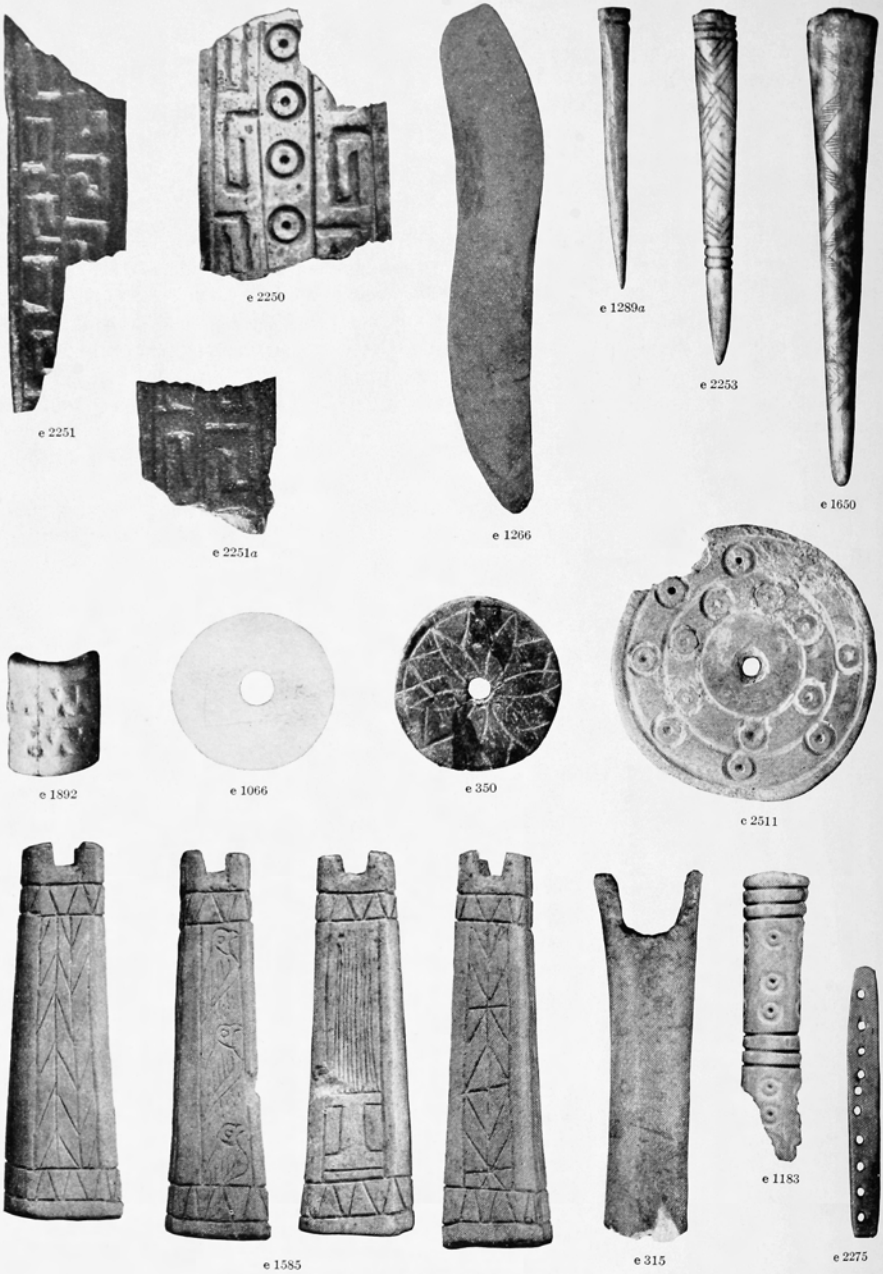

Fig. 489.—Bone Objects. Actual Size

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e 2275 has ten perforations; it may belong to a type of object which is especially common during the next period.[85] No. e 1892 is a small decorated cylinder.

For unwrought animal bones and shells see *OIP* XXX 294–309 and 324–27.

METAL OBJECTS

BRONZE OR COPPER

Nearly all the forms of metal pinheads (Figs. 490–92) had appeared in previous periods, and it is not possible to identify any as "typical." Truncated biconical heads; discoid heads, plain, scalloped, or fluted; scrolled heads; globular heads—these and other forms continued to appear. Some unusual forms are shown in Figure 492. No. e 351 is a trifoliate head; pin e 447 has a large hollow hemispherical head. The heads of Nos. e 222 and e 2243 are very elaborate, the top of No. e 222 being perforated and having a ring inserted.

Needles (Fig. 492) had eyes formed by slitting (e.g., d 628 and c 2286) or by flattening the upper ends and turning them over (e.g., e 1194 and e 2204). No. d 2563 is a needle with a slit eye in which a piece of bronze or copper wire with which it had been threaded was still preserved.

With this period fibulae appear for the first time on the Alişar mound. The following table indicates the distribution by type of all the bronze or copper fibulae found at Alişar between 1927 and 1932.[86] Types I and II probably belong to the Post-Hittite–Phrygian period. Type

BRONZE OR COPPER FIBULAE

Type	Number of Examples	Level							
		Post-Hittite–Phrygian				Between Post-Hittite–Phrygian and Hellenistic		Hellenistic or Later	
		4*c* M	4*b* M	4*a* M	Terrace	Mound	Terrace	Mound	Terrace
I*a*	23	2	4	12	2	2	.....	1	.....
I*b*	13	.....	2	6	3	1	.....	1	.....
II*a*	5	2	2	.....	1	.....	.....	.....	.....
II*b*	7	2	1	1	1	.....	2	.....	.....
II*c*	2	.....	.....	.....	.....	.....	2	.....	.....
III*a*	13	.....	.....	.....	5*	.....	3	.....	5
III*b*	5	.....	.....	.....	1	.....	4	.....	.....
III*c*	1	.....	.....	.....	.....	.....	1	.....	.....
IV	4	.....	.....	.....	1	.....	.....	.....	3
V	11	.....	.....	.....	.....	.....	2	.....	9
VI	2	.....	.....	1	.....	.....	.....	.....	1
VII	5	.....	.....	.....	.....	.....	.....	.....	5

* One piece (b 462) was found in F 14 in 1929 "sufficiently deep to minimize the possibility that it had intruded from Alişar IV [Post-Hittite–Phrygian] refuse on top" (*OIP* XIX 208). Nevertheless, this piece is surely intrusive from a later period.

I (Fig. 493) is bent slightly off center; the cross-section of Type I*a* is roughly circular, that of Type I*b* (e.g., the last two rows of Fig. 493, clearest in d 216) is rectangular. Figure 494 shows Type II fibulae. Type II*a* (e.g., e 2287) has at the bend a large globe, and between it and each end of the bow a large disk. On Type II*b* (e.g., d 1058, e 1623, and e 1919) the bend is accentuated by a hemispheroidal protuberance; between this and the ends of the bow are disks or globes. Type II*c* (c 692 and d 994) is decorated with five equidistant globes. Several

[85] *OIP* XXX, Fig. 100.

[86] Cf. *OIP* XXX 110 and 174.

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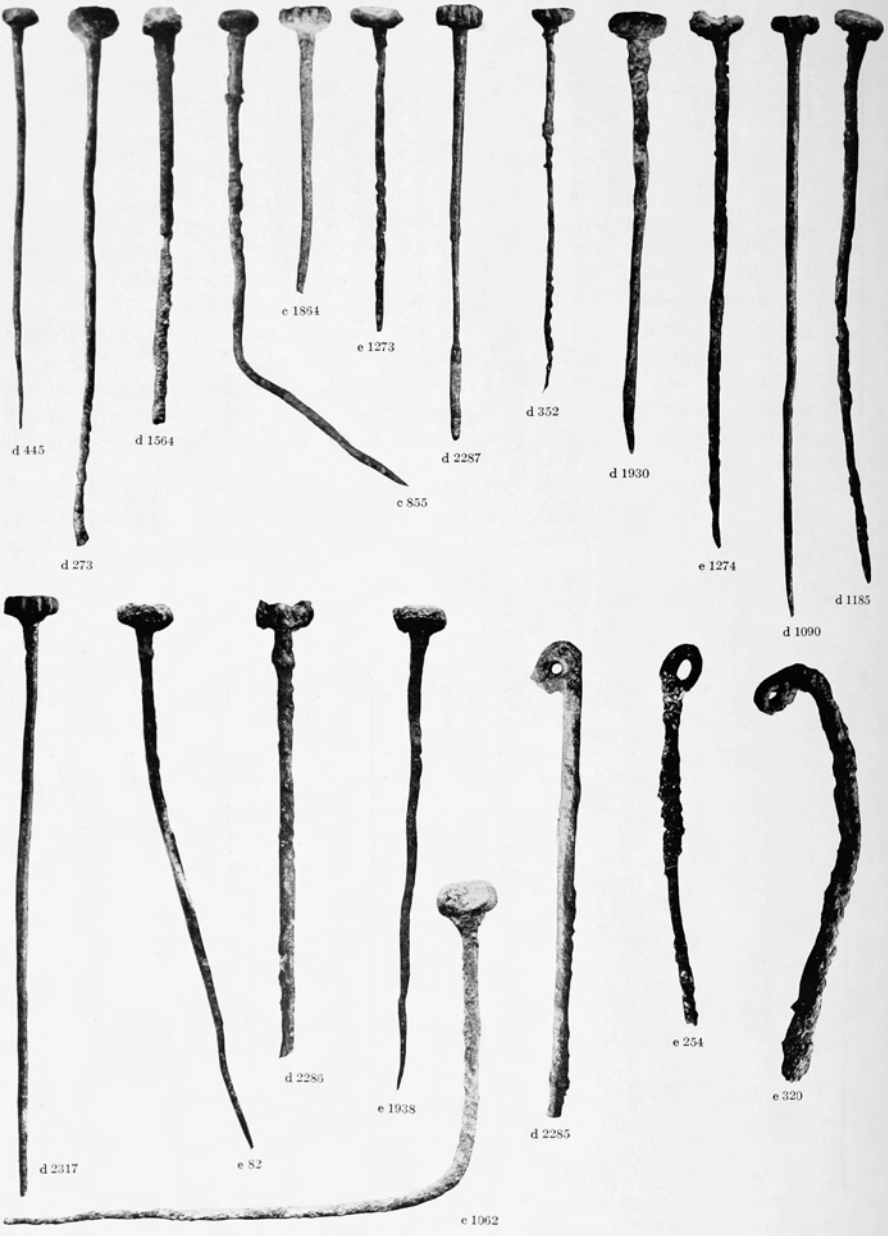

Fig. 490.—Bronze or Copper Pins. Actual Size

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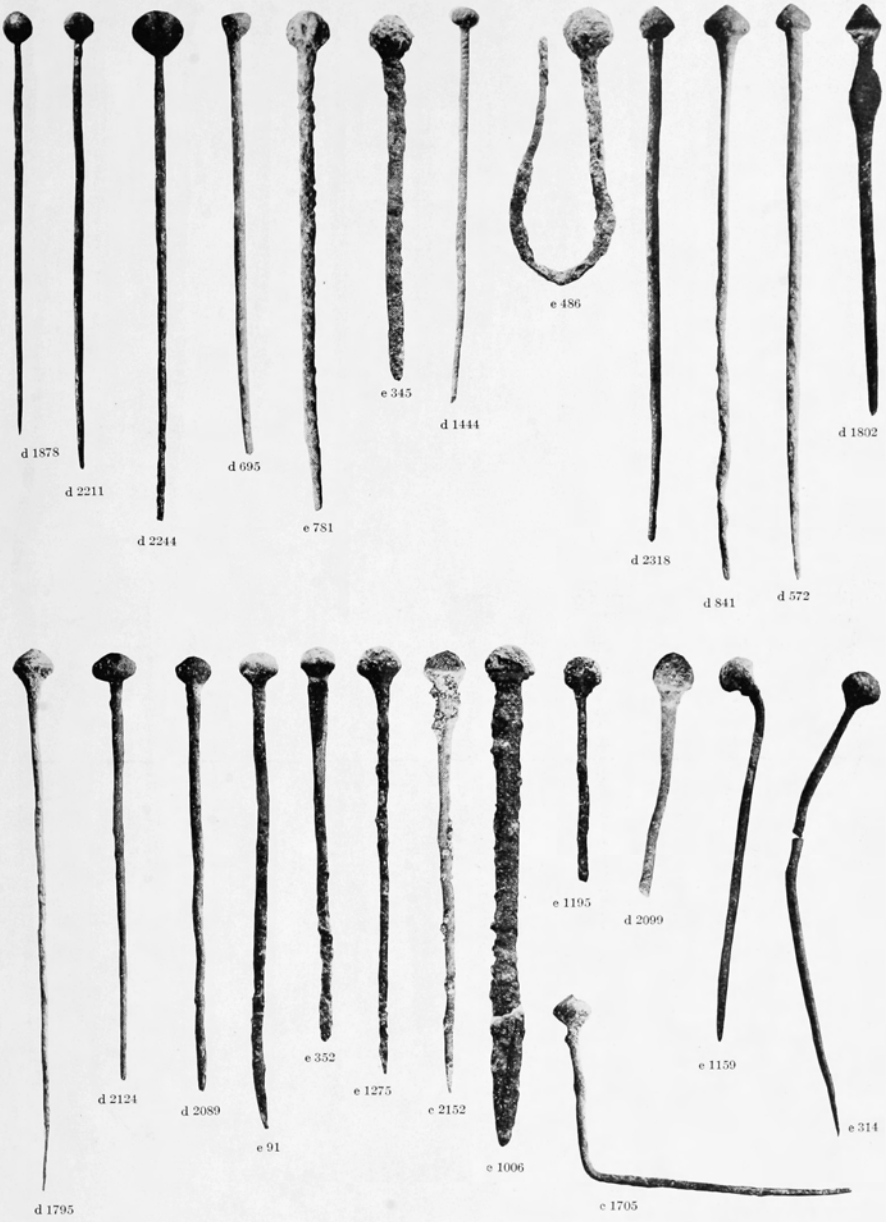

Fig. 491.—Bronze or Copper Pins. Actual Size

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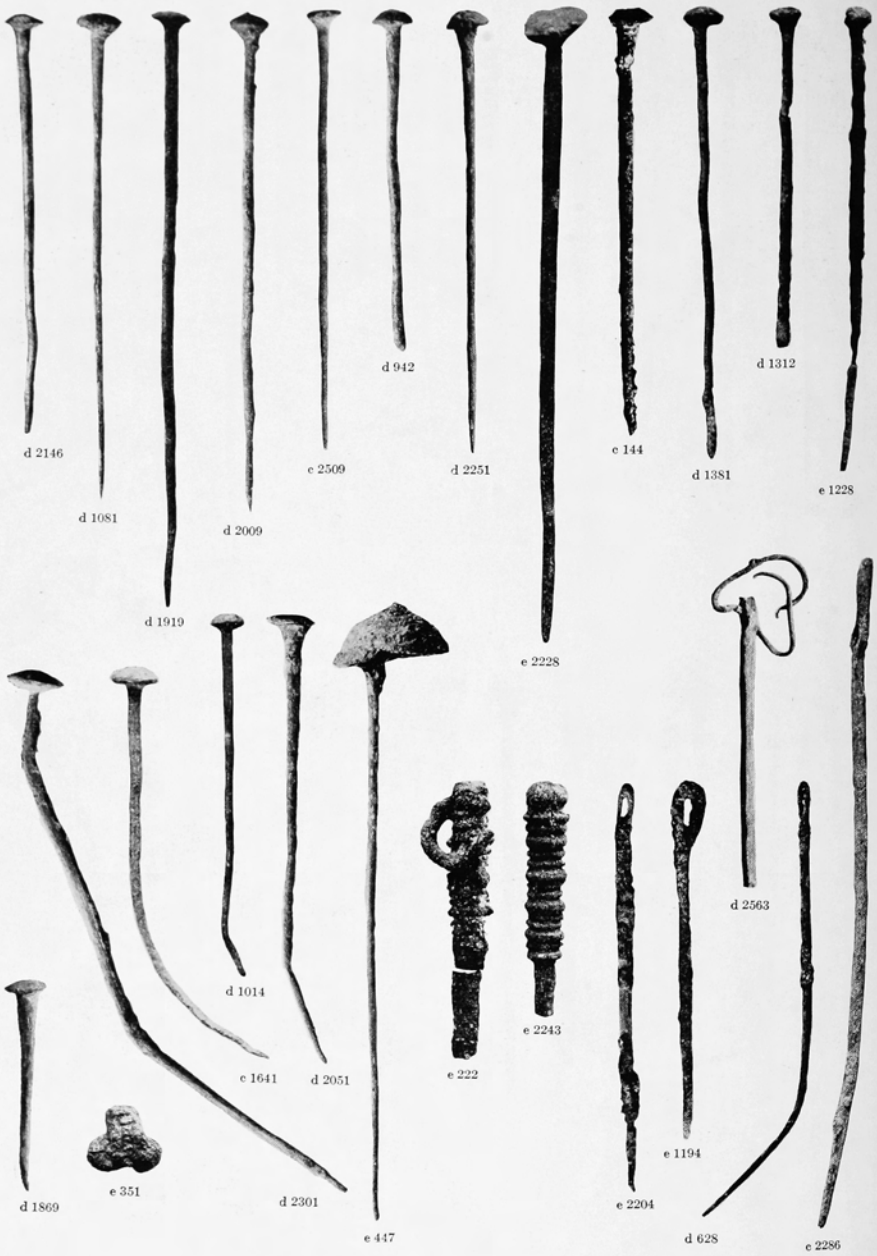

