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JOHN ALBERT WILSON
AND
THOMAS GEORGE ALLEN
Editors

KHORSABAD

PART II

THE CITADEL AND THE TOWN

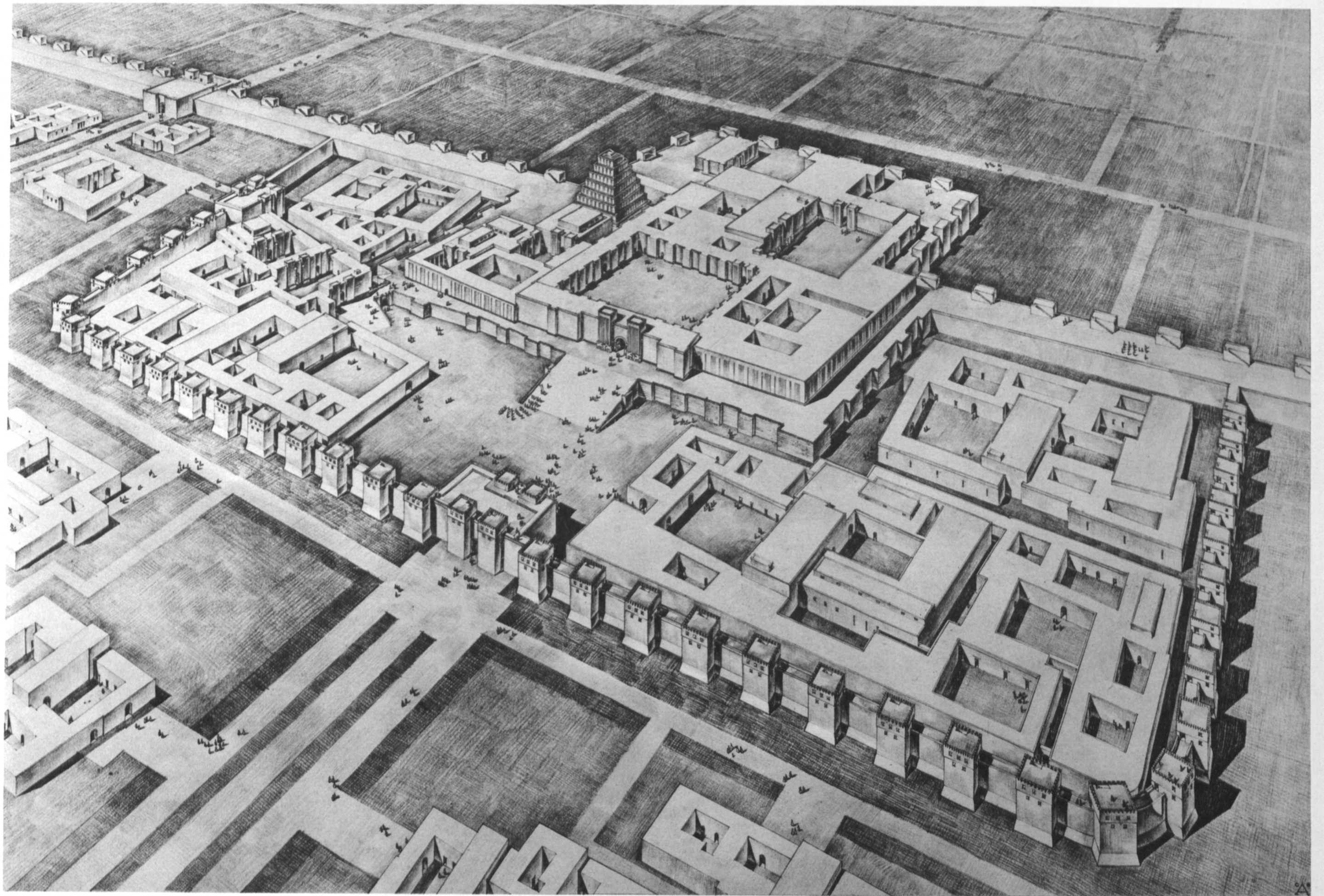
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THE CITADEL, RESTORED. BIRD'S-EYE VIEW FROM THE EAST
IN THE LOWER LEFT IS RESIDENCE Z; IN THE UPPER LEFT, TOWN GATE 7

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ERRATA

Page	Serial No.	
97	38	<i>For C. read B.</i>
97	39	<i>For B. read C.</i>
97	41	<i>For C. read B.</i>
98	110	<i>For DS 1344 read DS 1341.</i>
98	115	<i>For C. read B.</i>
98	116	<i>For C. read B.</i>
98	119	<i>For C. read B.</i>
98	121	<i>For C. read B.</i>
98	122	<i>For C. read B.</i>
98	126	<i>For C. read B.</i>
99	254	<i>For Obsidian vessel read Brown stone weight.</i>
99	270	<i>For B. read B. and C.</i>

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THE UNIVERSITY OF CHICAGO
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VOLUME XL

KHORSABAD

PART II

THE CITADEL AND THE TOWN

BY

GORDON LOUD

AND

CHARLES B. ALTMAN

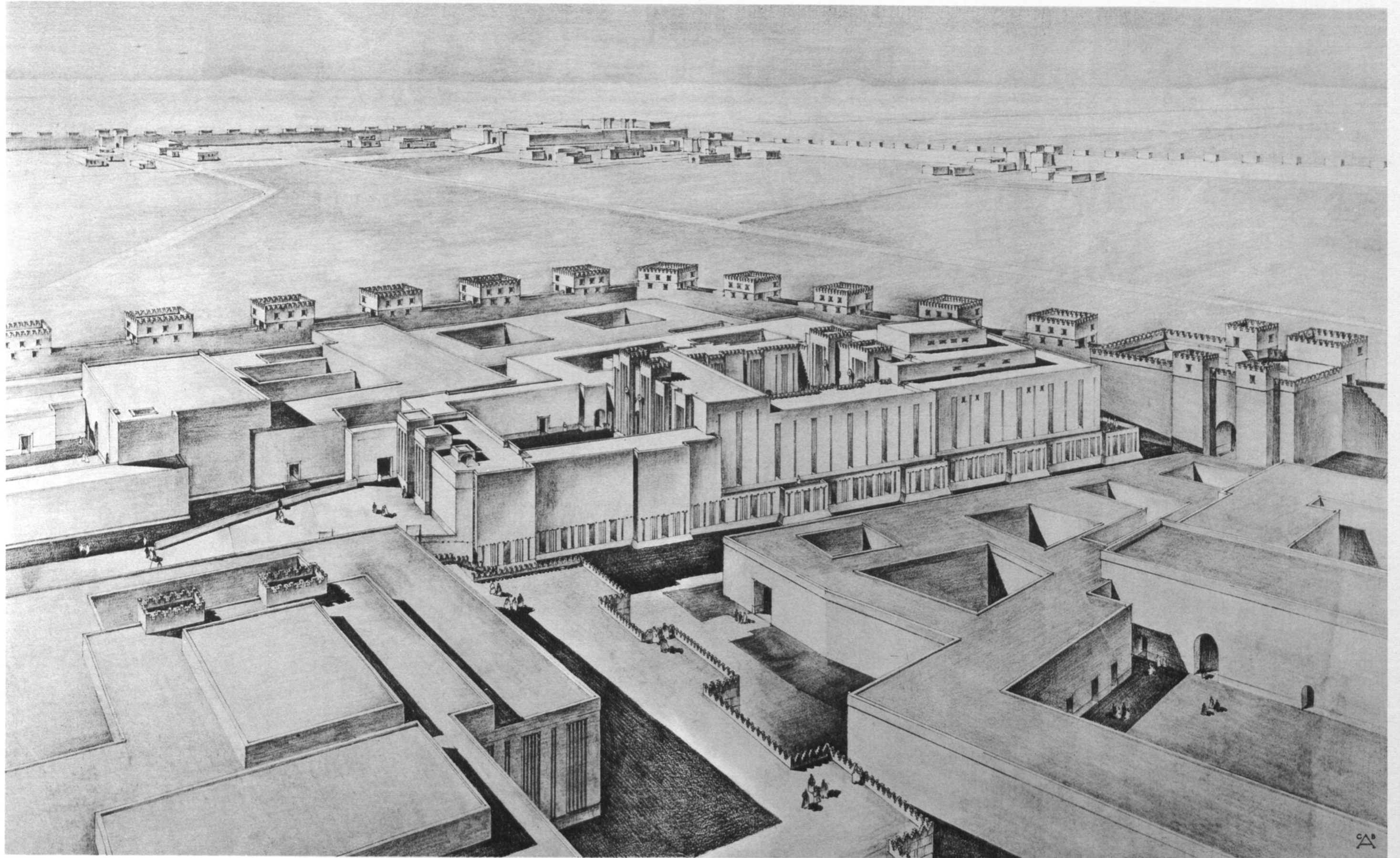


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FOREWORD



THE NABU TEMPLE, RESTORED, AS IT MIGHT HAVE BEEN VIEWED BY ONE LOOKING
SOUTHEASTWARD FROM THE TOP OF THE ZIGGURAT
IN THE DISTANCE ARE PALACE *F* AND TOWN GATES 4, 5, AND 6

FOREWORD

Nearly a century has elapsed since the chance discovery of inscribed bricks on the part of a Khorsabad peasant reached scientific ears. Paul Émile Botta, the French consul at Mosul, who then, in the year 1842, was searching for the ruins of Nineveh in the mound of Kuyunjik, upon receipt of the report of the Khorsabad discoveries soon transferred his activities to this site, some 12 miles northeast of Mosul, where he at once recognized the value of the antiquities which lay beneath this agricultural community. Subsequently he was enabled to continue his investigation of this mound, and with the aid of Eugène Flandin he explored and admirably recorded a part of the palace and made a few scattered soundings in the town.¹ Eventually Victor Place and Félix Thomas resumed the excavation of the site; from 1851 to 1855 they laboriously traced the entire palace and located and partially excavated the city wall, its seven gates, and a few buildings within the town.² To them we are indebted for the framework to which we have added the results of our excavations undertaken more than 70 years later. With the decipherment of cuneiform the inscriptions recorded by Botta and Place showed that Khorsabad was the site of Dur Sharrukin—the City of Sargon.

In the preparation of this volume a certain amount of repetition has proved inevitable in order to preserve the clarity and completeness of individual chapters and sections. The material upon which chapter ii, the generalization of the architecture of Dur Sharrukin, is based is necessarily drawn from the various excavated buildings individually discussed in chapters iii and iv. Typical features are therefore generally included in chapter ii, while peculiarities of individual buildings are noted in the chapters following. The generalization of the architecture is strictly limited to Dur Sharrukin. It may, however, be considered a late 8th century link in the chain of national architectural development rather than a purely localized style.

Although no further investigation of the palace was anticipated at the time of preparation of *Khorsabad I*, the tracing of the citadel plan has necessitated some slight additional work upon this royal abode. The resulting material is here included. Place's numbering of the palace rooms and courts has been retained, as have his designations "F" of a second palace and "H" of what has proved to be the Nabu temple. Succeeding letters have been used as designations for other citadel buildings, while "Z" has been applied to the sole newly found building outside the citadel, the intention being to apply letters from the end of the alphabet to such buildings in contrast to the letters from its beginning signifying a citadel location. For the sake of clarity in presentation room numbers assigned in the field have been altered in publication. A correlation of publication and field numbers appears as an appendix. Room numbers, with the exception of those of Sargon's palace, are in general preceded by the letter identifying the building, though in sections devoted to discussions of individual buildings the letter has been omitted as superfluous where no confusion might exist.

¹ P. E. Botta and E. Flandin, *Monument de Ninive* (5 vols.; Paris, 1849-50).

² Victor Place, *Ninive et l'Assyrie* (3 vols.; Paris, 1867-70).

Dimensions are included in the text only where they are essential to the argument. Otherwise they may be ascertained from the scale drawings in the plates.

Certain points in nomenclature and terminology perhaps require elucidation. "Dur Sharrukin" is used in its literal sense—the City of Sargon—while "Khorsabad" signifies the modern town and the site. "Sargonid" also is employed in its most literal sense, referring only to the reign of Sargon rather than to the dynasty founded by him. "City" in general denotes the entire area within the four great inclosure walls—an area composed of "citadel" and "town." The latter, however, is sometimes used synonymously with "city" in order to avoid confusion with "citadel," which in sound it closely resembles. "The palace" refers to Sargon's palace, never to Palace F, which always bears its identifying letter. "Mud brick" signifies sun-dried brick, while "baked brick" signifies fire- or kiln-baked brick.

Sargonid texts have frequently been called upon for enlightenment of certain doubtful points. Naturally skeptical at first of the records of a boastful king, the author was inclined to accept with the proverbial grain of salt the inscriptions relating to the building of Dur Sharrukin. More and more, however, as the excavation of the site progressed, the truthfulness of Sargon's words was established. The area of the city is in accord with the dimensions he gives, roofs and doors are constructed as he describes, and the temples he claims to have built are clearly identifiable. There is therefore justification, we believe, for placing considerable faith in the written documents of and pertaining to the city of Sargon.

The architectural plates, which form a major element in this volume, and chapter v on the painted plaster decoration have been prepared by my co-worker Mr. Charles B. Altman. Dr. Thorkild Jacobsen has contributed the copies, transliterations, and translations of the new architectural inscriptions appearing in chapter viii.

Grateful acknowledgment is hereby tendered to Major W. C. F. Wilson, who as administrative inspector of the Mosul liwa extended invaluable aid over a period of years in facilitating the progress of excavation; to Mr. F. J. Ashton of the British Oil Development Company, Limited, of Mosul, through whose courtesy were procured the services of Mr. T. Shamlian, who surveyed and prepared the contour map of the site; to the 30th (bomber) squadron of the Royal Air Force for numerous extremely useful and excellent aerial photographs; to the Director of Kew Gardens for analyses of wood specimens; to Dr. N. E. VanStone of the Sherwin-Williams Company for analyses of colors used for wall decoration; to Miss Helen Wells for assistance in the preparation of certain plates; and, last but not least, to my associates in the field and at Chicago headquarters, whose gracious cooperation has made the excavation of Dur Sharrukin and the preparation of the material gained thereby a joy rather than a task.

GORDON LOUD

CHICAGO
October 1, 1937

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I

THE EXPEDITION AND THE SITE



Royal Air Force Official

THE EXPEDITION HOUSE VIEWED FROM THE AIR

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I

THE EXPEDITION AND THE SITE

An account of the early campaigns undertaken on the site of Dur Sharrukin at Khorsabad by the Oriental Institute has appeared in *Khorsabad I* ("Oriental Institute Publications," Vol. XXXVIII). The Assyrian Expedition was organized in 1928 and during the late winter and spring of 1929 under the directorship of the late Dr. Edward Chiera conducted excavations in the palace of Sargon II—a site untouched by archeologists since the splendid work of Place and Thomas carried on from 1851 to 1855. Pressure of work at Chicago prevented the return of Dr. Chiera to the field, and during the summer of 1929 the Assyrian Expedition was reorganized as the 'Iraq Expedition with Dr. Henri Frankfort as field director and with the purpose of enlarging the scope of the work in this field. Excavations were to be carried on in the south of 'Iraq, while short seasons in spring and fall, when the climate made work in the south impossible, could be utilized in continuing the work at Khorsabad. Such a program was followed for several seasons until it became apparent that only full-length seasons of five or six months' digging could produce satisfactory results at a site built on such a massive scale as Khorsabad. In 1932 the writer was therefore delegated by Dr. Frankfort to take immediate charge of the excavations at Khorsabad, which it was now planned to continue simultaneously with those of Tell Asmar and Khafājah. Prior to this the short seasons had sufficed to clear up the points we wished to settle in the palace. It was now our task to explore the city, which our French predecessors had been unable to investigate other than to locate a few buildings and the inclosure wall with its seven gates.

Three campaigns in the town have accordingly now been completed, and, while we do not claim to have "exhausted" the site by any means, we do believe that further digging would only produce results incommensurate with their cost in contributing to our knowledge of this period. The city is approximately a mile square and was in all probability solidly built, for wherever soundings have been made walls have appeared. But so complete was the removal of possessions or so thorough the pillaging at the time of abandonment that there remains practically nothing in the line of inscriptions or utensils whereby the buildings can be identified. Literally miles of walls forming groups of meaningless rooms are neither very gratifying nor very instructive. From the several buildings already cleared completely or in part, we have learned all that we believe can be obtained from Khorsabad in the way of architectural principles. General methods of construction and decoration and "typical" plans of individual buildings we know from the palaces and the citadel buildings. To find in usually barren rooms stray objects of historical or artistic merit would be like searching for the proverbial needle in the haystack.

The first of the three campaigns with which this volume is concerned was carried out from December, 1932, to April, 1933. The writer was assisted in this for the entire season by Mr. Frederick L. W. Richardson, Jr. At the completion of

his season at Khafājah Mr. Hamilton D. Darby joined us to undertake the mapping of the winter's work and the preparation of the plans. The work was necessarily slow in starting, for we were feeling our way in new territory, but before closing in April we had succeeded in locating and identifying the Nabu temple and in tracing most of its ground plan. On April 11th the expedition was honored with a visit by His Majesty King Feisal and his party (Pl. 4 *A*), including the Emir Ghazi, now king of 'Iraq. After a visit to the excavations luncheon was served beside Sargon's throneroom (Pl. 4 *B*).

The second season (November, 1933—April, 1934) was concerned largely with the clearance of the rooms and courts of the Nabu temple and of the platform upon which it stood. While carrying out this program we learned for the first time of the existence of the wall which has since proved to inclose a citadel partially surrounding the palace. One of the citadel gates also, its walls faced with magnificent alabaster reliefs of winged genii, was exposed in the spring of 1934. Throughout this season Mr. Charles B. Altman assisted as architect and photographer, and again we had the help of Mr. Darby during the inevitable rush weeks prior to closing. Mrs. Altman acted as secretary and recorder of objects.

The investigation of the entire citadel, of Place's mound *F*, across the city from the palace, and of a dwelling within the town comprised the work of the final season (November, 1934—May, 1935). Mr. Olaf E. Lind of the Megiddo Expedition joined our staff, which otherwise was the same as during the preceding season. And for the last two months we had once more the assistance of Mr. Darby and of Mr. Harold D. Hill from Tell Asmar.

Throughout all three seasons Dr. Frankfort remained a willing collaborator whenever his advice was sought. Dr. Thorkild Jacobsen spent a part of each season at Khorsabad working upon the inscriptions. To him we are indebted for the material which makes up chapter viii.

Much credit is due Hussein Ali, a fellah from the neighboring village of Faḡiliyyah, who from the beginning of our work at Khorsabad served as foreman of the dig. His generalship, his grasp of the work, and his extreme loyalty are in no small way responsible for enabling a small staff to carry out a program on a scale employing at times 650 laborers.

Books on "how to dig" have been written, but anyone familiar with more than one archeological site knows very well that there is no one method superior to all others. The nature of the site is unquestionably the primary factor which determines the method of attack, though local conditions and the equipment at the digger's disposal are not without influence. Experience on the spot is the best guide for working out the ideal system for any one site; after several seasons of digging a site one may and probably will regret or be amused at methods employed at the beginning of the work—methods which were perfectly sound at some other dig.

A situation practically unique among archeological sites

exists in Khorsabad; there is but one major period of occupation. The city was built not upon the ruins of a former habitation, but in the open fields. Sargon in his prism inscriptions¹ does speak of building it on the site of Magganubba, but no traces of an earlier town have ever been encountered during the course of any of the excavations. It is not unlikely that Magganubba was the village nearest the site chosen for Sargon's capital, just as the modern village of Khorsabad lies without the area of Dur Sharrukin, yet gives its name to the ancient site. Two very minor later occupations we know existed, one immediately following the abandonment of the city as a royal residence and the other at a much later period.

Both occupancies are unidentified. The early one was probably that of peasants who moved into the abandoned, empty rooms, made no repairs, and departed with all their belongings when it became evident that danger from the collapse of the walls and roofs was imminent. Blocked-up doorways (Pl. 28 *A*), floors reconstructed with Sargonid bricks at a level not more than 50 cm. above the original ones,² a few carelessly constructed walls (Pl. 29 *B*), and crudely built drains (Pl. 29 *A*) furnish the only evidence of this poor occupation.

There is even less left of the building of the later inhabitants. Over the Nabu temple and barely under the present ground surface an extremely badly built pavement was encountered (Pl. 29 *D*). A group of pots (Pl. 29 *E*) such as might be purchased in the bazaars of modern Mosul apparently belonged to this same level. Lacking positive identification we may assume for these two periods nothing of greater importance than the modern peasant settlement which stood upon the palace mound (Pl. 4 *C*) and which, with the exception of the house used by our Expedition staff, was thoroughly removed when excavations were undertaken.

Aside from the existence of but a single major occupancy other factors more or less peculiar to this site led to the method of digging finally adopted. The area covered by the city is approximately a mile square. Individual buildings, exclusive of the royal palaces, may attain such dimensions as those of the grand vizier's dwelling—roughly 250 × 125 meters. Inner courts 30 or more meters square are not unusual in any building. Wall thicknesses run from 1.20 meters, rarely used, to the more common 2- and 3-meter widths; and not infrequently walls are found in the royal palaces and the Nabu temple measuring 5 or 6 meters from face to face.

The sun-dried bricks of which the walls were constructed were made of clay found on the spot. They were used without mortar and were probably laid before becoming thoroughly dry, for when set they form one solid mass and cannot be separated one from another. Except for a slight variation in color sometimes discernible among individual bricks after exposure for several hours to the air there is no way of recognizing them in place from the mass of debris, which is largely comprised of similar bricks fallen from the superstructure. Stones and potsherds are found equally in walls and in rubbish. Wall faces were fortunately always plastered either with mud or with lime, and where the plaster still adheres tracing the wall is not difficult once the faces

¹ D. D. Luckenbill, *Ancient Records of Assyria and Babylonia* (Chicago, 1927) §§ 116-23.

² See *Khorsabad I*, Fig. 75.

are established. In a new sounding, however, one is often confronted with a perfectly good plastered surface and the question of what is wall and what is rubbish. It may be necessary to dig to a considerable depth before a stray fire-baked brick or other definitely foreign object establishes rubbish on one side, or regular variation of color assures a standing wall on the other. And when plaster is nonexistent one may be forced to clear to the floor—to a depth of from 1 to 7 meters—where perhaps a few centimeters of wall plaster remains, or a room pavement ending in a straight line may indicate where the wall once stood.

The topography of the site is fairly flat with the exception of the palaces and the gates. Centuries of heavy rainfall and plowing have leveled the mounds which the collapse of individual buildings must once have made. It is, however, still possible to pick out slight rises throughout the city area, and it is upon them that soundings are usually made. A single building may extend under more than one of them, the intermediate depressions perhaps lying over courts or sections of the building where the walls were thinner and rose to a lesser height, thereby causing less debris at the time of destruction.

Trenches were employed in the search for the building that might lie below. They were about 3 meters wide and usually 20 meters or more in length (Pl. 5 *A*). Although the orientation of the buildings is not precisely regular, it follows in general that established by the city walls, and in sounding an attempt was made to lay out the trenches in a direction making as nearly as possible a 45° angle between trench and expected walls. Three reasons prompted this. Experience has shown that even the most skilled of wall-tracers will occasionally make an excellent wall face out of nothing, and that the tendency is to make these parallel or at right angles to the direction of the trench. A diagonal sounding upsets a native's calculation of what should be found and produces only real walls. Secondly, a sounding running at an angle to the wall precludes the possibility of the entire trench being made within the thickness of a single wall. Such a predicament is not unknown. A third reason for placing soundings in this manner is that more walls are likely to be located within one trench, thereby establishing a greater number of "leads" with which to expand.

Immediately one or more walls become a certainty the sounding trench is abandoned and the actual wall tracing begins. One side of each new trench is therefore a wall face. At this stage the trenches are made no deeper nor wider than is necessary to follow the wall. The depth is dependent upon the condition in which the wall is found, namely whether a certain face can be followed near the ground level or appears only far below. The average depth required to trace the plan of a building at Khorsabad is about 1.50 meters, though in some instances the depth at which a wall became recognizable was so great that tunneling seemed expedient (Pl. 5 *B*). This underground method, however, has so many disadvantages—darkness, lack of fresh air, and the consequent necessity of digging light and air shafts—that it has been resorted to only where a great saving in time and labor would be gained.

To effect the complete clearance of every room exposed at Khorsabad would be a colossal task unproductive of reward. The Nabu temple, with the exception of its two large courts, was excavated in this manner (Pl. 5 *C*). The complete,

THE EXPEDITION AND THE SITE

5

peaceful abandonment of the city has in general denuded its buildings of whatever objects may once have adorned them. Their removal was not a difficult task, for occupancy had been so short—perhaps but a year or two—that the accumulation of objects misplaced by or of no value to their owners was practically negligible. There are, of course, exceptions, and rooms have been completely cleared when evidence of objects was brought to light in tracing the walls or when a study of the plan of the building suggested their especial importance. Room clearance is therefore not usually undertaken until at least a portion of the plan of a building has been exposed and studied. In tracing the plan the wall faces located in the sounding trench are followed.

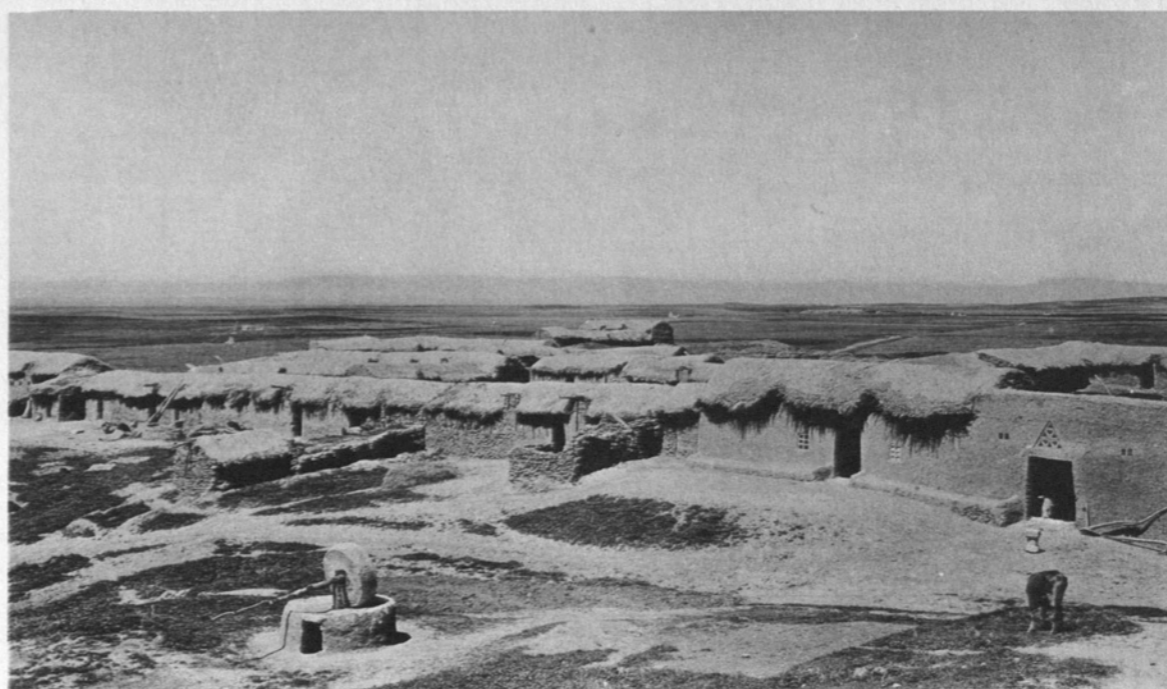
When a doorway appears, opening up another room, the number of walls to follow is thereby increased. In this manner the work expands, so that when a “blind” lead—such as a room with but a single doorway—terminates one trench there are always more places to which the workmen can be shifted. Plans of the buildings are thus developed, while certain rooms or areas are completely cleared. As the work progresses the evidence is recorded, deductions therefrom become possible, and in the end we are able to present a picture not only of what actually remains of the more important part of Dur Sharrukin but of what we believe was the original general appearance of this short-lived capital of the Assyrian Empire.



A



B



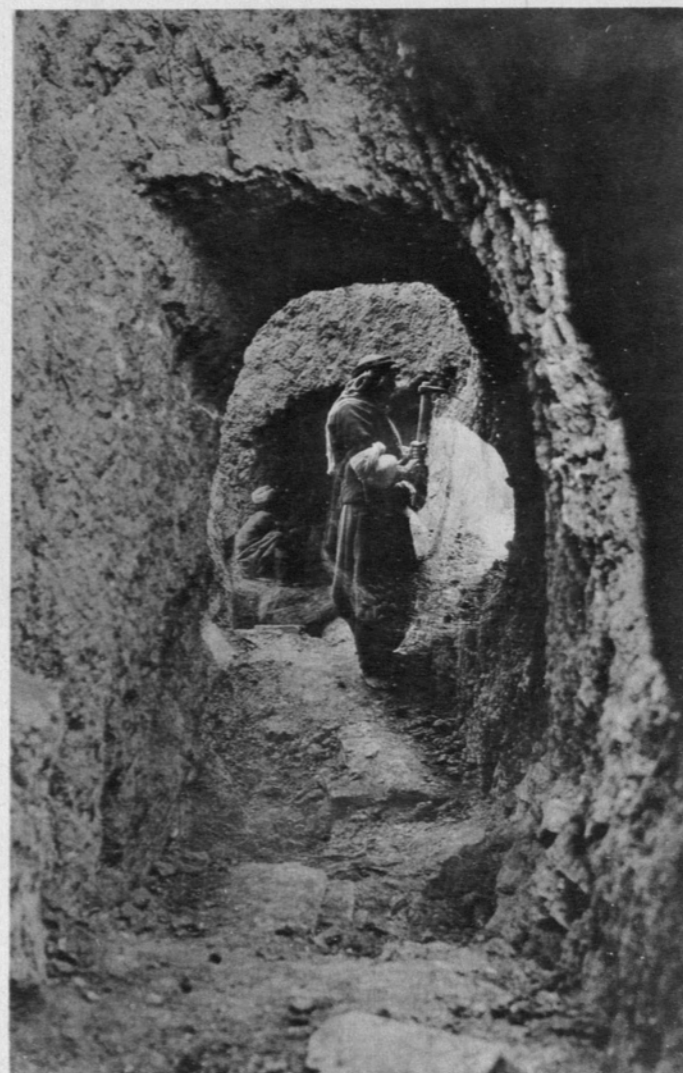
C

A. THE PARTY OF HIS MAJESTY KING FEISAL, WHO VISITED THE EXCAVATIONS APRIL 11, 1933
HIS MAJESTY IS EIGHTH FROM THE RIGHT; THE EMIR GHAZI, NOW KING OF IRAQ, IS THIRD FROM THE LEFT

B. LUNCHEON BESIDE THE EXPEDITION HOUSE APRIL 11, 1933
HIS MAJESTY KING FEISAL IS SEATED AT TABLE FOURTH FROM THE LEFT, FACING CAMERA

C. PART OF THE VILLAGE OF KHORSABAD STANDING UPON THE PALACE MOUND BEFORE THE
EXCAVATIONS OF THE ORIENTAL INSTITUTE WERE UNDERTAKEN
ALL THE BUILDINGS EXCEPT THAT USED AS THE EXPEDITION HOUSE (EXTREME RIGHT) HAVE SINCE BEEN REMOVED

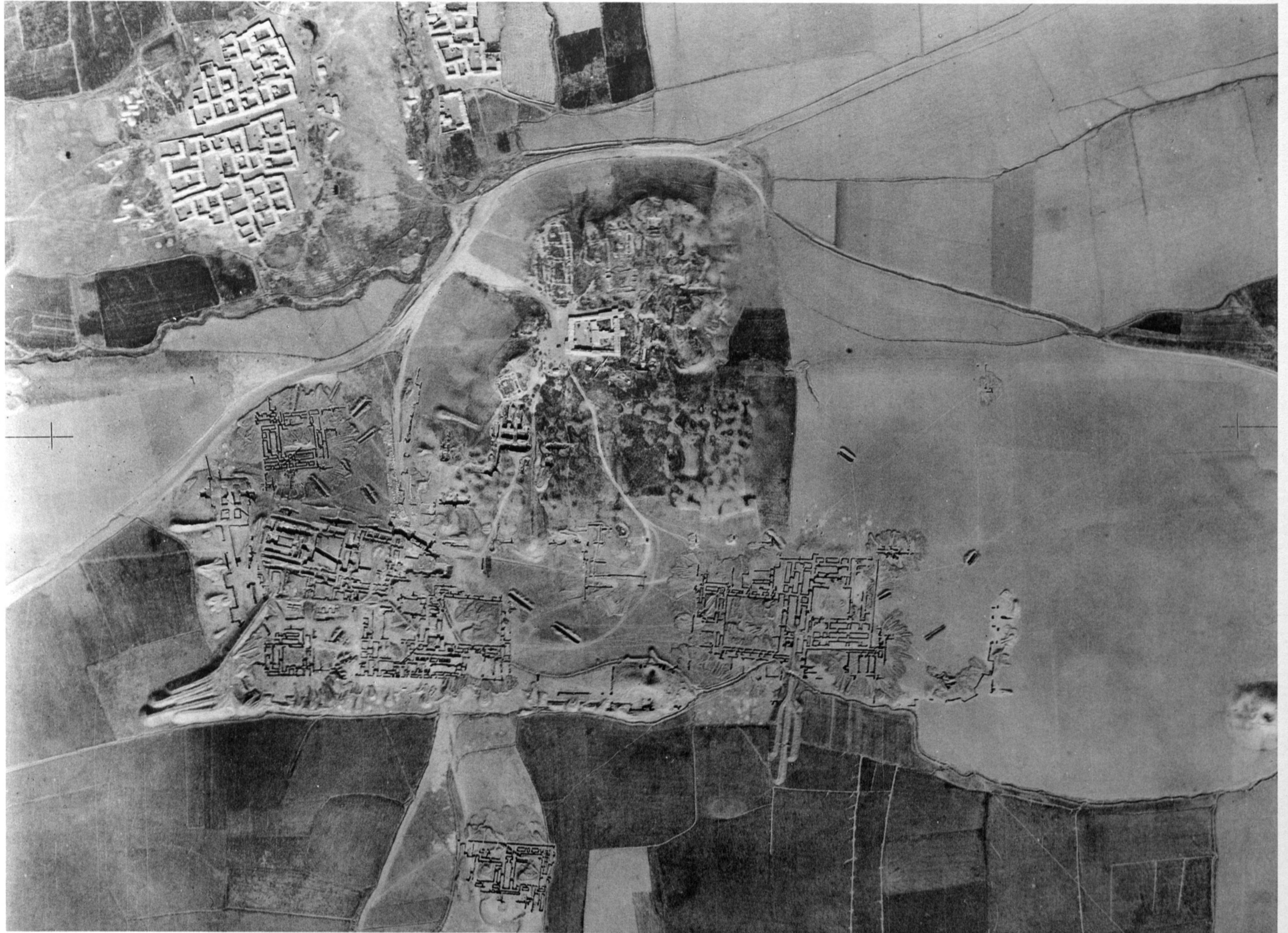
PLATE 5

*A**B**C*

- A.* DIAGONAL SOUNDING TRENCH AND SUBSEQUENT DEVELOPMENT OF RESIDENCE K
THE MOUNDS IN THE DISTANCE ARE THOSE OF CITY GATES 3 AND 4 ACROSS THE CITY. VIEW LOOKING SOUTHEAST
- B.* THE TUNNEL WHEREBY PART OF THE TERRACE OF THE NABU TEMPLE WAS TRACED
- C.* EXCAVATION OF THE NABU TEMPLE, VIEWED FROM THE PALACE MOUND, FACING SOUTH
THE MOUNDS OF CITY GATES 4 (AT EXTREME LEFT) AND 5 RISE ACROSS THE CITY ON THE HORIZON

II

THE CITY OF DUR SHARRUKIN AND
ITS ARCHITECTURE



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THE CITADEL EXCAVATIONS, INCLUDING RESIDENCE Z (AT BOTTOM CENTER), VIEWED FROM THE AIR
IN THE UPPER CENTER IS THE EXPEDITION HOUSE UPON THE PALACE MOUND; AT THE TOP LEFT, THE MODERN VILLAGE OF KHORSABAD

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II

THE CITY OF DUR SHARRUKIN AND
ITS ARCHITECTURE

Dur Sharrukin (City of Sargon) is the result of the desire of Sargon II to shift the Assyrian capital from Nineveh to a city of his own building. He chose a site 12 miles northeast of Nineveh. The construction of the town and palaces must have continued throughout his comparatively short reign (722-705), for evidence has been found which we believe indicates that the plan was never carried to completion. We may infer from replies to some of Sargon's letters that delays in the construction of Dur Sharrukin were as frequent as they would be today. The king's impatience with the progress of the work is evident, and he is assured that "the 'blueprint' which pertains to Dur Sharrukin they are carrying out."¹

The theory has long been held that Sargon usurped the throne and founded a new dynasty, and that he wished a new capital for his newly established line; for in none of his inscriptions hitherto published is mention made of his father. Recently, however, Unger has found on an enameled wall plaque from Assur, now in the İstanbul Museum, an inscription mentioning Sargon as a son of Tiglathpileser III and therefore a brother of Shalmaneser V, Sargon's immediate predecessor.² If one accepts the content of this inscription, Sargon was not the founder of a new dynasty. From his obvious reticence in mentioning his father one may reasonably assume that he took the throne by force, perhaps by murdering Shalmaneser V, and that the scandal attendant upon his irregular ascension to the throne may have prompted him to leave Nineveh behind and to establish his court in a new city free from reminders of the past.

To Place we are indebted for the outline of the city. Its walls, its gates, and the king's palace as recorded by him we accept as substantially correct. Variations from his plans have been recognized in the course of our recent campaigns, but they are of minor consequence and will be discussed later. Such errors are not to be wondered at; they are attributable no doubt to his lack of the instruments which the present-day digger has at his disposal and to the conditions under which he worked.

In Plate 67 we reproduce from Place³ the plan of the city as disclosed by his excavations. Rectangular in plan, the city covers an area approximately 1,600×1,750 meters. It is roughly oriented with its corners to the cardinal points. Seven gates give access to the city, two in each of three walls, while the seventh and the palace terrace form the only breaks in the fourth or northwest wall. The palace plan, nearly complete, is shown, as are fragmentary plans of buildings labeled *F*, *G*, and *H*. No subsequent work has been undertaken at *G*, but recent excavations have shown errors in

the presentation of *F* and *H*, due perhaps to a confusion of field records at the time of publication. Area *F* should be turned 90° clockwise, while *H* is slightly misplaced and the arrangement of rooms indicated corresponds in no way to any section of the Nabu temple which we now know comprises this mound.

Plate 69 shows the city as we know it today. The city walls, their gates, *G*, and the palaces are indicated in accordance with a reconciliation of Place's plan to our results and to the contours of the site (Pl. 68). By comparing this with Plate 67 the extent of the changes resulting from our excavations can readily be seen.

The most outstanding development is the citadel, of which the palace now becomes a part. Included within its walls are five or more buildings, but two of which we can identify: the Nabu temple, *H* (cf. *H* in Pl. 67), and the dwelling of Sinahusur, *L*. It will be noted that the arrangement of the palace terrace and the ramps leading thereto is quite different from that assumed by Place. No attempt has been made to adjust the details of Place's plan of the king's palace to the corrected terrace as it appeared while tracing the citadel. *Z*, a residence just without the citadel, shows striking similarities to the dwellings lying within the secondary inclosure walls.

Across the city at *F* (cf. *F* in Pl. 67) we have beyond much doubt a second palace (see chap. iv). Although no documentary proof in the form of inscriptions has been found in the excavations and there is no historical precedent, positive or negative, from any other site, we can assign to this obvious palace but three occupants worthy to sit upon a throne. Sargon himself may have occupied it at times, his queen may have had her abode here, or Sennacherib may have lived and carried on his duties as crown prince in this edifice. The author, without definite proof, accepts the last alternative as the most likely. Topographical contours indicate the probable extent of the building, which, like Sargon's palace, lay both within and without the line of the town wall.

By comparing the plans of the several buildings now excavated at Khorsabad it is possible to draw certain general conclusions upon the architecture of Dur Sharrukin. These conclusions are based purely upon evidence obtained in our excavations and are in no way intended because of negative results in our findings to disprove anything Place may have recorded. In most instances we find parallels to his discoveries. When differences do appear, more complete recent evidence may lead us to new interpretations, or it may be merely proof that the builders of Dur Sharrukin were familiar with and employed more than one method of solving a particular problem of construction or decoration.

Some architectural features appear over and over again, sufficiently employed throughout the various buildings to be considered as typical. Of others there may be but one or a very few examples. The latter can be cited only as existing

¹Leroy Waterman, *Royal Correspondence of the Assyrian Empire II* (Ann Arbor, Mich., 1930) Nos. 1432 and 1442.

²*Archiv für Orientforschung IX* (1933/34) 79; *Forschungen und Fortschritte IX* (1933) 245 f.

³*Ninive et l'Assyrie III*, Pl. 2.

at Dur Sharrukin and cannot, with present evidence, be called representative. A single occurrence of an architectural element may be no more than a duplication or a local

adaptation of a foreign element. Generalities are therefore confined to typical features, while isolated or infrequent forms appear only as such.

GROUP PLANNING AND ORIENTATION

One of the most surprising disclosures made by the excavation of the citadel is the fact that the builders of Dur Sharrukin were completely lacking in any sense of group planning. From the comparative regularity with which the city walls are laid out, with an idea of symmetry expressed in the placing of their gates, one would expect to find within the town a grouping of buildings planned with considerable forethought. One might equally anticipate finding in the citadel—the most important section of the city—an expression of the highest degree of group planning known to the Assyrians of this period. The manner in which the various citadel buildings are crowded into an unnecessarily irregular space (see Pl. 70) with an apparent disregard for functional or aesthetic arrangement is therefore an unexpected development, the more so because of the shrewdness shown in the treatment of individual buildings. An explanation may be found in the fact that, accustomed as they were to rebuilding in partially destroyed areas where existing remains determined to a considerable degree the position and extent of any new structure, the architects of Dur Sharrukin failed to recognize or were unable to take advantage of the possibilities at their command in laying out a city on unrestricted territory. We must, on the other hand, as mentioned above admit a thought-out scheme in their arrangement of the city walls with their gates and palaces.

One might like to imagine broad avenues leading inward from the seven gates to a spacious central square or to various interconnected open places around which the important buildings stood. Place tells us that streets led into the city from all seven gates, that he followed that from Gate 3 a distance of 42 meters, and that it maintained a width of 12 meters the entire length excavated.⁴ Were we to assume similar "avenues" extending from all the gates, we should get a very strange plan indeed of the interior of the city—one we cannot accept. Nor is the contour map (Pl. 68) nor a site study of the actual present topography of any assistance in

laying out a possible arrangement of main and minor arteries of circulation. If we may apply to the city what the citadel has disclosed, it is safe to state that few, if any, broad avenues existed. They may have started as such from the city gates, but soon they must have been lost as they encountered irregularly placed buildings. It is true that from the "front" gate of the citadel there is a direct, though not axial, approach to the principal ramp leading to the palace platform; but at the same time we have a "back" corner of *M* crowding the space just within the southwest citadel gate and forcing off center the street leading to the ramp at the south corner of the palace and under the bridge joining palace and Nabu temple. The idea of the Sargonid architect in laying out the streets would therefore seem to be the highly practical one of connecting two desired points by a straight line, regardless of the location of the extremities in relationship to surroundings. Buildings become irregular in outline in order to accommodate themselves to the spaces thereby created for them. A labyrinth not unlike a modern oriental town is the result.

From the foregoing it becomes evident that no scheme of orientation was adhered to. The square outlined by the city walls lies roughly with its corners facing the cardinal points, but this may be accidental. It is illogical to attribute this to intent when not a single building found within or upon the city walls gives any indication of a planned orientation within its own limit or in relation to other buildings. Even the temples, where one might expect a religious tenet to dictate a fixed position for at least the sanctuaries, fail to provide any consistent layout in respect to the compass. Of the six palace temples there are four corresponding roughly to each other in orientation, while two are placed approximately at right angles to them; and in the Nabu temple, which stands free upon its own raised platform, the principal and secondary sanctuaries are built upon axes oblique to those of the palace temples.

PLANNING OF BUILDINGS

Three types of buildings have been found at Dur Sharrukin: royal palaces, temples, and residences of what were probably nobles or court officials. It is strange that the citadel produced not a single building devoted purely to public affairs. It may be, however, that the governmental offices were incorporated in the palaces and in the residences of the officials who headed individual departments; for it is a well known fact that a certain amount of state business was carried on within early Mesopotamian temples. It is therefore not surprising that in palace, temple, or private residence there are striking similarities in plan which enable us to establish a formula upon which the buildings of Dur Sharrukin were based. Sargon's palace (Pl. 76) appears offhand to present a plan at considerable variance with those of the other buildings. Its outline alone is misleading. But let us remove the "harem," since proved to be the temple area, and we find

in the "sérail" and the "dépendances" a unit not unlike the buildings surrounding it, as the following discussion will make clear. Furthermore, there is some justification for considering the palace without its temple area, for the excavations in the citadel have disclosed evidence which implies that the temples might have been added to the palace after the original plan was conceived and partially executed (see p. 56).

The planning is primarily functional. In the king's palace and in the residences the public reception rooms, the private apartments, and the services are clearly segregated. From the comparatively small portion of the second palace that has been excavated it is evident that the same principle applies there. So also in the Nabu temple the services and the living quarters of the priests are set apart from the "inner temple," which in turn is almost identical in plan with each of the three larger palace temples.

⁴ *Op. cit.* I 199.

Common to all the buildings, whether palace, temple, or private dwelling, are two major courts about which are grouped lesser courts and the many large and small rooms. The forecourt is in every instance the larger of the two and is undoubtedly the place where public business, if any, was transacted. The most usual means of entrance to it from the street or terrace is through a single chamber in the "front" of the building. It may, however, have its main entrance from the side, as in *J*, or indirectly, as in *L*. Secondary entrances from the outside are also found in addition to the principal one. Their arrangement appears to be dictated by outside surroundings rather than by rule.

The rooms surrounding the forecourt seem to carry out an established order. Those on the two sides are on the whole definitely smaller than those which open off the "front" or "back" of the court. They appear as single rooms or as units of two with a single door from the court. Not infrequently a particularly small one serves as a vestibule or passageway to a small court or series of rooms not otherwise accessible from the court. In every instance the service area is reached through one or more of the side rooms of the forecourt. The services, however, are always confined to one area. If it is to the left of the court, as is the case in most of the buildings now excavated, there is commonly to the right but a single row of rooms separating the court from the outside. This arrangement reversed applies when the services are on the right, as happens in the king's palace, where, exclusive of the temple area, only the single row of storage chambers remains to the left. The courts and rooms within the service area are so irregular in arrangement that we can unfortunately do little more than recognize them by means of such domestic fixtures as ovens and storage jars. The former are sometimes found in court alcoves—rooms roofed over but with no wall on the court side—the exact counterpart of the outdoor kitchens used to this day in the houses of the villages in the vicinity of Khorsabad.

The rooms along the front of the forecourt appear to have the least regular arrangement of all and are certainly of relative unimportance. They may have served as guards' rooms or played some part in the business transactions of the times. They occupy the least noticeable position; for directly opposite at the back is invariably and unquestionably the most important and imposing section of the entire forecourt, the section where in the case of the royal palace and the Nabu temple we find indirect entrances to the central courts, while in all the residences there are direct entrances to the principal reception rooms, which in turn give access to the central courts.

At this point the chain of similarity is temporarily broken. The "public" section and the services have been accounted for, and there now remain the reception or court rooms and the private apartments. The plan of the Nabu temple, because of its inherent nature, must of necessity diverge from the scheme of the secular buildings. Its central court now becomes the counterpart of Court XXVII in the temple area of the royal palace, and the inner temple almost a duplicate of the palace temples.⁵

The peculiar demands of a royal palace as compared to those of a private residence may satisfactorily explain the dual function of the central court in the palaces. Whereas

⁵ A detailed description of Court XXVII and the Sin temple may be found in *Khorsabad I* 87-109 and 114-22.

in private dwellings the central court serves for communication between the various private apartments and the reception rooms, in the king's palace it assumes some of the functions of the forecourt as well. Actually it requires both the forecourt and the central court to satisfy the needs which in lesser residences were cared for by the forecourt alone. The pomp attendant upon a royal court no doubt required more space than would be needed for smaller private receptions, and a special court upon which the throneroom opened was therefore imperative, while a third court (VI), of comparatively small size, served to connect the private apartments. The king's private suite of reception and living-rooms comprises a unit extending onto the outer terrace platform with no direct access from any room or court within the palace.⁶ One could approach it via the terrace either through the corridor (Room 10) from the central court (VIII) or through a series of rooms (20, 19, and IV) from the third great court (VI) and the throneroom. This immediately presents a parallel to the arrangement at Palace *F* (see pp. 75-78), where we find the throneroom opening upon a large central court which, though only partially excavated, is unmistakably such, as the contours of the present ground surface show. Here again the private reception rooms and living suite of the royal master can be entered only from the terrace platform extending outside the city wall, while the terrace can be reached either from the throneroom via an anteroom or from the central court via a corridor which leads to a loggia. Unlike the king's palace, however, the private reception rooms, which extend onto the platform as a wing, and the living suite here are separate units.

A similarity perhaps even more striking than the court arrangement in all buildings is the standard reception suite which occurs without major variation in every palace and dwelling yet excavated either within or without the citadel (see Pl. 86). Outstanding in this unit is the "great hall"—the largest room in the building. It is the throneroom in the palaces and the main reception room in the private residences. In the palaces and in the larger dwellings (*K*, *L*, and *M*) it is entered from the central courts and from the forecourts respectively through three portals, of which the central one is the largest. In smaller residences (*J* and *Z*) one doorway from the forecourt suffices. These entrances are always in one of the long sides of the room.

In the end to the right as one enters, the wall is pierced by a broad portal leading into a small chamber which because of its size as compared with the wide entrance may be called an alcove of the larger room. A small portal near the right-hand corner in the back wall of the alcove leads to the stair well, in which a stairway or a ramp ascends about a central pillar to the roof. There is little doubt that alcove and stair well thus arranged adjoin the throneroom in the king's palace (see pp. 27 f.), although not shown as such in Place's records. Opposite the alcove, in the end at the left upon entering, we find in the palaces the throne base, centered before a niche which penetrates the wall.⁷

Just as the smaller residences (*J* and *Z*) differ from the palaces and the larger dwellings in their arrangement of doorways between forecourt and "great hall," so we find them possessing but one doorway in the second long wall as compared to two in the grander buildings. This single doorway

⁶ See *Khorsabad I* 71 f.

⁷ For the king's palace see *Khorsabad I*, Fig. 71.

leads from the reception room into a smaller chamber which faces the central court, about which the sleeping apartments are grouped. A doorway of like function is found in the larger residences and palaces (in *F*, the rooms into which it leads face the outer terrace rather than a court), and in addition there is near the end opposite the alcove a smaller doorway giving access to a small chamber of uncertain use. In assuming this small chamber to exist in the palace we again differ from Place, as later discussion (pp. 55 f.) will show.

Of the bedroom and bath arrangement we must of necessity be less definite, for in such private quarters there appears a greater variation than in the sections heretofore discussed. From this discussion Palace *F* must be omitted, for the incomplete excavation of this building tells us only that such quarters are probably to be found along the sides of the central court. In the other dwellings, however, we find the living quarters grouped around the central court (VI in the king's palace), which must have been the focal point of family life. Off this court there are very definite units of "parlor, bedroom, and bath," sometimes enlarged to include a private court; or a unit may consist merely of a single room and bath. The variation in arrangement and intercommunication of individual suites may very well be accounted for by the number of "wives" and children the master of the house possessed and the number of married sons and daughters living with their offspring under the paternal roof. There is invariably, however, in each house one apartment which stands out as the master suite either because of greater spaciousness or by virtue of orthostats lining its walls. Others may be grouped around minor courts or set apart by themselves off long corridors, forming "quarters" segregated for one reason or another. The sexes may have had separate quarters, or the family may have occupied one as distinct from another reserved for guests. Until documentary evidence throws more light upon the private habits of these people we can do no more than hazard a guess as to the reason behind this grouping of suites. The king's palace quite naturally presents the most complicated picture. Therein between the forecourt and Court VI we find an area consisting not only of the usual suites but of units suggesting dwellings complete in themselves.

It is curious to note that there is no evidence of any provision for the preparation of food except in the services, which are connected more directly with the forecourt than with the less public central court. If we may again reason backward by implying an ancient precedent behind modern oriental custom, we are confronted by the suggestion that there was no dining-room, which after all is but a comparatively recent innovation in the western world, and that the food was carried to and consumed in the various living-rooms. Long, narrow corridors whereby such a procedure might be carried on between services and central court do appear in the plans of *K* and *M*. In the other dwellings, however, the only means of entering the central court from the forecourt and services is through the large reception room. An almost contemporary pictorial record of a procession of attendants bearing fruit, game, and flowers, perhaps to a royal banquet, was found upon the walls of a corridor in the southwest palace at Kuyunjik.⁸ It is therefore probable that food prepared in the distant services was carried to whichever room

⁸ A. H. Layard, *Discoveries in the Ruins of Nineveh and Babylon* (London, 1853) pp. 337 f., and *Monuments of Nineveh*, 2d ser. (London, 1853) Pls. 8-9.

the current whim of the master prescribed for its consumption.

Individual rooms in general are rectangular, their length usually greatly exceeding their width. This almost universal shape was doubtless the result of the difficulties encountered in roofing a wide span with the materials at the disposal of the builders. We have, however, in Sargon's throneroom⁹ a width of 10.50 meters successfully spanned by wooden beams. From this, the widest roofed area we know to have existed at Dur Sharrukin, we learn that the Assyrians were able to and actually did construct roofs over rooms of a width far in excess of the more usual dimensions. When rooms vary from a true rectangle one can usually assign settling or careless building as the cause. There are very few instances of deliberate irregularity within rooms. Changes in orientation are effected by varying the wall thicknesses or more commonly by adjusting the open courts, which often are extremely irregular in shape. The plan of the Nabu temple (Pl. 79) is perhaps the clearest example of this.

The rooms are arranged about courts, each room with its long axis parallel to the side of the court off which it opens. They appear one, two, or three deep with no regularity in the manner by which they are connected to one another. Entrance from one court to another is generally effected through one or two rooms, the doorways through which one must pass being rarely on a common axis. Occasionally there are nearly square chambers with doorways approximately centered upon each other, these serving no purpose other than to provide "vestibules" or definite connections between courts. They are sometimes extended to considerable lengths, thereby becoming corridors, which in their course may turn at right angles or make jogs to one side or the other when near-by rooms crowd them.

The courts in the majority of cases tend to approximate a square, though a true square has never been encountered in any court yet excavated. There are some instances of irregular shapes wherein no two sides show any attempt at parallelism; more frequently two sides are parallel, while the remaining ones take whatever direction converging axes of adjacent areas may demand. Incorporating in open courts the irregularities brought about by shifting axes spared the builders no end of difficulties in their roofing problems.

A peculiarity that is at once noticeable when one studies the court plans is the frequency with which certain corners are inset. Although they all appear similar in plan, there are two definite types, each with its own purpose and function. Puzzling at first, they become reasonable only after the regularity with which they were tied to other features becomes apparent. There can now be no doubt that those in the forecourts of the residences exist in each instance only to permit a balanced court façade of the reception suite immediately behind. Without the added space gained thereby the doorways leading into the reception room would have been crowded too close to one another to be pleasing to the eye. In the Nabu temple space must be obtained in order to prevent crowding the decorated entrance to the small shrine (Room 14), a lesser architectural motive beside the elaborate main entrance toward the central court.

When we come to the inset corners of the central courts we encounter a totally different situation. Whereas in the forecourts their function was purely aesthetic, we now have prac-

⁹ *Khorsabad I* 56-71.

tical reasons for their existence. There are no façades to complete and make visible to one upon entering. There are, however, small doorways which for some reason it is desirable to shade from the summer sun or to protect from inclement weather. And what better method of accomplishing this than to set them back within a covered "alcove," the open side of which could be closed by means of tightly secured curtains? True, we have no possible explanation as to why these few relatively small doorways should be afforded such protection, but we do find set into the pavement at the outer corner and against the wall opposite stone rings with openings in alignment through which could be inserted a rod to which curtains or awnings might be securely lashed (Fig. 1). These in themselves we should not consider sufficiently evidential were it not for the fact that at many of the large doorways opening from courts we find identical pairs of stone rings (Pl. 30 E). In every instance throughout the residences, whether at alcove or at doorway, the rings are set at such an angle that a rod inserted in them would extend across the opening. Such an arrangement at a portal might seem superfluous when there are doors within to close against the elements. The use of these rings at once suggests a parallel to modern awnings, protecting against the sun while at the same time allowing a free circulation of air.

While examining the temple area of Sargon's palace during a previous campaign the author was perplexed over similar rings found at the entrances to the major temples. At the time they were considered tethering stones for animals about to be slaughtered within the temples or fasteners for awnings or for the halyards of flagpoles set near by behind the glazed

brick tableaux. The former theory was discarded in favor of the other possibilities.¹⁰ Now, in view of the subsequent investigation of the citadel buildings, he no longer is in doubt concerning their true function. They too must have secured

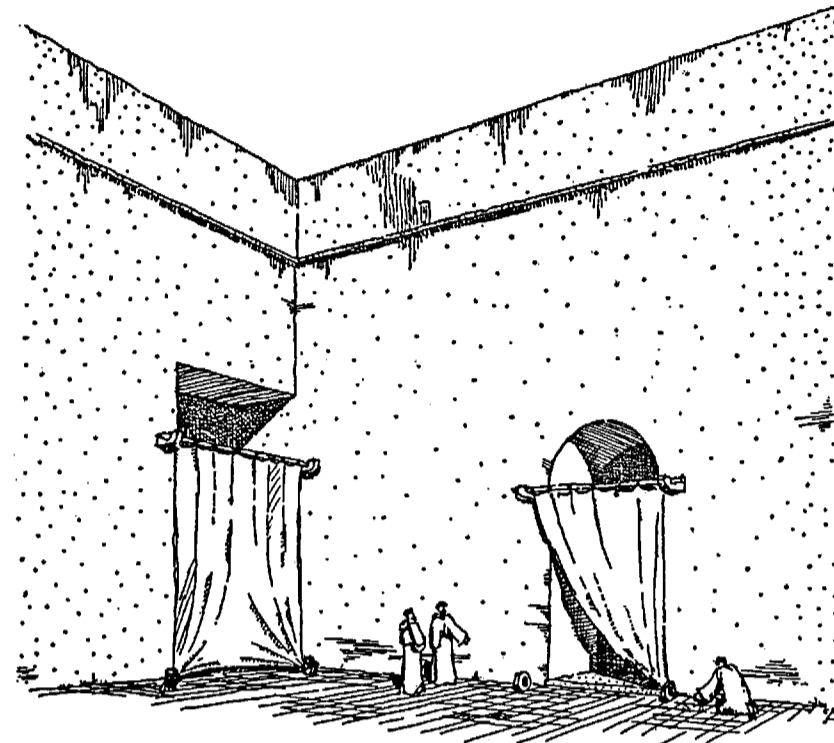


FIG. 1.—POSSIBLE USE OF STONE RINGS TO SECURE AWNINGS OR CURTAINS IN THE SOUTH CORNER OF THE CENTRAL COURT OF RESIDENCE K

awnings, but in a different manner from those found in the residences, for here the holes are not in alignment and could not have held securing rods. The awnings may have been fastened to poles which were guyed to the stone rings.

BUILDING MATERIALS

A description of the building materials employed in Dur Sharrukin appears in Place's publication.¹¹ The recent excavations have, however, disclosed new facts pertaining to these materials and to the functions which they served. Rather than add to or refute Place's account, the author lists at this point only the materials encountered in the investigations carried on by him, at the same time giving a brief outline of their uses.

SUN-DRIED BRICK.—By far the most extensively used material is sun-dried brick. Had all other structural materials been unavailable or forbidden to the builders of Dur Sharrukin and had they therefore been forced to build in this medium alone, the completed city would have presented an appearance but slightly different from what it actually did. Precedent was no doubt the reason for the almost exclusive use of this material, though it did possess the advantage of being the most accessible and at the same time the cheapest and quickest to make. One is indeed tempted to suspect from the chips of baked brick occasionally found therein that the bricks were molded very near if not at the very scene of construction. And from the way they adhere to one another to this day one is led to believe they were laid almost immediately upon being removed from the mold. In the modern village of Khorsabad bricks are left to dry in the summer sun for but a day or two, after which time they are sufficiently hard to handle as one would a kiln-baked brick. They are subsequently laid with mud plaster between courses and vertical joints. The ancient bricks, with the exception of those laid with mortar in the vaults,¹² probably required but

a few hours to become sufficiently hardened, for they were undoubtedly laid while still moist in order to retain the adhesive quality necessary when used, as they were, without mortar. Thus employed they certainly formed a more solid structure than the present-day mud-brick building.

They were made in various sizes, some being more adaptable to special requirements than were others. Those employed in foundation and wall construction appear to be all of similar dimensions and comprise such a large proportion of the total that they may be considered as "standard." Even in these there are slight variations, due no doubt to carelessness in the construction molds, but so nearly similar are they that a standard size of 40×40×10 cm. may be assigned to them. Half-bricks also were molded and employed to permit staggering the joints.

The many uses of mud bricks are almost too widespread to enumerate. In walls they are employed from the foundation (the undisturbed ground surface except in the case of fortification walls) to and including the parapet; they fill the space between ground level and floor or terrace pavement; set with mortar they form arches over gates and wide portals; as filling for stairs or ramps they permit ascent to the roof; between layers of matting they rest on beams to form ceilings and consequently roofs; and laid as a temporary mass they may possibly have served for scaffolding, if we may give that interpretation to an otherwise inexplicable block of mud brick found in the central court of the Nabu temple (see p. 61).

¹⁰ *Khorsabad* I 89-92.

¹¹ *Ninive et l'Assyrie* I 209-38.

¹² At Town Gate 3; see Place, *op. cit.* I 256.

FIRE-BAKED BRICK.—Second in use only to sun-dried brick are the bricks baked in ovens or kilns. Just as the clay of which the former are molded varies in color (see p. 4) so do the fire-baked ones range from a yellowish green through buff to red. It may be due to different degrees of firing, or the content of the clay itself may cause the coloration.

Sizes and shapes vary even more than in the case of the sun-dried bricks, for in the fire-baked there are not only square and rectangular ones, but segmental forms as well. Two "standard" sizes may be noted in the square bricks, 39.5×39.5×6 cm. and 32×32×11 cm. The latter size is by far the more common. Half-bricks of the smaller size are frequently employed. Occasionally bricks measuring 50 or 60 cm. to a side are found, employed sometimes for no apparent reason but more frequently, when pierced, as paving blocks, with the round hole serving as orifice of a drain.

The king, according to custom and ever alert to the opportunity of perpetuating his fame as the builder of this city, had engraved upon a goodly number of the bricks inscriptions wherein are mentioned his city, palace, or name, the last rarely unaccompanied by one or more of his many titles.¹³ The great majority of these inscriptions are stamped into a flat surface of the brick before firing and while the clay is still soft. There are, however, many instances in which the inscription has been written with a stylus, either upon a broad surface or, in a few cases, on one of the narrow sides. Bricks bearing identical inscriptions are employed in the construction of every building so far investigated. In the Nabu temple or in any of the several residences near or distant from the palace are therefore encountered innumerable bricks on which is stamped the ubiquitous inscription beginning "Palace of Sargon" The brief period historically allotted to the building of this capital is assurance that the construction of these many edifices must to a large extent have been carried on simultaneously. This fact alone precludes the possibility of the use of "left-over" palace bricks in temple or private dwelling. That in the Nabu temple "royal" bricks should have been employed as part of the structural material is not as surprising as is their presence in private residences. There can be but two interpretations of the latter usage. Either as individual builders the occupants of these dwellings were forced to purchase their bricks from the royal brickyard, or Sargon, considering the entire city as his palace, built these many houses and rented or gave them upon completion to his subjects who were to occupy them. More arguments can probably be advanced in favor of the former alternative, the almost utter disregard shown for group planning being among them.

In addition to inscriptions, kiln or brickmakers' marks are sometimes found stamped upon the fire-baked bricks. This, at least, is the only interpretation we can at present give to various marks as diverse as a simple wedge and a finely drawn bull. Their paucity, however, is difficult to explain. In Plate 65 are shown the comparatively small number of varieties found on loose bricks during the entire course of our excavations, and of these there were but few duplicates.

The primary purpose for which bricks were baked was paving. They are used almost universally for floors of rooms and without exception for pavements of courts and terraces. Their second great use is for the construction of drains and

sewers, segmental bricks being employed to encase and protect the roof drains as well as for the arched underground conduits. They are sometimes used for stair treads. Set into wall faces they hold in place *sikkāti*, but whenever so employed they are hidden from view by the plaster surface applied to the wall. They are never used structurally in walls.¹⁴

Although used decoratively rather than for utilitarian purposes, the glazed or enameled bricks are materially so similar to the fire-baked bricks that they cannot truly be classed separately from them. Actually they are ordinary fire-baked bricks which have undergone a further process of manufacture in order to prepare them for their specialized, purely decorative use. Never employed singly, they were first set up as units, perhaps in the "paintshop," where the design was painted upon the face of the temporarily erected panel or structure. The painting finished, the bricks were carefully removed for the firing required to effect the glaze. At the time of removal for glazing they were marked in such a way as to expedite their final reassembly.¹⁴ Such a process is evidenced by the fact that, while an entire decorative design may be repeated over and over again without apparent variation, one example is never exactly the same, brick by brick, as another. The Assyrian glazers either lacked the necessary precision in workmanship or failed to recognize the advantages that might be gained in the "mass production" of individual portions of one standard unit. They may, on the other hand, have tried, but found the architects lacking in the accuracy required to duplicate the structural motives of which the glazed decoration formed but a part. That certain variations of similar motives were intentional is at once evident; but it is often difficult, if not impossible, to tell at this day whether slight discrepancies in dimensions are due perhaps to carelessness in building or possibly to settling or the pressure exerted by the covering debris.

With the exception of some bricks of peculiarly small dimensions in *K* (see p. 42), the glazing is always applied to bricks of the smaller "standard" size, square or "half a square." In Dur Sharrukin the enamel is found only on the narrow sides of the bricks, although from other Assyrian sites have come examples of a complete design appearing upon the broad square face of a single brick. Those from Assur are so large that Andrae calls them "brick orthostats."¹⁵ Inscribed and uninscribed bricks are used indiscriminately for this purpose.

The most spectacular display of the handiwork of the Dur Sharrukin glazer was revealed in the tableaux flanking temple entrances. In the palace temple area they stand beside the doorways leading, in the case of the three major temples, from court to temple proper. The Nabu temple offers a parallel example and an additional one as well. Here a pair of tableaux faces upon each of the two large courts. In the forecourt it flanks the doorway through which one must pass to approach the central court; in the central court it graces the façade of the inner temple exactly as in the palace temple area.

The most widespread use of enameled brick decoration is undoubtedly that of bands set into the walls above large portals and taking the curve of the arch spanning the opening.

¹³ The only exception occurs in the buttresses at the entrance portal of the Nabu temple; see p. 58.

¹⁴ *Khorsabad* I 93.

¹⁵ Walter Andrae, *Farbige Keramik aus Assur* (Berlin, 1923) Pls. 7-10.

¹³ D. D. Luckenbill, *Ancient Records of Assyria and Babylonia* II (Chicago, 1927) §§ 127a-131; *Khorsabad* I 129, No. 2.

In many broad doorways are found glazed bricks fallen amid the debris of the superstructure. Unfortunately the enamel has become so disintegrated that only its presence can be detected, with rarely a trace of the design. It is impossible, however, not to conclude that such bricks once formed curved panels set above the true voussoirs of the arches of these portals, as exemplified at Town Gate 3 according to Place.¹⁶

A structure 1.50 meters square in the central court of the Nabu temple (p. 42) provides our only example of the use of enameled brick in a freestanding unit. The original height of the block or the glazed design upon its sides is forever lost. That it may have been some sort of altar is suggested by its position almost directly in front of the entrance to the inner temple. Horizontal bands between stone joints in the bridge connecting palace and Nabu temple illustrate another singular use of this material.

That there were other uses for glazed bricks as decoration must be accepted despite the lack of tangible examples. As they appear frequently but not plentifully in the debris throughout the many rooms which have been cleared, it is only logical to conclude that they served in a minor way to decorate interiors, perhaps to no greater extent than in the form of a narrow horizontal band of rosettes near the ceiling.

STONE.—With stone so plentiful at no great distance, its comparatively sparing use in the buildings at Dur Sharrukin can be attributed only to the architects' failure to recognize its possibilities or their desire to stick fast to tradition. The modern adjacent villages of Bazani and Bashiqaq, but six miles from the site of Dur Sharrukin, are built almost entirely of coarse white limestone quarried from the hills at the immediate foot of which they stand; and but slightly more distant are the quarries of gypseous alabaster from which modern Mosul obtains its "Mosul marble" used so freely as trim for the buildings of that city. Both these stones were employed at Dur Sharrukin far more extensively than the less readily procurable basalt, which was used only in rare and specific instances.

In cubic content the coarse white limestone used probably surpassed the alabaster. Its greatest display is in the facing of the palace terrace and in the crenelated parapet which crowned this wall. It has a similar use in the bridge joining the palace and the Nabu temple. A few blocks fallen within and near the passageway under the bridge appear to be identical with those composing the molded cornice of the "temple" base found by Botta near the west corner of the palace terrace.¹⁷ This stone is used for paving blocks in important rooms in palace and temple, and for drain caps in rooms and courts otherwise paved with baked brick. It is sometimes employed for stair treads, and occasionally for thresholds not bearing inscriptions or decoration. It forms dadoes of orthostats in the portals of town and citadel gates which are not decorated with alabaster reliefs. It also serves as curbing and as pavement in these same portals. In large undressed blocks it furnishes the unexposed foundations for town and citadel walls, and in roughly dressed slabs it is used in the construction of large drains or sewers. Its function in general therefore seems to be utilitarian rather than decorative, with a tendency to exterior use.

Alabaster, a soft sulphate of chalk, furnished an ideal medium for the Assyrian sculptor. Easy to work, it afforded variation in color ranging from a dead white through gray to

a distinct greenish tinge. To posterity, however, it is not so kind, for exposure to air and especially to water causes rapid disintegration. Yet its employment at Dur Sharrukin is probably second only to that of limestone. By far its greatest use was for orthostats lining the walls of many of the rooms and courts of the king's palace, where they were carved into reliefs depicting contemporary life in court and battle. In other dwellings the orthostats were uncarved and served merely as dadoes which may perhaps have been painted, although no trace of such decoration has been found. The winged human-headed bulls which adorned portals in palace and gate are of this same material. It is always used for decorated and inscribed thresholds and, uncarved, is generally employed in the same manner in other portals. When inscriptions appear upon the treads or the side platforms of stairways, the construction is always of this soft stone. Awning rings also are of alabaster. Two examples of what appear to be orthostats of this material, carved with but a simple molding, have been found in secondary usage and cannot be classified as to their original function. Alabaster, if we may again generalize, seems to be a decorative element in the construction of Dur Sharrukin and is used more frequently in interiors than where exposed to the ravages of the Assyrian climate.

Basalt is employed but rarely, perhaps because of its not being found in the vicinity or of the difficulty of fashioning such a hard substance into elements for which a softer, more workable material would serve equally well. It appears to have two specific uses to which it was universally applied. The more common is for pivot stones imbedded beneath the floor levels and supporting the weight of the massive doors. The more rare but no less specific use is for bases of columns, the scarcity of which implies that Assyrian architects had either a dislike of or were but experimenting with this form of support. An extremely limited and exceptional use in sculptural orthostats is disclosed by a few relief fragments found by Botta and Place.

While it is not to be considered as a geological species, rubble must enter this discussion of materials in view of its definite place in the architectural scheme of Dur Sharrukin. It falls quite naturally into two classes, coarse and fine. The former is used as fill behind the limestone facing of the palace terrace and the arched bridge. The finer variety, partially composed perhaps of stonecutters' chips, appears to cover all spaces, such as streets and "squares," not occupied by buildings.

METAL.—The practical nonexistence of metal as a building material at Dur Sharrukin all but precludes its discussion in this chapter. Its use as decoration, however, is so closely tied into the architecture that brief mention of it must be made.

Bronze was found in greater abundance than any other metal during our excavations. In implements and tools it was extensively employed, but we are at this point more concerned with its use from a structural, architectural, or decorative viewpoint. Its most utilitarian function was for nails of varying sizes and shapes. Embossed bands fastened around wooden shafts at temple doorways or similarly embossed plaques attached to wooden door leaves display it in its most spectacular forms.

Iron, like bronze, was employed to a large extent for tools and implements. It was also used for nails, though far less

¹⁶ *Op. cit.* I 174 f. ¹⁷ *Monument de Ninive* V 53-55 and II, Pls. 149 f.

frequently than bronze. Iron caps for door pivots were employed here, where at other Assyrian sites bronze was the rule.

A favorite material for jewelry, silver nevertheless enters the architectural picture to a very slight degree. Quantities of bronze nails, some found in their original positions, with heads covered with silver foil attest the fact that they were used to fasten embossed bronze bands and plaques to the wood they adorned. In a letter replying to Sargon's inquiries concerning the completion of the temple doors we are informed that those of the Sin, Shamash, and Ningal temples were overlaid with silver.¹⁸

The finding of tiny gold nails in considerable quantity is our only reason for including this precious metal in an architectural discussion. The size of the nails, however, leads to the conclusion that they were used to secure ornament to furniture or boxes. It is difficult to assign them a truly architectural interpretation.

Plain fragments of lead, impossible of identification, imply that this material may have been used for dowels in masonry construction. Dowel holes in the facing of the palace terrace bore, when found, no traces of the material that once filled them. Lead is suggested merely as a possibility for a function which bronze or iron might equally well satisfy.

WOOD.—In the discussion of wood as a building material we are forced to digress from our intention of mentioning only materials encountered in our excavations. For, with the exception of cedar, which apparently is the most lasting of those employed in the construction of Dur Sharrukin, no wood has been found sufficiently intact for analysis. Innumerable traces of planks and beams have been disclosed, usually in the form of mere imprints or "molds," which often give the size of the piece and the direction of the grain but nothing else. They do, however, definitely establish the use of wood for roofs, door leaves, lintels, and vertical shafts flanking temple entrances; and in some instances they tell us the size. The tall shafts at the entrance to the Sin temple have diameters of 0.50 m.,¹⁹ while in the sanctuary of the Nabu temple were found imprints of beams or planks 3.90–4.40 in length, 0.52–0.88 in width, and with a probable thickness of 0.15–0.20 (see p. 23).

We must revert, however, to ancient records for suggestions as to the actual materials responsible for these oft found bits of evidence. A letter from Tabsilesharra to Sargon tells of an inventory of 15,200 "whole" (sound?) timbers and 13,157 "inferior" ones to be shipped from his district alone for the construction of Dur Sharrukin.²⁰ This letter, one of several dealing with the shipment of wood to Dur Sharrukin,²¹ furnishes an indication of the extensive use of this material. For the kinds of wood we turn mainly to the inscriptions found in the palace and relating to the construction of the city. In no less than ten of these are mentioned palaces of "ivory, maple, boxwood, mulberry, cedar, cypress, juniper, pine, and pistachio-wood."²² All these materials with the exception of "pine" and "pistachio-wood" are mentioned in

still another inscription,²³ while there is one instance of the list being confined to "ivory, mulberry, cedar, cypress, juniper, and pistachio-wood."²⁴ Of woods other than those just listed pomegranate is mentioned in a letter to Sargon.²⁵ Admitting that the king's boasts may lack absolute reliability, we must at least recognize the possibility of truth. All the materials mentioned were available in Assyria proper or in the lands subjected to it through the many conquests, while cedar roof beams, exactly in accordance with the king's account,²⁶ have actually been found in excavation and analyzed as such.²⁷ Ivory, though also found in considerable quantity (see pp. 96 f.), cannot be classed as a wood and is therefore omitted from the following enumeration, which is confined to the palace inscriptions and is largely speculative.

Cedar.—This material is known by excavation and subsequent analysis to have been used in roofing beams and for tall vertical shafts flanking the court entrances to temples.

Cypress.—Relying entirely on the inscriptions we may attribute to cypress a place secondary only, if not equal, to that of cedar, for in them we find frequent references to roofs²⁸ and door leaves²⁹ of this material.

Mulberry.—In seven of the inscriptions³⁰ are references to door leaves made of mulberry wood. If we accept these as tending toward actual fact, we may assign a fairly extensive use to this material.

Maple.—There are two references in the inscriptions³¹ to maple used for door leaves.

Boxwood.—The fact that the use of boxwood in door leaves receives mention only once in the inscriptions³² tends to preclude a very extensive use of this material.

Juniper, pine, and pistachio-wood.—These three woods are mentioned in the inscriptions only in the lists. No specific uses for them are given.

MORTAR.—A statement that Dur Sharrukin was built entirely without mortar contains only slight exaggeration, for its sole use in structural parts appears in the construction of vaults. All stone masonry depended upon well fitted joints and dowels for stability, while the mud-brick walls stood as solid masses by virtue of their individual bricks having been laid before their complete desiccation. In no pavement of any sort was mortar used as such. Two types of mortar, however, were used in baked-brick construction: mud into which chopped clay had been worked, and bitumen, which the author prefers to class as a waterproofing material rather than an adhesive medium (see p. 17).

There is no reason to suppose that ancient mud mortar was made by any method differing from that so universally practiced throughout modern Iraq. Clay to which water and chopped straw have been added is trodden upon with bare feet to bring about the desired thorough mixing. It is then left for several days, during which time more mixing is periodically indulged in. The product thus prepared is considered to be more homogeneous and therefore of greater adhesive strength than if hastily made. Such, then, is the mortar generally used in baked-brick construction.

The use of bitumen for setting bricks is found only where waterproofing is especially desired (see below); it appears therefore only as a bed for open-air pavements, in certain interior floors, chiefly those of bathrooms, and sometimes in the construction of drains.

¹⁸ Leroy Waterman, *Royal Correspondence of the Assyrian Empire* (4 vols.; Ann Arbor, Mich., 1930–36) I, No. 452.

¹⁹ *Khorsabad* I 97 and Fig. 102. ²⁰ Waterman, *op. cit.* I, No. 92.

²¹ See also *ibid.* II, Nos. 813–14 and 934.

²² Luckenbill, *op. cit.* II, §§ 73, 84, 93 (= 83 ff.), 97, 98, 100, 102, 105, 110, 112. In § 84 and (by inference) in § 93 the word "lime" is misprinted for "pine." The Akkadian word is *burašu*.

²³ *Ibid.* § 114. ²⁴ *Ibid.* § 121. ²⁵ Waterman, *op. cit.* II, No. 814.

²⁶ Luckenbill, *op. cit.* II, §§ 73, 84, 93, 97, 100, 102, 105, 110, 112, 121.

²⁷ *Khorsabad* I 97.

²⁸ Luckenbill, *op. cit.* II, §§ 105, 110, 112, 121.

²⁹ *Ibid.* §§ 73, 84, 93, 97, 100, 102, 105.

³⁰ *Ibid.* §§ 73, 110.

³¹ *Ibid.* §§ 84, 93, 97, 100, 102, 105, 110.

³² *Ibid.* § 110.

BITUMEN.—With bitumen or asphalt wells so plentiful throughout Assyria, one is not surprised at finding this mineral used so extensively in the building of Dur Sharrukin. One wonders rather why such an excellent, readily available adhesive material was not more freely employed as such when construction work, so often weaker than desirable, could have been strengthened thereby. Yet the Assyrian builders of this period appear to have utilized bitumen more for its water-resisting properties than for its adhesive qualities.

Its greatest use unquestionably is under the brick pavement in open courts and terraces. This use of bitumen no doubt solidified the pavement to some extent, but the fact that it was seldom employed in room pavements at once suggests waterproofing as the *raison d'être*. Such a suggestion is strengthened almost to a certainty by the few exceptions to the general rule of no bitumen in interior pavements, for when these exceptions do appear they are always in bathrooms, and therefore part of a drainage system, or in such a specialized situation as the Adad temple, where water probably was used in the ritual of the fertility god.

As a waterproofing for small baked-brick drains by which water and sewage were carried to the main sewers bitumen is always used as interior coating. Infrequently one finds the bricks themselves set with bitumen, perhaps as an adhesive or more likely as a precaution against seepage of water through the joints. The terra-cotta tiles set within walls to carry rain water from the roof also employ this material (Pl. 32 D). In this construction there can be no doubt as to the intent behind the use of bitumen, for with these vertical drains solidly incased in massive mud-brick walls there is no possible need of additional reinforcement, while there is a very definite necessity for insurance against water seeping through into the mud brick and weakening the walls thereby. Despite certain overlapping tendencies one cannot refrain, therefore, from classing bitumen, as looked upon by the architects of Sargon's city, as a waterproofing material rather than an adhesive.

SAND.—Although employed for but one minor purpose, many tons of sand must have been required to "level" the construction of the buildings at Dur Sharrukin. For such seems to be its only use—a thin layer of an easily handled medium whereby paving bricks and blocks could be so adjusted in height as to produce a smooth, finished floor surface. It is therefore found beneath single-course pavements and between the two courses of exterior pavements. The huge limestone and alabaster thresholds also are leveled in this manner, with sand between the sills and the tamped earth or the mud-brick construction where door levels have been built up in this manner. Deposit boxes set beneath the floor pavements are often found filled with sand and rubbish, but the author attributes this to the dishonesty of workmen³³ rather than to a principle of construction. While sand therefore never assumes great vertical proportion, its horizontal extent is such that innumerable loads of it must have been transported from the river bed to the building site.

MATTING.—The tensile qualities of matting had been recognized in Mesopotamia since earliest times. It was used first in the construction of crude huts and later as a binder in mud brickwork. It is therefore not surprising to find it em-

ployed at Dur Sharrukin in the construction of roofs and as a binder within certain walls. The remains of matting are in such a state of decomposition when found that analysis is impossible. Its rather fine cross weave,³⁴ however, indicates that it was probably made from coarse grass or very small reeds.

DRAIN TILE.—A single example of a conduit of terra-cotta tiles found *in situ* within a citadel residence establishes the means by which rain water was carried from the roofs to the subpavement horizontal brick or stone drains. The individual tiles are so shaped, with a greater diameter at one end than at the other, that when set in place the bottom of each fits into the top of the tile immediately below it (see Pl. 32 D). Thus with the aid of bitumen a watertight joint is effected. The specimens of tile brought to light are of fine texture and are yellow after baking. They are 0.47 m. in length, with outside diameters of 0.22 and 0.14 at top and bottom respectively. There is little reason to doubt that such vertical conduits were employed extensively throughout the many buildings at Dur Sharrukin. The fact that they are hidden within the walls, which the excavator always tries to preserve, explains why no other examples happen to have been disclosed.

PLASTER.—The two types of plaster used at Dur Sharrukin appear to have served two distinct purposes. In general lime plaster is found on exterior surfaces, while mud plaster covers interior and court surfaces.

Lime plaster is a brittle substance made by mixing burned limestone with water. It has poor adhesive qualities on any background and is readily dissolved by rain, as is evidenced by the thick accumulation of lime often found at the angle where wall surface meets ground level. It covers the exterior wall faces of buildings and gates and the faces of town and citadel walls.

Mud plaster is undoubtedly the same material as that used for mortar—a mixture of clay, chopped straw, and water (see p. 16). Its adhesive properties, especially on the mud-brick background to which it was almost universally applied, seem to be equal to if not better than those of lime plaster. It covers all interior wall (and probably all ceiling³⁵) surfaces as well as the wall surfaces of courts exposed to the elements.³⁶ When covered with a thin white wash its appearance is not unlike that of lime plaster.

PAINT.—That all interior and court walls of buildings of any pretense whatsoever were painted in colored designs or in black and white cannot be doubted, for in nearly every room encountered during the course of the excavations small fragments of painted plaster were found. Most of them are unfortunately too fragmentary to disclose design or to permit of chemical analysis. Sufficiently large specimens of the blue, which is by far the predominant color employed, and the red, which undoubtedly holds second place in extent of use, have made possible color analyses³⁷ as follows:

Blue: lapis lazuli which has been used with a clay high in silica.

Red: mercuric sulphide with a clay apparently used as binder, though it is possible that the clay was present with the mercuric sulphide at the time when it was obtained.

³⁴ *Ibid.* p. 7. ³⁵ See p. 23, also *Khorsabad* I 9 f. and 68.

³⁶ The one exception is to be found in Court V of the Nabu temple.

³⁷ Made by the Sherwin-Williams Co. through the courtesy of Dr. N. E. VanStone.

³³ *Khorsabad* I 101 f.

KHORSABAD

FOUNDATIONS

Foundations, especially built as such, played but a minute part in the construction of Dur Sharrukin. One might almost with impunity say that the city was built without them. To class as foundations the artificial platforms or terraces upon which the two palaces and the Nabu temple stand seems erroneous to the author, who prefers to treat them as integral parts of the buildings proper. Less elevated structures literally sit upon the ground, for their walls are of homogeneous material and construction from undisturbed earth to parapet. True, the wall construction may begin slightly below ancient ground level; but, since there is no sign of footing or variation of material, this sinking of the lowest course of construction evidently harbored no purpose beyond that of placing the walls on hard, undisturbed earth rather than on soft, freshly plowed soil. Because of the high clay content of the natural soil in this locality the winter seepage of moisture alternating with the summer baking solidifies it to such extent that it provides bearing properties superior to any artificial means of support within the comprehension of

the architects of Sargon's time. This fact was undoubtedly recognized by those supervising the construction of the city, and wisely so, for in general walls so placed directly upon the ground remain to this day in a better state of preservation than those resting upon artificial foundations.

Town and citadel inclosure walls are actually set upon hidden foundations of rough undressed stone (Pl. 8 *A*) which appear to have been laid directly upon the ground surface. The inner and outer faces of these foundations present some regularity, with their stones placed side by side as headers. The space between is then filled with stones of every shape and size, fitted together as best they may be. The foundations are of three courses, with a total height averaging about 1.50 meters. There is no trace of any binding material.³⁸ The citadel gates are treated as buildings, for when they are reached the stone foundations abruptly cease, and the walls of the gates rest immediately upon the foundation supplied by nature. The town gates, however, appear, according to Place,³⁹ to have had foundations similar to those of the walls into which they were built.

WALLS

For general discussion walls may conveniently be divided into three categories: those forming inclosures of town and citadel, those of buildings, and the facing or retaining walls of the palace terraces.

FORTIFICATION WALLS.—Both town and citadel walls rest on stone foundations, as described above. For them we must be grateful, for so thorough has been the destruction or disintegration of the superstructure that, with rare exceptions, these foundations form the only means whereby the extent of the walls can be traced. Place was forced to follow the foundations in tracing the town wall,⁴⁰ as were we on the whole in locating the citadel walls. Portions of the citadel wall superstructure, however, have withstood the ravages of time sufficiently well to disclose its construction, which we may safely apply to that of the town wall as well. Above the foundation the wall is of mud brick laid without mortar. In one instance where we find especially good preservation, layers of matting appear to have been used as binders every nine courses of brick. Whether or not this was universal practice we cannot say with any degree of certainty. The presence of matting, however, in a normal section of the wall, that is, in a place at which there is no reason for extra strengthening of the structure, at least suggests the use of binding material throughout the fortification walls.

From the above mentioned section and others which remain in some degree of preservation it becomes clear that the lower portion—about 3 meters—of the citadel wall is battered on its outer face. At periodic intervals projecting "towers" or bastions give greater structural and defensive strength to the wall. Its inner face is vertical with the exception of an approximately 30° watershed of about 50 cm. at the base. Both faces are covered with white lime plaster. At the intersections of the palace terrace and the citadel wall with the town wall, the only points at which the last mentioned was encountered during recent excavations, the town wall presents construction identical with that of the citadel wall. We therefore have a town wall with plastered vertical inner

face and watershed where it meets the ground, and can with-in reason assume a battered outer face as well, with bastions as indicated by Place. Both inner and outer faces of town and citadel walls alike probably were terminated with parapet walls plain or crenelated.

In the matter of dimensions town and citadel walls present quite natural differences, for the latter is after all a secondary defense at the most or more likely nothing more than a means of separating the court domain from the everyday life of the city. The town wall according to Place⁴¹ has a width of 24 meters, with bastions projecting 4 meters and 13.50 in length spaced at intervals of 27 meters. These probably represent average dimensions, as work on the citadel wall has shown that few of its bastions are of identical size or equally spaced. Botta, who examined the town wall at a single point, gives its thickness as 14 meters,⁴² which in view of Botta's usually greater accuracy and Place's tendency to double dimensions seems far more probable. Of the citadel wall the foundation and upper width are 6 meters, which because of the batter of the outer face becomes about 7.50 at the ground or street level. Bastions 11.50–13 meters in length with 5.50 projection are spaced 14–19 meters apart. While horizontal dimensions can fortunately be given with certainty, the height, which naturally presents considerable variation due to sloping and irregular ground levels, must to some extent remain conjectural. Through restoration (p. 90) we arrive at heights which we believe can be allotted to these walls with a reasonable degree of exactitude. To both the citadel and the town wall, therefore, we assign a mean height of 12 meters, at considerable variance to the 23 meters arrived at by Place.⁴³

WALLS OF BUILDINGS have no foundations as such and are constructed entirely and universally of mud bricks. In rare

³⁸ This account is based on the results of our investigation of the citadel wall. A comparison with Place's description of the town walls (*Ninive et l'Assyrie* I 161 f.) indicates, but for dimensions, identical construction.

³⁹ *Ibid.* p. 178.

⁴⁰ *Ibid.* p. 165.

⁴¹ *Ibid.* pp. 162 and 166.

⁴² *Monument de Ninive* V 31.

⁴³ *Ninive et l'Assyrie* I 246.

instances (*M* 67, *J* 38, *K* 54) a single row of baked bricks is set into the wall face at floor level for no explainable reason other than perhaps to prevent injury from shoes. The use of these hard bricks is in no way structural and is so infrequent that some further explanation is desirable. This, however, we are unable to make.

The faces are always plastered or are covered with orthostats, the latter treatment appearing only over the lower portion, above which plaster is used. The orthostats except in certain portals and chambers of vehicular gates are of alabaster (the exceptions being limestone) and may have plain or sculptured surfaces. Positive proof in one instance⁴⁴ with complete lack of contradictory evidence elsewhere is, we believe, sufficient indication that where orthostats were employed they were first set up and the walls then built behind them. Plaster, as has already been noted above, is of burned lime or of clay mixed with straw and water, in general the former appearing on exterior wall faces and the latter employed on interior surfaces. The plaster is applied before floors and paving are laid and often extends considerably below floor level.

Although a tremendous range in wall thickness (1.25–8.00 m.) exists throughout the buildings of Dur Sharrukin, a study of the various plans is convincing proof that a definite reason dictated the dimensions of nearly every wall. Two points at once become apparent: that the scale of walls varies with the importance of the buildings, and that the corresponding portions of all buildings have a definitely relative order of wall thickness. Commencing with *Z*, a dwelling outside the citadel, we have general wall thicknesses increasing through the various citadel buildings from relatively unimportant *J* to the Nabu temple and the residence of the grand vizier and reaching a maximum in the massive walls of the two palaces. Within individual buildings we find a distinct thickening of the walls in the portions surrounding the central courts and in the residential quarters of the palaces. Anomalies do occur, some for definite special reasons, while others must remain without explanation.

What, then, prompted this scheme of wall thicknesses? Three reasons may be cited as applicable individually or collectively: insulation against a climate of extremes; bearing strength for roofs; and inherent stability, exclusive of bearing properties, as a requisite for height. That insulation was a determining factor may almost immediately be discarded. It is suggested by the fact that the living quarters in palaces and dwellings comprise the sections wherein the thickest walls are found. In the temples, where it is the cellas and sanctuaries which are inclosed in the thickest walls, this argument does not hold; nor does such reasoning offer any explanation for the general variation of wall size with importance of building.

Bearing requirements are undoubtedly a factor to be considered, for the sections wherein are thick walls are also generally the rooms of greatest width and consequently of greatest roof span. There is, however, a very noticeable lack of consistency in this respect, for we are confronted by the fact that not only within a given area of practically uniform wall thickness (e.g. the central courts of *L* and *M*) are enormous differences in room widths, but also in individual buildings rooms corresponding in width to their counterparts in other buildings have bearing walls of utterly different thick-

nesses. Compare for example the great halls in the residences and the Nabu temple, the extreme difference being between Residence *Z* and the Nabu temple *H*. Although we admit bearing requirements as a probable factor contributing to the determination of wall thickness, they cannot be considered in any way to explain the variation according to importance. For that we must turn to the remaining determinative, height.

That height exemplified importance to the Assyrians of Sargon's time scarcely requires argument. At Dur Sharrukin, as at other capitals, the palaces are constructed upon mammoth platforms to raise them high above the plain and other buildings. So also is the Nabu temple, dedicated to the god who was then considered supreme among all gods. As a crowning glory the ziggurat rising from the palace terrace soars above all. One might therefore expect that buildings in the case of which the intention to elevate is clearly expressed in artificial platforms erected for such purpose should have higher roofs, not only to increase their height but to bring them into better scale with their terrace bases. So it is not surprising that these same buildings possess the thickest walls, while conversely the town residence *Z*, which is kept low to emphasize the grandeur of the citadel and palace, has walls of maximum thickness no greater than the minimum in the palace. The same line of argument, if continued, may account for the thicker walls within certain portions of individual buildings. Just as the palaces are raised above common dwellings, so the throneroom and royal living quarters reach heights greater than do the utilitarian sections. Thus in the Nabu temple the cellas and sanctuaries attain emphasis over the services. The style set by the royal architects was no doubt emulated by those responsible for lesser buildings. Furthermore, the arrangement of rooms makes fenestration a necessity if important rooms are to be in anything but almost complete darkness, yet precludes windows other than those of a clerestory or set sufficiently high to overlook the roofs of adjacent rooms. It is therefore imperative that some rooms or sections of buildings rise above others and that thicker walls be provided to make the added height secure. The difficulty of determining exactly where changes in roof level occur cannot be denied, but, all things considered, the factor of height best satisfies the conditions as expressed in the plans. As previously noted, bearing quality was probably a contributing element and the desire for insulation may have had a small influence; but in the opinion of the author they never were more than secondary.

In giving the actual dimensions of walls one is confronted with constant minor variation, in all probability due to bricks of slightly different sizes. The wall thicknesses herein mentioned are therefore approximations toward which there is a definite tendency. The thinnest walls encountered are 1.25 m. in thickness and appear chiefly in *Z* and less frequently as curtain or nonbearing walls around the forecourts and in the service areas of the citadel buildings. Two- and three-meter walls are the most common in the citadel residences, the outer walls of which almost universally strike a mean of 2.50, which width is occasionally found within these buildings. In the Nabu temple and the palaces the scale is again increased. In the former those surrounding the cella have a thickness of 4 meters. In Palace *F* the thickness varies from 2.50 to 4.75, with the higher figures predominating. For the walls of the king's palace we must refer to

⁴⁴ *Khorsabad* 1 79.

Place, who states that their minimum thickness is nearly 3 meters, that the most frequent thicknesses are 4 and 5 meters, and that the maximum is about 8 meters.⁴⁵

For vertical dimensions we must, as in the case of fortification walls, resort to restoration (p. 90). Several examples of springings of doorway arches and a remarkable find of a painted wall in *K 12*, fallen almost intact, establish definite minimum ceiling heights. If our restorations err in height they do so in being too low rather than too high, for by adhering as much as possible to actual excavated evidence we naturally work with known minimum rather than speculative exaggerated dimensions. *K 12*, the great hall of what, exclusive of the palace, is probably the second most important residence within the citadel, we know to have had a minimum ceiling height of 14 meters. Its walls are 3 meters thick, as typical as any for those of the structures surrounding the central courts of the major citadel dwellings. We are therefore inclined to apply to these buildings such wall heights as Place assigns to the king's palace—10–12 meters for secondary and 14–16 meters for principal areas⁴⁶—and to increase the heights in the Nabu temple and the two palaces on the basis of their greater wall thickness. Sargon himself tells us that he made his palace walls 10 great cubits thick and 180 *tipki* (layers of brick) high.⁴⁷ Since excavation has proved the truth of his horizontal dimension, there is little reason to doubt his statement of the vertical, which according to mud-brick measurement would become 18 meters.

RETAINING WALLS.—It is perhaps unfair to base a generalization of retaining walls upon a single example—the terrace upon which the king's palace was built; yet its comparison with the bridge (Pl. 11 *A*) under which runs the street between the palace and the Nabu temple presents such outstanding similarities that it must be considered representative of a type of construction employed by the Assyrians of this period. The only other example which may exist at Dur Sharrukin is at Palace *F*. This, however, is purely speculative, as the excavations at this second palace were not carried to the extent of tracing the terrace. The high base upon which stands the Nabu temple is not faced with stone, its sun-dried brick surface being covered with lime plaster.

Built of limestone without the use of mortar, the wall entirely surrounds that portion of the palace terrace (see pp. 54–55) extending into the citadel. Its plane is periodically broken with buttresses at unequal intervals. Corner construction is strengthened by the use of dowels whereby the courses are secured to one another (Pl. 8 *E*). Courses con-

sist of headers and stretchers appearing in no regular order, the former to bind the wall to the material behind. That the face was dressed after the wall was built is evident from the stone chips pressed into the pavement below and from the line at pavement level where the smooth surface ends. The depth to which the lowest course extends below the ground or pavement level varies as horizontal joints encounter sloping ground level. A crenelated parapet, stones from which were found in profusion among the debris fallen upon the pavement below (Pl. 8 *C*), undoubtedly formed the upper termination of the retaining wall.

The heights of courses appear to decrease slightly toward the top. Of the five courses we found *in situ* where a ramp leads to the south corner of the terrace (Pl. 11 *B*), the vertical dimensions are 105, 95, 90, 90, and 85 cm. respectively from bottom to top. Headers and stretchers show no appreciable difference in horizontal dimensions as distinguished one from the other. Together they vary considerably, from 0.85 m. to 1.50 in length (one exceptional corner stretcher measuring 1.85) and from 0.20 to 0.50 in width. By means of known ground and terrace pavement levels we are enabled to ascertain that there were originally nine courses at the south corner of the terrace (8.38 above ground level), eight where the principal ramp approaches the southeast façade of the palace (7.44 above ground level), and probably less at the east corner, where the ground level is considerably higher yet.

Brief mention must here be made of the masonry bridge connecting palace and Nabu temple, more fully described on page 56. Aside from the curved section of the arch, its construction is identical with that of the terrace retaining wall with but one noticeable exception. Perhaps to increase the scale, or merely for decorative purposes, single rows of enameled bricks, now almost disintegrated, separate each pair of courses from its adjacent pairs (Pl. 11 *A*). No regularity exists between headers and stretchers, although the faces within the passageway itself are almost entirely of headers cut to fit the curve of the false arch. Behind the dressed face is rubble.

We are wholly unable to reconcile our findings with Place's description of the terrace retaining wall,⁴⁸ partially based, so he says, on the south corner which we ourselves have exposed. We agree neither in plan nor in elevation nor in section, while the dimensions given by him are slightly more than double those found during our excavations. His exaggerated height of the palace terrace no doubt largely accounts for the extreme height he assigns to the town walls.

PAVEMENTS AND FLOORS

While the recent excavations have on the whole substantiated Place's conclusions regarding paving materials and their methods of use,⁴⁹ our more general and extensive clearance of the site has disclosed evidence which makes possible expansion and necessitates some contradiction of his statements. To his assertion that in all rooms of the palace, with the exception of the "harem" (temple area), the floors consist only of tamped earth⁵⁰ we take exception. The so-called "tamped earth" is nothing but the surface upon which the brick floors were originally laid. It is not to be wondered at

that in the dark tunnels by means of which Place extricated the palace plan he failed to recognize the traces of the brick floors which had been removed in antiquity. Adequate light is essential to notice the marks left by the bricks in the tamped earth or the faint scars around the base of the wall disclosing the line of the original floor level. Plate 28 *A* illustrates a room in the Nabu temple from which the pavement had been partially removed in antiquity. An equally

⁴⁸ Place, *op. cit.* I 28–34.

⁴⁹ *Ibid.* pp. 295–302.

⁵⁰ *Ibid.* p. 295. This statement is modified on his p. 301, where Rooms 10, 16, 17, and 18 are mentioned as having stone floors.

⁴⁵ Place, *op. cit.* I 246.

⁴⁶ Place, *loc. cit.*

⁴⁷ Luckenbill, *op. cit.* II, § 110.

illustrative example is found in Room 164 of the Sin temple.⁵¹ Both rooms clearly indicate how easily without complete clearance might be overlooked the reality that brick pavement originally covered the tamped earth. From the fact that three palace rooms designated by Place as unpaved—Rooms 84 and 86 and the throneroom—have since shown complete, fragmentary, or indicated pavement⁵² we feel justified in applying to Sargon's palace our conclusions arrived at from the excavation of Palace *F* and the town and citadel buildings. We maintain, therefore, that at Dur Sharrukin all rooms have floors of stone blocks or a single layer of baked bricks, and that all courts and terraces are paved with similar bricks laid in two courses, one above the other.

"STREETS," or more correctly the spaces between buildings, since regularly laid-out streets apparently do not exist (see p. 10), could not have caused the builders of Dur Sharrukin great concern, for nowhere do we find pavement sufficiently well constructed to indicate careful forethought toward combating the winter mud of Assyria. It may have been considered an insurmountable problem or perhaps merely something taken for granted and therefore no problem at all. In any event we find a surprising carelessness in this respect, for in what must have been the most important streets and areas within the citadel (e.g. Pl. 16 *A*) no more than a rough cobblestone pavement exists. Consisting primarily of rough, odd-shaped stones, its surface is somewhat smoothed by the addition of small bits of limestone—stonecutters' chips, perhaps, or a material made expressly for this purpose. A small amount of what appears to be burned limestone may have been added as a binder, but it is possible that this may be merely the result of decomposition of the stone itself. Elsewhere ancient ground level is recognizable only by a thin layer of small, irregular stones somewhat held together by the same doubtful material.

TOWN AND CITADEL GATES.—Gates, as Place mentions, fall into two classes, those with portals ornamented with reliefs and those without decoration.⁵³ The newly discovered citadel gates belong to the former category and agree in most respects with Place's general description. Within these gates, in portals and chambers alike, the pavement is of large limestone slabs, usually cut in rectangular shapes. While laid without true regularity, they tend on the whole to preserve a perpendicularity of jointing (Pl. 10 *C*). Immediately within the citadel the pavement slopes steeply downward to street level (Pl. 8 *B*). In the undecorated gates the pavement is of uneven stones somewhat larger than the ordinary cobblestones, and consequently is laid with no order of jointing.⁵⁴ Again there is a downward slope immediately within the town inclosure.

TERRACES AND COURTS.—What is undoubtedly the best executed pavement in the entire city is that found in terraces and courts of buildings. It consists of two courses of baked brick, usually though not invariably the lower being of the smaller and the upper of the larger "standard"-sized bricks (see p. 14). The lower course is laid upon a bed of bitumen (Pl. 27 *D*), some of which fills the vertical joints, apparently forced into them by pressure applied during construction. Between this and the upper course, which is laid with tight joints without the use of any mortar, is a layer of sand varying in thickness from a few millimeters to 5 cm. or more. It

was no doubt employed as a medium to take up the slight variation in thickness among the bricks of both courses in order to insure an even top surface. So successful is this type of pavement that often to this day it is difficult if not impossible to pry loose an intact brick without first deliberately breaking an adjacent one.

The general tendency in both courses of bricks is for regular jointing with the lines running parallel to the walls of the court or terrace. The areas so paved, however, are usually so far from being true squares or rectangles that irregularities must be taken up in the pavements. The direction of the joints therefore may change anywhere within the area or may meet the wall at an oblique angle. Half-bricks are sometimes employed to meet these requirements of irregular space. At the front terrace and ramp of the Nabu temple, a particularly irregular area, two unusual features are encountered. Both courses are of the larger "standard"-sized bricks, and the lower course is laid with joints running at an angle oblique to those of the upper course (Pl. 16 *C*).

Deposit boxes are frequently set into the floors of courts at either side of the portals leading to the more important rooms.⁵⁵ These boxes have baked-brick sides and are so arranged that the cover becomes one of the paving bricks and cannot be distinguished from them. While intended as depositories for documents relating to the construction of the buildings or for amulets, they are usually found empty.

The pavements are always sloped to permit of drainage, the slope being so arranged that the water flows to the mouth of a drain connecting directly or eventually with one of the larger sewers. The orifice of the drain is usually a hole about 10 cm. in diameter cut into a stone slab which at this point replaces the usual paving bricks. Occasionally a pierced brick serves this purpose.

ROOMS.—There are two types of pavement employed as floors of rooms: limestone slabs and baked bricks. Were information available regarding the original floors of the many rooms of Sargon's palace, one might with more certainty arrive at the reason governing the distribution of these two types of paving. The tendency is definitely toward importance as being the factor determining which rooms shall have stone and which brick floors, yet there are several instances to which this premise cannot be reconciled. In the three major palace temples and in the Nabu temple all sanctuaries, cellas, and adjoining anterooms have stone floors, while in the king's palace and in Residence *K* the throneroom and great hall respectively may have been similarly paved. Sargon's bathroom also has a stone floor. These few known examples testify that at least some important rooms were favored in this manner and indicate that, had time permitted the complete excavation of the Palace *F* throneroom or the great halls of the remaining citadel residences, traces of similar pavement might have been found therein.

The stone floor of Corridor 10 in the king's palace is understandable when one recognizes this as the important passageway between royal residence and court, yet it is difficult to find an explanation of the fact that the only other known instances of stone paving in the king's palace lie in three rooms (16-18) of uncertain use⁵⁶ opening directly upon the residential terrace. Their counterpart, similarly paved, is found in Palace *F*, where again no light is thrown on their function (cf. pp. 77 f.). Here also we find Room 20 paved with stone for

⁵¹ *Khorsabad* I, Fig. 124.

⁵² Place, *Ninive et l'Assyrie* I 181.

⁵³ See p. 55 and *Khorsabad* I 60-62.

⁵⁴ *Khorsabad* I, Fig. 5.

⁵⁵ *Khorsabad* I, Fig. 117.

⁵⁶ Place, *op. cit.* I 64-66.

no apparent reason. Its position in relation to the throne-room suggests a parallel in "Court" V and Room 21 of the king's palace, rooms which may have possessed especial significance, since the wall slabs of Court V have inscriptions cut across the relief rather than on the reverse of the slab—a practice but rarely employed at Dur Sharrukin.⁵⁷

In the Nabu temple the two rooms (other than those already mentioned) selected for stone paving are Nos. 14 and 17 (see Pl. 79). The former, because of its decorated niche set high opposite the door and of the raised platform, upon which rests a smaller platform or pedestal, suggests a minor shrine. It unquestionably enjoys a prominent position, its doorway, flanked by statues, being directly opposite the main entrance to the building and beside the elaborately decorated portal leading to the central court. Room 17, however, would seem from the plan to be of less significance than Room 13, which similarly serves as a connecting link between courts and is paved with brick. The peculiar situation and construction of Court III may be sufficient evidence of its possessing unusual qualities in connection with the temple ritual. In such event, Room 17 would naturally assume some of this same importance—a theory strengthened by the presence of the high niche opposite the doorway from Court III.

The blocks used in paving are of limestone. Their variation is so great that no "standard" size can be assigned to them. It is perhaps no exaggeration to state that the majority are or tend to be square, a common size measuring 80 cm. on each side. Rectangular blocks permitting the joint lines to remain unchanged augment the square ones (Pl. 27 B). Thickness averages about 35 cm., and the lower surface usually has a smaller area than the upper face. Such blocks are therefore truncated pyramids upside down—a form whereby close-fitting surface joints can be effected without the necessity of carefully dressed and trued vertical sides. The blocks are laid directly upon tamped earth fill, sometimes leveled with sand.

Brick paving within rooms presents no difference in outward appearance from that of open courts and terraces. It consists of but a single course of baked brick as contrasted to the two courses of the latter. No mortar is employed in the joints, which parallel the walls as far as is possible, and the bricks are laid on the tamped earth either directly or with a fine layer of sand between to take up the unevenness in the brick thicknesses. While the larger "standard"-sized bricks almost universally form the surface of court and terrace pavements, the smaller "standard" size is most commonly employed for interior floors (Pl. 20 B). Exceptions to this principle, however, are far more frequent in rooms than in the open areas. Half-bricks are often employed, not only as dictated by space requirements, but sometimes as borders, when they were laid in pairs with their long joints alternating in direction (Pl. 18 E-F). In bathrooms bitumen is used not only in the brick joints but as a covering to the brick surface as well (Pl. 33 A-B). Here, as in areas subjected to rain, drainage becomes necessary, the drain outlets being of pierced stone slabs.

Deposit boxes similar to those found in courts appear to have been built under floors of rooms of minor as well as of major importance. In Plate 33 C are shown those in one of the smaller bedrooms of Residence K from which the brick floor was removed in antiquity. They are placed on either

side of the doorway leading to the bathroom private to this sleeping chamber. They may in such instances have served as receptacles for personal objects, their covers being removable at will so that they become places of convenience rather than of hiding.

It is possible that brick and stone were sometimes employed together. From the common use of stone thresholds and of stone inner thresholds adjoining them in conjunction with brick floors (see Pl. 20 A-D) we know that such a combination of material is at least not beyond reason. The bathroom cited above (Pl. 33 A-B) is a definite example of the use of these two materials, but the stones therein employed may more properly be classed as "fixtures" than as true paving blocks. The king's throneroom might be an instance of stone and brick used together.⁵⁸ Place states that Court XXVII in the "harem" (temple area) had diagonal stone walks set into the brick pavement, but recent excavations prove this to be untrue. As the author has already suggested,⁵⁹ these walks may exist in some other court and erroneously have been attributed to Court XXVII.

THRESHOLDS, properly speaking, are always of limestone or alabaster. In some portals, usually where there are no existing traces of pivot stones and where therefore in antiquity there were probably no doors, the paving is merely the continuation of the floor of one room into the adjacent one and accordingly may be of limestone, as between anteroom and cella of the Sin temple,⁶⁰ or of baked brick (Pl. 34 D). Such instances are comparatively rare, however, most portals being provided with thresholds which are distinct from the room paving on either side.

Thresholds of limestone are but infrequently used and have been found only in relatively unimportant doorways. They consist of several blocks (Pl. 15 E), never of a single piece as are those of alabaster—a fact which may signify that the harder limestone, superior for this very quality, was not or could not be quarried in blocks sufficiently large to fill the doorway areas, and that the softer alabaster was accordingly employed in order to avoid joints. Certainly no limestone blocks or slabs of a magnitude adequate for the larger thresholds have ever been found throughout the excavations.

Alabaster thresholds may be considered typical or standard, so great is their preponderance. The single slab, entirely covering the area between the doorjamb, is usually raised from 10 to 20 cm. above room floor level. Its surface, however, is often flush with the floor. Both positions are illustrated in the single room shown in Plate 27 C. The surface may be plain or, more rarely, incised with an inscription or a purely decorative motive or with a combination of the two. A thin layer of sand usually separates the slab from mud brick or tamped earth below.

Usually within the actual room area and immediately adjacent to the threshold are three slabs of limestone or alabaster set flush with the floor. Functionally they belong to the portal; the three together, for want of a better term, may be called the inner threshold (see Pl. 20 B). Of varying width, depending upon the scale of the portal and the room, these inner thresholds always extend in length beyond the portal opening a distance sufficient to include the pivot stones which support the door leaves. The two end slabs therefore have circular cuts through which the pivots extend, the cuts

⁵⁷ *Ibid.* pp. 56 f.

⁵⁸ *Khorsabad* I 60-62.

⁵⁹ *Ibid.* p. 88.

⁶⁰ *Ibid.* Fig. 119.

almost invariably being edged with a raised molding of double or triple bands which continues along the entire wall edge of the slab. The center slab usually is undecorated but contains slots, rectangular in section, into which slide the

vertical bolts whereby the door leaves are fastened in closed position. While primarily functional, these inner thresholds are nevertheless decorative in their emphasis of the portal architecture.

ROOFS

"With great beams of cedars I roofed them"⁶¹ and "beams of cedar and cypress I placed over them."⁶² Thus Sargon described the roofing of his palaces. With his statements our archeological evidence is in accord. While no beams of cypress have been analyzed as such, cedar beams are known to have been used, and it may be only chance that those of cypress have not survived in a state adequate for analysis. They may very possibly exist in the form of imprints remaining in the debris of the fallen superstructure (cf. p. 16).

The 19th century archeologists and explorers debated at considerable length whether the roofs of Assyrian buildings were of or supported by wood or consisted of vaults of baked or of mud bricks. The majority favored the vault theory. Layard, who found actual beams of cedar at Nimrud,⁶³ believed in flat roofs, probably supported by pillars, and in the existence of second stories,⁶⁴ in which theory he was upheld by Fergusson, whose restorations of Assyrian palaces present such astonishing edifices. Botta too believed in flat wooden roofs, while Flandin, who worked with him at Khorsabad, held the other view.⁶⁵ Place, also Thomas, who we may assume agreed with him, considered mud-brick vaults to have roofed Sargon's palace,⁶⁶ and Loftus, in writing of Nineveh palaces collectively, states that the thickness of their walls is due to the fact that the rooms were vaulted.⁶⁷

Since we are here concerned with the roofs of Dur Sharrukin, we need consider only the evidence found upon that site and the theories derived therefrom by those who participated in its excavation. But before proceeding to substantiate or refute the arguments of those who first investigated the site it is well to present our new evidence, which we believe proves Sargon's words.

Within the debris of the site wood is by no means rare. Whether intact, oxidized by age, burned to charcoal, or merely indicated by imprints left in the earth by beams or planks long since decayed, wood is to some extent found in nearly every room excavated. In one instance (Pl. 25 A-B) two beam impressions are found in such a position as to suggest a perpendicular beam arrangement. These, along with actual examples of wood found in the same room, all measure 35 cm. in thickness. Their width unfortunately cannot be determined. The fact that they are never found in quantities sufficient to comprise all the beams supporting the roof is by no means a negative argument, for wood is among the most perishable materials used in the construction of Dur Sharrukin and has therefore largely disappeared through decay, and it is also of great value in a country without forests. When Sargon's city was abandoned as a capital and began to fall

⁶¹ Luckenbill, *Ancient Records of Assyria and Babylonia* II, § 73; see also §§ 84, 93, 97, 100, 102.

⁶² *Ibid.* § 105; see also §§ 110, 112, 121.

⁶³ Layard, *Discoveries in the Ruins of Nineveh and Babylon* (London, 1853) p. 357.

⁶⁴ *Ibid.* pp. 647-51. ⁶⁵ Botta, *Monument de Ninive* V 65-71.

⁶⁶ Place, *Ninive et l'Assyrie* I 248-69.

⁶⁷ W. K. Loftus, *Travels and Researches in Chaldea and Susiana* (London, 1857) p. 182.

into decay, wood was undoubtedly among the greatest prizes sought by those who helped themselves to what they could find. Or, with beams brought from such distances as was necessary in this case, it is more than possible that some or many of them were removed from Dur Sharrukin and re-used in the building of Sennacherib's palace at Nineveh.

