ΙΣΘΜΙΑ ΦΡΕΑΤΩΝ

TERRACOTTA WELL-HEADS FROM THE ATHENIAN AGORA

(Plates 6-8)

TERRACOTTA well-heads, shaped like the tops of large pithoi, have long been familiar from representations on vases, both red-figured and black, of the archaic period. We are now in a position to compare these renderings not only with several actual pithos-tops used as well-heads [1] but also with drum-shaped well-heads proper, apparently inspired by the pithos-top type but unknown to us from representations, some eight of which have been identified in the Agora excavations.[2]

Since all of the well-heads known to us from the vase-paintings are of the pithos-top type, it will be better to consider first the Agora well-heads of this type and their similarities with the representations on vases before going on to the drum-shaped well-heads which have no pictured counterparts. The six pithos-tops of the Agora which are catalogued below (Nos. 1-6; Pl. 6) appear actually to have been used as well-heads and are not merely discarded fragments of broken pithoi. In the first place, no fragments of the lower walls were found with the rim and neck fragments. Secondly, several of the rims show rope marks and in two cases the present lower edge appears to have been trimmed to afford an even resting surface. Our earliest pithos-top (No. 1; Pl. 6) comes from a well which went out of use about 550 B.C., the latest (No. 6) belongs to a well which was filled after the Persian invasion. Examination of the profiles (Pl. 6) shows that there were at least two lines of development during this period, although the scantiness of the material does not allow definite conclusions. In one line a broad rim (No. 1) becomes broader and lower (Nos. 2 and 3) while the top diameter decreases sharply and the ridge below the rim is dropped. The other line of development has its beginning in a profile (No. 4) closely related to that of No. 1, with the same rim-width, but with the ridge below the rim displaced to mark the juncture of neck and shoulder. The rim-edge of No. 4 is moulded instead of straight, and its top diameter is smaller than that of the successors of No. 1. This line of development, as seen in Nos. 5 and 6, shows a rim narrowing sharply, even to the point of non-existence, and more jar-like curves.

Parallels with pithoi for all these pithos-top well-heads can be found in vase-paintings depicting the adventures of Heracles with Eurystheus or with Pholos, both of which involve pithoi.[3] Sketches of the pithoi which occur on four of these vases

[1] Catalogue below: Nos. 1-6; Pl. 6.
[2] Catalogue below: Nos. 7-14; Fig. 3; Pls. 7, 8.
[3] Amphorae (references to *C.V.A.*, section III He): Louvre F 208, pl. 25 (Fig. 1a); Louvre

appear in Figure 1 and show the closeness with which the painters followed the changing trends of the potters' work.[4]

The similarities between our pithos-type well-heads and the well-heads in vase-paintings are not so striking, largely because the well-head representations are limited to a short period at the beginning of the fifth century and reflect only the contemporary style of pithos, whereas both the representations of pithoi in mythological scenes and our pithos-tops range throughout the sixth century. Drawings of well-heads, all of the pithos-top type, occur on one late style black-figured pelike [5] and on five red-figured cups attributed to the Brygos painter and Onesimos [6] (Fig. 2). These renderings appear to be of one type of pithos-top most closely related to our No. 3, which belongs

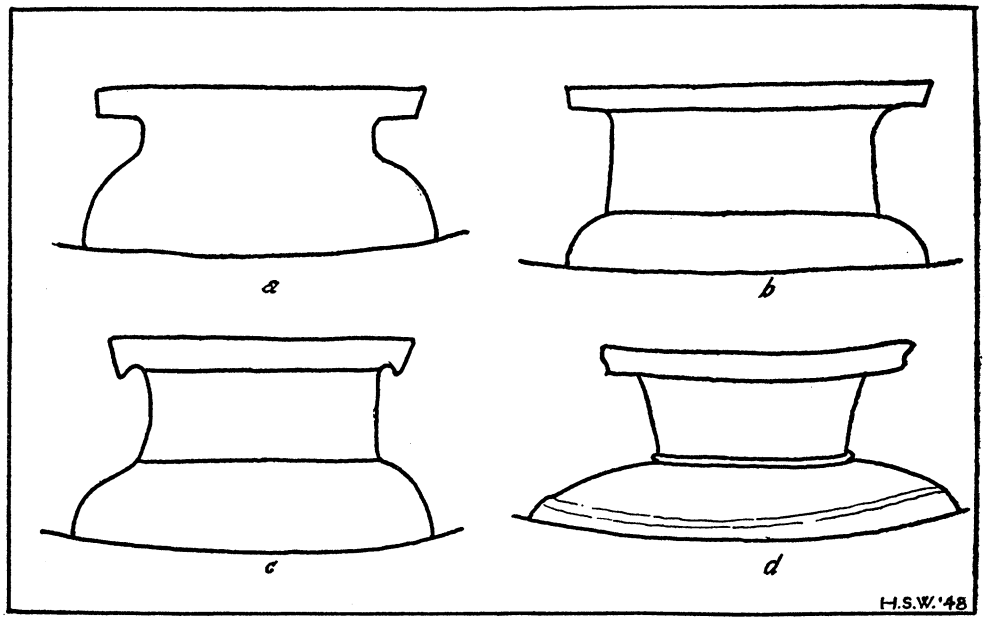


Fig. 1. Pithoi represented on Vases

F 213, pl. 26 (Fig. 1b); Louvre F 202, pl. 39 (Fig. 1c); Louvre F 59, pl. 30; Louvre F 229, pl. 43; British Museum B 162, pl. 28 (Fig. 1d); Copenhagen, Mus. Nat., pl. 107; Madrid, Mus. Arch. Nat., pl. 17; Villa Giulia, pl. 15; Bologna, pl. 15; Gallatin Coll., pl. 3. Also the white-ground lekythoi: Paris, Bibl. Nat., *C.V.A.*, III J a, pl. 86 and Copenhagen, Mus. Nat., III H, pl. 111 and the red-figured stamnoi: Villa Giulia 868, *C.V.A.*, III Ic, pl. 5 and Palermo, III Ic, pl. 40.

[4] I owe the drawings for all the figures to the kindness of Hazel S. Whipple.

[5] Berlin 3228: Pfuhl, *Malerei und Zeichnung*, fig. 276; *Arch. Anz.*, 1893, p. 85, no. 16.

