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the Atrium Veste seen from the East.

# THE ATRIUM VESTAE 

BY

ESTHER BOISE VAN DEMAN



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## PREFACE

I take this opportunity to express my gratitude to all those, both in America and in Rome, who have so kindly assisted me in the prosecution of this investigation.

I desire especially to thank the officers of the American School of Classical Studies in Rome for the many courtesies shown me as a research fellow of the School, and the Carnegie Institution of Washington for the generous aid by which the publication of this work has been made possible.

Esther Boise Van Deman.
Rome, fune, 1909.

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## INTRODUCTION

The House of the Vestals has presented, since its excavation, many problems of great interest to the student of Roman topography and Roman architecture. It was clearly seen that the magnificent building was not the work of one period alone, but that it had been enlarged and beautified in succeeding epochs. The later builders, however, did their work in such a way as to fit it as far as possible into that of their predecessors, and thus produced the impression of a uniform structure. Consequently it is often very difficult to distinguish the different periods.

Valuable monographs on the Atrium Vestæ have been published by Lanciani (1884), Jordan (1886), and Auer (1888); but since their time new researches in the field of Roman architecture and methods of construction have thrown additional light upon several questions, while our material for the study of the building has been essentially increased by the most recent excavations (1900-1901). For these reasons a new investigation of the Atrium Vestæ had become a necessity.

In the following pages Professor Van Deman undertakes this task with great energy and with an accurate knowledge of the situation. The House of the Vestals is taken up in her monograph not as an isolated problem, but in connection with a thorough and extensive study of Roman brickwork. As a result of these studies the author has been able to reconstruct the history of the Atrium Vestæ in the first and second centuries A. D. For the history of the republican building also, the remains of which are deeply buried under the imperial Atrium and are sketched for the first time in Professor Van Deman's work, valuable suggestions are given. Although some of the author's statements may be subjected to criticism and even corrected by later researches, her work marks a decided advance in the investigation of one of the most interesting monuments of the Roman Forum, and is besides a valuable contribution to the history of the architecture of the Romans and to our knowledge of their methods of construction.

Rome, $\mathcal{F u}$ uly, igo9.
CH. HÜLSEN.

## THE ATRIUM VESTAE

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BY
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ESTHER BOISE VAN DEMAN

## I.

## HISTORICAL INTRODUCTION.

Excavation of the Atrium: In October, $1883,{ }^{1}$ in the course of the excavations east of the Forum at the foot of the Palatine, there was discovered near the temple of Vesta a building which, from the inscriptions and statues found in and near it, was recognized at once as the house of the Vestal Virgins, the Atrium Vestæ. ${ }^{2}$ During the next three months the whole of the imperial Atrium, with the exception of the rooms on the southwest, was excavated. In 1899 the work, which had been left unfinished in 1884, was resumed, and in 1901, after the demolition of the church of S. Maria Liberatrice, the remaining rooms on the south and west, which before that time had been inaccessible, were uncovered. ${ }^{3}$ The excavations were carried below the level of the imperial period and the scanty remains of the earlier republican Atrium ${ }^{4}$ were laid bare, wherever this was not rendered impossible by the presence of later structures. During the following two years the excavations in the Atrium and in the buildings adjacent to it were brought to completion.

Previous Plans and Opinions: Of the results of the excavations of 188384, the first authoritative accounts published were those of Lanciani ${ }^{5}$ and Jordan. ${ }^{6}$ Their plans of the Atrium ${ }^{7}$ differed but little and were in their main features correct; they were in agreement also concerning the history of the building in considering it an architectural unit and the work of a single period. But in their opinions regarding the specific period to which its construction was to be assigned, they disagreed widely. Jordan, basing his conclusions on the presumable date of the inscription over the adicula ${ }^{8}$ and the dates of a number of brick-stamps, ${ }^{9}$ held that the building was the work of Hadrian ${ }^{10}$. The adicula is, however, as Lanciani pointed out, ${ }^{11}$ not structurally united to the Atrium and need not therefore be of the same

[^0][^1]period. Moreover, the larger number of stamped bricks were either not found in structural parts of the building or are for various reasons open to doubt in regard to their dates. ${ }^{1}$ Lanciani, ${ }^{2}$ agreeing with Jordan as to the architectural unity of the building, assigned the whole to the period of Septimius Severus. His conclusions were based upon the general style of architecture in the parts best preserved, and upon the presence, in certain walls, of brickwork undoubtedly belonging to the time of Severus. In 1888 Auer, a practical architect, after an independent study of the building, published a brief but suggestive discussion of its history, ${ }^{3}$ with a new plan of the group of rooms on the east. ${ }^{4}$ His conclusions ${ }^{5}$ differed radically from those of the earlier writers. The Atrium, or rather the part of it then excavated, was not, he held, the work of a single builder or period, as Jordan and Lanciani had maintained, but was composed of three distinct units, which were to be assigned to as many periods. ${ }^{6}$ The group of rooms on the east, ${ }^{7}$ the center of which is the large room called by Jordan ${ }^{8}$ the tablinum, which was rightly regarded by Auer as a single structure, was the earliest part of the building and belonged to the period immediately following the fire of Nero. ${ }^{9}$ The group of rooms on the south along the Nova Via, less symmetrical in plan than the group on the east, was wholly the work of Hadrian. ${ }^{10}$ The rooms on the north, which were more difficult to identify, since they were only partly excavated, were of a much later period, possibly later than the time of Diocletian. ${ }^{11}$ The rooms on the west were not yet excavated at the time of the publication of Auer's work.

Purpose of the Present Work: The conclusions of Auer as here given were generally accepted as final, when the results of the excavations which were carried on in $1901-03^{12}$ led me to a careful study of the plans of the Atrium, not only those mentioned above but those which have been published more recently, ${ }^{13}$ and of the views advanced concerning its architectural history. After a futile attempt to adapt the plans in detail to the walls as

[^2][^3]

I saw and measured them, or to reconcile the facts observed with any of the theories suggested, I decided to make an independent examination of the entire building and of the evidences bearing upon its history. In this examination my purpose was twofold: first, to prepare a more exact plan of the imperial Atrium, so far as it was then feasible, into which the walls discovered since 1889 should be incorporated as soon as they should be made accessible through their official publication; ${ }^{1}$ and, second, to reconstruct the architectural history of the building, including, so far as possible, that of the republican structure beneath it.

The carrying out of the former purpose was a simple matter, though tedious, consisting merely in the careful measurement of such of the walls now standing as have been published. In the plans based upon these measurements, which are here presented, ${ }^{2}$ a number of errors in the earlier plans have been corrected and some details of importance, as I hope, added.

The reconstruction of the architectural history of the Atrium was, however, less simple, involving, as it did, the determination of the structural units composing the building and their chronological relation to one another, as well as of the periods to which they are to be assigned. For the determination of the various units and their relation to one another, a careful examination was made of the building as a whole, as well as of the individual walls of the various parts; in this examination special consideration was given to the following points:

1. The comparative level of the individual walls in each part and the relation, with respect to level, between the various parts. ${ }^{3}$
2. The unity, in the several parts, in architectural plan and in structure, the latter as shown especially by continuity in brickwork and concrete.
3. The superimposition of walls of one type upon those of another.
4. The methods of construction, that is, the thickness of the individual walls and the occurrence and frequency, in them, of bonding-courses composed of large square bricks, the tegula bipedales of Vitruvius; ${ }^{4}$ and where it could be ascertained the depth of the concrete foundations and the width of the courses of brick and the layers of mortar. ${ }^{5}$

[^4]5. The character of the materials employed, as shown by the size, color, and composition of the bricks and by the color and composition of the mortar.

For the determination of the specific periods to which the various parts of the Atrium belong, a comparative study was made, especially with regard to the methods of construction and the materials employed, of all the buildings in and near Rome to which a certain date can be assigned. To this evidence was added that afforded by the literature and coins. The number of brick-stamps accessible to me was not sufficient to warrant their use as evidence, ${ }^{1}$ except in a very limited sense.

Periods in the Development of the Atrium: As a result of my investigation along the lines just indicated, certain important facts have been established and new conclusions reached concerning the architectural development of the Atrium. The structural units ${ }^{2}$ of which it is composed, apart from those of the early republican building, the number of which it is impossible to determine accurately, are seven or, possibly, eight. These will be described more fully in connection with the discussion of the architectural details of the several Atria. The stages in the history of the building represented by these seven units are, however, but five in number. While no conclusive evidence remains concerning the exact dates of these various stages, the periods to which they are to be assigned can, as will be seen, be definitely determined in all cases.

The Imperial Atrium of the First Period: The building whose scanty remains lie a meter below the present level of the Atrium ${ }^{3}$ may be accepted, from its orientation and style of architecture, as the republican Atrium Vestæ. More than half a meter above this was erected another building, consisting of a court 45 meters long, which was surrounded on two or, possibly, three sides by a series of lofty rooms. ${ }^{4}$ This later building, which differed in orientation and architecture not only from the earlier Atrium, upon the remains of which it was erected, but also from the other buildings of the precinct contemporaneous with it, belongs, as is evident from its construction, wholly to the imperial period. In the earlier of the two buildings, the republican Atrium, whose architectural history extends from the early republican or even the regal period to that of the early Empire, many of the walls were restored more than once before their final destruction, and new walls were added, especially in the rooms which belonged at an earlier

[^5][^6]

Fig. 1. The Levels of the Atrium.


Fig. 2. Brick Facing of the Periods of the Flavians and of Septimius Severus.
period to the Domus publica. All of these restorations and additions are, so far as can now be determined, ${ }^{1}$ antecedent to the fire of Nero. It is certain that at that time the whole precinct was swept by the flames. ${ }^{2}$ Had the Atrium survived the calamity, there would be traces remaining of the restorations necessitated by it. Since, as we have said, no such traces are to be found, the final destruction of the earlier building can not have been subsequent to that event. The later building also, which was erected in its place-which we have called the first imperial Atrium-though it suffered at least twice from fire, shows no evidence of any such complete restoration as would have been necessary had it been built before and passed through the great fire. We may conclude, therefore, that the earlier building, the republican Atrium, was destroyed in the fire of Nero and that the first imperial Atrium, by which it was replaced, was erected at some time subsequent to it. ${ }^{3}$ We know that at the time of the death of Galba, in 69 A. D., ${ }^{4}$ the precinct of Vesta was recognized as a place of refuge and that the temple and certain of the less important rooms connected with it were already built. At that time, therefore, the Atrium must have been in large part completed, since the continual attendance of the Vestals upon the temple-fire made it necessary that, with the restoration of the regular temple cult, they resume their residence inside the precinct. The half-year between the death of Nero and that of Galba would have been insufficient for the carrying out of the whole work; ${ }^{5}$ the reconstruction of the Atrium as well as of the temple ${ }^{6}$ must, then, have been begun, if not finished, by the former. ${ }^{7}$ The arguments presented are, as it seems to me, sufficient in themselves to warrant the acceptance of the first imperial Atrium as the work of Nero. This conclusion is, however, made more certain by the evidence of the walls themselves, which are identical in material and in methods of construction with those universally recognized as belonging to his time. ${ }^{8}$

[^7][^8]The Atrium of the Second Period: Within a few years after the erection of the first imperial Atrium, it suffered considerable injury from fire. ${ }^{1}$ The reconstruction following this partial destruction constitutes the second stage in the history of the building. ${ }^{2}$ From literary evidence ${ }^{3}$ we know that in the reign of Vespasian the Templum Augusti fell a prey to the flames. Since the injury to the Atrium of which we have just spoken was, so far as can be ascertained from the walls now standing, ${ }^{4}$ confined largely to the rooms on the west and southwest, ${ }^{5}$ it is probable that it was the result of this same conflagration, which, entering the building from the direction of the temple of Augustus, swept over this part of it only. From the coins of the Flavian emperors ${ }^{6}$ it is clear that the temple of Vesta was at some time either partly or entirely rebuilt by them. Since there is no reference to any injury to the temple during this period, or to any other calamity befalling this part of the city which might have caused its destruction except that just mentioned, we may safely assume that the rebuilding of the temple indicated by the coins, and the restoration of the Atrium which very naturally accompanied it, were necessitated by the injury wrought by this fire. To this presumptive evidence is added the indisputable evidence afforded by the masonry of the building, which is of the same type as that of the numerous other buildings of the Flavian emperors, especially of Domitian. ${ }^{7}$ To this time, therefore, we may assign the imperial Atrium of the second period. ${ }^{8}$

The Atrium of the Third Period: There is no evidence, either direct or indirect, of any further change in the Atrium until the second century, when with the growing luxury of the times there arose the necessity for a more extensive establishment. To satisfy this necessity it is probable that the group of rooms on the east ${ }^{9}$ was added. At the same time on the south there was built, in the tablinum of the earlier Atrium, a smaller group of rooms. ${ }^{10}$ The Atrium so enlarged we have called the Atrium of the third period. Concerning the exact time at which these additions were made, the proofs are simple and decisive. The new rooms on the south are, as will be

[^9]${ }^{6}$ Coins bearing representations of the temple: Cohen, Vespasien, 577-581; Titus, 347-351; Domitien, 613-616. Coins referring to the goddess or to the cult: l.c., Vespasien, 572576; Titus, 340-346; 7ulie, fille de Titus, 15-18; Domitien, 611-612. The representation of the temple on these coins differs from that on the coins of Nero, suggesting an entire rebuilding of the temple and not the completion of a structure already begun.
${ }^{7}$ See pp. 27-28.
${ }^{8}$ Huelsen holds correctly that the Templum Augusti as it now stands is the work of Domitian. The restoration of the Atrium by him is therefore more probable.
${ }^{-}$Plan C, 29-39.
${ }^{10}$ Plan C, 13, a, b, c, d.
seen, ${ }^{1}$ later in construction than the rooms adjacent to them. They must, therefore, belong to a period subsequent to that of Nero and of the Flavians, to which these rooms have been assigned. The rooms on the east are identical in type of construction with those on the south. ${ }^{2}$ The number of coins of the time of Hadrian ${ }^{3}$ which refer to the cult, as well as the wellknown activity of that ruler in building, lead to the assumption that the enlargement of the Atrium is to be ascribed to him rather than to any other of the post-Flavian emperors. With this conclusion the walls are in harmony, agreeing even in many unessential details with those of the more important monuments of Hadrian, such as the Mausoleum and the Pantheon. ${ }^{4}$ The new groups of rooms on the east and on the south are, therefore, of his time.

The Atrium of the Fourth Period: In the previous period there had been left, on either side of the garden ${ }^{5}$ on the east, spaces not unlike the ale of the private house. By filling in these spaces the number of rooms was much increased and the newer part of the Atrium on the east was more closely connected with the earlier building, ${ }^{\text {b }}$ although the court on the west and the garden were not united to form the present large court until a later period. ${ }^{7}$ Over the eastern half, at least, of the Atrium, when so enlarged, upper stories ${ }^{8}$ were built, or possibly, in the case of the rooms already existing, rebuilt. These alterations and additions mark the fourth stage in the growth of the building. ${ }^{\circ}$ That we are here dealing with a distinct structure and one later in period than those already discussed is certain. It is evident, in the first place, from the lack of agreement in architectural plan and in type of construction, as well as from the loose mode of attachment between their walls, that the rooms which are here under discussion are structurally distinct from those both of the first and second periods on the west and of the third period on the east. ${ }^{10}$ That they are not only distinct from, but later than the rooms of the other periods is even more evident. The concrete foundation of the front wall of the east rooms projects more than half a meter beyond the wall itself. On the north side of the court the later wall, the foundation of which is a meter lower than that adjoining it, has been built, in a bungling fashion, against and on top of this projecting foundation. ${ }^{11}$ In the same manner, on the south a shelf which extended along the front wall of the earlier rooms has been utilized in the building of the new walls. ${ }^{12}$ The walls of the upper stories also, ${ }^{13}$ which are united structurally with the new rooms of the lower story, are built on top of those of the east rooms, ${ }^{14}$ or are, as on the side towards

[^10]the Palatine, pushed out above and beyond them. The structural unit, therefore, of which the walls of the upper stories form a part, must be of a period later than that of these rooms, which are of the time of Hadrian. The immediate successors of Hadrian, in fact, the Antonines, especially Lucilla, were liberal benefactors of the Vestals. ${ }^{1}$ With the architecture of their time, moreover, that of the new building is in agreement. ${ }^{2}$ We may, therefore, conclude that the additions to the Atrium by which the eastern half of the building was completed are to be assigned to the period of the Antonines and are probably in a large part the work of Lucilla.

The Atrium of the Fifth Period: During the reign of Commodus the precinct of Vesta suffered again from fire. In this case the fire entered the Atrium from the side towards the temple, which was, as we know, almost totally destroyed by it. The injury affected most seriously, therefore, the western and northwestern rooms, the inner walls of which were burned almost to the ground. ${ }^{3}$ The rooms on the east and south, however, escaped injury. The restoration following this partial destruction marks the last fixed stage in the development of the Atrium. ${ }^{4}$ In connection with this restoration the Atrium-court on the west was extended to the east by the destruction of the walls separating it from the earlier garden ${ }^{5}$ and by the lowering of the level of the garden to that of the court. Discussion of the exact period at which this restoration took place is rendered needless by the peculiar nature of the brickwork, which is that accepted without question as of the time of Septimius Severus. Julia Domna, the wife of Septimius and a well-known patroness of the Vestals, rebuilt the temple. ${ }^{6}$ It is likely therefore, that the restoration of the Atrium was also her work.

