THE REMAINS
OF
ANCIENT ROME

BY
J. HENRY MIDDLETON

SLADE PROFESSOR OF FINE ART, DIRECTOR OF THE FITZWILLIAM MUSEUM, AND
FELLOW OF KING'S COLLEGE, CAMBRIDGE; AUTHOR OF "ANCIENT
ROME IN 1880," "THE ENGRAVED GEMS OF CLASSICAL
TIMES," 1891, ETC., ETC.

"Postea nihil urbe Roma
Visere majus."—HOR. CEP. SEC. 11.

VOL. II.

LONDON AND EDINBURGH
ADAM AND CHARLES BLACK
1892
CONTENTS

CHAPTER I

The Imperial Fora: the Forum Julium; the Forum of Augustus and the Temple of Mars Ultor, existing remains and recent discoveries; the Forum Pardon of Vespasian, its works of art, existing remains; the Templum Sacrum Urbis and the Marble Plan of Rome; the Temple of Romulus, its bronze doors; the Forum of Nerva, its existing remains; the Forum of Trajan; the Basilica Ulpia; the Temple and Column of Trajan; sculptured reliefs; outer circuit with rows of shops; reliefs from Trajan's Forum placed on the Arch of Constantine; the smaller Forum of Rome. Pages 1-39

CHAPTER II

The Circle of Rome: the Circus Maximus, its historic origin; the Altar of Conses; the growth of the Circus, its structural arrangements; the Circus games, the racing stables; existing remains under the Church of S. Anastasia; the Circus of Maxentius; the Circus Flaminius; Circle of Nero and Hadrian; the Stadium of Domitian; the Naumachiae and the Stagnum Neronis. 40-60

CHAPTER III

The Theatres of Rome: the Greek form of theatre, its Roman modification; the Theatre of Scævola; the Amphitheatre of Curio; the Theatre and Forum of Pompey, its works of art; the Temple of Apollo Sosianus; the Theatre of Marcellus; the Theatre of Balbus. 61-74
CONTENTS

CHAPTER IV

The Amphitheatres of Rome; the origin of the Amphitheatre; the Amphitheatres of Taurus and of Nero; the Flavian Amphitheatre or Colosseum; its development from the time of Vespasian to that of Severus Alexander; arrangement of seats; its methods of construction and mixed materials; the caves; the stairs; its drainage; its awning; the substructures below the arena; its lifts and inclined planes; its subterranean passages; the Amphitheatrum Castrense.

Pages 75-112

CHAPTER V

The Baths of Rome; early Greek and Roman baths; methods of heating, construction of hypocauste and smoke flues; the Pantheon, its hypostyle dome of solid concrete, its bronze covering, its marble facings, its portico; list of the Thermae of Rome; Thermae of Agrippa; Thermæ of Nero; the Golden House of Nero and the Thermæ of Titus; existing remains of the Golden House among the substructures of the Thermæ; the water supply; the Thermæ of Trajan; the Thermæ of Caracalla, its plan, decorations and methods of construction; the bronze ceiling on iron girders; the outer circuit with Halls, Stadium, and reservoir for hot water; the Thermæ of Diocletian, magnificent existing Hall; the great reservoir; the Thermæ of Constantine; the private baths of Rome

113-187

CHAPTER VI

The Forum Boarium and the Campus Martius; the Temple of Fortune; the round Temple; the Temple of "Ceres ad Circum Maximum"; the Campus Martius and its development; Temples in the Forum Olitorium; the Porticus of Octavius, and the Porticus of Octavia with its surrounding buildings; the Temples of Jupiter and of June; the works of art in the buildings of Octavia; existing remains in the Ghetto; the Porticus of Philip and the Temple of Hercules Munus; the Poseidium and Temple of Neptune; the Diriliatorium; the Seques Julia; the Villa Publica; the Temple of Minerva; the Isenum and Serapaeum; the Horti of Agrippa; records discovered of the Ludi Saeclulares under Augustus and Severus

188-214
APPENDIX TO CHAPTER VI

List of works of art in the Campus Martius which are mentioned in Pliny's *Historia Naturalis*. Pages 215-218

CHAPTER VII

VARIOUS BUILDINGS: Temple of Venus and Roma, its existing remains; the Basilica of Constantine; remains on the Caelian Hill, "Dunnum Vinctiani"; early Christian house; Temple of Minerva Medica, the supposed and the real one; the Sessorium; the Praetorian Camp, its existing remains; private houses in Rome, the so-called Villa of Maecenas; mosaic floors; the Horti Sallustiani; remains of the Villa of Sallust; Temple of Venus Erycina; marble throne; river-side houses, wall-paintings and reliefs in stucco of Greek style; plaster casts; other houses; a Roman library; the Barracks of the Vigiles; scratched inscriptions; Barracks of the Imperial horse-guards or Equites Singulares; the Horrea of Roma; storage of corn and other goods. 219-262

CHAPTER VIII

TOMBS AND HONORARY MONUMENTS: interments with and without burning; sepulchral necropoli; beautiful stucco reliefs, richly coloured; road-side tombs; tombs of the Gens Cornelia; sepulchral inscriptions; tomb of Cornelia Lucina Scipio; Imperial columbaria; various forms of columbaria; tomb of Eurysaces the baker and his wife Atista; tomb of Bilulus; tombs near the Porta Salaria; tomb of the Gens Licinia, of Piso and others; sculptured marble sarcophagi; tomb of Lucilius Poetus; tomb of the freedman Mammader; tomb of the Gens Sempronia; Pyramid of Cestius; other tomb pyramids; tomb of Marcella; Imperial sepulchres; Mausoleum of Augustus, the Ustrina Caesarum; Mausoleum of Hadrian and Castle of Sant' Angelo, bronze for cone and peacocks. 263-299

CHAPTER IX

TRIUMPHAL ARCHES: early arches; Arch of Claudius; Arch of Nero; Arch of Marcus Aurelius, of Titus, of Severus in the Forum Boarium,
CONTENTS

of Janus Quadrifrons; of Constantine; of Dolabella; of Gallienus; Honorary Columns; Columna Maeniana, Trullia and Minucia; columns of Antoninus Pius and Marcus Aurelius. Pages 306-313

CHAPTER X

THE WATER SUPPLY OF ROME: work of Frontinus; early cisterns; hydraulic skill of the Romans; administration of the water-works; laws and penalties; construction of water channels; species of aqueducts; Castella or reservoirs; Water-pipes of clay and of lead, their sizes, construction and inscriptions, names of emperors; consuls, house-owners and plumbers; the Aqueducts of Rome; list of nine Aqueducts and two added later; public fountains; private fountains and their ornaments. 314-351

CHAPTER XI

THE ROADS AND BRIDGES OF ROME: formation of Roman roads; lava paving; administration of the roads and post-horses; milestones; votive itineraries; list of the eleven chief roads. BRIDGES; early superstitions; Pons Sublacae; Pons Aemilius; the Tiber Island and the sanctuary of Aesculapius, the two island bridges; the Pons Cestius, Pons Agrippae, Pons Aelianus, and others; the Pons Malevius 350-371

CHAPTER XII

THE WALLS OF AURELIANUS; their extent, the cause of their construction, their design; most perfect part described; circuit of the wall from the Ostian Gate; the Appian Gate; the Larin Gate; the Domus Laterana; Porta Asinaria; the Amphitheatre Castrense; Porta Praestina; Castellum Aquarum; Porta Tilurtina; Porta Nomentana and Porta Salaria; muro forto; Porta Flaminia; the trans-Tiberina wall. 372-389

INDEX 391-448
LIST OF ILLUSTRATIONS

COLOURED PLATE

IV. Plan of the Imperial Fora, opposite page 1.

ILLUSTRATIONS IN THE TEXT

<table>
<thead>
<tr>
<th>FIG.</th>
<th>ILLUSTRATION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>Plan of the Imperial Fora</td>
<td>3</td>
</tr>
<tr>
<td>50</td>
<td>Existing wall of the Forum Julium</td>
<td>5</td>
</tr>
<tr>
<td>51</td>
<td>Plan of the Templum Sacrum Urbis, etc.</td>
<td>16</td>
</tr>
<tr>
<td>52</td>
<td>Plan of the Forum of Trajan</td>
<td>25</td>
</tr>
<tr>
<td>53</td>
<td>Reverse of an aeros showing the Arch of Trajan</td>
<td>96</td>
</tr>
<tr>
<td>54</td>
<td>Interior of the Basilica Ulpia, restored</td>
<td>27</td>
</tr>
<tr>
<td>55</td>
<td>Plan of the Circus of Maxentius</td>
<td>43</td>
</tr>
<tr>
<td>56</td>
<td>The Circus Maximus shown on a coin of Trajan</td>
<td>45</td>
</tr>
<tr>
<td>57</td>
<td>Plan of the Theatre of Marcellus</td>
<td>72</td>
</tr>
<tr>
<td>58</td>
<td>The Colosseum shown on a medallion of Gordianus III</td>
<td>81</td>
</tr>
<tr>
<td>59</td>
<td>Plan of the Colosseum</td>
<td>88</td>
</tr>
<tr>
<td>60</td>
<td>External arcade of the Colosseum</td>
<td>90</td>
</tr>
<tr>
<td>61</td>
<td>Use of mixed materials in the Colosseum</td>
<td>93</td>
</tr>
<tr>
<td>62</td>
<td>Substructures of the Colosseum under the arena</td>
<td>107</td>
</tr>
<tr>
<td>63</td>
<td>Plan of Pompeian Baths</td>
<td>116</td>
</tr>
<tr>
<td>64</td>
<td>Tile ceiling over hot baths</td>
<td>120</td>
</tr>
<tr>
<td>65</td>
<td>Details of hypocaust floors</td>
<td>121</td>
</tr>
<tr>
<td>66</td>
<td>Details of bath in the Atrium Vestae</td>
<td>124</td>
</tr>
<tr>
<td>67</td>
<td>Plan of the Pantheon</td>
<td>127</td>
</tr>
<tr>
<td>68</td>
<td>Elevation of the Pantheon</td>
<td>130</td>
</tr>
<tr>
<td>69</td>
<td>Section of the Pantheon</td>
<td>131</td>
</tr>
<tr>
<td>70</td>
<td>Bronze cornice round the hypaethral opening</td>
<td>133</td>
</tr>
<tr>
<td>71</td>
<td>Plan of the Thermae of Agrippa</td>
<td>143</td>
</tr>
<tr>
<td>No.</td>
<td>Illustration Description</td>
<td>Page</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>72</td>
<td>Plan of the Thermæ of Nero</td>
<td>148</td>
</tr>
<tr>
<td>73</td>
<td>The Golden House and substructures of the Baths of Titus</td>
<td>151</td>
</tr>
<tr>
<td>74</td>
<td>Plan of the Thermae of Titus</td>
<td>154</td>
</tr>
<tr>
<td>75</td>
<td>Plan of the Thermæ of Trajan</td>
<td>157</td>
</tr>
<tr>
<td>76</td>
<td>Plan of the Thermæ of Caracalla</td>
<td>160</td>
</tr>
<tr>
<td>77</td>
<td>Interior of the Tepidarium, restored</td>
<td>165</td>
</tr>
<tr>
<td>78</td>
<td>Section through the peristyle of the Baths of Caracalla</td>
<td>168</td>
</tr>
<tr>
<td>79</td>
<td>Plan of the Thermæ of Diocletian</td>
<td>178</td>
</tr>
<tr>
<td>80</td>
<td>Plan of the great Reservoir of Diocletian's Thermæ</td>
<td>188</td>
</tr>
<tr>
<td>81</td>
<td>Plan of the Thermæ of Constantine</td>
<td>185</td>
</tr>
<tr>
<td>82</td>
<td>Plan of the so-called Temple of Fortuna Virilis</td>
<td>190</td>
</tr>
<tr>
<td>83</td>
<td>Plan of the three temples under the Church of St. Nicola in Carcere</td>
<td>192</td>
</tr>
<tr>
<td>84</td>
<td>Plan of the Porticus of Neptune</td>
<td>203</td>
</tr>
<tr>
<td>85</td>
<td>Plan of the Temple of Venus and Rome</td>
<td>229</td>
</tr>
<tr>
<td>85a</td>
<td>Temple of Venus and Rome shown on a coin of Hadrian</td>
<td>243</td>
</tr>
<tr>
<td>86</td>
<td>Section of the Basilica of Constantine</td>
<td>225</td>
</tr>
<tr>
<td>87</td>
<td>Plan of the Basilica of Constantine and part of the Donnariurn</td>
<td>227</td>
</tr>
<tr>
<td>88</td>
<td>The Praetorian Camp shown on a coin of Claudius</td>
<td>234</td>
</tr>
<tr>
<td>89</td>
<td>Existing remains of the Praetorian Camp</td>
<td>235</td>
</tr>
<tr>
<td>90</td>
<td>Plan of part of Sallust's Villa</td>
<td>244</td>
</tr>
<tr>
<td>91</td>
<td>Wall-painting of Greek style from a Roman house</td>
<td>250</td>
</tr>
<tr>
<td>92</td>
<td>Plan of the Mausoleum of Hadrian</td>
<td>295</td>
</tr>
<tr>
<td>93</td>
<td>Section of the Mausoleum showing modern additions</td>
<td>297</td>
</tr>
<tr>
<td>94</td>
<td>Triumphal Arch of Nero shown on a coin</td>
<td>302</td>
</tr>
<tr>
<td>95</td>
<td>The Arch of Constantine</td>
<td>307</td>
</tr>
<tr>
<td>96</td>
<td>Section showing three spencers on one aqueduct</td>
<td>323</td>
</tr>
<tr>
<td>97</td>
<td>Lead pipes and turnsacks</td>
<td>328</td>
</tr>
<tr>
<td>98</td>
<td>Junction between a street main and service-pipes</td>
<td>330</td>
</tr>
<tr>
<td>99</td>
<td>Triple aqueduct built by Augustus (Porta S. Lorenzo)</td>
<td>340</td>
</tr>
<tr>
<td>100</td>
<td>Elevation of the Wall of Aurelianus</td>
<td>375</td>
</tr>
<tr>
<td>101</td>
<td>Section of</td>
<td>376</td>
</tr>
<tr>
<td>102</td>
<td>Plan of</td>
<td>377</td>
</tr>
</tbody>
</table>
CHAPTER I

THE IMPERIAL FORA.

Owing to its situation, and the many important buildings which surrounded it, it was impossible to enlarge the Forum Romanum so as in any way to keep up with the rapid growth of the population of Rome, and the increase of business both legal and commercial. Hence it happened that towards the end of the Republic the space provided in the old Forum was very inadequate to the needs of the people.

In order, therefore, to meet the necessity for new law courts, exchanges, and other requirements of law and commerce, one Forum after another was planned and constructed by the Emperors of Rome.

The Forum Romanum was further relieved from one of its early uses, that of a place of scenic spectacles and gladiatorial fights, by the construction of a number of theatres, amphitheatres, and other places of amusement, allowing of theatrical representations and scenes of butchery on a much larger scale, and got up with far greater splendour than was possible in the narrow limits of the area of the Forum, with its shaky rows of temporary wooden platforms and seats.

1 The name Forum Romanum, implying the old Forum, continued in use even when there were several other Fora in Rome. The old one was always "the Forum," par excellence; it was also known in later times as the Forum Magnum, though not equal in size to Trajan's Forum.
The first of these additional Fora was that which was begun and in part completed by Julius Caesar, from whom it was called the Forum Julium. Its central area was partly occupied by a magnificent Temple to Venus Genitrix, the mythical ancestress of the Julian Gens. This temple was vowed by Julius Caesar at the battle of Pharsalia, in 48 B.C., and the work was begun in the following year. The site chosen was a very crowded one, and the houses on it very valuable, owing to their neighbourhood to the great centre of Roman political and commercial life. Thus, in spite of the enormous sum spent in buying the ground, no less than 100 million sesterces, the site is said to have been somewhat cramped on account of the great expense of buying the private property at that place; see Suet. J. Caes. 26; Cic. Ep. ad Att. iv. 16; and Pliny, Hist. Nat. xxxvi. 103.

The central Temple of Venus Genitrix was completed with wonderful rapidity, and consecrated at the time of Caesar’s triumphal entry into Rome in 46 B.C., though the bronze statue of Venus in its Cella was not complete; this was the work of the Greek Arcessilas; Dion Cass. xliii. 22; Plut. Caes. 60; and Pliny, Hist. Nat. xxxv. 156. Pliny here tells us that Arcessilas’ model (proplasma) for the bronze of Venus Genitrix was placed temporarily in the Cella before the actual statue was finished.

We probably possess a copy of the Venus Genitrix of Arcessilas in the well-known marble statue of Venus in the Vatican. The figure is fully draped, but with thin, closely clinging folds, which do little to conceal the form. In her left hand Venus holds an apple, in the right hand, uplifted, she holds a corner of her stola. This statue is shown on the

1 The Forum Julium and the other Imperial Fora are shown on the Plate opposite page 1.

2 About a million sterling in modern value.
reverse of a denarius of Sabina, with the *legund Venere*

The Temple of Venus Genitrix is mentioned by Vitruvius (iii. 3) as an example of *pycnostyle* (close) intercolumniation, like

that built in honour of Divus Juliius. It contained many works of art and other rich treasures; a breastplate covered with pearls from Britain, Pliny, *Hist. Nat.* ix. 116; and six *dactylithocae*, cabinets of rings set with engraved gems, *ib.* xxxvii. 11.
Pliny (ib. vii. 126 and xxxv. 25 and 136) records that Julius Caesar bought for 80 talents two pictures of Medea and Ajax by Timomachus, and placed them in the Temple of Venus Genetrix; see also Cie. In Verrem, II. iv. 60. In the same temple Augustus dedicated the celebrated picture of Venus Anadyomene by Apelles, the lower part of which was injured by age; no living painter was skilful enough to restore it; see Pliny, Hist. Nat. xxxv. 96.

In front of the temple stood an equestrian statue of Julius Caesar, mounted on his favourite charger, which had strangely formed hoofs; see Pliny, Hist. Nat. viii. 155; and Suet. J. Caes. 61. This statue was of gilt-bronze; Stat. Silv. I. i. 84.

That the Forum itself, that is, probably, the rows of arches and columns which surrounded the area, was not finished during Caesar's life is shown by the passage from the Ancyrean inscription, quoted in vol. i. p. 385, where its completion by Augustus is recorded.

The Forum Julium was specially intended for legal business, and the few existing vaulted chambers, with which at least one side of the area was lined, were probably offices for scribes and advocates. The scanty existing remains of these which are now visible are to be seen in a small court which opens out of the west side of the Via Marmorcella, house No. 29, an alley which issues nearly opposite the Marmertine prison.

Remains of five arches exist above ground, each opening into a vaulted chamber, which is now mostly buried below the level of the ground; one or two of these have been excavated and can be explored. They are built of massive tufa blocks, with vaults of tufa concrete. On the outside there are a number of holes by which marble linings were attached over the whole wall and arches. Each archway is double, having a slightly cambered flat arch, and over it a semicircular "relieving arch." The springers and keystone of the flat arches are of travertine; the rest is of hard tufa, an interesting
example of the Roman use of mixed hard and soft materials, see fig. 50.

From below the old level of these rooms there are Cloaca large enough to walk through, which run towards the "Mamertine prison," and then on into the great Cloaca. The large arches by which this row of rooms opened into the Forum.

Fig. 50.

Part of the existing wall round the Forum Julium.
The keystones and springers of the flat arches are travertine, the rest tufa.

Julium were probably once fitted with wooden doors and shutters, like those in the Forum of Trajan, see vol. ii. p. 33.

Palladio (Architettura, iv. cap. 31) gives a complete set of drawings of a very handsome temple, conjecturally restored by him on the evidence of a number of marble architectural fragments which were in his time found near this place, between

1 There is not the slightest ground for Mr. J. H. Parker's notion that these chambers were part of the "Mamertine prison." They are at a considerable distance from it, and have no connection with it except through drains. They are manifestly a row of shops or offices; each has a large open archway for the sake of publicity, and nothing less like the rooms of a prison can possibly be imagined.
the Via del Marforio and the Forum of Augustus. The marble frieze was enriched with reliefs of dolphins and tridents, very like those on part of the Thermae of Agrippa, behind the Pantheon, on account of which Palladio calls it a "Temple of Neptune." The plan of this building, according to Palladio, was a peripteral, octostyle, pyramidal temple of the Corinthian order; and these facts, together with the position in which its remains were found, leave little doubt that it was the Temple of Venus Genetrix in the centre of the Forum Julium.

Rich details. Its details, as shown by Palladio, appear to be exceptionally rich and well designed. The entablature is elaborately decorated with sculptured ornaments, and the lacunaria of the marble ceiling over the peristyle are most sumptuously ornamented with enriched mouldings and floral reliefs at the bottom of each "coffer." The whole building is evidently the work of a Greek architect, possibly the same Arcesilaus who executed in bronze the cultus statue of Venus Genetrix which stood in the Cella.

Forum of Augustus.

The Forum built by Augustus, with its central Temple to Mars Ultor, was on the north-east side of the Forum Julium; in size it was about equal to the Forum Romanum. The temple and its surrounding area, enclosed with walls of immense height, were built in fulfilment of a vow made by Augustus in 42 B.C., before the battle of Philippi, which avenged the death of his adoptive father Julius; hence the dedication to Mars the Avenger; see Suet. Aug. 29, and Ovid, Fast. v. 569. The Ancyrean inscription records IN PRIVATO SOLO [EMP] TO MARTIS - VLTORIS - TEMPLVM - FORVMQVE - AVGSTVM EX [MANY]BIIS - FECI.

Temple of Mars. The Temple of Mars was dedicated in 2 B.C. (Vell. Paterc. ii. 100, 2); the surrounding Forum, like that of Julius, was mostly given up to legal business, and contained an important tribunal in which Augustus himself sometimes sat to hear causes;
Dion Cass. lxviii. 10. The plan of this Forum is rectangular (see vol. ii, p. 3), with two large curved projections; its wall was nearly 100 feet high, and the lower stages were wholly covered inside with marble linings.

A series of niches in the circuit wall, in several tiers, one above the other, contained an immense number of statues. One great series represented all the chief military leaders of the Romans, beginning with Aeneas and Romulus, down to the time of Augustus himself; a series specially intended to honour those Romans who had built up, extended, and consolidated the great Empire of Rome.

Pliny mentions a number of antique works of art, which were collected in this Forum; in the Temple of Mars Ultor, two of the four statues which once had supported Alexander the Great’s tent, the other two being in the Regia; see Hist. Nat. xxxiv. 48. An ivory statue of Apollo, ib. vii. 183; some elaborately worked iron cups (scyphi), xxxiv. 141; two pictures representing War and the Triumph of Alexander, with Alexander in a chariot accompanied by Victory and Castor and Pollux, both painted by Apelles, xxxv. 93.

Augustus, in the Ancrean Inscription, mentions a quadriga which he dedicated in his Forum; see Mommsen, Res Gestae, 1883, p. 113.

The Temple of Mars Ultor was specially appointed by Augustus as the place where the Senate were to meet to deliberate on the question, when it arose, of granting the honours of a triumph, in order that the crowd of statues of

---

1 The dedication of the Temple of Mars Ultor was celebrated with various dramatic and other representations, including a Nauomachia with thirty ships, the combatants being dressed to represent the Athenians and Persians at the battle of Salamis.

2 Drawings of the Forum of Augustus and its Temple of Mars, including plans, elevations, and sections, are given by Palladio, Arch. iv. cap. 7; and still better in the earlier work of Labacco, Libro appartenente a l’architettura, 1557, Plates 9 to 15.
victorious Roman generals might warn them not to be too lavish of the honour. Triumphant generals were to deposit here any standards that had been recovered from an enemy, and to dedicate their wreaths or crowns. In the Temple of Mars the toga virilis was to be assumed by the sons of succeeding emperors; and a solemn farewell sacrifice was to be made to Mars Ultor by newly appointed governors of provinces, before setting out for their seat of office.

Like many other Roman temples, the Temple of Mars contained a treasury; see Juvenal, Sat. xiv. 261, where a robbery of the treasury seems to be referred to.

A road passed on each side of the Temple of Mars towards the Forum Romanum, and across these roads Tiberius erected triumphal arches in honour of the German victories of Germanicus and Drusus; Tac. Ann. ii. 64.

Existing Remains of the Forum of Augustus; see fig. 49 in vol. ii. p. 3. The existing remains of the great circuit wall of this Forum are among the most stately of the ruins of classical Rome, and are specially worthy of careful examination, as one of the finest existing examples of massive Roman masonry of the best period. The best view of this wall is to be had from the Salita del Grillo on the slope of the Quirinal near the foot of the Marcellina Tower.

This enormous wall, about 86 feet high,\(^1\) is divided into three stages by two simple string-courses of travertine. The utter absence of any ornament or even moulding on the outside of this great mass of masonry gives it an effect of much simple grandeur. It is built of peperino, in large blocks, roughly 2 Roman feet thick by 2 wide across the ends, and varying from 5 to nearly 7 feet in length.

The upper story is built of a softer greenish sort of peperino (Lapis Albanus), which has weathered badly; and the lower

---

\(^1\) That is, measuring from the present ground level, but about 23 feet of the base of the wall are buried below the modern street, as has been shown by the excavation recently made in the interior of the Forum.
parts of the very hard grey peperino (Lapis Gabinus), which is
now as fresh in surface as ever. The stones are left rough and
bossy on the face, and are "draughted" with a smoothly
worked band round the joints. No mortar is used, but the
usual dovetail clamps fasten each block to the next; see
Vitr. i. 5. 3. Flaminio Vacea, writing in the sixteenth century,
records that when part of this wall was pulled down the
wooden clamps were found in a perfect state of preservation,
though no one could tell what wood they were made of.

Four well-jointed arched doorways are visible, though
buried in the modern street nearly to the springing of each
arch. A fifth archway has been destroyed by a modern door
into the Church of the Annunziata, which is built on the site
of the Temple of Mars Ultor.

Fig. 49 shows the plan of the Forum of Augustus; the
black indicates what still exists. The arched doorways above
mentioned are shown on the plan by the words "Tor de' Conti." The plan of the portions of the temple and Forum which are
now missing is taken from a drawing made about 1555 by
Labacco; see note in vol. ii. p. 7.

At the east angle of the Forum the symmetry of the plan
is spoilt by a piece of it being, as it were, cut off in a sloping
direction. There must have been at this point a building
which for some reason could not be pulled down and built
over, as the circuit wall here makes a strange bend, and is
built slightly curved inwards. Suetonius says, Aug. 56, Forum
Augustus fecit, non ausus extorquere possessoribus domos.

At this point, close by the Temple of Mars, an important
thoroughfare entered the Forum in a slightly diagonal direction
under a fine archway, which still exists, spanning the modern
street Via Bonella, under the name of the Arco de' Pantani.1
Its coursors are of immense blocks of travertine, tailing in with
the peperino courses of the wall.

1 This arch is called de' Pantani, because in the mediaeval period the
ground was marshy at this point.
This fine archway is shown at fig. 2, in vol. I. p. 43, as a characteristic specimen of Roman masonry of the Augustan Age. Great labour and much extra material have been expended in making parts of the soussoirs of the arch bond in with the level courses of the masonry of the adjoining wall.

A great part of the wall, over the arch, was stolen in the Middle Ages for building materials, together with all the rest of the peribolus, with the exception of this one end, and a bit of the south-west side adjoining.

The interior of the Forum of Augustus must have been a most striking contrast to the aspect of the outside. There, instead of roughly hewn blocks of dark grey peperino, all was lined with polished marble of dazzling whiteness, or with opus albarium decorated with brilliant painting, varied with columns of pavonazetto, giallo, and other foreign marbles of rich colour and markings.

On the top of the circuit wall, projecting on the inside of the Forum, there is a massive and effective travertine cornice, 4 feet deep, with large simple consoles; the upper part of the peperino wall, on the inside, appears to have been covered with hard white stucco, while the lower was cased with coloured marbles and rows of monolithic columns.

Close by the Arco de' Pantani there are marks, on the inside of the Forum wall, of a lofty porticus with gabled roof, which abutted against it; holes for the wooden beams of this roof are cut in the peperino wall. This porticus, supported on long rows of columns, was carried round three sides of the enclosing wall of the Forum; see plan on p. 3.

Next to this comes the wall of the great hemicycle which

---

1 A simple but stately late sixteenth-century palace adjoined the remains of this great wall, a little farther to the south-east. Its façade was built wholly of blocks of peperino taken from the Forum of Augustus. In 1884 this palace, in its turn, was destroyed, and replaced by a "jerry building" covered with stucco, such as are now springing up by hundreds in Rome.
backed up against the Forum of Nerva: a great part of it with circuit wall, its rows of niches for statues still exists in a good state of preservation: each niche was flanked by a great monolithic column of coloured marble, supporting an entablature of solid blocks of white marble. The rest of the surface of the wall was covered with lining slabs of various coloured marbles. Considerable remains of these magnificent decorations were discovered in 1888, when excavations were being carried on within this hemicycle. The paving of the Forum was found to be about 23 feet below the modern street: it was formed of the most costly materials, green and red porphyries, with Numidian and other coloured marbles and white marble arranged in large slabs so as to form simple geometrical patterns, but most magnificent in effect from the variety of the materials used.

Close by the Arco dei Pantani a considerable area of this pavement is now exposed to view. At this point, too, the stately circuit wall of the Forum can be seen to its full height of about 110 feet, so that it is now possible to judge how magnificent was the effect of the interior of the Forum of Augustus when it was complete.

Among the inscriptions recently found here the most interesting is the following: IMP · CAESARI · AVGUSTO · P · P HISPANIA · ULTERIOR · BAETICA · QVOD · BENEFICIO · EIVS · ET PERPETVA · CYRA · PROVINCIA · PACATA · EST · · · AVRE · P · C. The Comm. Lanciani explains the latter part of this inscription as meaning that some object of gold, probably a vase, weighing 100 pounds, stood on the pedestal on which the inscription is cut. During recent excavation in the Forum of Augustus a great many valuable fragments of sculpture were found; see Bull. Com. Arch. 1890, p. 251.

Temple of Mars Ultor. The small part that still remains of the Temple of Mars Ultor gives some notion of what its complete beauty must have been. Three Corinthian columns are still standing, and a pilaster fitted against the peperino circuit wall, all of Luna marble, and of the finest workmanship. Over
these columns the architrave still remains, and the coffered marble ceiling of the peristyle is here well preserved, with its richly moulded sunk coffers (lacunaria) and central rosette in each.

The Cella wall is of peperino lined with thin slabs of Greek marble, with intermediate bands of solid marble blocks, talling into the wall. The plinth is richly moulded, and the lower part of the Cella has a tall dado, with grooves sunk into the marble like sham joints, a device very successfully employed by the Romans to give increased appearance of size to their buildings.¹

The greater part of the existing wall on this side of the street and the site of the Temple of Mars cannot now be examined inside, owing to a nunnery being built against it, on the site of the Temple of Mars; it is therefore difficult to gain ad- mittance to this part.

In the sixteenth century this Forum was very much more complete than it is now; drawings of its plan and section, with details of the temple, are published in Palladio's Architettura, 1570, lib. iv. cap. 7, as is mentioned above; and by Gamucci, Ant. di Roma. These show the Temple of Mars as being octastyle, with nine columns and a pilaster on the sides;² the end of the Cella is apsidal, like the Temple of Venus and Rome, and several others.³

¹ Nothing dwarfs a building more than its being faced with very large blocks, so additional false joints were added in order to restore its true scale. This is skilfully done in the fine travertine facing of the Tomb of Cecilia Metella, and in other buildings of a good period, such as the circular Temple in the Forum Boarium.

² The shortness of Roman temples in proportion to their width is one of the chief points in which they differed from those of pure Greek style; peripteral Hellenic temples bad, as a rule, at least twice as many columns on the flanks as at the end.

Labacco, *Architett.* 1557, shows the rich internal columns of the cela with very elaborate bases, resting on a low podium or dado like that in the Temple of Concord, on which statues were placed between each pair of columns.

It should be observed that the common cenabum of Augustus—with *rev.* a small circular temple with Corinthian columns and a domical roof; *legend Mart.-Vlt.*—refers to a smaller *abside* which Augustus built in honour of Mars Ultor on the Capitoline Hill; see Dion Cass., liv. 8.

**FORUM PACIS OF VESPASIAN.**

The next in date was the *Forum Pacis*; built to enclose the large and magnificent *Temple of Peace* founded by Vespasian; Martial, I. ii. 8; Suet. Vesp. 9. It was on the south-east of the *Forum of Augustus*, but did not quite join it; a wide street from the *Subura* to the *Forum Romanum* being left between them. This strip of ground afterwards became the *Forum Transitorium* or *Palladium* of Nerva; see fig. 49, in vol. ii. p. 3.

Nothing now remains of the *Temple of Peace*, mentioned by Pliny (*Hist. Nat.* xxxvi. 102) as being one of the four most magnificent buildings in Rome.1

The *Tempulum Pacis* was dedicated by Vespasian in 75 A.D., having been begun four years before, immediately after the taking of Jerusalem; Dion Cass. lxvi. 15. Josephus (*Bell. Jud.* V. v. 5, and VII. vi. 5 to 7) gives a description of the splendours of the temple; in it were dedicated spoils from the Jewish Temple, including the gold candlestick, trumpets, and table of *prothesis*, which are represented in the relief on the Arch of Titus, which is described in vol. ii. p. 304; cf. Herodian, i. 14; and Amm. Marc. xvi. 10. This temple con-

---

1 The other buildings Pliny names in this passage as being the most remarkable in Rome for combined size and splendour are the *Circus Maximus*, the *Basilica Aemilia*, and the *Forum of Augustus*.
tained countless works of art and objects of archaeological interest, many of which are mentioned by Pliny.

Among them was a painting of the hero Ialysus, by Protogenes, said to have been his masterpiece, during the execution of which the artist, according to Pliny, lived on steeped beans alone, so that a constant sense of hunger might render his feeling for beauty more keen; see Plut. Demet. 22.

Other no less absurd stories are told by Pliny (Hist. Nat. xxxv. 102) about this wonderful picture, namely, that it was painted four coats thick in order to be more durable, and that one of its chief beauties was the vivid representation of the froth on a dog’s mouth, accidentally produced by the painter throwing his sponge at it in despair of getting the right effect.

The celebrated Colossus of the Nile in the Vatican, surrounded by sixteen children, probably representing the greatest number of cubits that the river rises, is a fine and probably contemporary copy in marble of a group in the Temple of Peace sculptured in the hard iron-coloured Egyptian basanites (basalt); Pliny, Hist. Nat. xxxvi. 58. The Vatican group was found in the time of Leo X. about 1516, on the site of the Serapeum, near the Church of S. Maria sopra Minerva.

The Temple of Peace also contained a fine statue of the Argive Cheimon by Naukydes, a victorious Athlete, mentioned by Pausanias, vi. 9. 3; and a statue of Ganymede, which is named by Juvenal, Sat. ix. 22.

1 Ialysus was a hero worshipped from very early times in the island of Rhodes, where he was said to have founded the city which took its name from him.

2 This statement may perhaps be based on some record of Protogenes’ careful method of preparing his ground with many coats of priming. The white earth of Ercilia in Euboea and another white earth from Egypt called paranitos were commonly used by Greek painters for the “priming” of their panels or canvases; see Pliny, Hist. Nat. xxxiii. 9; and xxxv. 38-39.

3 According to Procopius (Bell. Goth. iv. 21), even in the sixth
A great part of the enormous collection of works of art, the spoils of Delphi and other Greek cities, which Nero placed in the state-rooms of his Golden House, were dedicated by Vespasian in and around the Temple of Peace; see Pliny, Hist. Nat. xxxiv. 84. Among the large collection of pictures in the Temple of Peace, Pliny (Hist. Nat. xxxv. 109) mentions one of Seylla by Nicomachus, and a noble painting of a Hero by Timanthes. ⁰ Pliny specially praises a small panel painting by Timanthes in the Temple of Peace, representing Cyclops asleep, and round him a number of Satyrs, some of them measuring the giant's thumb with a thyrsus; see Hist. Nat. xxxv. 74.

A public library in this Forum is mentioned by A. Gellius, v. 21. 9; this appears to have been a meeting-place for literary discussions and criticism; see Treb. Pollio, Hist. Aug. Tyr. Trig. 31.

In the reign of Commodus, in 191 A.D., a fire broke out in the Temple of Peace, and swept across the Forum Romanum to the Palatine; Dion Cass. lxxii. 24.

Existing remains show that the Forum of Peace and the buildings it enclosed were restored soon after this, in the reign of Sept. Severus.

Existing Remains of the Forum Pacis. The chief portion of the original building of Vespasian which now exists is part of the circuit wall of his Forum, a lofty and very massive wall of mixed blocks of peperino and tufa, left rough outside like those of the Forum of Augustus; this is opposite the north-west end of Constantine's Basilica; see fig. 51, No. 1. In it is a fine square-headed doorway of travertine, with a flat arch, and a century, statues by Phidias, Lysippus, and Myron existed in the Forum of Peace.

⁰ The ancient Greek paintings which were brought to Rome were not all easel pictures; even mural paintings on the fine hard marble-dust stucco were cut off their walls and fixed in wooden frames so as to be portable; see Pliny, Hist. Nat. xxxv. 154 and 173; and Vitr. ii. 8. 9.
semicircular relieving arch over it; the *tympanum* being filled in with blocks of tufa; see vol. i. p. 41. The arches and quoins of this doorway are built of large blocks of travertine, in courses of irregular thickness, with which the tufa courses are made to range, the *pseudosodomen* of Vitruvius.

![Diagram of Basilica of Constantine and Forum Pacis](image)

**Fig. 31.**

Group of Buildings by the Forum Pacis.

1. Existing wall of peperino and tufa, with travertine doorway, shown in fig. 1, vol. i. p. 41.

2. Walls and porch, destroyed by Urban VIII.

3. Brick-faced wall of the time of Severus, against which the marble plan of Rome was fixed.

4. Apses built by Pope Felix IV., when he converted the Temple of the Sacred Urbis into the Church of SS. Cosmo e Damiano.

5. Temple of Romulus, built by his father Maxentius, made by Felix IV. into the porch of his church.

This entrance (now blocked up), which formerly led into one of the buildings of the *Forum Pacis*, is approached by a side road, leading out of the *Sacra Via*, close by the Temple of Romulus. This road was blocked up when Maxentius and
Constantine built their great Basilica, as is shown in the accompanying plan.

The researches of Prof. Jordan and the Comm. Lanciani have shown that this massive doorway opened into what was probably the *Templum Sacrae Urbis*, on the confines of Vespasian's Forum, a sort of Municipal Record office, which also contained a plan of the whole city of Rome, covering one of the walls, probably partly copied from the much earlier one made for Agrippa and placed about 7 B.C. on the walls of the *Porticus Pollae*, so called from Polla, the sister of Agrippa, who built it.