[6] (*a*) Florence 76103: *Rev. Arch.*, 1935, i, p. 201, fig. 1; J. D. Beazley, *Attic Red-figure Vase-Painters*, Oxford, 1942 (= *A.R.V.*), p. 252, no. 108. (*b*) Milan, Castello Sforzesco: *Rev. Arch.*, 1933, pp. 154-155; *A.R.V.*, p. 252, no. 110. (*c*) Vienna, Univ.: Benndorf, *Das Heroon von Gjölbaschi-Trysa*, p. 113, fig. 117; *A.R.V.*, p. 251, no. 92. (*d*) Louvre G 291: Hartwig, *Meisterschalen*, p. 259, fig. 36 b; *A.R.V.*, p. 222, no. 51. (*e*) Rome, Museo Artistico Industriale: *Röm. Mitt.*, 1923-24, pp. 84 ff., pl. II; *A.R.V.*, p. 222, no. 59.

to the very end of the sixth century. Perhaps the most interesting feature about the well-heads on vases is the small round hole which four out of the six show just below

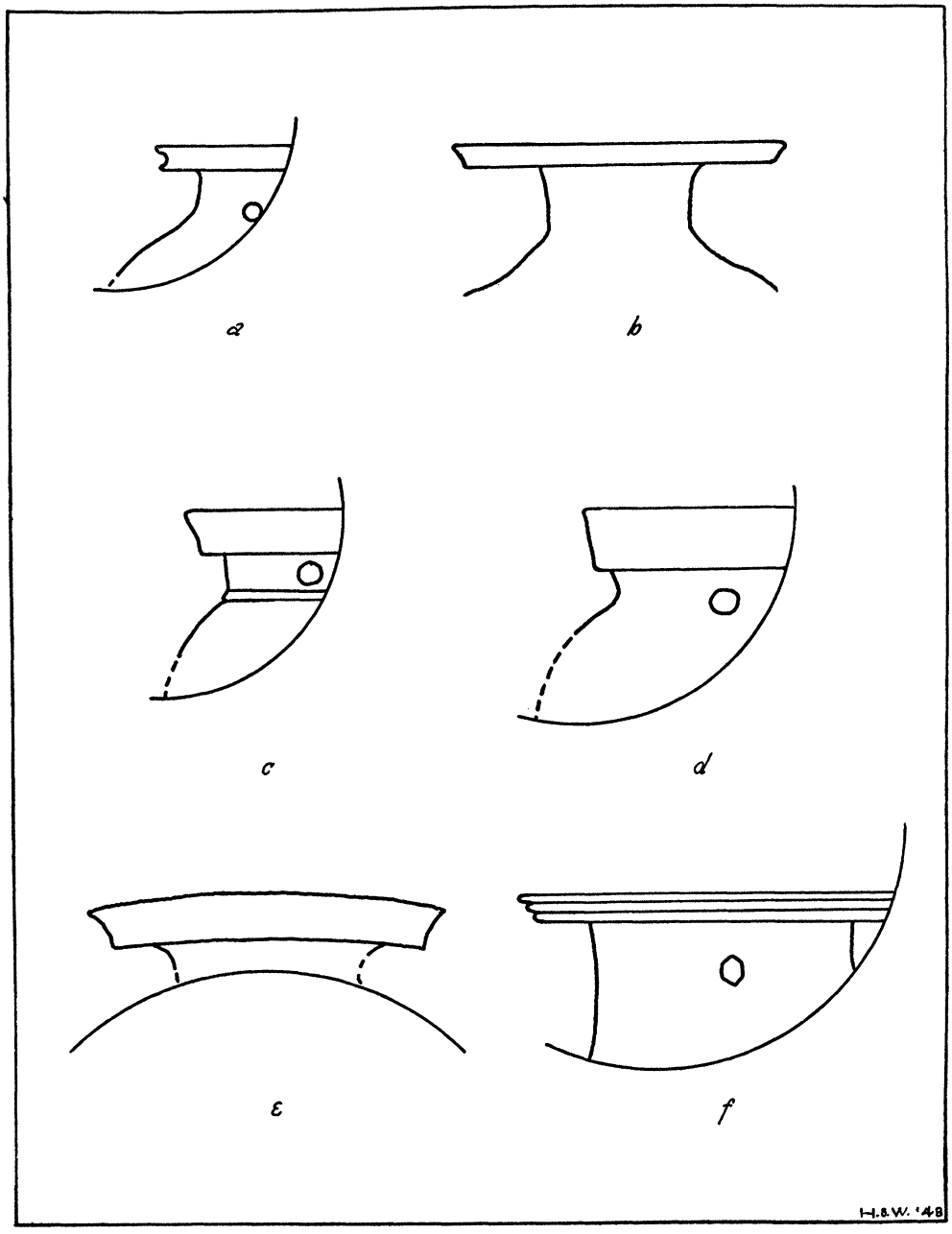


Fig. 2. Pithos-type Well-heads represented on Vases

the rim. Such a hole, with another in the same position on the opposite side, both cut in the unbaked clay, appear on all the drum-shaped well-heads in the Agora. These

holes show no wear and so could not have been functional in any way during the use of the well-head as such. They may, therefore, have served as lifting holes.[7] And the representation of the hole by the vase-painters on the pithos-top type of well-head may have been their shorthand method of identifying the pithos-tops as well-heads. But the absence of the holes on the actual pithos-top well-heads in the Agora might, on the other hand, be accidental, since it must often have been desirable for ease of handling to knock small holes in the sides of the top of a broken pithos when converting it to a well-head. That this was not always done, however, can be assumed from the absence of holes on two of the vase-representations (Fig. 2).

It may be an accident again that has deprived us of any representation of the drum-shaped well-head, but it is probable that this type was far less common than the pithos-top type and less amenable to simple and recognizable rendering.

Of the actual drum-shaped well-heads, one, found in the Agora during the 1947 season, belongs to the class of things inscribed with their own names and will thus serve as a convenient and formal introduction to the drum-shaped well-heads as a class. This well-head (No. 7) is fragmentary but recognizable, even without the inscription, from its size, heavy and clean fabric, flat projecting rim and heavy ridges, all of which are paralleled in our more complete examples (Pls. 7 and 8; Fig. 3). The letters (Fig. 4 *a*) neatly scratched on the outside wall of the well-head but upside down to the well-head's proper position, are: ΙΣ.ΜΙΟΝ ΠΡΕΑΙ and may be read *ἴσ*[*θ*]*μιον πρέα*⟨*τ*⟩[*ος*] by reference to the definition of *ἴσθμιον* as a well-head or well-neck in Photius and Moeris.[8] Although the substitution of pi for phi is not frequent, there are enough examples, even in fifth-century Athens, to suggest that it was a possible mistake for whole groups of population as well as for certain handicapped individuals. Visiting Cretans who had no phi may well have written pi. The Scythian slave in Aristophanes [9] spoke a strange tongue, apparently familiar to the Athenians from his compatriots, in which pi's were substituted for phi's. There must always have been occasional individuals who were psilotic as the result of a speech or hearing defect, and so could not distinguish or reproduce the difference between pi and phi. And finally there was the Brygos painter, who may, as Dümmler suggests,[10] have compromised between his native beta (which he used in writing his employer's name as Brygos rather than Phrygos), and the Athenian phi by using pi as in ΔΙΠΙΛΟΣ,

[7] Compare the lifting holes on large stands, such as *Hesperia*, XVII, 1948, pp. 184-185, pl. LXV, nos. 2-3. This stand comes from the same well as our No. 7. It is possible, of course, that the holes served either to hold the knotted end of the draw-rope or to provide attachment for the lid. But the lack of any trace of wear on these holes and the careless way in which the draw-rope drags its knotted end on the ground in the vase-paintings suggests that their primary purpose was as lifting holes.