After the time of Julia Domna, though the Atrium shared in the vicissitudes which befell the buildings in its vicinity, the restorations and additions were of comparatively small importance and can not be assigned to any certain period.

[^11]${ }^{4}$ Plan E.
${ }^{5}$ See p. 43. The extension of the court may be of the preceding period, but the weight of evidence is rather in favor of the view here given.
${ }^{6}$ This is clear from the coins of the period, as well as from other testimony. Coins representing the temple: Cohen, foulic Domne, 232244. Coins representing Vesta: l. C., 220$23 \mathrm{I}, 245^{-248}$. It is likely that the temple at least was not completed, since there are coins of Caracalla (l.c., Caracalla, 249-251) on which it appears.

## II.

## THE REPUBLICAN ATRIUM VESTÆ.

Although not connected directly with the main subject under discussion, the imperial Atrium Vestæ, the lack of definiteness in the use, among ancient and modern writers alike, of the term Atrium Vestæ has led me to discuss briefly the earlier use of the name and its gradual restriction to that building to which it is commonly applied.

The Original Atrium Vesta: During the earlier period of its existence there were no distinct buildings inside the precinct of Vesta, ${ }^{1}$ but the various parts, united more or less closely among themselves, formed a single complex structure. ${ }^{2}$ In this group of buildings were included the king's house proper on the north and the Domus Vestalium, or private rooms of the Vestals, on the south, the small temple, or more properly shrine, of Vesta in the center, and the group of rooms on the east, known later as the Domus publica; along the Nova Via at the foot of the Palatine lay the lucus Vestr. ${ }^{3}$ The center of this group of buildings was the open court in which stood, as in the private house, the shrine of Vesta. This court was in form and orientation a templum, which at an early period was probably inaugurated, though later this was not feasible, owing to the nature of the cult of which the temple was the center. The walls on the north and on the south are in part preserved. On the west it was probably bounded by the outer wall of the precinct. ${ }^{4}$ Towards the east, that is, along the front of the templum, ${ }^{5}$ the line bounding it was retained, even after the change in orientation of the surrounding buildings, in a raised edge, or curbing, ${ }^{6}$ in the pavement, which crossed the area diagonally in

[^12]${ }^{5}$ Servius, ad Aen., vir, 153: Templum Vesta non fuit augurio consecratum ne illuc conveniret senatus ubi eramt virgines. The templum here is not the ades but the area, or court just mentioned. The ades, because of its form, could not be inaugurated, and from its size and arrangement would have been, in any case, impracticable as a meetingplace for the Senate. Into this court, in which there was, as is shown on coins, an altar, Scavola fled for refuge in 82 B. C. (Cic., de Nat. Deorum, III, 32, 80. Livy, Epit., lxxxviet al.) It is possible that the sacrificial strata found at the southwest of the temple (Not.d.Scavi, 1900, 172) may be in some way connected with the exauguratio of this templum.
${ }^{6}$ Plan A, $\mathbf{y}$.
front of the later adicula. The pavement itself, the eastern half of which is raised slightly above the other, like the curbing, still preserves the earlier north and south orientation. ${ }^{1}$ The presence of this square inclosure was recognized by Jordan, who, however, considered it a separate temenos, or precinct, and held that its orientation, like that of the temple, was due to Greek influence. ${ }^{2}$ The rooms on the north side of the court with those on the east ${ }^{3}$ formed the residence of the king, though this was, at least in later times, merely official. The rooms on the south were set aside for the Vestal Virgins, who were simply a part of the king's household, assisting the regina in her duties as mater familias of the state.

This whole group of buildings, called more commonly the Regia of the kings, ${ }^{4}$ was the original Atrium Vestæ. This conclusion is based upon the following facts. It is evident from the numerous references in literature ${ }^{5}$ that there existed from the earliest times a building or group of buildings inside the precinct which was known as the Atrium Vestæ. It is, moreover, implied, or rather assumed as known, by Servius ${ }^{6}$ that this earlier building or group of buildings existed before and was distinct in location from the Atrium of the Empire, with which he was familiar. The original Atrium must have consisted of, or included as its most prominent feature, an open court, which corresponded in general style to the Atrium of the private house, since from this its name is obviously derived. ${ }^{7}$ This court must also have been of a size sufficient for the meetings of the senate, ${ }^{8}$ which numbered during the period with which we are concerned, from one hundred to six hundred members. As shown by recent excavations, the precinct of Vesta contained no court fulfilling these conditions except that inclosing the ades, which has been described above. ${ }^{9}$ This court, therefore, or rather the group of buildings of which it was the center and to which the name was easily extended, was, as has been said, the earlier Atrium Vestæ. The use of the designation Atrium for such a group of buildings is not peculiar. The best-known examples are the Atrium Libertatis, ${ }^{10}$ the Atrium Sutorium, ${ }^{11}$ and the Atria Licinia in prima Subura. ${ }^{12}$ The location of the ades inside the Atrium finds interesting parallels in the location of the shrine of Minerva

[^13]inside the Atrium Minerva, as suggested by Huelsen, ${ }^{1}$ and of the ades Titi inside the Templum Divorum. ${ }^{2}$ The application of the name of Vesta alone to the whole Atrium arose naturally from the prominence of her cult among the sacra of the state which were centered there. ${ }^{3}$

The Republican Atrium Vesta: With the gradual breaking up of the simple cult of which the king's house had been the center, and the growing independence of the various priesthoods among which the several religious functions of the king had been divided, the necessity arose for the assignment to them of distinct official residences. At this time it is probable that the parts of the Atrium became independent; for during the later Republic and the early Empire, in place of a single complex structure bearing one name, there were recognized four separate parts with as many distinct names, two of which were, however, those applied earlier to the whole structure. These four parts were: (1) the rooms on the north of the temple area, which at least after their reconstruction by Domitius Calvinus, in $3^{6}$ B. C., were regarded as a distinct structure, and to which was technically restricted the name of Regia; (2) the ades (less correctly called the templum) Veste; (3) the rooms on the south, the Domus Vestalium, to which the name Atrium was probably limited; ${ }^{4}$ and (4) the rooms on the east, the Domus publica, in which the Pontifex Maximus ${ }^{5}$ continued to live until Augustus on his assumption of the priesthood, in 12 B. C., ${ }^{6}$ transferred the official residence to the Palatine. ${ }^{7}$ The names Atrium Vestæ and Regia, however, though technically restricted to the parts named, were used also in the earlier and more general sense. ${ }^{8}$ The lucus Vesta, which covered the space originally between the Atrium and the Palatine, yielded place gradually to the new buildings, though a small part of it remained until a very late period.

After the destruction of the whole group of buildings in the fire of Nero, ${ }^{9}$ the Atrium was rebuilt on a scale commensurate in size with the other buildings of the period and with a different orientation from the earlier buildings. ${ }^{10}$ In this reconstruction the Domus publica disappeared wholly.

[^14]${ }^{4}$ The rise into prominence of the pontifical power was coincident with or followed closely after the fall of the kings (Marquardt, Röm. Staatsverw., 111, 235ff.). The granting of the Domus publica to the Pontifex Maximus as his official residence occurred probably at the same time.

- See Wissowa, Religion und Kultus der Römer, 69.
${ }^{7}$ Dion Cass., liv, 27.
${ }^{8}$ By Cicero (ad Att., x, 3), as well as by other writers, the name Regia is used for the Domus publica. Examples occur also of the use of Atrium Vestre for the entire group of buildings.
${ }^{-}$See p. 5 -
${ }^{10}$ See plan A.

Remains of the Republican Atrium: The remains of the original republican Atrium ${ }^{1}$ as a whole are scanty, though easily distinguished from those of the later buildings on account of their difference in orientation and in construction. The remains of that part of the building with which we are more immediately concerned, the early house of the Vestals, to which in 12 B. C. the Domus publica had been added, are even fewer than those of the other parts. ${ }^{2}$ There are distinguishable, however, even in these scanty remains, three periods of construction. ${ }^{3}$ The walls belonging to the first of these periods are, like those of the Regia proper, of tufa of two different varieties. Of these the walls of cappellaccio ${ }^{4}$ are somewhat the older, though those of light-yellow tufa may be but a little later. At an early period certain of these walls were restored and new ones added in the harder reddish-brown tufa. In 12 B. C., ${ }^{5}$ or a little later, extensive changes were made in the Domus publica both in plan and in type of construction, either to render it more serviceable to the Vestals or in consequence of some partial destruction of the earlier building. ${ }^{6}$ At the same time some unimportant changes took place in the Atrium. To this period belong the numerous brick-faced walls ${ }^{7}$ by which the tufa walls of the older building have been replaced and its larger rooms and central court cut into smaller rooms. ${ }^{8}$

The Domus Vestalium: The original house of the Vestals occupied the space between the temple area on the north and the lucus Vesta on the south, the precinct of Juturna on the west and the Domus publica on the east. The level is a little more than a meter below that of the later imperial Atrium. The orientation is, like that of the precinct as a whole, north and south. The apportionment of rooms between the Domus publica and the Domus $V$ estalium is difficult, since "the common wall" of which Dion Cassius" speaks can not be determined definitely. Of that portion of the whole which belonged certainly to the house of the Vestals, the principal parts distinguishable are a small vestibule-court ${ }^{10}$ and a series of rooms ${ }^{11}$ along two sides of it. The court opened directly from the central area in which the temple ${ }^{12}$ stood and was about 20 meters long and 7 or 8 meters wide. It was paved with a mosaic pavement made of a white limestone resembling marmor palombino and silex, into which were set at irregular intervals larger pieces of

[^15][^16]

Fig. 1. Remains of the Domus Vestalium.


Fig. 2. The Earlier Imperial Atrium
bright-colored marble. ${ }^{1}$ Out of this court, on the south, open five or six small rooms, ${ }^{2}$ which are not more than 4 meters long and vary from 2.50 to 4 meters in width. On the west are other rooms ${ }^{3}$ the dimensions of which can not be ascertained, since they have been almost wholly destroyed by the erection of the later building. In the smaller rooms ${ }^{4}$ are pavements similar to that in the vestibule, but of a finer quality. ${ }^{5}$ Beyond the rooms on the south was an area paved with blocks of cappellaccio, opening probably upon the earlier Nova Via. ${ }^{6}$ In a room, or court, on the southwest was a rectangular basin, ${ }^{7}$ resembling the impluvium of the private house.

The Domus Publica: The extent of the Domus publica is uncertain, but it is probable from the existing remains that it was much larger than the Domus Vestalium. It is likely that it covered almost the entire space between the Sacra Via ${ }^{8}$ and the earlier Nova Via. On the west it was united to the house of the Vestals by "the common wall" of which we have spoken. On the east it may have extended to the precinct which inclosed the ancient altar destroyed later by Nero. It is more probable, however, that the group of rooms about the court on the east ${ }^{9}$ belonged to another house. ${ }^{10}$ The general plan of the Domus can not be determined. In the center of the earlier building was an open court, ${ }^{11}$ of which there remain the bases of two columns and a gutter of travertine, as well as other smaller fragments. Of the rooms opening upon this court but little remains. In the later reconstruction this court was replaced by a number of smaller rooms. Beyond it on the east there were other rooms. The largest of these, ${ }^{12}$ in which there is an apse, was possibly a center for some of the various rites over which the Vestals presided.

In the earlier excavations some fragmentary remains were found of the painted stucco with which the Domus publica was decorated. ${ }^{13}$ But few traces of this are now visible, though the pieces of marble inserted in the walls to furnish a hold for the stucco are still to be found in many places The style of decoration ${ }^{14}$ is very simple, consisting of panels in plain colors, marked off by narrow lines, in which were circles or simple floral designs.

[^17][^18]In a room at the east end of the house, ${ }^{1}$ a small part of a more elaborate painting was found, ${ }^{2}$ which suggests in general style the well-known fresco of the house of Livia at Prima Porta. The pavements, which have been preserved in several of the rooms, do not differ in style from those of the Domus Vestalium described above. ${ }^{3}$

Construction and Materials: The walls of the republican period are 40 and 60 centimeters thick. Those of the earliest type are of opus quadratum made from smaller blocks of the gray-green cappellaccio, ${ }^{4}$ which is found in other early structures in the Forum and on the Palatine. These walls have been replaced or added to by others composed of much larger blocks of light-yellow and reddish-brown tufa. The walls of the later restorations are of concrete faced with opus reticulatum or with brick, and vary in thickness from 40 to 75 centimeters. The brick-faced walls, a considerable number of which are still to be found, are of two types. In one of these the courses of brick are from 3.50 to 4 centimeters wide and the layers of mortar from 1.50 to 1.75 centimeters. No bonding-courses are used. The bricks, which are made wholly from flanged roof-tiles cut or broken in an irregular manner, are magenta-red in color and of very fine texture. Walls of this type ${ }^{5}$ are found also in the Prætorian Camp and in the earlier buildings below the temple of Augustus, as well as in the so-called Flavian rostra. ${ }^{\text {. }}$ In the walls of the other type, of which but a few remain, the courses of brick are but 3 centimeters or less thick and the layers of mortar 1.25 to 1.75 centimeters. The bricks are yellow or reddish-yellow in color and of remarkably fine texture. Walls of this type, which are especially frequent in the facing of tombs, where the brickwork was not intended to be covered by stucco or marble, are not confined to any one period, though they are usually held to have been most common during the reign of Nero or a little earlier.

[^19]III.

## THE IMPERIAL ATRIUM OF THE FIRST PERIOD.

General Description: The new Atrium which arose after the fire of Nero, ${ }^{1}$ which we have called the imperial Atrium of the first period, was, as has been said, ${ }^{2}$ wholly distinct from the earlier republican Atrium Vestæ, as it was also from the other imperial buildings inside the precinct. ${ }^{3}$ It differed from the republican Atrium in materials and methods of construction, as well as in extent, orientation, and level. From the buildings of the period also, it differed in orientation and level. In its size the new Atrium, which was not out of keeping with the other buildings which arose out of the ashes of the great fire, was a striking contrast to that of the Republic. Its length was more than 70 meters, exclusive of the garden, which extended at least 15 or 20 meters further to the east. Its width was not less than 45 meters. Beyond the Atrium on the north, there was also, opening upon a narrow street, a line of small shops 4.50 meters deep, which were a part of the building structurally and belonged probably to the Vestals. The street itself, which connects the Forum directly with the height of the Velia, is to be assigned to this period, since in this part of its course, it is built upon the remains of the Domus publica, as are the shops opening upon it. The new Atrium extended from the rear wall of the shops to the Nova Via on the south. ${ }^{4}$ It was bounded on the west by the precinct of Juturna. On the east its exact extent is unknown. It is probable, however, that on this side it extended to the row of shops ${ }^{5}$ opening upon the street in the rear of the Atrium. The ancient altar ${ }^{8}$ northeast of the Atrium was destroyed in the course of the erection of these shops. ${ }^{7}$ The new building was made to conform in its orientation to the south side of the Forum and to the new Nova Via, ${ }^{8}$ though the Regia and the temple remained unchanged. It is difficult to fix accurately the level of this period. It can not have been, however, less

[^20]${ }^{6}$ Plan A, b, and p. 19.
${ }^{7}$ Plan A, $m^{\prime \prime}-m^{\prime \prime}$.
${ }^{8}$ Jordan (l.c., 28) suggested that the change was brought about by the great mass of the temple of Venus and Rome. This is of course impossible, since, as we now know, the first imperial Atrium was built a halfcentury earlier than the temple. The orientation of the Domus Aurea, however, which differed but slightly from that of the later temple (see Huelsen-Carter, The Roman Forum, plate 2) may not have been without its influence.
than one-half to two-thirds of a meter above that of the older building, the walls of which have been left standing to that height. ${ }^{1}$ The center of the court must have been somewhat higher, since almost a meter above the earlier level a small piece of the natural rock, the cappellaccio of the neighboring Palatine, has been left undisturbed. ${ }^{2}$

Of the outer walls of the Atrium proper that on the north, which divided the shops ${ }^{3}$ from the residence rooms, ${ }^{4}$ is still standing to a considerable height, except at the east end, where its presence is clearly indicated, however, by the remains of the division-walls between the shops. The front wall of the shops, as well as the corresponding wall on the opposite side of the street, has been torn down. ${ }^{5}$ The wall dividing the Atrium from the temple area also is in part traceable, though its course towards the west has been rendered uncertain by later reconstructions. ${ }^{6}$ It may possibly have followed the line of the later outer wall, ${ }^{7}$ though no traces of it remain. Since, however, that portion which can still be identified is in line with the later column wall, it is more probable that the direction of its course did not in general differ from that of the latter. On the south a portion of the outer wall behind the rooms which remain is still standing several meters above the ground. Beyond the Tablinum ${ }^{8}$ towards the west, however, it has been wholly rebuilt, though its earlier course is clear. The position of the wall bounding the Atrium on the east is, as has been said, not definitely fixed. On the west, between the precincts of Vesta and Juturna, the arches of the republican period ${ }^{9}$ which support the ramp to the Palatine are in part still to be traced. The wall in their rear, which runs parallel to them, can not, therefore, at any time have varied much in position. The foundations of the earlier wall, moreover, are in certain places still visible beneath the restorations of the later periods. The walls ${ }^{10}$ of the room between the court and the garden on the east have been almost wholly destroyed. Their general position is, however, certain.