The original plan of Rome in this building, made by order of Vespasian, was probably destroyed during the fire of Commodus' reign, which also ruined parts of the *Templum Urbis*. This building was restored by Severus, not in *opus quadratum* of stone as before, but with concrete faced with brick. The two end walls of this rebuilding still exist; that which faces on the *Sacra Via* is visible above the later circular *Temple of Romulus*, with five large round-headed windows high up, near the pediment.

In the sixteenth century much more than now exists remained of the original stone masonry of the *Forum Pacis* as built by Vespasian. Parts now lost are shown by Du Perac, *Vestigi di Roma*, 1575, and in a MS. of Ligorio, rather earlier in date, which is in the Vatican library (Cod. Vat. 3439).

Sept. Severus also replaced the *Plan of Rome*, which had perished or been greatly injured in the fire.

---


2 It is possible that parts of the *marble plan* which still exist date from the time of Vespasian. The drawing on some of the fragments is much more carefully executed than that on other pieces. Moreover, slight differences in the scale of various parts support the notion that the whole was not executed at the same time.
Severus' Marble Plan. On the other end wall (at 3 on fig. 51) was fixed the great plan, engraved on slabs of white marble, of which many fragments now exist, and are preserved on the stairs of the Capitoline Museum. The pieces were mostly found at the foot of this wall, and the stumps of the metal clamps by which they were attached to it still exist in the face of the wall, showing the size and number of the complete marble slabs, which were fixed in nine tiers; the slabs averaged about 5 feet high by 3 feet 6 inches wide.

The whole have been published by Prof. Jordan, *Forma Urbis Romae*, Berlin, 1875-82, a very valuable work, which also gives a plan of the building where the plan was fixed, and a drawing showing the position of the engraved slabs upon the wall.

The scale of the Marble Plan is about 1 to 300, but appears not to be quite uniform; the names of Severus and Caracalla, followed by the words AVGCC NN, show that it was made during their lifetime, probably at the same time as the restoration of the building, about 200 A.D.

Seventy-four of the 167 fragments found in the time of Pius IV. (1559-65) are now lost, but drawings of them by Bellori are preserved in the Vatican (*Cod. Vat. 3439*). These drawings have been copied in marble, and are let into the walls of the Capitoline Museum, together with the genuine pieces. The copies, which are distinguished by a star, are not

---

1 The fragments which relate to the *Forma Romanae* are shown on the *Forum Plan*. One piece, that of part of the Temple of Castor, with the stairs leading up to the *Nodus Vitis*, was not found where the others were, and possibly belongs to another similar plan. An account of the original discovery of the pieces is given by Vacci, writing in 1594; printed in Nardini, *Rom. Ant.* (ed. Nibby), 1829, vol. iv. p. 5.

2 An interesting monograph on the *Marble Plan* was published in 1891 at Bonn by Prof. Ant. Elster, *De forma Urbis Romae dissertatio*.

3 The phrase *Augustus notor* or *Dominus notor* is only used in inscriptions after the name of a living emperor.
all very accurate. A few additional fragments have been discovered during recent excavations.

Though having no connection with the Forum of Peace, it may be well here to complete the description of this group of buildings.

Templum Sacrae Urbis and Templum Romulii; see fig. 51. After the restoration by Severus, the Templum Sacrae Urbis appears to have been a large rectangular hall, with side walls of Vespasian's massive stone masonry, and end walls rebuilt in brick-faced concrete. The whole interior was panelled in the usual way with polished Oriental marbles. On the side towards the inner area of the Forum Pacis was a projection like a porch, remains of which existed in the sixteenth century, as is shown by Du Perac, Palladio, and others; No. 2 on fig. 51.

At the end towards the Forum Romanum, the Emperor Maxentius added a circular temple to his deified son Romulus, who died in his infancy at the age of four. This temple has a door opening from the Sacra Via, flanked by two curved projections (like an apse) and on each side of these two cipollino columns, supporting a white marble entablature; see 5 on fig. 51. The walls were faced with marble, but this lining and the columns on one side have been removed; in other respects the building is in good preservation.

The doorway is very handsome, being decorated with two red porphyry columns, supporting a very rich and beautiful carved entablature, taken from some earlier building; the surface enrichments on the mouldings of the cornice are remarkable for their beauty both of design and workmanship, though the whole is rather overloaded with ornament.

Bronze Doors. The double bronze doors, also taken from some earlier building, are very interesting as being important specimens of Roman metal work of a good period. The hollow framing of the reliefs is cast in long lengths, with the usual
cems recta moulding round the panels. A further enrichment—the ball and reel ornament—has been added to the moulding separately, and fixed very skilfully by small dovetailed projections. The framing is also studded with enriched bosses, now mostly missing.

In design this fine piece of Roman bronze work closely resembles the doors of the Pantheon—the only other example in Rome of bronze doors still in situ, and indeed the only ones that have always been in use in their original place; as the doors of the Temple of Romulus were refixed at a higher level in the end of the sixteenth century, and were only replaced in their old position a few years ago.  

The dome of the Temple of Romulus is well preserved; it had originally, like the Pantheon, an opening (hypaethrum) in the centre, which is now covered by a seventeenth-century lantern. This temple is shown on a First Brass of Maxentius, struck in memory of his infant son, with the legend—Obi. DIVO ROMVLIO: TEC. AETERNAE: MEMORIAE; the building is shown with unusual accuracy, and the existing bronze doors are clearly represented. The modern floor is far above the old pavement; it was raised when the whole church beyond was remodelled in the debased style of the seventeenth century. Like the other buildings of Maxentius, the Temple of Romulus was re-dedicated by Constantine, whose name, inscribed on the front, existed till the sixteenth century; see Ligorio’s MS. sup. cit.

Felix IV., who was Pope from 528 to 530, converted the Templum Urbis and the adjoining Templum Divi Romuli into a

1 Other equally fine ancient bronze doors, and of richer design, are those at the end of the nave of the Lateran Basilica; see vol. i. p. 241; and one of the two bronze doors in the Lateran Baptistery, that given by Bishop Hilarus, appears to be ancient, but is of much later date and inferior workmanship; according to tradition, it was taken from the Baths of Caracalla. The bronze doors of the Temple of Romulus and other examples of a similar kind are illustrated in Mem. Inst. Cor. Arch., 1824, p. 108 seq.
Church dedicated to SS. Cosmas and Damian, as is recorded by Anastasius Bibliothecarius, *Vita S. Felici IV*: "*Hic (Felix) fecit Basilicam SS. Cosme et Damiani . . . in via sacra, justu Templum Urbis Romae.*" This the Pope did by building a cross wall with an apse at the north-east end of the *Templum Urbis*, while the circular *Temple of Romulus* was converted into a sort of ante-church or porch, see fig. 51.

The mosaics with which Felix IV. decorated the apse are perhaps the best preserved early Christian mosaics in Rome. In the sixth century the walls of the *Templum Urbis* appear still to have been lined inside with the polished marbles of Severus' restoration, and these were made use of in the Pope's Church, but unhappily the whole interior, except the mosaics of the apse, has been completely modernised in the seventeenth century.

**Forum of Nerva.**

The narrow strip which remained between the *Forum Pacis* of Vespasian and the *Forum of Augustus* was soon occupied by another Forum begun by Domitian, and completed by Nerva; Suet. *Dom.* 5; Mart. *Ep.* I. ii. 8. It contained a Temple to Minerva (Pallas), and hence was sometimes called the *Forum Palladium*.

A third name for it was the *Forum Transitorium*, on account of its being an important thoroughfare from the *Corinnae* and the *Salaria* to the *Forum Romanum*; see fig. 49, vol. ii. p. 3.

The *Temple of Minerva* and the *Forum Palladium* were dedicated by Nerva in 97 A.D.; but few references to either occur in classical writings. The temple appears to have had a *hexastyle, prostyle* portico, as there was not width in the narrow space occupied by this Forum to allow of a *peristyle*. It had an apsidal-ended *Cella* like that of the *Temple of Mars Ultor*. A small piece of this apse, where it adjoins the outside of the wall of the *Forum of Augustus*, is the only part of this temple that still exists. It is built of similar massive
blocks of peperino, and the whole Forum was surrounded with a lofty wall, marble-lined on the inside.

A great part of the Temple of Minerva existed as late as the reign of Pope Paul V., who ruthlessly destroyed it in 1606, in order to use its materials, marble columns and linings, in the construction of the new Chapel of S. Paul in the Basilica of S. Maria Maggiore.

Du Perac in his Festigi, and Palladio, Arch. iv. cap. 8, show this temple and the Forum as they were in the middle of the sixteenth century. Four fine fluted Corinthian columns of the front were standing, and part of the pediment, with an inscription, which (when complete) probably ran thus—IMP · NERVA CAESAR · AV[6 · GERM · ] PONT · MAX · THIB · POTEJ · III · IMP II · [COS · II · P · P · AEDEM · MIJNERVAE · FECT.

In the end wall of the Forum there was an archway, now destroyed, which was similar to the “Arco de Pantani” of Augustus’ Forum. One part, however, of the circuit wall of Nerva’s Forum still exists to its full height, nearly 100 feet; this is the piece that adjoins the Forum of Augustus, with which it is built to correspond in height and appearance; see above, vol. ii. p. 8. On the side opposite the temple, another lower piece of the circuit wall exists, with its sumptuous architectural decorations, showing the great splendour with which the whole interior of the Forum was once lined.

Two Corinthian columns of Greek marble still exist, now buried to about half their height; they stand free from the wall, the entablature on which projects and returns round them. Above this heavy entablature is a lofty attic with plinth and cornice of its own, and in the centre of the intercolumniar space is a good relief of Minerva, with helmet, aegis, spear, and shield, about life size. The attic also projects over the columns, following the return of the main cornice, and

3 Breaking an entablature into projections over columns is a peculiarity of the somewhat debased taste of Roman architects, and never occurs in good Greek work.
these upper projections evidently formed pedestals for colossal statues.

A complete series of columns and entablature like those described once decorated the whole internal length of the side walls of the Forum Nervae, as is indicated in fig. 49, vol. ii. p. 3.

The massive peperino wall of the Forum once rose high above these architectural decorations, but its upper part was probably not lined with marble, as the lower part was. The facing slabs under the entablature are now stripped off, leaving the closely jointed masonry visible.

Between the columns, but not exactly in the centre, is an archway which opened into the Forum Pacis. This opening has a square top with a flat arch, and above that a round relieving arch; the former is rather difficult to trace, as it is partly cut away by a modern door-opening.

The frieze of the Order is richly decorated with sculptured reliefs, well designed and, considering their date, of excellent workmanship; these represent the various handicrafts which were specially under the patronage of Minerva. Female figures are spinning or weaving tapestry at an upright loom; others are dyeing, washing, fulling, and weighing out money in scales. Other graceful figures are drawing water; a reclining figure of a youth with an urn possibly represents the river Anio; while the arches indicate the Aqueduct which carried the Anio Neronianus.

Temple of Janus Quadrifrons. A four-way arch, or a temple dedicated to Janus Quadrifrons, stood in the Forum of Nerva, at the intersection of the cross road from the Forum Pacis to the Forum Augusti with the road from the Subura to the Forum Romanum; see Servius, Ad Aen. vii. 607; and Martial, Ep. X. xxviii. 6.

A graceful square Tuscan temple, of which remains were found in the sixteenth century near the south-west end of the

1 The Greeks honoured Athena Ergane as the patron of the lesser arts.
Forum Neronis is illustrated by Labacco, *Architettura*, Roma, 1558, Pl. 17; this may possibly be the Temple of Janus Quadrifrons.

The very beautiful existing fragments of this building are now lying in the Forum on the south-east side of the Temple of Castor; see vol. i. pp. 283 and 307.

The Emperor Severus Alexander, about 230 A.D., set up in this Forum colossal bronze statues of those Roman Emperors who had received the posthumous title of *Deus*; and by each Emperor was a bronze column inscribed with his *rei gestae*; Lamprid., *Hist. Aug. Sec. Alex.* 28.

**Forum of Trajan.**

The *Forum of Trajan* consisted of three parts, each of great size, namely, the *Forum* proper or open area, secondly, the *Basilica Ulpia*, and thirdly, the *Temple of Trajan* within a large colonnaded *peribolos*; see fig. 52.

In order to form a level area for this enormous group of buildings a large ridge of the tufa rock which united the Capitoline and Quirinal Hills was cut away and entirely removed, an engineering work of immense cost and expense of labour. What the original height of this great rocky spur of hill may have been it is now impossible to judge; the inscription on the pedestal of Trajan’s column cannot be understood literally. According to it a mass of hill equal in height to the whole monument (i.e. 120 Roman feet) was cut away—the inscription is:

```
Srnntvs Pcvlvscvsc Rcvnnvs Imp Caesari Divi Nervae P. Nervae Traiano Avg Germ Dacico Fons
Maximo Trib Pot Xvii Imp Vi Cos Vi P P Ad
Declarandvm Quantae Altitvdis Mons Et Locvs
Tant[is] Oper[ibvs] Sit Egestvs.
```

Brocchi (*Stato di Roma*, p. 133) has shown from geological

1 Trajan received the *Tribunician power* for the seventeenth time in the year 114 A.D., which is the date of the dedication of his column.
evidence that the ridge can never have approached the height of 100 feet, and he suggests that the inscription means that

the hill was cut back in a slope to a point where the Quirinal was 100 feet high—a very probable explanation.
The Forum of Trajan proper (see fig. 52) consisted of an enormous square dipteral peristyle or porticus, surrounded with a double row of columns. On the south-east side it was approached from the Forum of Augustus by a very magnificent triumphal arch, surmounted by a bronze statue of Trajan in a six-horse chariot and statues of six generals; this is shown on aurei and other coins of Trajan; see fig. 53, and cf. Anl. Gell. xiii. 25, 2, and Amm. Marc. xvi. 10, and Dion Cass. lxviii. 29.

The finely-sculptured reliefs which Constantine built into his arch came, partly at least, from the Arch of Trajan and partly from other portions of Trajan’s Forum.

Basilica Ulpia and its Bibliotheca. One side of the Forum, that on the north-west, was occupied by the Basilica Ulpia, surrounded, like the Forum, by a dipteral peristyle, two or more stories high, and probably roofed all over. It was similar in plan to the Basilica Julia, with the addition of a large Apse at each end, one of them cutting into the side of the Quirinal.

On the north-west side of the Basilica Ulpia were two large libraries, and between them, in a court surrounded by columns, stood the Columna cochlia, with its rich series of spiral reliefs. The interior of the Basilica is shown in fig. 54.

The two libraries which formed part of the Basilica were divided, one for Greek, the other for Latin MSS., like the libraries of the Palatine Apollo; Dion Cass. lxviii. 16. They

1 This Basilica is represented on coins of Trajan, with the legend BASILEA ULPIA, as a handsome building with many-columned façade.

2 One of the libraries and the apsidal part of the Basilica are shown on the marble plan with the inscription BASIL." VLPIA.

Under the Roman Empire books seem to have been neither rare nor costly. In late times Rome possessed as many as twenty-eight public libraries; see Preller, Region. Crit. p. 219. Wealthy book-lovers in
Fig. 54.

Interior view of Trajan's Basilica (Basilica Ulpia), as restored by Canina.
appear from a statement of Vopiscus to have been rich in historical works. Edicts and State papers appear to have been preserved there; Anl. Gell. xi. 17. 1; and the two libraries continued in use as late as the latter part of the fifth century. Sidon. Apollinaris (Ep. ix. 16; Carm. 25) mentions his own statue being set in the court between the two libraries, where the Columna cochli stands.

The other two sides of the Porticus which surrounded the Forum had each an enormous apsidal projection, with rows of shops and offices, several stories high. That on the north-east side is set against the cliff of the Quirinal, which was cut away to receive it, so that its upper stories were entered from the top of the hill. These projecting parts of the Porticus were surmounted by gilt statues of horses and trophies of arms with the subscription ex MANVBIIS; Sidon. Apoll. Carm. viii. 8; Anl. Gell. xiii. 24.

Other statues in great numbers stood all round the colonnades of the Peristyle; in the reign of M. Aurelius statues were added of the Roman officers who fell in the war with the Marcomanni.

The buildings of Trajan’s Forum were all roofed with gilt bronze, according to Pausanias, V. xii. 6 and X. v. 11; and the columns both of the Forum and the Basilica were of Numidian giallo, Phrygian parosazetto, and Egyptian red and grey granites; the rest of the building was of white Pentelic and Luna marbles.

The architect of these splendid buildings was the Greek some cases owned 20,000 volumes, or even more, mostly, no doubt, produced by slave labour. Martial tells us that a new volume of his epigrams was published at about two shillings in modern value, while a well “bound” or encased copy cost about five shillings; see Mart. i. 117, and xiii. 3; cf. Statius, Silv. iv. 9, 9.

Nearly 1500 papyrus MSS. were found in one private library at Herculaneum. The owner does not appear to have been an exceptionally wealthy man; see Middleton, Illuminated Manuscripts, 1892, chap. ii.
Apollosorus of Damascus (Dion Cass. lxix. 4), who was also an able sculptor and engineer, and designed many buildings for both Trajan and Hadrian.

Temple of Trajan. On the farther side of the Basilica stood a large octastyle temple dedicated to Trajan by Hadrian with a peribolus surrounded with columns; foundations of this building and some of its immense granite columns have been found at various times, while excavating for the walls or cellars of houses on the north-west of the modern piazza; it is shown on coins of Hadrian. The plan on fig. 52 shows the position of the Temple of Trajan.

The space excavated in the modern piazza includes part of the Basilica, with a small portion of one side of the Forum, the greater part of which is still buried under several adjoining blocks of houses. Most of what is visible has unhappily been much falsified by restoration; none of the stumps of the granite columns are in situ, and the whole result is thoroughly misleading.

What, however, is genuine is a great extent of the paving of the Basilica, with fine slabs of white marble, raised about 3 feet above the level of the adjoining Forum, which was approached by a long flight of steps, leading down from the Basilica, with a row of statues on each side; some of the pedestals of these statues still exist.

A few fine Corinthian capitals of white marble, and other architectural fragments, are lying in the excavated area. There are also seven or eight much mutilated colossal statues of Dacian and other barbarian captives, similar to those which were taken hence and set on the Arch of Constantine.

The Column of Trajan, or Columna coehlis, so called from its winding stairs like the spiral of a shell, is built of great blocks of Greek marble; Dion Cass. lxviii. 16. The shaft, base, and capital, not counting the pedestal, which measures 18 feet in

1 In 103 A.D. Apollosorus built for Trajan the stone bridge over the Ister, near the modern town of Czernetz.
height, are exactly 100 Roman feet high (97½ modern English), hence this column and the similar one of Marcus Aurelius were sometimes called Columnae Centenariae. In diameter the shaft measures 12 feet at the bottom, diminishing to about 10 feet under the capital.

Trajan’s ashes, placed in a gold vase, are said to have been deposited in a chamber under the column; and on the top of the capital was a colossal gilt bronze statue of the emperor, nearly 20 feet high, holding an orb in one hand and a spear in the other. The circular base of Trajan’s statue still exists in its place on the top of the column, but a modern base has been added on that to receive the existing bronze statue of St. Peter which was placed there in 1588 by Pope Sixtus V.

The tall pedestal on which the column is built is richly decorated with reliefs of armour and trophies taken from the Dacians. On one side is a tablet carried by two Victories, and on it the dedicatory inscription with the record of the cutting away of the hill. At each angle of the attic, above the cornice of the pedestal, is an eagle supporting a garland of flowers. Under the tablet is the doorway to the spiral staircase, which is lighted by forty-two small slits.

The winding stairs consist of 184 steps round a central newel, all of solid marble.

The base of the shaft consists simply of a large torus carved with laurel leaves in relief, forming a colossal wreath. The capital is of no definite Order; but resembles a Doric capital, the echinus of which has been cut into egg and dart enrichments.

1 This statue and the whole column are represented on a First Brass of Trajan, dated by his sixth Consulship 112-113 A.D.

2 This inscription is given above, see vol. ii. p. 24; it is dated 114 A.D.

3 The echinus of the Greek Doric capital was never carved, but was sometimes decorated with painted ornaments; varieties of the egg and dart were the usual patterns used for this purpose. The capitals of
Winding round the shaft are spiral bands of reliefs, arranged in twenty-three tiers, including more than 2500 figures, and a great number of background accessories, worked with great minuteness.

This spiral band of reliefs varies in depth from 3 feet at the bottom to nearly 4 feet at the top. The shaft is made of 23 courses of large blocks of marble.

The whole of the column was originally covered with gold and colour in a very gorgeous way; brilliant crimson, blue and yellow, were largely used both for the reliefs, the figures in which seem to have been coloured in a realistic way, and for the various members of the capital and pedestal.

The sculptures represent the complete history of Trajan's two Dacian campaigns, with the defeat and death of King Decebalus, which is described at length by Dion Cassius, lib. lxviii. Though wanting in grace and refinement, they are full of dramatic vigour, and form a sort of Encyclopaedia of Roman costume, arms, and military engineering, and methods of advance and attack by land and river, in open field, and against walled cities, with the most wonderful fertility of design and careful attention to detail. It is impossible to study the original reliefs with any closeness of attention owing to their lofty position; casts, however, in the Villa de' Medici, Rome, are more available for close examination.¹

When this column stood in a comparatively small peristyle, surrounded by lofty buildings several stories high, the sculptured subjects would not be so much wasted as they are now. But even making the utmost allowance for the former

or pilasters, on the other hand, were frequently both carved and painted by Greek architects of the best period, the fifth century B.C.

¹ Unfortunately the casts in the S. Kensington Museum are not put in a line near the eye, as they should be for purposes of study, but in two lengths, as if the column were broken in half, and thus they neither give the general effect of the whole nor allow the sculptures to be examined minutely.
surroundings, and the loss of its gold and colour, it must be admitted that these spiral bas-reliefs can never have been very strong in decorative effect, and involved an amount of labour quite out of proportion to their artistic result.

This colossal shaft, encrusted with reliefs all gleaming with gold, ultramarine, and other brilliant pigments, must have produced an effect of somewhat barbaric splendour very far removed from the purer Greek styles of architectural decoration, and resembling much more closely the methods used in the temples of ancient Egypt two thousand years or more before the time of Trajan.

The notion of placing statues on the summit of lofty columns appears to have been an invention of the Romans of the Empire. The Greeks, even at the best artistic periods, commonly used columnar pedestals both for votive statues of deities and for honorary portraits, but the column was not made of such size that the statue on it was practically out of sight.

A comparison of the column of Trajan with that of Marcus Aurelius is an instructive lesson on the effect that the size of the parts has on the apparent scale of the whole in architectural works. Both columns are exactly the same height (omitting the pedestals in both cases), but Trajan's is divided into twenty-three tiers of figures, while the column of M. Aurelius has larger figures in higher relief, and only twenty tiers of them. The result is that the column of Trajan looks very considerably the taller of the two.¹

¹ As a rule, the more horizontal subdivisions a structure has, the higher it will appear; hence the many false joints cut in stone and marble facings by the Romans; see vol. ii. p. 12. Hence also the difficulty of realizing the true height of the nave of S. Peter's, which is built in one gigantic order.

The great defect of classical as compared with medieval architecture is the fact that size, in the latter, is gained by multiplying parts, while in the classical styles it is only done by magnifying a fixed number of parts.
Outer Enclosure of Trajan’s Forum. The most interesting part of Trajan’s Forum, which is now visible, is about half of the great curved line of rooms three stories high which are set against the scarped side of the Quirinal Hill. A road, paved with the usual polygonal blocks of lava, follows the curve of this line of shops, which open on to it. Next to the bit of paving shown in fig. 30, vol. i. p. 251, this is the best preserved piece of Roman road still visible in the city; unlike the other lava roads existing in Rome, it does not appear to have been relaid during the period of decadence, but has the original paving of Trajan’s time.\(^1\)

On to this curved road faces a row of small chambers, shops or offices, vaulted with concrete, covered inside with painted stucco, and paved with simple mosaic patterns in white and grey tesserae; these open on to the street, with tall arches of concrete faced with brick. The lower part of these arches is filled up by a massive door-frame (or architrave) of great blocks of travertine, with a simple moulding round it, covered with stucco. The door-sill of each is a massive block of travertine, grooved to hold the wooden shop-front, and having a pivot-hole and a depression for the door to swing in; an arrangement like that in the Palace of Caligula and many other places;\(^2\) see fig. 26, in vol. i. p. 193. The groove to receive the wood framing extends all the way up the massive travertine jambs of the opening, and the lintel is rebated for the same purpose.

Thus the design of a small Greek temple may be exactly the same as that of a large one. In the large Gothic Church, on the other hand, extra stories, clerestory and triforium, are added over the ground-floor arcade, and larger windows are made by increasing the number of mullions rather than by adding to the width of the separate lights.

\(^1\) The access to these interesting remains is from the Campo Carlo, through a door which is usually locked, but the key is kept close by.

\(^2\) These interesting buildings used formerly to be called, quite without reason, “The Baths of Aemilius Paulus.”
These little chambers extend in a uniform row all round the curve, except where the stairs lead to the upper stories higher up the face of the hill. At the foot of the stairs there were wooden doors, fastened with a long hinged bar, with a bolt at the end of it. The holes for these and the marks made by its use can be traced in the jambs of the doorway.

The first upper floor, about level with the modern ground line, has a series of open arches, and engaged columns supporting an entablature. The capitals and bases of these half-columns, and the moulded string-course below them, are of travertine covered with hard stucco made of pounded marble; the rest is of concrete faced with brick. All of the brickwork is very neat and close jointed, even where it was covered with stucco, but at some places, such as the shafts of the engaged columns, it is of most remarkable beauty and neatness of jointing, numbering more than eight bricks to the foot.\(^1\)

The upper space, at the level of this open arcade, is occupied by a passage over the ground-floor shops, and from it open a series of other chambers, with stairs at intervals leading to the second upper story, now mostly destroyed.

The *Forum of Trajan* and its surrounding buildings formed, during the Middle Ages, an almost inexhaustible quarry for marbles, used in countless churches and palaces of Rome; and, worse still, supplied materials for burning into lime for many centuries, during the most architecturally degraded period of Roman history.\(^2\)

*Sculpture from Trajan's Forum.* In addition to the reliefs

---

\(^1\) The beauty of this brick facing is perhaps only surpassed by one existing example in Rome—namely, an archway between two half Corinthian columns, which is built into the line of the Aurelian wall not far from the *Porta Latina*; see vol. ii. p. 380.

\(^2\) During the ninth to the twelfth centuries, and even later, architectural skill in Rome had sunk to so low a pitch that the beautiful marbles stolen from ancient buildings were not even made use of in other buildings, but were burnt into lime or broken up to make concrete.
on the Arch of Constantine, very few fragments of sculpture have escaped destruction; among them are large half-length reliefs of Trajan and some senators, now in the Lateran Museum; two colossal horses' heads in a court near the Church of the SS. Apostoli, and in the porch of the same church a fine relief of an eagle with outspread wings, seated within a wreath bound by graceful flowing ribbons.

The reliefs on Constantine's Arch are, from their beauty and fine state of preservation, among the finest existing specimens of Graeco-Roman decorative sculpture, and though as late as the beginning of the second century A.D., show but little signs of that rapid decadence which was so shortly to begin. The positions of the reliefs are shown in fig. 95 in vol. ii. p. 307. Many of these beautiful reliefs, especially the graceful sacrificial scenes arranged as circular medallions, show a strong revival of Hellenic skill and artistic taste, but little marred by any Roman influence. In this respect they are very superior to the reliefs on the great column, which are of a more purely Roman style, both in subject and treatment.

On each front of the arch there are four circular medallions, and, on the attic, four rectangular reliefs, each complete in itself. There are also parts of a long frieze, representing an attack of the Roman cavalry, led by Trajan against the Dacians and their king Decebalus; the figure of the emperor appears more than once—in the thick of the fight, and again crowned by Victory, with the Dacian chiefs making their submission to him. This fine frieze, with life-sized figures, taken probably from some long wall in the Forum or Temple of Trajan, has been broken up into short lengths and built into various parts of Constantine's Arch, regardless of the fact that it was carefully designed to form one continuous composition, and of course is much injured by being separated for use in four

---

1 This is shown by Bellori in his *Vetere Arcus Auguderum*, 1690, pl. 42-45, a work of the seventeenth century, which is very valuable for its record of much that no longer exists; see also *Mon. Ital.* v. Tav. 30.
different panels. Two pieces are let into the attic, at the ends of the arch, and two are inserted in the jambs of the large central archway.

The subjects of the other reliefs on the Arch of Constantine are as follows:

**North Side (towards the Colosseum) Rectangular reliefs on the Attic, beginning from the spectator's left.**

No. 1. The Emperor Trajan is received at the gates of the city by a stately helmeted female figure, representing the goddess Roma. In the background is an arched gateway, hung with flower garlands, and by it a tetra-style prostyle temple. These are probably meant to represent the Porta Capena in the Servian wall and the Temple of Mars, which was just outside it, on the Via Appia.

No. 2 appears to be a scene outside the same gateway; a half-nude figure of a youth holding a wheel reclines on the ground, by him the Emperor is standing looking down; behind is a man in civilian's dress, and on the right are armed men, one holding a horse.

This interesting relief records the construction or restoration of a paved road (*via sinuata* or *silice strata*) through the Pontine marshes, in 110 A.D. The reclining figure with the wheel is the usual Roman way of symbolising a road; the same design occurs on reverses of several coins of Trajan with the legend *Via Appia*. The civilian behind the emperor is probably the engineer of the road, perhaps the Greek Apollo-dorus; see Dion Cass. *Xiph.* lxviii. 15.

No. 3. Trajan surrounded by attendants is seated on a throne, raised on a lofty *suggestum* or platform; below are various standing figures, whom the emperor is addressing; among them is a female with a child.¹

¹ Some such relief as this, or perhaps the common subject of Trajan raising a kneeling Province, was probably the origin of the beautiful story of Trajan and the widow quoted by Dante, *Purg.* x., 73 to 93.
This apparently represents the same scene as one of those on the reliefs in the Forum, the institution in 99 A.D. of the charity for children of the poor; see vol. i. p. 346. In the background is a building, the façade of which is decorated with a row of engaged columns, between which garlands are hung.

No. 4. The Emperor enthroned on a *suggalum* receives the homage of a barbarian prince, probably Parthamaspatis, King of Armenia, who was conquered in 115 A.D. Behind are a number of Roman soldiers bearing tall standards and eagles.

*Medallions on the North Side.*

No. 1. The Emperor and two attendants on horseback are hunting a boar.

No. 2. A very beautiful and gracefully composed relief, skilfully designed so as to fill its circular space. Trajan stands pouring a libation or grains of incense on to an altar in front of a statue of Apollo holding a tripod set on a tall pedestal; behind it a laurel tree with graceful spreading branches forms a background to the upper part of the relief. One attendant stands behind the Emperor, another on the right holds his horse.

No. 3. The Emperor and a number of attendants stand by the body of a lion, killed in the chase.

No. 4. Trajan in sacrificial dress, with veiled head, pours a libation on to an altar; two attendants stand by him. In the sky among clouds is a figure of Jupiter, and by him a small statue of Minerva; the precise meaning of this scene is not clear.
South Side; rectangular reliefs in the Attic.

No. 1. (from the spectator’s left). Trajan enthroned on a platform, in front of an arched building, receives a barbarian king.

No. 2. Trajan, enthroned in the same way, receives a number of Dacian captives with their king Decebalus, who are brought before him by Roman soldiers, some of whom carry tall standards.

No. 3. An allocutio or address to the army by Trajan, standing on a platform, a common subject on the large bronze coins of the Empire.

No. 4. Trajan, surrounded by soldiers and standard-bearers, pours a libation on to a tripod altar. The three victims for the Suoretavilia, a boar, a ram, and a bull, are being led forward to sacrifice.

Medallions on the South Side.

No. 1. Trajan, about to start on the chase, stands by his horse among attendants, one of whom, a beautiful youth leading a horse, has much resemblance in face to Antinous, the deified favourite of the succeeding emperor, Hadrian.

No. 2. The Emperor offers sacrifice at an altar under a tree, in front of a statue of Hercules.

No. 3. Trajan and attendants on horseback pursue a brown bear.

No. 4. The Emperor pours a libation on to an altar under a tree, in front of a statue of Diana, as a thank-offering for success in the chase.
In addition to the *Forum Romanum*, the five Imperial Other Fora, *Fora* and the *Forum Olitorium* and *Boarium* (oil and cattle markets), there were also smaller *Fora* or markets, namely, that for pigs, *Forum Suarium*; for bread, *Forum Pistorum*; and for fish, *Forum Piscatorium*; Livy, xxvi. 26, and xl. 51. These are all mentioned in the Regionary Catalogues, together with some others, which were not really *Fora*, though popularly called so.

1 For further details on the *Forum of Trajan* see Fea, *Foro Trajano*, 1832; Richter, *Ristauro del Foro Trajano*, 1839. The reliefs on the column have frequently been engraved on copper in this and previous centuries; sets of these are sold at the *Caleografía Camerale (Regia)*; see Fabretti, *Columnae Trajanae*, 1683; Bartolini, *Col. Trajan*, 1704; Pistolesi, *Col. Traj.*, 1840; De Rossi, *Col. Traj. designata*; and Froehner, *La Colonne Trajane*, Paris, 1865; this last work has an excellent description of the reliefs and their subjects. For an account of the reliefs from Trajan's *Forum* moved to the *Arch of Constantine* see Petersen in *Bull. Inst. Cor. Rom.* vol. 1887-88.
CHAPTER II

THE CIRCI OF ROME.

It was not till the closing years of the Republic that permanent buildings of stone, specially designed for scenic shows, races, or gladiatorial fights, were constructed in Rome. During the greater part of the Republican period the open spaces of the Fora, especially those of the Forum Romanum and Forum Boarium, were frequently used for gladiatorial fights and theatrical representations; temporary wooden screens and seats being erected for the occasion, and removed when the series of public amusements was over; see vol. i. p. 234.¹

CIRCUS MAXIMUS.

One part, however, of the city, the Vallis Marcia,² a long valley between the Palatine and Aventine Hills, appears from a very early period to have been reserved as a place for races and other public spectacles, for which its natural form rendered it specially suitable. This earliest of the Circi of Rome was called, from its great size, the Circus Maximus. It was first

¹ In a similar way, till the end of the last century, bull-fights in Spain, even in large cities like Madrid and Seville, were held in the public squares or plazas, round which wooden fences and seats were temporarily erected.

² Its name was derived from an altar to the Deus Maricia (Venus), so called from the myrtle plants which grew there, according to Varro, Lin. Lat. v. 154; and Pliny, Hist. Nat. xv. 121; other derivations are given by other writers.
drained and fitted with rows of wooden seats by Tarquinius Priscus (Livy, i. 35 and 56, and Dionys. iii. 68), and these seats were frequently burnt and restored in the same material; restorations in 327 B.C. and 174 B.C. are mentioned by Livy, viii. 20, and xli. 27.

The *carceres* or starting chambers of the circus were first built in 330 B.C.; see Livy, viii. 20. At an early period the entrances to the circus were decorated with triumphal arches surmounted by statues of gilt bronze; one erected by L. Stertinius in 196 B.C. is mentioned by Livy, xxxiii. 27.

Arches of this kind, bearing quadrigae and other statues, formed part of the design of the circus in its most magnificent days, as is indicated on the coin shown below, p. 45.

Prehistoric altars. The valley of the *Circus Maximus* contained two altars of the most remote antiquity; one was the *Ara Maxima*, traditionally founded by Hercules or Evander. The other was the *Altar of Consus*, an Equestrian Neptune, in whose honour Romulus was fabled to have held here the Consualia or games at which the celebrated carrying off of the Sabine women took place; see Varro, *Lia. Lat.* vi. 20. Consus appears originally to have been a god of the crops, but in later times he was identified with the Greek Poseidon Hippios; his festival was held twice a year; after the sowing was over, on the 15th of December, and when the crops were gathered, on the 21st of August.

The *Altar of Consus*, after the building of a permanent stone circus, stood on or in the *spina*; it was usually covered, but during the sports was exposed to the view of the people; see Plut. *Rom.* 14; and Tertull. *de Spect.* v. 8. Its position appears to have been at the opposite end of the *spina* from the *carceres* or starting-point; Tertullian speaks of it as being *ad primas metas*; and Tacitus mentions it as the first point after the *Ara Maxima* and the *Forum Boarium* in the line of the Pomœrium round *Roma Quadrata*.

The *Ara Maxima*, a still earlier altar, must have stood out-
side the circus, behind the carceres, near the apse end of the Church of S. Maria in Cosmedin; see vol. i. p. 109.

Development of the Circus. Additions and improvements made in the circus in 174 B.C. are mentioned by Livy, xli. 27, but the passage is unfortunately in a very fragmentary state. Nothing but wooden seats were used throughout the Republican period, and it was not till the reign of Julius Caesar that any part of the ranges of seats were built of stone. Even then the upper tiers were again constructed of wood; see Suet. J. Caesar, 39. According to Livy (xxxiv. 54), till the year of the City 558 (196 B.C.), there was no distinction of classes in the occupation of the seats—plebeians and senators sat side by side.

Augustus fully developed the separation of classes in the Circus Maximus, and other places of public amusement; reserving the first tier for the senate, and special seats for soldiers, married plebeians, boys and their tutors, women, and other classes; Suet. Aug. 43 to 45.

Till this separation, the fact that men and women sat together in the circus had been an exceptional thing in Roman places of amusement. Ovid often alludes to this; see Ars Am. i. 96, 163, etc.

The Circus Maximus, as described by Dionysius (iii. 68), is the place as it was after its rebuilding by Julius Caesar. Under the later emperors, especially Vespasian and Trajan, it was adorned with much greater magnificence.

The plan of this and other Roman circi was an adaptation of the Greek stadium, such as the one at Messene and that at Olympia, remains of which still exist. The Roman circus was, however, used for chariot and other horse races, while the Greek stadium was mainly intended for foot races and various kinds of athletic sports.  

1 A fragment of an inscribed seat found in the Colosseum has on it . . . vero . . . probably part of "paedagogi prodorum."  
2 A place called a Hippodrome was set apart by the Greeks for horse races in many of the principal Hellenic cities.
Fig. 55 shows the plan of the existing Circus of Maxentius; see below, p. 56. It will serve to illustrate the Circus Maximus, which was the prototype, in imitation of which all later Roman circi were constructed.

To continue the architectural history of the Circus Maximus; it was much injured (soon after its reconstruction by Julius Caesar) by a fire, which in 31 B.C. completely destroyed all the upper wooden seats; Dion Cass. I. 10. It was restored by Augustus, who built himself a fine marble pulvinar, and set the great obelisk, now in the Piazza del Popolo, on the centre of the spina; Suet. Aug. 43-45. Immense sums were spent by Augustus on shows and the slaughter of beasts in the Circus Maximus; no less than 3500 beasts were butchered there
in the reign of Augustus alone, as is recorded in the Ancyrean inscription.