[8] Photius, *s. v. ἴσθμιον· τὸ τοῦ φρέατος περιστόμιον* and Moeris, *s. v. ἴσθμιον· Ἀττικῶς, περιστόμιον ἢ φρεάτιον, Ἑλληνικῶς.* Cf. also Hesychius, *s. v.*

[9] *Thesmoph.*, 1007: *πέρ', ἐγὼ ξινίγκι πορμός, ἵνα πυλάξι σοι.*

[10] *Berl. philol. Wochenschr.*, 1888, p. 20.

NIKOΠIΛE, ΠIΛON, ΣOΠIΛIΠ.[11] Furthermore, the forms of the letters on the well-head, as also the context in which it was found, indicate a date not later than the middle of the sixth century B.C., so that some fluidity in alphabetic concepts is to be expected.

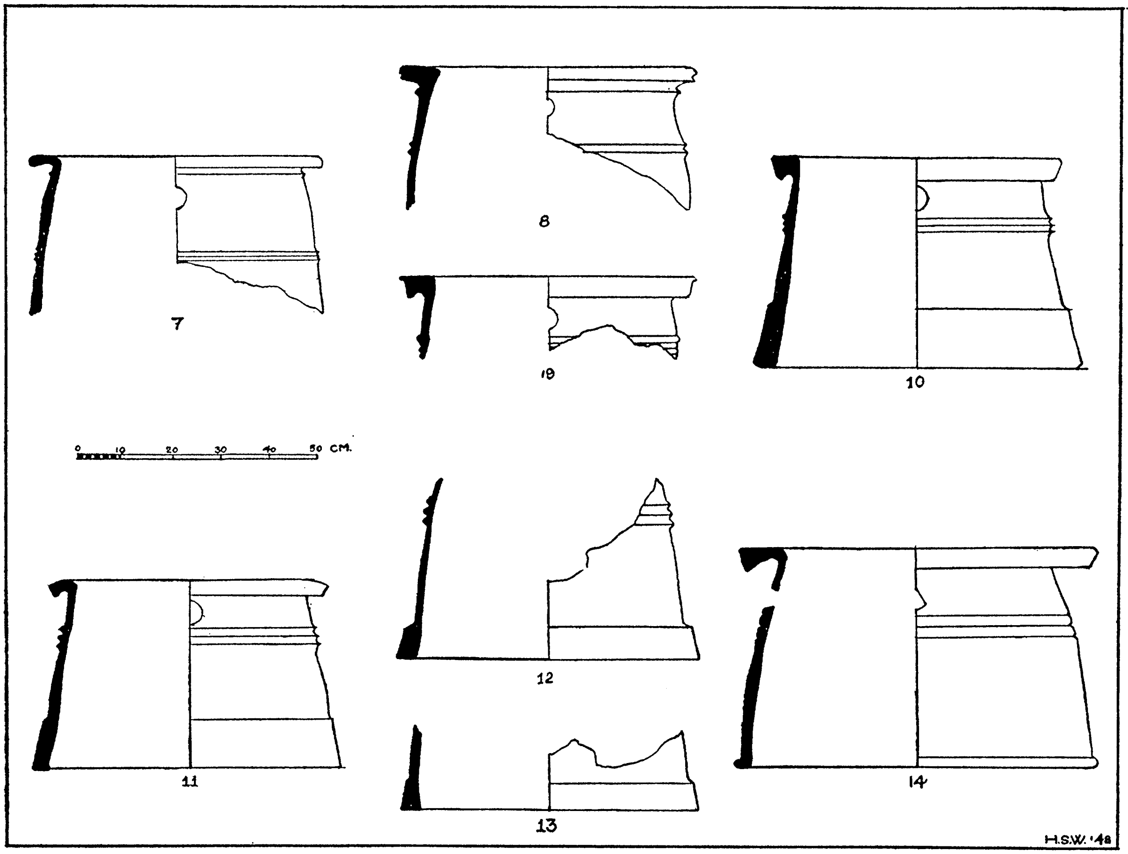


Fig. 3. Drum-shaped Well-heads: Profiles of Nos. 7-14

The fact that the graffito is upside down on the well-head makes it likely that it is the work of an idle and perhaps ignorant scribbler leaning negligently over the well and practising his new-learned alphabet by scratching the first thing that came into his head. The failure to complete the inscription might well be the result of a peremptory summons from indoors to the idler, child or slave, in the courtyard. The other graffito on the well-head (Fig. 4 *b*), this time right-side up and somewhat more neatly scratched, adds a name to our information about this sixth-century household.

[11] London E 68, *A.R.V.*, p. 247, no. 21. No phi appears on the Brygos painter's vases. Another cup (Florence 3949, *A.R.V.*, p. 251, no. 74) has IAKƎΛIΠ issuing from the mouth of a youth; it is probably an address to the beloved: φίλε καὶ [....

Eukles, a name which is early enough to be connected with Homer,[12] and which occurs in Athens as early as the first half of the fifth century,[13] may be that of the well-head's owner.