Plan and Arrangement of the Interior: The building as a whole is, so far as can be at present determined, composed of two architectural units, one of which is represented by the group of rooms on the north of the central court ${ }^{11}$ and the other by that on the south of it. ${ }^{12}$ These two groups probably were not distinct, when built, but were structurally united by the rooms

[^21][^22]

Fig. 1. Foundation of the Walls of the Imperial Atrium of the First Period.

E. B. V. D

Fig. 2. The Republican Altar.
on the west, which have been destroyed in the course of later restorations. The two parts formed thus a single complex structure, which is plainly of one period and the work of one builder. This is shown most clearly by the general harmony in architectural plan and by the structural unity which exists throughout the parts of the building which are preserved. The level of the concrete foundations also varies but a little in the several parts, although that of the pavement above them can not be determined. The methods of construction are, in general, the same and the character of the material used is identical.

The interior of the Atrium can be reconstructed only in its more general features. The size and arrangement of the rooms on the west it is impossible to determine, since they have been rendered inaccessible by the later buildings which have been placed on top of them. The existence and general position of the rooms on the north ${ }^{1}$ is certain, but no exact restoration of them is at present possible. While, however, the reconstruction of the Atrium as a whole is, as has been said, impossible, the general plan of the building is clear. ${ }^{2}$ In the center was a large court, ${ }^{3}$ or atrium, extending from northeast to southwest, $45.50+$ meters long and about 21 meters wide. On both sides and possibly at the west end of this court was a series of lofty rooms. ${ }^{4}$ There was left on the east a broad entrance into the garden beyond, ${ }^{5}$ which sloped gradually upward to the rear of the Atrium. The main entrance ${ }^{6}$ into the building was through a vestibule directly from the street on the north and not, as at a later time, from the temple area. ${ }^{7}$ The door on the north, which was closed by a cross-wall of the house of the next period, was 1.75 meters wide and between 2 and 3 meters high. There was doubtless, as later, a door leading directly from the Atrium into the temple area for the use of the priestesses in their attendance on the temple. The rooms on the north were at least nine in number. They were II meters or more long and vary in width from 4.15 to 4.85 meters. Between the three rooms towards the west, there are doors I .77 meters wide. ${ }^{\circ}$ There may have been originally similar doors between the other rooms also, though no trace of them now remains, since the walls have been destroyed almost to the foundations. For the same reason it is not possible to decide whether the rooms opened into the court through doors or wide arches. On the south side of the court opposite the entrance was a large open room, ${ }^{10}$ which on account of its position and proportions may be regarded as the tablinum. Next to it on either side was a smaller room, which was open also to the atrium. Of these rooms that on

[^23][^24]the east ${ }^{1}$ was 7.43 meters wide, while the corresponding room, ${ }^{2}$ though, in all probability, of the same width originally, was at a later time 15 centimeters narrower. The latter room, which at least later contained the shrine of the household gods, ${ }^{3}$ may be held to be the lararium of the house. It is probable, therefore, that the two rooms were throughout the early periods of the Atrium's history regarded as the ale. ${ }^{4}$ Their position is, however, unusual. Beyond the ala on the east is a smaller room, ${ }^{5}$ which is entered from the court by a door 2.50 meters wide. On either side of this room there were doors 3 meters wide and 3.70 meters high. Still further to the east was another room ${ }^{6} 5$.10 meters long, which was entered from a narrow corridor or directly from the garden. Whether there were other rooms beyond this, opening upon the garden, it is not possible to determine. At the east end of the court, extending into the garden, was a single room, ${ }^{7}$ which resembles in its position the tablinum of the Greco-Roman house. It is possible that this room ${ }^{8}$ was open towards both the atrium and the garden, though no proof exists, since the walls have been in large part destroyed. The garden, which was a part of the earlier lucus Veste, occupied the remaining part of the Atrium on the east. Concerning the rooms on the west no data are now obtainable. The existence of a wall on the west of the court may, however, be assumed as certain. The position suggested in the plan is that of the later wall, which is the same distance, within a few centimeters, from the tablinum as the corresponding wall on the east of the court. Next to the temple there were doubtless, as later, rooms for the use of the cult.

With the exception of the tablinum and alce on the south, the purpose of the various rooms is not clear. The rooms adjoining the entrance on the north were, probably, more public in their character. It is probable that the kitchen and the rooms connected with it were in the more remote part of the house east of the tablinum. The sleeping rooms were doubtless, as later, in the upper story, if there was one.

The small rooms, or shops, on the north, ${ }^{9}$ which are a part structurally of the building, are eleven at least in number, exclusive of the one ${ }^{10}$ which was used as an entrance vestibule to the Atrium. They are 4.50 meters long and correspond in width to the adjoining rooms in the Atrium. The front wall of these shops, as well as the corresponding wall on the opposite side of the street, has been, as stated above, destroyed to its foundations. ${ }^{11}$ Of the travertine posts in front of the shops portions of but two remain.

[^25][^26]With only a few exceptions, however, they can be restored from the impression left in the concrete of the later pillars, which were built in front of them.

The Republican Altar: The ancient altar, ${ }^{1}$ the remains of which are still to be seen in the room at the northeast corner of the Atrium, was at this time destroyed. This altar is made of ashes and sacrificial material and was surrounded by a narrow gutter. At a very early period it stood probably inside a separate precinct, or templum, which was inclosed by a wall. At a somewhat later period, possibly at the time of the abandonment of the altar as a place of sacrifice, a second wall of opus quadratum ${ }^{2}$ was built inside the precinct wall for the better protection of the altar itself. Of this inner wall and the altar inclosed by it but little now remains. ${ }^{3}$

Architectural Details and Construction: The height of the rooms can not be ascertained. That they were lofty may be assumed from the thickness of the walls, and the height of the doors which remain. There are no pavements left in any of the rooms, and there is no evidence of the use of hypocausts, as in the later Atria. All traces of decoration have disappeared, with the exception of a small bit of fresco in one room. The large quantity of rare marbles, however, which have been broken in pieces for use as filling in the concrete foundations of the next period, ${ }^{4}$ points to their extensive use as decoration in the earlier building. There are no stairs and no traces remaining of an upper story, though it is probable that one existed. ${ }^{5}$ There is beneath the whole Atrium an intricate network of sewers. ${ }^{6}$ No attempt has been made to describe these, since the data available are insufficient.

In methods of construction as well as in the materials used, the Atrium is perfectly in agreement with the other buildings of the period of Nero. The walls are throughout of concrete faced with brick. ${ }^{7}$ The outer walls are 89 centimeters ${ }^{8}$ thick. The inner walls on the south, where, because of the width of the rooms, the vaulting supported by them was heavier, are of the same thickness. The inner walls on the north are but 74 centimeters, ${ }^{9}$ corresponding to those of the shops in their rear. Bonding-courses of tegulce bipedales ${ }^{10}$ are not found in any of the walls on the north. They have been

[^27][^28]used occasionally, however, in certain of the walls on the opposite side. ${ }^{1}$ The upper portion of these walls is, however, in all probability, a restoration of the succeeding period. With the rise of the new city a distinct change takes place in the type of brick-facing used for concrete structures. The courses of brick, which are 3.75 to 4.25 centimeters wide, show much less variation in the individual walls. The layers of mortar also, which are 1.25 to 2 centimeters thick, become more regular. The change, or rather development, is especially noticeable in the character of the bricks themselves. The use of broken tiles for bricks, which was the most marked characteristic of the preceding period, was abandoned, ${ }^{2}$ and the bricks assumed the more regular triangular shape. The new bricks are of a much coarser quality than the tile-bricks and are much looser in texture, though they are well burned. In color they vary from yellow to yellow-red. The concrete, also, is of a coarser composition, though otherwise of a good quality. The filling is in large part of tufa and travertine with but a small proportion of broken brick and marble. Both mortar and concrete are marked by their unusual gray tone, which arises from the almost entire absence in their composition of red pozzolana. ${ }^{3}$

[^29]
## IV.

## THE IMPERIAL ATRIUM OF THE SECOND PERIOD.

General Description: A short time only after the completion of the new Atrium by Nero, a considerable part of it was destroyed by fire. In consequence of this partial destruction many of the walls of the building were rebuilt from the foundations and extensive changes were made in its general plan. ${ }^{1}$ From the walls which remain it is evident that the western part of the structure suffered most severely. The exact period of the restoration of the walls, on the south side of the building, east of the tablinum ${ }^{2}$ is uncertain. The wall west of the tablinum was, however, at this time rebuilt from about 3 meters above the ground. ${ }^{3}$ On the north side the wall next to the court ${ }^{4}$ and the division walls between the rooms, ${ }^{5}$ with the exception of one, were destroyed to the level of the later pavement. The back wall of the rooms, ${ }^{6}$ on the contrary, and the walls of the shops beyond ${ }^{7}$ were left untouched, at least to a considerable distance above the ground. It is possible, therefore, that the destruction of the other walls ${ }^{8}$ on this side was partly due to the changes in the general plan of the building, which took place at this time. The rooms on the northeast beyond the court ${ }^{9}$ were not, so far as can now be ascertained, affected by these changes. It is probable, therefore, that the fire did not extend so far in this direction. Many pieces of marble showing traces of fire were found, in the course of the excavations, in and near the pozzi at this end of the court. These may have been, however, from some more remote part of the building or have been injured in some later fire. ${ }^{10}$ The rooms on the west ${ }^{11}$ were, it is probable, wholly destroyed, since the walls are rebuilt from the foundations. ${ }^{12}$ Whether the foundations themselves belong to this or to the preceding period can not be determined, except in a few cases, since they are for the most part concealed by later structures. The changes in plan on the north side of the building suggest, however, a corresponding change in the arrangement on this side also. New foundations would in that case have been required.

[^30]${ }^{9}$ Plan B, 8-9.
${ }^{10}$ See p. 43.
${ }^{11}$ Plan B, 15-28. The arch in which was found a brick-stamp of the second century mentioned by Huelsen (Roem. Mitth., 1889, p. 246, n.) may very well have belonged to a later restoration.
${ }^{12}$ The outer wall on the west, though in large part restored at this time, was not wholly destroyed.

In size and extent the Atrium remained unchanged, ${ }^{1}$ except on the side towards the temple, where a small portion of the sacred area was included in the court. The level was raised 30 to 50 centimeters above that of the preceding period, that is 97 to 100 centimeters above that of the republican building. ${ }^{2}$ The rooms on the southwest ${ }^{3}$ may have been, as later, 30 centimeters higher than this. The new rooms on the north ${ }^{4}$ were on the same level as the outer corridor upon which they opened. ${ }^{5}$ The rooms beyond the Atrium on the west, ${ }^{6}$ which had no direct connection with the other parts of the building, were at least 30 centimeters below its level, being but 70 centimeters above that of the republican period.

Plan and Arrangement of the Interior: The differentiation of the new walls of the Atrium from those of the preceding period is not difficult, since they are not only dissimilar in their mode of construction, but are structurally independent. The determination of the relation which these new walls bear to each other is no less easy. That they are parts of a single structure is evident from their agreement in methods of construction as well as from their conformity to a general architectural plan. The unity which exists among them is, however, most clearly shown by the structural continuity by which they are marked. ${ }^{7}$ The general level is consistent and that of the foundations is uniform throughout.

In general plan the Atrium of the second period was a development rather than a mere restoration of that of Nero. The central court, or atrium, did not probably differ in length from that of the preceding period; its width was, however, somewhat increased by the pushing back of the wall on the north. Since the new wall varied slightly in direction from the older one, a difference arose in the width of the court at the two ends, which became much more marked after the extension of the court to the east. ${ }^{8}$ On all sides of the new court there was added a colonnade, or portico, of about 4 meters in width. ${ }^{9}$ Auer, ${ }^{10}$ who maintained that the colonnade consisted of but one story, in order to reconcile the height ${ }^{11}$ of the columns, which can not have exceeded 5 or 6 meters, with that of the windows, held that the portico was covered by a slanting roof, which rested upon the entablature above the columns and was attached to the opposite wall below

[^31]${ }^{7}$ This structural continuity is most noticeable on the southwest. It exists, however, throughout.
${ }^{-}$The colonnade on the north and east is 3.60 meters wide and on the west 3.90 meters; on the south it varies from 4 to 4.15 meters. The foundation wall of the colonnade at the east end of the court is seen below the foundation of the octagonal structure on the left in plate iv, fig. I.
${ }^{10}$ Auer, Der Tempel der Vesta, 4.
${ }^{11}$ See p. 23, n. 2.
the windows of the second story. It is more probable that the colonnade was composed of two rows of columns, ${ }^{1}$ one above the other, the lower one of which was from 5 to 6 meters in height ${ }^{2}$ and the upper somewhat less. There was no upper floor corresponding to the intermediate entablature, ${ }^{3}$ since the columns of the lower arcade were not sufficiently high to carry it to a level above the windows of the lower story. The floor would, moreover, have cut off the light almost wholly from the inner corridor. There were in each story thirty-two columns. ${ }^{4}$ The travertine foundations on which the bases of these rested have been in large part preserved. The intercolumnar spaces vary slightly, increasing towards the east of the atrium from 3.30 to 3.43 meters. The variation is, however, not regular. ${ }^{5}$ In the center of the court was a basin ${ }^{6}$ into which steps descended from either end. The water contained in this basin was for the ordinary uses of the household. ${ }^{7}$ That designed for use in the rites connected with the temple worship was kept in the rooms set aside for the cult. ${ }^{8}$ The entrance into the Atrium was from the area in front of the temple. The door which had in the preceding period led directly from the street on the north was closed by one of the newer walls. ${ }^{9}$ Between the posts of the new door and the columns opposite there was, on either side, a single column, which supported possibly a vaulted vestibule. Beyond the main entrance was a smaller door which led directly into the sacred precinct of the temple. ${ }^{10}$ This was closed later by the erection of the adicula. ${ }^{11}$

The rooms on the south belonging to the preceding period ${ }^{12}$ were not altered at this time, except by the addition possibly of the small posts in front of the alc, ${ }^{13}$ by which these rooms were separated a trifle more from the corridor outside. The remaining rooms, on the north and west, may be divided into two groups. ${ }^{14}$ The group on the north, which replaced the earlier rooms opening directly upon the court, consisted mainly of two large rooms ${ }^{15}$ united by a narrow corridor, ${ }^{16}$ from which opened three or possibly

[^32]${ }^{6}$ Plan B, o. The basin was 14 meters long, 4 meters wide and 5 deep. The upper part has been restored.
${ }^{7}$ No water could be used for the sacred rites except such as had been brought fresh from fountains or running streams in vessels specially prescribed for the purpose. See p.27. The basin, on the other hand, was supplied with water drawn from ordinary sources and conducted into the Atrium through lead pipes.
${ }^{8}$ Plan B, 24-27.

- Plan B. The wall between 2 and 4.
${ }^{10}$ See plan B. This inclosure was not entered by the public.
${ }^{\text {ur Plan C, }}$ E.
${ }^{18}$ Plan B, $10-15$.
${ }^{13}$ Plan B, 12 and 14.
${ }^{14}$ Plan B, 1-7; 15-28.
${ }_{15}{ }^{\text {Plan B B }} 2$ and 7.
${ }^{16}$ Plan B, 3 .
four smaller rooms. ${ }^{1}$ The walls of the newer rooms were not at right angles to the older wall in their rear, to which they were attached; this caused a slight irregularity in the shape of the larger rooms at either end. The first room on the north ${ }^{2}$ remained unchanged, except that its length was somewhat lessened by the change in position of the front wall. The room adjoining it, ${ }^{3}$ which is 8.30 meters long, was on the contrary widened to $7.3^{\circ}$ meters. The width of the corresponding room on the east can not now be determined. The corridor by which these rooms were united is 3 meters in width. The small rooms ${ }^{4}$ which open upon it are only 4.59 meters long. The doors leading from the corridor into the smaller rooms, as well as those by which the rooms were united to the colonnade outside, can not be restored, since the walls are destroyed almost to the foundations. No change took place in the rooms situated beyond the court and opening upon the garden. ${ }^{5}$ The group of rooms on the west and southwest ${ }^{8}$ is much larger than that just described. On the south, next to the ala on the west of the tablinum, is a room ${ }^{7} 4.14$ meters wide, which is to be connected rather with the older rooms adjoining it on the east than with the newer ones on the west. Beyond this room, at the southwest corner of the Atrium, are a number of rooms, which, though connected structurally with the rest of the building, seem from their position and arrangement to form a distinct group by themselves. The center of this group was a large room, ${ }^{8}$ at the west end of which was an apse. On the south were three smaller rooms, ${ }^{9}$ a little higher in level than the larger one and connected with it by wide arches. Next to these rooms on the north is a stairway, ${ }^{10}$ which gave direct access to them from the clivus, or ramp, leading to the Palatine. Beyond the stairs is a narrow corridor, ${ }^{11}$ resembling that on the north, out of which opened a room ${ }^{12} 5.30$ meters long and 4.71 wide. At the northern end of the corridor is a larger room ${ }^{13}$ which may have opened directly upon the colonnade. ${ }^{14}$ It is uncertain whether the rooms just mentioned formed a part of the group of which the large room was the center or were connected with the Atrium proper. On the west of these rooms and wholly distinct from them is a long hall, ${ }^{15}$ divided into three closely connected rooms by low archways. ${ }^{18}$ At the further end of this hall is a vaulted storeroom, ${ }^{17}$

[^33][^34]

Fig. 1. The Rooms for the Use of the Cult.