From some of the fragments found among the debris we learn that wood was cut sufficiently large in cross-section to span the widest rooms of the major buildings. In the main sanctuary of the Nabu temple are found impressions and fragments of four beams or planks, fallen in such a way, however, that they give no clue to their original position in relation to one another (Pl. 26 A). That they were parts of the superstructure is evident from their position when found, with nearly a meter of debris between them and the floor. While we can assign them no definite place in the roofing scheme, they are most useful in establishing sectional dimensions to which wood was cut, thereby giving assurance that long spans were structurally possible. Beams with a width of 88 cm.—the maximum here found—and an estimated thickness of 15-20 cm. are capable of supporting a roof across any span encountered in any room.

In the throneroom, perhaps as wide as any, if not the widest, room in Sargon's palace, decorated plaster in juxtaposition with wood offers direct evidence of a flat-beamed ceiling. Here a fragment of wood covered with plaster on two adjacent perpendicular sides, the plaster painted with an ornamental design, must assuredly be part of a beam fallen from above.⁶⁸

Furthermore, in the excavation of Gate 7 in the northwest town wall, wood, matting, and mud plaster were found so interrelated as to establish beyond doubt the type of roof which once covered the gate chamber, even to the extent of disclosing the beam spacing. Wooden beams spaced about 26 cm. apart supported alternate layers of matting and mud plaster, the lowest sheet of matting resting directly upon the wood. Beams and matting alike were painted red.⁶⁹

Stone rollers (Pl. 33 E) similar in all respects to those used today to keep in condition the flat, beam-supported mud roofs surely suggest that similar modern implements are a carry-over from ancient custom. Roof-rolling closes the cracks which desiccation after a hard rain causes to appear in any mud roof. By this method of packing the porosity of the mud is lessened and its water-shedding properties increased. Any flat roof, whether supported by beams or by vaults, may be improved in this manner. But the necessity for such upkeep is far greater in a roof of light, comparatively thin make-up than in one massively constructed as a requirement for stability, wherein volume of material itself acts as a preventive of cracks. The frequency with which the lighter type must be rolled is therefore far greater than in the case of the heavier roofs, and the demand for rollers would vary accordingly. A large building with flat, beam-supported roofs would require several rollers to be employed simultaneously after

⁶⁸ *Khorsabad* I 68. ⁶⁹ *Ibid.* pp. 9 f.

every heavy rain at the proper moment when the mud was neither too soft nor too dry, while fewer rollers would suffice to care for an extensive vault-supported roof which could be rolled section by section as the necessity arose. The large number of rollers found throughout the excavations therefore substantiates the direct evidence for beam-supported roofs.

Evidence for vaults is negative and may be dismissed in a few words. No indication of vaulting is found except in some of the larger portals. A curved section of mud brick with plastered surface encountered in the main cella of the Nabu temple caused some consternation on the part of a workman, who at once suggested it might be a ceiling vault. Upon further excavation, however, it proved to be nothing but a portion of the wall of the room, fallen at this point partially intact in such a manner. Wall thicknesses do not vary strictly in accordance with room width and therefore cannot have been planned as supports for vaults. This fact, as it pertains to bearing properties, has already been discussed (p. 19). The amount of debris which fills and covers the remaining buildings cannot supply an argument for vaults, for it is no greater than can be accounted for by the collapse of the walls, which recent evidence proves to have been higher than was formerly considered to be the case (see p. 20).

The evidence and conclusions therefrom of those who carried on the early excavations at Dur Sharrukin need be reviewed but briefly, for many of their arguments have already been answered by our recent discoveries. Botta and Flandin do not agree, the former believing in wood-supported roofs while the latter proposes a theory of baked-brick vaults.⁷⁰ Botta bases his views chiefly on two facts, one positive and the other negative. Within the section of the palace which he excavated were quantities of charcoal and wood, and the wall slabs had been damaged by fire. On the open terrace there was no charcoal, nor had the reliefs been burned. Only a wooden roof, he maintains, could have supplied combustible material sufficient to cause such a conflagration. Negatively he argues that the thickness of the walls was inadequate to support the weight and thrust of vaulted roofs. Flandin on the other hand considers the stability of the walls sufficient to carry vaults, which he believes to have been

constructed of the baked bricks which were found fallen within the rooms. Botta refutes this theory with the statement that, had the roofs been of baked bricks, more of them would have been found among the debris, and that those actually recovered were near the walls and doorways and therefore no more than bricks used for embellishment—a fact later proved correct by Place in his discovery of Gate 3.

Place and Thomas build up a third theory—that roofs were supported by vaults of mud bricks.⁷¹ They refute the theories of Botta and Flandin and proceed to establish a roofing system of mud-brick vaults on the strength of the vault of this material found intact at Gate 3 and of what they believe to have been portions of vaults so fallen within the debris of rooms that their original forms were retained. They go so far as to assume the use of domes over certain square rooms, their reason for this being no more than the representation upon a Kuyunjik relief of a domed building which is not necessarily Assyrian.⁷²

The vault of Gate 3 is not to be questioned. From it we know that gate, and probably other, portals were vaulted in this manner and that the architects of the period were capable of constructing true vaults of mud brick over spans of at least the width of this portal. It furnishes no proof that rooms were similarly spanned, though we must admit it to be a natural inference on Place's part, especially in view of his belief that he had found vault fragments in the debris of rooms. Such fragments probably were no more than walls which in falling had become curved in section (cf. above). The domes Place acknowledges to be conjectural. They exemplify, nevertheless, a deplorable tendency on the part of many who would restore ancient buildings to make too free a use of the scenes depicted upon the reliefs. Foreign as well as indigenous architecture is often represented thereon, and great caution must be exercised lest confusion result in error rather than truth.

After considering all past and present evidence we can, after a span of more than 2,600 years, do no better than repeat, with only a change of pronoun, Sargon's own words concerning the buildings of Dur Sharrukin, ". . . with great beams of cedars and cypress *he* roofed them."

PORTALS AND DOORS

PORTALS, on the basis of form, may be divided roughly into two classes, those spanned with vaults and those having lintels. On the relative distribution of these two types we can merely speculate, for seldom are the walls standing to a height sufficient to preserve the complete portal. Place found standing and intact the vault of Town Gate 3, and in Town Gate 7 and Citadel Gate *A* we have found portals standing high enough to disclose the spring line and some of the voussoirs of their vaults. In no palace, temple, or residence have vaults or traces of them been found, but from the known examples in gates and from the buildings pictured on reliefs we believe that large, important portals, at least, were once vaulted. Masses of fallen glazed brick usually found in the debris of these portals and not elsewhere cannot but suggest archivolts such as Place found at Gate 3. While, in the temples particularly, walls sometimes stand to a height greater than those of Gates 7 and *A* without disclosing a trace of vault-springing in the portals, we are inclined to reason that

these broad nondefensive portals have higher openings to permit of freer passage of light and air. Direct proof of their original vaulting is forever lost among the debris.

Of portals spanned with lintels there is positive evidence in both gate and residence. In Citadel Gate *A* the portals leading into the two side chambers both stand intact with low wooden lintels still in place. The painted wall decoration of the great hall of Residence *K* clearly shows that the portals between this large room and Rooms 13 and 14 were spanned horizontally (see Pl. 88), presumably, from the analogies in Gate *A*, with wood. With only these four examples of known lintel spans it is impossible to formulate a rule as to the extent of the use of this construction. The portals of Gate *A* are definitely unimportant and small, yet those in Residence *K* are broader than the majority in this building, and certainly no portal in the great hall of one of the more magnificent residences can be called insignificant.

We can only conclude that the reason governing the use of

⁷⁰ Botta, *loc. cit.*

⁷¹ Place, *loc. cit.* ⁷² Layard, *Monuments of Nineveh*, 2d ser., Pl. 17.

vaults or lintels in portals was aesthetic rather than practical, that the vault was considered the more elegant form and was therefore generally employed in monumental portals giving entry to important rooms and in those providing major circulation. The majority would accordingly be of wooden lintel construction.

Thresholds, as noted in the foregoing discussion of paving, cover the entire portal area, are usually of a single piece of alabaster, and are in most cases raised above the level of the adjacent floors.

The decorative treatment of portals appears generally to be a reflection of the material and motive employed in the decoration of the wall which the portal penetrates. Thus, if reliefs line the walls of a court or room, the portals have jambs faced with reliefs; and, if room or court has plastered walls painted black and white or in color, so have the portals plastered jambs painted as are the surroundings. A notable exception is found in the "master suite" of Sinahusur's residence, wherein the principal rooms are lined with orthostats while the portals connecting them are plastered with mud.

When court walls are adorned with buttresses, niches, and reeds, the vertical emphasis of their motives is carried into the larger portals, the court angles of which are rabbeted with single or double setbacks of a size similar to those of the niches. The rabbeting never extends to the floor, but ends abruptly at varying heights, sometimes perhaps at the base of the niche-and-reed motive, but often at an apparently arbitrary point.

From Place's findings at Gate 3 we assume that the glazed bricks sometimes found within the debris of portals originally formed archivolts, decorative panels inserted above the voussoirs and following the curve of the arch. Of other applied or inset decorations there is no evidence.

Dimensions in plan are as variable as are wall thicknesses, which of course do determine the depth. In width portals may vary from 0.90 m., the narrowest encountered during the excavations, to 3.60 in the main doorway of Sargon's throne-room. No "standard" width can be determined, but frequency of recurrence establishes "common" widths of 1.20, 1.80-2.00, and 3.00-3.50. Heights must remain conjectural with the exception of the few examples already noted as complete or subject to certain restoration. The small portals in Citadel Gate *A* have widths of 1.25 and 1.50, with lintels spanning the openings 2.45 above the thresholds. Such proportions cannot be accepted as a rule, for in a great many cases portals of greater width remain to a far greater relative height without sign of lintel or arch. Completion of the arch in the central portal of Gate *A* from its known spring line 4.30 above the floor results in a vault of 6.40 greatest height. If we assume a higher spring line of 4.70 to account for the downward slope of the floor, the relief-lined outer portal of this same gate has in restoration a maximum height of 7.00, the same absolute height therefore as the central portal and almost an exact replica of the intact portal of Town Gate 3. Again proportion must be avoided in restoration, for portals of widths approximately equal to those in the citadel gate stand today in the temples with vertical jambs intact to heights of 5 and 6 meters. As in the question of vault or lintel construction, aesthetic choice rather than practical reasons appears to govern portal widths; for, although principal passages which one naturally expects and actually finds to be broad are among the largest, there is no accounting for

the unexpectedly large portals in small rooms and for what must have been cramped passages where from the plan considerable circulation is manifest.

Although comprising but a small minority of the portals throughout the many buildings, the recessed doorway is sufficiently widespread to constitute a definite type. It is at once practical, in eliminating the opened door leaf from the room, and ornamental, in accentuating a relatively small portal. The portal proper is centered within a recess or niche of a depth equal to or greater than the width of the door leaf. The recess is sufficiently wide so that the door leaves, which revolve about pivots in the corners of the niches, rest in open position against the sides of the niche, thereby causing no interference to circulation and occupying no room area. The true portal therefore has a depth of but a fraction, half or greater, of the wall thickness. This type of portal is largely confined to those quarters of the two palaces wherein centered the private and court life, and to the side entrances to the great halls of the large residences, though it is occasionally to be found for no apparent reason in isolated examples throughout palace and residence.

Doors themselves have not survived the ravages of pilferage or of time; yet from recent evidence we cannot doubt Sargon's own words: "Door-leaves of cypress and mulberry I covered with a sheathing of shining bronze and hung them in their entrances."⁷³

That doors were usually of two leaves but sometimes consisted of only one is amply attested by the pivot stones upon which they rested and swung. Such stones are generally of basalt and are found directly under the circular cuts of the inner threshold through which the pivots extend. When the door is of a single leaf the portal is so placed near the corner of the room, as in Rooms 27-29 of Palace *F*, that the door in open position stands against the wall. Generally, however, there are two leaves, their pivots resting on stones at either side of the portal. Plate 24 *A-B* illustrates a small portal of this type in which remains of the actual wooden pivot exist to the present day. The lower extremities of the pivots are incased in metal to facilitate swinging and to protect the wood. Place illustrates such a cap of copper from the temple area ("harem").⁷⁴ Several examples have been found in the course of our recent excavations. They are all of iron, saucer-shaped at the bottom, with three projecting prongs whereby the casing can be nailed to the pivot (e.g. Pl. 37 *E*).

Whether the door leaves were of cypress, mulberry, boxwood, or maple, the four materials mentioned in the inscriptions,⁷⁵ we cannot say, for their traces are so fragmentary as to preclude analysis. That imprints of wood left upon the debris are remains of what were once door leaves we are reasonably certain. In the main doorway between the central court and the cella anteroom of the Nabu temple was encountered the imprint of wood, the vertical grain being clearly discernible (Pl. 22 *B*). Long, bent bronze nails were in place. Within the exact plane of the door when closed, this ancient wood very probably is that of a door leaf which stood in closed position when the debris incased it. Similar unmistakable evidence of wood appears in another room of the same temple (Pl. 23 *C-D*). Here the wood, also with bronze nails in place, was found in an inclined plane, in a posi-

⁷³ Luckenbill, *op. cit.* II, § 84.

⁷⁴ Place, *op. cit.* III, Pl. 70, No. 6.

⁷⁵ Luckenbill, *op. cit.* II, §§ 73, 84, 93, 97, 100, 102, 105, 110.

tion surely suggestive of its having once been a door of the portal near which it fell.

The "sheathing of shining bronze" no doubt is exemplified in the many embossed bronze plaques or bands found among the debris. Plate 20 *E* shows some fragmentary remains actually lying upon the threshold between forecourt and Room 13 of the Nabu temple. A more complete specimen, found near the door but upon the floor of this room, is seen in Plate 21 *A*. That such plaques were sometimes of silver is suggested by contemporary correspondence (see p. 16, n. 18).

How the doors were hung on pivots resting and swinging upon stone sockets has already been mentioned. No upper support for a pivot has come to light, though a restoration by Andrae⁷⁶ suggests that stone rings such as are set into the pavement at either side of certain doorways may have been inserted in the wall to receive the upper end of the pivot. Since a more certain purpose of these rings has now been established, and since their diameter is far too small to receive a pivot of the size indicated by the iron caps and the single fragment found intact, we disagree with this theory. In the absence of any preserved examples we are more inclined to assume an upper fixture of some perishable material. Wood is today used in the modern carry-over of this ancient method of hanging doors and is therefore most likely to have been the material employed as such in the time of Sargon.

Two methods are known whereby the doors were "locked" or fastened shut, and it is probable that at least a third one was employed. In many of the inner thresholds are slots obviously cut to receive vertical bolts. One and two seem to be most commonly used. In the former case one leaf of the door must have been flanged in order that a single bolt fastened to this leaf might secure the other leaf as well. Larger doors usually make use of two bolts, one apparently for each leaf. An unusual example of three slots and therefore probably three bolts occurs in the main entrance to the central court of the Nabu temple (Pl. 20 *C*).

FENESTRATION

Whatever system of fenestration the Sargonid architects may have employed receives no direct elucidation from the excavation of their buildings. Yet the necessity and therefore the probability of some means whereby light could enter the many rooms with no direct opening on exterior or court is glaringly apparent. That certain dark and remote rooms—the counterpart of the modern *sirdab*—were desirable as places of retreat from the summer heat is admissible, but it seems highly improbable that the Assyrians were forced or content to grope their way about a large part of the interior of their dwellings in semi- or total darkness. Rooms with direct openings on courts were no doubt usually adequately lighted from the doorways, but in inclement weather, when doors must be closed against rain, even these would have become dark and gloomy. What, then, of those chambers once, twice, or farther removed from court exposure, or reached only by circuitous routes through rooms and passageways themselves without illumination? A glance at any of the residence plans shows that these were many and often of relative importance. Surely some manner of lighting was provided.

⁷⁶ Walter Andrae, *Der Anu-Adad-Tempel in Assur* (Leipzig, 1909) Fig. 40.

A second method of securing doors is by a prop placed obliquely against the inner face of the door and secured at the other end by a grooved stone socket set within the pavement of the room. The prop apparently is an auxiliary to the bolt, for evidence for it is found in conjunction with bolt slots. Its use at Gate 7 in the town wall⁷⁷ intimates that its primary purpose lies in giving additional defensive security. At the single entrance to the Nabu temple and in the great hall of Residence *K* (Pl. 30 *D*) it is used perhaps merely as a means of securing as high up as possible the unusually high doors, which, if fastened only at the bottom, would shake and rattle in the strong winds sweeping down from the mountains.

Since most of the smaller portals give no evidence of bolt slots or prop sockets we must assume that some other means of security was employed. The most probable is at once suggested by the modern doors of Khorsabad, which are fastened shut by loose horizontal wooden bars dropped into L-shaped wooden hooks set into the door leaves or by horizontal wooden bolts fixed upon one door leaf and sliding into a slot upon the other. Either of these methods might have been used without leaving any trace.

Supplementing doors not as a means of security but as protection from the sun were probably awnings. While naturally no direct trace of these perishable appurtenances remains, we nevertheless suggest them as the *raison d'être* of the stone rings set into the pavement at either side of certain portals and alcoves (see p. 13). That sockets cut into the pavement of the central court (VIII) of Sargon's palace may have served as receiving supports for awnings has already been considered.⁷⁸ That these stone rings (see e.g. Pl. 30 *E*) either held rods to which awnings were lashed or were merely fasteners for the securing lines now seems highly probable. They are never found within rooms or on the exterior of buildings, but only in courts, usually the central courts around which are the private living quarters where protection from the sun is most desirable.

In the investigation of the palace temples deep, narrow niches were encountered in the corridor-like chamber which partially surrounds the cella of the Shamash temple. That they may in some manner have been a part of the fenestration, with light being admitted from high up in the wall or from the roof, was considered a possibility at the time.⁷⁹ Were they purely decorative they would not possess such depth and would have finished backs such as are found in the niches in courts. Similar niches have since been found in *H* 28, the long, narrow, L-shaped room serving the corresponding function in the Nabu temple. Again they are incomplete and tell nothing of their purpose. Here, however, they appear on both walls, one opposite another, so that even with roof heights arranged for clerestory lighting some of them penetrate interior walls and therefore could receive light only from directly above. Although formerly accepting such a scheme as a possibility, the author no longer considers it practical and discards the theory that these niches have any connection with the fenestration. Found, as they are, only in definitely corresponding rooms of temples, their significance probably lies in religious dogma or ritual rather than

⁷⁷ *Khorsabad* I 10.

⁷⁸ *Ibid.* pp. 39 f.

⁷⁹ *Ibid.* pp. 126 f.

in architectural motivation. Our only possible "windows" therefore disappear as evidence, and as we cannot accept Place's theory of terra-cotta cylinders within vaulted roofs as means of lighting and ventilation⁸⁰ we must resort to speculation on the form of lighting employed.

Windows as commonly used today for vision as well as lighting cannot be considered. Regardless of their form they were certainly placed high up in the walls, as is borne out in our only two sources of suggestion. Excavation proves that they do not exist in the lower parts of walls, while in reliefs the only forms which imagination can possibly call windows appear but infrequently and much nearer the roofs than the ground level. These graphic representations, however, may be of foreign cities and buildings and cannot unreservedly be applied to our argument. They are also conventionalized and therefore cannot be taken literally; but, as they were intended to suggest to the contemporary onlooker forms already familiar to him, so may we be permitted to receive suggestions but not facts therefrom.

We have already expressed our belief that roofs vary in height according to the distribution of heavy and light walls (p. 19). We may carry this discussion further by calling attention to the fact that the areas of heavy walls contain the majority of rooms remote from outside or court communica-

tion. The rooms having the greatest need for fenestration therefore have the greatest facilities for windows as they were known to the Assyrians. Rising above the roofs of the rooms comprising the forecourt and service areas, rooms possibly receiving air and light through their doorways only, the walls of the inner chambers might readily have been pierced with lighting apertures unobstructed by the surrounding construction. The use of a clerestory is actually suggested by wall thickness as a means of lighting the cella and sanctuary of the Nabu temple (Rooms 21 and 22) and the innermost chamber (Room L.38) of Sinahusur's private suite.

Of the form of window favored by the Assyrians of this time we can but hazard an opinion. An elaborate arrangement of a series of openings and small pillars, as suggested by Fergusson and Layard,⁸¹ appears somewhat too farfetched. While admitting the absence of archeological evidence, they seem to have been led to incorrect conclusions by misinterpretation of a relief. In the absence of direct evidence we are inclined to the belief that windows were comparatively few and were rectangular or arched. Whatever decoration may have been applied to them was probably simple, no more than rabbeted molding in keeping with the niches and reeds which form the basic element of the exterior wall decoration at Dur Sharrukin.

STAIRS AND RAMPS

Without upper stories, the buildings of Dur Sharrukin demanded little in the line of means of ascent or descent. As in most of the modern houses in the Mosul district, access to the roof was the major requirement. Stairs and ramps therefore were little used, and in this fact no doubt lies the explanation for their poor structural development. Except when inclosed in stair wells, the stairs by which the roof is reached are so awkwardly placed that one cannot refrain from feeling that not until construction was well under way did the architect consider the problem of stairs, which at such a point must be fitted into odd spaces as best they could. The results are not happy, as later discussion will show.

The principal ascent to the roof has a very definite place in the dwelling plan (see p. 11). Opening off the alcove of the great hall, it occupies a rectangular space with central pier of mud brick around which the slope winds to the roof. Unfortunately no trace of the surface of the slope remains to tell us whether the ascent was made by stairs or by ramp.⁸² The sloped fill or foundation, however, has in two instances survived and indicates that the ascent begins directly opposite the doorway and winds counterclockwise about the central pier. At or beyond the second turn the sloping surface apparently becomes supported by vaults or beams, for the space beneath is here utilized as a small chamber. While in no sense "monumental" according to architectural parlance, the winding ascending passage is by no means of niggardly dimensions. Its form rather than its size removes it from the monumental class, for in the larger residences its width averages more than 2.50 m., while nowhere has an example less than 2.00 in width been found. It is to be hoped that some sort of illumination was provided to assist the Assyrian nobleman in leading his guests to seek the cooler evening breezes on the roof.

⁸⁰ Place, *op. cit.* I 54 f.

In the palaces an identical form of staircase exists. At *F* the arrangement of throneroom, alcove, and stair well is the exact counterpart of the residence reception suite. While Place fails to record such an arrangement in Sargon's palace, we are convinced that it exists in connection with the throneroom. In Plate 76, reproduced from Place, we find in his representation of Rooms 22-24 opening off the throneroom (Court VII) a group in general scheme not unlike the alcove and stair well of Palace *F* and the residences. Our recent examination of the throneroom disclosed a fragment of one of the bulls lining the portal to this group. The fragment, found in position, clearly indicated that the portal was not placed as recorded by Place. It is much nearer the north corner of the throneroom than Place has it, and the portal was accordingly reconstructed by us on the basis of another doorway of the same room.⁸³ In view of our more comprehensive evidence subsequently obtained from buildings other than the king's palace, we now consider our early restoration of this portal erroneous. We are therefore now inclined to restore the missing bull to a position at the same distance from the west corner as that of the existing one from the north corner. The resulting portal thereby becomes centered upon the long axis of the throneroom and is the exact counterpart of the broad opening between great hall and alcove in the several residences (see Pl. 86). Place's Room 24 therefore becomes our alcove, with his small doorway leading into Room 23 corresponding in position to the doorway to our stair well. The curious projection near the middle of the southwest wall of his Room 23 is probably part of our stair-well pier which he failed to record properly as jutting out into his Room 22.

⁸¹ Layard, *Discoveries in the Ruins of Nineveh and Babylon* (London, 1853) pp. 647 f.

⁸² Such a slope, paved with lime plaster, was found at Kuyunjik by Layard and is described by him *ibid.* pp. 460-62.

⁸³ *Khorsabad* I 64 f. and Fig. 71.

Place's account of these rooms⁸⁴ further confirms our theory. There are no orthostats lining the walls of this suite—a feature unique in this section of the palace but entirely reasonable in a dark stairway. And the objects he found on the floor in Room 22 are perfect indications that this small room was a storage chamber under the stairs. The terra-cotta cylinders which Place considers to have been sections of the lining of lighting and ventilating apertures in the vaulted roof are certainly nothing but jar standards such as were used throughout all Mesopotamia. They are totally unlike the roof drainage tiles found in Residence *K*, which, fitting together as they do while Place's do not, would much better serve such a purpose as Place invents. The manner in which these cylinders were broken or the reason why many were unbroken is surely better explained if we interpret them as jar standards resting upon the floor rather than as part of the roof construction fallen from above. It is this very room in which Place also found a collection of glass and other objects partially preserved from destruction by virtue of their having been covered with sand. Vessels of glass and terra cotta, sand, and jar standards, all deliberately placed upon the floor, form ideal evidence of a storage room, while the comparatively unbroken state in which these objects were found is some indication that their burial was somewhat less violent than was usual—a condition possibly satisfied by the fact that a room placed under a stairway has a ceiling perhaps little more than head high as contrasted to the extremely high ceilings which exist elsewhere. The debris, falling from no great height, would cause comparatively little damage and furthermore would serve as protection against the force of the final collapse of the massive walls.

Place's plan supplies us with additional evidence in support of our belief that a stair well exists in connection with Sargon's throneroom. The break in the line of the wall face of Court VIII at a point directly opposite the back of Place's Room 24 is duplicated in the forecourts of Residences *K*, *L*, and *Z*. This surely is more than a coincidence. The break was no doubt intended to gain additional space for the stair well or to strengthen the walls thereof.

In the Nabu temple the same type of winding ramp or stairway supplies the chief access to the roof. Here, where throneroom or great hall and their alcoves are nonexistent, the stair well is a complete unit in itself, opening directly from the forecourt. It is entered from the extreme north corner of the court, the ascending passage commencing directly opposite the doorway and continuing upward in the usual counterclockwise manner. The storeroom is to the left upon entering and extends around a right angle to a point determined by the requirements of headroom.

When we consider the "back stairs," or more properly speaking the secondary ones, leading to the roof, we must treat them individually, for they conform to no standard and, as previously stated, suggest afterthoughts rather than deliberately planned elements of the buildings. They are likewise inconsistent in failing to appear in all buildings. In Residences *K* and *L* they begin their ascent in corresponding corners of the central courts, yet in each of the remaining three residences they are absent not only from the central court but from the entire building. Of their presence in the palaces we can say nothing, for our investigation of *F* was too limited, while Place fails to mention any in the king's palace.

⁸⁴ Place, *op. cit.* I 53–56.

It is more than probable that they do exist, for the demand for such in a private residence would surely extend to a royal abode. In the Nabu temple we find a stairway—a very minor one—rising from the corner of a room of no importance.

In Residence *K* the secondary stairway is reached through a small inclosed vestibule extending into the north corner of the central court (see Pl. 71). Beyond this (Room 15) an inclined surface, stripped of its original paving, rises in a passageway through the thickness of the court wall. Reaching at this point what probably was originally intended to be part of Room 16, it turns at a right angle and continues upward to the left, its foundation occupying more than half the area of Room 16, from which it is separated by a thin curtain wall. Through the thickness of the court wall its width is 1.40 m., while the higher section has a width of 2.20. While giving every indication of having been a late incorporation into the original plan of the building, it nevertheless occupies a relatively important part in the private life going on therein. For it opens from the court about which centered the family life, and its walls are painted with an elaborate design in which can be recognized the fig tree and bird of the glazed brick tableaux of the temple courts.

Filling the corresponding corner of the central court of Residence *L* is the secondary stairway serving Sinahusur (see Pl. 72). Unlike the inclosed one of Residence *K*, this is partially open to the elements. Ten treads of alabaster 2.40 m. wide lead from the brick pavement of the court to an alabaster "threshold" set into the court wall 1.60 above the floor (Pl. 37 *C*). Beyond this the slope continues upward by ramp or stairs, the surface of which was removed in antiquity. While this slope reaches present ground level short of Room 88 and therefore gives no positive evidence of the fact, we believe nevertheless that it originally extended upward over this chamber. Although more direct and frank than its equivalent in Residence *K*, this stairway also gives the impression of being a late addition or something ill conceived by the architect. Its construction alone, while showing some attempt at finish, cannot be considered very elegant (see Pl. 37 *A–C*). Just as in Residence *K* Room 16 was partially utilized as space for the stairway, so in Residence *L* a small room originally opening from the central court may have been taken over completely for this purpose, the only necessary alteration in Room *L* 88 being a lowering of the ceiling.

A third stairway in the Sinahusur complex of buildings is a smaller version of the usual stair-well type of approach to the roof. Situated at the west corner of Court *L* 76, it opens not directly from the court but from a small vestibule (*L* 74). With an ascending passageway 1.30 m. in width it no doubt led to the roof covering this remote section of the dwelling, a section considerably removed in access from the main elements of the residence and therefore perhaps set aside as the abode or "offices" of those forming the retinue of the grand vizier.

The least prepossessing stairway of all is found in Room 45 of the Nabu temple and is truly a "back stairway" (see Pl. 79). With treads 1 meter wide of baked brick set and covered with bitumen it rises parallel to and exposed along the northwest wall of this room (Pl. 28 *B*). There is no proper approach; to ascend, one must step upon the lowest tread from the side rather than the front. A stairway so placed and of such construction surely can have been no more than service stairs, supplying, in all probability, the means of

reaching the high roofs over the main cellas and sanctuaries of the temple.

Serving an entirely different purpose, the stairs whereby the raised sanctuaries or the platforms within shrines are reached are more properly classed as steps. Though functionally identical they present great variation in size and construction, from a simple single-tread step of baked brick (Pl. 19 *E*) to the six-tread inscribed alabaster approach to the sanctuary of the Nabu temple (Pl. 25 *C*). Of excellent architectural conception and execution, these steps in the major temple cellas⁸⁵ and in the small cella of the Nabu temple (Pl. 26 *E*) with their flanking podium-like platforms may truly be called monumental. It is strange that an architect capable of such achievement resorted to such an incongruity as the crudely built steps of unequal risers forming a part of the baked-brick platform shown in Plate 18 *C*. The shrine (Room 14) directly opposite the entrance to the Nabu temple must have enjoyed considerable importance, for its doorway is flanked on the court side with statues, its floor is of stone, and a large decorative niche is set into the wall directly opposite the entrance. Yet with all these elements of grandeur the platform, which in turn supports a second platform or altar, is reached by means of such obviously ill planned steps. The care with which the steps of the Adad temple were planned in relation to both platform and portal⁸⁶ only emphasizes the surprising crudity displayed in working out the steps of this Nabu temple shrine. Room 12, perhaps another shrine or possibly a meeting-room with dais for the speaker, opening off the same court of the Nabu temple, displays somewhat similar though not such glaring carelessness of plan. Two narrow side flights of steps of equal width allow a central projection of the platform on the long axis of the room (Pl. 18 *D-E*). But the niche set into the wall backing the platform is considerably to one side and therefore is centered on neither step arrangement nor room. A possible explanation for the strange position of the niche may lie in a desire of the architect to lessen as little as possible the bearing strength of the external corner immediately behind. With such a variety of steps serving sanctuaries or shrine platforms, any generalization of these elements must be very broad. They may be of baked brick or of alabaster, the latter plain or with incised inscriptions, and they may form a single central flight or two side flights separated by a forward projection of the platform.

Stairs of a third class may be distinguished which in reality are no more than stepped thresholds employed when the floor levels of connecting rooms require some means of ascent or descent. But two instances of these have been found, both in the Nabu temple. For some reason which we do not attempt to explain, the floors of Rooms 10 and 11 are raised about 50 cm. above those in the adjoining rooms. To reach this higher level what would normally be the threshold between the forecourt and Room 10 consists of a flight of brick steps between the doorjambs, each riser one brick high (Pl. 19 *B*). Between Rooms 12 and 11 the same purpose is served by steps with risers two bricks high (Pl. 19 *A*). Neither of these examples appears to have been constructed with great care.

Departing from the subject of stairs we come to the closely allied one of ramps. It has already been suggested that the

ascending passages winding around the central piers of stair wells may have had sloping rather than stepped floors, as no conclusive evidence testifies to one or the other. Interior ramps are therefore conjectural, but exterior ones are a certainty.

By far the most impressive ramp, and one of the most imposing features of the southeast or "front" façade of Sargon's palace, is that leading from the central area of the citadel up to the principal bull-flanked entrance (see Pl. 1). For some unaccountable reason Citadel Gate *B* is not situated on the axis of the ramp and entrance. If it had been, it would have enhanced considerably the magnificence of the general plan. We must nevertheless admire the grandeur of the approach as it was constructed—a ramp 25 meters in width beginning the ascent to the palace terrace, at this point approximately 7.50 m. above ground level, some 20 meters out from the face of the terrace. Its slope is direct, that is, perpendicular to the façade. Barely under the present ground level, its surface has been denuded and today is traceable only by means of a layer of fine rubble. A few paving stones found upon this layer in what appear to be their original positions suggest that originally the entire ramp was paved with limestone. Its vertical sides are faced with limestone blocks in the same manner as the terrace wall. Common horizontal joints are maintained in the facing of ramp and terrace wall, the unity of which is emphasized by the repetition of the terrace buttresses in the ramp. The stone crenelations forming the parapet wall of the terrace continue down the edges of the ramp to ground level. Such a ramp is far different from the stairway which Place, inspired by Persepolis, restores as the grand approach to the palace.⁸⁷

A second ramp facilitates the approach to the palace terrace from Citadel Gate *A* (see Pls. 70 and 82). Directly in line with the "street" running between the Nabu temple and Residence *M* from this gate, it mounts to the south corner of the palace terrace. It is not "freestanding" as is the great ramp, but forms an integral part of this strangely managed corner (Pl. 11 *A-B*). But 4 meters wide, its rubble layer today remains to the extent of 7.50 m. of slope. This, however, accounts for but part of the height to which it led in reaching the level of the platform. Its original length was therefore greater than that which it has today. Upon one side the stone-faced terrace wall rises above, while upon the other the wall supporting the ramp drops to ground level. The surface is missing, but the destruction to the light rubble caused by a single rainstorm during the process of excavation (Pl. 11 *A*) is evidence enough to warrant assumption of a solid original pavement. Since the dressing of the stone of the wall along the present surface further suggests this in the form of a slope steeper and at a higher elevation than the light rubble incline, we do not hesitate to propose that this, like the great ramp, was once paved with stone.

A single ramp provides the sole approach to the Nabu temple. Irregular in shape, it is of far gentler slope than the ramps to the palace. Commencing some 42 meters from the entrance pylon of the temple, it increases in its ascent from a width of 16 to one of 36 meters where it meets the temple façade. During its entire length it rises only 3 meters. Its pavement, mutilated when found, is of baked bricks laid in

⁸⁵ Cf. *Khorsabad* I, Fig. 123.

⁸⁶ *Ibid.* pp. 122-25 and Fig. 125.

⁸⁷ Place, *Ninive et l'Assyrie* II 29-31.

two courses. Its vertical sides, like those of the platform of the temple, are not faced with stone but are merely plastered with lime. A mud-brick parapet wall probably ran the length

of the slope at either side, for the pavement as found extends only to a distance from the edge which might represent the thickness of such a wall.

COLUMNS AND PIERS

Whether from choice or from lack of understanding on the part of the architect, the use of column and pier at Dur Sharrukin is almost nonexistent. That they are used at all is proof enough of their familiarity to the Assyrians of this period in form if not in practice. The frequency with which the column is represented upon the reliefs is further testimony of this fact. Why, then, was this architectural element almost completely neglected in this great capital? That the vertical was appreciated and sought after is evident from the ubiquitous buttress, reed, and niche in the exterior decoration of the predominantly horizontal buildings. Wood

Dur Sharrukin they employ mud brick, the material least suited to this use. Suggestive evidence of wooden shafts in conjunction with stone bases does, however, come from the interior of one of the citadel residences, while an isolated example of a fluted stone shaft fragment is found at the Nabu temple, but in such questionable context as to preclude the certainty of its having served the original building program.

The loggia (Fig. 2) with its attendant passageway (Rooms 15 and 13) is at Palace *F* the counterpart of the corridor (Room 10) of Sargon's palace (cf. Pls. 75-76). Both supply communication between the residential outer terrace and the court upon which faces the throneroom. The splendor of the king's corridor is effected by the reliefs lining its walls and the bulls guarding its entrances. At Palace *F*, where reliefs are employed but sparingly if at all, this important communication is enhanced by the broad loggia, which is open to the terrace to the extent of 13 meters. This opening, centered on the passageway as well as on the loggia itself, presents a span exceeding that of any other portal or room in palace or temple. Barely greater, however, than the width of Sargon's throneroom, which is known to have been roofed with wooden beams, the span of the loggia opening requires a lintel which, even carrying, as it must, the parapet, was surely not beyond the engineering skill of the Assyrian builders. The columns which support it are therefore probably more decorative than structural, inspired perhaps by the columned portals of the foreign buildings pictured upon the reliefs.

In this, our only example of such a columned portal at Dur Sharrukin, the columns are symmetrically placed within the opening, the intercolumnar interval being greater than that between column and wall (Pl. 38). The column bases, consisting of rectangular plinths and torus drums, are cut monolithically of basalt (Pl. 41 *B-C*).⁸⁸ The tops of the plinths were originally level with the floor surface and therefore actually part of the paving rather than elevating blocks. While varying but slightly in size, the bases are so nearly alike that identity was clearly intended. The dimensions of one may therefore be considered as applicable to the other. The plinth of the base shown in Plate 41 *B* measures $1.80 \times 2.40 \times 0.25$ m., while the drum has a height of 0.73 with greatest diameter of 1.85. Its top diameter is 1.45, while at its juncture with the plinth the diameter is 1.40. The top surface of the drum is plane, and upon it rested directly the column shaft.

The column shaft probably was of mud brick. A shaft of wood, unless it be one of multiple elements bound together, cannot be considered, in view of the great diameter. Furthermore, no trace of wood was found in the vicinity—a fact admittedly not necessarily precluding its use—nor was there any evidence of baked bricks, some of which surely would have survived had the shaft been of this material. Although it was impossible to detect any remaining shafts of mud brick, we feel fairly confident that they once existed and

⁸⁸ These may be some of the bases referred to in a letter of unknown authorship written in reply to Sargon's inquiry about an apparent delay in supplying "bases . . . which are beneath the pillars of the vestibule(?)" (Waterman, *Royal Correspondence of the Assyrian Empire* I, No. 452).

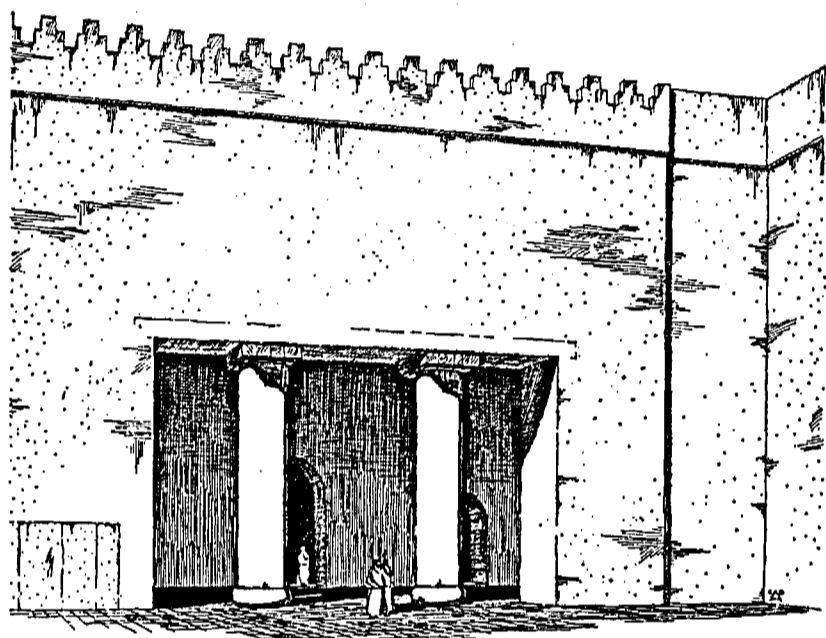


FIG. 2.—SUGGESTED RESTORATION OF THE LOGGIA (15) FACING UPON THE OUTER TERRACE OF PALACE *F*

and stone were at the architect's disposal readily enough to permit of their lavish use in other elements of construction, and baked bricks in segmental form were molded as casings for roof drains. Yet with the desire for the vertical and the availability of the materials best suited for columnar construction the architect failed to make any great use of the element which but a few years later characterized more than anything else the architecture to the east and west of Dur Sharrukin. In no more than two certain instances did he hazard its incorporation into his buildings—in the columned loggia facing the outer terrace at Palace *F* and in the pier-supported portico extending across one side of a minor court in Sinahusur's residence.

Tradition, therefore, must have decreed against the free use of column and pier at Dur Sharrukin. That they were not indigenous to Mesopotamia, a country generally lacking in stone and wood, causes no wonder. Growth of empire, however, is accompanied by increased foreign influence, and one would therefore expect the Assyrians, who seem a fundamentally practical people and who had at their disposal a wealth of material, to have borrowed an architectural element which might greatly simplify their problems of construction. Yet they refuse almost completely to incorporate column and pier into their architecture, and, stranger still, when they do experiment with this form in the two examples known at

now lie broken and indistinguishable among the debris within and about the portal. Of the capitals there is no evidence. Had they been of stone, which upon mud-brick shafts seems incongruous, they doubtless would remain to this day and have been encountered in the debris. Rather than terminating in capitals, the shafts more likely extended directly to the lintel, ending abruptly at this point. The decorative reeds or engaged half-columns, which after all furnish the closest parallel to the freestanding column, are treated in this fashion and therefore suggest a similar upper termination to the columns of this loggia.

The piers forming the portico (Fig. 3), unique in the excavated portion of Dur Sharrukin, which extends across the southeast wall of Court L 105 in Sinahusur's residence (see

respectively. The corners not engaged to the side walls of the court are rabbeted just like the corners of the freestanding piers, which are spaced 3.20 apart from one another. Whether the piers supported arches or horizontal lintels we are unable to determine, for in no instance was a pier recognized standing intact to more than 2 meters above the pavement. The rabbeted corners, so suggestive of the large portals which may have been arched, at least bring up the former possibility. They likewise suggest the recessed niches which play such a large part in exterior wall decoration and which have straight horizontal upper terminations. In the event of lintel construction the rabbets could not have been carried horizontally across the tops of the openings as they are in the niches, for the lintel in this case would be but 0.40

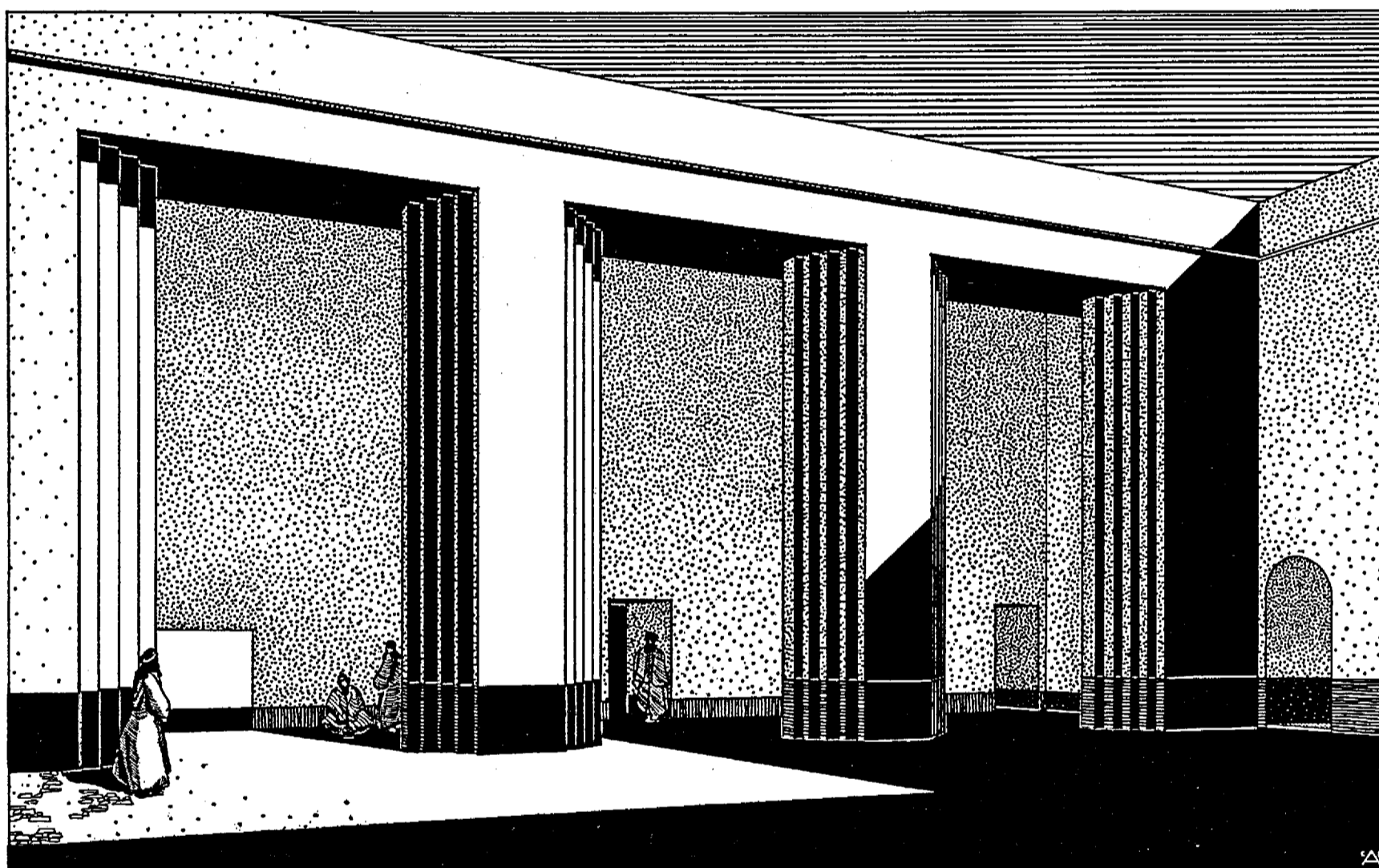


FIG. 3.—SUGGESTED RESTORATION OF THE PORTICO FACING COURT 105 OF RESIDENCE L

Pl. 72) tend to verify what remains a speculation in the foregoing discussion of the loggia of Palace F, namely that lofty freestanding supports were constructed of mud brick. Here a row of five freestanding and two engaged piers, all of sun-dried brick plastered with mud, partially segregates from the court a long, corridor-like portico off which open directly or indirectly six rooms of indeterminate use. The piers spring directly from the pavement without base of any sort and are of mud brick throughout. In greatest dimension each one is 2.00×2.80 m., the long axis being in a line parallel to the back wall of the portico. Actually they are not rectangular in horizontal section, for the four corners of each pier are rabbeted, each corner with four recesses of 0.20 each (Pl. 36 E). Unlike those at the corners of large portals, the rabbets in this case extend to the pavement. The extreme plane vertical surfaces have therefore widths of but 0.40 and 1.20 respectively. The engaged piers have the same thickness as have the freestanding ones and maximum widths of 2.60 and 3.00

in width and too narrow to support the overhang of 0.80 on each side. They must end abruptly at the lintel as at the floor, as do the reeds of exterior walls.

Of other columns there is scattered conjectural evidence but no example *in situ*. Three basalt drums (chap. vii, Nos. 15-17, and Pl. 32 B) of approximately the same size (0.20 m. high, 0.35 in greatest diameter, 0.28 in upper diameter with a depression 0.21 in diameter at top) from their form and material do suggest column bases and are therefore tentatively considered as such. They were found stacked against the wall of K 15, the small vestibule of the stairs or ramp leading from the central court to the roof of Residence K. In this room they could have had no possible structural significance. They seem similar in all respects to a "capital" which Place found in a court of the palace "dépendances."⁸⁹ They bear a simple decoration which may be a debased form, outlined in double ribs, of the recurrent bud-and-flower mo-

⁸⁹ Place, *op. cit.* III, Pl. 35.

tive. If they may be considered column bases, their recessed upper surfaces are probably indicative of wooden shafts.

An equally uncertain form which may have served as base or capital of a column stands within a doorway of Residence *K* upon a stepped pavement of a later occupation (Pl. 34 *F*). It is of limestone with torus drum and spreading plinth or abacus as the case may be. In its later use at least it appears to have served as a table.

A limestone column base (Pl. 19 *D*) and a fragment of a fluted column shaft of the same material (Pl. 16 *D*) appear in the latest period of occupation of which there are any traces at the Nabu temple. Because nothing similar has been found within any of the original buildings we are in-

clined to class these as foreign to the city of Sargon's time; yet the fact remains that no occupation of later date gives evidence of importance enough to warrant attributing to it the importation of material or ideas. No more than a very crude use of material found on the spot has ever been indicated in the scant traces of rebuilding.

Aside from the loggia at Palace *F* and the portico in Residence *L*, there is therefore no conclusive evidence for the use of column and pier. These two examples, however, provide sufficient proof of their existence. The other instances above cited are merely suggestive of a more extensive use than the single loggia and the sole portico imply, and are in no way to be considered as concrete examples of columnar architecture at Dur Sharrukin.

VAULTS

Vaults, like columns and piers, were known and understood by the builders of Dur Sharrukin, yet were not extensively employed by them. Unlike freestanding supports, however, they are indigenous to Mesopotamia, where in the south vaults antedating by approximately 2,000 years those of Dur Sharrukin have been found. In the course of their long development they reached such perfection as that expressed in the large barrel vault discovered intact by Place in Gate 3 of the town.⁹⁰ Possessing the knowledge and skill required for the construction of such true vaults, Sargon's architects nevertheless continued the use of the corbeled vault from which the true vault probably originated. Whether the corbeled form was retained from choice, simplicity of construction, or lack of confidence in true vaults, only these architects could say.

Notwithstanding the fact that because of their place in the superstructure of the buildings vaults would naturally lose their identity in the fallen debris, we believe that the use of vaults at Dur Sharrukin was limited. Evidence for beam and lintel construction is too convincing to allow for vaults in roofs and in all except certain monumental portals. We are therefore inclined to confine the use of vaults to town and citadel gates, to important and ornamental portals within the major buildings, and to the utilitarian drains and sewers which underlie terraces and ground level.

At Town Gate 7⁹¹ and Citadel Gate *A* (Pl. 7) we find portions of vaults still standing slightly above their spring lines. The completed vault was no doubt structurally identical to that of Gate 3, which Place describes as having voussoirs formed of mud brick laid with narrow sides comprising the soffit. The resulting wedge-shaped joints are filled with mud, which in solidifying makes a contiguous mass of brick and mortar. In the portal of Gate 7 a baked-brick archivolt, unglazed, is inset into the vertical wall face above the true voussoirs of mud brick. As restored by Mr. Lloyd,⁹² this portal opening has a central maximum height of 4.90 m., but slightly in excess of its width of 4.30. The archivolt is decorative rather than structural. At the citadel gate there is no form of decoration over this inner portal, the soffit of the mud-brick vault and the vertical surface facing the chamber being plastered with mud and whitewashed. The portal, 4.60 in width, when restored from the known spring line

attains a maximum height from floor to soffit of 6.80. Such are the only examples of true vaults found during our recent excavations; but from the glazed bricks sometimes encountered in the debris of other portals we attribute vaults with enameled archivolts, as found by Place at Town Gate 3, to certain doorways of the major buildings.

The passageway under the bridge between the king's palace and the Nabu temple presents an elliptical or parabolic opening of masonry (Pl. 12 *A-D*). It is not a true vault but rather is corbeled to the extent that the limestone lining, laid in horizontal courses, is so cut as to form in itself the curve of the arch. The opening, 3.70 m. in width at the street level, reaches a restored maximum height of 5.10.

Of arch-shaped drains we have found examples of two types. At Palace *F* subterranean drains are in principle identical with those described by Place.⁹³ In section the opening is an ogival arch resting upon vertical sides (Pl. 39 *B*). The baked bricks of which the vault is composed are segmental and are laid upright with their broad sides nearly vertical. For the "vertical courses" are actually slanting, one course accordingly partially supporting the weight of the next and thereby facilitating construction without the use of centering. In alternate courses there is no keystone, the upper voussoirs meeting only at their angles. Since section by section the vault is not self-supporting, the entire structure cannot in the strictest sense be termed a true vault. With the interstices and keystone void packed with mud, which when dry becomes as hard as the baked bricks themselves, a solidity equal to that of the best-made arch is attained.

A drain of a second type, possibly the main sewer of the citadel, is of coarse limestone throughout. The blocks forming its sides are in one portion laid with vertical faces, while in another they are cut with curved surfaces making a "vault" similar in general shape to that of the street passageway between palace and Nabu temple. Here, however, we have the "vault" intact, the lintel in both cases having its underside cut in curved section. The height of the opening averages about 1.80 m., the width a meter or more.

True vaults are therefore rare in the present-day ruins of Dur Sharrukin. Their false complements have been included in this section on the basis of form rather than construction.

⁹⁰ Place, *op. cit.* I 255-59.

⁹¹ See *Khorsabad* I, Fig. 3.

⁹² *Ibid.* Fig. 4.

⁹³ Place, *op. cit.* I 271-74 and III, Pl. 38.

WATER SUPPLY

Little can be said of the water supply of Sargon's capital. The chief source may have been the river Khosr, which then flowed almost at the very wall of the city, or the canal mentioned by Sargon.⁹⁴ An internal supply, however, was a necessity in time of siege, which eventuality must be provided for, and it is all but certain that numerous wells answered this requirement as they did the daily needs of the inhabitants.

The manner of excavating necessitated by the scale of the site, whereby with few exceptions only the architecture has been traced, precludes the discovery of wells, which in all probability would exist in open "squares" or in centers of courts. Place therefore records no instance of any well in the palace, nor can we state with certainty the presence of more than one elsewhere. That more did exist throughout the city must, however, be accepted as an unequivocal fact.

In an alcove of the forecourt of the Nabu temple appears our only actual example of a well within the walls of Dur Sharrukin (see Pl. 79). Its orifice is square, measuring a meter in each direction. Limestone slabs set on edge furnish

a curb (Pl. 17 B). Below floor level the shaft becomes circular in section, with diameter slightly exceeding one meter, its walls lined with rough, irregular stone masonry. The water level was reached at a depth of 6.60 m.—higher no doubt at this time of year, after the winter rains, than the mean level.

Near the center of the forecourt of Residence Z a peculiar mass of stone rubbish extending below floor level was encountered. It could never have reached this position had there been no cavity to receive it. Since drainage always seems to have been carried without the limits of the buildings, we are strongly inclined to interpret this find as a collapsed well. Were the forecourts of other buildings to be completely examined, similar structures might be found. While it is unwise to base generalities on but one known and one conjectural example, we do not hesitate to state that Dur Sharrukin was in all probability partially supplied with water from wells placed within the buildings, except perhaps in the poorer quarter, where community wells might serve the populace.

DRAINS

The drainage system of Dur Sharrukin is an extensive, elaborate, and well constructed project, a tribute to the architect. It is furthermore another proof that sanitation is by no means a modern institution but reached a surprising development among the ancients. The private bathrooms adjoining most of the sleeping-rooms and the disposal of a heavy rainfall necessitated a vast system of manifold drains, and these the architect supplied in a manner worthy of a modern builder who might be forced to work without the use of metal. Being incorporated in the nethermost parts of the buildings, the greater portion of the drainage system is covered with maximum debris and accordingly is but sporadically encountered in sections where complete excavation is otherwise warranted. From such piecemeal evidence, however, it becomes possible to recognize the system as a whole rather than a small section in detail. For convenience the drains may be classified as vertical or pipe drains and horizontal or channel drains. The latter are of course not truly horizontal, but slightly sloped to expedite the flow of water, and may be divided into local drains and general sewers.

The vertical drains serve two purposes: as conduits from roof to subterranean sewers, and as connections between surface or local subfloor drains and the main sewers below. As can be seen in Figure 4, the roof drains of terra-cotta tiles incased in baked brick are imbedded in the walls and are invisible in the finished building. The tiles are so shaped that they may be set with tight overlapping joints (see p. 17). The resulting pipe is incased in baked bricks molded in segmental shape, which when set in bitumen form a casing impervious to water (see p. 17 and Pl. 32 D). This in turn is further supported by more baked brick, whereby the finished structure becomes square in plan. In the case of the single example found during the excavations the outer side stands flush with the mud-brick face of the wall, so that the plaster surfacing covers both wall and drain without disclosing the presence of the latter (Pl. 32 C). For the connections be-

⁹⁴ Luckenbill, *Ancient Records of Assyria and Babylonia* II, § 120.

tween floor drains and sewers we refer to Place, who describes one found in the palace.⁹⁵ We may accept this as of the type generally employed when refuse as well as water must be considered. The drains the sole function of which is the disposal of water may, however, have been of the roof-

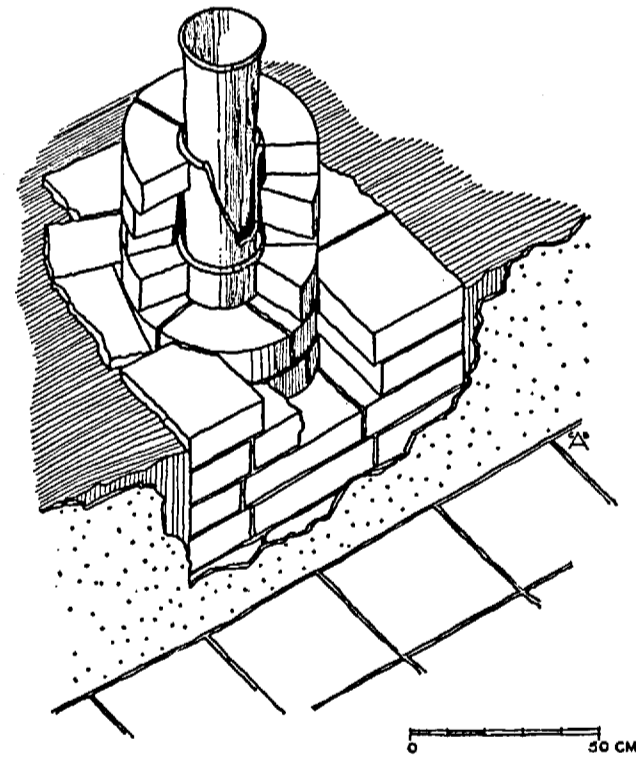


FIG. 4.—CONSTRUCTION OF VERTICAL ROOF DRAIN IN THE NORTHWEST WALL OF THE CENTRAL COURT OF RESIDENCE K. SCALE, 1:20

drain type, provided they are located directly over a horizontal sewer.

The local horizontal drains are of baked brick and are located immediately under the pavement. They may in fact be incorporated in it to the extent that their covering bricks sometimes are actually part of the pavement. In their twisting course they may serve several surface orifices before emptying into the downspout connecting with the sewer below. A specimen of this type is found in Residence K, where a

⁹⁵ Place, *op. cit.* I 270 f. and III, Pl. 38.

small court (Room 32) is provided with a drain orifice near its northeast wall (Pl. 33 *D*). The water entering the drain is conducted via a bitumen-lined channel under the floor of Room 36, where it turns a right angle in order to connect with the drain of Bathroom 35 (Pl. 33 *C*). The covering of the channel in this instance is of rough stones imbedded in tamped earth on which the brick pavement of the room was originally laid.

Commonly these local channel drains run under the thresholds of doorways, as in Residence *Z* and in the Nabu temple. The drain type in the former (Pl. 42 *C-D*), which serves but one room, has a small, narrow channel covered with baked bricks. That in the latter (Pl. 28 *C*), which probably serves several orifices, is considerably larger. Its channel is three brick courses or about 30 cm. deep and is 20 cm. wide. Lined with bitumen, which also fills the brick joints, it is covered with single bricks, upon which are placed the rough stones. The entire construction is concealed under floor and threshold.

Quite another type of local drain comprises those which carry the rain water from the forecourt and the central court of the Nabu temple through the mass of the platform and into the street below. They are independent of the main sewers and are complete units in themselves, similar to each other. At the outlet (e.g. Pl. 14 *E*) the channel is of stone cut U-shaped 30 cm. wide from a single block 60 cm. in width. A stone slab serves as cover. The closed channel is then incased on all sides with baked bricks. It is perhaps justified to assume that this construction continues into the platform, at least throughout the horizontal course of the drain, for in Residence *L* a somewhat smaller drain under Rooms 6 and 7 is similar in having its channel hollowed out of stone blocks. The outlet into the street running between the Nabu temple and Residence *M* presents several oddities which are difficult to explain. The spout of the channel extends some 40 cm. beyond the face of the wall, but not enough to clear the sloping watershed which extends around the entire building. At this point, however, the watershed is broken and three large rectangular stone slabs are placed upright around the spout. The cutting upon the faces of these slabs suggests that they were originally used or intended as part of a retaining wall. The crude manner in which they are set upon rough uncut stones is additional evidence that they are not part of the original construction of the drain. A weakening, or even a partial collapse, of the platform wall at this point, the result of settling around the drain or perhaps of undermining by the excessive water gushing forth from the spout, obviously necessitated repairs during the Sargonid occupation. The watershed was altered, being cut away entirely at the spout and constructed of baked bricks for a short distance in the direction in which the water from the drain would flow and therefore cause greatest damage. The limestone blocks were set up to break the force of the water issuing from the drain, and the wall above was strengthened by means of a buttress of baked bricks (Pl. 14 *D*).

The general drains cease to be simple channels and become passageways of such dimensions as to permit of a man's walking through them without undue discomfort. They may be of vault or lintel construction, depending upon the material employed in their make-up. Two drains at Palace *F* provide examples of two types of construction. Under Room 31 and the outer terrace is one of baked brick vaulted in the

manner described on page 32. Throughout the 10 meters investigated the construction is consistent, an ogival vault formed of slanting courses of segmental baked bricks. The outer termination is unfortunately lost in the washing-away of the edge of the mound, but there is little reason to doubt that it once was in the face of the outer terrace, as is that of the somewhat similar drain under this same terrace.

In a corresponding position at the opposite side of the outer terrace is a second drain which when found was partially intact and clear of any debris (Pls. 39 *B* and 87). The portion under the palace itself remains to this day as it was in the time of Sargon. It is entirely of baked brick, the lower part consisting of a channel 0.50 m. wide and of equal height. Resting upon the sides of the channel is the vault, 0.70 wide at its base and forming a closure 1.40 above the floor of the channel. The greater width of the vault superimposed upon the narrower channel forms a ledge or shelf along each side of the passageway (Pl. 39 *C*). This construction extends 7.40 from under the outer face of Room 3, at the end of which dis-

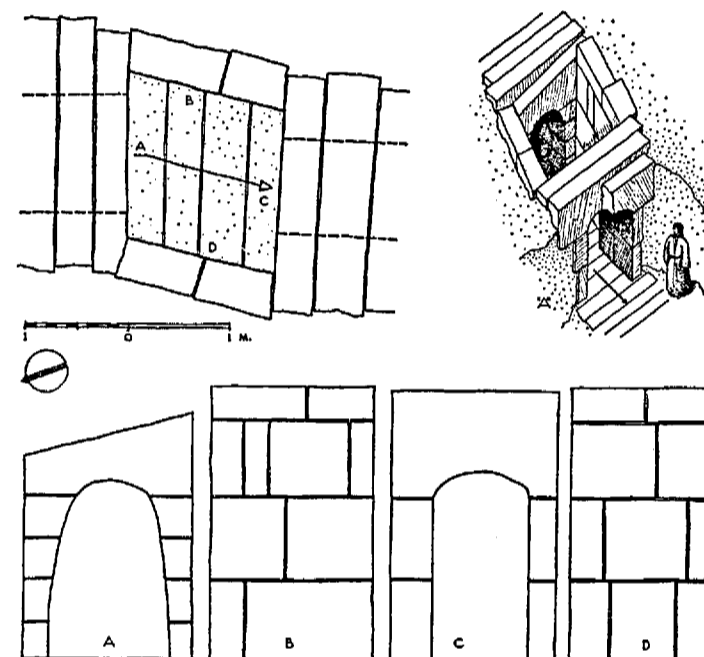


FIG. 5.—PLAN, ELEVATIONS, AND PERSPECTIVE OF THE SEWER MANHOLE OUTSIDE THE CITADEL WALL SOUTH OF THE NABU TEMPLE. SCALE, 1:75

tance the vaulting ceases and the channel is covered with limestone lintels. At a distance of 3.40 from the outer face the drain is joined at a right angle to one exactly similar in size and construction, the vaulting of which extends 10.60 before giving way to limestone lintels. Under the terrace the drain is today but fragmentary. The floor and lowest brick course of the channel, however, remain nearly intact in their passage between two masses of rough masonry extending to the face of the terrace, 20.40 from the palace (Pl. 39 *A*).

The sewer serving the citadel, or at least a portion of it, is quite naturally of greater capacity than those found at Palace *F*. Unlike the drains which discharge their contents into street or plain, this massive limestone conduit is truly subterranean—built for the disposal of refuse. Its discovery just outside the citadel wall behind the Nabu temple (see Pl. 71) came in the form of a “manhole” (Fig. 5 and Pl. 8 *D*), a structure whereby the sewer could be entered from the surface to facilitate repairs or the clearance of stoppage. Of rhomboid plan roughly averaging 1.60 m. to a side, this manhole is in reality a small chamber with an inlet sewer from the citadel and an outlet toward the town. The inlet in section takes the form of a parabolic arch 1.20 in width at the base

and with a maximum central height of 1.75. The curvature is obtained by the cutting of the masonry, which is laid in horizontal courses. The lintel, cut on the under side with curved groove, completes the approximately parabolic form. The outlet to the town is simpler. Its sides are vertical, the only curvature being confined to the lintel. Its width is 0.95 and its maximum height 1.85. Both inlet and outlet were

followed for a distance of 10 meters from the manhole and in this length disclosed construction similar to and consistent with that shown at their openings. Straight in themselves, a slight change in direction is effected in their common irregular, rhomboid chamber. It is to be regretted that more important excavation prevented following this sewer through the town to its final disposition in plain, cesspool, or river.

DECORATION

Decoration, whether exterior or interior, architectural or applied, appears to have been standardized to a large extent, each type confined to its special place in the general architectural scheme of Dur Sharrukin. Were we able to view the city as it was in the days of Sargon, our superficial impression would be not unlike that created when for the first time we behold a modern village in this area. True, the modern peasant house cannot be compared in magnitude to the dwelling of the Assyrian nobleman, but the same feeling of monotony expressed in the buildings of modern Khorsabad was no doubt present in those of the ancient capital which once occupied the same site. In Khorsabad today individual houses differ somewhat in shape and size, and some are raised higher than others; but in general appearance they are all alike, their walls and roofs covered with mud plaster of practically unvarying hue, their surfaces unbroken except for the single entrance and a rare second-story window. In Dur Sharrukin conditions were similar. Buildings varied in outline, and the palaces and the Nabu temple reached heights above those of their surroundings; yet all buildings, with the exception of the ziggurat, which according to Place had each stage of a different color,⁹⁶ were covered with unpainted white lime plaster, their walls unpierced but for the necessary doorways and perhaps a few windows high above the ground. Scale and color are all that the intervening centuries have changed. Walls, with the exception of those of palace and temple, were entirely without decoration. The city as a whole was one of buildings with blank, unrelieved wall surfaces.

It is indeed difficult to reconcile the elaborate decoration of exterior walls, in which term we include court as well as truly outer walls, of palace and temple with the utter severity of the plain exterior surfaces of all other buildings. That the residence of Sinahusur, the grand vizier, covering as it does an area but slightly less than that of the residential section of Sargon's palace, should be barren of all exterior decoration may cause some astonishment. But more incredible is the fact that court and outside walls of Palace *F* are almost without ornamentation. That the glory and might of the king were to be emphasized by elaborate and free use of relief, buttress, niche, and reed upon the exterior walls of his palace may be granted. But the temples are decorated as well, to the extent that in the brilliance of the enameled brick tableaus within their courts they surpass the royal residence. The inference rather is that the restriction of exterior wall decoration to the temples and the royal residence was intended to stress the divinity of the king. For with the Nabu temple connected to the palace terrace, while the temples of the other gods were themselves incorporated in the palace, surely he "dwelt among the gods." His divinity has already been

suggested in the throneroom, where his throne occupies the position corresponding to that occupied in temples by the statue of the god.⁹⁷

The restrictions applicable to interior decoration are less clearly defined, yet are nevertheless recognizable. In this respect the king's palace enjoys a greater lavishness than do the temples, for in his dwelling alone is to be found the generous use of wall reliefs. They are employed sparingly in town and citadel gates and perhaps at Palace *F*, as suggested by the mutilated remains of a winged bull lining one side of a portal between court and throneroom. There are none in temples, where austerity rather than splendor appears to have governed the choice of ornamentation. Whitewashed walls with black dadoes are found throughout from cella and sanctuary to the meanest service—austerity undoubtedly the goal in the former and practicability in the latter, for the simple black-and-white treatment is applied as well to unimportant rooms everywhere in all buildings. In the open courts the dignity of black and white is relieved by brilliantly colored tableaus of enameled bricks flanking the portals. The tableaus and the enameled brick archivolt over the portals supply the only touches of color to the temples. Color, however, is not lacking elsewhere, for in palace or residence it is freely used on plastered wall surface, in designs covering the entire expanse from floor to ceiling. Where reliefs in the palace or plain orthostats in the residences form dadoes around important rooms, painted decoration is applied to the upper walls. The reliefs themselves are partially colored. In short, therefore, and generally speaking, reliefs are restricted to Sargon's palace and the major town and citadel gates, with perhaps a limited use in Palace *F*; plastered wall surfaces painted white with black dado are common to all buildings and within the temples practically exclude all other types of wall decoration; plaster with brilliantly painted designs thereon is freely used with or without orthostats as wall decoration in palace and residence and is the sole decorative medium employed in the latter.

EXTERIOR DECORATION

The decorative elements which enliven the walls of courts and the exterior façades of palace and temple may for convenience be classified as architectural and applied. Into the former group fall those which are formed by molding or fashioning in a definite manner the material of which the wall is constructed. The latter group is more varied, consisting of many materials which in one form or another are inset or applied to the architectural structure, or as freestanding or attached units become part of the comprehensive motive. Except where especially noted,

⁹⁶ Place, *op. cit.* II 79.

⁹⁷ *Khorsabad* I 67.

they are employed only in palace and temple, the residences by force or by choice relying entirely for their splendor upon distribution of mass and upon interior embellishment.

ARCHITECTURAL ELEMENTS

BUTTRESSES.—Among the three groups of decorative rectangular wall projections, all of which appear somewhat similar in plan, one may be considered as a true structural buttress, while the others are purely decorative and may more properly be termed engaged piers. The true buttress is found at intervals on the vertical faces of palace and temple terraces. Whether the primary intention was decorative or structural we cannot say with certainty, though we are inclined to favor the latter. There can be no doubt that the periodic breaking forward and backward of an otherwise long uninterrupted wall surface is aesthetically pleasing and tends to create a sense of height which does not actually exist. Such can be the only motive behind the frequency with which three of the walls surrounding the forecourt of Sargon's palace are so treated. In a terrace, however, the added solidity of buttressing was probably desirable in a mass inherently structurally precarious. Archeological evidence confirms this, at least in the king's palace, for in the remains of the stone facing of the terrace the angles and the short side faces of the buttresses are intact to a greater degree than are the long faces of buttress and interval. Whatever retaining strength lay in the stone facing was naturally greatly increased in the short sections paralleling the thrust of the terrace. No such strength, however, was gained in the buttresses of the Nabu temple terrace, for in the absence of a retaining wall greater stability could come only from the additional mass of material. The present state of this terrace wall gives no indication of the extent to which the building benefited structurally from these buttresses. That the architect anticipated some such advantage from their use seems evident from the buttressing of the angle outside the east corner of the forecourt; yet at the same time he appreciated their decorative possibilities, for in every instance the buttress is itself ornamented.

Another borderline case lies in the regular projections of the outer face of town and citadel wall. Literally they need not be included among decorative elements, even though they are unquestionably ornamental in effect. Fortification towers—points of vantage from which defenders of the city might ward off an attack—they were originally, but their use as such at Dur Sharrukin may be questioned. In the citadel wall they are probably no more than buttresses to strengthen an otherwise rather thin wall which, because of vulnerability of the palace from outside the city, probably was intended as a simple inclosure rather than a defense wall. The enormous width which Place assigns to the town wall, or even the lesser width which Botta gives to it (see p. 18), precludes the necessity of buttresses for stability. Here they may have been constructed to serve their original purpose; or, at a time when strength and organization of empire made the Assyrian capital relatively free from danger of attack, they may have been due to nothing but unshakable tradition which prescribed the construction of city walls in this manner. Buttresses of terrace or of inclosure wall are therefore in all probability structural or defensive. They may nevertheless be considered as accidentally decorative.

The remaining two groups of buttresses—the purely decorative engaged piers—are obvious in their purpose. The more common of the two is that to which we assign only the buttresses flanking portals. Because of their importance or their position in plan, certain portals in both palaces and in the temples were on court or terrace façade treated monumentally. Town and citadel gate received similar emphasis at inner- and outermost portal. A glance at the plans makes it immediately clear that such buttresses cannot be structural requirements. They are rather the single decorative element which, more than anything else, characterizes and dominates the architectural motive framing the monumental portals of Dur Sharrukin. Profusely employed, they vary considerably in width and projection. Their scale seemingly is in no fixed relation to size of portal, but is determined by the space requirements of the façade and by the degree of distinction sought in their use. With bases adorned with reliefs or with enameled-brick tableaux, some by virtue of this special decoration give archeological proof of emphasis on certain portals. A potential additional control of emphasis is present in the upper termination of the buttresses, for which we must resort to restoration. Carried above the line of roof and parapet and crowned with cornice and parapet of their own in the manner of fortification towers, they command far greater attention than when terminated in a line with and similarly to the wall of the façade. The scenes depicted upon the reliefs give both types, and the restorer is thereby left to an arbitrary decision as to which, if not both, was employed in Sargon's city. The tower type seems to be the obvious restoration in the case of town and citadel gates, for the reliefs leave little doubt of the preference for this at the openings in inclosure or fortification walls.

Place and Thomas adapted the tower type not only to the city gates but to all buttressed portals throughout the palace,⁹⁸ and no great obstacles were encountered in their restoration on this theory. In the Nabu temple, however, we come upon a situation which leads us to believe that buttresses terminating in line with the wall were used in conjunction with the tower type. If we restore the buttresses flanking the portals in the side walls of the central court in the same manner as we do those dominating the façade of the inner temple, we have, despite the lesser height of the side walls, two motives, in close proximity, similar to each other in principle but badly out of scale one to the other. No matter which single type we essay, the result is unfortunate. Had Place and Thomas, when they discovered Court XXVII, compared the simple buttresses of doorway Z' with the elaborately decorated ones of Z and Z'',⁹⁹ and had they restored the main temple court of the palace in detailed perspective, they would no doubt have realized the same thing. Disparity in scale threatens to become even more apparent and unhappy in the principal façade fronting upon the forecourt of the Nabu temple. Here are two broad portals with architectural motives scarcely separated from each other. One portal, the ingress to the central court, is flanked with broad buttresses with bases faced with enameled brick; the other, leading to a shrine chamber, is flanked with narrow buttresses having but the usual decoration. With the four buttresses restored in the same manner, no matter whether tower or simple projection, the result is not only unhappy but

⁹⁸ Place, *op. cit.* III, Pl. 18 *bis*.

⁹⁹ Cf. Place, *op. cit.* III, Pl. 6, and *Khorsabad I*, Fig. 98.

verges on the ridiculous. A simple expedient, for which the reliefs supply suggestion if not authority, rectifies the incongruity of scale. Let us restore the major-portal buttresses, distinguished for their tableau-faced bases, as towers and all others as simple projections not rising above parapet line, and we have façades not only aesthetically pleasing but with disparities in scale greatly reduced. So in Sargon's palace we should prefer to see many of the tower buttresses of Place and Thomas become simple projections, the tower type being reserved for those with bases adorned with reliefs or enameled brick or those which flank portals of obvious importance.

Supplementing the buttresses which properly belong to portals are those of a third group, purely decorative but contributing to no set architectural motive. They can serve no purpose but to break up a wall surface otherwise bare of decoration and are found only in Sargon's palace, though in view of the use of portal buttress at Palace *F* it seems not improbable that in the unexcavated portion of this palace also they may be present. According to Place (see our Pl. 76) they appear along the southwest façade of the king's palace, upon three sides of the forecourt, and to a limited extent upon the only sections of northeast and southeast façades not otherwise ornamented with reliefs, reeds, or niches. In the forecourt (XV) we are inclined to classify as portal buttresses only those flanking the doorways of Room 81 near the north corner. All others we believe fall within the group which we consider as truly individual decorative wall projections. Without exception we should restore buttresses of this group not as towers but as simple projections with parapet continuous with that of the wall itself.

NICHES AND REEDS.—Were one asked the question, "What most typifies the exterior wall-surface decoration of Dur Sharrukin?" the answer unhesitatingly would be, "Niches and reeds." For more than anything else these two forms, themselves a part of the wall construction, are found throughout royal palace, temple, and gate, the only types of building the exterior walls of which were ornamented. In various combinations they make up the motives which decorate buttress or wall surface. The niches are of several types, differing from one another in width and depth and in the number of rabbets or setbacks. The reeds are in reality segments of engaged columns with circumference tangent to the plane of the wall and hence with no projection beyond it. They may, as suggested by Place¹⁰⁰ and by Loftus in his description of similar decoration at Warka,¹⁰¹ owe their origin to timber construction of palm trunks set vertically side by side. The long interval between the early wooden house of the south and the city of Dur Sharrukin in the north—an interval during which this form of decoration appears but rarely—somewhat weakens the force of this suggestion.

For the distribution of niche-and-reed decoration throughout Sargon's palace we must rely largely on Place's discussion,¹⁰² for our recent excavations in the palace were so limited that only in Temple Courts XXVII and XXXI and outside the Shamash temple have we firsthand evidence of this form of decoration. According to Place niche-and-reed motives were found on all outer walls and in the two above mentioned courts of the temple area ("harem"), on the buttresses

of the large forecourt (XV), on the outer wall of the service area ("dépendances"), and on the piers and buttresses included in the great entrance motive of the outer southeast façade (see our Pl. 76). Of walls facing the terrace the only ones upon which they were not found by Place are those of the southwest façade, which is largely hidden by the temple complex and the ziggurat, and those of the northwest section comprising the king's private apartments, whereon reliefs make magnificent dadoes. Were we to attempt a revised detailed restoration of the palace, we should be inclined to include some of these among the walls decorated with niche and reed. We know beyond any doubt that in rooms plaster painted in brilliant designs covered the walls between reliefs and ceiling. It is only reasonable therefore to expect in a building so prone to exterior decoration some form of ornamentation upon the vast expanse of wall between dado and parapet. Place found the niche and reed used in conjunction with reliefs on the piers of the principal portal of the southeast façade—a rare occurrence of intact wall surface above reliefs. Why, then, should this element not also have been used above the sculptured alabaster dadoes of the walls enclosing the private apartments?

The same argument may probably be applied to the walls of Court VIII, upon which opens the throneroom, and to all walls of Court VI; but the analogy here is not so strong. Because of the niches and reeds upon the buttresses of the forecourt (XV) and of the southeast entrance façade we should be tempted to restore similar decoration to at least the salient sections of the southwest façade. Place's failure to note any in this wall makes us hesitate to do so. It may be that, hidden as it was behind temple area and ziggurat, it was considered unworthy of ornamentation. On the other hand our suspicion that the temple area may not have been included in the original conception of the palace plan (see p. 56) and the fact that some attempt at decoration is expressed in the regular buttressing make it highly possible that niches and reeds, which of necessity must have been executed during the period of construction, were employed to decorate this façade and in their state of destruction were overlooked by Place.

At the Nabu temple the niche-and-reed decoration has been traced along the entire extent of the faces of the terrace (Pl. 13 *A*). Buttress and interval alike are covered with this type of decoration, which continues even along the sides of the ramp. Of the exterior walls above floor level or terrace we can say but little. So complete had been the collapse of their outer faces that it is only from a small section which fell intact that we are able to ascertain that they were decorated. One niche and fragments of reeds are all that remain in the debris (Pl. 14 *A*), but their similarity to the niches and reeds of the terrace is so exact that we feel justified in restoring parts of the upper walls with the same decoration.

While lavishly employed in temple courts, niche-and-reed decoration appears to follow therein a prescribed distribution. In the central court of the Nabu temple and in the corresponding court (XXVII) of the palace temple area it covers the entire surfaces of three of the walls. The wall behind one upon entering remains barren of decoration in both instances. Lesser courts have but one side so decorated—that which one faces in approaching central court or temple sanctuary.

In addition to palace and temple, three of the town gates have, according to Place, their flanking buttress towers

¹⁰⁰ Place, *op. cit.* II 50 f.

¹⁰¹ W. K. Loftus, *Travels and Researches in Chaldaea and Susiana* (London, 1857) p. 175.

¹⁰² Place, *op. cit.* II 48–52, esp. p. 49.

adorned with niche-and-reed decoration.¹⁰³ As at the principal southeast palace entrance it rises above the reliefs, so at the town gates it is found extending from limestone dado toward parapet. At the gates of the citadel there is no evidence of decoration of this sort. That it may have existed here and at the remaining town gates is a possibility, for their state of preservation is insufficient to give either positive or negative evidence in this respect.

On Plate 80 are reproduced to scale the various combinations of niche and reed in the decorative motives found in the Nabu temple. Oddly enough, they are more elaborate and varied than are those of the palace.¹⁰⁴ In the palace and its temples there is but one type of niche, while another type is confined to the decoration of the ziggurat. In the Nabu temple both types are employed, with the addition of a third which is the most elaborate of the three. Enjoying the greatest frequency of use is the simplest of the three—a rectangular niche 0.30–0.35 m. wide and 0.15 deep, with its back wall centrally grooved with a channel 0.10 wide and slightly deeper. Dimensions vary, as in the case of all types of niches, according to space requirements, but they tend to approximate those herein quoted. This simple grooved rectangular niche appears, with but a single exception, never to be used by itself or as a central element of a motive. Its function is rather that of framing or setting off other elements of the composition. It is the only type of niche used in court decoration and is employed with equal freedom in true exterior façades.

The type of niche second in simplicity is in reality but an enlarged and differently proportioned version of that just described. The proportions are such, however, that the groove of the simpler type is here expanded to the extent that there results a rabbeted or stepped-back niche rather than a grooved rectangular one. Of 0.60–0.65 m. width at the wall face, it is narrowed to 0.30 by the single rabbet at either side. The depth of the broad portion is 0.15, while the total depth is 0.35. Of the three types of niche it is the only one never found in conjunction with reeds and other niches as an element of a larger motive. It is employed only in regular repetition and appears to be confined to true exterior façades, for it has been encountered only in the ziggurat and in two sides of the terrace upon which the Nabu temple stands.

The most elaborate and largest of the three types of niches (Pl. 13 C) is in horizontal section roughly a triangle with two zigzag sides, for the innermost groove is approximately equal in size to the rabbets which decrease the width while increasing the depth. From 1.00 to 1.10 m. in width at the face of the wall, its greatest depth is 0.45, the individual rabbets thereby approximating 0.15×0.12. Because of its scale and the depth of shadow it creates, this type of niche becomes the dominant element of the motives of which it forms a part. It is usually the central element, flanked with groups of reeds, which in this case yield their central position to this comparatively rare type of niche. It is found only in the terrace faces and the true exterior façades of the superstructure of the Nabu temple. Its confinement to this one temple may have some significance, perhaps to be found in a rather forced and farfetched parallel to the double-column symbol of Nabu.

¹⁰³ *Ibid.* II 50.

¹⁰⁴ See *ibid.* III, Pls. 33–34, and *Khorsabad I*, Figs. 98 and 116.

Individual reeds are practically invariable throughout their extensive use in exterior decoration. Their width of 35 cm., measured on the chord rather than the circumference, varies slightly but imperceptibly with whatever “squeezing” or “stretching” is dictated by space requirements. The depth of 10 cm. from wall face to the points at which the segment terminates remains constant. Diversity in effect is obtained by grouping rather than by changing the form of individual members. As elements of a decorative motive they appear singly, which is rare, or in groups of uneven numbers—three, five, or seven. Except in motives in which the large rabbeted niche is employed, they form the central element, the framing or balancing members being simple grooved niches or smaller groups of reeds. When limited space or a desire to avoid emphasis precludes the employment of a set motive, groups of reeds with or without complementary niches are used in an informal arrangement whereby the same general decorative effect is maintained without detracting from the featured member of the façade. In such arrangement the all but universal rule of grouping the reeds in odd numbers breaks down, for, in one instance at least, a pair is found in the court façade of the Sin temple. Whether in court or in true exterior façade, the free use of the reed is the same throughout palace, temple, and gate. It is by far the most prevalent element entering into the composition of the varied motives of niche-and-reed decoration.

The motives themselves fall into two groups, which we may term “running” and “fixed.” The former is no more than a regular order of elements repeated indefinitely the length of the façade. It may consist of groups of three or seven reeds, each group separated by a simple grooved niche; or it may be composed of groups of three or seven reeds alternating with a single reed, a grooved niche separating group from single reed.¹⁰⁵ Such running motives have been found only in the palace, but it is more than possible that the fallen niche (Pl. 14 A) which furnishes the only evidence for the decoration of the superstructure of the Nabu temple is an element of such a motive, for the continuous wall, without buttress, above the terrace lends itself more readily to a running motive than to a fixed one.

Of the two fixed motives the more common is at the same time the simpler. Consisting of a group of three, five, or seven reeds framed at either side with a simple grooved niche, it is the universal motive for palace buttresses at portals and around the forecourt. At city gates it is somewhat modified, for the greater width of buttress requires a broader motive, which in reality is nothing but a doubling of the usual one—that is, two groups of seven reeds separated and framed by simple grooved niches.¹⁰⁶ This motive is not confined solely to buttresses but is used in certain sections of temple court walls as well.

Decorating all platform buttresses of the Nabu temple is the other motive, which is at once the more elaborate and the more successful in the play of light and shade as a means of relieving a plane white surface. A broad, deep, rabbeted niche flanked on either side by a group of three reeds and a simple grooved niche produces a well balanced and proportioned composition possessing variety of form and depth (Pl. 13 A). This motive is doubled for use in three of the buttress intervals of the northwest façade, which from its position on the avenue approaching the palace is more elabo-

¹⁰⁵ *Place, op. cit.* III, Pl. 33.

¹⁰⁶ *Ibid.* II 50.

rately decorated than are the other faces. In the two remaining intervals of this façade (see Pl. 80) it becomes involved in such an irregular arrangement that it all but loses its identity.

In the remaining wall surfaces subject to niche-and-reed decoration the arrangement of elements is haphazard. From existing evidence it is impossible to deduce any reason which prompted the disposition of niche and reed, singly or in combination. In the central court of the palace temple area the walls are so broken up by buttresses and portals that most of the spaces remaining to be decorated are of such width and position that the simple motive of reed group flanked by grooved niche is effectively and pleasingly employed. This formality only emphasizes the irregularity of reed and niche in the courts of the Nabu temple. A tendency toward symmetry may be recognized in the arrangement at the minor portals if one considers the grooved niche as a balancing element matching an angular wall break. Otherwise the relationship of reed group and niche to space seems purely arbitrary, glaringly noticeable in Court III (see Pl. 83), where in an otherwise symmetrical portal façade one finds a group of three reeds beside one buttress and a single grooved niche in the corresponding space beside the other.

So far we have discussed only the horizontal aspect of niche-and-reed decoration—its distribution and the arrangement of the elements in reference to each other and to space. For the vertical we must add some slight restoration to archeological evidence in order to present a complete picture. Of the base or springing of this form of decoration we are certain, and from a few extant examples but slightly less so of its upper termination.

Around the Nabu temple the niches and reeds which decorate the terrace upon which the temple stands rise directly from the line where the sloping watershed intersects the vertical wall face, at an average height of about one meter above the street (Pl. 13 B). Their upper termination is likewise horizontal; that is, all types of niches and reeds, whether on buttress or on buttress interval, end in a horizontal line slightly below terrace floor level. In the case of rabbeted niches the rabbets are continuous, being horizontal at the upper extremity of the niche (Pl. 13 D). Reeds, however, terminate abruptly in the horizontal (Pl. 15 B). The individual members do not follow the outline of the group by becoming horizontal at the top as Place has restored them. The relief which inspired Place's restoration in this manner comes from Kuyunjik¹⁰⁷ and in all probability represents a foreign palace not necessarily contemporary with Sargon's city. Furthermore, his manner of restoration breaks down completely when an even number of reeds is encountered (see below). What Place quite naturally interprets as reed decoration may even have been an ill proportioned attempt to represent large niches, the rabbets of which we know were treated in the manner indicated in the relief.

Upon court and terrace façades of palace and temple there is no one base line of niche-and-reed decoration, for section by section its distance from the pavement varies (see Pl. 83), often because of tableau or relief or purely arbitrarily as does the height of the black painted dadoes. It is never broken within a motive, the elements of which maintain a common horizontal springing. Since no example of an upper termination has been found *in situ* or among the debris, we can only

¹⁰⁷ Layard, *Monuments of Nineveh*, 2d ser., Pl. 40.

by analogy assume a terminal arrangement similar to that of the niches and reeds in the faces of the Nabu temple terrace, an arrangement originally suggested by the single example of a pair of reeds found in the central court (XXVII) of the palace temple area.¹⁰⁸

MOLDINGS.—Of the four types of molding found throughout Dur Sharrukin two are architectural and are used on exterior surfaces. One of these, however, has an interior use as well. The remaining two fall into the category of applied interior decoration and, with the interior overlapping of one of the architectural types, are discussed on pages 46 f. and 49. Of the exterior moldings one, of mud brick, was commonly used, while the other, of stone, is rarely encountered and apparently was so seldom employed that had it been entirely omitted the resulting difference in architectural appearance would have been scarcely discernible. The rabbeted molding formed of mud brick in the exterior angles of certain portals may be considered as characteristic, while that cut of stone seems experimental or foreign—almost accidental. Although but one definite instance of its use is known, there is evidence which suggests its possible use elsewhere.

The rabbeted molding is so similar in construction and general appearance to the niches used in conjunction with reeds that we are almost tempted to consider it as a part of the niche-and-reed decoration. That the Sargonid architect so considered it, at least in its exterior use, is very possible, for in addition to this similarity its distribution appears to follow closely that of niche and reed. It is found only in portals which are themselves part of a buttress, niche, and reed motive or are in close proximity to such decoration. The single exception to this lies in a portal connecting Court V and Room 36 of the Nabu temple. Within the extent of our excavations it is confined to the temples. Since, however, Place overlooked this molding in Courts XXVII and XXXI of the palace temple area, where we find it freely employed,¹⁰⁹ he may have failed to note it elsewhere. Its limited distribution within the temples ties it to the architectural niche and reed rather than to any religious significance. We should therefore extend its use to royal palace as well as temple—to Court XV, where Place found niche-and-reed decoration, and to any other parts of the palace in which such decoration may have existed (see p. 37).

Fashioned during the construction of the wall, this type of molding may consist of one or two rabbets, the latter by far the commoner. Only in rare cases does it vary in section from a standard size—40 cm. in each direction from the angle which it decorates. Its rabbets or grooves are alike, each therefore having a width and depth half that of the entire molding. Like the niche and reed it never extends to the floor, but springs from varying heights, sometimes in line with near-by niche-and-reed motives but often set arbitrarily. It is logical to assume that it continues uninterrupted around the vaulted portion of the portal as well. The difficulties of carrying such a molding across a horizontal lintel are so evident from the nature of the material that in portals of lintel construction we believe the molding adorns only the sides and terminates at the lintel. Such a contingency, however, may not have arisen, for on exterior surfaces we find rabbeted molding only on such important or monumental portals as we consider to have been vaulted (see p. 24).

Similar in principle but unique in form is the rabbeted

¹⁰⁸ *Khorsabad* I 100.

¹⁰⁹ See *ibid.* Figs. 98 and 115.

molding of the piers (p. 31) supporting the portico facing Court 105 of Sinahusur's residence. Formed of four rabbets totaling 80 cm. in each direction, the molding so cuts away the corners of the piers that the full rectangular pier section is all but lost. The molding springs from the pavement and doubtless terminated at the lintel; if the portico were of vaulted construction, it would have continued around the arch. As the entire portico seems experimental and in no way typical of Sargonid architecture, we must consider this molding in the same light.

Of the stone molding little can be said. The single certain example of its use is in the base of a small, isolated, unidentified building found by Botta upon the palace terrace near its west corner.¹¹⁰ Cavetto and torus are so cut into the short, narrow sides of rectangular blocks of limestone that the blocks when laid broadside to one another form a continuous molded cornice not greatly unlike the Egyptian cornice, which after all may be the model or inspiration for this singular Assyrian example. Several blocks similarly cut were actually found recently in the debris of the bridge connecting the palace and the Nabu temple. The possibility that they were part of the adjoining palace terrace can be dismissed by the fact that not a single cornice stone of this nature was found among the debris of the collapsed face of the terrace. The immediate inference is that a cornice similar to that found by Botta had some place in this unique bridge, a possibility strengthened by the fact that the stones in the passageway are with few exceptions laid in the unusual manner of being broadside to one another as are the cornice blocks. Two factors, however, cast a negative light on this argument. Pleasing and magnificent as is the vaulted passageway, the upper surface treatment of the bridge must at best have been awkward in view of the difference in level between the palace and temple terraces which it connects. Any stepped or sloped arrangement does not lend itself readily to a heavy horizontal cornice like that found by Botta. And, had such a cornice once existed at this point, what has become of the many blocks of which it was composed? Those found in the debris would make no more than a meter of cornice. They may of course be extraneous to the debris of the passageway, but it cannot be by accident, for only wilful transportation could be responsible for their being moved the great distance from the building in which Botta found the cornice. Conflicting as the evidence is, however, the balance seems to favor the original existence of a cornice built somehow into the superstructure over the vaulted passageway.

CRENELATIONS.—Whether the façades of the buildings of Dur Sharrukin were crowned with crenelated parapet walls must, we fear, remain forever conjectural. Of one thing, however, we may be certain—that if such crenelations existed they were of mud brick. Falling from their lofty position they would therefore lose completely their identity in the great mass of resulting debris. Had they been of more durable material, they surely would have been encountered somewhere in the excavations; yet from no part of the city has there ever come even a suggestion of crenelated roof parapet wall. There is, however, archeological evidence for such a wall inclosing the ramp of the ziggurat and the palace terrace within the citadel, the former of baked brick and the latter of limestone.

For the crenelations on the ziggurat we must refer to Place,

¹¹⁰ Botta, *Monument de Ninive* II, Pls. 149–50.

for our excavations did not include this structure. In his account of the “observatoire”¹¹¹ Place mentions finding not only the bricks fallen from a parapet wall but portions of the wall itself sufficiently intact so that the form of the crenelations could be recognized. In Thomas' detailed presentation of the restored parapet wall¹¹² the crenelation is shown to be of three stages, each three bricks (36 cm.) high and, like the wall, one brick (40 cm.) thick. The lowest stage is three bricks (1.20 m.) wide, the second two (80 cm.), the top but one (40 cm.). With a space of a single brick between the lowest stages of the battlements the voids become identical to the masses upside down.

Such massive symmetrical crenelations as are described by Place leave us wholly unprepared for those which apparently topped the masonry facing of the palace terrace. Found in profusion among the debris along the entire southeast and southwest faces of the terrace were blocks of limestone cut with stepped crenelation (Pl. 8 C). Some represent complete battlements, while others form but halves, obviously intended for use at the many angles caused by the buttresses. Their scale alone, with “steps” about half the size of those of the ziggurat, causes some surprise; but the variation in width, height, and proportion shown in the crenelation of the many examples makes one wonder how a wall with any degree of battlement symmetry could have been constructed of them (see Pl. 82). Their thickness remains practically the same throughout, 28 cm. They range in maximum height from 1.00 to 1.20 m., which difference might easily be taken up in their setting or be required to effect changing height of wall due to sloping or stepped terrace pavement. But it is difficult to conceive how the varying heights of crenelation, 50–60 cm., were incorporated into a single wall without strange, irregular results irreconcilable with the usual symmetry shown in other forms of decoration. It is equally difficult to explain the exact relationship of the parapet wall to the facing and pavement of the terrace. The blocks of the parapet wall must have had some sort of setting, for in the absence of dowels stability would have been lacking had they rested directly upon the edge of the terrace. Of their manner of setting there remains not a clew.

That parapet walls surmounted buildings and inclosure walls and gates seems certain despite the lack of positive evidence. The same practical reason which prompted their use on ziggurat ramp and palace terrace extends to all high surfaces accessible to the populace, civilian or military. Precaution against falling must be accorded them. That such parapet walls were of mud brick seems equally certain, for had they been of any other material they would have been recognized in excavation. Granted the existence of mud-brick parapet walls, we are still confronted with the question of whether all or only part of them were crenelated. The first impression gained from the scenes depicted upon the reliefs is that crenelation is so typical and widespread in this period that it was probably applied to all parapet walls at Dur Sharrukin. Place accepted this assumption in his restorations.¹¹³ A closer study of the reliefs discloses the fact that crenelations are not as universal as seems at first apparent. They are seldom omitted from town fortifications, but upon buildings within the cities they are used but intermittently along with simple parapets. We are therefore inclined to follow

¹¹¹ Place, *op. cit.* I 137–48, esp. p. 142.

¹¹² *Ibid.* III, Pl. 34, Nos. 6 and 7.

¹¹³ *Ibid.* II 53.

this procedure in restoring the city of Sargon; for, just as the architect sought variation in his restricted use of buttress, niche, and reed, so he probably avoided the monotony of universal crenelations by limiting them to certain parapet walls. For strategic reasons, or as a result of their having their origin in defense, they no doubt were employed on walls and gates of town and citadel. Monumental portals of palace and temple, which appear to be but variations of defensive gate portals, were in all probability so adorned. Important façades decorated with niche-and-reed motives may have been crowned with crenelations, but we believe the simple parapet wall was employed far more extensively than the crenelated one.

As to the form of mud-brick crenelation, we may accept that devised after considerable study by Place.¹¹⁴ It is fundamentally the same as that which he found on the ziggurat (see above) with the omission of the lowest stage. It is therefore more in scale with the stone parapet wall of the terrace and more suited to the purpose for which it was intended.

APPLIED ELEMENTS

RELIEFS sculptured upon the alabaster orthostats which are built into certain exterior façades appear to be confined to Sargon's palace. They are furthermore, with a single exception,¹¹⁵ limited to those parts of the palace which were frequented by the monarch in the course of his domestic life or while carrying out his court duties. Placed side by side, they form continuous bands of sculpture 3 meters high around the throneroom court (VIII), around the central residential court (VI), and along all the façades facing upon the northwest terrace. At certain portals the flanking buttresses of which are adorned with winged bulls, genii, or mythological figures the height of the dado is increased.

With the exception of the portals just noted the representations upon the exterior reliefs are generally of heroic-sized human figures, sometimes accompanied by animals. They are usually arranged in procession, tribute-bearers or captives advancing or being led to the king. For emphasis or perhaps to relieve monotony, some color was applied to certain parts of the figures. Hair, beard, and the iris of the eye were tinted black, lips red, and parts of the dress red and blue. No attempt apparently was made to produce a brilliant polychrome dado by painting the entire slab. To Botta and Flandin we are indebted for a careful record of the reliefs in these exterior façades.¹¹⁶

Whether or not the three upright slabs set side by side in the terrace façade adjoining the loggia at Palace *F* were originally intended to be sculptured we are unable to say. They are of the same height as are the exterior orthostats of Sargon's palace and have inscriptions (chap. viii, No. 5) cut upon their backs. It may be that they were set in place during the construction of the walls and were later to be carved in relief, but for some reason never were subjected to the sculptor's chisel. At no other point within the excavated area of Palace *F* have any suggestions of exterior reliefs been encountered.

¹¹⁴ *Ibid.* II 53-57.

¹¹⁵ The exception is to be found in the buttress flanking the main portal directly at the summit of the great ramp which approaches the southeast façade.

¹¹⁶ Botta, *Monument de Ninive* I for reproductions, V for description. Some reliefs of Court VIII, overlooked by Botta, were recovered by the Oriental Institute excavations; see *Khorsabad* I 38.

ENAMELED BRICKS.—Despite the manifest love of color possessed by the Sargonid Assyrian, the exterior façades of Dur Sharrukin are primarily white, relieved only by the play of shadow. Two reasons, both of them practical and involved in the limitations of his material, no doubt prevented the architect from an extensive use of exterior color. Any design painted upon surfaces covered with a poor sort of plaster which necessitated frequent and constant repair would soon become fragmentary or patched. Secondly, no medium in which pigments could be mixed appears to have been sufficiently weatherproof to withstand the rugged climate of Assyria. The small colored members of the reliefs might easily be retouched from time to time, for the stone was permanent. But plaster which adhered imperfectly to the wall was an insurmountable obstacle to the use of painted exteriors. In enameled bricks, therefore, the architect found the only means whereby he could display the large masses of brilliant color and design of which he was so fond.

Used sparingly at most, enameled bricks are confined chiefly to the palaces, temples, and town and citadel gates. Perhaps so as not to detract from the reliefs, the greatest display of enameled bricks is in the temples rather than in the king's palace. For the tableaux, which at the temple portals take the place of the sculptured winged bulls and genii flanking the palace portals, present not only the greatest enameled surfaces but have in their designs the most magnificent figures attempted in this medium. They are in reality facing or retaining walls of shelves about 1.50 m. in height and extending the width of the buttress with a projection of 1.00 from the buttress face.

As already described by the author,¹¹⁷ the tableaux were set up, painted, taken apart for firing, and finally reassembled in their ultimate locations at the portals of the three major palace temples. Emblematic figures of a lion, an eagle, a bull, a fig tree, and a combination plow and grain-seeder are painted upon the front face, while upon the two ends are representations of the king and the prime minister respectively. At the Ningal temple, where lack of space limits the length of the shelf, the eagle and the bull are omitted from the tableau, which otherwise is the same as those at the temples of Sin and Shamash. Borders of rosettes serve as frames. The original color was brilliant. Outlined in black, the figures stood out upon an ultramarine blue background. They were of chrome yellow with deep ocher flesh and black hair and beards. The leaves of the fig tree were green, while the border rosettes were white-petaled with yellow centers and banding stripes. When found, the color had largely faded or disintegrated, during which process the blue apparently first turns to green before becoming a pale, dead yellow, while the green reverts to its primary blue.

The foregoing description applies practically without alteration to the two pairs of tableau-faced shelves subsequently found in the Nabu temple: one pair, each member of which is 5 meters in length, in the forecourt, at the entrance via Room 13 to the central court; the other, each shelf 7.50 long, in the central court, at the main entrance to the cella anteroom. From their fragmentary remains we are able to recognize upon the front face of the former the lion, fig tree, and combination plow and grain-seeder (Pl. 17 *D*), while upon the latter the full array, including the eagle and the bull, can be identified. The end figures of king and prime

¹¹⁷ *Khorsabad* I 92-97, 102-4, and 112.

minister are similar to those in the palace temples. The only difference in design lies in the borders of the central court tableaus. In the palace temples and in the forecourt of the Nabu temple all borders are of simple rosettes between parallel bands. Two types of border, however, are found in the one exceptional case. The lower one, near the pavement, consists of a continuous inverted U-design very similar to the conventionalized representation of mountains. The top horizontal and all vertical borders are of rosettes within circles which in turn lie between parallel bands. Upon the end panels the vertical border is at the outer angle rather than in its usual position at the side next to the buttress. The coloring is apparently the same in all examples.

More widely distributed but of less individual surface area are the enameled brick archivolts inset above mud-brick vousoirs over certain portals of palace, temple, and gate. While they were found intact by Place at Town Gate 3 only,¹¹⁸ we may infer from the glazed bricks encountered in other gates and at certain portals of palace and temple that the use of identical or at least somewhat similar curved panels was fairly widespread. In Place's complete example the design consists of the traditional winged genii with bucket and cone alternating with large encircled rosettes.¹¹⁹ Bands of small rosettes make up the usual border. The colors are apparently the same as are those of the temple tableaus. The design may have been somewhat simplified in palace and temple portal, though in many instances rosettes and also fragments of the winged genius may be recognized on the broken bricks in the debris. The similarity expressed in the architecture of gate, palace, and temple portal may very well extend to their polychrome decoration.

But two other instances of the application of enameled bricks to exterior decoration are known. In alternate horizontal joints of the stone facing of the arched bridge connecting palace and Nabu temple and of the palace terrace between its south corner and this arch are single rows of enameled bricks setting off the courses two by two (see Pl. 12 B). At the time of excavation most of the bricks had deteriorated beyond recognition, but enough remained in position and in a sufficient state of preservation to give positive evidence that originally a single band of rosettes, white-petaled and yellow-centered upon a deep blue background, was thus employed. These provide a strange and at Dur Sharrukin a unique example of the use of stone and enameled brick in combination, a method of joint-pointing whereby the effective scale of the masonry is increased.

In the central court of the Nabu temple a freestanding structure, 1.50 meters square and of uncertain height, directly before the main entrance to the cella anteroom is of enameled bricks (Pl. 22 C-F). Because of its material and its position some 8 meters from the portal it becomes a decorative element of the court rather than of a façade. Only fragmentary remains of four courses were found *in situ*, the lowest course forming a projecting base. The enamel had so deteriorated that no design could be ascertained either from the bricks in position or from those in the debris. Faint traces of some foliate pattern, however, suggest, but with more imagination than certainty, the fig tree of the tableaus. Equally conjectural are the height and function of the structure, although from the paucity of bricks among the debris any great height seems unlikely. It may have been a low

¹¹⁸ Place, *op. cit.* I 174 f.

¹¹⁹ *Ibid.* III, Pl. 14.

altar connected in some way with the temple ritual, or less possibly an obelisk, purely decorative or possessed of a religious significance. In any event its brilliant enameled faces added color and decorative interest to this temple court. It may have had its counterpart in the central court (XXVII) of the palace temple area, wherein Place found at the intersection of his fictitious diagonal walks traces of some ornamental structure.¹²⁰

During our excavation of both palaces and the Nabu temple, bricks with enameled surfaces have been found from time to time in places which preclude a part in any of the aforementioned uses. The standard border rosette appears most frequently, but occasionally are encountered fragmentary representations of the human figure and bits of enameled text such as Botta found in that area of the palace in which he worked.¹²¹ Since no definite allocation can be assigned to them, we can only offer the suggestion that they may in some manner have formed bands or panels in exterior or interior walls.

The only place in which enameled bricks have been discovered in buildings other than palace, temple, or gate is the small vestibule (K 15) of the secondary stairway in the central court of Residence K. Piled, when found, in a haphazard manner against the wall were several baked bricks enameled along their narrow faces. They could not, therefore, have been employed in this room, nor is it certain they were intended for use in this building. They, like the carved column bases (p. 31) with which they were found, were deliberately placed in this small chamber, perhaps a hiding-place for stolen goods or possibly a temporary storage room. The most interesting fact concerning these bricks is their small size—0.23×0.24×0.07 m. and 0.11×0.24×0.07. Bricks of this size, whether sun-dried, fire-baked, or glazed, have been found nowhere else throughout the entire excavations. They were doubtless destined for some special use. Whether it was in conjunction with the column bases or was exterior or interior, we do not attempt to say.

SIKKĀTI (WALL PEGS).—Found in great quantities throughout the debris of the palace temple area and the Nabu temple, especially in the courts, were carafe-shaped bottles of coarse pottery, pierced centrally with an aperture about one centimeter in diameter at the bottom of the base (e.g. Pl. 63, No. 250). Complete or intact specimens are rare, but their peculiar shape is easily recognized in the many fragments from temple debris. Shapes vary, but a general tendency toward squat body, about 12 cm. in greatest diameter, and long, tapering neck is maintained, the total height averaging roughly 25 cm. They bear neither inscription nor decoration of any sort other than occasional rim and molding on the neck.

In the author's account of the excavation of the palace temple area some doubt was expressed as to the function of these clay bottles.¹²² They were considered to be vessels used in the temple ritual, as suggested by their likeness to bottles held in the hands of the stone figures which stand at temple entrances, or to be *sikkāti*, pegs inserted into the walls. Since the excavation of the Nabu temple, however, only the former possibility remains conjectural, for *in situ* in the outer wall of this temple were found *sikkāti* (Pl. 15 A-C) which were in fact carafe-shaped bottles with their necks inserted into the wall. Such a type of wall peg is both awkward and fragile;

¹²⁰ *Ibid.* I 115.

¹²¹ Botta, *op. cit.* II, Pls. 155-56.

¹²² *Khorsabad* I 98 f.

but it was not an experiment at Dur Sharrukin, for similar ones found at Assur can be dated from their inscriptions to the reign of Shalmaneser II¹²³ and to that of his later namesake, Shalmaneser III.¹²⁴

From Sargon's Nabu temple we learn for the first time how this type of *sikkatu* was employed, for those from Assur were not found in place. Spaced with but fair regularity, about 80 cm. apart, they project from the wall surface in a horizontal line slightly below the floor or terrace level of the temple (Pl. 15 A and Fig. 6). Since the outer wall is preserved to this height only around the forecourt, where no terrace exists, we cannot be certain whether or not the *sikkāti* extended around the entire building. We are inclined to believe they did, however, for the projection of their line would fall just below the parapet wall of the terrace, so that they would form a sort of frieze immediately above the vertical niches and reeds. In such manner they were probably employed near the parapet walls of roofs also. Their presence in the

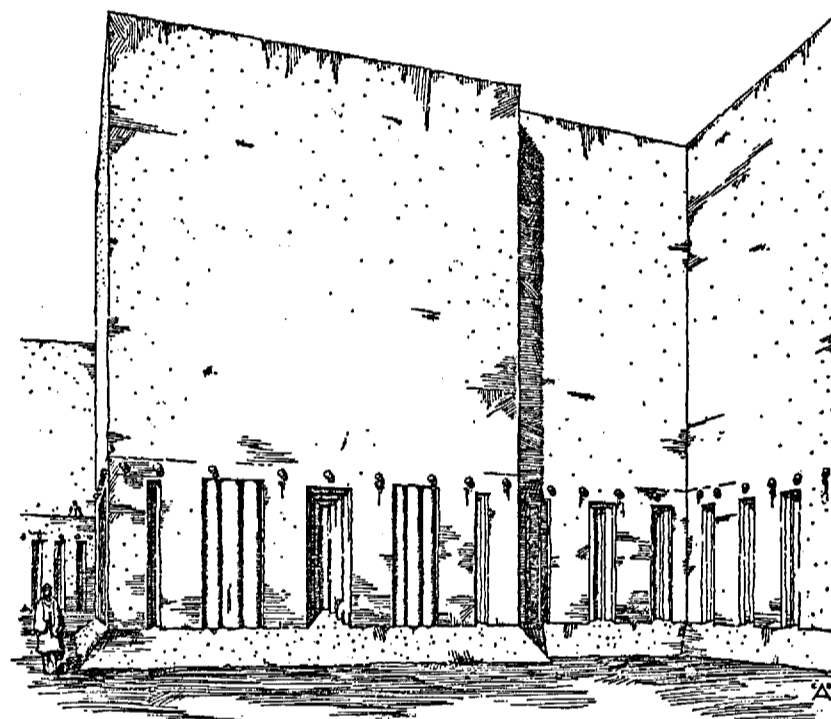


FIG. 6.—RESTORATION OF THE EXTERIOR ANGLE AT THE NORTH CORNER OF THE NABU TEMPLE FORECOURT, SHOWING THE ROW OF *sikkāti* ABOVE THE NICHE-AND-REED DECORATION

debris of courts at once establishes their use in such exterior walls—high up, no doubt, in order to avoid interference with niche and reed. Similarly we assign them to true exterior façades, justifying such assignation by the general uniformity between court and outer wall and by the Assyrian tendency toward repetition. We believe therefore that between niche-and-reed motives and parapet wall a frieze of *sikkāti* graced all exterior temple façades.

Such a frieze could have been neither handsome nor impressive. While the *sikkāti* were set into a three-course band of baked bricks which apparently existed for no other purpose, although mud brick would have served equally well or better, only the body or bowl of the *sikkatu* was exposed; for the lime plaster which covered the mud-brick wall covered the baked brick as well and was partially intact when first exposed during excavation. The only decorative value of a frieze of *sikkāti* lay in the shadows they cast upon the wall,

¹²³ Walter Andrae, *Der Anu-Adad-Tempel in Assur* (Leipzig, 1909) pp. 40–42 and Pl. XXII.

¹²⁴ Walter Andrae, *Die Festungswerke von Assur* (Leipzig, 1913) p. 173 and Pls. CI–CIII.

for because of their height above ground or floor they would appear only as small, insignificant pink or buff knobs.

Any interior use of *sikkāti* seems improbable. Fragments of some, it is true, have been found within rooms, but by far the great majority were in the debris of courts. They may have found their way into rooms through the falling of court façades backward rather than forward, or they may, as has already been suggested, have served not as wall pegs but as ceremonial vessels.

In view of their poor decorative value, why were *sikkāti* employed? The hole in the base at once suggests that some function was served thereby—drainage perhaps, or a passage for air to facilitate the drying-out of the wall after a heavy rain. Neither of these alternatives is plausible. One might argue that at the base of the parapet the wall is most subject to moisture caused by seepage from improperly drained roof or terrace and that *sikkāti* were placed at these crucial points as remedial instruments. Such may be a satisfactory explanation for their location, but it in no way accounts for the fact that they are found only in temples and not in other buildings the construction of which is in principle exactly like that of the temples. We must therefore discard any theory based on structural properties and turn to a religious significance as a possible reason for our *sikkāti*.

From the earlier Assyrian kings onward there are numerous text references to *sikkāti* in connection with the temples. In a text written more than one thousand years before Sargon, during the reign of Shamshi-Adad I, we read of the hope that the *sikkāti* be replaced should the temple be destroyed.¹²⁵ Which of the many meanings of the word was intended there is no way of telling, but it is evident that the *sikkatu*, in this case at least, had an important connection with the temple. The same concern for *sikkāti* in the restoration of the temple is expressed by Shalmaneser III in his inscriptions on the very *sikkāti* found within that temple.¹²⁶ Sargon himself makes no reference to the wall-peg *sikkāti*, but in the account of his eighth campaign he mentions a golden *sikkatu* as securing the lock of the temple door.¹²⁷ Here the word obviously has another meaning, but it nevertheless has, by accident perchance, some connection with the temple.

While the inscriptional material is by no means conclusive, it is at least sympathetic toward the idea that some religious significance may be attached to the bottle type of *sikkatu* found in the temples at Assur and at Dur Sharrukin. The suggestion comes primarily, however, from two archeological facts: that they lack decorative or structural value—a conclusion based not necessarily on modern appraisal but evident from their limited use—and that they are confined solely to the temples.

EMBOSSSED BRONZE.—Thin sheets of bronze, cut into rectangular plaques and delicately embossed, appear to have two specific uses as decorative elements. Nailed to the wooden door leaves, they no doubt are the “sheathing of shining bronze” to which Sargon himself refers in the description of the doors of his palaces (see p. 25). Wrapped around the wooden shafts which protrude vertically from the tableau shelves at either side of the main temple portals, and fastened securely thereto by bronze nails, they are possibly the metal

¹²⁵ *Altorientalische Bibliothek I* (Leipzig, 1926) 26 f.

¹²⁶ Luckenbill, *Ancient Records of Assyria and Babylonia I*, §§ 699–702.