The eight drum-shaped well-heads from the Agora were found in fragments in eight different wells, all but one of which went out of use before or at the time of the Persian invasion; the exception appears to have been in use after the first quarter of the fifth century. Between the first two, which must be dated by their accompanying

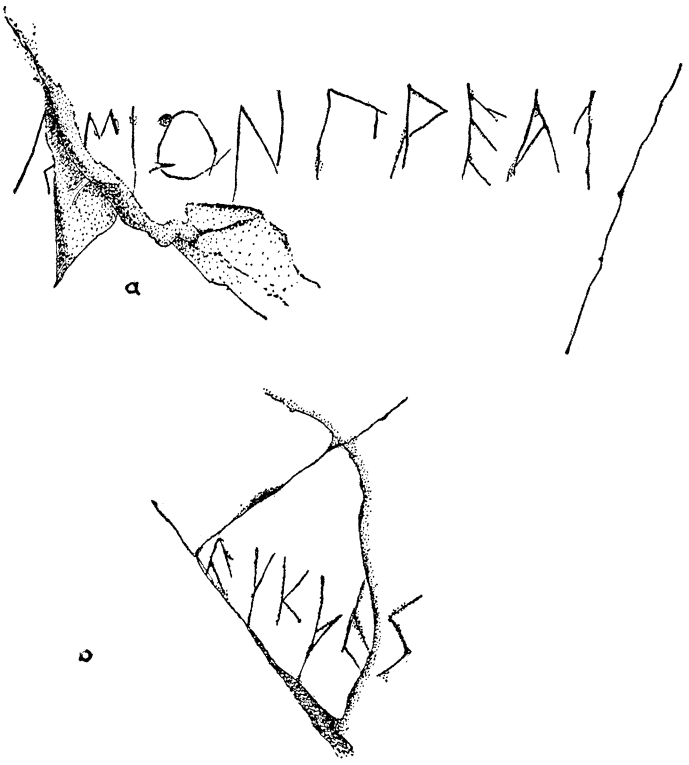


Fig. 4. Graffiti on fragmentary Well-head No. 7

pottery to the first half of the sixth century, and No. 13, which belongs to the last quarter of the sixth and the beginning of the fifth century, there is a period of fifty years. During this time the basic form remains the same, and the line of development which may be traced (p. 120, below) is concerned only with details. The explanation of the sameness must lie in the singleness of the well-head's function; once that function had been fulfilled there was little room for variation and modification as long as the well-head was conceived as a pithos-top substitute adapting the pithos to a

[12] Suidas, *s. v.* Ὅμηρος.
[13] Kirchner, *Prosop. Att.*, No. 5701.

specialized function. The basic form shared by all seven is as follows: a cylindrical drum tapering toward the top with a slight thickening of the wall to form a base-collar and to strengthen the lower part of the wall; a fairly wide projecting rim, flat on top; a band of three heavy ridges to reinforce the wall in its upper part; two small round holes on opposite sides slightly below the rim, cut in the clay before firing; very heavy fabric but fine clean clay, often with a slip on the outside and with dull or dilute black glaze on the top of the rim, on the ridged band and base-collar. The height ranges from 0.40 m. to 0.45 m., the inside diameter at the mouth from 0.46 m. to 0.48 m., and the inside diameter at the base from 0.52 m. to 0.60 m.

The eighth well-head, which was apparently in use considerably later than the other seven, differs from them in the following respects: the base-collar has vanished leaving only a slight thickening in the lowest part of the wall; the projecting rim is wider; there is no ridged band, but three shallow grooves in its place; beneath the rim there are four holes instead of two, and they are almost triangular instead of round; the fabric is heavy, but the clay is coarse and gritty, and there is no trace of slip or glaze.

Examination of the eight well-heads shows that some variations are irrelevant and immaterial while others point to a definite line of development (Fig. 3). The significant criteria on which the relative dating within the series was based and the numbers 7 to 14 were assigned are: the distance of the ridged band from the rim,[14] the height of the base-collar, the overhang of the rim, and the diameter of the lifting hole, in all of which the development follows a single line. This development is similar to that of the pithos-top well-heads Nos. 1-3, and the closeness between No. 1 and Nos. 7 and 8 suggests that the cylindrical well-head type had its origin in the early sixth century from just such a pithos type.

The continuity of form and tradition exemplified by our eight well-heads is emphasized by a comparison between them and two terracotta curbs of the Hellenistic period which have been recently identified in the Agora.[15] These Hellenistic curbs differ from the earlier group not only in their total conception, which appears to have been inspired by the contemporary stone curbs,[16] but also in size and details: the diameters, both top and bottom, are smaller by about twenty-five and fifteen percent; the rim has its parallels not in pottery but in the mouldings of architectural members; there are no lifting holes; and the fabric is coarse. Their function, also, appears to differ, since both of our examples were found in cisterns and their smaller diameter

[14] In addition to the ridged band, Nos. 1 and 2 have a single ridge just below the rim; this vanishes as the ridged band moves up in the later examples.

[15] Nos. 15 and 16; Fig. 5; Pl. 7. I am indebted to G. Roger Edwards who made the identification and forwarded complete notes and descriptions for incorporation in this article. To Professor Oscar Broneer I owe permission to reproduce the photograph of the limestone curb in Corinth (Pl. 7).

[16] Cf. *Délos*, VIII, *Le Quartier du Theatre*, Pl. LXII, E.

is much more suitable for the comparatively narrow neck of the stuccoed, flask-shaped cistern than for a well-mouth which would have had to be dangerously and unstably contracted from the shaft-diameter of a meter or more to support the smaller curb. Therefore, although the manufacture of terracotta curbs may have continued uninterrupted from the Pre-Persian period through the first half of the third century B.C., the obvious relationship of our Hellenistic examples to stone curbs excludes them from our group of pithos-inspired well-heads.[17]

The development and relative chronological order of the sixth- and fifth-century well-heads, as established on the basis of their form and structure, can be tested by the independent evidence of the wells' contents. Nos. 7, 8, and 14 were given their places in our list from the dates of their wells, so a check will be profitable only in the other five cases; of these, four wells include pottery down to the first quarter of the

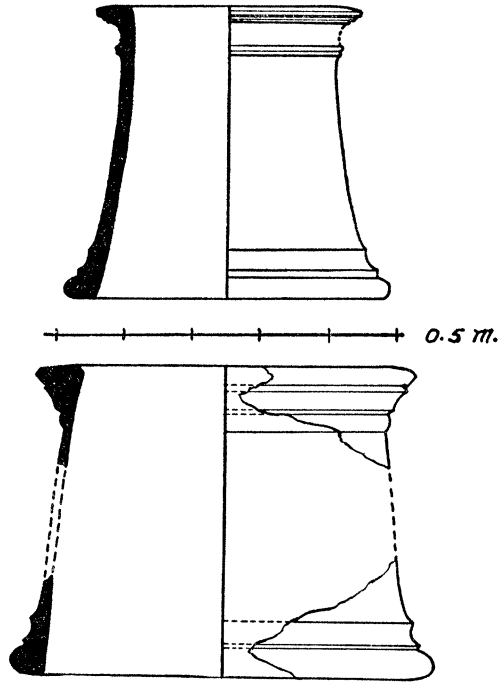


Fig. 5. Hellenistic Curbs: Profiles of Nos. 15 and 16

fifth century and seem to have gone out of use with the Persian destruction; the fifth (No. 13) went out of use in the second half of the sixth century. But since there is no way of knowing a well-head's life-span, or of learning from the time the well went