Fig. 492.—Bronze or Copper Pins and Needles. Actual Size

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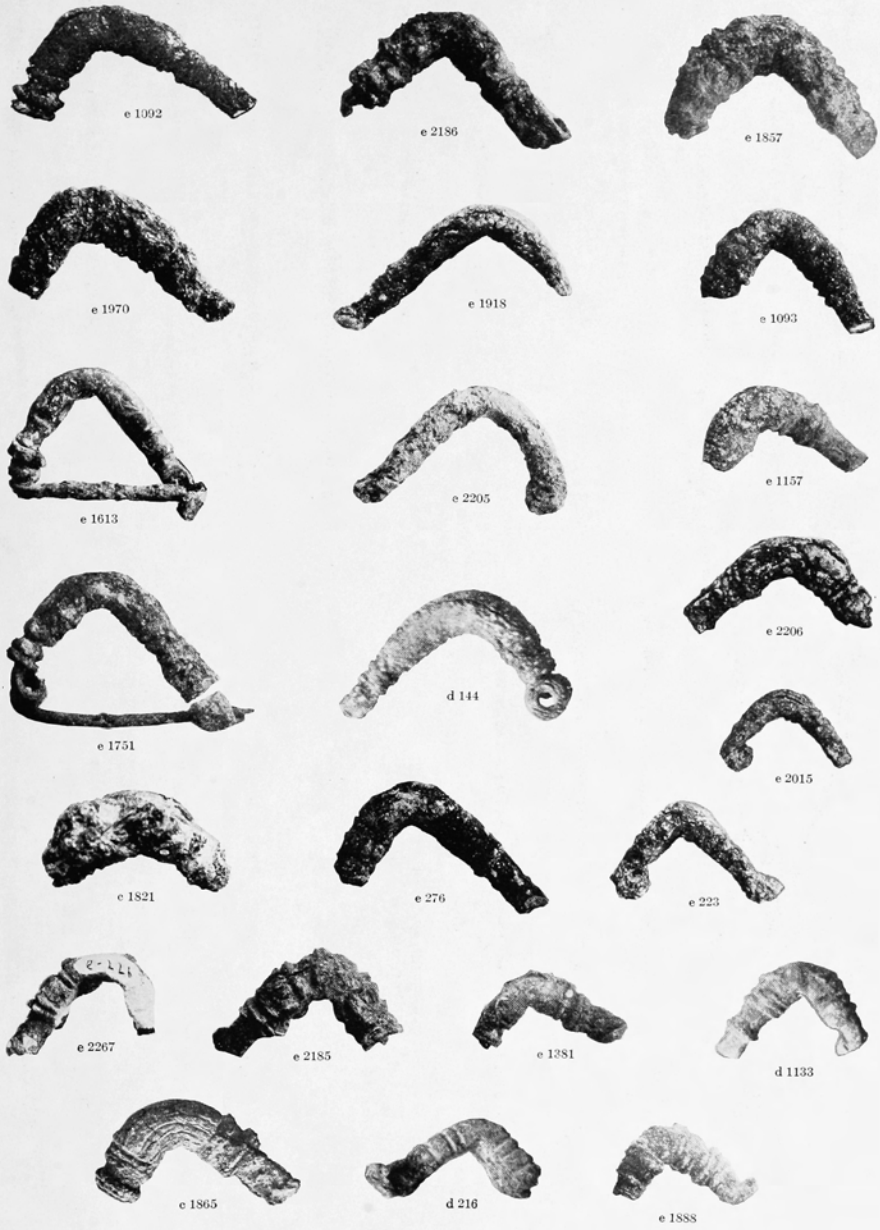

Fig. 493.—Bronze or Copper Fibulae, Type I. Actual Size

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Fig. 494.—Bronze or Copper Fibulae, Type II, and Iron Fibulae. Actual Size

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much corroded fragments of iron fibulae also were found (e.g., e 1200, e 1464, e 1789, e 1856, and e 2242), but the types were no longer recognizable.

Relatively few bronze or copper blades were found (Fig. 495). Interesting are two small "razors" (d 1340 and d 1904). Curved blades with one edge serrated appear again (e.g., e 332, e 1133, and e 1287*a*). No. c 1580 is a fragment of a sickle blade. No. d 1813 (Fig. 498) is a dagger blade with a long tang. Other weapons are shown in Figure 496. A new type of arrowhead appearing in this period is three-winged and has a socket. Lance- or spearheads may be divided into two types, both with tangs. The lanceolate head is represented by No. d 1474; the second type, elongated or triangular, has two wings, sometimes barbed.

Only three of the bronze or copper axes found in 1930–32 can be ascribed to this period (Fig. 497). No. d 697 is a flat ax of a type common in the previous periods. No. d 2135 is a rather stubby axhead with lugs. No. d 1234, with two cutting edges and two very large lugs, has a socket. A fragmentary mold for an axhead with lugs (d 2682) shows that such axes were manufactured here.

Nos. d 1131 and d 2160 (Fig. 497) are tweezers. No. e 1276 is shaped like a miniature dagger. No. c 1245 is a twisted bronze or copper wire; No. e 1061 is a chain. A representative group of rings is shown (Fig. 497). No. d 1812 (Fig. 498) is a large, well preserved chisel. The use of No. e 1731 (Fig. 498) and of two large flanged fragments (e 865–66) is problematical. Nos. c 938 and c 2174 were probably ornaments. A small piece of bronze or copper wire remained in the perforation of a polishing stone (d 1379, Fig. 482).

Bronze or copper figurines are described on pages 410–14, seals on page 418.

IRON

With this period objects of iron, especially weapons, become very numerous. Figure 499 shows a number of typical dagger or knife blades, most of them slightly curved. All have tangs, and in many cases rivets are still in place. The handles seem to have been of wood.

One of the finest pieces of this period is the long sword e 2245 (Fig. 500) found in Level 4*c* on the citadel mound. The sword is .65 long and rested in a wooden scabbard decorated with bronze; the hilt also was made of wood decorated with bronze, but unfortunately the bronze was much corroded.

The typical axhead has two lugs. Three very fine specimens were unearthed which undoubtedly belong to this period (Fig. 501). Traces of a wooden handle remain on No. e 1590. Iron arrowheads and spearheads also were common; all show tangs (Fig. 502). No. d 2536 (Fig. 503) is a small chisel. No. c 955 is a plate with several perforations. The uses of Nos. e 1144 and e 1243 are problematical.

Iron fibulae (see Fig. 494) are described above. A knucklebone loaded with iron is shown in Figure 488.

LEAD

Lead was used frequently in ties for mending broken pottery (e.g., e 842, e 1868, and e 2175, Fig. 503), as was done in previous periods. No. e 1784 is a sherd still held by such a tie. No. e 620, a small ball, may have been used as a missile for a sling.

SILVER

One fragmentary pin (d 2153) and one small ring (d 1846) are of silver (Fig. 503). Glass bead e 2292 (Fig. 510) has silver mountings. No gold was found.

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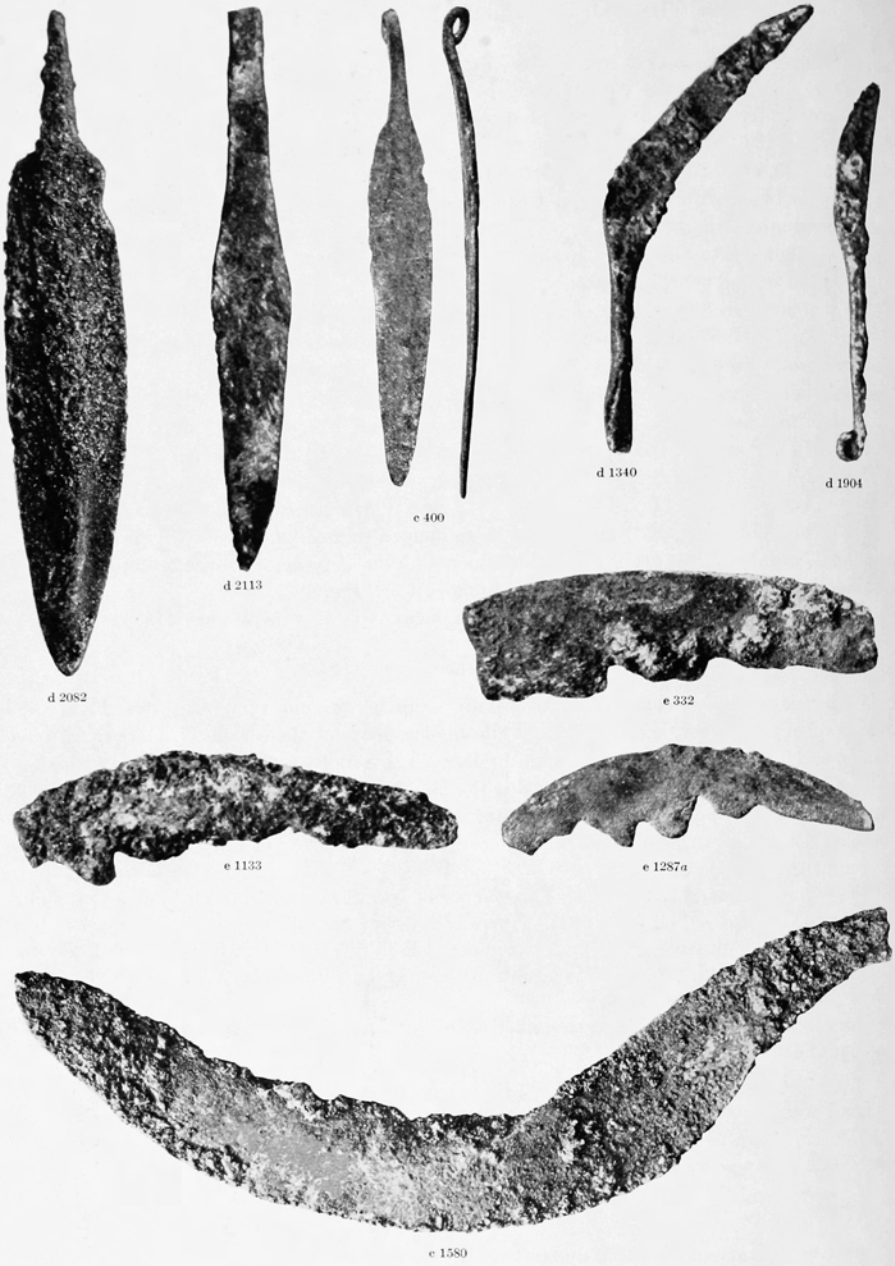

Fig. 495.—Bronze or Copper Blades. Actual Size

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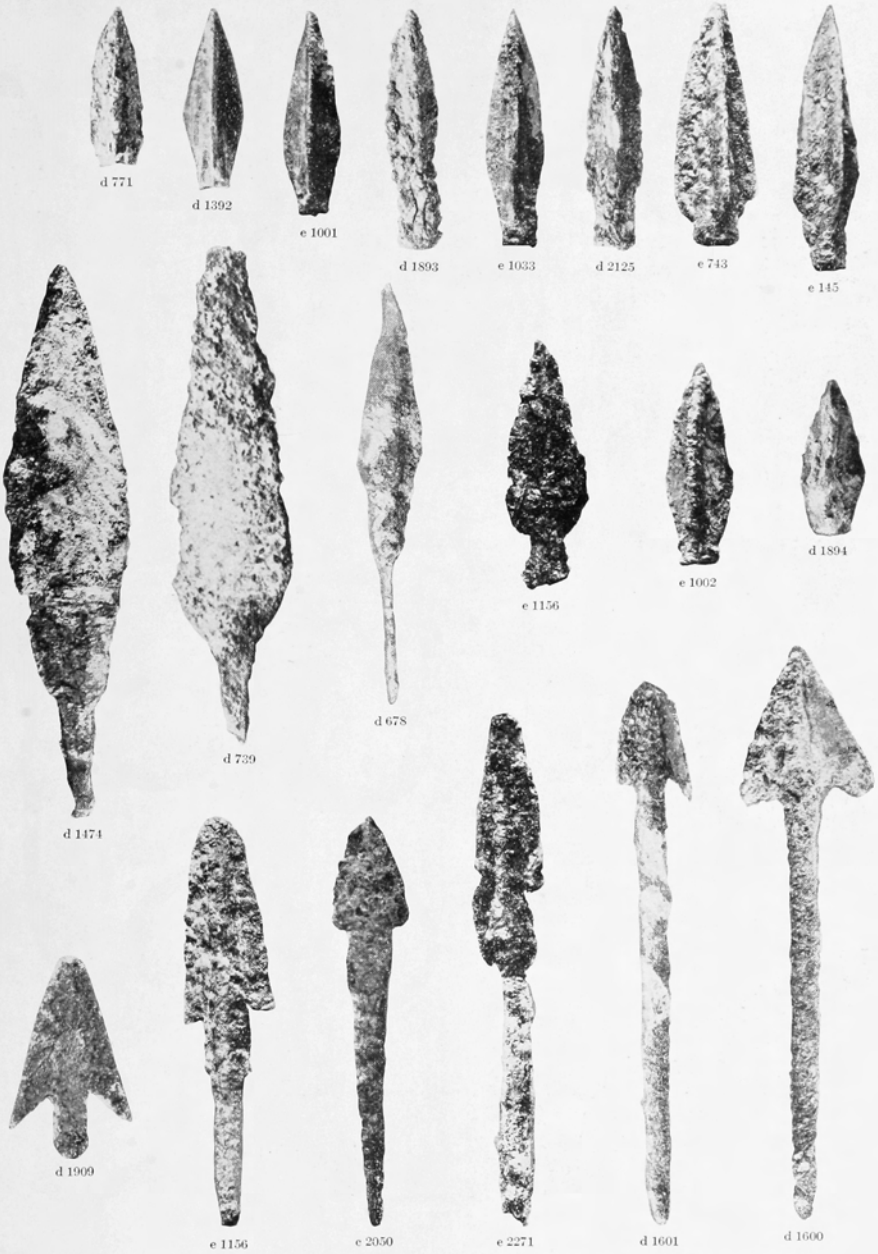

Fig. 496.—Bronze or Copper Arrowheads and Spearheads. Actual Size

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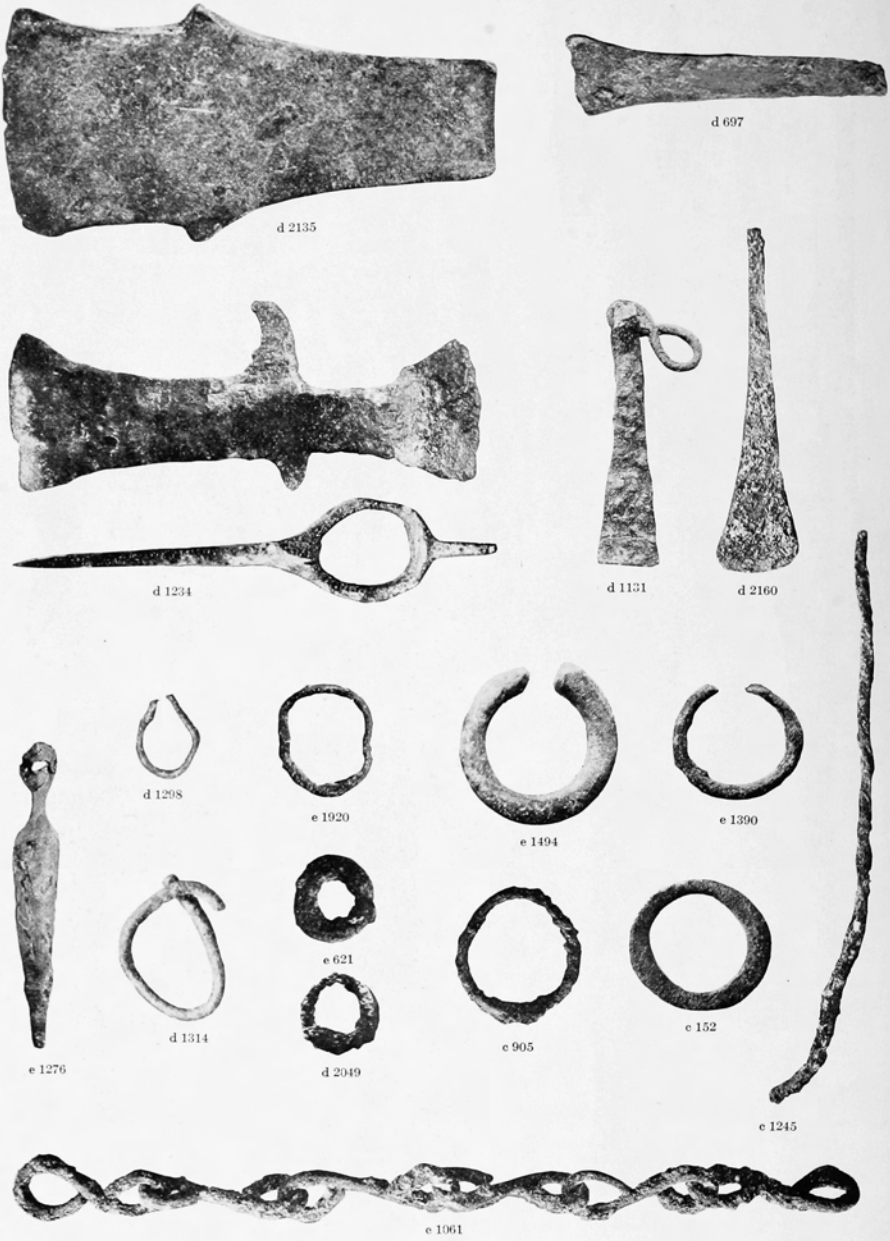