¹²⁷ François Thureau-Dangin, *Une relation de la huitième campagne de Sargon* (Paris, 1912) pp. 58 f., line 374.

yokes which entered into the ritual of the New Year festival as described by Sidney Smith.¹²⁸

Whether the door sheathing was confined to temples, as are, quite naturally, the yokes upon the shafts, or was likewise employed elsewhere—in palace and gate—we cannot state with certainty. There is little likelihood that the doors of residences were so decorated, for among the debris of five dwellings not one fragment of a sheathing plaque has been encountered. One small piece (chap. vii, No. 28), found in Court 41 of Residence *K*, is so unlike the usual bronze *re-poussé* work in character that it may well be considered intrusive. No fragments of embossed bronze were found in Palace *F*, nor do Botta and Place record any from Sargon's palace except a few in the "harem," which we now know to be the temple area. The excavation of but such a small portion of Palace *F*, however, prevents from being conclusive our failure to find therein evidence of door sheathing. But in our examination of Sargon's throneroom there came to light some tiny bits of bronze showing unmistakable traces of embossing. They were too few and fragmentary to disclose their original function, but they at least suggest in their similarity to known door plaques that the door leaves of the throneroom portals were covered with embossed bronze. If these doors were so adorned, it is highly probable that those in the large portals facing the terrace were similarly decorated and that the sheathing was perhaps removed with the doors in antiquity or was overlooked in Botta's excavation. There is nothing indicative of bronze-covered doors in the portals of Town Gate 7 or of the citadel gates, nor does Place record such findings at the other gates.

In the temples, on the other hand, there is generous evidence for door plaques. They may sometimes have been of silver, as a letter written to Sargon would lead us to believe (see p. 16). In the Nabu temple upon actual threshold (Pl. 20 *E*) or immediately within the room where the door leaf might easily have fallen (Pl. 20 *D*) are found many fragments of embossed bronze. Unfortunately they are but seldom sufficiently intact to permit even a restoration of their designs. The fragmentary plaques found by Place within the Adad temple ("chambre à coucher 166") undoubtedly once adorned a door leaf of its portal rather than a stair balustrade or a bed as he suggests.¹²⁹ Their exact position when found, which he fails to note, matters little, for a high door falling within such a small room might leave its mark almost anywhere within that area. In the court of the Ningal temple (Court XXXI) the many bronze fragments encountered in the ash layer may well have come from the temple doors, added perhaps to the intentional conflagration which here took place.¹³⁰ Archeological evidence therefore points to the fact that certain doors of temples and probably of palaces, of that of Sargon at least, were "covered with a sheathing of shining bronze," while those of gate and private residence were without such decoration.

The only shaft bands or yokes which have been found sufficiently complete for positive identification are those upon one of the shafts at the entrance to the Shamash temple.¹³¹ Each yoke, composed of two registers of figures, is 70 cm. high, with narrow horizontal bands of rosettes bordering each register, the middle one being common to both regis-

ters. The heads of the nails with which the band is fastened to the shaft form the centers of the rosettes. The figures are diverse, a few complete but most of them fragmentary. Included in the arrangement, whatever it may have been, are such individual figures as a man leading a bull by its horns, a man walking by himself, a bird in flight, and two figures reminiscent of the fig tree and combination plow and grain-seeder which appear upon the enameled brick tableaux. They are very similar to the fragmentary figures upon the bronze found by Place in the Adad temple (Room 166).¹³² The workmanship involved in their execution is excellent, with remarkable wealth of fine detail skilfully displayed in facial features, hands, hair, beards, and dress. The metal craftsman was no less expert than the stonemason.

Embossed bronze of quite a different nature was found by Place upon the shafts at the entrance to the Sin temple. He concludes that the shafts at this portal were completely incased in bronze embossed with an allover scalelike design, the casing being covered with gold leaf.¹³³ At the Ningal temple the debris suggests, without any degree of certainty, bands rather than a complete casing as the decoration of the shafts. At the Nabu temple the bronze, whatever its form, had been completely removed in antiquity, carelessly enough, however, so that some of the nails were left in the shaft (Pl. 22 *A*).

The plaques upon the door leaves are not greatly unlike the shaft bands of the Shamash temple. Each plaque, however, contains but a single register, bordered, in the examples found, not by rosettes but by bands of twisted-rope design, the nailheads taking the place of every third knob which protrudes between the twisted strands (Pl. 49). The figures embossed thereon are as finely executed and as varied in subject as are those of the shaft bands. Fragmentary or complete portrayals of men, a horse, mythological figures, a clump of reeds, and the ever recurring combination plow and grain-seeder have come to light (Pls. 49–50). Innumerable other fragments bear figures too incomplete for identification.

The plaques themselves, including borders, average about 25 cm. in height and probably had a width equal to that of the door leaf. They apparently did not cover the entire surface of the door, but were used rather as intermittent horizontal bands. The only instance where two have been found in relationship one to the other indicates that the spacing, at least in this individual case, about equaled the height of the band. It is doubtful whether the bands were spaced evenly from top to bottom of the door. They may have been grouped, as suggested by Plate 20 *D*, perhaps giving the appearance of massive hinges. No matter what their arrangement, they were decidedly ornamental and in their original shining state added considerably to the monumental magnificence of the great portals.

WOODEN SHAFTS.—Rising vertically from the tableau shelves beside the major temple entrances are tall shafts of wood. Wrapped with embossed bronze in the form of gilded casing or of individual bands, they were unquestionably decorative. Their position only at temple portals, however, suggests a religious symbolism as well—possibly that of the sacred tree which entered into the ritual of the Assyrian New Year festival. But we are here concerned primarily with their value in the composition of the portal decoration.

¹²⁸ London Institution, *Bulletin of the School of Oriental Studies* IV (1926–28) 69–76, esp. p. 72; cf. *Khorsabad* I 98.

¹²⁹ Place, *op. cit.* I 129. ¹³⁰ *Khorsabad* I 109. ¹³¹ *Ibid.* pp. 104 f.

¹³² Place, *op. cit.* III, Pl. 72.

¹³³ *Ibid.* I 120–22 (where "XXX" should be "XXVII") and III, Pl. 73.

Owing to their perishable nature, but little unfortunately remains upon which to base a restoration. That they were of cedar, with base diameter of 50 cm., and were set in the corners of the shelves 40 cm. behind the front and portal faces of the tableaux is known from the entrance to the Sin temple.¹³⁴ At the same portal Place found a bronze casing extending horizontally 9 meters in the debris and concluded that the shaft must have reached a height of 10 or 11 meters. Were we able to determine the exact significance of these shafts we might more readily make an intelligent restoration of their complete form, but without a shred of direct archeological evidence we can resort only to conjecture. To Place's arbitrary restoration as palm trees two obstacles are encountered. Were the branches actually those of living trees fastened to the tops of these great shafts, they would after a few days' time become a sorry sight. Were they artificial, in order to gain permanency, we must recognize in their creation an art or a craft for which there is to date no archeological justification. We are inclined therefore to believe that each of these shafts was originally topped by some formal standard, religious or otherwise, a simple knob perhaps, or, if we profit by a hint from the reliefs, a disk. As the latter one might even interpret the "golden dish" which Mr. Smith refers to as, in at least one case, set upon the top of the trunk. Such a restoration, while by no means a certainty, does reflect some pictorial and textual suggestions and at the same time adds dignity to the composition of the portal.

STATUES.—Alabaster statues, slightly less than life-sized human figures, standing at the outer corners of the tableau shelves as if guardians of the temple entrance, present a problem similar to that of the wooden shafts as to how far they are decorative or symbolic. Carefully executed, they represent the human figure considerably stylized in body and dress but with definitely lifelike features.¹³⁵ Masses of curls fall from under a crown with two pairs of horns, the crown supporting a square, hollowed-out receptacle (Pls. 45 and 47). A flowing beard extends down the chest to the top of a carafe-shaped vessel similar to the *sikkāti*, held at the waist by both hands. Water, in conventionalized wavy bands, spouts from the mouth of the vessel and flows to the fringed hem of the garment, two streams down the front, two over the shoulders and down the back. Bare feet protrude from under the garment.

There can be no question but that such statues enhanced the temple portals. That they have some religious significance as well seems no less certain; for they are found only in temples, along with tableau and shaft, or by themselves at portals with no other applied decoration. Were they cult figures they would stand in sanctuary rather than at entrance, but the horned crown implies at least some degree of divinity. They may have assumed some part in the temple ritual; or they may signify no more than the fact that the portal led to a temple, in which event we may look upon them as conventionalized guardians of the sacred precincts.

INTERIOR DECORATION

The elements of interior decoration may, like those of exteriors, be classified as architectural and applied. Many of them are common to exterior use as well, some being identical in form and manner of employment both inside and outside,

¹³⁴ *Khorsabad* I 97 f.

¹³⁵ *Ibid.* p. 98.

while others appear similar in form but different in purpose. In order to maintain a complete classification of interior decorative elements a certain amount of repetition and overlapping cannot therefore be avoided.

ARCHITECTURAL ELEMENTS

NICHES.—While the exterior niche in all its various forms is strictly decorative, the interior niche sometimes borders upon the, or frankly becomes, utilitarian. Since the most obviously utilitarian niche has some decorative quality, even though it be secondary, all types of interior niches are included in this section.

The broad, shallow niches, spaced more than a meter above the floor, usually with rabbeted edges and always with backs molded in standard reeds, are of all types the most decorative. Centrally placed in the back walls of temple sanctuaries, they form framed backgrounds for the cult statues. In the main sanctuary of the Nabu temple a mud-brick platform upon which the figure of the god probably stood is built up nearly to the level of the niche and extends slightly beyond it on either side (see Pls. 25 *D* and 84). In the other sanctuaries the cult figures must have stood upon more perishable or movable bases; for in no other temple have such mud-brick structures been found, nor are there any traces of them such as the channel drain which outlines their area in the pavement. Without the platform the niches upon excavation stand out by themselves (Pl. 26 *E*).¹³⁶ So stripped of accompaniment, they are almost identical with those which appear to be no more than independent decorative panels. Of such niched panels but two examples have been found, both of them in the Nabu temple. They are placed directly opposite the broad entrance portal, one in Room *H* 14 (Pl. 18 *A*), which as a minor shrine has its platform at the end at some distance from the niche, and the other in Room *H* 17 (Pl. 23 *A*), which appears offhand to be no more than an important connection between Court III and the central court of the temple but probably enjoyed a certain sanctity. There is practically no variation among any of these niches, which are 3.00–3.50 m. in width and 0.30–0.40 in depth. Whether they extend to the ceiling or end at some arbitrary height we have no way of knowing, for they have never been found intact to a height of more than 3 meters. Those in the sanctuary of the Sin temple and Room *H* 14 are the only examples with plain rather than rabbeted edges.

A second type of niche is in most respects similar to that just described. The major difference between the two types is the presence of reeds in one and the lack of them in the other. Two examples have been found, one in Room *H* 12 of the Nabu temple and the other in the throneroom (*F* 23) of Palace *F*. Both spring from levels above the floor of the room, that in the Nabu temple from a raised dais which may have been the platform of a shrine or a podium from which a speaker might address an audience (Pl. 18 *D–E*), that in Palace *F* from the monolithic throne base. These niches, or at least that in Palace *F*, served as backgrounds for living beings rather than for statues. In the Nabu temple the niche is centered on neither room nor podium, but is set to one side, perhaps for structural reasons (see p. 29). Framed with a double-rabbeted molding, it is 2.40 m. wide and 0.80 deep.

¹³⁶ See *Khorsabad* I, Figs. 123 and 125, for similar niches in the Sin and Adad temples.

In the Palace *F* throneroom the niche has more the proportions of the sanctuary niches, measuring 4.10 in width and 0.30 in depth. It too is framed with double rabbeting. The height in both instances is as conjectural as in the case of the niches with reed backs.

The remaining types of niches are less decorative in form and are more widespread in their distribution in palace, temple, and residence. The most common type springs from the floor, is rectangular, and is completely devoid of molded decoration. It may vary in width from 1 meter to 2.50, with an average depth of about 0.40. In one instance, in Room *K* 49 in the service area of Residence *K*, it was found intact, spanned horizontally at a height of 2 meters from the floor (Pl. 34 *B*). We may therefore infer that some, if not all, examples of this simple type of niche terminated at a point not far above the floor and did not extend to the ceiling.

To what extent these niches were intended to be decorative or utilitarian is difficult to determine. In many instances where they balance doorways or other architectural motives decoration would appear to be the primary reason for their construction. In numerous bathrooms, on the other hand, they play a very practical part in the sanitary arrangements, for in the more important of the rooms designed for this purpose the drain is placed centrally within a niche and thereby further removed from the center of the room. In Sargon's own bathroom the middle of the three limestone paving slabs which extend into the niche is pierced to serve as the drain orifice.¹³⁷ In one of the more important bathrooms, Room *K* 29 in Residence *K*, a pierced stone paving slab set into the bitumen-covered brick floor serves the same purpose (Pl. 33 *A-B*), while in a bathroom (*K* 47) in the service area of the same residence the drain orifice is cut into a stone no larger than the adjoining bricks (Pl. 33 *E*).

Another type of undecorated niche is found in the Nabu temple and in Residence *K*. It would no doubt have been found elsewhere had walls been preserved to a greater height. Like those just described, the niches of this type are rectangular, free of moldings of any sort, and suggestive of a dual purpose. They do not, however, spring from the floor, but are set into the wall some distance above it to provide shelves. Two such niches, symmetrically located, one on each side of the smaller sanctuary of the Nabu temple, are from their positions definitely suggestive of shelves for the display of statues or other articles of temple furniture (Pl. 26 *D*). Identical with each other, they are placed 1.60 m. above the floor, are 1.00 wide, and 0.80 deep. Their height unfortunately cannot be determined, but it is certainly no less than a meter and probably not much more. Their counterpart in Residence *K* is found in three niches irregularly placed in two walls of Room *K* 49 (Pl. 34 *A*). Here they remain intact, having widths of 0.45–0.95, depths of 0.40–0.60, and heights of 0.45–0.80, and averaging 1.25 from the floor of the room. Placed as they are in the services and being of such proportions, they immediately suggest convenient depositories for objects of everyday use rather than settings for ornamental figures.

Similar in purpose to the shelf niches but entirely different in construction are the small niches built in horizontal tiers within a room rather than in the wall. But two groups have been found, both in the Nabu temple. Across one end and extending partially down the two sides of Room *H* 5 is one

group, arranged in three tiers (Pl. 19 *C*). Individual niches are 0.25–0.30 square and 0.40–0.50 deep, separated from one another by 10-cm. partitions. A few fragments of inscribed prisms and tablets found within the niches are indicative of, but do not prove the existence of, a temple library. If this was a library, it had been completely stripped of its contents before the destruction of the building. A second group extends across one end of Room *H* 15, this composed of but two tiers of niches (Pl. 24 *D*). No objects of any sort were found within these niches, but the great similarity in size and arrangement between these and the others leads to the inference that both groups existed for the same function.

The deep, narrow niches which appear in the long corridors partially surrounding the cellas of the Nabu and Shamash temples have already been mentioned.¹³⁸ But 15 cm. in width and of indeterminate depth, with sides plastered for an arm's length from the wall face, they are of questionable function. Those in the Shamash temple were first considered as possible means of fenestration—a theory which was later discarded in view of their more extensive use in the Nabu temple. Their great depth is totally unnecessary and wasted, had a desire for decoration been the sole motive which prompted their construction. We can only surmise that a significance related somehow to the temple entered into the incorporation of such niches within certain specific temple walls.

REEDS.—The reed, so freely used in exterior decoration, is but sparingly employed in interiors. Although its form remains the same in both cases, in interior use it loses its accompanying element, the rabbeted niche, with which it is almost universally combined in the various exterior motives. The temples furnish the only examples of its interior use, the most frequent of which are the broad shallow niches of sanctuaries and certain other rooms. Standard groups of seven form the backs of such niches, the only known variation from this number being in the Adad temple, where there are but six reeds. Similarity of plan, however, suggests that the same arrangement of six might be found in the Ea and Ninurta temples, were they to be completely excavated. There can be no doubt that the reeds were cut abruptly at the top of the niche, for the even number employed in the Adad temple at least precludes the horizontal upper arrangement worked out by Place.

Of the interior use of reeds outside the niche there are but two known examples, both in obscure rooms of the Nabu temple. Groups of seven, unframed and unaccompanied, appear in the walls of Rooms *H* 26 and *H* 25, being placed directly behind the niches of the major and minor Nabu sanctuaries respectively. As no such group of reeds was encountered in our excavation of Room 170, which is directly behind the sanctuary of the Shamash temple, it is probable that this use of reed decoration is peculiar to the Nabu temple.

MOLDINGS.—The only type of molding which may be called an integral part of interior construction is the rabbeted molding which in its simplest single-grooved form or in its more complex double- and multiple-grooved versions frames certain niches and portals. Other types, found upon thresholds and orthostats, are discussed with the applied decoration of which they are a part (p. 49). There is no difference in size or method of employment between the exterior and the much more limited interior use of the rabbeted molding. Bordering

¹³⁷ *Ibid.* Fig. 26.

¹³⁸ See p. 26 and *Khorsabad* I 126 f.

niches, it is found with single or double rabbets and is confined to niches of a decorative nature in temple or palace and to the nichelike alcoves in the three minor palace temples. Its use in portals is even more limited, in proportion to the great number of portals throughout the several buildings. In the temples only those portals opening off anteroom, cella, or sanctuary are framed with moldings, singly or doubly rabbeted. As in the exterior portals of their courts, the molding springs not from the floor but from an arbitrary point some centimeters above it. Exceptions are to be found, however, in the broad openings between cella and sanctuary, for which an explanation may lie in the fact that these are not true portals. For cella and sanctuary in reality are one, with a suggested rather than an effective separation expressed in the piers framing the broad opening between them. Another similarity between the exterior and the interior use of molding in temple portals is found in its application only to the external angles, that is, to the angles one faces when proceeding from court toward innermost room.

Place leaves no record of any rabbeted interior portals in Sargon's palace, nor do we encounter any in Palace *F*. It is therefore all the more surprising to find the most elaborate rabbeting of all in Sinahusur's residence. It is by no means general and, like the portico in the same building, should perhaps be considered a special rather than a typical case. For not even in Residence *K*, which equals Sinahusur's dwelling in grandeur if not in size, is there a parallel to the portals of the two principal rooms, *L* 40 and *L* 38, of what must have been Sinahusur's private suite. The walls are lined with orthostats; yet all portals, with but a single exception, leading to other chambers or connecting these two are framed with mud-brick molding formed of three or four rabbets, their number depending upon the wall thickness. Even more unique is the fact that in two of the three portals by which these rooms are connected the molding is found upon all four angles, the portal thereby appearing the same from either room. Such a strange combination of mud-brick and alabaster decoration must have been far from successful not only from our modern point of view but from that of the Assyrian, who seldom combines materials in any but a logical manner. The construction of the portals of this suite, unprecedented and apparently foreign to Assyrian taste, may well be classed among the experiments of the architect of Dur Sharrukin.

APPLIED ELEMENTS

RELIEFS.—There is no fundamental difference, in execution or in manner of application, between exterior reliefs and those which line the walls of rooms and portals. All are of alabaster, are cut with the same degree of relief, have corresponding touches of color, and are of the same general size. Even their distribution is similar, although somewhat more widespread in the case of interior reliefs. It has already been noted that exterior reliefs are almost entirely confined to those parts of Sargon's palace wherein the king resided and carried on his affairs of state. The same limitation applies to most of the interior reliefs. They form 3-meter dados throughout the rooms devoted to his domestic and court life; but, furthermore, in the form of winged bulls and genii they line portals elsewhere in his palace, at Palace *F*, and in certain town and citadel gates. They are never employed in temple or in private residence. Chiefly notable for the mate-

rial of which they are carved are the exceptional basalt reliefs which line the interior of Botta's small, isolated building situated near the west corner of the palace platform. Though incapable of identification, this building no doubt served in some capacity the daily needs of the king.

Far greater variety of subject than is allotted to exterior reliefs is expressed on those which line the interior walls of the palace and which have been carefully recorded in detail by Botta and Flandin.¹³⁹ Representations of events of the campaigns, scenes from the royal hunt, banquets perhaps in celebration of Assyrian victories, files of captives with trains of animals, and processions of subjects bearing tribute to their king are all to be found in the reliefs of the palace. The scenes often are in two registers separated by a band of inscription describing the annual campaigns and the building of Dur Sharrukin. A nice recognition of scale is discernible in the distribution of the reliefs having single and double registers. Those of two registers, in which individual figures are accordingly considerably less than life-sized, are generally to be found in the smaller rooms; when they adorn the larger chambers they are used in conjunction with single-register sections, the heroic-sized figures of which are thereby emphasized, so that an ensemble is created which is in keeping with the scale of the room.

The reliefs in the portals are so standardized in subject that the only variation in the conventionalized human-headed winged bull is to be found in its size, determined no doubt by the portal itself, and in its occasional accompaniment by a winged genius. The latter may be full-faced or in profile, with two or four wings, but is always pictured in the traditional position with cone and bucket (Pl. 9 *D*). In palace portals, including the single example at Palace *F* (Pl. 39 *D-E*), the bull stands alone, facing the exterior, while in citadel gates and the three sculptured gates of the town it stands in like position with its accompanying genius directly behind it (Pl. 7). In every portal the reliefs on opposite sides are identical but in reversed position, so that both figures face in the same direction. The guardian bull of the portal is unquestionably the most characteristic single element of Assyrian sculpture.

UNSCULPTURED ORTHOSTATS.—Structurally similar to the palace reliefs but unlike them in almost every other respect are the unsculptured orthostats found in gate and residence. They fall into two distinct types, differentiated from each other by location, material, and purpose. Those at the gates are of limestone and are utilitarian. They line all portals through which traffic from field to town or from town to citadel must pass save the outermost portals of the citadel and of three of the town gates which have interior faces covered with bulls and genii.¹⁴⁰ Since they line only the corners and walls of the direct passages and not the entire gate chambers, their purpose is obviously protective. They rest upon a limestone curbing 0.30 m. high and are themselves 1.35 in height.

Those in residences are of alabaster. Their use is limited, apparently restricted to the master suites of the most important dwellings, where private court, anteroom, bedroom, and bathroom may individually or collectively have their walls so adorned. In Residence *K* one entire suite (Court 38 and Rooms 26-28) and one end of Room 24, including its portal,

¹³⁹ Botta, *Monument de Ninive* I-II for reproductions, V for descriptions.

¹⁴⁰ See Citadel Gate *A* in our Pl. 7 and lining of Town Gate 7 in *Khorsabad* I, Fig. 5.

of a second suite are decorated in this manner. So in Residence *L* are the private apartments of Sinahusur (Rooms 35-41), with the exception of two. It has already been suggested that painting may have been applied to such orthostats but have completely disappeared during the course of time (p. 15). A plain alabaster dado 1.50 high, in contrast to the brilliantly painted upper walls, seems more likely, however, especially since no trace of drawing or color can be recognized upon the slabs today.

PAINTED DECORATION.—Covering the greatest total area of any single interior decorative element is the painted decoration applied to the walls and ceilings of palace and residence. Yet so perishable is its nature that its consequent destruction leaves little that can be restored. Applied in bril-

lection in which toppled the superstructure. We are accordingly unable to state just which rooms were with or without painted wall surfaces. The broad though not prolific distribution of such evidence, however, strongly implies that most if not all rooms frequented by master and guest had walls painted entirely or in part with varying designs predominantly of brilliant red and blue.

The single instance of a wall fallen intact permits the restoration of a complete wall of the great hall of Residence *K* (Room 12). How the design and color, not only of this fortunate find but of many small fragments as well, have been recovered is described in chapter v by Mr. Altman, who, often under most adverse conditions, laboriously traced and recorded whatever evidence remained of this once brilliant element of decoration.

Simpler and even more widespread are the painted black dados of varying height which are almost universally applied to both interior and court walls and to portals throughout all buildings (Fig. 7).

THRESHOLDS.—The Assyrian love for decoration is perhaps nowhere more manifest than in the fact that such a definitely utilitarian object as a threshold should occasionally have carried thereon some of the most delicate ornament ever wrought by Sargon's sculptors. Examples of such elaborately decorated thresholds are extremely rare and cause considerable consternation by their surprising distribution. One would naturally expect to find them most abundant in the king's palace, yet neither Botta nor Place records any evidence of their presence therein. The latter mentions the existence of sculptured thresholds, but cites only an example from Nineveh. We may therefore infer that he found none in Sargon's palace. The temples are equally barren of such thresholds. Yet the two citadel residences which face the "square" before the palace have three apiece.

In the three wide portals through which one passes, via Rooms *L* 119 and *L* 116, from forecourt to central court of Sinahusur's residence are thresholds similar to one another in their sculptured design and varying only according to the dimensions of their respective portals. Their surfaces are completely covered with ornament (Pl. 36 *A*). Running from side to side near the mid-point is a seven-line inscription (chap. viii, No. 2) which identifies the building as the residence of Sinahusur, who in turn is thereby established for the first time as Sargon's grand vizier. The areas above and below the inscription are entirely filled with the usual daisy-like rosettes, each in its individual square. A desire for inscriptions upon the thresholds of palace and temple therefore does not of necessity preclude the use of a decorative design thereon.

The three sculptured thresholds of Residence *K* are more richly decorated than those in Sinahusur's dwelling. They pave the portals leading from forecourt to great hall (Room *K* 12). Those in the two narrow side portals are identical and were found *in situ*, one with its carved surface practically obliterated by weathering, the other in an almost perfect state of preservation (Pl. 30 *B*). There is no inscription. The design, lacelike in its fine detail, sharpness of outline, and depth of carving, covers the entire surface. It is composed of but two motives, both of them favorites of the Assyrian decorator, whether sculptor, painter, or ceramist. Outstanding is the bud-and-flower, which is augmented by the daisy rosette. Whether the "flower" is the Egyptian lotus or, as suggested

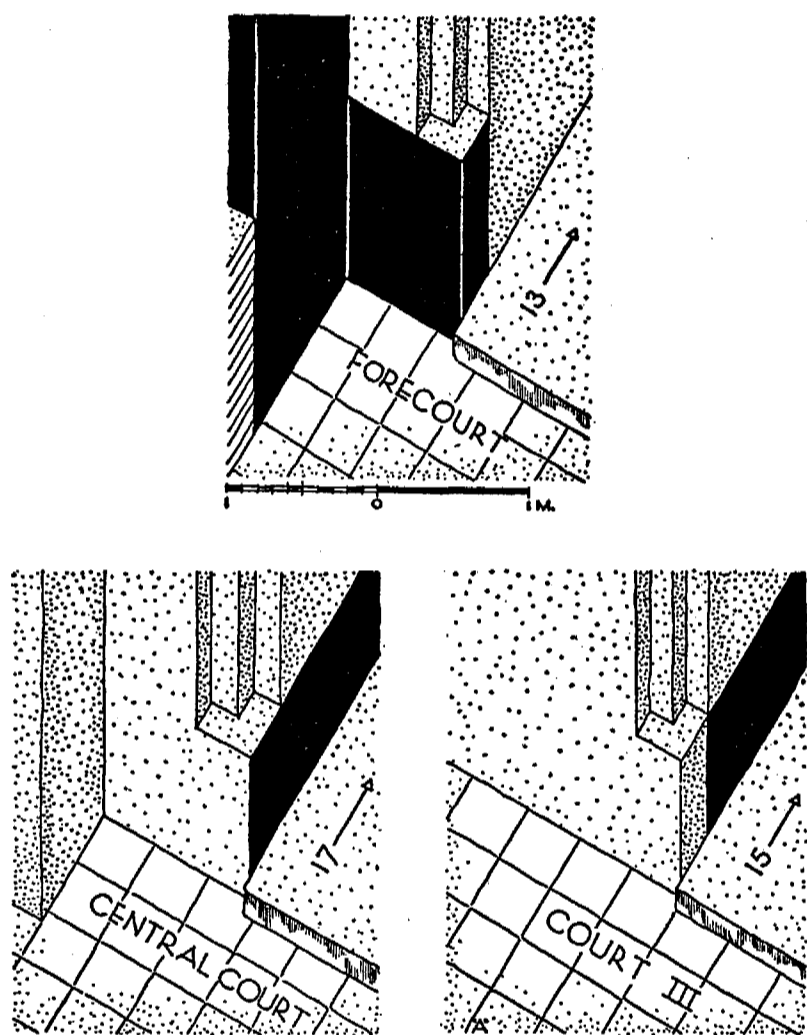


FIG. 7.—THREE EXAMPLES OF PORTALS IN THE NABU TEMPLE ILLUSTRATING VARIED DADO TREATMENT. SCALE, 1:50

liant flat colors to thin mud plaster, already lightly white-washed, it suffered so in the collapse of the buildings that but few of its many designs can be recognized from the quantities of fragments encountered in the excavations. Its distribution is widespread. During our very limited investigation of Sargon's palace traces of brilliant designs painted upon the plaster of rooms of such widely divergent functions as the throneroom and the royal bathroom were found in the debris.¹⁴ In Palace *F* and in all citadel residences minute and fortunately sometimes larger fragments were encountered in nearly every room outside the service areas. The greater part had disappeared completely, doubtless crumbled to dust in the collapse of wall and ceiling. The fragments are therefore comparatively few in relation to the wall area of the rooms, nor can one always be certain that they belong to the room wherein they are found. They may have been hurled from one room into an adjacent one, depending upon the di-

¹⁴ *Khorsabad I*, Pls. I-III.

by Layard,¹⁴² the tulip, which grows wild in Assyria, and whether the "bud" is actually the early stage of the flower or a pine cone, which its interlacing spiral surface suggests, matter little. The result is equally pleasing, regardless of interpretation. The body of the design is made up of nine square panels, three each way, framed with bands of daisy rosettes. Within each panel is a square "rosette" with four buds and four flowers alternating as "petals" from a normal rosette center. A border of the common running bud-and-flower motive surrounds it on all four sides.

The larger threshold of the central portal had been mutilated and partially done away with in antiquity. From its few remaining fragments (Pl. 30 *D-E*), however, we learn that its design was similar in principle to that of the thresholds in the side portals. The same bud-and-flower "rosettes" fill square panels framed by bands of daisy rosettes. The body, in this case five panels deep and four panels wide, is again entirely surrounded by the running bud-and-flower motive. An inner threshold (p. 22) carved in the same design added to the splendor of this central entrance; for, found within the debris of the room, wilfully placed against the wall as if temporarily, was a slab so decorated (Pl. 30 *A*). The tell-tale bolt slot for which provision had been made in the design carved thereon can have but one meaning. The slab undoubtedly was the central one of three set level with the floor of the room and immediately within the slightly raised threshold. The two endpieces, now missing, no doubt had the usual circular cuts through which extended the pivots of the doors. A fragment of such an end slab (Pl. 30 *C*) was found elsewhere in Residence *K*, in Room 24, not however in its original position. It cannot have been part of the inner threshold of the great hall, for the development of its design is more elaborate than that of the central slab in that the square "rosette" is framed not only with bands of daisy rosettes but with bands of chevrons as well. Found not far under the present ground surface, it may well have come from some other building.

The complete lack of such decorated thresholds in Sargon's palace, the obviously wilful removal of the large one in Residence *K*, the similarity between those in Residence *K* and several from Sennacherib's palace at Nineveh,¹⁴³ all raise the suspicion that perhaps after all Sargon's palace was not without this form of decoration. There is already precedent for the fact that some things from Sargon's palace found their way to that which his son constructed as his abode at Nineveh. It is at least possible that some of the thresholds of Sennacherib and the fragment from Room *K* 24 were installed originally in Sargon's palace. The bands of chevrons which frame their square "rosettes" and the slightly more elaborate treatment of the bud-and-flower bases on the examples from Nineveh make them somewhat more elegant than those known to belong to Residence *K*; and it is only natural and characteristic of Dur Sharrukin that the king's palace should outdo in decorative forms the residence of a mere nobleman or court official.

MOLDINGS.—Most of the several types of molding used in the decoration of Dur Sharrukin have already been discussed as architectural elements (pp. 39 f. and 46 f.). Two remain to be classed as applied ornament or, more exactly, as integral parts of applied elements. Since one of these appears only in isolated examples of problematical function and original posi-

tion, it cannot upon present evidence be considered typical. The other, however, is characteristic in its application to the inner threshold, in which provision is made for the door pivot (pp. 22 f.). Composed of double or triple flat bands, each raised slightly above its neighbor, the highest being at the edge of the slab, this molding not only frames the pivot hole but extends along the edge adjoining the wall and threshold. In but one known instance, the carved threshold in the great hall of Residence *K* (Pl. 30 *A*), does it continue along the edge of the central one of the three slabs of which the inner threshold is composed. In Room *H* 18 of the Nabu temple (Pl. 24 *A*) we find an example of a single-band molding upon the right endpiece with one of double bands upon the left. Since the single band is never found elsewhere and is here balanced with a typical double-band molding, we attribute this sole example to an oversight on the part of the builders. Far more common in palace, temple, or residence is the molding of triple bands (Pl. 23 *B*), which like that of but two bands varies slightly in width, depending upon the scale of the portal.

Two alabaster slab fragments from the debris of a side entrance chamber (Room *K* 18) of Residence *K* fail to tell from their context whether they are intrusive or once formed some part of the decoration of this room. Regardless of their function, their chief interest lies in the molding which runs along one edge of each fragment. A torus bounded on both sides with double bead or reed is combined with a scotia to form this molding (Pl. 32 *E*), which is more classical than Assyrian in feeling. The height and thickness of the slabs immediately suggest the orthostats which line some walls of this and Sinahusur's residence, yet none of the certain orthostats have this molded decoration. A hole is probably accidental. Since the walls of the room wherein they were found are plastered, the only place where they might have been used as orthostats—are they not intrusive—would be in the portal. A rare outer doorway opening directly from the street may have received treatment not accorded to the inner portals. In this molding we are again confronted with an unusual decorative element found exclusively in a citadel residence, whereas we should expect to find such a rarity limited, or at least given preference, in use to the king's palace.

ENAMELED BRICKS?—Although no concrete examples of the interior use of enameled bricks can be cited, we are nevertheless bound to suggest such use as a possibility. From the earliest investigation of the site onward enameled bricks have been found in the debris of palace and temple. Botta would restore the many fragments encountered in the rooms within his area of excavation to a frieze immediately above the reliefs.¹⁴⁴ Place ignores an interior use, establishes tableaus and archivolt as certainties, and proceeds to confine his restoration of the many loose fragments encountered over a far larger area to friezes and crenelations of exterior façades.¹⁴⁵ In the course of our excavations enameled bricks, whole and fragmentary, appeared scattered throughout both palaces, the Nabu temple, and the gates. Some may readily be accounted for in the tableaus and probable archivolt, but there yet remain in palace and temple a number which can only be attributed to the superstructure. In some manner, therefore, in panel, frieze, or narrow band, enameled bricks decorated or inscribed may have been used to brighten the interiors of certain rooms.

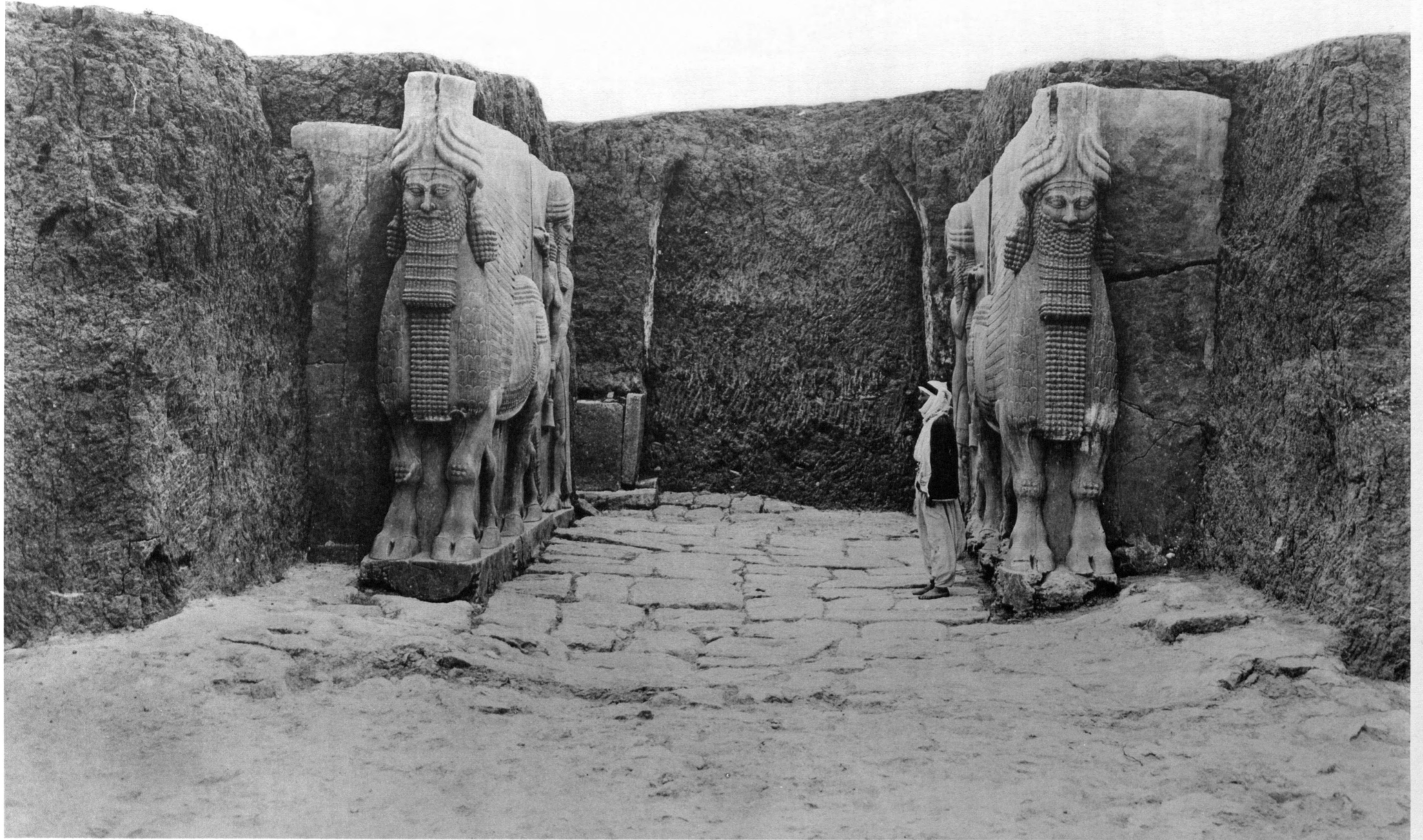
¹⁴² *Discoveries in the Ruins of Nineveh and Babylon* (London, 1853) p. 184.

¹⁴³ Layard, *Monuments of Nineveh*, 2d ser., Pl. 56 and description.

¹⁴⁴ Botta, *Monument de Ninive* V 59 and II, Pls. 155–56.

¹⁴⁵ Place, *Ninive et l'Assyrie* II 84 f.

III
THE CITADEL AND ITS BUILDINGS



THE OUTER PORTAL OF CITADEL GATE *A*, WITH THE PARTIALLY EXCAVATED CENTRAL PORTAL BEHIND

III

THE CITADEL AND ITS BUILDINGS

Grouped about the base of Sargon's palace are the Nabu temple and the residences of what may be considered the major court officials (Pl. 70). Together with the palace they comprise the "state" buildings, separated from the rest of the city by an inclosure wall. This inclosure (including the palace), roughly some 250,000 square meters in area, we term the "citadel." Therein for an unexpectedly very brief period was conceived and directed the course of Assyria.

Irregular in outline at the outset, the citadel presents a surprising confusion of plan within (see p. 10). The royal palace, the nucleus of the group, juts for no apparent reason into the area at an angle oblique to any of the inclosure walls. The two gates, obviously placed to facilitate the approach to the palace, are not on the direct axes of the ramps up which one must pass to reach the palace terrace. An open space permits a diagonal approach between Gate *B* and the main ramp, while the avenue connecting Gate *A* with the smaller ramp at the south corner of the palace causes the buildings upon either side of it to be askew.

Despite the limitation of area there is no logical explanation for the capricious outline of the Nabu temple, next to the palace the most important building in the group, or of Residence *M*, which with a slightly different fundamental orientation might easily have been more graciously adapted to its allotted space. Access and entry to Residence *J*, tucked behind the Nabu temple and Residence *K*, is awkward and circuitous, while in order to reach the unexcavated

building or buildings in the northern section of the inclosure a corner of Residence *L* seems almost to have been "chopped off" to avoid an overlapping of this building with the palace. We do not attempt to restore the plan of the building or buildings in the unexcavated section northeast of the palace. Our soundings here were meager and disclosed only the fact that this area was solidly built up. It is indeed astounding to find so disordered an arrangement of citadel buildings at Dur Sharrukin, a city free from natural obstructions, wherein accidental planning seems incongruous with the original formal conception of city wall and gates and with the faithfulness with which individual buildings conform to a set general plan (see pp. 10-13).

Irregularities of ground surface within the citadel may have been removed, but a definite downward slope from northeast to southwest remained. Since the same directional slope is found throughout the palace, one may infer that it is intentional, doubtless for drainage purposes. The large sewer (pp. 34 f., Pls. 8 *D* and 71, and Fig. 5) running under the citadel wall just behind the Nabu temple, where the street level is lowest, may well have served the entire citadel. So great is the general slope that the floor of the Nabu temple, which is set upon a base 4-6 meters above the street, is actually more than a meter lower than the floor of Residence *L*, which rests directly upon the ground. The floor of the palace, however, is maintained at a level above those of the other citadel buildings.

THE INCLOSURE WALL AND GATES

About 240 meters southwest of the north corner of the city is the juncture of town and citadel wall (see Pl. 69). From this point the citadel wall extends approximately perpendicular to the town wall a distance of nearly 300 meters into the city. There it curves around the corner of Residence *L* to follow for about 650 meters a southwesterly direction roughly parallel to the town wall until, with but a slight change in direction at Gate *B*, it reaches the corner of Residence *J*. Making another curve at that point, it continues straight but obliquely until it rejoins the town wall, its direct course being interrupted by Gate *A*. So closely does it cut the corners of Residences *L* and *J* that they themselves have rounded corners to conform with the inner curves of the citadel wall. Had the citadel wall closely followed the general line of the buildings within, as one would expect, the citadel inclosure would have formed a rectangle. One is tempted to suspect that this was the intention until it was discovered that there was no room for Gate *A*, which was perhaps not included in the original plan. To incorporate this gate into the wall may have necessitated shifting the wall to its present oblique position.

The construction of the citadel wall is regular throughout with the exception of the short stretch between Gate *A* and the town wall, where the bastions are omitted (see Pl. 70). The details of construction, mud brick upon rough limestone foundations (Pl. 8 *A*), are noted on page 18.

The two gates, the sole means of entry to the citadel except via the top of the town wall, which could be reached only through its gates, are in outline roughly similar to each other. Gate *A*, which was found in a remarkably fine state of preservation, was completely excavated, while only the outer surfaces and portals of Gate *B* were cleared when it became apparent that a former investigation of it had destroyed all evidence we might hope to find. There can be no doubt that Gate *B* is the "propylæum" from which came the pair of winged bulls and genii now in the British Museum.¹ It is therefore restored on the basis of its similarity in outline to Gate *A*.

Gate *A* is in reality but a somewhat simplified version of the town gate as recorded by Place.² Unlike the town gates and Gate *B*, however, it is set decidedly askew to the wall. Two unequal "towers" flank its entrance (Pls. 77-78). Its outer portal is lined with reliefs of genii (Pl. 10 *C*), winged human-headed bulls facing forward toward the town (Pl. 10 *D*), and, directly behind, winged human figures with cone and bucket (Pl. 9 *D*). They are represented in a combination of profile and full view. The wings, one pointing upward and the other down, and the arms and legs are in profile, while

¹ A. H. Layard, *Discoveries in the Ruins of Nineveh and Babylon* (London, 1853) pp. 131 f. and 640; H. R. Hall, *Babylonian and Assyrian Sculpture in the British Museum* (Paris and Brussels, 1928) Pl. XXVIII.

² Place, *Ninive et l'Assyrie* III, Pl. 12.

head and shoulders are in full view (Pl. 46). More than any other Assyrian relic these magnificent and intact vital specimens of Sargonid sculpture standing in their original positions enable one to visualize the splendor of Dur Sharrukin. It is the admirable intention of the 'Iraq Government to insure the preservation of these sculptures *in situ* by restoring this citadel gate.

The utmost care was expended to guard these reliefs from damage during excavation. When the magnificence that was in store for us first became apparent (Pls. 9 *B* and 10 *B*), every effort was made to secure the sculptures against injury from wilful intent, accident, or nature. Lest the foundations be weak or there be cracks near the lower extremities, props were installed to prevent earth pressure from pushing the reliefs forward (Pl. 10 *A*). Heavy reed matting overlaid with sheets of corrugated iron covered the edges of the cut to check the infiltration of rain behind the slabs. Tarpaulins were hung over the faces of the reliefs and kept lowered to the point where excavation was in progress, for the soft alabaster must be protected from sun and rain as well as from human injury. The debris was removed in layers of about a meter each, half a meter or so being left on each side as protection to the stone until the center was cleared (Pl. 9 *A*). Space was thereby provided for the slow, careful, horizontal cleaning of the reliefs (Pl. 9 *C*). Guards kept watch day and night to prevent any mischievous attack.

Four chambers comprise the interior of the gate, which lies

entirely within the line of the citadel wall. The two principal or central ones, through which traffic to the citadel must pass, are of approximately the same shape and size. They are connected by a central portal which, like the inner portal, is lined with curbing and orthostats of unsculptured limestone (Pl. 7). The walls of the chambers themselves are covered with mud plaster. Opening off the central chambers are two side chambers, the outer one provided with a central pier about which stairs or a ramp ascended to the roof.

The three portals were unquestionably vaulted, while the small doors leading into the side chambers were spanned with wooden lintels which were found intact. The restoration and dimensions of all these are discussed on pages 24 and 25. Portals and central chambers were paved alike with irregular blocks of limestone, the pavement immediately within the inner portal sloping downward to the avenue leading to the palace (see p. 21 and Pl. 8 *B*).

There is no reason to believe that Gate *B* differed to any major extent from Gate *A*. Excavation of its outer portal disclosed fragments, some inscribed, cut from the backs of the reliefs which had been removed from this spot. Unsculptured orthostats lined the inner portal exactly as at Gate *A*. The pavement had been removed, doubtless by stone-robbers while the gate lay partially exposed after its reliefs had been taken away. When restored, it would look not unlike Gate *A* (Pl. 77) except for greater symmetry in its flanking towers.

THE PALACE AS REVISED FROM PLACE

In revising the plan of Sargon's palace as recorded by Place we are faced foremost with the problem of trying to fit a jagged though rectangular palace plan to an oblique terrace proved by excavation and suggested by topography to be in shape and size considerably at variance with Place's restoration. The variation becomes at once apparent upon comparing Plate 76 with Plate 70. On the latter may be noted how the inner terrace as proved by our excavations is neither rectangular nor regular in buttress arrangement as Place would have it. A superimposition of the contour map (Pl. 68) upon the city plan (Pl. 69) shows how closely the contours as they today exist follow the excavated outline of the inner terrace. The coincidence of contour with certain inner terrace and citadel wall frees us from all hesitancy in presenting an irregular outer palace terrace based upon topographical contours. Such restoration is indeed confirmed by the shifting axes of the palace plan as noted in our scattered excavations within the palace. Although Place's room arrangement and dimensions must be accepted as substantially correct, he failed to recognize the fact that the palace does not conform to one single pair of axes. The various sections recently examined present after survey the relationships to one another shown in Plate 70. They can no longer be incorporated into a general plan of parallel and perpendicular walls. Were the palace to be completely re-excavated, the resulting plan would doubtless be as irregular as are those of the citadel buildings surrounding it.

THE TERRACE

The terrace or raised platform which supplies the base of the palace probably owes its origin, in this instance at least,

to a natural mound, advantage of which was taken to elevate above all other buildings the royal abode and court. Although it was not proved by systematic test soundings, certain factors disclosed during the course of our excavations lead one to believe that the terrace is partly natural and is not of solid mud-brick construction as was formerly thought.³ The filling behind the limestone face or retaining wall is of coarse rubble and rubbish (see Pl. 8 *E*). Were the entire mass of mud brick, this material surely would extend to the edges. Elsewhere while digging below floor pavement level only a few courses of mud brick have been encountered. Especially noticeable at Palace *F* is the fact that the nearer the terrace edge the deeper is the mud brick. But one conclusion can be drawn—that a natural mound was roughly leveled horizontally, was "trimmed" vertically by means of retaining walls, and was finally leveled with mud brick for building purposes. Such a process may account for the strange outline of the palace terrace, the finished area of which may have assumed the general shape of the natural mound. Sargon himself in commemorating the founding of his capital states that he established "its foundation platform upon the bed rock of the high mountain."⁴ Since the vicinity of Khorsabad abounds in eminences which might thus be utilized, the choice of two upon which to build the palaces may have determined the orientation if not the actual location of Sargon's capital, for there is no other reason for locating it on this exact spot.

Integrally a part of the town wall, the palace terrace projects both outside and inside the line of this wall. Outside the facing was probably of mud brick, presenting a homo-

³ Place, *op. cit.* I 24 f.

⁴ Luckenbill, *Ancient Records of Assyria and Babylonia* II, § 121.

geneous appearance with the outer face of the town wall. Within the citadel it was faced with limestone blocks laid in courses of headers and stretchers arranged in no mathematical order (see p. 20 and Pl. 82). The surface is not level but slopes downward from northeast to southwest, there being a difference of about 3 meters between the level of Court VIII outside the throneroom and the central court (XXVII) of the temple area. The ground level slopes even more in the same direction. No one height above ground level can therefore be assigned, but the height of about 7.50 m. at the main ramp approach (see p. 20) may be considered as fair an average as can be taken. A steep declivity outside the town wall might account for the 14-meter height Place assigns to the terrace,⁵ were it not for the fact that his dimensions for the stone blocks of the retaining wall are likewise approximately double those found in our excavations (see p. 20). The revised height of palace terrace is our chief reason for restoring the town wall with a mean height of 12 meters, again about half that assigned by Place (see p. 18). It is impossible to reconcile a town wall of greater height to the palace terrace with which it is one.

There are but two direct means of approach to the palace terrace. A broad ramp (described on p. 29) ascends perpendicularly to the principal entrance in the southeast palace façade. A smaller ramp (Pl. 11 *A-B* and p. 29), with slope parallel to the face of the terrace wall, leads to the south corner of the palace. The bridge spanning the street to connect the terraces of palace and Nabu temple may have served only for royal visits to the temple.⁶

The pavement of the palace terrace outside the area of the palace itself is identical with that within the courts. Two courses of baked brick set with sand and bitumen furnish a pavement at once substantial and impervious to water (see p. 21).

A crenelated parapet wall surrounds the palace terrace. Outside the line of the town wall it may have been of brick in keeping with the terrace facing below and with the town wall. Toward the city, however, it is of limestone, slabs of which were found in great profusion in the "street" below (Pls. 8 *C* and 11 *D*). How this wall was made secure remains a matter of conjecture (see p. 40).

THE SUPERSTRUCTURE

In Plate 70 the portions of the palace excavated by us, given in black, have been located by survey and placed accordingly in their true relationships to other recently excavated buildings. About these certain points we have attempted to fit the remainder of the palace as recorded by Place. Liberties with Place's plan have been taken, justified, we consider, in the light of evidence from other citadel buildings. Some of his courts we have changed to covered rooms, other courts cease to be square or rectangular, the ziggurat has necessarily been shifted to accord room to the Sin temple, and the general outline has been altered to fit the irregular terrace. Our plan is admittedly hypothetical, but is, we believe, closer to actuality than the plan prepared under great difficulties by Place and Thomas.

Variations from Place in palace details encountered in our excavations have already been noted in *Khorsabad I*. A few

⁵ Place, *op. cit.* I 26.

⁶ Ramp and bridge, because of their interrelation, are jointly described on p. 56.

points, however, have arisen in excavation subsequent to the preparation of that earlier volume. The clearance of Room 86 has definitely established the truth of our surmise that Place confused this storage chamber with Room 84.⁷ A few iron implements were all that remained of the large collection found by Place, but from the numerous scattered oxidized fragments it is evident that in Room 86 rather than in Room 84 once was stored a great quantity of iron. Both these rooms had floors of baked brick.

The principal palace entrance, at the head of the broad ramp, proves upon excavation to differ from Place's version. He himself is inconsistent in the presentation of this portal. It can readily be seen from the blackened section shown on Plate 70 how the niche between the portal bulls and the plane of the wall is considerably broader than that recorded by Place (see Pl. 76). On another plate Place records this niche with different proportions.⁸ The broader niche precludes the existence of the side portals shown by Place, for excavation proves the niche unbroken, while there no longer remains space in the wall plane sufficient to permit direct entry from the terrace to Room 97 and therefore supposedly to the corresponding Room 99.

Upon examination of the south corner of the palace terrace it became apparent that a series of rooms unnoted by Place existed along the southwest side of Court XXXI (see Pl. 70). An attempt to discover the plan of these rooms proved futile, for centuries of heavy rainfall had so washed away the slope that the extent of the palace plan is forever lost. But we may be certain of the fact that rooms once did exist at this point.

Further alterations in the palace we should like to consider, not based on actual excavation, to be sure, but strongly suggested by other citadel buildings. On Plate 86 are reproduced for comparative purposes the "reception suites" of all the excavated Dur Sharrukin residences. The large central room becomes in the case of the palaces the throneroom. The striking resemblance among all these corresponding units cannot escape notice (see p. 11). We should therefore like to make of Rooms 22-24 of Place's palace plan an alcove and stairway similar in arrangement to those proven in our excavations to exist in Palace *F* and in all private residences. This alteration is indicated in the reproduction of this section of the palace on Plate 86. We propose this modification not merely on the basis of similarity but because we believe there are reasons (stated on p. 27) which justify questioning Place's recording of this section. The peculiar projection of the southwest wall of Room 23, the debris in Room 22, the suggestion of a wide opening between throneroom and Room 24, and the outward jog in the wall of Court VIII directly opposite Room 23 may all be considered positive factors in our argument.

The standardization of this unit implies yet a further change we may make in Place's plan. Room 27 of his plan has always seemed strange with its two doorways side by side from the throneroom (Court VII). The doorway nearer the corner of the throneroom Place indicates as lined with reliefs; the other he records as plain. Our own excavations have proved these portals not only misplaced by Place but reversed in the matter of reliefs. Winged bulls line the doorway farther from the corner, while that next the corner is plain.⁹ Cognizant of this error in Place's recording, we are

⁷ *Khorsabad I* 87. ⁸ Place, *op. cit.* III, Pl. 5. ⁹ See *Khorsabad I*, Fig. 71.

tempted to attribute to it a second one. There is little doubt in our minds that a wall dividing in two Room 27 at a point between the doorways from the throneroom was overlooked either in Place's excavation or in his recording. A wall so placed obviates the unreasonableness of the two doors. At the same time it creates a small chamber similar to the one which forms a part of this unit in Palace *F* and the other residences with the exception of *Y* and *Z*, which patently are of relative unimportance. The existence of this wall is indicated on Plate 86.

A few changes in structural decoration, based entirely upon generalities, may be suggested in Place's palace exterior. We prefer to omit all domes and half-domes in roof construction. They appear to us to be the product of 19th century European architectural influence rather than logical archeological restoration based upon actual or analogous evidence. Most of the towered buttresses we should prefer to restore as simple wall projections terminating in the parapet line of the roof (see pp. 36-37). Niches and reeds we believe were more profusely used than indicated by Place, notably above dadoes of sculptured alabaster and along the southwest façade (see p. 37).

At this point attention may be called to the possibility of the temple area's being an afterthought to the original scheme of the palace. There can be no refutation of the argument that the temple area is joined to the palace proper in a most awkward manner (see Pl. 76). The heavy exterior wall forming the southwest façade of the palace continues without major change, unaffected by the temple complex, which partially conceals it. The regularity of its buttressing is maintained to such an extent that some buttresses not only cease to be decorative—their primary purpose—but are actually hindrances to circulation. The buttress directly behind Rooms 84 and 85 is an obstruction within, rather than a proper entrance to, the narrow corridor, Room 193. Room 194 is no more than a clumsy attempt to effect an entry in crowded space. Room 90, the single passage from palace to temples, is surely no more than a storage chamber adapted into a vestibule by cutting a second doorway through what was once intended to be an outer wall. Something assuredly is amiss when an architecture so prone to monumental portals provides only this insignificant entrance to such imposing temples. That the temple complex was not a part of the original scheme is the logical inference to be derived from these architectural irregularities; or it may be that the architect, used apparently to a more or less fixed residential formula, was unable to incorporate gracefully an unusual element into his general plan.

THE BRIDGE CONNECTING PALACE AND NABU TEMPLE

The chief cause of the glaring irregularity of the south corner of the palace terrace is the bridge by which direct access from palace to Nabu temple is effected (see Pl. 70). It appears almost as if the gradual forward extension of the southeast terrace was deliberately aimed at no purpose other

than to bring it into such proximity to the front terrace of the Nabu temple that a single-arched bridge (Pl. 12 *A*) could connect the two structures. A more awkward handling of bridge and ramp can scarcely be conceived. Granting such difficulties as the oblique angle and the difference in level between palace terrace and Nabu temple ramp, one cannot refrain from wonder at such clumsy treatment in the hands of architects capable of the town and citadel gates.

In Plates 80-82 are presented plans, sections, and elevations of the south corner of the palace terrace, including the ramp and bridge. Darkened portions indicate what was actually found by excavation, the remainder presenting what seems to be the most logical restoration in the light of existing evidence. The ramp (Pl. 82) begins at a point outside the line of the southwest face of the palace terrace (see Pl. 11 *B*). The slope as found (Pl. 11 *A*) does not appear to be either the finished slope or the surface (see p. 29). From the fact that the dressing of the stone face (see Pl. 82, No. 2) ends in a line higher and of greater slope than the lime surface found, and because the present slope if continued would not reach the level of the terrace as disclosed by brick pavement still existing outside Court XXXI, we have restored the slope as indicated on Plate 82. With these premises there appears to be no other workable solution.

The arched bridge is an impressive sight even in its present state (see Pls. 11 *A* and 12 *B*). After one night's rain it presents quite a different appearance (Pl. 11 *C*), which well illustrates the necessity for the drainage system of Dur Sharrukin. The present pavement of the ramp is of rubble (Pl. 12 *F*), but the line at which the dressing of the surface ends suggests an original pavement at higher level. Plate 12 *C*, which shows this line, also shows the peculiar manner in which the interior facing is constructed. Almost without exception all the stones are laid as headers, with every other horizontal joint filled with a band of enameled brick (see p. 42). This system of jointing is continued on the exterior of the bridge and along the outer face of the ramp leading to the palace (see Pl. 82).

Restoration of the bridge has caused considerable consternation. How the transition from high palace terrace to low temple terrace was managed we can only surmise. Since the intact pavement of the latter shows no sign of steps, the change in level must have occurred on the bridge itself. Enough remains of the arch to permit its completion with a fair degree of certainty. The molding and parapet have been restored in the only manner that seems possible if we employ the stones found fallen in the debris at the base of the arch (see p. 40).

The Nabu temple seems to have been constructed before the bridge, and therefore before the palace terrace, for the plastered decorated face of the temple ramp (Pl. 12 *D*) continues behind the bridge structure. Plate 12 *E* shows the angle of temple and bridge with the rubble filling of the latter directly against the face of the temple ramp. Whether or not the entire Nabu temple antedates the construction of the palace there is no way of telling.

THE NABU TEMPLE

"Nabu, king of all of heaven and earth" and "leader of all of the gods"—thus does Sargon in his annals and in his prism inscriptions commemorating the founding of his capi-

tal speak of Nabu.¹⁰ It is therefore not surprising to find at Dur Sharrukin a temple outstanding architecturally above

¹⁰ Luckenbill, *Ancient Records of Assyria and Babylonia II*, §§ 38 and 120.

all others, set high upon its own terrace, and next to the royal palace the most elaborate building in the citadel, dedicated to this god, who nearly a century earlier had become the central figure in the reputed religious reforms of Sammuramat (Semiramis). The extent to which she succeeded in establishing Nabu as the one and only god is doubtful. Two statues of Nabu set up in the palace at Nimrud during the joint reign of Semiramis and her minor son Adadnirari III bore inscriptions terminating: "O man, who shall come after (me), on Nabu wait. Do not trust in another god."¹² When we reach the reign of Sargon the tendency appears to be henotheistic rather than monotheistic. Nabu still remains supreme; but six other gods are accorded honor in the palace temples,¹³ while even more are mentioned in the palace inscriptions.

Of the great building dedicated to Nabu (Pl. 79), but a small portion was devoted to his worship. The actual ritual performed in his honor was doubtless confined to the "inner temple," the group of rooms behind the central court. The remainder of the building was taken up with the abode and offices of the priests, whose duties probably spread to civil as well as religious welfare. To maintain this large staff of state servants an endowment was provided by the king; and to Tabsilesharra, who was also commissioned to "send green timbers" to Sargon,¹⁴ was delegated the task of its establishment. He writes to his king that "a field there (in the city of Kurani in the land of Halahhi) the king my lord has taken for the temple of Nabu of Dur Sharrukin."¹⁴ The limited space provided for the nonritual activities in the palace temples (see Pl. 76) implies that the Nabu temple may have served as the center for all the priests.

Standing upon its artificial platform or terrace, the Nabu temple towers above the buildings immediately surrounding it (see Pls. 1-2). There is but a single approach, a broad ramp leading from the open "square" in front of the palace to the terrace before the entrance façade (see Pl. 79). A bridge (p. 56) spanning the street from Gate A joins this terrace to that of the palace—the only connection between the temple and the palace. Passing within, one enters the forecourt, the scene of probably the greatest activity within the temple. Upon its face the many chambers in which, as well as in the court itself, take place the transactions between the priesthood and the civil world. An elaborately decorated façade prepares one for the central court (Pl. 83) which lies beyond and which though smaller is far more elegant than the forecourt. Here an air of serenity prevails in contrast to the bustle left behind. To right and left, behind walls and through portals both richly decorated with niche and reed, are rooms serving in one way or another the requirements of the religious ritual. Before one rises the magnificent façade of the inner temple, containing the cellas and sanctuaries consecrated to Nabu, "scribe of the universe" (chap. viii, No. 1). An altar of enameled bricks stands before the broad central portal leading to the inner temple, which in height surpasses that of the other sections of the building. Within, sanctuaries are raised above the cellas. In the main sanctuary an unusual mud-brick platform serves as base for the cult figure.

¹² *Ibid.* I, § 745. ¹³ *Khorsabad I*, chap. iv.

¹⁴ Waterman, *Royal Correspondence of the Assyrian Empire I*, No. 92 (same letter cited on our p. 16, n. 20).

¹⁴ *Ibid.* No. 480.

From both forecourt and central court the residential quarters of the priests may be entered. From the former two circuitous corridors lead, one to the services, grouped about Court IV, the other to Court III, which with the courts and rooms beyond comprises the living-rooms. From the central court one passes through a framed portal to reach indirectly Court III and so the remainder of the living-rooms and courts. Continuing through the priests' quarters one may at two points step upon the narrow terrace which surrounds the entire temple with the exception of the forecourt. Here a promenade in the cool of the evening may be enjoyed. But in order to leave the temple precincts one must re-enter the building and return via the forecourt to the front terrace, there to cross the bridge to the palace and descend thence to the street or to continue forward down the ramp.

TERRACE AND RAMP

The terrace or platform which raises the floor of the Nabu temple 3-6 meters above the sloping ground level is a more integral part of the superstructure than is that of the royal palace. Not only is its facing of the same material—mud brick covered with lime plaster—as that of the superstructure, but it follows much more closely the line of the temple walls. The outer faces of the walls of the rooms surrounding the forecourt are actually in the same planes as those of the terrace (see Pl. 79).

Tracing the face of the terrace proved a long and often tedious procedure. Because of the proximity, if not coincidence, of temple and terrace wall face, the collapse of the superstructure had pushed forward the upper part of the terrace facing, burying deeply beneath debris of both temple and terrace what little remained of the exterior vertical surfaces. Oddly enough, where temple and terrace present a common outer face there was least destruction (see Pl. 13 A). More often the face could be located only near ground level (Pl. 13 F). Digging in such cramped, deep quarters necessitated the slow process of tossing baskets of the loosened earth from one man to his co-worker higher up (Pl. 13 E). Occasionally the entire face had fallen to such an extent that for a length of several meters it could be reconstructed only from the "back" of the plaster lying horizontally at street level (Pl. 14 B). Tunneling was sometimes resorted to—near the west corner, where unusually badly damaged walls were buried beneath the debris of both temple and citadel gate (see Pl. 5 B), or more often as a guide to pilot the trench in the proper direction (Pl. 14 C).

By following the entire circuit of the terrace we not only have outlined the base of the temple but while so doing have learned in a general way the manner in which the Sargonid architect employed the niche and reed in exterior decoration (see pp. 37-39). In the Nabu temple the face of every terrace buttress has the same motive of large central niche (Pl. 13 C-D) between balancing groups of three reeds and small niche (see Pls. 13 B and 80). Along all the faces hemmed in by Residences K and J and by the citadel wall (see Pl. 71) the buttress intervals have only simple niches spaced fairly regularly (Pls. 15 A and 80 B-D). The side extending along the street and facing the palace has buttress intervals more elaborately and irregularly treated with both niche and reed (see Pl. 80 A-B). Such decoration extends even to the sides of the ramp approach to the temple (see Pl. 80 A and D).

A fragment of niche and reeds which cannot possibly belong to the terrace can only have fallen from above (Pl. 14 *A*). It is our sole indication that the exterior of the superstructure was decorated with niche and reed (see p. 37).

Around the entire base of the terrace a 45° watershed of varying height (50 cm. average) served to prevent seepage of water from weakening the wall (see Pl. 13 *A*). From immediately above this spring the niches and reeds, terminating above alike in a horizontal line just below a line of *sikkāti* (Pl. 15 *A-C* and pp. 42-43) placed slightly below the temple floor level.

Two drains empty into the street at points opposite the forecourt and the central court (see p. 34). They are doubtless fed by numerous small drains leading to a downspout which in turn empties into the horizontal channel (Pl. 14 *E*). Imperfect construction or other causes brought about a weakening of the wall over both these drains, for at each of them baked brick has been added to strengthen it against collapse (e.g. Pl. 14 *C-D*).

The horizontal surface of the terrace is paved with baked brick laid in the usual manner with two courses set in sand and bitumen. Owing, probably, to the irregular shape of the ramp, which broadens from 16 to 36 meters in the course of its 42-meter horizontal length, the brick joints of one course are laid oblique to those of the other (see Pl. 16 *C*). For some distance where the ramp begins its ascent from the street the pavement appears to have been of rubble (Pl. 16 *A*), although the brick pavement doubtless originally extended farther down than Plate 16 *B* would indicate.

There are scant remains of the narrow terrace surrounding the sides and back of the temple. The small section of pavement shown in Plate 15 *D* and a few remains just outside the threshold from Room 29 are the sole surviving pieces of this once extensive promenade. From outside the thresholds from Court V (Pl. 15 *E*) and Room 45 the pavement had completely disappeared.

There is no direct evidence for the mud-brick parapet which we would restore at the edges of the ramp and the promenade terrace. A parapet must have existed for practical purposes. That it was of mud brick seems most likely in view of the lack of baked bricks in the debris below and of our belief that the parapet is generally of the same material as is the wall which it crowns.

ENTRANCE AND FORECOURT

Little remains to this day of the entrance façade, for at this point the floor level is scarcely more than a meter below the present ground surface (see Pl. 16 *D*). Enough exists, however, to establish its simplicity as compared to the façades in forecourt and central court. It is broken only by a single portal flanked with statues and buttresses (Pl. 16 *E*). Otherwise it presents a plane surface which probably was undecorated. To the left as one approaches the entry is a small, isolated chamber (Room 1) which could serve no other purpose than that of a guardroom (see Pl. 79).

The portal leading within the temple conforms in plan to the standard monumental portal. Peculiar features are to be noted, however, in the statues placed in the angles between portal opening and buttresses and in the baked-brick foundations of the buttresses. The combination of statues and baked brick at once suggests enameled tableaus. Such can

scarcely be the case here; for not only was there no trace of enamel upon the bricks, but had the brickwork been the facing of tableau shelves there could have been no buttresses—a situation unparalleled in any monumental portal at Dur Sharrukin. Furthermore, the position of the statues in the corners next to the doorway is not in accord with the universal procedure of placing them at the outer angles of the brickwork. We are therefore inclined to treat the brickwork as simple buttress foundations, believing that it was originally concealed behind the surface plaster, as was that into which the *sikkāti* are set (see p. 43). We believe also that above these foundations the buttresses were decorated with niches and reeds in the usual manner. The statues were probably not unlike those found complete within the courts of this and the palace temples.

Threshold and inner threshold are of alabaster, now badly weathered (see Pl. 16 *E*). A two-leaved door originally provided means of closure. When secured in the regular manner by bolts extending into the inner threshold, it could be more firmly fastened by means of a prop braced in the stone slot set into the brick pavement of the room beyond, which doubtless had no purpose other than to serve as passage to the forecourt.

The forecourt, the largest of the temple courts, is neither square nor rectangular (see Pl. 79). Two sides are approximately parallel to each other, but the remaining two are definitely oblique one to the other. The irregularity is further emphasized by the projecting entrance to Room 29 in the south corner and by the change in direction of the northeast wall as it approaches the east corner. Its wall faces conform to the standard treatment for court surfaces (see p. 17). They are of mud plaster, whitewashed, with a black dado of varying height. All the surfaces are undecorated with the exception of the southwest wall, the façade of the rooms between this and the central court. The pavement is of the usual court type, two bricks thick, but in this case laid with much less regularity than usual. The obliquity of the court is no doubt responsible for the changing direction of the brick jointing, but in addition there is a hit-or-miss use of half-bricks (Pl. 17 *A*). This pavement appears to have been badly mutilated by secondary occupants. Bricks were removed and re-used in small structures which are today meaningless in their meager remains. Further evidence of a later occupation of the court is to be found in a few barely distinguishable surfaces of mud-brick walls built upon the original pavement (Pl. 29 *B*). "Pockets" hollowed from the southwest wall (Pl. 29 *C*) can be but the handiwork of subsequent inhabitants, for they contained silver jewelry and coins of much later date (Pl. 60, Nos. 166-70). A still later occupation, barely under the present ground surface, is manifest in a carelessly built pavement (Pl. 29 *D*) and a cache of pots (Pl. 29 *E*).

Dominating the entire court is the southwest wall, the highly decorated façade of the less secular part of the building, which is presented in plan and section on Plate 83 and in restored perspective on Plate 2. Facing the entrance through which all who would enter the temple must pass, it at once suggests the splendor of the central court beyond. It consists of two prime elements, monumental portals, one to Room 13 and the central court and the inner temple, the other to Room 14, a single-chambered shrine.

The major of the two portals is, of course, that supplying

passage toward the holy of holies. It deviates in no way from the conventional temple portal.¹⁵ A pair of buttresses rising from the floor and terminating, we believe, above the roof line (see pp. 36–37, esp. p. 37) frames the actual doorway, the outline of which is accentuated by rabbeted corners. An archivolt of enameled bricks may or may not have followed the curve of the arch. The threshold inscription is so badly weathered that it remains illegible. A comparison, however, with texts subsequently found removes all doubt of its being other than the inscription repeated upon thresholds and steps within the inner temple.

Of the doors themselves there are no actual remains. The pivot holes and bolt slots in the inner threshold (see Pl. 20 *B*) tell us that the door was of two leaves. Fragments of embossed bronze upon the threshold (see Pl. 20 *E*) and the more complete pieces within Room 13 (Pls. 20 *D* and 21 *A–B*) are assuredly remains of plaques which once adorned the door leaves (see p. 44). Two specimens (chap. vii, Nos. 20–21) have fairly complete designs. These, along with examples from Room 14, comprise representations of living and inanimate figures, all of them already familiar from reliefs and tableaus. They can be but a small sample of this form of Sargonid art. The positions of the fragments as found indicate that the doors were not covered solidly with the bronze. It is more likely that the plaques were applied thereto according to some definite order, probably as horizontal bands so arranged as to suggest hinges (see p. 44).

Projecting from the bases of the buttresses are shelves faced with enameled-brick tableaus. Buttress and shelf are in this case of the narrower type, comparable to those at the entrance to the Ningal temple.¹⁶ Upon these tableaus we find therefore represented but three of the symbolic figures. Destruction was so complete (Pl. 17 *E*) that were it not for the parallel examples at other temple portals restoration would be impossible. From occasional sections which have withstood entire collapse or color-fading (e.g. Pl. 17 *D*) the lion, fig tree, and combination plow and grain-seeder can be recognized, as can the border rosettes between parallel bands. The colors appear to have been the same as those used in the palace temple tableaus: ultramarine, chrome yellow, deep ocher, green, yellow, and black. In their original brilliance they must have been dazzling.

The upper surfaces of the tableau shelves have become completely obliterated. They were probably of some material which easily loses its identity in the general debris. We may therefore infer that the fill was merely covered with plaster and perhaps with bitumen, as in the case of the Sin temple tableaus. We do not hesitate, however, to restore the tall wooden shafts projecting vertically from the shelves just within the portal corners; for from no tableau shelf found with top intact have these peculiar shafts (see p. 45) been missing.

The alabaster statues once standing at the portal corners of the tableaus were recovered, broken but complete (Pl. 17 *C*). They have since been restored and set up in the Oriental Institute Museum (Pls. 45 and 47). Whether they were purely decorative or were symbolic as well is a matter of speculation (see p. 45).

The buttresses towering above the tableaus have faces decorated with the most common of all niche-and-reed motives, an uneven number of reeds between single niches. In

this instance there are five reeds in each group. Black dadoes extend across the buttresses immediately above the tableau shelves, thereby raising this darkened base to the highest point along the entire façade. Although the heights of the dadoes throughout the various buildings appear to be casual rather than planned, the higher black surface upon these buttresses cannot be accidental. In this case it seems obviously intentional as a means of furthering the emphasis already attained by tableau and shaft upon this important portal, making of it the dominant element of the entire façade and subduing but not killing the more than average splendor of the second element, the portal to Room 14.

Although without enameled-brick tableaus and straight-rising shafts, the portal to Room 14 would in almost any other façade stand out as the central motive governing the whole composition. The doorway is broad and is flanked with buttresses decorated with niches and reeds. Its outer edge is rabbeted, and its threshold is unincised. Up to this point it is a typical major portal. But the alabaster statues placed in the angles between doorway and buttresses lift it above the ordinary. The statues are badly weathered and incomplete (e.g. Pl. 17 *F*) but are unmistakably of the type apparently used only at temple entrances. Here they provide the sole instance of their use other than at portals leading directly or indirectly to major shrines. Of the six palace temples only the three larger ones are provided with such statues. Room 14 would therefore become a shrine, devoted almost beyond doubt to Nabu, who seemingly shares this entire building with no other gods—a supposition strengthened by the architecture within the room itself.

On Plate 84 Room 14 is shown in plan and two sections (*E–E*, *F–F*). Directly opposite the entrance is a shallow niche, the back of which is formed of seven reeds (Pl. 18 *A*). It is placed high in the wall and must be purely decorative (see p. 45). The walls are otherwise undecorated, although the burning which had taken place during destruction so discolored the walls that a black dado may have been obliterated. The floor is of limestone paving slabs. Across the northwest end of the room and occupying nearly half the room area is a raised platform of baked bricks (Pl. 18 *C*) reached by poorly constructed inset steps (see p. 29). Upon this platform and extending forward from the back wall is a second platform, of mud brick reinforced with baked brick (Pl. 18 *B*), a most unusual form of construction. The only parallel to this structure is to be found in the main sanctuary of the inner temple (see p. 62). Fragments of embossed bronze imply that the door to Room 14 was adorned with pictorial plaques. The pieces shown on Plate 50, Nos. 22–26, compare favorably with those from the major portal.

The third portal of the façade forming the southwest wall of the forecourt is no more than a simple doorway leading to the living quarters of the priests. It lends no decorative value to the façade and is placed as inconspicuously as possible in the extreme south corner of the court. The wall surface between this doorway and the buttress of the large portal is broken up by two groups of reeds and a single niche, unsymmetrically arranged and thus forming in themselves no motive which might detract from the emphasis so deliberately laid elsewhere. That an alcove (No. 7) rather than a room should occupy the west corner we believe is due to a desire to extend the width of the façade to prevent crowding of the portal to Room 14 (see p. 12).

¹⁵ See *Khorsabad* I 89–100 for full description of the portal to the Sin temple.

¹⁶ *Khorsabad* I 112 f.

The remaining walls of the forecourt present nothing of architectural or decorative interest. We believe they were plain from floor to roof, punctuated only by alcoves and doorways spaced purely to accord convenient entry to the rooms behind.

Outstanding in interest among the rooms along the southeast side of the forecourt is Room 12 (Pl. 18 *E-F*), which is presented in plan and sections on Plate 84. It is not only the largest, but it has across one end a raised platform of baked brick backed by a niche extending upward from its floor (see pp. 29 and 45). Walls are undecorated, and the floor is of baked brick. The single row next to the long southeast wall consists of half-bricks so laid as to suggest a border (see p. 22). In the wall opposite the platform is a doorway into Room 11, the floor of which, raised above that of Room 12, is reached by steps within the doorway (Pl. 19 *A*). The simplicity of this room as compared to the decoration of known shrines tends to establish its secular use. An audience hall (see p. 45) seems the most plausible explanation.

It was while clearing the debris from the floor of Room 12 (Pl. 18 *D*) that a tablet enumerating Assyrian kings (chap. viii, No. 6, and Pl. 57, No. 74) was found. This invaluable

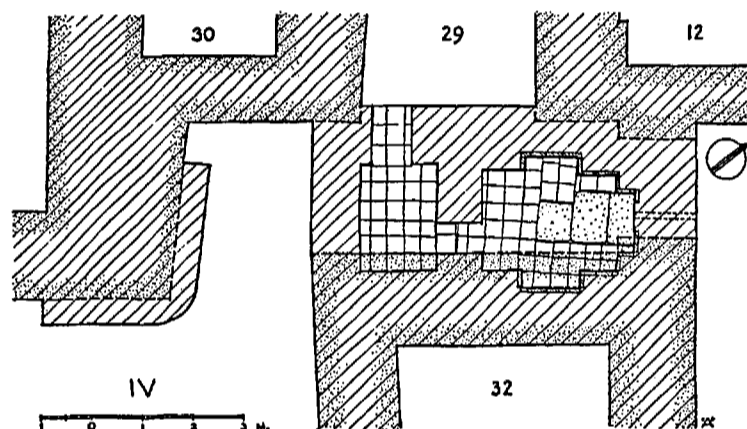


FIG. 8.—BATHROOM SUITE OF LATER OCCUPATION BUILT WITHIN ROOM 29 OF THE NABU TEMPLE. SCALE, 1:150
Dots indicate the original walls.

tablet, each face of which is covered with two double columns of cuneiform text, measures 18×14 cm. Professor Poebel, who is to edit the list in another Oriental Institute volume, states that when it was complete the tablet enumerated in unbroken succession 107 Assyrian rulers, the last of them being Ashurnirari V (753–746). Beginning with the thirty-third king, Erishum, son of Ilushuma—the latter a contemporary of Sumuabu, the first king of the so-called “first dynasty” of Babylon—the list recorded the regnal years of every king, occasionally even adding short notes explaining disturbances in the succession of the kings. No regnal years were recorded for the thirty-two kings prior to Erishum. Ushpia, the earliest king whose name was hitherto known, is the sixteenth of these rulers (the seventeenth before Erishum).

Room 29 was originally but a passage to the service area. At some later date, probably during the first occupation immediately following the abandonment of Dur Sharrukin as the capital, it was converted into a bathroom suite. The original and revised plans are indicated in Figure 8. The outlet drain was built over the threshold originally leading to the terrace. In Plate 29 *A* remains of both occupations may be seen. To reach the higher level of the bathroom the floor sloped upward from the threshold between forecourt and Room 29. The removal of this secondary slope dis-

closed the bed of tamped earth upon which the original brick floor was laid (Pl. 28 *D*).

Room 10 has its floor raised to the same level as that of Room 11, although there is no direct connection between them. Steps within the doorway (Pl. 19 *B*) provide the means for reaching the higher level from the floor of the forecourt.

There are but two rooms (Pl. 19 *D*) along the northwest side of the forecourt, both of them with unusual features. Across one end of Room 5 and extending partially down the two adjacent sides are tiers of small rectangular niches (Pl. 19 *C*), surely the forerunners of modern “built-in” shelves and bookcases (see p. 46). To what height they originally extended we have no way of knowing, for present ground surface cuts them off above the third tier. Fragments of many tablets, including a complete one inscribed with a syllabary (chap. viii, No. 7), were found in the debris, suggesting that this room may perhaps have been a library. Room 6 may be another audience hall. It is L-shaped in plan, and its floor is at two levels, the platform end being raised two bricks above the lower level (see Pl. 19 *E*).

The northeast side of the forecourt, that through which one enters the building, appears to be exclusively utilitarian. It is mostly taken up with the large entrance chamber and the small room connecting with it. Aside from the small corner room (No. 8), of uncertain use, the remainder is given over to a stair well (Room 4) leading to the roof and to an alcove in which is the well supplying the temple with water. The stair well conforms to standard—an ascending passage winding counterclockwise around a square central pillar (see pp. 27–28). The slope begins directly opposite the doorway from the court, the space to the left probably serving for storage under the stairs or ramp. So little of the slope remains intact that it is impossible to ascertain its original surface. Treads may have turned it into stairs, or a plane surface may have served as a ramp.

The well (see p. 33) in the alcove near the east corner of the court appears square at floor level (Pl. 17 *B*). Below, however, it is circular in plan, its sides being of rough stone. At a depth of 3.75 m. below floor level quantities of beads and amulets (Pl. 60, No. 159) were encountered in the debris filling the shaft. They are of all shapes and sizes, ranging in material from paste and bone to carnelian, crystal, and amethyst. Small bronze bells, some with intact iron clappers, were among them. They continued in the debris as far down as digging, which was stopped at a depth of 6.60 by ground water, was possible.

THE CENTRAL COURT

The central court, though rectangular, approaches more nearly than most courts a perfect square (see Pl. 79). Its principal entrance is through Room 13, somewhat similar in size and plan to Room 3, the entrance to the forecourt. Noticeable in Room 13, however, is the fact that the two portals are not placed on a single axis as one might expect. With a direct view from forecourt to central court thus shut off, the latter becomes more secluded, in keeping with its sanctity.

Room 13 discloses no architectural peculiarities. Its pavement is of baked brick, and its walls are covered with mud plaster (Pl. 20 *A-D*). The inner threshold of the portal to the central court, however, has three bolt slots rather than the

more usual two (see p. 26). The chief interest of this room lies in the objects found within it and in its secondary occupation, at which time the doorway to the central court was blocked by a plastered mud-brick wall, its alabaster threshold being at the same time covered with a pavement of baked bricks (Pl. 20 C). Most important of its objects are ivories (chap. vii, Nos. 29–56) found not only within the room but upon the secondary pavement over its threshold. So generally poor is the secondary period that we are inclined to believe that the ivories are a carry-over from the original occupation. Certain inscriptional materials (chap. viii, Nos. 9, 11, 15, 16, 20, 27, and 56) were found upon both thresholds or rather upon the secondary pavement in what was once the portal to the central court and the original alabaster threshold of the portal to the forecourt. They, like the ivories, are probably of Sargonid origin despite their later context.

Within the central court, which is paved with two courses of baked bricks and has walls surfaced with mud plaster, the southwest wall, the façade of the inner temple (see Pl. 83), again dominates the entire court. Although this like the commanding façade in the forecourt contains three portals, there is but one, rather than two, which can be called a major element of the composition. The central portal is typical of entrances to temples. There is no fundamental difference between it and the portal between the forecourt and Room 13 (see pp. 58 f.), while it is almost identical with the portals of the Sin and Shamash temples in the palace.¹⁷ The buttresses are wider than in the portal of the forecourt (see p. 41), and upon the tableaux appears therefore the complete group of symbolic figures. Lion, eagle, bull, fig tree, and combination plow and grain-seeder upon the front, and the king and prime minister upon the ends, were recognizable from the faded remains. The chief difference between these and the tableaux in the palace lies in the borders (described on p. 42).

The tableau shelves are here covered with a single course of baked brick coated with bitumen (Pl. 21 E). It may be that a similar covering protected the top surfaces of the other shelves. If so, its removal before final destruction is the only explanation for the fact that such bricks were not found among the debris elsewhere. Remains of both vertical shafts were clearly recognizable, that to the right of the entrance lying partially upon the tableau shelf (Pl. 21 D), while in that to the left were intact some of the nails which once held in place the bronze bands now entirely missing (Pl. 22 A). The statues also had disappeared, although the holes in which they had once stood remained in the pavement. The debris before the doorway (Pl. 21 C) contained nothing but bricks of the tableaux and a fragment of wood which may or may not have been part of the door (see Pl. 22 B), which here appears to have been in closed position when destruction overtook it (see p. 25). Upon the threshold is the standard inscription (chap. viii, No. 1) used throughout the temple.

Standing some 8 meters in front of the central portal is a square structure of enameled bricks (Pl. 22 C–F), probably some sort of altar connected with the temple ritual (see p. 42). It was encountered in the broad trench cut across the court from the doorway of Room 13 to that of Room 19 (Pl. 22 D).

The decoration of the buttresses is according to rule, here,

¹⁷ *Khorsabad* I 89–100 and 102–7.

because of their greater width, with seven rather than five reeds between the niches (see Pl. 83). They continued upward, we believe, beyond the line of the roof, terminating in crenelated parapets (see pp. 36–37). There is no black dado above the tableau shelves.

The two side portals completing the façade have no decoration other than rabbeted edges. That to the left, opening into Room 28, is framed to a certain extent by the angle of the court and a simple niche, which form occasionally seems to be used as a balancing element to wall angles. Between the niche and the buttress of the central portal is a group of three reeds. The portal at the right is framed by the angle of the buttress and the corner of the court. It provides a second entrance to Room 19, the anteroom of the cellas. An inscription upon the threshold is similar to the one in the central portal.

The black dado which extends across the entire façade with the exception of the portal buttresses, where the tableaux serve the same purpose, is uniform in height save on the narrow surfaces between the buttresses and the rabbeted edges of the central portal. Raising the dado at these points accomplishes two purposes. It provides an excellent background for the alabaster statues and at the same time focuses attention upon the doorway.

The other three walls of the central court (see Pl. 83) are more uniform with the inner temple façade than are those of the forecourt with its southwest wall. The wall through which one enters, the northeast wall in this case, is without decoration, according to custom. The rabbeted edges of the doorway from Room 13 are exceptional. The side walls are similar to each other in decorative motives, the only differences being due to a slight rearrangement of elements. In the southeast wall, to the left upon entering, the broad portal flanked by buttresses is centrally placed. Close to the right buttress is a smaller doorway, framed by the buttress angle and a balancing niche. The remainder of the wall surface is broken up with niches and groups of reeds in irregular arrangement. The northwest wall, on the other hand, has its buttresses and portal to the left, while a small doorway is placed at some distance from the nearer buttress. The wall decoration aside from the buttresses appears to have been planned with balancing elements in view. The niche between small portal and buttress serves a double purpose: it is the balancing vertical to the west corner of the court in relation to the large portal; and, in the case of the small doorway, it is the complement of the niche beyond the first group of reeds.

All four buttresses of the side walls are approximately of the same width. Each is decorated with the common motive of three reeds between two niches. That they are simple buttresses terminating above with the parapet of the roof is our belief (see pp. 36–37).

A great mass of mud-brick construction, clearly intact and not a section of fallen wall, stands upon the pavement near the south corner of the court, actually abutting against the corner of the tableau. There are no plastered surfaces. Our only explanation for this is a suggestion that it served somehow as scaffolding to facilitate work on the upper walls or roof.

The most important room opening off the sides of the central court obviously is Room 17, the passage between central court and Court III. A glance at Plate 79 shows that it

contains the only stone pavement (Pl. 23 *B*; cf. p. 22) aside from the cellas and sanctuaries of the inner temple and from Room 14, which we believe to be a shrine (cf. p. 59). This at once suggests its possessing some degree of sanctity—a supposition which is further substantiated by the high reed-backed niche (see Pl. 23 *A*) opposite the entrance from Court III (cf. p. 45). Just within the doorway from the central court were found remains of wood (Pl. 23 *D*) fallen in such a position as to imply its being part of the original door (see Pl. 23 *C*). Fragments of embossed bronze indicate that the door was once decorated with this material.

The only point of interest in Room 18 (Pl. 23 *E*) is the inner threshold (see Pl. 24 *A-B*), in one pivot hole of which exist remains of the wooden pivot (Pl. 24 *C*) upon which one of the door leaves swung open and closed.

Room 15, opening from the northwest side of the court, has horizontal tiers of small rectangular niches (Pl. 24 *D*) built across its southwest end. As they are preserved to a less extent than their counterpart in Room 5 off the forecourt (see p. 60) and were barren of all objects, there is no further enlightenment here gained as to their function. Three iron wheels 23 cm. in outer diameter, eight-spoked and with bronze “bearings” and hubs (Pl. 24 *E*), were found just inside and to the left of the doorway. Room 16 appears to be no more than a spacious vestibule of Room 27.

THE INNER TEMPLE

From façade to rear wall the inner temple consecrated to Nabu (see Pl. 79) is in all major respects a replica of the three larger palace temples dedicated to the worship of Sin, Shamash, and Ningal respectively (see Pl. 76). Broad, shallow anteroom, cella on axis with central portal of the façade, sanctuary raised above and but partially separated from cella, and encircling corridor-like rooms are present without great variation in all. Individual units lacking in one or another of the palace temples are, however, all present in the Nabu temple, which is therefore the most complete as well as the most ornate of all. The outstanding difference between this and the palace temples is the presence here of the smaller cella and sanctuary (Rooms 23 and 24), the counterparts of which are perhaps to be found by a stretch of the imagination in the small shrines of Adad and Ninurta fitted respectively into the corners of the Sin and Shamash temples. In the Nabu temple, however, the central and side cellas and sanctuaries have inscribed therein identical prayers to Nabu (chap. viii, No. 1).

The anteroom (Room 19) of the inner temple conforms generally to the standard set by the palace temples. The only noticeable variation lies in the number of portals, five in this case as against the usual three. The floor is paved with limestone slabs. Walls, as are all those within the inner temple, are surfaced with mud plaster. The edges of the doorways leading to the rooms beyond are rabbeted—a treatment likewise applied to the corresponding doorways of the Sin temple and probably to those of the other palace temples, although they are not so noted by Place (see p. 39). In the debris of this room were found imprints of wood (Pl. 25 *A-B*) in a position suggesting a roof support of perpendicular beams (see p. 23).

The heart of the entire temple is the pair of cellas and sanctuaries, especially the larger central one composed of

Rooms 21 and 22. They are all presented in detailed plan and sections on Plate 84. Although their outward appearance in plan suggests two rooms, cella and sanctuary are actually one, divided into two sections by broad projecting piers (see p. 47). The floor of the sanctuary is raised above that of the cella and is reached by steps extending into the latter. Both cella and sanctuary are paved with limestone slabs.

That the central cella and sanctuary should be so devoid of special decoration would be surprising were one not prepared from the example of the Sin temple¹⁸ to find their wall surface treatment similar to that in ordinary rooms of the temple. Even with such a parallel serving as precedent one might expect to find in the special temple devoted to the greatest of the gods some peculiar decorative features accorded this holy of holies. Such, however, is not the case. A black dado, unusually high to be sure, extends around the unit, roughly following in height the changing levels where sanctuary floor and mud-brick platform become increasingly high (see Pl. 84, sections *B-B* and *D-D*).

The steps leading from cella to sanctuary are of alabaster (Pl. 25 *C*). Placed centrally and spread over the lower five treads is the usual Nabu inscription (chap. viii, No. 1). Duplicates of this inscription are cut also upon the front faces of the two platforms flanking the steps.

In the sanctuary a platform of solid mud brick (Pl. 25 *D*) occupies the central position directly in front of the large niche (see p. 45). The niche is of the more elaborate type with back of reeds and with rabbeted edges. The top of the platform was originally at the level of the base of the niche, its present stepped appearance being due to destruction. A shallow channel cut into the pavement follows the outline of the platform. It gives every appearance of being a drain emptying into a square hole with cover slab. Platform and niche together in all probability form the base and background of the cult figure. That the base is of mud brick rather than of some more elegant material may be significant, for Nabu as “scribe of the universe” might readily be identified with clay, the medium of written documents.

While clearing the debris from the sanctuary (Pl. 25 *E*) we found at approximately the level of the top of the platform fragments and the imprint of several pieces of wood. Plate 26 *A-C* shows how unmistakable is this evidence of what, from its position so far above the floor, we consider the roof structure (see pp. 16 and 23).

Opening off the side of the sanctuary is Room 25, from which in turn opens Room 26, a long, narrow, corridor-like room extending nearly across the back of the inner temple. There was nothing found suggestive of their functions, but from their positions and connections in relation to the sanctuary we may assume for them a part closely attached to the ritual of the sanctuary. Their chief point of interest seemingly is the groups of seven reeds placed unaccountably directly behind the niches of both sanctuaries (see p. 46). It is these niches, rather than the rooms themselves, which probably for some reason which we do not attempt to give governed the existence and location of these two unique groups of reeds.

The side unit of cella and sanctuary, Rooms 23 and 24, is to a great extent a smaller version of the central cella and sanctuary. It differs chiefly in the proportion between the two sections. Here the cella is little greater in area than is

¹⁸ *Khorsabad I* 118-22.

the sanctuary. The high black dado in the smaller unit maintains a single horizontal upper termination throughout, regardless of the higher floor level of the sanctuary (see Pl. 84, Sections *A-A* and *C-C*). It is interrupted only by the two niches (see Pl. 26 *D*) in the side walls of the sanctuary, which for want of a better explanation we assume to have held statues or other pieces of temple furniture (see p. 46).

Three alabaster steps lead from cella to sanctuary (Pl. 26 *E*). The usual inscription (chap. viii, No. 1) is so widened that it is cut in its entirety upon the lower two treads. It is repeated upon the platforms flanking the stairs at either side, here upon the top surfaces (e.g. Pl. 27 *A*) rather than the front faces. It is repeated again upon the threshold between anteroom and cella. A deposit box at the foot of the steps (see Pl. 26 *E*) proved empty, as usual.

There was no trace of a platform within the side sanctuary, but the niche is according to form with reeded back and rabbeted edges. The vista from sanctuary through cella and anteroom to the court beyond remains impressive despite the present ruined state of the walls (Pl. 27 *B*).

How the worship of Nabu was divided between the large and small units of cella and sanctuary there is no way of telling from the architecture. The sacred objects which they once housed were probably the first to be removed when upon Sargon's death the capital was returned to Nineveh. It is to be hoped that some day texts may enlighten us upon this curious subject.

Room 20, which like both cellas opens off the single anteroom, produced no evidence as to its function. The part assigned to Rooms 28 and 27 is equally conjectural. Room 28, which opens directly from the central court, extends not only along the entire side of the inner temple but partially across the back as well. Its L-shaped course is not unusual. Its greatest peculiarity is to be found in seven mysterious niches irregularly spaced in the two long walls (see pp. 26 and 46). Similar niches appear in the short leg of the corresponding room in the Shamash temple.¹⁹ Room 27, which is reached from the court indirectly through Room 16 (Pl. 27 *C*), is like Room 28 in most respects. It is completely lacking in any distinguishing features.

PRIESTS' QUARTERS AND SERVICES

Although occupying nearly one-half the area of the entire Nabu temple and doubtless once the scene of great activity, the priests' living quarters and services are dull in comparison with the large courts and inner temple. The life centering therein was "behind the scenes" and was probably colorless. Because of this and the fact that this section of the temple is the least well preserved, little can be said concerning the life and the architecture surrounding it.

From the forecourt one approaches the services via the circuitous arrangement embodied in "Room" 29 (see Pl. 79). Immediately to the right is Room 30, of uncertain use. Curiously enough, it was just outside the doorway to this room that several tablets and fragmentary inscriptions were found, many of which are accounts and business documents. Slightly beyond, the passageway turns, to the left toward the doorway leading to the narrow terrace, to the right toward Court IV, the central point of the services.

Court IV and its surroundings present several peculiarities.

¹⁹ *Ibid.* pp. 126 f.

The foremost is its unusual L-shaped plan. Furthermore, it is partially separated from another court (III) only by a wall rather than by the usual series of rooms. Along its south-east side is a row of alcoves. Therein were found ovens and fragments of coarse pottery. We conclude, therefore, that these alcoves are the forerunners of the outside kitchens used to this day in the courts of peasant houses in this district. They are roofed over, but one entire side remains open and exposed to the court. So high must have been the walls, however, in comparison to the size of the court, that there was afforded great protection from the prevailing south-east winds and rain. From the three rooms grouped around the east corner there was nothing significant among the debris. Room 33 from its niche and secluded position may well have been a bath. A doorway in the southwest end of the court provides access via Room 37 to Court V, which might be termed the "central" court of the living quarters.

At some time the corner of the wall where Room 29 emerges into Court IV caused the occupants of the building considerable concern as to its stability. For during either the Sargonid occupancy or the early period of reoccupation this corner was strengthened by a structure of baked brick resting upon the original pavement (Pl. 28 *E*).

A second means of reaching the living quarters from the forecourt is the winding passageway, "Room" 31, the portal of which adjoins that to Room 29 in the extreme south corner of the forecourt. This entrance, while leading to the same ultimate destination, avoids the utilitarian service area. A small vestibule, no more than a slight widening of the passage, may serve no purpose other than to provide space for the hanging and swinging of the door leaves. Just beyond, the passage turns to the left and again to the right before reaching Court III, the only truly decorated unit in the entire living quarters.

That Court III possesses some significance in relation to the temple proper has already been suggested (p. 22). At least, its northwest wall is decorated with portal buttresses, niches, and reeds. Were it not for the fact that Room 17 has received more elaborate architectural treatment than Room 13, one might attribute the buttressed portal from Court III purely to the fact of its being an entrance to the temple. The apparent importance of Room 17, however, suggests that Court III shares to some degree a sanctity not belonging to the remainder of the residential quarter. Aside from the buttresses flanking the portal, what little remains of the northwest wall is subject to decoration. A group of three reeds to the left is oddly balanced by a single niche to the right. Further evidence of special decoration in this court lies in the rabbeted edges of the doorway of Room 35. This doorway and the one from Court V to Room 36, which therefore provides an entrance to Court III, supply the only instances of rabbeted molding to be found throughout this section of the temple.

The southeast side of Court III consists of alcoves similar to those along the corresponding side of Court IV. There was nothing in the debris indicative of their purpose. The only peculiar feature of Room 35 is the rabbeting of its doorway, while Room 36 appears to be no more than the customary passage chamber between two courts.

In and about Court V doubtless centered whatever private life the temple priests enjoyed. It is the third largest of the temple courts and corresponds roughly to the central courts

of residences. In the early stages of excavation it provided the first concrete example of the care with which court pavements are laid (Pl. 27 *D*). The removal of some of the bricks in antiquity had left exposed the bitumen bed upon which rested the lower course of bricks, disclosing at the same time the layer of bitumen between the two courses. For some inexplicable reason the walls of this court are faced with lime plaster; it is the only court encountered in the entire excavations with walls coated with a material employed otherwise exclusively on exterior surfaces (cf. p. 17). The general appearance of these lime-plastered walls is not appreciably different from that of the usual whitewashed mud-plastered surfaces.

A single room (38), strangely placed between two covered alcoves, occupies the southeast side of Court V. The left alcove provides one of the three means of reaching the narrow terrace which runs around three sides of the living quarters and services. Along the entire southwest side of the court extends Room 42, the largest room in the entire temple. Its prototype is probably to be found in the great hall of the reception suite common to all residences (cf. p. 11). Its wall surfaces are unbroken except for a plain niche extending from the floor (cf. p. 46). A simple portal leads to Room 39.

The rooms along the northwest side of Court V have little of interest. Room 43 (Pl. 27 *E*) has a dado unusually well pronounced after the lapse of so many years, while the level of the brick floor, removed in antiquity, is clearly evident in the line of broken plaster near its base. Room 44 is somewhat similar and provides the only access to the group of irregularly shaped rooms in the south corner of the temple. As in Room 43, the brick pavement was removed in antiquity, and in this case was used as blocking for the doorway to Room 45 (Pl. 28 *A*).

Of the rooms grouped about Room 45 little more than their plan was recovered from their advanced state of destruction. Their unusually irregular shapes imply that they were fitted as best they could be into what space remained upon the terrace. From the northwest end of Room 45 a narrow stairway ascends to the roof (see pp. 28 f.). It appears at best to be no more than a service stairway, with its awkward approach in the corner of the room (Pl. 28 *B*). A channel drain (see p. 34) of baked bricks with stone cover slabs extends from Room 45 through Rooms 41 and 40 (see Pl. 28 *C*). It was originally entirely concealed under floor and threshold.

THE SUPERSTRUCTURE AS RESTORED

That the Nabu temple in its original splendor appeared somewhat as we suggest in our restoration (Pl. 2) is our conviction after working for six seasons among the ruins of Dur Sharrukin. We make no claim that the restoration is correct in every detail, but we do believe that it approximates reality as closely as the meager remains of the ancient architecture, the pictorial records of Assyrian reliefs, and the present-day architecture of the vicinity permit. Its irregularity of plan, its gradual building-up of mass from front façade to sanctuaries, and its general simplicity, with profusion of ornament concentrated in certain sections, are all innovations perhaps startling to those whose ideas of Assyrian architecture are based upon earlier attempts at restoration. Such outstanding departures from the restorations of our

predecessors are justified, we believe, in the light of the more profuse "raw material" now at our disposal, upon which we base our restoration here presented.

The ramp approach and the terrace, both in outline and in decoration, require no restoration. They are presented as they were found still preserved among the debris of the superstructure. The plan of the courts and rooms is similarly presented with certainty as recorded from excavation, but beyond this point restoration must accompany established fact.

The increasing mass from entrance to inner temple we base primarily upon thickness of walls, which extensive excavation leads us to believe is a guide to their height (see p. 19). A mere glance at Plate 79 suffices to show the wall thickness increasing from forecourt to central court and again to inner temple, while in the priests' quarters and services no general thickening occurs. The present ground surface, the result of accumulated debris, corroborates this premise; for while the walls of the main cella lie buried to a depth of 5.50 m. and those between central court and forecourt to a depth of 4.00, we find scarcely more than a meter of debris covering the entrance threshold (see Pl. 85). Around the priests' quarters it is even less. Thicker walls no doubt create more debris, but we believe greater height was also a contributing factor. The actual height we do not claim to have settled with certainty. From the painted wall recovered in the great hall of Residence *K*, however, a minimum ceiling height for rooms comparable in size and wall thickness has been established. Upon this basis we restore to the various sections of the Nabu temple heights which we believe are approximately correct (see pp. 19 f.).

The simplicity in our treatment of walls and roofs we believe to be in keeping with archeological and pictorial evidence. The niches and reeds upon the portal buttresses facing the front terrace are entirely the result of restoration (see p. 58). Upon the exterior walls surrounding central court and inner temple we have restored niches merely as an indication of some form of this type of decoration authorized by archeological evidence (see p. 58). Otherwise we have omitted all forms of wall decoration except where it was actually found by excavation. The courts and rooms of the Nabu temple alone prove that wall decoration is applied only to certain spaces, while excavation shows that the exterior walls of the residences at least are always plain. Buttress heights and terminations we believe are determined by their intended decorative value (see pp. 36-37). The problem of crenellations is more difficult to solve (see pp. 40-41). They are of course completely lacking in the debris. According to the reliefs they may crown every wall, be totally absent, or be used sparingly in conjunction with simple parapet walls. We prefer the last alternative, especially in the Nabu temple, where a distinction between simplicity and lavish decoration is clearly indicated in the treatment of wall surfaces.

Our restoration of clerestories over cellas and sanctuaries is prompted by the necessity for some form of lighting and by the extremely thick walls surrounding these units (see p. 27). Other windows high up in certain outer walls we have inserted arbitrarily as the only means of letting light into various rooms far removed from any court. The disks upon the shafts rising from the tableau shelves at the major portals (see Pl. 83) have been restored purely in accordance with a suggestion from a Kuyunjik relief.²⁰

²⁰ Place, *op. cit.* III, Pl. 41, Fig. 1.

RESIDENCE *Y*

Residence *Y* (see Pl. 71) is at once the smallest, probably the least important, and the most inaccessible of the citadel buildings (see Pl. 70). Tucked behind the Nabu temple and Residence *K* and hemmed in by the citadel wall, it is completely hidden from the view of a visitor to Dur Sharrukin (see Pl. 1). Despite its inclusion in the citadel and its consequent proximity to what, excluding the two palaces, are probably the largest residences of the city, it is even smaller in area and scale than Residence *Z* (Pl. 74), to which it is more comparable than to its more immediate neighbors. Surrounded by more lofty structures in antiquity, it has in its ruined state remained for centuries a slight depression encircled by higher ground. Alternately soaked by collected rain water and baked by the sun, its debris has become exceedingly hard packed. Extricating this building from its debris was therefore an unusually slow and difficult task, for which there was little reward. For this building, comparatively poor to begin with, had been so thoroughly cleared of its contents that it proved upon excavation to be not only of the least architectural interest but the most barren as well.

Only about half of Residence *Y* was systematically excavated. The central court and the rooms surrounding it were traced in the usual manner. By means of diagonal trenches spaced at intervals throughout the area where the forecourt and its rooms were known to exist, sufficient walls were subsequently located to enable us to restore the plan of the entire building, which fundamentally is a miniature version of Residence *K*.

The usual order of forecourt, reception suite, and central court is maintained. Perhaps because of space requirements the main entrance is on the side rather than the front. The threshold, from which it was hoped some identification of the building might be derived, was missing—obviously a case of removal in antiquity. A second threshold, between the forecourt and Room 16, again failed us in this respect. The stone was still in place, but the desired inscription had never been cut thereon.

On the side of the forecourt opposite the entrance are the services. Direct access to this area from the street may have existed, but in our restoration we have adopted the more usual arrangement whereby it is reached only from the forecourt.

The reception suite conforms to the standard. The modest scale of this building is no doubt responsible for the fact that there is but a single portal between forecourt and great hall

rather than the usual three (see p. 11). A similar situation exists in Residence *Z*. The same reasoning may account for the single portal rather than the usual two portals leading beyond the great halls of these two residences. A third irregularity peculiar to the same rooms of these smaller residences is the niches in the walls in which are the portals from the forecourts. They extend to the floor (see p. 46) and may owe their origin to an emulation of the recessed side doorways (see p. 25) present in the great halls of the larger residences. In Residence *Y* we have restored a second niche in the great hall (Room 16), in keeping with the two niches in the corresponding wall of Room 31.

There are few peculiarities noticeable in the central court and its surrounding rooms. The room arrangement is surprisingly similar to that immediately around the central court of Residence *M*, while the two indirect entrances from the street are not greatly unlike those permitting access from street to central court of Residence *K*. The free use of niches in the larger rooms, the alcove in a corner of the court, and an unusual single row of baked bricks set into the court wall at "foot level" (see pp. 18 f.) further liken to each other the central court areas of Residences *Y* and *M*. The south corner of the building is rounded to permit free circulation within the curve of the citadel wall.

There was doubtless a generous employment of painted decoration upon the interior wall surfaces of Residence *Y*. Although few walls remained standing to any great height, the profusion of fragments of painted plaster among the debris implies that they were once brightly decorated in this manner. To the walls of Room 32, which are among the best preserved, a goodly portion of the plaster still adhered. The design painted thereon was too faded to permit restoration, but disclosed the fact that 1.60 m. above the floor was a horizontal band 0.40 wide consisting of eleven alternating blue and white stripes. Above this, red appeared to predominate, but in no recognizable design. Below, the entire surface was white with the possible exception of a dado faded beyond recognition.

From the meager evidence supplied by excavation, we can do no more than assume that Residence *Y* was the abode of some court official whose position warranted his living within the citadel but not on the scale enjoyed by his neighbors. Except for its size and scale and its unfortunate crowded location it compares not too unfavorably with the other citadel residences.

RESIDENCE *K*

The second most important private residence of the citadel probably is Residence *K*, which faces upon the open "square" in front of the king's palace. Of the residences it is eclipsed in scale only by the dwelling of Sinahusur, which occupies the complementary position upon the square (see Pl. 70). As in Residence *Y*, the lack of inscriptional material precludes positive identification. Its position in regard to the other citadel buildings, its scale, and its lavish decoration, however, all speak for themselves of its importance. It seems reasonably certain that the occupant of this great house was an official second only in rank to Sinahusur, Sargon's grand vizier.

Were it not that exterior decoration appears to be universally restricted to palace and temple (see p. 35), one would experience considerable surprise at finding the exterior of Residence *K* (see Pl. 71) finished only with unrelieved white lime plaster. Even the main entrance portal facing the square has no trace of the simplest molding or other form of decoration. There is nothing in the treatment of this portal, the only break in the front façade, indicative of the scale or magnificence within. A simple arched opening, in all probability, provided access to Room 2, the entrance chamber, situated in the extreme north corner of the forecourt, which itself is undecorated although enlivened considerably by the nu-

merous doorways opening to the rooms on all four of its sides.

Rooms in which probably the business affairs of the master of the house were transacted line three sides of the forecourt (see p. 11). Room 9, in the west corner, because of its niche and a large jar set into the floor, the surface of which was removed in antiquity, may have been a lavatory. Three vestibules or passages (Rooms 86, 66, and a passage to Court 72) leading to the services punctuate the continuity of rooms along the southeast side.

The façade of the reception suite occupies the entire southwest side, which is lengthened by means of a corner alcove to provide space sufficient for the three portals to the great hall (Room 12). Toward the west corner the wall plane is broken where it juts slightly into the court area in order to broaden the stair well (Room 10) within.

Although the three portals between forecourt and central court appear to have been undecorated, their thresholds provide some of the most exquisite carving found throughout Dur Sharrukin. That of the central portal was originally the most magnificent, although its mutilation in antiquity leaves us only fragments (Pl. 30 *D-E*) of its lacelike design, composed of square panels and borders of rosette, bud, and flower motives (see pp. 48 f.). Restored together with the inner threshold of similar design (Pl. 30 *A* and chap. vii, No. 8), its original beauty is not hard to imagine. The inner threshold was found not in place but resting against the opposite wall of Room 12. The bolt slot, however, and the similarity of design to that of the threshold fragments easily identify its origin. Just outside the portal are stone rings set into the brick pavement of the court and probably used to secure awnings (see p. 26).

The thresholds in the two side portals were no less elegant in their decoration than was the central one. They are complete, however, and therefore more impressive today. That in the right-hand portal is so weathered that its carved surface is recognizable only by comparison with its well preserved mate in the left-hand portal (Pl. 30 *B* and chap. vii, No. 9), which it is proposed to remove to the Iraq Museum in Baghdad.

Although decidedly out of keeping with the severity of the forecourt, these thresholds more than literally pave the way to the splendor of the great hall (Room 12), one wall of which had so fallen as to permit the recovery of the design painted upon its plaster. How the plaster was carefully exposed section by section, some parts adhering to the wall (Pl. 31 *D*), others fallen (Pls. 31 *A* and 43), how its various designs (Pl. 31 *B-C*) were traced from its reverse side, and how the individual tracings were finally pieced together to permit restoration of the whole are all described by Mr. Altman in chapter v. The mere extent of this mass of brilliant red and blue stretching for nearly 80 meters around the walls of this great room and to a constant height of $7\frac{1}{2}$ meters, which was increased to 13 in the panel opposite the central portal (Pl. 88), is in itself appalling. The intricate though oft repeated designs are astonishing.

Aside from the recovery of its design the painted plaster of the great hall has been extremely valuable as a guide for restoring the architecture of the various buildings. Its primary contribution in this respect is in establishing the minimum ceiling height at a point higher than we would have dared suggest without such concrete evidence (see p. 20).

Furthermore it proves from the distribution of its design that low doors with horizontal lintels were used in residence interiors as well as in Citadel Gate *A*, the only instance where wooden lintels were found intact (see p. 54).

The floor, like the central threshold, had suffered in antiquity. The bricks were completely missing in all sections examined, but there remained in place the stone socket (see Pl. 30 *D*) set into the floor to receive the prop with which the central door was secured when closed (see p. 26).

That painted plaster adorned the walls of the broad opening between great hall and alcove is evident from the few fragments adhering thereto (Pl. 31 *E*). The design, while not entirely recoverable, is apparently a continuation of that within the great hall itself. The stair well, Room 10 (cf. p. 27), completes this standard reception suite.

The central court and its connecting apartments are readily accessible both from the forecourt and from the outside. From the former the reception suite supplies the more direct passage used probably only by family and guests. The more frequented approach was doubtless the long narrow corridor, Room 48, connecting jointly to the forecourt through Room 66, to the services through Room 50, and to the central court via Rooms 40 and 37. From the street one entered via Room 20 or by the roundabout route through Rooms 18, 17, 16, and 14. The court itself offers no peculiarities other than the stairway leading from its north corner to the roof (see p. 28). Room 15, the vestibule, occupying the actual corner of the court, and Room 16, reduced to a corridor by the stair base, which is necessarily jogged to prevent blocking of the doorway, make an awkward arrangement which cannot help but suggest that the stairs were not a part of the original plan. That they were not the creation of secondary occupants, whose rebuilding at best was of the crudest nature, is certain from the painted walls of vestibule and stairway. Upon the wall of the vestibule was clearly recognizable the stylized fig tree (Pl. 32 *A*) so familiar from the temple tableaus, while on the wall of the stairway was an ascending array of the tableau fig tree and bird along with other designs too fragmentary for identification. The original plan, one suspects, provided for entrance to the court via Rooms 18, 17, and 16, from which there was to be no doorway to Room 14—an arrangement not greatly unlike that in Residence *J* whereby the corresponding corner of the central court is reached from outside via Rooms 22 and 21. It was in the debris of Room 18, the outermost room of this complicated entrance passage, that two alabaster slabs with unique molded edges (Pl. 32 *E*) were found. If they are not intrusive, their most likely provenance seems to be the portal from the street (see p. 49).

Within the vestibule were found, oddly enough, several enameled bricks stacked against the wall, these being of a small size encountered nowhere else in the excavations (see p. 42). With them were also found three basalt drums (e.g. Pl. 32 *B*; chap. vii, Nos. 15-17) which were probably intended for column bases (see p. 31). The use of the vestibule as a storage room cannot have been contemporary with the use of the stairs. Since the stairs are undoubtedly Sargonid, though perhaps an architectural afterthought, the enameled bricks and stone column bases must have been placed in the vestibule before or after the original occupation of this residence. If we accept the former alternative, we must assume that Residence *K* was never fully completed and occupied and that these objects were stored here temporarily, await-

ing their final destination. Otherwise their presence in this vestibule must be attributed to an act of later occupants.

While a section of the central court was being cleared, the collapse of the face of the northwest wall just outside the stairway vestibule accidentally disclosed a vertical drain whereby water was carried from the roof to the sewers below (see p. 33). A square casing of baked bricks, one side of which is flush with the wall face (see Pl. 32 *C*) and is therefore concealed only by the plaster, incloses a circular casing of segmental bricks. Within this inner case overlapping tiles form the actual water conduit (Pl. 32 *D*). The entire structure, tiles and bricks alike, is solidified and waterproofed with bitumen.