Fig. 2. The North Side of the Atrium.
in which were found many broken amphoræ and other vessels. ${ }^{1}$ The only entrance to these rooms was from the temple precinct. ${ }^{2}$

No change took place in the shops on the north, except that by the closing of the door into the Atrium ${ }^{3}$ one was added to their number. It is possible that the shops along the Nova Via ${ }^{4}$ were added at this time, but the scanty remains belong to a later period.

The Sacellum Larum: The rooms on the southwest, ${ }^{5}$ though structurally a part of the building, formed, as has been said, a distinct group by themselves. The stairway on the west, by which the Atrium was connected with the ramp leading to the Palatine, though affording admission to the other parts of the building, was designed especially to give direct access to these rooms. The communication with the outer world, especially with the Palatine, was at a later time made still more easy by the erection of a second stairway, ${ }^{6}$ by which the court was connected directly with the Nova Via. At the further end of the court was a large apse. In the wall at the end of the court toward the east, by the building of which the rooms were still further cut off from the Atrium, there were added also three niches for statues. ${ }^{7}$ The group of rooms must, therefore, have had a religious purpose ${ }^{8}$ and have been designed for some cult over which the Vestals had special, though not exclusive, oversight. The remoteness of the rooms from the temple and their lack of any direct communication with it, as well as the freedom of intercourse with the outer world indicated by the stairways, forbid the identification of this cult with that of Vesta and the Penates, the center of which was the temple. A close connection, however, must have existed between them. Of the various cults connected with, though distinct from, that of Vesta and the Penates, the most nearly allied is that of the Lares Publici. Their shrine, which was known as the Sacellum Larum, in distinction from the ades Larum, was recognized by the Romans as one of the determinative points in the line of the Pomerium of the Palatine city. ${ }^{0}$ It must have been situated, therefore, within a short distance of this corner of the Atrium, since in this vicinity the line of the Pomerium, which on the north followed in general the course of the later Nova Via, turns abruptly toward the west. It has seemed to me probable, therefore, that in this group of rooms, under the same roof with, though distinct from, the shrine of the other gods of the state hearth, is to be found the hitherto unplaced Sacellum Larum.

[^35][^36]The Cult Rooms: The presence in the rooms on the west ${ }^{1}$ of certain structures held to be ovens, ${ }^{2}$ as well as of a number of amphore and fragments of other vessels, ${ }^{3}$ has led to the almost universal acceptance of these rooms as the private kitchen and storerooms of the Atrium. That they were not intended for such a purpose is, however, clear from the primitive character of the vessels found and the noticeable absence of any of the more common appliances for cooking, ${ }^{4}$ as well as from the existence of a regularly appointed kitchen ${ }^{5}$ at the opposite end of the Atrium. It is evident, moreover, from the complete isolation of the rooms and from their lack of any means of communication ${ }^{8}$ with the other parts of the building, that they were not even a part of the Atrium but were intentionally separated from it. Their proximity to and direct communication with the temple precinct, on the other hand, make it certain that they were instead connected with the temple and belonged to it. From the unusual arrangement of the rooms themselves and the peculiar character of their contents ${ }^{7}$ it is evident that they were designed for the special use of the cult and for the storing of the instrumentum ${ }^{8}$ belonging to it. In addition to the instrumentum there were no doubt preserved in these rooms such of the pignora imperii ${ }^{9}$ as could not conveniently be kept in the temple itself. It is probable that the documents of state and the other articles of value which were entrusted to the Vestals for safekeeping were kept here rather than in the private rooms of the Atrium. Of the objects found in the rooms the pointed amphorx, which are of the primitive type prescribed for the use of the cult, ${ }^{10}$ were for the carrying of the water used in the sacred rites and in the cleansing of the temple. The smaller vessels, of which numerous fragments have been found, were for the use of the Vestals in the preparation of the sacred cakes and of the other materials for sacrifice and purification over which they had charge. ${ }^{11}$ In one of these vessels there are still preserved the remains of pastry. ${ }^{12}$ The appliances for the grinding of the sacred meal ${ }^{13}$ and for the preparation of the muries ${ }^{13}$ were also of the simplest kind and have been either carried away or destroyed. In one of the rooms ${ }^{14}$ is a basin of peculiar construction. It consists of a square structure 3 .II meters long and a meter wide, which,

[^37][^38]though inclosed regularly at both ends by walls, is without either front or back. ${ }^{1}$ The bottom of the basin, which like the ends was lined with opus signinum, slopes noticeably towards the back, where it drains directly into the sewer below. This basin, or rather drainage sink, was probably for the washing of the vessels used in the temple service, which were cleansed by pouring water over them directly from the amphoræ in which it had been brought. ${ }^{2}$ By this method the water as well as the basin was kept free from all impurities, which were carried immediately into the sewer behind. The room ${ }^{3}$ or rooms next to the temple area were probably for the servi publici attached to the temple.

Architectural Details and Construction: The height of the various rooms can not be determined. In the central court as well as in the corridor surrounding it traces of the pavement of several periods still remain. The earliest of these, which is of opus spicatum, is, however, not older than the second century. No pavements have been preserved in the rooms on the north or on the south. In the group of rooms on the west and southwest ${ }^{4}$ the larger room and the smaller ones adjoining it are paved with white and black mosaic. The pavement in the smaller rooms is probably original, since above it have been found remains of a pavement of opus sectile of the style popular in the time of Hadrian. ${ }^{5}$ The pavement in the larger room belongs probably to a later period. ${ }^{\circ}$ In the rooms on the north ${ }^{7}$ hypocausts, or at least double floors, ${ }^{8}$ were built. In several of the rooms these have been preserved. Hypocausts of this period remain also in the smaller rooms on the southwest. That in the larger room on the west was inserted at a later time. In one of the rooms on the north remains of a stairway have been found. It is probable, therefore, that a second story extended over the whole house, with the exception possibly of the rooms on the southwest, ${ }^{9}$ though no traces of it are left. But little change took place, probably, in the purpose to which the various rooms of the Atrium were set apart. The sleepingrooms were without doubt transferred to the upper story, if this had not already been done in the preceding period.

As in the other buildings of the period of Domitian, ${ }^{10}$ the walls are clearly distinguishable from those of the preceding period, both by their methods of construction and by the materials used. The outer walls, especially those on the southwest, while not free from restoration, have in no case been rebuilt

[^39]${ }^{8}$ Traces of double floors remain in several of the newer rooms. In one of these there is also evidence of the presence of fire. Professor Mau holds that the use of such floors is not sufficient proof of the existence of hypocausts.
${ }^{9}$ The character of the rooms makes the existence of a second story improbable.
${ }^{10}$ Of the buildings of Domitian, those of especial interest are the Domus Augustana and the so-called Stadium on the Palatine, the temple of Augustus, and the villa at Albano.
from the foundations. Their width, therefore, remains the same as in the preceding period. The wall on the north of the court also is at the west end 89 centimeters wide, though further towards the east, a few courses above the foundation, it has been reduced to 60 . The walls on the west are, with one exception, 60 centimeters, although those on the north are 75 , as were the older ones. The walls in which are set the travertine bases for the columns are 89 centimeters. Bonding-courses, which are found only sporadically, if at all, in the earlier walls, appear regularly in those of this period. They are especially noticeable in the rooms on the southwest, where the tegule bipedales of which they are made are 4.50 to 5 centimeters thick and of a dark-red color. Since the walls on the north have been almost wholly rebuilt, only one bonding-course remains; upon the shelf ${ }^{1}$ formed by this rests the lower floor of the hypocausts. The courses of brick measure from 3.75 to 4.25 centimeters, as in the last period, and the layers of mortar from 1.50 to 2 centimeters. In the materials used, the type of construction differs from that of the time of Nero. The bricks are of the same type, many of them possibly left over from the earlier buildings. The mortar, however, is unlike that of the preceding period, showing a large proportion of red pozzolana. The concrete, especially that used in the foundations of the walls, is marked also by the large quantities of rare marbles which have been used as filling. ${ }^{2}$

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Fig. 1. The Rooms on the South, built by Hadrian.


## V.

## THE IMPERIAL ATRIUM OF THE THIRD PERIOD.

There is no evidence that any further calamity befell the Atrium until the time of Commodus. At two different periods before that time, however, important changes took place in the building. The first of these, which represents the third stage in its growth, ${ }^{1}$ consisted in the addition by Hadrian of the group of rooms on the east, ${ }^{2}$ the center of which is the large hall, or exedra, and of a smaller group on the south. ${ }^{3}$ These two groups will be discussed separately.

The Rooms on the East: The group of rooms on the east, which was held by Auer ${ }^{4}$ to be the oldest part of the imperial Atrium, was located at the rear of the garden and united to the earlier structure by the outer walls only. ${ }^{5}$ The space occupied by it was at least 42 meters long and $16+$ meters wide. The new building extended on the north only to the line of shops belonging to the first period. ${ }^{6}$ The destruction of these shops and the inclusion of the space occupied by them in the Atrium took place at a later time. ${ }^{7}$ On the south the new building extended to within a short distance of the Nova Via. ${ }^{8}$ The rooms extended on the east to the street in the rear of the Atrium, ${ }^{\circ}$ the shops opening upon which were in consequence almost wholly destroyed. ${ }^{10}$ The orientation of the new rooms conforms in general to that of the earlier building, but their level differs greatly, being a meter higher than that of the rooms on the west, that is to say, two meters above the republican level. Since the height of the hypocaust openings, which are still to be seen in the smaller courts ${ }^{11}$ on the north and south, is but io centimeters less than this, the original level of the rooms can not have been lower than it is at present. This noticeable difference in level between the newer and the older parts of the building was due to the natural rise in the ground towards the east and south. The garden, at least the eastern end of it, agreed in level with the new rooms which adjoined it. This is evident from the

## ${ }^{1}$ See p. 6.

${ }^{2}$ Plan C, 29-39.
${ }^{3}$ Plan C, I3 $a^{-d}$, and plate vi, fig. I.
${ }^{4}$ Auer, Der Tempel der Vesta, 20.
shere may have been a row of rooms along the south side of the garden, but no traces of them remain.

- The point at which the new front wall was attached to the rear wall of the shops may still be determined from changes in the masonry.

[^41]height of the concrete foundations of the new court on the north, which projected 60 centimeters beyond the front wall. ${ }^{1}$ These foundations, which are but a few centimeters lower than the pavement of the new rooms, must have been, at the time they were built, below the level of the garden and concealed by it. ${ }^{2}$ Moreover, in front of the exedra traces remain of a sewer, the top of which is but a little lower than the pavement of the rooms under which it ran. This sewer, traces of which may still be seen on the right of the steps leading to the exedra, must also have been originally below the level of the garden. It is clear, therefore, that the garden was either raised consistently to the level of the new rooms or, as seems more probable, made to slope gradually up to them. The walls of the new building, with a few exceptions, are still standing to a considerable height, though they have suffered much from restoration in the next period. ${ }^{3}$

Arrangement and Description of the Rooms: Since the time of Auer ${ }^{4}$ these rooms have been generally recognized ${ }^{5}$ as belonging to one period and as forming a distinct group by themselves. ${ }^{8}$ That this conclusion is correct is very evident from their harmony in architectural plan and their uniformity in methods of construction. ${ }^{7}$ The concrete foundations are, moreover, continuous in structure, as are the walls themselves, except at one point. The level of the floors also is the same throughout, though the foundations of the court on the north are 75 centimeters higher than the rest. ${ }^{8}$

The plan of the new group of rooms is simple. The center of the group is a large hall, ${ }^{9}$ out of which open three smaller rooms ${ }^{10}$ on either side. Beyond these rooms, and connected with them by large windows, there are two smaller halls, ${ }^{11}$ or courts, which, like the central hall, opened directly upon the garden. At the northern end of the group were two small rooms, ${ }^{12}$ the entrance to which was from the adjoining court. The new group of rooms, when viewed in its relation to the plan of the Atrium as a whole, ${ }^{13}$ is marked by a slight irregularity in position. This irregularity, however, which consists in the location of the central hall almost 3 meters to the south of the main axis of the court on the west, was not so apparent at the

[^42][^43]time of the erection of the new rooms as later, ${ }^{1}$ since the Atrium was then divided into two distinct parts. The approach to the new rooms was through the garden upon which the central exedra and the smaller courts opened directly.

The large hall, the center of the new group of rooms, which has been called the tablinum, though resembling more nearly an exedra, is 8.97 meters wide and about 12 meters long. ${ }^{2}$ In the center of the ceiling of this hall, which is covered at both ends by barrel vaults, was a large opening, for which there was probably substituted in the next period a shaft for the lighting of the upper rooms. The length of the rooms on the north of this hall was 3.55 and of those on the south 3.60 meters. The width ${ }^{3}$ was the same in the corresponding rooms on the two sides. The doors were originally 1.62 meters wide and 2.60 meters high. Their height has been, however, somewhat lessened by the raising of the floors, both of the exedra and of the rooms themselves. The windows, which open upon the smaller courts, were all, it is probable, 1.75 meters wide and 2.45 meters high, although several of them have been altered in later restorations. The smaller courts were connected with the central part of the new group only by the windows into the small rooms. Of these courts that on the north is 12.06 meters long and 8.60 meters wide, while that on the south was smaller, being but ir.80 meters long and 6.64 meters wide. The walls of the court on the south have suffered much from later restoration, especially on the south and west, where they have been rebuilt from the level of the later pavement. The two smaller rooms ${ }^{4}$ beyond the court on the north, the inner one of which occupied the site of the ancient altar, ${ }^{5}$ were but 4.11 meters long and 5.56 meters wide.

The purpose of this group of rooms is not clear. Their remoteness from the temple makes any connection with its rites improbable. On account of the number of the smaller rooms ${ }^{6}$ adjoining the exedra, they have been held to be the drawing-room and sleeping-rooms of the Vestals. Although the number, which corresponds to the number of the priestesses, can scarcely be accidental, the isolation of the rooms from the rest of the Atrium with the consequent removal of the Vestals from the protection and assistance of their attendants, renders them unsuitable for such a purpose. They may very well have been, however, the private offices of the priestesses and the depository for their records and insignia of office. The smaller courts may have been reception-halls or triclinia, such as are often found adjoining the garden in Pompeian houses.

[^44]Architectural Details: The original height of the rooms of this group can not be determined, since the period of the upper part of the walls is uncertain. The height of the exedra is at present II meters, while that of the rooms adjoining is but a little less. The court on the south, the upper part of which is wholly rebuilt, is 8 meters high. The walls of the court on the north are too much destroyed to allow of the possibility of any decision concerning them. There are no traces in any of the rooms of the original pavements. ${ }^{1}$ They were possibly of opus sectile of the same type as those still preserved in the rooms ${ }^{2}$ of the same period on the south. For the first time in the history of the building, a system of permanent hypocausts ${ }^{3}$ was constructed. Arched openings ${ }^{4} 75$ centimeters wide and 70 centimeters high were placed beneath the windows of the small rooms, through which these hypocausts were supplied with fuel. In the rooms on the south of the exedra an upper floor, supported by amphoræ cut in halves, was added at a later time as a protection against the dampness. The original decoration has in no case been preserved. The marble posts and wall-facings in the exedra belong to a much later period. No traces of an upper story or of a stairway leading to one are left. The existence of an upper story over the central rooms is, however, suggested by the thickness of the walls.

The Rooms on the South: The group of rooms on the south ${ }^{5}$ is much smaller than that just described, filling merely the space occupied in the earlier periods by the tablinum. ${ }^{6}$ In orientation and level the rooms in general conformed to those immediately adjoining them. The walls are in large part preserved for several meters above the ground.