Fig. 497.—Miscellaneous Bronze or Copper Objects. Actual Size

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FIG. 498.—MISCELLANEOUS BRONZE OR COPPER OBJECTS. ACTUAL SIZE

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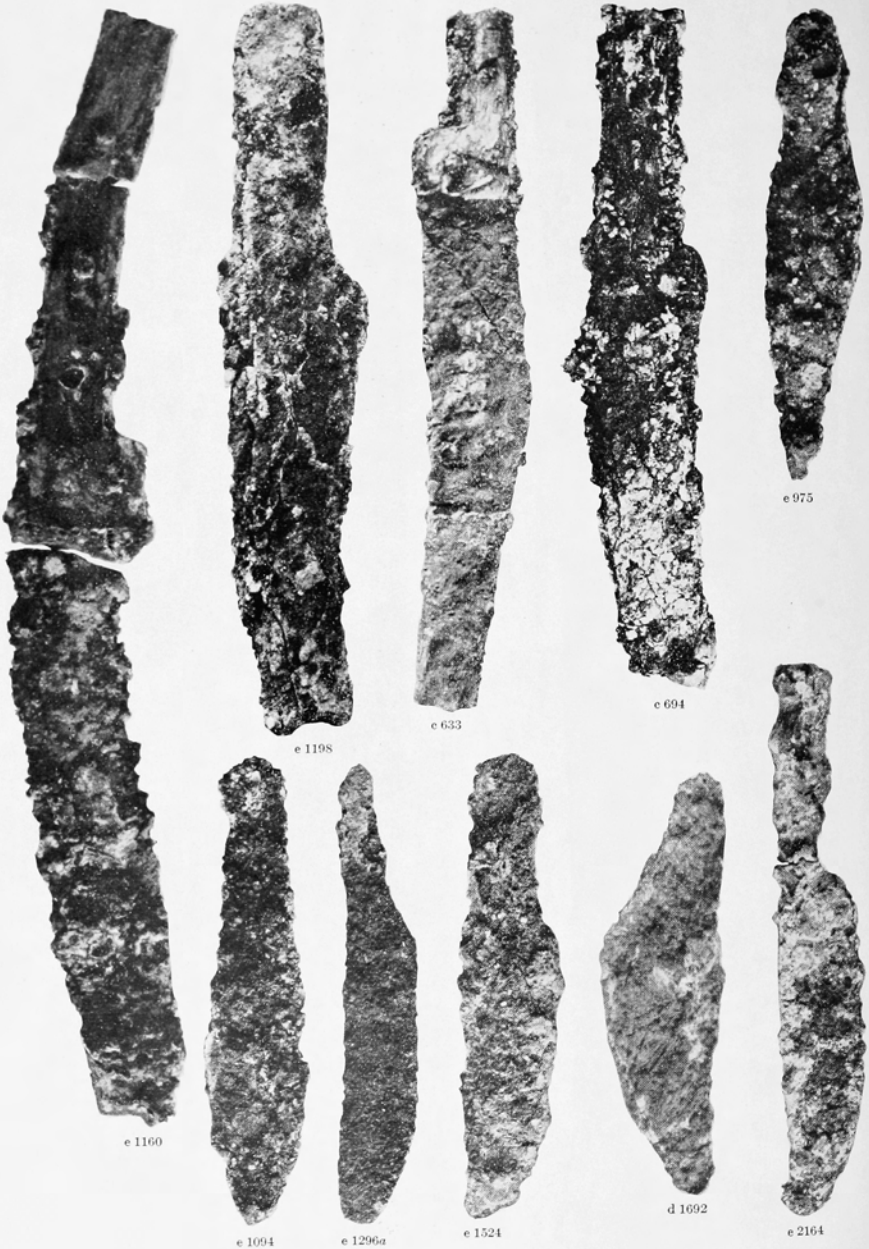

Fig. 499.—Iron Blades. Actual Size

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e 2245

Fig. 500.—Iron Long Sword in Wooden Scabbard. Scale, 1:3

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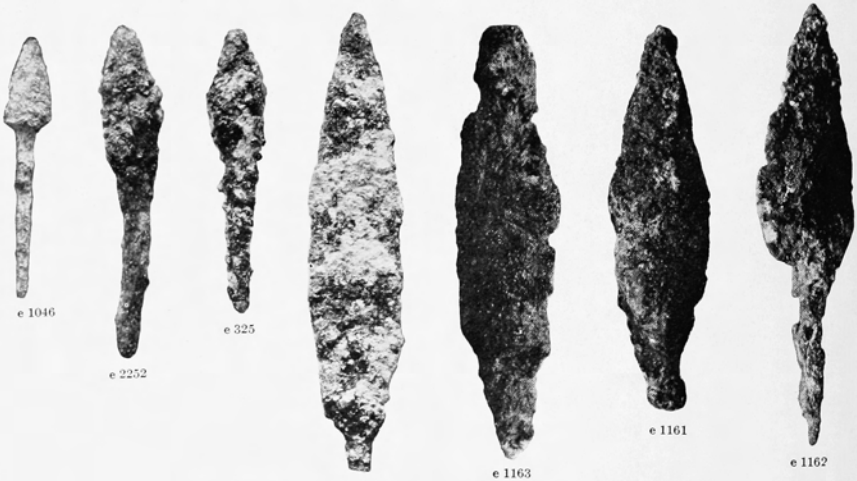
e 2244

e 1590

d 1520

Fig. 501.—Iron Axes with Lugs. Scale, 3:5



e 1046

e 2252

e 325

e 1199

e 1163

e 1161

e 1162

Fig. 502.—Iron Arrowheads and Spearheads. Actual Size

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Fig. 503.—Iron, Lead, and Silver Objects. Actual Size

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MINOR OBJECTS OF POTTERY OR CLAY

Pottery "whorls" were found in great variety (Figs. 504–6), but no form can actually be called typical of this period. Very interesting is a hoard of twelve "whorls" (e 2002–13, Fig. 506), found in Level 4*c* M in O–P 11–12, which proves definitely that several forms were in use at the same time. Nos. e 2012–13 are of stone; the others are of pottery.

Both pyramidal and round loom weights were numerous. A hoard of round weights (e 2074, Fig. 507) was found in Level 4*b* M in L 12, and another hoard was found in a kiln in J 28 (see Fig. 396). Oval weights also appeared (e.g., e 1861, Fig. 508).

Reworked potsherds (Fig. 508) are common in this and the following period, but we do not know their use. Nos. e 1597 and e 2254 (Fig. 508) are pottery balls similar to those found in other periods. Figure 509 shows a variety of small pottery objects. No. e 2173 is a miniature vessel. No. e 507 seems to be a reworked pot fragment used for polishing. No. d 1247 may be part of a rattle. No. d 1619, a kind of support, is of medium ware with a yellowish buff slip and a design in reddish brown and brownish red.

FRIT AND GLASS OBJECTS

Figure 510 shows a representative collection of frit and glass beads, which were numerous in Post-Hittite–Phrygian deposits. With the exception of some of the frit beads, they cannot be considered characteristic.[87]

A relatively large number of light grayish blue frit beads, probably imported pieces, were unearthed; they fall into four main types. The first is a long, segmented bead (e.g., e 392, e 582, and e 1969). The second is cylindrical (e.g., d 380 and e 1823). The two specimens of the third type are large discoid beads with convex faces decorated with raylike incisions (e 588 and e 2145). The fourth type includes several small beads of roughly biconical form, which may be collared (e.g., e 204, e 345, and e 1310), incised (e.g., e 794 and e 1121–22), or undecorated (d 1949). Of the nine recorded specimens of the first type, five were found in definitely Post-Hittite–Phrygian layers, three in refuse probably belonging to the same period, and one in an undetermined deposit. Of the second type, four came from a definitely Post-Hittite–Phrygian layer, two from refuse deposits which could well belong to the same period, and three from uncertain refuse. The two beads of the third type came from Post-Hittite–Phrygian deposits.[88] Of the fourth type, one was in a layer of this period, two were in a refuse deposit between the Hittite and Post-Hittite–Phrygian levels, four in mixed Post-Hittite–Phrygian and Hellenistic refuse, and two in a predominantly Hellenistic refuse deposit. I am inclined to attribute all the beads of this particular color and material to the Post-Hittite–Phrygian period.

Disk-shaped beads of light bluish green frit (e.g., e 741 and e 1747) resemble those found in earlier periods[89] but are a little larger and better made. Simple globular beads of greenish blue or discolored frit, similar to those used as pinheads in the Hittite period (cf. d 1317 and d 2562, Fig. 284) were found in Post-Hittite–Phrygian deposits also. No. d 2023, now discolored, is an oblong bead with square cross-section. Small round beads with bluish green

[87] Cf. *OIP* XXX, Fig. 268.

[88] No. b 2663, the only bead of this type recorded in 1929, also was found in an indisputably Post-Hittite–Phrygian layer (*OIP* XIX 275).

[89] E.g., e 480, e 511, and e 394 (*OIP* XXVIII, Fig. 101).

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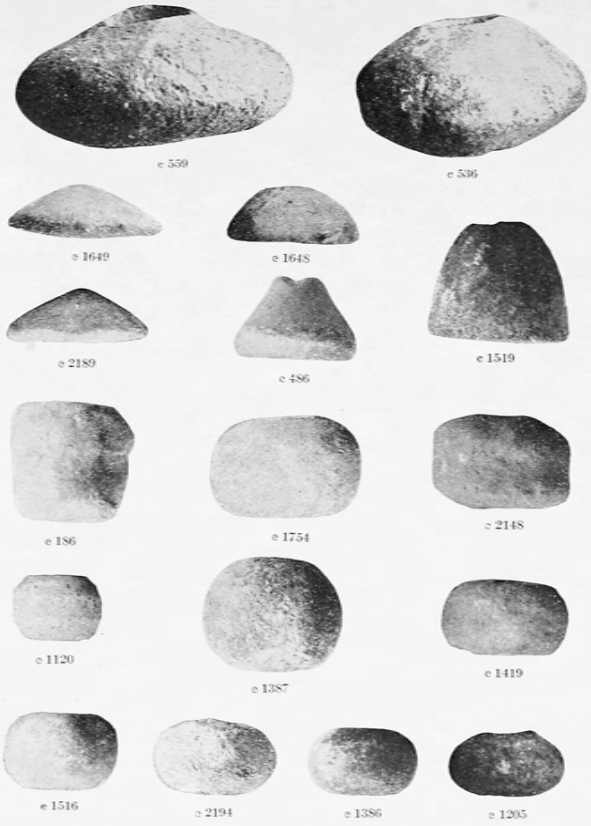

FIG. 504.—POTTERY "WHORLS." SCALE, 2:3

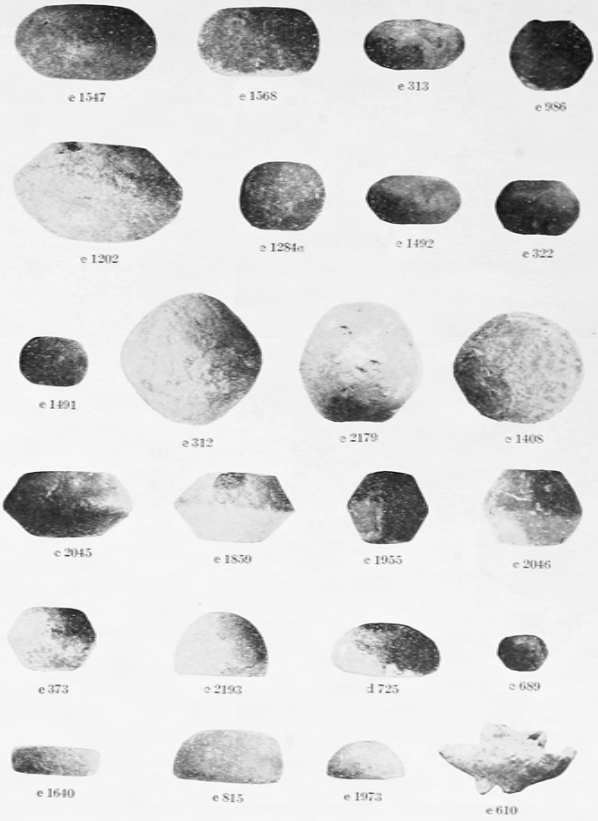

FIG. 505.—POTTERY "WHORLS." SCALE, 2:3

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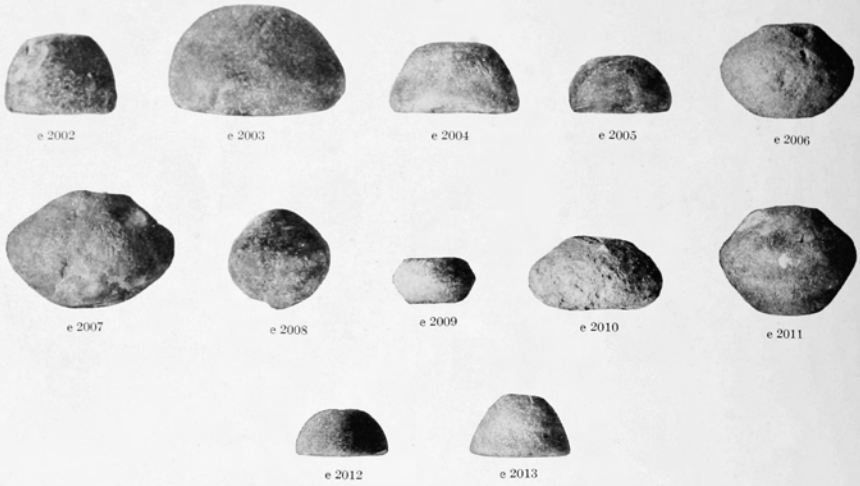

Fig. 506.—"Whorl" Hoard. Scale, 2:3

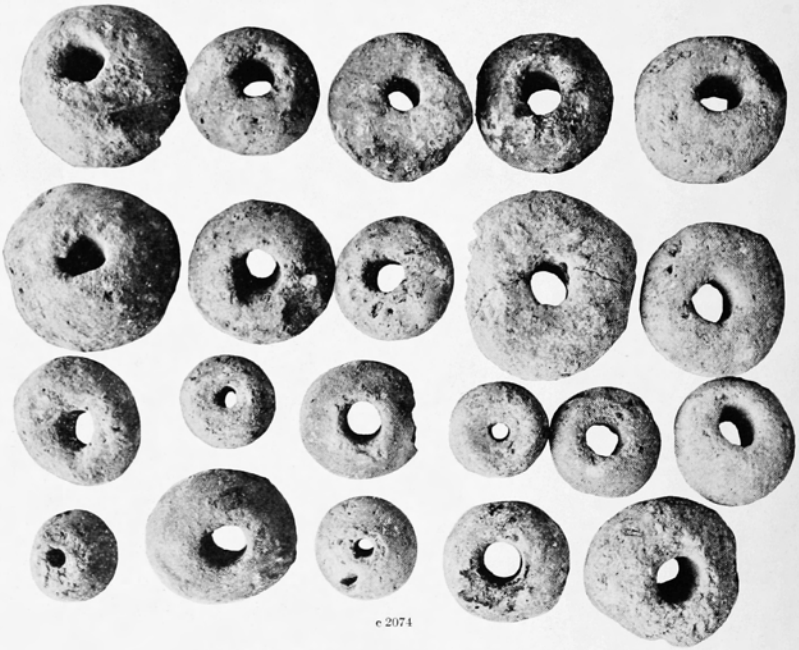

Fig. 507.—Hoard of Loom Weights. Scale, 2:5

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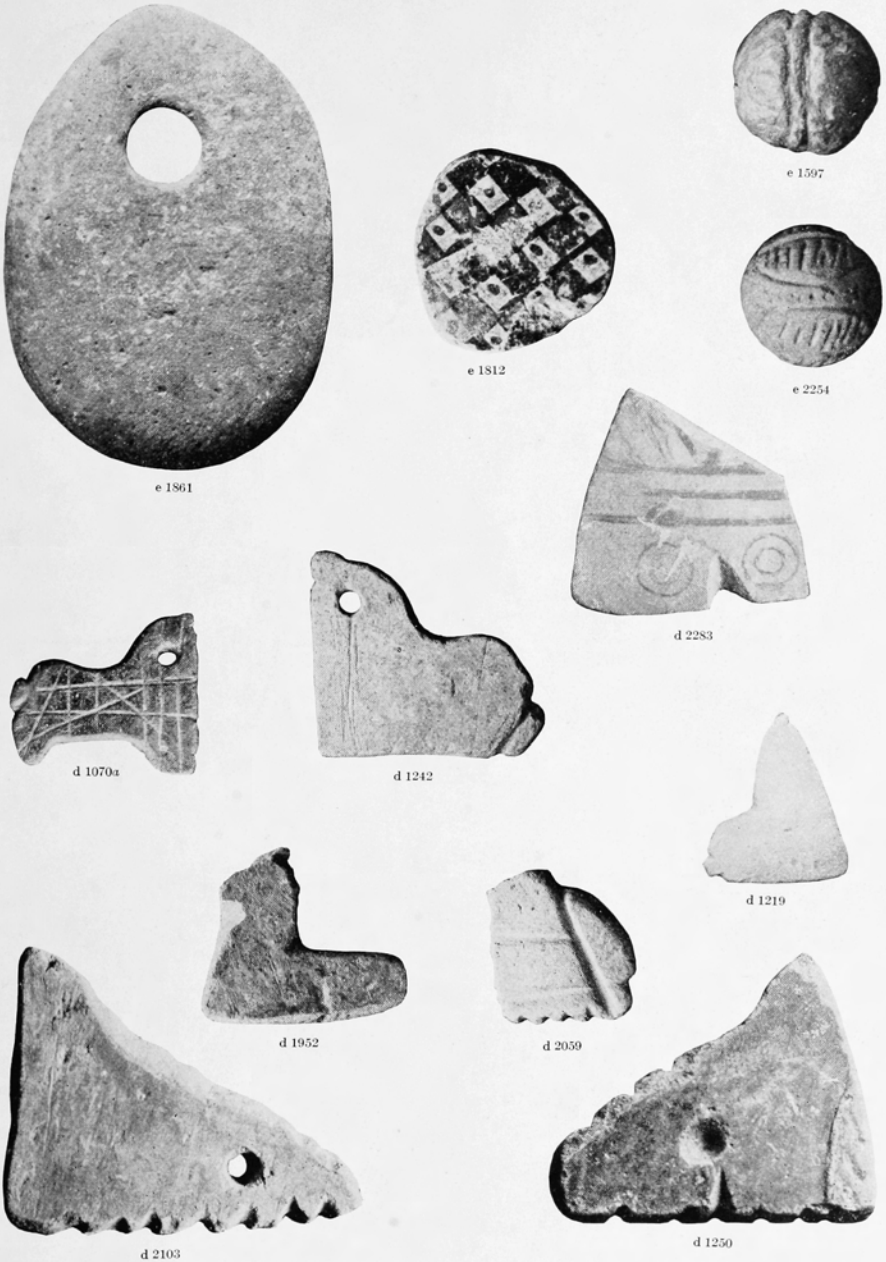