So closely joined to the central court that it cannot properly be considered a separate apartment is the group of rooms centered about Room 24. Three portals open between the court and this large room, which extends across the entire southwest end of the court and occupies a position in relation thereto comparable to that of the great hall (Room 12) in relation to the forecourt. Room 24 would therefore appear to be the private reception room, the family living-room if such a thing existed, in contrast to the great hall, the public aspect of which is evident. Three of its walls are painted with designs unfortunately too far disintegrated to permit recognition. Its fourth wall probably is similarly decorated, but in addition has unsculptured orthostats forming a dado along its base and in the portal to Room 21, which lies behind it. It is a unique example of a partial use of orthostats within a room. Elsewhere they extend along all four sides or are entirely missing. A fragment of an elaborately carved inner threshold (Pl. 30 *C*) may have belonged to one of the portals of this room. As it lay in the debris barely under the present ground surface, it more probably is extraneous to this room and in some manner found its way here from elsewhere (see p. 49).

Completing this apartment are two suites of two rooms each. Both of them open off the central living-room (24). The larger of the two, composed of Rooms 21 and 22, contained nothing indicative of its nature. The other, Rooms 25 and 23, is equally enigmatical. Room 25 has a somewhat unusual cement floor, while from Room 23 come fragments of several incised and painted ivory plaques (e.g. Pl. 32 *F*).

The private apartments or suites connecting with the central court can be more readily analyzed and segregated in Residence *K* than in any other residence. They are so complete as to include their own private courts. Some are naturally more elaborate and on a grander scale than others. The various units, complete in themselves and differing one from another in size and in room arrangement, can only suggest that, although under the paternal roof, members of the family with perhaps children of their own were accorded considerable individual independence and privacy.

What in all probability is the master private apartment opens directly off the central court. Its private court (38) alone has an area nearly half that of the central court, from which it is separated by a single wall. Adjoining it are three rooms (26-28), all lined with orthostats. They are the only rooms in the entire residence so differentiated from the others. Whether they are to be termed living-room, bedroom, and bath, or bedroom, dressing-room, and bath is perhaps a minor question. The former seems the better guess in view of the fact that in other apartments the two small

rooms are often separated from the large one. The bath, however, remains certain, for here as in the other apartments the plumbing has survived in the form of drains. Among the debris of Room 28 were fragments of painted plaster upon which could be identified kneeling winged genii like those of the decoration of the great hall (see chap. v). Here, however, they are drawn at a smaller scale than those upon the walls of the great hall—another indication of the Assyrian appreciation of scale in decoration already shown in the figures of the palace reliefs (see p. 47). We may with reason infer that above the orthostats of Rooms 26 and 27 a similar type of decoration prevailed.

Corridor-like Room 37 connects the two remaining private apartments with the central court, while they may be reached from the forecourt via Room 48 past the services. The larger of the two centers around Court 32, while the smaller is grouped around Court 41. In passing from the central court to Court 32 is encountered a peculiarly fashioned angle of the connecting corridor. Cramped space due to the crowding of Court 41 is no doubt responsible for the rounding of the angle outside its west corner and the setback of the angle opposite. Otherwise the walls of Courts 38 and 41 would come so close together that the passageway would become blocked, thereby isolating Court 32 and its rooms from the rest of the building.

Second in size to the master private apartment is that built around irregularly shaped Court 32. Although but slightly smaller in area, this group is definitely inferior in elegance to that occupied by the master. There are no orthostats lining the walls, nor is there such a spacious court. The rooms, however, had their walls painted in gay designs, none of which could be identified from their fragmentary remains.

The arrangement of the rooms suggests that several persons occupied this apartment, which is made up of three distinct suites, one of which is considerably more capacious and luxurious than the others. In plan it is not unlike that of the master apartment, nor is it appreciably smaller. Room 31, extending across the width of the court, may be termed the living-room, with bedroom and bath (Rooms 30 and 29) opening therefrom. The relative position of these two small rooms is reversed from that in the master apartment, for the practical reason, no doubt, of placing the bathrooms side by side to simplify the drainage problem. The bathroom here is unusually well preserved (Pl. 33 *A-B*). Its bitumen-covered brick and stone floor (see p. 22) is nearly intact, its "fixtures" having suffered but slightly more. Immediately within the doorway and along the wall to the left was probably a stone slab bench, the four round supports of which remain imbedded in the floor though the slab is missing. A slightly raised stone between bench and doorway may have served as a steppingstone from bench to threshold when the floor was wet after bathing had taken place. The stone slab with depression for bathing is in its customary place, while the "soil pipe" orifice, cut in the stone slab centered in the niche, likewise occupies its usual position (see p. 46).

The two smaller suites of this apartment have but two rooms apiece, each suite practically identical with the other in size and arrangement. Room 34 supplies the bath to Room 33, whereas in the other suite Room 35 similarly augments Room 36. How a drain is supplied from several sources (see pp. 33 f.) becomes evident from the removal of the floors in this suite (Pl. 33 *C-D*), for the course of the drain

exposed thereby shows how Court 32, Bathroom 35, and, in all probability, Bathroom 34 of the adjacent suite are all served by a single drain. Brick boxes, in this case perhaps receptacles for personal objects (see p. 22), are also part of the subfloor structure of Room 36.

Whether this apartment was occupied by three wives, the favorite or ranking one having the "de luxe" suite, or but one wife and perhaps her children or attendants were its occupants, we shall never know. A strainer is the only indication that the court was to some extent used for local domestic purposes—a possibility for which there is considerable evidence in Court 41 of the third apartment.

The smallest and least prepossessing of the three private apartments is that around Court 41, which may be entered only from Room 40, a vestibule between Corridors 37 and 48. In the north corner of Court 41 is a niche in which ovens were found. These along with bowls, pots, and jar stands suggest that a certain amount of cooking took place within this court. A single fragment of bronze embossed with a unique design of tree and animals may possibly be intrusive (see p. 44). Across the northeast end of the court extends Room 46, which corresponds to the living-rooms of the other apartments. It is a unit in itself, however, for the two suites of bedrooms and bathrooms (Rooms 42-43 and 44-45) are connected with it only by the court and are in most respects similar to the minor suites about Court 32. A few fragments of incised ivory suggestive of those from Room 23 shed no light on the function of Room 46, which like its complements in the other apartments had its walls brightened with designs painted upon the plaster. That the occupants of this apartment were inferior in rank to those of the other two is certain. To identify them one guess is as good as another.

The service area, which occupies the southeast side of the building from the private apartments to the east corner, falls roughly into two sections: one of them the domestic services, in and around Court 54; the other, the remaining services, centered in the two connecting Courts 80 and 72.

The domestic services, identified as such by the objects of that nature found scattered throughout the court and various rooms, are so centrally located that they are equally accessible from forecourt and central court. They are confined to a simple area consisting of Court 54 and the rooms which open off it on three sides. The single entrance is through Room 50.

This entire area of domestic services appears to have continued in use after the original occupation; at least such is the impression gained by certain blocked doorways and flimsy structures typical of the secondary occupation. For the most part, however, it is impossible to differentiate between what is original and what is secondary, since in reality both are parts of one continuous occupation (see p. 4).

The most unusual feature of Court 54 is a single course of baked bricks built into the wall at floor level (Pl. 33 *F*), a structural detail found only here and in the central courts of Residences *J* and *M*. Approximately centered along the southwest wall is a large rectangular stone vessel with outlet. Beside it is a "table" of bricks piled in crude fashion. The vessel probably belongs to the Sargonid occupancy. The doorway in the west corner of the court appears to have been partially blocked to decrease its opening. At the same time the door leaf was rehung on the court side instead of in the

room behind. This unheard-of procedure must certainly be the work of later occupants, who did not even bother to set the pivot into the floor. A pivot socket resting upon the brick pavement seemed to satisfy these crude builders.

The only rooms of note in the domestic services are among those along the northwest side of the court. Rooms 47 and 49, which adjoin each other and have but a single entrance from the west corner of the court, illustrate several types of wall niches (see p. 46). In Room 49 there are three niches, two in the northwest and one in the northeast wall (see Pl. 34 *A*), set conveniently at shoulder height probably as "shelves" for daily used objects. In the southeast wall a broad, shallow niche springs from the floor and terminates horizontally at a height of 2 meters (Pl. 34 *B*). A brick-sized stone centered in its floor has a circular drain-sized cut, which, however, does not penetrate through the thickness of the stone. A circular baked-brick structure in the west corner and a square mass of mud brick in the corner opposite

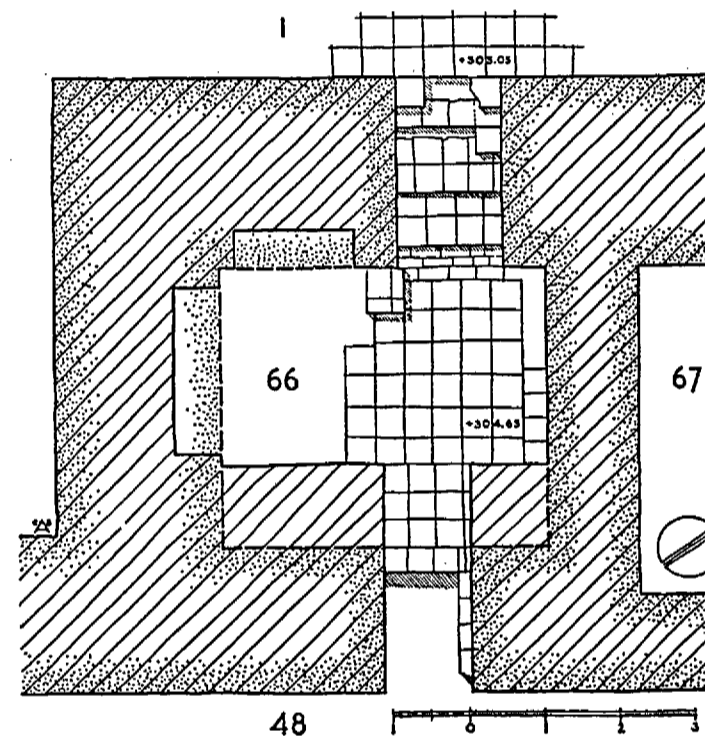


FIG. 9.—ALTERATIONS TO ROOM 66 OF RESIDENCE K MADE BY POST-SARGONID OCCUPANTS. SCALE, 1:100
Dots indicate the original walls.

are doubtless secondary, for they rest directly upon the earth surface, which was originally covered with brick pavement. Room 47 is another bath or lavatory, paved with bitumen-covered brick and with drain orifice cut through a small stone slab centered in a niche (Pl. 33 *E*). A roof roller had fallen into this niche.

Rooms 51 (Pl. 35 *A*) and 52 (Pl. 35 *B*) are both filled with mud-brick and baked-brick structures of obviously domestic character. The mud-brick shelf in the latter is probably original and perhaps with fire underneath served as some sort of stove. The baked-brick structures may have been contemporary or later additions.

The vestibule, Room 66, through which one enters the corridor to reach the domestic services from the forecourt was considerably changed by post-Sargonid occupants. The original room was rectangular, its brick pavement being level with that of forecourt and Corridor 48. Later, however, the wall between vestibule and corridor was nearly doubled in thickness (Pl. 34 *C*), niches were cut into two of the walls (Pl. 34 *E*), and a new pavement sloping upward toward the forecourt was laid over the original floor (Pl. 34 *D* and Fig. 9).

Within the doorway to the forecourt the new floor rises in steps to the level of secondary pavement in the forecourt, 70 cm. above the original threshold. Upon these steps rests what is probably an inverted column base (see Pl. 34 *F*), which may in its present position have served as a table (see p. 32).

What may have been the original "wine cellar" is Room 65, which is distinctly separate from the services and is connected only with Room 67 upon the forecourt. Ranged along its sides are eight storage jars (Pl. 35 *C*) imbedded to about half their depth in bases of mud brick (Pl. 35 *F*). They are of differing shapes and are variously decorated (Pl. 35 *D*). Their contents are not especially enlightening, consisting chiefly of scattered fragments of pottery and baked bricks and occasional bird bones. These, however, are the contribution of later occupants, who for some unfathomable reason blocked the original doorway, substituting therefor a new one in the same wall and leading to the same room (Pl. 35 *E* and Fig. 10).

There is little to be said concerning the remainder of the services, so bad was their preservation and so barren were they of objects. Courts 72 and 80, though connected one to the other by Room 84, have each an individual entrance from the forecourt. Certain features, such as the units of small room attached to a larger one, possibly a bedroom-and-bath arrangement, suggest living quarters. They may therefore be the servants' quarters rather than areas in which

services were actually performed. Or they may equally well have served with the rooms directly upon the forecourt in

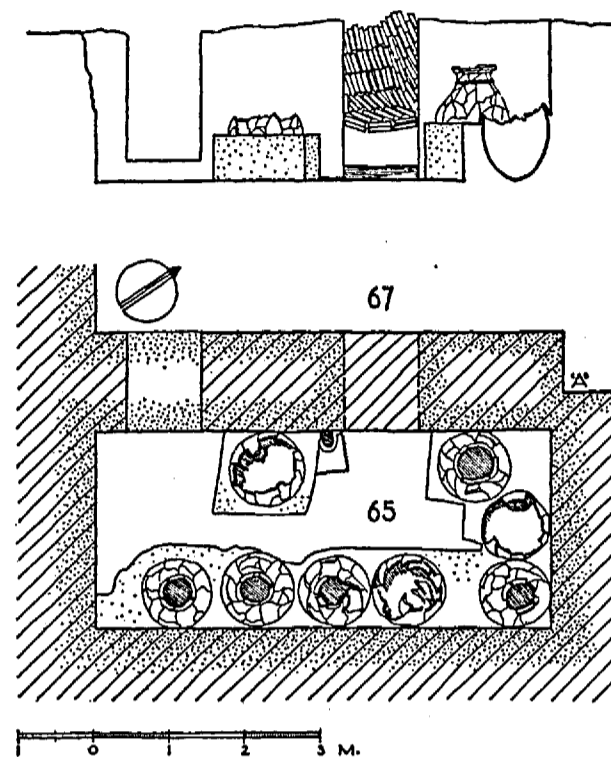


FIG. 10.—THE "WINE CELLAR" OF RESIDENCE K, WITH MODIFICATIONS BY LATER OCCUPANTS. SCALE, 1:100
Dots indicate the original walls.

the business transactions of the house. In the debris there was nothing of evidential character.

RESIDENCE L, THE DWELLING OF SINAHUSUR

Residence *L* is outstanding above all others in size, in architecture, and in the fact that it is the only residence capable of identification. It enjoys the most favored position within the citadel, facing upon the square in front of the palace and in greatest proximity to the main ramp leading to the palace terrace (see Pl. 70). Its extent approximates the combined areas of the Nabu temple and Residences *J* and *K*. Its room and court arrangement presents not only the greatest complication of plan but structural elements found nowhere else. It is therefore appropriate to learn from its inscribed thresholds (chap. vii, Nos. 11–13; chap. viii, No. 2) that it is the residence of Sinahusur, full brother and grand vizier of Sargon.

Sinahusur is all but forgotten in the inscriptions that have come down to us. He is accorded but a single reference in Sargon's annals, where in the account of the eighth campaign he is mentioned as being in command of the king's body-guard.²¹ Whether or not he is the same man as one of that name mentioned once as a witness some years later (677 B.C.)²² during the reign of Sennacherib we have no way of knowing. Such a lowly reference seems scarcely appropriate for the king's uncle and the former grand vizier of Assyria. Yet Sargon's literary treatment of him is scarcely more adequate. Until the recovery of the thresholds in his residence there was no knowledge of the fact that Sinahusur was Sargon's grand vizier, let alone his being full brother of the king. Sargon apparently was as loath to mention his brother as his ancestors (cf. p. 9).

²¹ Luckenbill, *Ancient Records of Assyria and Babylonia II*, § 154.

²² C. H. W. Johns, *Assyrian Deeds and Documents* (4 vols.; Cambridge, Eng., 1898–1923) I 123 and III 416, No. 194; J. Kohler and A. Ungnad, *Assyrische Rechtsurkunden* (Leipzig, 1913) No. 475:6.

Residence *L* is, properly speaking, a typical residence within a larger complex (see Pl. 72). The true residence, which by itself is larger than the whole of Residence *K*, is complete in and confined to the areas surrounding the forecourt and central court, which with the exception of a small section in the extreme south corner were fully traced by excavation. The courts and rooms attached to the back of the residence unit are freely restored on the basis of soundings which determine limiting as well as certain interior walls. Upon this meager skeleton we have reconstructed a plan in keeping with this and other buildings of Dur Sharrukin, a plan such as Sargon's architect might but not necessarily did conceive.

The courts and rooms other than those ranged around forecourt and central court present problems not encountered in Residences *J* and *K*. Since the requirements of Sinahusur's domestic establishment are apparently met in the normal unit embracing the two principal residential courts, the remainder of the building would seem to have been devoted to special purposes attendant upon his office. As grand vizier he doubtless possessed a large retinue to assist in carrying out his state duties. Its members may have been housed in these various apartments attached to but segregated from the private dwelling of their master, analogous perhaps to the apartments located between Courts XV and VI in the king's palace (see Pl. 76). A more likely hypothesis is that these apartments were the offices required for government affairs, the "10 Downing Street" of Assyria. The circulation is so arranged that they might easily be considered an annex to the forecourt, in which the business of the master normally takes place and which in this instance is scarcely adequate for the requirements of such high office.

The outward appearance of Residence *L* is not unlike that of the other residences. Its exterior wall surfaces are white and unadorned. A watershed where wall meets ground helped to prevent weakening of the foundations from excessive rains. A larger area of thick walls suggests a greater extent of high roofs than in Residence *K*, while the arrangement of rooms three deep along the sides of the central court leads us to believe that clerestory lighting further increased the roof height in certain places (see p. 27 and Pl. 1).

The main entrance to Residence *L* presents peculiarities not encountered elsewhere. The portal, rather than being directly upon the street or square, is in the side of an alcove or loggia—an excellent arrangement, to be sure, to protect it from the elements. The same purpose would be accomplished were the portal in the wall of Room 143, facing the open side of the alcove, as one would naturally expect it to be. But a more indirect entry to the forecourt was for some reason preferred. To reach the forecourt one must first pass through small Court 3, surrounded by its own group of rooms, a unit wherein guards may have lived and kept watch.

The forecourt is in principle a replica of that in Residence *K*. An alcove in the far left corner, as one enters, provides the added space for the third portal of the great hall (Room 119). The wall of the stair well (Room 121) again projects slightly beyond the normal plane of the façade. Small chambers and vestibules connecting with the services behind line the side walls. The orientation, however, of the forecourt and its immediately surrounding rooms is oblique to that of the central court and of the building as a whole—an arrangement unique among the residences. The change in orientation may of course be purely accidental, but it was more likely deliberately planned. Outwardly it appears to have been the architect's solution of a problem arising from the limited space between this residence and the corner of the palace. An open space must be maintained between palace and Residence *L* lest the area northeast of the palace become completely isolated. At the same time it was desirable to provide interior circulation between the forecourt and the courts and rooms behind the residence proper. How might this be done without sacrificing space either from the great reception suite or from the private apartment centered in Room 34, the apartment second only to, and connected with, the master apartment grouped about Room 40? Shifting the axes of the forecourt may have seemed the easiest way out of the dilemma.

The reception suite offers no variation from the standard plan. That its walls were gaily decorated is attested by the many fragments of painted plaster found within the debris. The small Room 118 off the north corner of the great hall is granted special treatment in the form of a recessed portal as well as the usual niche. There is a plain alabaster threshold leading to the stair well (Room 121). The chief contribution of this reception suite is in the three thresholds (see p. 48) which one must cross in proceeding from forecourt to central court. Except in dimensions they are similar to one another. The best preserved of the three (Pl. 36 *A* and chap. vii, No. 11), which lies between Rooms 119 and 116, is to be taken to the Iraq Museum in Baghdad. The one from the portal between Room 116 and the central court (Pls. 36 *B* and 66 and chap. vii, No. 12) is in the Oriental Institute Museum in Chicago. The third, between the forecourt and Room 119, the design and inscription of which are barely legible (Pl.

36 *C* and chap. vii, No. 13), is to be left *in situ*. The 7-line inscription on each (chap. viii, No. 2) extends from side to side at approximately the mid-point of the threshold and identifies both the dwelling and its owner. The entire surface not occupied with the inscription is covered with an all-over design of small squares in each of which is a daisy-like rosette.

The central court of Residence *L*, unlike those of all other citadel residences, has but one means of entry—from the forecourt via the reception suite. The lack of other entrances may be a precautionary measure to insure the privacy of the residence against intrusion of the life that went on in the attached courts and rooms. At the portal from Room 116 are stone awning rings set into the brick pavement at either side of the threshold (see Pl. 37 *A*). Otherwise the court differs little from that of Residence *K*.

In the corner immediately to the right upon entering and corresponding to that in which is the stairway vestibule of Residence *K* are the stairs leading from central court to roof (Pl. 37 *A-C*). Again the awkwardness of their construction suggests that they were not incorporated in the original plan of the building but were added after construction was under way (cf. pp. 27 and 28). The lower part of the stairway gives a presentable appearance. Ten treads of alabaster slabs are regularly laid, forming an approach to a landing within the wall, 1.60 m. above floor level (Pl. 37 *C*). Their outer edges and their stone supports show some attempt at joint-fitting (see Pl. 37 *B*). Beyond the landing, in what normally would be a room (87), an inclined earth surface continues upward until it disappears at ground level. Originally the incline must have been covered with a hard surface in the form of a ramp or steps continuing over Room 88.

As there were few objects of note found throughout the entire building, the various apartments around the central court and the services off the forecourt can be assigned to functions purely on the basis of their plan in relation to that of Residence *K*, where concrete evidence was more plentiful. Across the back of the central court is an apartment similar in position and number of rooms to the private living apartment in Residence *K*. The main room (79) extends the entire width of the court and is somewhat unusual in having two rather than one or three doorways opening therefrom. One of these is recessed like the side portals of the great hall of the reception suite. Units of two rooms each open off the back and one end of the large room.

Two distinct but connecting private apartments open off the west corner of the central court. The one consisting of Rooms 40 etc. is undoubtedly the master apartment, while that composed of Rooms 34 etc. is second in size and elegance. Of the seven rooms in the master suite all but two (Rooms 35 and 36) are lined with undecorated alabaster orthostats, above which the walls were once unquestionably painted in brilliant designs. Room 38 appears to be the central room, for the recessed doorway in the middle of the wall between it and Room 40 clearly shows that the door, if any, was hung in the latter. It is difficult to account for the hanging of the doors in the side portals of this same wall, for their edges in both rooms have multiple rabbeting, a most unique arrangement (see p. 47). Stranger still is the fact that jambs and rabbeting alike are of plastered mud brick in contrast to the adjacent stone orthostats (see p. 25). Room 37 (Pl. 36 *D*) appears to be the bath.

There are no orthostats or rabbeted molding in the apartment connecting with that of the master. Otherwise there is little difference between the two. The arrangement is primarily the same, although there is one less room. Walls apparently were covered with painted plaster, even in the bathroom (30), where some of it remains intact though faded beyond recognition of design.

Of the remaining rooms around the central court even less can be said. Suites of bedroom and bath can be recognized in the intricate maze of rooms forming the southeast side of the court, and painted plaster fragments have been found therein. But we cannot attempt a full explanation. Corridor-like Room 42 and the four rooms opening therefrom make up a segregated unit the plan of which offers no suggestion of function. A sentry box is perhaps the best explanation of tiny Room 47, opening outside rather than within the court area.

The service area is apparently separated into two parts, one on each side of the forecourt. That the domestic services are to be found on the side nearer the palace seems likely, for several storage jars imbedded in the floor were lined along the walls of Room 20. Then too it is nearer the entrance to the reception suite and consequently the private quarters of the central court. Floor surfacing throughout this area had been entirely removed except for an inner threshold in Room 14.

Along the southeast side of the forecourt are courts and rooms which for want of a better assignment we may delegate to miscellaneous services. The circular structures in Rooms 137 and 141 surely are intimations of storage receptacles calling to mind the modern silo.

Most of the area of courts and rooms extraneous to the residence proper is the result of restoration. Court 105, however, and its accompaniments were excavated and produce one of the most unique and perplexing structural elements of the entire residence complex. For along the entire southeast side of this court is a row of freestanding deeply rabbeted

rectangular piers (see p. 31) which must have formed a portico. Since the piers remain intact to no greater certain height than 2 meters (Pl. 36 *E*) and since the debris is not enlightening, one can only hazard a guess as to whether the space between piers was spanned with lintel or with vault. Another curiosity of Court 105 is the pavement, which is of rubble and therefore like street rather than court pavement. It is the only instance of this type of pavement found within a building inclosure. Were this area not so remote from any entrance to the building complex, one might suspect Court 105 and its environs of being a specialized sort of market. Indeed, in Room 113 were found quantities of storage jar fragments, while from the debris of the portico itself (Room 106) were recovered three inscribed sherds, obviously from measuring-jars (chap. viii, Nos. 34–36). But a market in such a location seems preposterous. A government bureau of weights and measures is perhaps a more plausible suggestion.

Beyond Court 105 Corridor 99 continues past four rooms of uncertain use. A portal near its far extremity connects it with "Room" 98, or, more properly, an areaway stretching across the back and along the entire northwest side of the central court area. Eventually it rejoins the forecourt through Room 27. Two courts opening off this areaway have been partially excavated. Court 76 is as spacious as the central court of the residence proper. A stair well (75) adjoins the vestibule (Room 74) by which it is entered from the areaway. A smaller court (53), with similar means of entry, occupies the corresponding position at the north corner of the areaway.

Walls of a building not far from Residence *L* were encountered during our attempts to locate the northwest extremity of this building complex. Two further soundings, one toward the center of the blank area on Plate 70 and one near the point where citadel and town walls meet, produced walls of this same or of an adjacent unknown building. They are, however, so fragmentary and so widespread that we do not attempt a restoration.

RESIDENCE *M*

Our discussion of Residence *M* must of necessity be limited largely to the central court area to which our examination of this building was chiefly confined. Surrounded closely by town and citadel wall and by the massive palace and Nabu temple (see Pl. 70), this residence in its ruined state presents the same difficulties of excavation encountered in Residence *Y* (see p. 65). The hard compactness of the debris made the progress of excavation (Pl. 37 *D*) not only difficult but extremely slow. Soundings made subsequent to the tracing of the central court area, however, have located sufficient walls to determine the limits of the building and the changing orientation of the sections therein. From this framework we have been able to restore, with considerable freedom to be sure, a plan of the entire residence (Pl. 73), which almost completely fills the citadel area southwest of the palace.

What individualizes Residence *M* perhaps more than any other single factor is the varying orientation throughout its several sections and its irregular plan resulting therefrom. Forecourt, reception suite, and central court are in their customary relationship one to another and as a unit form, so to speak, the backbone of the entire residence. To this unit, the axes of which are oblique to every one of the neighboring

walls and buildings, are attached wedge-shaped "wings" or sides. The entire building therefore fills most of the space allotted to it; and its side walls, at least, are parallel respectively to the side of the Nabu temple and to the town wall. Front and rear walls, however, show little consideration for their limiting factors, the palace terrace and the citadel wall.

Sounding trenches spaced at intervals throughout the forecourt and wing areas disclose a rather broad open space between Residence *M* and the palace at the base of the ramp leading from the street to the south corner of the palace terrace (see Pl. 70). One known doorway provides access from this area to Room 17 (see Pl. 73), in the extreme corner of the east wing, which probably contains offices or services. Despite its size and its prominent position near the palace ramp and street, this portal, in view of the interior plan of the building, can scarcely be the main entrance. This element we supply as indicated on the restored plan, in recognition of its convenience so placed, of the importance attached to the open space because of its location, and of the precedent set by Residences *K* and *Y* for both corner and side entrances.

A peculiarity to be noted in the forecourt is the recession rather than protrusion of the section of the reception suite

façade immediately opposite the stair well (4). So regular is the interior plan of the reception suite that we do not hesitate to restore the three portals of the great hall and the forecourt alcove as indicated. The remaining forecourt walls and rooms we restore as they may have been according to suggestion from the other residences.

The reception suite offers no greatly surprising features. The niche customary in the equivalent of Room 8 is here missing, while the recessed portal between the great hall and Room 6 is unusual, as also is the partition dividing the ordinarily large single room into Rooms 6 and 7. The thresholds upon which it was hoped to find identification inscriptions were disappointing, for of the two between great hall and central court one was removed in antiquity, while the other is plain.

The central court appears upon first glance at its plan to be T-shaped and therefore primarily different from the central courts of the other major residences. Actually, however, the court is rectangular, for the stone rings set into the baked-brick pavement where the "arms" join the "body" of the T seem to us clear indication that the "arms" are no more than alcoves which by means of awnings could be shut off from the court (see p. 13). Such hypothesis is formulated not only from the two pairs of rings here involved but from those before the portals of Rooms 40 and 45 in this very court and from examples in Residences *K* and *L*. The rings in the two alcoves of this central court vary slightly in position. In the alcove in the west corner they are outside the line of the northwest wall face, while in the south corner they are within the alcove itself. In both cases the rings are so set that their holes are in alignment, permitting the insertion of rods to which curtains or awnings could be securely lashed. The same possibility occurs at the portals where such rings are found.

Alcoves in the central court are not peculiar to this residence. They are found in the small Residences *Y* and *Z* also. A further link between the central court of this residence and that of Residence *Y* is a single course of baked bricks imbedded in the walls at floor level (see pp. 18 f.).

There appears to be no family apartment as such in Residence *M*. In its place across the back of the central court there is instead a large apartment of eight rooms, the focal point of which is Room 45. There is but a single entrance in the court façade, rather than the two or three found in Residences *L* and *K* respectively. The two niches in Room 45, springing from the floor as they do, offer at least a suggestion of the missing portals. Niches of this type are unusually prevalent in this residence. The complexity of interior arrangement may imply that this apartment contained both family and private rooms, for circulation from room to room is so worked out that one section might be freely used without disturbing occupants of another section. All in all, how-

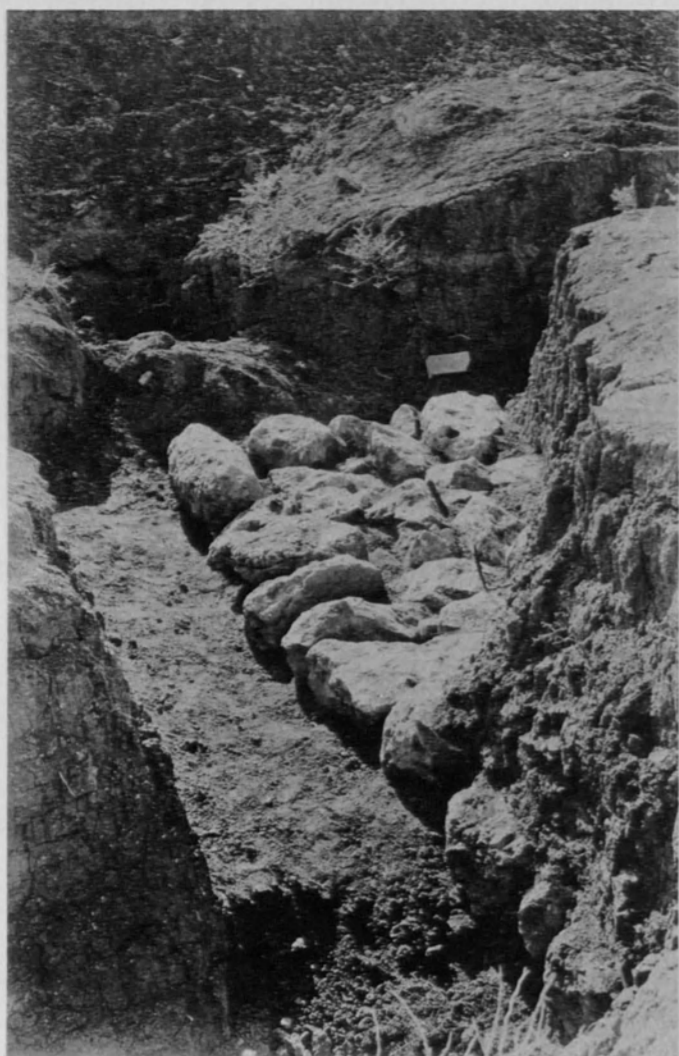
ever, one is more inclined to treat this as the master private apartment, connecting through a small vestibule (42) with the second largest central court apartment, centered in Room 40—a parallel to the adjoining apartments of Residence *L*. Again the entrance from the court is provided with awning rings. There are, however, only five rooms, including but one bedroom-and-bath suite (Rooms 37–38). A single niche in Room 40 recalls the pair in Room 45 of the master apartment. The functions of Rooms 41 and 36 are problematical. The former is part of the passage connecting the two apartments, while Room 36 opens from it. In Room 41 was found in position, resting upon the pivot stone beside the portal to Room 40, the iron socket (Pl. 37 *E*) for the pivot of the door (see p. 25). It is saucer-shaped at the bottom, while three prongs provide for securing it to the wooden pivot.

Opposite this apartment is the third of the private apartments surrounding the central court. Although smaller by one room, it is almost a duplicate of its complement across the court. Room 66 with its single niche is practically identical with Room 40 opposite, while Room 65, the passage chamber, connects in this case directly with the alcove rather than with a small vestibule immediately inside.

A possible fourth private apartment is to be found in Court 29 and its surrounding rooms in the back of the east wing. Although considerably removed from the central court, this apartment, consisting of a court and three suites of two rooms each, possesses communication thereto via Rooms 25 and 39, reminiscent of the connection provided between the central court and the apartment about Court 32 in Residence *K*.

Throughout these apartments there was ample evidence for assuming that the walls were once painted. One fragment in the debris of Room 47 actually had thereon a design identical to one found in Room 116 of Residence *L*.

It is impossible to assign functions to the individual sections of the two wings of Residence *M* and scarcely less so to differentiate the functions of the wings themselves. Storage jars neatly set in mud-brick bases in the south corner of Room 53 recall the "wine cellar" (*K* 65) adjoining the services of Residence *K*. The long passageway and possible areaway (70) connecting forecourt and central court via the west wing is reminiscent both of the areaway outside the central court area of Residence *L* and of the service corridor of Residence *K*, which has a second counterpart in Residence *M* in the passage chambers (10, 9, and 25) in the east wing. We are therefore confronted with evidence in both wings which is suggestive of both service and office areas. The functions are perhaps combined in each of the wings. If we seek, however, to divide them on our meager evidence, the more extensive area of the east wing, with its larger courts, and the storage jars in the west wing incline us to assign the former to offices and the latter to the services.



A



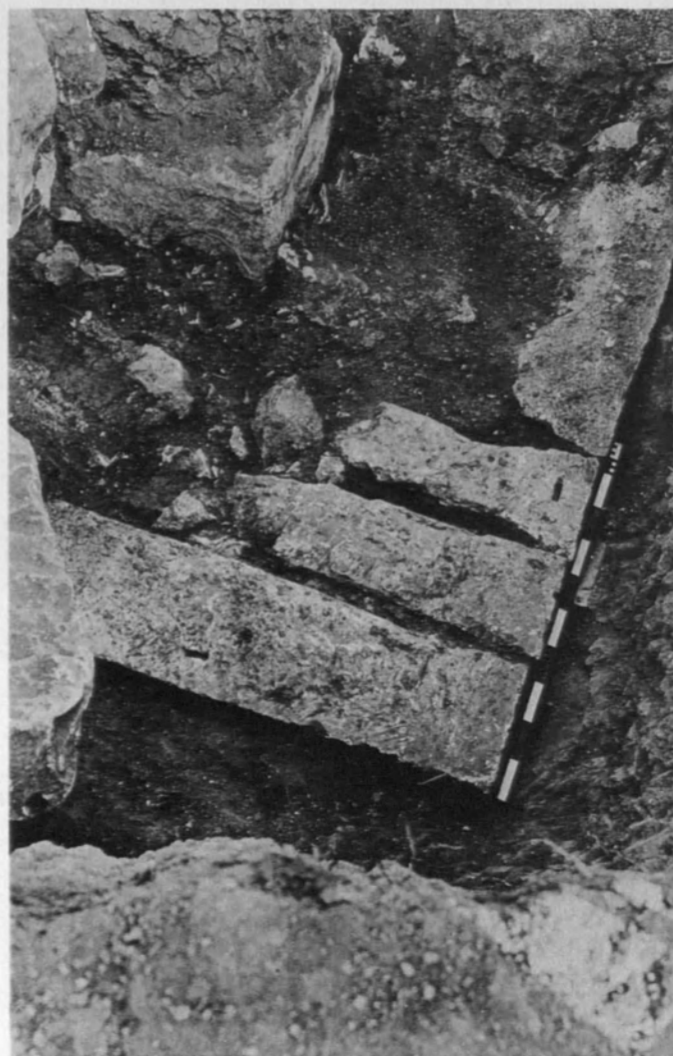
B



C



D



E

A. LIMESTONE FOUNDATION OF A CORNER OF A BASTION IN THE CITADEL WALL

B. THE SLOPING LIMESTONE PAVEMENT OF THE STREET JUST INSIDE CITADEL GATE A
THE LIMESTONE CURB AND DADO OF THE INNER PORTAL OF THE GATE ARE SEEN IN BACKGROUND AT RIGHT

C. STONES FALLEN FROM THE CRENELATED PARAPET WALL ALONG THE SOUTHEAST FACE OF THE PALACE TERRACE

D. THE MANHOLE OF THE SEWER OUTSIDE THE CITADEL WALL SOUTH OF THE NABU TEMPLE
THE BRICKWORK INSIDE IS OF LATER CONSTRUCTION

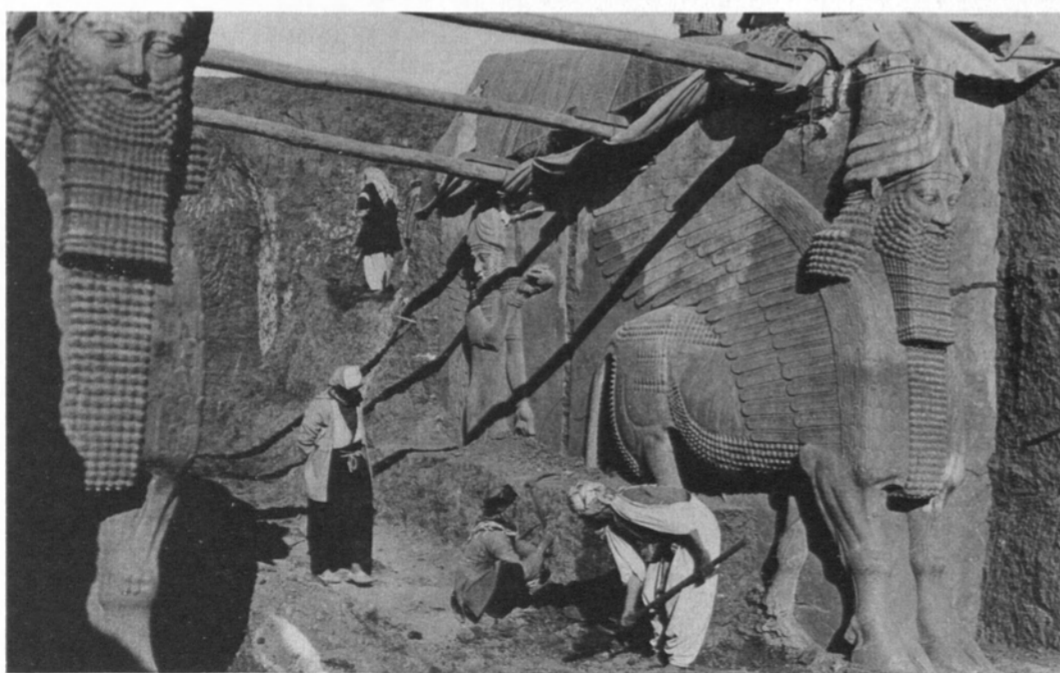
E. A CORNER OF A BUTTRESS IN THE SOUTHWEST FACE OF THE PALACE TERRACE, SHOWING HOLES INTO WHICH METAL DOWELS ONCE WERE FITTED TO STRENGTHEN THE CONSTRUCTION



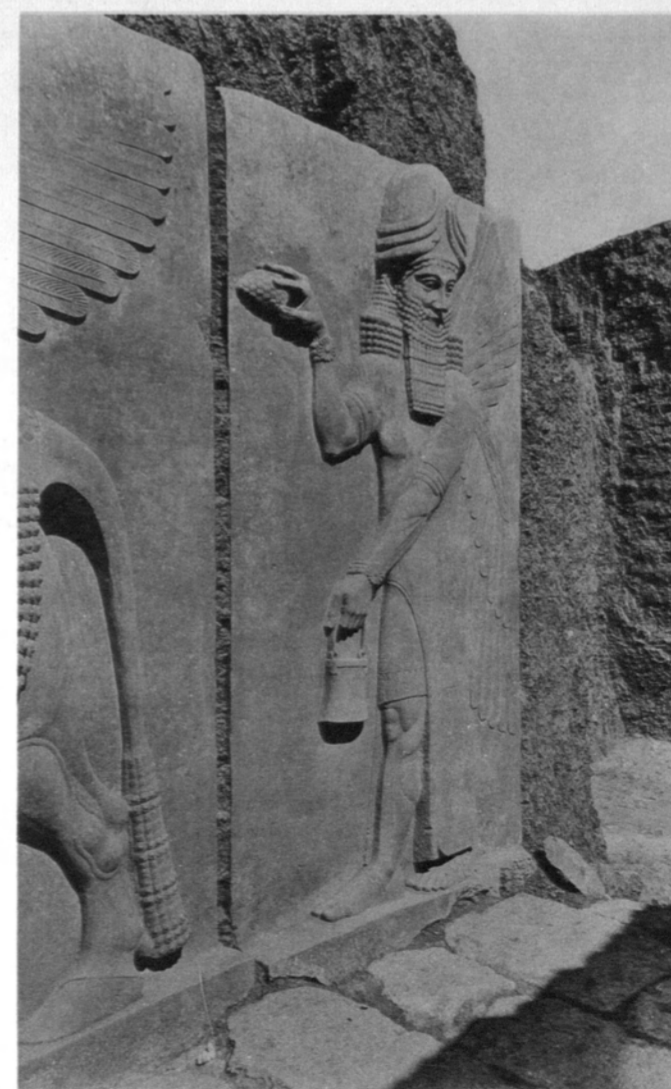
A



B



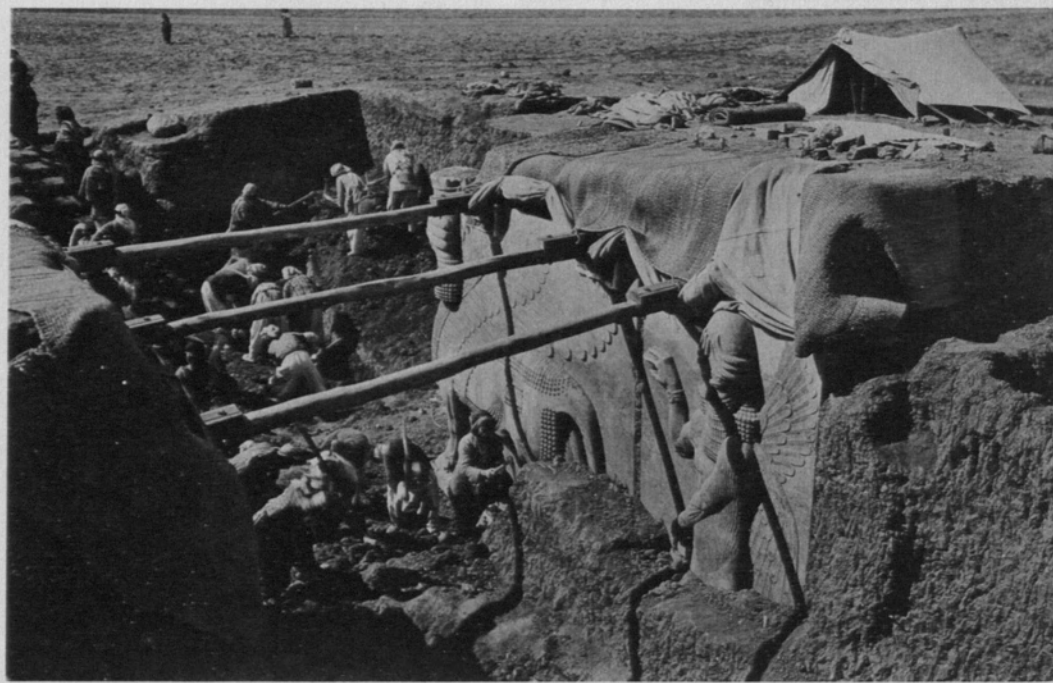
C



D

A-C. THE ALABASTER RELIEFS IN THE OUTER PORTAL SAFEGUARDED (A AND C) BY PROPS, MATTING, CORRUGATED IRON, AND TARPULINS DURING EXCAVATION

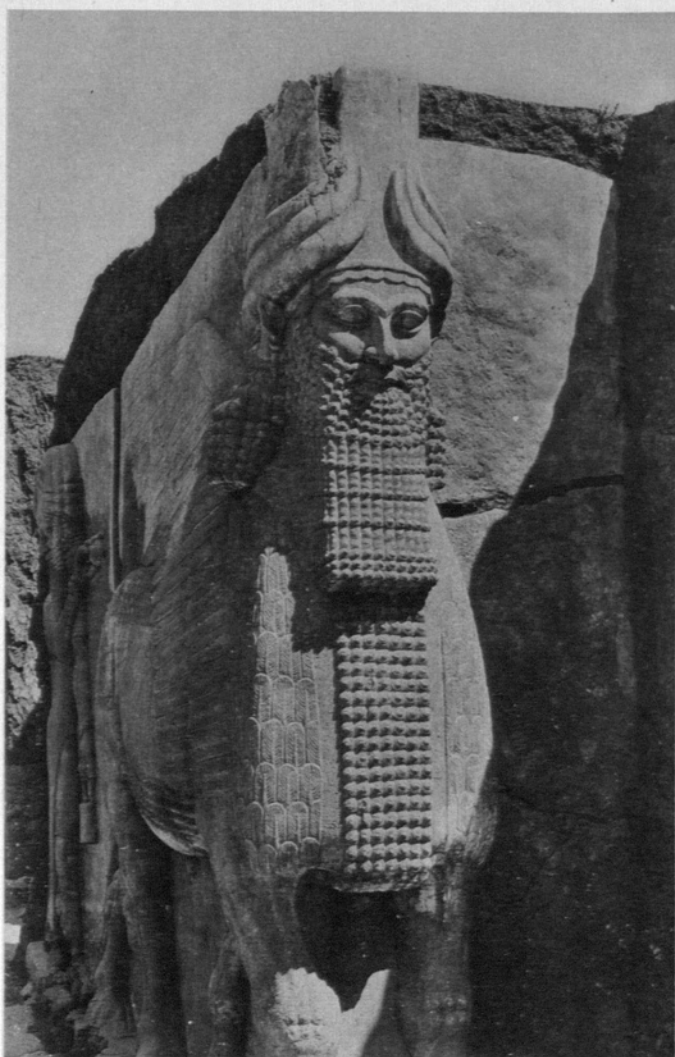
D. THE WINGED HUMAN FIGURE BEHIND THE BULL LINING THE LEFT-HAND (NORTHWEST) SIDE OF THE OUTER PORTAL.



A



B



D



C

A-B. THE ALABASTER RELIEFS IN THE OUTER PORTAL SAFEGUARDED (*A*) BY PROPS, MATTING, CORRUGATED IRON, AND TARPULINS DURING EXCAVATION

C. THE OUTER PORTAL, WITH PART OF THE CENTRAL PORTAL, LINED WITH DADO AND CURB AND DISCLOSING A SECTION OF THE ARCH, BEHIND

D. THE WINGED BULL AND HUMAN FIGURE LINING THE RIGHT-HAND (SOUTHEAST) SIDE OF THE OUTER PORTAL

PLATE II



A

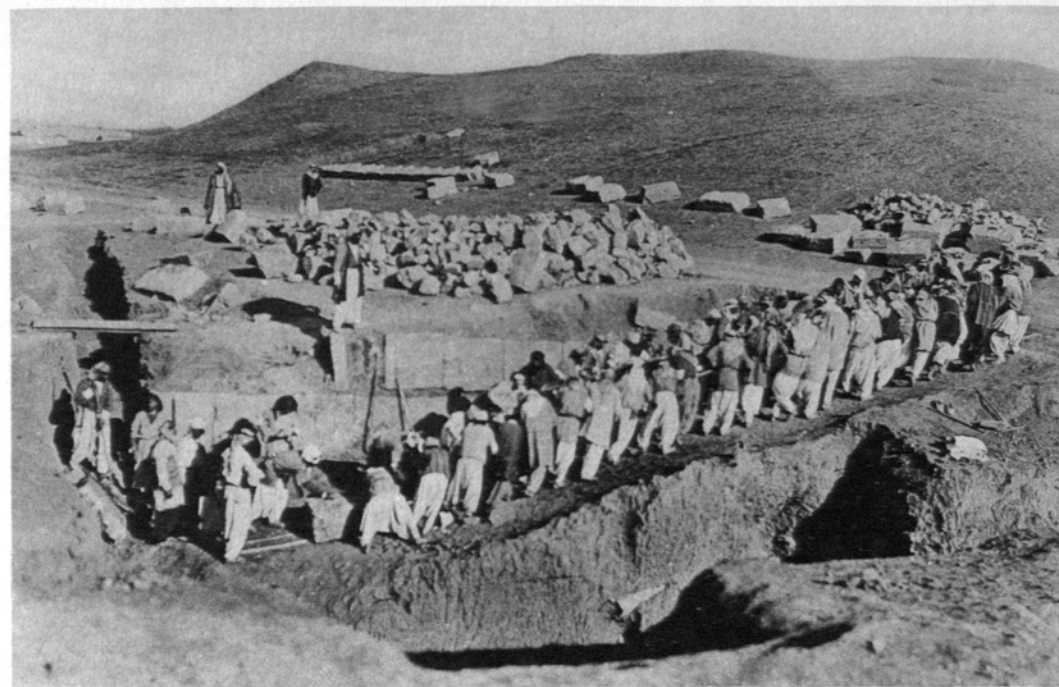


B

C



D

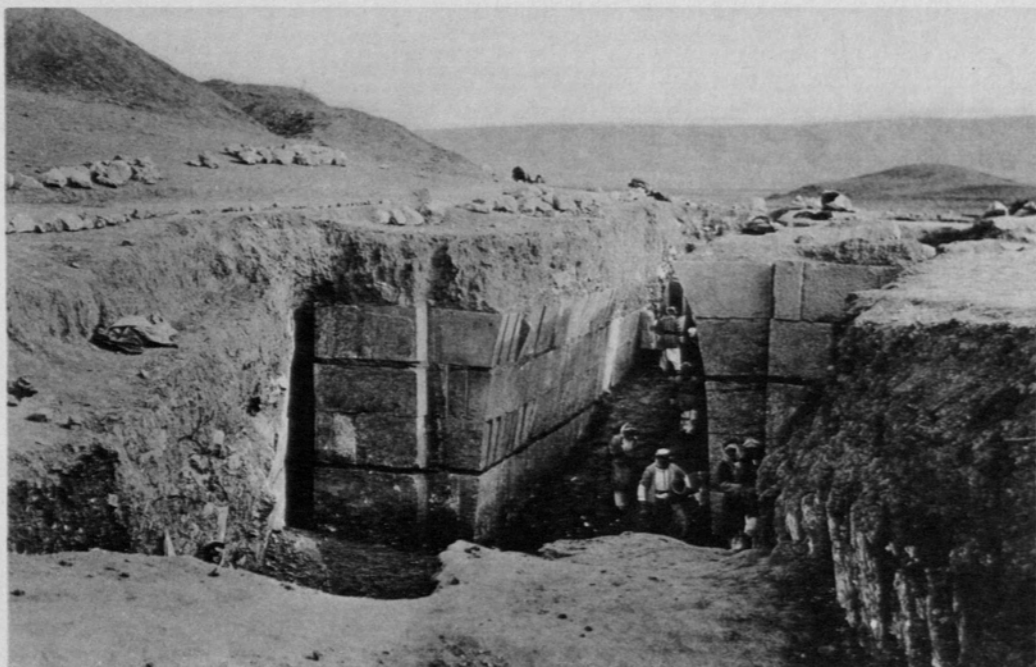


A. THE RAMP AT THE SOUTH CORNER OF THE PALACE TERRACE
BEYOND TO THE RIGHT IS THE BRIDGE BETWEEN PALACE (AT LEFT) AND NABU TEMPLE (AT RIGHT)

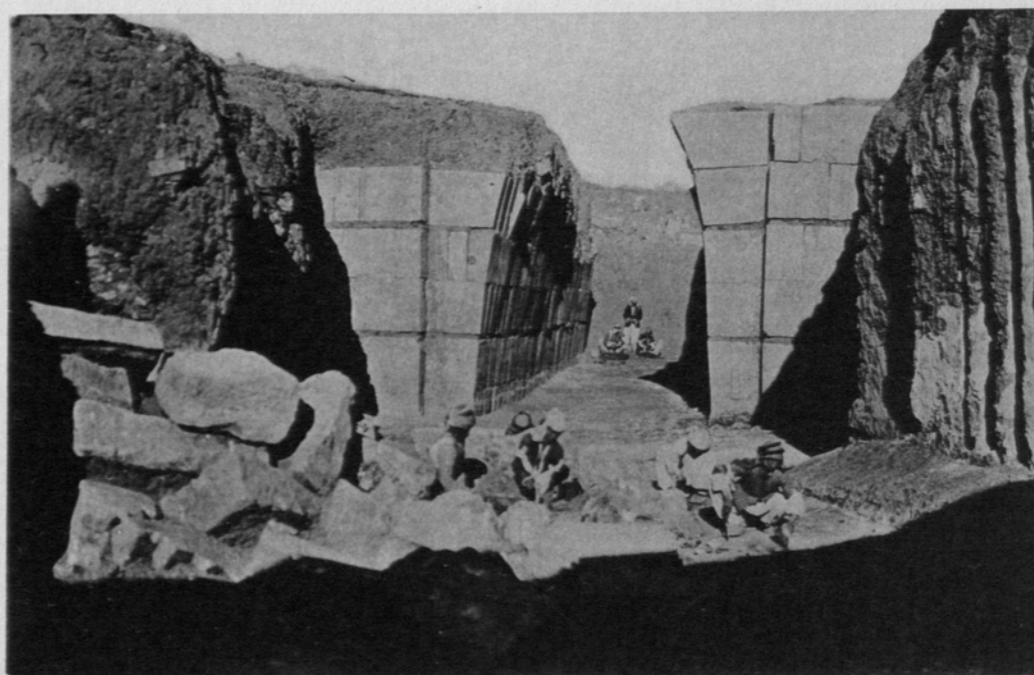
B. THE RAMP AT THE SOUTH CORNER OF THE PALACE TERRACE
THE DRESSING OF THE WALL FACE BEHIND INDICATES THAT THE FINISHED SURFACE OF THE RAMP WAS HIGHER AND
OF STEEPER SLOPE THAN ITS PRESENT SURFACE

C. THE BRIDGE BETWEEN PALACE (AT LEFT) AND NABU TEMPLE (AT RIGHT) AFTER A SINGLE NIGHT'S RAIN
IN FOREGROUND ARE STONES FALLEN FROM THE CRENELATED PARAPET WALL OF THE RAMP LEADING TO THE PALACE

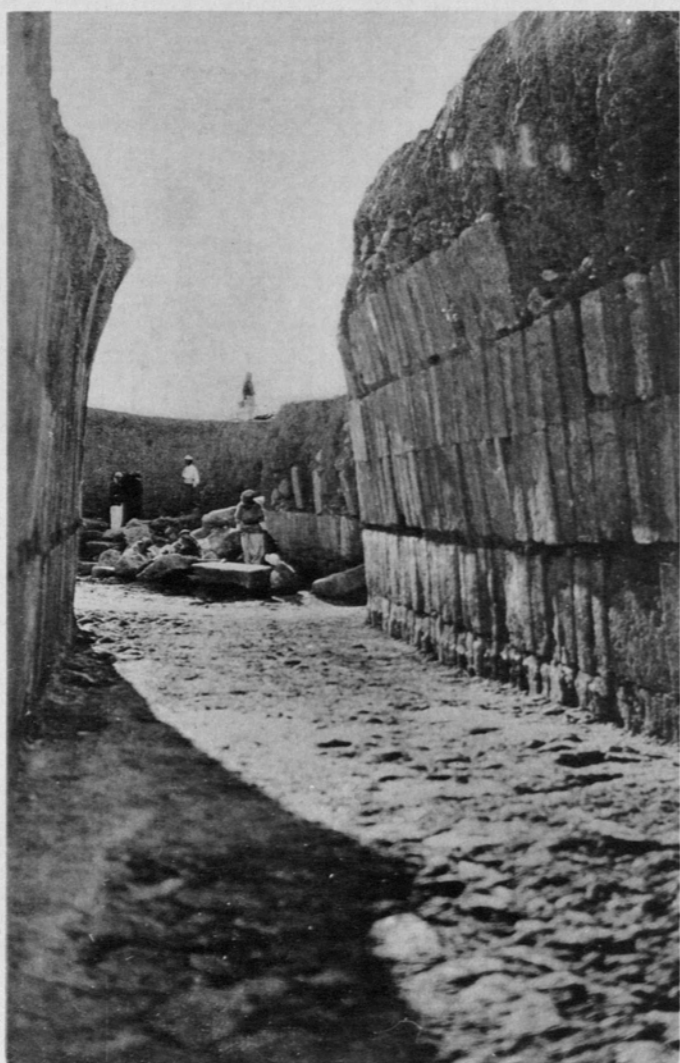
D. HAULING STONES FALLEN FROM THE FACING OF THE PALACE TERRACE UP THE
RAMP AT THE SOUTH CORNER OF THE PALACE



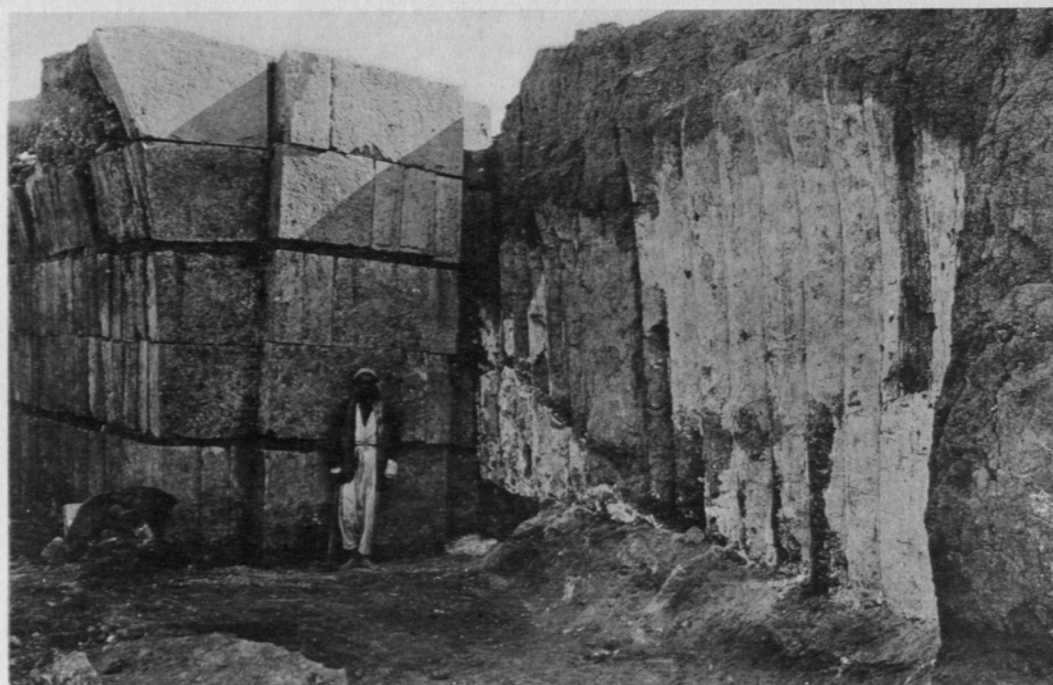
A



B



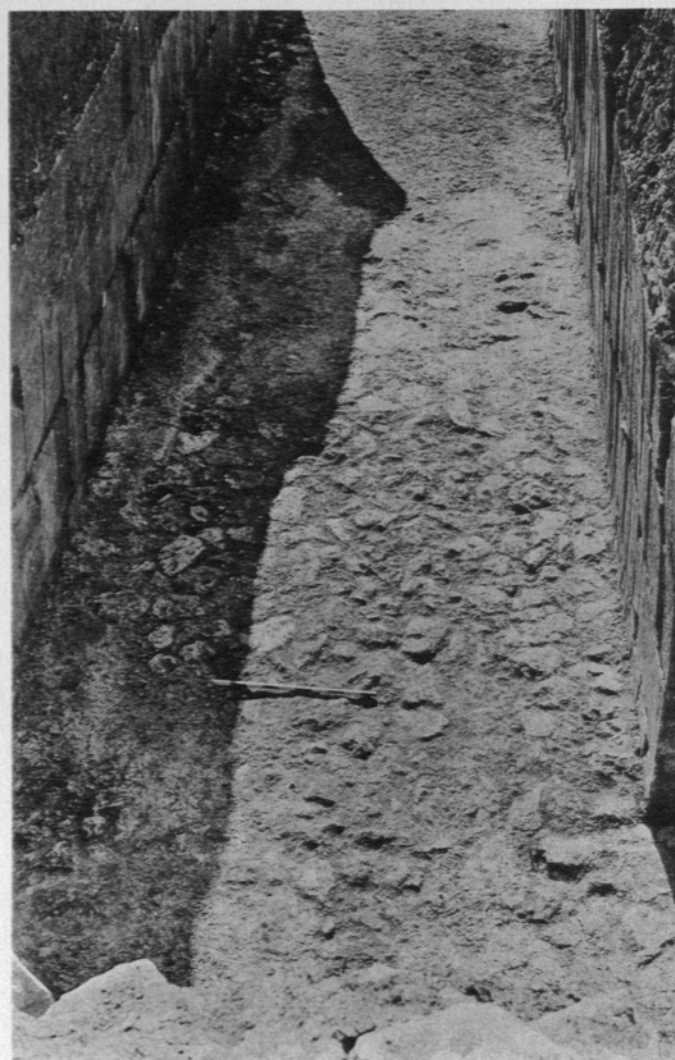
E



D



F



A. EXCAVATION OF THE BRIDGE JOINING THE TERRACES OF PALACE AND NABU TEMPLE

B-C. CLEARING THE PAVEMENT UNDER AND SOUTHWEST OF THE BRIDGE

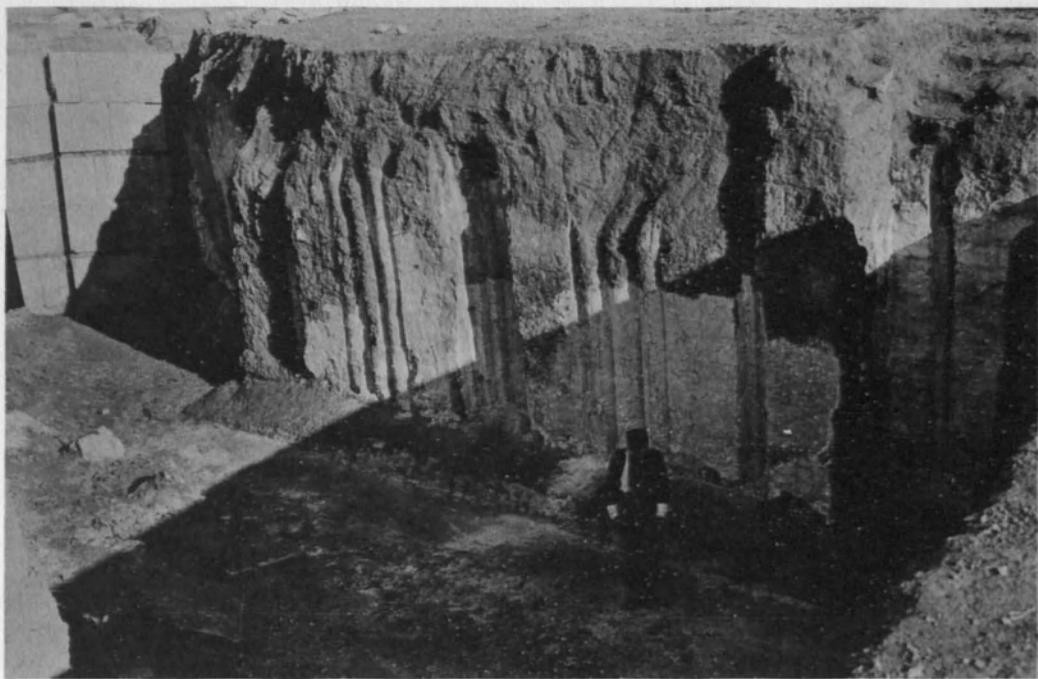
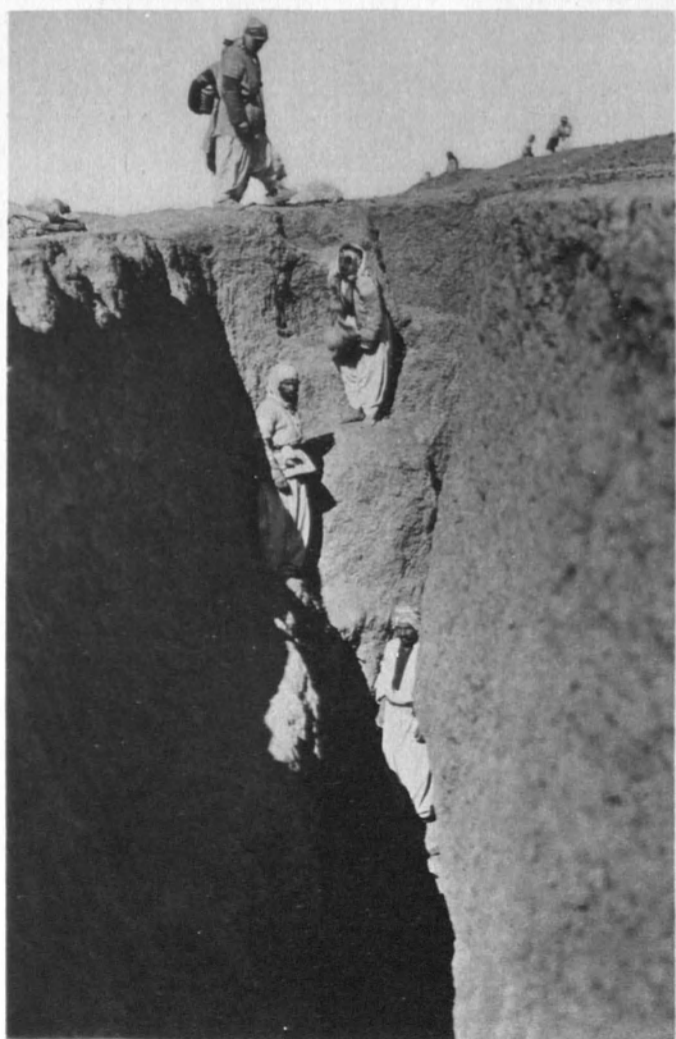
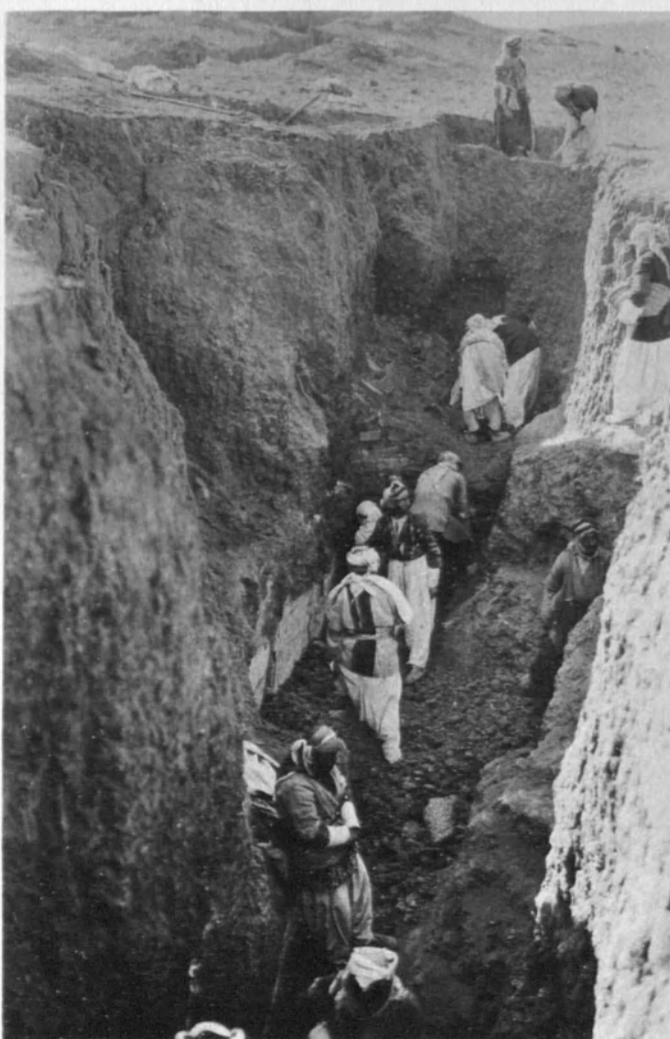
THE UNDRESSED STONES IN THE LOWEST COURSE OF THE BRIDGE INDICATE THAT THE FINISHED PAVEMENT
WAS HIGHER THAN THE PRESENT LIME-AND-RUBBLE SURFACE

D. THE FACE OF THE NABU TEMPLE RAMP WHERE THE BRIDGE FROM THE PALACE ABUTS IT
IN THE WIDE ALTERNATE HORIZONTAL JOINTS OF THE BRIDGE WERE ORIGINALLY SET ENAMELED BRICKS

E. THE ABUTMENT OF THE BRIDGE AGAINST THE NABU TEMPLE RAMP

THE CONTINUATION OF THE REED MOTIVE (HERE VIEWED FROM THE BACK) BEHIND THE FILL OF THE BRIDGE
INDICATES THAT THE TEMPLE ANTEDATES THE BRIDGE

F. THE LIME-AND-RUBBLE PAVEMENT FOUNDATION WITHIN THE ARCH OF THE BRIDGE

*A**B**C**D**E**F*

A. THE FACE OF THE TERRACE OPPOSITE SOUTH CORNER OF THE PALACE

B. A BUTTRESS OF THE TERRACE (SEE *A*) WITH ITS TYPICAL NICHE-AND-REED DECORATIVE MOTIVE AND THE WATERSHED WHICH CONTINUES AROUND THE BASE OF THE ENTIRE TEMPLE

C-D. THE LARGE NICHE FORMING THE CENTER OF THE NICHE-AND-REED MOTIVE DECORATING THE BUTTRESSES
THE CURVED UPPER TERMINATION IS THE RESULT OF SETTLING; IT WAS ORIGINALLY HORIZONTAL

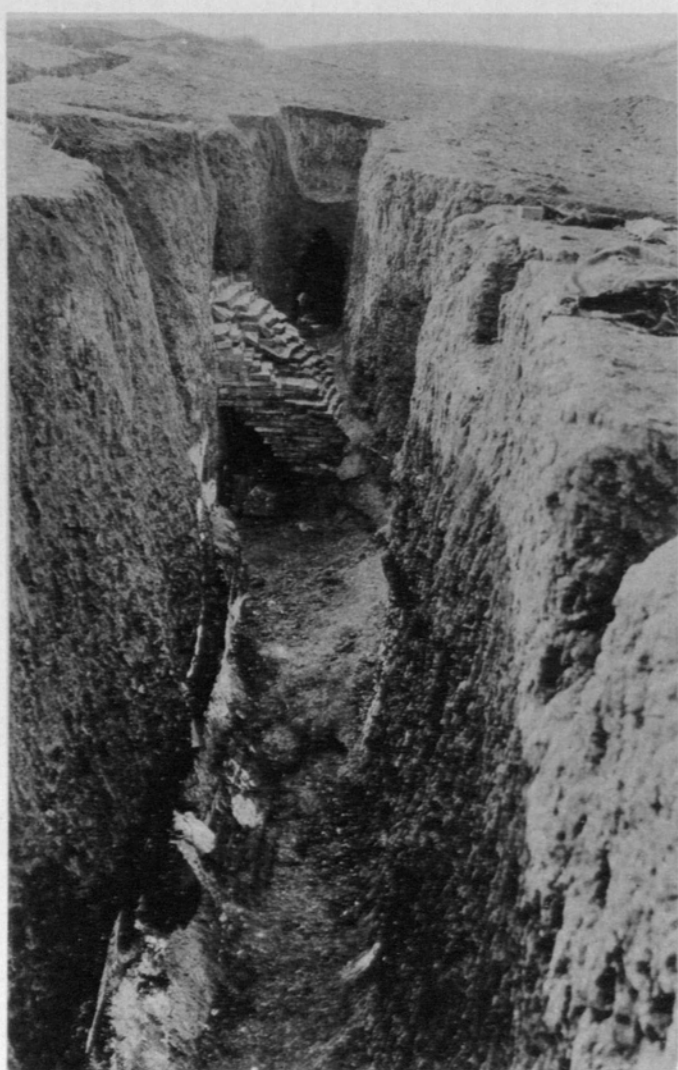
E-F. TRACING THE OUTER FACE OF THE TEMPLE



A



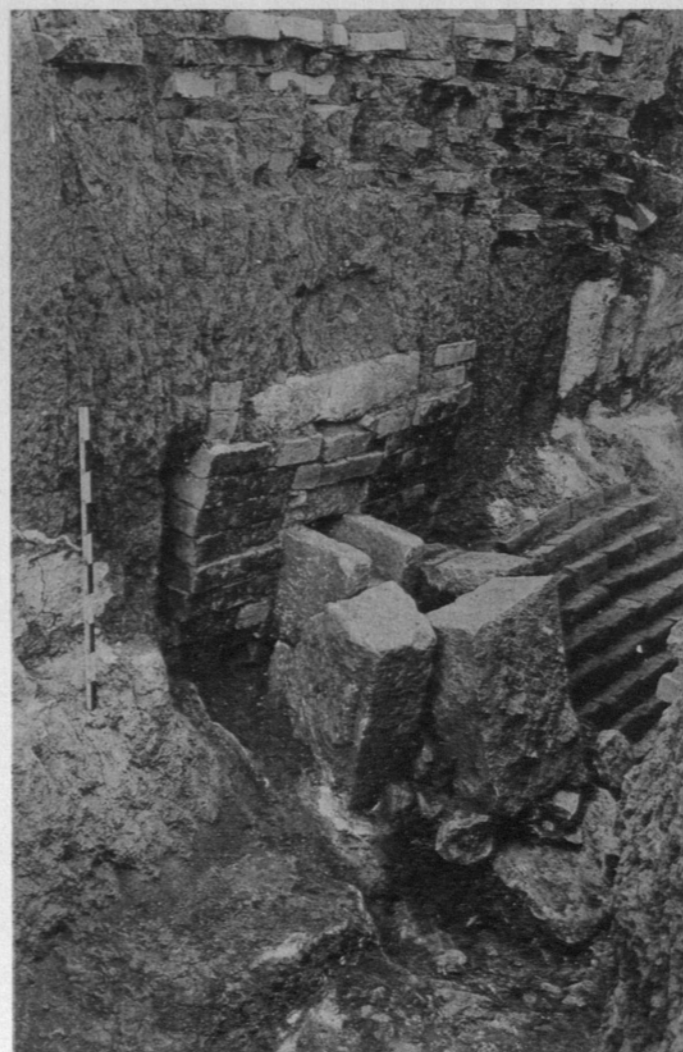
B



C



D



E

A. A SECTION OF NICHE-AND-REED DECORATION FALLEN IN THE DEBRIS OUTSIDE THE NORTHWEST FACE OF THE TEMPLE

THIS IS THE ONLY EVIDENCE OF DECORATION ON THE SUPERSTRUCTURE

B. THE PLASTERED SURFACE OF A BUTTRESS OF THE SOUTHEAST FACE FALLEN HORIZONTALLY

C. THE TRENCH AND PILOTING TUNNEL ALONG THE NORTHWEST OUTER FACE

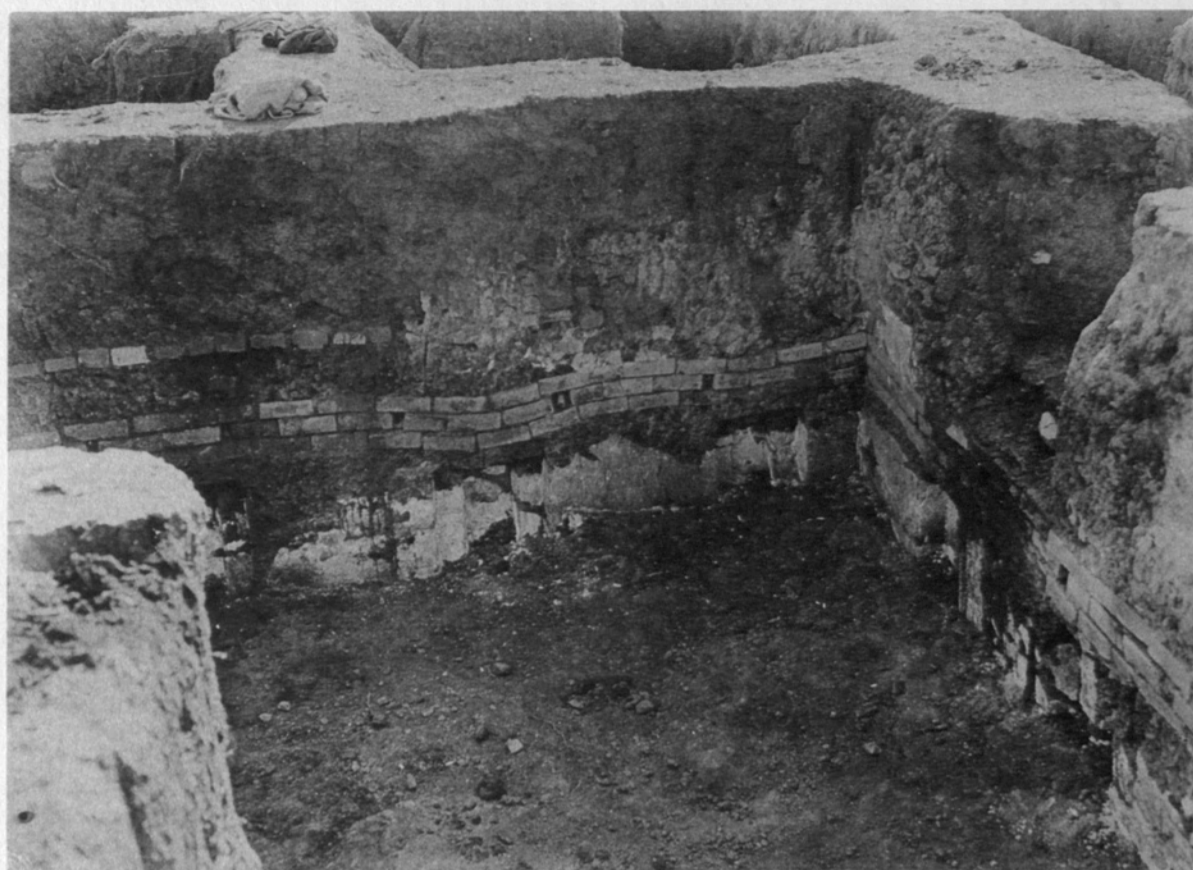
D. THE OUTLET OF THE DRAIN EMPTYING INTO THE STREET OUTSIDE THE CENTRAL COURT

THE BRICK BUTTRESS IS OF LATER CONSTRUCTION TO STRENGTHEN A WEAKENED WALL

E. THE DRAIN (SEE D) AFTER REMOVAL OF THE BUTTRESS

THE LIMESTONE BLOCKS STANDING AROUND THE OUTLET TO BREAK THE FORCE OF THE WATER ARE LATER ADDITIONS

NABU TEMPLE



A

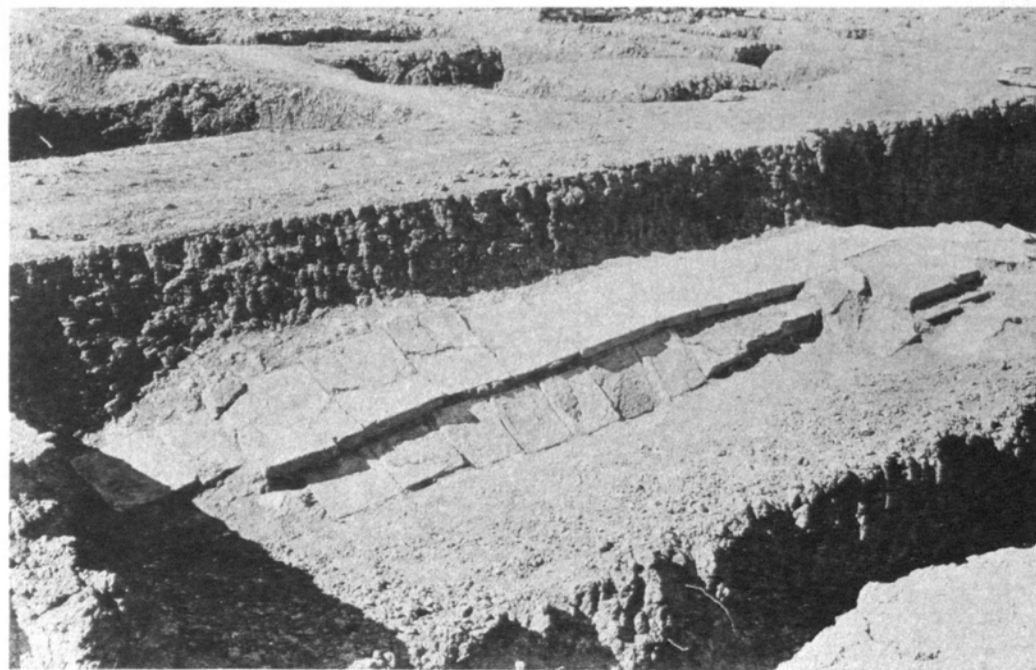


B



C

D



E



A-C. THE HORIZONTAL ROW OF *SIKKĀTI* IMBEDDED IN BAKED BRICKS ABOVE THE NICHE DECORATION IN THE ANGLE OF THE WALL OUTSIDE THE EAST CORNER OF THE FORECOURT
WHEN FIRST EXPOSED IN EXCAVATION THE LIME PLASTER STILL ADHERED TO THE BAKED BRICKS, COVERING THEM FROM VIEW

D. REMAINS OF THE TERRACE PAVEMENT OUTSIDE COURT IV

E. THE THRESHOLD BETWEEN COURT V AND THE TERRACE



B



A



C



D



E

A. THE LOWER END OF THE RAMP WHERE IT MEETS STREET LEVEL. VIEW EASTWARD
AT THIS POINT RAMP AND STREET ARE PAVED ALIKE WITH RUBBLE

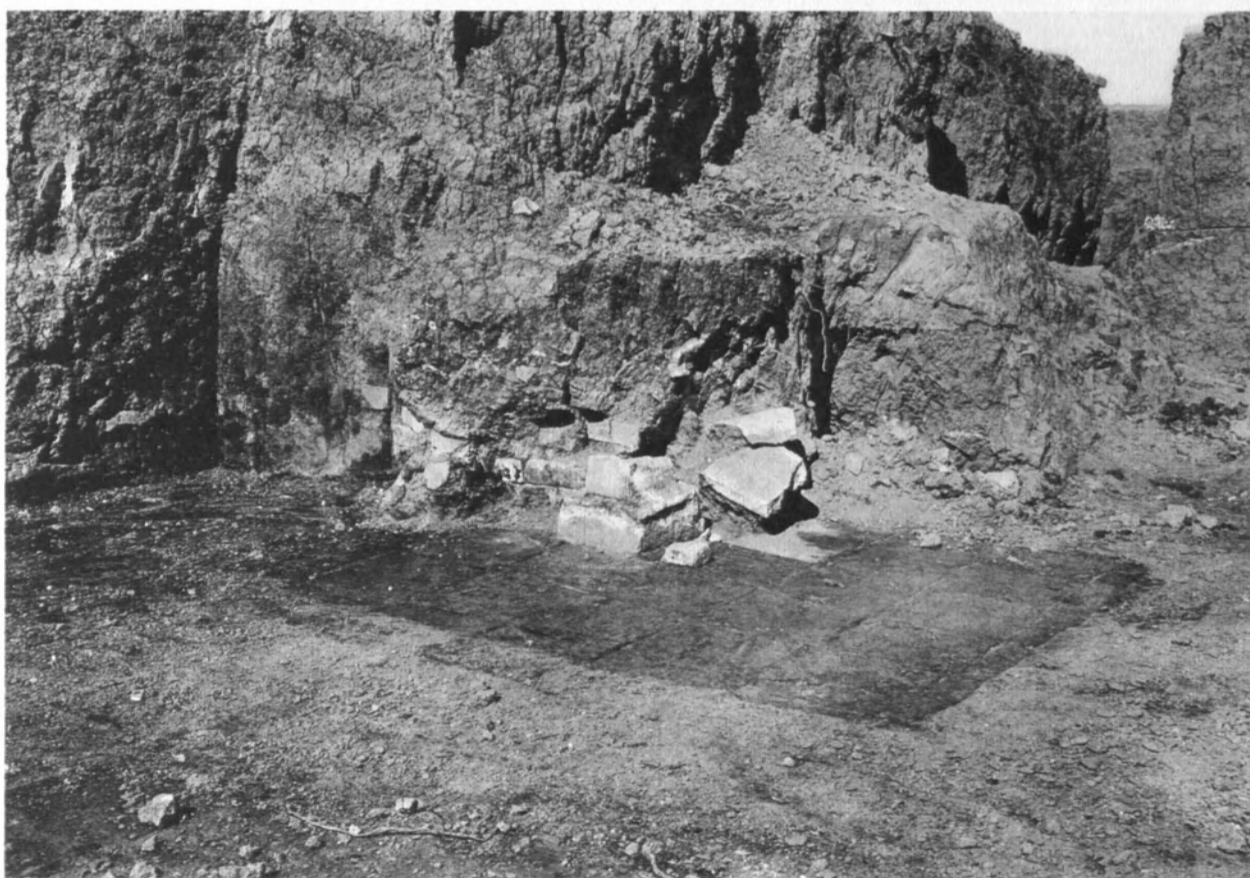
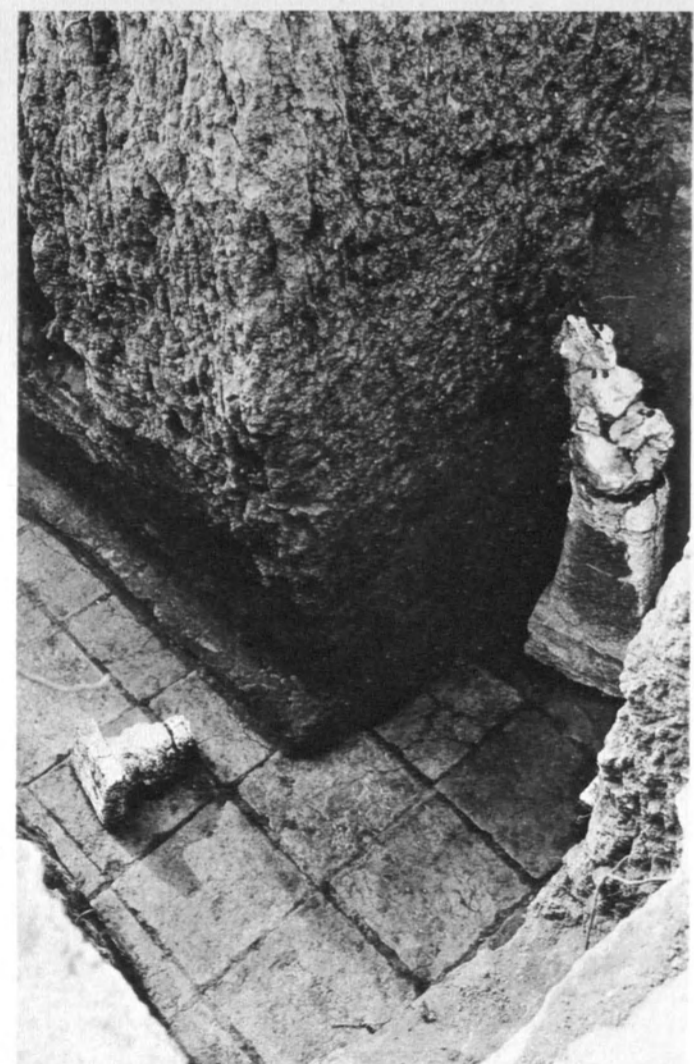
B. THE LOWER END OF THE RAMP WHERE THE PAVEMENT CHANGES FROM RUBBLE
TO BAKED BRICK. VIEW TOWARD THE TEMPLE ENTRANCE

C. THE PAVEMENT OF THE RAMP NEAR THE TEMPLE ENTRANCE
THE BRICK JOINTING OF THE UPPER COURSE IS OBLIQUE TO THAT OF THE LOWER COURSE

D. THE SOUTHEAST EDGE OF THE RAMP. VIEW TOWARD THE TEMPLE ENTRANCE
THE COLUMN FRAGMENT IS OF LATER OCCUPATION AND PROBABLY EXTRANEOUS

E. THE ENTRANCE TO THE TEMPLE, WITH STATUES FLANKING THE PORTAL
IMBEDDED IN THE FLOOR OF ROOM 3 BEYOND IS A STONE SOCKET TO RECEIVE THE DOOR PROP

NABU TEMPLE

*A**B**C**D**E**F*

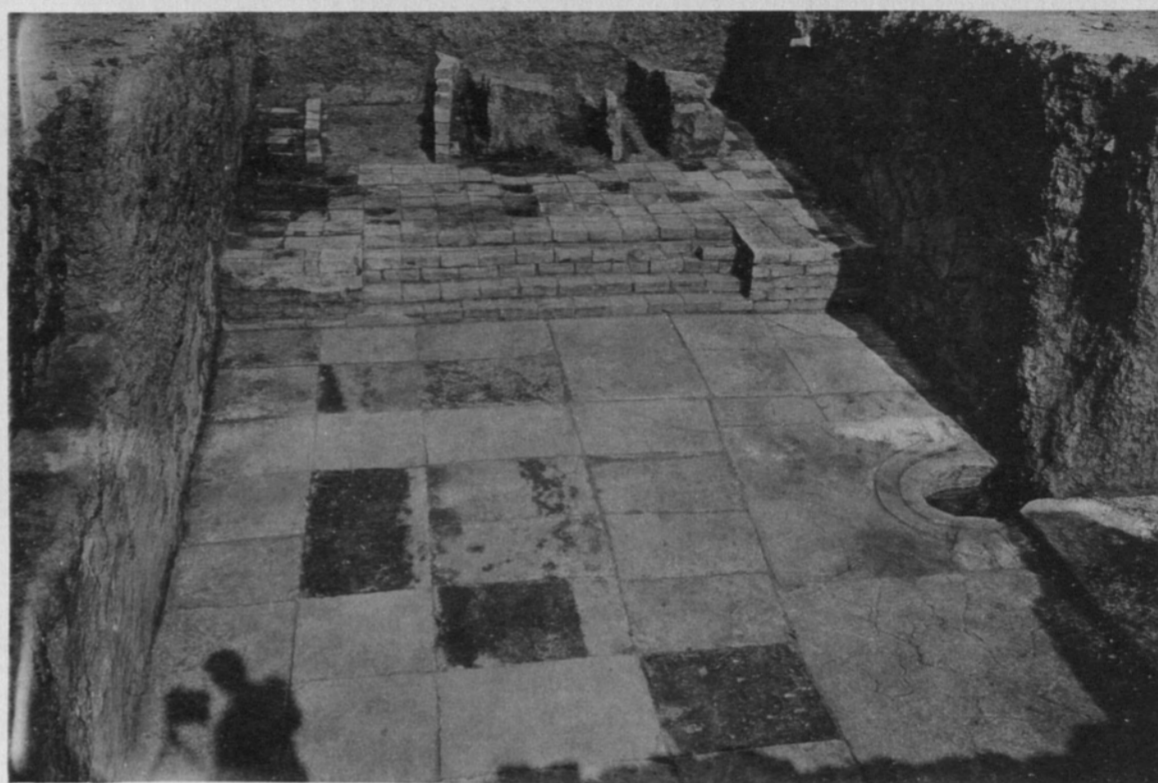
- A.* THE EAST CORNER OF THE FORECOURT
- B.* THE WELL IN THE ALCOVE NEAR THE EAST CORNER OF THE FORECOURT (SEE *A*)
- C.* THE PORTAL FROM THE FORECOURT TO ROOM 13, WITH ITS STATUES, ONCE STANDING AT THE CORNERS OF THE TABLEAUS, LYING BROKEN UPON THE PAVEMENT
- D.* A SECTION OF THE ENAMELED-BRICK TABLEAU TO THE LEFT OF THE PORTAL (SEE *C*)
UPON THIS SECTION CAN BE RECOGNIZED A FIG TREE AND A COMBINATION PLOW AND GRAIN-SEEDER
- E.* THE CORNER OF THE TABLEAU TO THE RIGHT OF THE PORTAL (SEE *C*), SHOWING STATUE BASE IN POSITION
- F.* REMAINS OF THE STATUE AT THE LEFT OF THE PORTAL FROM THE FORECOURT TO ROOM 14



A



B



C



D



E



F

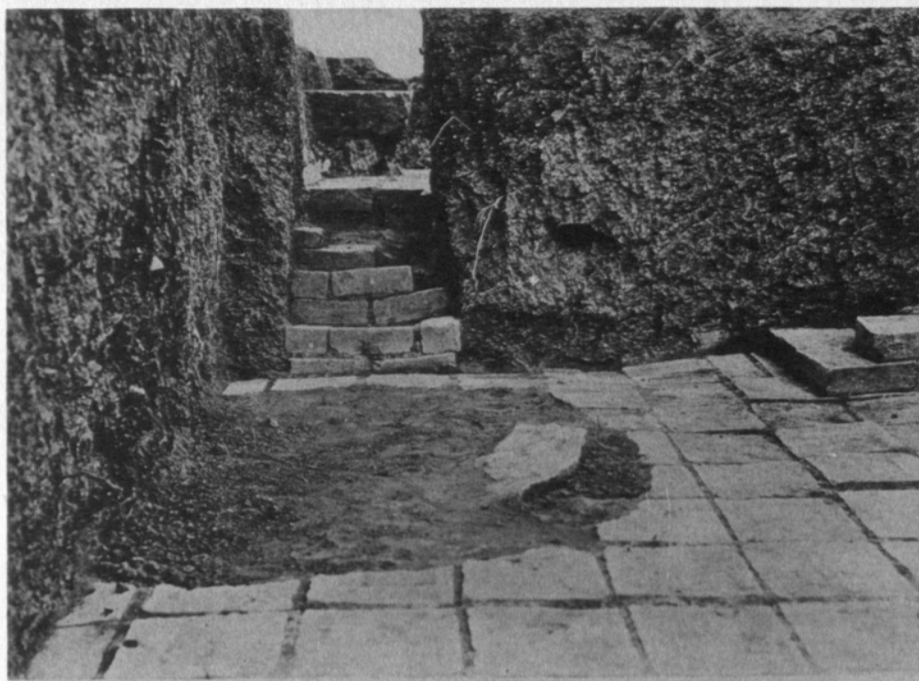
A-C. ROOM 14, PROBABLY A SHRINE, WITH LIMESTONE PAVEMENT (C), A PLATFORM OF BAKED BRICK (C) UPON WHICH STANDS A SECOND PLATFORM OR ALTAR OF BAKED AND MUD BRICKS (B), AND A DECORATIVE NICHE (A) OPPOSITE THE PORTAL, WHICH IN THE FORECOURT IS FLANKED WITH STATUES (SEE PL. 17 F)

D. CLEARING THE FLOOR OF ROOM 12

IN THE DEBRIS IMMEDIATELY OVER THE FLOOR WAS FOUND A TABLET ENUMERATING IN CHRONOLOGICAL ORDER 107 ASSYRIAN KINGS

E-F. ROOM 12, WITH PLATFORM AND NICHE AT ITS SOUTHWEST END

NABU TEMPLE

*A**B**C**D**E*

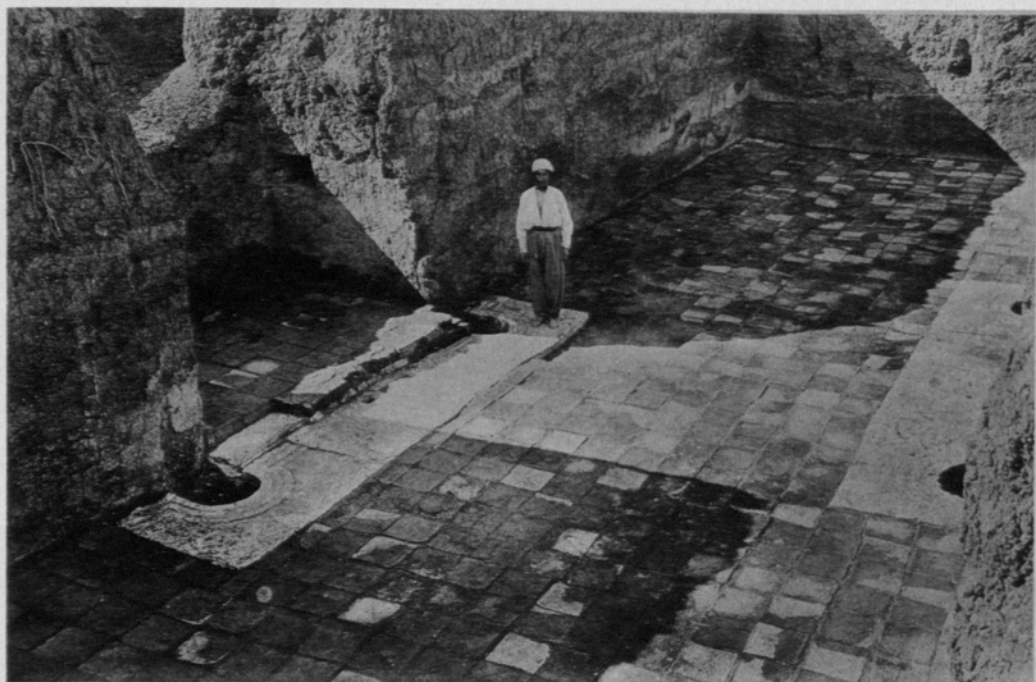
A. STEPS IN THE PORTAL FROM ROOM 12 TO ROOM 11 (SEE PL. 18 *F*)

B. STEPS IN THE PORTAL FROM THE FORECOURT TO ROOM 10

C. ROOM 5, WITH NICHE ARRANGED IN TIERS ACROSS ITS NORTHEAST END AND PARTIALLY DOWN THE ADJACENT SIDES

D-E. ROOM 6, WITH PLATFORM ACROSS ITS BROADER SOUTHWEST END (*E*)
A COLUMN BASE (AT RIGHT IN *D*) BELONGS TO A LATER OCCUPATION. ROOM 5 APPEARS IN BACKGROUND OF *D*

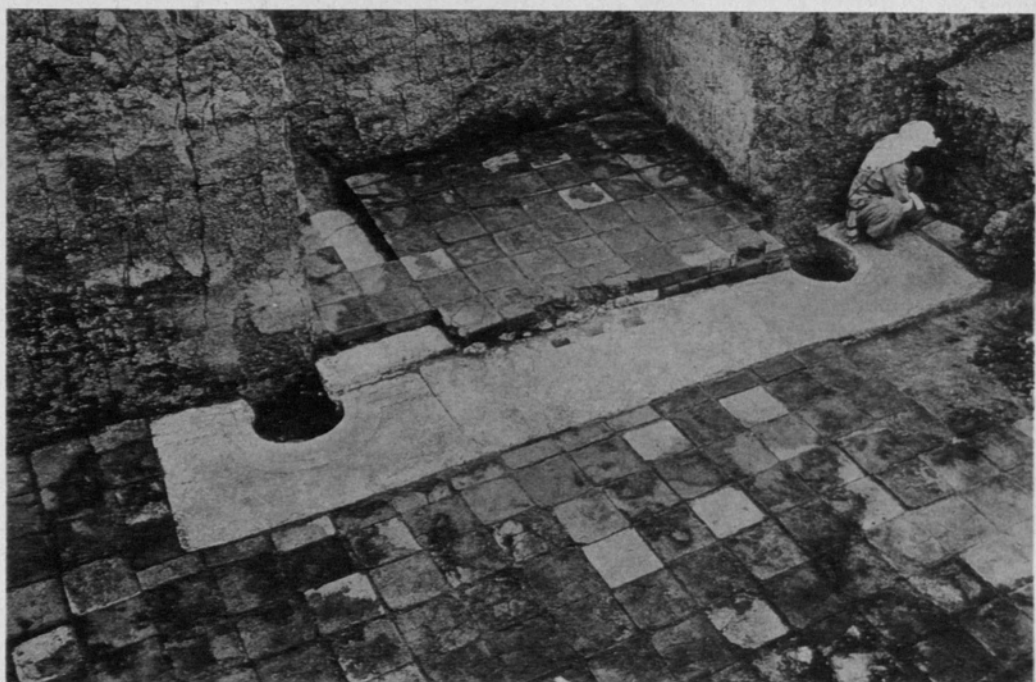
NABU TEMPLE



A



B



C



D



E

A-B. ROOM 13, IN WHICH WERE FOUND QUANTITIES OF IVORY PLAQUES
THE PORTAL IN A LEADS TO THE CENTRAL COURT, THAT IN B TO THE FORECOURT

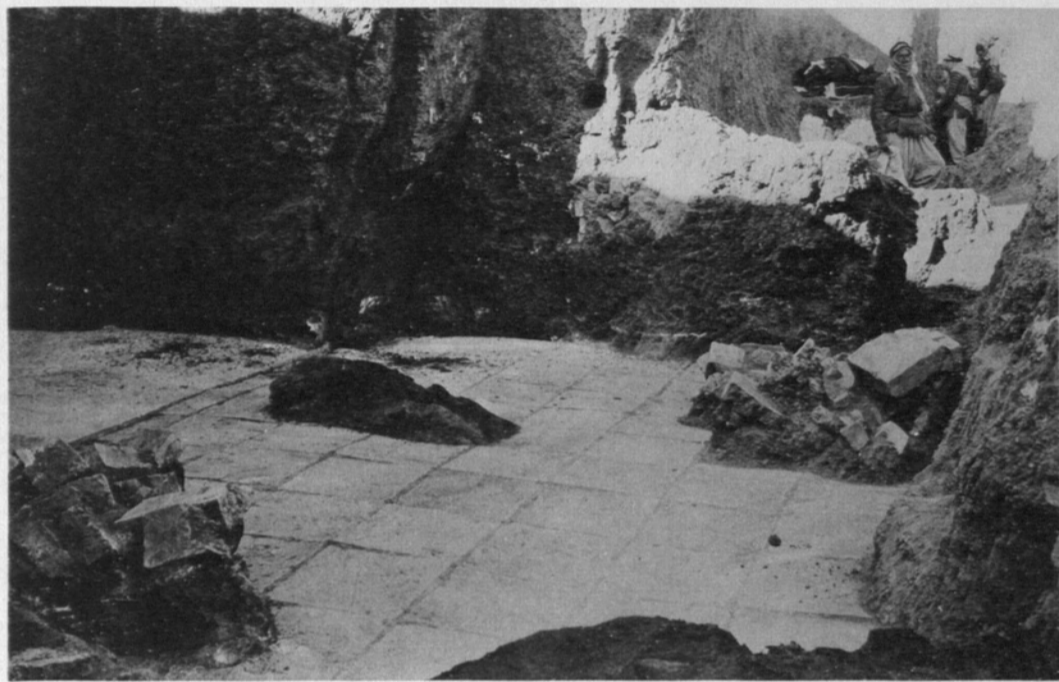
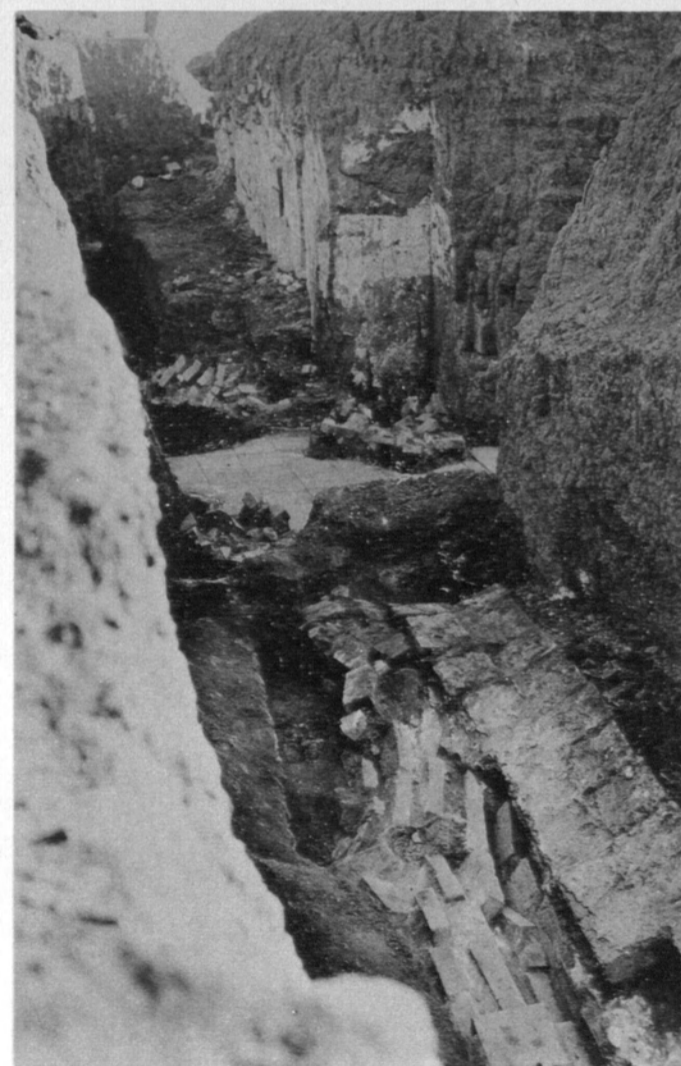
C. THE PORTAL BETWEEN ROOM 13 AND THE CENTRAL COURT, WITH BLOCKING AND BRICK THRESHOLD
OF LATER OCCUPATION UPON THE ORIGINAL ALABASTER THRESHOLD

THE THREE BOLT SLOTS IN THE INNER THRESHOLD ARE UNUSUAL

D. EMBOSSED BRONZE PLAQUES ONCE ADORNING THE DOOR BETWEEN FORECOURT AND ROOM 13

E. FRAGMENTS OF EMBOSSED BRONZE UPON THE THRESHOLD BETWEEN FORECOURT AND ROOM 13

NABU TEMPLE

*A**B**C**D**E*

A-B. EMBOSSED BRONZE PLAQUES ONCE ADORNING THE DOOR BETWEEN FORECOURT AND ROOM 13 (SEE PL. 20 *D*)

C. DEBRIS BEFORE THE PORTAL FROM THE CENTRAL COURT TO ROOM 19

THE DECOMPOSED WOOD (LEFT CENTER) MAY BE FROM THE DOOR

D. PART OF THE TABLEAU SHELF AND THE FALLEN WOODEN SHAFT AT RIGHT OF THE PORTAL FROM THE CENTRAL COURT TO ROOM 19

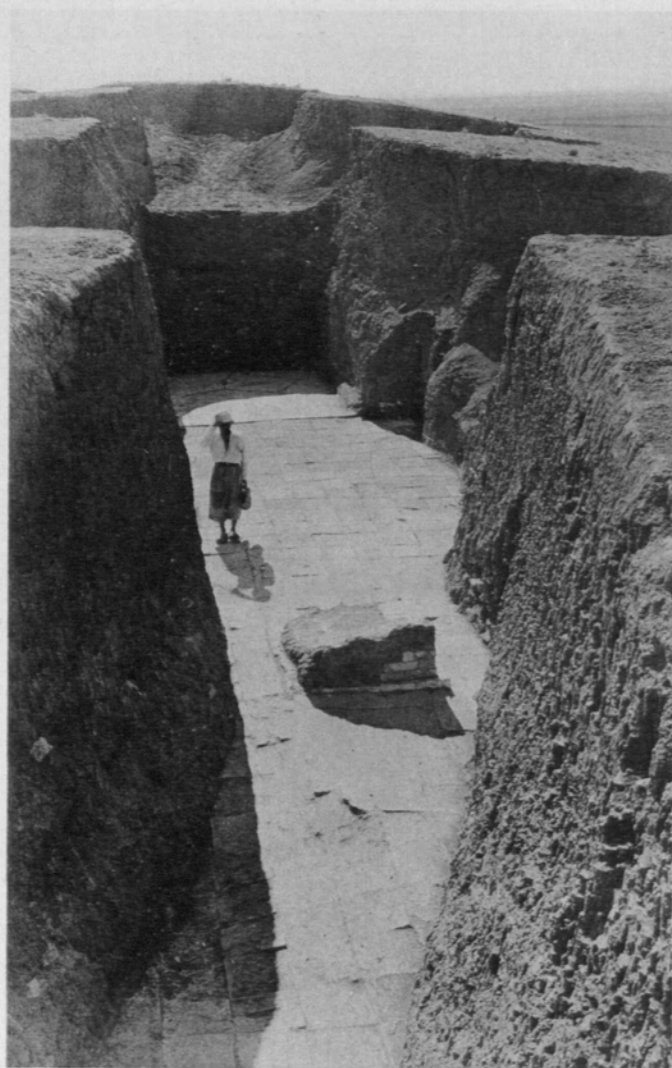
E. THE FAÇADE OF THE INNER TEMPLE, SHOWING PRESENT STATE OF THE TABLEAUS AND WOODEN SHAFTS FLANKING THE CENTRAL PORTAL



A



B



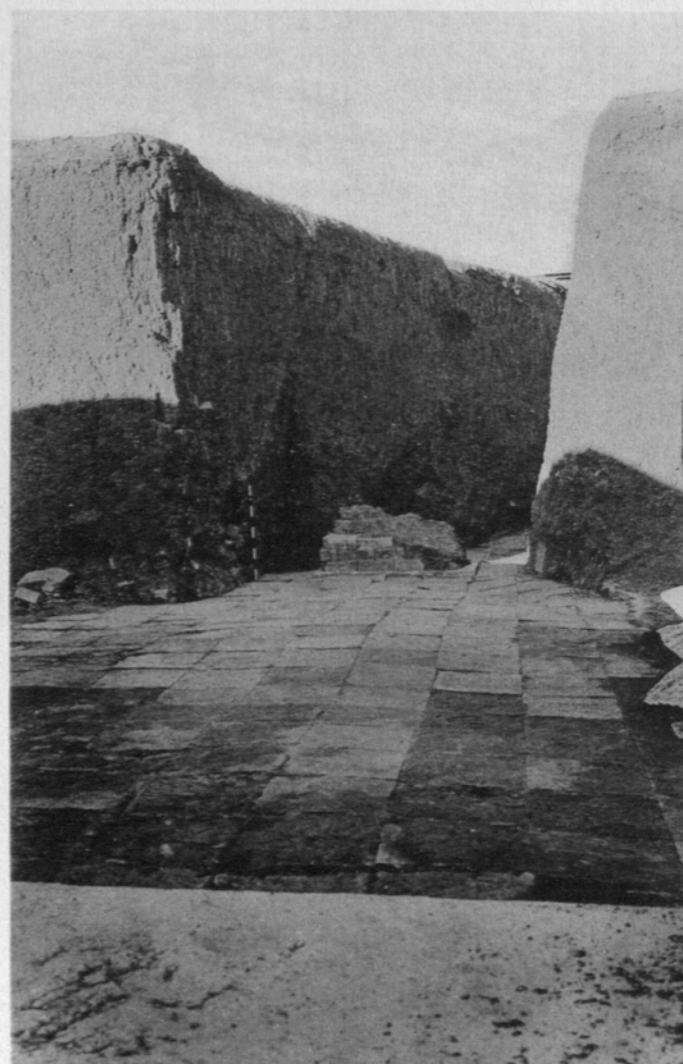
C



D

E

F



A. THE WOODEN SHAFT FALLEN FROM THE TABLEAU SHELF AT LEFT OF THE PORTAL
FROM THE CENTRAL COURT TO ROOM 19 (SEE PL. 21 C-E)

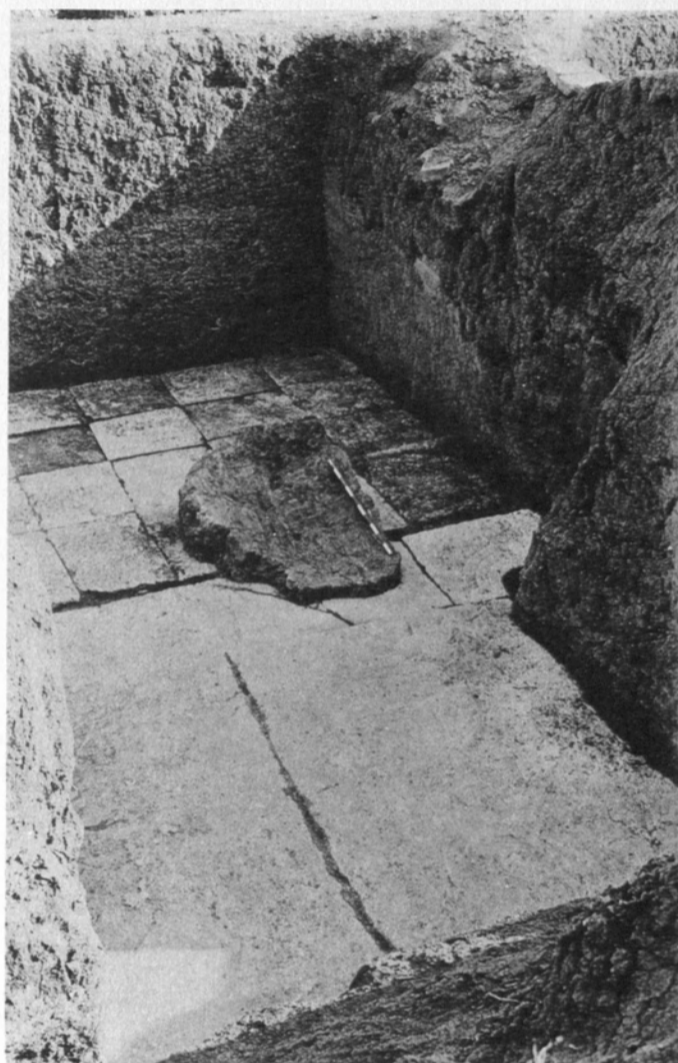
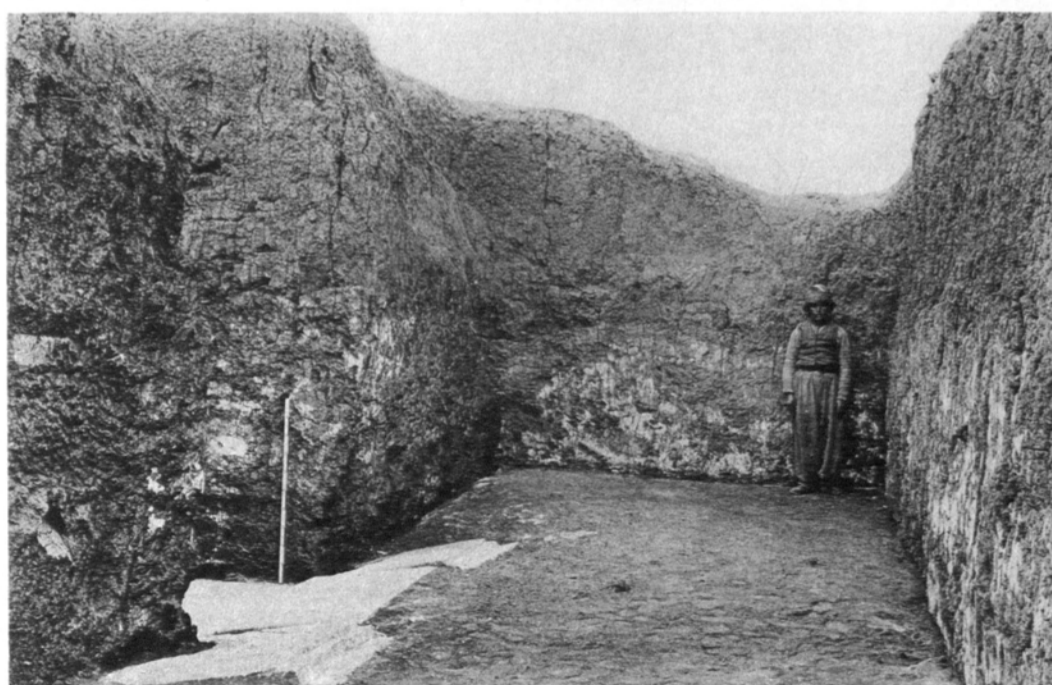
SILVER-HEADED BRONZE NAILS WHICH ONCE FASTENED BANDS TO THE SHAFT REMAIN IN THE WOOD