In the eighth book of the *Historia Naturalis* Pliny gives a great deal of curious information about the enormous number and the great variety of wild beasts of all kinds, from elephants to porcupines, that were at different times butchered in the circus and elsewhere in Rome. On some occasions from 200 to 300 lions were slaughtered in one day, and a proportionate number of smaller and less costly animals.

In 36 A.D. another fire destroyed part of the upper tiers of seats, those on the side of the Aventine. The circus was then restored and enlarged by Claudius, who rebuilt the *caveae*, which were then of tufa, in marble, and gilded the *metres*; Tac. *Ann.* vi. 45; Suet. *Claud.* 21.

After this restoration the circus held 250,000 spectators; Pliny, *Hist. Nat.* xxxvi. 102. In the time of Dionysius (iii. 68), after the rebuilding by Julius Caesar, it had only held 150,000, showing that great additions must have been made to the upper tiers of seats and galleries.

In the reign of Domitian most of the remaining wooden seats were, after another fire, replaced by stone and marble, so that henceforth the building was less liable to suffer from fire. Additional splendour was added to the circus by Trajan, and in his time it must have been a structure of extraordinary size and magnificence, wholly covered inside and out with white marble, relieved with gold and painting, brilliant mosaics, columns of coloured Oriental marbles, and statues of white marble and gilt bronze; see Pliny, *Persip.* 51.

It must then, from its crowd of works of art, its immense size, and its splendour of material, have been on the whole the most magnificent building in the world.

Further size and splendour were added to the circus by Constantine; and Constantius his son set on the *spina* another enormous obelisk, brought from Heliopolis; see *Ann. Vict.*
Caesar, 40; and Amm. Marc. xvii. 4. This obelisk is now by the Lateran Basilica.

The circus, when complete, cannot have been less than 2000 feet long by more than 650 feet wide. Even in the time of Julius Caesar it was about 1860 feet in length and 620 in width; see Pliny, Hist. Nat. xxxvi. 24; and cf. Juv. xi. 192 to 201.

In its final state, in the fourth century, according to the Notitia, Regio xi, the Circus Maximus could hold the almost incredible number of 485,000 people.

DESCRIPTION OF THE CIRCUS MAXIMUS.1

The outside of the circus, during its most magnificent period in the second century A.D., had three tiers of arches and engaged columns very like those of the Colosseum, except that they were of white marble instead of stone.

Large brass coins of Trajan and of Caracalla represent with much detail a view of the circus as seen from the Palatine Hill.

The exterior is shown with its row of arches, and at each end a lofty structure something like a triumphal arch crowned with quadrigen and other statues.

The spina is minutely represented with its group of metæ at each end, the obelisk of Augustus in the centre, and midway the small mediceum bearing the dolphins and the eggs; see fig. 56.

A bronze medallion of Gordianus III. also shows the

---

1 One of the fragments of the Marble Plan shows part of the Circus Maximus, the semicircular end towards the south-east; see Jordan, Forma Urbis Romae, Pl. viii.
interior of the circus with groups of gladiators fighting; see Gruaeeer, Roman Medallions, xli. 4.¹

In the fifteenth century some of the external arches still existed; they are shown in the Mantuan view of Rome published by De Rossi in his Pianta di Roma, 1879.

The cavea of the Circus with its tiers of seats was divided into bands (maeniana or maeniani) by the horizontal passages (ambulacra or praecinctiones). There were probably three of these divisions or maeniana in the Circus Maximus, without counting the gallery at the top. The lowest of these divisions was called Maenianus primus, and the highest was called summus. Each of these bands of seats was also divided by flights of steps into cavei like a Greek theatre, which were numbered; each line of seats (gradus) in each cavea was also numbered, and as there were no divisions except incised lines to separate one place from the next, each gradus was measured, and allotment was made to various classes of a fixed number of feet measured from one end.

A passage in Ovid (Am. III. ii. 19) alludes to the system of marking lines on the gradus to distinguish the space allowed for each person—“cogit nos ligna jungi.”

The spectators' seats (cavea) sloped upwards, resting on raking vaults of concrete like those of the Colosseum; and tiers of columns at different levels supported ceilings over the people's heads.²

In addition to the Cavea proper and its podium, various State boxes were constructed of marble, with columns and arches to support the entablature and roof of each.

One series of these cubicula or suggeisti was over the

¹ Another medallion of Gordianus III. representing chariot races in the circus is illustrated by Froehner, Méd. Rom., p. 189.

² In several Greek theatres the seats have been found to be marked with lines at intervals of about 20 inches.

² The fall of some of these pillars and roofing in the reign of Antoninus Pius killed over 1000 people; Chron. Ptol. Lanc. vol. ii. col. 244.
carreres (see fig. 55, AA), and appears to have been occupied by the giver of the games (editor spectaculorum) and his friends.

Another elevated box (the tribunal judicium, D) was placed at one side for the umpires who decided which chariot first crossed the line chalked on the arena in front of them: the phrase "ad cremam praesidebant" occurs in the celebrated inscription of 80 A.D., which was found among the ruins of the College of the Fratres Areales, a little way outside the Porta Portuensis, Rome; see Henzen, Act. Fr. Arr. p. 37.

A separate pulvinar or state box of great size and magnificence was erected for the Imperial family on the Palatine side of the Circus Maximus; Suet. Claud. 4.

An interesting relief of the third century A.D., found at Foligno, represents the presiding Magistrate or Editor of the games, seated in his box over the carreres; he holds in his hand a bag of money, which he is about to give to the winning charioteer, who has driven up and is saluting him from below; see Ann. Inst. 1863, Tav. D; and 1870, Tav. LM; and cf. ib. for 1839, Tav. iv.

A similar scene is represented on several of the ivory consular diptychs of the fourth and fifth centuries; see Gori, Thesaur. vet. dipl. Florence, 1759.

The chief of these is the celebrated leaf of a fourth century diptych in the Museo Quiriniano at Brescia. On this the presiding Consul sits in his pulvinar; in the arena below four quadrigae are racing round the spina, which, like that on the Lyons mosaic, is a long tank of water. The way in which the reins were looped round the body of the driver (auriga) is clearly shown; each holds in his hand what seems to be a combination of whip and goad; they all wear fasciae round their legs and bodies. The horses’ legs are also closely bound round with thongs.

During recent excavations a short distance outside the Porta Portese, seven marble portrait busts of victorious aurigae were found. Leather thongs are represented wound
round the neck and shoulders of each. Each bust is set on a tall cippus or pedestal of coloured marble; they are well executed works of art, full of spirit and eiconic vigour; they probably date from the time of Hadrian. These busts are now placed in the cloister of the Museo delle Terme.

A glass bowl of the fourth century found at Trèves has a very minute representation of a circus engraved in relief; the spina is shown with the usual ornaments, and each of the metae stands on a lofty pedestal with a door opening into it; see Froehner, *La vererie antique*, Paris, 1879, p. 96.

On the ivories the consul or other president of the games is usually represented in the pulvinar, magnificently robed in the toga picta and rich pallium. In some cases he holds in his hand the mappa or napkin with which he gave the signal for the start. Under the later Empire proconsuls and governors of provinces usually celebrated the commencement of their office by providing circus games, and hence the frequent occurrence of these subjects on consular diptychs.

The starting end of the circus by the Forum Boarium was formed by a row of small vaulted chambers (carceres), each large enough to hold one chariot and its horses. At the time of its greatest splendour there appear to have been twelve carceres in the Circus Maximus, but a smaller number was more usual. Each carcer had two doors, one behind by which the chariot entered, and one in front opening into the arena.

This latter doorway was closed by folding doors with open grilles in the panels (cancelli); these were thrown open at the start by slaves, two to each doorway, who flung them open simultaneously at the given signal.

Each carcer received no light except what came in through the open grille of the doors; hence they are called crypta (Sidon. *Carne. xxiii. 319*) and claustra (Stat. *Theb. vi. 399*); their narrow openings are called fauces; Cassiod. *Var. Ep. iii. 51*.

In early times the race apparently began from the carceres, but afterwards the actual start took place from a line marked
on the *arena* in white chalk or lime (*alba linea*), and hence 
sometimes called *creta* (Senec. *Ep.* 108) or *calz*; Cic. *de 
Am.* 27.

A similar white line for the finish was drawn across the 
*arena* opposite the judges' box (*tribunal judicium*), at a point 
unequally distant from the two *metae*. Thus Cicero (*Senec.* 
23) uses the metaphor "quasi decurso spatio ad carceres a 
calce revocari;" and Horace (*Ep.* I. xvi. 79) speaks of "mors 
ultima linea rerum" see also Cassiod. *Var. Ep.* iii. 51. The 
starting-line was drawn opposite the *metae* which were nearest 
to the *carceres*. It is difficult to understand how the white 
line for the finish could remain unobliterated by the rush and 
trampling of the horses and chariots in their seven laps. 
There is, however, no reason to think that a chalked rope was 
used, as has been suggested.

Lofty state boxes above the *carceres* with their colon-

nades and arches towered to an imposing height, and the 
whole structure was known as the *oppidum*, from its re-

semblance to the gates and towers of a city; Varro, *Lin. 
Lat.* v. 153.

It will be seen from the typical plan given above that the 
carceres (AA) are slightly curved on plan, and are constructed 
on a segmental line, the centre of which is struck from a point 
midway between the line of the *spina* and the side of the 
cavea; N on fig. 55.

This plan was adopted in order that the chariots in all the 
carceres might have as nearly as possible a position of equal 
advantage at the start. The special *carcer* occupied by each 
chariot was fixed on by drawing lots.

The *spina* was a long low wall, or rather platform of marble 
(MM), set in the middle of the *arena* to separate the going 
and returning course of the racers.

The line of the *spina* is not parallel to that of the *cavea*, 
but is slightly inclined so as to leave a wider space at K than 
that near the semicircular end. The object of this seems to
have been that the chariots might have more space where they were crowded together at the start than at other points, where some would have begun to tail off.

Various mosaics and reliefs show the *spina* covered with a series of statues and ornamental structures, such as obelisks, small *aediculae* or shrines, columns surmounted by statues, altars, trophies, and fountains. In addition to these, two sets of seven marble eggs (*ovaria*) at each end of the *spina*—each set mounted on a small *aedicula*, to which access was given by a ladder; Livy, xli. 27. One of these eggs was removed after each lap (*curriculum*) was run (Varro, *Re Rust. I.* ii. 11, and Cassiod. *Var. Ep.* iii. 51), there being usually seven laps to each race (*missus*). According to Livy (xli. 27) these *ovaria* were first set on the *spina* by the Censors in 174 B.C.; but Dion Cassius (xliii. 43) attributes their introduction to Agrippa in the reign of Augustus. He is, however, probably confusing them with another series of ornaments—seven dolphins, which were set on a similar *aedicula* and served a similar purpose. These dolphins must have been too heavy to take down, and were probably merely moved in some way to indicate the number of laps.

In some ancient representations they form fountains—water spouting from the mouth of each fish.¹ The eggs had some sacred allusion to the Dioscuri, and the dolphins to Neptune (or Consus)—deities who were the patrons of horses and racing; Tert. *de Spect.* 8.

An interesting mosaic found at Lyons, which no doubt represents the local circus, has what appears to have been a common form of *spina*, consisting of a long tank of water instead of the marble podium. Statues and other ornaments stand on pedestals in this water.

Two sarcophagi in the *Sala della Bigna* in the Vatican have reliefs which represent a chariot race of Cupids in the Circus Maximus, and show clearly the *spina* and its ornaments, among

¹ This shows that they could not have been wholly removed.
which are statues of Apollo, Helios, Cybele, Victory, a quadriga and an obelisk, as well as the eggs and dolphins.

Each of the *metae* consisted of three tall conical objects (Ovid, *Met.* x. 106) on a semicircular plinth, placed at a short distance from each end of the *spina*. From the time of Claudius they were of gilt bronze decorated with bands in relief, as is shown in a relief in the British Museum. These formed the turning-points for the chariots. The *prima metae* are not, as might be expected, the ones nearest to the start, but those near the semicircular end of the circus, round which the chariots made their first turn.

The primitive *Altar of Consus* (Tert. de Spec. 8) was in the *spina*; it usually was covered up, and was only exposed to view during the progress of the games; see above, p. 41.

The *arena* or sandy floor of the circus, like that of the Colosseum, was on some occasions strewed with glittering particles of mica, red lead, or perfumes by the ostentations extravagance of some of the emperors; see Suet. *Cal.* 18, and Pliny, *Hist. Nat.* xxxiii. 27; xxxvi. 45. That part of the *arena* which formed the course for the chariots was known as the *spatium*; Juv. vi. 582.

Before the construction of amphitheatres in Rome the Circus Maximus was used for gladiatorial fights with wild beasts and other scenes of butchery.

In order to keep the beasts from reaching the spectators on the *caeca* Julius Caesar constructed a canal (*Euripus*) 10

---

1 See also the above-mentioned medallion of Gordianus III.; Grueber, *Roman Medals.* 1874, xii. 4.

2 Any tall conical object was called a *meta*.

3 The space near the *carceres* was known as the *Circus primus*, while that on each side of the *spina* was the *Circus interior*; Varro, *Lan. Lat.* v. 154.

4 The Ancyran inscription records that Augustus had no less than 8500 wild beasts butchered in the circus, forum, and amphitheatre in twenty-six exhibitions.
feet wide and 10 deep all round the arena; this was supplied by a stream which still runs through the site of the circus, near the modern Via de' Cerchi; Suet. J. Caes. 39.

After the erection of the Amphitheatre of Statilius Taurus in the reign of Augustus, the Circus Maximus appears to have been less often used for fights with beasts, and the curipus was therefore filled up by Nero; Pliny, Hist. Nat. viii. 20. It was, however, again introduced in later times; Lamprid. Helig. 23.

The principal doorway was at B (see plan), in the middle of the carceres; the procession before the games (pompa) entered through this door, which was therefore called the Porta Pompea. At the opposite end of the circus (F) was the Porta Triumphalis, through which the winning chariots left the arena.

This door in the curved end of the Circus Maximus, together with the "prima velae" and part of the spina, is shown on fragments of the Marble Plan of Rome; Jordan, Fac. Urb. Rom. pl. viii.

The position of the Porta Libitinensis, through which the bodies of the dead were carried out, is uncertain. It must have been one of the three side doors which exist in the Circus of Maxentius at HH and E; see Lamprid. Comm. 16.

In 1887, in the devastated Ludovisi Gardens on an outlying part of the Pincian Hill, a Columbarium was found (and quickly destroyed) in which were buried a number of circus drivers and other members of the Green Faction; see Bull. Com. Arch. 1887, p. 263. The following is an example of the sepulchral inscriptions—

A • ANTONIVS • ALBANVS
CVSOR • ET • SVPRA
CVSORES
FACTIONIS • PRASINAE
TREBONIA • TERTVLLA
POSVIT
These inscriptions record a number of other classes who composed the *familia quadrigaria*.

In addition to the *aurigae, agitatores*, and *cursores*, we find the names *conductor*, *succedunator*, *morator sellarius*, *spertor*, *vater*, *tutor*, *medicus*, *villicus*, and *viator*.

Several *stabuli* of the Green Faction occupied this quarter of Rome.

An interesting mosaic found in a Roman villa near Bracciano represents *auriga* of the four principal factions. Each *auriga* is represented standing by a horse; he wears a tunic of the colour of his faction. The four colours are green, blue, russet-red, and white, *prusina, veneta, russata*, and *albata*; see Juv. xi. 196, and Tertull. de Spect. 9. This mosaic appears to date from the third century A.D. It is preserved in the cloister of the Museo delle Terme.

The chief training-stables for horses which ran in the circus were an extensive group of buildings in the *Campus Martius, Regio ix.*, near the *Circus Flamininus*; see Jordan, Topog. der Stadt Rom, ii. 554. They appear to have been the centre of intrigue and villainy of all kinds; the bribing of jockeys and the "hocuspocus" of horses and their drivers were familiar to the ancient Romans. Dion Cassius (lix. 5 and 14) describes how Caligula poisoned the cleverest chariot-drivers of his rivals. Immense sums of money were lost in betting on the races; see Juv. xi. 200, and Mart. Ep. XI. i. 15.

Seven laps or circuits of the spina (*curricula*) appear to have been the usual number in each race (*missus*); see Varro quoted by Aus. Gell. iii. 10. On one occasion Domitian reduced the number to five laps so as to get a hundred races run in one day. In the time of Julius Caesar ten or twelve races was a usual number for one day, but Caligula increased the number to twenty, or even, occasionally, to twenty-four. In later times the races were so numerous that they lasted from sunrise to sunset, with intervals of acrobatic performances between groups of races. To amuse the populace, in addition
to the races, a great variety of entertainments were given in
the circus, fights and slaughter of animals, and general
butchery like that which went on in the amphitheatres.¹

The Ludi Circenses continued to be held in the Circus
Maximus as late as the sixth century, as is described in the
letters of Cassiodorus, the able minister of the Gothic kings
Odoacer and Theodoric. Soon after then it fell into disuse,
and for many centuries the ruined circus supplied enormous
stores of marble to feed the limekilns of the degraded
city.

In the sixteenth century some remains still existed of its
external arcades, and a great part of the raking vaults of
concrete, which had supported the marble seats along the
side by the Palatine.² Now even these have disappeared;
probably no great building of stone and marble has ever
vanished from the face of the earth as completely as the
Circus Maximus has done. A great part of its site is now
made hideous with large gasworks, pouring forth volumes of
black smoke. Some considerable remains of the spina were
destroyed when these gasworks were built.

Existing Remains of the Circus. Partly under the Church
of S. Anastasia (see No. 58 on fig. 22) excavations have ex-
posed a series of very interesting buildings of many different
dates,² which appear to have skirted the edge of the Circus
Maximus on the side towards the Palatine, and perhaps formed
part of the circus itself. These are only partially exposed to

¹ The better class of Romans, even under the Empire, seem to have
despised the brutal sports of the circus; see Pliny, Ep. ix. 6.
² See Du Perac’s Vestigi. The great sixteenth-century oil-painting
in the Museum of Mantua shows the end by the careness very complete
in three orders; the lower two having open arches, just like those of the
Colosseum.
² The remains under S. Anastasia are described in Bull. Inst. 1846-
47. They can be visited under the guidance of the Sacristan of the
Church; see plan in vol. i. p. 196, fig. 22.
sight, and the more ancient parts are so built over by later walls that it is impossible thoroughly to understand the existing remains.

Farther away from the circus, towards the Palatine, are a number of small square chambers, built of massive blocks of tufa, 3 to 4 feet long, and in courses (roughly) 2 Roman feet thick; the vaults of these rooms are of concrete made of tufa and pumice stone. Their floors are nearly 7 feet below those of the adjoining rooms of Imperial date, and the lava-paved road which skirts the circus; this road is about 22 feet below the present ground level. These very ancient tufa chambers seem to be built against an enormously thick tufa wall at the foot of the Palatine slopes; they probably once extended much higher up the hill.

Partly over these tufa chambers, and extending along and over the paved road, which runs along the side of the circus, is a large series of lofty concrete and brick chambers, passages, and staircases. A row of rooms, all of the same shape and size, faces on to the paved road, opening on to it with large double archways, both flat and semicircular. This series of archways appears to be a restoration under the Empire of an earlier Republican arcade, built of tufa, parts of which still exist, with capitals of travertine. The present arches, evidently restorations, are of brick-faced concrete of the first century A.D.

Between two of these rooms a flight of travertine stairs leads up from the road to upper rooms in the direction of the Palatine. All these concrete brick-faced walls are of great strength and solidity, some as much as 7 feet thick; the facing is very neat, with seven bricks to the foot.

The long series of buildings, of which part is now visible, appears to have extended along the whole side of the circus, and it is probable that they formed part of the substructures under the upper rows of seats; without, however, more complete excavations it is impossible to be sure on this point.
All the above-mentioned remains are to be seen by descending from the Church of S. Anastasia.

Some remains of massive travertine walls outside the apse of S. Maria in Cosmedin have been thought to be part of the carceres end of the circus, but they are too far towards the river for that.

OTHER ROMAN CIRCI.

The Circus of Maxentius on the Via Appia, two miles from Rome, is sufficiently well preserved to show its original form, though it has been completely stripped of its marble seats and decorations. It is in many ways a building of very great interest, and on the whole is the most perfect example of a Roman circus which now exists. Its plan is shown in fig. 55, vol. ii. p. 43.

Till 1825 it was thought to be a circus built by Caracalla; but three inscriptions which were then found showed that it was dedicated by Maxentius in 311 A.D. in honour of his infant son Romulus, who died in 309 A.D. One of the inscriptions (with breaks supplied) runs thus—DIVO ROMVLO N•M • V • COS • ORD • H • FILIO • D • N • MAXENTII • INVICT • VRIB ET • FERF • AVG • NIPOTI • T • DIVI • MAXIMIANI • SENIORIS • AC RIS • AVG VSTI.

The greater part of the external wall is still standing; but the raking vaults on which the marble seats rested have mostly fallen in. The walls are of concrete, faced with "opus mixtum," of alternate courses of brick and small blocks of tufa. A number of large amphorae are embedded in the concrete of the vaulting and upper part of the walls; they were intended to diminish the weight of the vaults.¹ At the

¹ A notable instance of this method of constructing vaults exists at the Tomb of S. Helena, three miles outside the Porta Labicana; in its dome rings of pots (pignatae) are embedded in order to lighten the thrust on the haunches; hence it is popularly called the Torre Pignatara. The dome
starting end, the lofty wall above the oppidum and carceres is very perfect, and the core of the spina exists along its whole length, with the foundations of the metas at each end. The obelisk which is now in the Piazza Navona once stood here in the centre of the spina.¹

The building of this circus by Maxentius "ad Catacumbas" is recorded in an early chronicle published by Runcall, Chron., vol. ii. col. 248. This name was given to the Circus on account of a large number of very extensive Catacombs which exist near it, namely, those of S. Sebastian, S. Calixtus and others.

Near the carceres of the Circus of Maxentius, on the side towards Rome, there are extensive remains of a large and lofty porticus, once surrounded with a row of columns which supported a vaulted cloister-like walk along all four sides of this great court. An upper gallery extended over the whole of the vaulted part. This porticus was probably used for what would now be called the saddling paddock, and possibly as a temporary stable for the race-horses.

Little or no visible remains now exist of the other great Circi of Rome. After the Circus Maximus the chief was the Circus Flaminius, which gave its name to the Campus Flaminius, an important and architecturally very splendid portion of the Campus Martius, towards the Capitoline Hill.

The Circus Flaminius was founded in a part of the Campus Martius called the Prata Flaminia by the Censor C. Flaminius Nepos, who fell at the battle of Lake Trasimenus in 217 B.C.; Livy, xxii. 4 to 6. The same man had also in 220 B.C. constructed part of the great Via Flaminia, which skirted the Campus Martius, and passed out from Rome by the Porta Flaminia in the wall of Aurelian on the site of the modern of the Basilica of S. Vitale at Ravenna is a sixth-century example of a similar use of pottery.

¹ See Nibby, "Circo di Caracallo," 1825; and Canina, Rom. Ant. i. p. 447, Tav. 127.
Porta del Popolo; Livy, *Epit.* xx. See also Livy, iii. 54; xxvii. 21; and xl. 52. The positions of this and the next-mentioned circus are shown on the Map of Ancient Rome.

In the sixteenth century considerable remains of this circus were found while digging foundations for the *Palazzo Mattei*, and the tower now called *Citronyolo* marks the position of the *metae* at one end of the *spina*; from this it was formerly known as the *Torre Matrignola*. In the early mediaeval period the long open space of this circus was used as a rope-walk, a record of which is preserved in the name of the Church of *S. Caterina dei funari*. The descriptions of the remains of this circus given by Fulvio, *Antiquaria Urbis*, Venice, 1527; and Ligorio, *Effigies Antiquae Romae*, Rome, 1561, are quoted by Nardini, *Roma Ant.* (ed. Nibby, 1819), iii, p. 21. An *Altar of Neptune* in or near the *Circus Flamininus* is mentioned by Livy, xxviii. 11. Games in honour of Neptune had existed from prehistoric times; see Livy, i. 9.

The ancient *Ludi Apollinares* were held in the *Circus Flamininus* except when that part of the *Campus Martius* was flooded. Between the *Circus* and the *Porticus of Octavia* there was a temple of Apollo, which had been founded in 428 B.C. by Gna. Julius Mento (Pliny, xxxvi. 34); see below, p. 70.

The *Circus of Caligula* and Nero was in the *Horti Agrippinae*, at the base of the Vatican Hill; Suet. *Claud*. 21; Pliny, *Hist. Nat.* xxxvi. 74; part of the Basilica of S. Peter, and especially the sacristy on the south side, now stand over its site. The great obelisk, now in the Piazza of S. Peter, stood on its *spina*, and remained standing in situ till it was moved by the architect Fontana to its present position in the reign of Sixtus V. An interesting and well-illustrated description

---

1 Livy (xxiv. 43) records that *Ludi Sacrii* were first instituted in 214 B.C. by the Aedile Tuditanus, who through his bravery had escaped from the slaughter at Cannae.

2 The *Circus of Caligula* and Nero was the scene of the horrible tortures which Nero inflicted on the Christians; see Tac. *Hist.* xv. 44.
of the methods employed to move this enormous monolith was published by Fontana, *Trasportazione dell’ obelisco Vaticano*, 1590. Of all the obelisks in Rome, this is the only one that has never been thrown down since it was first brought from Egypt.

The *Circus of Hadrian* lay to the north-west of his mausoleum in the *Campus Vaticanus*; nothing of it is now visible, but part of its remains were excavated in 1743; see *Atti della Pontif. Accad.* 1839.

The *Stadium of Domitian*. The modern *Piazza Navona* (a corruption of *Agonale*) marks by its line of houses the area of the *Stadium* built by Domitian (Suet. *Dom. 5*) and restored by Severus Alexander under the name of the *Stadium Alexandrinum* (*Hist. Aug. Sec. Alex.* 24). Remains of its substructures exist under all the houses round the Piazza, and especially below the Church of S. Agnese. The line of the curved end is still partly marked by the curve of the houses at the northern end. Those over the starting end also mark the ancient line; they are set square with the sides, not in a slightly diagonal line, as would be the case if the building had been a circus.

The *Circus of Sallust*, supposed to have existed in a valley between the Quirinal and Pincian Hills, is mentioned below, see vol. ii. p. 246.

*Naumachiae*. Few remains exist of the various *Naumachiae*, which were great reservoirs, surrounded by seats like an amphitheatre, and were constructed for holding naval fights. That built by Augustus was in the *Nemus Caesarum*, on the transtiberine side of the river; traces of it have recently been found; see vol. i. p. 386.

1 Augustus records in the Anencyean inscription—*Navalia proeli spectaculum populo dedit trans Tiberim in quo loco nunc nemus est Caesarum, curato (solo in) longitudinem milles et centum pedes, in latitudinem (pedum milles it) ducentum quo trigento rostrato navis, triremes (et quadrirremes), pluris autom miniore inter se confliguntur. (In eos) classibus pugnaverunt proster remiges militia (hominium tri) a circiter.*
The position of the *Naumachia* of Domitian is unknown, as is also the reason of its being destroyed, apparently by Domitian himself, when its stone was used to restore the burnt wooden seats of the *Circus Maximus*; Suet. *Dom.* 5.

Naval fights were also held in the *Stagnae Neronis*, a great reservoir of water formed in Nero's *Golden House*, on the site now occupied by the Colosseum; see vol. ii. p. 78.¹

¹ Part of the description of the Roman Circi given above was originally written for the third edition of *Smith's Dictionary of Antiquities* (Art. "Circus"); I have to thank Mr. John Murray for permission to make use of it here.
CHAPTER III

THEATRES IN ROME.

The Roman theatre was simply a slightly modified copy of the theatre of the Greeks.

The most important difference was that the flat space or pit (the orchestra) in front of the stage, which in the Greek theatre was occupied by the chorus, in the Roman theatre was devoted to the seats of the senators and other dignitaries. The differences in the plans of the Greek and Roman theatres are minutely described by Vitruvius (v. 7 and v. 6), who points out that in the latter the *orchestra* was exactly half a circle, while in the Greek theatre it occupied more than three-fourths of a circle. Recent excavations at Epidaurus, Megalopolis and elsewhere in Greece have shown, what Vitruvius probably did not know, namely, that in the earliest Greek theatres, built in the fifth and fourth centuries B.C., the orchestra was a complete circle. This space was gradually diminished by the extension forwards of the stage.

According to the theory of the very learned German archaeologist Dr. Dörpfeld, there was no raised stage in the Greek theatre of the best period, the principal actors playing their parts in the circular *orchestra* on the same level as the chorus. The evidence of existing remains in support of this theory is very strong.

Another important structural difference was that the Greeks always selected a hillside, out of which they could excavate the *cavea* of their theatres, and so avoid the massive
and costly substructures which were necessary for so many of the Roman theatres built on level ground.

This was especially the case in Rome, where almost all the theatres were erected in the perfectly flat Campus Martius.

The skillful Roman use of concrete made it possible to do without the aid of a natural slope. Close-set radiating walls supporting raking vaults of concrete were used by the Romans to carry the high tiers of seats, alike in their theatres, amphitheatres, and circi; see Vitruvius, 3. 3.

Till the middle of the first century B.C. no theatre in Rome was other than a temporary wooden building. During the Republican period a great prejudice existed against the construction of a theatre of stone, chiefly from a dread of introducing the luxurious habits of the Greeks. So strong was this feeling that Scipio Nasica induced the Senate to pull down and sell the stone of a half-finished theatre which had been begun by the Censor C. Cassius Longinus in 154 B.C.; ¹ Livy, Epit. 48; Appian, Bell. Civ. i. 28. Even Pompey, who built the first stone theatre in 55 B.C., had to construct in it, on the top of the cavea, a Temple to Venus Victrix in such a way that the stone seats and steps formed the access to the temple, so that the fact of their not being of wood might be excused, by means of the pigment that they were an essential part of the temple.

The spirit though not the letter of this sumptuary law against Greek extravagance had been very completely ignored three years earlier than this by the Aedile Scaurus.

Theatre of Scaurus. A temporary wooden theatre, built by M. Aemilius Scaurus, the stepson of Sulla, during his

¹ “Tamquam inutilis et nocituras publicas moribus,” were the words of the decree. The objection seems to have been not only to having stone seats, but having any seats at all, when it had hitherto been the custom for the spectators to stand. The decree, therefore, prohibits seats of any material, but stone ones were specially obnoxious to the stern Romans of the Republic.
Aedileship in 58 B.C., is described by Pliny (Hist. Nat. xxxvi. 5 and 113) as being a building of the greatest possible magnificence and costliness, containing seats for 80,000 spectators, an almost incredible number, only about 7000 less than the number which it has been calculated that the Colosseum could hold. According to Pliny it was the greatest work ever produced by human hands, and though only a temporary building, was constructed as if meant to last for ever. Pliny refers to it again and again, as being on the whole the greatest marvel of skilful workmanship, extravagant cost, and human folly that the world had ever seen; see Hist. Nat. xxxiv. 36; xxxvi. 5; ib. 50; ib. 113 to 115; and ib. 189.

The scenae was divided into three stories or "orders," and had 360 marble columns; those of the lower order were monoliths, 38 feet high. The whole lower order of the scenae was of marble or lined with marble, the second was e vitro; by which Pliny means that the wall was covered with mosaics of glass tesserae; the third story was of gilt wood. No less than 3000 bronze statues were set between the columns. Pliny expresses his amazement that such splendour, and especially the 360 marble columns, should have been tolerated in a city which took it ill that one of the richest citizens of Rome (the orator Crassus) should adorn his atrium with six columns of Hymettian marble, only 12 feet high. The fact, however, that it was not a private house but a building for the use and amusement of the people would make a great difference in the eyes of the fellow-citizens of Scaurus and Crassus.

1 As Pliny cannot have seen this wonderful building some allowance for the exaggerations of hearsay evidence should perhaps be made.
2 At Hist. Nat. xxxvi. 189, Pliny mentions more distinctly the glass mosaics on the scenae of the Theatre of Scaurus.
3 This passage has been wrongly understood by Mr. J. H. Parker (Colosseum, p. 76) and others, who have taken the materials of the three orders of the scenae to refer to the columns.
Scaurus also distinguished himself by providing a new form of butchery to please the Romans. Crocodiles and hippopotami were slaughtered in tanks of water made to imitate a river; see Pliny, *Hist. Nat.* viii. 96.

Some notion of the wealth squandered on the temporary Theatre of Scaurus is given, Pliny says (*Hist. Nat.* xxxvi. 115), by the fact that when the mere superfluities of the building, easel pictures, cloth of gold (*attalica*), and stage dresses and ornaments, were burnt with Scaurus' Tuscan Villa, whither they had been removed, their value was estimated at 300 million sesterces, equal to about 3 millions sterling of modern money.

**Amphitheatre of Curio.** Another temporary wooden building, built by C. Scribonius Curio in 50 B.C., of even more astonishing character, is described by Pliny (*Hist. Nat.* xxxvi. 116 to 120). This consisted of two very large theatres, built of wood, and made to swing on pivots, so that dramatic representations were given in the morning in the two separate theatres; while for the afternoon performance the two theatres were swung round, so as to meet and form an amphitheatre, in which gladiatorial fights were held.

An interesting restoration of the amphitheatre of Curio, showing how its two halves revolved, has been worked out from Pliny's description by MM. Homolle and Nénot; see *Gazette Archél.* 1889, pp. 11-16 and pl. iii. and iv.

The Theatres of Scaurus and Curio were both erected in some part of the *Campus Martius*, but their exact sites are not known.

It is not without reason that Pliny (*Hist. Nat.* xxxvi. 118 and 119) speaks with amazement of the folly of the Romans in trusting themselves in such a structure as that of Curio. Accidents on the most terrific scale not unfrequently happened through the breaking down of temporary wooden places of amusement. In the reign of Tiberius, according to Tacitus, no less than 50,000 people were killed or injured by the fall
of a wooden amphitheatre erected at Fidenae, five or six miles from the Porta Salaria of Rome. Many similar accidents are recorded; see Tac. Ann. iv. 62; and cf. Suet. Tib. 40.

Buildings of Pompey. Near the carceres or square end of the Circus Flamininus there was a very large and magnificent group of buildings—the Theatre, Porticus, and Curia of Pompey; see Map of Ancient Rome.

The Theatre of Pompey was opened in 55 B.C., but was not completed till 52 B.C.; see Dion Cass. xxxix. 38, and Plut. Pomp. 52. It contained 40,000 people; the seats and inner architectural decorations were of marble, the outer arches being of travertine, the raking vaults supporting the canes of concrete, and the radiating walls on which the vaults rested were built of travertine and peperino.

The Theatre of Pompey is mentioned by Vitruvius (iii. 3. 2) as "the stone theatre" (theatrum opidum), par excellence, because it was the first one in Rome built of stone, and possibly the only one at the time when his work on architecture was written. In this passage Vitruvius mentions a Temple of Equestrian Fortune, in or by the theatre, and there were also near it Temples of Honos and Virtus and Felicitas.

On the summit of the cavea there was a shrine of Venus Victrix, placed there for the reason mentioned above, in vol. ii. p. 62.

This theatre was gilt, Pliny tells us, by Nero, in one of his fits of extravagance; see Hist. Nat. xxxiii. 54, and Dion Cass. lxiii. 6. Pliny (Hist. Nat. viii. 19) describes the great slaughter of beasts which celebrated the opening of Pompey's Theatre.

It is very characteristic of the brutal nature of the Romans that they frequently used a form of building designed by the more intellectual Greeks for purely literary pleasures, for the base purpose of wholesale butchery. The Ancyrsean inscription records that, during the reign of Augustus, the Theatre of Pompey was used for fights between wild beasts and gladiators, in which no less than 500 lions and 20 elephants were
slaughtered. How many of the less costly gladiators were killed is not mentioned.

The *Theatre of Pompey* is said to have resembled the Greek theatre at Mitylene; it was begun shortly after Pompey’s visit to Mitylene on the occasion of his defeat of Mithradates; see Plutarch, *Pomp.* 41 and 42.

Considerable remains of this theatre still exist, but are almost wholly concealed by modern houses; the Via de' Chiavari follows the line of the *scena*, and a great part of the foundations and substructures of the *arena* can be seen in many cellars in the houses in the Via de' Giubbonari and the Via del Paradiso, and especially under the Palazzo Pio.¹

The plan of the whole theatre is represented on one of the (now lost) fragments of the *Marble Plan*, and this shows that it cannot have been an exact copy of the Mitylene Theatre, as it presents the Roman peculiarity of having its *orchestra* confined within an exact semicircle, while in the Greek theatre, as is mentioned above, the *orchestra* occupied either a complete circle or, in late times, a segment which was considerably more than half a circle.²

The *scena* is shown on the plan to have had large recesses for statues and rows of closely set columns.

The outer arcade, in its lower story at least, resembled that of the existing *Theatre of Marcellus*, having arches under an entablature supported by engaged Tuscan columns; part of this was found during excavations made in 1837.

Like almost all the buildings of Rome, the Theatre of Pompey suffered frequently from fire. The *Ancyrean Inscription* records that it was restored at a great cost by Augustus,

¹ The radiating walls under the *scenae* are partly of travertine and partly of peperino; the outside appears to have been wholly of travertine. The name of the Church *S. Maria in grotta pinta*, is derived from its being built over the substructions of Pompey’s Theatre, which had painted decorations on their walls.

² See Vitr. v. 6 and 7.
without the addition of his name to that of Pompey's on the front; POMPEIVM - THEATRVM - IMPENSA - GRANDI - REFECI
SINE - VILLA - INSCRIPTIONE - NOMINIS - MEI.¹

Another fire did much injury to the theatre in the reign of Tiberius, who then rebuilt the scena, and left the rest to be
restored by Caligula, who, not imitating the unselfish modesty
of Augustus, put his own name in the place of Pompey's.
The Emperor Claudius, however, soon afterwards obliterated
Caligula's name, and restored that of Pompey in its original
place; see Tac. Ann. iii. 72, and vi. 45; Suet. Cal. 21.

This theatre was again burnt in the great fire of 80 A.D.,
and restored by Titus; further injury was done to it by
various fires during the reign of Philippus I., 249 A.D., and in
that of Diocletian about 290 A.D. The building was restored
after both these fires, and the theatre continued in use till the
time of Theodoric, and even later in the sixth century A.D.

A great part of the outer wall was standing as late as the
sixteenth century, and is described by Fauno, Fulvio, Gamucci,
and other antiquaries of that century. Its existing remains
are described by Canina; Arch. Ant. Sex. iii. Par. ii. p. 341.