Fig. 508.—Miscellaneous Pottery or Clay Objects. Actual Size

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Fig. 509.—Miscellaneous Pottery or Clay Objects. Actual Size

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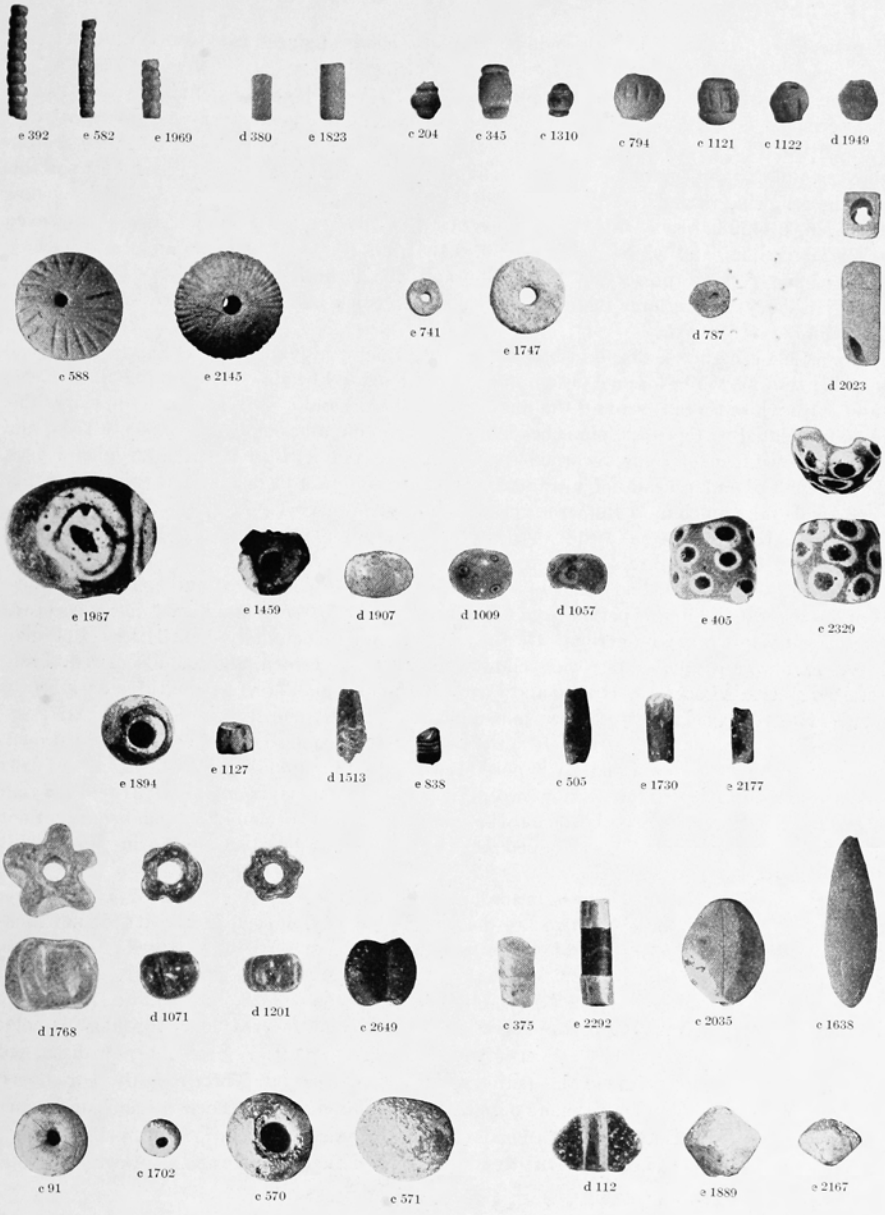

Fig. 510.—Frit and Glass Beads. Actual Size

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glaze occurred (e.g., d 787). Two scalloped globular beads of glazed frit[90] were found in refuse which could belong to either this period or the following one.

No. e 1967 is the only large glass eye bead (cf. p. 284) which can be definitely attributed to this period; it is black with white inlay. The use of small eye beads seems to have started in Post-Hittite–Phrygian times. Of ten recorded specimens three may be ascribed with reasonable certainty to this period, and a fourth (d 1057) was found in a refuse deposit between this and the following period. No. d 1907, much discolored, now appears white with four yellow eyes. No. e 1459 is black with three white eyes (two lost). No. d 1009 is blue with seven yellow, dark blue, and white eyes; and No. d 1057 is a fragment of a similar bead on which parts of five eyes are preserved. Nos. e 405 and c 2329, both from definitely Post-Hittite–Phrygian deposits, are large cylindrical beads of greenish blue glass with several dark blue and white eyes.

No. e 1894 is a globular bead of black glass with thick white inlay. A roughly discoid bead (e 1127) shows a white lozenge design on black. Elongated beads of ultramarine glass, decorated with white threads around the middle (e.g., d 1513 and e 838), began to appear in this period. Related to these are plain beads of similar shape and color (e.g., c 505, e 1730, and e 2177). Seventeen of forty recorded specimens occurred in Post-Hittite–Phrygian layers. Three small globular beads of ultramarine glass were found in deposits of this period, but such beads were much more numerous in the following period.

Several lobate or "melon" beads of glass occurred. Nos. c 2649 and d 1768 are discolored; Nos. d 1071 and d 1201 are dark brown.

More or less globular glass beads of various sizes, discolored by heat and sometimes iridescent, occurred again in this period (e.g., c 91, c 1702, and c 570–71). Small globular glass beads of various colors were numerous. Of the eight found in definitely Post-Hittite–Phrygian layers four were turquoise, one was yellow, one green, one brown, and one discolored. From refuse deposits between the Hittite and Post-Hittite–Phrygian layers came three dark brown beads, two red, one canary yellow, one milky white, and one discolored. In mixed Post-Hittite–Phrygian and Hellenistic refuse there were four turquoise, four blue, one light brown, one amber, and one discolored. It is possible that the four found in Hittite layers (p. 284) and those from mixed refuse of the two periods were intrusive from Post-Hittite–Phrygian deposits. The turquoise glass beads may be modern, as the workmen wore such beads on their garments. One very small ring-shaped bead of light blue glass was found in this period; there were more in the next period.

Three truncated biconical glass beads appeared (d 112, e 1889, and e 2167); the first is purplish brown, and the other two are discolored. Two cylindrical beads (d 488, not illustrated, and e 2292) were found in layers of this period and one (c 375) in mixed refuse of this and the following period. No. e 2292, of dark brown glass, is mounted in silver. Nos. c 375 and d 488 are yellow and blue respectively. Three barrel beads (c 2629, e 955, and e 1725)[91] may belong to either this period or the following one. A small faceted bead, turquoise in color (e 1207, not illustrated), was in a Post-Hittite–Phrygian deposit. A large one, now discolored (c 2035), was in mixed refuse of this period and the Hittite period. Three roughly pear-shaped beads were found in refuse deposits outside the Hittite city wall. Their attribution is very uncertain; they are illustrated with beads of the Hellenistic period.[92] A drop-shaped bead (c 1638, Fig. 510) found in a Post-Hittite–Phrygian layer has a red core and a dark green patina.

[90] Nos. d 265 and d 777 (*OIP* XXX, Fig. 120).

[91] *OIP* XXX 125.

[92] Nos. e 893–94 and e 1182 (*OIP* XXX, Fig. 120).

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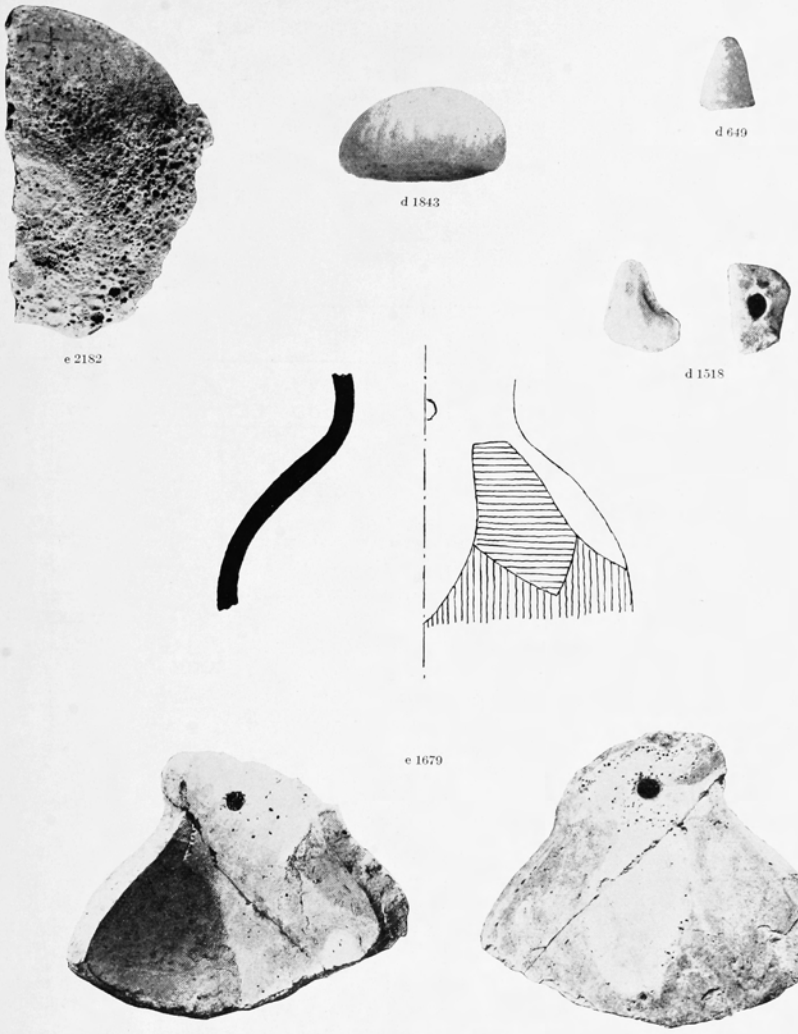

Fig. 511.—Frit Objects. Actual Size

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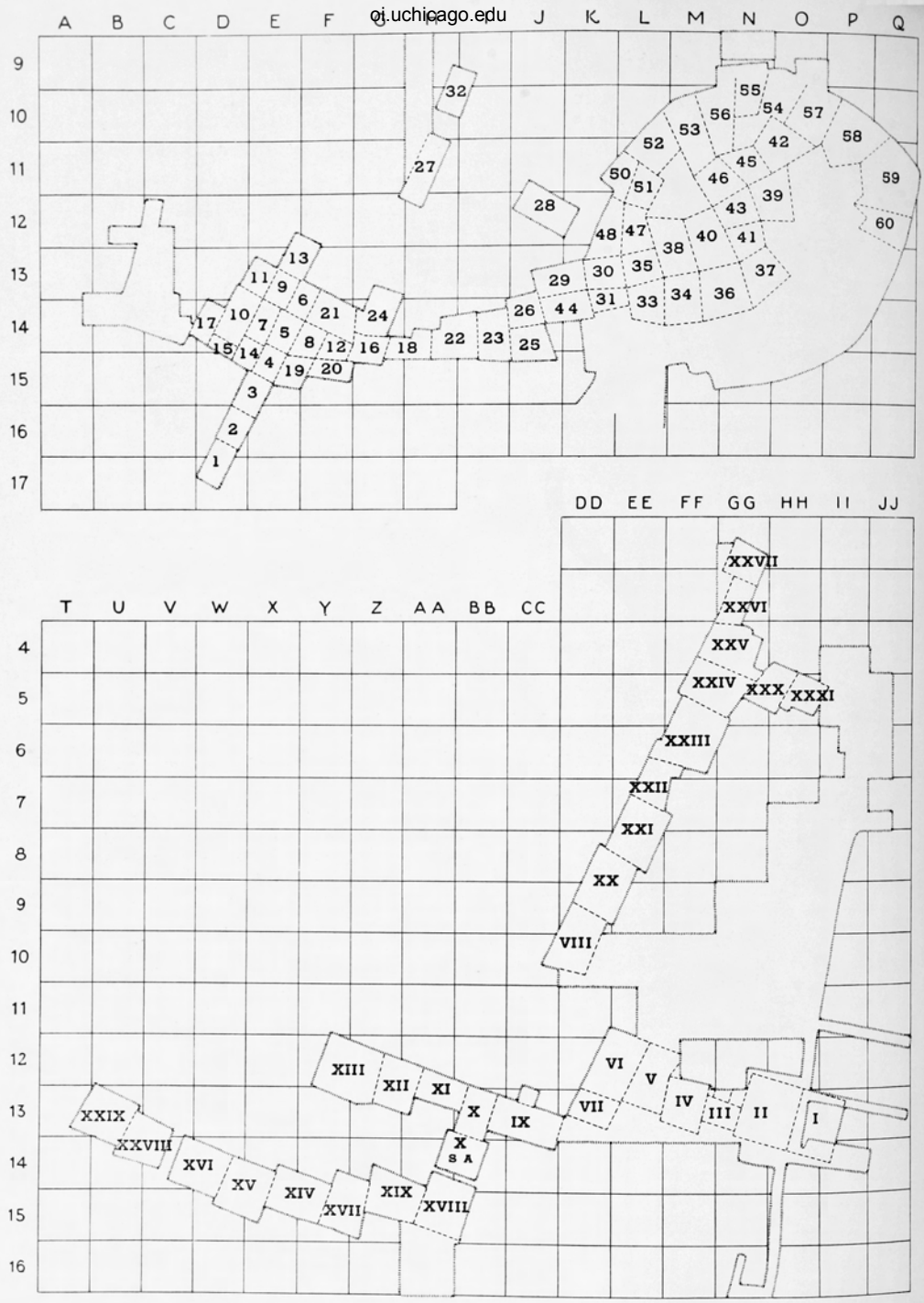

Fig. 512.—Correlation of the Plots of 1927 with the Later Net

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Frit objects other than beads are shown in Figure 511. No. e 2182 is a fragmentary vessel, light grayish green in color. Another fragmentary vessel (e 1679), with yellow, greenish blue, and bluish green shades, is an Assyrian import. No. d 1843 is a broken frit "whorl" with

Approximate Date*	*OIP* XXVIII–XXX and *OIC* No. 14			*OIC* No. 11 and *OIP* XIX–XX	*OIP* VI–VII
	Periods	Levels†		Periods	Periods
		Mound	Terrace		
11th to 18th century	Turkish {Osmanli / Seljuk	1	1	VII {Osmanli / Seljuk	Osmanli and Seljuk
0 to 11th century	Byzantine and Roman		2–3	VI {Byzantine / Roman	Byzantine and Roman
7th century B.C. to 0	Hellenistic (including independent kingdom of Cappadocia and the Galatian invasion) and Medo-Persian	2–3	4–7	V {Hellenistic / Medo-Persian / Phrygian	Late III
12th to 7th century B.C.	Phrygian Post-Hittite	4*a* 4*b* 4*c*	8–9	IV: Hittite Empire	Middle III
End of 3d millennium to 12th century B.C.	Hittite Empires (including Mesopotamian merchants)		10–11	II: aliens	II
Extends into 2d millennium B.C.	Early Bronze Age (overlapping beginning of first Hittite Empire)	5 5–6	12	III: Early Hittites	Early III
Ends in 24th century B.C.	Copper Age	7–9 10–11	13–14	I: Early Anatolians	I
	Chalcolithic§	12–19			

* For details cf. *OIP* XXX.
† The mound levels agree in all reports. On the terrace Dr. Schmidt started his numberings with "Level 1" in each individual area.
§ Called "Neolithic" in *OIC* No. 14.

Fig. 513.—Table Correlating Designations of Levels and Culture Periods in This Report with Those Used in Previous Reports of Work at the Alişar Mound

bluish green glaze. Many such "whorls" have been found at Byblos, Syria. The similar "whorls" a 563, a 891, and b 564, formerly attributed to the Hittite period,[93] should possibly be considered as intrusions from Post-Hittite–Phrygian layers. Nos. d 649 and d 1518 are fragments of frit objects with turquoise blue glaze.

Frit seals are described on pages 420–23.

[93] *OIP* XIX 126–27.