Arrangement and Description of the Rooms: The independence of this group of rooms is clear from the lack of any structural connection between them and the rooms on either side and from their dissimilarity in type of construction. In the walls between which the rooms have been inserted, moreover, doors ${ }^{7}$ have been cut into the adjoining rooms for the admission of light and air and to afford greater ease in communication between the various parts of the building. These doors would certainly have been built and not cut, had the rooms under discussion been erected at the same time as those adjoining them or earlier. They must, therefore, have been built at another and a later period. That they form not only an independent

[^45]4 The most of these openings have been filled in at a later time; one of them, however, in the north court still remains open.
${ }^{5}$ Plan C, 13 a-d.
${ }^{6} C f$. plan B, 13 and plan C, $13 a-d$.
${ }^{7}$ The doors have been cut down to the level of this period, as is shown by the traces of stucco on the lower part of the posts. This would not have been done, had the doors belonged to the next period, in which the level was raised.
group but a single structure is evident from their harmony in plan and their structural unity. Their striking agreement, in methods of construction and in the materials used, with the rooms on the east leaves no doubt as to the connection between the two groups.

The group is modeled after the earlier groups of rooms on the north and west, ${ }^{1}$ not only in its general plan but also in many structural details, such as the width of the doors and the size of the small brick pillars, which become later so conspicuous a feature of the whole building. The group consists of three rooms connected by doors and opening upon a narrow corridor. ${ }^{2}$ By connecting the newer rooms with the older ones on either side, the whole south side of the Atrium was closely united. The corridor is connected with the larger one outside by a door 1.77 meters wide and by two lofty windows. The door in the rear of the room toward the west may have been cut through at this time, though the reason for it is not apparent. The wall in the rear of the room into which this door opens, in which are the niches for the statues of the household gods, can not have been built later than this period, ${ }^{3}$ since in the next period it was cut off from the room by a second wall.

Architectural Details: The height of the rooms is not known, but that they were lofty is suggested by the height of the walls still standing. In one of the rooms, ${ }^{4}$ under a hypocaust of the next period, is a fine pavement of opus sectile, ${ }^{5}$ made of giallo antico, rosso antico, Porta-Santa, pavonazzetto, and other fine marbles. In the corridor are a few pieces of a similar pavement. Of the original wall decoration nothing remains, unless it be a dainty bit of fresco ${ }^{6}$ on the side of one of the doors. Though no stairs are left, it is probable that a second story existed over these rooms, as well as over those adjoining. The rooms were probably, from their position, small reception or guest rooms.

Construction and Materials: The construction of the walls of the groups both on the east and on the south is of the distinctive type which may be recognized everywhere as that of Hadrian. ${ }^{7}$ In the construction of the east rooms the use of a barrel-vault supported by similar smaller vaults on either side has been rightly noted by Auer. ${ }^{8}$ His assumption ${ }^{\ominus}$ that this method of construction is peculiar to the period following the fire of Nero is, however, unwarranted. In both groups the bonding-courses appear regularly and are from twenty-one to twenty-eight courses apart. They are made from

[^46]${ }^{7}$ The use of opus reticulatum inclosed between bands of brickwork, which is held to be the mark of Hadrian's construction, is not a certain test. The type of construction is, however, certain. In this point the new rooms are perfectly in agreement with the Pantheon, the Mausoleum, and the other more important buildings of the period. - Auer, Der Tempel der Vesta, 6.

- Auer, Der Tempel der Vesta, 20.
tegula bipedales of the yellow type so common in floors of the period. The courses of brick measure from 3.30 to 3.70 centimeters and the layers of mortar from 1.50 to 1.75 centimeters. The bricks, which are in part made from roof-tiles, are magenta-red in color and of a finer texture than those of the preceding periods. While the quality is in general good, the bricks have not been properly burned. The mortar is finer than in the last period. The concrete foundations are noticeable from the almost exclusive use of selce as filling.


## VI.

## THE IMPERIAL ATRIUM OF THE FOURTH PERIOD.

The last of the important changes in the Atrium, by which the building, apart from the court, attained its final form, took place under the successors of Hadrian, the Antonines. This change, which represents the fourth stage ${ }^{1}$ in the development of the building, consisted in the filling in of the spaces ${ }^{2}$ which had been left on either side of the garden by groups of rooms ${ }^{8}$ opening upon narrow corridors, ${ }^{4}$ above which, as well as above the rooms of the last period, were added a second and a third story. ${ }^{5}$

General Description: The earlier part of the building on the west was not changed. At the eastern end the Atrium was increased in extent by the inclusion of the space which had been occupied by the last five shops on the north. On the south the outer wall of the upper stories was pushed back beyond that of the lower rooms, increasing the extent of the building in that direction from 3 to 6 meters. The level of the new groups of rooms ${ }^{6}$ on the north and the south was the same as that of the group on the east. The two corridors, however, through which these groups were entered, as well as the first of the rooms on the north, were $90+$ centimeters lower, agreeing in level with the court. ${ }^{7}$ The older rooms on the south were raised by the insertion of hypocausts, though the room at the southwest corner of the court, through which the others were entered, retained its original level. ${ }^{8}$ The general level of the second story above that of the central court is 9 meters. Too little of the third story remains to make any decision concerning its level possible. The walls of the new building are for the most part well preserved, especially on the southeast, where they are still standing as high as the third story. ${ }^{9}$

Arrangement and Description of the Rooms: The differentiation of the walls of the new rooms from those of the earlier periods is, except in a few

[^47]${ }^{7}$ This is evident in the corridor and in the room on the north from the level of the hypocausts. In the corresponding corridor on the south, the stairs, which belong to this period, ascend from the level of the central court.
${ }^{8}$ Near the bottom of one of the door-posts, which was restored at this time, there are remains of the painted stucco with which the walls of the room were decorated. See plate $x$, fig. 2 , for late level.
${ }^{0}$ The mexmanino is here included.
cases, ${ }^{1}$ made easy by their dissimilarity in methods of construction as well as by their structural independence. This structural independence is especially noticeable at the points of juncture of the new walls with the front wall of the rooms on the east. On the north, where the concrete foundations of the small court project 60 centimeters beyond the face of this wall, the later wall has been built against and on top of them. ${ }^{2}$ In a similar manner on the south a shelf, which extended along the front of the earlier rooms, has been utilized in building the new walls. ${ }^{3}$ The relation of the walls to each other is most clearly shown by the similarity in architectural plan of the two groups as well as by their structural unity. ${ }^{4}$

By the addition of the new groups of rooms on the north and south and by the extension of the front wall of the older court towards the east, the two parts of the Atrium were united into one and the building assumed a more symmetrical form. The earlier independence of the parts was still recognized, however, in the separation between the court and the garden. By the changes just mentioned, as well as by the destruction of the earlier rooms on the north which had been left untouched in the preceding periods, the eastern end of the building was much altered in appearance and the irregularity in the position of the exedra became apparent. ${ }^{5}$ In the older parts of the building on the west, little change took place, except the raising of the level in one or more of the rooms, of which mention has been made. ${ }^{6}$

The new rooms may, for convenience of treatment, be divided into four groups: (1) the group of rooms on the north, ${ }^{7}$ (2) the group on the south, ${ }^{8}$ (3) the series of half-story rooms in the rear of the court on the south, ${ }^{9}$ which we shall call the mezzanino, and (4) the rooms of the second story. ${ }^{10}$

The Group of Rooms on the North: The group of rooms on the north ${ }^{11}$ was modeled in its general features on that adjoining it towards the west, with which it was united by the narrow corridor which connected the whole series of rooms on that side of the building. ${ }^{12}$ Although it has suffered much from later restorations, it is clear that the group consisted of two smaller and two larger rooms opening upon the common corridor. The corridor itself, which is 2.66 meters wide, was connected with the garden outside by a door 2.66 meters in width and by four lofty windows. The two smaller rooms are 4.90 meters long and 3.46 and 4.06 meters wide. The two larger rooms beyond, which are too much injured to be restored with certainty, are now 13.90 meters long and 4.60 and 4.76 meters wide. The two small

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Fig. 1. The Penus.


Fig. 2. The Shrine of the Penates.
rooms ${ }^{1}$ beyond the north court were also lengthened to 9.50 meters and were connected with the newer rooms adjoining them on the west by a doorway.

The Group of Rooms on the South: The group of rooms on the south, ${ }^{2}$ which resembles in its general features that on the north corresponding to it, consisted of three small rooms ${ }^{3}$ opening upon a narrow corridor, ${ }^{4}$ at the end of which was a single large room. ${ }^{5}$ This group was entered from the central court through one of the older rooms, the front part of which served as an entrance corridor both for the new rooms and for the stairway to the upper stories. A small door at the rear of the garden afforded more direct communication with the rooms at that end of the group. ${ }^{6}$ The three smaller rooms were all originally 5.95 meters long. Two of them, however, were a little later shortened by the insertion of a thin wall in the rear, by which a passage-way was formed, along the front of which a number of openings were left. Through these openings the furnaces of the various rooms were supplied with fuel. ${ }^{7}$ Opening from the corridor upon the garden were two windows high above the ground, through which the rooms as well as the corridor received their light. The larger room, or hall, at the end of the corridor, behind which ran the stairway to the upper stories, also received its light from the garden outside through a lofty window. The older room, which adjoined the newer group towards the west, was much diminished in size by cutting off from it the stairway leading to the second floor. The door which led from this room into the court was reduced in width from 2.50 to I. 75 meters, while that which led into the adjoining room on the west was completely closed. By these changes the newer rooms gained additional privacy and all direct communication with the rooms toward the west was cut off.

At this time the courts at either end of the group of rooms on the east were almost wholly rebuilt. The upper part of the court on the north is wholly destroyed. Around the top of that on the south runs a row of travertine corbels similar to those seen in the Pantheon, upon which rested a cornice. ${ }^{8}$ On the north side of this court was built a vaulted cellar ${ }^{9}$ 1.96 meters wide and 1.70 meters high, which was entered from the inner corridor belonging to the new group of rooms. At the rear of the court was a basin for water ${ }^{10} 3.75$ meters long, 1.77 meters wide, and 60 centimeters deep, which emptied into a sewer running to the northwest. At the back and

[^50][^51]sides of this basin were five niches for statues, ${ }^{1}$ above which ran the stairs to the mezzanino. ${ }^{2}$ In the north court also there are remains of a similar, though smaller, cellar, which was entered from the garden outside by a door cut in the earlier wall. In front of the cellar there was at a later time a small corridor, the level of which was the same as that of the later court, upon which it opened. From this corridor the furnace of the hypocaust underneath the rooms was fed. In the back wall of this court were built three niches for statues. At a later time others were added on the south side between the windows of the rooms.

The Mezzanino: A half story above the south court were three low rooms, ${ }^{8}$ which were reached by a stairway built above the basin at the rear of the court. Adjoining these rooms towards the west was a low, windowless passage ${ }^{4} 2.3^{8}$ to 2.52 meters wide, upon the walls of which rest those of the upper story. At the eastern end of the passage a room ${ }^{5} 2.82$ meters long and 3.Io meters high has been at some time cut off from it. Beyond this room the passage-way was at a very late period ${ }^{\theta}$ partially closed, leaving a furnace-like opening not more than I.IO meters wide, inside of which the fire was made for the heating of the caldarium and the rooms connected with it in the story above.

Purpose of the Rooms: In the rooms on the north but little remains by which their purpose can be determined. From their position and arrangement, however, it is probable that they were connected more immediately with the private life of the Vestals, and may very well have been used as triclinia or private reception rooms. It is possible also that the rooms for the entertainment of the guests who sought the protection of the Vestals ${ }^{7}$ may have been in this part of the house.

In one of the rooms on the south ${ }^{8}$ several structures were discovered in the earlier excavations, ${ }^{9}$ which have been generally recognized as the foundations of ancient stoves. In the room ${ }^{10}$ adjoining this on the west there were found also the remains of an ancient mill, and in the court on the other side ${ }^{11}$ the vaulted cellar and the basin for water which have been described above. In the vaulted cellar were found at the same time many broken pottery vessels and three large dolia sunk in the earthen floor. ${ }^{12}$ Earlier writers, ${ }^{13}$ failing to recognize any difference in the periods of the objects

[^52]found and misunderstanding their significance, held that the rooms had a religious purpose and were designed for the use of the Vestals in the preparation of the mola salsa, the muries, and the other materials for sacrifice and purification which were committed to their charge. The rooms set aside for that purpose were, however, as has been said, at the other end of the Atrium and were distinct from it. In recent times the rooms have been more commonly held ${ }^{1}$ to be those of a private bakery connected with some one of the many extensive establishments which found quarters in the Atrium after its abandonment by the Vestals. It is very probable that in the last days of the empire the rooms served such a purpose. Since, however, the mill and the greater number ${ }^{2}$ of the stoves are of a very late period, any such assumption concerning their original use is unwarranted. They were instead, at the time they were built, the center of the domestic life of the household. The room in which the stoves are found was the kitchen, with which the court adjoining it was closely connected. The exact purpose of the room in which the mill was afterwards placed is not clear, but that it also was very closely connected with the kitchen is evident from the presence of a door ${ }^{3}$ between these rooms. The vaulted cellar in the court was, as is plain from its contents, the penus of the household. ${ }^{4}$ The basin near it was for the water needed for the ordinary uses of the household. From their proximity to the penus and to the kitchen, one may safely assume that the statues which occupied the niches above the basin were those of the Penates. The court on the north was, in all probability, an open air triclinium. In this court there was, as has been said, ${ }^{5}$ a second vaulted cellar, resembling in every way that in the other court. Though the existence of more than one penus is peculiar, no other explanation for the presence of this cellar seems possible. It was changed at a later time into a basin for water by the insertion of narrow cross-walls. The niches in the back wall of the court are but three in number. It is probable, therefore, that the divinities worshiped here were the Lares with the statue of the ruling emperor between them. ${ }^{6}$ The purpose of the large rooms ${ }^{7}$ beyond this court is unknown, though it is possible that the inner room continued to serve as a sacellum for the divinity whose altar had occupied its site in earlier times. The mezzanino ${ }^{5}$ adjoining the court on the south ${ }^{8}$ contained the rooms for the slaves of the household. The three larger rooms ${ }^{9}$ belonging to this group, which is entered by a narrow stairway from the court below, may have been

[^53]originally intended for storerooms, or have formed a dark passage ${ }^{1}$ like that adjoining them towards the west.

The Shops: At this period the street on the north was spanned by arches resting on concrete pillars, which were built against the travertine posts of the first period. ${ }^{2}$ By the addition of these pillars the street became 1.80 meters narrower. The level both of the street and of the shops was raised, especially towards the east, where the street is 2 meters above the level of the republican remains below. ${ }^{3}$ On the east a new wall was built in front of the earlier shops. ${ }^{4}$

Architectural Details: The height of the rooms on the north can not be determined. The corridor and rooms on the south, however, which were covered by vaulted ceilings, were $7+$ meters high. The archways by which the rooms were connected with the corridor were but a little lower. ${ }^{5}$ Though the upper floors of the hypocausts, upon which the pavements were laid, are still left in many of the rooms, the pavements themselves have almost wholly disappeared. Those found in several of the rooms on the south are of a later period. A part of the pavements which are preserved in the mezzanino may be, however, original. In the older room ${ }^{6}$ on the south in which was built the stairway leading to the upper stories, there is still preserved a fine opus sectile pavement, which is often assigned to this period, though it belonged more probably to that of Hadrian. ${ }^{7}$

In the room on the north adjoining the entrance-corridor is a hypocaust 55 centimeters high, which was built at the same time as the rooms themselves. ${ }^{8}$ Hypocausts of a similar type were, it is probable, built under the other rooms, though at a higher level. ${ }^{\circ}$ In the new rooms on the south, also, hypocausts were built throughout, raising the level of the whole group to that of the group on the east. In several of the rooms the double floors of the hypocausts are still preserved. In the corridor, unfortunately, they have been destroyed, though traces of them still remain. In the room farthest toward the east a second hypocaust has been placed on top of the earlier

[^54]${ }^{7}$ From the traces which remain it is probable that the hypocaust under which the pavement was found is not later than this period. The pavement itself, therefore, must be earlier. In type also it agrees perfectly with the pavements which are usually assigned to the time of Hadrian.
${ }^{8}$ In building the walls of this room, the bondingcourse which is at the level of the lower floor of the hypocaust has been so laid as to allow the tegula bipedales to project beyond the wall. On the shelf, so formed, has been placed the outer row of supports for the upper floor of the hypocaust.
${ }^{0}$ The hypocaust still to be seen in one of these rooms is of a much later period.