[17] For terracotta well-heads in Pompeii cf. von Rohden, *Die antiken Terrakotten von Pompeii*, p. 5, pl. XXVII; Winter and Pernice, *Hellenistische Kunst in Pompeii*, V; Pernice, *Hellenistische Tische, Zisternenmündungen*, etc., p. 16, no. 2.

out of use the exact period during which the well-head crowned the well, it is possible that Nos. 9, 10, 11, and 12, which come from wells which went out of use in 480 B.C., are earlier than No. 7, whose well was closed in the second half of the sixth century. Such a supposition becomes more credible when it is observed that the pithos-top well-head No. 3, found in the well once crowned by well-head No. 10, is dated late in the series of pithos-tops (see above, p. 114) and so may well have served as No. 10's successor in the latter part of the sixth and early fifth century.

The problem of how the well-heads topped well-shafts which tend to be some 0.40-0.50 m. greater in diameter [18] than the bases of the well-heads is worth considering both for itself and for the light it sheds on the comparatively short vogue of the terracotta well-head. No help is forthcoming from the vase-paintings on this point, inasmuch as the well-heads on the vases are always cut off above their bases. Less help than might be expected from their number comes from the wells of the Agora, because in many cases their mouths were destroyed by filling and building operations subsequent to their abandonment. In most cases the wells now appear as simple circular rockcut shafts, often with hand or foot holds neatly gouged out of the walls. Only in three sixth-century wells is sufficient of the upper part preserved to provide any useful data:

1) The well below the Tholos,[19] which is curbed with small polygonal masonry throughout its depth with an inside diameter of 0.70 m. in its depths and 0.60 m. at its mouth. Such a curb would be ideal for supporting a terracotta well-head with a base diameter of 0.68 m. A section of this well topped by well-head No. 10 is given in Figure 6; although the well-head seems to sit precariously, it is not likely that the diameter of the shaft at its mouth was smaller than the base diameter of the well-head, since pots could so easily be broken on a ledge jutting out. It is probable that the base of the well-head was packed around with sand or pebbles to hold it firmly in place.

2) A second well faced with stones throughout was found in the residential area on the west slope of the Areopagus; here the inside diameter is 0.70 m. at the preserved top and 1.00 m. at bottom, and the curbing is 0.40 m. thick.

3) The third curbed well [20] differs from the other two in having its shaft faced with stones only above the bedrock; the mouth itself, however, is not preserved.

As far as other sixth-century wells are concerned, the footholds scooped out of the bedrock walls in many of the shafts, and the lack of tumbled masonry in the well-fills suggest that the latter method of curbing may have been more frequent [21] and

[18] Sixth- and fifth-century well-shafts in the Agora vary from 0.90 to 1.20 m. in diameter; this was a minimum diameter for convenient digging. The well-head, on the other hand, needed to be large enough only to admit the water-jar and, very occasionally, a man.

[19] *Hesperia*, Suppl. IV, p. 25, fig. 20.

[20] It was from this well that the pithos-top well-head No. 1 came. *Hesperia*, VIII, 1939, pp. 247 ff.

[21] It is not paradoxical to assume that the method employed in one out of our three cases was

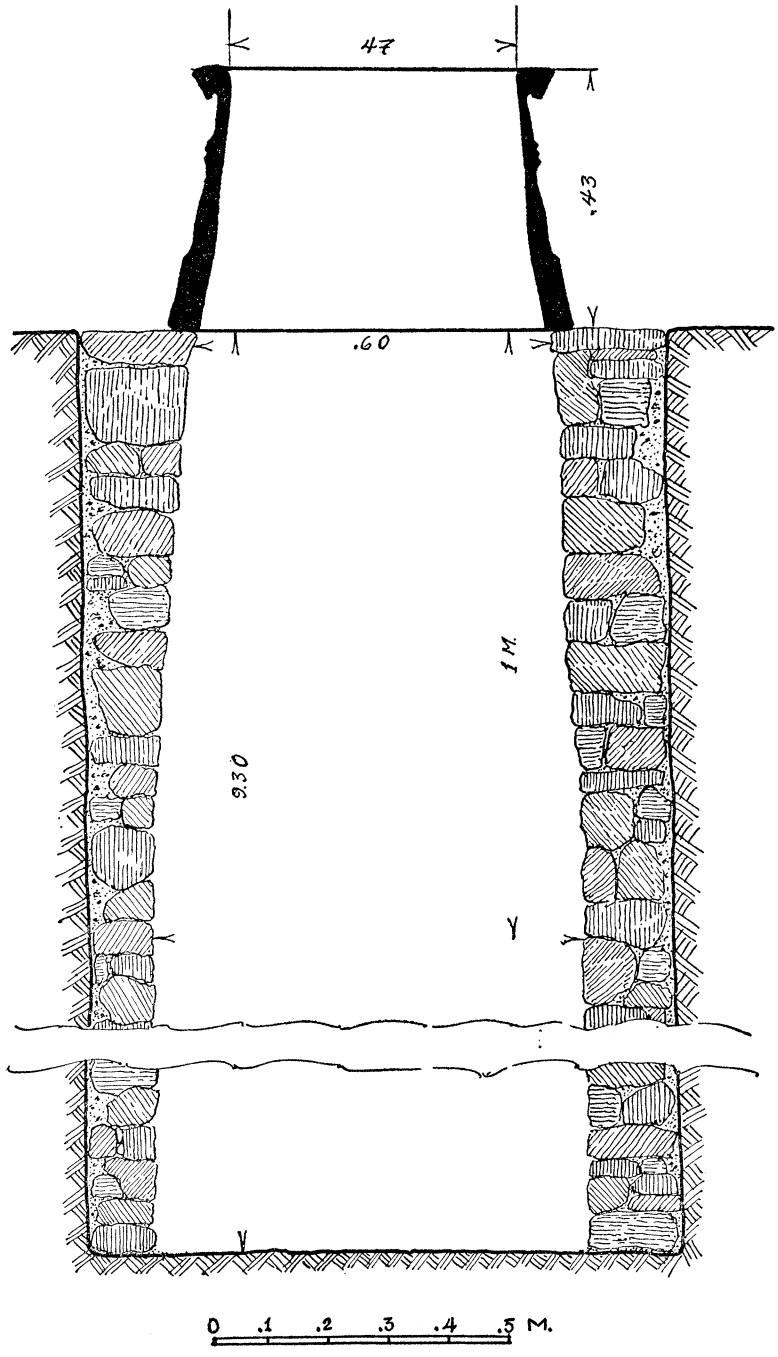


Fig. 6. Section of drum-shaped Well-head on curbed Well

that only in a public building or wealthy establishment could the elaborate curbing throughout be undertaken. Thus we have as the most likely underpinnings for our terracotta well-heads a curbing such as that illustrated in Figure 6 or one built up on top of the bedrock shaft, continuing the shaft walls upward and gradually contracting from the shaft diameter of 1.00 m.-1.20 m. to a top diameter of 0.60 m.-0.70 m. on which the terracotta well-head was set.