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The plots of 1927 are correlated with those of 1928–32 in Figure 512 on page 458.

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PLATES I–XXV

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PLATE I

All are of medium, grit-tempered, moderately fired ware except No. 4.

1. Rim piece of a jar; buff paste with gray core; reddish wash on outside.

2. Rim piece and handle of a bowl; buff paste with gray core; buff slip.

3 (d 2935). Sherd of a large vessel with relief ornamentation; buff paste; reddish yellow slip, very carefully polished after burnishing.

4 (d 2201). Rim piece of a small cup; grayish white frit; moderately fired; greenish glaze, perhaps alkaline (not analyzed, but does not appear to be a tin glaze), on inside and outside; a second glaze, colored with manganese, has been applied over the green glaze on the inside.

5. Buff paste with gray core; red slip.

6 (d 2648). Sherd with relief ornamentation; grayish buff paste; polished, brownish red slip; cream-colored garment, also polished.

7. Buff paste with gray core; yellowish red slip.

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Potsherds of the Period of the Hittite Empires. Actual Size

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PLATE II

All are of medium, grit-tempered, moderately fired ware.

1. Buff paste; buff slip with reddish brown decoration.
2. Buff paste; light buff slip with reddish brown decoration.
3. Reddish buff paste; reddish buff slip with reddish brown decoration.
4. Reddish buff paste; reddish buff slip with reddish brown decoration.
5. Orange-buff paste; orange-buff slip with reddish brown decoration.
6. Buff paste; whitish buff slip with reddish brown and brownish red decoration.

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1 2 3 4 5 6

Potsherds of the Post-Hittite–Phrygian Period. Actual Size

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PLATE III

All are grit-tempered. Nos. 1, 2, and 4 are of medium ware; Nos. 3 and 5–10, of fine ware, are fragments of cups such as those in Plate VIII (middle group).

1. Buff paste discolored by heat; creamy white slip, discolored by heat, with brownish black decoration.
2. Buff paste; whitish buff slip with blackish brown decoration.
3. Reddish buff paste with gray core; whitish buff slip with reddish brown and red decoration.
4. Buff paste; light buff slip with reddish brown and purplish brown decoration.
5. Buff paste; buff slip with reddish brown and brownish red decoration.
6. Buff paste; light buff slip with reddish brown and light brown decoration.
7. Reddish buff paste; light buff slip with brownish black and red decoration.
8. Reddish buff paste; buff slip with reddish brown decoration.
9. Buff paste; light buff slip with brownish black decoration.
10. Buff paste discolored by heat; creamy white slip, discolored by heat, with brownish black decoration.

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Potsherds of the Post-Hittite–Phrygian Period. Actual Size

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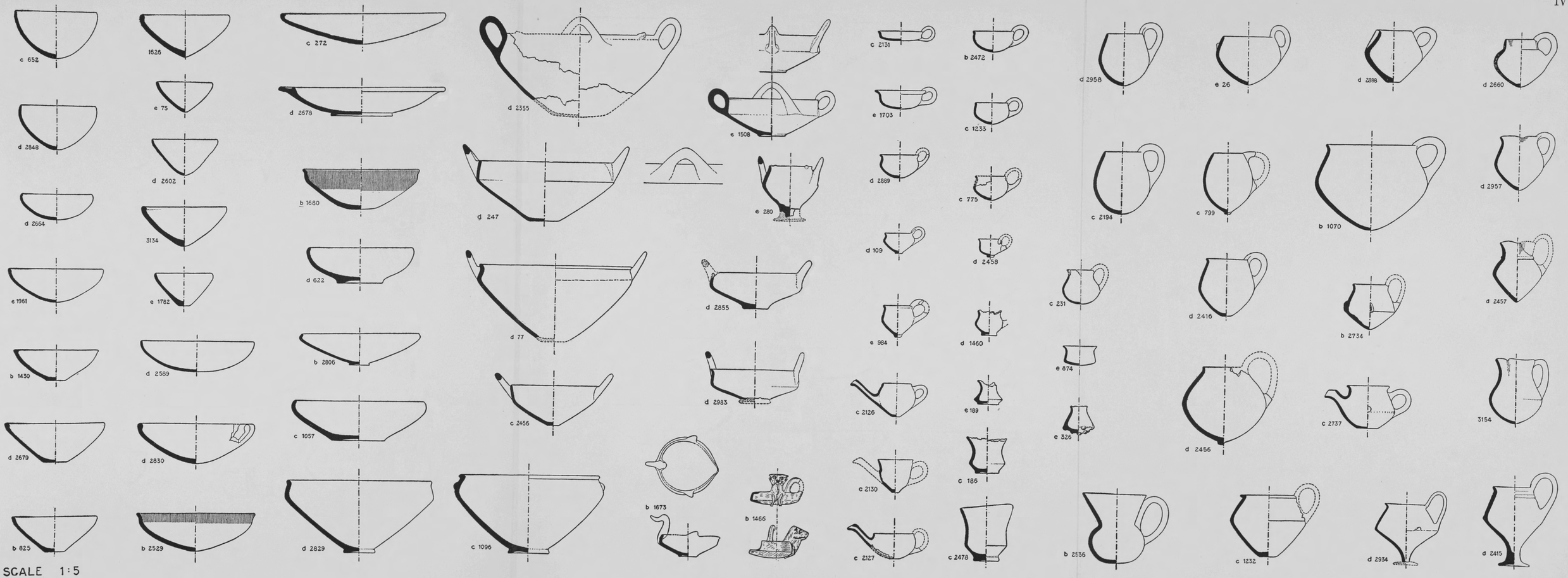

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Forms of Vessels of the Period of the Hittite Empires. Scale, 1:5

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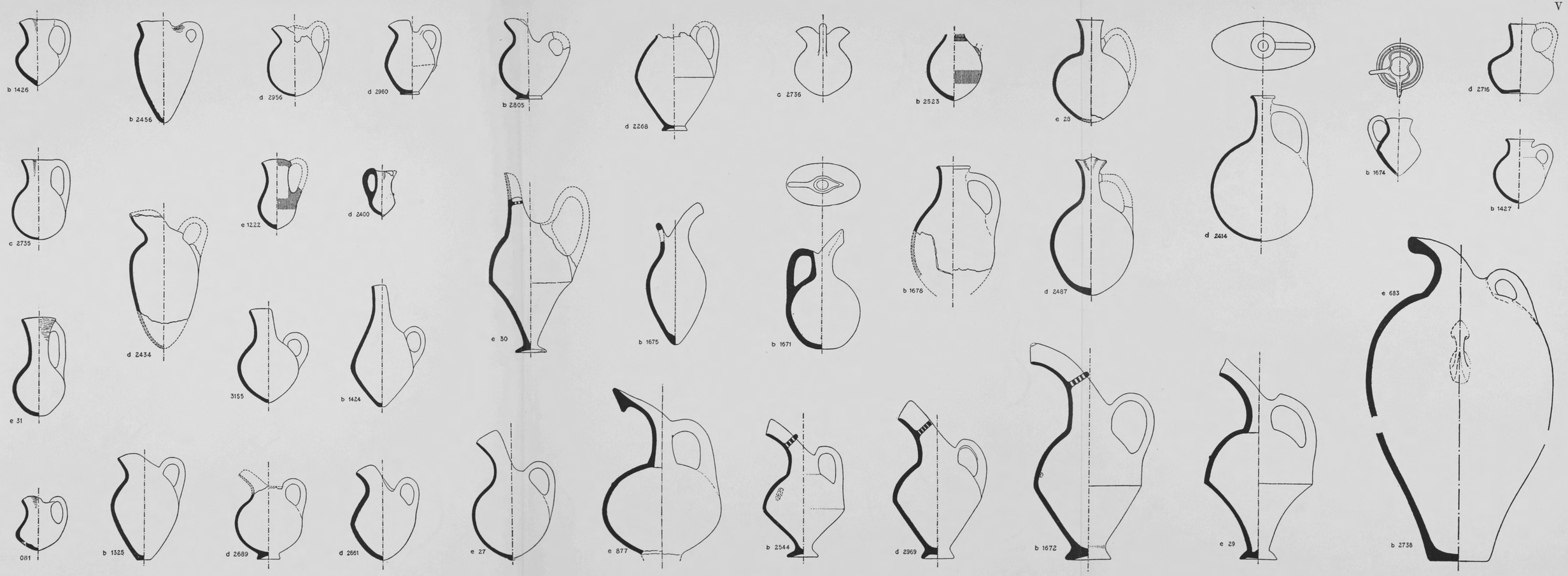

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FORMS OF VESSELS OF THE PERIOD OF THE HITTITE EMPIRES. SCALE, 1:5

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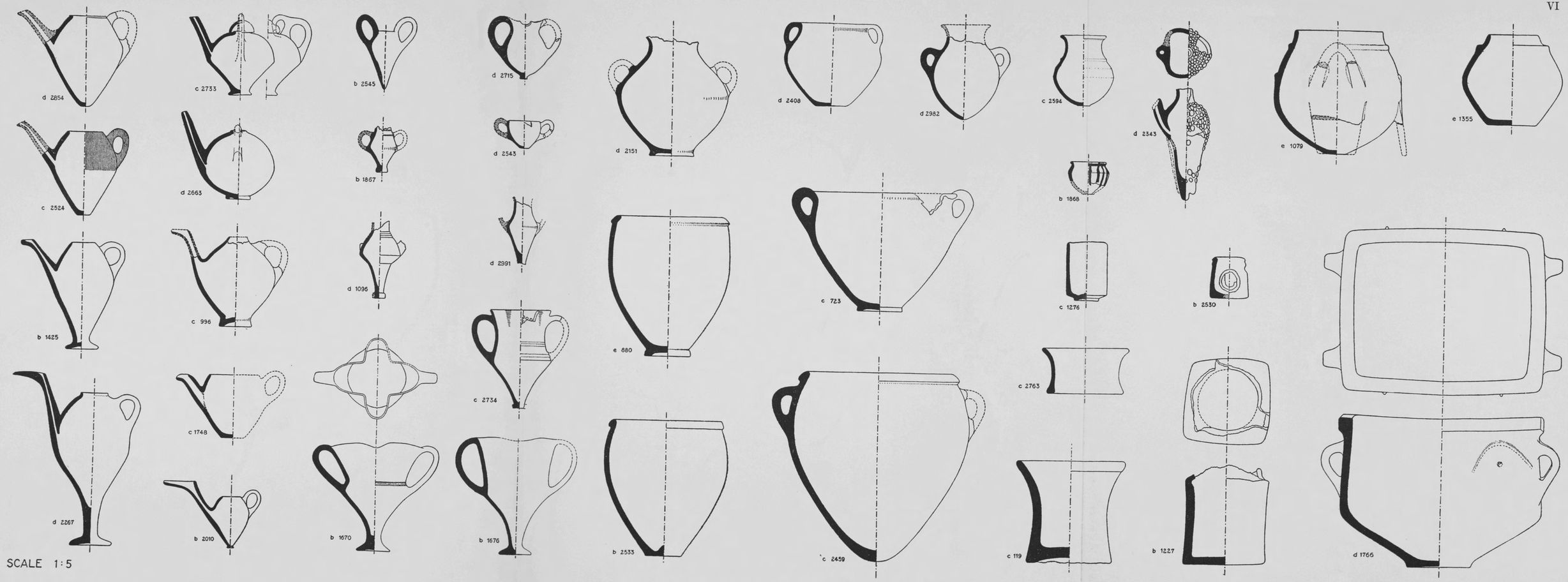

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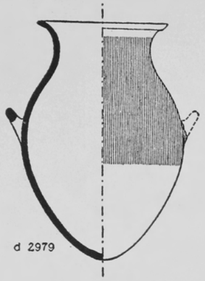
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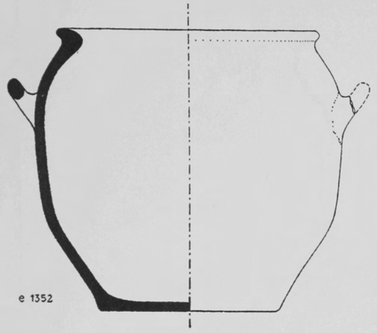
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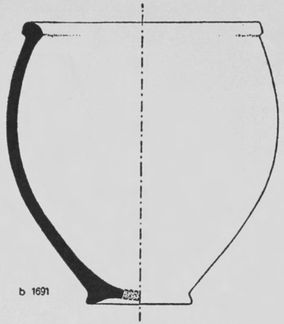
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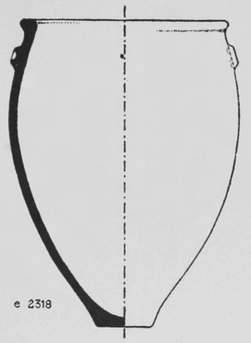
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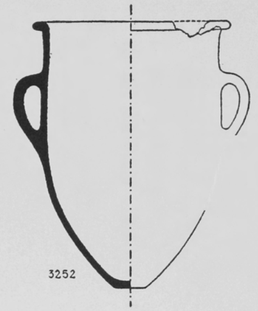
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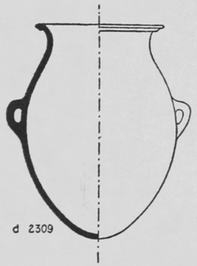
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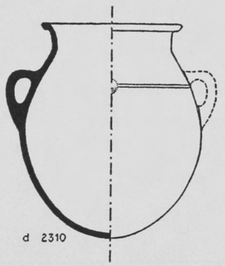
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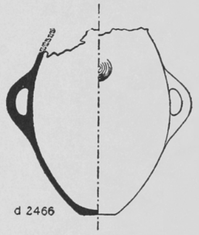
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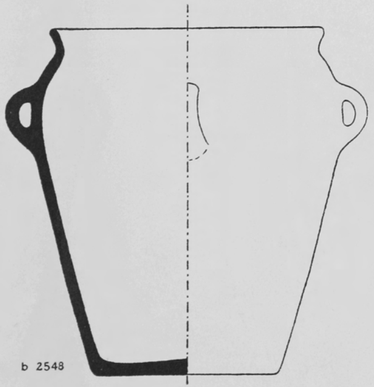
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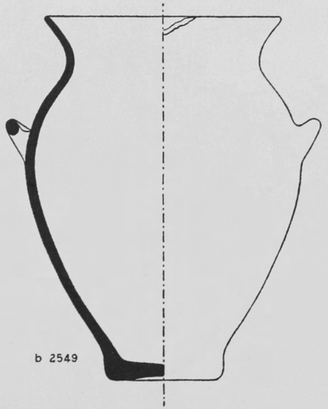
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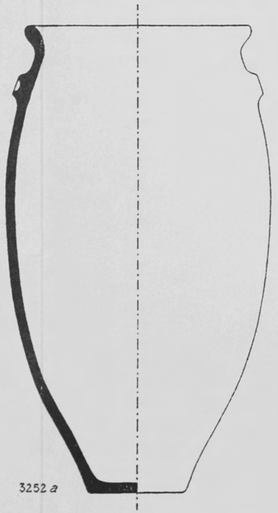
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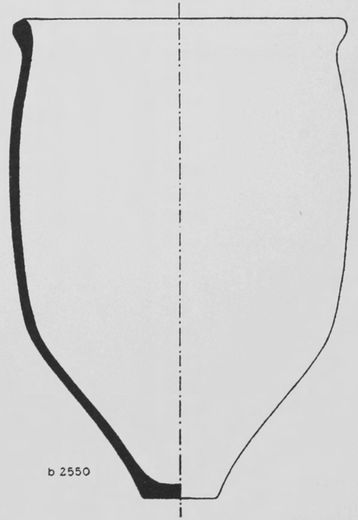
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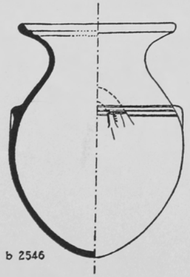
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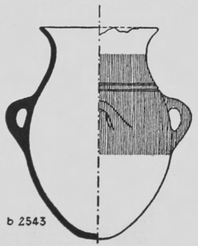
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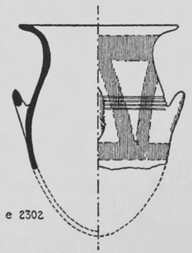
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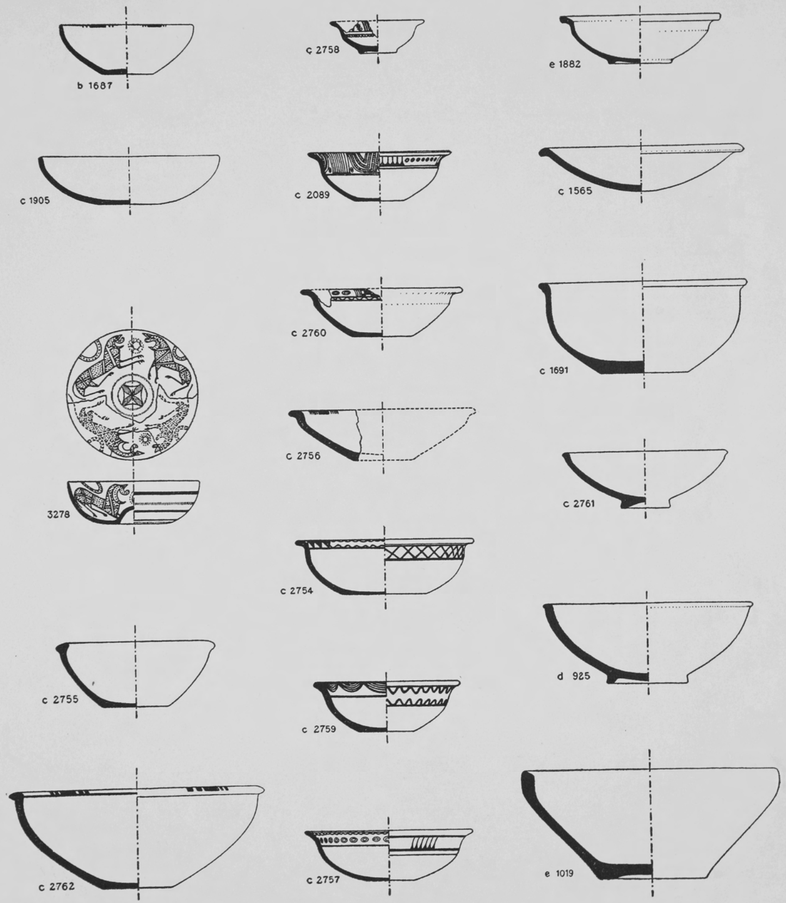