E. B. v. D.
1808.

Fig. 1. The Street on the North of the Atrium.

one, by which the level of the room was raised above that of the corridor. In the wall in the rear of the two smaller rooms ${ }^{1}$ arched openings were left below the level of the pavement, through which the furnaces placed beneath the upper floor of the hypocausts were fed. In the rear of the larger room toward the west, ${ }^{2}$ and adjoining one of these openings, are the partly destroyed remains of one of these rude furnaces. Traces of others are found in various parts of the Atrium. Hypocausts were at this time inserted also into the older rooms on the south, with the exception of two ${ }^{3}$ which retained the level of the outer corridor on which they opened directly. In connection with these changes the doors between the smaller rooms ${ }^{4}$ belonging to the last period were closed, and those by which they were connected with the corridor were reduced in width. The older rooms ${ }^{5}$ on either side of this group, the alce of the earlier house, were at least partially cut off from the court, upon which they opened through wide arches. In one of them ${ }^{6}$ a wall 45 centimeters thick was built, in which is seen a hypocaust opening similar to those in the newer rooms toward the east. The shrines of the household gods, ${ }^{7}$ which by the insertion of the wall had been made inaccessible except through a narrow passage-way, were abandoned and the statues of the gods were removed, probably to the court ${ }^{8}$ at the northeast corner of the Atrium, in the back wall of which niches were at this time built. In the passage-way just mentioned was discovered in 1899 a hoard of coins of the late empire. ${ }^{9}$ In the large room on the west of the court ${ }^{10}$ hypocausts were inserted or the earlier ones entirely rebuilt, since the tegula bipedales, of which the floors of the hypocausts are made, are almost wholly of this period. In several of the rooms there are scanty remains of frescos, which may possibly belong to this period. It is more probable, however, that they belong to the final restoration of the building in the time of Septimius Severus. ${ }^{11}$ Marble also was used extensively in many parts of the building.

The Upper Stories: Of the upper stories of the Atrium, as a whole, but a few rooms remain, which are situated at the southeast corner of the building. ${ }^{12}$ These rooms belong entirely to the period under discussion. The further extent of the rooms of the period can not be determined, though it is certain that there was a group on the north corresponding to that on the south. Of the stairways ${ }^{13}$ leading to the group on the north only the supporting walls are left. The stairway ${ }^{14}$ on the south divides at a short distance

[^55]from the bottom. The part towards the west has been almost wholly destroyed, ${ }^{1}$ although that leading to the rooms on the southeast ${ }^{2}$ is still preserved.

The rooms of the second story correspond in general to those of the lower floor and of the mezzanino. Since, however, the walls are somewhat narrower than those below, to which they correspond in position, the rooms are a trifle larger. On the north side of the narrow corridor in which the stairway ends are three large rooms ${ }^{3}$ looking out over the garden. The rooms on the south ${ }^{4}$ are much smaller and have been raised to the level of those opposite by the insertion of double floors. ${ }^{5}$ At the end of the corridor are three other rooms ${ }^{6}$ which, like the mezzanino, are lighted from the open court. These rooms were connected directly with the Nova Via by a small door. At the rear of the court a passage-way was thrown across to the opposite side, where there are scanty remains of a stairway ${ }^{7}$ leading to the third story and of one room, ${ }^{8}$ both of which seem to be of a later period. It is possible that this part of the building was originally occupied by a terrace. Behind the exedra are the remains of a passage-way leading to the rooms on the north.

The height of the rooms is about 5 meters. The pavements which remain belong probably to a later period, since there are traces of others at a lower level. Beneath all the rooms, except the three next to the garden, are hypocausts of a later period. It is probable that the double floors of the original building were the same height, since the level of the rooms would otherwise have been below the level of the corridor. The group of rooms was probably that in which were the private apartments of the Vestals. The smaller rooms may have been used for baths as was the case later.

Construction and Materials: The walls of the new rooms agree in construction with those elsewhere recognized as of the period of the Antonines. The walls of the lower story are 89 or 75 centimeters thick, while those of the upper stories are either 75 or 60 centimeters. There are no bondingcourses in any of the walls. ${ }^{9}$ The materials used do not differ from those of the preceding period.

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## VII.

## THE IMPERIAL ATRIUM OF THE FIFTH PERIOD.

In the time of Commodus the Atrium was once more partly destroyed by fire. The restoration following this partial destruction marks the last stage in the development of the building. ${ }^{1}$ In this restoration the rooms on the west and northwest, ${ }^{2}$ which had suffered most severely, were rebuilt, and the central court, which had remained unchanged during the previous periods, assumed its present form.

General Description: Since the fire and the reconstruction following it affected only the upper portion of the walls, there was no change in the extent of the Atrium. Several important changes took place, however, in its level. In consequence of the extension of the colonnade, the level of the garden was lowered to that of the court on the west, although the level of the colonnade itself was at this time, or a little later, raised 20 centimeters. ${ }^{3}$ Various other changes occurred in the level of individual rooms.

Plan of the Interior and Description of Changes: The determination of the walls and portions of walls which belong to this period is rendered easy by the distinctive type of their construction. ${ }^{4}$ The walls which are wholly of the period are, moreover, clearly distinguished from those of the earlier buildings by their structural independence.

The general plan of the building remained unchanged. Its appearance was, however, much altered by the destruction of the walls ${ }^{5}$ separating the earlier court from the garden and by the extension of the colonnade to the rooms on the east. By the extension of the colonnade the building was more closely bound together and the differences in the height and the style of architecture of its various parts concealed. The colonnade, which was probably wholly rebuilt, consisted, like that of the earlier period, of two rows of columns, one above the other, but with no floor corresponding to the intermediate entablature. The intercolumnar spaces are wider than those of the older part of the colonnade towards the west. ${ }^{\circ}$ The increase in width, however, is not regular ${ }^{7}$ and arose from the necessity of distributing the six columns on either side of the newer part of the colonnade over a space

[^58][^59]determined by the limits of the earlier building. The octagonal structure, ${ }^{1}$ the remains of which may still be seen in the center of the court, was probably built to conceal this irregularity. The columns of the lower story of the new colonnade were of cipollino, 50 centimeters in diameter and not over 3 meters in height. Those of the upper story were of breccia corallina, 40 centimeters in diameter and 2.93 meters high. ${ }^{2}$ In connection with the extension of the colonnade, the large basin, ${ }^{3}$ which was no longer in the middle of the court, was destroyed and its place taken by two smaller ones ${ }^{4}$ at the ends of the building. At this time or a little later ${ }^{5}$ was built, over the older basin, the octagonal structure mentioned above. The exact character of this structure is uncertain but it was probably an open summer-house, or pavilion, designed to conceal the irregularity in the colonnade and to afford more privacy to the rooms set apart for the daily life of the household.

No change took place in the size or arrangement of the rooms of the Atrium proper. At a somewhat earlier period the large room ${ }^{6}$ on the north next to the temple precinct had been divided into three smaller rooms opening directly upon the area in front of the temple. At this time a similar change was made in the room ${ }^{7}$ on the south of the area. In the room ${ }^{8}$ adjoining that in which stood the basin for the washing of the sacred utensils was built a platform 2.15 to 2.84 meters wide and 1.08 meters high, the purpose of which is not clear. It may have been connected, however, with a temporary stairway thrown across to rooms which no longer exist. Beside it a narrow stairway was built opening directly upon the ramp leading to the Palatine. By this stairway an easier means of communication was provided with the fountain of Juturna, from which water was probably brought for the uses of the cult. Underneath the platform are the so-called ovens, which resemble in form the modern Dutch ovens. They were intended for the storing away of articles used in the sacred rites or for the ashes of the focus, which probably stood near. ${ }^{9}$ That they were not ovens is clear from their form and construction ${ }^{10}$ as well as from the absence of any opening for the escape of the smoke or the creation of a draught. There are, moreover, no traces of the presence of fire inside of them.

The Nova Via was at this time spanned by arches $4+$ meters high supported by pillars 1.47 meters square, which formed an arcade extending

[^60]${ }^{5}$ Bricks bearing stamps of a later period have been found in the structure. They belong, however, to a restoration, since the construction in general is of the time of Severus.
${ }^{6}$ Plan D, i. Cf. plan E, ia-ic.
${ }^{7}$ Plan D, 56. Cf. plan E, $56 a-56 c$.
${ }^{8}$ Plan E, 54 .
${ }^{2}$ This was first suggested to me by Professor Mau. ${ }^{10}$ See plate ix, fig. 2. For the form and construction of ancient ovens, see Mau-Kelsey, Pompeii, 391. Such places for the stowing away of various objects are often seen in Pompeian houses.


Fig. 1. The Street east of the Atrium.

from the corner of the Atrium to the juncture of the Nova Via with the Clivus Sacer. ${ }^{1}$ A similar but smaller arcade was built along the narrow street in the rear of the Atrium.

Architectural Details and Construction: The height of the rooms can in no case be determined. In the court are pavements of several periods. Of these that of opus spicatum belongs probably to this period, ${ }^{2}$ though that of the coarser black and white mosaic is but a little later. Many of the pavements of opus spicatum throughout the house are, however, of a later period. The pavements of opus sectile made of large slabs of marble, which are found in the court and in many of the rooms, are also of a later time. The remains of decoration which are found in many parts of the Atrium belong in great part to this restoration. The most striking of these remains is the dado of marble, with which the court and a number of the rooms ${ }^{3}$ are decorated. Above this dado the walls were covered with marble facings or with frescos. Traces of both these styles of decoration have been found in various rooms.

The walls are, with a few exceptions, superimposed on those of the earlier periods, with which they agree generally in width. ${ }^{4}$ The height to which they have been left standing varies from a few centimeters to several meters. The type of construction differs greatly from that of the earlier walls. ${ }^{5}$ The tegula bipedales appear, though less regularly than in the walls of Hadrian. The courses of brick measure from 2.75 to 3.25 centimeters in width and the layers of mortar from 2.25 to 2.50 centimeters. The bricks themselves are well burned and of a good quality. They vary in color from yellow to yellowred and are of a coarse texture, resembling most nearly those of the periods of Nero and the Flavians.

Later History of the Atrium: Of the changes which took place in the Atrium after the time of Septimius Severus, two only are of importance in its development. The first of these, which affected the Sacellum Larum rather than the Atrium itself, consisted in the construction of two stairways, one a short time after the other, in one of the smaller rooms ${ }^{6}$ connected with the Sacellum and in the erection of a thin wall in the rear of the court, by which the whole group was separated from the rooms of the Atrium adjoining it. In this wall were placed the three niches for statues mentioned above. ${ }^{7}$ At some later time another stairway connecting the Atrium with the Nova Via was added in the room ${ }^{8}$ at the southwest corner of the cen-

[^61][^62]tral court, the level of which was also raised. ${ }^{1}$ Underneath the stairway a small shrine was built.

The other and more noticeable change occurred in the second story, where a system of bath-rooms was inserted in the rooms of the earlier building. ${ }^{2}$ The rudeness of the construction and the awkwardness of the arrangement point to a period later than that of the Vestals. In the rooms next to the stairs on the south is a caldarium ${ }^{3}$ with a tepidarium ${ }^{4}$ adjoining it. The method of entrance into the caldarium is not clear, since the basin occupied the space next to the door. The frigidarium, if one existed, was in the room ${ }^{5}$ on the other side of the caldarium. In the walls of all these rooms flue tiles are found, by which the heat was conducted from the furnace in the dark passage below. ${ }^{6}$ In the first of the larger rooms beyond ${ }^{7}$ a smaller caldarium has been built, which received its heat from a furnace underneath the basin. The water, however, must have been heated in some other manner, since sufficient heat for this purpose could not have been received from the furnace underneath, on account of the thickness of the concrete floor of the basin. The rooms toward the east, ${ }^{8}$ which also were heated both by hypocausts and by flue tiles in the walls, were probably used for a tepidarium and for dressing-rooms. Behind this group of rooms ${ }^{9}$ a corridor was built, from which the furnaces underneath the rooms were fed. On the east of the court is a frigidarium ${ }^{10} 2.95$ meters square and 1.15 meters deep, which is lined with rare marbles. It was entered by steps leading down directly from the passage-way which connected the rooms on either side of the court. Near the entrance, 1.90 meters above the ground, were holes through which the water poured into the basin below in jets, as in certain houses in Pompeii. At the southeast corner of the building, in one of the earlier shops ${ }^{11}$ opening upon the street in the rear of the Atrium, a tank ${ }^{12}$ was placed, from which the various baths were supplied with water. In the adjoining room a smaller tank was built, near which may have stood another basin. Throughout the whole Atrium many unimportant changes occurred, as the insertion of hypocausts in several of the rooms ${ }^{13}$ on the north, and the restoration of the older pavements. The colonnade also was at some later time superseded by a brick wall pierced with windows and the corridor on the south was cut into small rooms.

Of the history of the Atrium in the centuries following 382 A. D., when the building was abandoned by the Vestals in consequence of the decree of

[^63][^64]

Gratian, our knowledge is very slight. It is probable, however, that it served for several centuries as a residence for the officials of the imperial court, to one of whom doubtless belonged the treasure of the three hundred and ninetyseven coins found in 1899 beneath the pavement of the corridor on the south. ${ }^{1}$ The greater number of these coins, ${ }^{2}$ which belong wholly to the fourth and fifth centuries, are of the emperor Anthemius (467-472 A. D.). With the passing of time, as the building fell into decay, the poorer classes found shelter within its walls in huts built among the heaps of rapidly accumulating debris, while the marbles of the walls and the statues furnished a source of supply for at least two limekilns located in the building itself. ${ }^{3}$ At this time probably the pedestal dedicated to Coelia Claudiana, which was found in 1868 in the stadium on the Palatine, was removed from the Atrium. ${ }^{4}$ That the Atrium was not yet wholly abandoned in the tenth century is shown by the remains of a small house in the northwest corner of the court, beneath the pavement of which in 1883 a vase was found containing over eight hundred Anglo-Saxon coins ${ }^{5}$ of the ninth and tenth centuries. From the fibula found with these coins, which bore the name of the pope Marinus, it is clear that the owner of this house was an official of the papal court. After this time the Atrium Vestæ was, so far as can now be ascertained, not only wholly abandoned, but its site was forgotten until 1883, when in the course of the excavations it was once more brought to light.

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[^0]:    ${ }^{1}$ For discussion of the exact date, see Not. d. Scavi, 1883, 371, 470, n. 1. Jordan, Der Tempel der Vesta, 5, n. 5 .
    ${ }^{2}$ In the fifteenth century, in the search for marbles to supply the limekilns, a number of statues with inscribed bases were brought to light, leading to the supposition that the site was that of the burial-place of the Vestals.
    ${ }^{3}$ Not. d. Scavi, 1899, 325-333; 1900, 159-191. Bull. comun., 1899, 253-256; 1902, 30; 1903, 70-78. Huelsen, Roem. Mitth., xvi, goff.

[^1]:    ${ }^{4}$ See plan A, walls indicated in red.

    - Not.d. Scavi, 1883, 434ff. Cf. Ruins and Excavations, 40, 226 ff .
    ${ }^{6}$ Bull. dell' Inst., 1884, 88ff. Cf. Der Tempel der Vesta, 25 ff .
    ${ }^{7}$ Lanciani, Not. d. Scavi, 1883, plate xxin. Cf. Ruins and Excavations, figs. 72 and 92. Jordan, Der Tempel der Vesta, plate i.
    ${ }^{8}$ Jordan, Der Tempel der Vesta, 27 et al.
    - Jordan, l. c., 28 ff .
    ${ }^{10}$ Jordan, l. c., 28.
    ${ }^{11}$ Bull. dell' Inst., 1884, 149.

[^2]:    ${ }^{1}$ Jordan in his discussion refers to seventy stamps. Over forty of these are valueless as direct evidence, by reason of uncertainty concerning their original place in the walls or their date. The evidence of none of those which are free from doubt is contradictory to the conclusions reached in this discussion. Cf. Auer, Der Tempel der Vesta, 20.
    ${ }^{2}$ Bull. dell' Inst., 1884, 148 ff .
    ${ }^{3}$ Auer, Der Tempel der Vesta, 1-10, 20-22.
    ${ }^{4}$ Auer, l. c., plate II. Plate 1 is a reproduction of that published by Lanciani in the Notizie.
    ${ }^{5}$ Auer, l. c., 3, 6-10, 20-21.
    ${ }^{6}$ A fourth period may be, perhaps, represented by the upper story (Auer, l. c., 8). Richter (Topographie der Stadt Rom, go) seems so to interpret the divisions made by Auer.
    ${ }^{7}$ Auer, l. c., plate II. Cf. plan C of the present work.
    ${ }^{8}$ Jordan, Der Tempel der Vesta, 36 et al.

[^3]:    - Auer, l. c., 20. Note Richter's error (l. c.) in quoting this date.
    ${ }^{10}$ Auer, l. c., 21 .
    ${ }^{11}$ L.c. Middleton (Rem. of Anc. Rome, 1, 309) accepted in general the view of Jordan. Richter (l.c.) follows that of Auer. Huelsen (Huelsen-Carter, The Roman Forum, 206 and fig. 125. See also Huelsen, Roem. Mitth., 1889, pp. 245-247), adopting the views of Auer in the main, adds to the south rooms those more recently excavated on the west, and assigns the rooms on the north to the period of Septimius Severus. The official report of the later excavations is not yet published.
    ${ }^{19}$ See plate 1.
    ${ }^{18}$ Huelsen, Roem. Mitth., xvir, plate 1. Vaglieri, Gli Scavi Recenti nel Foro Romano, 1903, 15 and 71. Thedenat, Le Forum Romain, 1904, 317.