B. IMPRINT OF WOOD, POSSIBLY THAT OF THE DOOR, WITH BRONZE NAILS, IN THE
CENTRAL PORTAL FROM THE CENTRAL COURT TO ROOM 19

C-F. SQUARE "ALTAR" OF ENAMELED BRICK BEFORE THE MAIN PORTAL FROM THE
CENTRAL COURT TO THE INNER TEMPLE

VIEWS C AND E FACE TOWARD THE PORTAL, D AND F TOWARD THE TRENCH ACROSS THE CENTRAL COURT

NABU TEMPLE

*A**B**C**D**E*

A. ROOM 17, A ROOM OF SPECIAL SIGNIFICANCE BY VIRTUE OF ITS POSITION IN PLAN, ITS LIMESTONE PAVEMENT, AND ITS DECORATIVE NICHE OPPOSITE THE PORTAL FROM COURT III

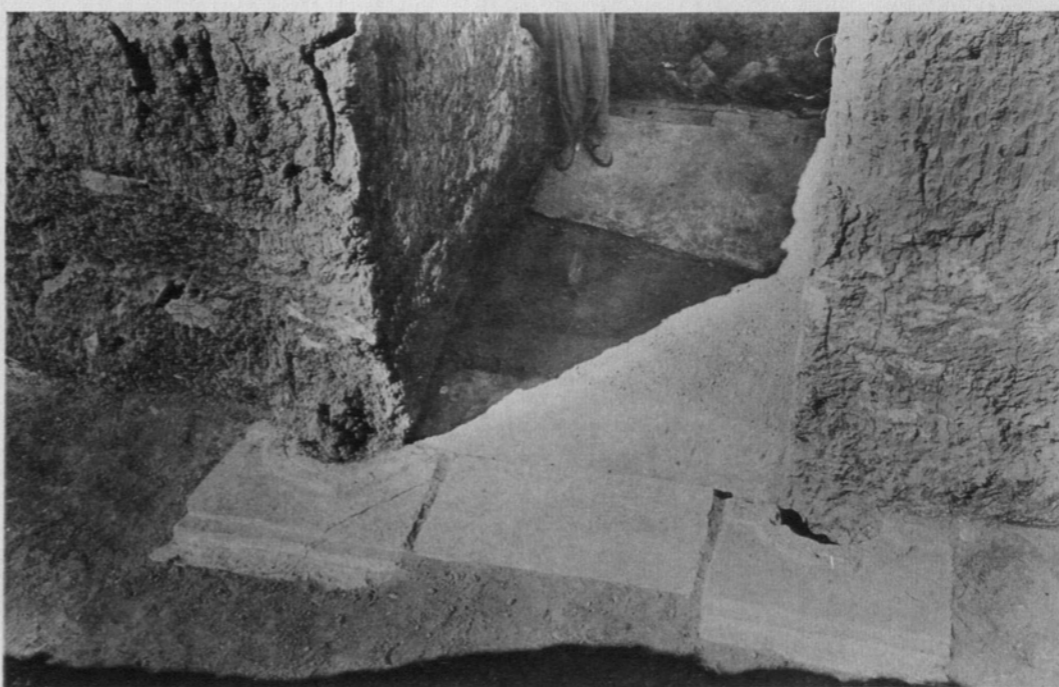
B. THE PORTAL BETWEEN COURT III AND ROOM 17, VIEWED FROM THE LATTER
THE CHANNELS IN THE THRESHOLD ARE DUE TO WEATHERING

C-D. REMAINS OF THE DOOR BETWEEN THE CENTRAL COURT AND ROOM 17, FALLEN WITHIN THE ROOM

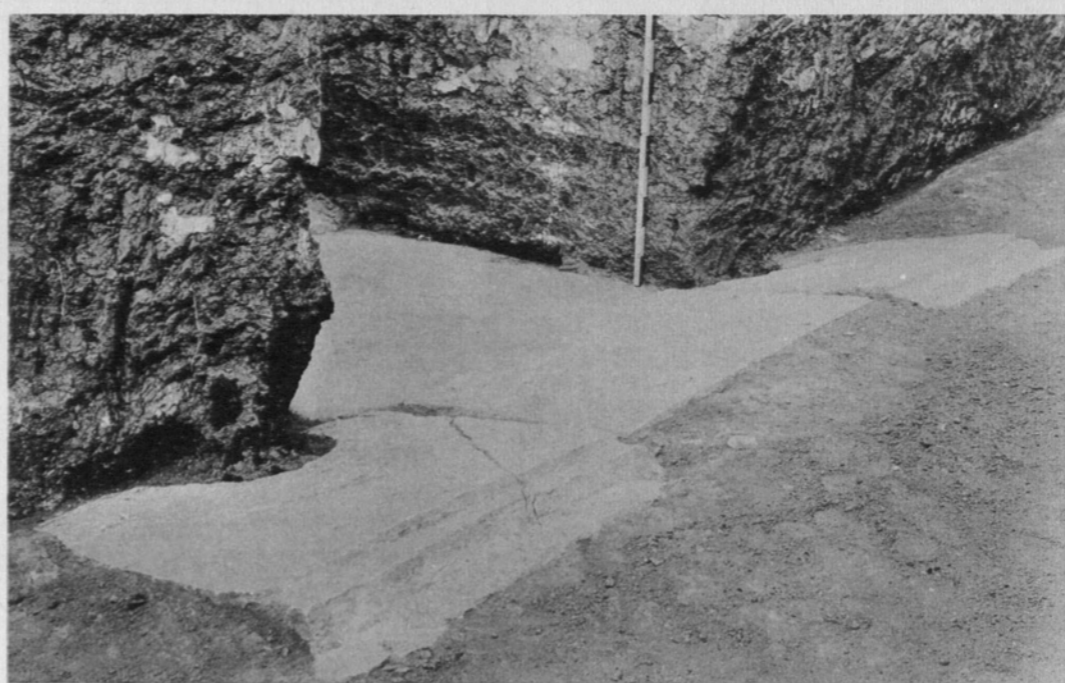
E. ROOM 18, WITH PART OF THE DOOR PIVOT REMAINING IN THE PIVOT HOLE
BESIDE THE PORTAL FROM THE CENTRAL COURT



C



A



B



D



E

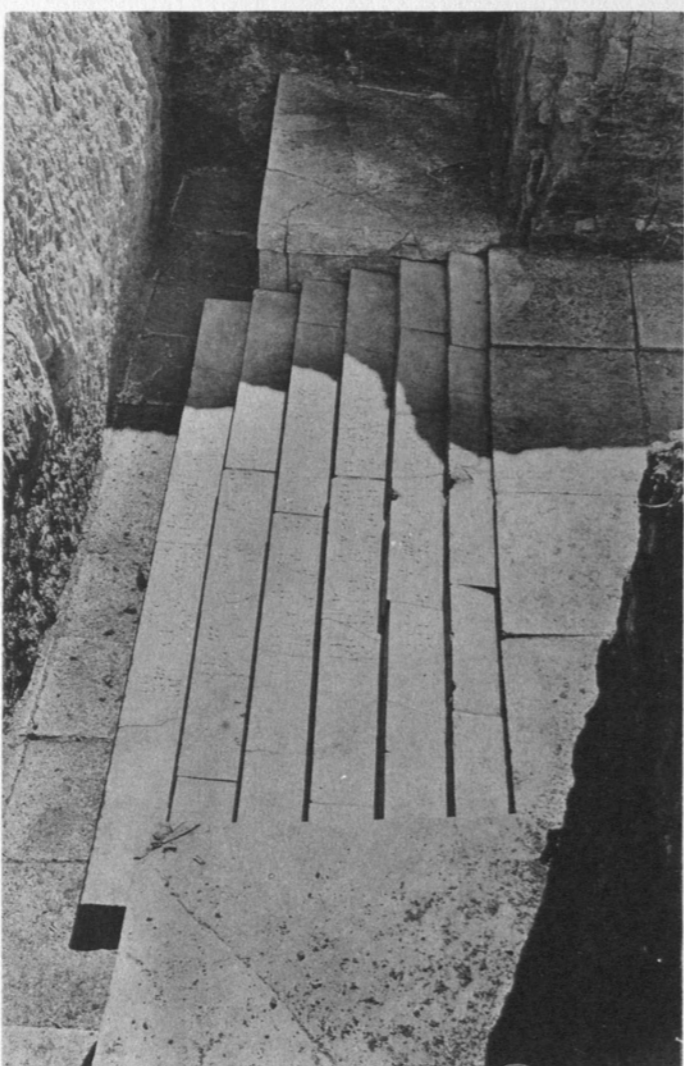
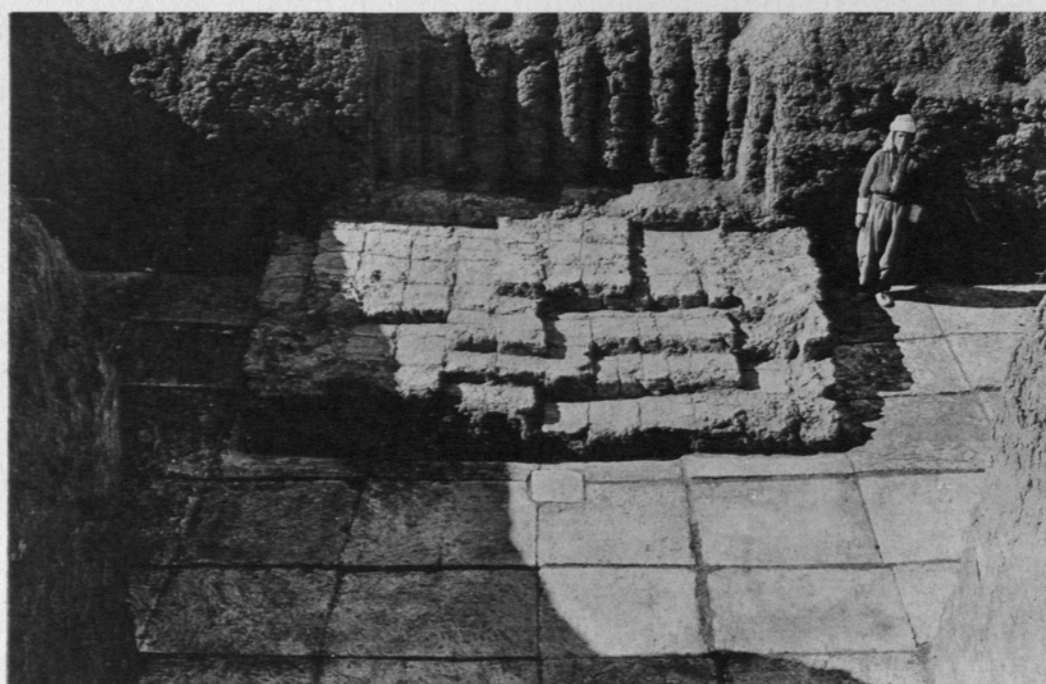
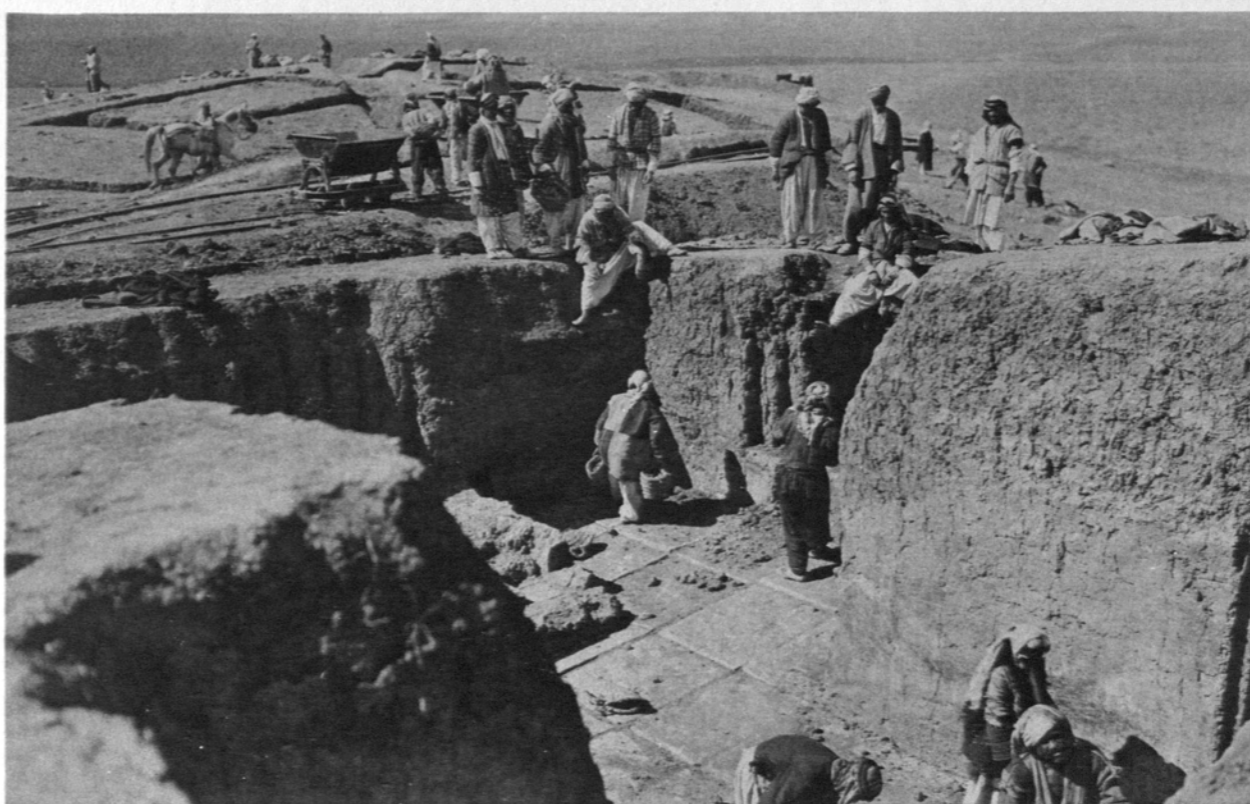
A-B. THE PORTAL FROM THE CENTRAL COURT TO ROOM 18, VIEWED FROM THE ROOM (SEE PL. 23 E)

THE INNER THRESHOLD IS UNIQUE IN HAVING SINGLE-BAND MOLDING AROUND THE RIGHT-HAND PIVOT HOLE AND DOUBLE-BAND MOLDING AROUND THAT AT THE LEFT, IN WHICH REMAINS THE ONLY EXAMPLE OF A DOOR PIVOT

C. REMAINS OF THE DOOR PIVOT AT THE PORTAL BETWEEN CENTRAL COURT AND ROOM 18 (SEE A AND B)

D. REMAINS OF NICHE IN TIERS ACROSS THE SOUTHWEST END OF ROOM 15

E. THREE IRON WHEELS, EIGHT-SPOKED, WITH BRONZE BEARINGS AND HUBS, IN ROOM 15

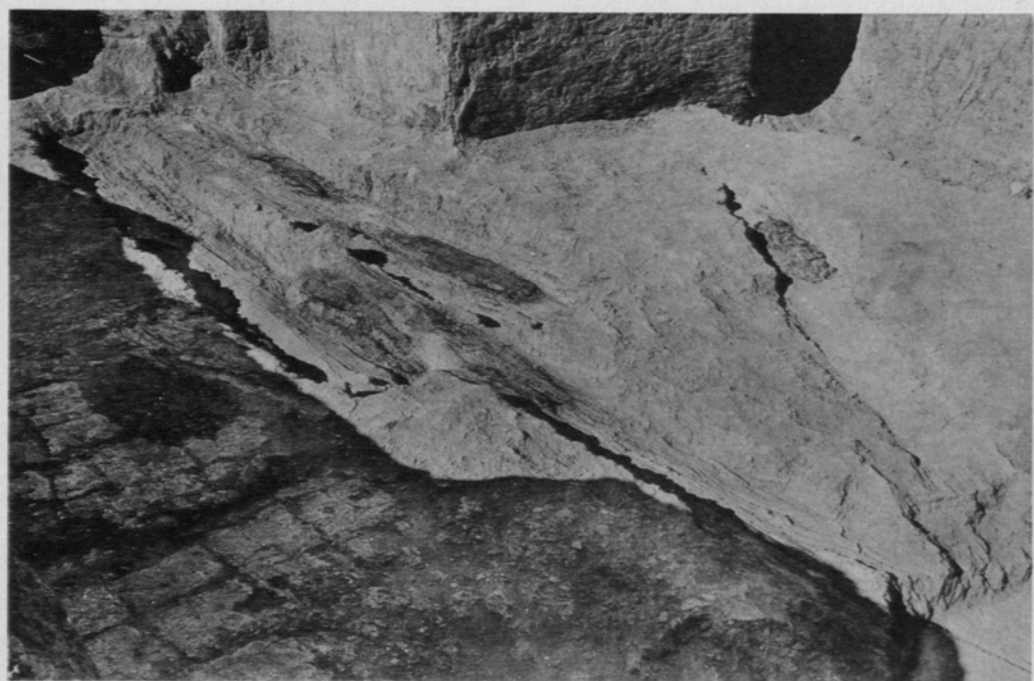
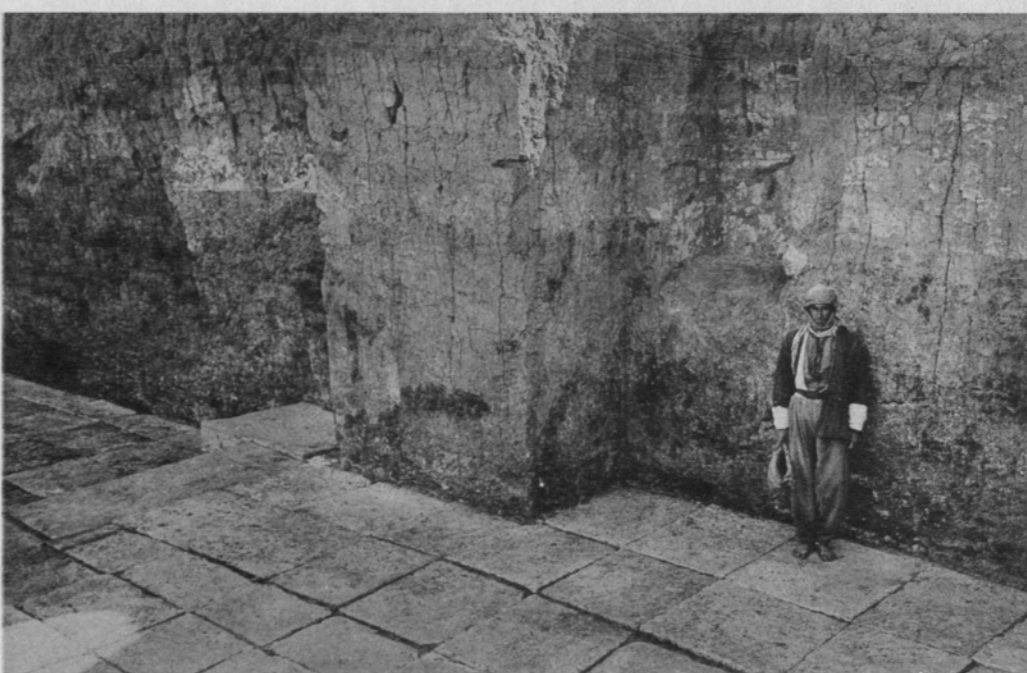
*A**B**C**D**E*

A-B. IMPRINTS OF WOOD IN THE DEBRIS OF ROOM 19, SO FALLEN AS TO SUGGEST ROOF BEAMS OF PERPENDICULAR ARRANGEMENT

C. THE STEPS LEADING FROM THE MAIN CELLA (ROOM 21) TO THE MAIN SANCTUARY (ROOM 22)
INSCRIBED UPON THE LOWER FIVE TREADS IS A PRAYER TO NABU. THE SAME INSCRIPTION APPEARS UPON
THE FRONTS OF THE TWO PLATFORMS FLANKING THE STEPS

D. THE MUD-BRICK PLATFORM UPON WHICH PROBABLY STOOD THE CULT STATUE IN THE MAIN SANCTUARY
AROUND ITS BASE IS A CHANNEL CUT INTO THE FLOOR AND EMPTYING INTO THE SQUARE, STONE-COVERED "BOX"
CENTRALLY PLACED IN FRONT OF THE PLATFORM

E. CLEARING THE MAIN SANCTUARY

*A**B**C**D**E*

A-C. REMAINS AND IMPRINTS OF WOOD IN THE DEBRIS OF THE MAIN SANCTUARY
D. THE SIDE SANCTUARY (ROOM 24), SHOWING NICHE (NEAR RIGHT SHOULDER OF MAN)
 ITS CELLA (ROOM 23), AT LOWER LEVEL, IS BEYOND AT LEFT
E. THE SIDE SANCTUARY AS VIEWED FROM ITS CELLA
 THE PRAYER TO NABU IS INSCRIBED ON THE TREADS OF THE STEPS AND ON THE TOPS OF BOTH FLANKING PLATFORMS

NABU TEMPLE



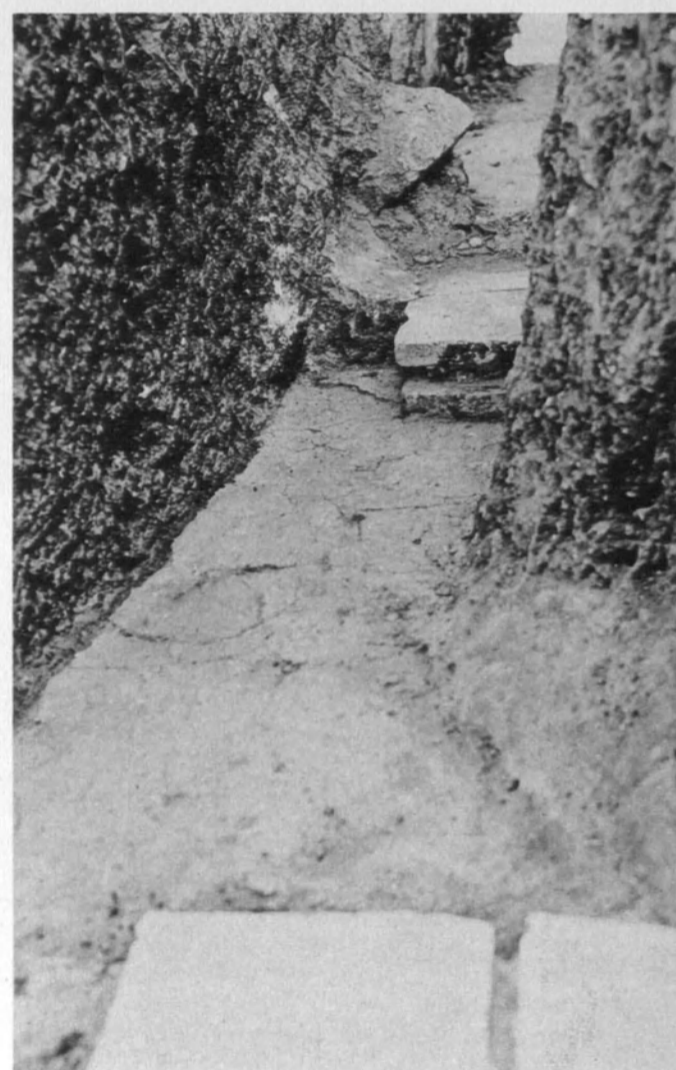
A



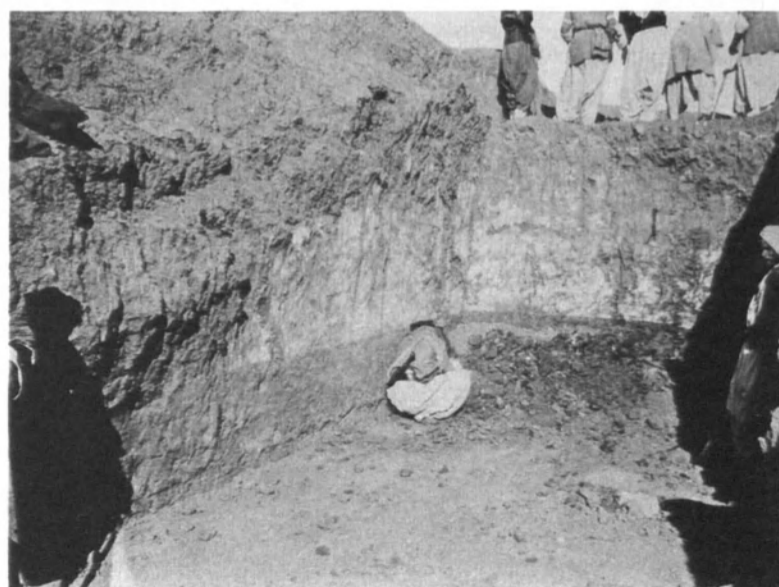
B



C



D



E

- A. THE PRAYER TO NABU INSCRIBED UPON THE TOP OF THE RIGHT-HAND PLATFORM FLANKING THE STEPS FROM THE SIDE CELLA TO ITS SANCTUARY
- B. VIEW FROM THE SIDE SANCTUARY THROUGH ITS CELLA AND THE ANTEROOM TO THE CENTRAL COURT
- C. ROOM 16, WITH ROOM 27 BEYOND
THE PORTAL AT EXTREME LEFT LEADS TO THE CENTRAL COURT
- D. REMAINS OF THE PAVEMENT IN THE WEST CORNER OF COURT V, SHOWING ITS CONSTRUCTION OF TWO COURSES OF BAKED BRICK LAID WITH BITUMEN
- E. CLEARING THE FLOOR OF ROOM 43
THE LEVEL OF THE ORIGINAL BAKED-BRICK FLOOR IS APPARENT FROM THE JAGGED LINE LEFT ON THE WALL AFTER THE REMOVAL OF THE BRICKS IN ANTIQUITY

*A**B**C**D**E*

A. DOOR-BLOCKING OF LATER OCCUPANTS ACROSS THE SOUTHWEST END OF ROOM 44
THE BAKED-BRICK PAVEMENT REMAINS IN ONE CORNER ONLY, THE GREATER PART HAVING BEEN REMOVED IN ANTIQUITY

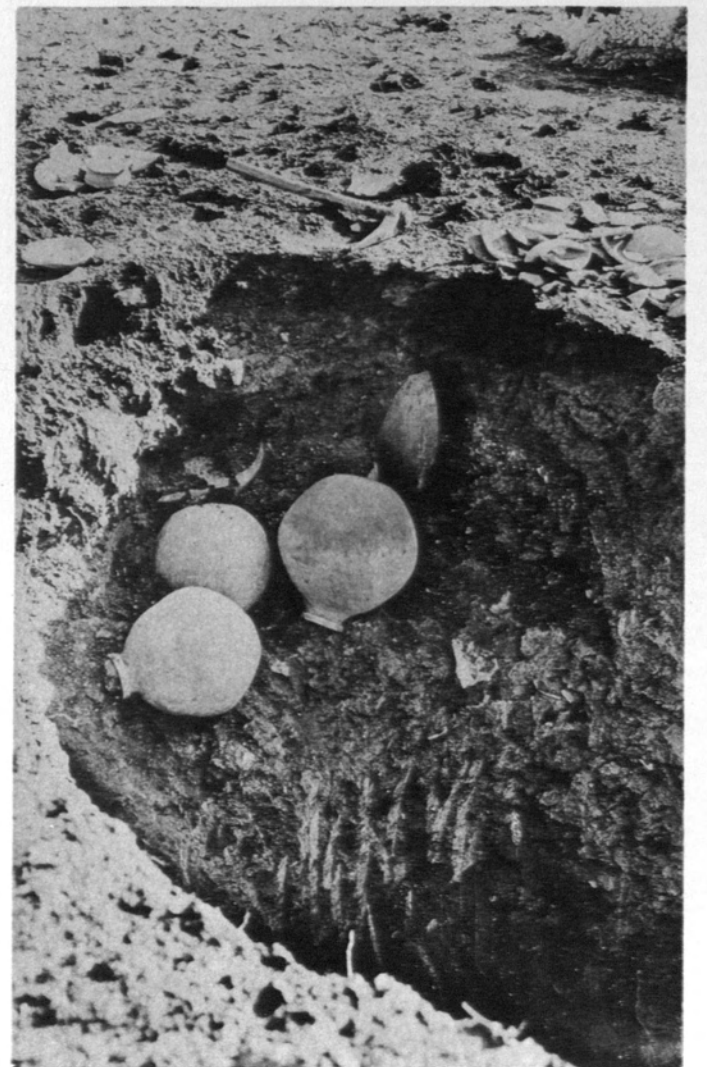
B. REMAINS OF THE STAIRWAY IN THE NORTH CORNER OF ROOM 45

C. THE STONE-COVERED DRAIN, ORIGINALLY UNDER THE PAVEMENT, RUNNING FROM ROOM 45
THROUGH ROOM 41 (WHERE NO FLOOR REMAINS) TO ROOM 40 AND BEYOND

D. ROOM 29, WITH THE FORECOURT BEYOND AND THE THRESHOLD TO ROOM 30 AT LEFT
THE PAVEMENT WAS REMOVED BY LATER OCCUPANTS, WHO MADE A SLOPING FLOOR FROM THE FORECOURT TO A BATHROOM SUITE OF THEIR CONSTRUCTION

E. THE CORNER BETWEEN ROOM 29 AND COURT IV, STRENGTHENED BY BAKED BRICKS

NABU TEMPLE

*A**B**C**D**E*

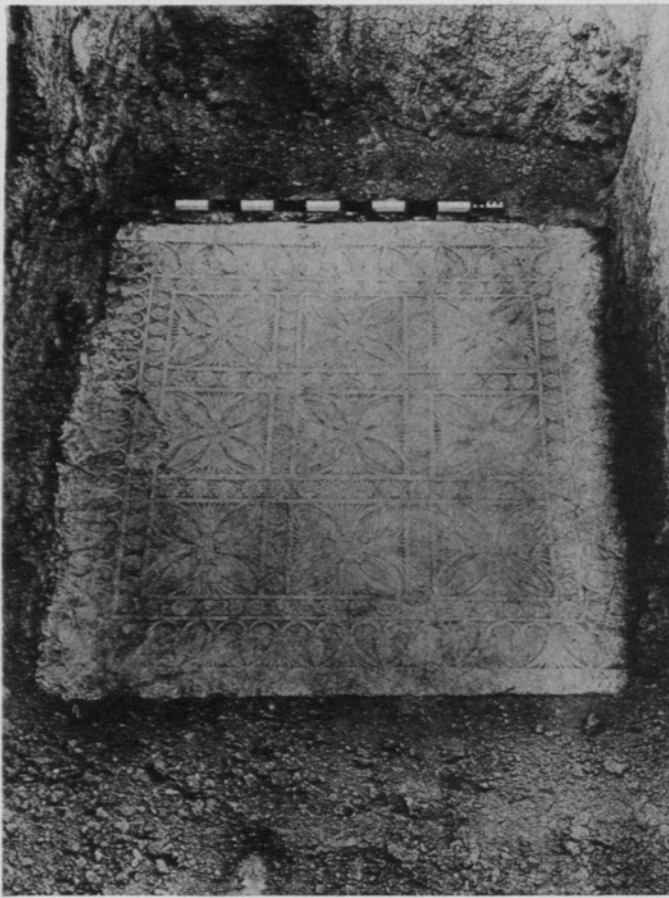
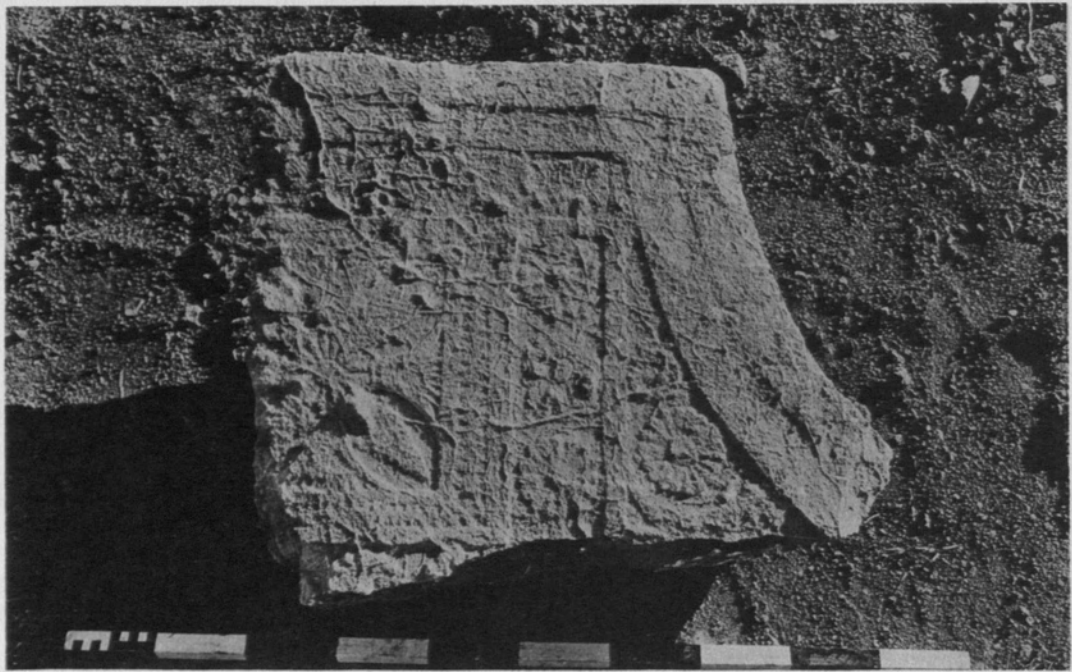
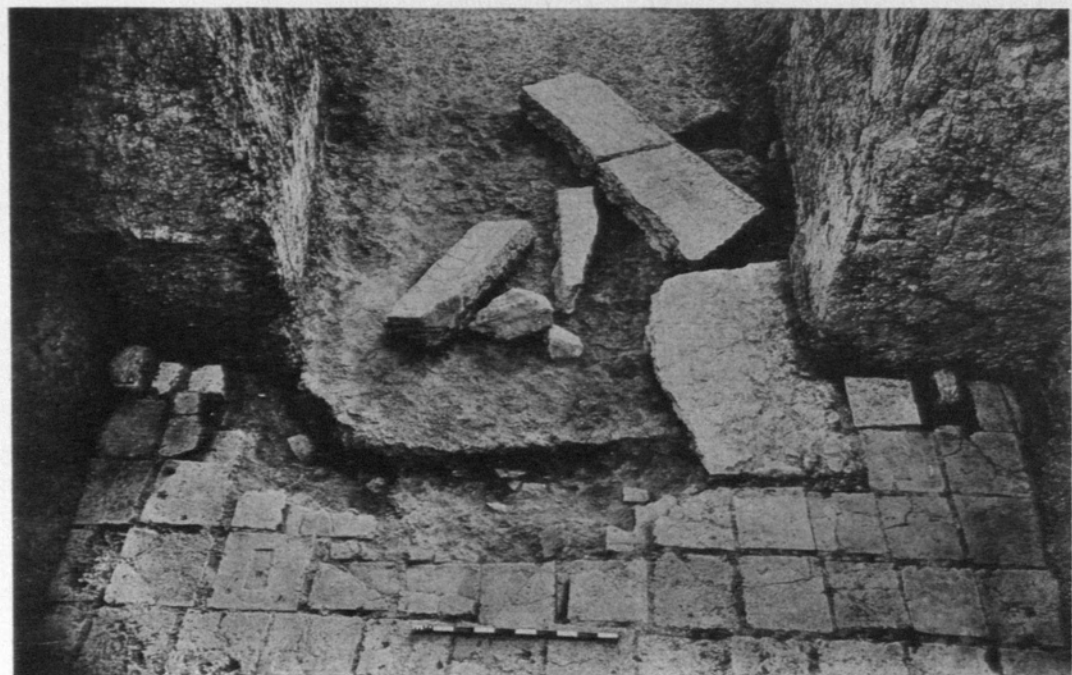
A. ROOM 29 AFTER REMOVAL OF THE FLOOR OF THE BATHROOM SUITE BUILT BY LATER OCCUPANTS. VIEW NORTHEASTWARD

THE BATHROOM DRAIN MAY BE NOTED AT THE FAR END OF THE ROOM; ITS FLOOR LEVEL IS SHOWN BY THE BAKED BRICKS REMAINING IN THE NICHES

B. PLASTERED MUD-BRICK CONSTRUCTION OF LATER OCCUPANTS IN THE FORECOURT

C. THE REEDS IN THE SOUTHWEST WALL OF THE FORECOURT, WITH "POCKETS" IN WHICH LATER OCCUPANTS STORED SILVER JEWELRY AND COINS OF ALEXANDER III

D-E. CRUDE BAKED-BRICK PAVEMENT (*D*) AND POTTERY (*E*) OF LATEST OCCUPATION OVER THE FORECOURT

RESIDENCE *K**A**B**C**D**E*

- A.* THE INNER THRESHOLD OF THE CENTRAL PORTAL FROM FORECOURT TO ROOM 12
- B.* THE THRESHOLD IN THE SOUTHEAST PORTAL FROM FORECOURT TO ROOM 12
- C.* A FRAGMENT OF AN INNER THRESHOLD FOUND NEAR THE GROUND SURFACE OVER ROOM 24
- D-E.* REMAINS OF THE THRESHOLD IN THE CENTRAL PORTAL FROM FORECOURT TO ROOM 12
ON EACH SIDE ARE THE STONE RINGS (*E*) FOR SECURING AWNINGS, WHILE BEYOND, NEAR THE CENTER OF ROOM 12, IS THE STONE SOCKET (*D*) WHICH BRACED THE DOOR PROP



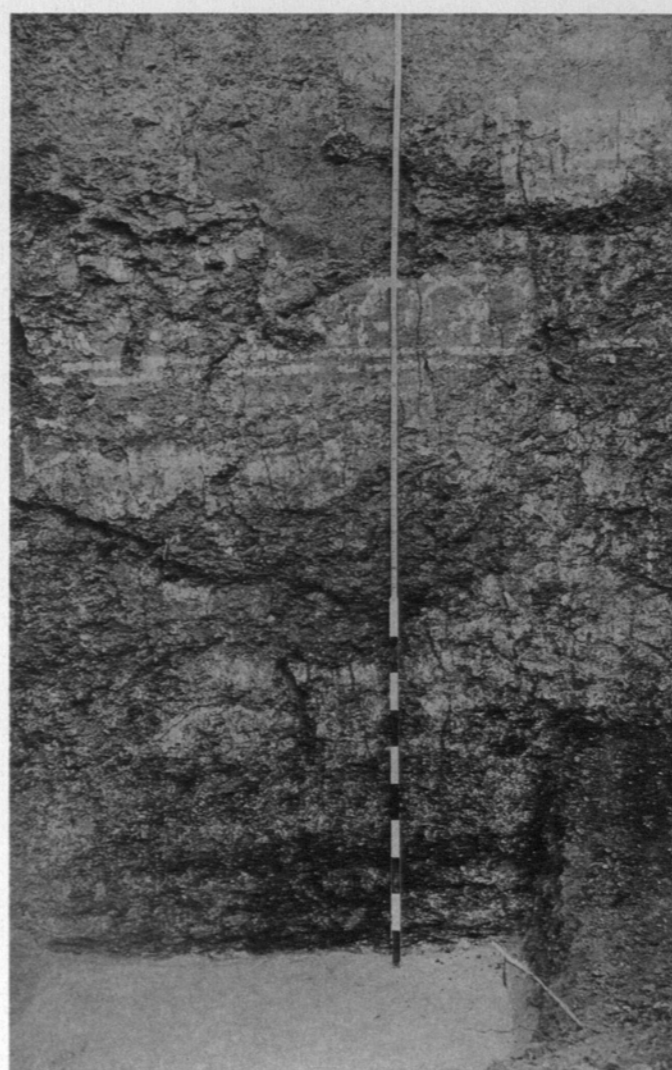
A



B



C



D



E

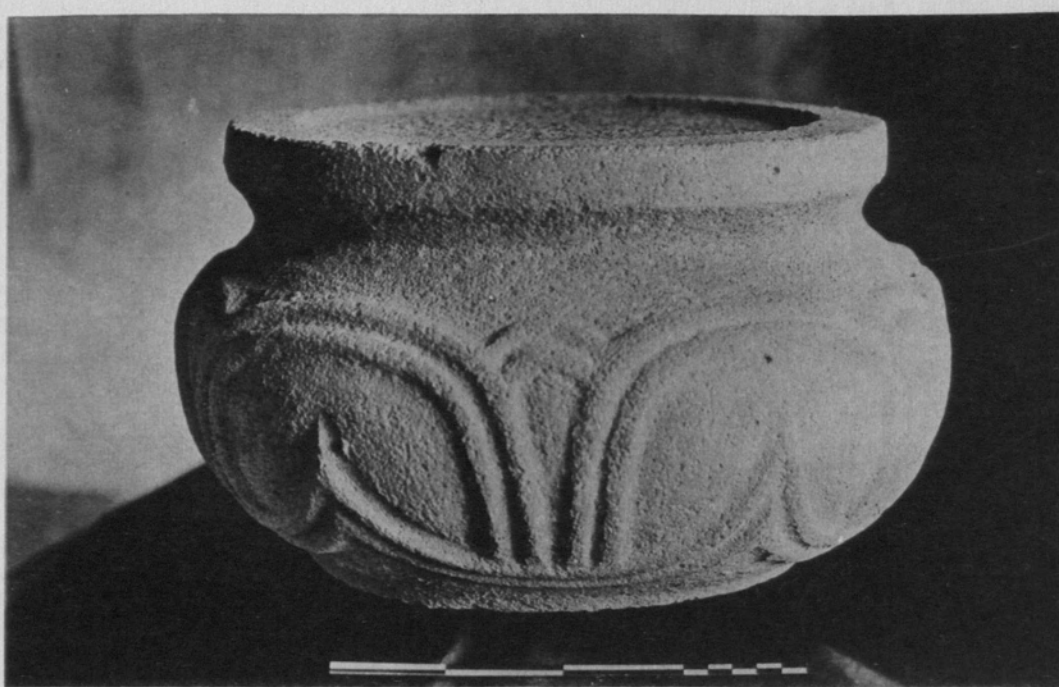
A-C. THE PAINTED PLASTER DECORATION OF THE SOUTHWEST WALL OF ROOM 12, AS IT WAS FOUND FALLEN FACE DOWN WITHIN THE ROOM

D. PART OF THE PAINTED SURFACE STILL ADHERING TO THE SOUTHWEST WALL OF ROOM 12

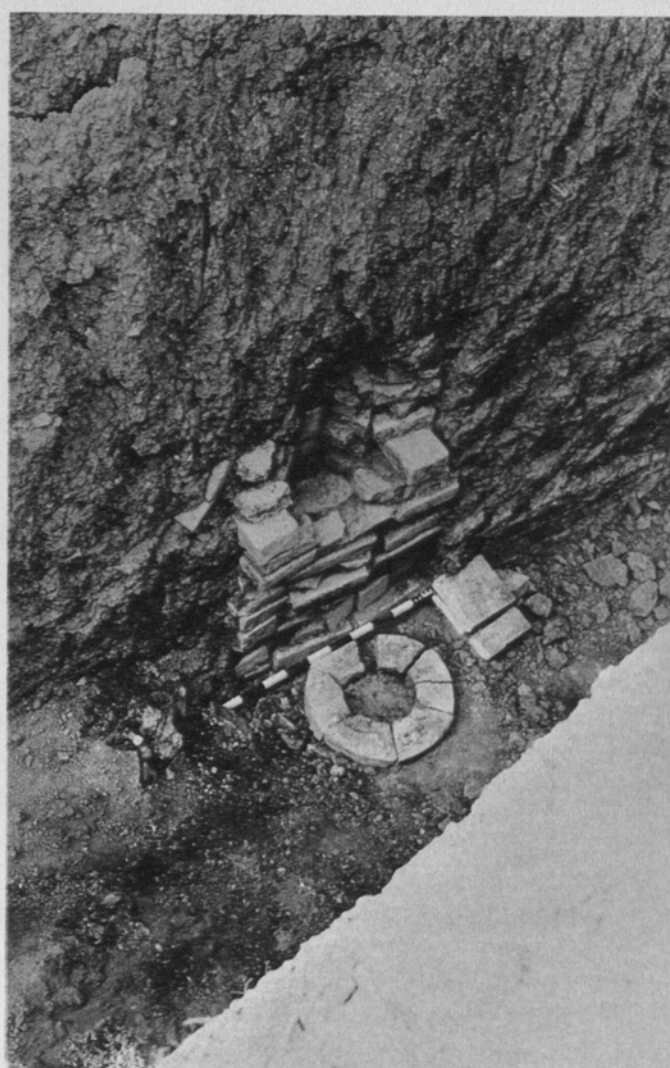
E. PART OF THE PAINTED SURFACE ADHERING TO A JAMB IN THE PORTAL BETWEEN ROOMS 11 AND 12



A



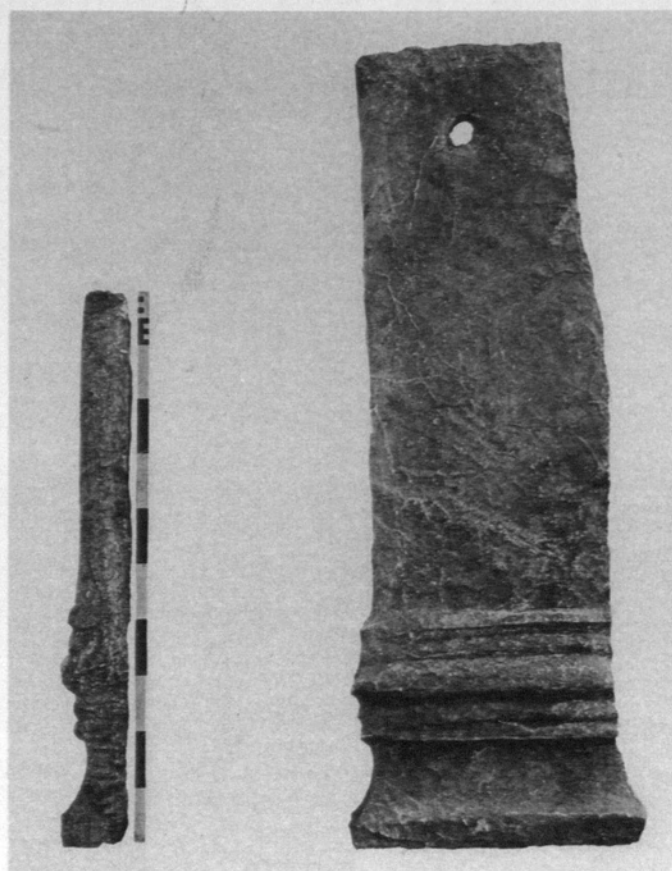
B



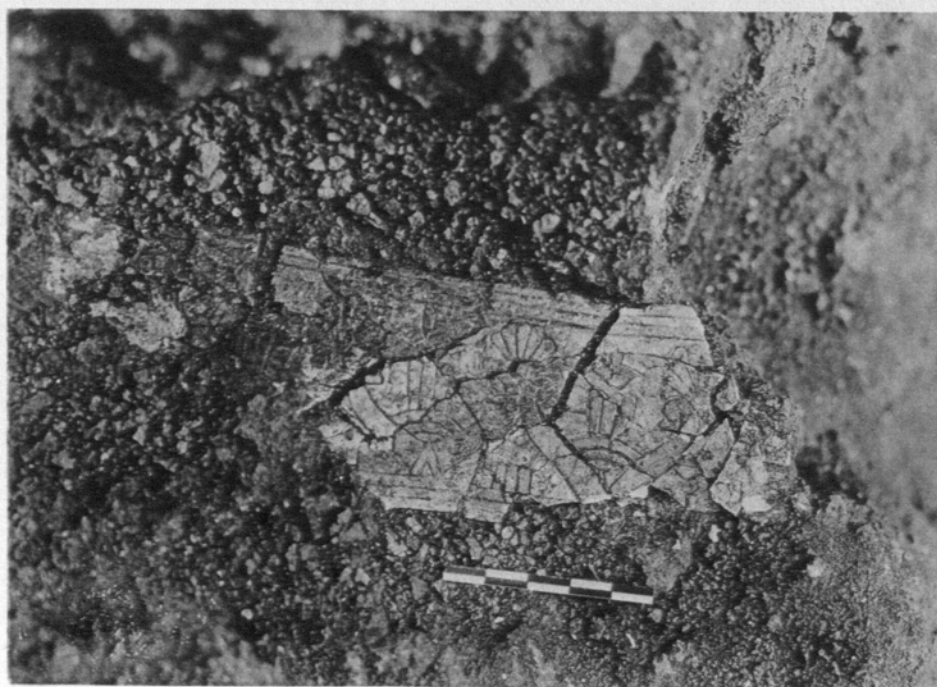
C



D



E



F

A. PAINTED PLASTER WALL DECORATION OF ROOM 15, FALLEN WITHIN THE ROOM THE DESIGN SUGGESTS THE FIG TREE ALWAYS PRESENT ON THE ENAMELED-BRICK TABLEAUS IN THE TEMPLES

B. ONE OF THREE BASALT COLUMN BASES FROM THE DEBRIS OF ROOM 15

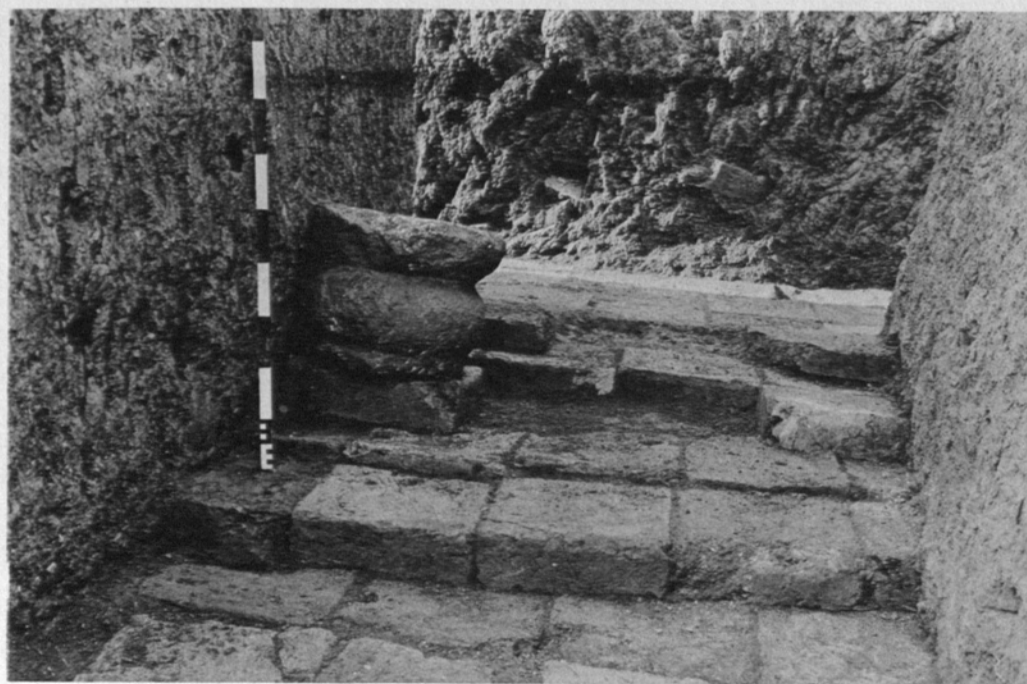
C-D. THE TILE-AND-BAKED-BRICK ROOF DRAIN IN THE NORTHWEST WALL OF THE CENTRAL COURT

E. ALABASTER SLAB FRAGMENTS FROM ROOM 18, WITH MOLDING UNIQUE IN DUR SHARRUKIN

F. FRAGMENTS OF AN INCISED IVORY PLAQUE IN ROOM 23

*A**B**C**D**E**F*

- A-B.* A BATHROOM (29) WITH STONE "FIXTURES" AND A BAKED-BRICK PAVEMENT COVERED WITH BITUMEN
- C-D.* THE SUBFLOOR CHANNEL DRAIN RUNNING THROUGH ROOM 36 AND SERVING COURT 32 (SEE STONE ORIFICE IN *D*) AND BATHROOM 35 (SEE ORIFICE IN *C*, RIGHT FOREGROUND)
THE PAVEMENT OF ROOM 36 WAS REMOVED IN ANTIQUITY, LEAVING DEPOSIT BOXES EXPOSED (*C*)
- E.* ROOM 47, WITH A NICHE IN WHICH LIES A STONE ROOF-ROLLER
- F.* COURT 54, WITH STONE VESSEL AND BRICK "TABLE" NEAR THE CENTER OF ITS SOUTHWEST WALL
THE OPENING OF THE PORTAL TO ROOM 49 WAS NARROWED BY LATER OCCUPANTS, WHO HUNG THE DOOR ON THE COURT SIDE.
THE SINGLE ROW OF BAKED BRICKS SET INTO THE WALL AT FLOOR LEVEL IS UNUSUAL

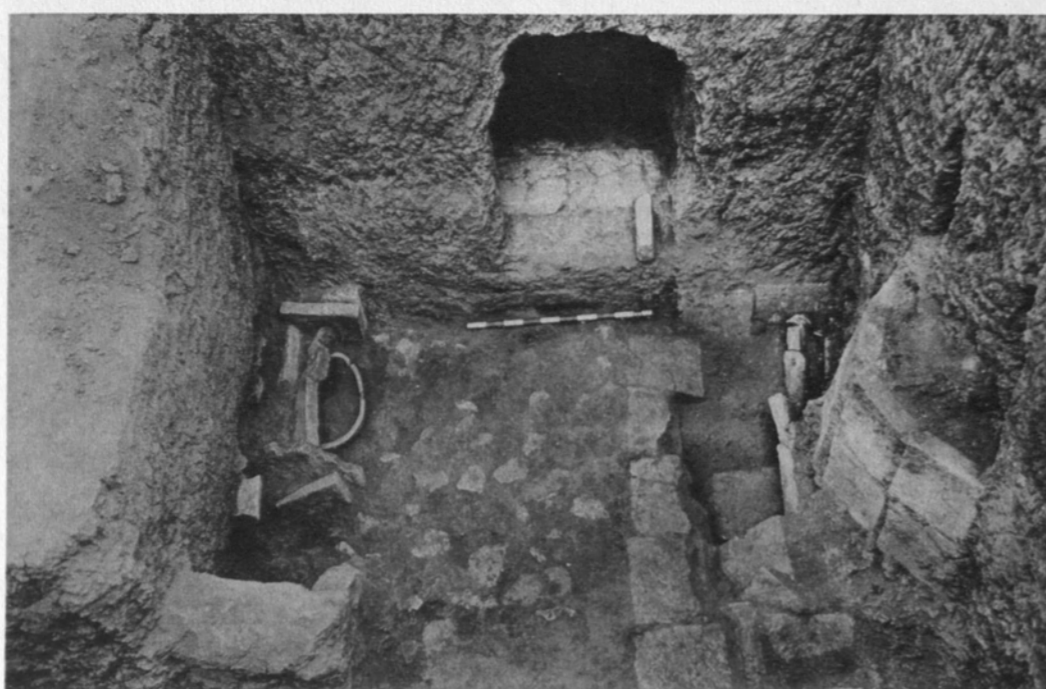
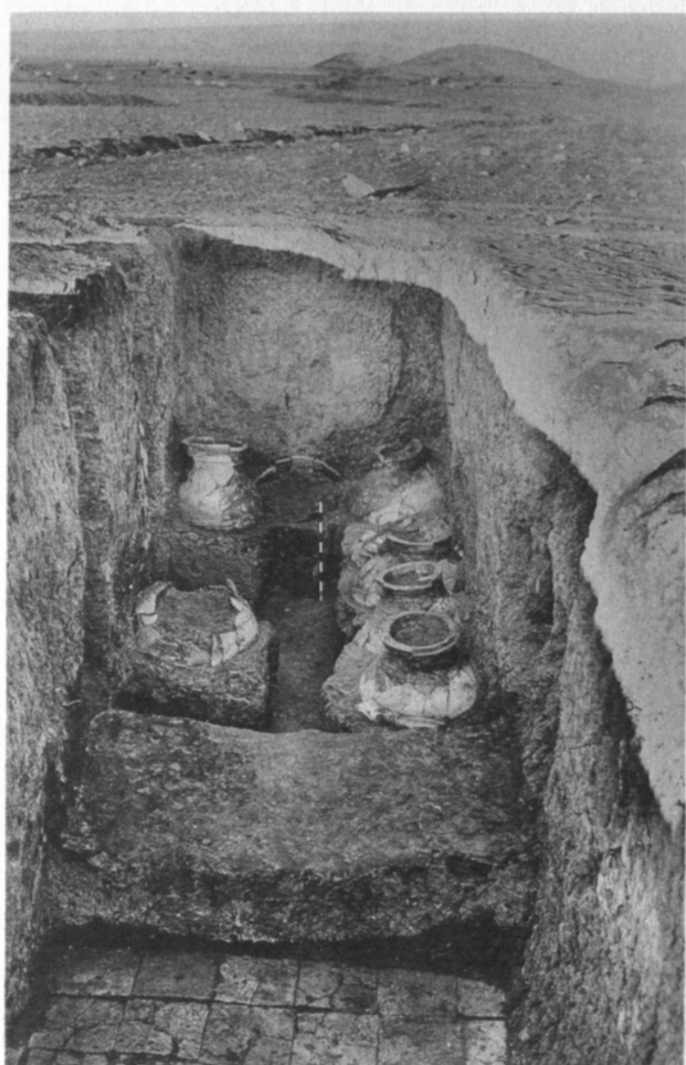
RESIDENCE *K**A**B**C**D**E**F*

A-B. ROOM 49, WITH A "SHELF" NICHE IN ITS NORTHEAST WALL AND ITS EAST CORNER FILLED WITH A MUD-BRICK MASS OF LATER OCCUPATION (*A*). A FLOOR NICHE IS IN ITS SOUTHEAST WALL, AND IN ITS WEST CORNER ARE FURTHER SIGNS OF LATER OCCUPATION (*B*)

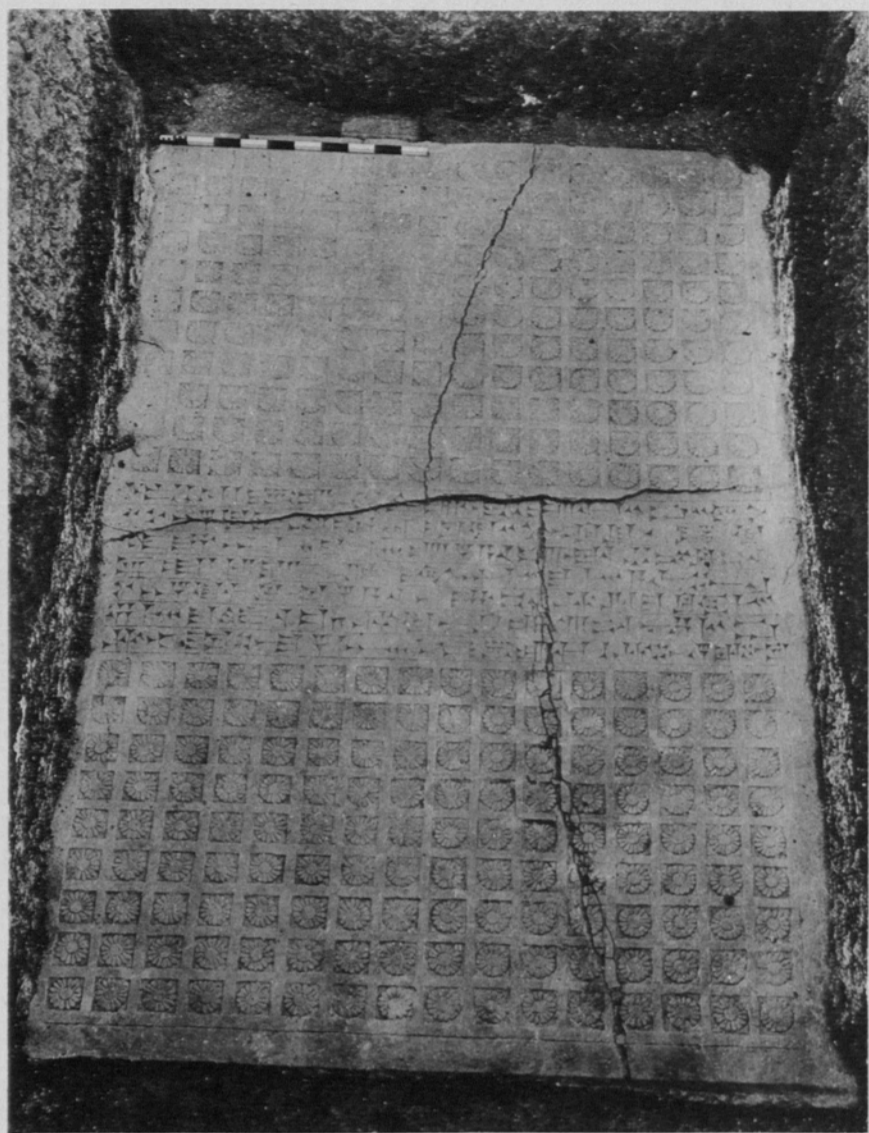
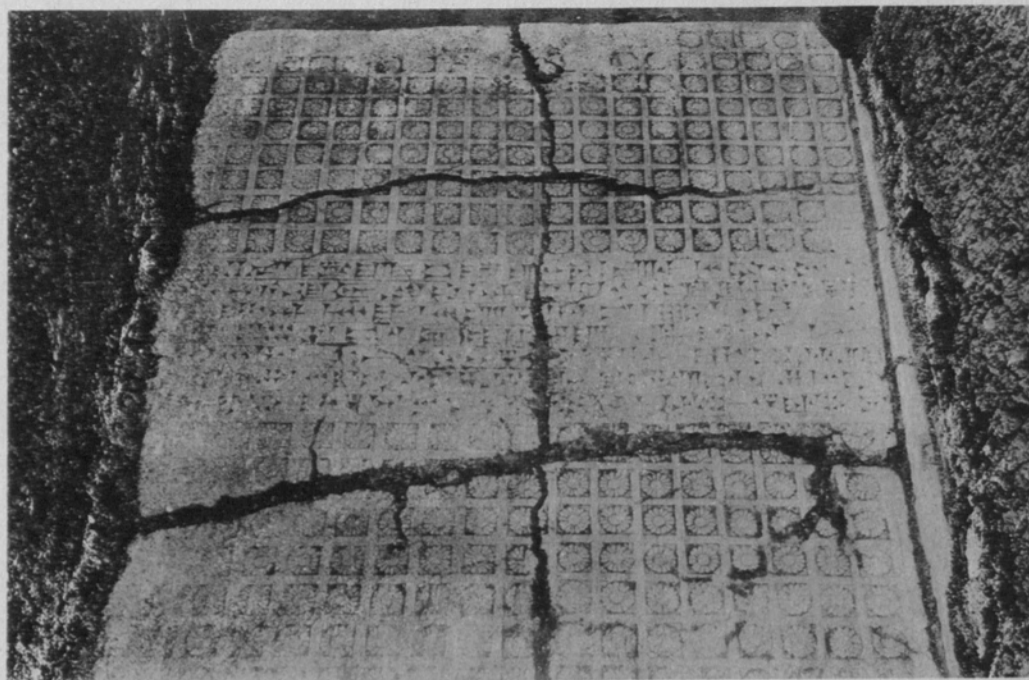
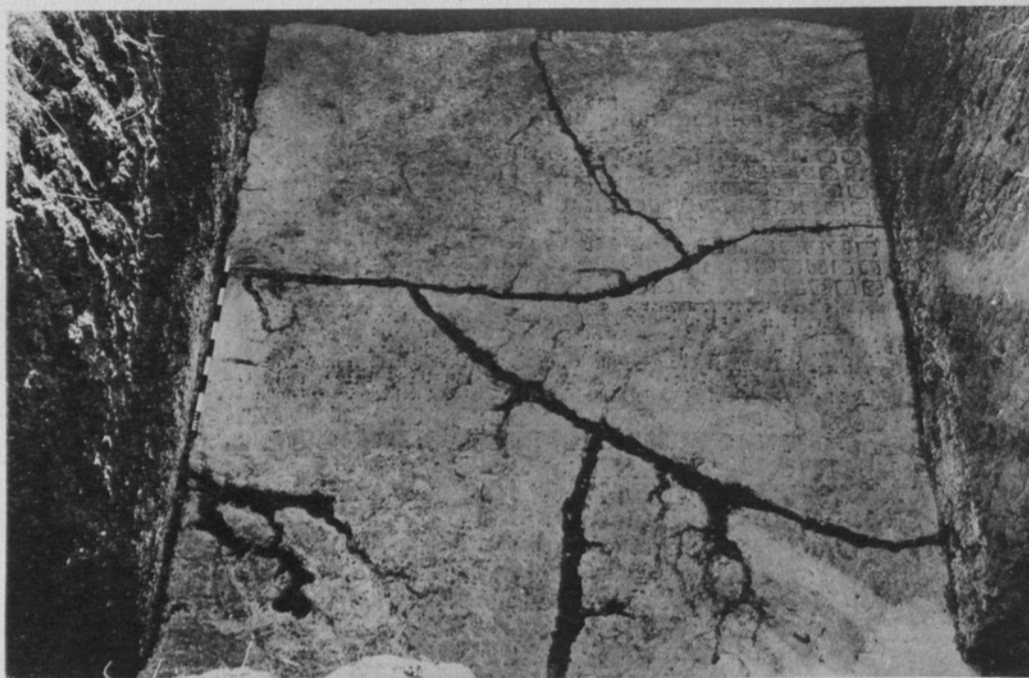
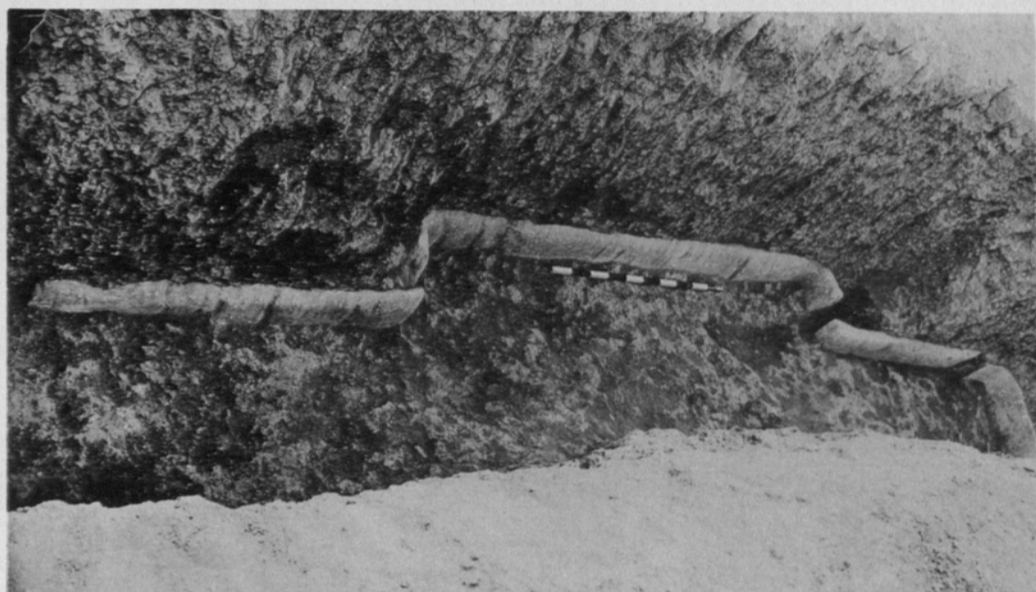
C-F. ROOM 66 AS REBUILT BY LATER OCCUPANTS, WHO THICKENED ITS SOUTHEAST WALL (*C*), MADE NICHEs IN ITS NORTHWEST AND SOUTHWEST WALLS (*E*), AND CONSTRUCTED A NEW PAVEMENT COMMENCING AT THE PORTAL FROM ROOM 48 (*D*) AND RISING TO STEPS IN THE PORTAL TO THE FORECOURT (*F*)

A STONE COLUMN BASE IN THE FORECOURT PORTAL MAY HAVE SERVED AS A TABLE

RESIDENCE K

*A**B**C**D**E**F*

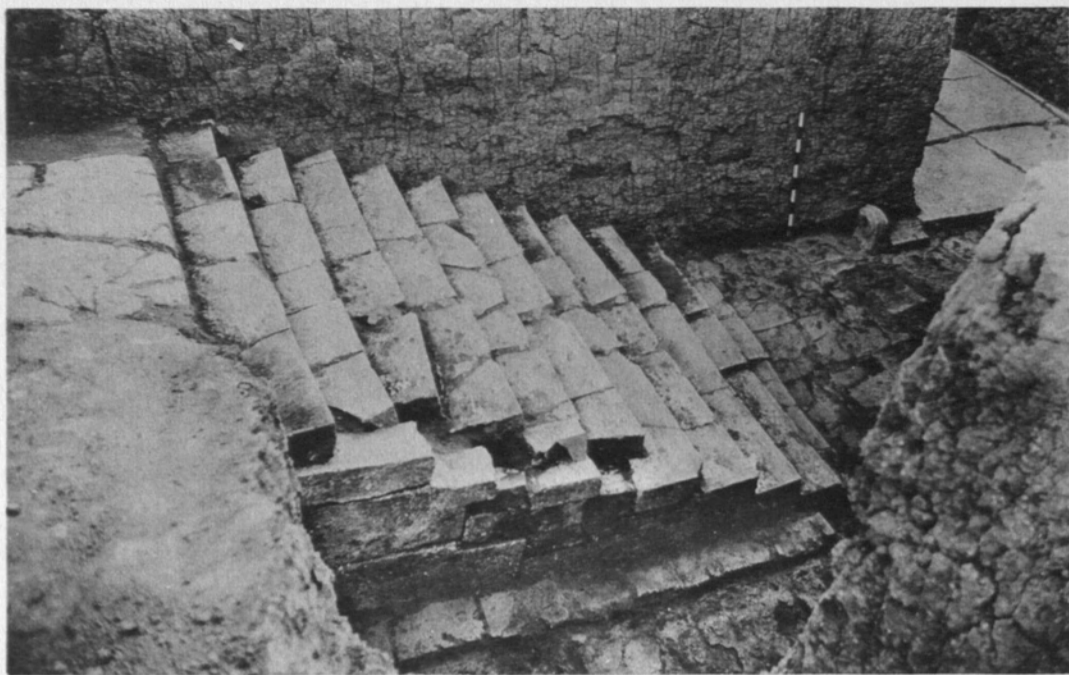
A-B. ROOMS 51 (*A*) AND 52 (*B*) IN THE SERVICE AREA, WITH STRUCTURES OF ORIGINAL OR LATER OCCUPATION
C-F. ROOM 65, THE "WINE CELLAR," AND ITS STORAGE JARS AS LEFT BY LATER OCCUPANTS, WHO BLOCKED THE ORIGINAL PORTAL TO ROOM 67 WITH BAKED BRICKS AND CUT A NEW ONE INTO THE SAME ROOM (*E*)

*A**B**C**D**E*

A-C. THRESHOLDS IN SINAHUSUR'S RESIDENCE: *A* BETWEEN ROOMS 119 AND 116, *B* BETWEEN ROOM 116 AND THE CENTRAL COURT, AND *C* IN THE CENTRAL PORTAL BETWEEN THE FORECOURT AND ROOM 119

D. THE TOP OF THE ALABASTER DADO IN BATHROOM 37 OF THE MASTER APARTMENT

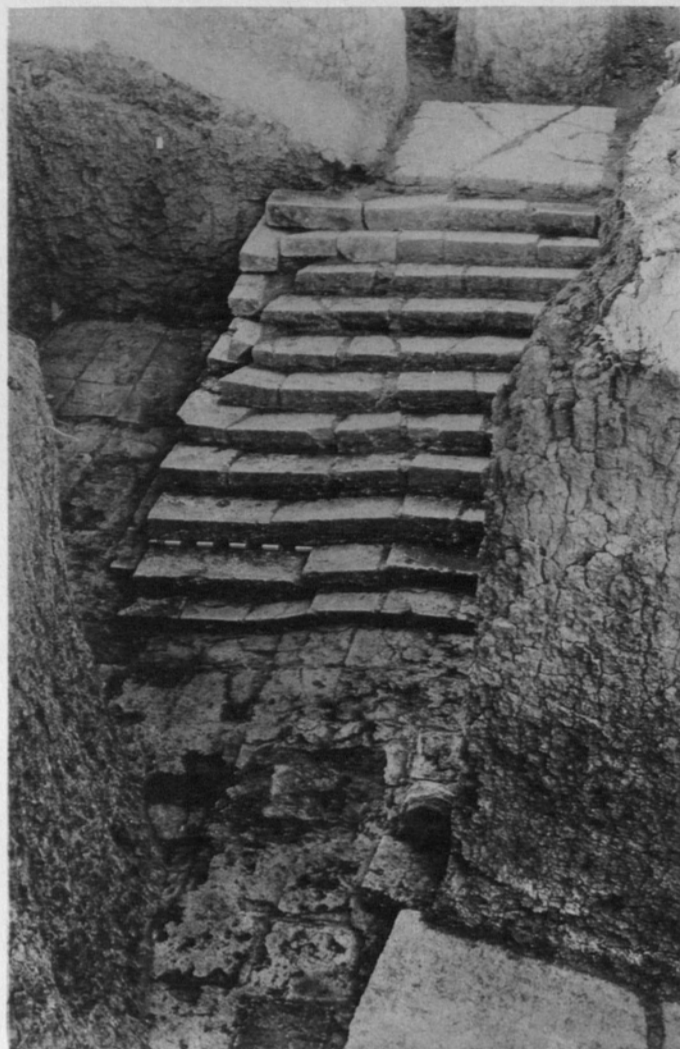
E. A PIER OF THE PORTICO ALONG THE SOUTHEAST SIDE OF COURT 105



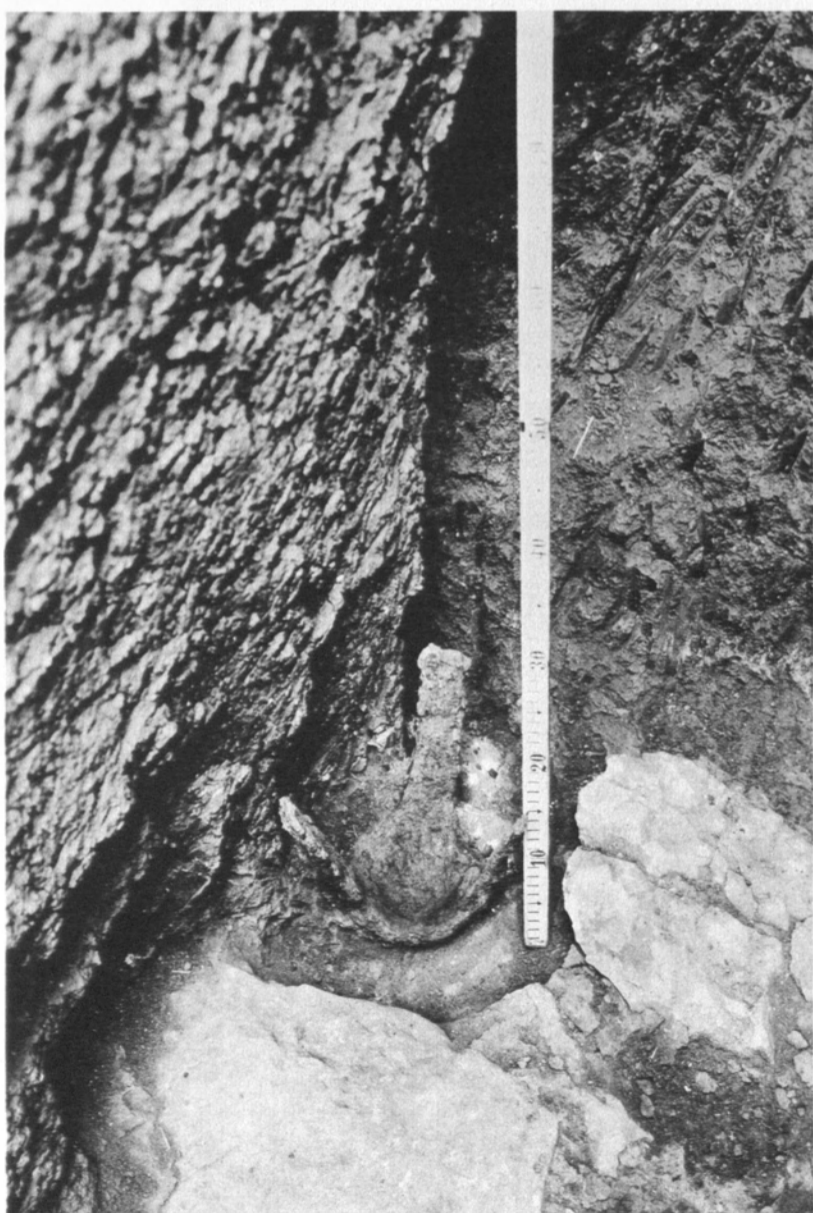
A



B



C



E



D

A-C. THE ALABASTER STAIRS IN THE SOUTH CORNER OF THE CENTRAL COURT OF RESIDENCE L, VIEWED FROM NORTHEAST (A-B) AND NORTHWEST (C)

D. EXPANDING THE SOUNDING TRENCH IN TRACING THE WALLS OF RESIDENCE M

E. THE IRON PIVOT CASING BESIDE THE PORTAL FROM ROOM 41 TO ROOM 40 OF RESIDENCE M

IV

THE BUILDINGS OUTSIDE THE CITADEL



THE BASALT COLUMN BASES IN THE OPENING OF THE LOGGIA FACING THE OUTER TERRACE
OF PALACE F, VIEWED NORTHEASTWARD FROM THE TERRACE

IV

THE BUILDINGS OUTSIDE THE CITADEL

The extent of our knowledge of the entire city of Dur Sharukin, in so far as the relationship of its buildings to one another and to the city wall is concerned, is summarized on Plate 69, which restoration is based compositely on the present topography of the site and on Place's and our own excavations.

Aside from the citadel the most monumental architecture of the city is to be found at *F*, which in the light of our excavations we consider a second palace (see p. 9). It was first noted by Botta,¹ who made here what he terms unsuccessful soundings. From the few uninscribed and unsculptured stones and from the bricks he encountered, he makes no suggestion as to the nature of this edifice. Place later made a more extensive investigation in this area and from the architecture and contents of eight rooms (see Pl. 67) concludes that the building may have been a market or bazaar.² He notes, however, that it compares favorably with the king's palace in scale and in construction, though he neglects to compare the room in which he found quantities of copper objects to the storage rooms off the forecourt of the palace.

PALACE *F*

Palace *F* we believe is generally similar to Sargon's palace (see Pl. 69). From its partial excavation we know that it stands upon a terrace incorporated with the city wall so that part lies inside and part outside the rectangular city area. The extent of this palace and terrace is suggested by the present-day contours of the site (Pl. 68). That it had its own inclosure is a possibility suggested by the same source, for a low ridge today continues the line of the northwest face of the terrace and turns sharply to join the city wall at Gate 4. The excavated portion of Palace *F* is in room area and wall thickness comparable to the king's palace. At this point, however, the structural similarity ceases, for the splendor inherent in the reliefs which adorn the corresponding section of the king's palace is missing at *F*. Here the walls are plastered like those of the citadel residences, with only an occasional use of orthostat or relief.

The terrace which forms the base of Palace *F* is in construction like that of Sargon's palace. It is a natural mound shaped and leveled by a generous use of mud brick—a condition clearly shown in a vertical section cut through the outer terrace, wherein the courses of mud brick are increasingly numerous toward the edge of the terrace. The two points at which the face of the terrace was actually found are indicated on Plate 75. In our restoration we have adopted a broken outer face rather than a single straight face such as Place restores at the king's palace. Three reasons prompt our indentation of the corners: the present topography of the mound, the apparent lack of any but a single structure on this section of the terrace, and the masonry inclosing the terrace drain which terminates opposite Room 3 at a point we assume to be in the plane of the outer face.

¹ Botta, *Monument de Ninive* I, g on Pl. 2, and V 28.

² Place, *Ninive et l'Assyrie* I 200 f.

Near the center of the city Place also examined a small mound in which he located five rooms of a building which he designates *G*.³ The size and character of the rooms, two of which are lined with plain alabaster orthostats, tempt us to note a resemblance between *G* and the residences excavated by us.

Not far outside Citadel Gate *B* is Residence *Z*, a large portion of which we have recently traced. Unproductive of notable objects and disclosing but another version of the standard residence plan, this building fails to warrant the time and expense required for its complete excavation.

Soundings made at several other points throughout the city tell us but one fact, that the city was densely built, for wherever investigation was undertaken there were immediate signs of ancient habitation. So little remains of the architecture, and so uninformative are the poor objects therein, that our soundings invariably led to discouragement rather than to a desire to pursue further investigation.

The vertical side of the outer terrace is plastered and appears to be identical in construction with the face of the city wall. Outside Room 16 nothing but the rubble foundation was encountered, but at the buttress angle outside Room 38 foundation and plastered surface were to some extent both intact, as they were in the city wall farther to the southeast. Not a vestige of the terrace pavement remains. It undoubtedly was of baked brick but had suffered removal long before our excavations were undertaken.

The construction of two of the drains which served sections of the outer terrace is described on page 34. One was traced for a distance of 10 meters under the terrace and Room 31 and disclosed nothing other than its manner of construction. The other we were able to follow more extensively. With its orifice near what we consider the outer edge of the terrace, its first section was vertical, descending directly from pavement level to the slightly sloping "horizontal" section protected by rubble masonry (see Pls. 39 *A* and 87). Its vaulted horizontal section (see Pl. 39 *B-C*) runs under Room 3, where, joined by a branch from the opposite direction—probably one serving one or more inner courts—it makes a right-angled turn to carry its contents toward Gate 5. One is tempted to wonder why the terrace drainage was not simply debouched onto the ground surface outside, rather than being carried inward toward an eventual more distant outlet.

It is difficult to account for two facts encountered in the clearance of this drain: the removal of the outer vertical section and the blocking of the entrance to the remaining channel. An explanation may perhaps be found in local legend as related by the patriarchal *mukhtar* of the near-by village. Many years ago (he isn't quite sure whether it was sixty or

³ *Ibid.* pp. 201 f.

seventy) a man from this village, while plowing this very spot, found a stone of extraordinary shape. He carried it home and gave it to his daughter to use as a pestle for grinding wheat. After a while he happened to hear that a certain Frenchman named "Baloz" (Place), from Mosul, paid good money for stones such as this. He therefore took the stone to "Khan Baloz" in Mosul and received three Turkish pounds in gold and a shawl for his wife.

Such is the old man's tale, which probably has as much truth as fiction. If such munificence was to be gained from a single stone, we may be sure that this spot was searched carefully for more treasure. The reward may have been no more than our drain, from which those bricks that were not imbedded in bitumen were removed for building purposes in the village, while the remaining channel was blocked to ward off exploring children. Or it may be that Place himself actually discovered this drain, removed a section of it to examine its construction, blocked up the remaining opening, and failed to record it in his meager account of *F*. The sterile debris encountered by us is therefore the accumulation of but a few years, regardless of which interpretation we accept. A third explanation, however, may be desirable in view of an almost complete inscribed prism (chap. viii, No. 48) which we found here near the surface in two pieces, one 8 meters distant from the other. Its text is the usual one commemorating the founding of Dur Sharrukin.⁴

The ramp which we have restored to supply an approach from the city to Palace *F* is purely imaginative. The existence of some such approach is to be expected; in our restoration we have therefore copied the one at the king's palace. The buttressed faces of the inner terrace are likewise freely restored on the basis of comparison, but they at least have the virtue of following the contour lines as they now exist.

Of the superstructure of Palace *F* only two sections—one between the outer terrace and what may be termed the central court, the other a small area at the south corner of the forecourt—have been excavated (see Pl. 69). The remainder of the palace we have restored in outline as the present topography of the mound suggests. Large forecourt and central court seem certain, while two small courts also have been located by excavation. Two other courts we supply at random, purely because courts of one sort or another must have existed in this area.

The south corner of the forecourt and the excavated rooms opening therefrom disclose little of interest. The court contains the usual evidence of secondary occupants, who tore up sections of pavement for bricks which they used in strange, meaningless structures. In the portal between the court and Room 43 the pavement is of brick and is stepped to reach a higher floor level in the latter. Long, narrow Room 42 has at its floor level a layer of ashes which may be indicative of domestic occupation or of a conflagration at the time of destruction. There were no objects to bear out the former alternative.

Between central court and outer terrace can be recognized several elements the counterparts of which are to be found facing upon Court VIII and the outer terrace of Sargon's palace (cf. Pls. 75 and 76). The throneroom (23) suite at *F* is almost a duplicate of the king's throneroom ("Court" VII) and adjoining rooms if we revise the latter as we think it should be (see pp. 55 f.). Both are glorified examples of the

reception suites of private residences (Pl. 86). The loggia (Room 15) at *F* with its passageway (Room 13) connecting court and outer terrace is but a variation of the corridor (Room 10) of the king's palace. The units projecting upon the outer terraces of the two palaces are similar, both of them probably the apartments set apart for living and entertaining. At *F* this unit may very possibly be a later addition, for, as may be noted on Plate 75, a plane, smooth surface which might once have been the outer face of the palace is to be found between Room 19 and Rooms 20 and 24. The apartment composed of Rooms 5-8 at *F* is probably the master's bedroom suite, which in the king's palace as Rooms 6, 9, 11, and 12 is joined directly to the unit extending onto the terrace. Three stone-paved rooms adjacent to one another (Rooms *F* 27-29) have their equivalent in Rooms 16-18 of Sargon's palace.

The throneroom suite is quite naturally the largest apartment opening off the central court of Palace *F*. Its importance is further emphasized in that its entrance is the dominating architectural element and the focal point of attention of the entire central court. Although we do not claim to have carried the excavation of the central court and its surroundings to any degree of completion, we do believe that the scale of the few rooms encountered in its two short sides precludes any possibility of apartments existing therein such as might deserve or receive monumental entrances. The fourth side, untouched by our excavation, is most certainly to be considered plain in its architectural treatment unless it is an exception to the so far infallible architectural custom proscribing decoration opposite the major court façade.

Although by no means comparable in magnificence to the throneroom portals in Sargon's palace, the central portal, at least, between the central court of Palace *F* and Room 23 stands out from the general severity which permeates this building. It is flanked by the largest buttresses found in our excavated area at *F* and is lined with alabaster winged bulls, the only examples of relief encountered in this palace. The bulls had suffered mutilation almost to the extent of annihilation. One of them actually had been removed, but its original existence is assured by the space recognizable between the floor edge and the unplastered wall against which it stood. The second bull (Pl. 39 *D*) had suffered the fate of those in a side portal of Sargon's throneroom:⁵ to provide a grindstone all but the forehoofs and a small section of a rear leg and the tail (Pl. 39 *E*) had been chiseled off. Enough remains, however, to certify the original magnificence of this creature which once faced the central court. The side portals, spaced symmetrically at either side of the buttresses, are recessed. Their walls are plastered—a definitive indication that originally there were no reliefs adorning them.

The throneroom (23) is easily recognized as such by the large alabaster dais or throne base, which as partially excavated is shown in Plate 40 *B*. There is no decoration of any sort upon the top or any of the three exposed sides, nor are there mounting steps such as exist in Sargon's throne base. A rabbeted niche (see pp. 45 f.) is centered in the wall behind the dais, a substitute perhaps for the more elegant stone niche behind Sargon's throne.⁶ Opposite the throne base and niche is the usual alcove, beyond which is the stair well, all in accordance with custom. Equally customary is Room 25 with its niche and recessed portal, beside the throne base. Rooms

⁴ Luckenbill, *Ancient Records of Assyria and Babylonia* II, §§ 117-23.

⁵ *Khorsabad* I 39.

⁶ *Ibid.* pp. 65-67.

24 and 20 are likewise typical of this unit. The former opens upon the outer terrace rather than upon a court as in the king's palace, while the latter is one of the few rooms of Palace *F* retaining its pavement to this day. Its floor is of limestone slabs (see Pl. 40 *A*). The room was apparently investigated by Botta or Place, although there is no record of it in their respective accounts. For while proceeding with the excavation of this room we suddenly found ourselves in a tunnel extending along its northeast wall. Within this tunnel were the only objects the room produced—a blue-glazed lamp like those frequently found in Place's palace tunnels and a slightly rusted pair of scissors of European origin.

Of the other rooms opening off the central court little need be said. Nos. 4 and 40 are undoubtedly small courts, the former perhaps part of the service area to attend the apartments facing the outer terrace, which may be reached from this court via Room 3, a small vestibule. The rooms around these courts, like those off the central court, are single or are variously grouped in suites. There is nothing in plan or in their contents to distinguish them from the hundreds of rooms surrounding residence courts elsewhere throughout the city.

The only break in the plain southwest wall of the central court other than the accented entrances to the throneroom suite is the portal of Room 13, the direct connecting link between central court and outer terrace. Like its counterpart Corridor 10 in Sargon's palace, it is flanked with buttresses smaller in scale than those at the near-by throneroom entrances. There is no other form of decoration.

Beyond Room 13 this communication between court and terrace opens into a broad loggia, which element, unique in the excavated sections of Dur Sharrukin, is described on pages 30 f. In its opening to the terrace are two column bases (Pl. 38), supports for probable mud-brick shafts carrying the lintel. The bases are of approximately equal size and have plinth and drum cut monolithically of basalt (Pl. 41 *B-C*). Among the debris (see Pl. 41 *A*) there was no trace of the shafts, which we suppose to have been of mud brick without capitals. The shafts probably terminated abruptly at the lintel—a suggestion derived from the reeds so freely used in the wall decoration of temples and of Sargon's palace. An abacus perhaps absorbed the difference between column diameter and width of lintel (see Fig. 2).

The manner in which Room 14 served the loggia is problematical. Room 12, which balances it, is part of the adjacent apartment rather than of the loggia. A peculiarity noted in the wall construction between Room 12 and the loggia is the laying of a section of mud brick on the outer face alone in the form of an arch (Pl. 40 *C*). We can give no reason for this unusual procedure, for what would be the arched opening is filled with brick laid in the usual horizontal position. It could not have been decorative, for the entire surface was covered with plaster; nor is there any structural reason apparent.

Beside the loggia opening are three alabaster orthostats set into the surface of the wall facing the terrace. Outwardly their surfaces are plain, but upon their backs (Pl. 41 *D*) are fragments of an inscription which according to Dr. Jacobsen is apparently the second "Pavé des portes" text.⁷ These orthostats therefore appear to be re-used thresholds—a sup-

⁷ Hugo Winckler, *Die Keilschrifttexte Sargons* (Leipzig, 1889) I 138-43 and II, Pl. 37, No. II; Luckenbill, *op. cit.* II, § 97.

position further substantiated by the fact that upon the middle of the three the lines of the inscription are vertical rather than horizontal. That they were so placed in their present position by later occupants seems scarcely credible, in view of the customary character of secondary construction; yet they are the only orthostats encountered in our excavation of Palace *F*.

The unit or wing exposed on three sides to the outer terrace contains four large rooms (16-19), in which we are inclined to believe the master of the palace spent his private hours and entertained his guests. Although nearly symmetrical in plan, it has a distinct front and back, designated by the portals, for the single buttressed portal facing the south section of the terrace is distinctly more monumental than the undecorated pair facing northwest. The south terrace, upon which opens a similar portal from the throneroom suite, therefore appears to be the more formal and public section, while the terrace upon which face the loggia, the private apartment, and the "back" doors of the wing appears to be of a more private nature. All portals with the exception of the front, buttressed one are recessed.

In the debris outside the front of this unit were found baked bricks bearing fragmentary enameled designs of human figures and text. There was nothing familiar in the former, while from the latter could be restored Sargon's name. It is an instance rare throughout Dur Sharrukin of a painted rather than incised text which probably accompanied a paneled scene set somewhere in the exterior façade. Botta found fragments of enameled text⁸ while exploring the corresponding section of Sargon's palace.

Upon the floor of Room 17 were found eight complete prisms (chap. vii, Nos. 75-82), all inscribed with the usual commemorative text. On only one (chap. vii, No. 78; chap. viii, No. 46) is the text as given by Luckenbill⁹ complete. From the others has been deleted his § 119 with the exception of the last third beginning "The town of Magganubba" Fragments of similarly inscribed prisms were found in the debris of adjoining Room 16. There were no other objects within this entire unit.

What we consider the private apartment of the master of this palace is made up of five rooms and faces the west section of the outer terrace. A central portal, flanked with buttresses, and two side portals all provide access from the terrace to Room 7. Off Room 7 opens a suite of two small rooms (5-6), both with recessed portals. The latter is provided with a niche extending from the floor, as is small Room 12, which communicates only with Room 8, a spacious room joined to Room 7 with two recessed portals. There was painted plaster in the debris of these rooms, but nothing of note indicative of the importance which we attach to this apartment because of its position and monumental portal.

A suite of four rooms (27-30) which has a single entrance from the outer terrace presents a curiosity which at once recalls Rooms 16-18 in Sargon's palace. All are paved with limestone slabs—a fact which alone immediately hints at importance; they enjoy a favored position facing the outer terrace; and, at *F* at least, one of them has an inscribed threshold (Pl. 40 *D-E*). Too great significance, however, cannot be attached to the inscribed threshold of Room 29, for the lines of the text run parallel to the axis of the doorway (Pl. 40 *E*)—an unusual circumstance which implies that this threshold

⁸ Botta, *op. cit.* II, Pls. 155-56.

⁹ Luckenbill, *op. cit.* II, §§ 117-23.

was originally intended for a portal elsewhere. The inscription is indistinct but is unquestionably, according to Dr. Jacobsen, one of the five "Pavé des portes" texts.¹⁹ None of the doorways from Room 30 to the three rooms opening therefrom are centered upon these rooms. Iron pivot sockets remained in position, one on each of the pivot stones in Rooms 27 and 28.

Place appears to have been unable to explain Rooms 16–18

of Sargon's palace,²⁰ to which we are inclined to compare Rooms 27–29 of Palace *F*. In the king's palace these rooms had floors raised above the surrounding rooms and terrace and contained many bronze implements of war. At Palace *F* there is nothing to indicate the function of this group, and we are at as great a loss to explain them as was Place to elucidate the nature of the corresponding group in Sargon's palace.

RESIDENCE Z

About 150 meters outside the southeast wall of the citadel is Residence *Z* (see Pl. 69). It faces northeast, perhaps on a street leading from the center of the town to Gate *B* of the citadel. With scarcely more than a meter or two of debris covering its floor this building, like all others where soundings have been made within the town, retains little of its original structure. It is probably typical of the buildings which once filled the interior of Dur Sharrukin and is surprisingly similar to the citadel residences, which one might rather expect to stand out in a class by themselves.

Although covering a larger area than Residence *J* in the citadel, Residence *Z* (Pl. 74) is very similar in scale to this smallest of citadel residences. Wall thicknesses and room sizes are generally about the same in these two buildings. In plan Residence *K* furnishes probably the closest parallel to this noncitadel building. It is perhaps significant that in Residence *Z*, obviously the dwelling of one ranking lower than the inhabitants of the citadel, there is proportionately more space devoted to services and offices and less to courts and living quarters than in the citadel buildings. Were we to restore Residence *Z*, the length of which is already established by its northwest wall, the least possible width must include two small rooms or their equivalent beyond Room 42, the present limit of the incomplete front or northeast façade. The restored plan therefore becomes almost a square, of which the courts and family apartments take up but slightly more than a half.

The forecourt of Residence *Z* is in most respects the normal forecourt of any residence. There is the alcove in the corner immediately outside the façade of the reception suite, which façade is broken in the usual manner by a slight projection of its surface opposite the stair well within. Awning rings are set into the pavement at either side of the portal to the great hall (Room 12). There is the customary single row of rooms along one side, while the side opposite consists of single rooms and vestibules connecting with service courts behind. The only peculiarity to be found in the forecourt of Residence *Z* is the placing of two entrance chambers side by side across the front, a unique arrangement due perhaps to the exigencies of surrounding buildings. Outside the entrance portals the street pavement is of the usual rubble construction. The portal between the street and Room 3 has a threshold and inner threshold of limestone. Channel drains of baked brick (see p. 34) run under the thresholds between the court and Rooms 7 and 8 (Pl. 42 *C–D*). Both of them show evidence of mutilation by post-Sargonid occupants. None of the rooms surrounding the forecourt or

those throughout the rest of the building produced objects of any worth or significance.

There is, however, more evidence of prolonged secondary occupation in the forecourt area of Residence *Z* than was found elsewhere in the excavated buildings. An extraordinarily thin mud-brick wall running from southwest to northeast and no more than a brick and a half in thickness divides the court into two sections. Near the center of the court it passes over a mass of stone debris which, extending below floor level as it does, may be the remains of a collapsed well (see p. 33). Within the northwest section of the court two crude pavements of brick and stone (Pl. 42 *B*) are recognizable at levels above the original brick pavement (Pl. 42 *A*). The doorway between the court and Room 8 was blocked with mud brick topped with a new sill of mammoth baked bricks (Pl. 42 *D*), while the threshold, probably of stone, between the court and Room 7 was removed (see Pl. 42 *C*), doubtless to be used elsewhere. Such acts on the part of later occupants leave exposed the drains which were once concealed under floor and thresholds.

The reception suite contains its three fundamental elements, the great hall (12), the alcove (11), and the stair well (10). A single niche in Room 12, extending to the floor, may be an attempt to balance the single doorway from the forecourt to the great hall. The remainder of this suite conforms to pattern in Room 13 only. The position of Room 24 opening off it is unusual, as is the court alcove outside the opposite end of Room 13.

The central court, aside from the alcove just mentioned, has but one peculiarity—the recessed doorway from Room 13. As the door certainly swung into the room, the recessed corners can in this case be purely decorative, perhaps in emulation of portal buttresses, which themselves would be an irregularity on this side of the court. The alcove in the back right corner has parallels in Residences *J* and *M*. There is no stairway ascending from this court.

There appear to be but two apartments of any size opening from the central court. Across the back is one which, while but partially excavated, promises to be comparatively extensive. One wonders at the queer arrangement whereby "Room" 20 is in reality an alcove of Room 21. The second approach to this apartment from the court alcove recalls a similar means of communication in Residence *M*. Four rooms (15–18) occupying the northwest side of the court form the only other sizable apartment in the central court area. On the opposite side there is but a small suite of two rooms (22–23).

Apartments to which there is no access from the central court except via the forecourt may exist in the unexcavated

¹⁹ Winckler, *Die Keilschrifttexte Sargons I* 136–63 and II, Pls. 37–40; Luckenbill, *op. cit.* II, §§ 96–102.

²⁰ Place, *op. cit.* I 64–66.

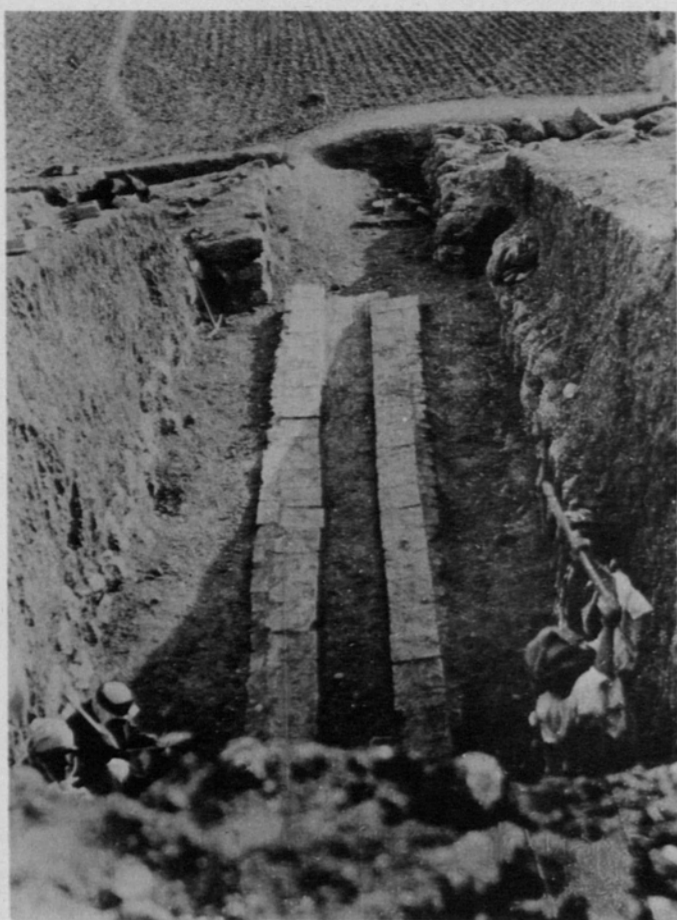
THE BUILDINGS OUTSIDE THE CITADEL

79

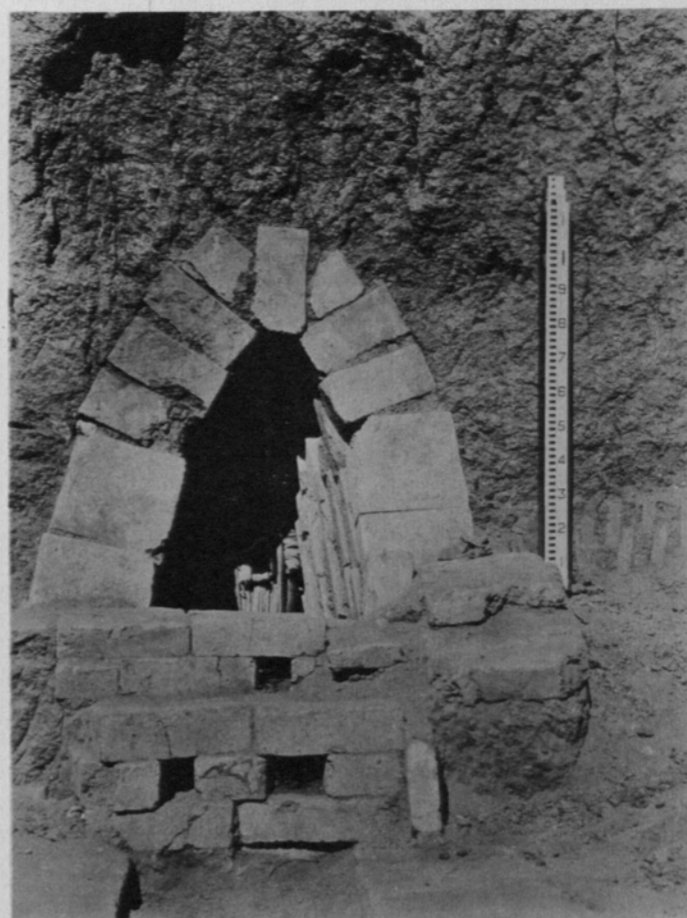
portion of Residence Z. Since, however, apartments so isolated from the central court do not exist in other residences, there is a greater possibility that the entire unexcavated area consists of services and offices. The two parallel vestibules (38-39) from forecourt to connecting inner courts have a precedent in Residence K. Room 36, a third vestibule, providing access to corridor-like Room 29, is likewise paralleled in K as are roughly the numerous rooms to which the corridor leads. How the services are divided according to their various functions we make no attempt to explain, for here, as in

all other residences, there is too meager internal evidence upon which to base definite conclusions.

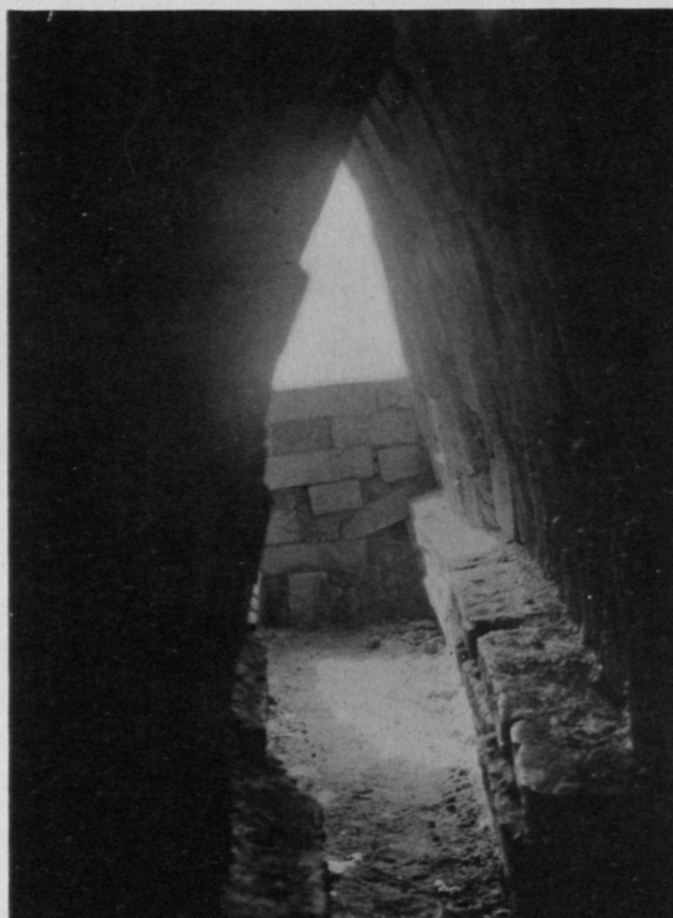
If in all the nearly three million square meters of the city could be found one building from which utensils and furniture had not been removed in antiquity, the problem of service distribution could be answered for all buildings. But the odds against finding that single building are so great that were one to spend ten years and unlimited funds in its search one would, when the entire city was laid bare, in all probability still have to guess as freely on this subject as do we.