Porticus Pompeiana; see Vitruv. v. 9. 1. Outside the
theatre, at the back of the scena, was a very large and magni-
cificent building supported by several parallel ranges of columns,
forming a great Porticus or court, with an open area in the
centre, planted with avenues of sycamore trees and decorated
with fountains and rows of statues² in marble and gilt bronze.

¹ The original inscription recorded that the theatre was completed in
the third consulship of Pompey (52 B.C.), and the question arose whether
it was more elegant to use the word TERTIVM or TERTIO; Cicero cautiously
refused to commit himself to either opinion, and advised the contracted
form TERT to be used, so as to avoid the difficulty. The Emperor Claudius
did not approve of the abbreviation and altered Tert. into TERTIVM; see Aus.
Gell. X. i. 7 and 9. The form TERTIVM was adopted by Agrippa on the
frieze of the Pantheon.

² Martial, ii. 14, 9, iii. 19; Ov. Ars Am. i. 67; Cic. De Fato, c. 4.
This *Porticus Pompeii* was also known as the *Hecatosylon* or "Hall of the hundred columns"; it is shown on three fragments of the Marble Plan, one of which is inscribed with the word *[HECΑ]TOSTYLVΜ.

*Curia Pompeiana.* Adjoining the *Porticus* was the *Curia of Pompey*, an *exedra* or hall, with one side curved and furnished with tiers of seats. It was used for meetings of the Senate, and in it Caesar was murdered at the foot of a colossal statue of Pompey, which stood in the centre; Plut. *J. Caes.* 66, and *Brut.* 14; and Cic. *De Dīvin.* ii. 9, 23. The *Curia* and *Porticus* also contained a number of fine Greek pictures, among them one by Pausias, representing a sacrifice of oxen, which was technically very remarkable for its skilful foreshortening and *chiaroscuro* (Pliny, *Hist. Nat.* xxxv. 126), and a painting of Cadmus and Europa by Antiphilos; *Hist. Nat.* xxxv. 114. Pliny also mentions a painting of Alexander by Nicias; *Hist. Nat.* xxxv. 132; see also *ib.* 59.

During the outburst of grief caused by the death of Julius Caesar the *Curia Pompeiana* was burnt, and the scene of the murder decreed by the Senate to be a *locus seleratus*; Appian. *Bell. Cæs.* ii. 147; Suet. *J. Caes.* 88. The statue of Pompey was saved from the fire, and was set by Augustus on a marble arch at the entrance to the *Porticus*; Suet. *Aug.* 31.

Pompey's private house was close by, a very modest and simple building (Plut. *Pom.* 40), contrasting strongly with the magnificence of the group of buildings which Pompey erected for the public use.

Pliny mentions (*Hist. Nat.* xxxiv. 57) a bronze statue of Hercules by the celebrated Myron of the fifth century B.C., which was in Pompey's house.

A number of important statues have at different times...
been found in the neighbourhood of the Theatre and Porticus of Pompey; among them is one of the finest Greek statues known, which was found in the reign of Julius II., about 1506 —the celebrated torso of Herakles in the Vatican, signed as the work of Apollonios of Athens, 1 the son of Nestor, ΑΠΟΛΛΟΝΙΟΣ ΝΕΣΤΟΡΟΣ ΑΘΗΝΑΙΟΣ ΕΠΙΟΙΕΙ.

In 1864 a colossal statue of Herakles, 15 feet high, in gilt bronze, was found carefully hidden in a small chamber underground near the theatre. It is chiefly remarkable for its great size and perfect preservation, not being of much merit as a work of art, and not earlier than the third century A.D. It was bought by Pius IX. for £2000, and is now in the round hall of the Vatican.

Like other buildings in Rome, the remains of the Theatre and Porticus of Pompey were for many centuries used to feed limekilns, and as a quarry for stone and marble. From it the famous architect Bramante of Urbino took the monolithic columns of grey and red Egyptian granite, nearly fifty in number, which he used for the arcades of the cortile and in other parts of the magnificent palace which he built for Cardinal Riario about the year 1498. 2 It is now called the Palazzo della Cancelleria; and is, on the whole, the noblest of the Roman palaces.

1 This wonderful fragment is apparently part of a group, with a nude seated figure of Herakles. The same motive is represented in a statuette published by Le Bas, Voyage en Grèce, etc., ed. Reimann, vol. ii. pl. 144. For its subtle knowledge of human anatomy this torso is perhaps unrivalled in the world. The late form of the Ω (used instead of Η) in the signature of Apollonios shows that the statue is probably not earlier in date than the first century B.C.

2 Bramante did not take the granite columns direct from the ruins of the Porticus of Pompey, but he obtained them from the old Basilica of S. Lorenzo, which had previously been built with materials taken from Pompey’s buildings. Bramante rebuilt the Basilica as part of Cardinal Riario’s Palace, and used the ancient columns to support the two-storied arcade of the great court.
The Theatre of Marcellus was begun by Julius Caesar and finished in 13 B.C. by Augustus, who dedicated it in the name of his nephew Marcellus the son of Octavia, as is recorded in the Ancient Inscription—Theatrum AD AEDEM APOLLINIS IN SOLO MAGNA EX PARTE A [PRIVATIS] EMPTO FECI QVOD SYB NOMINE M MARCELLI GENERI [ME]I ESSET. See also Suet. Aug. 29.

The Temple of Apollo, mentioned in this inscription, was one of the most highly venerated and ancient in Rome; it was dedicated to the Delphic Apollo by Gn. Julius Mento in 428 B.C.; Livy, iv. 28. It contained a very sacred statue of Apollo carved in cedar wood, presented by C. Sosius, Prefect of Syria, in about the year 34 B.C.; Pliny, Hist. Nat. xiii. 5. From this statue it is called by Pliny the Temple of Apollo Sosianus (Hist. Nat. xxxvi. 34), and he mentions that it contained a celebrated set of statues representing the slaughter of Niobe’s children by Apollo and Diana, the authorship of which was due to either Scopas or Praxiteles, but to which had been forgotten.¹

Livy (xxvii. 37) describes a pompa or religious procession carrying statues, which started from the Temple of Apollo, passing into the Servian city through the Porta Carmentalis and so along the Vicus Jugarius into the Forum Romanum. Thence the pompa passed from the Forum by the Vicus Tuscus, through the Velabrum, and then through the Forum Boarium on to the Clivus Publicus and the Temple of Juno on the Aventine. Remains of the temple of the Delphic Apollo have been discovered near the Piazza Montanara, under an inn called the Albergo di Catena.

¹ Many ancient copies of these fine statues still exist; one almost complete set, which was found in Rome in 1583, is now in the Uffizi at Florence. The gradations in the heights of these statues indicate that they were originally designed to fill the triangular pediment of a temple. A very fine but mutilated statue of one of the daughters, which is in the Museo Chiaramonti of the Vatican, may possibly be one of the original set.
Pliny (loc. cit.) speaks of the temple as being ad Octaviae Porticum. Near the Temple of Apollo and the Circus Flamininus were two other temples of Bellona and Hercules Castor; the former was used as a "Senaculum" for meetings of the Senate outside the sacred Pomœrium; see vol. i. p. 108. Another more important building was the Temple of Mars, to whom the whole Campus Martius was specially sacred. It was built, or rather rebuilt, by Junius Brutus Callaicus, who was consul in 138 B.C.; its designer was the Greek architect Hermodorus; see Pliny, Hist. Nat. xxxvi. 26.

The Theatre of Marcellus stands on the borders of the Forum Olitorium; this Forum was immediately outside the Servian wall, which separated it from the Forum Boarium inside the Servian city.¹

Fig. 57 shows the plan of the Theatre of Marcellus with its deep Roman stage, and a large hall or "green-room" for the performers on each side.

An earlier theatre, built by Aemilius Lepidus, existed on this site (Livy, xl. 51), but was probably pulled down by Julius Caesar when he founded the Theatre of Marcellus. The Temple of Pietas,² in the Forum Olitorium, was also pulled down to make room for it; Dionys. xliii. 49.

The Theatre of Marcellus occupied a long time in building; though begun in the time of Julius Caesar it was not completed till 13 B.C., the date when it was opened by Augustus.

¹ A large extent of the travertine paving of the Forum Olitorium, between the Piazza Montanara and S. Niccolo in Carcere, was discovered during excavations in 1875; see Bull. Com. Arch. Mus. iii. 1875.
² This temple was founded, according to Pliny (Hist. Nat. vii. 121, and Festus, ed. Müller, p. 209), to commemorate the oft-told and frequently painted story of the starving mother in prison who was fed by milk from her daughter's breast. Another form of the story (Val. Max. ii. 5, 1) makes it the father who was fed by the daughter. The temple was built by M. Acilius Glabrio, in 186 B.C., and contained the earliest gilt statue in Rome; Val. Max. ii. 5, 1.
It appears to have suffered in the fire which burnt the adjoining Porticus Octaviae, and it was then restored by Vespasian; Suet. Vesp. 19.

It is thus mentioned in the Regionary Catalogues, *Regio IX. Theatrum Marcelli; capiit loca xxx mil.* Judging from the size of its existing remains, it appears hardly possible that it can have contained as many as 30,000 spectators. Its *scena* is shown on one of the fragments of the Marble Plan of Rome, with the inscription THEATRUM - MARCELLI.

In the Middle Ages the theatre was made into a fortified palace by Pietro Leone, in the year 1086, and in the following century it was partly destroyed and built upon by the Savelli family. Subsequently it became the property of the Orsini barons, who completed its disfigurement.

The existing remains of the *Theatre of Marcellus* are of great beauty and interest. Little of the *scena*, the side facing on the Tiber, now remains above ground; but a considerable
extent of the arcading, two stories high, of the curved exterior is still standing; the lower story is nearly half buried below the present ground level. The design consists of the usual arcades, with engaged columns supporting an entablature to each story. The lower order is Tuscan or Romanised Doric; the upper Ionic order is of very graceful proportion.

It is all worked in travertine, once covered with hard white stucco made of pounded marble (opus albarium). The details are much more delicate and refined than those of the similar arcades in the Colosseum. The volutes and egg and dart moulding of the Ionic capitals are carefully worked, not left in the block as they are in the coarser Flavian arcading.

A very noticeable feature of Roman architecture is the constant repetition, almost without variation, of this design with rows of arches between engaged columns. Even among the few existing (or till recently existing) remains, we find it over and over again—namely, in the arcade under the Campanile of SS. Giovanni e Paolo; in the Theatre of Pompey, in the Amphitheatre of Taurans, in the Basilica Julia, in the front of the Tabularium; and (shown in the sixteenth-century picture of Rome at Mantua) on the façades of the Circus Maximus, and the back of the Basilica of Constantine. It is a design which, when skilfully treated, is capable of great beauty of effect, and formed the favourite motive for the splendid courts and façades of the pseudo-classic buildings of the sixteenth century; even at the present day its popularity seems to be almost as great as ever in all the principal countries of Europe.

This combination of the arched and the trebled methods of construction appears to have been one of the very few architectural forms which was an invention of the Roman period. Even this, however, was probably devised by Graeco-Roman, not Roman architects.

The Theatre of Cornelius Balbus, which was built in 13 B.C., stood a little to the north-west of the Theatre of Marcellus, and was placed with its curved façade close to the Tiber bank. It
appears to have been a building of great splendour, and, according to Pliny (Hist. Nat. xxxvi. 60), was adorned with four wonderful little columns of Arabian onyx; cf. Dion Cass. liv. 25. It was surrounded with open arcing, like that of the other theatres and amphitheatres of Rome, and in other ways was very similar to the Theatre of Marcellus.

Two of the Tuscan engaged columns of this arcade, with their entablature of travertine, still exist, built into a house in the Via di S. Maria in Cacaberis, No. 23; and other parts of the theatre and its porticus are visible in the neighbouring houses. Foundations and substructures of the cavea exist below the Cenci Palace. At the back of the scena was a covered hall, or crypto-porticus, considerable remains of which existed in the sixteenth century, and were drawn by Serlio to illustrate his work on architecture, published at Venice in 1545.

According to Suetonius (Aug. 29) the Theatre of Corneliu Balbus was one of the many buildings erected in Rome by private persons owing to the influence and exhortations of the Emperor Augustus, who was, above all things, anxious to increase the architectural splendour of Rome. In his time the last remaining Republican prejudices against magnificence and richness of material, even as applied to private houses, completely passed away.

According to the Regionary Catalogue (Reg. ix.) the Theatrum Balbi, like the Theatre of Marcellus, contained seats for more than 30,000 people; the writer of this Catalogue erroneously says that it was dedicated by Caesar, and states that its name was derived from the adjacent Crypto Balbi; by this is evidently meant the crypto-porticus which formed part of the building, and was naturally called the Porticus Balbi from the name of the theatre to which it belonged.

The colossal statues of Castor and Pollux holding their horses, now at the top of the Capitoline steps, were found in or near the Theatre of Ballbus about the year 1556.

1 A variety of hard alabaster, not the modern onyx; see vol. l. p. 21.
CHAPTER IV

THE AMPHITHEATRES OF ROME.

The amphitheatre with its brutal scenes of butchery was unknown to the more refined and intellectual Greeks, and therefore this class of building cannot have been derived by the Romans from Hellenic sources, as was the case with their Temples, Thermes, Porticus, Basilicae, and most of their other buildings. The question then arises whether it was a Roman invention, or derived from the Etruscans, from whom the Romans learnt the custom of having gladiatorial fights, and the even more horrible one of propitiating the gods by burying human victims alive, or by cutting the throats of prisoners of war and slaves to celebrate the funerals of important personages.

It is important to remember the religious origin of the gladiatorial combats of ancient Rome, which were first instituted as a form of human sacrifice to the manes of the

---

1. Livy (xxii. 57) mentions that in 216 B.C., a Gallic man and woman and a Greek man and woman were buried alive in a stone chamber in the Forum Boarium; similar acts of human sacrifice were repeated on several occasions down to the first century A.D. The punishment of unchaste Vestals, which was the last survival of this horrible custom, lasted till Christianity became the State religion of Rome.

2. This latter form of human sacrifice is of frequent occurrence among the paintings on the walls of Etruscan tomb-chambers. Among the Greeks the sacrifice of human victims was given up at a very early period. It was exceptional even in the Homeric Age; see Pausanias, I. xxii. 6.
dead, and therefore, in early times, were always associated with the funeral of some wealthy citizen.

The existence of a fine stone amphitheatre in the ruins of the Etruscan city of Sutrium has been supposed to be a proof of the Etruscan origin of this class of building. The seats, concentric corridors, and *vomitoria* of the Sutrium amphitheatre are to a large extent hewn in the solid rock, and this helps to give a look of great antiquity to the remains; but a careful examination of the details, and of the mouldings especially, shows that this is really a purely Roman building, and most probably but little earlier than the Colosseum of Rome.

There is really no evidence to show that amphitheatres were built by the Etruscans, and there can be little doubt that they were purely Roman inventions, developed out of the theatre of the Greeks, by the simple process of putting together the *cavea* of two theatres, omitting, of course, the *scenae* and stages.

The fact is that the Roman amphitheatre is constructed on purely utilitarian principles, so that any architectural beauty it may have is, as it were, accidental, and was not specially aimed at by the designer. In the aesthetic part of architecture the Romans showed little or no talent, seldom attempting more than to imitate and adapt the graceful buildings of the immeasurably more artistic Hellenic race.

But as engineers and constructors of huge and complicated piles, perfectly and ingeniously adapted to their special uses, the Romans were quite unrivalled, showing a complete mastery of the most difficult problems of construction. No less remarkable was their skilful use of the most varied materials, their wonderful application of hydraulic laws, shown in the

---

1. Sutrium is about thirty-three miles north of Rome, on the Via Cassia.
2. The supposed origin of the amphitheatre, from the two wooden revolving theatres of C. Curio constructed in 50 B.C., has been mentioned above; see Vol. II. p. 64.
complicated systems of lead pipes by which various parts and levels of buildings were supplied with water, and also in the complicated perfection of their arrangements for warming rooms and heating baths.

The peculiarities and merits which the Roman amphitheatre, considered as an elaborate architectural product, possesses, are precisely those of simple and straightforward provision for practical uses, which was the one strong point of the utilitarian Romans. No artistic invention was required; the decoration of the exterior with its series of colonnades, and the interior with its tiers of seats, were taken directly from the similar parts of the Gracco-Roman Theatre. What was purely Roman was the ingenious arrangement of passages and staircases by which a crowd of eighty or ninety thousand people could rapidly, and without confusion, pour out of the Colosseum of Capua or Rome, and also the massive series of substructures which in the Roman theatres and amphitheatres commonly took the place of the natural hillside which was necessary for the theatres of the Greeks.

Amphitheatre of Taurus. Under the Roman Republic amphitheatres, like other places of amusement, were merely temporary structures built of wood. The first stone amphitheatre in Rome was that built by Statilius Taurus in the reign of Augustus, about 29 B.C.; Suet. Aug. 2; Dion Cass. ii. 23 and lxii. 18. No remains of it are now visible, and it is not named in the Regionary Catalogues;

1 The two amphitheatres in Rome and at Capua are of about the same size; each was known in the Middle Ages by the name Colossus, probably on account of its gigantic scale. It has been supposed that this name was given to the Roman Amphitheatre from its vicinity to the colossal statue of Nero, but this is hardly possible, as the bronze Colossus had been overthrown and melted long before the name Colossus had been applied to the Flavian Amphitheatre. The word first occurs in the writings (eighth century) of the Venerable Bede, who uses the form Colosseus.

2 Amphitheatres are not mentioned by Vitruvius; see note 1 in vol. ii. p. 128.
it appears to have been destroyed during the great fire in Nero's reign; its very site is uncertain. It probably stood in the Campus Martius, where the houses of modern Rome are the thickest; the elevation called Monte Giordano has been supposed to be caused by its ruins.\(^1\)

The Amphitheatre of Nero, erected in the Campus Martius, appears to have been a wooden structure. It was, however, decorated in the most costly and magnificent way: it had rich awnings of silk, and perfumes were sprinkled on the spectators from concealed pipes; see Suet. Nero, 12 and 31; Tac. Ann. xiii. 31; and Pliny, Hist. Nat. xxxvii. 45.

**THE COLOSSEUM.**

The Flavian Amphitheatre, or Colosseum, was built by Vespasian and Titus in the lowest part of the valley between the Caelian and Esquiline Hills, which was then occupied by a large artificial pool for naval fights (Nauymachia).\(^2\) This reservoir was in the middle of the Golden House of Nero—that gigantic palace which had swallowed up a whole district of Rome, and extended from the Palatine Hill, near the present Via di S. Bonaventura, to a distant point on the Esquiline, covering the whole intermediate slopes and valleys; see vol. ii. p. 146. As Suetonius says (Nero, 31), *domum a Palatio Esquilius usque fecit*; see also Pliny, Hist. Nat. xxxvi. 111.

Not even the horrible cruelties, or the mad pranks with which Nero degraded the purple, seem to have aroused the indignation of the people of Rome to the extent that was

\(^1\) The same has been said of Monte Citorio, another slight elevation; but it is known now that this is over the remains of the Temple of Marcus Aurelius.

\(^2\) "Hic ubi conspicui venerabilis amphitheatrum

Erigitur molest, stagna Nerone eruat."

caused by his arrogant extravagance in building the Golden House, partly, no doubt, on account of the great inconvenience which must have been caused by the loss of many important public roads, which Nero's Palace covered and blocked up, including that part of the Sacred Via which now leads up to the Arch of Titus from the direction of the Colosseum.

The destruction of this gigantic palace, and the restoration to the Romans of its site in the form of public buildings, the Thermæ of Titus and the great amphitheatre, were among the most politic acts of the first Flavian emperors.

The exact date of the commencement of the Colosseum is doubtful, but it was opened for use in 80 A.D.; Suet. Vesp. 9, and Tit. 7. An examination of the interior shows clearly that it is of two distinct dates, with a considerable interval between.

To the first period, a great part, that is, of the reigns of Vespasian, Titus, and Domitian, belong the three orders of open arches on the façade, and the internal structures up to the level of the top of the arcades. The highest tiers of seats inside, and the fourth story with a wall relieved by pilasters, are not earlier than the time of Severus Alexander and Gordianus III., in the first half of the third century. The junction of the work of these two periods can be clearly seen in the interior; see below, p. 100.

As built by the Flavian emperors the upper galleries (maenianæ) were of wood, and these, as in the case of the

1 On the occasion of its opening 5000 wild beasts were brought into it to be slaughtered; so, at least, Suetonius states, Tit. 7.

2 Who the architect of the Colosseum was is unknown; the sepulchral inscription which was found in the Catacomb of S. Agnese, which has been popularly supposed to show that a Christian named Gaudentius was its architect, does not refer to the Colosseum at all, and does not even say that Gaudentius was an architect. The inscription is now in SS. Martina e Luca; see Nardini, ed. Nibby, Rom. Ant. i. p. 400.

3 The older form of this word is maeniana.
Circus Maximus, on many occasions caught fire from lightning or from other causes, and did much damage to the stone-work of the building.

These two periods are recorded on the reverse of two groups of coins; the original building is shown on the First Brasses of Vespasian, Titus, and Domitian, the latter dated 94 A.D., with, on one side of it, the colonnade two orders high, which united the amphitheatre to the Thermae of Titus on the Esquiline; and on the other side the tall conical fountain popularly called the Meta Sudans.

On these coins the three tiers of arches are represented as they now exist, with a statue under each of the arches in the two upper stories. Over the wider arch which formed the Imperial entrance, there is a figure standing in a Quadriga; the other arches contain single statues. Even on these earliest representations a fourth story is shown, with pilasters and windows or panels between them; but this probably represents an original wooden order, or possibly it also was of stone, but, being injured by the burning of the upper tiers of wooden seats and galleries within, had to be rebuilt in the third century A.D.

The amphitheatre is represented on these coins in perspective, by means of a sort of bird's-eye view, so as to show the interior with its top tiers of galleries, and the stairs sloping up, which divided the ranges of step-like seats of the caveæ into cunei or wedge-shaped compartments. The emperor is represented in the centre, seated under an arched canopy.

On no further coins is the Colosseum represented till we come to the second period, when its top story was rebuilt as it now exists, probably following the design of the original fourth story of the Flavian emperors. It then held, according to the Notitia, 87,000 spectators.

The Colosseum is represented both on reverses of First Brasses of Severus Alexander (222-235 A.D.), and on a large bronze medallion of Gordianus III. (238-244 A.D.), neither
of which, unfortunately, is dated by the number of the Tribun- nicia potestas. The legend on Gordian’s medallion is MVNI- FIGENTIA - GORDIANI - AVG; see fig. 58. On it is also shown the colossal statue of Nero,¹ the so-called Meta Sudans, and, on the other side, another smaller statue under an arched aedicula. A statue is shown in each of the arches of the two upper tiers. Traces of the pedestals of these statues still exist. The blank upper story is clearly shown above the third tier of open arches.

In the arena a fight is shown between an elephant with a rider on its back and a bull; see Pliny, Hist. Nat. viii. 19.

The important restoration of Severus Alexander was begun by Heliogabalus, after the upper wooden galleries had been destroyed by a fire caused by lightning, on the 3d of August 217 A.D., in the reign of Macrinus; Dion Cass. lxxviii. 25; Hist. Aug. Heliog. 17, and Siv. Alex. 24. A less important restoration had been carried out in the previous century by Antoninus Pius; Hist. Aug. Ant. Pius, 8.

A subterranean passage was added by Commodus to connect the amphitheatre with his palace, the Domus Vettilliana on the Caelian. Commodus was passionately fond of the wholesale butchery of men and beasts in the Colosseum, and used himself to assist, showing his courage by killing beasts in cages, or by shooting arrows from a safe place outside the arena. Dion Cassius, who was an eye-witness, has given a vivid

¹ The colossal of Nero had been altered so as to represent Apollo Helios, and so on this medallion rays of light are indicated round the head of the statue.

VOL. II
account of these scenes; lxxii. 17-22; see also Hist. Aug. Commod. ii.

In the reign of Theodosius II. and Valentinianus, 442 A.D.,
great damage was done by an earthquake, and in 445 A.D.
important restorations were carried out in the arena, the
podium, the entrances, and the seats. This is recorded on an
inscription cut on a previously used block of Pentelic marble,
which now lies near the entrance from the side towards the
Velia. This inscription states that Lampadius, the Praefect
of the city, restored HAREMAM - AMPHITHEATRUM - A - NOVO - VNA
CYM - PODIUM - ET - PORTIS - POSTIC - CIS - SED - ET - REPARATIS
SPECTACULI - GRADIBVS.1 A very fragmentary inscription
records a restoration by Messius Phoebus, between the years
467 and 472 A.D.

Another very interesting and perfect inscription, recording
a restoration after an earthquake, was discovered during the
excavations of 1813; it runs thus— DECIVS - MARIUS - VENANTIUS - BASILIVS - V - C - ET - INL - PRAEF - VIB - PATRICIVS
CONSUL - ORDINARIUS - ARENAM - ET - PODIUM - QVAE - ABOMINANDI - TERRAEMOTVS - RVIN - PROSTRAVIT - SVMPVT - PROPRIÒ
RESTITVT. This Basilius is possibly the consul of that name
in 486 A.D.

The amphitheatre continued in use during the sixth
century, though the brutal slaughter of gladiators and
prisoners had been put a stop to in the year 403 A.D., by the
heroic self-devotion of an Oriental monk named Telemachus,
who came to Rome to protest against this cruel sport.
Telemachus rushed into the midst of one of the scenes of

1 In an amphitheatre the word podium has a special meaning, namely,
the raised floor or platform which skirted the arena, and was reserved as
a place for the seats of the emperor's family, the Vestal Virgins, and a
few of the highest officials of Rome. A valuable collection of inscriptions
found in the Colosseum has been published by the Comm. Lanciani,
Iscrizioni dell' Anfiteatro Flavio, Rome, 1880; for other works see below,
p. 37, note 1.
butchery, and fell a victim to the rage of the people at having their favourite amusement interrupted. The moral effect of this noble act was, however, so strong, that henceforward human victims were no longer slaughtered in the arena; see Theodoretus, Hist. Eccles. v. 26.

ARRANGEMENT OF SEATS.

The tickets of admission to the Colosseum marked the exact seat the holder was to occupy, the number of the tier (maculatum), and the number of the cænsus or department of the cæna; so that there could be no mistake. And each external arch of the lower order was numbered, with the exception of the central arches towards the Caelian and Esquiline by which the emperor entered, so that each ticket-holder could go straight to the stairs which led to his place.

An existing ivory ticket for the amphitheatre of Frosinone has similar indications, namely, CVN. VI. IN. XVIII, that is, "the sixth cænsus, lowest row, seat No. 18"; see Mommsen in Berl. Sachs. Gesell. 1849, S. 286.

Certain fixed seats were reserved for the various officials, religious and political, and the different classes of the Roman people. On the podium were the thrones of the Emperor and his family, the Vestal Virgins, the Senators, the Pontifex Maximus, the Flamen Dialis, the chief Fratres Arvales, the Consuls, the Praetors, and a number of other officers of State. The disposition of seats in the Colosseum was the same as in other amphitheatres and theatres of Rome. A similar system had previously been adopted in the Circi of Rome as far as their rather different arrangements would allow.

Suetonius (Aug. 44) mentions that Augustus made new and elaborate enactments as to the positions of various people in the places of amusement of Rome; see vol. ii. p. 42. The Vestals, though allowed to be present in the front rank at gladiatorial fights, were excluded from the contests of nude
athletes, and other women were not only excluded by Augustus from the athletic sports, but were only allowed to sit in the top galleries of the amphitheatres while contests of gladiators were going on.

Inscription of the Fratres Arvalis. A very long and interesting inscription, which was found in 1699, in the Grove of the Fratres Arvalis, outside the Porta Portuensis, is of special value, not only as showing the manner in which seats in the Colosseum were divided, numbered, and their compartments named, but also as proving that the building was carried to a great height as early as the year 80 A.D.; see Cor. In. Lat. vi. part i. p. 506; and Henzen, Acta Frat. Arval. Berlin, 1874.

This large inscribed slab, now in the Capitoline Museum, contains, among a number of other enactments, those made with regard to the seats of the inferior members of the Collegium of the Fratres Arvalis. The enactment was made in the Temple of Concord, in the presence of the Fratres Arvalis and some of the secular officials of Rome.

The paragraph in question is headed LOCAS ADESIGNATAE IN AMPHITHEATRO. It is dated 80 A.D. by the names of the Consules Suffecti for that year, L. Aelius Plautinus Lamia, and Q. Punctumius Fronto. Names of other officials follow; and then comes the list of three groups of seats. The positions of

1 The twelve Fratres Arvalis formed the most ancient and the most highly honoured priestly Collegium of Rome. Their special duty was to offer sacrifice on behalf of the fertility of the soil. The Collegium included a large number of priests of inferior grades, for whom the seats mentioned in the inscription were reserved. The twelve Fratres appear to have sat on the podium, on a level with the Emperor, who was frequently a member of this very sacred body of priests.

The Arval Grove, with its circular Temple of the Dea Dia, was five miles outside the Porta Portuensis. About one hundred inscribed slabs have been found at various times with records of the proceedings of the Fratres from 14 to 241 A.D. They have been published by Hansen; see vol. ii. p. xxi.
and numbers of the seats reserved for the *Collegium* are
described as follows:—

I. "In the first *maenianum* or band (that is, the group im-
mediately above the *podium*) in the twelfth *cuneus* (or wedge-
shaped division of the *cavea*) on marble seats, (parts of) eight
*gradus* or tiers." The space is further defined by the mention
of the number of feet which was reserved in these eight
*gradus*; this detail was necessary, as there were no arms or
side division to the seats above the *podium*.

II. The next assignment of places was in the second
*maenianum*, also with marble seats; the number of the *cuneus*,
the *gradus*, and the number of feet reserved in the *gradus*
are all specified.

III. The third lot of seats were *in summo maenianum in
ligatis*, in the highest division, the seats of which were not of
marble like the lower two, but of wood. This shows that in
the year 80 A.D., when the Colosseum was first opened, it had
two bands of marble seats above the *podium*, one of which had
at least as many as eight tiers in it, and above them a third
story of wood.

The word *maenianum*, used here for the band of marble
seats between two horizontal *proscriptions*, and also for the
upper wooden gallery in the amphitheatre, is also used for the
projecting balconies of houses or public buildings. The word
is thus explained by Festus (*s. v.*), *Maeniana appellata sunt a
Maenio Censor, qui primum in Foro Ultra columnas tigna projectat,
quo ampliarentur superiora spectacula*. This was in the year 318
B.C., when C. Maenius was Censor; see also vol. i. p. 235.

The officials who had charge of the seats, to see that they
were occupied by the right people, are mentioned by Martial,
v. 8; and at v. 14 he describes the attempts of a certain
pushing fellow to get into a better seat than his rank entitled
him to.

Calpurnius (*Ed. vii.*) gives an elaborate account of the
scenic effects, and the splendours of an amphitheatre in Rome; but the seventh eclogue was written in the reign of Nero, so Calpurnius must be describing an earlier amphitheatre than the Colosseum, probably the wooden amphitheatre which Nero built. His remarks, however, would probably apply equally well to the Flavian amphitheatre.

Calpurnius describes grand and complicated scenery, gardens, rocks and caverns, which seemed to rise out of the arena, and the sudden formation of a great lake. The marble colonnades were plated with gold, the gratings which defended the podium from the beasts were of gold (or gilt) wire;¹ the venae, or walls which divided the tiers, were studded with mosaics of precious stones (that is, of the jewel-like glass tesserae); the awnings and cushions were of silk, and fountains poured forth jets of perfumed water;² cf. Suet. Nero, 31.

A large amount of storage-room must have been required for the bulky scenery used at these shows; and it is interesting to find that the Greek architect, Apollodorus of Damascus, suggested that the great elevated stylobate, on which the Temple of Venus and Rome, designed by Hadrian, was to stand, should be formed with chambers in its concrete mass, in which the scenery for “the Theatrum” might be fitted together out of sight and rapidly brought into the Arena — καλ ἐς τὸ κοῖλον τὰ μυχανήματα ἐκδέχοντο, ὡστε καὶ ἀφανὸς

¹ Pliny mentions the use of gold wire for screens round the Amphitheatre of Nero in the Campus Martius. He also tells us that the metal screens were studded with bosses of amber (succinum): Hist. Nat. xxxvii. 45.

² It appears to have been the custom, under the Empire, for all theatres and other places of amusement to be provided with perfumed fountains and concealed jets for cooling the air with a fine spray of scented water; Lipsius, De Amphitheatrum, cap. xvi., gives a number of classical references to this custom.

³ The Colosseum was usually called θέαμα by the Greeks; amphitheatre not being Greek either in fact or in name, although compounded of two Greek words.
The Construction of the Colosseum, in its skilful use of varied materials, each applied so as to get the utmost benefit from its special qualities, is perhaps the most remarkable existing instance of Roman utilitarian architecture. The materials used are three sorts of concrete, brick-facing, massive blocks of tufa and travertine; and lastly, marble for columns, cornices, paving, seats, and other ornamental purposes. The whole of the exterior of the Colosseum is of massive travertine, in very large blocks, carefully jointed, set without mortar, and each clamped to the next with heavy iron clamps, run with lead. The paving on the ground-floor, except that of the inner ring round the podium, which is of thick slabs of white marble, is of blocks of travertine, and the columns of the lowest Order stand on a stylobate of three steps, which run all round outside the oval. The two top steps are cut in the solid out of a great travertine block 4 feet 6 inches wide. Some of the blocks in the piers are over 7 feet long.

The lowest Order of arches in the external façade is set under an entablature, supported by engaged columns. This

1 On the Colosseum and its inscriptions see Lipsius, De amphitheatro, 1584; Maffei, Degli anfiteatri, 1728; Fontana, L’amfiteatro Flavio, 1725; Foa, Osser. nell’arcas del anf. 1813; Uggeri, Delle linee dei selli, 1823; De Rossi, Ann. Inst. 1849, p. 338; Hübnner, Iscriz. sui sedili dei teatri, Ann. Inst. 1856, p. 52; Gori, Mem. storiche del anf. Flav. 1874; and Tocco, Naumachie e spetacoli, 1875. See also note in vol. ii. p. 82.

2 Concrete of lava for foundations; of tufa and brick-bats for walls; and of pumice-stones for vaults.

3 The numerous holes, which disfigure the arcades, were made during the early Middle Ages in attempts to extract the then valuable iron of the clamps; the amount of trouble taken in cutting through the hard travertine to extract each clamp shows that labour must then have been worth but very little, or iron very scarce.

4 The outer arches of the lowest tier had each a number over it, rang-
Order is debased. Tuscan in style, the capitals are well moulded,

but the base mouldings are coarse and inelegant. In fact, throughout the building, little taste or refinement is shown.

Fig. 59.

Plan of the Colosseum at four different levels.
The lower quarter on the right gives the plan at the ground level. The upper quarter on the right gives the plan at the top of the caves. The other two quarters give the plans at two intermediate points.

There still remain arches numbered xxiii. to liii., and one unnumbered arch—the emperor's entrance from the Esquiline, where a covered passage or colonnade abutted against it; see fig. 60.
in the details. This is specially apparent in the coarse mouldings of the impost\(^1\) of the inner square piers, the slight pilasters of which do not project enough to stop the heavy impost capping, and hence these have to be cut off in a very awkward way.

In the middle of the side towards the Esquiline traces can be seen of the start of the long colonnade, which once joined the amphitheatre to the Thermæ of Titus. At this point the arch is wider than the rest, and is unnumbered, being the private Imperial entrance. On each side of it the steps of the stylobate stop short, leaving a level surface on which stood the first marble columns of the arcade; a piece of one of these columns still exists. Under this colonnade a subterranean passage ran towards the Thermæ; it is vaulted in concrete, but only its commencement has been cleared out.

The next Order of the façade has similar rows of arches, but with engaged columns of Ionic style, unfluted, and with capitals only roughly blocked out.\(^2\) The columns stand on pedestals, the die and mouldings of which return under the arches, forming a sort of attic over the main cornice of the Order below, which also served as a parapet to prevent people walking in the upper ambulatories from falling over.

Each of the arches in the two upper tiers was filled in with this thin and low parapet wall. In the centre of each, on the outside of the parapet, was a projection which formed the pedestal for a statue—one in each archway, as is shown on the medallion of Gordianus III., fig. 58. Only one of these parapets is complete; it is in the top tier, opposite the Esquiline, and by it can be seen the dowel-holes for the (now missing) pedestal; see also fig. 60.

\(^1\) The moulding on which the springing of an arch rests is called the impost.

\(^2\) The whole external façade of travertine was once probably covered with \textit{opus albareum} (stucco), and the more minute details and enrichments would be modelled in it, over the rougher stone.
The third Order is the same as the second, but with Corinthian capitals, also only roughly sketched out; the

Fig. 60.
Part of the outer façade of the Colosseum, restored.

The lowest story shows the Imperial entrance and the numbers over the arches. The second and third stories show the statues and their pedestals. The top story, added in the third century A.D., has the masts which supported the awning.

cornices of both are debased, or rather simplified forms of the orders they are intended to belong to.
The passages, which follow the outside of the oval inside the arcades, are vaulted with concrete made of pumice stone or soft tufa, with occasional rings of brick inserted. These vaults were cast in fluid concrete on wooden boarded centering, and are free from the lateral thrust that constructional arches would have. The whole of the barrel vaulting throughout the building was covered with fine hard marble-stucco, moulded with panels containing foliage and figures in relief, all once decorated with painting and gold. In the sixteenth and even as late as the eighteenth century a great deal of this delicate stucco work still remained, but now all is gone except one bit under the arch nearest to the podium by the Imperial entrance from the Esquiline.

These reliefs were especially used to decorate the raking vaults under the various staircases, and the vaults of the ambulacra and vomitoria, concentric passages and exits. These fine coatings of opus tectorium have fallen off the vaults owing to the imperfect adhesion of the stucco to the cast concrete of which the vaults are made. On this concrete the impress of the boards of the centering is very visible; it has been pecked over to form a key for the stucco decoration, but this was not sufficient to give it a firm hold. The method of studding the surface with iron nails, always used and with greater success in the case of walls, was not applied by the Romans to their vaults.

The construction of the inner walls is specially worthy of attention. These walls supporting the rows of vaults, which carried the cavea with its sloping tiers of marble seats, radiate inwards towards the various centres from which the oval of the plan is struck, and are set rather close together; on them rest the raking vaults which support the seats and the stairs. Thus the nearer the wall is to the arena, the less it is in height, and the less need it has for very great strength.