[^4]:    ${ }^{1}$ By the courtesy of Commendatore Boni, Director of the Excavations, I continued my work in the Atrium during the progress of the excavations. I was not, however, allowed to measure the new walls.
    ${ }^{2}$ Plans A-F.
    ${ }^{3}$ See plate ir, fig. I.

    - De Arch., vii, 1, 7; 4, 2. The tegula bipedales Lanciani (R. and E., 47) holds appear first in the Pantheon and Mausoleum of Hadrian. They are used, however, much earlier, being found occasionally in the walls of Nero, and regularly in those of Domitian.

[^5]:    ${ }^{1}$ The value of brick-stamps in determining the date of the structures in which they are found has been greatly overestimated, owing to the failure to take into account the frequent use of new material in repairing old walls and of old material in constructing new ones.

[^6]:    ${ }^{2}$ By a structural unit is here meant a building or a part of a building in which the construction is identical in type and the walls are continuous throughout.
    ${ }^{8}$ Plan A, II-xil.

    - Plan A and pp. 16 ff .

[^7]:    ${ }^{1}$ The restorations and additions belong in large part to the Domus publica. Of these new walls but one type is uncertain. Although no decision can now be reached concerning its date, in no case need it be held to be later than the early part of the reign of Nero. For further discussion, see pp. 12-14.
    ${ }^{2}$ Tac., $A n n .$, xv, 4 .
    ${ }^{3}$ As filling for the concrete foundations of this period, rare marbles have been used in appreciable quantities. Before their abandonment to such a use, these marbles must have been rendered worthless for other purposes by the destruction of the earlier buildings in which they had been used. Before the rise of the new city of Augustus, imported marbles were almost unknown. After that period no destruction befell the Atrium or the buildings adjacent to it until the fire of Nero. The first imperial Atrium must, therefore, have been erected after that calamity.

[^8]:    4Plut., Galba, 27. Tac., Hist., 1, 43; Piso in adem Vesta pervasit, exceptusque misericordia publici servi et contubernio eius abditus . ....... protractus Piso in foribus templi trucidatus est.
    ${ }^{5}$ The coins of Galba (Cohen, Galba, 309-314, 364, $367,404,43^{2}$ ), as well as those of Vitellius (Cohen, Vizellius, 89-91), afford evidence of their continuance of the work.
    ${ }^{6}$ Owing to the importance of the cult, neglect to rebuild the temple would hardly have escaped the notice of the historians.
    ${ }^{7}$ H. Dressel (Zeitschr. für Numismatik, xxII, 23, n. 3) holds that the temple was only planned by Nero, but built at a later time. The evidence of the coins is not in harmony with this conclusion; for, though the variants in type are not numerous, the coins represent a number of issues. For example, the three gold coins in the British Museum, though of one type, are from three different issues.
    ${ }^{8}$ See pp. 19-20.

[^9]:    The irregular manner in which certain of the walls have been repaired indicates destruction by fire rather than intentional demolition. For the extent of the injury, see plan $\mathbf{B}$ and pp . 21 ff.
    ${ }^{2}$ Plan B.
    ${ }^{3}$ Plin., N. H., xir, 94 .
    ${ }^{4} C f$. plans A and B. For further discussion, see p. 21.
    ${ }^{5}$ The outer walls on the north, which are standing to a considerable height, show no sign of restoration at this time. Those on the southeast are in part restored. The exact extent of this restoration can not at present be determined. It is, however, clear that it was by no means as complete as that of the western part of the building.

[^10]:    ${ }^{1}$ See P. 32.
    ${ }^{2}$ See Pp. 32 f.
    ${ }^{3}$ Cohen, Mdrien, 1450; Sabine, 64-68, 78-87. The coins of the time of Trajan are few (Cohen, Trajan, 644-645; Plotine, 10-11). The brickwork also does not belong to his period.
    ${ }^{4}$ See p. 33.
    See plan C, c.

    * Plan D.
    ${ }^{7}$ See p. 43.
    ${ }^{8}$ Plan Fa.
    - Plans D and Fa.
    ${ }^{10}$ Auer (l.c., p. 8) noted certain of these facts and called attention to their significance.
    ${ }^{11}$ See p. $3^{6}$ and plate v1, fig. $2 .^{2}$.
    ${ }^{3}$ See p .36.
    splan F .
    ${ }^{14}$ Sce p. 42.

[^11]:    ${ }^{1}$ The coins of the period are numerous. Cohen Faustine Mère, 285-293, 318; Marc Aurèle et Lucius Verus, 2; Faustine Feune, 284286; Lucille, 92; Crispine, 45. It is assumed that the famous medallion of Lucilla refers to a restoration of the temple. It is unlikely that the temple was restored by her. It is possible that the medallion was struck instead, in token of assistance given the Vestals in the completion of the Atrium.
    ${ }^{2}$ Unfortunately very little masonry of the time of the Antonines remains.
    ${ }^{3}$ See plan E.

[^12]:    ${ }^{1}$ This is called by the Italians locus Vesta. $C f$. Maes, Vesta e Vestali, 157 et al. Marucchi, Le Forum Romain, 160 et al. As a technical designation for the precinct, however, the name is not found in ancient writers and possibly had its origin in a mistranslation of Ovid, Trist., 111, 1, 29: Hic locus est Veste, where Veste is predicative and does not depend on locus.
    ${ }^{2}$ The road which now divides the temple from the later Regia is not original.
    ${ }^{2}$ Cic., de Divin., 1, 45.
    ${ }^{4}$ There are, however, in the rear of the temple traces of a row of rooms, which may have formed the western line of the templum, though the remains which are at present visible are too scanty to allow of any certain conclusion concerning them. Plan A, z

[^13]:    ${ }^{1}$ Cf. Jordan, l.c., 23, and plan B.
    ${ }^{2}$ Jordan, l. c., 83.
    The recognition of these rooms as a separate structure took place much later. See P. 11.
    ${ }^{4}$ The question as to whether the Regia and the Atrium Vesta are identical has been much discussed. For principal references, see Ambrosch, Studien und Andeutungen, 32 ff . The identification by Ovid is of especial interest. Fasti, vi, 263-264: Hic locus qui sustinet Atria Veste Tunc erat intonsi Regia magna Numa. By a confusion of the two names arose later the designations Atrium Regium (Livy, xxvı, 27, 3; xxvi, 11, 16) and Regia Vesta (Orelli, 2353).

[^14]:    ${ }^{1}$ The Roman Forum, 117.
    ${ }^{2}$ Jordan, l. c., 111, 565.
    ${ }^{8}$ A parallel is found in the title of the priestesses. Their office was that of the mater familias, but from the prominence of the one cult among the many committed to them arose the title Virgines Vestales. Cf. Pontifices Vesta.
    ${ }^{4}$ It is possible that the name Atrium included at that time not only the Domus, but also the area of the temple. The remains (plan A) show that a peculiarly close relationship existed between the two parts until the destruction of the whole building in the first century A. D. After that time the Atrium was much less closely connected with the temple.

[^15]:    ${ }^{2}$ See plan A , walls indicated in red.
    ${ }^{2}$ Plan A, I-xir. Since the official reports concerning the excavations are not yet published, no exact plan of the republican walls is possible. The partial plan given is not intended to be more than a suggestion of the main features of the building.
    ${ }^{3}$ The first two periods have not been distinguished on the plan.
    ${ }^{4}$ An inferior kind of tufa, which is found in the buildings of the earliest period.
    ${ }^{5}$ The Domus publica was granted to the Vestal Virgins by Augustus in that year. Dion Cas8, riv, 27.

[^16]:    ${ }^{6}$ In 14 B. C. the Basilica Aemilia with the buildings near it was burned. It is possible that the Atrium may have suffered also.
    ${ }^{7}$ Plan A, walls outlined in indigo.
    ${ }^{8}$ Middleton recognized three periods of construction in the early Atrium. The division made by him (Archaologia, xux, 399f.) is, however, inaccurate.
    ${ }^{9}$ Dion Cass., Liv, 27. One of two walls is possible. The evidence concerning either of them is not decisive.
    ${ }^{20} P$ lan $A, 11$.
    "Plan A, m-IX and plate m, fig. 1.
    ${ }^{12}$ Plan A.

[^17]:    ${ }^{1}$ The pavement in the vestibule of the house of Livia at Prima Porta is of the same type and probably of the same period. Similar pavements found frequently in Pompeii belong to the late republican period.
    ${ }^{2}$ Plan A, iv-ix, and plate m, fig. 1 .
    ${ }^{3}$ Plan A, in.
    ${ }^{-}$Plan A, iv-ix.
    ${ }^{5}$ The pavement in these rooms resembles that of the private house destroyed by Nero in the construction of his Golden House, of which a small part still remains below the Baths of Trajan.
    6 The course of The Nova Via was originally further towards the north than at present.
    ${ }^{5}$ Plan A, w.

[^18]:    ${ }^{8}$ Along the Sacra Via was a row of rooms or shops which may have formed a structural part of the Domus.

    - Plan A, xirr.
    ${ }^{10}$ Behind the room with an apse (Plan A, xi) there is a heavy wall, which may be the division wall between the two houses. If this be so, the entire building to the west of this wall must be included in the house of the Vestals and the Domus publica confined to the group of the rooms on the east.
    ${ }^{11} P l a n A, x$.
    ${ }^{18}$ Plan A, xr.
    ${ }^{13}$ Middleton, Archaologia, xlix, 400 .
    ${ }^{14}$ See Middleton, l. c., xlix, plate opposite p. 402.

[^19]:    ${ }^{1}$ Plan A, xir.
    ${ }^{2}$ This fresco, though faded, is still visible.
    ${ }^{3} \mathrm{Pp}$. $12-13$.
    ${ }^{1}$ See p. 12, n. 4.
    ${ }^{5}$ The exact date of the walls of this type is yet unsettled. The greater number known to me are of the time of Tiberius. Shortly after this period, they give place to an entirely new type.
    ${ }^{6}$ This rostra is, as Huelsen holds, of the period of Augustus.

[^20]:    ${ }^{1}$ Plan B, cf. plan A.
    ${ }^{2}$ See above, p. 4 -
    : The later Atrium and the temple of Vesta were surrounded by a common precinct wall. They were, however, structurally distinct from each other.
    ${ }^{4}$ The earlier Nova Via was at this time destroyed and the present street built in its place.
    ${ }^{8}$ Plan A, $m^{\prime \prime}-m^{\prime \prime}$. Towards the east also there may have been a few shops opening upon the Nova Via. Concerning the existence of these shops, however, with the exception of one, the evidence is not conclusive.

[^21]:    ${ }^{1}$ No traces of the pavement of this period remain.
    ${ }^{2}$ The lucus Veste covered originally the site of the Atrium court. It is possible that a small portion of this grove, including the lotus capillata, was left in the center of the court.
    ${ }^{3}$ Plan A, $m$-m.
    ${ }^{4}$ Plan A, $1-9$.
    ${ }^{5}$ The foundations of the front wall of the shops remain throughout their whole length. Concerning the massive concrete foundations of these two walls, see p. 18, n. 10.
    Plan E, $56 a-56 c$.

[^22]:    ${ }^{7}$ See plan B.
    ${ }^{8}$ Plan A, 13.
    ${ }^{\ominus}$ For description of these arches, see Boni, Not. d. Scavi, 1901, 62ff.
    ${ }^{10}$ Plate iv, fig. I. (From a photograph taken uring the course of the excavations in 1903, by the courtesy of Director Boni.) The walls are seen at the level of the foundations at the right side of the figure. Concerning the period of this room, see p. 18, n. 8.
    ${ }^{1}$ Plan A, ${ }^{1-9}$.
    ${ }^{12}$ Plan A, ${ }^{10-15}$.

[^23]:    ${ }^{1}$ Plan A, ${ }^{1-9 .}$
    ${ }^{2}$ See plan A.
    ${ }^{8}$ From data recently obtained it seems possible that earlier walls existed in the same position as those on which the ends of the colonnade of the next period (see plan B) rested. The earlier court would, in that case, have extended on the east and west only to these walls.

[^24]:    ${ }^{4}$ Plan A, 1-9, $10-15$.
    ${ }^{5}$ Plan A, c.
    ${ }^{6}$ Plan A, $n$.
    ${ }^{1}$ See plan B and p. 23.
    ${ }^{8}$ Plan A, 1-3.
    ${ }^{0}$ Approximately 6 Roman feet, a common measurement throughout the whole building.
    ${ }^{10}$ Plan A, 13. This room was 16.07 meters wide and 10.28 meters long.

[^25]:    ${ }^{1}$ Plan A, 12.
    ${ }^{2}$ Plan A, 14.
    ${ }^{3}$ See plan D, 42, and p. 33.
    ${ }^{4}$ There are no clearly defined alde elsewhere. The rooms suggested must, therefore, be accepted as such.
    ${ }^{5}$ Plan A, II. This room is $5 \cdot 50$ meters wide.
    ${ }^{6}$ Plan A, 10.
    ${ }^{7}$ Plan A, D .

[^26]:    ${ }^{8}$ It is possible that this room and the walls adjoining it on either side are to be assigned to the next period. Cf. p. 17, п. 3 .
    ${ }^{9}$ Plan A, $m-m$.
    ${ }^{10}$ Plan A, room adjoining 3.
    ${ }^{11} \mathrm{~A}$ full discussion of these concrete foundations, which rise in certain parts more than a meter above the republican level, will be presented by the writer at a later time.

[^27]:    ${ }^{1}$ Plan A, B; plate iv, fig. 2. The divinity to whom the altar was dedicated is unknown. The shrine of Aius Locutius lay within the lucus Vesta. Huelsen, from the description of its position given by Cicero (de Div., 1, 45, 101) locates it however much further to the west along the Nova Via. The worship of the divinity to whom the altar belonged was probably continued, since in the wall behind there is found a niche for a statue.
    2 The inner wall is of a much later period than the altar itself.
    ${ }^{3}$ See plan A, e.
    ${ }^{4}$ See P. 28.

[^28]:    ${ }^{5}$ Professor Huelsen has suggested that walls of such thickness would not have been built had there been no upper story to support.
    ${ }^{6}$ Under the careful direction of Commendatore Boni, a number of the sewers have been restored to their original use.
    ${ }^{7}$ The use of the term brick-walls should be avoided, since none existed in Rome.
    ${ }^{8}$ This measurement, which is equal to 3 Roman feet, is very common in walls of this period and later.
    ${ }^{3}$ Another common measurement, which is equal to 2.5 Roman feet.
    ${ }^{10}$ See p. 3, n. 4 .

[^29]:    ${ }^{1}$ The walls in which the bonding-courses appear most frequently are those east of the tablinum. Bonding-courses appear sporadically in this period, but their use is not common until the time of the'Flavians.
    ${ }^{2}$ At several later periods they are again used in considerable quantities.

[^30]:    ${ }^{1}$ Plan B. Cf. plan A.
    ${ }^{2}$ Plan B, 13.
    ${ }^{8}$ The line is plainly marked by the change in brickwork.
    ${ }^{4}$ Cf. plans A and B.
    ${ }^{5}$ Plan A, $\mathrm{I}-7$.
    ${ }^{-}$Cf. plans A and B.
    ${ }^{7}$ Plan B, $m-m$.
    ${ }^{8}$ The wall next to the court and the division walls between the rooms.

[^31]:    ${ }^{2} C f$. plans A and B.
    ${ }^{2}$ The level of the colonnade is taken as the standard for the period. See plate in, fig. I; wall on the right.
    ${ }^{3}$ Plan B, $14^{-23}$.
    ${ }^{4}$ Plan B, $2-7$.
    ${ }^{5}$ If the hypocausts which remain in several of the rooms are of a later period, the level of the rooms was a half-meter lower than that of the corridor. It is more probable, however, that the hypocausts were built at the same time as the rooms.
    ${ }^{6}$ Plan B, $24-28$.

[^32]:    ${ }^{1}$ Jordan, Der Tempel der Vesta, 37.
    ${ }^{2}$ The height of the columns has been estimated from the size of the travertine blocks on which their bases rested. The marble bases and columns which have been found belong to a much later period. They do not, however, differ materially, in all probability, from those of the earlier colonnade.
    ${ }^{3}$ There was a similar colonnade in the building of Eumachia at Pompeii (Mau-Kelsey, Pompeii, $113-114$ ).

    - The number of columns at the sides of the colonnade is twelve, that at the ends, six. Jordan (l.c.) holds, though in my opinion without sufficient reason, that the occurrence of the number six is not without significance.
    ${ }^{5}$ Schulze (Jordan, l. c.) considers the variance due to regard for perspective. The size of the earlier Atrium at least is not such as to warrant this conclusion. See pp. 43-44 for further discussion.