A



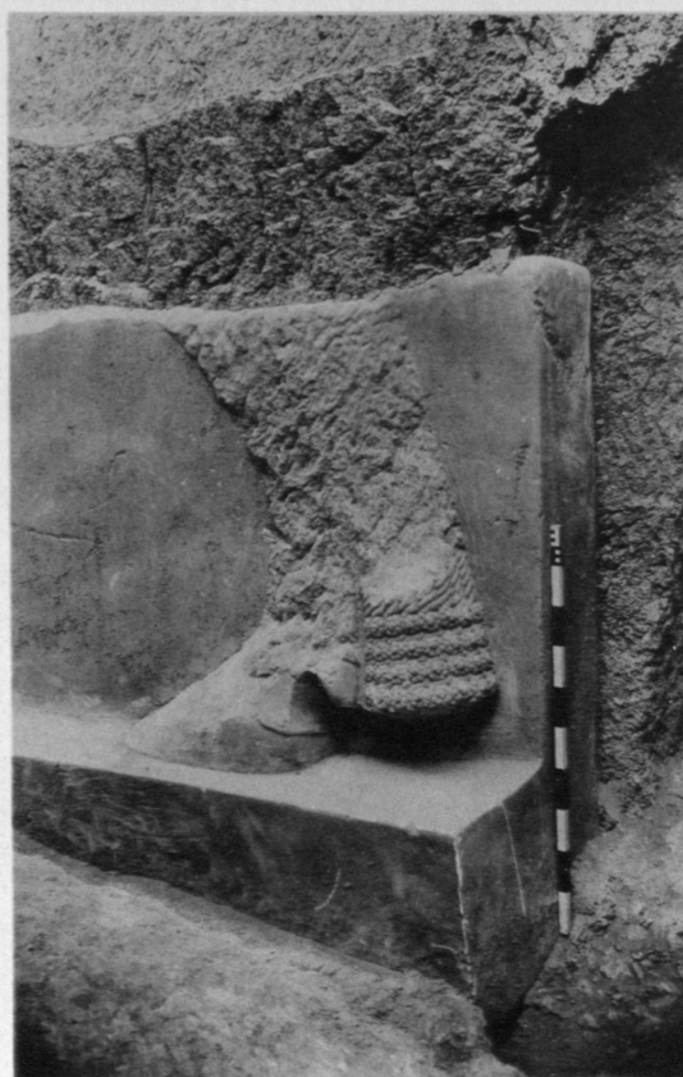
B



C



D



E

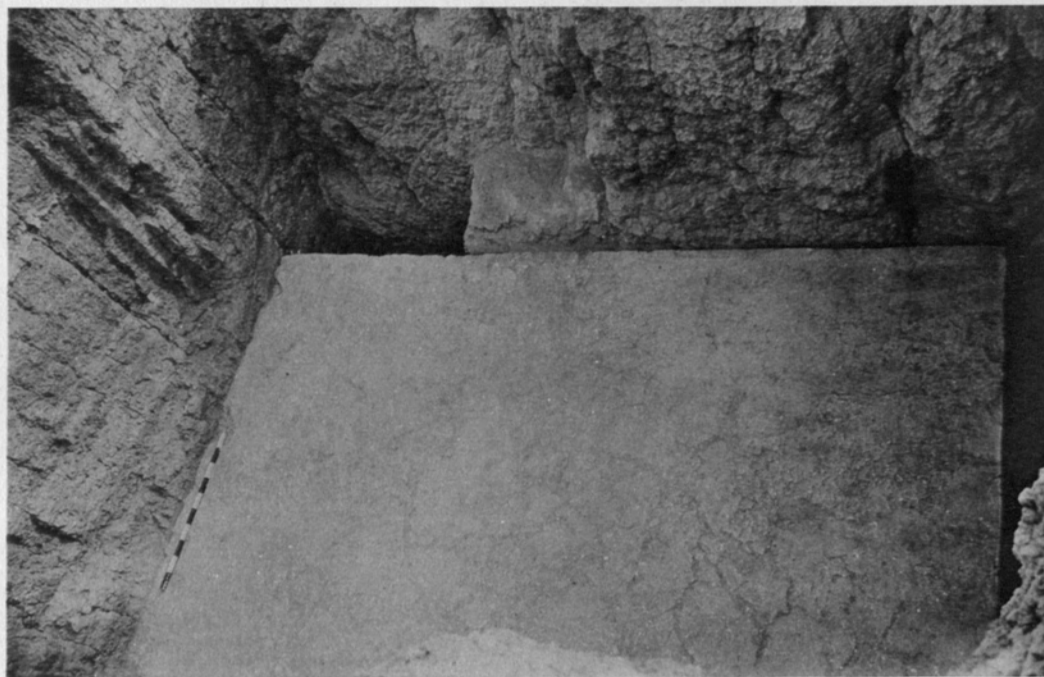
A-C. A VAULTED DRAIN UNDER THE OUTER TERRACE AND ROOM 3

THE VAULTED STRUCTURE WAS PARTIALLY REMOVED IN ANTIQUITY (A) AND THE RESULTING OPENING BLOCKED WITH BAKED BRICKS (B-C)

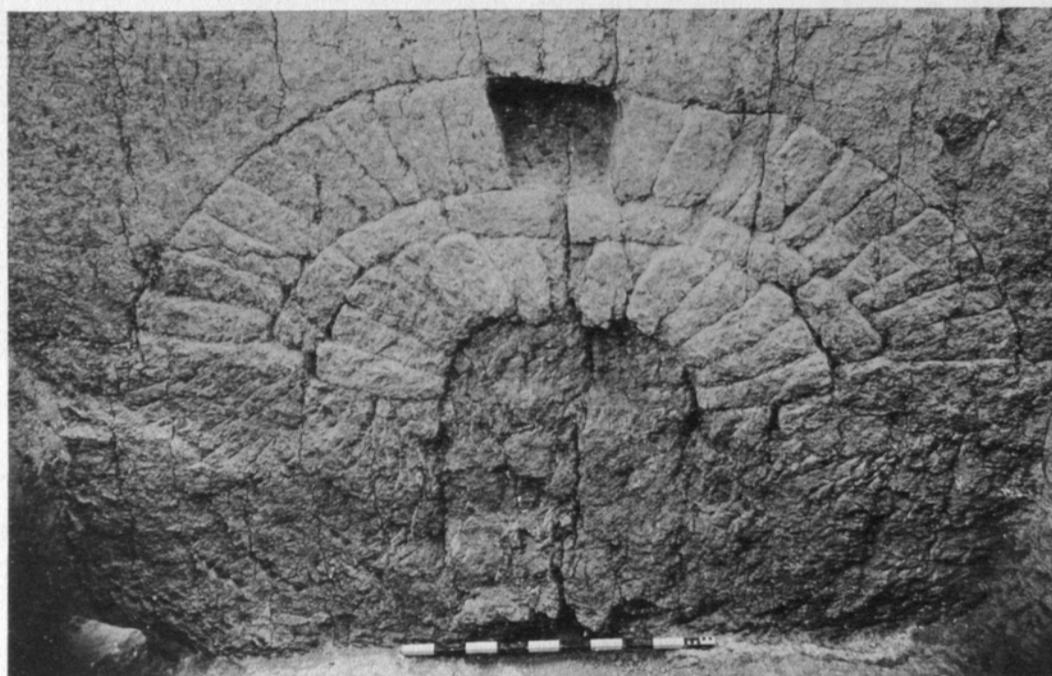
D-E. REMAINS OF A WINGED BULL IN THE CENTRAL PORTAL BETWEEN CENTRAL COURT AND THRONE ROOM (23)



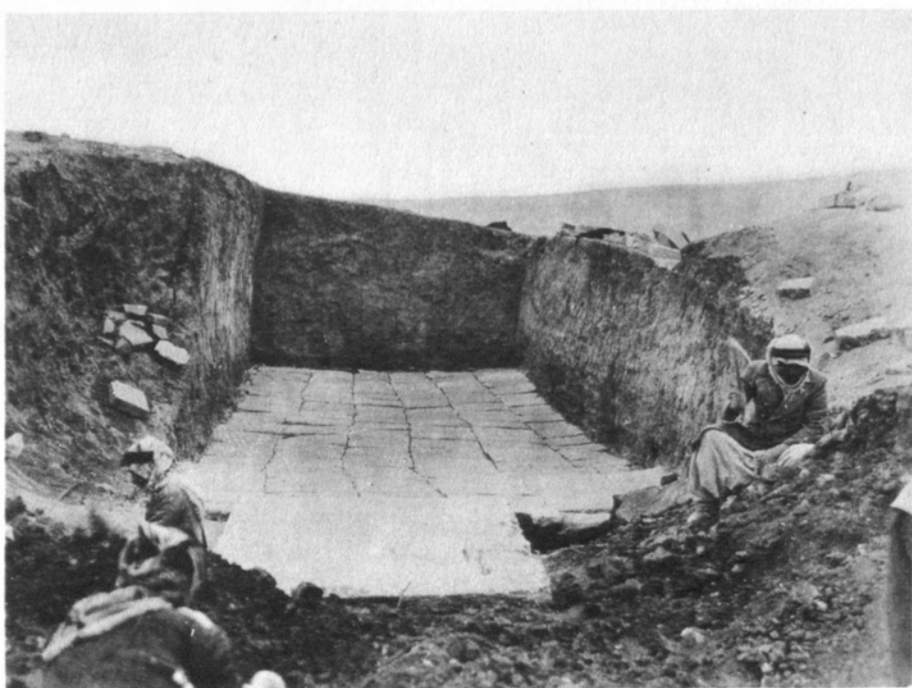
A



B



C



D



E

- A. THE NORTH CORNER OF ROOM 20, ORIGINALLY INVESTIGATED BY PLACE
B. THE THRONE BASE BEFORE THE NICHE IN THE SOUTHEAST END OF THE THRONEROOM (23)
C. ARCHED CONSTRUCTION IN THE NORTHEAST WALL OF THE LOGGIA (15)
D-E. ROOM 29 AND ITS INSCRIBED THRESHOLD

*A**B**C**D*

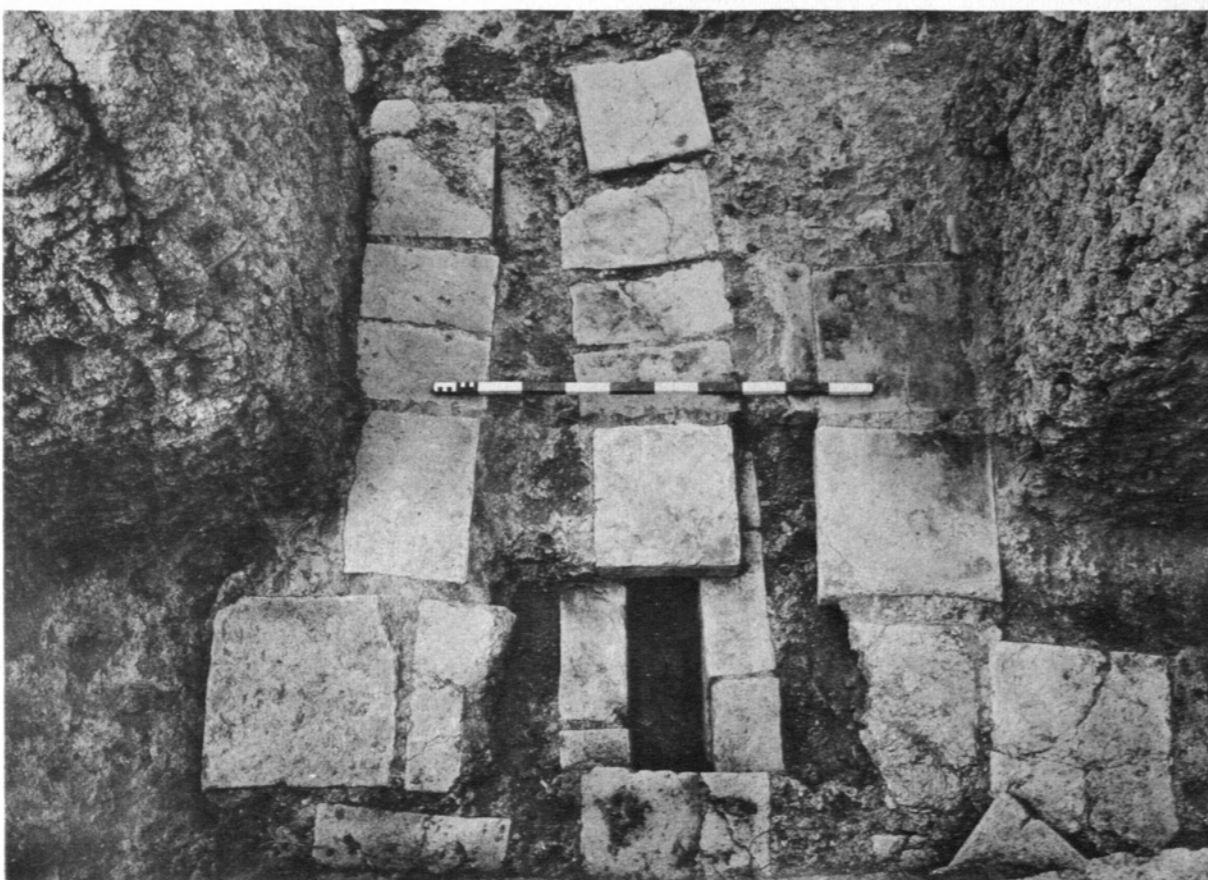
- A.* CLEARING THE COLUMN BASES IN THE OPENING OF THE LOGGIA FACING THE OUTER TERRACE
B-C. THE BASALT COLUMN BASES OF THE LOGGIA: *B*, THE LEFT-HAND OR NORTHWEST ONE;
C, THE RIGHT-HAND OR SOUTHEAST ONE
D. REMAINS OF THE ORTHOSTATS IN THE FACE OF THE WALL IMMEDIATELY AT THE LEFT
OR NORTHWEST OF THE LOGGIA OPENING



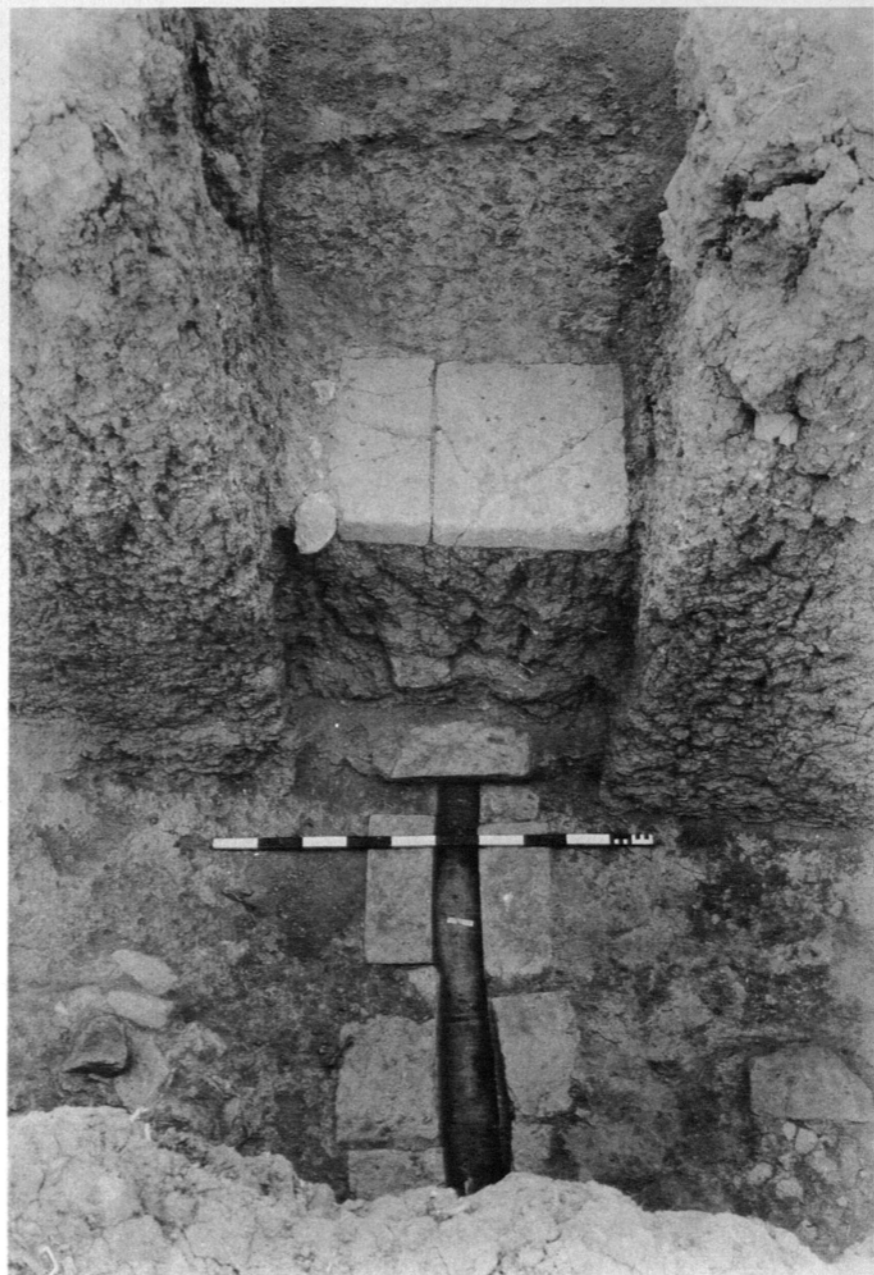
A



B



C



D

A. THE NORTHWEST WALL OF THE FORECOURT
 B. LATER PAVEMENTS IN THE WEST CORNER OF THE FORECOURT
 C-D. THE DRAINS UNDER THE THRESHOLDS (REMOVED IN ANTIQUITY) BETWEEN FORECOURT AND ROOMS 7 (C) AND 8 (D)

V

PAINTED PLASTER DECORATION



A SECTION OF THE PAINTED PLASTER DECORATION FALLEN FROM THE SOUTHWEST WALL OF ROOM 12 IN RESIDENCE K

V

PAINTED PLASTER DECORATION

By CHARLES B. ALTMAN

Murals now seem to have been an important and spectacular part of Assyrian design. Of the three principal methods of applied decoration used at the major Assyrian sites—carved stone, enameled brick, and painted plaster—the third had, until the finds at Arslan-Tash in 1928¹ and especially those at Til Barsip in 1929–31,² almost escaped discovery. A few fragments were recorded by Layard³ and Place.⁴ Perrot and Chipiez, writing after the otherwise revealing excavations of the 19th century, said: “. . . the Assyrian architect looked to sculpture for his most sumptuous effects; he used polychromatic decoration only for subordinate parts of his work.”⁵ Other fragments were discovered by Andrae at Assur,⁶ and tantalizing bits found in recent excavations at Dur Sharrukin were included in *Khorsabad I*. But, with the sole exception of the Til Barsip murals, the painted fragments have been so small and have fallen in such confusion from their original positions that a factual reconstruction of the greater portion of any design has been impossible.

At Til Barsip there are two types of composition: one—the counterpart of the story-telling carved dadoes of palaces at Khorsabad, Nimrud, and Kuyunjik—processions of figures showing the king's activities; the other an arrangement of geometric designs in horizontal bands. Our most important Khorsabad discovery, with which this chapter is primarily concerned, made during the season of 1934/35, is of the second type, as are also most of the smaller fragments. With the exception of our heroic figures,⁷ found to belong more than 6.50 m. above the floor, the painted rooms in Residence *K* at Dur Sharrukin and those in the Til Barsip palace must have presented an almost identical effect. The colors are the same, and the details, though individually different, are so closely related in style that they might have been the work of the same artist.

In two respects we were more fortunate than the excavators of Til Barsip. There the wall painting existed *in situ* for about 4.50 m. above floor level. At Dur Sharrukin, though only 1.50 of decorated wall remained, the painting was found lying in such a position that we know definitely of the design to a height of 10 meters. Moreover, the motive was such that a highly probable restoration determines the minimum height of the room to have been about 14 meters, giving thereby a very reasonable height basis for Assyrian architectural restoration (cf. pp. 20 and 85).

¹ F. Thureau-Dangin, A. Barrois, G. Dossin, and Maurice Dunand, *Arslan-Tash* (Paris, 1931) pp. 28–30 and Pls. XVI 2, XVII, and XLVIII.

² F. Thureau-Dangin and Maurice Dunand, *Til-Barsip* (Paris, 1936) pp. 42–74 and front. and Pls. XXXIX–LIII.

³ *The Monuments of Nineveh* [1st ser.] (London, 1853) Pls. 86–87.

⁴ *Ninive et l'Assyrie* III, Pl. 32.

⁵ Georges Perrot and Charles Chipiez, *A History of Art in Chaldaea and Assyria* (London and New York, 1884) I 289.

⁶ Walter Andrae, *Farbige Keramik aus Assur* (Berlin, 1923) Pls. 1–4.

⁷ Even such heroic figures may have occurred on the lost upper portions of the Til Barsip walls.

Previous to the finding of our largest expanse of painted plaster we had found many fragments, some of which are reproduced on Plate 91. Working with these, we learned much about the technique of the painting and of its recovery. The plaster usually fell face down, the wall material thereby being uppermost and the debris beneath. Gray mud plaster covered the mud-brick construction. This was surfaced with white lime, on which flat colors were applied. Finally black lines were added to cover the edges of abutting colors and to impart the hard, distinct outline which is so pronounced a characteristic of the work. We found that after exposure the colors were rather evanescent—that rain washed them away, and that sun faded them quickly. We began to consider ourselves lucky when the decoration was face down. That statement may seem a perverse one; but there was considerably more adhesion between the color and the debris than between the color and its rightful base, so that working from the debris side more often than not removed the design as well. This fact made it impossible to preserve the actual surface with its decoration. The colors were predominantly blue, red, and black, upon a white ground. The blue was granular and quite thick, a brilliant color. The red was more of a wash and had neither the sparkle nor the permanence of the blue. Green and brown also were noted. Unfortunately the green pigment was not analyzed, as were the blue and the red (p. 17); hence the question whether that color might be merely the blue somehow changed in tone, as both Layard⁸ and Thureau-Dangin⁹ consider, cannot be definitely settled. We believe it to be a separate and distinct color. It is found side by side with the blue (Pl. 91, Nos. 5, 13, 30) and is outlined in black as adjoining colors invariably were. Brown was discovered in only one example, the tree trunk from the wall of *K* 15 (see pp. 66 and 85 f. and Pls. 32 *A* and 91, No. 16). Yellow did not appear at all.

Thus before beginning work in the great hall of Residence *K* we knew something of the substance of painted plaster, but little of its design.

PAINTED PLASTER IN ROOM *K* 12.—While we were tracing the doorway between Rooms *K* 13 and *K* 12 a fragment of color appeared. As usual we proceeded carefully, though with the greatest optimism we could only hope for another piece 30 or 40 cm. long. A day's careful knifework revealed what we show in Figure 11 *a*—considerable blue and white, a little red, and a seemingly haphazard collection of black lines. With this, above and below, were little circles in rows, and on each side was a circular shape. Meaningless though it was, the pattern was new; consequently it was traced and its colors recorded.

Day by day the visible area of decoration increased, and after a week of painstaking labor we were able to photograph a continuous painted surface about 2.50 by 3.50 m. (Pl. 31 *B*). The pattern was definitely a horizontal one: a band of

⁸ *Nineveh and Its Remains* (London, 1849) II 16.

⁹ *In Syria* XI (1930) 128.

winged shapes separated by circles, a band of small circles in rows with stripes between, and, above, a series of animal forms not of any evident species. One was quite complete, and the leg of another was visible beyond the separating geometrical design. To continue this work to best advantage we next traced the walls of the entire room before removing the material from above the decoration. The room proved to be 31.80 long and 8.20 wide. Three doorways from the forecourt were on one long side, a wide opening into an alcove at one end, and two doorways in the wall from which the painted plaster had fallen. This preliminary ended, more than a meter of earth was removed from the area beneath which we hoped the plaster would extend. The exposing of the design continued anew toward the northwest. Two weeks of further investigation, working almost entirely with pocketknives and the smallest of picks, brought us to a stage at which Mr. Loud remarked in his diary: "What for days has seemed an elusive bird now grows more and more like a winged figure very similar to our genii [chap. vii, Nos. 3-4] in the citadel gate of last season." We had exposed perhaps 8 meters of that lower band of winged figures before we could assemble a complete one, and only one offered a pic-

bordered by a geometrical pattern. The width of the space within the frame equals exactly the width of the door through which it fell. From this fact, as well as its position, we logically assume this triad to have been on the axis of the door, an impressive scene beheld on entering from the forecourt this richly decorated hall.

It is a pity that some of the painted plaster could not have been preserved; but its destruction was completed in its recovery. It fell on the uneven and broken surface of debris and assumed the shape of that surface, seamed with cracks and penetrated by stone fragments and roots. The 10 centimeters or so of mud brick immediately above the plastered surface usually came away quite cleanly, bringing with it the gray plaster and portions of the white lime. The greater part of the color adhered to the debris beneath. Where the white remained over the paint, gentle scratching often bared the color. Where the result was meaningless, it often paid to scratch away the color in hopes that the black line, having been last applied, might indicate the pattern. Over sixty tracings were made in this room, and from this file of fragmentary designs has been made the restoration of the wall.

There were two possible ways of presenting the painted

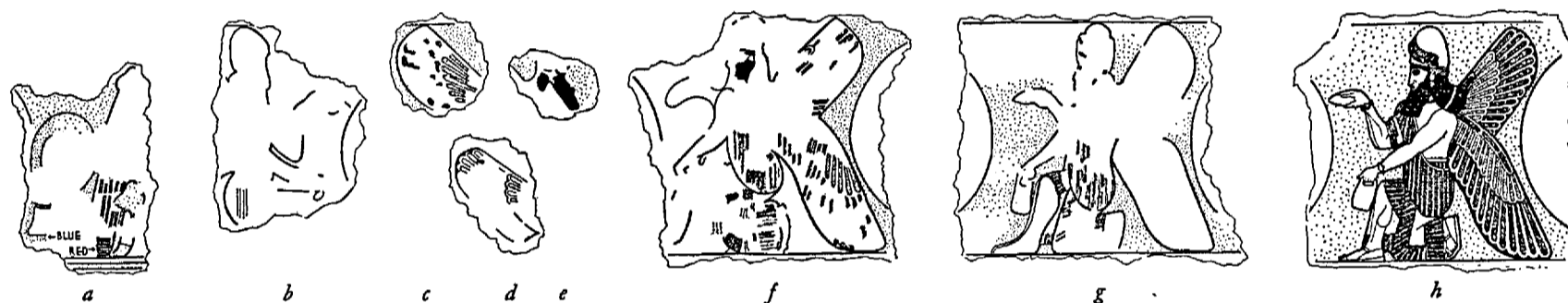


FIG. 11.—EVOLUTION OF THE RESTORATION OF THE WINGED KNEELING FIGURE REPEATED ON THE WALLS OF ROOM K 12

ture worth the taking (Pl. 31 C). To demonstrate this evolutionary process more thoroughly, the accompanying series of drawings from some of our tracings is shown (Fig. 11). The final winged figure is a resultant from ten successive examples, each offering something to the composite design. Approximately 60 square meters of plaster were recovered during a period of more than two months of winter weather; and more than once rain, draining through the tarpaulin covering, seemed to mean its destruction.

The plan and section on Plate 88 show this area as found. The decoration has been simplified and completed so as to indicate clearly the number of repeated elements of the design investigated. The photographs (Pls. 31 A-B and 43) better indicate the actual condition of the surface itself and the sparseness of paint in certain portions of it. The wall had fallen face downward upon the debris resulting from the earlier collapse of the roof and other walls. Where first found (at point indicated by arrow on plan) the plaster lay about 2.50 m. above the floor and sloped sharply downward toward the northwest to assume the position shown in the section. There, where the vertical dimension is greatest, its horizontal pattern almost parallels the wall. The wall must have fallen in a wide arc straight out from its original location. The missing doorway opposite permitted the plaster to fall in a relatively unbroken mass and thus preserved the continuity of design from 1.50 above the floor to a height of almost 10 meters. Between the jambs of this doorway appeared the outlines of three heroic figures, about 3 meters tall,

plaster in this volume: the design as found, or its complete restoration. A mere copy seemed useless because of the relative scarcity of color actually found and because of the appearance of the entire decoration in reverse during excavation. Neither of these facts, however, hindered a restoration; nor do they limit an accuracy which seems assured from the very scheme of design. The continued repetition of motive leaves no doubt as to the mural's actual content, even though but a small patch of any particular section retained color and pattern.

Center-to-center dimensions were taken within the various bands of ornament, and the larger shapes were measured. Their averages were used as units for the restoration. Complete vertical measurements from the lower band of lotus up into the figure group were available at one place (center line in the plan, Pl. 88). The dado below appeared *in situ* near the south corner of the room and included this band of lotus (Pl. 31D and D in Pl. 88). To the right of the figure group (A in Pl. 88) we obtained the uppermost portion of the general mural design. Above it, though searched for, no sign of color could be found; presumably the space to the ceiling was white. To the left of the group and higher (B in Pl. 88) the pattern was entirely vertical, evidently a frame for this heroic triad. The outer bands of the frame correspond so truly with the topmost horizontal bands that we can readily assume the lotus and palmette to be a continuous upper border. The band of rosettes and winged genii retained no background color. In the similar but horizontal

decoration below, the background is blue; but here the outermost circle of each rosette is blue. This forbids blue as a background. The bounding stripes of red prevent the use of that color, and thus white becomes most probable, though unusual. On the jamb of the large opening into the alcove (*E* in Pl. 88), at a height equal to the height of the same pattern within the room, were found rows of small circles, a series of small black and white rectangles, and a fragment of a winged figure. So the decoration continued certainly into this opening and probably around the alcove itself.

Having, we believe, rightfully assumed the axis of the figure group and that of the doorway opposite to be one, we traced the lower register of winged genii toward the northwest far enough to be assured that they continued beyond the opening into Room *K* 14. This fact seems to preclude an arched doorway, for the spring line would be too low for

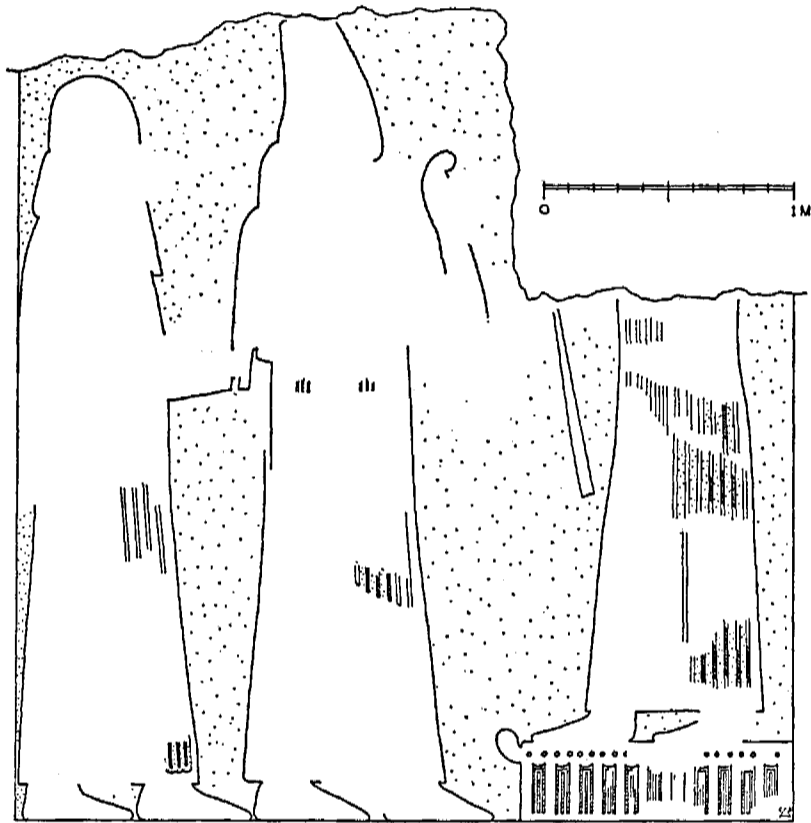


FIG. 12.—EXISTING REMAINS OF THE HEROIC-SIZED TRIAD IN THE PANEL OPPOSITE THE CENTRAL PORTAL OF ROOM *K* 12. SCALE, 1:30

comfort with the soffit below that band of decoration. The doorway into Room *K* 13 is similarly restored with a lintel.

The only conjectural parts of the mural are the heroic figures and the design above them. We have used an arch in the restoration of the doorway from the court into this room (cf. pp. 24 f.). Admitting this as probable, we restore an arched form above the three figures, since the simultaneous sight of both doorway and decoration upon entering the hall suggests a need for similar treatment. Placing the spring line as close to our known design as possible and maintaining the spacing of the small winged genii and the rosettes of the frame, we find that the arch itself attains a height of almost 13 meters from the floor. Comparable decorative treatment of an arch was discovered by Place in City Gate 3.¹⁰

Figure 12 shows the triad as found. Unfortunately most of the details within the outlines were missing, but the helpfully unimaginative and unvarying conventions in Assyrian art permit a restoration which cannot be so far from the original as to lose its character and meaning. Undoubtedly the figures are Sargon and an accompanying officer standing before a god. The headdress of the central figure, just within

¹⁰ Place, *op. cit.* III, Pl. 14.

the plaster area recovered, is of the shape invariably worn by the king. His right hand is raised in worship. Behind him is plainly outlined the figure of one of his officers, bearded, his head uncovered, with his hands before him in the attitude characteristic of patient respect. The third figure, receiving Sargon's homage, must be a god. He stands on a dais, as the king never seems to have done, and is evidently grasping a long scepter. The smaller feet and narrower body of this figure are indications that he is shorter than either of the others, even though a god; but the platform beneath and the customary high, horned tiara to be restored above give him a certain prominence without detracting too much from the imposing stature of the king himself. Examples of the attitudes, emblems, and apparel are numerous in sculptures of the 9th to 7th century B.C. in Assyria.¹¹ The rock sculptures at Bavian¹² and at Maltai,¹³ as well as the wall carvings at Khorsabad, Nimrud, and Kuyunjik, contribute to the probability of our identification and restoration. The lack of details within the bare outlines has forced us to restore the heads and garments from the evidence of the small winged genii below, a method indicated too by the similarity of the traces of clothing design actually uncovered. In any case an Assyrian artist would be unlikely to change the character of his work just because of a change in scale. The god's missing crown was perhaps surmounted by an emblem, or the spacious blue ground of the arch may have exhibited some symbol of deity;¹⁴ but in their absence it is impossible to identify the god who was receiving the royal obeisance.

We have shown this wall, completely restored in height at least, on Plate 89. The immensity of the surface is almost unbelievable when the minuteness of the details is considered. The 7.50 meters of design reproduced are less than one-fourth of the length of one wall alone. The scale of the details is so small that the reduction necessary for inclusion of the total wall height in even a double plate of this volume is to be regretted. The room, however, is such a startling example of the rich setting demanded by the Assyrian nobility for its activities that its effect would surely be lost by division of the design among several plates of ornament divorced from their architectural relationship. This mural is an indication of the infinite labor available—a fact as evident here as it is in the vast structure of the buildings themselves. Its extent and its type both seem to indicate a scarcity of designers and a plenitude of craftsmen. Units of the pattern are not identical and not stenciled; but they are so similar to one another that they must have been sketched in by a skilled draftsman before any color was applied. Relatively unskilled artists in great numbers could have then colored the spaces and perhaps applied the final black.

FRAGMENTS FROM RESIDENCE *K*.—More extensive finds were made in Residence *K* than elsewhere in the citadel

¹¹ E.g. British Museum, *Assyrian Sculptures . . . , Reign of Ashur-nasir-pal, 885-860 B.C.*, ed. E. A. Wallis Budge, Pls. II, XI, XIX; H. R. Hall, *Babylonian and Assyrian Sculpture in the British Museum*, Pl. XXIV; Archibald Paterson, *Assyrische Skulpturen* (Haarlem, 1901-7) Pls. VI and CIII; Botta, *Monument de Ninive* I, Pl. 40, and II, Pls. 118-19; and G. Contenau, *Manuel d'archéologie orientale* III (Paris, 1931) Fig. 815 (described on p. 1279).

¹² Layard, *Monuments of Nineveh*, 2d ser. (London, 1853) Pl. 51; Thorkild Jacobsen and Seton Lloyd, *Sennacherib's Aqueduct at Jerwan* ("Oriental Institute Publications," Vol. XXIV [Chicago, 1935]) Pl. XXXIII.

¹³ F. Thureau-Dangin, "Les sculptures rupestres de Maltaï," *Revue d'assyriologie et d'archéologie orientale* XXI (1924) 185-97.

¹⁴ Cf. refs. given above, n. 11; see also Contenau, *op. cit.* Figs. 791 and 796 (described on pp. 1219 and 1229).

buildings. The fig-tree fragments (Pl. 91, Nos. 16–20) were scattered in the debris of the ramp portion of *K* 15 (see p. 28). The largest (Pl. 32 *A*), from a spot close to the beginning of the slope, is very similar to the tree of the glazed brick tableaus in both the palace and the Nabu temple. From the presence of the bird beside the tree we suspect that perhaps the other figures of these tableaus might have once decorated this passage, but the fragments found were so small as to be meaningless. No. 21 of Plate 91 was close to the tree and may be from an upper register in the design.

Of other *K* fragments shown in Plate 91, No. 1 is from the northwest doorway between the forecourt and *K* 12. Not corresponding to any part of the design within the great hall, it indicates a change of design within these doorways. Where or how this change occurs is not known.

Nos. 25–29 are from *K* 28, a reception room of an important suite in the living quarters. This suite is lined with a stone dado; and the paint, necessarily from above the dado, bears out Layard's statement that colored plaster was so used.¹⁵ The size of the room, smaller than *K* 12, caused the decorator to reduce the scale of his motives. The patterns are very similar to those used in *K* 12 except for an interesting variation from the usual lotus-palmette design. The ornament seen in No. 26 has become a complicated interlacing pattern with three terminations: a flower, a palmette, and a third figure which usually occurs as the calyx of the palmette but is here alone.

No. 34 is another example of the design found in the great

¹⁵ Layard, *Nineveh and Its Remains* I 130.

hall. Again reduced in scale, but not as small as in *K* 28, it was discovered in the doorway between *K* 24 and *K* 25. Its original location is undetermined. With this third repetition in *K* of the winged-genius motive, the question of its connection with the occupant of the building is interesting. Had it some relation to his office or rank, or merely to his taste in art? Nowhere else were fragments found suggesting this design in painted plaster, though it does frequently occur in stone carving and on the glazed brick of Gate 3.¹⁶

OTHER FRAGMENTS.—Of the remaining fragments on Plate 91 there is little to be said. None were found *in situ*, and their sources are scattered. They do indicate how extensively the walls in these citadel buildings must have been painted, but they do not further very considerably our knowledge of its design. They show great variety in composition and scale, and among them are our only findings of green. Fragments such as these may be of some value if similar patterns are found elsewhere.

Nos. 2–15 were found during the season of 1933/34. They are typical of a great number of incomplete designs found throughout the excavations.

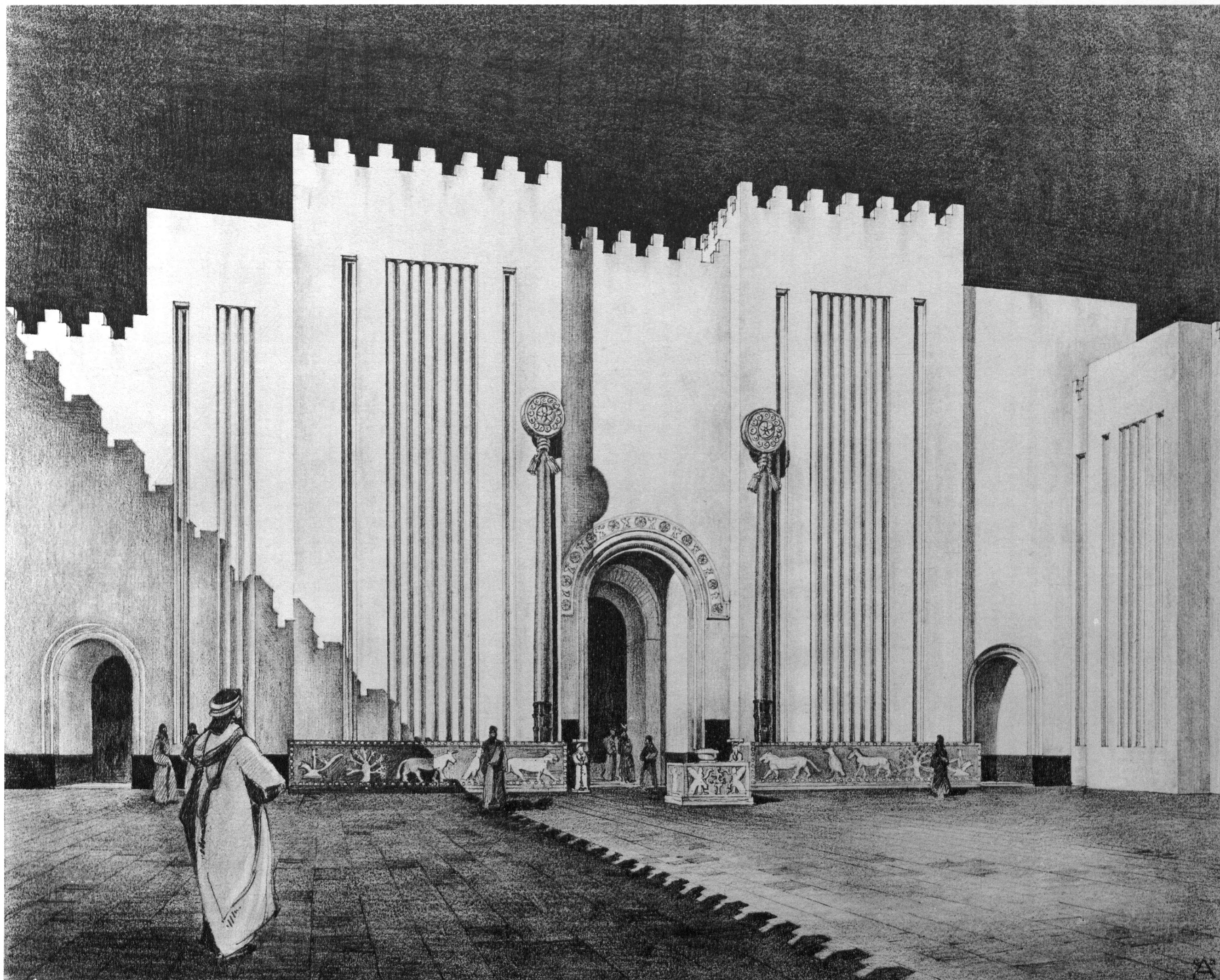
Nos. 30–32 came from the vicinity of Room 35 in Residence *L*.

No. 33 was found in Residence *M*.

A lotus pattern and one of large rosettes similar to No. 22 came to light in Residence *L*, and the very familiar rows of small rosettes occurred everywhere.

¹⁶ Place, *loc. cit.*

VI
RESTORATIONS



THE FAÇADE OF THE INNER TEMPLE OF NABU. RESTORATION

VI

RESTORATIONS

The basic reasons prompting our restorations as they are presented in the various plates have all been discussed in previous chapters of this volume. In chapter ii, wherein the architectural elements collected from all buildings have been individually analyzed, arguments for possible and probable restoration have necessarily found their place along with presentation of archeological fact. A certain amount of restoration discussion has similarly proved necessary to elucidate the descriptions of the individual buildings with which chapters iii and iv are concerned. This chapter is therefore largely a brief résumé of previously stated facts and arguments responsible for our restoration, which changes, drastically in some respects, the conception one has long held of Dur Sharrukin. That we may have erred in our task we do not deny, but we believe that our presentation of the architecture of Sargon's capital at least approaches the reality of more than 2,600 years ago.

If the general simplicity of the buildings be alarming, let us here state that we have refrained from using ornamentation the presence of which is neither proved by excavation nor justified, we feel, from reliefs. Excavation has established the predilection of the Sargonid architect for confining ornament to certain places. Why then should we cover entire façades with decoration just because such decoration has been found elsewhere—a practice which in the 19th century unfortunately enjoyed too great a vogue. The architecture of the modern towns of this vicinity, in which can be recognized so many carry-overs from ancient building, is in itself an argument for simplicity. We have in every respect tried to avoid exaggeration. Just as we confine ornament to its proper place, so do we restore roofs to what excavation has proved to be a minimum height. They may have been higher, but assuredly they were not lower. They may universally have had the crenelated parapets which our predecessors in restoration prefer; but for this practice archeological evidence is at least neutral, as are the reliefs, while the architecture of the modern villages in this area is negative.

Whether or not trees and gardens should be included in our perspective restorations (Pls. 1-2) is a question that has arisen during the preparation of these plates. Certainly the countryside and probably whatever open spaces may have existed in the city were not as barren as our perspectives suggest. Sargon himself in a "display" inscription upon the walls of his palace states: "A park like unto Mount Amanus, in which were set out every tree of the Hittite-land, the plants (fruit-trees) of every mountain, I laid out by its [Dur Sharrukin's] side."¹ Such a description is, however, somewhat vague as a basis for restoration; and since not a vestige of planted vegetation was found in excavation we prefer to let the reader's imagination supply it. It is certain that courts had neither trees nor gardens, for the universal use of baked-brick pavement therein precludes such a possibility.

¹ Luckenbill, *Ancient Records of Assyria and Babylonia* II, § 83.

For convenience of reference it is perhaps well to divide the elements which our restorations involve into two categories, horizontal and vertical. In the former classification we include general layout and plans, while anything pertaining to the superstructure of buildings falls naturally into the latter.

HORIZONTAL ELEMENTS

CITY WALLS AND GATES.—According to Place's record (see Pl. 67) the walls of Dur Sharrukin form a perfect rectangle, the sides of which are punctuated only by the seven gates and by the terrace of Sargon's palace. The contour map (Pl. 68) representing the present topography of the site, however, suggests a less geometrical layout for the city walls, while recent excavation has disclosed an outer terrace of Palace *F* (see p. 75). In the light of more complete excavation and with the aid of modern surveying we are therefore enabled to revise Place's city plan, at the same time incorporating with it additional plans resulting from our excavations. In Plate 69 we present the plan of the city as we now know it, with its walls and Gate 7 adjusted to fit the topography of the site. Place's Building *G* also we locate by contour.

The area of the city thus becomes an oblique quadrilateral with irregular protuberances formed by palace terraces—a plan far more in keeping than Place's with the irregular buildings and citadel which have come to light through our excavations.

SARGON'S PALACE.—The palace terrace of Place (see Pl. 67), consisting of two rectangles oriented with the city on parallel and perpendicular axes, we can no longer accept (see p. 54). Our almost complete excavation of the face of the inner terrace proves beyond a doubt that the inner terrace is not rectangular (see Pls. 69-70). The southeast face, the line of which is not even straight, is roughly parallel to the line of the city wall, but the two sides are neither perpendicular to the city wall nor parallel to each other. The ramps (see p. 29) by which approach to the terrace is effected are totally unlike the stairway and ramp Place suggests.

Although no attempt has been made in recent years to trace the outline of the outer terrace, we feel confident that it too is not the rectangle Place would have us believe (see p. 54). By superimposing the contour map upon Plate 69 the coincidence of contours and excavated inner terrace is apparent. Mindful of Place's error in recording the inner terrace, we do not hesitate to adjust the outer terrace to the contours and present it as shown on Plate 69.

Our excavation of several points within the palace proves that certain rooms and courts are not laid out on axes parallel and perpendicular one to the other. Their relative obliquity more than suggests that the entire palace is as irregular in plan as are our excavated residences. Since it becomes necessary to shift the outline of part of Place's palace to fit the inner terrace disclosed by our excavations,

we feel justified in taking liberties with the remainder of the palace, adjusting its general outline to an irregular outer terrace as well. The result cannot be considered a conclusive plan of Sargon's palace. Only by extensive re-excavation could such a presentation be possible. In Plate 70 we offer an outline plan, with major courts indicated, as a suggestion which we believe at least approximates the original and is consistent with the architecture of the other Sargonid buildings.

PALACE F.—The contours of present-day topography again play a major part in our restoration of Palace *F*, which Place indicates as a rectangular edifice within the city wall (see Pl. 67). Recent excavation, however, proves that this building, which we term a palace, is built upon a terrace which lies both outside and inside the line of the city wall (see Pl. 69). The outer terrace we restore partly from established evidence and partly from contours, while the inner terrace, as we present it, is based entirely on the topography of the mound (see p. 75). The ramp is merely a necessity which we arbitrarily restore as indicated (see p. 76). The outline of the unexcavated portion of the superstructure is also an arbitrary suggestion, as are the small courts. The two major courts, however, result from both excavation and topography. Place erroneously records the contours 90° counterclockwise to their actual position.

CITY PLAN.—The streets, squares, and buildings within the city as they are suggested in our two perspective restorations are not to be taken literally. Residence *Z*, shown in the left foreground of Plate 1, and Palace *F*, in the distance of Plate 2, are the only town buildings which may be considered real. The others are merely indicative of the fact that there is extensive building in the city. Actually we believe the city is solidly built up, with few, if any, open spaces or broad, straight streets (see p. 10). In our perspective restorations, however, we refrain from indicating more than a very few buildings in order to emphasize the architecture disclosed by our excavations.

CITADEL WALL AND GATES.—Little need be said concerning our restoration of the citadel wall and gates (Pl. 70). All critical points of the wall were determined by excavation, as were sufficient straightaway sections to establish the size and spacing of the bastions. To restore the unexcavated gaps is therefore a simple matter. The complete excavation of Gate *A* enables us to restore the interior of Gate *B*, the outline of which is established by excavation.

PLANS OF THE BUILDINGS.—Although considerable portions of the citadel residences are presented as restorations (Pl. 70), there is, we believe, sufficient justification for completing them as indicated. The plan of Residence *K* has been entirely traced by excavation, as have complete sections of other residences. Sounding trenches spaced at intervals throughout the unexcavated sections of these buildings have enabled us to locate certain rooms, courts, and exterior walls, all clearly distinguishable one from another by their plaster, pavements, and relative positions. Upon the skeleton so obtained we have constructed plans based upon the similarity known by excavation to exist between corresponding sections of various buildings and upon such principles of planning as we have learned from ample evidence in excavated areas. The completed plan is therefore one which the Sargonid architect may well have laid out for these buildings. We freely admit, however, that were the buildings en-

tirely excavated the plans resulting therefrom would show considerable discrepancies in minor details from those we here present.

VERTICAL ELEMENTS

HEIGHT OF TOWN AND CITADEL WALLS.—No single dimension can be given as the probable height of town and citadel walls, for the ground surface is so far from being level or regular that a measurement taken at one point of the wall, were it still intact, would not necessarily apply at another point. From the terrace of Sargon's palace we learn that a considerable slope to the terrace surface is less than the ground-surface slope within the same distance (see p. 55). A similar condition no doubt exists to an even greater extent between the tops of town and citadel walls and the ground surface. In restoring these walls we therefore attempt no more than a mean height, which we believe to be about 12 meters (see p. 18). If the walls were no higher than the average height (7.50 m.) of the palace terrace they would have little defense value. Their gates must then necessarily be of far greater height than the walls in order to accommodate the portals which have been found in excavation—a situation which the reliefs do not bear out. A height of 12 meters, the approximate difference in level between palace terrace and street at Citadel Gate *A*, not only satisfies this condition but is approximately half the height given by Place, who tends to double dimensions (cf. p. 20), and agrees with the only known reference to dimensions of city walls in Sargon's inscriptions. True, his statement does not apply to the walls of Dur Sharrukin; but were they of greater height he surely would not boast of the "mighty fortifications" of the cities on the peaks of Mount Arzabia, the walls of which were "120 *tipku*" or 12 meters high.²

HEIGHTS OF BUILDINGS.—In restoring heights of buildings excavated at Dur Sharrukin we have but one starting-point, the great hall of Residence *K*, wherein the fallen painted wall decoration establishes a minimum height of 14 meters for that particular room (cf. p. 66). Since it is our belief that height of wall determines wall thickness (see p. 19), we conclude from the plans that heights vary not only between buildings but within individual structures as well. Upon the basis of this argument and our known minimum height of a room of certain wall thickness we assign to secondary and principal areas of residences roof heights of 10–12 and 14–16 meters respectively. In parts of the Nabu temple the height would be increased, while in the palaces the 18-meter height mentioned by Sargon in all probability exists (see p. 20).

ROOFS AND THEIR PARAPETS.—Roofs we believe were flat, generally with simple parapet walls. Archeological evidence seems to us clearly to point to flat rather than vaulted ceilings and roofs, for aside from certain portals there have been found no traces of vaulted roofs, whereas evidence for wood-beamed ceilings is far from rare (see pp. 23–24). Furthermore Sargon makes frequent mention in his inscriptions of having roofed his palace with beams (see p. 23). The elaborate vaults and domes which Place restores to Sargon's palace we are inclined to attribute more to the tendency of 19th century European architecture toward such structural elements than to evidence encountered in his excavations (cf. p. 56).

² *Ibid.* § 163.

That crenelated parapet walls were used to a certain extent we admit, but we do not believe that they were universally employed throughout the miles of parapet walls upon the buildings of Dur Sharrukin (see pp. 40 f.). No traces of crenelations have been found in the debris of the several buildings excavated—a fact readily understandable in view of the nature of the material of which they were constructed. Like other forms of decoration they were probably used sparingly upon buildings, their presence being confined to certain areas. Although the reliefs picture a free use of them on fortification walls, they suggest a restricted use upon buildings.

PARAPET WALLS OF TERRACES.—The only concrete example of parapet walls upon terraces is at the inner terrace of Sargon's palace. Limestone slabs so cut that placed side by side they form crenelations were found in profusion in the debris at the base of the limestone retaining wall (see p. 40). Elsewhere no evidence has come to light. In view of the fact that parapets are a practical necessity at such points and were probably of mud brick, as are the faces of the terrace, we consider almost a certainty their presence upon the terraces of the Nabu temple and Palace *F* as well as upon the outer terrace of Sargon's palace.

PORTALS.—There is evidence for both arched and lintel-supported portals (see pp. 24 f.). From the limited number of portals sufficiently intact to disclose their form it is difficult to formulate any rule governing the relative frequency of vault and lintel. We are, however, inclined to the belief that the vault, as the more elegant form, was used in monumental portals, while the lintel was more extensively employed.

It may be noted that in our restoration of Sargon's palace (see Pl. 1) there is but a single portal rather than three at the entrance above the ramp. Re-excavation of a section of this façade proves that there is insufficient space for the two side portals which Place records at this point (see p. 55).

FENESTRATION.—Although no windows have ever been encountered in Dur Sharrukin we take the liberty of restoring a limited number of them to the excavated buildings. Room arrangement is such that many rooms would receive neither adequate nor, in fact, any light were the portals the sole sources of illumination. It is inconceivable that the Assyrians, who have left us so many symbols of a highly developed civilization, were content to live in semi- or total

darkness. Wall thicknesses in certain sections where rooms are most remote from court light suggest the possibility of clerestory lighting, while reliefs indicate the occasional use of windows (see p. 27). Upon these suggestions we therefore incorporate windows in our restorations, located where they may have been but admittedly without any degree of certainty.

WALL DECORATION.—For the distribution of wall decoration one need scarcely resort to restoration, for in general the walls are sufficiently well preserved to disclose not only the location but the form of decoration employed thereon. In the light of our more extensive knowledge of the site we should like at least to suggest certain revisions to Place's presentation of the decoration of the palace. Were the palace to be re-excavated we would not be surprised to find niches and reeds freely employed on the exterior southwest façade behind the ziggurat; nor would we be startled, should the walls be well enough preserved, to find similar decoration employed above the magnificent dadoes of reliefs on the exterior wall faces of the northwest section comprising the king's apartments (see p. 37). We would also expect to find a rather free use of rabbeted molding around the portals in certain sections of the palace (see p. 39).

In the upper termination of wall decoration restoration plays its part, for, except on the terrace of the Nabu temple, decorative motives have never been found complete. The decorative buttresses used at portals and by themselves we believe are of two sorts, one terminating with the adjacent roof, the other rising above the roof and suggesting a tower (see pp. 36–37). Working upon this theory we have in our restoration (Pl. 1) removed many of the towers which Place used so freely in the king's palace.

The upper termination of niche and reed as disclosed in the terrace of the Nabu temple sufficiently justifies, we feel, its universal application where this type of decoration is found. We therefore keep these elements entirely vertical, doing away with the upper horizontal treatment Place accords them (see p. 39).

The stone molding found in the debris of the bridge between palace and Nabu temple presents a puzzling problem (see p. 56). In our restoration on Plate 81 we restore it as a cornice between the arch and the parapet merely because we must accept its presence and there seems no other possible use for such unusual stone forms (see p. 40).

VII
OBJECTS



STATUES RECOVERED FROM THE FORECOURT OF THE NABU TEMPLE, AS RESTORED IN THE ORIENTAL INSTITUTE MUSEUM

VII OBJECTS

The objects recovered from Dur Sharrukin are extremely few in proportion to the scale of the site. Their paucity reflects both the short life of the city and its orderly abandonment when the capital was returned to Nineveh upon Sargon's death. There was little time for the accumulation of objects by loss or concealment on the part of their owners, nor was there invasion and destruction causing the inhabitants to flee leaving their belongings subject to loot or to burial in the resulting debris. Peaceful desertion of the buildings left them free for peasants to move into until with only the slight repairs and changes their new occupants could afford they were again abandoned, this time to disintegration. During this entire course of events some objects were naturally accidentally or purposely overlooked and

have therefore remained for archeological discovery. As there is no stratification of the debris, it is often impossible to distinguish Sargonid from later objects. All objects, even coins necessarily of much later date, are here listed, merely as representative of the material remains of the city founded by Sargon. For convenience of reference they have been classified into four groups: sculptures, embossed bronze, ivories, and miscellaneous objects. In the following descriptive lists the numbers preceded by "DS" are the field registration numbers. The present location or ultimate destination is indicated by "C" for the Oriental Institute Museum at Chicago or "B" for the Iraq Museum at Baghdad. Illustrations are grouped on the plates at the end of this chapter.

SCULPTURES

There is little new in the sculptures recently recovered from the debris of Dur Sharrukin. Most of them—those from Sargon's palace—have previously been recorded.¹ With the exception of the thresholds in Residence *L*, whereon text and decoration are combined, all the newly acquired specimens of the sculptor's art are duplicates or variations of types heretofore found at Khorsabad or, in the case of the thresholds in Residence *K*, at other Assyrian sites. Thresholds upon which only texts are inscribed we classify as inscriptional material (chap. viii, No. 1), while the column bases at Palace *F*, devoid as they are of any decorative attempt, we consider architectural elements (see p. 77). They are therefore omitted from this section.

The winged genii (Nos. 1-4) lining the outer portal of Citadel Gate *A*, though truly magnificent, are not new to Khorsabad. The bulls (Nos. 1-2) are merely two more examples of the favorite subject of Assyrian sculpture and are distinguished only by their almost perfect state of preservation *in situ*. The human figures (Nos. 3-4), even better preserved, are variations of a subject scarcely less popular than the bulls. They are, however, of the more unusual type with but a single pair of wings and with the head and shoulder in full view while the rest of the body is in profile. This type has been found only in the citadel gates. In the town gates the figures have four wings each, if Gate 3 may be taken as a criterion.² All other representations of this subject at Dur Sharrukin have figures entirely in profile.³

The temple statues (Nos. 5-7) show no intentional variation one from another. The specimens found wholly or in part in the Nabu temple (see pp. 58, 59, and 61) are indistinguishable from one another or from those in the palace temples.⁴ Their use appears to have been confined to portals of temples.

The thresholds (Nos. 8-10) covered solidly with variations of bud-and-flower designs which were found in the portals

of the great hall of Residence *K* are unique among the sculptures recovered from Khorsabad. A small fragment of a similar threshold (Pl. 30 *C*), found elsewhere in this same residence (see p. 67), may originally have belonged to some other building; a threshold similarly decorated was recovered from Nineveh (see p. 49).

The thresholds (Nos. 11-13) of Residence *L* upon which are combined both inscription and rosette decoration appear to be unique not only in Dur Sharrukin but at other Assyrian sites.

The winged bulls in the throneroom portal of Palace *F*, only one of which (No. 14) remains even in part, must originally have been not unlike those of Sargon's palace and of the town and citadel gates.

The three column bases (Nos. 15-17) from Residence *K* are duplicates of a "capital" found and so termed by Place in the "dépendances" of Sargon's palace (see p. 31).

The two altars (Nos. 18-19) found in the town just outside the citadel are no more than variations of a pair of altars previously found at Khorsabad.⁵

Serial No. CATALOGUE

- 1 Winged bull in Citadel Gate *A*, northwest side of outer portal. *In situ*. See p. 53.
- 2 Winged bull in Citadel Gate *A*, southeast side of outer portal. *In situ*. See p. 53.
- 3 Winged figure in Citadel Gate *A*, northwest side of outer portal. *In situ*. See p. 53.
- 4 Winged figure in Citadel Gate *A*, southeast side of outer portal. *In situ*. See p. 53.
- 5 Statue from Nabu temple, forecourt. DS 787. C. See p. 59.
- 6 Statue from Nabu temple, forecourt. DS 786. C. See p. 59.
- 7 Statue from Sargon's palace, Court XXVII. DS 784. B. See *Khorsabad* I 98 f.
- 8 Inner threshold from Residence *K*, Room 12. DS 1317. C. See p. 66 and Pl. 30 *A*.
- 9 Threshold in Residence *K*, left-hand portal between forecourt and Room 12. DS 1316. *In situ*; ultimately B. See p. 66 and Pl. 30 *B*.

¹ *Khorsabad* I, index on p. 135. ² Place, *Ninive et l'Assyrie* III, Pl. 12.

³ Botta, *Monument de Ninive* I, Pls. 24-26 and 30.

⁴ See *Khorsabad* I 98 f. and Place, *op. cit.* III, Pl. 31 bis.

⁵ Botta, *op. cit.* II, Pl. 157, and V 171.

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| <p>Serial No.</p> <p>10 Threshold in Residence <i>K</i>, right-hand portal between forecourt and Room 12. <i>In situ</i>. See p. 66.</p> <p>11 Threshold in Residence <i>L</i>, portal between Rooms 119 and 116. DS 1315. <i>In situ</i>; ultimately B. See p. 70, chap. viii, No. 2 <i>C</i>, and Pl. 36 <i>A</i>.</p> <p>12 Threshold from Residence <i>L</i>, portal between Room 116 and central court. DS 1314. C. See p. 70, chap. viii, No. 2 <i>B</i>, and Pls. 36 <i>B</i> and 66.</p> <p>13 Threshold in Residence <i>L</i>, portal between forecourt and Room 119. DS 1313. <i>In situ</i>. See p. 70, chap. viii, No. 2 <i>A</i>, and Pl. 36 <i>C</i>.</p> | <p>Serial No.</p> <p>14 Winged bull in Palace <i>F</i>, central portal between central court and Room 23. <i>In situ</i>. See p. 76 and Pl. 39 <i>D-E</i>.</p> <p>15 Column base from Residence <i>K</i>, Room 15. DS 1224. B. See p. 66; cf. Pl. 32 <i>B</i>.</p> <p>16 Column base from Residence <i>K</i>, Room 15. DS 1222. B. See p. 66; cf. Pl. 32 <i>B</i>.</p> <p>17 Column base from Residence <i>K</i>, Room 15. DS 1223. C. See p. 66; cf. Pl. 32 <i>B</i>.</p> <p>18 Altar from town, northwest of Citadel Gate <i>A</i>. DS 1195. B.</p> <p>19 Altar from town, northwest of Citadel Gate <i>A</i>. DS 1194. C.</p> |
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EMBOSSSED BRONZE

The fragments of embossed bronze (see pp. 43–44) appear for the most part to be portions of plaques which once adorned the doors, especially of temples. Nearly all the specimens recovered from Khorsabad by Place or by us have come from temple areas, either in proximity to portals or as bands upon the vertical shafts rising from the tableau shelves. So fragmentary are the surviving pieces that we can do little in restoring the complete scenes depicted thereon. They seem, however, to be simpler and less varied than those upon the Balawat gates. Both living and inanimate figures such as might be found upon stone reliefs or enameled tableaus are represented.

The fragments from the Nabu temple (Nos. 20–27) are apparently all from doors of the portals leading from the forecourt to Rooms 13 and 14.

A single fragment from Residence *K* (No. 28) belongs in a distinctly different category and is very possibly intrusive.

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| <p>Serial No.</p> <p>20 Composite figures from Nabu temple, Room 13. DS 1006. B. See p. 59.</p> <p>21 Horse from Nabu temple, Room 13. DS 1007. C. See p. 59.</p> <p>22 "Dragon of Babylon" (<i>mušḫuššu</i>, previously read <i>širruš</i>) from Nabu temple, Room 14. DS 1008. B. See p. 59.</p> <p>23 Man from Nabu temple, Room 14. DS 1011. C. See p. 59.</p> <p>24 Fragment of combination plow and grain-seeder from Nabu temple, Room 14. DS 1012. C. See p. 59.</p> <p>25 Fragment of man with staff from Nabu temple, Room 14. DS 1013. B. See p. 59.</p> <p>26 Fragment of reeds(?) from Nabu temple, Room 14. DS 1009. B. See p. 59.</p> <p>27 Fragment of "mountains" from Nabu temple, forecourt. DS 744. B. See p. 59.</p> <p>28 Fragment of tree and animals from Residence <i>K</i>, Room 41. DS 1126. B. See pp. 44 and 68.</p> | <p>CATALOGUE</p> |
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IVORIES

The Khorsabad ivories represent a form of art which sporadically has appeared from sites widely scattered throughout Western Asia. Plaques in relief and pierced work, bands and plaques with incised and stained decoration, and pieces in the round have long supplied material for speculation as to their origin, their purpose, and their dating. The group from Khorsabad, like most of those found elsewhere, came from inconclusive context. Fragments of individual pieces were scattered throughout Room 13 of the Nabu temple, wherein most of the ivories were found (see pp. 60 f.). Others were occasionally encountered in various rooms of Residence *K*. All had been severed from their original settings and scattered before becoming buried in the debris. In no instance, however, were duplicates of any single type found in both the Nabu temple and Residence *K*. There is no trace of an Aramaic or Phoenician inscription, such as was found on an Arslan-Tash ivory,⁶ or even of single letters, such as were found on ivories there and at Nimrud⁷ and Samaria⁸ as well. Minute fragments of gold leaf among the debris imply that certain pieces may in part have been gilded. None, however, was found adhering to the ivory, nor was there any evidence of colored inlay.

In the writer's opinion the Khorsabad ivories, while undoubtedly importations to Dur Sharrukin, are of manufacture contemporary with Sargon. Although they resemble

the Arslan-Tash ivories, which are dated to the last half of the 9th century,⁹ and Group II of the Samaria ivories, which Crowfoot dates but a few years earlier,¹⁰ they are far more similar in execution to the ivories from the northwest palace of Nimrud assigned by Barnett to perhaps the first half of the 8th century.¹¹ The use of decorative ivory plaques upon furniture and boxes appears to have been practiced in Western Asia and the Mediterranean islands from the middle of the second millennium onward at least to the time of Sargon, as proved by excavation, and probably through Sennacherib's reign, as suggested by reliefs. Their styles changed, but their manufacture must have continued in order to supply the demand. The workshops in which they were fashioned may have been located in Damascus or Phoenicia, the one school being more Asiatic as compared to the other, which was more subject to Egyptian influence; but they must have been made to order—in the case of the Khorsabad ivories, we believe, to the order of Sargon.

The subjects of the Khorsabad ivories are fewer than in the case of those from Arslan-Tash or the parallel group from Nimrud. Examples of each major type, however, are plentiful. In the accompanying plates they are presented as they have graciously been assembled from many fragments by the Iraq Museum. All, with the exception of No. 73, which is at half scale, are reproduced in full size.

Of the "woman at the window" type there are nine examples (Nos. 29–37), for the most part burned so the ivory

⁶ Thureau-Dangin *et al.*, *Arslan-Tash*, pp. 135–38.

⁷ See R. D. Barnett in *Iraq* II (1935) 184.

⁸ See J. W. and G. M. Crowfoot in Palestine Exploration Fund, *Quarterly Statement* (hereafter called *PEFQS*), 1933, p. 9.

⁹ Thureau-Dangin *et al.*, *op. cit.* pp. 136–38.

¹⁰ *PEFQS*, 1933, p. 22.

¹¹ *Iraq* II 185.

OBJECTS

is black. This type is represented at Arslan-Tash, Nimrud, and Samaria.¹²

Three fragments of plaques (Nos. 38-40) have twin winged figures standing one at either side facing the center, which unfortunately is missing. The garment, which is that of a female figure, suggests on the basis of comparison with the Arslan-Tash ivories that the complete plaque included the sacred tree¹³ rather than the more usual infant Horus sitting upon a lotus flower. Nos. 39 and 40 are possibly parts of a single plaque. The ivory is burned black.

A single example of a head in profile (No. 41) suggests no parallel to types found elsewhere. The ivory is unburned.

Fifteen examples of a sphinx with head shown in fullface (Nos. 42-56) appear to be a combination of two sphinx types found at Arslan-Tash, one, the criosphinx,¹⁴ supplying the body, and the other, the androsphinx,¹⁵ the head of the Khorsabad type. Nos. 42-50 face left, Nos. 51-56 right. The ivory shows various stages of burning, the fragments being white, brown, blue, and black.

A fragment of a band incised with running palmette motive (No. 57) appears to be unique among other ivories. The ivory is unburned.

Two fragments of bands incised with lotus bud-and-flower motive (Nos. 58-59) have the design accentuated with yellow stain. They are similar to examples found at Arslan-Tash.¹⁶ The ivory is unburned.

Two plaques in relief have an elaborate design of palmette blossoms with intertwining stems (Nos. 60-61). They appear to have no parallels from other sites. The ivory is unburned.

Two fragmentary openwork plaques of elaborate palmette design (Nos. 62-63) suggest the motive of Nos. 60-61. Yellow stain is used to emphasize and differentiate certain parts of the design. The ivory is unburned.

Miscellaneous fragments on Plate 56 are with and without parallels. No. 64 is perhaps an example of the clump of papyrus buds and flowers found at Arslan-Tash.¹⁷ Nos. 69-70 are similar to the "colonnade" fragments from Arslan-Tash,¹⁸ while Nos. 71-72 have parallels both at Arslan-Tash¹⁹ and at Nimrud.²⁰ Nos. 69, 70, and 72 are burned black. The others are unburned.

CATALOGUE

Serial No.	From Nabu temple, Room 13, unless otherwise specified
29	Woman at the window (restored). DS 1017.01. B.
30	Woman at the window. DS 1017.02. B.

Serial No.	
31	Woman at the window. DS 1017.03. B.
32	Woman at the window. DS 1017.04. B.
33	Woman at the window. DS 1017.05. C.
34	Woman at the window. DS 1017.06. C.
35	Woman at the window. DS 1017.07. C.
36	Woman at the window. DS 1017.08. C.
37	Woman at the window. DS 1017.09. C.
38	Sacred tree. DS 1017.10. C. <i>B</i>
39	Sacred tree. DS 1017.11. B. <i>C</i>
40	Sacred tree. DS 1017.12. C.
41	Head in profile. DS 1017.13. <i>C. B</i>
42	Sphinx. DS 1017.14. B.
43	Sphinx. DS 1017.15. B.
44	Sphinx. DS 1017.16. C.
45	Sphinx. DS 1017.17. B.
46	Sphinx. DS 1017.18. B.
47	Sphinx. DS 1017.19. C.
48	Sphinx. DS 1017.20. B.
49	Sphinx. DS 1017.21. B.
50	Sphinx. DS 1017.22. C.
51	Sphinx. DS 1017.23. C.
52	Sphinx. DS 1017.24. C.
53	Sphinx. DS 1017.25. C.
54	Sphinx. DS 1017.26. C.
55	Sphinx. DS 1017.27. C.
56	Sphinx. DS 1017.28. B.
57	Band with palmettes from Residence K, Room 23. DS 1331. B.
58	Band with lotus bud and flower from Residence K, Room 23. DS 1282. B.
59	Band with lotus bud and flower from Residence K, Room 46. DS 1285. C.
60	Plaque with palmette from Residence K, Room 23. DS 1287. C.
61	Plaque with palmette from Residence K, Room 23. DS 1286. B.
62	Fragments of plaque from Residence K, Room 46. DS 1279. B.
63	Fragments of plaque with palmettes etc. from Residence K, Room 8. DS 1284. C.
64	Papyrus reeds(?) from Residence K, Room 88. DS 1328. B.
65	Fragment from Residence K, Room 23. DS 1348. B.
66	Fragment of hand and arm from Residence K, Court 64. DS 1280. C.
67	Fragment from Residence K, Court 64. DS 1281. B.
68	Fragment from Residence K, Room 88. DS 1329. C.
69	Fragment of small column from Palace F, Room 13. DS 1017.29. B.
70	Fragment of small column from Palace F, Room 13. DS 1017.30. B.
71	Fragment of rope pattern from Palace F, Room 13. DS 1017.31. B.
72	Fragment of rope pattern from Palace F, Room 13. DS 1017.32. B.
73	Fragment of arm(?) from Residence K, Room 88. DS 1330. B.

nos. 38-39 not in Chicago

no. 41 not in Chicago

MISCELLANEOUS OBJECTS

For the miscellaneous objects no commentary is required to supplement the list. They are for the most part a heterogeneous collection such as might be found at any contempo-

¹² Thureau-Dangin *et al.*, *op. cit.*, Pls. XXXIV-XXXVI, Nos. 45-60; Layard, *Monuments of Nineveh* [1st ser.] Pl. 88, Nos. 3 and 4; Crowfoot in *PEFS*, 1933, Pl. III 3.

¹³ Cf. Thureau-Dangin *et al.*, *op. cit.* pp. 97-99 and Pls. XXIV-XXV, Nos. 15-19.

¹⁴ *Ibid.* Pls. XXVII-XXX, Nos. 22-28.

¹⁵ *Ibid.* Pl. XXXI, Nos. 32-35.

¹⁶ *Ibid.* Pl. XLVI, Nos. 105-7.

¹⁷ *Ibid.* Pl. XLV, Nos. 101-3.

¹⁸ *Ibid.* Pl. XLIV, Nos. 92-93.

¹⁹ *Ibid.* Pl. XLVII, Nos. 108-11.

²⁰ Layard, *op. cit.* Pl. 90, No. 17.

rary site. Significant facts pertaining to the objects themselves or to their finding are included in the text, to which page references are given in the list. In the presentation of the objects they are arranged, insofar as is possible, in homogeneous groups. In a few instances grouping according to provenance is retained. No attempt has been made to separate the Sargonid from the post-Sargonid remains, although objects from upon or near the ground surface are so noted in the list. The objects for which no final disposition is indicated are yet to be divided between the Iraq Museum and the Oriental Institute Museum.

- CATALOGUE
- | Serial No. | TEXTS | Serial No. | |
|-----------------------|---|--|--|
| 74 | List of Assyrian kings from Nabu temple, Room 12. DS 828. See p. 60 and chap. viii, No. 6. | 121 | From Sargon's palace, Room 12. DS 805. <i>C. B.</i> |
| 75 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1295. B. See p. 77 and chap. viii, No. 47. | 122 | From Sargon's palace, Room 12. DS 804. <i>C. B.</i> |
| 76 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1290. B. See p. 77 and chap. viii, No. 42. | BRACELETS | |
| 77 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1293. C. See p. 77 and chap. viii, No. 45. | 123 | Silver, with rams' heads, from latest occupation over Nabu temple (see p. 4). DS 742. C. |
| 78 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1294. C. See p. 77 and chap. viii, No. 46. | 124 | Bronze, from Residence <i>J</i> , Room 19. DS 1227. B. |
| 79 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1292. C. See p. 77 and chap. viii, No. 44. | 125 | Bronze, from Residence <i>J</i> , Room 19. DS 1226. C. |
| 80 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1291. C. See p. 77 and chap. viii, No. 43. | 126 | Bronze, from Residence <i>J</i> , Room 19. DS 1228. <i>C. B.</i> |
| 81 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1289. B. See p. 77 and chap. viii, No. 41. | 127 | Silver, with rams' heads, from latest occupation over Nabu temple (see p. 4). DS 741. B. |
| 82 | Inscribed prism from Palace <i>F</i> , Room 17. DS 1288. B. See p. 77 and chap. viii, No. 40. | 128 | Bronze, with rams' heads, from Residence <i>K</i> , Room 1. DS 1115. B. |
| | For other texts on clay or pottery see chap. viii, Nos. 7-39 and 48-64. | 129 | Bronze, from Residence <i>Z</i> , central court. DS 1196. C. |
| CYLINDER SEALS | | RINGS | |
| 83 | Fayence, from City Gate 7. DS 1. B. | 130 | Bronze, from Nabu temple, Room 13. DS 913. C. |
| 84 | Gray stone, from Nabu temple, dump. DS 459. B. | 131 | Bronze, from Residence <i>J</i> , Room 19. DS 1230. C. |
| 85 | Steatite, from Residence <i>L</i> , Room 9. DS 1262. C. | 132 | Bronze, from Residence <i>J</i> , Room 19. DS 1229. B. |
| 86 | Paste, from Sargon's palace, Room 7. DS 82. C. | 133 | Bronze earring from Residence <i>J</i> , Room 19. DS 1231. B. |
| 87 | Paste, from Residence <i>K</i> , Court 54. DS 1203. B. | 134 | Bronze earring from Residence <i>Z</i> , forecourt. DS 1134. C. |
| 88 | Gray stone, reputedly from vicinity of City Gate 2. DS 251. B. | 135 | Bronze earring from Residence <i>Z</i> , Room 42. DS 1255. C. |
| 89 | Gray stone, from Residence <i>Z</i> , Room 13. DS 1139. B. | FIBULAE | |
| 90 | Paste, from Nabu temple, forecourt. DS 707. B. | 136 | Bronze, from Nabu temple, Room 9. DS 723. B. |
| 91 | Brown stone, from Sargon's palace, Court XXXI. DS 247. C. | 137 | Bronze, from Residence <i>J</i> , Room 19. DS 1238. C. |
| 92 | Clay, from City Gate 7. DS 41. C. | 138 | Bronze, from Residence <i>Z</i> , forecourt. DS 1133. C. |
| 93 | Paste, from Residence <i>Z</i> , Room 19. DS 1270. C. | 139 | Bronze, from Residence <i>J</i> , Court 31. DS 1104. C. |
| 94 | Paste, from Sargon's palace, Room 165. DS 580. C. | 140 | Bronze, from Sargon's palace, Room 165. DS 581. B. |
| 95 | Red stone, from City Gate 7. DS 43. C. | 141 | Bronze, from Residence <i>L</i> , Court 3. DS 1108. B. |
| STAMP SEALS | | 142 | Bronze, from Residence <i>Z</i> , Room 15. DS 1297. B. |
| 96 | Clay, from bridge between palace and Nabu temple. DS 931. B. | 143 | Bronze, from Residence <i>L</i> , Room 26. DS 1175. B. |
| 97 | Paste, from southeast of palace terrace. DS 917. B. | 144 | Bronze, from Residence <i>L</i> , Room 49. DS 1340. B. |
| 98 | Paste scarab from Nabu temple, ramp. DS 976. C. | 145 | Bronze, from Residence <i>J</i> , Room 23. DS 1170. C. |
| 99 | Clay, from palace, Room 164. DS 612. B. | PENDANTS, AMULETS, AND BEADS | |
| 100 | Paste, from west of bridge between palace and Nabu temple. DS 928. C. | 146 | Black stone, from Sargon's palace, Room 164. DS 731. B. |
| 101 | Paste, from southeast of palace terrace. DS 947. B. | 147 | Gray stone, from ramp at south corner of Sargon's palace. DS 1018. B. |
| 102 | Black stone, from outside of Citadel Gate <i>A</i> . DS 925. B. | 148 | Gray stone, from Sargon's palace, Room 164. DS 673. B. |
| 103 | Clay scarab from Residence <i>M</i> , Room 50. DS 1214. B. | 149 | Alabaster, from Sargon's palace, Room 164. DS 674. B. |
| 104 | Paste scarab from Residence <i>K</i> , Room 49. DS 1149. B. | 150 | Gray stone, from Nabu temple, Room 9. DS 721. B. |
| 105 | White stone scaraboid from Residence <i>K</i> , Court 54. DS 1204. C. | 151 | Gold, from Nabu temple dump. DS 1015. B. |
| 106 | Paste scaraboid from Residence <i>K</i> , Room 57. DS 1253. C. | 152 | Bronze, from Residence <i>L</i> , Room 49. DS 1346. B. |
| 107 | Stone, from Palace <i>F</i> , surface. DS 1140. B. | 153 | Bronze bell from Residence <i>L</i> , Room 114. DS 1160. B. |
| 108 | Black stone scaraboid from Residence <i>Z</i> , Room 7. DS 1120. C. | 154 | Bronze, from Palace <i>F</i> , surface. DS 1199. C. |
| 109 | Paste, from Residence <i>L</i> , Room 121. DS 1172. B. | 155 | Bronze, from east corner of citadel. DS 1248. B. |
| 110 | Green stone, from Residence <i>K</i> , Room 25. DS 4344. C. | 156 | Bronze, from Residence <i>L</i> , Room 114. DS 1161. C. |
| 111 | Gray stone, from City Gate 7. DS 42. B. | 157 | Bronze, from Residence <i>K</i> , Room 47. DS 1152. C. |
| 112 | Black stone scaraboid from Nabu temple, Room 28. DS 1027. B. | 158 | Miscellaneous beads from the citadel buildings. B and C. |
| CLAY SEAL IMPRESSIONS | | OBJECTS FROM WELL IN NABU TEMPLE FORECOURT (SEE P. 60) | |
| 113 | From Sargon's palace, Room 12. One of many of same type, grouped under No. DS 791. B and C. | 159 | Beads, pendants, and amulets of paste, bone, crystal, amethyst, and carnelian. Group <i>A</i> , B; Group <i>B</i> , C. |
| 114 | From Sargon's palace, Room 12. One of many of same type, grouped under No. DS 789. B and C. | 160 | Bronze bell. DS 780. B. |
| 115 | From Palace <i>F</i> , surface. DS 1142. C. | 161 | Bronze bell. DS 783. C. |
| 116 | From Residence <i>Z</i> , central court. DS 1241. <i>C. B.</i> | 162 | Bronze bell with iron clapper. DS 779. C. |
| 117 | From Residence <i>K</i> , Room 1. DS 1212. B. | 163 | Bronze bell with iron clapper. DS 778. B. |
| 118 | From Palace <i>F</i> , Room 42. DS 1201. B. | 164 | Bronze bells with iron clappers. DS 782. C. |
| 119 | From Sargon's palace, Room 12. DS 803. C. <i>B.</i> | 165 | Bronze bell. DS 781. C. |
| 120 | From Sargon's palace, Room 12. One of many of same type, grouped under No. DS 790. B and C. | OBJECTS OF LATER OCCUPATION IN "POCKETS" HOLLOWED IN SOUTHWEST WALL OF NABU TEMPLE FORECOURT (SEE P. 58) | |
| | | 166 | Silver medallion. DS 750. B. |
| | | 167 | Silver ornament. DS 753. B. |
| | | 168 | Silver fibula. DS 751. B. |
| | | 169 | Silver pendants and beads. DS 752. B. |
| | | 170 | Nine silver coins of Alexander III. DS 749. |

OBJECTS

99

- Serial No. COINS FOUND IN DEBRIS
- 171 Eleven examples out of many Arabic coins, copper. DS 322 and DS 1327.
- 172 Athenian coin, silver. DS 1327.
- 173 Byzantine coin of Justin II, copper. DS 1327.
- 174 Two Parthian coins of Orodes I, silver. DS 807.

WEIGHTS

- 175 Duck weight, blue agate, from Residence Z, Room 42. DS 1260. C.
- 176 Duck weight, carnelian, from Sargon's palace, dump. DS 92. B.
- 177 Weight, hematite, from Sargon's palace, Court XXVII. DS 282. B.
- 178 Duck weight, bronze, from Residence K, Room 23. DS 1271. C.
- 179 Duck weight (fragment), black stone, from Residence M, Room 41. DS 1100. B.
- 180 Duck weight, bronze, from Palace F, Room 8. DS 1164. B.
- 181 Duck weight, bronze, from Residence K, Room 66. DS 1138. C.
- 182 Duck weight, bronze, from Residence K, Room 66. DS 1137. B.
- 183 Duck weight, limestone, from Residence K, Court 54. DS 1188. C.
- 184 Duck weight, limestone, from Residence Z, Room 38. DS 1191. B.
- 185 Duck weight, limestone, from Palace F, Room 21. DS 1190. C.
- 186 Duck weight, limestone, from Residence K, Court 54. DS 1189. C.
- 187 Duck weight, limestone, from Residence K, Court 54. DS 1200. B.

MISCELLANEOUS METAL OBJECTS

- 188 Bronze fitting from late occupation of Nabu temple, forecourt. DS 811. B.
- 189 Bronze fitting from late occupation of Nabu temple, forecourt. DS 743. B.
- 190 Bronze fitting from late occupation of Nabu temple, forecourt. DS 817. C.
- 191 Iron fitting from Nabu temple, Room 26. DS 700. B.
- 192 Bronze fitting from near surface north of bridge between Nabu temple and Sargon's palace. DS 969. C.
- 193 Bronze fitting from Nabu temple, forecourt. DS 708. B.
- 194 Bronze spearhead from Nabu temple, forecourt. DS 686. B.
- 195 Iron blade from Nabu temple, forecourt. DS 591. B.
- 196 Bronze implement from Nabu temple, forecourt. DS 648. B.
- 197 Bronze fitting from Residence K, Room 25. DS 1263. B.
- 198 Bronze mirror from Residence K, Room 66. DS 1136. C.
- 199 Three iron wheels with bronze hubs from Nabu temple, Room 15. DS 757. C. See p. 62 and Pl. 24 E.
- 200 Bronze "button" from Residence K, Room 51. DS 1151. C.
- 201 Bronze needle from Residence K, Room 1. DS 1273. C.
- 202 Bronze fitting from Nabu temple, Room 9. DS 722. B.
- 203 Bronze "hairpin" from Residence L, Court 129. DS 1272. C.
- 204 Bronze spoon from Residence L, Room 16. DS 1236. B.
- 205 Three out of six bronze fittings from Residence K, Room 10. DS 1265. B and C.
- 206 Two out of many bronze nails. DS 439. B and C.
- 207 Two out of many bronze nails with silver-capped heads from Nabu temple. DS 440. B and C.
- 208 Bronze nail from Nabu temple, Room 17. DS 447. C.
- 209 Gold nail from Sargon's palace, Court XXXI. DS 249. C.
- 210 Two out of seven gold nails from Nabu temple, central court. DS 442. B and C.
- 211 Bronze nail with gold head from Nabu temple, Room 13. DS 717. B.
- 212 Silver fitting from Nabu temple, Room 14. DS 761. B.
- 213 Iron pick from Sargon's palace, Room 86. DS 960. B.
- 214 Iron pick from Sargon's palace, Room 86. DS 959. C.
- 215 Iron pick from Sargon's palace, Room 86. DS 961. C.
- 216 Iron pick from Sargon's palace, Room 86. DS 941. B.
- 217 Iron pick from Sargon's palace, Room 86. DS 962. B.
- 218 Iron cutting tool from outside of north corner of citadel. DS 1155. B.
- 219 Iron cutting tool from Residence K, Room 59. DS 1232. C.
- 220 Iron cutting tool from Residence K, Room 35. DS 1171. C.

- Serial No.
- 221 Iron socketed ax from Nabu temple, forecourt. DS 810. C.
- 222 Iron blade from Residence K, Room 52. DS 1184. B.
- 223 Iron implement from Palace F, Room 32. DS 1198. B.
- 224 Iron pivot casing from Residence M, Room 41. DS 1109. B. See Pl. 37 E.

POTTERY

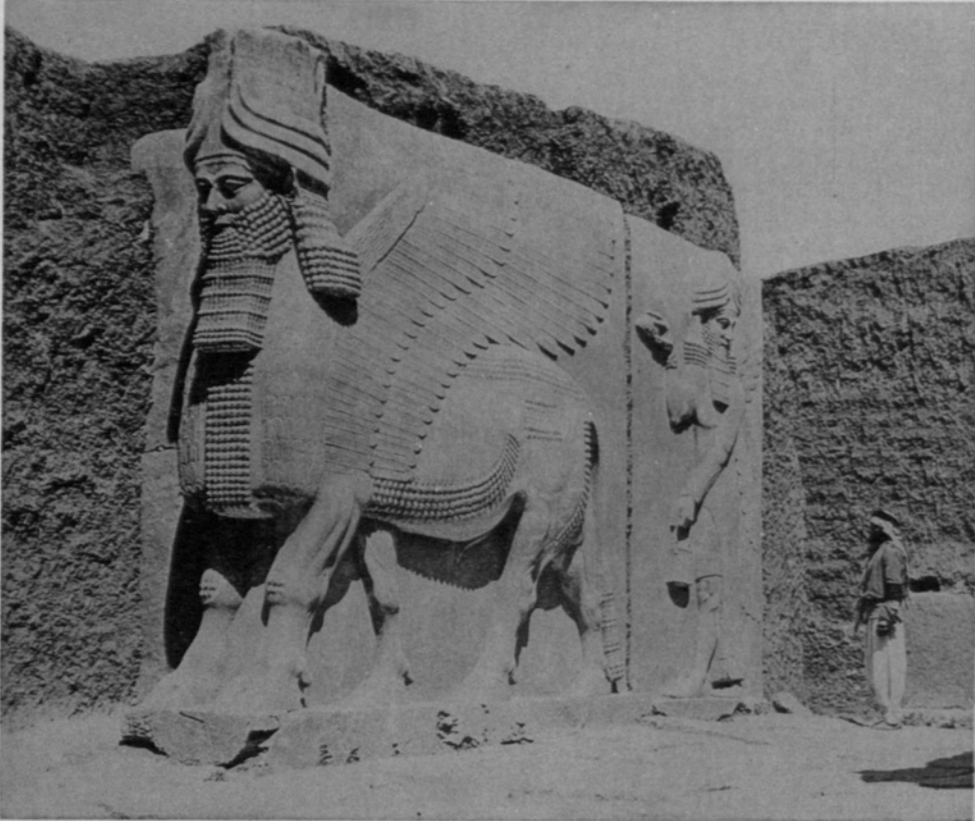
- 225 Jar from Residence Z, Room 4. DS 1243. B.
- 226 Jar from Residence K, Room 58. DS 1234. B.
- 227 Jar from Residence K, Room 58. DS 1235. B.
- 228 Jar from Residence K, Court 41. DS 1111. B.
- 229 Jar from Residence K, Court 41. DS 1110. B.
- 230 Jar with pierced sides from Residence K, Court 54. DS 1250. C.
- 231 Jar with glazed design from Residence K, Court 51. DS 1251. B.
- 232 Jar from Residence Z, Room 25. DS 1261. B.
- 233 Jar from Residence K, forecourt. DS 1207. B.
- 234 Jar from Residence Z, Room 34. DS 1244. B.
- 235 Jar from Residence K, Room 57. DS 1209. B.
- 236 Jar from Residence K, Court 54. DS 1245. B.
- 237 Jar from Residence Z, Room 37. DS 1163. B.
- 238 Jar from Residence K, Court 41. DS 1112. B.
- 239 Jar from Residence L, Room 22. DS 1246. B.
- 240 Jar from Residence M, Court 67. DS 1174. B.
- 241 Jar from Residence K, Room 58. DS 1233. B.
- 242 Jar from Residence M, Court 67. DS 1173. B.
- 243 Jar from Residence K, Court 41. DS 1116. B.
- 244 Fragment of jar with glazed design from Residence K, Room 51. DS 1249. C.
- 245 Zoomorphic vessel from Residence Z, Room 2. DS 1240. C.
- 246 Fragment of zoomorphic vessel from Palace F, Court 44. DS 1247. B.
- 247 Shallow vessel from Residence Z, Room 4. DS 1219. B.
- 248 Lamp from Residence Z, Room 37. DS 1187. C.
- 249 Lamp from Residence K, Room 44. DS 1132. B.
Many more lamps of the same type as Nos. 248-49 were found.
- 250 Four *sikkāi* from Nabu temple. B and C.
Examples of many found throughout the Nabu and palace temples; see pp. 42 f.
- 251 Jar stands from Residences K and L. B.

MISCELLANEOUS STONE OBJECTS

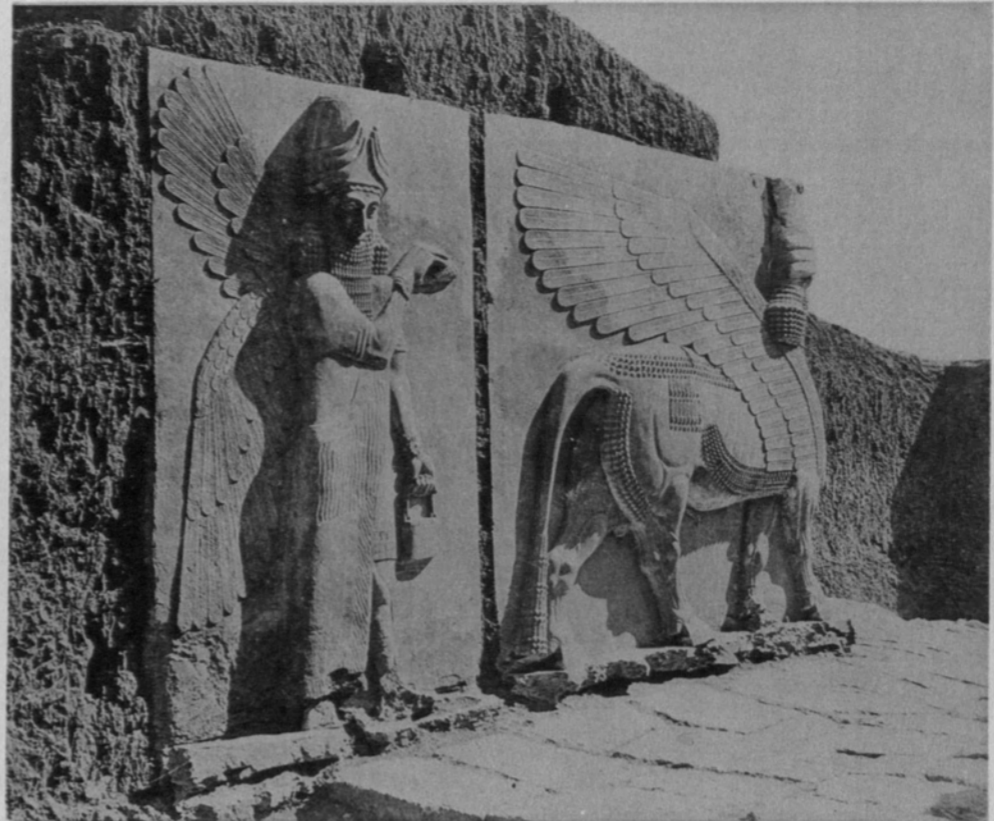
- 252 Gray stone weight from Residence Z, Room 7. DS 1129. C.
- 253 Green stone ax from Residence Z, Room 34. DS 1213. B.
- 254 Obsidian vessel from Residence K, Room 57. DS 1216. C.
- 255 Die from palace temple area. DS 237. B.
- 256 Light green stone head, pierced for threading, from Nabu temple, Room 3. DS 800. B.
- 257 Gray stone censer from Sargon's palace, Court XXXI, near surface. DS 246. C.
- 258 Black stone object from Residence K, Room 57. DS 1208. C.
- 259 Hollowed stone vessel from Residence K, Room 51. DS 1156. B.
- 260 Five pierced limestone knobs from Nabu temple, Room 15. DS 957. B and C.
- 261 Ax from Palace F, Room 23. DS 1211. B.
- 262 Four-legged basalt vessel from a sounding in the town. DS 272. C.
- 263 Gray stone censer from Residence Z, Room 29. DS 1158. B.

MISCELLANEOUS CLAY AND BONE OBJECTS

- 264 Clay strainer from Residence K, Room 24. DS 1121. C.
- 265 Spiral shell-shaped clay object from Residence M, Room 44. DS 1143. C.
- 266 Clay animal figurine from Residence K, Room 59. DS 1259. B.
- 267 Clay "slingstones," three out of many examples found generally distributed. DS 85, 54, and 7. B and C.
- 268 Incised bone handle from Residence K, Room 51. DS 1165. B.
- 269 Bone "spoons," two out of many from Residence K. DS 1186 and 1169. B and C.
- 270 Makers' marks upon baked bricks, found generally distributed. B.



1



2



3



4

RELIEFS IN THE OUTER PORTAL OF CITADEL GATE *A*. SCALE OF NOS. 3-4, 1:20



5



6

STATUES FROM THE FORECOURT OF THE NABU TEMPLE. SCALE, 1:10



7



8



15



16



17



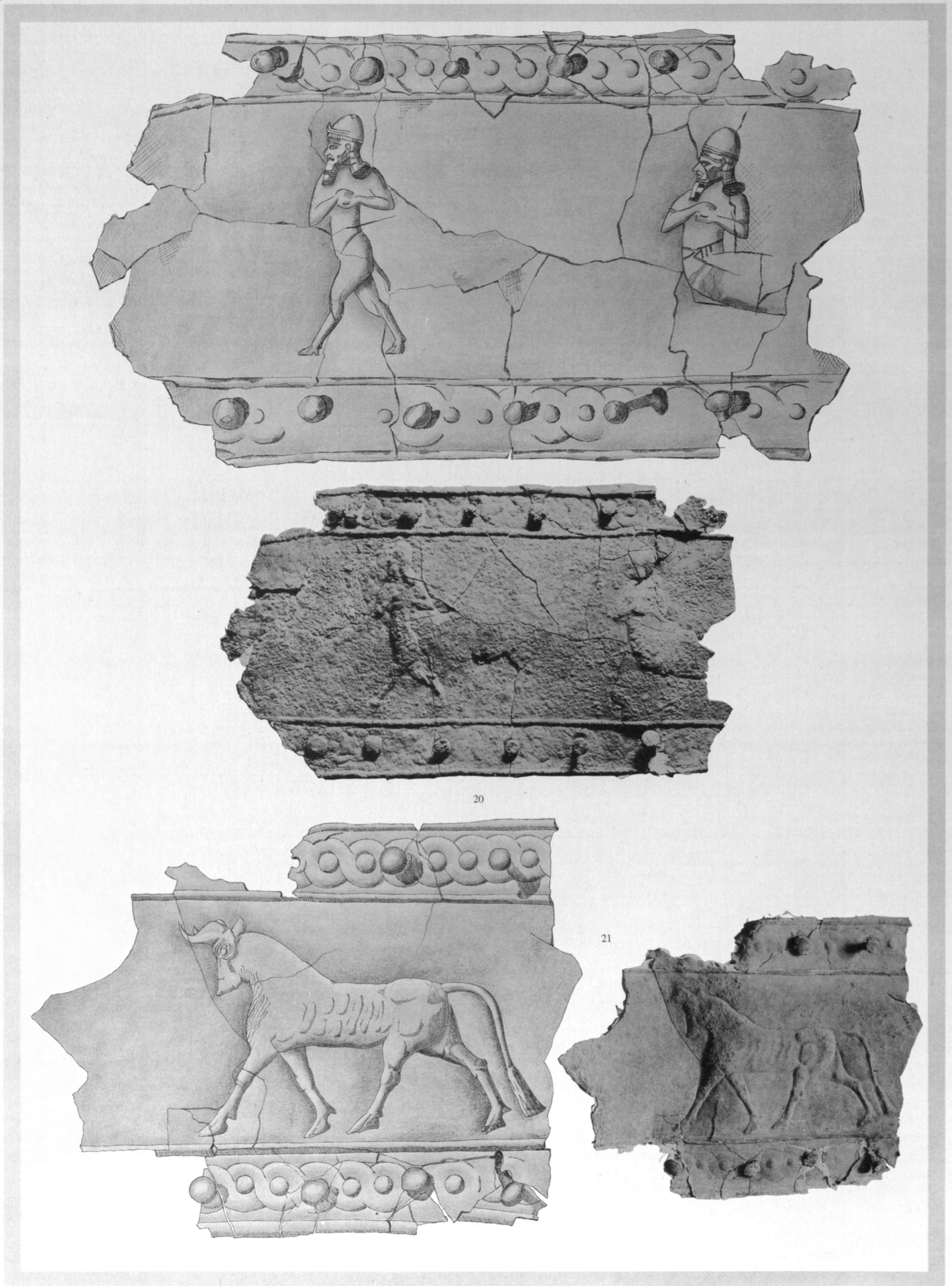
18



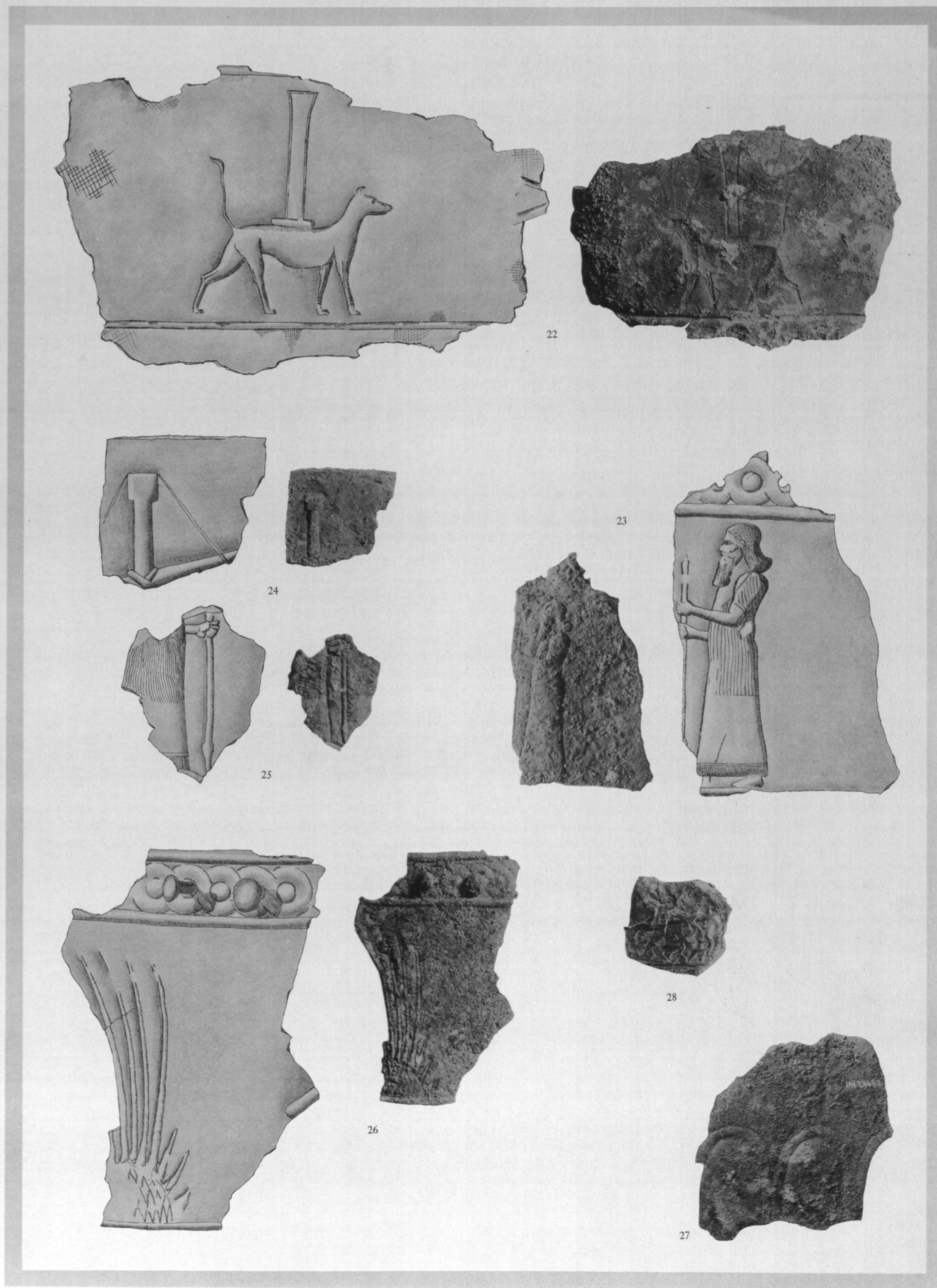
19



MISCELLANEOUS SCULPTURES. SCALE OF NOS. 15-17, 1:5; OF THE OTHERS, 1:10



FRAGMENTS OF BRONZE DOOR PLAQUES. SCALE OF DRAWINGS, 1:2; OF PHOTOGRAPHS, 1:3



FRAGMENTS OF BRONZE DOOR PLAQUES. SCALE OF DRAWINGS, 1:2; OF PHOTOGRAPHS, 1:3



29



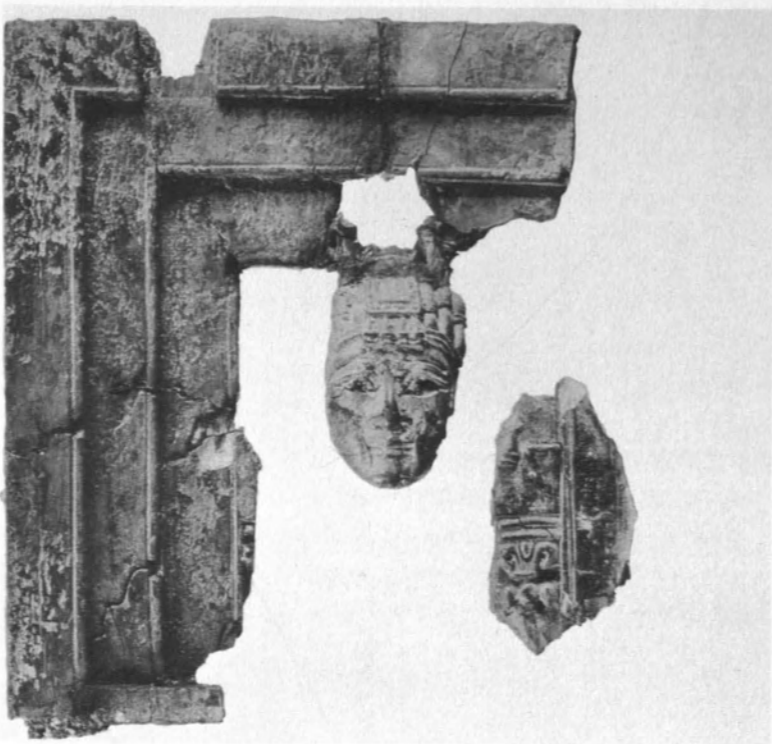
30



31



32



33

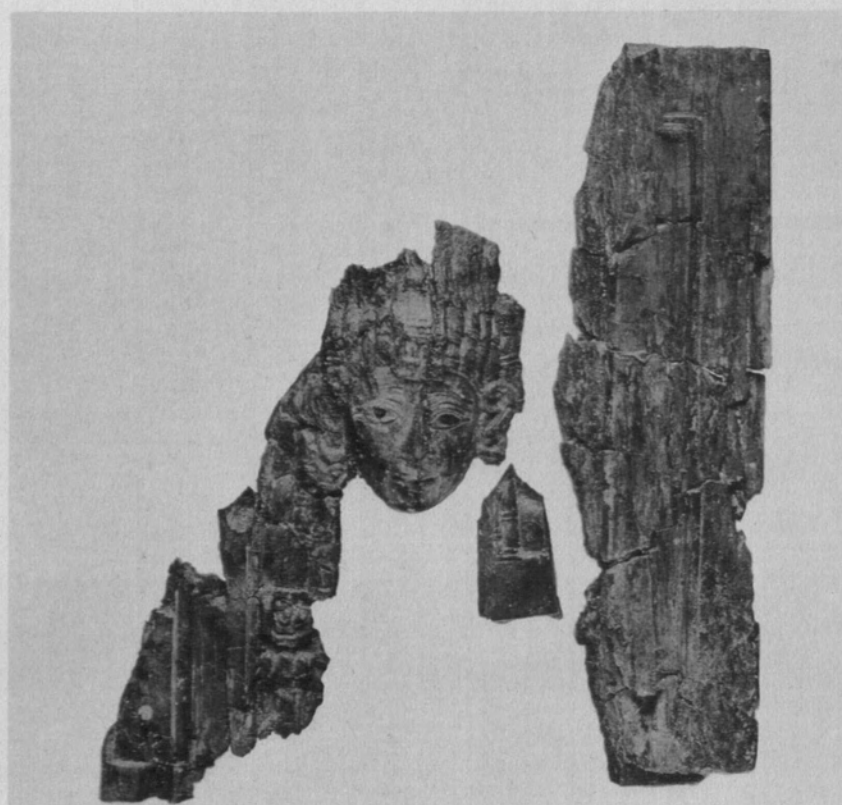


34

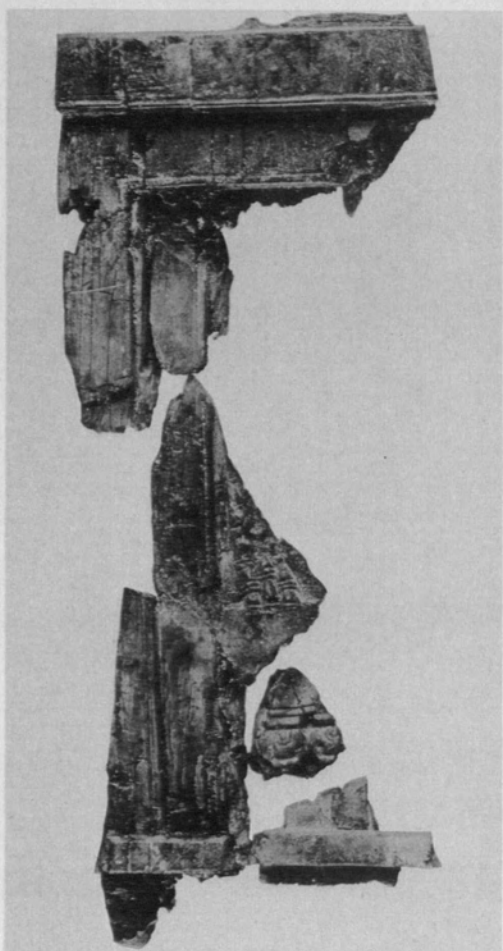
IVORY PLAQUES FROM THE NABU TEMPLE. SCALE, 1:1



35



36



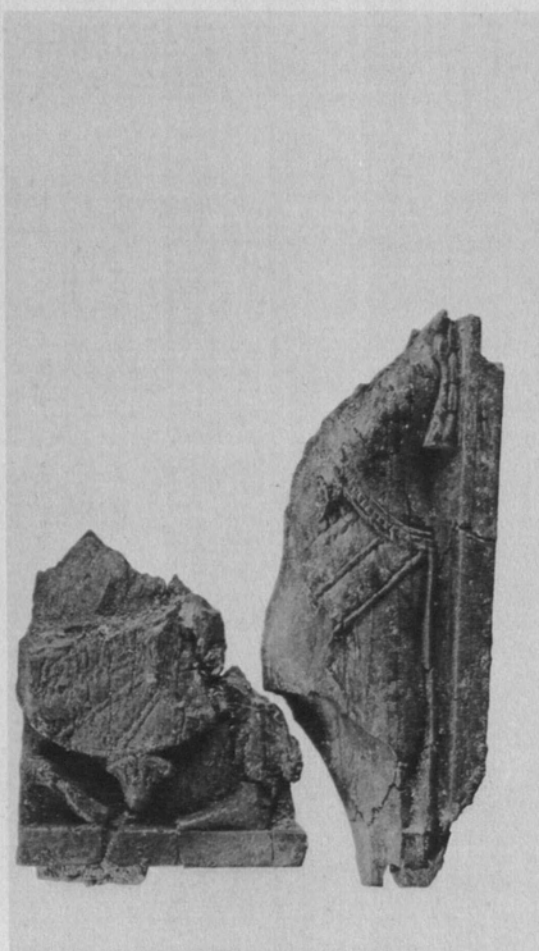
37



38



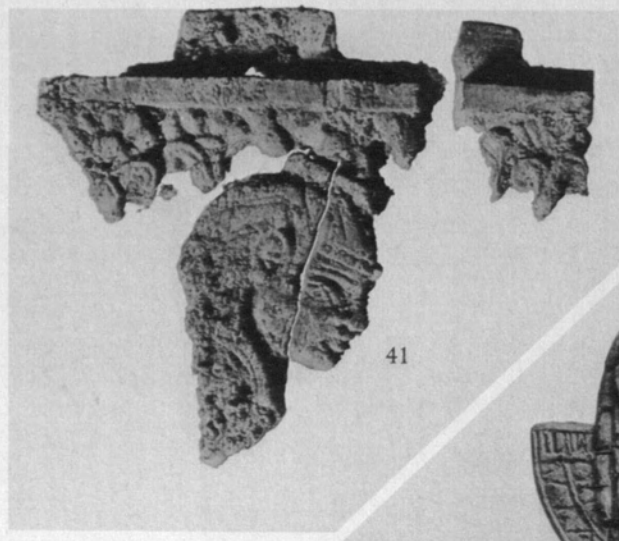
39



40



42



41

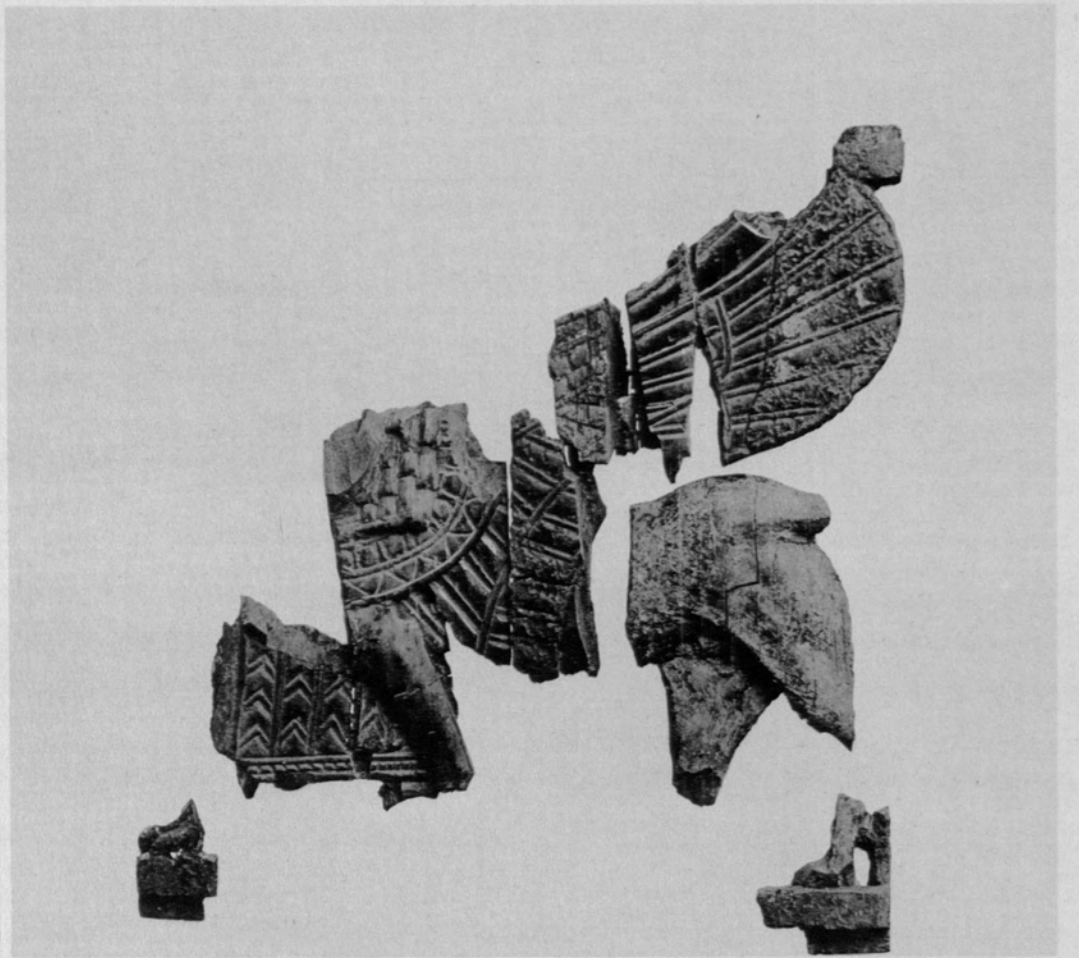


43

IVORY PLAQUES FROM THE NABU TEMPLE. SCALE, 1:1



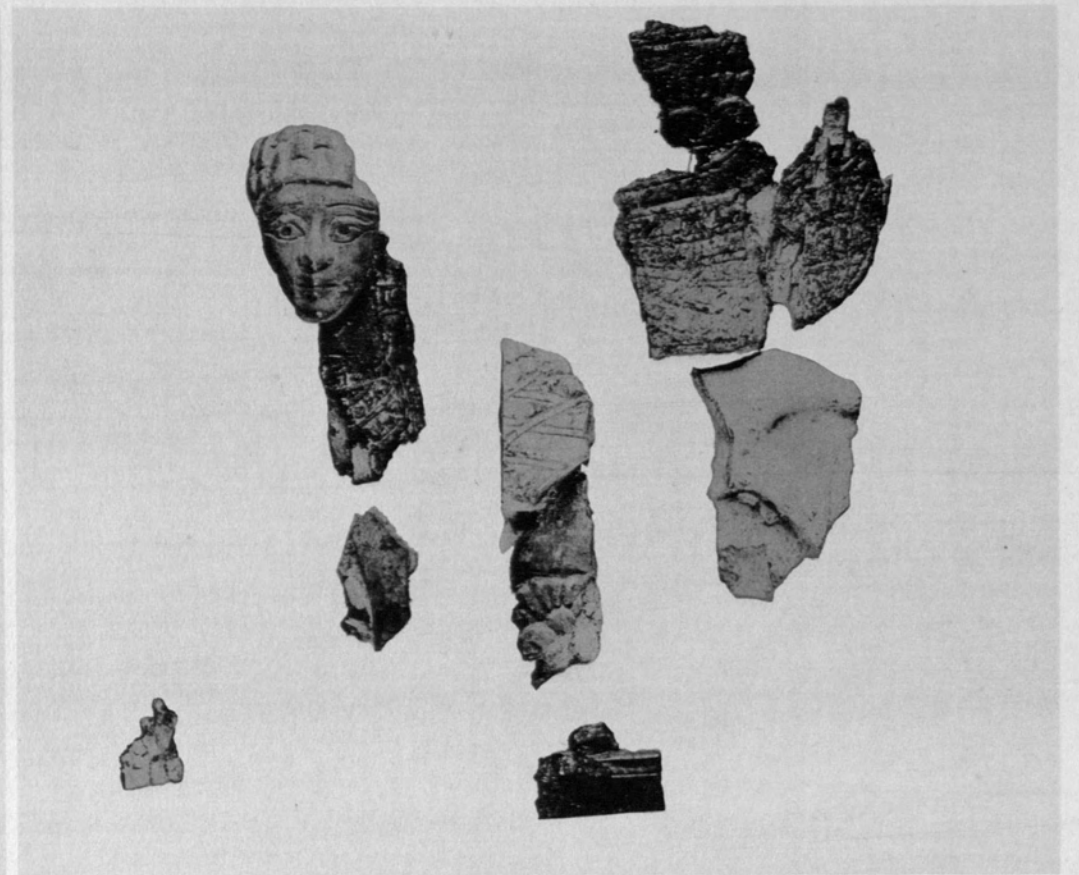
44



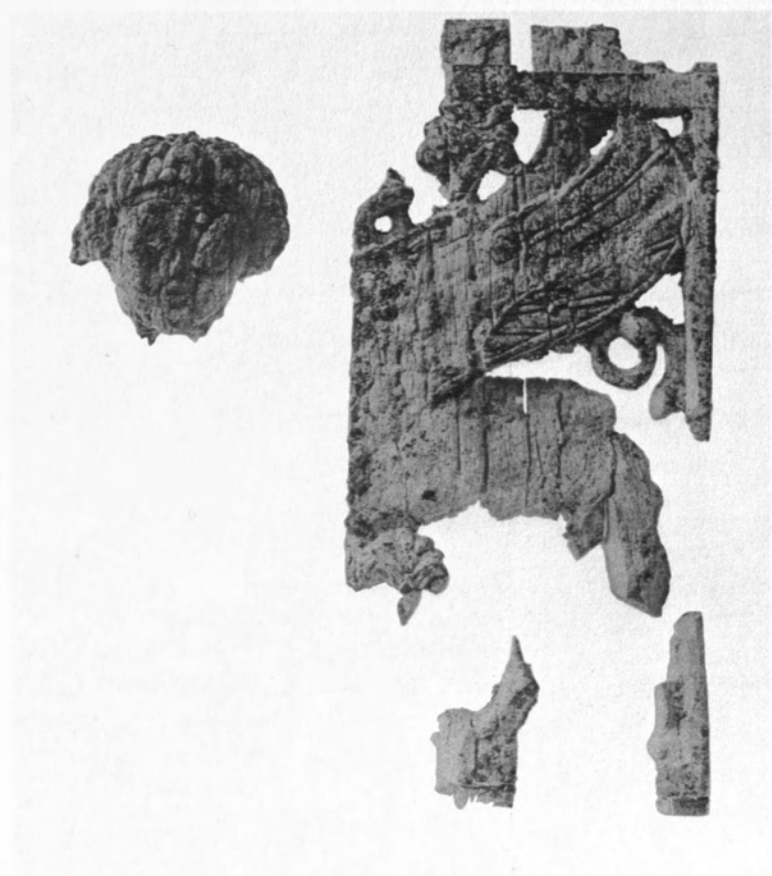
45



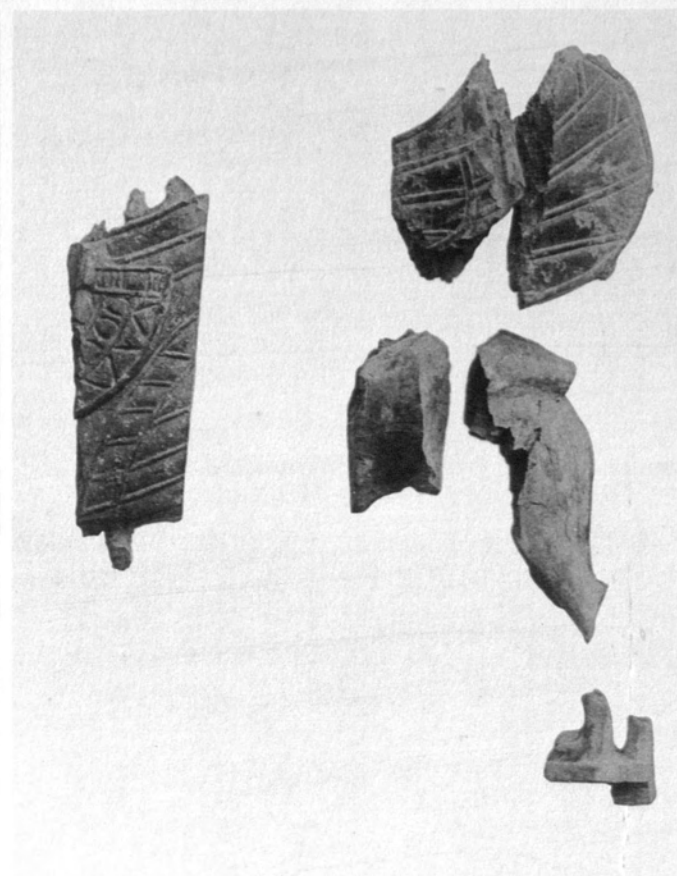
46



47



48

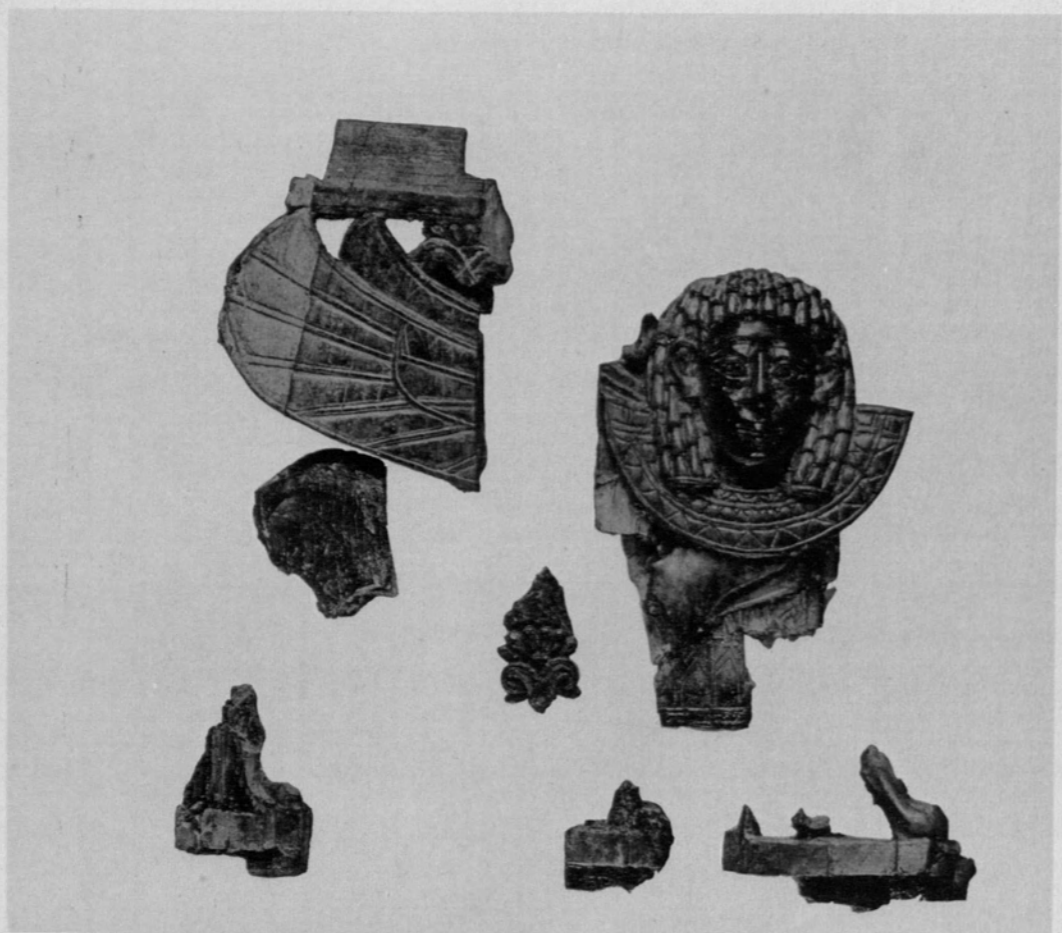


49

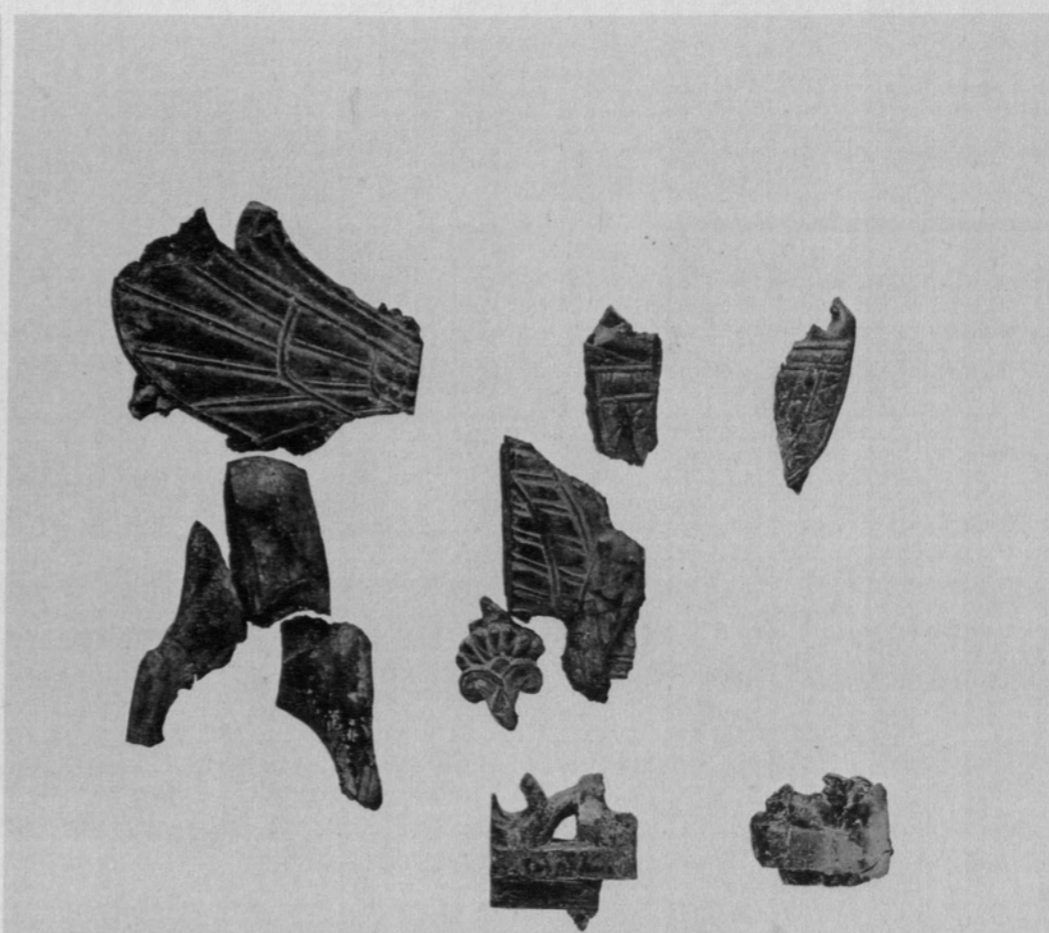


50

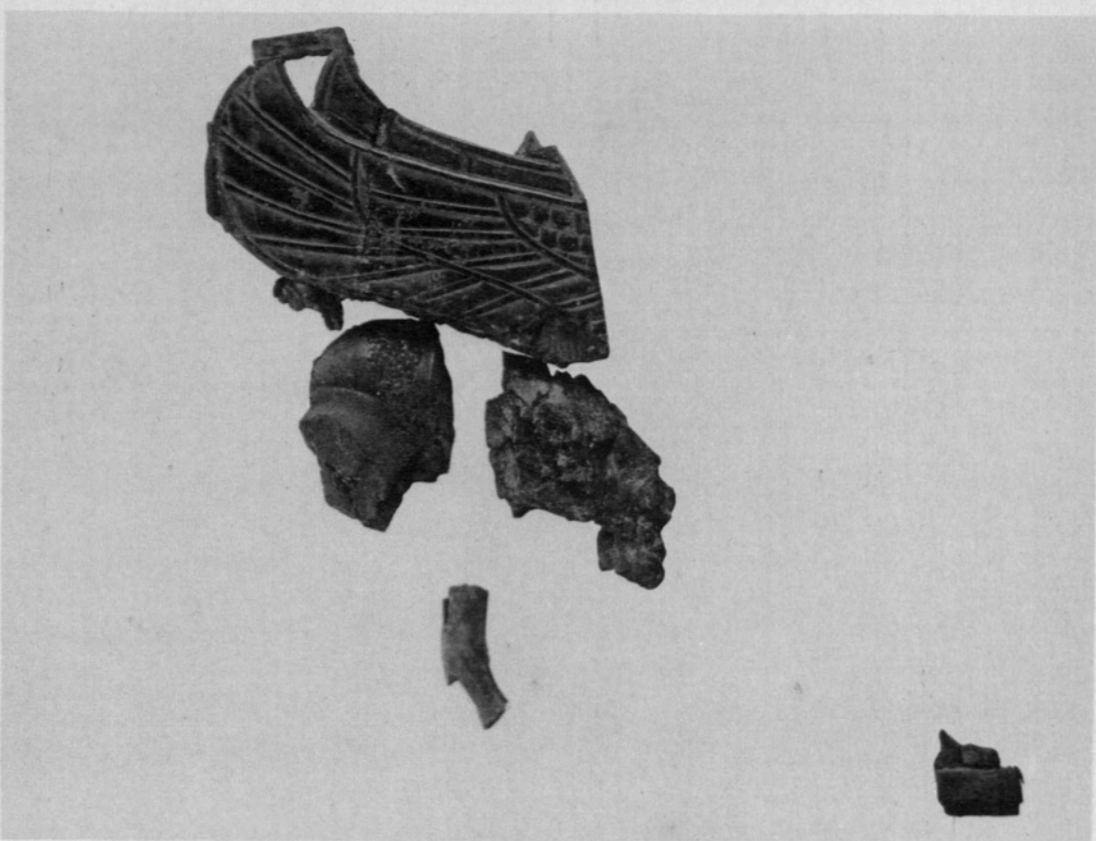
IVORY PLAQUES FROM THE NABU TEMPLE. SCALE, 1:1