Of the fifth-century wells cleared in the Agora, the three which are preserved complete both as to shaft and mouth present an entirely different picture from those of the sixth century. The mouths are composed not of small stones, built into a well, but of large blocks suitable for supporting the stone or marble well-heads (puteals) familiar from a later age with or without a windlass. And here we have reason enough for the disappearance of the pithos-inspired terracotta well-heads. Either the curbing of small stones proved unsatisfactory or the greater resources of the fifth century made a more elaborate structure possible and desirable. The use of large stone blocks to outline the well-mouths and the employment of tiles as well-lining tended to take the well out of the potter's sphere and subject it to architectural treatment. The new capping blocks served as foundations for stone windlass scaffolds and demanded equally solid and imposing stone puteals. When expense was a major consideration, the puteal may have been made from terracotta,[22] but for the harmony of the whole it would take its form from the stone puteal. Although the available material is not adequate to demonstrate more specifically the development of well-curbs in the periods following the Persian wars, the absence of well-heads in vase-paintings after the first quarter of the fifth century seems to confirm the apparent break in the terracotta well-head tradition, which had flourished throughout the sixth century.

The group of potters' well-heads from the Agora adds still another detail to our knowledge of the domestic life of early Athens, another evidence of the potters' varied skill, and another link between representations on vases and reality.

TERRACOTTA WELL-HEADS FROM THE AGORA

Catalogue

1. Inv. P 12,497 (Pl. 6). From a well on the lower slopes of the Areopagus in use during the third quarter of the sixth century. The well-head did not, however, crown this well since it was found above the level of the period-of-use in earth which had been brought from elsewhere to fill the well in the third quarter of the century. Cf. *Hesperia*, VIII, 1939, pp. 255 ff. This is the well referred to above (p. 122) as preserving part of a built facing above bedrock. Preserved height, 0.16 m.; estimated top diameter, 0.70 m.; rim width, 0.07 m.

---

the more frequent, since it happens to be the method and construction most susceptible of complete destruction either at the time of the well's abandonment or in subsequent leveling for foundations.

[22] Terracotta puteals similar to our Hellenistic curbs and to their own neighboring stone puteals were found in Pompeii. Von Rohden, *Die antiken Terrakotten von Pompeii*, pp. 5 ff., pl. XXVII.

Two joining fragments preserve almost half the rim and neck including the heavy ridge at the base of the neck and the beginning of the flare toward the shoulder. The projecting rim is flat on top. The clay is rather coarse, fired red to brown at the surface, grey at the core; unglazed.

2. Inv. P 14696 (Pl. 6). From a well on the lower north slope of the Acropolis in use during the second half of the sixth century. Preserved height, 0.43 m.; top diameter, 0.56 m.; rim width, 0.09 m.

Many fragments preserve most of the rim and neck with part of the shoulder. The projecting rim is flat on top with a ridge at its outer edge. The wide neck forms a continuous curve with the shoulder, around which run three heavy, notched ridges. The clay is red and micaceous; there is no glaze.

3. Inv. P 13,871 (Pl. 6). From a well on the north slope of the Acropolis in use during the late sixth century. See *Hesperia*, VIII, 1939, p. 233, fig. 30 for one of the vases from this well. Preserved height, 0.23 m.; top diameter, 0.56 m.; rim width, 0.085 m.

Several fragments preserve most of rim and neck; the gaps have been filled in with plaster. The projecting rim is flat; the neck is straight, without trace of shoulder-spring. The clay is coarse and reddish; there is no glaze.

4. Inv. P 13,744 (Pl. 6). From a well on the lower north slope of the Acropolis in use during the late sixth century. Preserved height, 0.44 m.; top diameter, 0.51 m.; bottom diameter, 0.70 m.; rim width, 0.07 m.

The whole upper body with neck and rim are fairly complete with the missing bits restored in plaster. The present baseline shows traces of careful chipping. The projecting rim is flat on top with a double torus along the outside edge. The neck is slightly concave with a ridge at the base above the sloping shoulder. The clay is brown at the surface, pink at the core, with grit throughout, but well-finished on the surface.

5. Inv. P 13,770 (Pl. 6). From a well on the lower north slope of the Acropolis in use during the third quarter of the sixth century. Preserved height, 0.30 m.; top diameter, 0.62 m.; rim width, 0.04 m. See *Hesperia*, VIII, 1939, pp. 231-2, figs. 28 and 29 for other objects from this well.

Many fragments make up most of the rim, neck and shoulder. The neck flares above to form a plain flat rim, the inner edge of which is scored with rope marks. Below, the neck merges into the shoulder which is chipped off neatly at its lower preserved edge. The clay is reddish-brown and micaceous; there is no glaze.

6. Inv. P 13,774 (Pl. 6). From a well on the lower north slope of the Acropolis, in use into the early fifth century B.C. See *Hesperia*, VIII, 1939, p. 235, fig. 32 for one of the vases from this well. Preserved height, 0.335 m.; top diameter, 0.565 m.; rim width, 0.055 m.

Several fragments preserve most of mouth and neck, strengthened with plaster. The flaring rim is flat on top and finished with a groove on its outer face. The clay is reddish brown at the surface, grey at the core; there is no glaze.

7. Inv. P 18,276 (Pl. 8; Figs. 3, 4). From a pit-well on the lower west slopes of the Areopagus, used for only a short period and filled largely from the digging of its successor, the well from which No. 8 came. Preserved height, 0.265 m.; estimated top diameter, 0.60 m.; rim width, 0.06 m.; distance from top to ridge band, 0.18 m.; diameter of handhold, 0.04 m.

Many fragments mend up to four which preserve part of the rim with hand-hold below and part of the side-wall with ridge below rim and a series of three ridges lower down. Flat, projecting rim. Fairly fine Attic clay, well-polished, with traces of dilute glaze on the top of the rim and on the ridge-band.