1 Barrel vaulting means one of plain semicircular form, continuing without the intersection of other vaults.
Of the three materials used for these walls, concrete is subjected to the least pressure, next comes opus quadratum of tufa, and thirdly, travertine, the strongest of the three. Thus the inner parts of the radiating walls, where the height is insignificant, are made of concrete of mixed broken bits of tufa and brick. The foundations, on which the weight is heavier, are of concrete made with the very hard lava (silic) used for the Roman roads; this is for extra strength. The vaults in many parts, but not all, are of concrete formed of pumice stone, for the sake of lightness.

At the ends of these low radiating concrete walls, travertine piers are built as points of special strength. Again concrete walls are used in other parts of the radiating walls, but higher up where they have no great weight resting on them. In all parts the concrete walls are faced with the usual skin of triangular bricks, with many arches introduced, apparently as relieving arches, but of no real constructional use. On arches in brick facing see vol. i. p. 58.

The brickwork of the facing to the concrete is of the neat regular kind, with rather thick bricks, which is peculiar to the Flavian period; it exactly resembles that in the Palace of Domitian on the Palatine, having bricks averaging 1 1/2 inch in thickness with 1/2-inch joints. Here and elsewhere the whole surface of the brick facing is studded with large iron nails driven in, when the mortar was soft, to form a key for the stucco, which in the Colosseum covered every inch of brick facing. The sham relieving arches are of the usual 2 feet tiles, mostly cut into three, with a few whole ones at intervals.

The outer and lower parts of the radiating walls, where the pressure was great from the great height of wall above, are built of massive blocks of brown tufa, set with a thin skin of mortar in the joints. Strong as these massive tufa walls really were, when protected from weather, the cautious engineer who built the Colosseum was not satisfied without
adding additional points of strength, and so at intervals he built piers (as it were) of travertine, not projecting, but flush with the tufa walls, and tending into them on each side. On account of this the tufa blocks do not run in the usual 2 foot courses, but range with the irregular (pseudisodomous) courses of the travertine.

In fig. 61 is shown one of the points in the upper part of the radiating walls, where all three methods of construction are seen together—namely, the tufa wall, with its upright strip of travertine, and upon that the brick-faced concrete wall, with its sham relieving arches, upon which, finally, rests the raking concrete vault which carried the tiers of marble step-like seats.

System of drains. A large drain runs all round the oval of the plan, passing under the radiating walls where they are highest, that is, nearest to the double ambulatory of the ground-floor. A large travertine keystone is inserted in the walls where this drain pierces them. Other smaller drains from the central arena communicate with this main one, radiating outwards to it. Their start may be seen in and by the sides of the recesses of the podium; they are roofed with two large tiles leaning together, and forming a triangular top—a very common way of roofing the smaller drains in Rome. The larger one, into which they all run, was roofed in parts with brick arches, and in other parts only by the large travertine slabs of the pavement.1

1 Mr. Parker, in his work on the Colosseum, wrongly asserts that these travertine "piers" were later insertions; his failure to understand the objects of the Romans in using these different materials led him to think that each was the work of a different time, and has hence caused him to invent a complete imaginary history of the building, very far removed from the real one.

2 Owing to the position of the Colosseum in the hollow once occupied by the Stagnus of Nero, a natural deep depression abounding with springs of water, its careful drainage was a very important matter, and was arranged with the greatest possible skill and accurate adjustment of
Example of construction in which many materials are used; upper part of one of the inner radiating walls of the Colosseum.

AA. Marble seats on brick and concrete core, supported on vault made of pumice-stone concrete (C).

B. Travertine arch at end of raking vault (C).

D. One of the travertine piers built in flush with the tufa wall as a point of extra strength.

EE. Wall of tufa-concrete faced with triangular bricks.

F. Travertine pier at end of radiating wall.

G. Brick-faced arch of concrete to carry floor of passage.

HH. Tufa wall, opus quadratum.

JJJ. Line of steps in next bay.

KK. Surface arches of brick, too shallow to be of any constructional use, and not meant for ornament, as the whole was stuccoed.

levels, forming a complete network round and inside the building. The repair of this system of drainage is recorded in one of the inscriptions published by the Comm. Lanciani.
Main entrances. At the four axes of the oval there are entrances under travertine arches, two on the Esquiline and Caelian sides leading to the podium, where the emperor sat; and two at the ends of the longer axes, leading into the arena. Through these latter archways entered the processions of gladiators who were about to fight. At these four points travertine is used along the whole depth of the entrance, from the outside to the arena; no tuff or concrete is introduced except for the vaulting.

The arena and the podium. The arena was originally smaller than it looks at present, owing to the destruction of the wall that fenced in the beasts, and prevented their reaching the podium. The position of this wall, which was of travertine, can be traced at one point on the Esquiline side. The narrow passage between it and the podium was paved with massive slabs of travertine. This wall was probably low, so as not to obstruct the view, and on it was fixed a metal screen, with network of gilt bronze, and a smooth top rail made to revolve, so that even the active panthers and other felidae could not climb over it; Calpurn. vii. 51-56; Pliny, Hist. Nat. viii. 20.

The podium is a long encircling suggestum or platform, about 12 feet high, built of brick-faced concrete. It was once covered with marble, with a moulded plinth and cornice, and probably a colonnade supporting a roof or canopy over the heads of the dignitaries who sat on it. It was provided, not with step-like grades of seats, but with rows of separate marble thrones, each inscribed with the titles of the official who occupied it. This system of inscribed marble thrones and their form were taken from the thrones in the front row of the theatres of the Greeks; many of them are still in situ in the great Dionysiac Theatre at Athens. Several fragments of these thrones have been found in the Colosseum.¹

¹ A large number of these marble seats were taken during the Middle Ages, and used as Episcopal thrones in the centres of church apses; many of these still exist in the Roman churches. A few, these, for example, in
The Emperor's throne was raised above the top of the _podium_ on a _scockum_ or _tribunal_. A canopy over his head was supported on columns, so that he sat in a raised shrine-like niche.

At the back of the _podium_ a wide passage, handsomely paved and lined with slabs of marble, ran all round the oval; and from it a number of marble stairs gave access to the top of the _podium_. The start of these marble steps still exists at one point on the Caelian side; and in the second step from the bottom holes remain for the pivots and bolts of bronze gates which shut in each staircase at its foot. The massive marble paving of the passage, from which the _podium_ stairs ascend, has a channel for rain-water on each side, slightly sunk in the marble, and the surface of the pavement is curved upwards in the middle, like the convex _dorsum_ of a road, so as to throw the water into the channels at the sides. Some of the paving slabs are as much as 10 feet long, and each is fastened to the next with metal dowels or pins.

Besides the stairs, of which there were eight in the whole circuit, there are two other sorts of breaks in the _podium_. On each side of the two main gladiators' entrances, at the ends of the oval, the _podium_ is interrupted by approaches, 6 feet 9 inches wide, to the passage between it and the missing fence wall of the _arena_. This passage was probably filled with guards to prevent the beasts from reaching the dignitaries on the _podium_, in case a lion or some other fierce beast succeeded in climbing over the screen which fenced round the _arena_.

The approach to the passage is formed by two marble steps and a gently-inclined slope with massive slabs of white marble, which lead from the higher level of the passage behind the

the Churches of S. Pietro in Vincoli, and S. Stefano Rotondo, are of pure Greek workmanship and design, and were probably stolen by the Romans from the theatre of some Hellenic city, for use in the Colosseum or other place of amusement. Thus, these thrones have been, at three different periods, used for three quite different purposes.
podium to the lower level of the passage in front of it. There were four of these approaches, one on each side of the two main entrances to the arena.

Another form of break in the podium is a sort of projecting balcony, 6 feet 9 inches wide, the marble pavement of which is level with that of the passage behind the podium, and juts out a little way into the passage between the podium and the fence wall, at a level of about 2 feet 9 inches above the lower paving of the passage round the fence wall.

These balconies also were probably intended for officers on guard in case of accident or conspiracy.

One of these balconies, on the side by the Esquiline, is well preserved, with its massive projecting slab of white marble, channelled at the edges with rain-water gutters. In it are marks of its marble parapet, and at the edges the holes for fixing the thick marble lining of the podium. The projecting part of this marble floor rests on a large block of travertine. There were eight of these "balconies" in the whole circuit of the podium.

In the front face of the podium a number of nearly square recesses are formed, which opened into the sentinels' passage between it and the fence wall; they are about 6 feet high, 6 feet 6 inches wide, and 3 feet deep. From the bottom of these niches start most of the drains mentioned above, radiating to the main drain, which formed an oval ring round the whole building. Like the rest of the podium, these recesses were lined with marble, the cement backing of which, and many of the iron clamps, still remain. These recesses were twenty in number; probably they were intended as sentinels' boxes for the body of guards mentioned above.

The cavea. Behind and above the podium sloped up the gradus or step-like seats of the cavea, where the bulk of the

1 The best preserved example of this slope and the two steps is that by the main entrance from the Sacra Via end, on the left, as one enters into the arena.
spectators sat. The lowest range, being nearer the podium of honour, was the more honourable. It consisted of about twenty tiers, and a great part of it was reserved for persons of Equestrian rank—Equites.¹

Above them, and separated by a zona or proecinctio (a low wall and passage) was a large block of seats for the mass of the wealthier Roman citizens. Along the top of this is a high brick-faced concrete wall, once, of course, lined with marble, pierced with a series of doors, windows, and recesses for statues. At this point Domitian's work ends, and the galleries above are of the third century A.D. These uppermost tiers were occupied by the women and by the lower classes of Rome; and to them admission was frequently free.

Along the highest tier ran a handsome marble colonnade of the Corinthian order; many fragments of the columns and their capitals still exist, and have rolled down the cavea to the bottom. The capitals are of more than one date; some have well-cut foliage, while others are only blocked out. Some are of late and fanciful design, with winged serpents and Medusa heads introduced among the acanthus leaves. All appear to be late in date, and probably belong to the restorations of Severus Alexander and Gordianus III., between 222 and 244 A.D.

One of the capitals is carved out of an immense marble frieze taken from some much earlier building. In it are sinkings for a bronze inscription; the matrix for the letters

¹ The rights of the Roman Equites to places of distinction in the various places of amusement were confirmed and increased by a law introduced in 87 A.D. by L. Rescius Otho, Tribune of the People; it was known as the Lex Oescis Theatralis. The Saecus Equitum are mentioned by Martial, v. 41. Till the third century A.D. no names of individuals were inscribed on the seats—only titles or words descriptive of classes; in the fourth and fifth centuries individual names were occasionally affixed. Many interesting inscribed fragments of the praedae are given in Lanciani's valuable work on the inscriptions of the Colosseum.
still remain on the top of the capital. The existing columns are of white Luna marble, Carrystian cipollino, and Egyptian granites; all appear to have been monoliths. Other architectural fragments are of Pentelic white marble and Phrygian marble (parniasetto).

A large number of other marble blocks, also taken from some earlier building, have been used to cut a long inscription on; see Lanciani, Iscriz. d. Anf. Flav. These are the blocks of a very long moulded Corinthian plinth, the large torus moulding of which has been hacked away, and the blocks set on edge. The late inscription has then been cut on the upper bed of each block; it records a restoration of the Colosseum in the reign of Gratianus and Valentinus, about 375 A.D.

On one of the inscribed fragments occurs the phrase (restored by Mommsen) Aquis dimissis. This refers to a restoration of the system of drainage, which, if it got blocked, would soon flood the lower levels of the amphitheatre with water, owing to its deeply sunk position in a natural basin, between the Esquiline and Caelian Hills.

A great many fragments of the marble seats (gradus) exist, some inscribed, but none are in situ; nearly every piece of marble having been stripped off the whole of this gigantic interior.

Staircases. The start of the main staircases leading to the upper tiers is from arches in the second (inner) surrounding ambulatory. The steps are of travertine, with ten-inch treads and ten and a half inch risers; they have moulded nosings. Some of these stairs are very perfect on the side towards the

1 Possibly part of NEReu Traianó tribUn. postestate; this fragment may be from Trajan's Forum, possibly from the Arch which was destroyed by Constantine, in order to use its materials and reliefs for the construction of the existing Arch near the Colosseum.

2 A number of small marble altars have been found in the Colosseum, cut in the shape of tripods; some of these are on the right near the main entrance.
Lateran, and show but little signs of wear. The whole system of stairs is rather complicated, and is arranged with the greatest ingenuity, so as to occupy the least space, and also to afford a complete set of separate approaches to each cavea or division of the cavea.

Some of the smaller upper stairs are very steep; all rest on raking vaults of pumice stone or soft tufa, and each stone or marble step was bedded on square clay tiles. The stairs which ascended the cavea, up the slope of the seats, were all of marble, like the seats themselves, and were arranged (as in the Greek theatres) so as to have two steps ranging with each seat.

Upper tiers. Upper part of the cavea. About two-thirds up the cavea there is the marked division mentioned above as separating the plebeians' and women's seats from the wealthier classes below. A lofty wall runs all round the oval, forming a considerable break between the highest seats of the tiers below and the lowest of the tier above. Of course all except the top part of this enormously lofty wall is hidden by the sloping tiers of seats of the cavea. The lower hidden part is of travertine, but the upper part, pierced with doors, windows, and recesses, is of concrete lined with brick, and was once covered with marble, having probably, a cornice resting on engaged marble columns. The recesses were made to contain statues.

The upper part of this wall is of the third century A.D. It marks the beginning of the addition or rebuilding of Severus Alexander.

Behind this wall, at the level where it ceases to be of travertine, a low vaulted passage runs the whole way round the oval plan; lighted partly by arches which led into the cavea, and partly by windows formed in the springing of the vault. From this encircling passage stairs at regular intervals ascend to the higher level, leading to the floor of the third Order on the exterior, that with Corinthian capitals. The
stairs project into the passage in short double flights of five
steps, passing right and left.

In this passage a large open water-channel runs along
the floor at one side, formed of hollow blocks of travertine,
thickly lined with *opus signinum*. The use of this is not clear.
It can hardly have been for rain-water, as there are pipes for
that set in vertical channels, 13 inches wide, formed in the
faces of the walls at various points, and apparently descending
almost straight down to the ground. It was more probably
to carry water brought from the Caesian Aqueduct to feed
the various fountains and water-jets which cooled the air of
the crowded amphitheatre.

The doors in the upper part of the intercepting wall
mentioned above open on to the level of the floor above this
passage; and it is at this point that the Flavian work ends
and that of the third century begins. This is clearly shown
by the very different character of the two sorts of brick facing,
which in the Flavian work has bricks 1 1/2 inch and joints 1/2-inch,
and in the later wall, bricks scarcely 1 inch thick, and joints
3/4-inch to 1 inch. This later brick facing is as neat in appear-
ance as the Flavian, and is really equally strong, though it
looks less solid owing to the greater thickness of the joints.
Passing towards the exterior of the building, the Flavian work
reaches higher; the above-described brick-faced wall is level
with the third (Corinthian) order of the exterior arcade,
which, like the two below (Ionic and Tuscan), is of the
Flavian period.

But the fourth external order, that with the tall travertine
wall broken by pilasters, is a third-century addition, or prob-
ably, judging from the above-mentioned representations on
coins of Titus and Domitian, a rebuilding of an earlier story.
The wall is of three materials, namely, an external facing of
travertine 4 feet thick, an internal facing of brick, and an
intermediate filling in (*fætura*) of concrete, 2 feet 3 inches
thick. The brick facing is a very characteristic example of early
third-century brickwork, being exactly the same as that described above with 1 inch bricks and joints nearly the same.

The concrete contains a great deal of marble, as is usually the case during a late period, and the travertine facing is partly built of numbers of blocks taken from some earlier building; among these are a quantity of drums of columns, pieces of cornices, friezes, and architraves, and other moulded details. These are allowed to project roughly into the concrete for the sake of forming a good bond, and this gives the wall the appearance of having been built roughly and in haste, but this is not really so. On the external face of the façade the stones are cut as truly, and jointed as neatly, as in any part of the building; and it would have been worse than useless to make the inner face regular and smooth, as it would not have tailed into and bonded with the concrete mass behind.

Two tiers of small windows in the top external order gave light to small vaulted passages, which encircled the whole building at different levels near the summit.

Awning. At the top of all, nearly 160 feet above the ground, there is a bold well-designed cornice, with deep projection on the outside of the wall, and this is pierced at intervals with square holes. About 14 feet below each hole a large travertine corbel projects from the face of the wall, and in this there is a square sinking corresponding to the hole above. This was an arrangement to hold the wooden poles that supported the awning over the heads of the spectators. A pole was dropped through each hole in the cornice, and its foot rested in the hole in the corbel below; the slightly

1 From the time of Sept. Severus to Severus Alexander, the appearance of brick facings was exactly the same—neat, regular, and set in very good hard mortar. Brick facing rapidly declined both in neatness and the goodness of its mortar after the middle of the third century A.D., and yet some of the brickwork of the wall of Aurelianus of about 275 A.D. is nearly as neat and regular as that of the Antonine period.
projecting frieze and architrave of the entablature were cut away to allow the mast to rest close against the wall. Other corbels on the inner face of the wall held a corresponding set of wooden uprights.

The upper parts of each pair of poles were about 6 feet 3 inches apart, being separated by the thickness of the wall; they were probably strutted and lashed together so as to form a stiff support, as the strain of the ropes of the awning must have been very great. The awning did not, as has sometimes been supposed, cover the whole amphitheatre; a thing which would have been practically impossible, owing to the enormous strain of so long a bearing, far beyond what any ropes could bear. It simply sloped down over the heads of the spectators in the cavea, leaving the whole central arena unshaded.

Corbels to support the lowest masts exist in the outer wall of the substructures below the level of the arena; see GG on fig. 62. These poles rose out of the arena along the line of the fence wall that protected the podium. There must have been many intermediate points of support at intervals up the slope of the seats, but no indications exist of any of these owing to the complete removal of all the marble seats and linings.

A whole army of sailors were employed to extend and furl the awning; see Lampridium, Comm. 15. Throughout the period of the most luxurious extravagance in Rome the awning and its ropes were of silk; Dion Cass. xliii. 24. During some of the scenic shows boys were hoisted up to this awning—


1 Pliny tells us that awnings were first introduced into theatres by Q. Catulus, who rebuilt part of the Capitoline Tabularium in 98 B.C.

Silk awnings, Pliny states, were first used by Lentulus Spinther at the Ludi Apollinaris in the Campus Martius.

Julius Caesar spread silk awnings not only over the whole central area of the Forum, but also over the Sacra Via from his house, the Domus Publica, up to the Clivus Capitolinus; see Pliny, Hist. Nat. xix. 23.
Ropes for acrobats were stretched across the arena, probably supported by the lower poles of the awning.

Traces of a continuous wooden gallery for the sailors who managed the awning to work on exist on the interior, at the level of the top of the outer wall, and there are remains of the brick and concrete stairs which led to this, still visible on the internal brick facing. At one or two points these staircases crossed the upper windows between the Corinthian pilasters, and in these places the windows were built up, forming only sunk panels. Traces of other wooden galleries and stairs exist at a lower level than the sailors’ gallery; the holes for their joists can be traced in the wall.

The exact arrangement, however, of this top story with its wooden floors and seats cannot now be completely made out. Very near the top there appears to have been a gallery resting on a colonnade, some large fragments of which still exist on the ground below, and one or two small pieces of marble bases still remain at this high level. There was probably another colonnade along the podium; and midway there was the marble-covered wall with its doors and windows. It is now impossible to tell whether there were any other important breaks to the monotony of the sloping arena. It appears probable that there were not.

Substructures below the arena. This is one of the most interesting parts of the Colosseum. A complicated system of walls and arches exists below the level of the arena; these were partly excavated by the French at the beginning of this century, but soon filled in, and not again cleared out till about the year 1872, under the supervision of Comm. Rosa.

The floor of this subterranean part is about 20 feet below that of the arena. The whole oval space is divided up into long narrow passages by a series of walls, some parallel to the major axis, and others following the curve of the oval. The floor of the arena must have been of wood, resting on the top of the closely set walls of the substructures. In it trap-doors
and grooves were arranged so that scenery and cages containing beasts (see below) could be hoisted up on to the arena floor.

These substructures are of many different dates, and show repeated mendings and patchings of earlier walls and arches. The greater part that now exists is of late date, probably of the fourth to the sixth century A.D., but among these later structures there are fragmentary remains of a series of walls and arches which are probably contemporary with the original Flavian building. These earlier remains consist of a series of tufa walls very neatly jointed, and built of blocks of great length and depth; some as much as 7 feet long.

Inclined planes. In these tufa walls are remains of a number of massive arches, some flat, some semicircular, and others formed of a quarter of a circle, with over them a course of tufa blocks raking upwards at a gentle slope, which look as if they had been made to support inclined planes of wood on which to slide the heavy cages up to the arena level, before the invention of the lifts with counterpoise weights. The windlasses mentioned below were probably used in connection with these inclined planes. These fragmentary portions of massive tufa masonry are built up and supported in various ways by the later brickwork. It is impossible now to form a clear notion of what the form of these tufa substructions was when they were complete.

The same may be said of the greater part of the later brick walls; evidently a great deal of wooden framing connected with the scenic machinery (pexmata) existed in these substructures, and the absence of this timber work leaves the greater part of the existing arrangements an almost insoluble mystery.

Lifts for cages. One point, however, seems clear, namely, that in the fifth or sixth century a number of rudely constructed lifts were added in four of the straight passages. These, there can be little doubt, were used to introduce wild animals suddenly through trap-doors in the wooden floor of
the arena. In these square lifts grooves can be traced to guide the cages in their ascent, and pierced stone bearers (at the top) to hold the pulleys over which ran the ropes and counterpoising weights that hoisted up the cages.

A similar arrangement of machinery and lifts in some earlier place of amusement is described by Seneca (Epis. 88), who mentions the machinatorer (scene-shifters) working the pegmata (lifts?) and scenery (tabulata) rising up to a great height.

A large number of massive bronze sockets, with dovetailed flanges set in great blocks of travertine, exist in rows in various parts of the substructures, both under the arena, and also in the long-vaulted rooms on each side of the subterranean passage, which runs towards the Lateran, on the major axis. These bear marks of circular wear, from revolving pivots, and must have been for windlasses to hoist up the heavy scenery from the lower spaces. Probably these windlasses were originally used to hoist the cages up the inclined planes mentioned above, before the lifts were introduced.

Dens for beasts. The outermost oval ring of the space below the arena is contemporary with the original Flavian building; and still remains in a very perfect state; see fig. 62. It consists of a row of recesses, 8 feet wide and 5 feet 3 inches deep, made of brick-faced concrete; these little chambers appear to have been dens for wild animals. In the vaulted roof of each is an opening, immediately below a small window, which opens out of a space or passage (not cleared out) which ran all round behind the dens. Food pushed through this little window would fall through the hole in the vault of the den. In this way the fierce animals could be safely fed without the risk of opening the doors in the grated front of the dens. Between each pair of arched dens are the travertine corbels and grooves in the face of the wall to hold the lower masts of the awning mentioned above.
At present these dens have open arches in front, but originally were, no doubt, filled in with a metal grating.

Colosseum: part of the substructures below the arena.

The plan is shown straight, but really it is on a curve, which varies at different parts of the oval plan.

AA. Recesses to hold beasts, once closed by metal gratings.
BB. Small windows and openings in the top of the dens, by which food could be supplied.
CC. Openings in the top of the water-channel, for the beasts to drink.
D. Water-channel shown in section.
EEE. Tufa piers in front of the dens; in the elevation they are shown broken off.
F. Flat arch of tufa on the top of the piers.
GGG. Pairs of large travertine corbels to hold the lowest masts for the awning.
H. Existing piece of fence wall round the arena to keep in the beasts.
In the floor in front of the dens, and forming a complete ring all round the oval, a drain or water-channel is formed, laid carefully to fall towards the end by the Sacra Via. In this a clear stream of pure water still runs. This stream is brought along a channel under the floor of the subterranean passage leading towards the Lateran. Opening at intervals along the whole circuit of this water-channel round the oval are small branch channels, leading from the brick herring-bone floor (opus spicatum) of the under-space, so that any water which got on to this floor would drain off into the stream along the oval ring. Other openings in the top of this water-channel look as if they were made to allow the animals in the dens all along its course to put their heads through to drink.

Close in front of these rows of dens are a series of tufa piers, with flat tufa arches at the top, much restored in parts with late brickwork. These piers are spaced out with no reference to the archways of the dens, and are evidently a later addition, but when they were made or with what object it is now impossible to tell. All the piers are full of holes for wooden framing of some sort, which appears to have been fixed against them.

Subterranean passages. Four long subterranean passages led from the space under the arena in different directions. One is on the minor axis towards the Baths of Titus on the Esquiline, below the long colonnade mentioned above; vol. ii. p. 89. Another in the opposite direction led to the Palace of Commodus on the Caelian Hill. This was partly cleared out in 1813-15, and was found to have mosaic pavement, marble wall-linings, and stucco reliefs on the vault. This passage was added by Commodus to unite his palace (originally the Domus Vechilliana) with the Colosseum, the scene of his favourite amusements. In it he narrowly escaped being stabbed by Claudius Pompeianus; see Dion Cass. Ixxii. 4, 17; and Herodian. i. 15, 16. A third passage branches from that last named in a southward direction.
These three passages are not now accessible. A fourth subterranean passage, about one hundred yards of which is now cleared-out, leads towards the Lateran Hill on the major axis. In this passage it is interesting to observe the massive travertine foundations of the Colosseum, built of enormous blocks, a few of which are taken from earlier buildings. The floor over the passage, made of thick travertine slabs, was supported on a series of huge flat arches, very neatly jointed, but not otherwise carefully worked. Some of the blocks are as much as 8 feet long. The floor of this passage is 4 feet 6 inches above the herring-bone pavement of the space under the arena, and under it runs the channel which brings the stream of water into the oval ring-channel mentioned above. Out of the passage leads a branch, communicating with the long vaulted room on each side, in the floor of which are the rows of bronze windlass sockets mentioned above.

By this branch, on each side, is a narrow winding stair, with very steep steps, ingeniously planned so as to fit in a very small space. These stairs lead up to the ground level in the central gladiators' entrance towards the Lateran. It is by this staircase that the visitor now descends to the substructures below the arena. A corresponding pair of staircases probably exist at the other end of the building, but that half of the substructures is not now cleared out. Two other square chambers, each with a bronze socket in its pavement, open out of the subterranean passage farther away from the arena.

**Colossus of Nero.** The colossal gilt bronze statue of Nero, about 119 feet high, with its pedestal, originally stood in one of the courts of the *Golden House*;¹ Suet. *Nero*, 31. When Vespasian pulled down this enormous palace he moved the

¹ This statue, which was the work of a Greek called Zenodorus, appears to have been badly cast, as Pliny (*Hist. Nat.* xxxiv. 45 and 46) remarks that it showed that skill in bronze casting had ceased to exist, in spite of its being the work of a very able sculptor, who was liberally paid by Nero; see vol. ii. p. 147.
Colossus to the *Summa Sacra* *Vet*, probably to the place afterwards occupied by the north-west end of the Temple of Venus and Rome. At the same time he is said to have removed Nero's head, and replaced it with that of *Apollo Helios*, surrounded with rays of light.¹

According to Lampridius (*Hist. 17*), Commodus placed his own portrait head on the Colossus, but on the medallion of Gordianus III., shown in fig. 58, vol. ii. p. 81, the head of the Colossus is shown surrounded with rays.

When Hadrian built his Temple of Venus and Rome the Colossus was again moved, and set on the brick and concrete pedestal which still exists between the temple and the Colosseum; see Spartian. *Hadr. 18*.

It is shown in its final position near the Colosseum on the above-mentioned medallion of Gordianus III.

_The Amphitheatrum Castrense._ This name has been given with much probability to a small amphitheatre, which is on the line of the Aurelian wall, near the Basilica of S. Croce in Gerusalemme. It can best be examined from the outside of the wall of Aurelian at a short distance to the left after passing out of the Lateran Gate; see below, vol. ii. p. 383. It is catalogued in the *Curiosum* in Reg. v. This amphitheatre was probably built for the amusement of the soldiers in the Praetorian camp. In plan it resembled the Colosseum, and was surrounded by open arches with engaged columns, two orders high, both Corinthian in style.

The foundations are of cast concrete made of lava, the walls are of tufa concrete faced with brick, and all the architectural details are of very neatly moulded brick or terra cotta, once covered completely with white stucco, on which coloured decorations were painted. The Corinthian capitals of the

¹ Like the three-quarter face of Apollo on the coins of Rhodes, which is probably similar to the head of the celebrated Rhodian Colossus of Helios.
engaged columns are of moulded terra cotta built in courses, ranging with the rest of the brick facing. Fragments of antefixae, delicately moulded friezes, and other terra-cotta ornaments, have been found in large quantities scattered round the building, but none of these minuter details are in situ. In a few places blocks of travertine were embedded in the concrete and brick wall to give points of extra strength. One large block is set under the base of each engaged column in the lower tier. And two small rectangular bits of travertine are built in on each side of the jambs of the lower arches. The use of these apparently was to fix metal screens in each archway.

The general character of the work appears to belong to the early part of the second century A.D. The brickwork is not Flavian in appearance, but resembles that of Trajan's reign. It may possibly, however, be earlier. The facing is very neat and regular; the bricks average 1 to 1\(\frac{1}{2}\) inch in thickness, with joints \(\frac{1}{4}\) to \(\frac{3}{4}\) inch. They are hard and well burnt, and are yellow and red, mixed at random. The facing bricks of the arches are the usual tegulae bipedales, tiles 2 Roman feet square, which have been cut into three pieces, and at rare intervals a whole tile built in, in the usual way for the facing of arches, as is shown in fig. 9 in vol. i. p. 59. The interior is now completely ruined, but was once richly ornamented with marbles; of which an immense number of fragments lie all round.

The Amphitheatrum Castrense was included by Aurelian in the circuit of his wall, in such a way that about half the curved arcading of the exterior was visible outside the city. The open arches of the amphitheatre were then built up, so as to form a strong defence, like the wall on each side of it. The original level of the ground round this amphitheatre was several feet higher than it is now; and parts of its foundations are now exposed by the removal of the soil, both within and without the circuit of Aurelian. At one point only is any of
the upper tier of arches still preserved; that is immediately outside the Aurelian wall, where it runs up to the amphitheatre, on the side nearest the Porta Asinaria. A very little more than now exists is shown by Du Perac in his Festigij di Roma, 1575, pl. xxvi.
CHAPTER V

ROMAN BATHS.

Till the time of the Empire the Baths of Rome (Balnea or Balneae, from the Greek βαλνεῖα) were on a comparatively small scale, and were constructed without that architectural magnificence which made the later Thermae perhaps the most magnificent, and by far the largest, of all the public buildings of Rome.¹

One of the earliest baths mentioned by a Roman writer was that in the Villa of Scipio Africanus at Liternum, about 190 B.C., which Seneca (Ep. 86. 12) says consisted only of one small dark chamber, after the ancient fashion. In the middle of the first century B.C. there were many Balnea in Rome; see Cicero, Ep. ad Q. Frat. iii. 1, and Pro Coel. 25, 26.

The system of heating by hypocausts is said to have been introduced into Rome about 100 B.C. by Sergius Orata; see Val. Max. ix. 50, and Pliny, Hist. Nat. ix. 168; in this passage Pliny calls baths heated with hypocausts balneae pensiles.

The large and very magnificent baths which occupied so extensive a part of the area of Rome under the later Empire were usually called Thermae (Θέρμαι). Not only the name but the institution itself and the customs connected with it were of Greek origin. The costly splendour and luxury of the Thermae would have been very repugnant to the stern Romans of the Republican period. The description of the Roman balnea given by Vitruvius was probably written

¹ With the exception, perhaps, of the Circeus Maximus.

VOL. II
before the construction of the Thermae of Agrippa, which were the first built in Rome, and only refers to the smaller balnea which were then in use. He says that the baths for men and women should be in adjoining buildings, so that one set of furnaces and hot-water cisterns might be available for both. This is the arrangement adopted in a small set of balnea at Pompeii, and also in a building shown on the Marble Plan of Rome, with the inscription Balneum Caesars. In later times either both sexes bathed together or else the baths were reserved on certain days for women only, as is the modern custom in the East. Consequently the great Thermae have no separate sets of rooms for men and women.

Edicts forbidding promiscuous bathing of both sexes were issued by Hadrian and Marcus Aurelius; Spartan, Hadr. 1, and Capitol. M. Aur. Ant. 23.

The public baths were originally under the supervision of the Aediles, and were guarded by Balneatores, who received the fee for admission (balneaticum), which was usually one quadrans, about a farthing. Children were admitted free; see Juv. ii. 152 and vi. 447, and Hor. Sat. iii. 137. In some cases strangers and foreigners had free admission to the baths, special endowments being made for this purpose. An inscription found in Rome in the sixteenth century gives an example of this—

L. OCTAVIO - L. F. CAM | RVFO - TRIB. MIL. ... |
QVI - LAVATIONEM - GRATVTEAM - MVNICIBVS |
INCOLIS - HOSPITIVS - ET - ADVENTORIVS ... |

A somewhat similar inscription found near Naples is published in Cor. In. Lat. v. 376.

The principal classes of bath attendants were these: junitor, doorkeeper; coapsarius, keeper of the bathers’ clothes; uactor...

Varro (Linn. Lat. ix. 68) mentions separate baths for women built adjoining those of the men: Bina conspicua uedificia lavandi causae, uum ubi ivi, alterum ubi mulieres lavarentur.
and _reuncitor_, anointer with oil; _tonсор_, barber; _aliphus_, the bath slave. _Servants_.

slave who extracted superfluous hairs; _tractator_, shampooser; _fornavator_, stoker of the furnaces; and _sebacarius_, lamp-lighters. In the large _Thermæ_ there were some hundreds of slave attendants.

The various processes gone through in the bath are thus described by Lucilius, who died in about 102 B.C. (Sat. vii. frag. 9), "_rador, subvellor, desquamor, puniscor, ornor, expolior, pingor._"

The names of the various parts of the Roman _Thermæ_ were taken from the baths of the Greeks, which appear to have been usually built in connection with the _Palaestra_ where athletes exercised.

Much interesting information about ancient baths is given by Lucian, Ίππιας ἡ Βαλανείων, in which he describes the baths designed by his friend the architect Hippias; see also Pliny, _Epis._ ii. 17 and v. 6, where he gives a detailed account of his country villas at Laurentium and in Tuscany.

Another still more important source of information is Vitruvius' description (v. 11) of the baths which occupied one side of the typical Greek _Palaestra_. He enumerates the following rooms, all of which appear to have found a place in the later _Thermæ_ of the Romans. On each of three sides of the great open _peristyle_ or _porticus_ there was a semicircular recess (_exedra_) with seats round it. On the fourth side a larger recess or apse was called the _ephebeum_. On each side of this, occupying the rest of the fourth side of the _porticus_, the rooms of the bath were arranged.

These were the _nuxæum_, (from κωβυκός, a sack), a room for pugilists to practise by striking at hanging leather bags of sand;¹ the _conisterium_, where the bathing athletes rubbed themselves with sand; the cold bath-room (_frigidæ_)

¹ One of the beautiful engravings on the "Ficorion cista" in the Museo del Collegio Romano represents one of the Argonauts practising by hitting out at a hanging bag (_κόβυκας_).
Fig. 63.

Plan of the smaller Baths at Pompeii, showing the double sets of rooms for men and women, with the heating apparatus between them, so that one furnace served for both, as is recommended by Vitruvius.

21a, 21b, 21c. Public entrances to the men's baths.
1. Entrance to the women's baths.
9. The common furnace and cauldrons for both baths.

10 and 11. Store-room for fuel.
22. Latrina by entrance 21c.
20. Open court of men's baths.
8. Court of women's bath.
2. Stairs to upper floor.
3. Apodyterium.
4. Tepidarium.
In women's baths.

5 and 6. Calidarium.
7. Labrum.
17. *Apodyterium.*
18. Cold bath.
15. *Tepidarium* with benches, 16.
12. *Calidarium,* with hot bath at one end (13), and *tobracium* at the other (14) as described by Vitruvius, v. 10. 4 and 5.

In the men's baths.

The hatching on this plan shows the rows of shops (tabernae) facing on the streets which surround the *insula.*

*Laetatio,* or Greek ἔλεος; and the *claustrhothesium,* a room for anointing with oil and perfumes. The whole skin of the bathers was covered with olive oil, which was then scraped off with a sharp strigil; this was done for the wealthier classes in Rome by slaves called *alitiae* or *anctores.* The fine ancient copy of the celebrated *Apoxymenos* by Lysippus, now in the Vatican, represents an athlete after his bath removing the oil with a strigil. This statue was in front of the *Thermae* of Agrippa; see Pliny, *Hist. Nat.* xxxiv. 62; and below, p. 141.

The furnaces which heated the hypocausts and hot water baths were called *prostigmae* (Greek πρό and πυργεύς). The *Laconicum* and the *concamerata sudatio* were the hottest chambers for sweating in, like a modern Turkish bath; next came the hot water bath (*calidu laetatio*). The frigida *laetatio* or *frigidarium* was the cold room, which in the large Roman *Thermae* contained a cold swimming bath, which was called *a piscina* or *baptisterium,* see Pliny, *Ep.* v. 6. 25.

In this list Vitruvius does not mention the *Apodyterium,* a room for undressing, which was provided in all except the smallest Roman baths; slaves, called *caparitii,* took charge of the bathers' clothes. In the previous chapter (v. 10) Vitruvius gives some interesting details about the *Laconicum* in the smaller *balnea.* It was an apsidal chamber, with a circular opening in the centre of the dome of the apse, which was closed or opened by a bronze valve, called *clipeus,* from its round shield-like form. This was arranged to move up and down by pulleys and chains, so as to regulate the inlet of cold air.
The small *Laconicum*,¹ which Vitruvius describes, had seats all round its walls, and in the centre there was a hot bath (*labrum*). In the great *Thermae* the *labrum* was frequently very large, and was cut out of one immense block of marble.²

In the baths at Pompeii exactly such a *Laconicum* as Vitruvius describes still exists, with its *labrum* and the circular opening in the dome above, all in a perfect state of preservation, except that the bronze valve is missing; see plan on fig. 63.

With regard to the hot water supply Vitruvius (v. 10) advises the provision of three bronze cauldrons (*ahena*), which are to be fixed above a hypocaust, and arranged so as to overflow from the cold vessel into the tepid one, and finally into the hot water cistern. This method would, however, only be applicable to the small *balanae*. An example of these *ahena* still existing in their place is mentioned below, p. 186.³

In the great *Thermae* water was heated on a large scale by passing it through a series of concrete and brick chambers or *piscinae* (see fig. 76 in vol. ii. p. 160), each of them being heated by a hypocaust floor and by flue-tiles passing up the sides, as is shown in fig. 65, left-hand side.