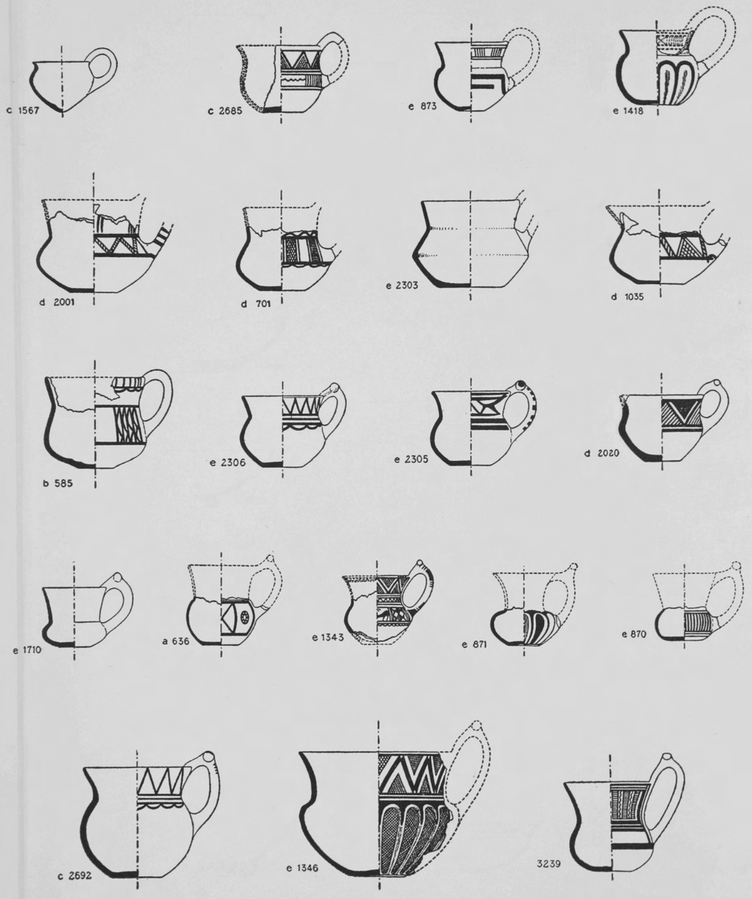

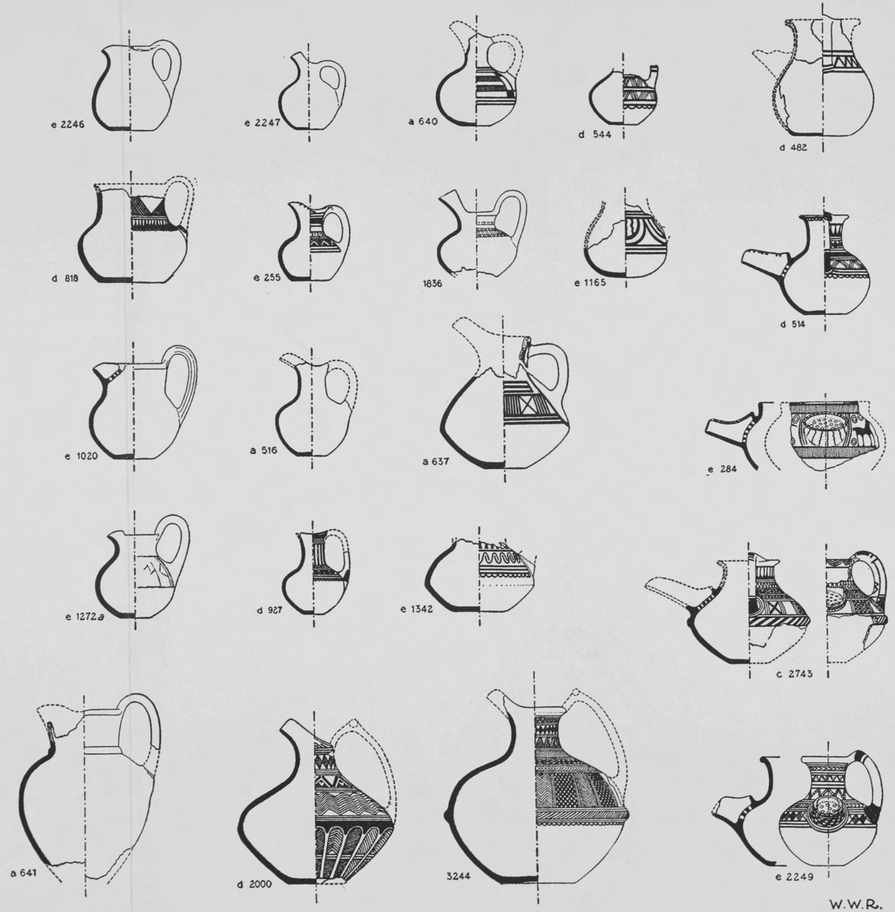

Forms of Post-Hittite–Phrygian Vessels. Scale, 1:5

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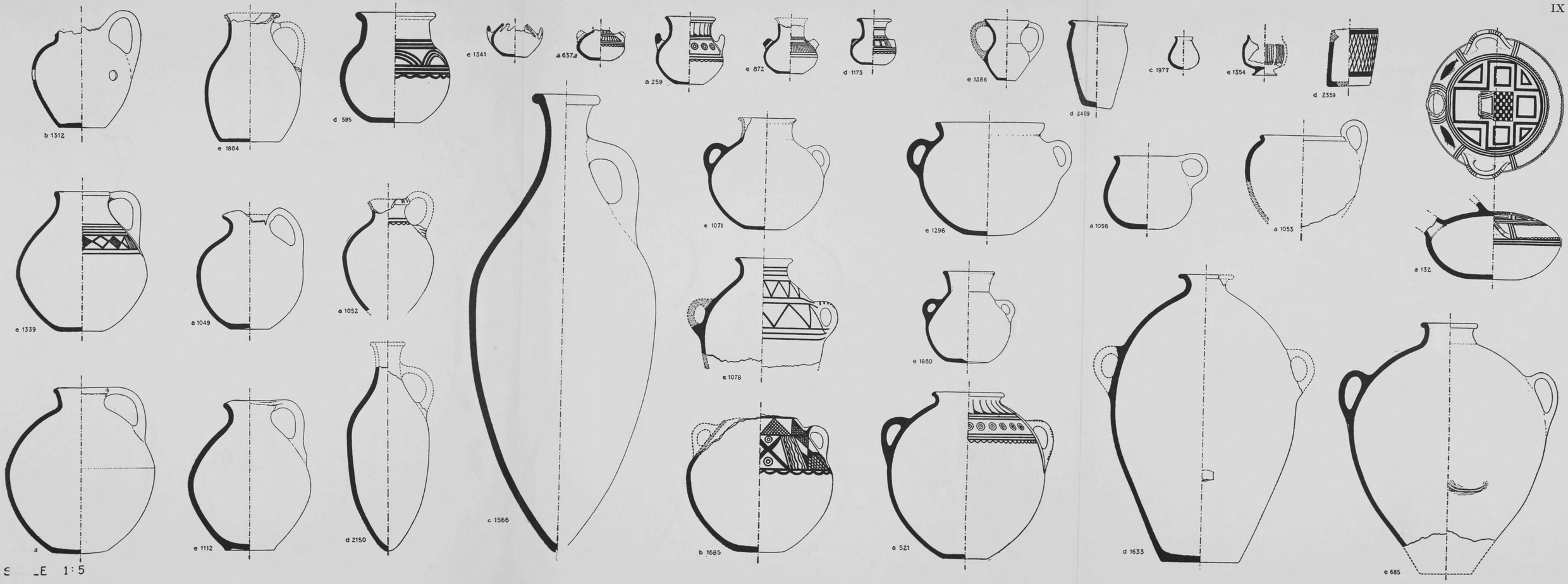

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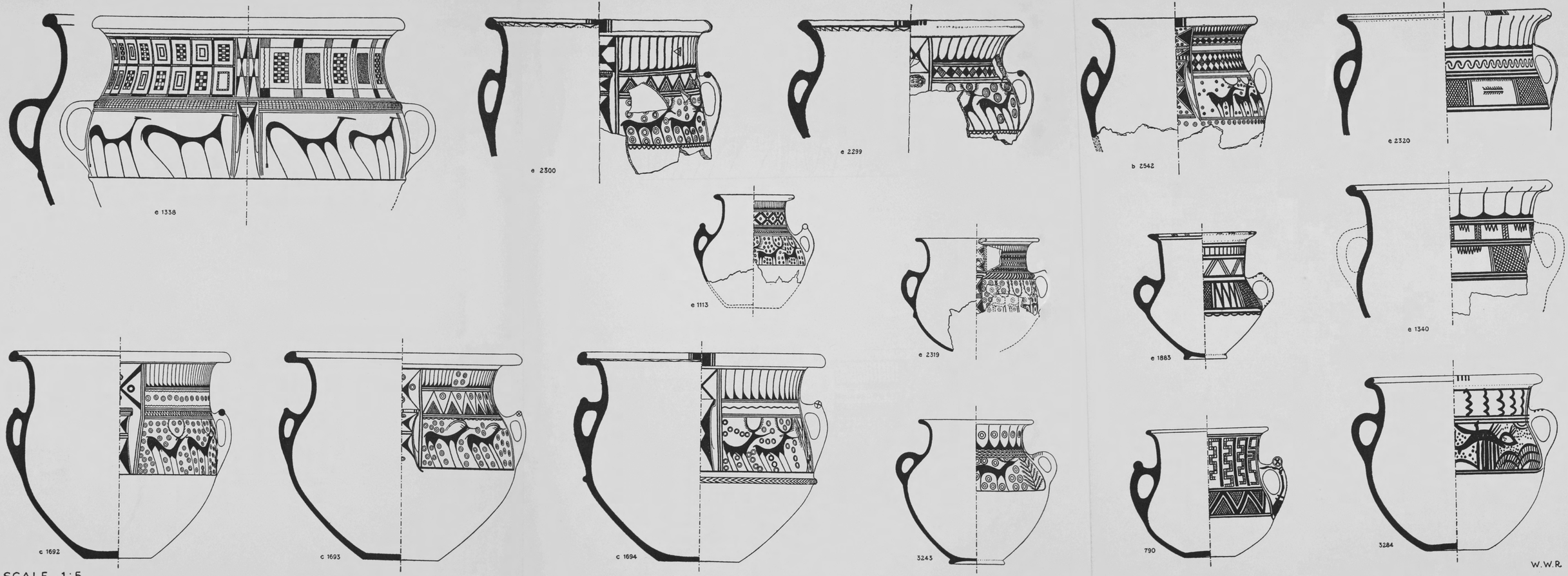

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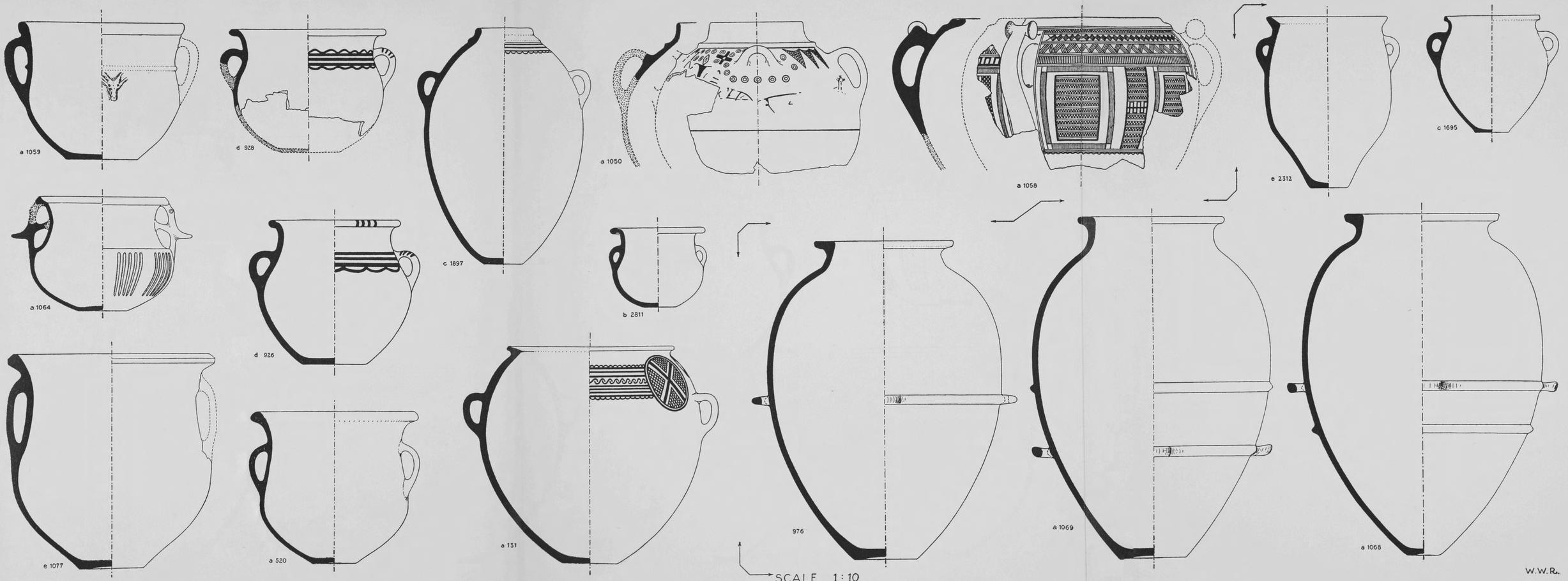

FORMS OF POST-HITTITE-PHRYGIAN VESSELS. SCALE, 1:5 (EXCEPT 976, a 1068–69, c 1695, AND e 2312, SHOWN 1:10)

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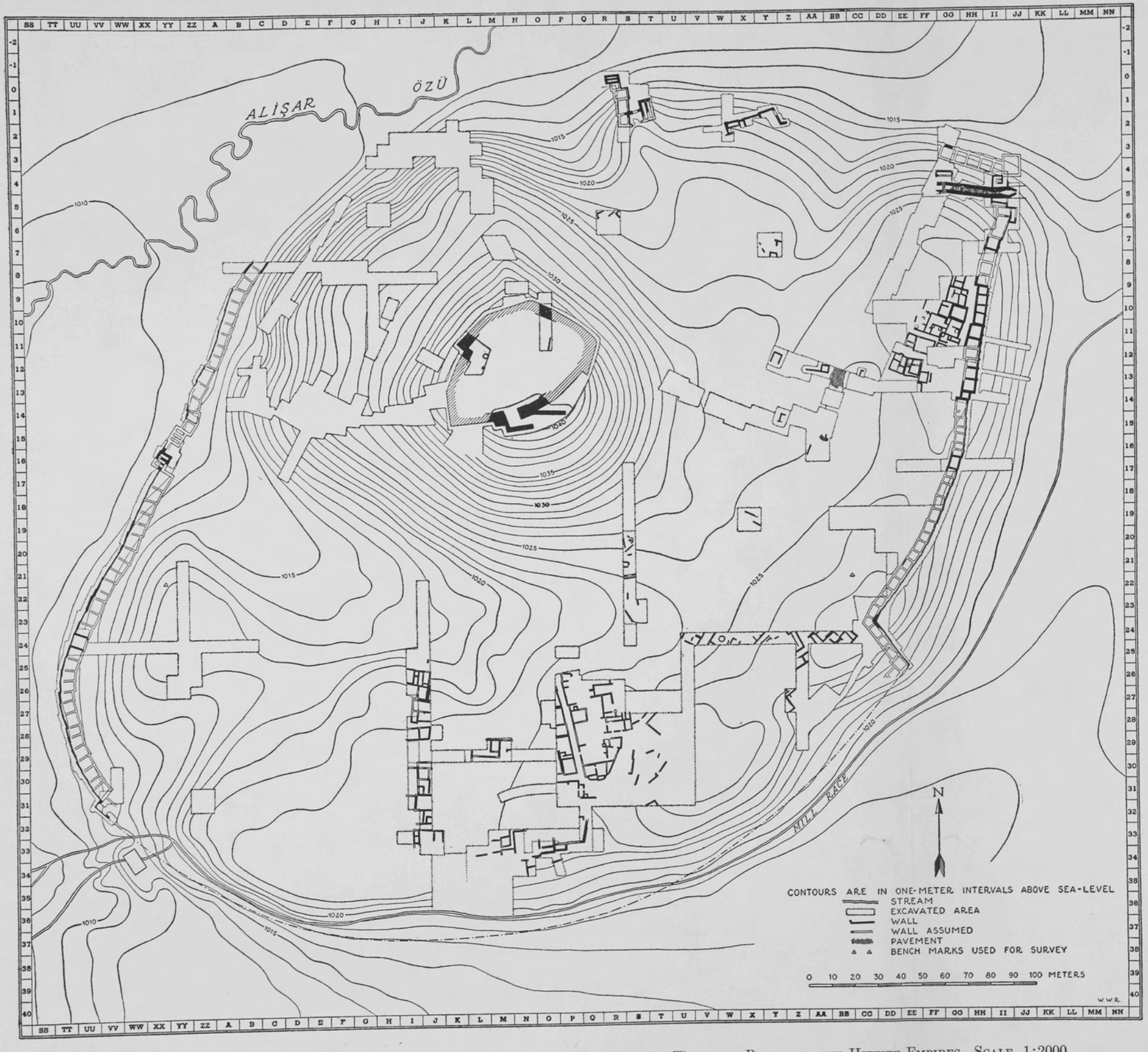