Graffito on fragment (*a*), upside down: ἴσ[θ]μιον πρέα⟨τ⟩[ος].

Graffito on fragment (*b*), right side up: Εὐκλῆς.

8. Inv. P 18,853 (Pl. 8; Fig. 3). From a well neighboring that in which No. 7 was found, and succeeding it; in use till the middle of the sixth century. Preserved height, 0.29 m.; top diameter, 0.60 m.; rim width, 0.065 m.; distance from top to ridge band, 0.14 m.; diameter of handhold, 0.04 m.

Several joining fragments preserve three-fourths of the rim, parts of two opposite handholds, and part of the wall. The projecting rim is flat on top, concave on its outer edge, and the transition from rim to wall is effected by a heavy ridge like that in No. 7. Attic clay with black glaze on rim and ridge-band.

9. Inv. P 11,060 (Pl. 8; Fig. 3). From a well on the southeast slope of Kolonos Agoraios filled with debris from the Persian sack of 479 B.C. Preserved height, 0.17 m.; top diameter, 0.60 m.; rim width, 0.07 m.; distance from top to ridge band, 0.12 m.; diameter of handhold, 0.05 m.

Most of the rim is preserved with two handholds below, and the upper part of the wall down to topmost ridge on band. Projecting rim is flat on top and shows overhang at outer edge. Clay and glaze are the same as Nos. 7 and 8.

10. Inv. A 957 (Pl. 7; Fig. 3). From a well on the north slope of the Acropolis which contained material from the seventh and sixth centuries but was not closed till early in the fifth century. Height, 0.44 m.; top diameter, 0.60 m.; bottom diameter, 0.68 m.; width of rim, 0.065 m.; distance from top to ridge band, 0.11 m.; base collar height, 0.12 m.; diameter of handhold, 0.05 m.

Many fragments preserve most of rim and three-fourths of walls, with profile complete. The whole is restored in plaster. Flat projecting rim with pronounced overhang. Two handholds below rim; lower wall thickened to form base-collar. Clean Attic clay; good dull black glaze on rim top, ridge-band, and base-collar.

11. Inv. A 1112 (Pl. 7; Fig. 3). From a well in use during the late sixth and early fifth centuries, just outside the southwest entrance to the market square. Height, 0.40 m.; top diameter, 0.64 m.; base diameter, 0.58 m.; width of rim, 0.06 m.; distance from top to ridge band, 0.09 m.; height of base collar, 0.11 m.; diameter of hand-hold, 0.055 m.

Many fragments preserve most of the well-head; restored in plaster. Projecting rim flat on one side of the well-head but bent down on the other. Hand-holes, band of ridges and base collar are all present. The clay is fairly fine, brown to dark grey in color; black glaze on the base-collar and ridge-band.

12. Inv. P 8887 (Pl. 8; Fig. 3). From a well used during the latter part of the sixth century. Preserved height, 0.37 m.; base diameter, 0.67 m.; height of base collar, 0.06 m.

Complete base collar is preserved, and parts of the wall up to the ridge band. The clay is buff, and the glaze on collar and ridges is fired red and black.

13. Inv. A 1111 (Pl. 8; Fig. 3). From a well close to that in which No. 11 was found. Preserved height, 0.17 m.; base diameter, 0.61 m.; height of base collar, 0.06 m.

Five joining pieces preserve most of the circumference of the base collar and lower wall; the top is entirely missing. Orange-red, rather coarse clay with traces of black glaze on the base-collar.

14. Inv. A 1104 (Pl. 8; Fig. 3). From a well south of the market square, abandoned in the third quarter of the fifth century. Height, 0.44 m.; estimated top diameter, 0.73 m.; estimated base diameter, 0.70 m.; width of rim, 0.10 m.; height of base collar, 0.015 m.; width of hand-hold, 0.04 m.

Several joining fragments preserve only one-fifth of the well-head, but the profile is complete. The flat projecting rim is very broad and overhangs slightly. The base of the wall is slightly thickened. Three wide but shallow grooves go around the wall below the rim. There are remains of two triangular hand-holds suggesting by their position that the well-head originally had four. Coarse red clay; no glaze.

15. Inv. A 1418 (Pl. 7; Fig. 5). From a cistern in use during the second half of the fourth century. Height, 0.444 m.; top diameter, 0.537 m.

About two-thirds of the circumference is preserved, with parts of all elements. The whole is restored in plaster. The profile is spreading, with heavy mouldings around the base and lighter around the top. Bottom: ovolo surmounted by a cavetta; top: ovolo around lip, and beneath it a moulding not preserved, border above and below by a set of double roundels. A vertical hole 0.008 m. in diameter is pierced through the outer edge of the top moulding, possibly to secure the cover. Very friable pinkish-buff clay with grits, unglazed.

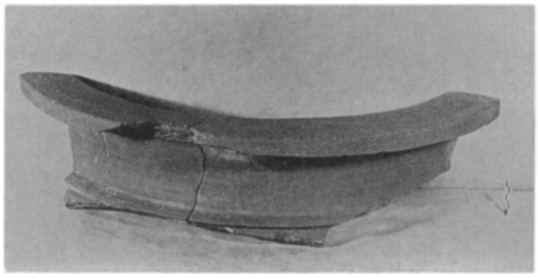
16. Inv. P 4072 *a-c* and P 4073 (Fig. 5). From a cistern in use during the first half of the third century B.C. P 4072: (*a*) preserved height, 0.108 m.; (*b*) 0.142 m.; (*c*) 0.079 m.; estimated diameter, 0.562 m.; P 4073, preserved height, 0.155 m.; estimated diameter, 0.63 m.

P 4072 *a-c* are from the rim, and P 4073 from the base, of the curb. P 4072 *a* was published in *Hesperia*, III, 1934, p. 344, B 42; P 4073, *ibid.*, B 43. Comparison with No. 15 makes certain the identification as a curb. The estimated diameters of P 4072 and P 4073 indicate that the curb from which they came had a spreading profile resembling that of No. 15. The height restored in the accompanying Figure 5 is intended to be only suggestive, since it is not possible to arrive at an accurate estimate with so irregular a curve in profile.