---

¹ The name *Laconicum* was given to the hottest room, as being a supposed Spartan invention; see Dion Cass. liii. 27.
² Some ancient labra are cut out of enormous blocks of porphyry, granite, or Oriental alabaster. Many magnificent examples in all these materials are preserved in the Vatican, especially round the Court of the Boleaeae. In the round hall is an enormous circular *labrum* cut out of one block of porphyry. Two fine *labra* of Egyptian granite from the Baths of Caracalla are used as basins for fountains in the Piazza Farnese.
³ It should be noticed that one *Laconicum*-like room still exists in Rome in a perfect state of preservation, having been made into a church; see below, p. 189.
⁴ The drawing of a Roman bath, illustrated at p. 332 in *Ancient Rome* in 1888, was said to have been found in the Baths of Titus, but it really is a production of the sixteenth century, drawn by some one who was trying to depict a Roman bath from the description of Vitruvius.
Another name for the hot room of a bath was *calidarium*, usually applied to chambers the temperature of which was not quite so high as that of the *Laconicum*. The *tepiderium*, as its name implies, was midway between the hot and cold rooms in temperature.¹

All the existing examples of Roman baths appear to have had concrete vaults over each chamber, but in the time of Vitruvius (reign of Augustus) ceilings made with wooden joists were sometimes used. He gives an interesting description of the great care with which these were to be protected from the steam rising from the hot baths below. The whole under surface of the woodwork is to have a series of iron bars at intervals of less than 2 feet hung from it by iron hooks nailed to the ceiling joists. Tiles 2 feet square (* tegulae bipedales*) are to be laid on the rows of iron bars, thus covering the whole area of the ceiling; the whole under side of the tile ceiling was then to be covered with that very hard cement which was made of lime, pozzolana, and pounded potsherds—"opus tectorium et testis tunxis"—similar in character to the *opus signinum* used for the *specus* or channels of aqueducts. Over this was laid an ornamental coating of fine hard stucco made of pounded white marble—*opus albarium* or *caementum marmoratum*. This great care was considered necessary to prevent the condensed steam from the hot baths soaking through the plaster ceiling and causing the wooden joists to rot.

Fig. 64 shows the tile ceiling as described by Vitruvius.

Vitruvius' description of the *hypoocausts* or hollow floors (*hypoconasts*) used for heating the hot rooms (*calidaria*) agrees closely with many existing examples; see fig. 65.

The lower floor was to be laid with 2-feet tiles (* tegulae*

¹ It should be observed that Vitruvius (v. 10. 1) gives the names *calidarium*, *tepiderium*, and *frigidarium* to the three bronze cauldrons of water, using the words *caldo* and *frigido* to cover the hot and cold rooms.
hipodes), over a bed of concrete; on this, all over the area of

CEILING OVER HOT BATHS

WTH V, X, S.

WOOD BOARDS

SECTION.

2 FT. TECULA

OPUS ALEARIVM

IRON HOOKS

OPUS SIGNIVM

JOISTS

SIGN BAR

Fig. 64.

Perspective sketch and section to illustrate Vitruvius' system for protecting the wooden ceiling joists over the hot rooms of baths by an inner ceiling of tiles. The tiles rest on iron bars which are hung in hooks nailed to the sides of the joists above.

the room, rows of short pillars (pilae) were built to support the upper or "hanging floor" (suspensura). These pilae
were 2 feet high, made of tegulae bessales, or tiles 8 inches

Fig. 65.

Baths of Caracalla; sections through the floors and walls showing the different methods of heating, the Tepidarium being heated by the hypocaust only and the Calidarium both by the hypocaust and by flue-tiles up the walls.

AA. Concrete wall faced with brick.
B. Lower part of wall with no brick facing.
CC. Suspensoa or upper floor of hypocaust supported by pillars.
DD. Another floor with support only at the edges.
EE. Marble flooring.
FF. Marble plinth and wall-lining.
GG. Underfloor of hypocaust paved with large tiles.
HH. Horizontal and vertical sections of the flue-tiles which line the walls of the Calidarium.

sa. Iron holdfasts.
JJ. Socket-jointed flue-pipe of Tepidarium.
K. Rectangular rain-water pipe, used where there was a copious downward flow of water.
LL. Vaults of crypt or basement made of pumice-stone concrete.

1 In existing examples of later date the pilae are higher, leaving more space between the two floors, probably because extra space was needed to allow slaves to crawl in under the suspensura to clear away accumulations of soot and ashes from the furnace.
square, set, not in mortar, but with clay in the joints. In existing examples these clay joints have been baked into brick by the action of the fire, which played among the pilae all over the space below the suspensura.\footnote{1} The example of a hypocaust on the left hand side of fig. 65 agrees exactly with the description of Vitruvius. That on the right is a later variety. It was from these hollow or "hanging" floors that Roman baths were sometimes called Balnea pensilia or Balneae pensiles; see Val. Max. ix. 1, 1, and Pliny, Hist. Nat. ix. 168.

In later times, when the Roman architects had grown bolder in their use of concrete, the pilae were frequently omitted,\footnote{2} and the whole upper floor was supported only at its edges, as if it were one immense slab of stone; see DD in fig. 65.

The suspensura itself was usually about 18 inches thick, and was formed of four distinct layers—(i.) its main mass of rough concrete (radius), usually of broken tufa; (ii.) a layer of opus testaceum, made of pounded brick and potsherds; (iii.) a thin bed of hard white marble cement (coementum marmoreum) or nucleus, in which were bedded (iv.) the marble tesserae or slabs which formed the upper surface of the floor.

The furnace (præfurnium or prægnicium) was at one side or below the hypocaust (ὑποκαλέω), and the heated air and smoke from it, after circulating between the two floors, escaped up a flue which was formed in the thickness of the concrete wall. This flue was usually formed of socket-jointed clay pipes, about 10 to 12 inches in diameter, round which the fluid concrete of the wall was poured.

Among the enormous collection of objects of all kinds in

\footnote{1} The hot rooms of Roman baths were occasionally used as means of putting people to death. An early example of this is mentioned by Livy, xxi. 7.

\footnote{2} Several examples of this can be seen in the Baths of Severus' Palace on the Palatine; an even more astonishing use of unsupported concrete floor existed at the House of the Vestals; see vol. i. p. 317.
the Museo delle Terme there is a large roof-tile of terra cotta with a circular pipe about 8 inches in diameter projecting from its upper surface. This pipe appears to be a chimney-pot for the exit of the smoke from a flue bedded in the wall below. This shows the way in which the smoke was carried through the roof, without any risk of rain-water leaking in round the chimney-pot—a thing which so commonly happens in modern Italian houses.

An additional method of heating, not mentioned by Vitruvius, was used under the Empire for the *Sudationes* or hottest rooms. This was done by lining the whole wall surface of the bath-room with upright lines of flue-pipes, rectangular in section (see HH in fig. 65, and fig. 66, next page). These flues communicated at the bottom with the space under the *mappamuro*, and were carried up to the top of the building where the hot air and smoke escaped. Thus the whole wall surface, as well as the hollow floor, was strongly heated by this sort of jacket of hot air flues.¹

It is rather difficult to understand how the exits of a long row of flue-tiles into the open air were managed. Most probably a number of them were made to converge to one point before issuing through the roof. A very interesting mosaic picture of a large country villa of the fourth century A.D., found at Oued-Atmenia in Algeria, clearly shows the roof pierced by a number of chimney-stacks, exactly like those now in use. Even the chimney-pots or smoke-cowls are indicated in this curious mosaic picture, which is now, unfortunately, destroyed; it is illustrated in *Trans. Inst. Brit. Arch.* Vol. I. New Series, 1885, and in the *Proceedings of the Arch. Soc. of Constantinie*, 1884.

¹ These wall-flues can be best examined in the large round chamber of the Baths of Caracalla, in the upper part of the Palace of Severus, in the upper rooms of the House of the Vestals, in the so-called Bath of Heliodorus by the *Saepta Vici*, and in the house at the extreme western angle of the Palatine beyond the *Scalae Caei*. 
Both these methods of heating were used under and around the hot water baths, which, in the great Thermes, are set in recesses of the Calidaria, as, for example, in the great domed hall of the Baths of Caracalla; and also in the Baths of the Atrium Vestas; see fig. 65.

Fig. 66 shows an interesting example of the method of heating a small private bath-room. The drawing gives a section through one of the series of bath-rooms on the upper floor of the House of the Vestals; see fig. 42, where this room is shown to a small scale, near the Nova Viale. It is described in vol. i. p. 316.

The hollow hypocaust passes under the floor of the room, and also under the hot water bath, which is made of concrete,
faced with thin slabs of white marble. The mouth of the
furnace is immediately under this bath, which is about 6 feet
long, 3 feet 3 inches wide, and about 2 feet 4 inches deep.
The suspensura and its pilae resemble those shown in fig. 65
vol. ii. p. 121. The pilae rest on the barrel vault of the room
below, the extrados being filled in level with concrete, and then
paved with the usual tiles on which the pilae rest.

Three of the four walls of each of these little rooms are
covered with a hot air jacket in the form of the usual rect-
angular flue-tiles, which are bedded and covered with a thick
mass of cement, against which the marble slabs rest, lining
the whole surface of the walls.

The horizontal section at the top of fig. 66 shows these
flue-tiles, the marble facing, and behind the tiles the usual
facing of triangular bricks over the whole surface of the
concrete wall.

It also shows the use of metal for three purposes—(i.) nails
driven into the joints of the brick facing to form a "key" for
the cement in which the flue-tiles are bedded; (ii.) T-shaped
clamps used at a few places to hold the flue-tiles—quite
needlessly, as the flues are completely bedded in a mass of the
most solid cement; (iii.) long iron or bronze clamps to hold
the marble slabs. One end of these clamps is driven deep
into the concrete wall, the other end is turned down into the
upper edge of the marble slab.

The portion of the Atrium Vestae which is illustrated here
appears to date from the time of Severus, c. 200 A.D., when
important alterations and repairs were carried out.

In both of Pliny the younger's country villas hypocausts
were used, not only for the baths, but also to warm his bed-
room. In the Laurentian Villa, near Ostia, there was some
arrangement by which the admission of heat to the bedroom
could be regulated by a door or valve: *Adapticulum est cubiculo
hypocauston perexiqum, quod angusta fenestra superpositum calorem,
ut ratio exigat, aut effundit aut retinet; Epis. ii. 18. 23; see also
Epis. v. 6. 25, in which Pliny describes another country house of his among the mountains of Tuscany: [cubiculo] coheseret hypocauston, et si dies nubilus, inmissu vapore solis vicem supplet.

The Pantheon.

It has been for several centuries a disputed question whether the Pantheon ever formed part of Agrippa's baths, or was a separate building. The discoveries, however, which were made in 1882, by the removal of the block of houses at the back of the Pantheon, have made it practically certain that there was no connection whatever between the two buildings.¹

Traces exist, not only of the marble wall-linnings outside the back of the Pantheon, but also of its various cornices and string-courses at different levels. These cornices continued round the whole of the back of the drum, showing that originally the complete circuit was exposed to view. The existing walls which join the Thermæ and the drum of the Pantheon are all considerably later in date than the time of Agrippa, being partly the work of Hadrian and partly of Sept. Severus. This is shown in figs. 67 and 71. Fig. 71 gives the plan of the Thermæ before there were any walls uniting them to the Pantheon. Thus it is evident that the Pantheon when first built was a completely isolated structure.

¹ It is noticeable that the Pantheon is not mentioned by Vitruvius. So also amphitheatres are not mentioned in his treatise, in spite of the Amphitheatre of Taurus having been built about 29 B.C., while the wooden Amphitheatre of Curio was constructed about twenty years earlier.

Vitruvius might very reasonably, in writing about architecture, omit any description of temporary wooden structures, but he could hardly have failed to mention such important and massive buildings as the Amphitheatre of Taurus and the Pantheon if they had been in existence at the time he was writing. It seems reasonable, therefore, to conclude that Vitruvius' book was finished in the early part of the reign of Augustus, before about 30 B.C.
with an interval of about 20 feet at the narrowest part between it and the Thermae. And though in later times the Thermae were extended against, and even on both sides of

![Plan of the Pantheon and part of the Thermae of Agrippa; the black shows the original work of Agrippa, 27 B.C.; the hatching shows additions of the time of Hadrian and Severus.](image)

A. Angle of portico, rebuilt in the seventeenth century.
BB. Niches which contained colossal statues of Augustus and Agrippa.
C. Pedestal for statue, and apse added by Hadrian.

the Pantheon, yet at no time was any entrance broken through to connect the one building with the other.

Moreover, if further proof were wanting to contradict the theory that the Pantheon was once the Calidarium or Laconicum of the baths, this is supplied by the fact that there is no trace of any hypocaust under the floor, but merely an ancient
drain to carry away the rain-water that fell through the opening in the dome. The Pantheon, too, is on the north side of the Thermæ—a very improbable position for the Laconicum or hot room, which was usually placed on the sunny side of the buildings.

And lastly, it was consecrated as a Temple to Mars, Venus, and other mythical ancestors of the Gens Julia, out of compliment to Augustus, certainly very shortly after it was built, and probably immediately after its completion in 27 B.C.; see Dion Cass. (lxxii. 27), who states that Agrippa completed the Pantheon, and that it was so called, either because it was dedicated to the various deities above mentioned, or else because its domical vault resembled the curved canopy of heaven. It appears from the earliest times to have been called the Pantheon; see Dion Cass. liii. 27; lxvi. 24.

An inscription found in the sacred Grove of the XII Fratres Arvalis in 1865, outside the Porta Portuensis, records that it was used by this important Collegium, or endowed body of priests, as a meeting-place, before they met in the Temple of Concord; see Henzen, Acta Fratrum Arvalium, 1874, inscrip. No. 71.

Pliny, Hist. Nat. xxxvi. 38, mentions a row of Caryatidae, probably round the upper part of the interior, the work of an Athenian sculptor called Diogenes, who also executed some statues which were placed on the top of the Pediment. Nothing is known of the sculptor Diogenes, who is mentioned only by Pliny in the passage referred to; see Hist. Nat. xxxvi. 38. There is in the Vatican a marble Caryatid figure which is copied with some modifications from those in the porch of the Erechtheum on the Athenian Acropolis.

It appears probable that this is one of the statues from the Pantheon by Diogenes, or an ancient copy of it; see Brunn, Griech. Künstler, i. pp. 548 and 568.

Pliny (Hist. Nat. ix. 120) tells us that one of an enormous pair of pearls which had belonged to Cleopatra was sawn in
half to make ear-rings for a statue of Venus in the Pantheon. The other pearl was said to have been dissolved in vinegar and drunk by Cleopatra on the occasion of her wager with Antony as to the sum she could expend on one feast. As pearls are not soluble in any drinkable fluid it is evident that some sleight of hand was employed in this feat.

In the tympanum of the pediment there was a large bronze relief representing the Gigantomachia, or defeat of the Titans by Jupiter and other deities; 1 the holes for fixing this relief are visible all over the tympanum. At Hist. Nat. xxxiv. 13, Pliny records that the capitals of the columns (of the interior) were of Syracusean bronze, a name given to a certain alloy of copper and tin, which was very highly prized. 2

The Porticus of Octavia is mentioned by Pliny in the same passage as another example of a Roman building with bronze capitals; see below, p. 200.

The Pantheon, with its great portico (see fig. 68), and magnificent cupola lighted only from the top, is even now, though stripped of a great part of its marble linings, one of the most stately and effective buildings in the world.

1 See Hirt, Geschichte der Baukunst, ii. p. 283.
2 The dome of the Temple of Vesta in Pliny's time (Hist. Nat. xxxiv. 13) was also covered with this special variety of bronze; the bronze of the islands of Delos and Aegina appears to have been of equal celebrity with that of Syracuse. Another variety, Corinthian bronze, was highly prized from its golden colour; whence arose the story of its being mixed with gold and silver; see Pliny, Hist. Nat. xxxiv. 5 to 13, and xxxvii. 49.

Among the early Greeks bronze made with silver instead of tin, and even with gold, was sometimes used. The metal of an archaic fibula was shown by analysis to be a mixture of 73 per cent of copper, 20 of silver, and 7 per cent of gold. As skill in metal-working increased it was discovered that "golden bronze" of the finest colour could be made by a mixture of tin and zinc with copper without using any gold. Compare also an interesting letter of Pliny the younger (Epist. iii. 6), in which he describes an ancient statuette of Corinthian bronze which he bought out of the proceeds of a legacy.

VOL II.
The internal appearance of the immense hemispherical dome, with its slanting flood of sunlight pouring in at the top, is imposing beyond all possible description. The effect of its central hypaethral opening, framing a patch of blue sky, across which white clouds are seen moving, makes it unlike any other building in the world. Moreover, the apparent size of the dome is not diminished by its being raised to a great height above the floor, and consequently it looks enor-

Fig. 68.

The front of the Pantheon.

The letters in the tympanum of the pediment are modern.

mously larger than the dome of St. Peter's, which measures almost the same in diameter.¹

The internal diameter of the dome of the Pantheon is 142 feet 6 inches, and its height from the pavement to the central opening is almost, if not exactly, the same. Thus the section of the whole interior might be represented by a circle, the upper half coinciding with the inner surface of the dome, and

¹ The internal span of the dome of St. Peter’s is nearly 140 feet.
the lower extremity of the circle touching the line of the pavement; see fig. 69.

The construction of this enormous cupola is a remarkable instance of the extraordinarily skilful use of concrete by the Romans; it is cast in one solid mass, and is as free from lateral thrust as if it were cut out of one block of stone.

Fig. 69.

Section through the Pantheon.

Though having the arch form, it is in no way constructed on the principle of the arch.

It has occasionally been possible, while the present external covering of lead was being repaired, to examine some breaks in the upper surface of the dome. It then appeared that the complicated systems of brick arches, shown in Piranesi’s drawings of the dome, are, like the other brick arches of Rome, only skin deep, and by no means of the constructional importance which Piranesi indicates. These fanciful drawings have been unfortunately copied by Violet-le-Duc in the article
Fonte in his *Dictionnaire*, vol. ix. p. 478, and by many other writers on architecture.  

The inner surface of the dome is divided into a series of square coffers or deeply sunk panels (*jacunaria*), now quite devoid of ornament, but once decorated very richly with mouldings in stucco, painted and gilt, like those which still exist in parts of Hadrian's Palace on the Palatine; see fig. 13 in vol. i. p. 71. The outside of the dome is not an important feature in the external design of the building, as about half of it is, as it were, buried in the enormously thick walls it rests upon. In this respect it somewhat resembles the dome of Justinian's Church of S. Sophia in Constantinople.

In its original state the dome of the Pantheon must have looked like a gigantic mound of shining gold, as it was covered with tiles of gilt bronze. One part only exists of this magnificent roofing, which not only covered the external surface of the dome, but was carried also round the rim of the central opening or *hypaethrum*. Round the opening a cornice or ring of enriched bronze mouldings still exists, the various members of which are delicately ornamented with egg and dart, acanthus leaves and fluting, finished with great care in spite of their being almost invisible at so great a height; see fig. 70.

The gilt, or rather gold-plated, tiles^2 on the dome were

---

1 To a certain extent brick arches are used in most of the great vaults of the Roman buildings, such as the *Thermes of Caracalla* and of *Diocletian*. They are, however, only one ring deep, on the under surface of a great mass of concrete—a very insignificant part of the whole thickness, and so they can only have been of use during the formation of the vault. As soon as the mass of concrete had set, these superficial brick ribs and arches might have been cut away with very little injury to the strength of the vault.

2 The gilding of the Greeks and Romans was not done with the immensely attenuated leaf of modern gilders, but the gold was laid on in plates of appreciable thickness. Each *πέταλον* or leaf of gold used for the gilding of the Athenian *Erechtheum* cost one drachma. The very durable mercury process was used for gilding metal both by the
stripped off in 663 A.D. by the Emperor Constans II., who was carrying them off to Constantinople when he was intercepted and killed by the Saracens at Syracuse, into whose hands these and other rich spoils from Rome fell. The inner ceiling of the porch was also of gilt bronze, supported by a very curious system of bronze tubular girders. These remained intact till the reign of Urban VIII., who, in 1626, removed

Fig. 70.
Existing bronze moulding round the central opening in the dome of the Pantheon.

AA are bronze bands to fix other parts of the lining now stripped off.

them, and used the bronze to make no less than 110 cannon, weighing about 400,000 pounds, for the Castle of S. Angelo, and also the great Baldacchino, with twisted columns, designed by Bernini for the high altar of S. Peter's. The metal thus stripped off is recorded to have weighed 450,250 pounds, and 2374 pounds obtained by melting down the bronze rivets. The form of the bronze girders is shown in some drawings made by Greeks and Romans; see Vitruvius, liv. 8, 4, and Pliny, *Hist. Nat.* xxxii. 64.

1 The present lead covering of the dome was put on by Nicholas V. in 1454; see Vasari, *Vite dei Pïtori*, Milanesi's ed. ii. p. 462, note.
by the architect Sallustio Peruzzi, who gives many other interesting details which no longer exist. These drawings are preserved in the Uffizi Collection at Florence.¹

Construction of the Pantheon. The walls of the great rotunda which supports the dome of the Pantheon are nearly 20 feet thick, cast in concrete, with the thin facing of brick which afterwards became so common. Examples of burnt brick used to face concrete in the time of Augustus are very rare, as the usual facing for concrete at that time was opus reticulatum, of which Vitruvius (ii. 8. 1) says, quo nunc omnes utuntur. The actual mass of concrete used is very much reduced by a series of recesses formed in the drum. Those which open on to the interior form large niches for statues and altars, and were enriched with marble columns and other decorations.

Other semicircular chambers, set at intervals in the thickness of the wall, between the internal niches, were probably formed to diminish the mass of concrete required, and also to admit the air into its interior, so as to hasten its setting. These chambers are lined with neat brickwork, and have external openings both at the ground level and high up.

The brick facing of the whole rotunda is very neat; the bricks are of the usual triangular form, 13 inches long, and $1\frac{1}{2}$ to $1\frac{1}{4}$ thick, with joints from $\frac{3}{8}$ to $\frac{3}{4}$ inch. All over the wall, in three tiers, there are series of what appear to be relieving arches, in one, two, and three rings of 2 feet tiles; but these, like the rest of the brick facing, merely enter the wall to a depth of a few inches, and are of no structural use.

¹ A paper by Comm. Lanfrani, in the Notizie degli Scavi, 1882, p. 340, gives a list of mediaeval drawings of the Pantheon and the adjoining Thermæ; these are by Jacobo Sansovino, Baldassare and his son Sallustio Peruzzi, Raphael, and the younger Antonio Sangallo, in the Uffizi; and Cod. Pat. 9439. The Barberini Library (lib. xlix. 33) has other drawings by Antonio Sangallo and Giuliano di Francesco. See also Geymüller, Documente inediti sur les Thermes d'Agrippa, Lausanne, 1883.
Nor can they have been meant for ornament, as the whole of the brick facing was concealed from sight.

The drum or rotunda was divided into three stories by horizontal string-courses or cornices, partly of marble and partly of large tiles with projecting edges, covered with mouldings made of marble-dust stucco—once painted and gilt. The two upper stories of the exterior were coated with stucco, but the lowest story, which is the largest of the three, was faced with slabs of white marble, which have been completely stripped off the circular part of the Pantheon, but still exist on the square projection against which the portico stands; see plan in vol. ii. p. 127. This is the finest example which still remains in Rome of the use of marble as a wall lining, and is worthy of close examination. The pilasters all round the rotunda, which are now missing, are shown by Palladio, Du Perac, and Lafreri, 1546-70 A.D.

The scheme of this marble facing is as follows: on each side the projection which joins the rotunda to the columns of the portico is divided vertically by fluted Corinthian pilasters, and horizontally by two sculptured bands or friezes, richly decorated with reliefs of garlands hanging between candelabra. Below is a richly moulded plinth, which is a continuation of the mouldings of the bases of the pilasters. The plain wall surface is covered with massive slabs of Pentelic marble, 5½ inches thick, some of which are 11 feet long by 3 feet 2 inches wide, very unlike the thin veneers of marble which were used to face the buildings of the later Empire—veneers which were often considerably less than an inch in thickness. A small door on each side, with moulded architrave, leads to a staircase formed in the thickness of the concrete wall. And six similar doors in the circular part lead into the semicircular recesses, mentioned above; see fig. 67. The other similar small chambers at higher levels have no apparent means of access, as their doors open high above the ground.

Against the rectangular projection is set the very noble
portico, with eight columns on its front and three at the sides; they are unfuted monoliths of grey and red Egyptian granite, with Corinthian capitals of white Pentelic marble. This is the earliest existing example of the use of granite columns in Rome. The anomaly of using unfuted columns with Corinthian capitals is an example of the want of taste of the Romans, which at first came almost necessarily from the use of such hard materials as granite and porphyry, and then, in later times, was in some cases extended without any practical excuse to columns made of the softer marbles. The columns at AA on the plan are restorations of the time of Urban VIII. and Alexander VII., and the arms of these Popes are introduced among the acanthus leaves of the restored capitals.

The frieze of the entablature is plain, except for the inscription, which records the dedication of the Pantheon by Marcus Vipsanius Agrippa during his third Consulship, that is in 27 B.C.

The letters were inlaid in bronze, but only the sunk matrices now remain—

M - AGRIPPA - L - F - COS - TERTIVM - FECIT

1. The use of enormous monolithic columns is a peculiarity of the Romans. In the sixth century B.C. monolithic columns were occasionally used by the Greeks, as, for example, in the early Doric temple at Corinth. But during the best period of Greek architecture columns were always built up of many courses or drums. The use of monoliths had the serious practical objection that it involved the marble being set on end, not on its natural bed, and therefore was very liable to cause the column to split.

2. Agrippa thus settled the question as to whether tertium or tertio was more correct, though Cicero had declined to do so in a similar case; see vol. ii. p. 67, note. There is a fine large bronze coin which was struck by Agrippa in the same year, 27 B.C.; with obv. a very noble portrait head of Agrippa wreathed; AGRIPPA - L - F - COS - IIII; and rev. a standing statue of Neptune holding a trident in one hand and a dolphin in the other; s. c. This coin commemorates Agrippa's naval victories.
It has sometimes been questioned whether the portico with Agrippa’s inscription is of the same date as the rotunda behind it, but that they were built at the same time is shown by many constructional details at the junction of the two.

Another inscription in much smaller characters added on the architrave of the portico records a restoration of the building by Severus and Caracalla in 202 A.D. This inscription, which is now difficult to read, runs thus—IMP CAES. L. SEPTIMIVS. SEVERVS. PIVS. PERTINAX. ARABICVS. ADIABENICVS. PARTHICVS. MAXIMVS. FONTIF. MAX. TRIB. POTEST. X. IMP. XI. COS. III. P. P. PROCOS. ET. IMP. CAES. M. AVRELIVS. ANTONINVS. PIVS. FELIX. AVG. TRIB. POTEST. V. COS. PROCO. PANTHEYM. VETIVSTATE. CORRYPVTVM. CUM. OMNI. CULTV. RESTITVERVNT.

The pediment over the Portico is much higher in proportion to its width than it would be in a Greek building; this may have been partly in order to give additional space for the bronze relief of the Gigantomachia in the tympanum.

It was, however, usual for Graeco-Roman architects to build their pediments with considerably steeper slopes than those of Greek temples.

On each side of the great doorway is a niche which originally contained a colossal statue—Agrippa on one side and Augustus on the other.

Within the portico there were also two magnificent grey basalt lions from Egypt, which are now in the Egyptian Museum of the Vatican. They are fine examples of Graeco-

1 The Pantheon had previously been restored by Domitian and Hadrian, who used it as a Court of Justice; see Roncalli, Chron. ii. col. 197, 243; Spartan. Hadr. 19, and Dion Casa. lxix. 7. Hadrian also built a Pantheon at Athens; see Pausanias, i. 18. 9.

2 It is possible that the statue of Agrippa is that which now exists at Venice in the Museo Civico; it was found in Rome, and sent to Venice in 1595, by the Cardinal Domenico Grimani.
Egyptian art under the Ptolemies, and were probably brought to Rome in the reign of Augustus.

Flaminio Vacca records that these colossal lions were found in the Portico of the Pantheon in the reign of Pope Eugenius IV., about 1435 A.D.; they were afterwards placed by the great fountain of the Acqua Felice, where they remained till they were transferred to the Vatican; see Bull. Com. Arch. Nov. 1890. In Du Perac's and Laffreri's drawings these lions are shown in front of the Pantheon.

At the same time portions of a colossal bronze quadriga were found, including part of a horse, the head of the driver, and a wheel; these fragments had vanished in Vacca's time.

Strange to say, the massive bronze doors of the Pantheon escaped the thefts both of Eastern emperors and of mediæval popes, and are still well preserved—the noblest existing specimens of Roman bronze work on a large scale. On each side of the doors are bronze fluted pilasters with Tuscan capitals enriched with egg and dart moulding.

Over the doors is an open bronze grating of a simple design, which seems to have been commonly used both by the Greeks and Romans for many purposes, especially, as it is here, for closing windows. Though it is essentially a metal design, the same pattern was frequently used in Rome for marble cancelli. In late times window openings were closed with a slab of marble pierced with holes of the shape and arrangement of the apertures in this bronze grating. Each hole was, in some cases, filled in with a bit of glass. Examples of these window slabs are to be seen under the Church of S. Martino ai Monti, and in the great apse of the Quattro Santi Incoronati near San Clemente in Rome.

The doors themselves are framed with large plates of cast bronze, having a cyma recta moulding round the panels; the styles and rails are decorated with rows of bosses enriched with foliage. The whole doors, in design and detail, resemble the

other ancient bronze doors in Rome—those of the Temple of Romulus, and those of the Curia now at the end of the Lateran Basilica; see vol. i. p. 241. Both the doors and the grating over them were once plated with gold.

The sill of the door is a colossal monolith of Porta Santa marble. This must be contemporary with the building itself, not later, that is, than 27 B.C., and therefore a very early example of the use of foreign coloured marble in Rome, just as the columns are an exceptionally early example of the use of Egyptian granite.

The door-sill of the Temple of Concord by the Forum Romanum is equally remarkable as a colossal block of coloured marble, but more than half a century later in date than the Pantheon.

The Portico of the Pantheon is paved with large slabs and roundels of marble and Egyptian granite; a great part of this floor probably dates from the time of Agrippa.

The internal walls of the Pantheon were magnificently decorated with wall-linings of Oriental marbles and porphyry, and columns in two orders supporting entablatures. What now exists is of the ancient materials, but the design has been somewhat altered, and the marbles of the upper order have been stripped off and replaced with painted stucco.

The lost marble decorations of the upper part of the interior are shown in one of Piranesi's fine etched plates, and also in Palladio's drawing, published by him in 1570 in his Libri dell' Architettura, iv. p. 81. In the same work Palladio also gives the now missing marble linings and pilasters on the outside of the rotunda. In his section he shows the dome correctly as being a solid mass of concrete, not a brick vaulted structure.

Many large and magnificent fluted columns in front of the internal series of recesses still exist, made of the rich Numidian giallo antico and of poronazetto. The smaller columns by the modern altars are of granite, red porphyry, and giallo; all are monoliths. Many other richly-coloured marbles are used in
the panelling of the walls, contrasting vividly with the white Pentelic marble of the capitals and entablature; the chief marble used for the wall slabs is the Phrygian pavonazzo. Gold and colour appear to have been applied in the usual fashion to all the capitals and other sculptured decorations in white marble.

The floor is paved with large slabs and roundels of a great variety of materials, granite, porphyry, *ponto santo*, *pavonazzo*, *giallo*, and *rosso antico*, and in this pavement the old design probably still survives. The whole surface of the pavement under the dome is slightly curved, with a fall from the centre towards the walls, thus giving the floor a convex contour.

In the pavement of the interior, under the hypaethral opening, there are holes communicating with the great *cloaca* with which Agrippa drained this part of the *Campus Martius*. This drain is still used, and in flood time the back water, forced up the *cloaca* from the Tiber, may occasionally be seen spouting like a fountain through these apertures in the Pantheon pavement.

Little, if any, of the internal decorations are probably as early as the time of Agrippa, but may belong to the extensive restorations which were carried out by Hadrian and Severus, when the use of porphyry and coloured Oriental marbles was very common, while in the reign of Augustus these magnificent and costly materials were only beginning to come into use. The whole building, both the rotunda and its portico, was built on a raised podium of massive blocks of travertine lined with white marble, with a moulded cornice and plinth.¹ This podium is now buried below the modern level of the Piazza.

The preservation of this building is mainly due to the fact

that about the year 608 A.D. the tyrant Phocas presented it to Pope Boniface IV., who consecrated it as a church under the title of S. Maria ad Martyres.

THE THERMAE OF ROME.

Before going on to describe the Thermae of Agrippa it may be convenient to give a list of the seven principal Thermae of Rome.¹

1. Thermae of Agrippa, in the Campus Martius, 21 B.C.  
2. Thermae of Nero, in the Campus Martius, c. 60 A.D.  
   Enlarged by Severus Alexander, and then called the Thermae Alexandrinas, 229 A.D.  
3. Thermae of Titus, on the Esquiline, c. 80 A.D.  
4. Thermae of Tyrian, on the Esquiline, c. 110-115 A.D.  
5. Thermae of Caracalla, beyond the Porta Capena, 206-217 A.D.  
6. Thermae of Diocletian, on the Quirinal and Esquiline, 295-300 A.D.  
7. Thermae of Constantine, on the Quirinal, c. 320 A.D.

THERMAE OF AGrippa.

The Thermae of Agrippa, which were the first public Thermae of Rome, were opened in 21 B.C., and were of enormous extent and extreme splendour both in design and material. They were decorated with a great number of fine statues, among which Pliny (Hist. Nat. xxxiv. 62) specially mentions the bronze Apoxyomenus² of Lysippus, which was so enthusiastic-

¹ In addition to the great Thermae there were numerous smaller public balneæ in Rome. In the time of Constantine there were at least as many as 856; see Jordan, Forma Urb. Rom. p. 43. The Regnary Catalogues enumerate no less than 952. Many of these were worked by private enterprise.

² An athlete in the bath, scraping the oil from his arm with a strigil.
ally admired that when Tiberius removed it to his palace, substituting another statue, he was forced by indignant public opinion loudly expressed in the theatre to put it back in its place in front of the Thermae.

The Thermae were altered and largely restored after injury by fire in the reign of Domitian; then by Hadrian (Spartian. Hadr. 18); and again, after another fire, by Severus and Caracalla.

_Aqua Virgo._ These Thermae were copiously supplied by the pure cool water of the *Aqua Virgo*; the aqueduct of which was one of the most important of Agrippa’s many benefactions to the City of Rome; see vol. ii. p. 342.

_Palladio’s plan._ The plan of the Thermae of Agrippa has been recorded in a drawing made by Palladio about 1560 A.D., when most of this magnificent building was still standing; see fig. 71.

_Peronzi’s plan._ Another plan of the whole baths was made by Baldassare Peruzzi early in the sixteenth century for the Count of Piri-
gliano, who purposed making the ruins into a magnificent palace.¹

By far the greater part of these Thermae has been destroyed since the time of Palladio and Peruzzi, and the little that still remains is mostly hidden by streets of modern houses.

The removal in 1881-82 of the row of houses which had been built against the back of the Pantheon brought to light remains of a grand hall, with fine fluted columns of Phrygian *pavonazzello* and a rich entablature of Pentelic marble, with a sculptured frieze decorated with reliefs of dolphins and

_A Existing remains._

A fine ancient copy in marble of the bronze of Lysippus is now in the _Bronzi nuovo_ of the Vatican.

¹ The plan given by Canini is very inaccurate and misleading; the existing remains are shown in the _Notizie degli Scavi_, 1882, p. 357. _seq._ Palladio’s _Therme dei Romani_ was left by him in manuscript, and was not published till the eighteenth century; a good edition was printed at Vicenza in 1797, more complete than the first edition printed in London in 1730 at Lord Burlington’s expense.
tridents, part of which has been refixed in its original position. This hall is shown in fig. 67, and at A on fig. 71. The whole walls of the hall were lined and the floor was paved with Oriental marbles. On the side towards the Pantheon an apsidal recess, with a pedestal for a large statue, was added.

Plan of the Thermæ of Agrippa showing its position with regard to the Pantheon before the two buildings were joined in the way shown on fig. 67.

This plan, which is taken from Palladio, shows the whole of the Thermæ of Agrippa, but not the extensive additions on the south which were made by Severus. The large hall A is the one shown in fig. 67, with the apse added by Hadrian.

by Hadrian, who also appears to have enlarged the doorways at the ends of the hall.

Before the addition of this apse there was a considerable free space between the Thermæ and the Pantheon, as is shown in fig. 71.
Remains of a vaulted roof were found, apparently of the time of Severus. In its original state it seems probable that the hall was open to the air. It possibly was a systus or place for athletic exercises (see Vitr. v. 11. 3 and 4), or else part of the frigidarium.

The original Thermae of Agrippa extended southwards as far as the Arco della Ciamella, but did not include the circular hall, a portion of which still exists; this and the part beyond it were an addition by Severus.

Some of the bricks of the later part are stamped opvs doliare - de - praedis - Augusti - nostrī - ex - figlinis - vet caecilia - amanda - de - lic. The Praedia Liciiana (estates with clay pits) are known to have belonged to Sept. Severus.

Other additions by Severus extended on both sides of the Pantheon, and must have concealed the greater part of its rotunda; these were partly destroyed in the demolitions of 1881–82.

**THERMAE OF NERO.**

Thermae Neronianae and Alexandrinas. Other very extensive Thermae stood near those of Agrippa, and extended over a large area towards the Stadium of Domitian (Piazza Navona).

These were originally built by Nero in a very sumptuous way under the name of the Thermae Neronianae (see Martial, ii. 48, vii. 34, and xii. 84; and Statius, Silv. I. v. 62), but were restored and enlarged by Severus Alexander about the year 229 A.D. Their name was then changed to the Thermae Alexandrinas; Hist. Aug. Sever. Alex. 25; Aur. Victor, Cæs. 24.

What appear to be these Thermae are shown on the rev. of a coin of Sev. Alexander, which represents a very lofty and magnificent building. Extensive remains of these Thermae exist under the houses on the west side of the piazzas of the Pantheon, and under the Palazzo Giustiniani, the Palazzo Madama, and the

1. *Quid Nerona pejus?*

2. *Quid thermis melius Neronianis?*
Church of *S. Salvatore in thermae*, so called from its position amid the ruins of these baths.

One part only is now visible above ground, an apse in the stable of an inn in the Piazza Randanini. A complete plan of these *Thermae* is given by Palladio in his work on Roman Baths, but it is probable that part of this was a conjectural restoration; see fig. 72.

**Golden House and the Thermae of Titus.**

Owing to the chief remains of the *Golden House of Nero* being below the *Thermae of Titus*, it will be convenient to describe them together.  