51



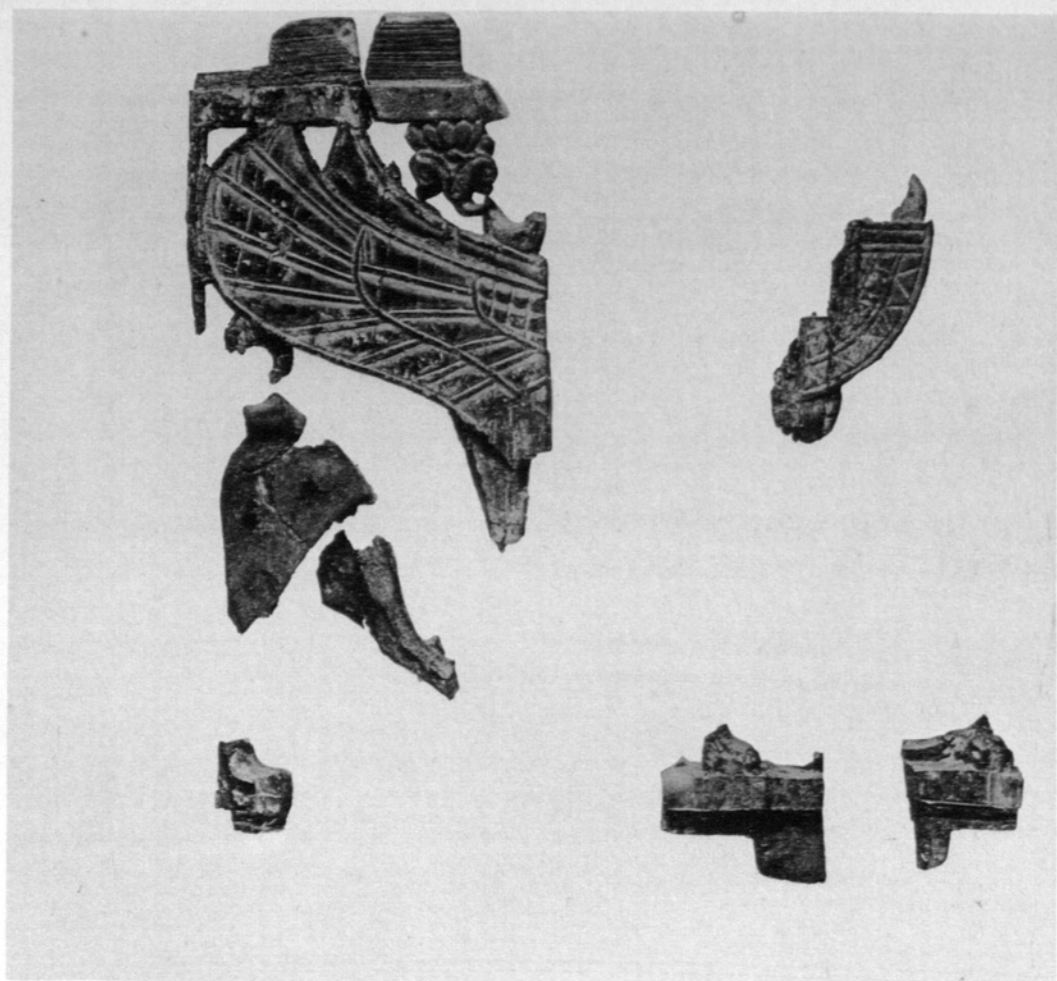
52



53



54

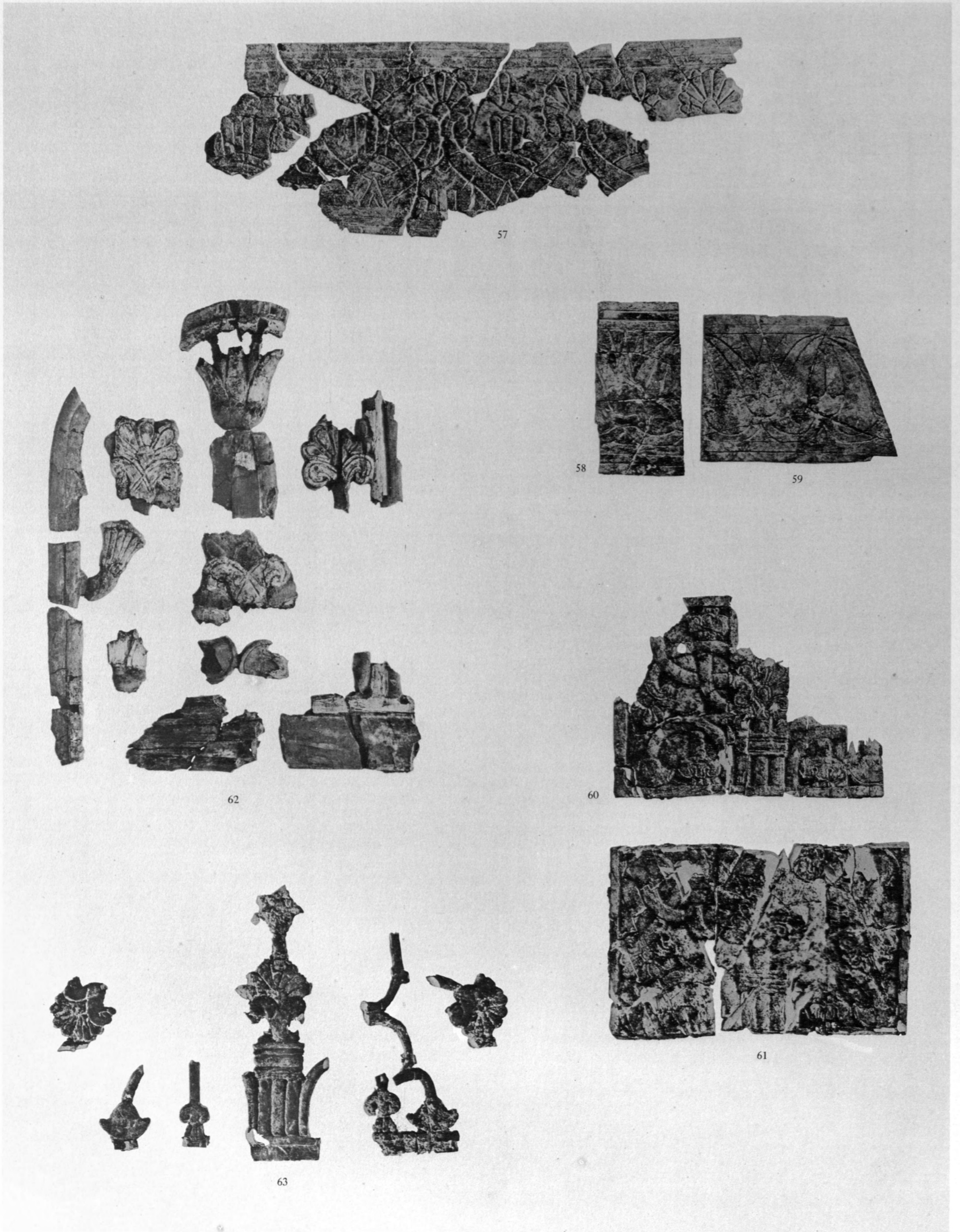


55

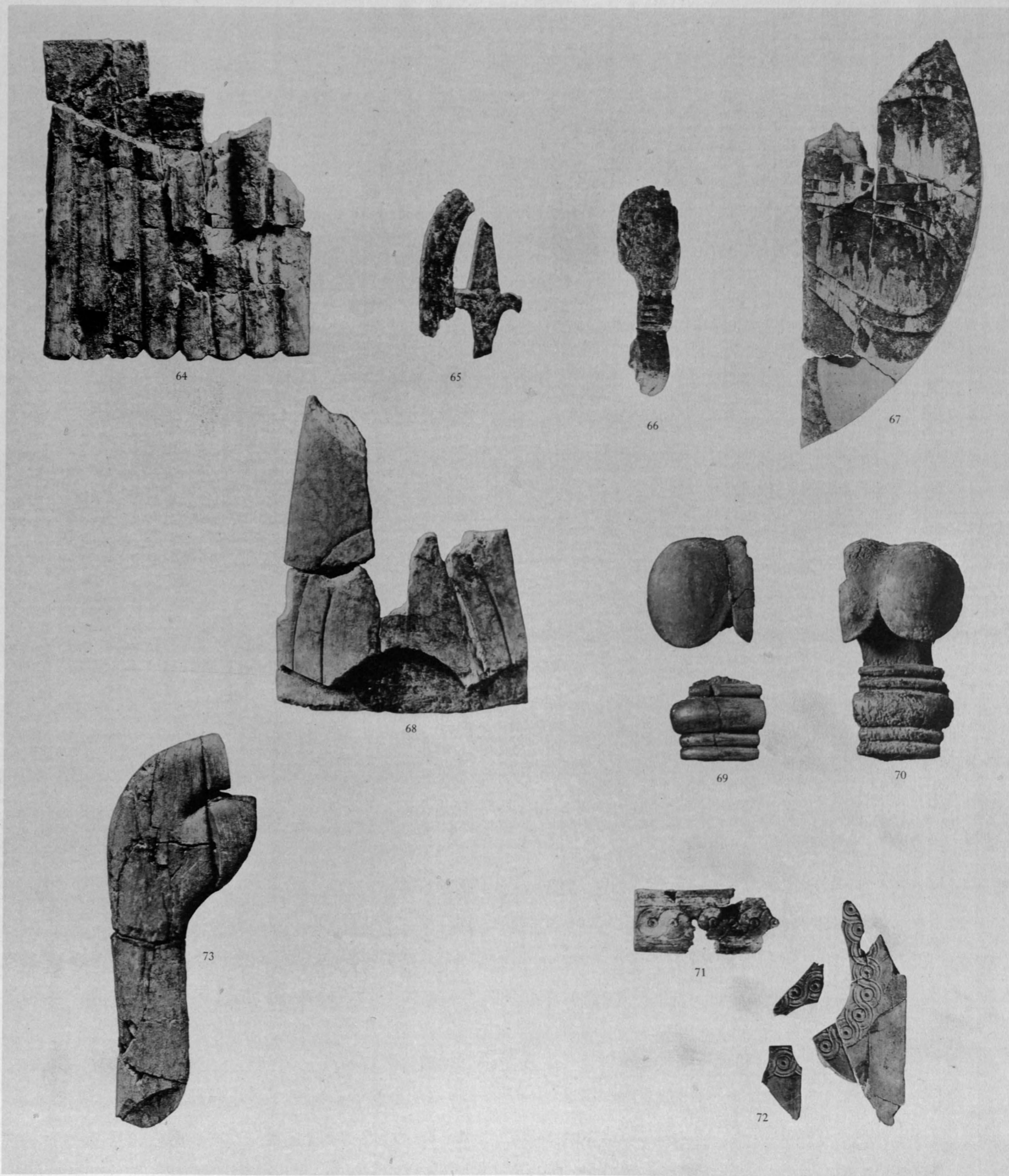


56

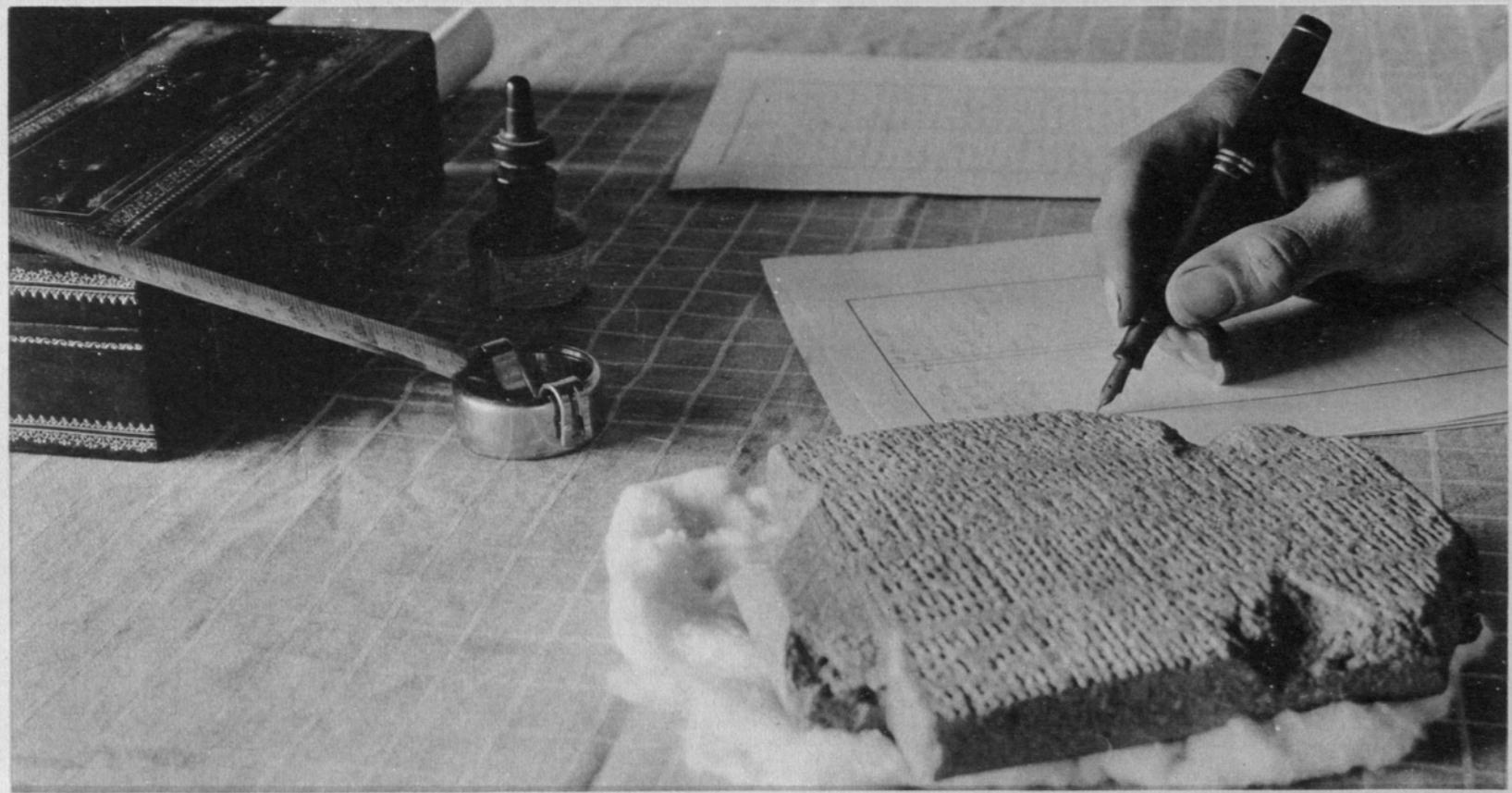
IVORY PLAQUES FROM THE NABU TEMPLE. SCALE, 1:1



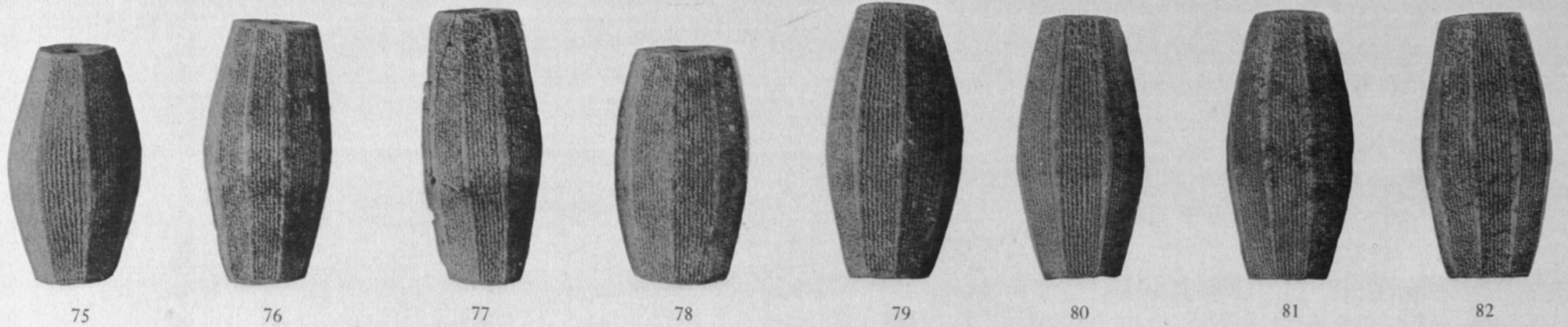
IVORY FRAGMENTS FROM RESIDENCE K. SCALE, 1:1



IVORY FRAGMENTS FROM RESIDENCE K AND PALACE F. SCALE, 1:1



74



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82



IM. 1845.

83



84



85



86



IM. 2369.

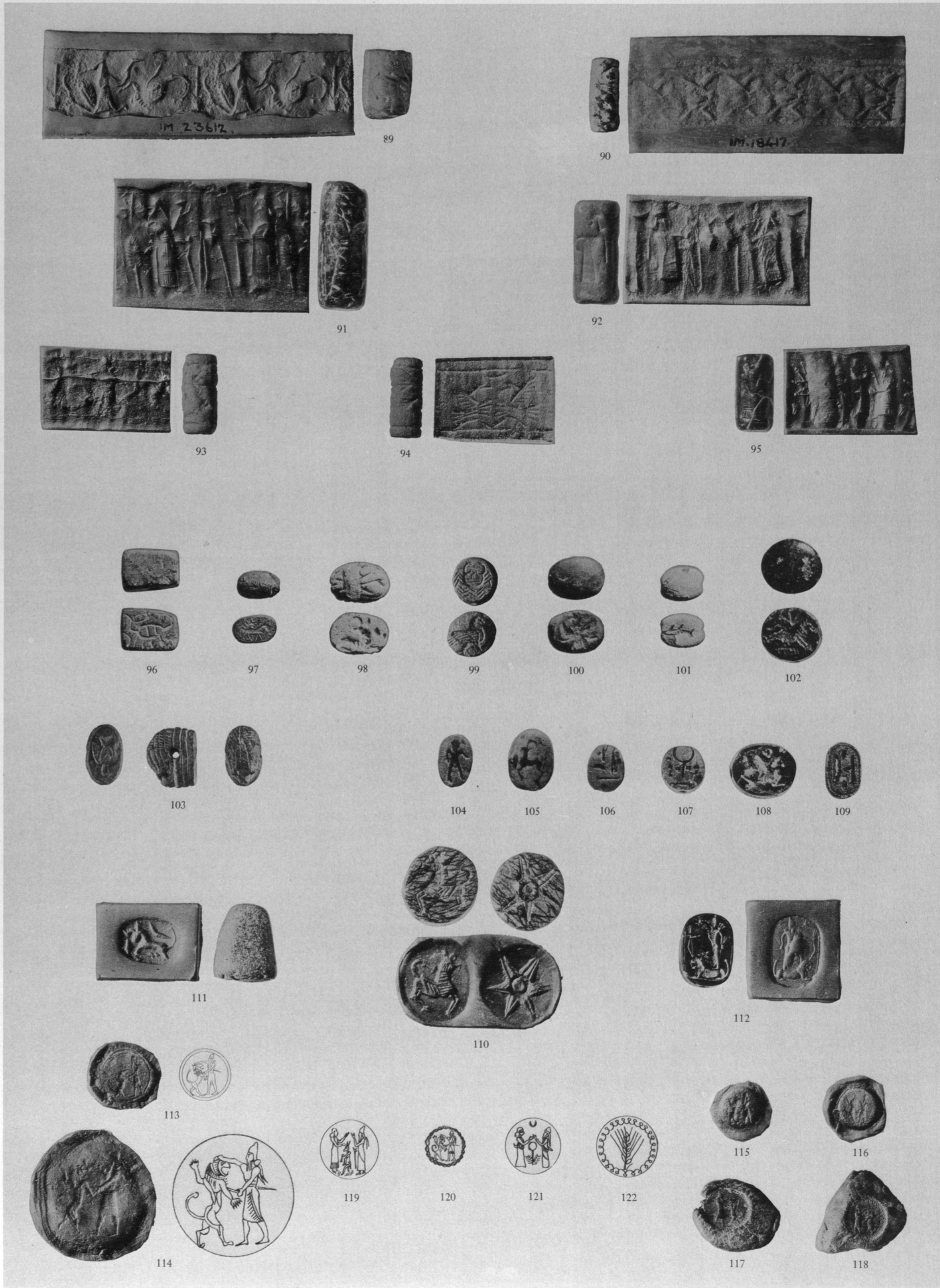
87



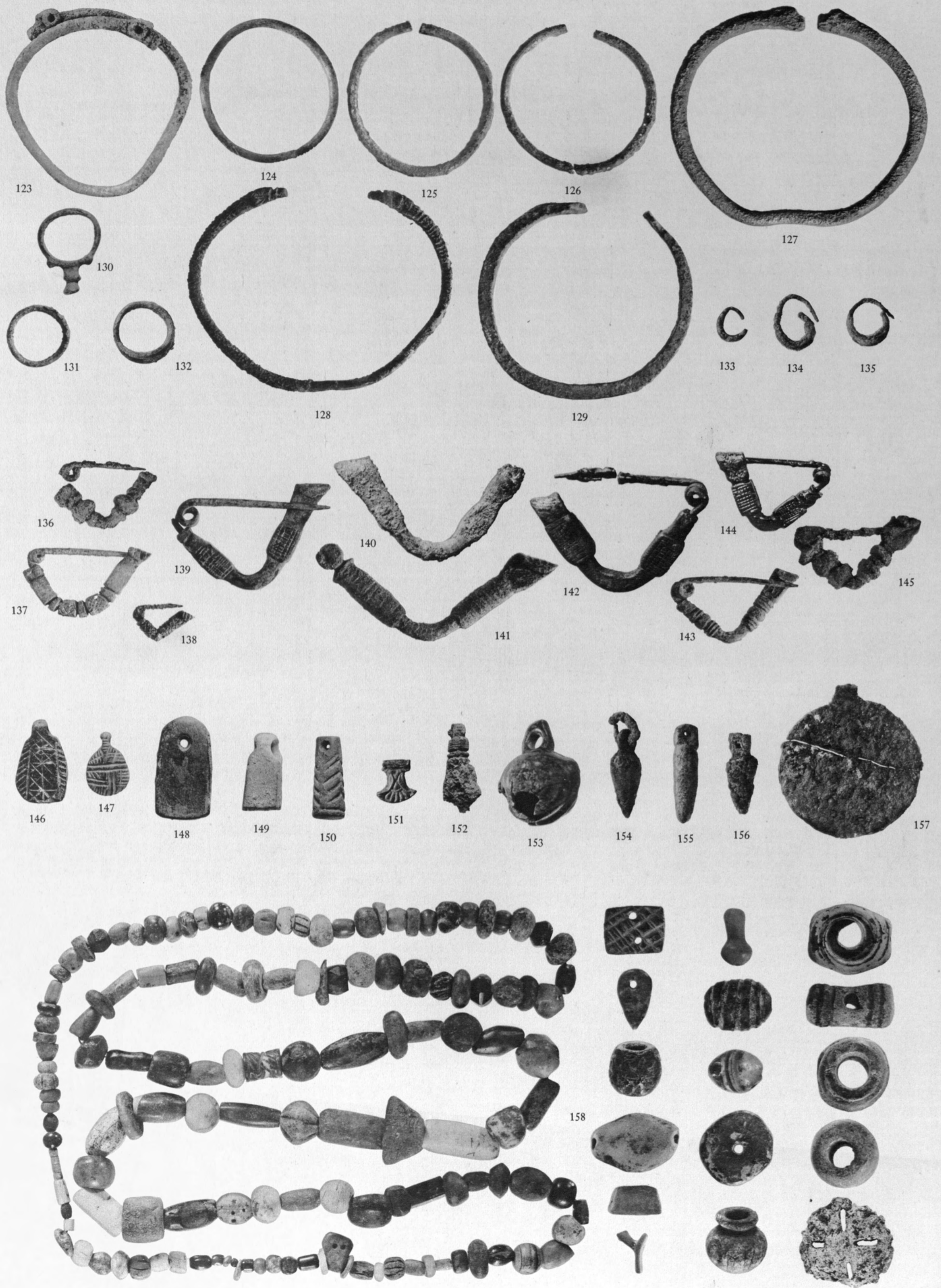
88

IM. 1846.

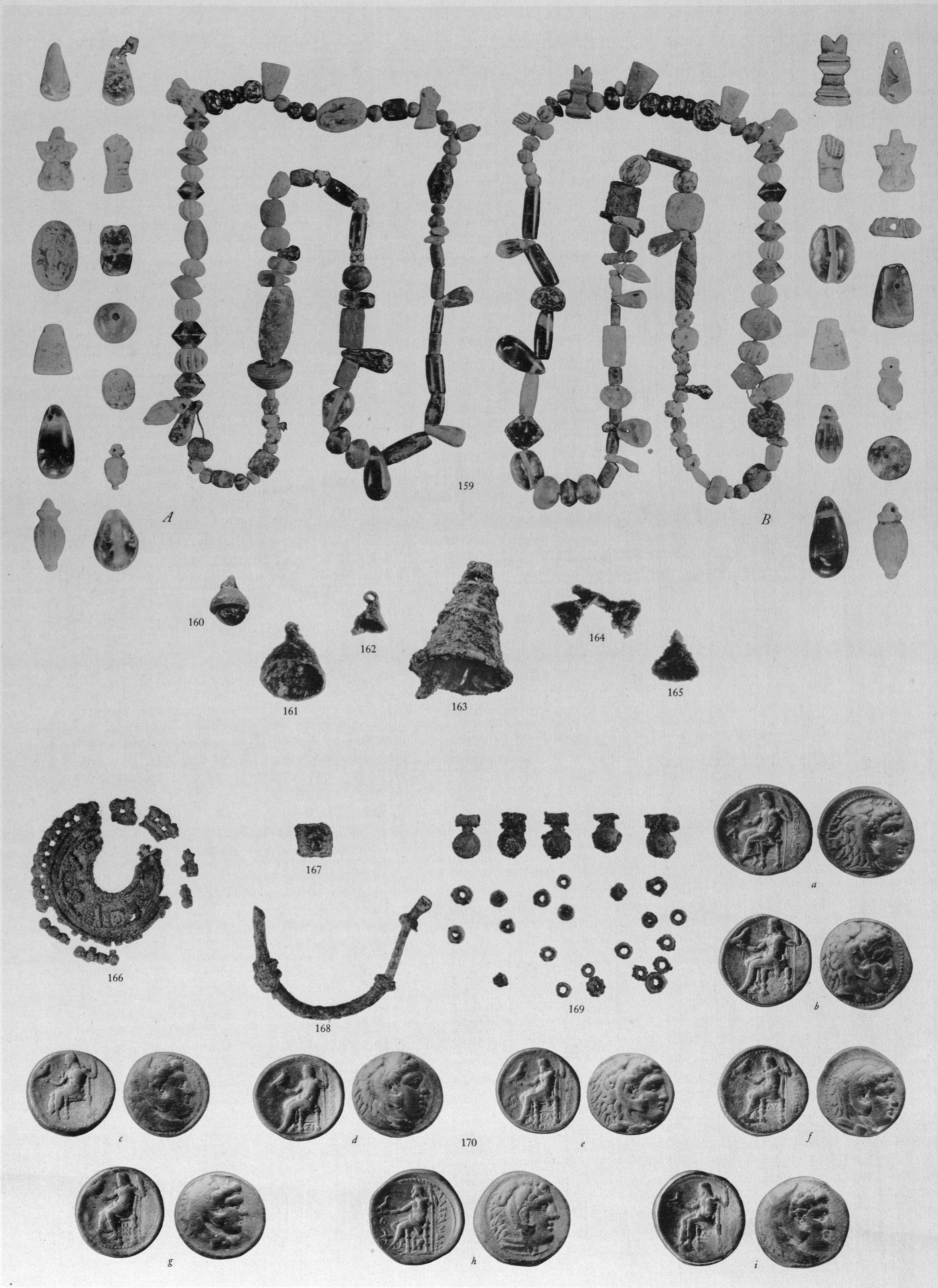
TEXTS AND CYLINDER SEALS. SCALE OF PRISMS (NOS. 75-82), 1:5; OF CYLINDER SEALS, 1:1



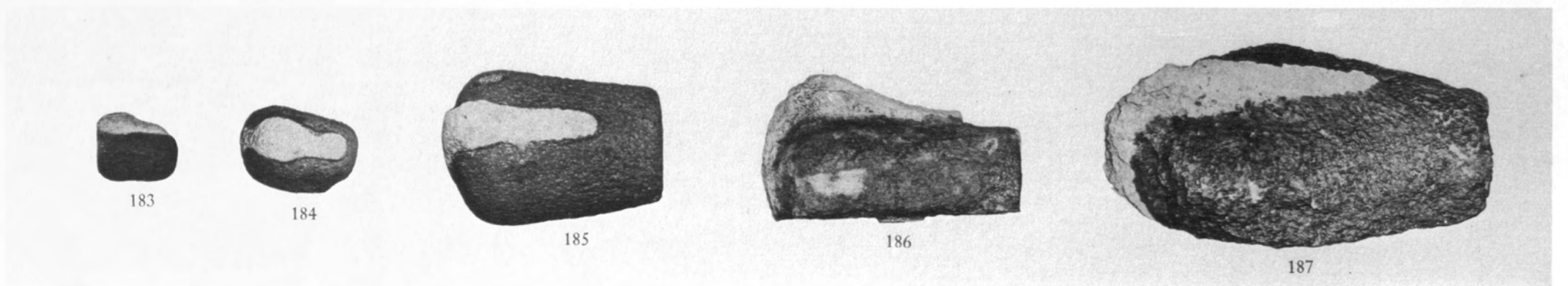
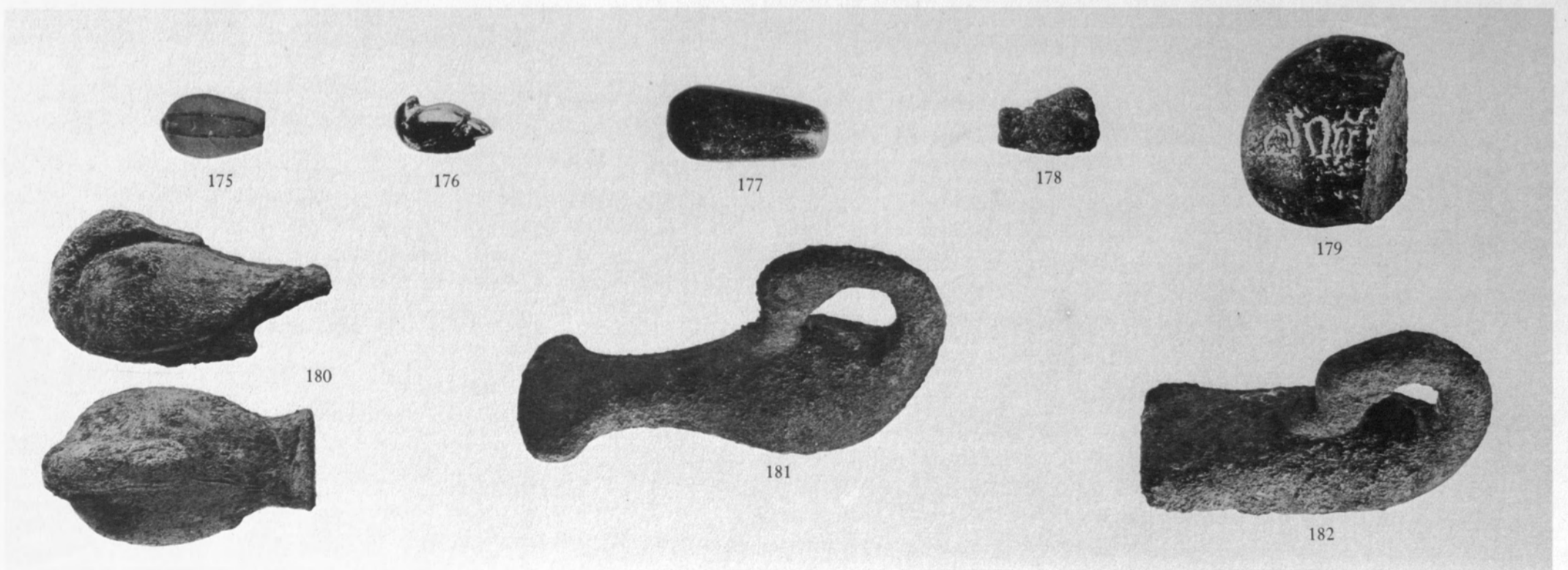
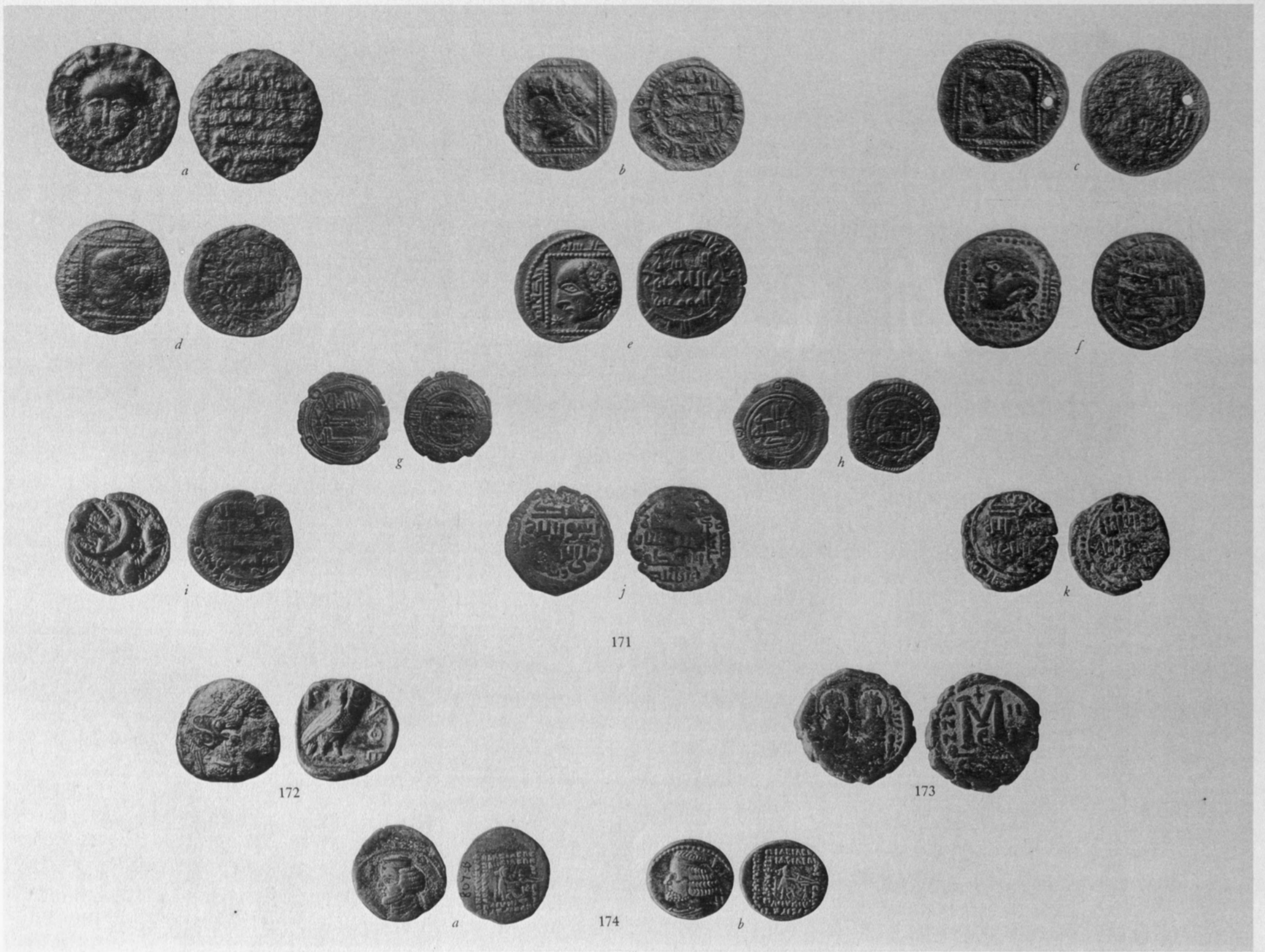
CYLINDER SEALS, STAMP SEALS, AND IMPRESSIONS. SCALE, 1:1



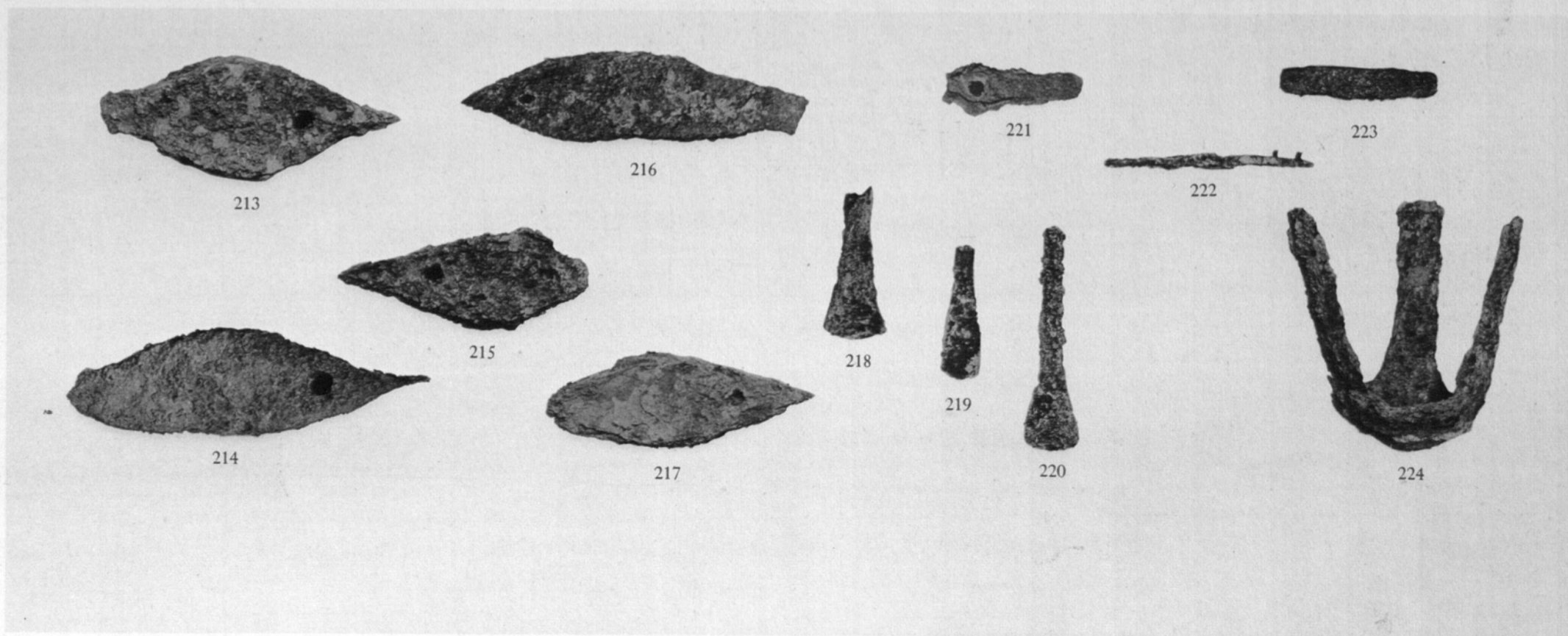
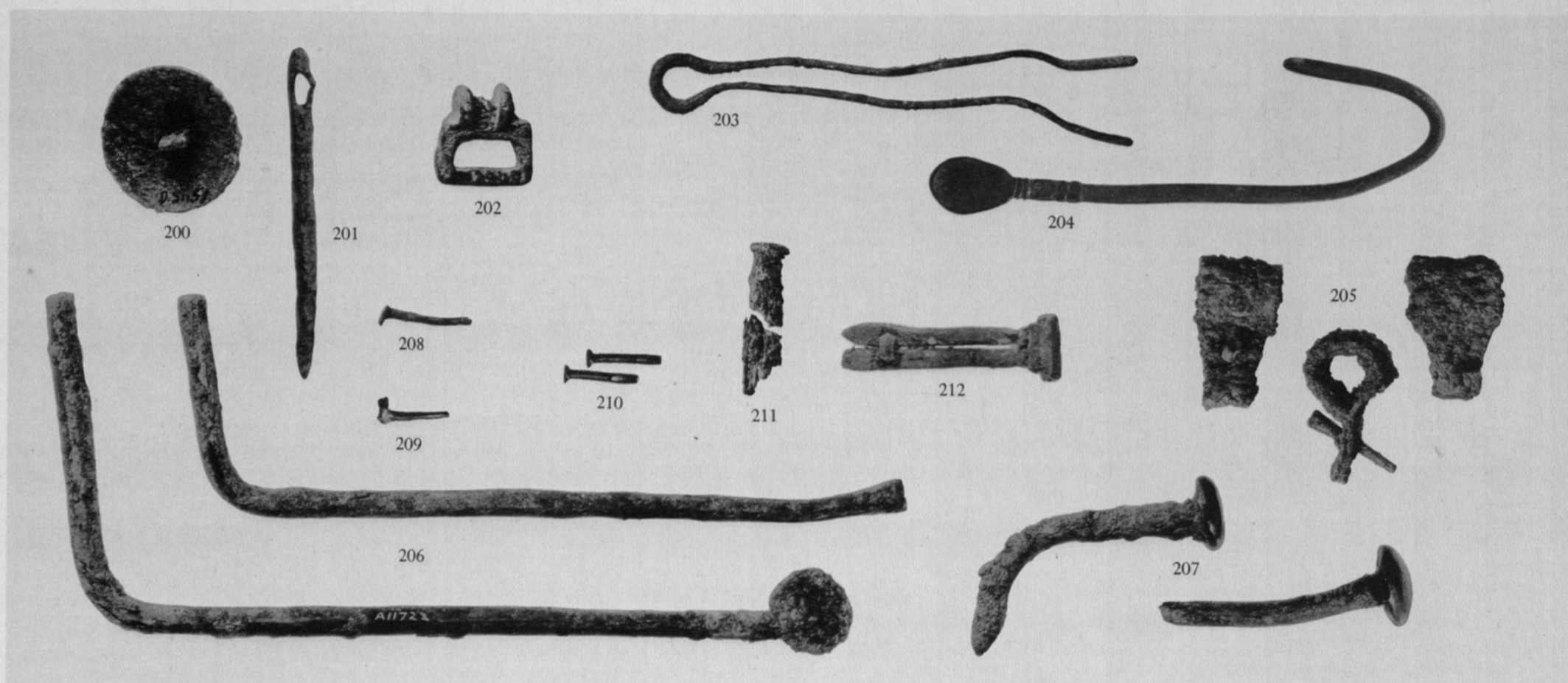
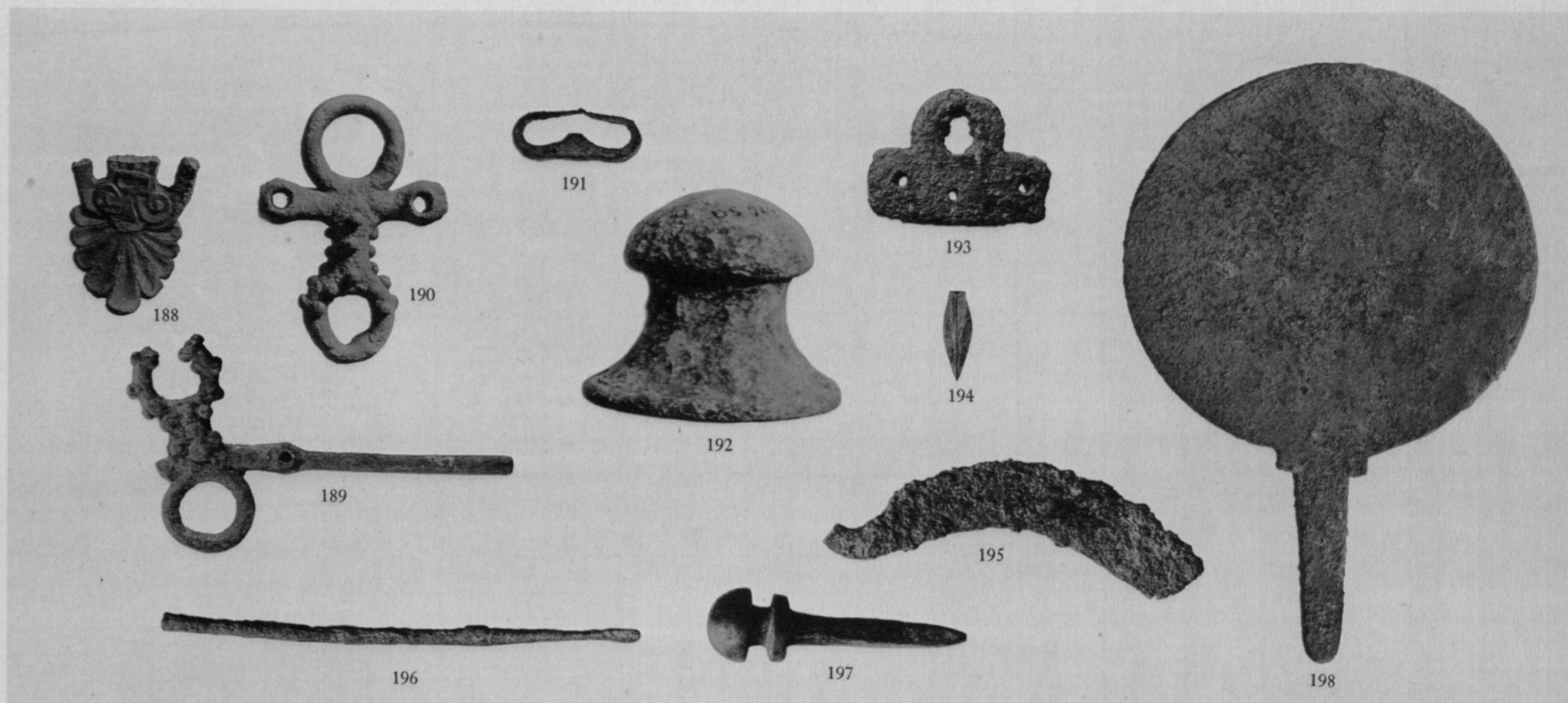
BRACELETS, RINGS, FIBULAE, PENDANTS, AND BEADS. SCALE, 1:1



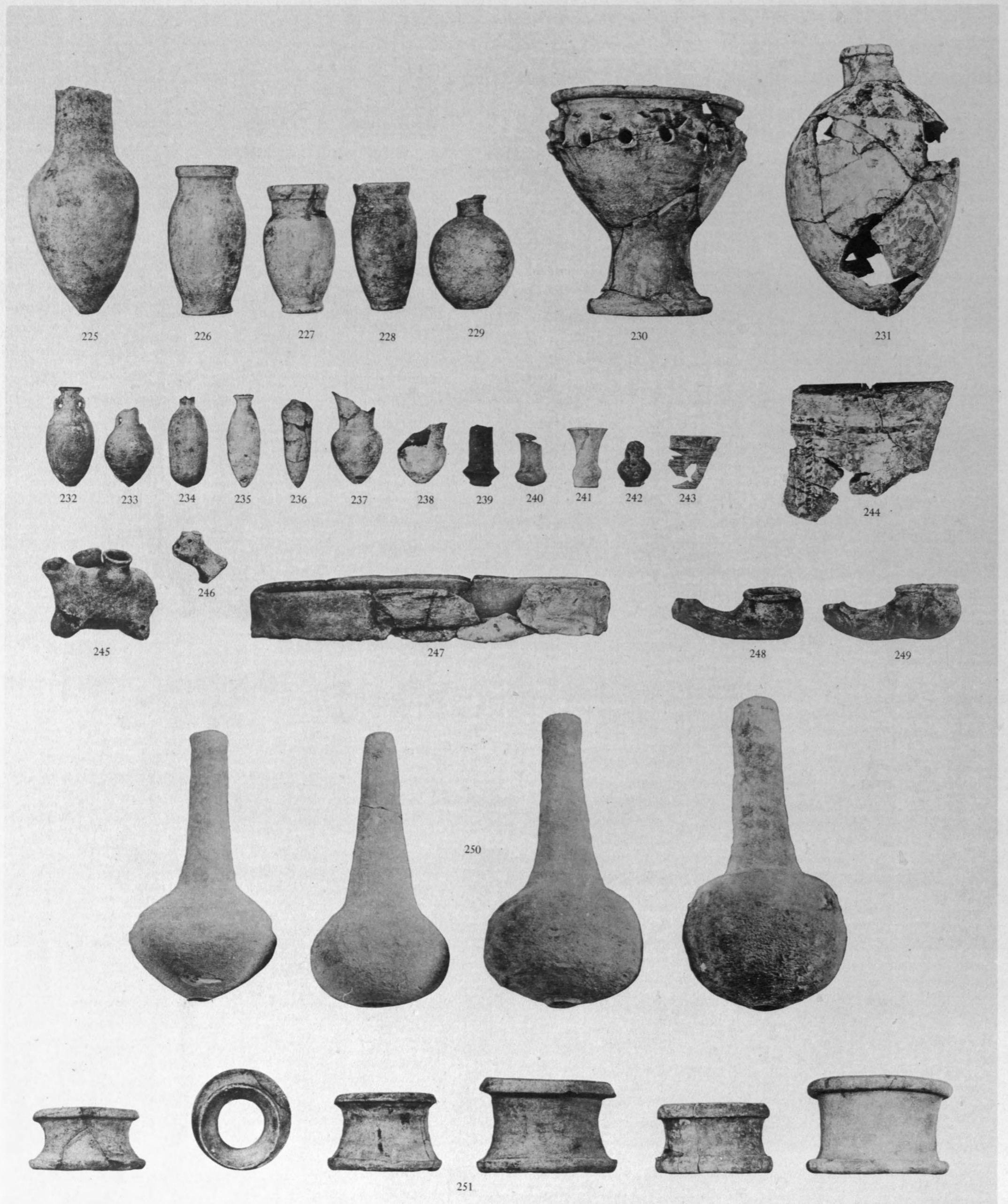
BEADS, AMULETS, AND BELLS (NOS. 159-65) FROM THE WELL IN THE NABU TEMPLE FORECOURT. SCALE OF STRUNG BEADS, 7:10; OF OTHERS, 1:1. SILVER JEWELRY AND COINS (NOS. 166-70) FROM "POCKETS" IN A WALL OF THE NABU TEMPLE FORECOURT. SCALE, 1:1



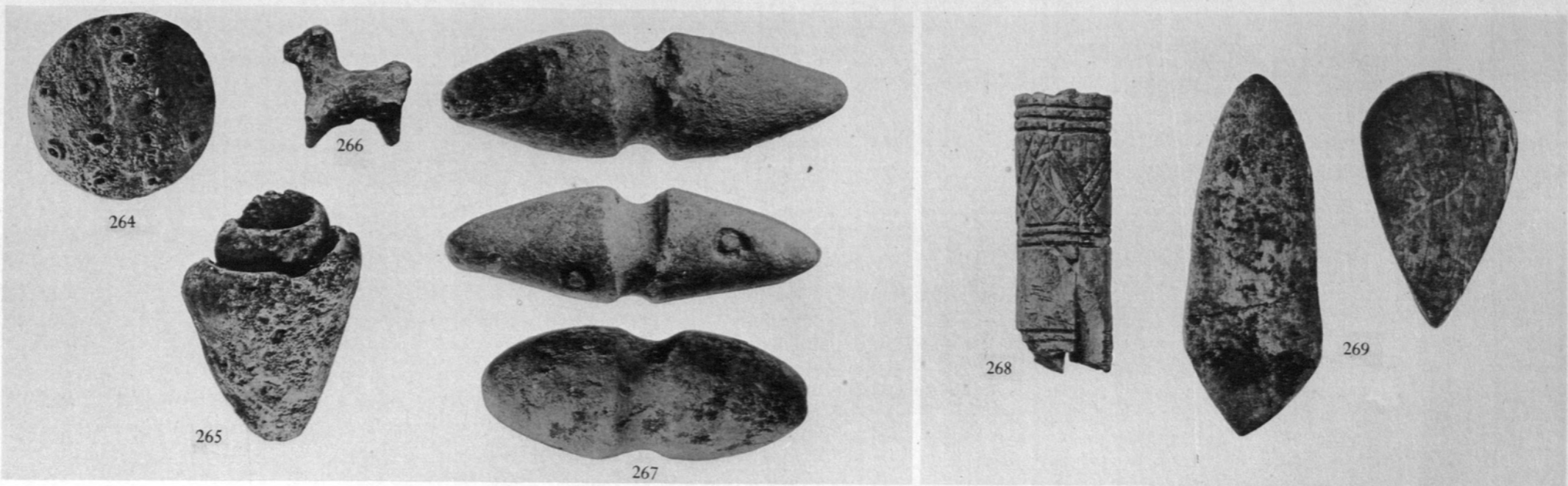
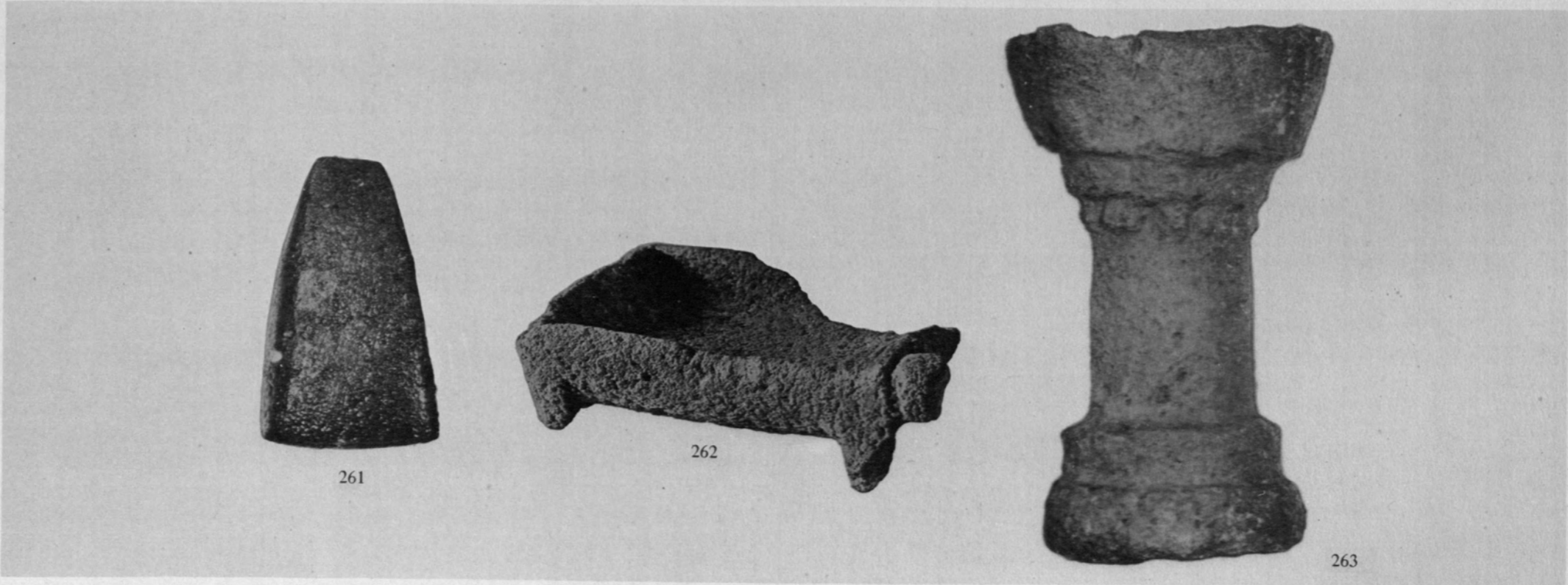
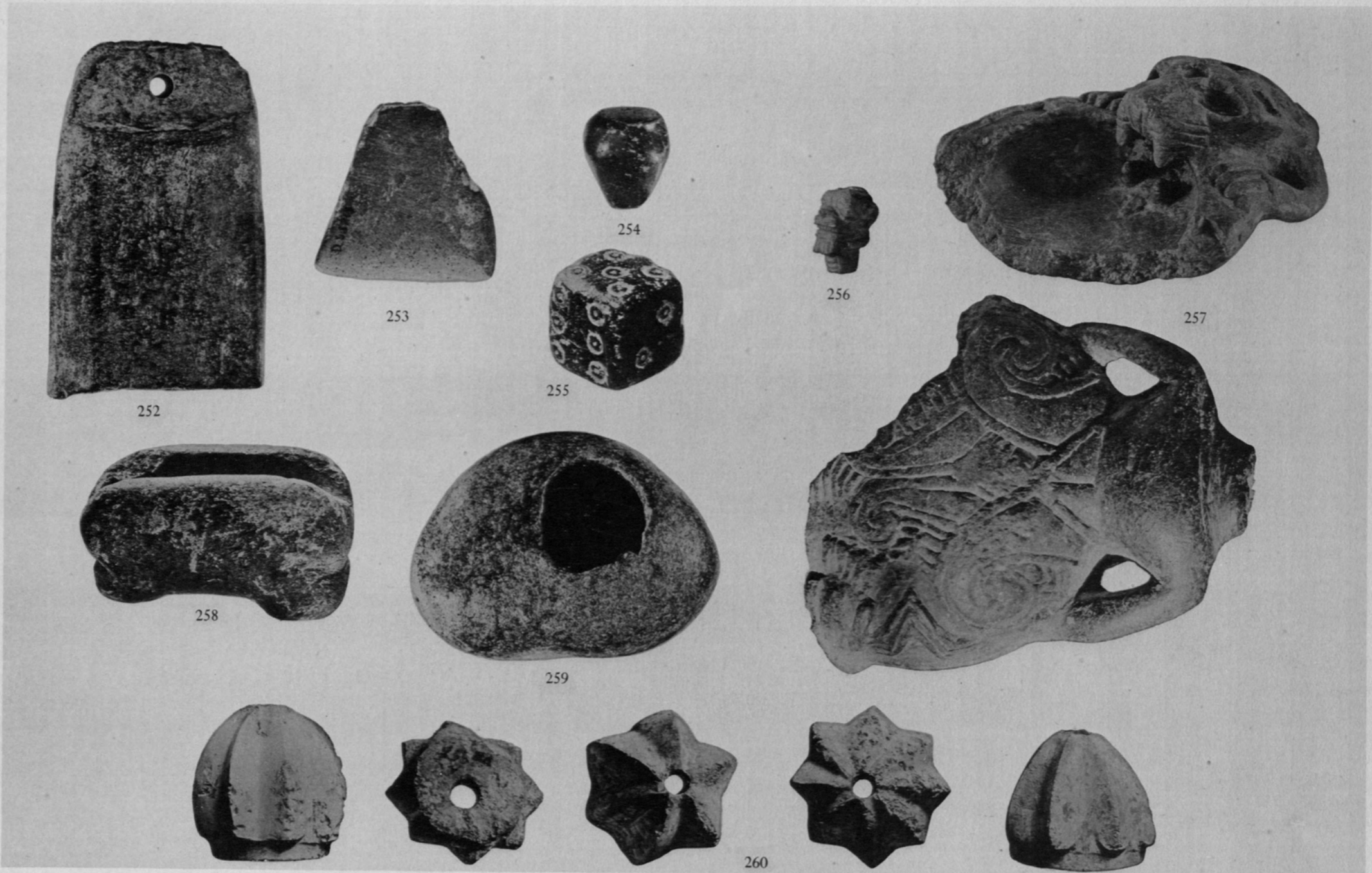
COINS AND WEIGHTS. SCALE OF NOS. 183-87, 1:5; OF THE OTHERS, 1:1



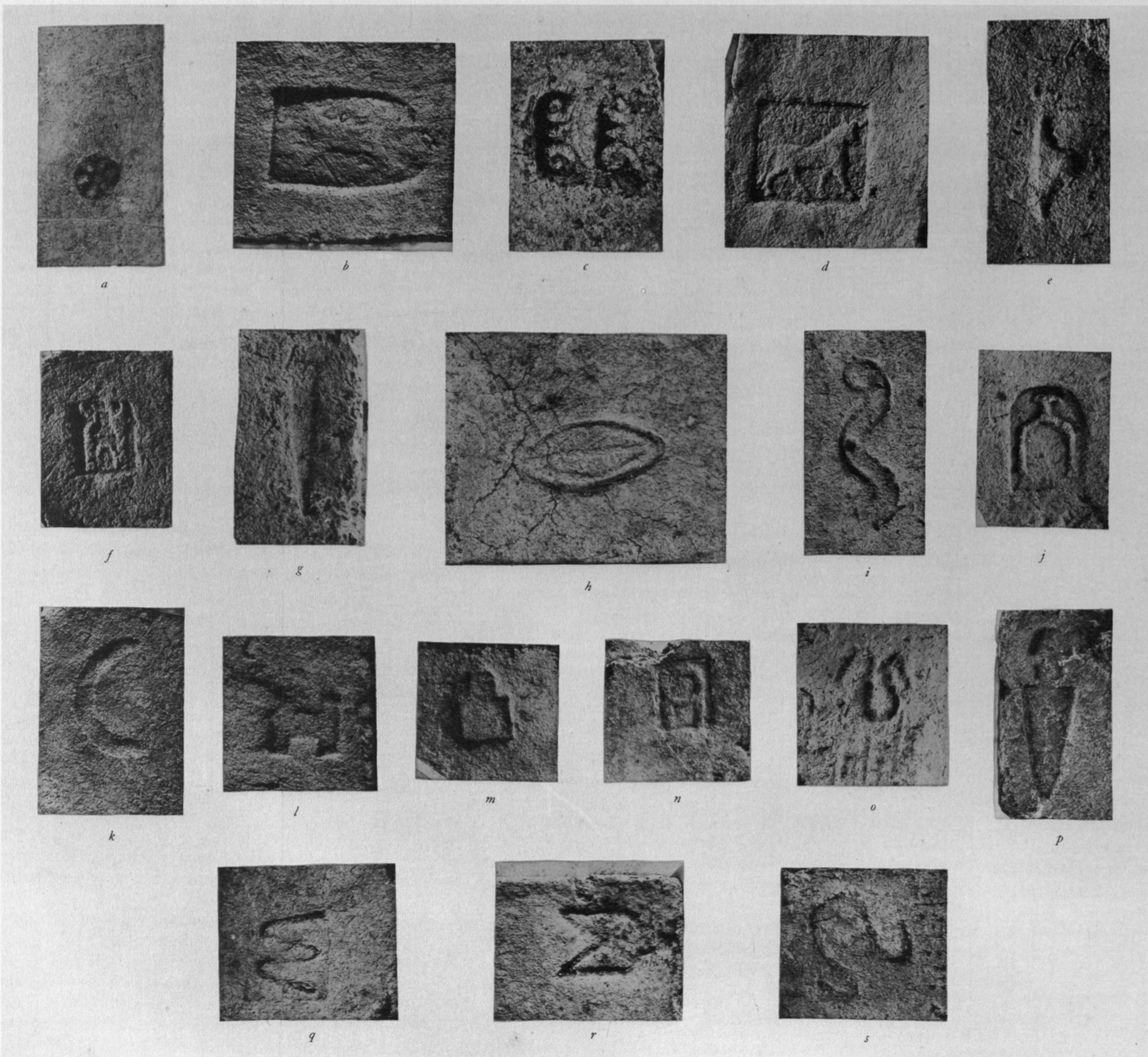
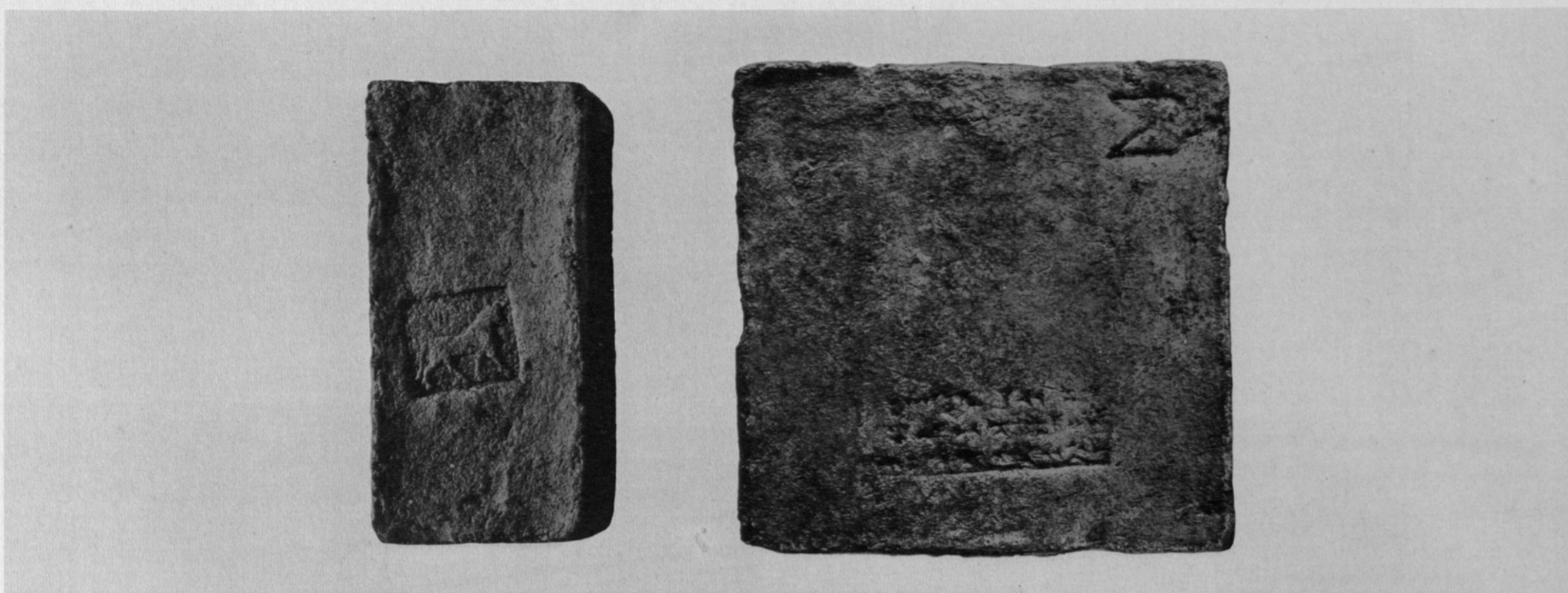
MISCELLANEOUS OBJECTS OF BRONZE, IRON, GOLD, AND SILVER. SCALE OF NOS. 188-98, 1:2; OF NOS. 200-212, 1:1; OF NOS. 213-24, 1:5



POTTERY VESSELS, LAMPS, *SIKKĀTI*, AND JAR STANDS. SCALE, 1:5

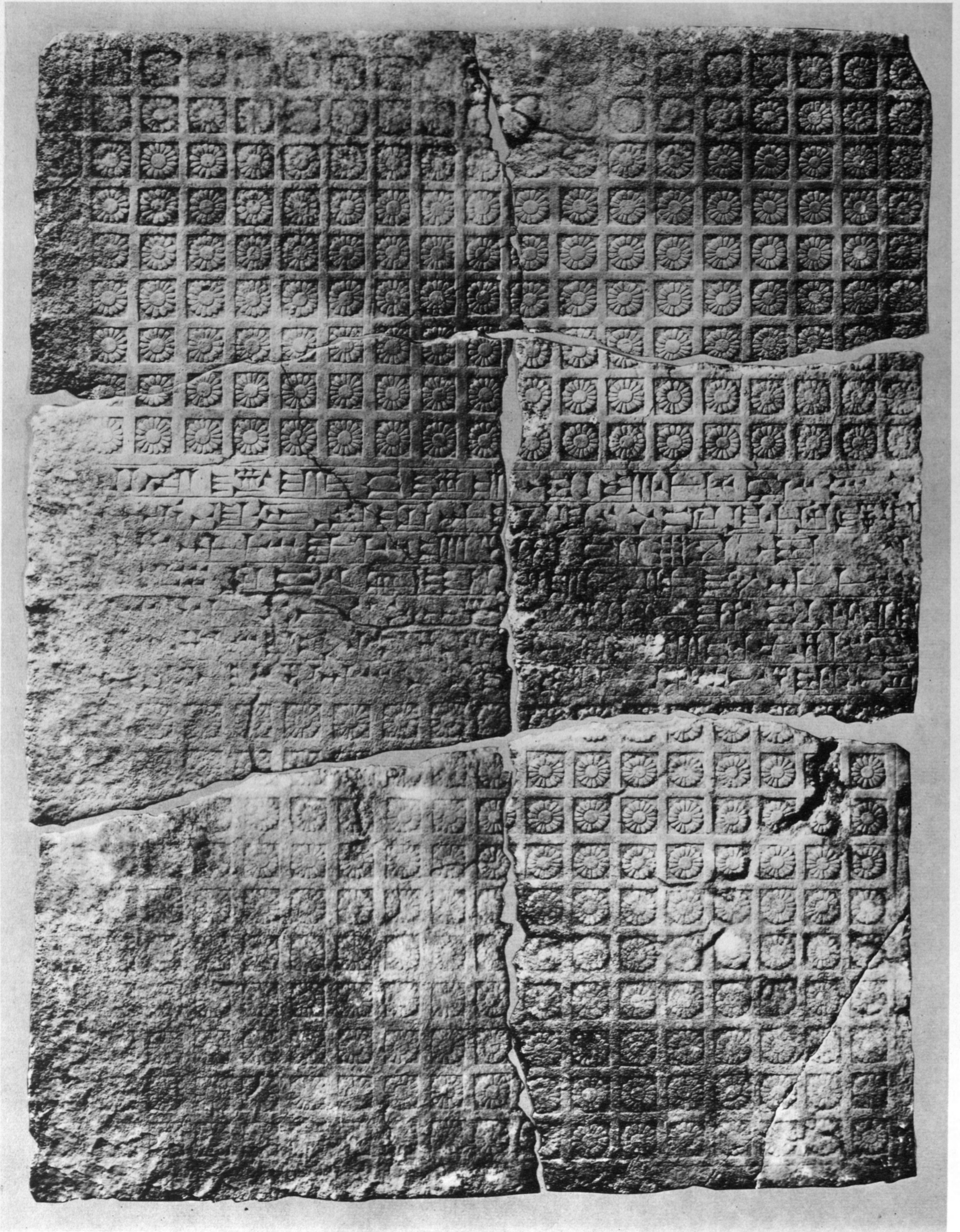


MISCELLANEOUS OBJECTS OF STONE, CLAY, AND BONE. SCALE OF NOS.
 261-63, 1:2; OF THE OTHERS, 1:1



IMPRESSIONS STAMPED IN BAKED BRICKS. SCALE OF COMPLETE BRICKS (AT TOP), 1:4; OF IMPRESSIONS, 3:8

VIII
INSCRIPTIONS



THE THRESHOLD BETWEEN ROOM 116 AND THE CENTRAL COURT OF RESIDENCE L
THE INSCRIPTION IDENTIFIES SINAHUSUR AS SARGON'S BROTHER AND GRAND VIZIER

VIII INSCRIPTIONS

Inscriptional material aside from that recovered from Sargon's palace is peculiarly scarce at Dur Sharrukin. Correspondence between the capital and the outposts of a far-flung empire must have been prolific, while the economic life of the capital alone must have involved many written documents. Yet few texts of these types have been recovered from any of the excavated buildings of Sargon's capital. Were we to judge Sargon's reign solely on the basis of the great majority of the texts retrieved from the city of his making, we should consider his life as king devoted exclusively to battle and to the construction of Dur Sharrukin. Rare inscriptions of historic, religious, and economic character have, however, fortunately been found throughout the citadel buildings. Many more such documents dating to his reign have been recovered from Nineveh.¹ It is reasonable to assume therefore that whatever libraries and archives Dur Sharrukin possessed were upon Sargon's death immediately

transferred to Nineveh, where they doubtless were of great help to those who continued the administration of the empire.

Little need be said in this volume about the texts salvaged from the debris of our recently excavated buildings. The architectural inscriptions, with the exception of the repetitive and heretofore published texts appearing upon baked bricks,² we present herewith in copy, transliteration, and translation by Dr. Jacobsen, who studied them *in situ*. The "movable" inscriptions upon tablets, prisms, pottery, etc. we present merely as a list originally prepared by Dr. Jacobsen in the field during the limited time at his disposal and subsequently expanded by Dr. F. W. Geers and other members of the Assyrian Dictionary staff of the Oriental Institute. Those texts meriting publication will appear after future study. In listing the inscriptions we indicate not only their provenances but their final dispositions whenever possible.

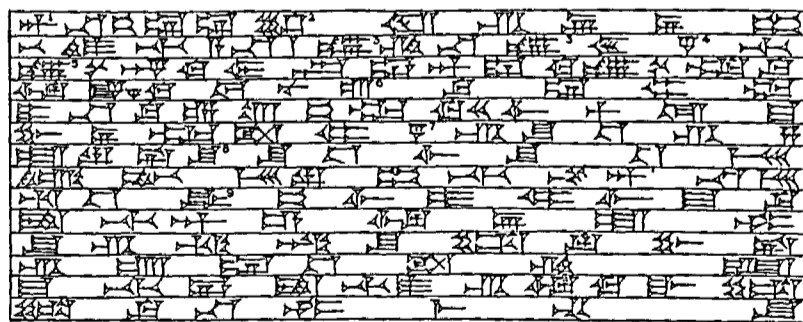
ARCHITECTURAL INSCRIPTIONS

NO. 1

INSCRIPTION UPON THRESHOLDS AND UPON AND BESIDE STEPS IN THE SANCTUARY AREA OF THE NABU TEMPLE (H)

- A* (reproduced below) on front of left-hand platform flanking the steps from main cella (Room 21) to main sanctuary (Room 22).
B on treads of same steps.
C on front of right-hand platform flanking same steps.
D on threshold between anteroom (Room 19) and side cella (Room 23).
E on top of right-hand platform flanking the steps from side cella (Room 23) to side sanctuary (Room 24).

Only the best preserved five copies, listed above, have been drawn on for variants. Most of the latter are merely in the forms of the signs. For the various occurrences see pp. 61-63 and Pls. 25 *C* (for copy *B*), 26 *E*, and 27 *A* (for copy *E*). All are *in situ*.



¹B. 𒀭. ²E. 𒀭. ³C. 𒀭. ⁴B. 𒀭. ⁵E. 𒀭.
⁶B,C,E. 𒀭. ⁷B,C,D. 𒀭. ⁸E. 𒀭. ⁹E. 𒀭.

- 1 ⁶na-bi-um dup-šar gim-ri sa-ni-qu
2 mit-ḥar-ti a-na ⁷šarru-kēn(GI.NA) šar kiššati

¹ Waterman, *Royal Correspondence of the Assyrian Empire* IV 12, provisionally considers 3 of the Kuyunjik letters he publishes to have been written by Sargon and 203 to have been addressed to him.

- 3 šar ⁸atāš-šur^{ki} šakkanak bābili^{ki}(KÁ-DINGIR-RA^{ki}) šar māš šumerī
4 ù akkadī^{ki} ba-nu-ú ku-um-mi-ka
5 i-na ku-un lib-bi-ka ki-niš naplis-su-ma
6 bu-mi-ka ša mi-šá-ri šu-ut-ri-ša
7 ši-ru-uš-šu šu-ut-lim-šu ūmē^{meš}
8 tūb šēr^{meš} ru-qu-ti šanāte^{meš}(MU-AN-NA^{meš})
9 ḥu-ud lib-bi ši-i-mi ši-ma-tuš
10 it-ti šamē^ē ù ir-ši-tim
11 šu-ri-ik palū-šu li-tip-pu-uš
12 RE²UT^{u3} ša gi-mir
13 ma-ti-tan it-ti āš-ri ù ki-gal-li
14 li-ku-na tim-men-šu

- 1 O Nabu, scribe of the universe, juxtaposing
2 what corresponds,⁴ as to Sargon, king of the world,
3 king of Assyria, governor of Babylon, king of the land of the Sumerian
4 and the Akkadian, builder of your throneroom,
5 in the steadfastness of your heart look faithfully upon him and
6 your righteous countenance direct
7 toward him; grant him
8 long days of bodily well-being, years
9 of heart's delight fix as his destiny;
10 (as) long as heaven and earth
11 make his dynasty (last),⁵ let him exercise

² D. D. Luckenbill, *Ancient Records of Assyria and Babylonia* II (Chicago, 1927) §§ 127a-131; *Khorsabad* I 129, No. 2.

³ Written RI-É-UM-ut. RI-É-UM, an old-fashioned orthography for *rē²um*, "shepherd," is here treated as if it were an ideogram.

⁴ The idea underlying this rather difficult epithet is perhaps that Nabu as scribe of the gods keeps the accounts of the world, balancing therein for each human being his good deeds—credit entries—against corresponding debit entries. On the translation "juxtaposing" for *sanāqu* note that the word is used e.g. of the placing side by side of original and copy for collation (*barū*) purposes.

⁵ Literally, "with heaven and earth make long his dynasty."

12 the shepherdship of all
13-14 lands; may his (building) terrace remain as firm as the very
site and bedrock upon which it is built.⁶

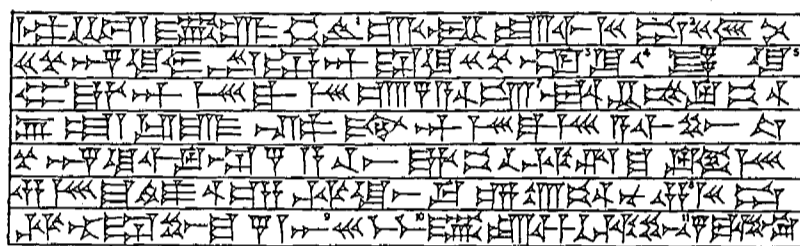
NO. 2

INSCRIPTION UPON THRESHOLDS IN
RESIDENCE L, THE DWELLING
OF SINAHUSUR

A between forecourt and Room 119. DS 1313. *In situ*. See p. 70,
chap. vii, No. 13, and Pl. 36 *C*.

B between Room 116 and central court. DS 1314. *C*. See p. 70,
chap. vii, No. 12, and Pls. 36 *B* and 66.

C (reproduced below) between Rooms 119 and 116. DS 1315.
In situ; ultimately *B*. See p. 70, chap. vii, No. 11, and Pl. 36 *A*.



1. B. 111. 2. A. 111. 3. B. 111. 4. B. 111. 5. A. 111. 6. A. 111.
7. A. 111. 8. A. 111. 9. B. 111. 10. A. 111. 11. A. 111.

- 1 ^{md}sin(EN.ZU)-aḫu-ú-šur ^{amē}sukkalmahḫu ta-lim ^mšárru-kēn šar₄
kiš-šat
- 2 šar₄ ^{mā}aš-šur^{ki} šakkanak bābili^{ki}(KA-DINGIR-RA^{ki}) šar₄ mā^t
šumeri(EME-KU) u akkadī^{ki}
- 3 mi-gir ilāni^{meš} rabūti^{meš} bitu šá-a-šú ištu ušši-šú adi gab-dib-bi-šú
- 4 ir-ši-ip ú-šak-lil ilāni^{meš} rabūti^{meš} a-ši-bu-ut
- 5 ^{mā}aš-šur^{ki} à ālu šá-a-šú ina qir-bi-šú ik-ri-ma immer niqē^{meš}
- 6 ellūti^{meš} ma-ḫar-šu-un iq-qí ina ku-un lib-bi-šú-nu elli ^mšárru-
kēn
- 7 ik-tar-ra-bu-ma šá ^{md}sin-aḫu-ušur(sin-KUR-KUR) aḫi ta-lim-me-šú
iq-bu-u šá ta-bu-uš

- 1 Sinahusur, the grand vizier, full brother of Sargon, king of the
world,
- 2 king of Assyria, governor of Babylon, king of the land of the
Sumerian and the Akkadian,

3 favorite of the great gods, this house from its foundation to its
parapet

4 constructed (and) completed. The great gods inhabiting

5 Assyria and this city into it he invited, and pure sacrificial lambs

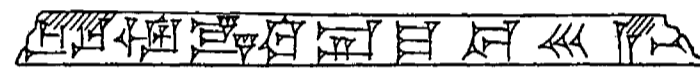
6 he sacrificed before them. In the steadfastness of their pure
heart(s) Sargon

7 they blessed; and concerning Sinahusur, his full brother, they
spoke what was good for him.

NO. 3

INSCRIPTION UPON A STONE ALTAR

Found in the town outside and to the west of Citadel Gate *A*.
DS 1195. *B*. See chap. vii, No. 18. Inscription restored from a
similar altar found by Botta at Khorsabad; text published by
Hugo Winckler, *Die Keilschrifttexte Sargons* (Leipzig, 1889) I 190
and II, Pl. 49, No. 1. See bibliography of latter, correction of
Winckler, and text of another altar of Sargon given by Essad
Nassouhi in *Revue d'assyriologie et d'archéologie orientale* XXII
(1925) 85-88.



1a-na^l [d. . . šarru-kēn(GI.NA) šar₄ kiš-šat šar₄ ^{mā}aš-šur^{ki} šakkanak
bābili^{ki} šar₄ mā^t] [šumeri(EME-KU) u akkadī^{ki} iškun(?) -ma(MAL-ma)
iqīš^{meš}(BA-eš)]

To [the god . . . has Sargon, king of the world, king of Assyria,
governor of Babylon, king of the land of] the Sumerian and the
Akkadian, set up and presented (this altar).

NO. 4

INSCRIPTION UPON THRESHOLD BETWEEN
ROOMS 30 AND 29 OF PALACE F

In situ. See pp. 77 f. and Pl. 40 *E*.

NO. 5

INSCRIPTION UPON THE BACKS OF THREE
WALL SLABS FACING THE TERRACE
OUTSIDE ROOM 15 OF PALACE F

In situ. See p. 77 and Pl. 41 *D*.

MOVABLE INSCRIPTIONS

TEXTS INSCRIBED UPON TABLETS, PRISMS, POTTERY, ETC.

- No.
6. LIST OF ASSYRIAN KINGS, from Nabu temple, Room 12.
DS 828. See p. 60 and chap. vii, No. 74.
 7. SYLLABARY, from Nabu temple, Room 5. See p. 60.
 8. SYLLABARY, from Nabu temple, forecourt.
 9. SYLLABARY, from Nabu temple, portal between forecourt
and Room 13.
 10. LIST OF GODS, fragment from Nabu temple, forecourt.
 11. LIST OF GODS, TEMPLES, AND CITIES, from Nabu
temple, portal between forecourt and Room 13.
 12. INCANTATION, fragment from Nabu temple, Room 29.
 13. INCANTATION AND RITUAL, fragment from Nabu
temple, Room 29.
 14. INCANTATION AND RITUAL, fragment from Nabu
temple, Room 29.

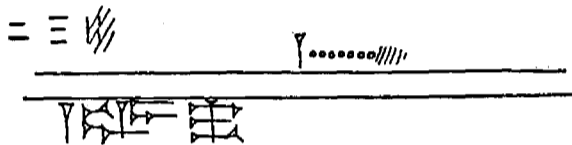
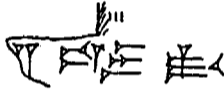
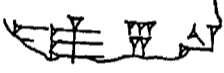
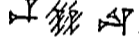
⁶ Literally, "with site and bedrock may his (building) terrace remain firm."
On the terms *ašru*, *kigallu*, and *temenu* see W. Baumgartner in *Zeitschrift für
Assyriologie* XXXVI (1925) 30-36, 249 f., n. 1, and 245-53 respectively.

- No.
15. PRAYER, from Nabu temple, portal between forecourt and
Room 13.
 16. LIVER OMENS, from Nabu temple, portal between fore-
court and Room 13.
 17. ASTROLOGICAL OMENS, fragments from Nabu temple,
Room 3.
 18. HISTORICAL(?) TABLET, from Adad temple of palace,
Room 166.
 19. BUSINESS DOCUMENT, from Sin temple of palace, portal
between Rooms XXVI and 167.
 20. BUSINESS DOCUMENT(?) WITH SEAL IMPRESSION,
from Nabu temple, portal between forecourt and Room 13.
 21. BUSINESS DOCUMENT (ACCOUNT OF GRAIN), from
Nabu temple, Room 29.
 22. BUSINESS DOCUMENT (DELIVERY OF DONKEYS),
from Nabu temple, Room 29.

⁷ At right end of preserved text.

INSCRIPTIONS

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- No.
23. BUSINESS DOCUMENT (ACCOUNT), from Nabu temple, Room 29.
24. BUSINESS DOCUMENT (ACCOUNT), from Nabu temple, Room 29.
25. BUSINESS DOCUMENT, from Nabu temple, Room 29.
26. TABLET, fragment from Nabu temple, forecourt.
27. TABLETS, fragments from Nabu temple, portal between forecourt and Room 13.
28. TABLET, fragment from dump.
29. TABLET OR PRISM, fragment from Nabu temple, Room 3.
30. TABLETS, fragments from Nabu temple, Room 4.
31. TABLETS, fragments from Nabu temple, Room 29.
32. INSCRIBED BOWL OF SARGON, fragments from Sin temple of palace, Room XXVI.
33. INSCRIBED BOWL, fragments from outside northwest wall of Nabu temple.
34. MEASURING JAR, fragment from Residence L, Room 106. DS 1278. B.
- 
- 1 homer 50 (sila)
35. MEASURING JAR, fragment from Residence L, Room 106. DS 1320. B.
- 
- 2¹ homers 40 (sila)
36. MEASURING JAR, fragment from Residence L, Room 106. DS 1321. C.
- 
- [...] 35 sila
37. MEASURING JAR, fragment from Residence L, Room 123. DS 1322. C.
- 
- 12 sila
38. TAG, from Town Gate 2.
39. BULLA WITH HITTITE SEAL IMPRESSION, provenance unknown.
- No.
40. PRISM, from Palace F, Room 17. DS 1288. B. See p. 77 and chap. vii, No. 82.
41. PRISM, from Palace F, Room 17. DS 1289. B. See p. 77 and chap. vii, No. 81.
42. PRISM, from Palace F, Room 17. DS 1290. B. See p. 77 and chap. vii, No. 76.
43. PRISM, from Palace F, Room 17. DS 1291. C. See p. 77 and chap. vii, No. 80.
44. PRISM, from Palace F, Room 17. DS 1292. C. See p. 77 and chap. vii, No. 79.
45. PRISM, from Palace F, Room 17. DS 1293. C. See p. 77 and chap. vii, No. 77.
46. PRISM, from Palace F, Room 17. DS 1294. C. See p. 77 and chap. vii, No. 78.
47. PRISM, from Palace F, Room 17. DS 1295. B. See p. 77 and chap. vii, No. 75.
48. PRISM, nearly complete, from Palace F, outer terrace. See p. 76.
49. PRISM(S), fragments from Palace F, Room 16. DS 1298 and 1302. B. DS 1303-4. C. See p. 77.
50. PRISM, fragment from Palace F, Room 28.
51. PRISM, fragment from southwest of Sargon's palace. DS 1301. B.
52. PRISM, fragment from southeast of Sargon's palace.
53. PRISM(S), fragments from Sin temple of palace, Room XXVI.
54. PRISM(S), fragments from Nabu temple, forecourt.
55. PRISM, fragments from Nabu temple, portal between forecourt and Room 14.
56. PRISM, fragment from Nabu temple, portal between central court and Room 13.
57. PRISM, fragment from Nabu temple, Court V.
58. PRISM(S), fragments from Nabu temple, Room 4.
59. PRISM(S), fragments from Nabu temple, Room 5.
60. PRISM, fragment from Nabu temple, Room 31.
61. PRISM, fragment from outside of Residence K, northwest of Room 20. DS 1299. B.
62. PRISM(S), fragments from Residence K, Room 86. DS 1264 and 1267. C.
63. PRISM, fragment from dump.
64. PRISM, fragment, provenance unknown.

APPENDIX
CORRELATION OF PUBLICATION AND FIELD
NUMBERS OF ROOMS

APPENDIX

CORRELATION OF PUBLICATION AND FIELD NUMBERS OF ROOMS

SARGON'S PALACE

The numbers assigned by Place have been retained. The Roman numerals, which according to Place signified courts, may now apply to rooms as well, for several Place "courts" have since proved to be rooms. The throneroom, for example, is still called "VII," though it can no longer be considered a court.

NABU TEMPLE

All numbers preceded by *H*

Publication No.	Field No.	Publication No.	Field No.	Publication No.	Field No.
<i>H</i> I	<i>H</i> 17 and 41	<i>H</i> 13	<i>H</i> 21	<i>H</i> 30	<i>H</i> 20
II	6	14	42	31	12 and 16
III	11	15	27	32	57
IV	35 and 51-54	16	33	33	56
V	4	17	7	34	55
1	58	18	3	35	15
2	43	19	10	36	22
3	46	20	45	37	31
4	47	21	23	38	44
5	48	22	28	39	.....
6	49	23	25	40	.....
7	.....	24	32	41	13
8	40	25	30	42	8
9	39	26	36	43	2
10	34	27	37	44	1
11	38	28	9	45	5 and 18
12	29	29	19,24, and 26	46	14

RESIDENCE γ

All numbers preceded by γ

Publication No.	Field No.	Publication No.	Field No.	Publication No.	Field No.
γ 1	γ 14	γ 23	γ 27	.....
2	γ 24	15	22	28	.....
3	16	21	29	γ 7
4	17	.....	30	8
5	18	18	31	2
6	19	15	32	1
7	20	19	33	3
8	21	16	34	4
9	22	.....	35	6
10	23	12	36	13
11	24	9	37	11
12	25	14	38	5 and 10
13	26	17		

RESIDENCE *K*

All numbers preceded by *K*

Publication No.	Field No.	Publication No.	Field No.	Publication No.	Field No.
<i>K</i> 1	<i>K</i> 11 and 25	<i>K</i> 9	<i>K</i> 47	<i>K</i> 17	<i>K</i> 60
2	75	10	42	18	66
3	.....	11	36	19	77
4	.....	12	6	20	76
5	67	13	1	21	.....
6	59	14	24	22	.....
7	.....	15	51	23	54
8	52	16	44	24	61

Publication No.	Field No.	Publication No.	Field No.	Publication No.	Field No.
<i>K</i> 25	<i>K</i> 48	<i>K</i> 47	<i>K</i> 33	<i>K</i> 69	<i>K</i> 45
26	41	48	7	70	46
27	39	49	32	71	.....
28	38	50	12	72	53 and 71
29	30	51	34	73	.....
30	26	52	35	74	.....
31	17	53	69	75	.....
32	9	54	16 and 21	76	.....
33	20	55	37	77	.....
34	23	56	43	78	.....
35	31	57	50	79	70
36	10	58	55	80	65
37	4 and 5	59	49 and 56	81	.....
38	74	60	.....	82	.....
39	2	61	.....	83	.....
40	3	62	.....	84	.....
41	8	63	.....	85	58
42	15	64	.....	86	62
43	27	65	28	87	63
44	19	66	18	88	64
45	22	67	29	89	68
46	14	68	40	90	13,57, and 72

RESIDENCE *L*

All numbers preceded by *L*

Publication No.	Field No.	Publication No.	Field No.	Publication No.	Field No.
<i>L</i> 1	<i>L</i> 104	<i>L</i> 36	<i>L</i> 57	<i>L</i> 71	.....
2	74	37	65	72	.....
3	71	38	32	73	<i>L</i> 42
4	73	39	83	74	44
5	72	40	20	75	68
6	78	41	66	76	93
7	79	42	89	77	.....
8	76	43	91	78	.....
9	81	44	98	79	67
10	107	45	99	80	92
11	70	46	103	81	85
12	77	47	.....	82	54
13	75	48	.....	83	35
14	47	49	108	84	22
15	59	50	.....	85	53
16	46	51	.....	86	55
17	84	52	.....	87	56
18	86	53	.....	88	5
19	.....	54	.....	89	13
20	60	55	.....	90	11
21	38	56	.....	91	15
22	29	57	.....	92	30
23	82	58	.....	93	16
24	40	59	.....	94	24
25	45	60	.....	95	26
26	25	61	90	96	31
27	18	62	97	97	36
28	21	63	.....	98	41
29	34	64	.....	99	7
30	33	65	100	96
31	19	66	101	43
32	28	67	102	50
33	27	68	103	51
34	12	69	104	95
35	37	70	105	7

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KHORSABAD

Publica- tion No.	Field No.	Publica- tion No.	Field No.	Publica- tion No.	Field No.	Publica- tion No.	Field No.	Publica- tion No.	Field No.	Publica- tion No.	Field No.
L 106	L 58	L 119	L 1	L 132	.....	M 73	.....	M 77	.....	M 80	.....
107	94	120	2	133	.....	74	.....	78	.....	81	.....
108	100	121	6 and 17	134	.....	75	.....	79	.....	82	.....
109	.....	122	52	135	.....	76	.....			
110	101	123	39	136	.....					
111	61	124	48	137	L 88						
112	102	125	49	138	.....					
113	69	126	62	139	105						
114	14 and 23	127	63	140	.....					
115	3	128	64	141	.....					
116	4	129	87	142	106						
117	8	130	.....	143	80						
118	9	131	.....	144	10						

PALACE F

All numbers preceded by F

Publica- tion No.	Field No.	Publica- tion No.	Field No.	Publica- tion No.	Field No.
F 1	F 41	F 16	F 36	F 31	F 24
2	39	17	33	32	17
3	28	18	40	33	16
4	22 and 29	19	35	34	23
5	12	20	7	35	30
6	11	21	13	36	31
7	8	22	15	37	34
8	9	23	6	38	37
9	21	24	14	39	38
10	27	25	5	40	32
11	19	26	20	41	55
12	10	27	4	42	54
13	26	28	3	43	53
14	18	29	2	44	51
15	25	30	1	45	52

RESIDENCE M

All numbers preceded by M

Publica- tion No.	Field No.	Publica- tion No.	Field No.	Publica- tion No.	Field No.
M 1	M 49	M 25	M 23 and 40	M 49	M 25
2	35	26	42	50	28
3	.....	27	41	51	34
4	37	28	43	52	39
5	30	29	44	53	.....
6	20	30	46	54	.....
7	31	31	45	55	38
8	.....	32	22	56	.....
9	36	33	11	57	.....
10	.....	34	7	58	.....
11	.....	35	1	59	.....
12	.....	36	4	60	.....
13	.....	37	12	61	.....
14	.....	38	14	62	.....
15	.....	39	15	63	24
16	.....	40	5	64	29
17	.....	41	3	65	21
18	.....	42	2	66	26
19	.....	43	8	67	6,10, and 18
20	.....	44	13	68	27
21	48	45	9	69	32
22	.....	46	16	70	.....
23	.....	47	17	71	.....
24	.....	48	33	72	.....

RESIDENCE Z

All numbers preceded by Z

Publica- tion No.	Field No.	Publica- tion No.	Field No.	Publica- tion No.	Field No.
Z 1	Z 3, 8, and 15	Z 15	Z 38	Z 29	Z 17
2	32	16	39	30	.....
3	25	17	41	31	34
4	29	18	40	32	.....
5	31	19	26	33	44
6	11	20	42	34	21
7	9	21	37	35	27
8	7	22	36	36	16
9	4	23	43	37	18
10	1	24	14	38	19
11	2	25	33	39	20
12	6	26	28	40	22
13	10	27	35	41	23
14	12 and 13	28	24	42	30

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GENERAL INDEX

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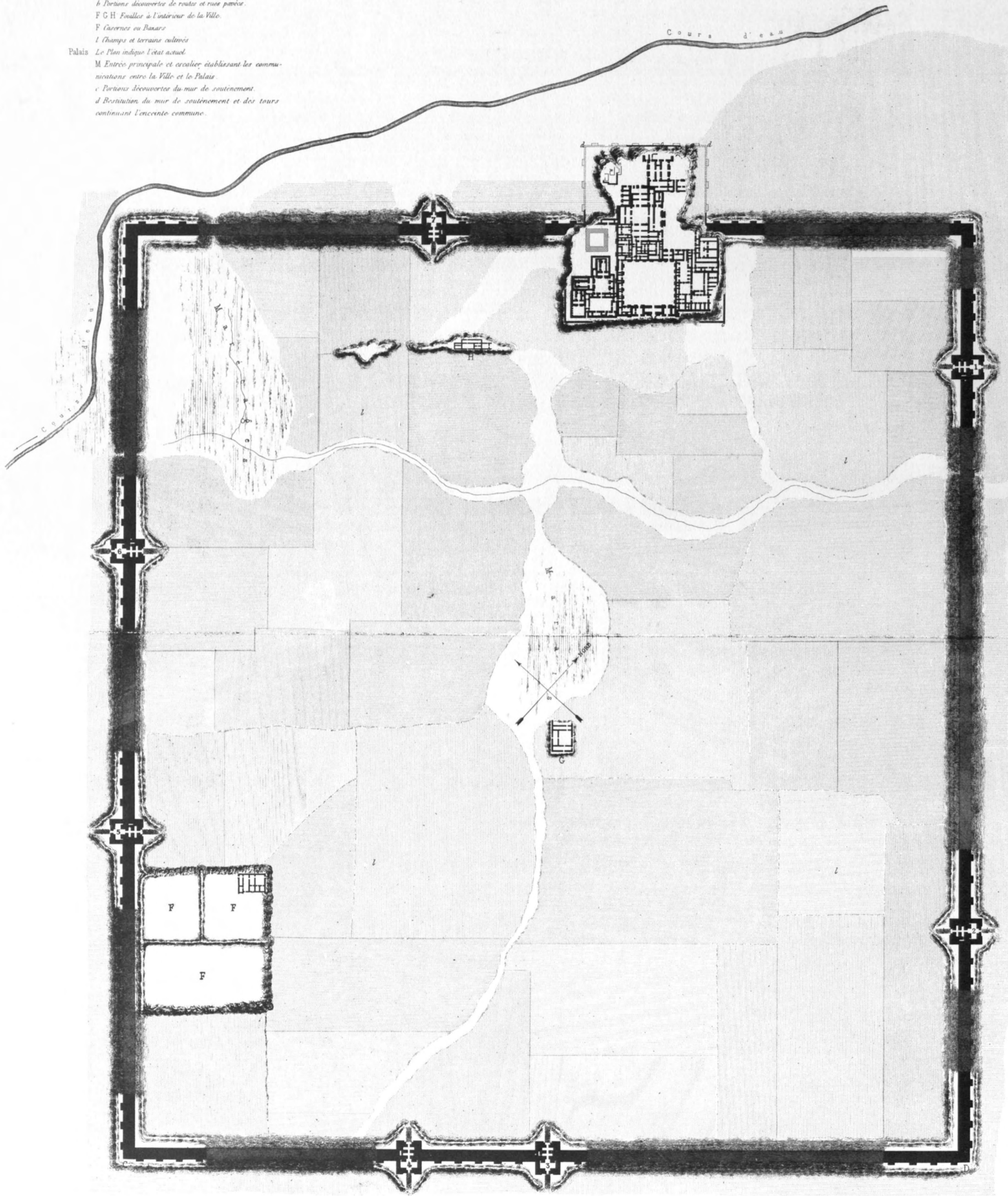
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ARCHITECTURAL PLATES

Ville A B C D Muraille d'enceinte flanquée de tours et percée de 7 portes enveloppant la Ville et le Palais. N.B. Les parties hachurées en noir indiquent les parties délabrées de la muraille.
 1 3 et 6 Portes ornées.
 2 4 5 et 7 Portes simples.
 b Portes découvertes de routes et rues pénétrant.
 F G H Fouilles à l'intérieur de la Ville.
 F Casernes ou Bazar.
 l Champs et terrains cultivés.

Palais Le Plan indique l'état actuel.
 M Entrée principale et escalier établissant les communications entre la Ville et le Palais.
 c Portes découvertes du mur de soutènement.
 d Reconstitution du mur de soutènement et des tours continuant l'enceinte commune.