MABEL LANG

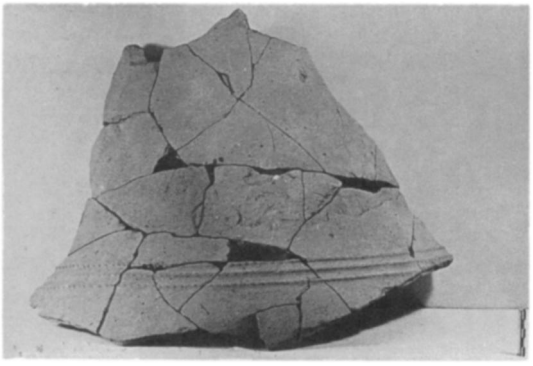
BRYN MAWR COLLEGE

PLATE 6

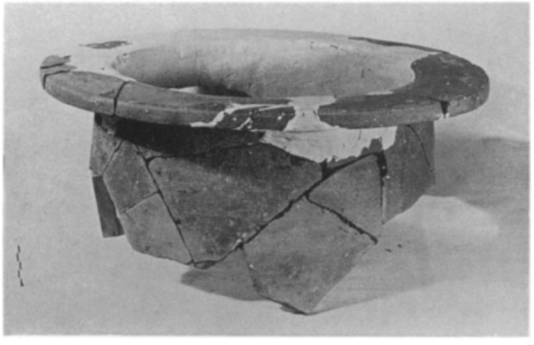


No. 1

No. 2a



No. 2b



No. 3

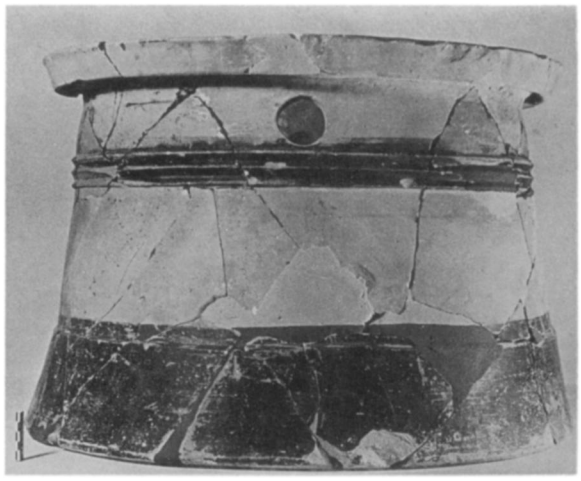
No. 4

No. 5

No. 6

Pithos-Type Well-Heads Nos. 1-6

M. LANG: ΙΣΘΜΙΑ ΦΡΕΑΤΩΝ



No. 10

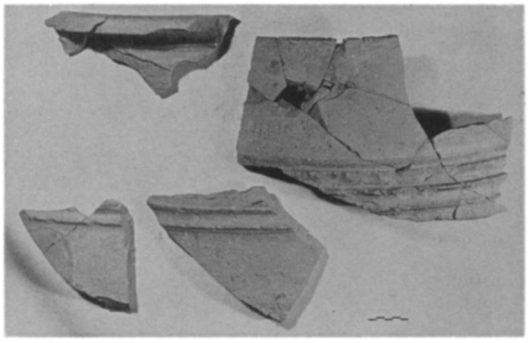
No. 11

Two Drum-shaped Well-Heads

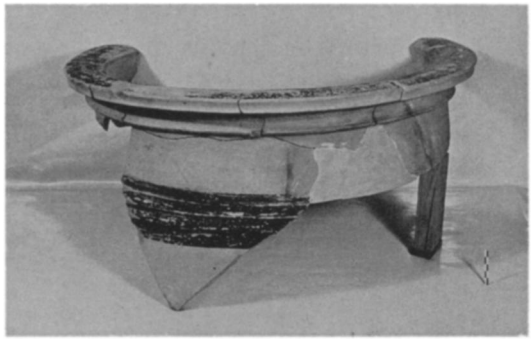
Corinth, South Stoa, 5490

No. 15

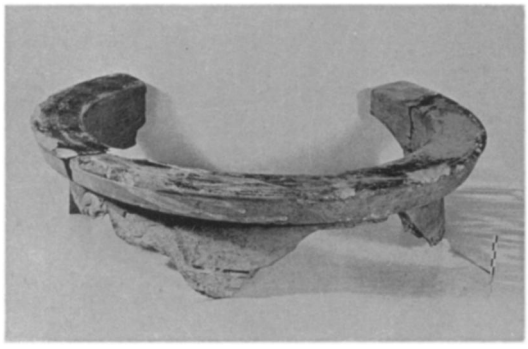
PLATE 8



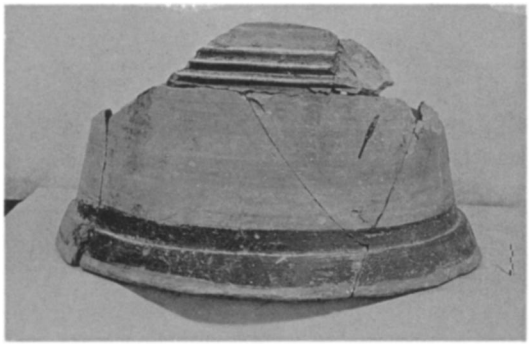
No. 7



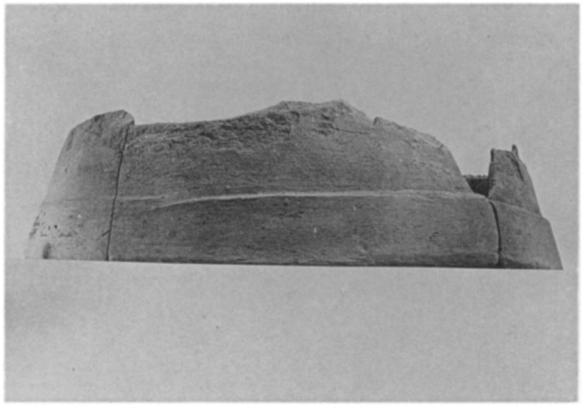
No. 8



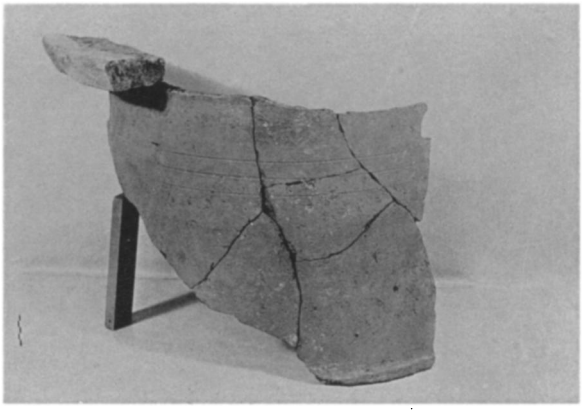
No. 9



No. 12



No. 13



No. 14

Six Drum-shaped Well-Heads Nos. 7-9, 12-14

M. LANG: ΙΣΘΜΙΑ ΦΡΕΑΤΩΝ