---

1 Admission to these remains of the *Golden House* and to the substructions of the *Thermae of Titus* is given through a turnstile entered from a lane on the north-east of the Colosseum. The main buildings of the
In 65 A.D. occurred the great fire, lasting nine days, which completely burnt three of the Regiones and parts of seven more, leaving only four untouched; Tac. Ann. xv. 39, 40.

The Domus aurea. In this fire the first Palace of Nero, called the Domus transitoria, was destroyed, and Nero immediately commenced to build a palace of such size and magnificence as probably has never either before or since been rivalled.

It is very difficult now to realise its actual extent, reaching as it did from the north-eastern part of the Palatine over the Velia, the whole valley of the Colosseum, and a large extent of the Esquiline, the whole of which district had been devastated by the fire.

The palace was a mile in length, and included large gardens, and parks stocked with deer and other animals, surrounded by triple colonnades. The interior was decorated in the most lavish way, with gold, precious stones, and ivory; see Pliny, Hist. Nat. xxxvi. 111, and Suet. Nero, 31. Some rooms, according to Suetonius, were entirely plated with gold and studded with pearls and jewels. The supper-rooms had panelled ceilings (lacernae) overlaid with ivory, from openings in which flowers and perfumes were scattered on the guests. The walls of the chief banqueting-room, a circular hall (Coenatio rotunda), were made to revolve by means of machinery, in imitation of the movement of the heavens.

The baths of the palace were supplied with three kinds of Thermae; are on the higher part of the hill, and can only be visited by entering the private grounds of a farm.

1 See vol. i. p. 99.

2 It appears very probable that, as Tacitus and Suetonius assert, the fire was wilfully caused by Nero, who thus not only cleared a site for his palace, but also was enabled to lay out the new city with increased regularity and magnificence, and to bring into immediate effect the provisions of his Metropolitan Building Acts; see Tac. Ann. xv. 38 to 43; Suet. Nero, 38; and above, vol. i. p. 89.
water—that brought by the Claudian Aqueduct, which Nero extended to the Caelian and Palatine Hills; secondly, the *Aqua Albula*, from a warm mineral spring on the road to Tivoli; and thirdly, sea-water brought from Ostia. In order to pay for these extravagances Nero did not hesitate to strip many of the temples in Rome of their rich offerings and statues of gold and silver, and resorted to other equally disgraceful ways of raising money; see Suet. *Nero*, 32.

The *Golden House* was not completed at the time of Nero's death, and one of the first acts of Otho during his brief reign in 69 A.D. was to order 50 million sesterces to be spent on the completion of the *Domus aurea*.

An enormous number of works of art were collected from countless cities in Greece, Asia Minor, Egypt, and other countries, or were specially made for the *Golden House*. The most conspicuous of these was the bronze colossal of Nero, decorated with gilding, the work of the Greek sculptor Zenodorus, which, according to Pliny (*Hist. Nat.* xxxiv. 45), was 119 feet high; see vol. ii. p. 109.

This enormous statue appears to have been in point of technique a failure; Pliny describes it as an example of the degenerate state of the bronze-founder’s art. Pliny mentions another colossal bronze statue representing Mars which was made by the same sculptor, Zenodorus.

At *Hist. Nat.* xxxiv, 47, Pliny tells us that Zenodorus was a skilful imitator of the works of earlier Greek artists; he made copies of two embossed metal cups (*pulae caelatae*) by the famous Kalamis, an Athenian sculptor of the first half of the fifth century B.C.

Nero also had a portrait of himself painted on canvas, 120 feet high, which was placed in the *Domus aurea*, and was afterwards destroyed by lightning; Pliny, *Hist. Nat.* xxxv. 51.

The *Golden House* contained so many pictures by the famous painter Fabullus, that Pliny calls it "the prison of his art"—*cæver ejus artis domus aurea fuit*; *Hist. Nat.* xxxv. 120.
A Temple to Fortune, called the \textit{Aedes Seia}, founded by Servius Tullius, existed within one of the great enclosures of the \textit{Golden House}, and this Nero rebuilt with a brilliant translucent stone, then recently discovered in Cappadocia, which from its shining qualities was called \textit{Phengites}; Pliny, \textit{Hist. Nat.} xxxvi. 163.\footnote{Suetonius records that Domitian lined the walls of the \textit{porticus} where he used to walk with \textit{phengites}, so that its mirror-like reflections might enable him to see if any one was approaching from behind with hostile intent.}

According to Pliny this wonderful shrine was lighted by the light shining through its translucent walls; possibly the fact really was that it had windows filled in with slabs of some transparent crystal. Examples of this beautiful way of admitting light have been found in more than one ancient Roman building.\footnote{Medieval examples even now exist of the use of translucent marble for windows; \textit{e.g.} at the east end of the Church of San Miniato at Florence, and, much restored, in the nave of the cathedral at Orvieto.}

Remains of the \textit{Golden House}, in addition to those described below as being under the \textit{Thermæ of Titus}, exist along that part of the Palatine which faces on the \textit{Sacra Via} in its course from near the \textit{Meta Sudans} up to the Arch of Titus. These remains consist of a long series of vaulted rooms, three and four stories high, which stand against the cliff of the Palatine.

Other similar rows of rooms exist on the other side of the \textit{Velia}, facing on the Temple of Venus and Rome. Ligorio’s plan of this part of the \textit{Golden House}, where the \textit{Basilica of Constantine} is built up against it and over part of its site, is shown in fig. 87, in vol. ii. p. 227. These buildings are of concrete, faced with very neat and regular brickwork, and are set on very massive foundations of concrete made of lava, part of which has been cut away, evidently with great difficulty, when the baths, attributed to Heliogabalus, were built along the \textit{Sacra Via}. 

Existing remains.
The Thermae of Titus. A large portion of the Esquiline called the Mons Oppius, which had been occupied by part of Nero's gigantic Golden House, was restored to public use by the construction on it of the Thermae of Titus; Suet. Titus, 7; and Mart. De Spec. 2. The main part of the Thermae was on the summit of the Esquiline, but its enormous peribolus, or outer enclosure, extends far over the lower slopes of the hill, and is raised to the level of the rest by a series of parallel rows of lofty walls, set near together, forming substructions on which the great platform of the peribolus rests. On one side of the enclosure of the baths was a large theatre-like structure, forming a semicircular projection far above the level of the ground. The substructions of this "theatre" consist of a series of long and lofty vaulted chambers, running in two directions, the walls of which cut through Nero's Palace, rendering its rooms dark and useless, but at the same time saving them from complete destruction; see fig. 73 and No. 6 on fig. 74, in vol. ii. p. 154.

The comparatively small portion of the Golden House which is thus preserved consists of part of a large peristyle or open quadrangle, with a colonnade round three sides, on to which a series of rooms opened; 1 8, 8, 9, 9 on fig. 73.

Those on the west side (4, 4 on fig. 73) are small, with very simple decorations painted on the stucco, and show signs of having been built rather hastily, without much regard for neatness or finish.

Construction. The walls are of concrete faced with mixed brick and opus reticulatum; the latter is very rudely cut, and the brick facing is unlike any other example in classical Rome, having bricks of extraordinary thickness mixed with others of the common sizes in a very irregular way. Some

1 These interesting remains of Nero's Palace and the substructions under the Theatre of the Thermae have been cleared of rubbish, and are now accessible; see note in vol. ii. p. 145.
bricks of the unusual thickness of 2 1/4 inches are set in the same course with others of 1 1/2 inch thick.

Traces of a number of wooden staircases and upper floors exist along this line of rooms; the positions of these are shown by the holes in the walls for the wooden joists or raking bearers of the stairs, and also by the profile of the wooden steps being marked on the stucco of the wall.

These walls, and all the others which belong to the Golden House, have their surface thickly studded with marble plugs and iron nails to hold the stucco or cement backing for the marble slabs; and are easily distinguishable from those of the substructures of the Thermæ, which were left bare of any covering, and therefore have no plugs inserted in the brick facing.

The rooms on the south side of the peristyle (10, 10 on fig. 73) were much more handsomely ornamented, both with pavements and wall-linings of polished Oriental marbles, of which pieces still remain in situ, some even preserving their original high polish. The vaults and upper parts of the walls were very richly decorated with stucco reliefs, picked out with gold and colours, and among them well-executed paintings, both figure subjects and graceful arabesques, treated with wonderful invention and spirit.

Very few of these now remain, and they are rapidly

1 In other cases the brick facing of Nero’s time was of remarkable neatness and beauty; especially in his extension of the Claudian Aqueduct, in which the surface was not hidden by stucco. This immense diversity of work during the same reign shows that great care must be taken in judging the dates of Roman buildings from the appearance of their brickwork.

2 A number of paintings, now lost, are illustrated by Mirri and Carletti, Terme di Tito, 1776, and De Romanis, Terme di Tito, 1822.

It should be observed that the paintings described in these and in other works as belonging to the Baths of Titus really were on the walls of the Golden House, which were formerly mistaken for part of the Thermæ.
perishing from combined damp and exposure to air. It was the discovery of similar paintings among these and other ruins

Fig. 73.

Part of the Golden House of Nero, and the substructures of the Baths of Titus, which cut through it.

The black shows Nero's work, the shading that of Titus.

1, 1, 1. Long parallel walls built by Titus to support the theatre above; see No. 6 on fig. 74.

2, 2. Existing remains of the peristyle of Nero's house.

3, 3. Passage.

4, 4. Slaves' rooms in Nero's Palace.

5. Remains of a mosaic floor earlier than Nero's time.


7. Fountain in the middle of the peristyle.


9, 9. Walls added by Titus to support the building above; these cut up the Palace of Nero into long dark strips.

of ancient Rome which, in the reign of Julins II., gave a strong impetus to the classical revival, and supplied Raphael and his pupils with new motives for mural decoration, with combined colour and relief, such as those in the loggie of the Vatican and the even more splendid Villa Madama.\footnote{The Villa Madama, on the slopes of Monte Mario, about two miles outside the Porta Angelica, was designed by Raphael for Giul. de' Medici (afterwards Pope Clement VII.), and was decorated by Giulio Romano, Fran. Penni, and other pupils of Raphael, after their master's death, with the most gorgeous series of delicate reliefs in stucco, covering both walls and vaults with a profusion of elaborate designs far exceeding in splendour the loggie of the Vatican. This wonderful but unfinished palace is now empty, and is rapidly falling into decay; it is the property of the ex-king of Naples.}

Fig. 73 shows how the \textit{peristyle} of Nero's \textit{Golden House} is now cut up into narrow strips by the long vaulted chambers of Titus' substructions.

In the centre of the peristyle a large \textit{nesia} or marble-lined fountain still exists (No. 7 on fig. 73), and beyond it is the pedestal for a statue. At one point, at the north-west angle of the existing remains (No. 5 on fig. 73), at a level below the floor of the \textit{Golden House}, is part of some mosaic pavements belonging to one of the many houses which Nero destroyed to clear a site for his palace. It is a characteristic specimen of early mosaic with simple patterns in white and grey, formed with small and very closely fitted \textit{tesserae}; very like the mosaics in the Temple of Castor and in the "House of Livia" both in design and execution.

The whole of that part of the \textit{Golden House} which exists below the \textit{Thermæ} of Titus is set at quite a different angle from the latter, as can easily be seen by comparing the direction of the parallel walls which fill up the curve with those of the palace; see fig. 73.

\textit{Construction.} The walls of the substructions of the \textit{Thermæ} are of concrete faced with very neat and regular brickwork, mixed in parts with \textit{opus reticulatum}, which is used sparingly.
in large panels 6 feet high, and about 16 feet long. The bricks average in thickness rather more than 1 ½ inch, with joints barely \(\frac{1}{2}\) inch; the extreme beauty and evenness of this brickwork is a great contrast to that in the adjoining walls of Nero’s Palace.

The opus reticulatum is also cut and set with perfect regularity. The walls, where they come over Nero’s peristyle, were not stuccoed, and consequently they have no marble or iron plugs, but the long vaulted chambers in the projecting part of the curve were stuccoed, and are thickly studded with iron.

These various chambers below the theatre were not a public part of the Thermae, but were merely substructures below a portion of the surrounding peribolus, the main block of the Baths of Titus being a separate building on the higher level of the Esquiline. These lower rooms were probably used only as store-rooms, or possibly for the numerous slaves who were attendants in the baths. Many of these chambers have no means of lighting, and are perfectly dark.

We now leave the substructions of the Thermae of Titus and the remains of the Golden House, and pass to the higher level of the Esquiline where the remains of the main block of the Thermae stand among the cultivated fields of a large farm in the possession of a private owner.

This building has not yet been excavated down to its ground-floor level; it is still buried to a height of ten or twelve feet in accumulated earth and rubbish.

Fig. 74 shows the plan of the Thermae of Titus, at the higher level above the substructions.

Only the part shown black is now visible: the rest of the plan is taken from Palladio’s book on the Roman Thermae; very much more remained fairly perfect in his time (middle of the sixteenth century), and even as late as the last century many fine rooms existed which have now completely disappeared.\(^1\)

\(^1\) See Du Pera’s and Piranesi’s etchings.
It is, however, probable that excavations will some day bring

Plan of the Baths of Titus, at the higher level; the ground falls rapidly from the main block to the south-west.

1. Frigidarium.
2. Tepidarium.
3, 3. Two circular domed halls.
4, 4. Open peristyles.
5, 5. Dressing and anointing rooms.
6. Theatre; this is over the structures shown in fig. 73.
7, 7 and 8, 8. Exedras.
9. Remains of Trajan's Thermae set at a different angle from the baths, or possibly part of Nero's Golden House.

to light the whole plan of the Thermae, and possibly many fine mosaic pavements and pieces of sculpture. The whole
ground over the buried parts, now cultivated as vineyards, is thickly strewn with fragments of all sorts of marbles, granites, and porphyry, with countless tesserae in glass and marble, and other fragments of rich decoration, all of which show that the Thermae must have been a building of extreme magnificence.

The arrangement of the rooms in these Thermae is very similar to that in the Baths of Caracalla, except that the latter had one immense circular domed hall, and the Baths of Titus had two of smaller size; see 3, 3 on fig. 74.

In both cases there is a large open peristyle (4) on each side, and a grand central hall (2); this latter was probably the Tepidarium, and the row of rooms which occupy the opposite side the Frigidarium, Apodyterium or dressing-room, and Elaeothesia, the chambers where bathers were anointed and perfumed.1

The oval chamber which opens out of the central hall on the south-west appears to have been the Laconicum or hottest room.

The main block of the Thermae of Titus stands in the centre of a large peribolus or enclosure, on one side of which was the theatre, resting on the vaults of the substructions described above. This so-called theatre appears to have been a place for spectators to watch athletic exercises, not a building for dramatic representations. At the corners of the same side were stairs leading up from the lower level of the slope; and by them two exedrae, or apsidal recesses, with tiers of seats for loungers or literary discussions, reading of new poems, and the like. Similar but larger exedrae opened on the opposite side of the peribolus, and one of these is still in good preservation; behind it is a passage concentric with the apse, and

1 The use of perfumes was carried so far by the Romans that they not only scented the water in the baths and poured perfumes on the bathers, but they even rubbed scented oil on the walls of the building; see Suet. Cal. 37, and Pliny, Hist. Nat. xiii. 22 — "audimus spargi perites balnearum unguento."
a staircase leading up to a higher story. Other existing portions are indicated on the plan.

The *Sette Sale*, so called. On the higher part of the Esquiline, at some distance to the north-east, is a large *Castellum* or reservoir, built originally to supply the *Golden House*, and used afterwards by Titus for his *Thermae*. It is a large concrete and brick structure divided by parallel walls into nine long vaulted chambers; it is two stories high, though at present the lower one is choked up with rubbish. In each wall there are four openings like doorways, arranged so as not to be opposite to each other, in order that the water in its course from the first chamber to the last might have to run in as devious a course as possible, and thus deposit any sediment it contained before it passed out of the last chamber in the lower story, having in turn run through the whole eighteen subdivisions of the cistern.

The internal walls are covered with waterproof stucco made of pounded brick and potsherds (*opus signinum*), and over this the water, in course of several centuries, has deposited a succession of thin layers of carbonate of lime, which is always seen where the water supplied to Rome was stored or conveyed. The front of this *Castellum aquarum* was magnificently decorated with rows of columns flanking semicircular niches lined with marble. Another building, perhaps an open *porticus*, now destroyed, appears to have adjoined this reservoir, as there are remains of a mosaic pavement extending in front of it.\(^1\)

The *Thermæ of Titus* appear to have been adorned with an enormous number of statues. Excavations in 1886, near the *Sette Sale*, brought to light a number of pedestals inscribed with the names of various sculptors from Aphrodisias in Asia Minor, where in the second century A.D. there appears to have been

\(^1\) Ficoroni in his *Vestigi di Roma* describes the lower story. This reservoir is commonly known as the *Sette Sale*, in spite of its consisting of nine not seven chambers.
a large and flourishing school of sculpture. Among them are the following names: Flavius Zeno, Flavius Chrysaeus, Polineikes, and Flavius Andronicus; see Bull. Com. Arch. Sept. 1886.

The celebrated group of Laocoon and his sons, now in the Vatican, was found here during excavations made in 1506. Pliny (Hist. Nat. xxxvi. 37) mentions this group as being in domo Titi, which probably adjoined the Thermae. He says that it was the work of three Rhodian sculptors called Agesander, Polydorus, and Athenodorus, and that the whole group was cut out of one block of marble. This is not the case; it is really made of three blocks very skilfully united.

**THERMAE OF TRAJAN.**

The *Thermae of Trajan* appear to have stood adjoining the *Thermae of Titus*, at the northern side of the peribolus. They are mentioned in a long inscription printed by Orelli, Inser. 2, 591; by the Curiosum Reg. III.; and by Anastasius Bibl. Vitæ Pont. Symmachii. The latter writer mentions them as being by the Church of S. Martino ai Monti.

These *Thermae*, of which little or no remains are now visible,¹

¹ The remains of some classical building below the level of the present Church of S. Martino are later in date than the time of Trajan.
were much smaller than those of Titus, and were intended for women only, for whom there appears to have been no provision in the larger ones; see Roncalli, Chron. vol. ii. col. 243.

A plan of the Thermes of Trajan is given by Palladio under the name of the Baths of Vespasian; see fig. 75.

**Thermes of Caracalla.**

The Baths of Caracalla are shown by some of the stamps on the bricks, dated 206 A.D., to have been begun during the lifetime of Severus, but were mainly built by his son Caracalla (see Hist. Aug. Carac. 9), completed by Heliogabalus and Severus Alexander, 218 to 235 A.D. (see Lamprid. Hel. 17, and Alex. 25), and restored by Theodoric about 500-510 A.D. In size and state of preservation combined, few if any Roman buildings surpass these great Thermes. The building is also of great value as affording many interesting varieties and details of methods of Roman construction. Unfortunately, it is impossible to identify the uses of many of the chambers, and but little help is afforded by Vitruvius, as his description of Roman baths refers rather to the older and smaller class of *balnea* than to the more extensive *Thermes* of which Agrippa built the first example.

The whole building, including its great *peribolus* or outer

---

1 Sept. Severus also built a less magnificent set of baths, for the use of the Transtiberine inhabitants of Rome, by the Porta Septimiana; and the same emperor made a large addition to the Thermes of Agrippa.

2 The brick-stamps of Severus and Caracalla usually have OP - DOL.

---

3 According to Olympiodorus these Thermes contained marble seats for 1600 bathers; Olymp. op. Phot. Bibl. 30, p. 63, Bekker.
enclosure, is constructed on a vast platform raised on massive substructures about 20 feet above the natural ground-level. This platform consists of a great number of vaulted chambers, which extend under the whole of the main floor of the baths. These were partly excavated between 1850 and 1870, but unfortunately were filled in again with rubbish, and are not now accessible.

Buried Villa. A small villa of the time of Hadrian was partly destroyed by Severus, and buried under the southeastern part of the peribolus; a portion of this house is now exposed. Its pavement is about 20 feet below that of the Thermes, showing what an immense artificial platform was constructed as a base for the Thermes and its pleasure-grounds.

The villa has a small atrium, surrounded by rooms once two stories high; one of these is a well-preserved example of a Lararium or private chapel, with a pedestal for statues of the Lares. The columns of the atrium are of concrete, faced with moulded bricks and covered with painted stucco. The walls are decorated with paintings of architectural scenes which are now rapidly perishing. The position of this interesting house is indicated on fig. 76, No. 20.

The very numerous vaulted rooms which were constructed as a basement below the ground-floor of the Thermes of Caracalla were probably used by the crowd of slaves who attended on the bathers, and also for storage of fuel and oil, and for various other purposes connected with the working of the baths. This crypt contained also the furnaces (proximaria or propriaria) for heating the water and hot rooms above. Two staircases down to this lower level are still accessible; one of these is a very narrow stair formed in the thickness of one of the piers which supported the great dome of the Laconicum;¹ it descends to the furnaces of the hypocaust under the dome, and also appears to have gone up to the top of the building. Near it a broad

¹ See below, p. 165, for the reasons for doubting whether this great dome was ever actually completed.
Fig. 76.

Plan of Baths of Carcalla.

1. Frigidarium and swimming bath, cella caldaria.
2. Tepidarium.
3, 3. Anterooms to do.
4, 4. Passage-rooms, Apodyteria, and two grand staircases.
5, 5. Large entrance halls.
6, 6. Large open peristyles.
7, 7. Rooms with hot baths.
8. Antechamber to the Calidarium.
10. 10. Row of rooms on each side of do., some with warm baths.
11. Apsa of Calidarium.
12, 13. Entrances to the baths.
14. Entrance to the outer peribolus.
15, 16. Rows of small chambers and long porticus.
15, 16. Large halls, lecture-rooms, libraries, and xysti for exercise.
16, 16. Similar halls on the south side.
17. The stadium.
18. Aqueduct.
19, 19. Reservoir.
20. Site of a villa of Hadrian's time which is buried in the great artificial platform on which Caracalla's Baths stand.

A staircase descends to another part of the lower chambers, close by one of the apses which adjoin the round hall.

Other stairs, lined with marble and porphyry, existed on each side near the entrance by the great swimming bath; and at the side of the two apses of the swimming bath steep narrow stairs, formed in the thickness of the wall, ascend to the summit of the building, which was once very lofty. The smaller rooms appear to have been from two to three stories high, but the three great central halls probably occupied the whole height of the building, and had no floor over them, thus cutting the upper floor into two parts.

In order, therefore, to give access from one half to the other a number of narrow passages are formed high above the ground in the thickness of the walls, probably only for the use of the attendant slaves.

This system of connecting passages is rather complicated, as the upper floors were at different levels. In some cases these passages issued from the face of the wall, and were continued in an upward direction by wooden stairs supported on stone corbels against the face of the wall; at the top of this projecting stair the passage again entered the thickness of the wall. Unfortunately none of these upper floors still exist, though large masses of the vaulting of the lower rooms with the mosaic pavement which formed the floor of the upper chambers on the top of it are scattered about the building. The under sides of the vaulting were decorated in various
ways; some of it was covered with moulded stucco in panels, decorated with figure subjects or arabesques in relief, all painted and gilt; other parts of the vaulting had brilliant glass mosaics or painting on the flat. The flat bronze panelled ceiling of the frigidarium is described below.

The floors were mostly of mosaic, with coarse figures of athletes, gladiators fighting with beasts, or tritons and dolphins, all rudely executed with large tesserae, and usually drawn in the most clumsy and inartistic way possible. Some few of the simple patterns which framed these figure subjects are graceful and more delicate in style. The materials used for these mosaics on the ground-floor are very rich and various; tesserae of green and red porphyry and a great number of different foreign marbles are used with much ingenuity, so as to produce realistic pictures with great variety of colouring.

The mosaics on the upper floor are of much simpler character in white and grey only, and appear to have mostly had large figures of marine subjects—tritons, fish, and the like—worked in grey tesserae made of lava on a white marble ground.

Some of the ground-floor mosaics were of a very elaborate sort of opus sectile, with patterns formed, not of small square tesserae, but of thin slices of porphyry and marble, shaped into patterns, with flowing lines and leaf-shaped ornaments, each piece fitted with great accuracy to the next, a much more expensive and elaborate method of mosaic work than the opus tessellatum.

An immense number of tesserae, made of glass of very brilliant colours, almost jewel-like in appearance, are strewn about the building. These glass mosaics were used for the walls or vaults, not as a rule for pavements.

The greater part of the walls were lined with thin slabs of porphyry and coloured marbles in great variety; nearly all the kinds mentioned in chap. i. were used in this magnificent building.

The columns were mostly monoliths of red porphyry, grey,
and red granite, or coloured marbles. A piece of a large column still exists in the building, made of the magnificent Egyptian alabaster, the osytre of Pliny, which in his time was rare and extremely valuable.¹

The uses of the chief rooms have been to some extent determined by the excavations of recent years.

In the centre of the north-east side is a large hall, the frigidarium (No. 1 on fig. 76), the floor of which was mostly occupied by an immense cold swimming bath (natatio) of marble about 4 feet deep, with a long flight of marble steps at each end.

A row of columns separated the main part of the frigidarium from a vaulted vestibule at each end, in which were two entrances from the outer court.

This magnificent hall appears to have been what Spartianus calls the cella solaris, the ceiling of which, he says, was formed of interlaced bars of gilt bronze. When the excavations in this hall were being carried on an immense quantity, amounting to many tons, of fragments of iron girders was found. These were compound girders, formed of two bars riveted together thus — — , and then cased in bronze. A sort of lattice-work ceiling had been formed with these bronze-cased girders, the panels being probably filled in with concrete made of light pumice stone coated with fine stucco reliefs, painted and gilt. The discovery at this place of so remarkable a ceiling, which agrees so well with Spartianus' description, makes it fairly certain this hall was the cella solaris.² It seems probable that this ceiling did not cover the whole area of the hall; the central part over the swimming bath may have been left open for the admission of

¹ This fragment is now placed in a room on the north-east side of the peristyle which is farthest from the turnstile where visitors enter the Thermae.

² I owe these facts about the metal ceiling to my friends the Comm. Lanciani and Prof. Aitchison, A.R.A.
light. In the upper part of the walls deep sinkings to receive the ends of the great girders which supported the ceiling are clearly visible.

Adjoining the *frigidarium*, in the centre of the building, is the *tepidarium*, a very large and once magnificent hall, groined in concrete, with three bays of quadripartite vaulting resting on eight columns; see No. 2 on fig. 76.

Four large recesses in the sides of the hall contain each a marble-lined bath, and other vaulted recesses open, one into the *frigidarium* and the other into part of the *sudarium*; at each end is a large vestibule, separated by columns and screens from the main *tepidarium*.

Fig. 77 shows this hall, which is 170 feet long by 82 wide, with its groined roof springing from immense columns of granite and porphyry, each surmounted by a short piece of entablature, which merely returns round the capital of the column in the debased fashion of the second and third centuries A.D. The smaller columns on each side were set in front of the recesses containing the warm baths.

The last of the great columns shown in fig. 77 was removed in 1563, and, at an enormous cost, was taken to Florence and erected in 1570 in the Piazza S. Trinità. It is of Egyptian grey granite, and measures about 5 feet in diameter.

The next room southwards (No. 8) forms a sort of vestibule to the great circular hall, and contains two marble-lined baths for hot water; it is part of the *sudarium* or sweating-room, and could be raised to a very high temperature, as it has a hypocaust floor and its walls were lined with flue-tiles.

The "*Laconicum*" (No. 9) comes next; it is an immense circular hall, 116 feet in diameter, with half of its circumference projecting on the south-west side of the main block. It was heated with a hypocaust floor and with a wall-lining of flue-tiles. This is the least perfect part of the whole

---

1 The *frigidarium* is placed on the north-east side and the *calidarium* on the south-west, as Vitruvius recommends.
building; and from the thinness of the wall of the half which is most destroyed it is very difficult to understand how the weight can have been supported of such an enormous dome Great dome.

as that which is supposed to have spanned this great area, 116 feet across.

The fact is, the existing remains very strongly suggest that in the original building of Caracalla the dome and the complete rotunda were not built, but only half of the rotunda, forming an apse with a semi-domical ceiling, like that in a similar position in the Baths of Diocletian. In later times, it
appears, the rotunda (with small apsidal recesses) was completed, but it is very doubtful whether the whole circular space was ever roofed with a dome. This being so, the original Thermae must have been a simple rectangle on plan, without any semicircular projection on the side, but merely with an immensely lofty apse, forming a great recess in the façade. In any case, it must be admitted that the part of the rotunda which projects beyond the main rectangular block is of considerably later date than the reign of Caracalla.

A number of recesses round this circular hall contained hot baths, each with a hypocaust furnace under it, like the bath shown in fig. 66, vol. ii. p. 124.

On the side away from the main building was an apsidal recess (No. 11 on fig. 76), as in the Pantheon, to which this Laonicum had some resemblance, at least in its plan. One pier only of the Laonicum exists as high as the springing of the vault,\(^1\) and the thinner walls of the side with the small apse or recess are almost destroyed down to the ground-level.

The remains of the recess and the walls near it have only been recently discovered, and consequently Palladio's and subsequent plans are incorrect in this part, as they show the projecting part of the great rotunda as if it were merely a repetition of the opposite side. Whereas there was the above-mentioned apse projecting from the rotunda on the side away from the main block, and the walls are very much thinner than those of the other half of the rotunda; see No. 11 on fig. 76. In the massive pier which still exists to a considerable height next to the hot room (No. 8 on fig. 76) there is a well-preserved staircase which formerly led up to

\(^1\) Near this pier and in other places are remains of walls which belong to more than one late restoration. The building appears to have suffered seriously from earthquakes, and was probably much injured by the one which, in the reign of Maximus, did considerable injury to the Colosseum; see vol. ii. p. 82.
the top of the building and also descended into the now inaccessible basement.

The pavement of this hall is a rude restoration, probably of the time of Theodoric, with large roundels of granite, and a number of incongruous pieces of marble carelessly fitted together. A large number of fluted pilasters, taken from some earlier building, have been used during this restoration; they were laid with their faces downwards, and the print of the fluting is clearly visible on many parts of the cement in which the marble was bedded in places where the marble itself has been removed.

On each side of the circular hall are four handsome and lofty chambers, of which the two angle rooms contain semi-circular marble-lined baths.

These rooms appear to have been open on one or more sides to the surrounding gardens; their precise use is uncertain, they cannot have been part of the Calidarium, as they are too open to the air, and not sufficiently heated.

It has been suggested that these suites of rooms composed two sets of private baths, but that is not very probable, as people who wished to bathe in private would hardly come to these great public Thermæ, when there were some hundreds of smaller and more private baths in Rome, without counting those in almost every private house.

Other rooms with hypocausts, wall-flues, and hot baths, exist between the great apses of the peristyles and the last-mentioned rows of rooms.

The two great peristyles (No. 6, 6 on fig. 76) are very large and handsome, with ranges of columns all round, supporting a vaulted aisle or gallery.

Fig. 78 gives a section through the peristyle, showing its concrete vault, with a mosaic paved gallery above it. The construction of the wall is noticeable; the lower part, below the level of the main floor, is a mass of concrete without any facing. Above the floor-level the concrete is faced first with
brick and then with marble slabs. Over the doorway is an interesting example of one of the numerous sham "relieving arches." The upper part of this arch, behind the marble frieze, was omitted, and only the lower part ever was constructed—for no useful or ornamental purpose, since it was wholly concealed by the slabs of marble with which the whole
wall surface was covered. The omission of the upper part of this arch shows that the builders had no delusions as to its being of any constructional use.

The same curious anomaly is shown in fig. 6, vol. i. p. 55.

Each *peristyle* has a small porch at two of its angles, with an entrance from the outer *peribolus*; and at its north end a large and very handsome vestibule, vaulted in three compartments, with other entrances from the north. In all, there are eight doorways into the *Thermæ*, without counting the possible entrances between the columns of the eight southern rooms, and in this way a good deal of space is sacrificed in making large vestibules. On two sides of the *peristyles* are apsidal recesses, the larger of which has niches for statues.

The whole *peristyle* pavement was of tesselated mosaic; simple in design in the central open space and along three sides, and with figure subjects of athletes and gladiators in the large apses. It appears probable that the central open spaces of these courts were used for gymnastic exercises; the upper gallery would hold a large number of spectators, as well as the lower passage round the aisles.

Although it is possible to identify the uses of the chief parts of these *Thermæ*, a number of rooms remain which cannot be appropriated to any certain use. These were probably dressing-rooms (*Apodyteria*), and anointing-rooms (*Elaeothesia*). The *Apodyteria* were especially magnificent and full of works of art. This is illustrated by the following inscription (Cor. In. Lat. viii. 828), *APODYTERIVM - NOVVM - IN - DEXTERA CELLIS - EXEVNTIBVS - CONSTRVXIT - SCALAS - NOVAS - FECIT CETERA - RESTAVRavit - ET - STATVIS - MARMORIBVS - TABVLIS PICTIS - COLUMNIS - ALVIBVS - CELLARVM - CATHEDREBVS ORNAVIT.

In addition to the main block of buildings which contained the actual baths there were long lines of very magnificent.

---

3 A large extent of this mosaic is preserved in the Lateran Museum. The figures of gladiators are very clumsy in design and coarse in execution.
buildings surrounding the immense enclosure, like a great park, in the centre of which the main block was erected. As is mentioned above, this great *peribolus* is raised to a considerable height above the natural level of the ground, forming an artificial platform of gigantic size.

This outer enclosure, which was nearly 1200 feet square, was laid out with flowers, shrubs, and avenues of trees. It was surrounded by long lines of buildings, mostly the work of Heliogabalus and Severus Alexander.

The whole of the north-east side of the great platform is occupied by a row of small vaulted chambers, forty in all, two stories high, with several staircases at intervals; see No. 14, 14 on fig. 76. In front of the row was a long covered *porticus*; and in the centre was the main entrance to the *Thermæ* from the Via Appia, apparently the only one by which the public were admitted.

The use of these small rooms is doubtful; it is most probable that they were shops; another suggestion is that they were rooms for the attendant slaves; but they probably lived in the main block, in part of the extensive basement.

On the north-west and south-east sides of the *peribolus* are two sets of three halls, with a semicircular colonnade or *porticus* behind, arranged in a very curious way; No. 15, 15 on fig. 76. Other spacious rooms exist on the south-west side; No. 16, 16. One of these halls, on each side of the *peribolus*, contained a large swimming bath supplied by a water-channel which recent excavations have exposed to view.

The best preserved of the rooms is a lofty hall, square on the outside and octagonal inside, with a large semicircular recess at the four angles. It was roofed by a dome with pendentives fitting into each angle of the octagon. This structure appears to date from the time of Severus Alexander, about 230 A.D.; it is therefore an exceptionally early example.

---

1 The central block alone covers a larger area than the English Houses of Parliament together with Westminster Hall.
of the construction of a dome on pendentives. This hall and the large bath on the south-east side can easily be examined, but the corresponding buildings on the north-west side of the peribolus are on private land, and are shut off from the main portion of the Thermæ.

The larger halls have on one side an open colonnade; they were handsomely decorated with marbles and porphyry, and had many niches for statues; in some cases there are tiers of seats against the walls. These were probably intended for the purposes mentioned by Vitruvius (v. 11), namely, halls with seats for philosophers, rhetoricians, and other literary men and their pupils. Others again were rooms for exercise and games, such as ball-play, which were called by Greek names, Ephebea, Conisteria, Sphaeristeria, and Xysti. Vitruvius in his description of the Greek Palæstra also mentions a stadium where spectators might sit to watch the athletic sports.

This, in the Thermæ of Caracalla, occupies part of the north-west side; it had tiers of marble seats, with stairs at intervals, like an ordinary stadium, except that one half was omitted; No. 17 on fig. 76. The corresponding structure in the Thermæ of Titus is shaped like the cavea of a Greek theatre; see No. 6 on fig. 74, vol. ii. p. 154.

Reservoir of Water. Behind the stadium is the great reservoir for the water supply of the baths, consisting of sixty-four vaulted chambers, arranged in two rows two stories high, through which the water flowed, depositing its sediment and becoming heated in its course from chamber to chamber; see 19, 19 on fig. 76.

Each of these cistern-chambers measured about 50 feet long by 28 feet wide and 30 feet high.

In the lower tier of thirty-two chambers the water for the baths was heated by a complete system of furnaces, hypocaust floors, and flue-tiles, like those shown in fig. 65, passing upwards over the whole wall surface of the tanks (see above,
vol. ii. p. 121). Thence to the main block, a distance of about 500 feet, the hot water was carried in large pipes of massive lead. All these tanks were lined in the usual way with opus signinum made with pounded pottery.

This reservoir was supplied by an aqueduct, which enters it in the middle, in a diagonal direction; see 18 on fig. 76. It crosses the Via Appia, over the so-called Arch of Drusus, which appears to be simply one of the arches built by Caracalla in a more ornamental way than the rest, as was commonly done where an aqueduct happened to cross a road.

This archway is of travertine lined with thin slabs of white marble, and is decorated with columns of Numidian marble with Composite capitals placed on pedestals; it had an entablature surmounted by a pediment on each side. The details are all coarse and clumsy, and evidently much later than the time of Drusus. The aqueduct was built by Caracalla to supply his Thermæ; it was merely a branch from one of the earlier aqueducts—from the Aqua Marcia, according to the Einsiedlen MS.

Methods of Construction. The foundations of the whole Thermæ of Caracalla are of concrete made of broken lava, lime, and pozzolana, cast in the usual way between wooden framing. Up to the level of the main floor these concrete walls have no brick or other facing. The upper parts of the walls are of tufa concrete, with the usual thin facing of triangular bricks, and single courses of large 2-feet tiles built in about every 4 feet, and passing through the whole thickness of the wall, as is shown above on fig. 78, vol. ii. p. 168.

1 This arch has been so called for no better reason than the fact that the Notitia catalogues an Arch of Drusus in Regio 1. or Porta Capena, which included this part of Rome.

2 The aqueduct arches, used as doors in the Aurelian Wall, and now called the Porta Magna, and the Porta Santi Lorenzo, are examples of this; the former built by Claudius, the latter by Augustus; see vol. ii. pp. 383 and 340.
The construction of the various arches and vaults affords many interesting examples of the Roman method of using the arched form without the principle of the arch. They were in all cases cast in one solid mass and had no lateral thrust. Some of the great vaults could not have stood for a moment if they had been built with true arches, as the thrust of such wide spans would have inevitably pushed out the lofty walls on which they rest.

The material used for the concrete of these immense vaults, as is the case in many other Roman buildings, was pumice stone, selected for the sake of its lightness. The top or extrados of the vaulting appears to have been filled in level with the crown, so that the suspended mass of material is in places enormously thick; even at the thinnest place the larger vaults were nearly 6 feet thick. The many fragments of these great vaults which are now scattered about the area of the baths afford an excellent opportunity of examining their construction. Any brickwork which exists in these vaults can here be seen to be of a purely superficial nature.