PLAN OF THE ALIŞAR MOUND, SHOWING BUILDING REMAINS OF THE EARLIER LEVEL (11 T) OF THE PERIOD OF THE HITTITE EMPIRES. SCALE, 1:2000

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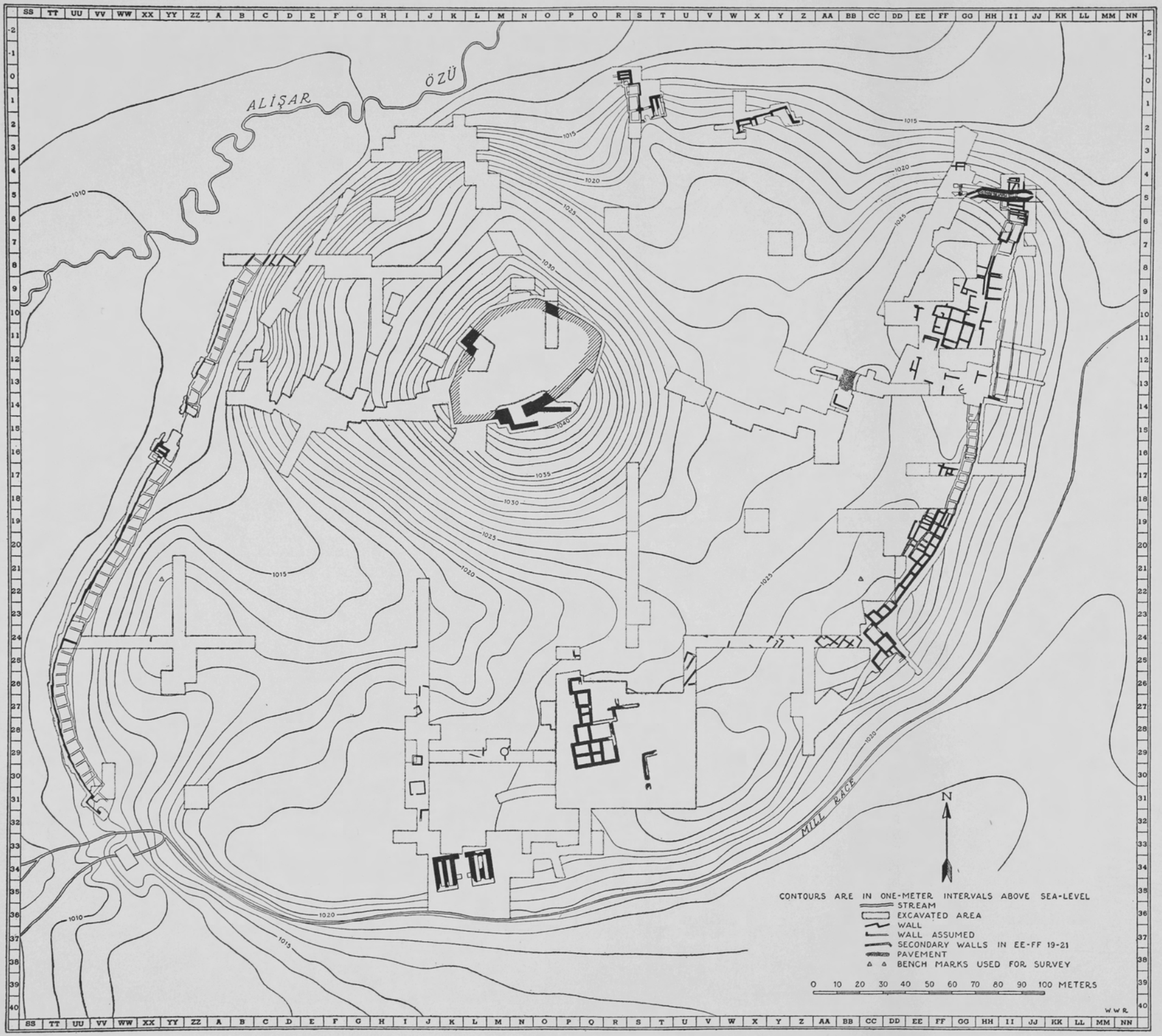

PLAN OF THE ALIŞAR MOUND, SHOWING BUILDING REMAINS OF THE LATER LEVEL (10 T) OF THE PERIOD OF THE HITTITE EMPIRES. SCALE, 1:2000

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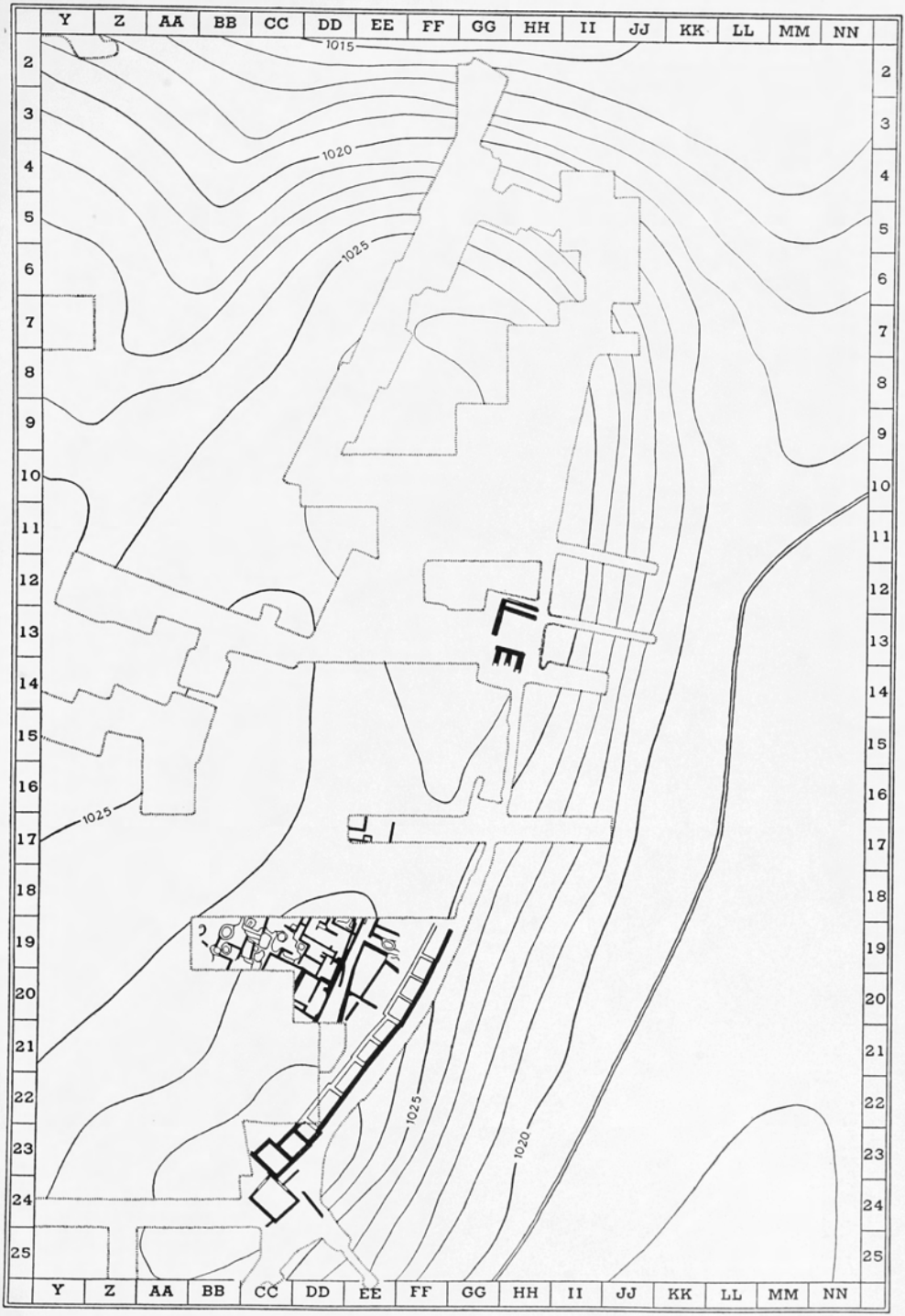

Plan of the Eastern Part of the City Terrace, Showing Building Remains of the Latest Sublevel of

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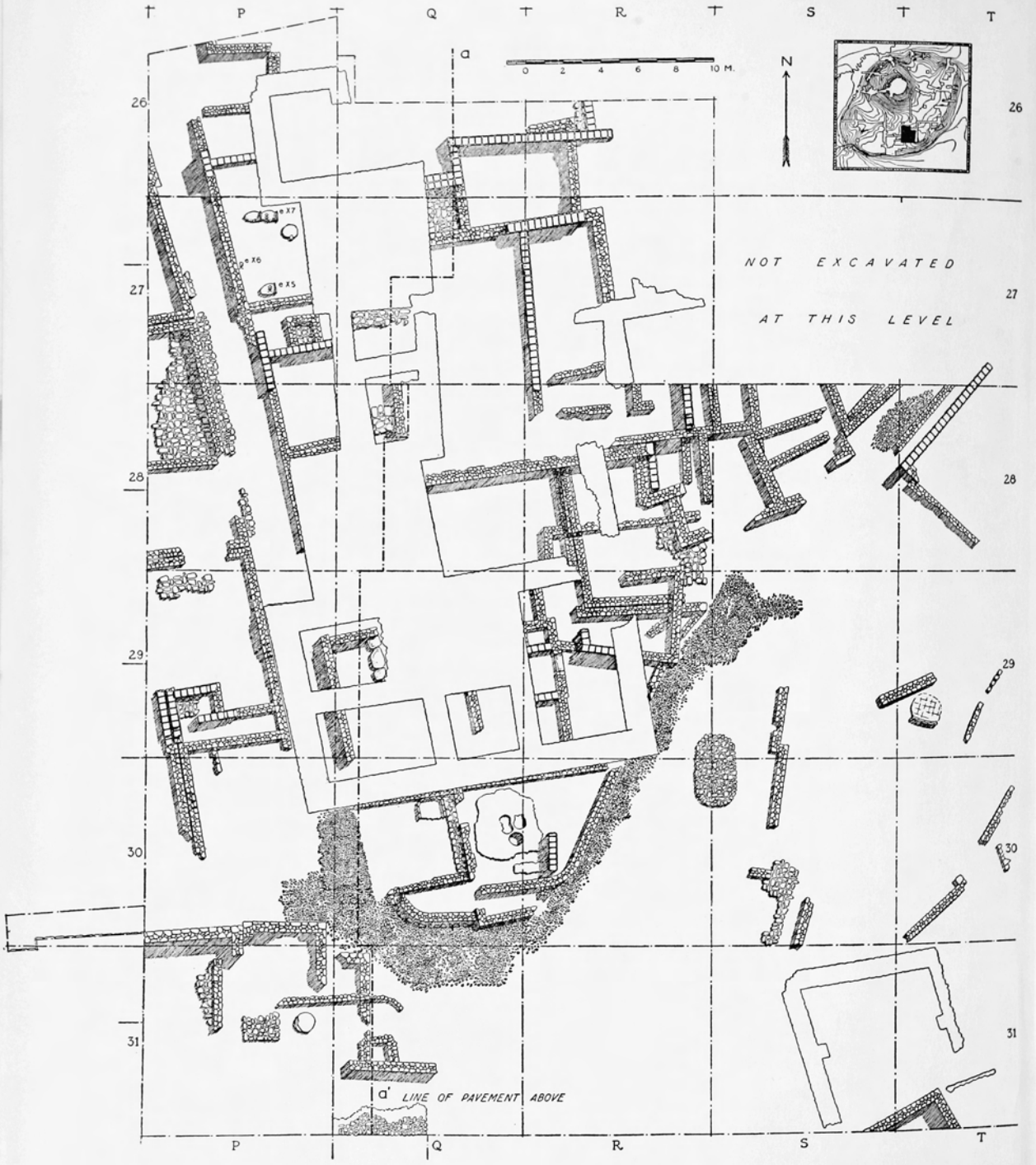

Plan of Level 11 T in the Complex of 1931 (P–T 26–31). Scale, 1:250

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KEY TO THE SUBLEVELS OF LEVEL 11 T IN THE COMPLEX OF 1931. SCALE, 1:250

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PLAN OF LEVEL 10 T IN THE COMPLEX OF 1931 (P–U 26–31). SCALE, 1:250

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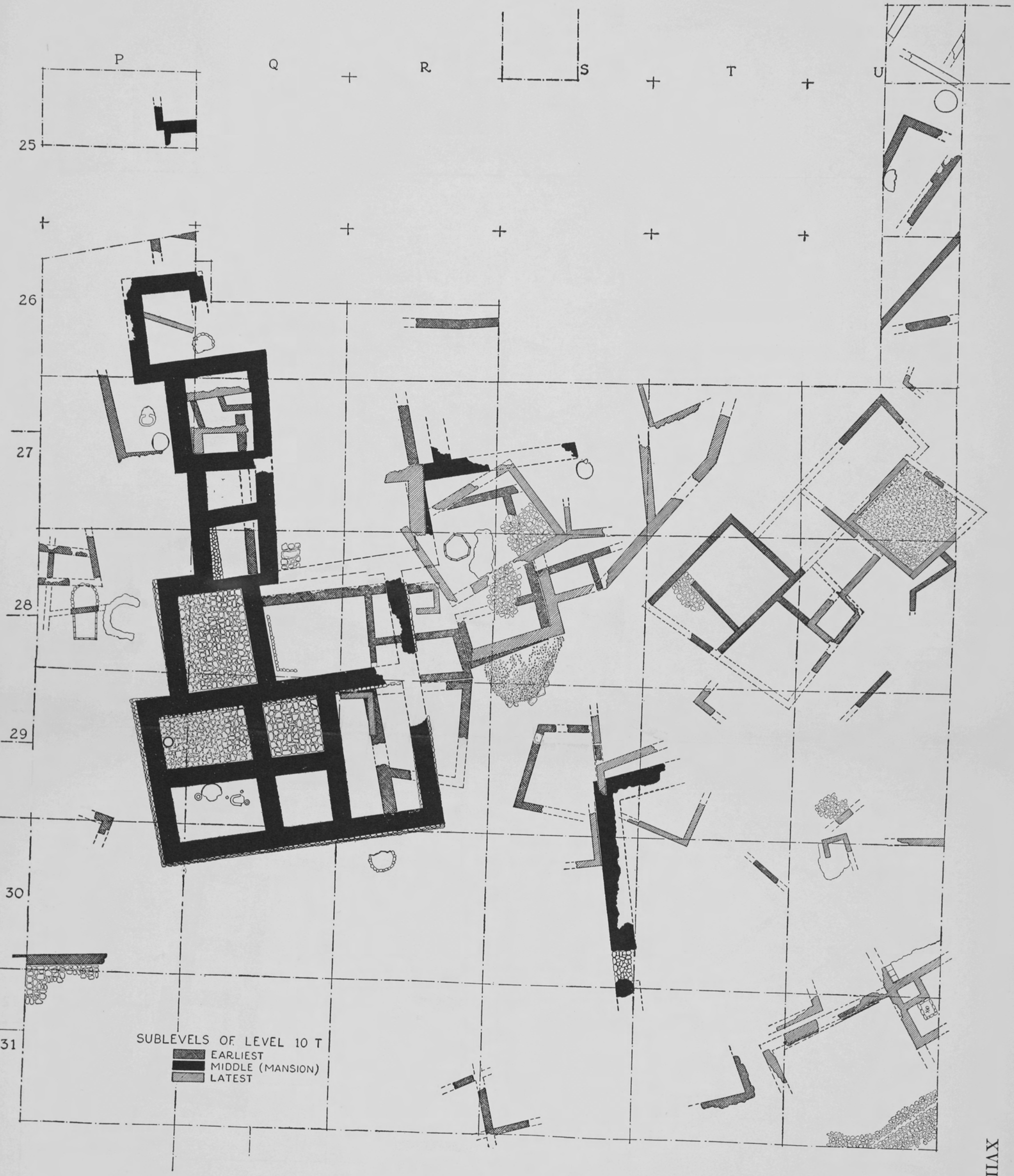