[^33]:    ${ }^{1}$ Plan B, 4-6 and plate $v$, fig. 2.
    ${ }^{2}$ Plan B, 1 .
    ${ }^{8}$ Plan B, 2.
    ${ }^{4}$ Plan B, 4-6. These rooms are 5.13, 2.95 and $3.3^{8}$ meters wide.
    ${ }^{5}$ Plan B, 8-9. The wall in front of the new rooms is not continued beyond the division wall between rooms 7 and 8 , which is of the preceding period.
    ${ }^{6}$ Plan B, $15^{-28}$.
    ${ }^{7}$ Plan B, 15 .
    ${ }^{8}$ Plan B, 19. This room, which was divided into two unequal parts, was 12.64 meters long and 6.09 meters wide.

[^34]:    ${ }^{-}$Plan B, 16-18. The rooms were 4 meters long and over 3.50 meters wide.
    ${ }^{10}$ Plan B, 20.
    ${ }^{11}$ Plan B, 21 .
    ${ }^{13}$ Plan B, 22.
    ${ }^{13}$ Plan B, 23. This room is 8.90 by 7.40 meters in size.
    ${ }^{14}$ There are remains of a window opening upon the colonnade at a later period.
    ${ }^{25} P l a n ~ B, 25-27$, and plate $v$, fig. 1 .
    ${ }^{10}$ The walls by which the arches have been filled in may be of the same period; it is more probable, however, that they were built a little later.
    ${ }^{17}$ Plan B, 24 .

[^35]:    ${ }^{1}$ Bull. comun., $\times x \times 1$, 7 of. Huelsen-Carter, Roman Forum, 216 .
    2 The door connecting these rooms with the Atrium is not original.
    ${ }^{3}$ Plan A, $n$.
    ${ }^{4}$ Plan C, $m^{\prime \prime \prime}$.
    ${ }^{5}$ Plan B, 16-19.
    ${ }^{6}$ Plan E, 44 .
    ${ }^{7}$ See plan E, 47.

[^36]:    ${ }^{8}$ The so-called libation-bowl in the pavement of the court had no connection with religious rites, for which it was wholly inappropriate on account of both its size and construction. It was probably, as Professor Mau has suggested, connected with the cleaning of the pavement, since it leads directly into the sewer below.
    ${ }^{0}$ Tac., $A n n$., xin, 24. Cf. Richter, Top., plate 2.

[^37]:    ${ }^{1}$ Plan B, $24-27$.
    ${ }^{2}$ See P. 44 .
    ${ }^{8}$ A number of these are still preserved in the storeroom in which they were found.
    ${ }^{4}$ There are no traces of stoves or of any of the ordinary receptacles for water.
    ${ }^{5}$ The kitchen now seen belongs to a later period. The earlier one must have been, however, in the same part of the Atrium, where the more private life of the household was centered.
    ${ }^{6}$ The door leading from the Atrium into these rooms is not original.
    ${ }^{7}$ Especially the rude pottery and the basin described below.

[^38]:    ${ }^{8}$ For the instrumentum of the temple, see Wissowa, Religion und Kultus, 406 f .
    ${ }^{9}$ The size and arrangement of the temple make it improbable that the less important sacra were kept there.
    ${ }^{10} \mathrm{~A}$ number of these are still to be seen in the room in which they were found (plan B, 24).
    ${ }^{11}$ For the principal duties of the Vestals in connection with the cult, see Wissowa, l. c., 143 .
    ${ }^{12}$ Boni (Vaglieri, Scavi Recenti nel Foro Romano, 71, n. 1) recognizes in this the strues mentioned by Festus (p. 310, n.).
    ${ }^{13}$ Wissowa, l.c.
    ${ }^{14}$ Plan B, ${ }^{27}$.

[^39]:    ${ }^{1}$ On account of the lowering of the level of the room by the removal of the ancient pavement, the basin at present resembles a low platform.
    ${ }^{2}$ See P. 23, n. 7.
    ${ }^{2}$ Plan B, 28.
    ${ }^{4}$ Plan B, 16-23.
    ${ }^{5}$ See p. 33 .
    ${ }^{6}$ The pavement is of a much coarser type than that in the adjoining rooms.
    ${ }^{7}$ Plan B, $2-7$.

[^40]:    ${ }^{1}$ This shelf, which is formed by the change in the width of the wall, at a little distance above the foundations, from 89 to 75 centimeters, is characteristic of this group of rooms.
    ${ }^{2}$ This is best seen in the foundations of the column wall on the west and of the wall opposite.

[^41]:    ${ }^{7}$ The walls at this corner of the Atrium are of the next period.
    ${ }^{3}$ The rooms on the south of the court at a higher level are of a later period.
    ${ }^{\circ}$ Walls $\mathbf{1} .20$ to 1.30 meters in thickness were built behind the new rooms, to resist the pressure of the earth by which the street had been raised to the higher level.
    ${ }^{10}$ The walls between the shops were in no case wholly destroyed.
    ${ }^{11 P l a n}$ C, 31 and 39.

[^42]:    ${ }^{1}$ When the level of the east end of the central court and of the adjoining rooms on the north was lowered, these foundations were chiseled off, except where a later wall had been built on top of them. See p. 43, and plate vi, fig. 2.
    ${ }^{2}$ Also the foundations of the walls along the sides of the later court projected originally beyond the walls.
    ${ }^{3}$ The brickwork of the two periods differs but slightly. It is, therefore, at times scarcely distinguishable.

    - Auer, Der Tempel der Vesta, 9.
    ${ }^{5}$ Cf. Richter, l. c. 90; Huelsen-Carter, Roman Forum, 206 and 213.

[^43]:    ${ }^{6}$ The exact limits of the group on the north and south have not been recognized by previous writers. Cf. Richter, l. c., go. HuelsenCarter, Roman Forum, 206 and 213.
    ${ }^{7}$ This is especially marked in the almost unbroken lines of bonding-courses throughout the whole structure.
    ${ }^{8}$ The reason of this change is not clear. It was due, probably, to local conditions, which are no longer apparent.
    ${ }^{9}$ Plan C, 35.
    ${ }^{10} P$ lan C, 32-34, 36-38.
    ${ }^{11 P l a n ~ C, ~} 31$ and 39.
    ${ }^{12}$ Plan C, 29-30.
    ${ }^{13}$ Plan C.

[^44]:    ${ }^{1}$ See plan E. The destruction of the division wall between the two parts of the Atrium first made the lack of symmetry conspicuous.
    ${ }^{2}$ The length on the north side is 12.7 meters, but on the south side 13 centimeters less. Such irregularities are not uncommon.
    ${ }^{3}$ The width is $4.26,3.99$, and 4.08 meters.
    ${ }^{4}$ Plan C, 29-30.
    ${ }^{5}$ See p. 19. In the wall behind the altar was built a small niche, of which mention has been made above (p. 19, n. 1.)
    ${ }^{6}$ Plan C, 32-34, 36-38.

[^45]:    ${ }^{1}$ The pavement of large slabs of fine marble which still remains in the exedra is much later.
    ${ }^{2}$ Plan C, $13 c$ and $d$. The pavement in room II was inserted, probably, at this time.
    ${ }^{3}$ The hypocausts of the Atrium do not form a single system supplied with heat from a common source, but were arranged in small groups, which were heated by fires placed directly underneath the upper floor. These fires were supplied with fuel through openings in the rear of the various rooms.

[^46]:    ${ }^{1}$ Plan C, 2-7; 21-23.
    ${ }^{2}$ The rooms are 4.80 meters long and $5.58,5.60$, 3.10 meters wide. The corridor is 3.46 meters wide.
    ${ }^{3}$ The construction of the wall is peculiar. The exact period of its erection is at present difficult to determine.
    ${ }^{4}$ Plan C, 13 c.
    ${ }^{8}$ See p. 40.

    - See Boni, Not. d. Scavi, 1899, 326 .

[^47]:    ${ }^{1}$ See P. 7.
    ${ }^{2}$ See plan C.
    ${ }^{3}$ Plan D, 9-12; 32-35.
    ${ }^{4}$ L.c., 8 and 31.
    ${ }^{5}$ Plan F, $a$ and $b$. Behind the court on the south is a series of low rooms (plan D, $24^{-3} 0$ ) forming a mezzanino. If these rooms be included, the Atrium was at least four stories high. The stairs leading to the fourth story remain, though the rooms themselves have been destroyed.
    ${ }^{8}$ The level of the garden remained unchanged.

[^48]:    ${ }^{1}$ Owing to the use of similar materials, the original walls of Hadrian are at times difficult to distinguish from the later restorations.
    ${ }^{2}$ See plate vi, fig. 2.
    ${ }^{3}$ At the southeast corner of the later court.
    ${ }^{4}$ The walls form but one structural unit. The two sides are united by the front wall of the shops in the rear of the buildings (plan D, $m^{\prime \prime}-m^{\prime \prime}$ )。

[^49]:    ${ }^{5}$ Plan D. Cf. plan C and p. 30. ${ }^{6}$ P. 27.
    ${ }^{7}$ Plan D, 8-12.
    ${ }^{1}$ Plan D, 3I-35.
    ${ }^{2}$ Plan D, 24-30.
    ${ }^{10} \mathrm{Plan} \mathrm{F} a$.
    ${ }^{13}$ Plan D, 8-12.
    ${ }^{12}$ The new rooms with the older ones toward the west form practically a single group.

[^50]:    ${ }^{1}$ Plan D, 13 -14.
    ${ }^{2}$ Plan D, 31 1-35.
    ${ }^{3}$ Plan D, 32-34. These rooms are 4.56, 3.40, and 4.14 meters wide respectively and 5.95 meters long.

    - Plan D, 31. The corridor was 3.24 meters wide and 13.88 long.
    ${ }^{6}$ Plan D, 35. This room was 8.26 meters long and 6.90 wide. For its original form, see plan A, 10. Traces of its earlier front wall are still to be found.

[^51]:    ${ }^{6}$ In the original plan a smaller door was built slightly to the east of the present one. This door, for some reason, met with such disfavor that before the completion of the building it was replaced by the other.
    ${ }^{7}$ For further description of these hypocausts, see pp. 40-41.
    ${ }^{8}$ These corbels were not intended to support a roof, as Jordan supposed.
    ${ }^{\text {D Plan D, }} 23$ a and plate vir, fig. I.
    ${ }^{2}$ Plan D, 23 b

[^52]:    ${ }^{1}$ See plate vir, fig. 2.
    ${ }^{2}$ Plan D, 24-30.
    ${ }^{2}$ Plan D, 24-26. These rooms are 5.30 meters long and $4.77,2.97$, and 2.66 meters wide.
    ${ }^{4}$ Plan D, 27-30.
    ${ }^{5}$ Plan D, 27.

    - The conversion of the passage-way into a furnace took place when the bath-rooms were added in the upper story. The construction is of a late type, as is that of the bath-rooms themselves.

[^53]:    ${ }^{1}$ Huelsen-Carter, Roman Forum, 212.
    ${ }^{2}$ Only two or possibly three of the stoves are early.
    ${ }^{3}$ This door was blocked up later by the mill and by a structure on the opposite side.

    - The penus here described must not be confused with the Penus Veste, which was in the temple and belonged to the cult. The Vestals as a household possessed a penus as well as private Penates. See plate vir, figs. I and 2.
    ${ }^{5}$ P. $3^{8 .}$
    ${ }^{6}$ In the private cult of the Lares the pater familias held the central position. The emperor, as Pontifex Maximus, occupied the same relation to the Vestals that the pater familias did to the household.
    ${ }^{7}$ Plan D, 13 - 14 .
    ${ }^{2}$ Plan D, 23.
    ${ }^{9}$ Plan D, $24-26$.

[^54]:    ${ }^{1}$ The door and windows do not belong to the earliest period, but were cut out of the wall later.
    ${ }^{2}$ Cf. plan C and see pp. 18-19.
    ${ }^{3}$ See plate virr, fig. 1. The level of the street is shown by the height of the concrete foundations of the pillars, which were added at this time.
    ${ }^{4}$ Plan D, $m^{\prime \prime}-m^{\prime \prime}$.
    ${ }^{5}$ The archway into the kitchen (plan D, 32) was, possibly before the completion of the building, replaced by a small door. Traces of the earlier archway are, however, still to be found, though its width can not be determined.
    ${ }^{6}$ Plan D, 36.

[^55]:    ${ }^{1}$ Plan D, 33-34.
    ${ }^{2}$ Plan D, 35.
    ${ }^{3}$ Plan D, $3^{6}$ (front part of room) and 43.
    ${ }^{4}$ Plan D, 38 -40.
    ${ }^{5}$ Plan D, 37 and 42.
    ${ }^{5}$ Plan D, 42.
    ${ }^{7}$ See P. 33 .
    ${ }^{8}$ The number of niches in both rooms is the same.
    ${ }^{9}$ For further description of these coins, see $N o t$. d. Scavi, 1899, 327 ff .
    ${ }^{10}$ Plan D, 5 I.
    ${ }^{11}$ Too little remains to make any decision concerning them possible.
    ${ }^{13 P l a n} \mathbf{F} a$; see plate viu, fig. 2 and plate 1x, fig. I .
    ${ }^{12}$ Plan D, adjoining 9 and 13 .
    ${ }^{4}$ Plan D, 35-37.

[^56]:    ${ }^{1}$ The supporting wall has, however, been preserved and is identical in width and construction with that corresponding to it on the other side. A second wall exists behind this supporting wall, the purpose of which is not clear.
    ${ }^{2}$ Plan Fa, 2.
    ${ }^{2}$ Plan F a, 3-5.
    ${ }^{4}$ Plan F a, 6-8.

[^57]:    ${ }^{5}$ It is possible that these were intended, when built, for hypocausts. There are no traces of any means for heating them, however, until later.
    ${ }^{6}$ Plan F a, 9 - II.
    ${ }^{7}$ Plan F $b, 13 b$.
    ${ }^{8}$ Plan F b, $13 a$.
    ${ }^{0}$ This is the most striking difference in construction between this and the preceding period.

[^58]:    ${ }^{1}$ See p. 8.
    ${ }^{2}$ Plan E, $48-56 d, 1 a-7$.
    ${ }^{3}$ The new level was that of the coarse black and white mosaic, of which considerable remains are found.
    ${ }^{4}$ For this type of construction, see plate II, fig. 2.
    ${ }^{5}$ See plate iv, fig. 1.

[^59]:    - Schulze (Jordan, l.e., 37) held this increase to be an architectural refinement due to regard for perspective. Cf. p. 23.
    ${ }^{7}$ The intercolumnar spaces on the west do not exceed 3.43 meters. Those toward the east are $3.93,3.63,3.63,3.63,3.73$ meters respectively.

[^60]:    ${ }^{1}$ Plan E, o. The top of this basin has been restored.
    ${ }^{2}$ Several columns of breccia corallina are still preserved. Only fragments remain of the cipollino columns, which resisted less well the action of fire. Fragments remain also of the entablature of white marble, as well as a number of Corinthian capitals of various sizes.
    ${ }^{3}$ Plan D, 0.

    - Plan E, $r$ and $s$. These smaller basins, although they are of the same period, are not of the same size.

[^61]:    ${ }^{1}$ See plate x , fig. I .
    ${ }^{2}$ The pavement was laid on the top of one of the walls across the middle of the court (plate 1v, fig. 1), which were broken down in this period.
    ${ }^{3}$ Door posts as well as a dado of marble are found in the exedra. They may bave been commonly used throughout the house.

[^62]:    ${ }^{4}$ The walls of the small rooms on the west which are built from the foundations are but 45 centimeters thick.
    ${ }^{6}$ For the construction of this period see plate n , fig. 2.
    ${ }^{5}$ Plan E, 44 -
    ${ }^{7}$ P. 25 .
    ${ }^{3}$ Plan E, 43.

[^63]:    ${ }^{1}$ See plate $x$, fig. 2. The pavement to which the modern steps ascend is of this late restoration.
    ${ }^{2}$ Plan F $b$.
    ${ }^{3}$ Plan F $b, 7$.
    ${ }^{4}$ Plan F b, 6 .
    ${ }^{8}$ Plan F b, 8.
    ${ }^{6}$ Plan E, 28-29.

    - Plan F b, 9.
    ${ }^{8}$ Plan F $b$, 10-11. $^{-11}$
    - Plan F b, 9-11.

[^64]:    ${ }^{20}$ Plan $\mathrm{F}, 15$. The frigidarium has been built above one of the shops opening upon the street behind the Atrium, into which there had been inserted a stairway leading to the upper stories of the house.
    ${ }^{\text {sPlan }} \mathrm{E}, \mathrm{m}^{\prime \prime}$. The shop furthest to the south.
    ${ }^{18}$ The remains of this tank are very scanty. It rested on a brick-faced concrete vault similar to that which supported the adjoining frigidarium.
    ${ }^{13}$ For example, see plan E, 11, 12.

[^65]:    ${ }^{1}$ Plan E, 42.
    ${ }^{2}$ For a description of these coins, see Not. d. Scavi, 1899, 327 ff. The coins are now in the Museo delle Terme.

[^66]:    ${ }^{2}$ Lanciani, Not. d. Scavi, 1883, 485.
    ${ }^{4}$ This base has within a few years been restored to its original place in the Atrium.
    ${ }^{5}$ These coins are now in the Museo delle Terme.