VILLE ET PALAIS DE KHORSABAD (HIZIR SARGON)

PLAN D'ENSEMBLE

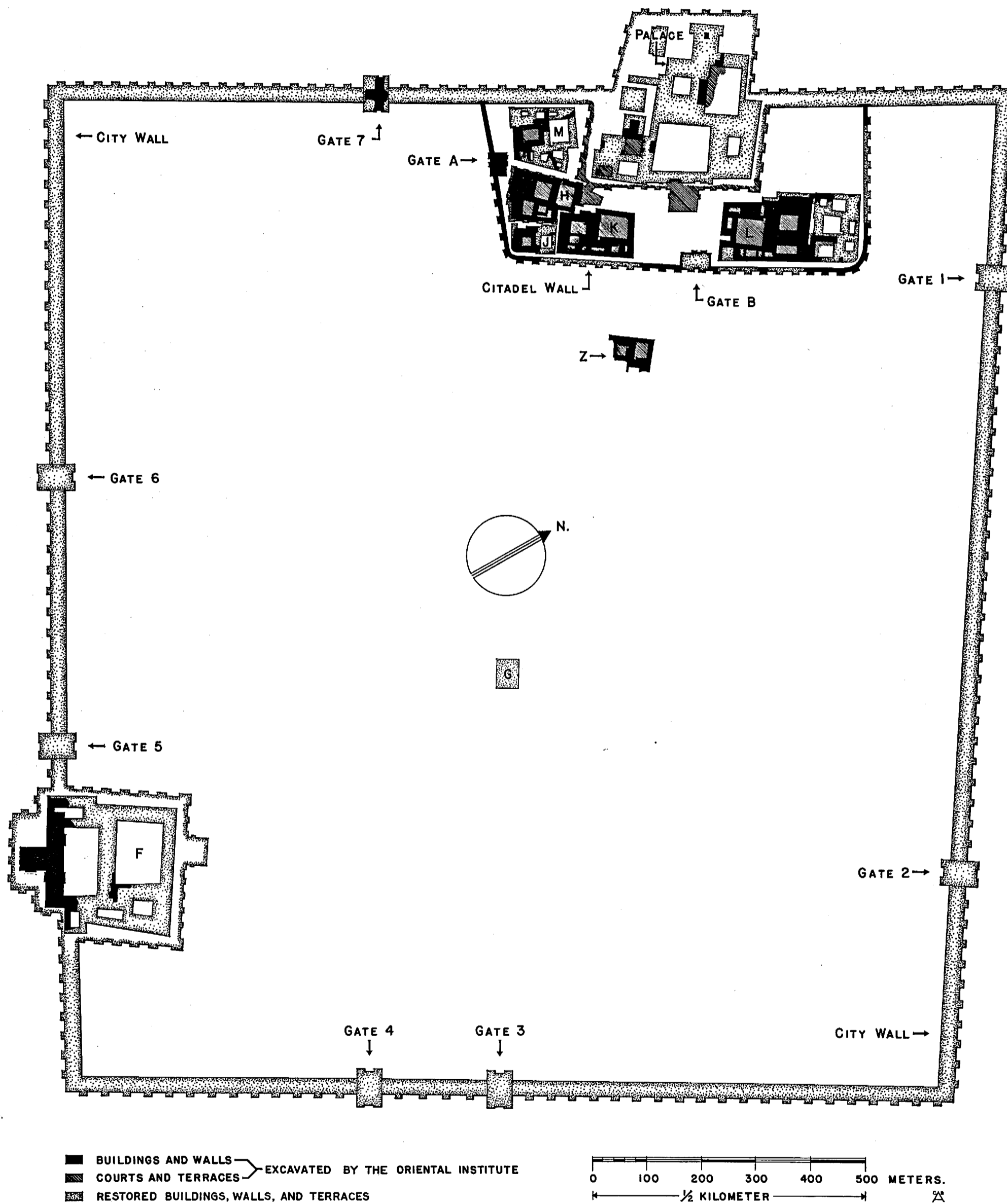
Echelle de 0.0025 pour 10 mètres



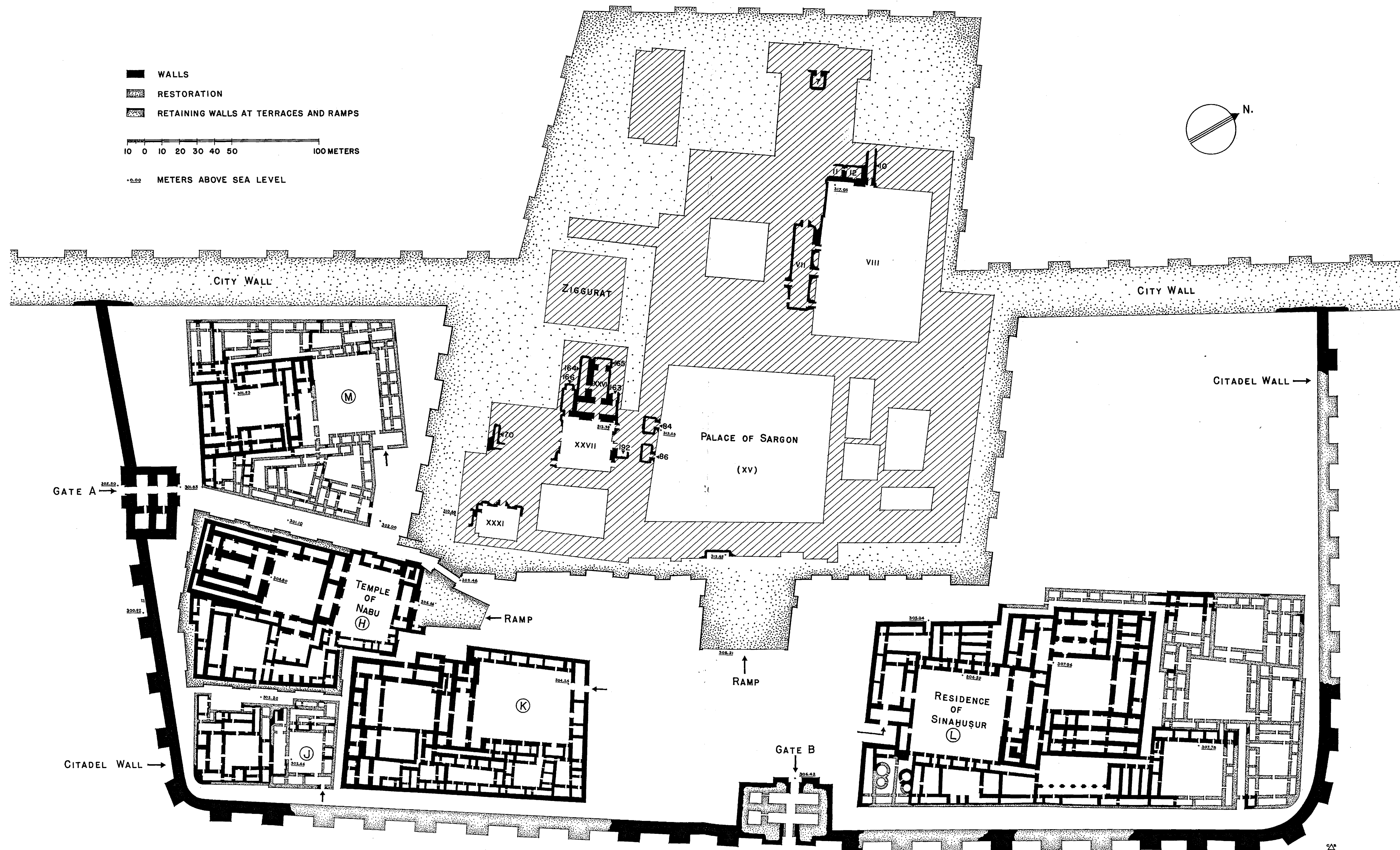
PLAN OF THE CITY OF DUR SHARRUKIN, AFTER PLACE. SCALE, 1:7000



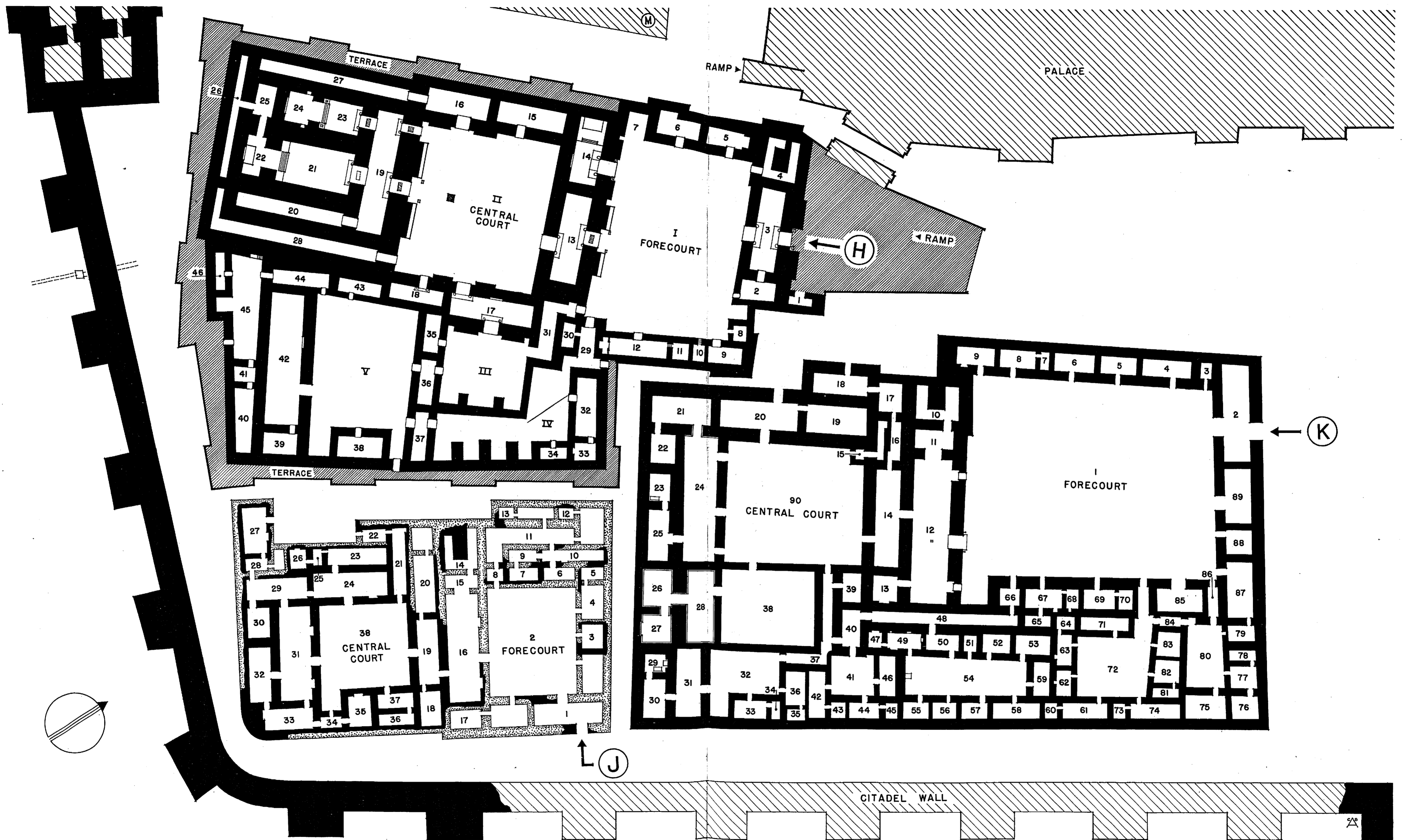
CONTOUR MAP OF THE SITE OF DUR SHARRUKIN. SCALE, 1:7000



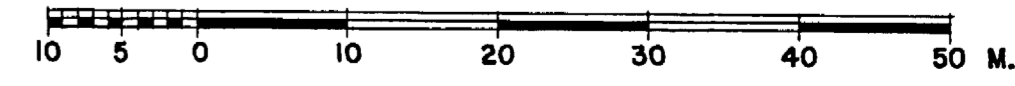
PLAN OF THE CITY OF DUR SHARRUKIN AFTER COMPLETION OF ORIENTAL INSTITUTE EXCAVATIONS. SCALE, 1:7000

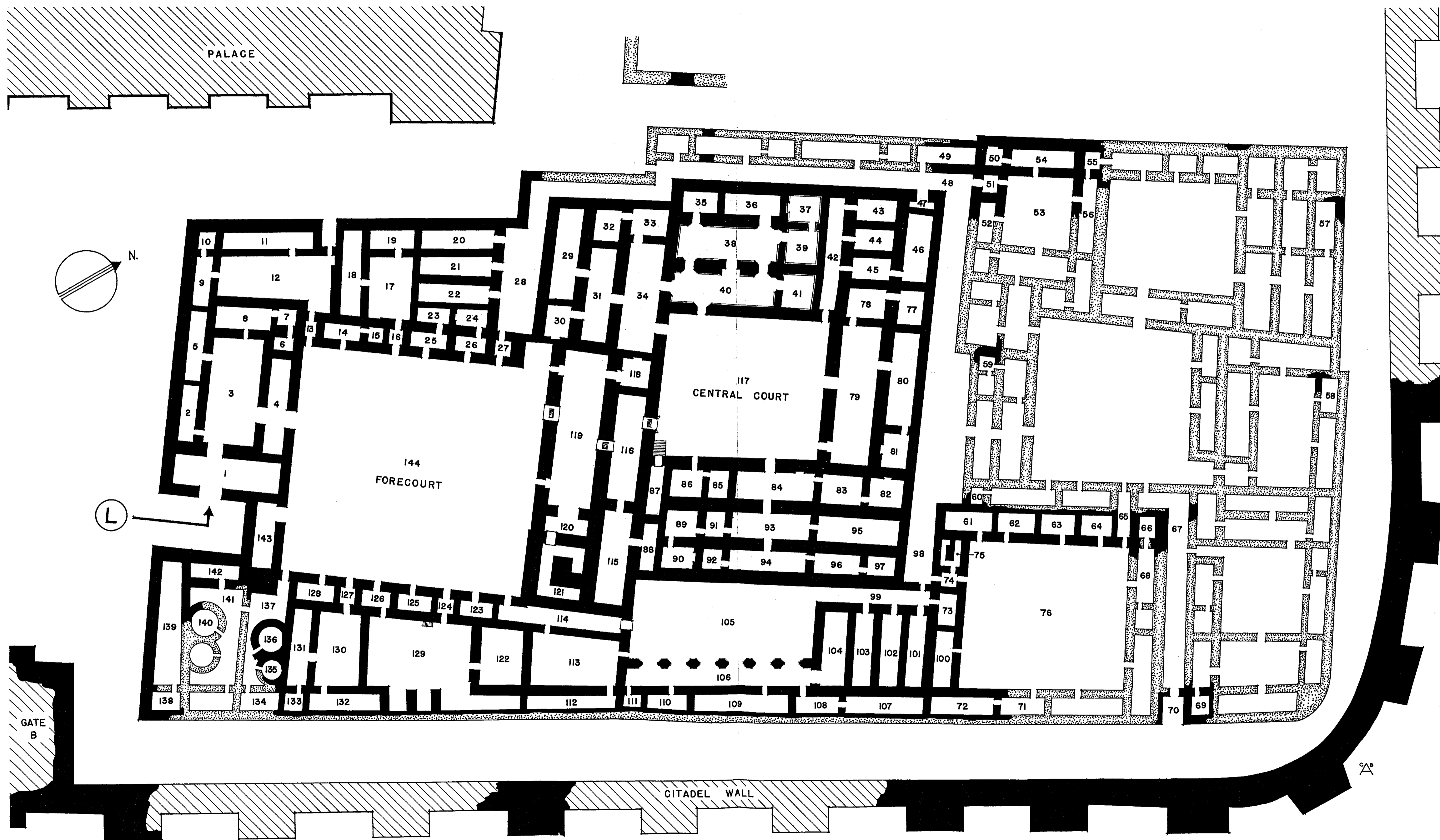


PLAN OF THE CITADEL, WITH SARGON'S PALACE REORIENTED AND ITS PLATFORM CHANGED TO ACCORD WITH RESULTS OF ORIENTAL INSTITUTE EXCAVATIONS. SCALE, 1:1250

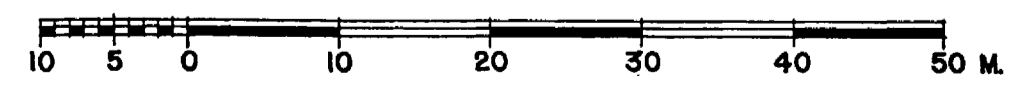


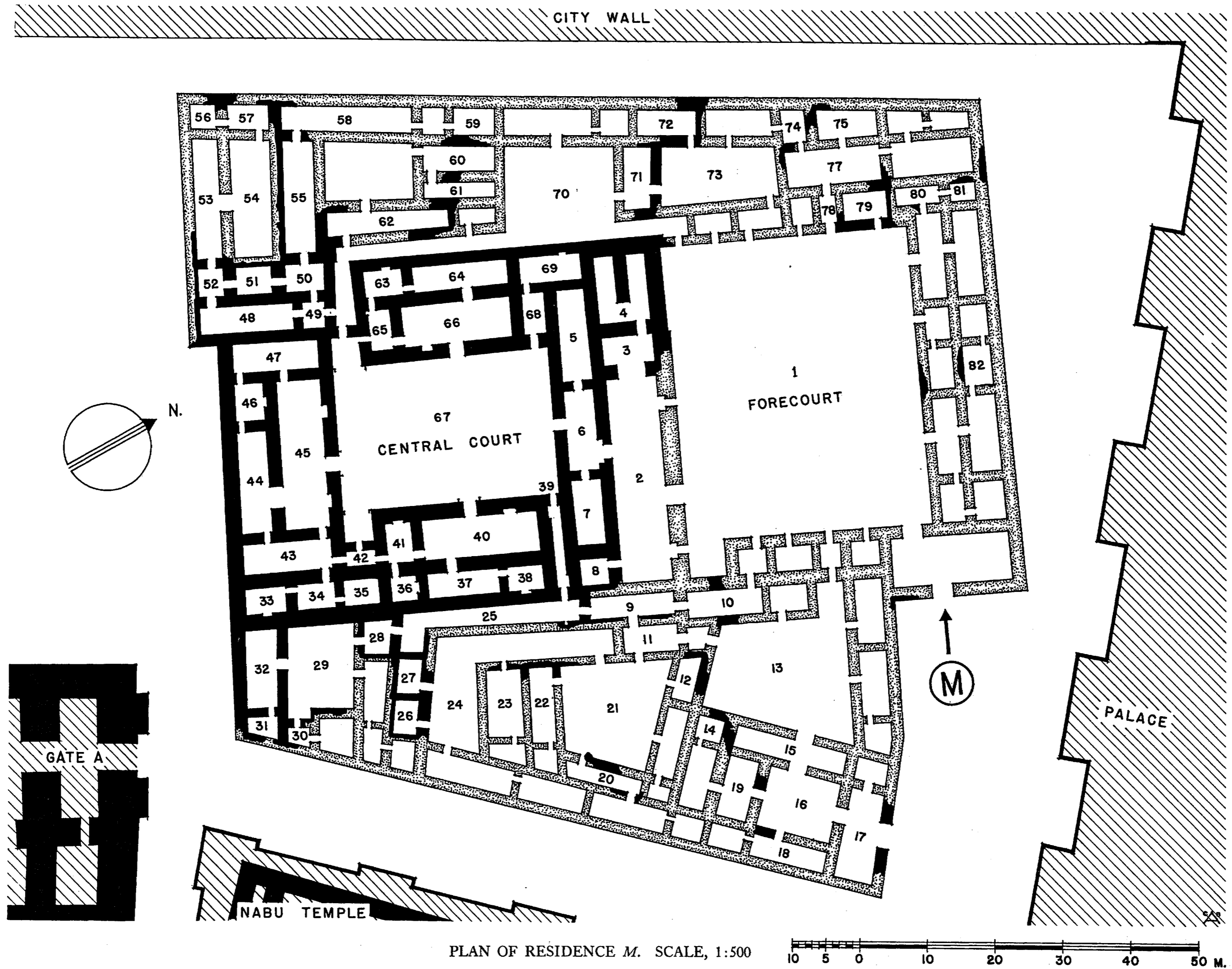
PLAN OF THE NABU TEMPLE (H) AND RESIDENCES Y AND K. SCALE, 1:500



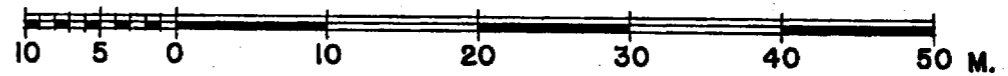


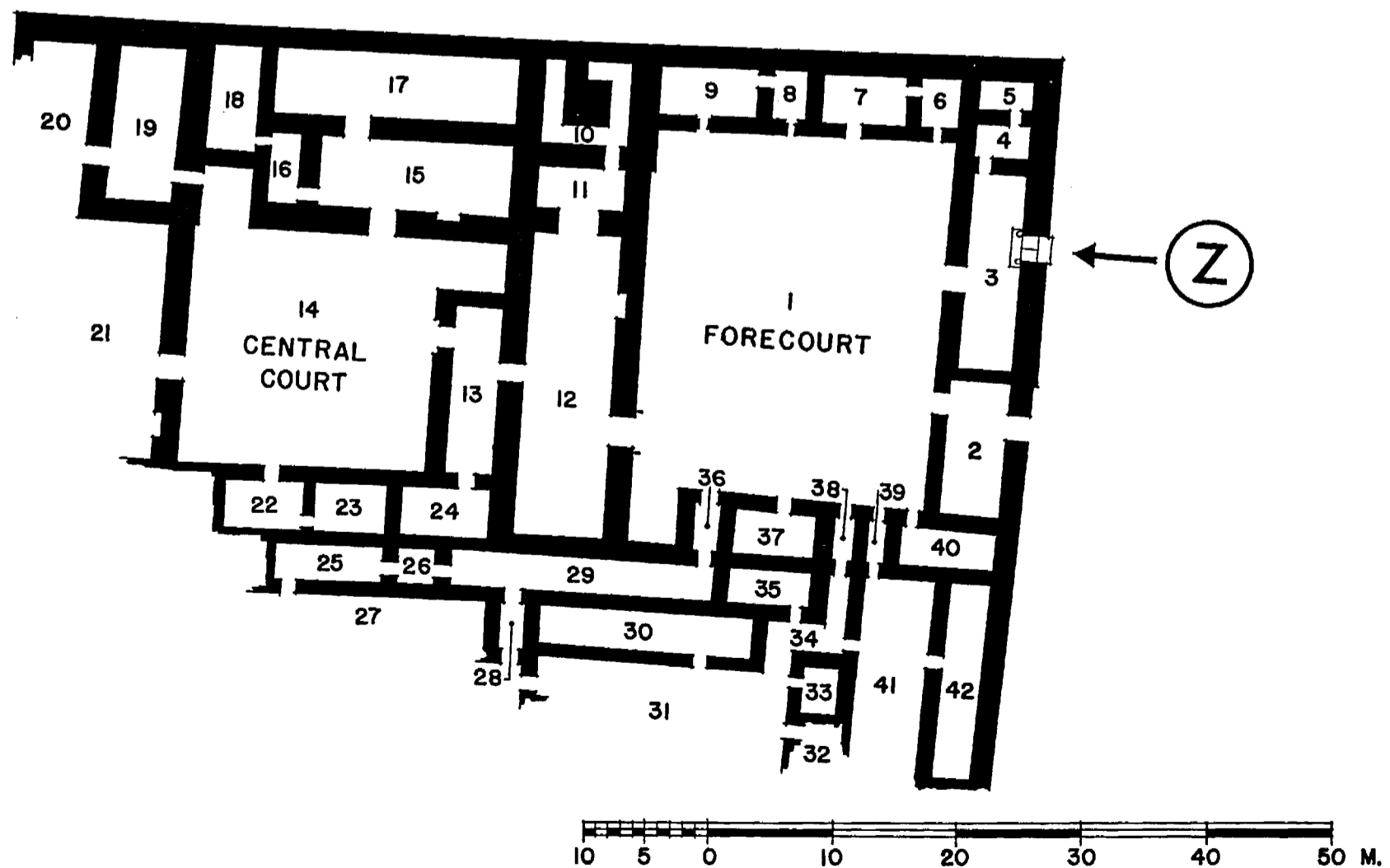
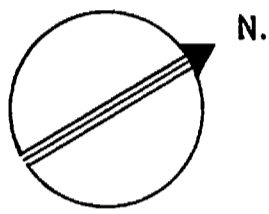
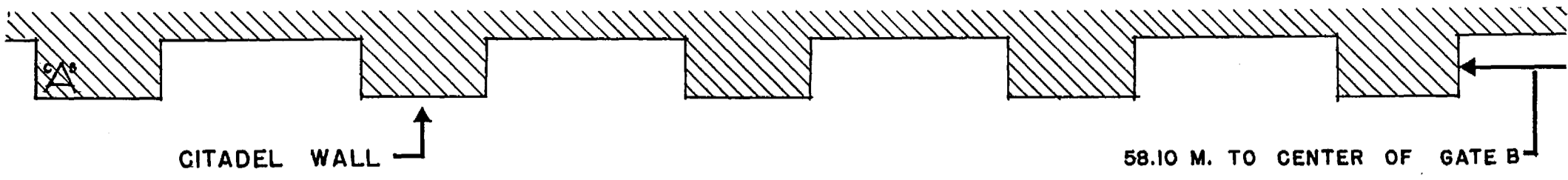
PLAN OF THE RESIDENCE OF SINAHUSUR (L). SCALE, 1:500



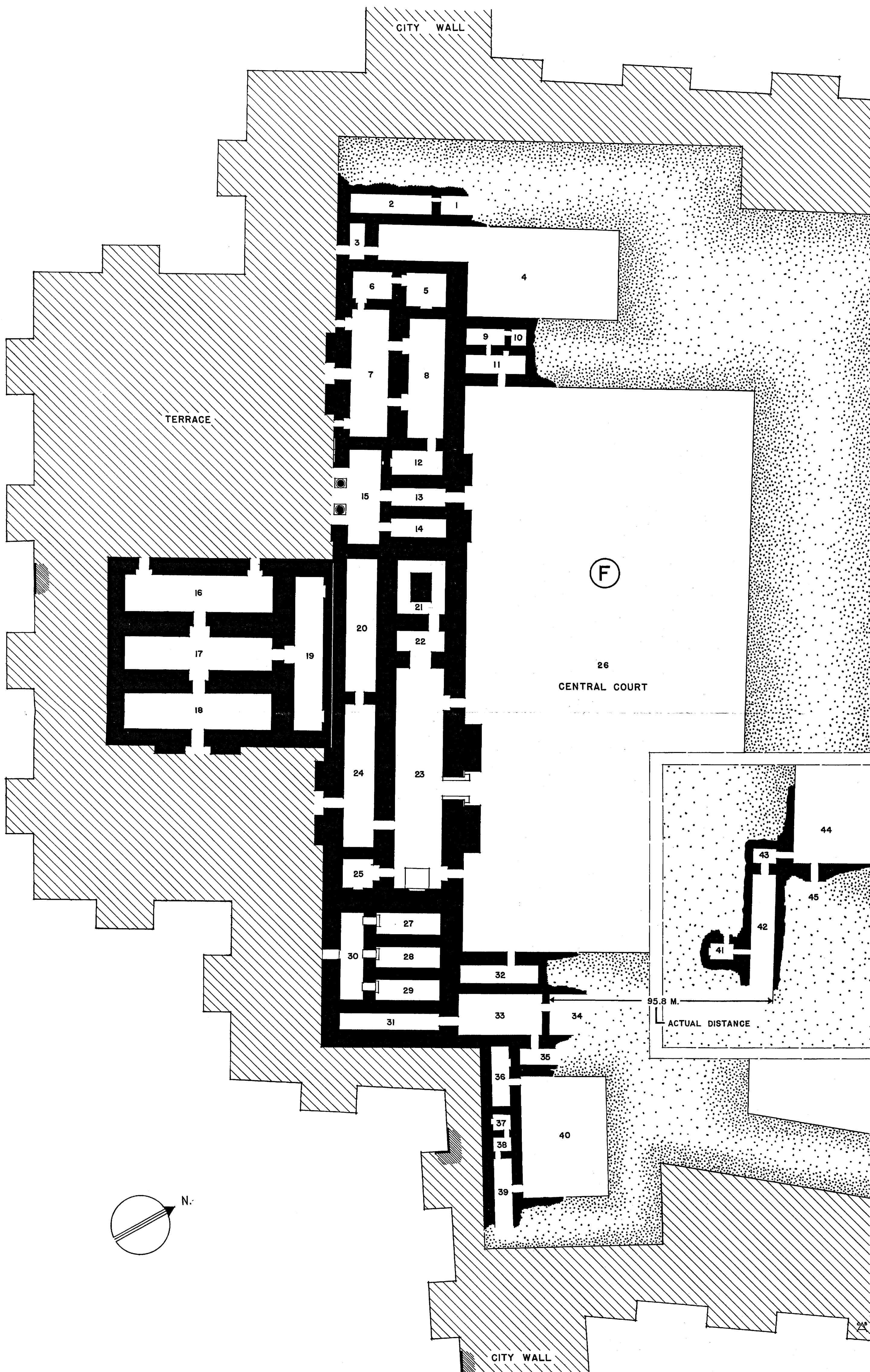


PLAN OF RESIDENCE M. SCALE, 1:500

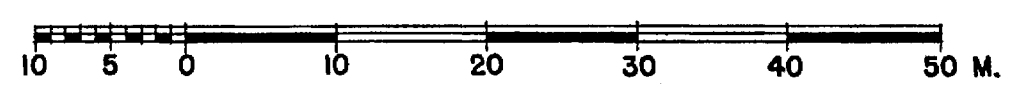


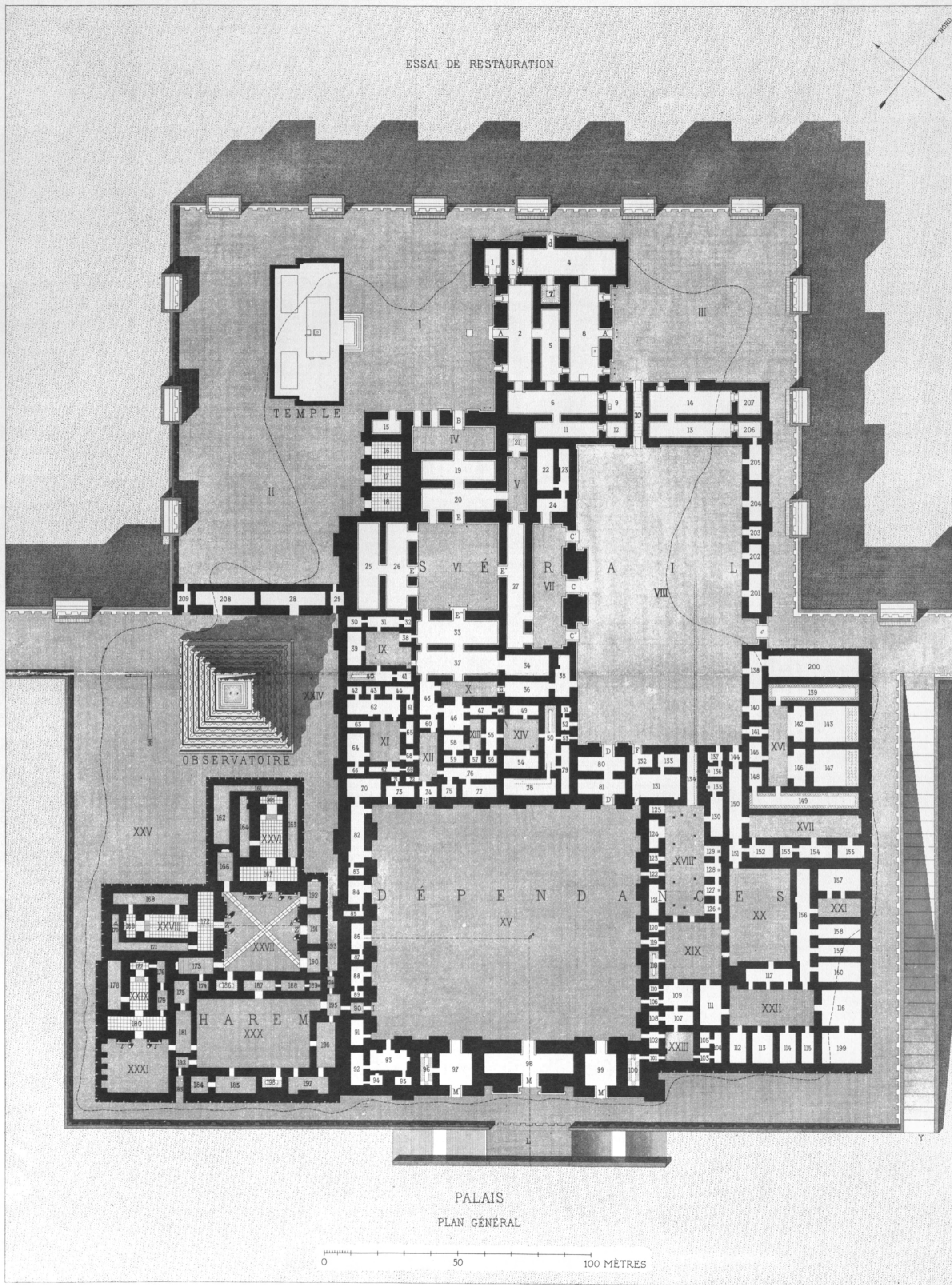


PLAN OF RESIDENCE Z. SCALE, 1:500



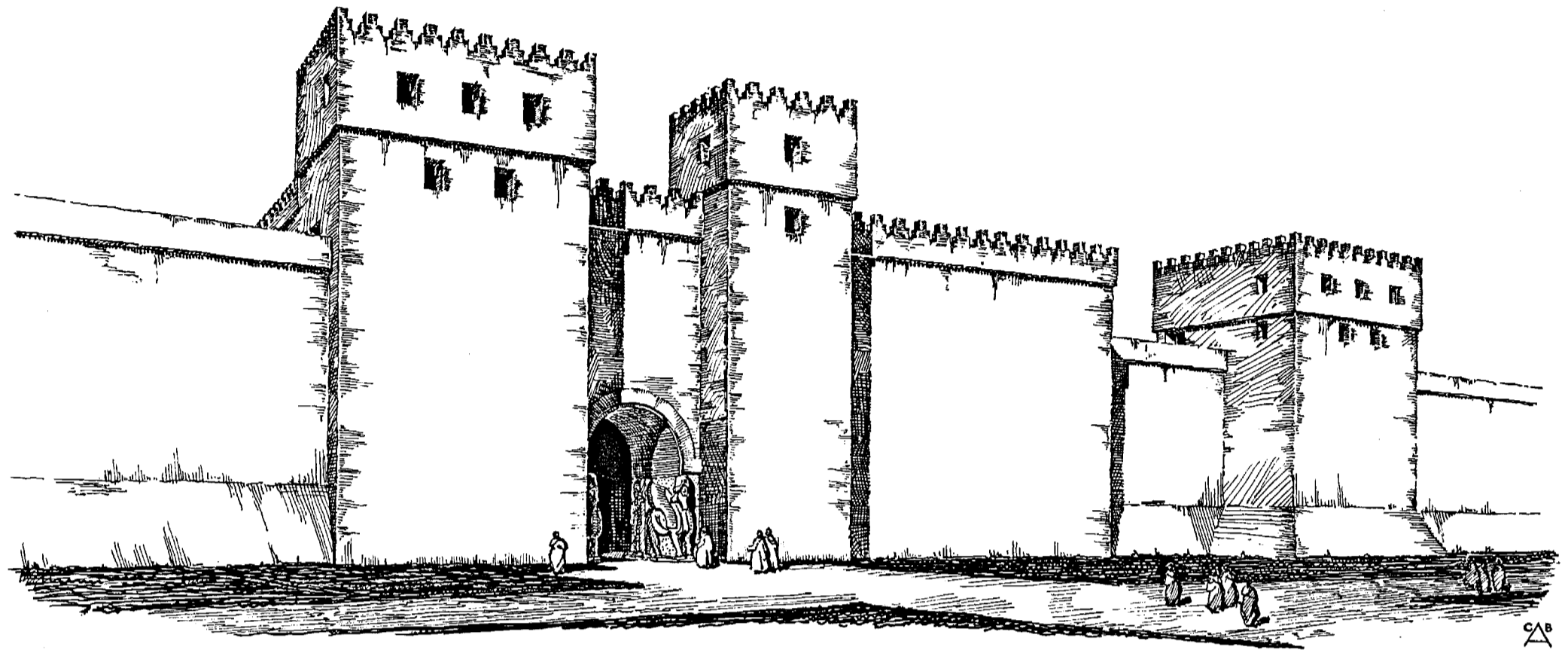
PLAN OF PALACE F. SCALE, 1:500



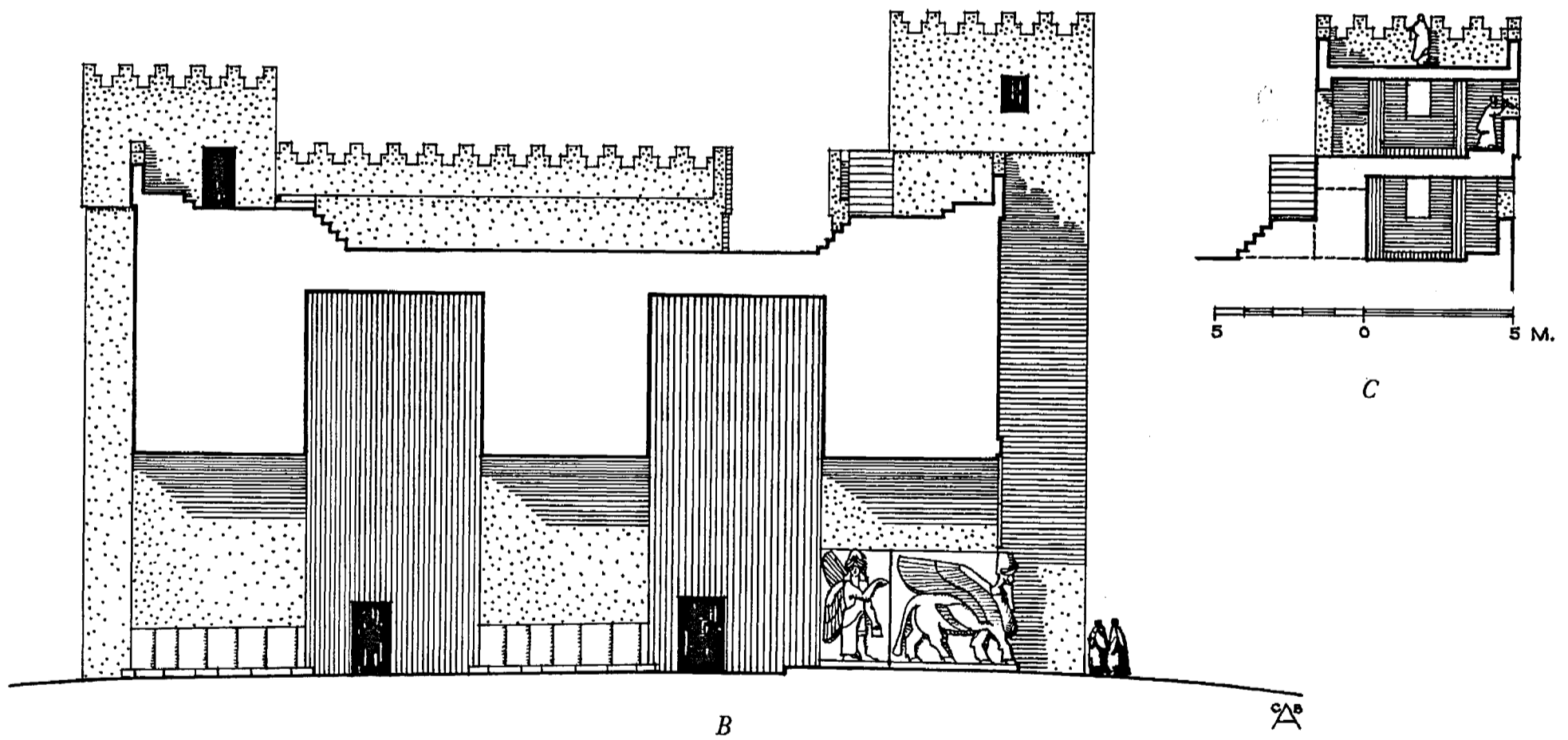


PLAN OF SARGON'S PALACE, AS RESTORED BY PLACE. SCALE, 1:1250

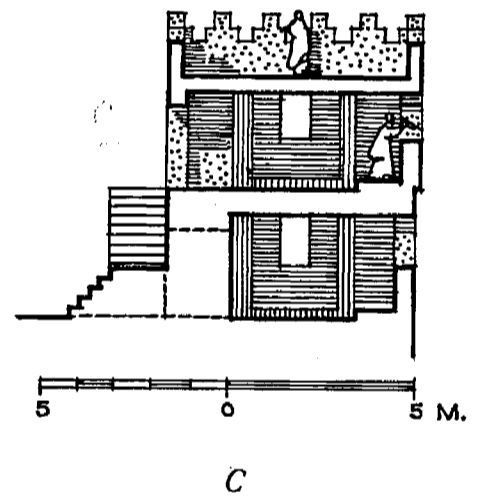
PLATE 77



A

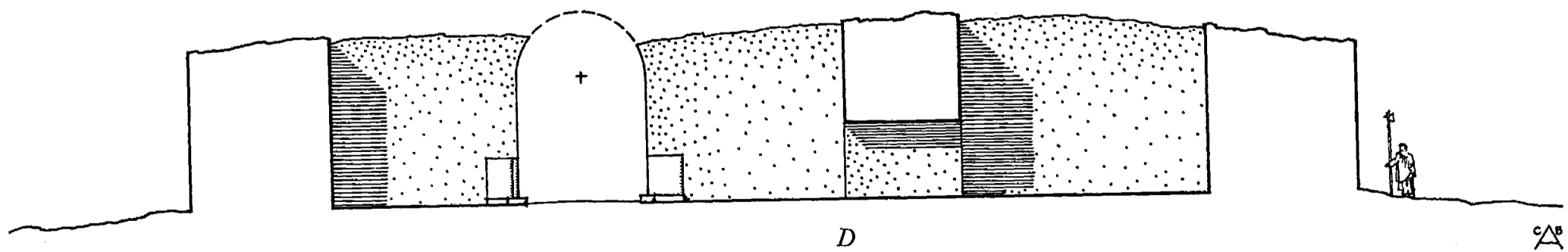
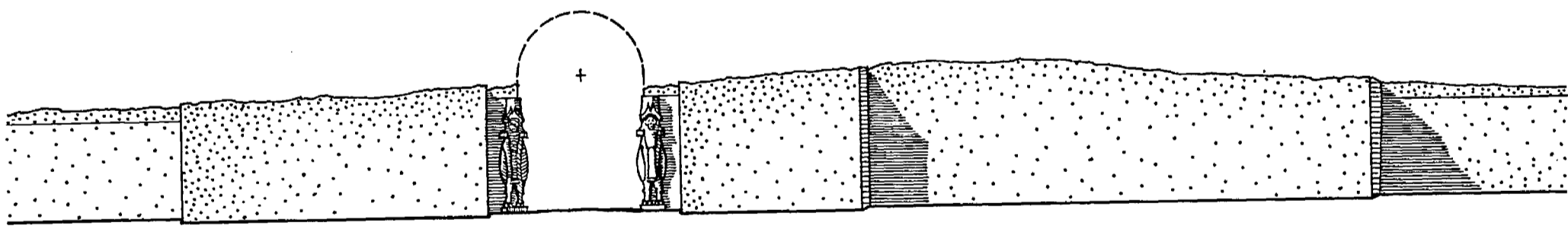
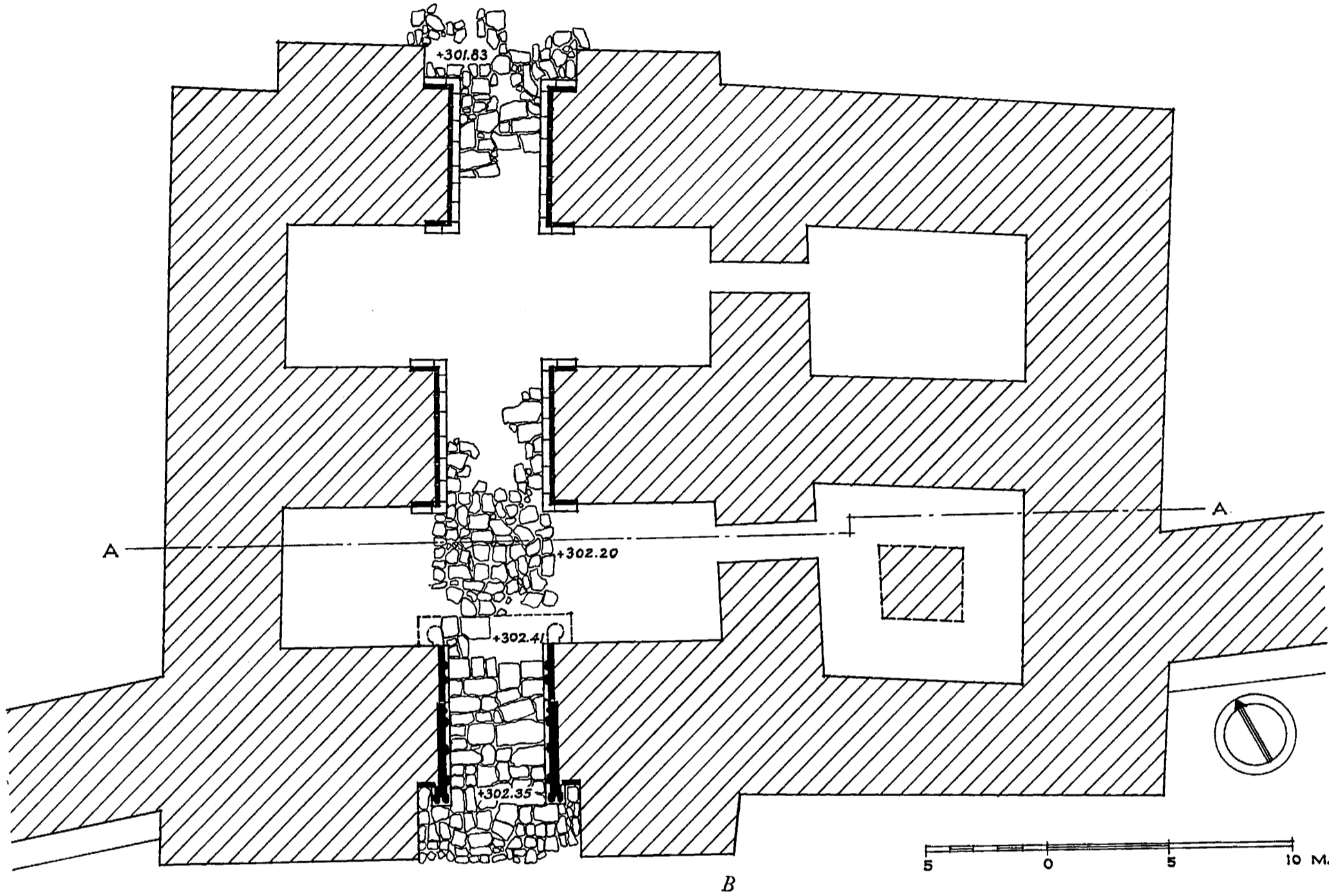
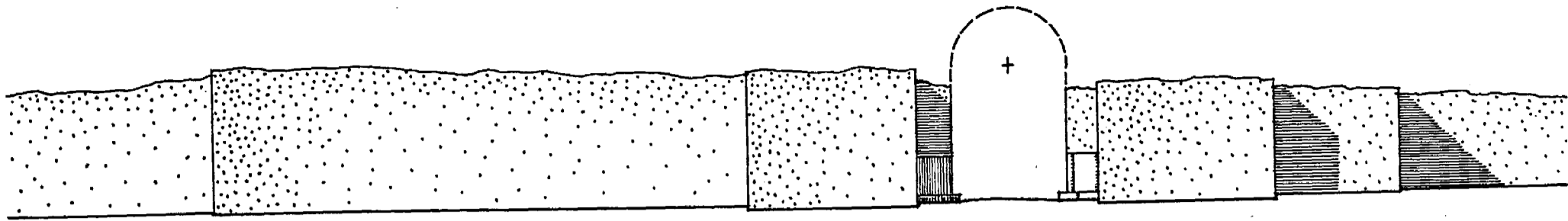


B

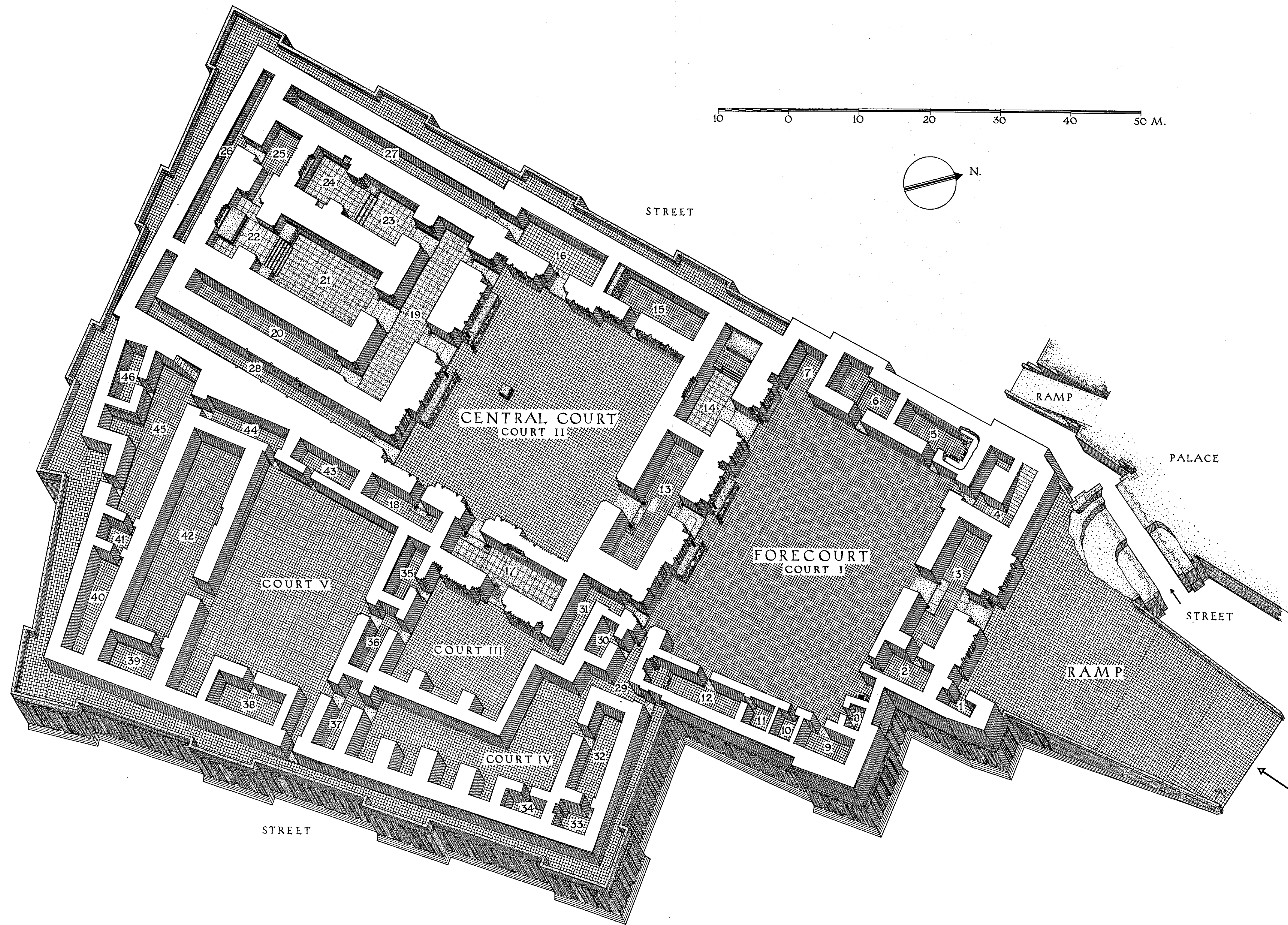


C

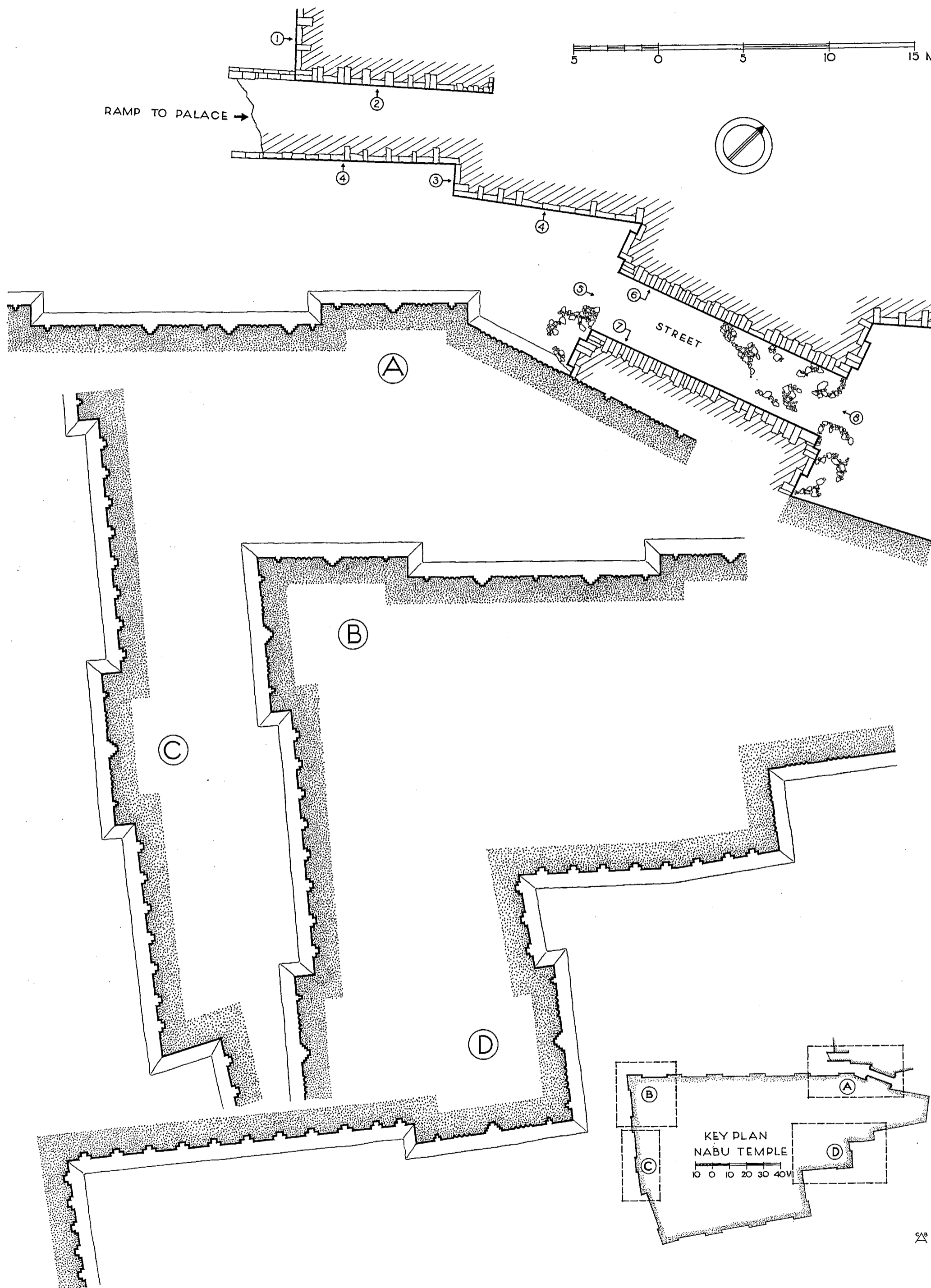
CITADEL GATE A, RESTORED. A. VIEW FROM OUTSIDE THE CITADEL. B. SECTION THROUGH GATE. C. SECTION THROUGH TOWER. SCALE OF SECTIONS, 1:200



CITADEL GATE A. PLAN (B), NORTH AND SOUTH ELEVATIONS (A AND C), AND SECTION ON LINE A-A (D). SCALE, 1:200

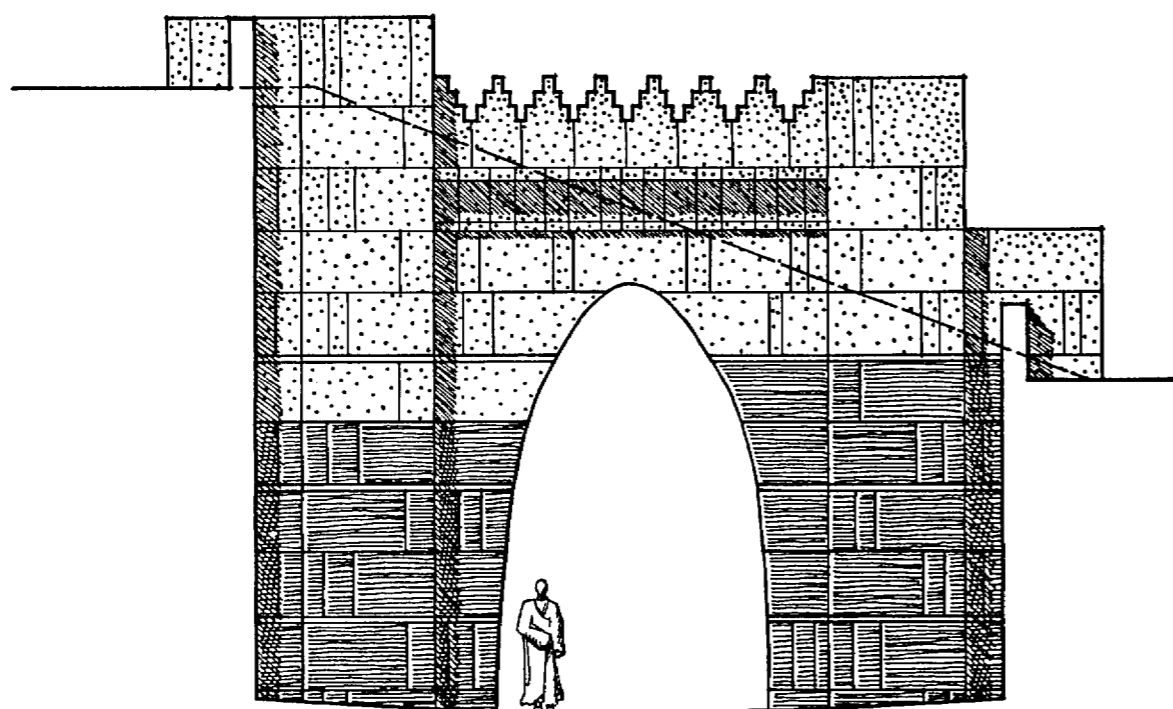


THE NABU TEMPLE. ISOMETRIC PLAN. SCALE, 3:1000

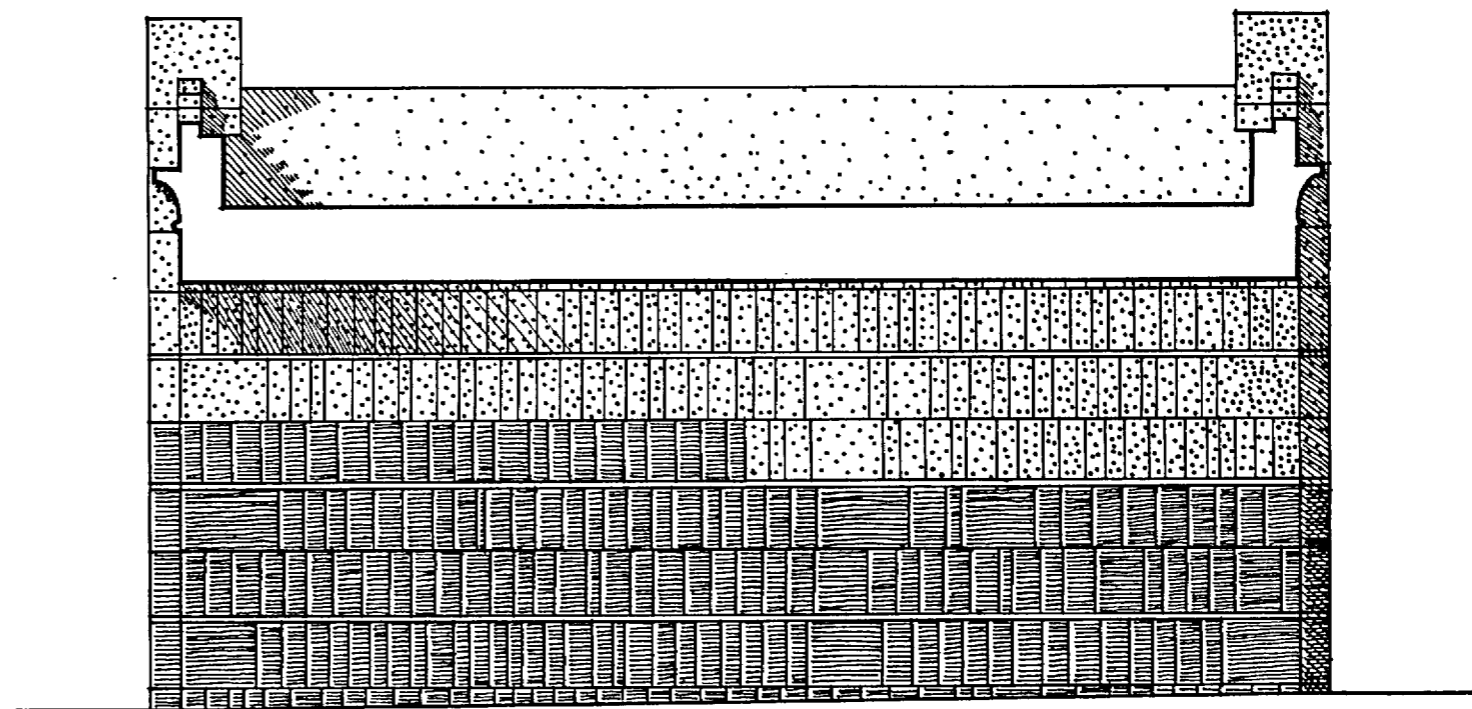


NICHE-AND-REED MOTIVES OF THE NABU TEMPLE, WITH PLAN OF ADJOINING BRIDGE AND OF THE RAMP LEADING TO THE SOUTH CORNER OF SARGON'S PALACE. SCALE, 1:200

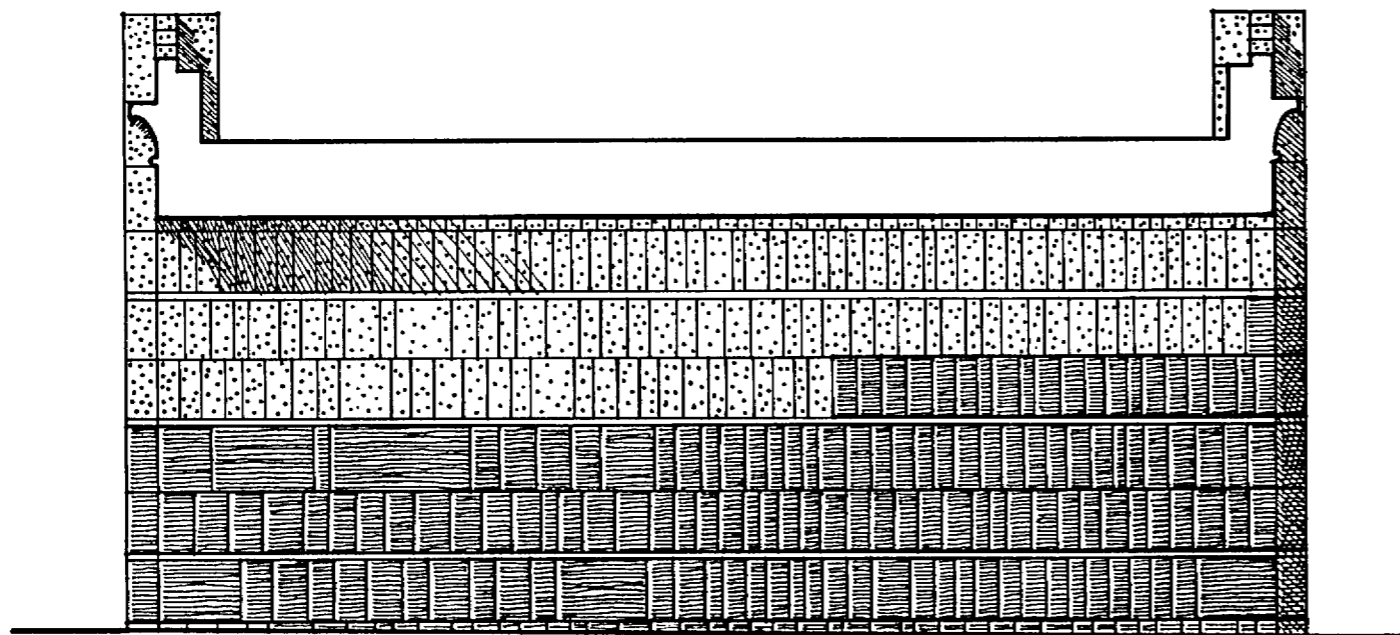
NUMBERS IN CIRCLES REFER TO PLATES 81 AND 82



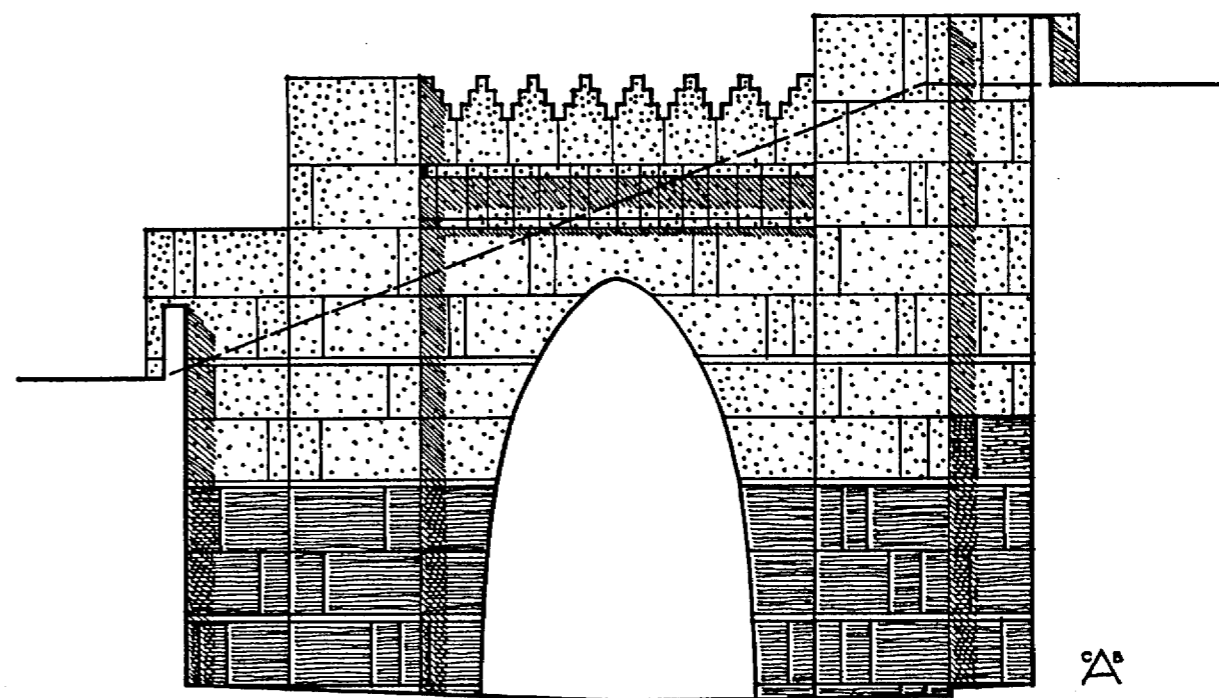
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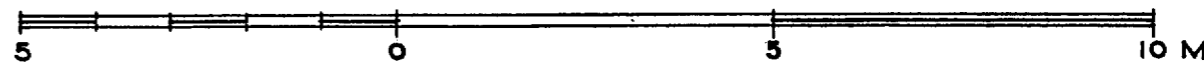
⑥



⑦

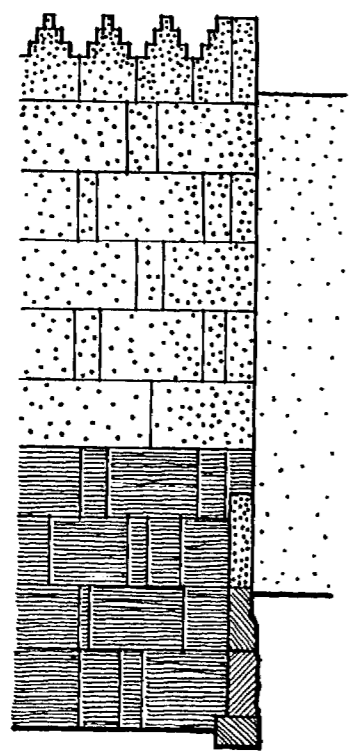


⑧

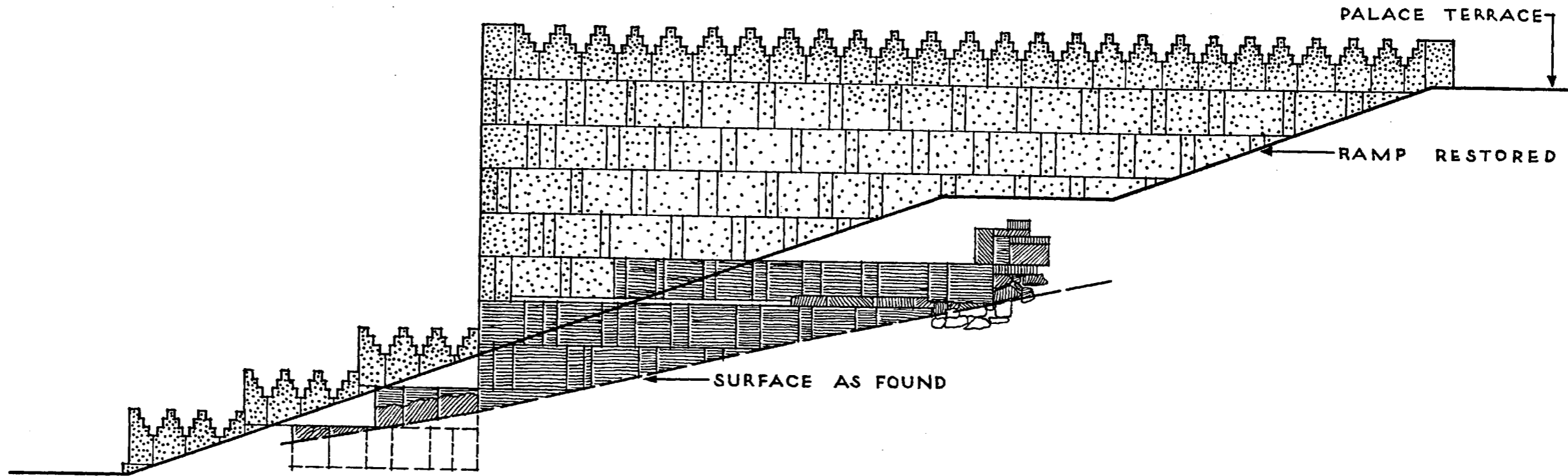


THE BRIDGE CONNECTING THE NABU TEMPLE WITH SARGON'S PALACE.
RESTORED ELEVATIONS AND SECTIONS. SCALE, 1:100

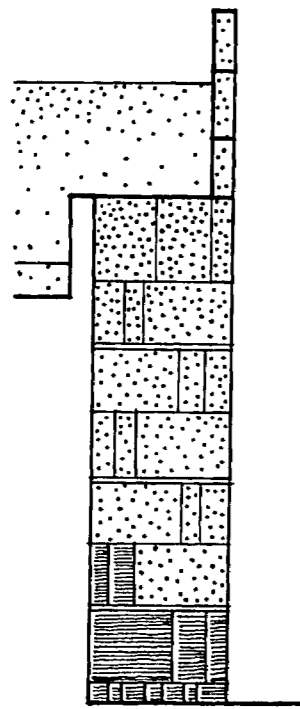
THE NUMBERS REFER TO PLATE 80. SHADED AREAS REPRESENT BLOCKS REMAINING; DOTTED AREAS, RESTORATION



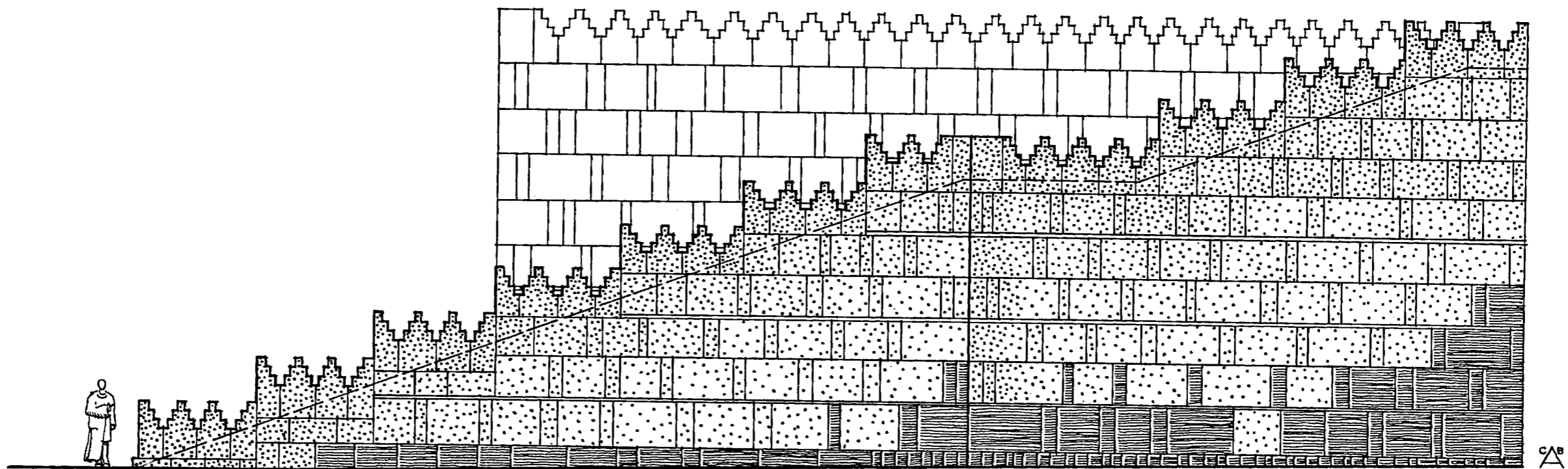
①



②

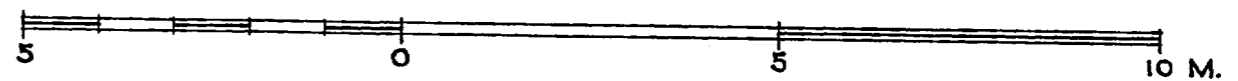


③



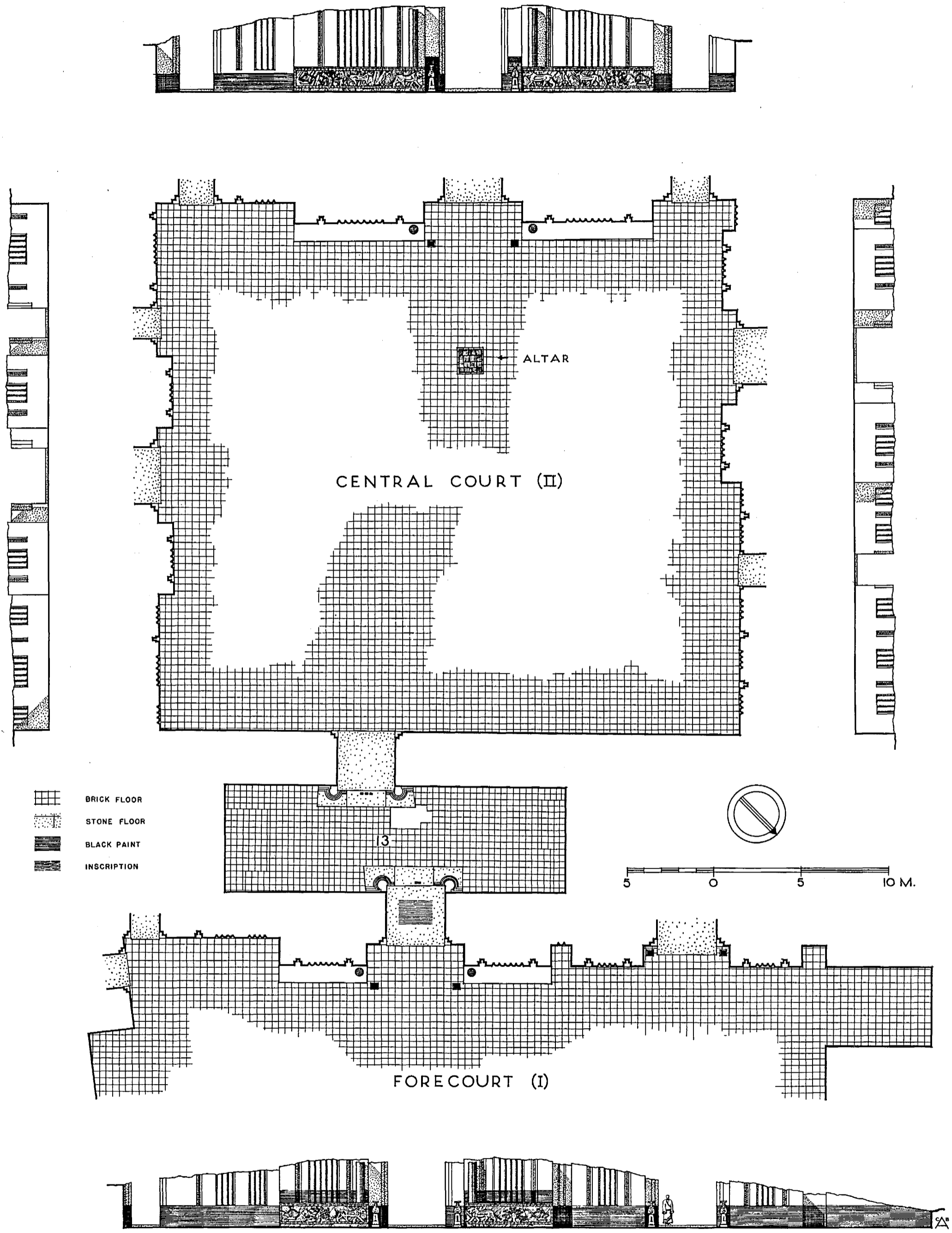
④

 RESTORATION

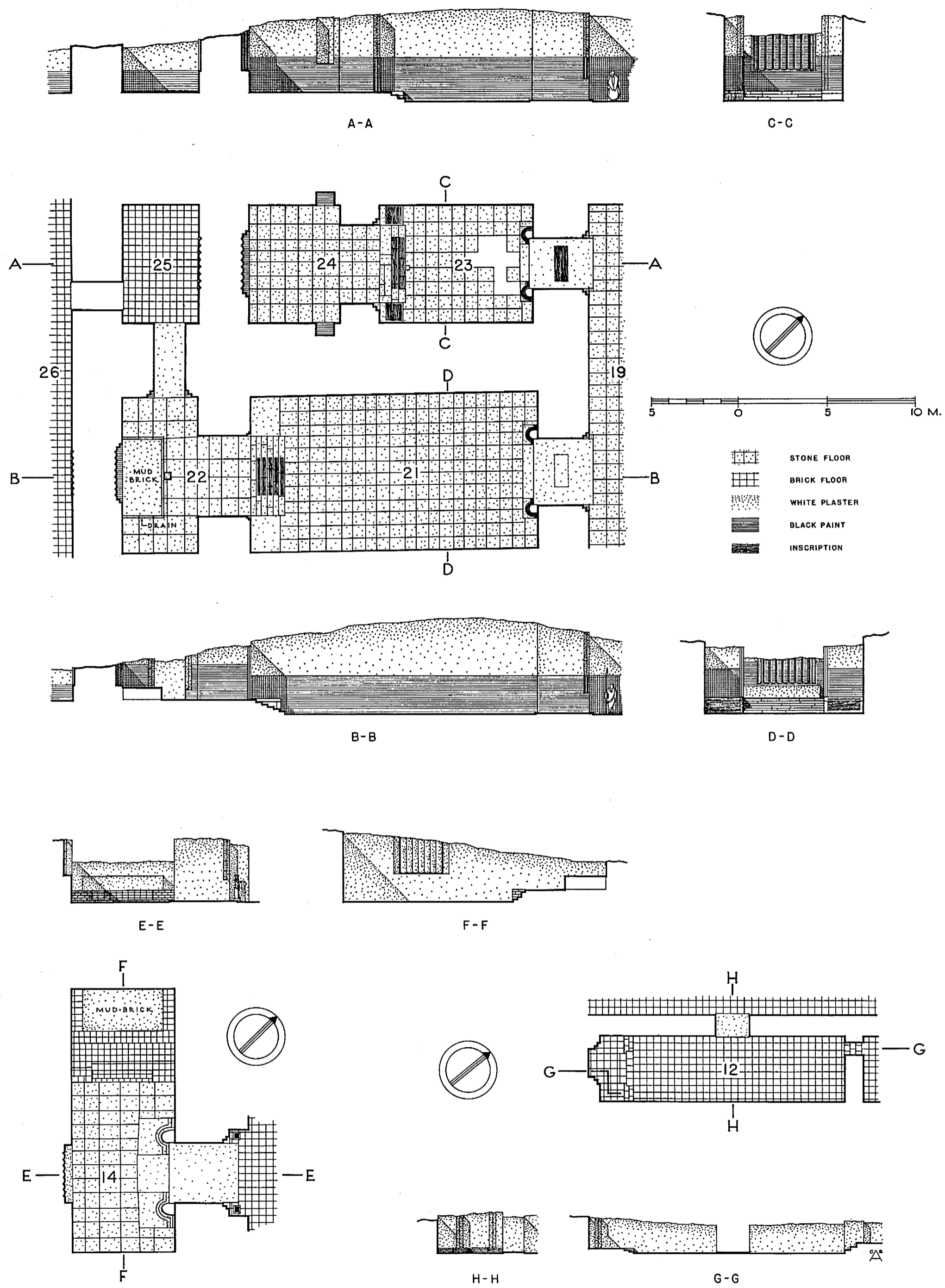


THE RAMP LEADING TO THE SOUTH CORNER OF SARGON'S PALACE.
RESTORED ELEVATIONS. SCALE, 1:100

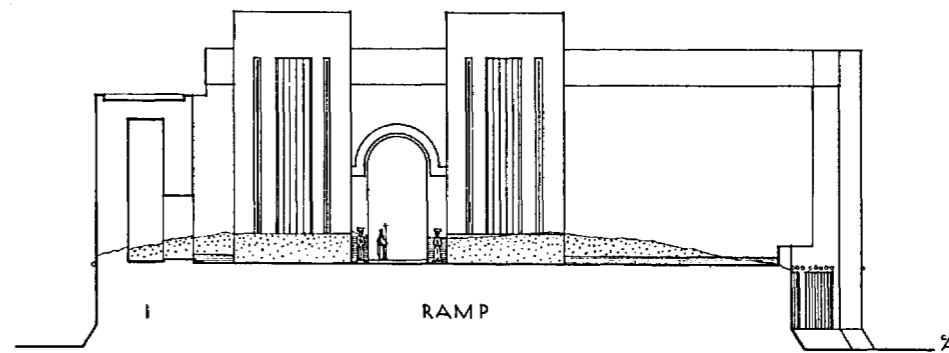
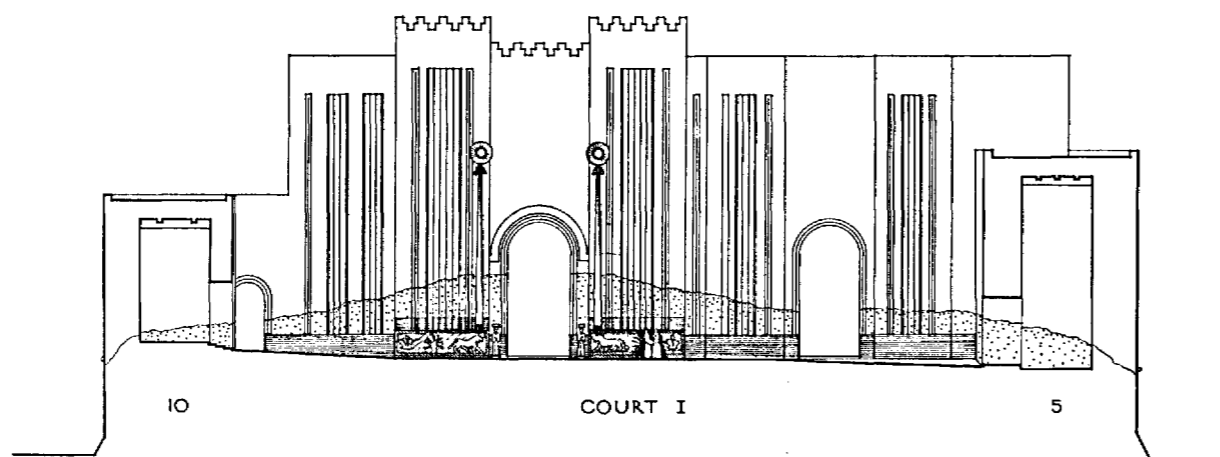
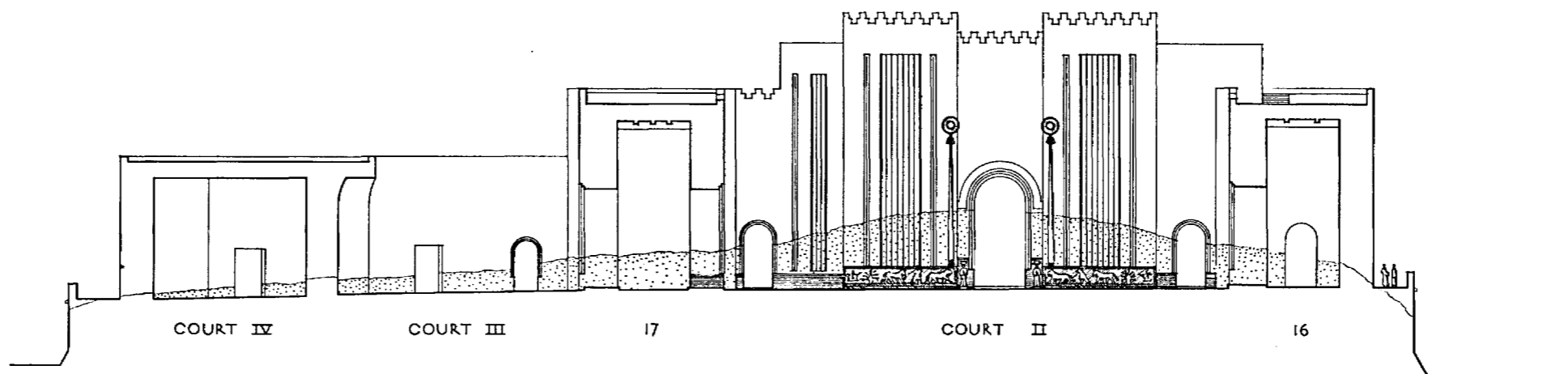
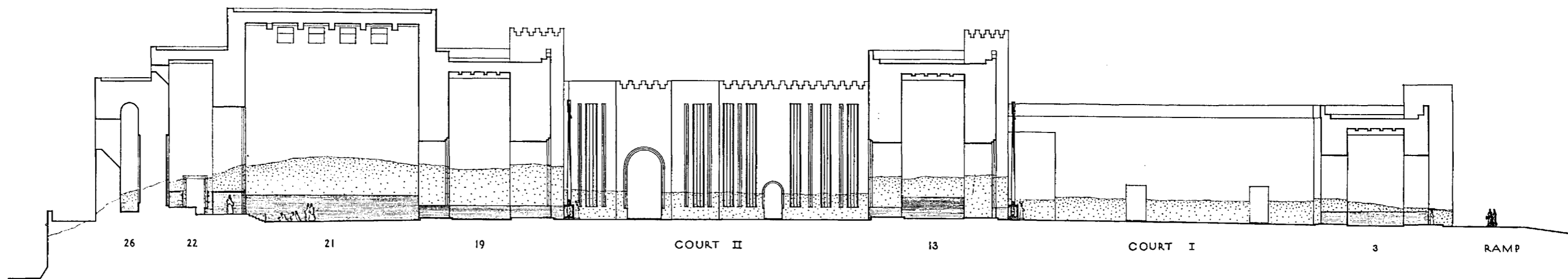
THE NUMBERS REFER TO PLATE 80. SHADED AREAS REPRESENT BLOCKS REMAINING; DOTTED AREAS, RESTORATION



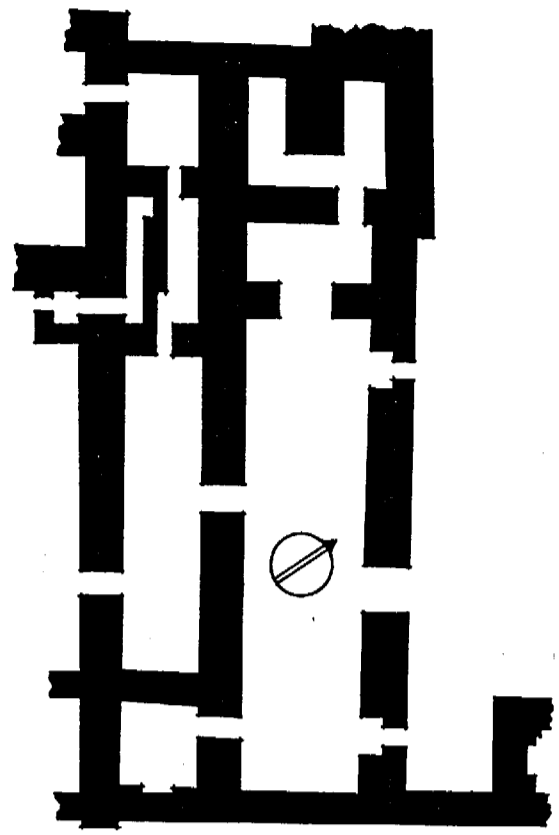
DETAILS OF THE MAJOR COURTS OF THE NABU TEMPLE. SCALE, 1:200



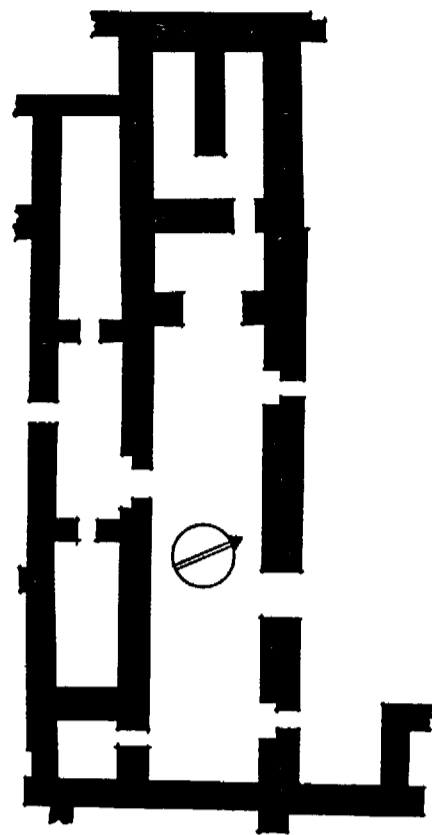
DETAILS OF THE SHRINES OF THE NABU TEMPLE. SCALE, 1:200



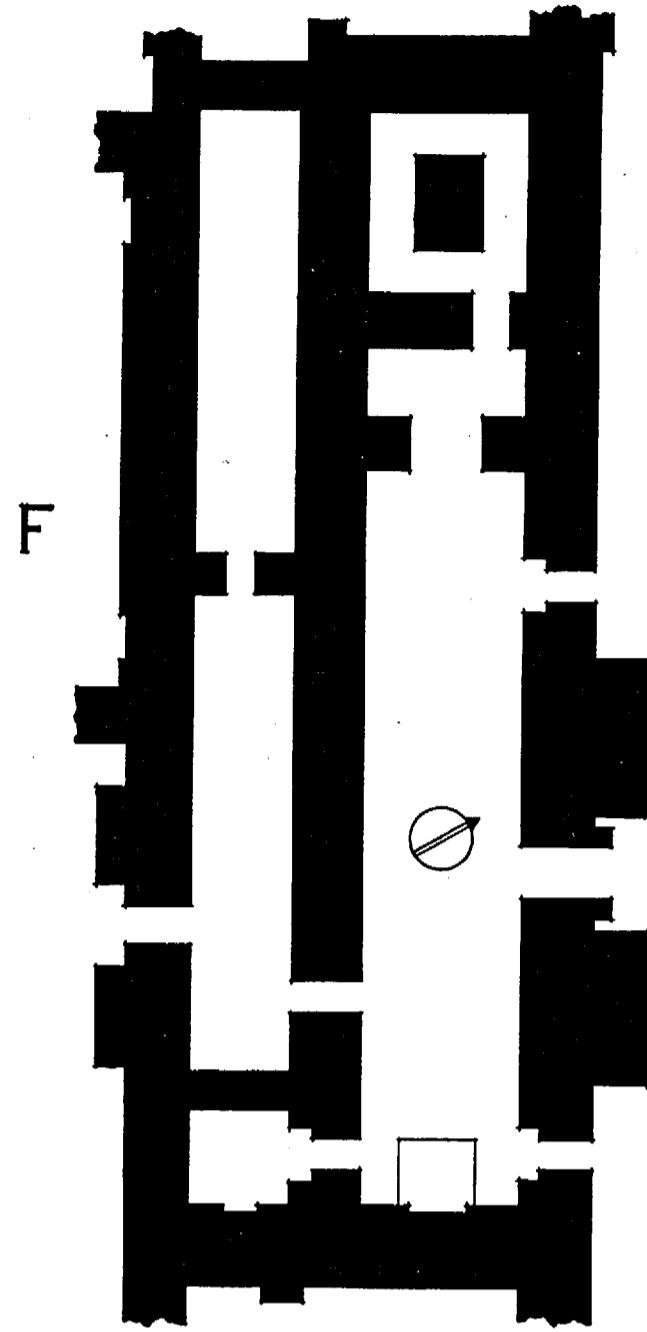
RESTORED SECTIONS OF THE NABU TEMPLE. SCALE, 1:400
DOTTED AREAS REPRESENT HEIGHTS AS FOUND



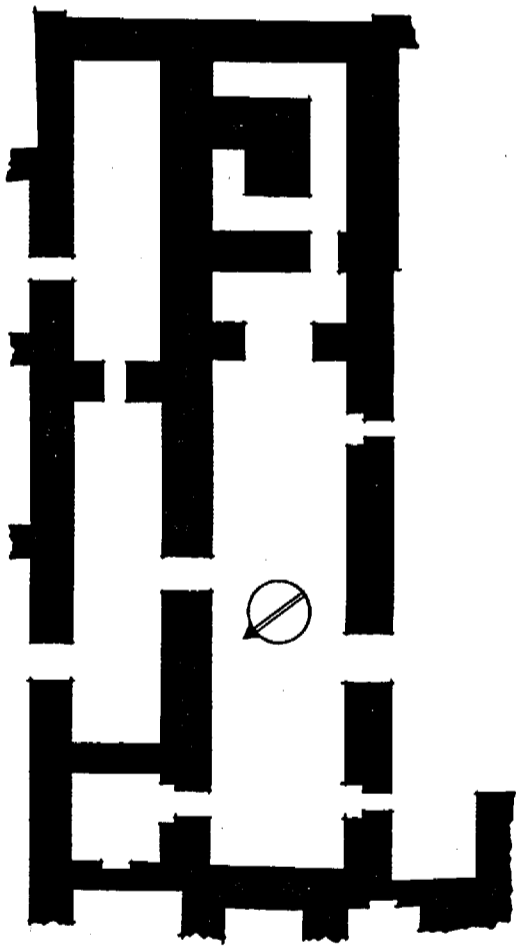
K



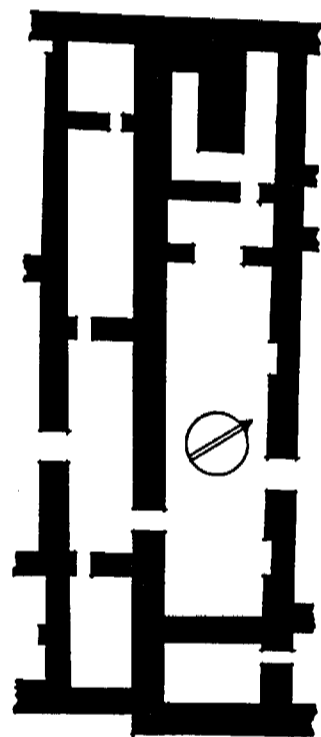
M



F

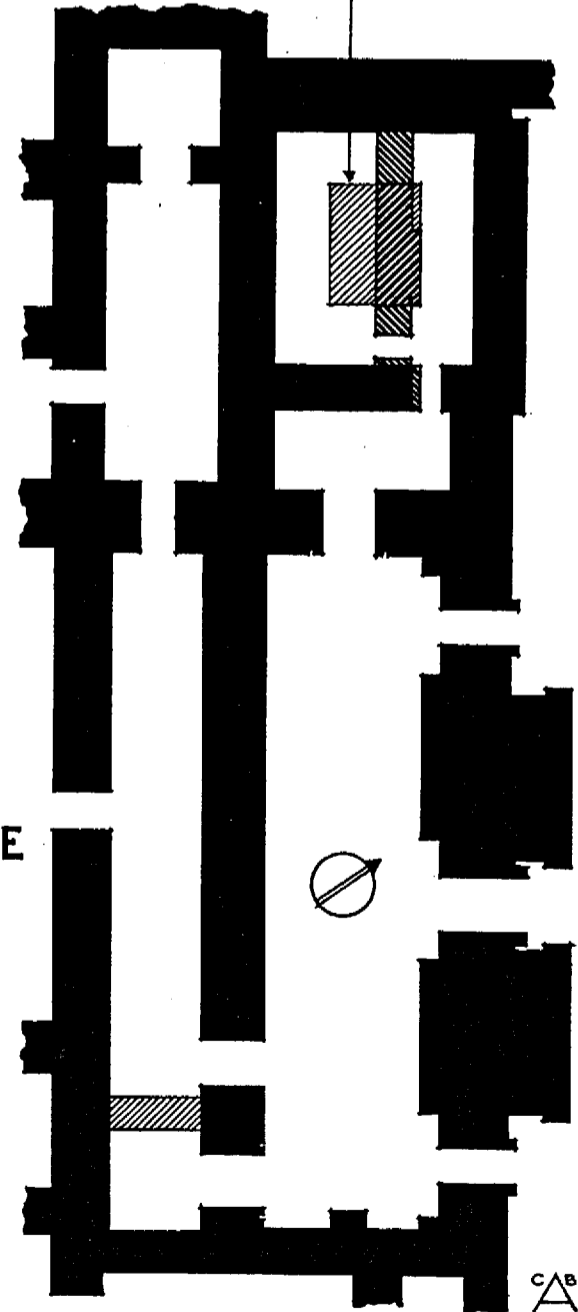


L



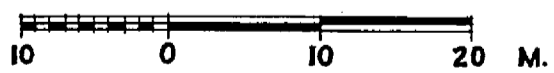
J

SUGGESTED RESTORATION

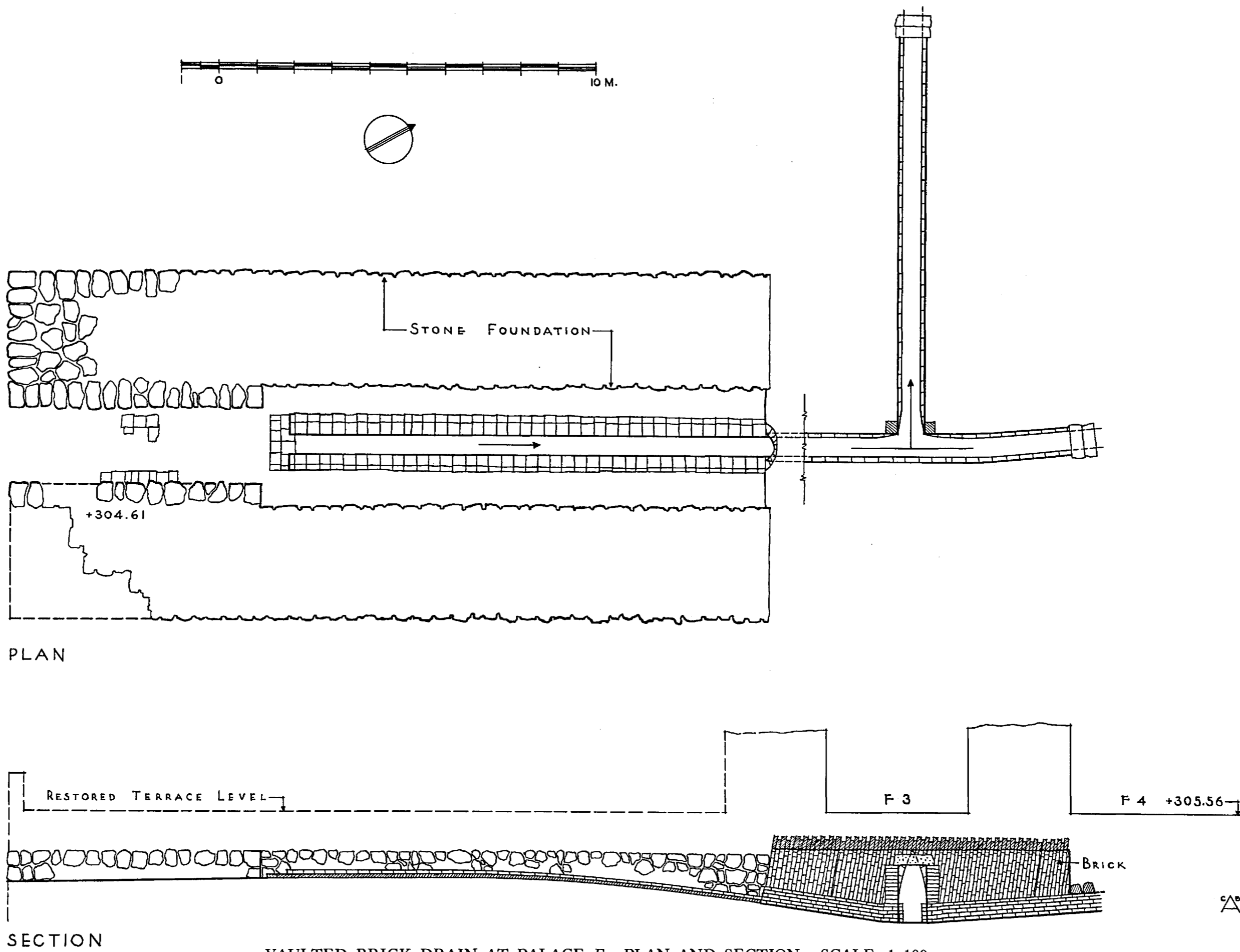


PALACE

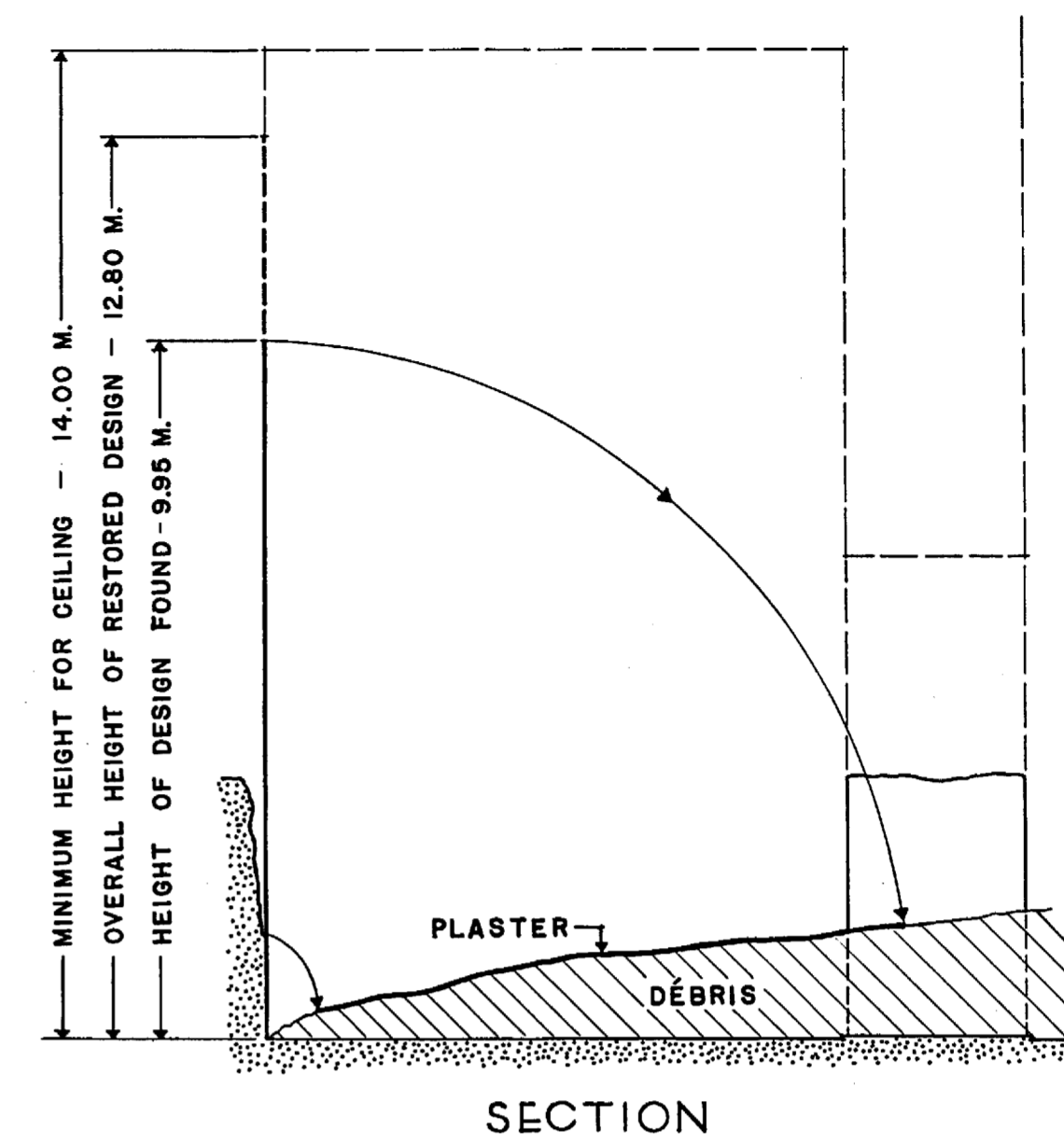
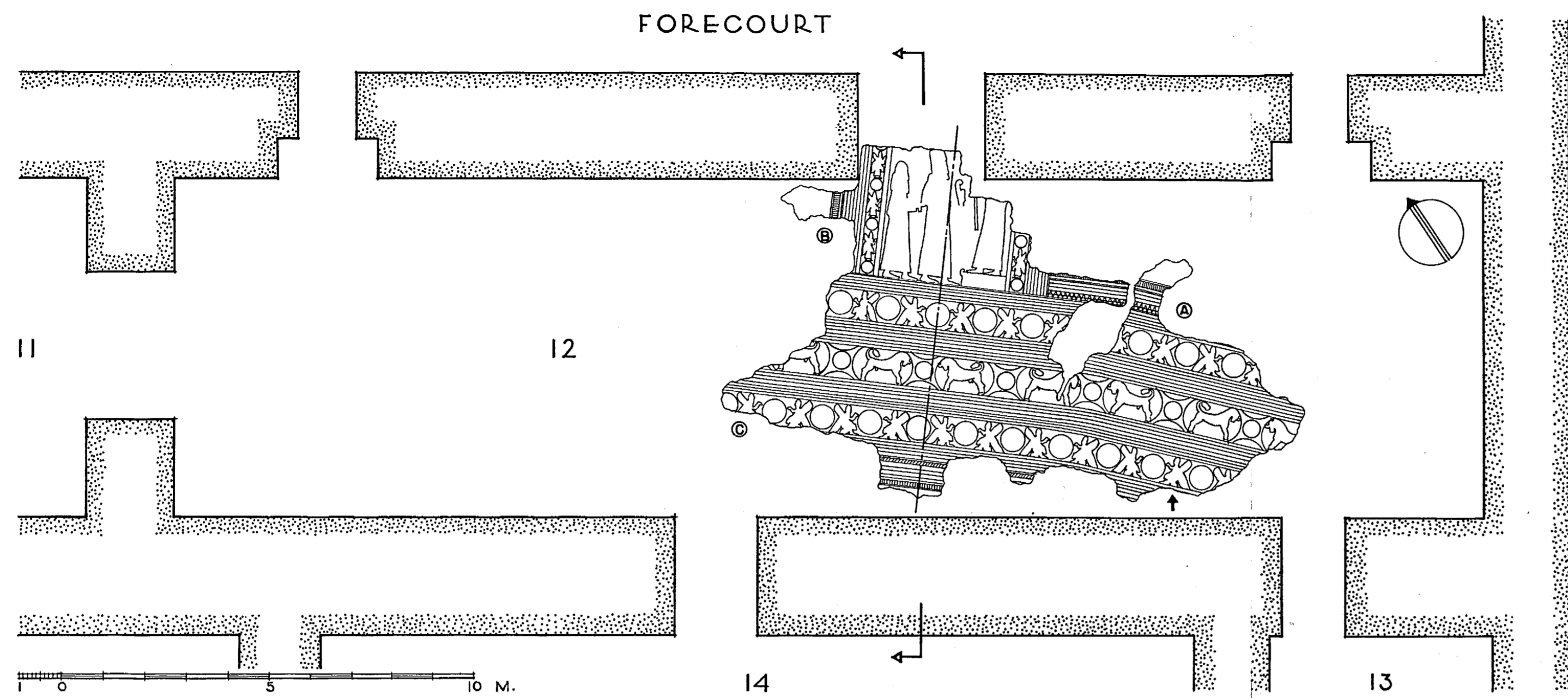
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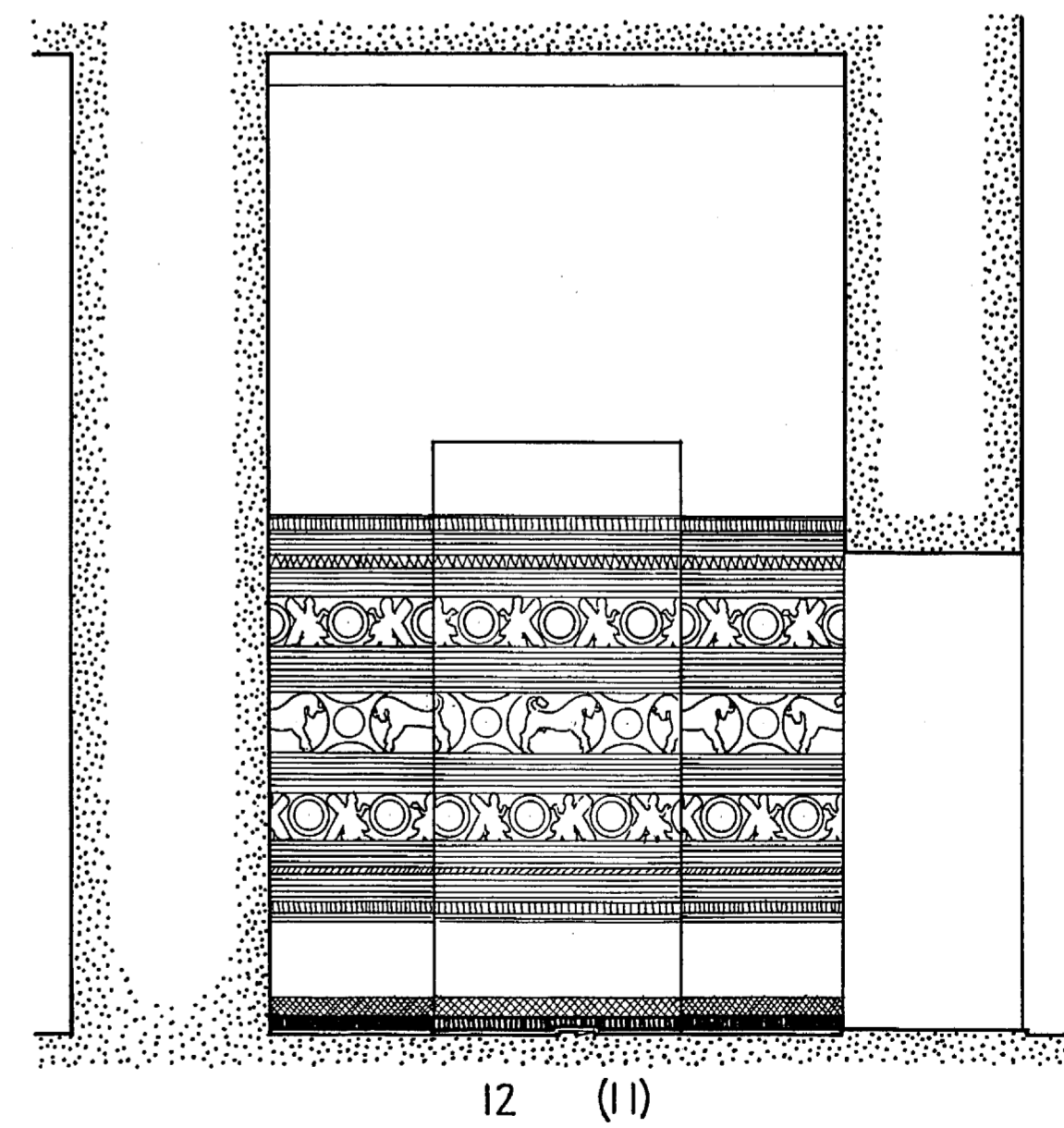
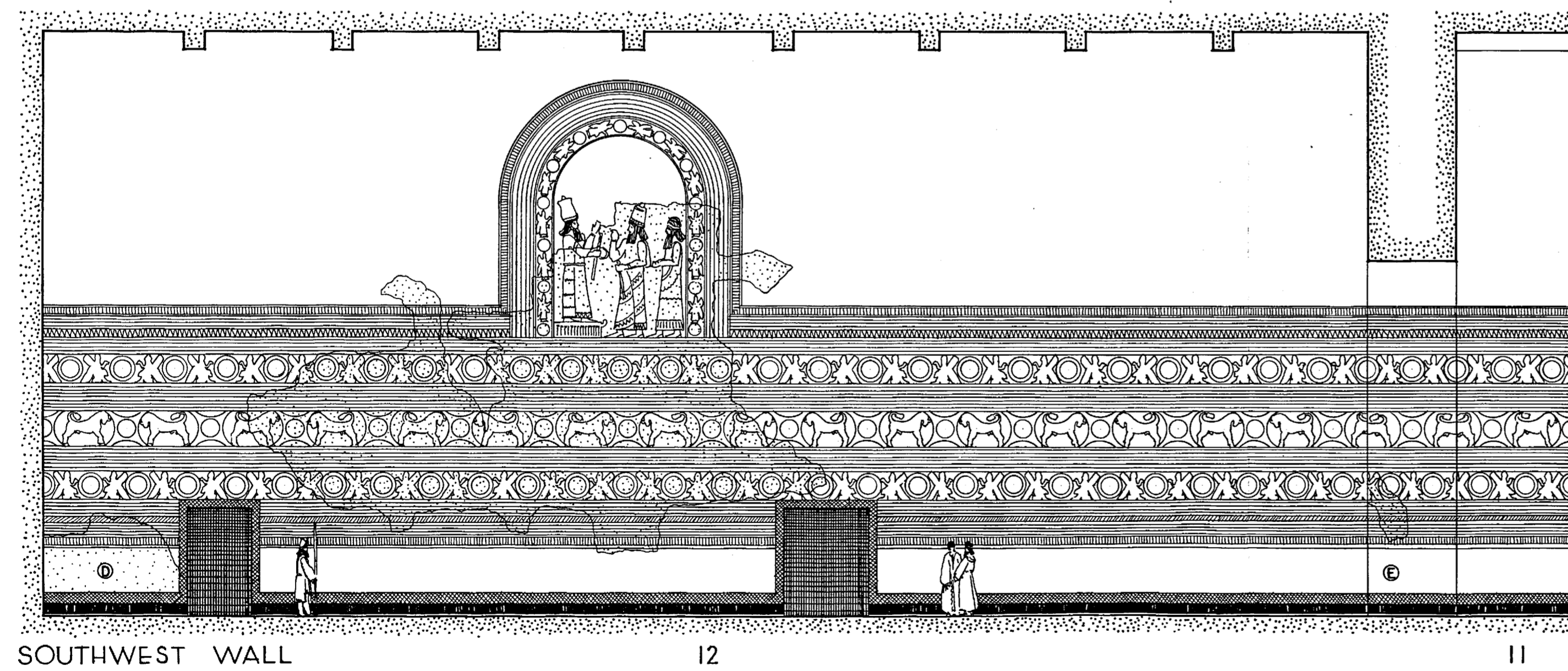
COMPARATIVE PLANS OF RECEPTION SUITES. SCALE, 1:500
 PLAN OF SARGON'S PALACE SUITE (THRONE ROOM ETC.) IS TAKEN FROM PLACE



VAULTED BRICK DRAIN AT PALACE F. PLAN AND SECTION. SCALE, 1:100



RECOVERY

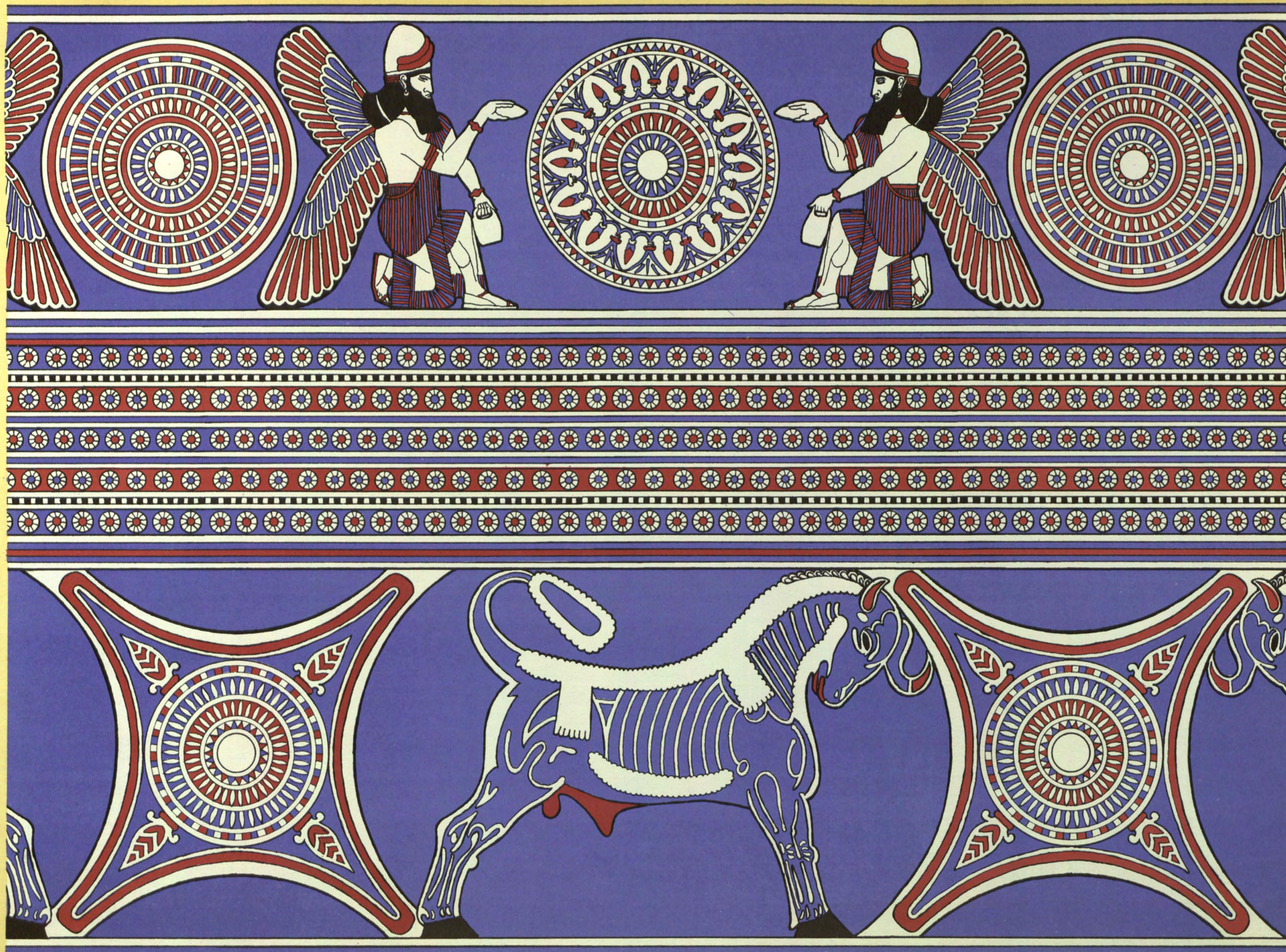


RESTORATION

RECOVERY AND RESTORATION OF PAINTED PLASTER IN ROOM 12 OF RESIDENCE K. SCALE, 1:100
MOST OF THE PLASTER WAS FOUND LYING FACE DOWNWARD. IN THE RESTORATION THE PARTS ACTUALLY FOUND ARE OUTLINED



RESTORATION OF THE PAINTED PLASTER DECORATION OPPOSITE THE CENTRAL PORTAL OF ROOM 12 IN RESIDENCE K. SCALE, 1:20



DETAIL OF THE PAINTED PLASTER DECORATION SHOWN IN PLATE 89. SCALE, 1:8



FRAGMENTS OF PAINTED PLASTER DECORATION FROM THE CITADEL BUILDINGS. SCALE, 1:8