KEY TO THE SUBLEVELS OF LEVEL 10 T IN THE COMPLEX OF 1931. SCALE, 1:250

East-West Cross-Sections of Level 11 T on the Southern Terrace. Scale, 1:200

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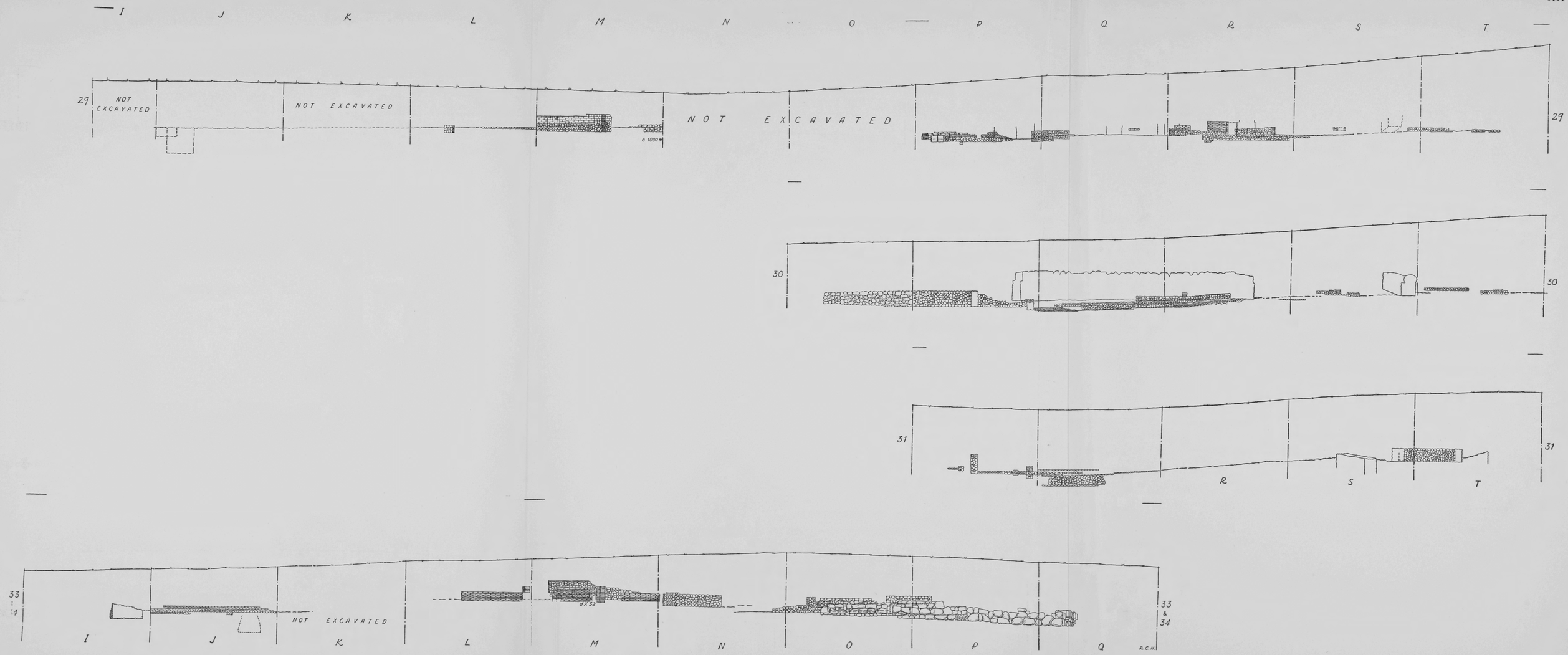

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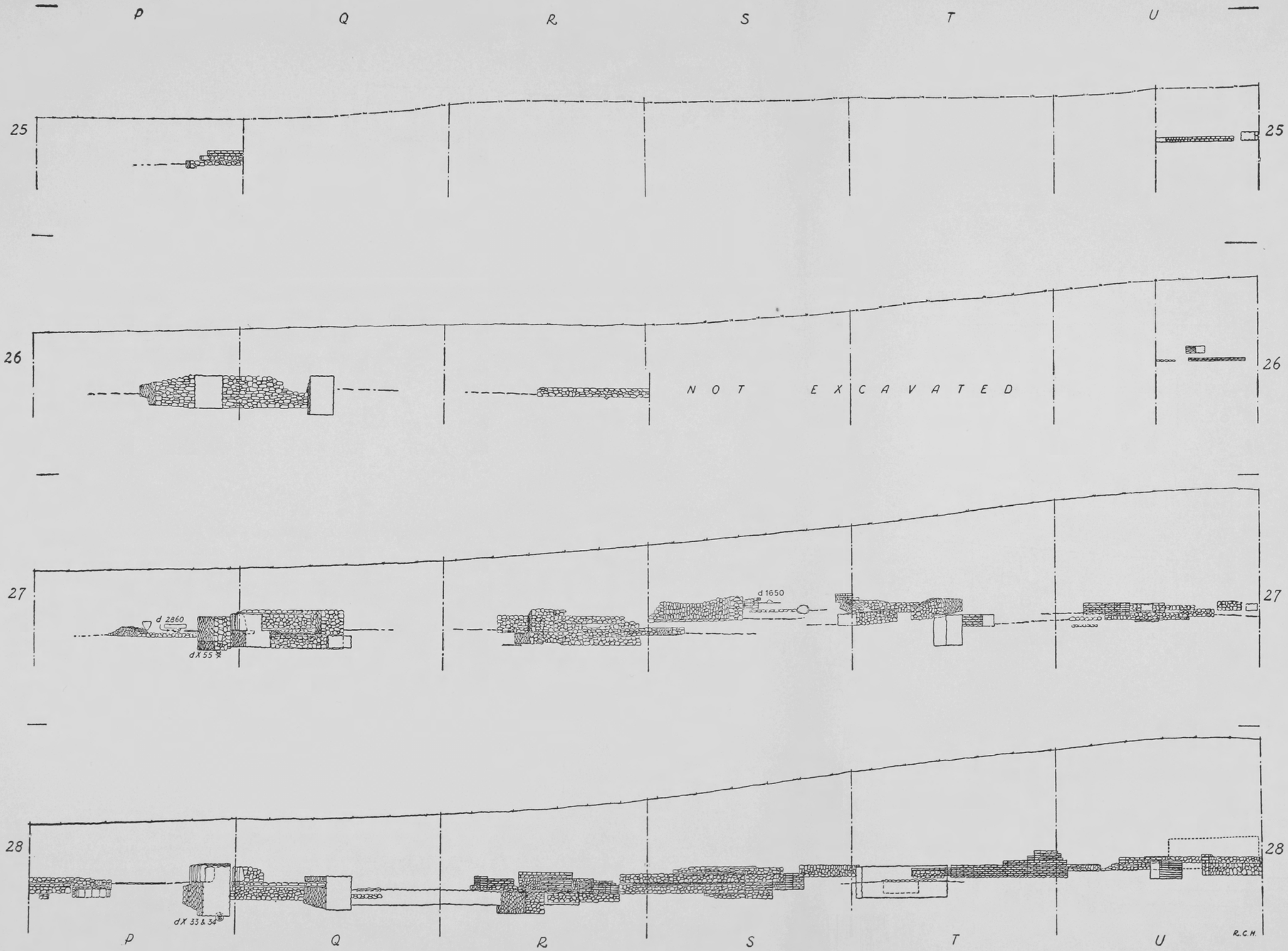

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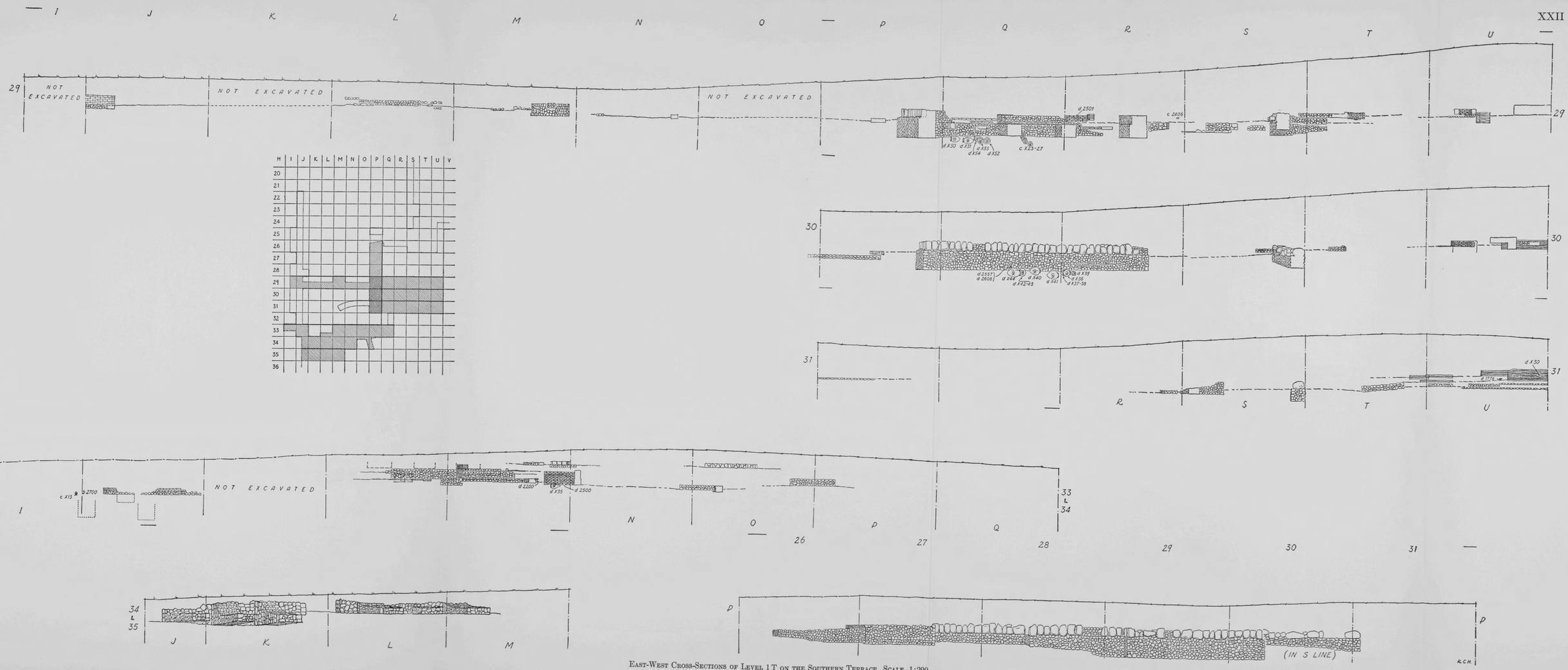

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East-West Cross-Sections of Level 1T on the Southern Terrace. Scale, 1:200

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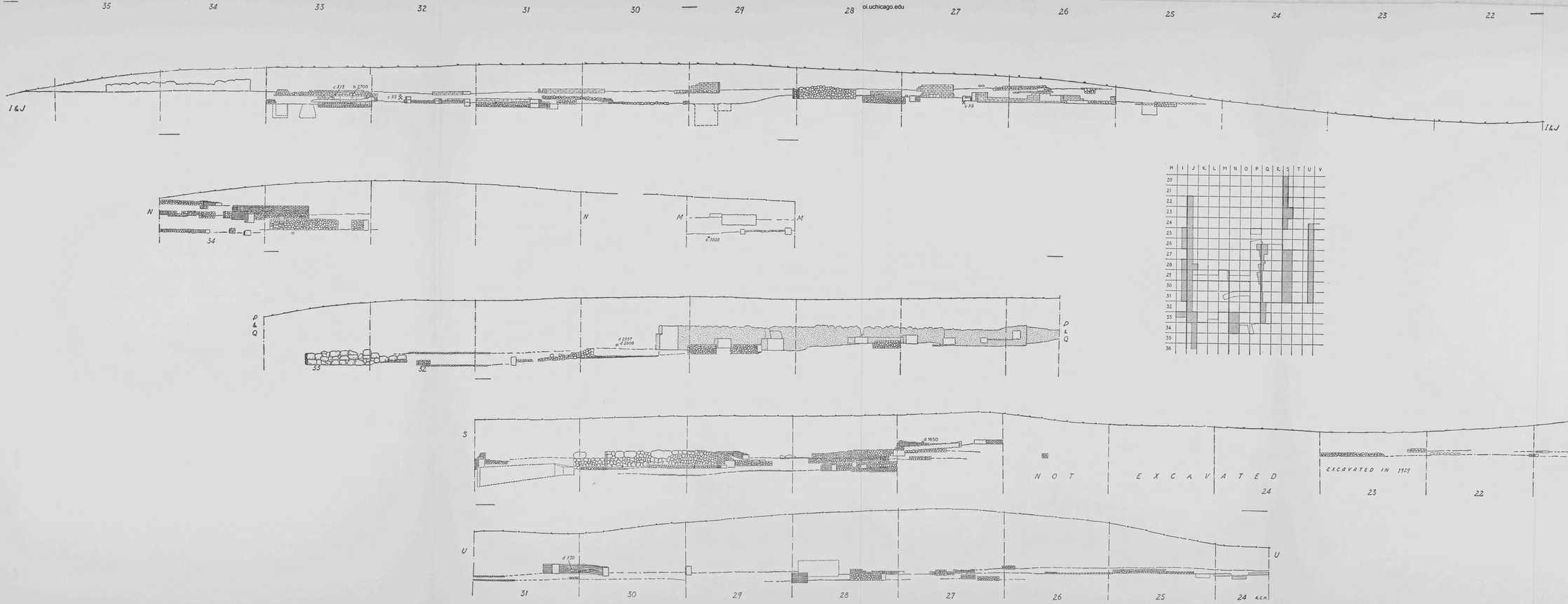

North-South Cross-Sections of Levels 10–11 T on the Southern Terrace. Scale, 1:200

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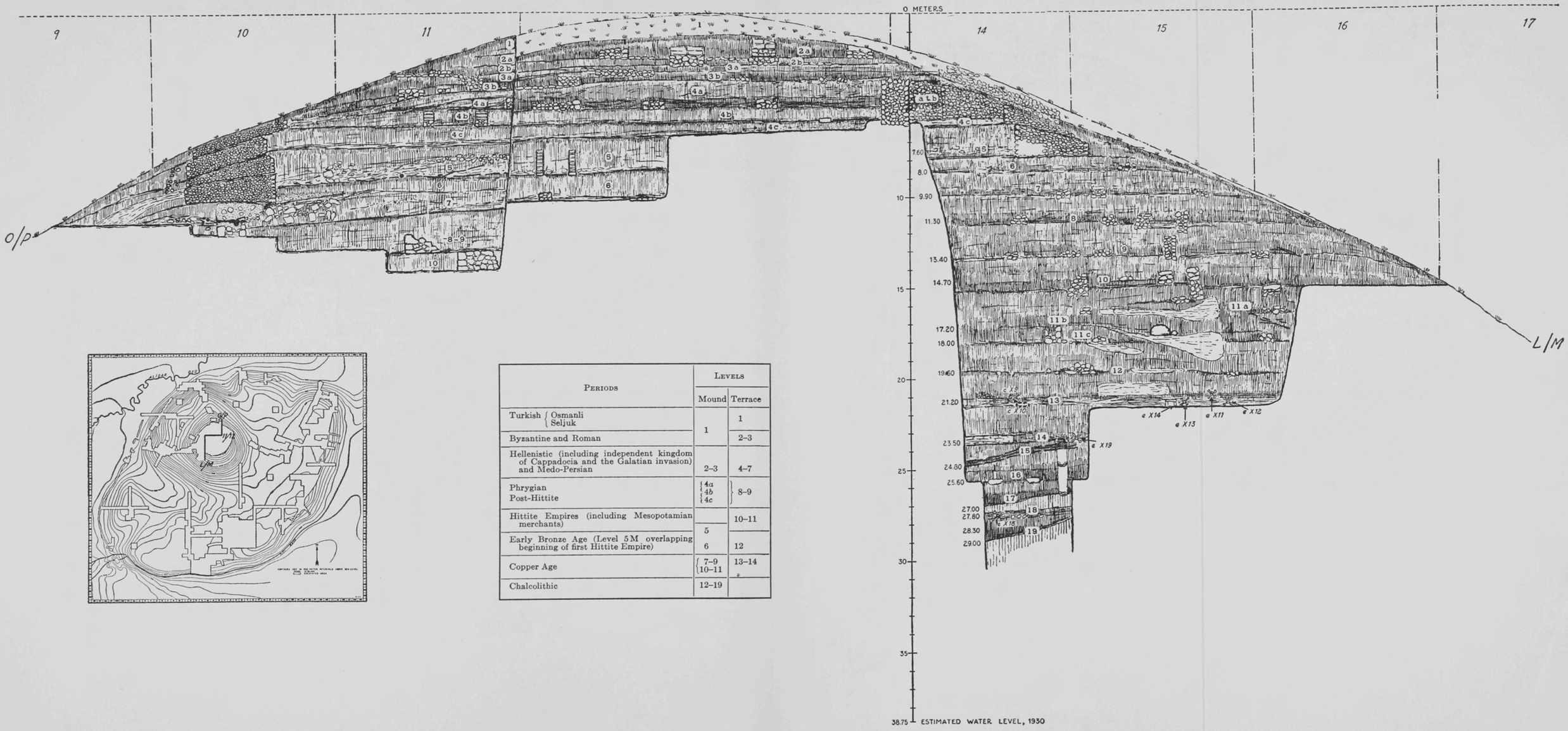

Periods	Levels	
	Mound	Terrace
Turkish { Osmanli / Seljuk	1	1
Byzantine and Roman		2–3
Hellenistic (including independent kingdom of Cappadocia and the Galatian invasion) and Medo-Persian	2–3	4–7
Phrygian / Post-Hittite	4a / 4b / 4c	8–9
Hittite Empires (including Mesopotamian merchants)	5	10–11
Early Bronze Age (Level 5M overlapping beginning of first Hittite Empire)	6	12
Copper Age	7–9 / 10–11	13–14
Chalcolithic	12–19	

North-South Cross-Section of the Citadel Mound: Eastern Profiles of O 9–11 and L 12–16, Showing Levels 1–19. Scale, 1:200

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Drawings of Seal Impressions of the Period of the Hittite Empires and the Post-Hittite–Phrygian Period. Actual Size

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