The mosaic pavements of the upper rooms, which rest upon these vaults, were formed thus—first, over the pumice stone concrete of the vault was laid a layer, 1 foot thick, of very hard concrete made of broken brick; on that another layer was placed from 2 to 3 inches thick, of similar concrete, differing only in the brick being finely pounded like the opus signinum used for aqueducts; last, come the tesserae of the mosaic, bedded in fine white cement (nucleus) made of pounded marble (cementum marmoratum). These various processes are described by Vitruvius, vii. 1. 3 to 4. All these different layers can easily be distinguished in the many large pieces of the vaulting which now lie scattered about the building.

The suspensurae or hanging floors of the hypocaust are also formed with three layers of concrete; the lowest about 10 inches thick, the next 5 inches, and then the marble tesserae. The supporting pilae are built of 8-inch square tiles bedded
in clay, and usually 2 feet 6 inches to 2 feet 9 inches high. The heat of the furnace passing under the hypocausts has baked this clay bedding till it is as hard as the fired bricks themselves. The under floor is formed of large tiles, tegulae bipedales, laid on a thick bed of concrete; see fig. 65, vol. ii. p. 121.

In addition to the square flue-tiles which line the hot rooms, circular socket-jointed pipes, beaded in the thickness of the concrete wall, are used to carry off the smoke from some of the hypocausts.

Rain-water down pipes are constructed at close intervals all through the concrete walls from top to bottom; these are about 12 inches square, carefully lined with tiles; they were hidden by the marble wall-linings and their cement. These rectangular down pipes are shown above at K in fig. 65, vol. ii. p. 121.

The marble slabs which lined the walls were usually thin, varying only from 1 to 2 inches in thickness. They are all backed with a thick bed of cement, 4 to 6 inches thick, and this cement backing is studded with fragments of older marble slabs, often arranged roughly in squares, stars, and crosses. These were possibly inserted to give a number of plane surfaces for the men, who applied the cement wall-coating, to work to, in order to get a perfectly even surface against which to fit the marble linings.  

Vitruvius (vii. 3. 5) describes the method of laying stucco

---

1 Modern plasterers in covering a wall with stucco form first of all a number of these plaster strips or servant, the faces of which are worked quite true and even; they then fill in between these strips, using them to level the intermediate spaces. The Roman plasterers worked with a large sort of wooden trowel, exactly like the modern plasterer’s float, and also with a long regula or norma extending along a wide piece of the wall, which was one form of the savà of the Greek builders. A scene with plasterers working with the float is represented on a painted wall found at Pompeii; see plate in Ant. Inst. for 1881.
on a wall, by first working a series of strips, *directiones arenati*¹, modern "screeds," to a true level, and then filling in between them, using a long strip of wood (*regula*) reaching from screed to screed, and so working the intermediate space to the same level.

The face of the brick lining is studded with marble and iron plugs to hold the cement backing, and the marble slabs were in many cases fastened by long iron or bronze clamps. Strong T-shaped holdfasts of iron are used to fix the square flue-tiles where they line the walls; see fig. 66 in vol. ii. p. 124.

Very little now remains of the marble, porphyry, and granite which once lined the *Thermae* with wonderful variety of rich colours forming a brilliant contrast to the white marble which was used for the decorative sculpture. A few Corinthian and Composite capitals still exist, and some pieces of the sculptured frieze which ran all round the two *peristyles*.

This frieze is carved in high relief with foliated scroll-work, among which animals and Cupids are playing, very decorative in effect, especially when seen from a distance, but not executed with any refinement of detail. The sculpture is largely executed with the help of the bow and drill (*tornus*), and no trouble is taken to conceal this. The utmost effect was produced with the least possible labour, a remarkable contrast to the exquisite finish and minute detail of the sculptured decorations of the first century of the Empire, and even later, as is exemplified in the beautiful cornices of the Temples of Concord and Vespasian; see vol. i. pp. 335 and 340.

A great part of the marble decorations and numerous columns of these baths existed in their place as late as the sixteenth century, and many churches and palaces, both in Naples and Rome, were enriched with the spoils of this magnificent building. Enormous quantities of sculpture, with

¹ "Arenati" implies the rougher under-coats of stucco which were made with *suda*, instead of the finely-powdered marble which was used for the finishing coats.
many engraved gems and other works of art, were found in these Thermae. Among them are the huge statue of Hercules, signed by the Athenian Glycon, a fine colossus restored as Flora, and the celebrated group of Dirce being fastened to the wild bull by her stepsons Amphion and Zethus, the work of Apollonios and Tauriskos, two sculptors of the Rhodian school; see Pliny, Hist. Nat. xxxvi. 34. These are now in the museum at Naples.

Many gigantic labra, or baths cut out of a solid block of porphyry or granite, were found here. One is now in the Vatican, one at Naples, and two in front of the Farnese Palace.

Some of the mosaics of the pavement have been taken up and placed in the Vatican and in the Lateran Museum. In the latter is one very large mosaic, representing gladiators and athletes, of colossal size, coarse execution, and the most ungraceful drawing; a most striking example of the very rapid decadence in taste which had taken place in Rome since the reign of Hadrian, who died in 138 A.D.

Great injury was done to the Thermae about the year 1534, by the Farnese Pope, Paul III., who not only took away its marble and columns, but even had the greater part of its brick facing laboriously picked off from the concrete walls that the broken bits of brick might be used to make concrete for the Palazzo Farnese. The removal of this thin facing of brick shows, in a very striking way, how unimportant a part of the walls the skin of brickwork really is.

Stripped of its brickwork, relieving arches and all, each massive concrete wall remains with hardly any perceptible diminution of its strength. The only bricks which remain in this part of the walls are the single courses of tegulae bipedales, tiles 2 feet square, which are laid in the concrete walls at intervals of about 4 feet, as shown in fig. 78.

The building is well illustrated with plans, sections, and

1 The stone used in the Farnese Palace was obtained by breaking down part of the external arceding of the Colosseum.
elevations by Blouet, *Thermes de Caracalla*, Paris, 1828, but his plan is in some few respects incorrect, as the whole area had not then been excavated.

**Thermæ of Diocletian.**

The *Thermæ of Diocletian* were built on the Quirinal Hill, close up to the inner side of part of the Agger and wall of Servius Tullius, occupying nearly all the space from the *Porta Viminalis* to the *Porta Collina*. In the sixteenth century they were very well preserved, and their plan is recorded by Palladio in his *Therme dei Romani*; see fig. 79.

In general arrangement these baths much resembled those of Caracalla, having on one side a large *frigidarium* and swimming bath (*nataio*), on the other a circular *laconicum* or hot room, and between them the *tepidarium*. At each end of the block was a large peristyle, open in the centre, and on the side by the domed *laconicum* there was a row of rooms of uncertain use. All these are similar to corresponding rooms in the *Thermæ* of Caracalla, not only in position, but in shape and proportion, except that the circular *laconicum* appears to have been much smaller in the Baths of Diocletian.²

These enormous *Thermæ*, which accommodated 3200 bathers—about double the number provided for in the Baths of Caracalla—were begun by Maximianus in the year 302 A.D., in honour of his absent brother Diocletian, and were dedicated in 305 A.D. under the Emperors Constantius Chlorus and Galerius Maximianus.

¹ The new *Museo delle Terme* is formed in the monastic buildings which occupy part of the site of Diocletian's Baths.

² Smaller, that is, than the great circular chamber which appears not to have been completed till many years after the reign of Caracalla, as is explained above at p. 166.

² Diocletian was but a short while in Rome; he had reigned twenty years before he paid his first visit to the ancient metropolis of his Empire.
According to tradition a large number of Christians, who were afterwards martyred, were forced to work at the construction of these baths.\(^1\)

The Latin and Greek libraries from the Basilica Ulpia of Trajan were moved to these baths (Hist. Aug. Prob. 2), and, like the other Thermæ, they contained an immense number of statues and busts, some of which are now in the Museum of Naples.

Like the Baths of Caracalla, these Thermæ still retained much of their magnificent marble linings, columns, and pavements as late as the sixteenth century. Much that is now destroyed is shown by Du Perac in his Vestigi di Roma as existing till 1575. The state of the Thermæ of Diocletian in

\(^1\) There is no truth in the story that the bricks used in the walls are marked with a cross.
the earlier part of the sixteenth century is described by Fulvio (Antiquaria Urbis, Venice, 1527), who gives a vivid account of their magnificence. A great part of the Thermæ was destroyed, and the rest stripped of its marbles, by Sixtus V. towards the close of the same century. Before then even the rooms of the extensive substructions, now wholly buried, were richly decorated with marble linings and pavements.

The existing Hall. The great hall which formed the tepidarium was made by Michelangelo into the nave of the Carthusian Church of S. Maria degli Angeli, during the reign of Pius IV. (1559-66); see B on fig. 79.

In 1740 alterations and additions were made, all in the worst possible taste. Even now the tepidarium forms one of the most imposing interiors in the world; it is about 200 feet long by about 80 feet wide, vaulted in three bays with simple quadripartite groining, which springs from eight monolithic columns of Egyptian granite about 50 feet high and 5 feet in diameter. These have fine Composite and Corinthian capitals supporting a rich entablature, all of white marble, but now restored with stucco, and covered with whitening so as to hide their material.

The real bases of the columns are now buried about 7 feet below the modern pavement, which was raised by Michelangelo to its present level above the old floor; the apparent bases simply encircle the granite shafts like a ring.

Though the walls are stripped of their rich marbles, and the vault has lost its elaborate stucco reliefs brilliant with gold and colour, and though the interior is disfigured with gaudy painting and clumsy figures, yet the noble size and well-designed proportions of this immense hall, and the wonderful span of its simple but graceful vaulting, produce an effect of the utmost grandeur. One part only of its original decoration exists on the vault, namely, a number of gilt bronze rosettes arranged regularly in each compartment; these were
probably intended as points of support for clusters of hanging lamps.¹

One of the hot rooms or *lazonea* is also well preserved, and is now used as the vestibule to the church; see A on fig. 79. This is a circular domed hall, which originally had a circular opening in the crown of the dome like the Pantheon; and adjoining it the start of a large recess or apse still exists on the outside of the building, very similar to that which appears to have existed on the south-west side of the Baths of Caracalla before it was converted into a circular hall by adding the projecting half of the rotunda.

As in the Baths of Titus and Caracalla, the central block of Diocletian’s *Thermæ* stands in the centre of a great *peribolus*, part of which still exists.

On the side opposite the hot chambers was a large theatre-like semicircle like that in the enclosure round the *Thermæ* of Titus. This now forms part of the boundary of the modern Piazza de’ Termini. The tiers of marble seats and their supporting vaults are now wholly gone, and only the outer semicircular wall of the “theatre” with rows of niches for statues still exists.

At each angle of this side of the peribolus was a circular domed hall like a miniature Pantheon, the cupola of which is decorated with sunk coffers (*lauuvaria*).

One of these is now perfectly preserved, though stripped of its marble linings, and is used as the Church of San Bernardo. It was turned to this purpose in 1598, and was given to the Cistercian Monastery,² which was built among the ruins of the *peribolus*.

¹ The choir which projects from one side of the *tepidarium*, and the chapel at each end, are eighteenth-century additions. The nave of the church, which is formed by the great hall, is set crossways instead of lengthways, on account of the long axis of the *tepidarium* running nearly north and south.

² This afterwards became a Carthusian Monastery. Some of the rooms are now used as a museum for sculpture and other antiquities found in Rome.
As is the case with the domed *lacoicum* of the main block, the central aperture or *hypaethrum*, formerly open to the air except when closed by its bronze valve, is now covered by a modern lantern.

About half the corresponding circular hall at the opposite side of the *peribolus* still stands, built in among some modern constructions.

Other parts of the enclosure still exist, and among them five semicircular apses or *exodrae* for lectures or philosophical discussions. Palladio shows a number of other rooms now destroyed, which were probably used for the same purposes as those round the *peribolus* of the *Thermæ* of Caracalla.

*The methods of construction* employed in the Baths of Diocletian are very similar to those of Caracalla’s Baths.

In the same way the enormous vault, 80 feet in span, over the *tepidarium* is not a true arch, but is simply cast in one solid mass of concrete.

The brick facings, and especially the skin-deep brick arches, are much less neat than those in Caracalla’s *Thermæ*; the bricks vary in thickness from 1½ to 1¾ inch, and the joints from half an inch to an inch.

The concrete of the walls is mostly made of broken bricks, and the vaults are of tufa concrete.

The external cornices are mainly formed with projecting courses of tiles, supported at close intervals by travertine or marble corbels, and the whole was once covered with enriched mouldings worked in hard white cement, and decorated with gold and colours.

In 1548 a large bronze bell was found in the Baths of Diocletian, inscribed *FIRMÆ BALNEATORIS*. This is noticeable as being an example of the *Aes Thermorum* (Mart. xiv. 163), a bell which was rung every day to announce that the water was hot and the baths ready.¹

¹ The discovery of this bell is recorded in the supplement to Ciacconi’s *De triclinio*. 
Till quite recently remains existed of an extensive piscina or reservoir to contain the water supply for the Thermæ. This stood outside the peribolus, at the fork of two roads which converged and met before passing out of the Porta Viminalis in the Servian Agger. Owing to the confined nature of its site the piscina was not rectangular in plan. The vaulted roof of this curious building was supported on rows of square piers standing in the water, like the large Roman reservoir which still exists in Constantinople.

Fig. 80 from Ligorio's Bodleian MS. shows the plan of this enormous cistern, which was 306 Roman feet in length.

**Thermæ of Constantine.**

The enormous baths built by Constantine only a few years after those of Diocletian have now almost wholly disappeared. Extensive remains of these splendid Thermæ existed till the sixteenth century; see Palladio, Therme dei Romani, and Du Perac, Festigj di Roma. The remains which then existed were mostly destroyed to clear sites for the Quirinal, the Rospigliosi, and the Bentivoglio Palaces.

The central block, of which Palladio gives a plan (see fig. 81), in some respects resembled the older Thermæ, and had a huge central domed laconicum like that in the Baths of Caracalla. The Palazzo Rospigliosi occupies part of the site of

---

1. These interesting remains, together with the greater part of the Servian Agger, have been destroyed by the enlargement of the railway station and other so-called improvements; see a paper by the present author in Archaeologia, vol. II. 1888, p. 392.

A very handsomely illustrated work on the Thermæ of Diocletian was published in Paris in 1891. The drawings, which gave the existing remains and also a conjectural restoration of the whole, were executed by one of the "Prix de Rome" students.

2. An inscription, recording the restoration of these Thermæ by Petronius Perpenna, in the year 443, was found during the building of the Quirinal Palace.
Fig. 80.
Lagrange's plan of the Tepetlum of the Saints of Diodorius, measuring 306 feet long.
this main block, and the whole enclosure extended over nearly the whole width of the Quirinal Hill, verging on its slope, which is now partly occupied by the gardens of the Colonna Palace. The enormous fragments of a white marble Corinthian entablature which still are visible in these gardens probably belonged to the main western entrance of the peribolus.¹

One of these fragments is a piece of frieze, nearly 18 feet long, richly sculptured with Cupids and birds among foliated scroll-work, decorative in effect, but very coarsely executed.

The so-called "Pediment of Nero," which is illustrated by Palladio, Du Perae, Donatus, and other archaeologists of the sixteenth and seventeenth centuries, appears to have been part of the peribolus of these baths; its entablature and sculptured frieze resembled the fragments in the Colonna gardens.

The colossal statue of Constantine, now at the end of the Narthex of the Lateran Basilica, was found among the ruins of these Thermae, and also two other portrait statues of Constantine and his son Constans which now stand at the top of the Capitoline steps.

The two colossal figures of nude heroes holding their horses, which gave the name to Monte Cavallo on the Quirinal, once stood in some part of Constantine's Baths. They are, like the bronze equestrian portrait of Marcus Aurelius, among the very few statues in Rome which have never been thrown down and buried. They are shown in most of the mediaeval views of Rome.

These magnificent groups are probably copies executed in Rome during the first or second century A.D., from bronze

¹ These fragments are thought by some archaeologists to have belonged to the great Temple of the Sun built by Aurelianus about 271 A.D.; but it appears more probable that this temple stood in the Campus Martius, not far from the Pantheon. The Curicium and Notitia have the following entry—Regio vii. Via Lata continet... Campus Agrrippae, Templum Solis et Castre. Caius's supposed restoration of the Templum Solis is a remarkable example of his highly imaginative method of archaeology.

Fig. 81.

Plan of the Thermae of Constantine, taken from Palladio. Only the central block is given.

sharp-cut lips of the heroes, more suitable for metal than marble, shows clearly that these statues were originally designed in bronze.¹

¹ In front of the Porticus Metelli, afterwards rebuilt as the Porticus
They are usually called Castor and Pollux, but without much reason. The names of Phidias and Praxiteles on the pedestals were placed there during a period of utter ignorance of the archaeology of art. 1

The present inscriptions on the pedestals seem to be copies of older ones, which existed before the year 1409, dating probably from the time of the late Empire; see Cor. In. Lat. vi. 55, and p. 15.

**PRIVATE BATHS**

A small *Calidarium*, part of the baths of a private house, is now made into a chapel in the Church of S. Cecilia in Trastevere; according to tradition this is said to have been the house where the Saint lived. The clay flue-pipes all round the walls are well preserved, as are also some of the lead pipes that supplied the water. A bronze cauldron for heating water (*alaerum*) still exists *in situ*, built into the floor over the hypocaust in the way Vitruvius describes, v. 10. The mediaeval pavement is nearly 3 feet above the original floor.

Remains of other private baths exist below the Churches of S. Pudenziana, S. Martino ai Monti, and at many other places in Rome.

The most interesting and perfect examples of private baths which still exist in Rome are those in the upper story of the House of the Vestals; see vol. i. p. 316, and fig. 66, in vol. ii. p. 124.

It should be observed that the presence of a hypocaust: *Octaviae*, in the *Campus Martius* (see vol. ii. p. 200), were set bronze statues of Alexander and twenty-four horsemen, the work of Lysippus; it is possible that the groups by the Quirinal Palace are copies from two of these; see Pliny, *Hist. Nat.* xxxiv, 64.

1 According to one form of the mediaeval legend, Phidias and Praxiteles were brothers, who lived in the reign of Alexander the Great. Like Aristotle and Virgil, they were powerful magicians, who produced wondrously realistic statues by the simple process of turning living men into marble.
alone does not by any means necessarily indicate the existence of a bath, as in the time of the later Empire, in the second century A.D., most of the rooms in rich men's houses and in Imperial palaces appear to have been heated in this very effectual way. A complete wall-lining of flue-tiles, on the other hand, would not be used in a living room, but only for the calidarium or sudatio of a bath.¹

¹ A very interesting and well-illustrated course of lectures on the Thermac of the Romans was given in 1889 at the Royal Academy by Prof. Altheim, A.R.A. They are published in The Builder, February 1889; see also a paper by the same author in Proceedings Roy. Inst. Brit. Arch. for 1889, vol. v. p. 106 seq.
CHAPTER VI

THE FORUM BOARIIUM AND THE CAMPUS MARTIUS.

The Forum Boarium, or cattle-market, lay between the Velabrum and the Tiber; on its northern side it was bounded by the Servian wall where there were three gates very near together, the Porta Flumentana, Triumphalis, and Carmentalis; see vol. i. p. 126; and Plan of Ancient Rome.

Ovid (Fast. vi. 477) describes the Forum Boarium thus—

\[ Postibus et magna juncta est celeberrima Circa,\]
\[ Area, quae posito de bove numen habet.\]

The bridges referred to in this passage are probably the Ponte Sublicius and the Ponte Aemilius. The carceres of the Circus Maximus bordered on the Forum Boarium; and the ox mentioned by Ovid was the celebrated work of the Greek sculptor Myron, a statue of an ox made of Aeginetan bronze, which was one of the most famous statues in Rome; see Pliny, Hist. Nat. xxxiv. 10.

In early times the Forum Boarium was frequently used for scenes of gladiatorial butchery, and we also read of the most hideous form of human sacrifices being performed in it, namely, the burial alive of men and women; see Pliny, Hist. Nat. xxviii. 12; Livy, xxii. 57; and vol. ii. p. 75.

Excavations in 1887 in part of the Forum Boarium exposed a stratum of burnt materials at a level lower than that of the

\[^1\] An immense number of epigrams were written about the ox of Myron; some still exist in the Greek Anthologia.
Forum during the Imperial period, showing that a great fire must have devastated this part of Rome in Republican times. This conflagration was probably the *foedum incendium* which Livy (xxiv. 47) records as having occurred in 214 B.C., raging for a day and two nights, and causing immense destruction.

*Temple of Fortuna.* In the *Forum Boarium*, near the Pons Aemilius (modern Ponte rotto), is one of the best preserved buildings of ancient Rome, and one of special interest from its early date.

It is popularly called the Temple of *Fortuna Virilis*, which is probably a blundered form of the title *Fors Fortuna*. The mistake appears to have arisen thus: Dionysius (iv. 27) translated the phrase *Templum Fortis Fortunae*, i.e. "the Temple of *Fors Fortuna*," into ναὸς Τύχες αὐδηριας, as if "*Fortis*" were the adjective meaning "manly," instead of the genitive of *Fors*. The same mistake is made by Plutarch, *De Fortuna* Rom. 5; see also Livy, x. 46, and xxvii. 11.

It is more probable that this is the *Temple of Fortuna*, dedicated by Servius without any affix, since the one about which Dionysius made the above mistake was not in the *Forum Boarium*, but on the other side of the river, some distance lower down, Dionys. iv. 27, and Varro, *L. a. Lat.* vi. 17; the latter writer speaks of it as being *extra urbem*. See Bunsen, *Beeh. Rom.* III. i. 665, and Livy, xxxiii. 27.

The statue of Fortuna in the temple built by Servius was robed in a woollen *toga praetexta*, which, according to Pliny, (Hist. Nat. viii. 194), lasted without decay from the time of Servius to that of Tiberius; cf. Ovid, *Fast.* vi. 569.

In front of the *Aedes Fortunae* was the Arch of L. Stertiniii; Livy, xxxiii. 27.

Servius also founded a Temple to *Mater Matuta* in the *Forum Boarium*, which was rebuilt in 396 B.C., by the Dictator M. Furius Camillus as a thank-offering after the capture of Veii; Livy, v. 19 and 23. It is quite possible that this may
be the existing temple, though perhaps dating from a later reconstruction.

What the real date of this very interesting building may be is impossible to guess, except that it is probably earlier than the middle of the first century B.C. Its early date is indicated by its pure Hellenic style, free from any Roman modifications (except perhaps the form of its elevated \textit{podium}), by the absence of any marble, and by its being mainly built of tufa, travertine being used in a very sparing way, though much care and labour have evidently been spent on the con-

![Diagram of temple](attachment:image.png)

\textbf{Fig. 82.}

So-called Temple of Fortuna Virilis.

The black shows tufa, the shading travertine.

struction and decoration of the building. It is an Ionic, \textit{tetracontastyle}, \textit{prostyle} temple, with seven columns on the sides, five of which are \textit{engaged}, the other two forming the portico; see fig. 82.

The temple stands on a travertine \textit{podium}, about 8 feet high, with well-moulded plinth and cornice. The \textit{cella} with its engaged columns is of tufa, except the angle columns, which are of travertine, as are also the free columns of the portico. Travertine is also used for the bases of the tufa columns. This use of the harder and stronger material at points of special pressure is very common in Roman buildings, especially those of an early period.

\footnote{The use of engaged columns along the cela wall is not necessarily a Roman peculiarity; see vol. i. p. 30, note.}
The frieze was decorated with graceful reliefs of garlands hanging from candelabra, and ox-skulls, all modelled in hard white stucco. The *nymatium* of the cornice was also enriched with foliated ornament, and had pierced lions' heads at intervals to discharge the rain water from the roof. The whole building was covered externally with *opus albarium*, or hard stucco, once decorated with painting, so that originally the contrast between the white travertine and the dark brown tufa was not visible. It is now used as the Church of S. Maria Egiziaca, and the open columns of the portico are built up by a modern wall.

**Circular Temple.** Another existing temple in the *Forum Boarium* is the circular building which was once thought to be the *Temple of Vesta*; see vol. i. p. 297. This may possibly be the *Temple of Hercules*, mentioned by Livy, x. 23; who says that the *Sacellum Pudicitiae Patriciae* stood in *Foro Boario ad aedem votundam Herculis*; see Piale, *Tempio di Vesta*, 1817. Becker wished to identify the temple shown in fig. 82 with this shrine of Pudicitia, but it seems too important a building to be called a *Sacellum*

The Temple of Hercules in the *Forum Boarium* is mentioned by Macrobius, *Saturn. iii. 6*, and Solinus, i. 11; and also by Festus (ed. Müller, p. 242), who speaks of it as the *Aemiliana*¹ *aedes Herculis*, possibly so called on account of its proximity to the Aemilian bridge.

Pliny mentions (*Hist. Nat. xxxiv. 33*) a very ancient bronze statue of Hercules in the *Forum Boarium*, which was called *Hercules triumphalis*. It was of prehistoric date, fabled to have been dedicated by Evander.

This graceful little temple appears to date from a rebuilding during the reign of Augustus. In design it closely resembles the real Temple of Vesta in the Forum, being a circular Corinthian building, surrounded by twenty columns, one of

¹ The word *Aemiliana* is, however, a conjectural emendation made by Scaliger.
which is now missing, together with all the entablature, and
the upper part of the cella wall. The whole was built of
solid blocks of white marble except the circular podium, which
is of tufa, with a block of travertine used as a footing-stone
under each column.

This use of marble, not in thin facing slabs but in solid
blocks, is rare among the existing remains of Rome. The
Regia was another example of this substantial method of con-
struction; see vol. i. p. 307.

The tufa of the podium was completely hidden by the
marble paving of the circular peristyle, and by a flight of eight
marble steps which surrounded the whole. An open gutter
for rain water, 10 inches wide, cut in blocks of peperino, sur-
rounded the lowest marble step in a complete ring; this was
probably covered with marble cement like the similar gutter
in the House of the Pontifex near the Requa.

The blocks of white marble of which the cella is built are
made to appear smaller than they really are by having false
joints cut in them, so as, by multiplying the apparent number
of courses, to give a greater appearance of size to the building
than it really possesses.¹

The wall of the circular cella is surrounded with a dado
about 9 feet high, with a well-moulded plinth and cornice.
There was one central door and a window on each side; the
former has a moulded architrave. The temple was probably
roofed either with a marble tholus or with a wooden dome

¹ The Greeks and, in imitation of them, the Romans very frequently
gave increased scale to their buildings by this system of introducing false
joints. A wall built, for example, with twenty courses of masonry, each
2 feet deep, will look considerably higher than one which consists of
the courses of blocks 4 feet deep. And a column with many flutes
seems thicker, as Vitruvius says (iv. 4. 2), than one of the same diameter
with fewer flutes. In the same way the thin brick facing of the Romans
gives much greater scale and dignity to the walls than is produced by our
modern bricks of about double the thickness.
covered with bronze tiles, but this is now lost. In the Middle Ages this temple was consecrated as the Church of S. Stefano delle Carozze; so named from an ancient marble chariot which was found near it. Its dedication was afterwards changed to S. Maria del Sole from a miraculous shining picture of the Virgin which was found floating in the river hard by.

**Temple of Ceres ad Circum Maximum.** Near this circular temple remains of a large peripteral temple exist built up into the walls of the very interesting Church of S. Maria in Cosmedin. This is probably the Temple of Ceres, Liber and Libera, which was originally dedicated by the Consul Spurius Cassius in 494 B.C., in fulfilment of a vow made by the Dictator Aulus Postumius three years before; Dionys. vi. 17 and 94.

The position of this temple is indicated by Dionysius (loc. cit.), Vitruvius (iii. 3. 5), Pliny (Hist. Nat. xxxv. 154), and Tacitus (Ann. ii. 46), who describe it as being by the Circus Maximus, close outside the carceres, in the Forum Boarium.

According to Vitruvius it was of the Tuscan or Etruscan style, with widely spaced (araeostyle) columns; its pediment was adorned with statues of terra cotta and gilt bronze. Pliny (loc. cit.), quoting Varro, mentions this temple as the first in Rome which was adorned with works of art by Greek artists, not by Etruscans, as had up to that time been the custom. It contained mural paintings by Damophilus and Gorgasus, which, when the temple was rebuilt, were cut off the walls and fixed in wooden frames; at the same time the statues of the pediment were taken elsewhere and dispersed.

Pliny (Hist. Nat. xxxv. 24) mentions another very cele-

---

1 Bacchus and Proserpine were identified by the Romans with Liber and Libera. Their worship, in connection with that of Ceres, was probably taken from the Greek cult of Dionysos, Demeter, and Ceres, in their character of Chthonian Deities. The Greek colony of Tarentum was one of the chief centres of this Chthonian cult.

**VOL. II**
brated picture in this temple representing Liber Pater (Bacchus), by the Greek painter Aristides, which was carried off by Lucius Mummius about 146 B.C. with countless other spoils from Greece. It was put up to auction with other works of art by Mummius, who did not suspect its value; but when King Attalus of Pergamus bid sixteen talents for it (about £4440), Mummius began to appreciate its value, and so withdrew it from the sale and sent it to Rome in spite of the king’s remonstrances.¹

This temple, which was usually called Templum Ceres ad Circum Maximum, was burnt in 31 B.C., and partly rebuilt by Augustus; the new temple was finished and dedicated by Tiberius in 17 A.D.; Tac. Ann. ii. 49. The existing columns probably belong to a still later rebuilding, of which no record appears to exist. This temple was one of great splendour and importance, and was used as the aerarium and tabularium of the aediles of the people. In 197 B.C. Livy tells us (xxxiii. 25) the aediles dedicated in it three bronze statues of Ceres, Liber, and Libera out of the fines which had been paid to them.

Ten of the columns of the peristyle are still standing in situ; four of them built up in the wall of the north aisle of S. Maria in Cosmedin and six in the west wall. Their capitals, which are Composite in style,² are well sculptured; they can be closely examined in the room over the Narthex and in the western organ-gallery. The columns are widely spaced (ornus-style), as, according to Vitruvius (iii. 3. 5), was the case with the original temple.

There are also some remains of the cella wall, built of large blocks of peperino, once faced with marble.

In the atrium of this very interesting church there is

¹ The magnificent collection of works of art of all kinds made by King Attalus was bequeathed by him to the Roman people.

² These Composite capitals are evidence that the building is later than the time of Tiberius. The Arch of Titus has the earliest examples of Composite capitals the date of which is known.
preserved a great circular slab of marble 5 feet in diameter, sculptured in low relief with the face of a bearded river-god. This was called in the Middle Ages La bocca della Verità. It appears to have been originally part of the paving of an open court, made to communicate with a drain to carry off the surface rain water, which passed away through the open mouth and eyes of the great face.

Outside the Church of S. Maria in Cosmedin, at the east end, are remains of some extensive building with walls and arches of peperino and travertine, and later additions in brick-faced concrete. These are evidently no part of the temple, and may be portions of the outbuildings belonging to the carceres of the Circus Maximus.

The above-mentioned buildings are all within the Forum Boarium and inside the limits of the Servian wall, which separated the Forum Boarium from the Forum Olitorium and the rest of the great Campus Martius.

The Campus Martius was originally a great grassy and marshy plain bordered by a loop of the Tiber, outside the Servian wall, to the north-west of the Capitoline Hill. On the north-east it was bounded, roughly speaking, by the Pincian and Quirinal Hills; on the south by the Capitoline Hill and by the Tiber; and on the west by the Tiber. Being outside the Servian line of wall, and for long being marshy and exposed to floods, it remained unencumbered with private houses, and so, in later times, when a complete

---

1 It was called the "mouth of truth" on account of the mediæval superstition that the mouth would close if any one swore a false oath while standing with his hand in the open mouth of the mask.

2 In the appendix to this chapter is given a list of references to the many passages in which Pliny mentions the buildings and works of art throughout the Campus Martius.
system of cloaca had got rid of its marshes, its great area was free for the erection of the most extensive and magnificent groups of public buildings in Rome.

Under the Empire almost the whole of this great plain, measuring roughly about one mile by three-quarters of a mile, was covered with a succession of sumptuous buildings, temples, theatres, circi, porticus, and thermae, forming one uninterrupted group of stately public buildings. In the Imperial period four or five bridges connected the Campus Martius with the opposite bank of the Tiber.

The southern portion of the Campus, which formed the 9th Regio of Augustus, was called after the Circus Flaminius. The northern part was called the Campus Martius proper; and the eastern part took its name from the Via Lata.

In the time of the mythical Kings of Rome the Campus Martius was a place of meeting for general assemblies of the citizens, for reviews of the army, and for various sacred games and festivals, such as the Equitia, which was fabled to have been instituted by Romulus in honour of Mars, to whom the whole Campus was dedicated. The Ludi Soculares and the Ludi Apollinares were held there.

The Campus also contained altars to Mars and to the Chthonian deities Dis and Proserpina. A great part of its area consisted of arable land and pasture, which the Tarquins are said to have treated as their private property.

Hence the older name of the Campus Martius, before it was consecrated to Mars, is said to have been Ager Tarquiniorum. Livy (ii. 5), writing of the time soon after the expulsion of the Tarquins, says, Ager Tarquiniorum qui inter Urbem ac Tiberim fuit, consecratus Marti Martius deinde Campus fuit; see also Livy, i. 44, and vi. 20.

Under the Republic the Campus was almost wholly treated

1 Another area sacred to Mars, the Campus Martialis on the Caelian Hill, was used for festivals and games at times when the Campus Martius was flooded.
as public ground, and was used as a military and athletic exercising place, and for meetings of the Comitia Centuriata which were at first held in the open air, and afterwards in a great roofed hall built by Julius Caesar (the Septa Julia).

Among the buildings in the Campus Martius, the theatres, such as those of Baebius, Marcellus, Pompey, and others, are described in chap. iii. The Thermae of Agrippa and of Nero are described in chap. v. Among the rest of the buildings in the Campus, the following are the most important:

BUILDINGS IN THE FORUM OLITORIUM.

The Forum Olitorium or oil-market occupied the southern extremity of the Campus Martius; the wall of Servius separated the Forum Boarium from the Forum Olitorium. Access from one Forum to the other was given by the Servian Porta Flumentana, close by the modern "Ponte rotto," Pons Aeutilius; near this gate, within the enclosure of the Forum Olitorium, stood a group of three temples set close together side by side. Remains of these still exist built into the walls of the Church of S. Niccolo in Carcere. Fig. 83 shows their plan, with indications of the parts which still exist. Parts of the three are shown on a fragment of the Marble Plan of Severus, as is shown by the line on the annexed figure. The central and largest temple is Ionic, hexastyle and peripteral; one side of its cella wall still partly exists, built of large blocks of travertine, of which the four existing columns also are constructed.

The next in size also is Ionic, hexastyle, and peripteral except at the back; seven of its columns exist. The third and smallest is Tuscan, hexastyle, and peripteral; five columns are still stand-

3 Pliny (Hist. Nat. xxxiv. 25) tells us that a plot of land in the Campus, which was the private property of one of the Vestals, was given by her to the Roman people. A statue was erected in her honour, with the inscription, Quod Campus Tiberius gratificata esse su populo; see also Aul. Gall. vi. 7. In the main, however, the Campus was public property.
ing. The latter two temples are built partly of travertine and partly of peperino, and the whole group dates probably from the early years of the Empire.

It is probable that two of these temples were dedicated to *Spes* and to *Juno Sospita,* the dedication of the third is unknown. It has been supposed to be the Temple of Piatas, but wrongly, as that was destroyed to make room for the Theatre of Marcellus. The Temple of Juno Sospita was built in 197 B.C., by C. Cornelius Cethegus, in fulfilment of a vow made before battle; Livy, xxxii. 30.

Another temple dedicated to *Juno Matuta* is mentioned by Livy (xxxiv. 53) as having been built in the *Forum Olitorium* in 194 B.C.

The Temple of *Spes* was founded by M. Attilius Calatinus. Livy (xxiv. 47) speaks of it as being outside the *Porta Carmentalis,* and mentions its destruction by fire in 214 B.C. It was rebuilt the next year by a decree of the Senate; see Livy, xxv. 7. It was again rebuilt after a fire in the year 17 A.D.; see Tac. Ann. ii. 49; in this passage Tacitus mentions a Temple of *Janus* in the *Forum Olitorium,* but temples to this deity were usually of a form different from the three of which remains still exist in S. Niccolo.

A considerable part of the porticoes of these three temples

---

1 An early Latin or Etruscan form of Juno, worshipped specially at Lanuvium, where a large temple and grove were dedicated to her; in the latter was preserved a sacred snake. Juno Sospita or Sispi ta is represented as a warlike goddess, armed with spear and shield, and wearing a goat's skin over her head. In the British Museum an early Gracco-Etruscan amphora has a representation of a contest between Hercules and Juno Sospita; the same subject is repeated on a vase in the Fitzwilliam Museum at Cambridge. A very noble equestrian statue of Juno Sospita which was found at Lanuvium is preserved in the round hall of the Vatican.

2 Burn, in his valuable work, *Rome and the Campagna* (p. 506, note 1), suggests that the third temple may have been that to *Apollo Medicus,* mentioned by Livy (xl. 51), as being "post Spes ad Tiberin."
was standing in the sixteenth century, projecting into the modern street; they are shown in one of the drawings in Du Perac's *Vestigii di Roma*; see also Labacco, *Architettura*, 1557; *Ann. Inst.* 1850, p. 347; and *Mon. Inst.* v. 24.

A large extent of the travertine paving of the Forum Olitorium was discovered near this group of temples in 1875; see *Bull. Comm. Arch. Rom.* 1875, p. 165 seq.

Plan of the three Temples on the site of S. Niccolo in Carcere.
The part within the line AA is that shown on a fragment of the Marble Plan. The black shows what still exists.

**PORTICUS OCTAVIAE AND ADJOINING BUILDINGS.**

The *Porticus Octaviae* and the temples it enclosed formed one of the most magnificent groups of buildings in the Regio which took its name from the *Circus Flaminius*, and occupied an extensive area in the *Campus Martius*. It stood near the Theatre of Marcellus, and its site till the recent demolitions was occupied by some of the most squalid streets of the Ghetto, which are now destroyed. The existing remains, still partly hidden by modern buildings, with the help of a fragment of
the *Marble Plan*, enable the arrangement of the whole group to be fairly well made out.

The *Porticus Octaviae* was built by Augustus on the site of the *Porticus Metelli*, founded in 146 B.C. by the Propraetor Q. Metellus Macedonicus; Suet. *Aug.* 29. It must not be confounded with the neighbouring *Porticus Octavia*.

The *Porticus Octavia* or *Octavius* was built by Cn. Octavius, the conqueror of King Perseus of Macedonia in 168 B.C. (Livy, xlv. 6 and 42), and was rebuilt by Augustus under the same name, as is recorded in the Ancyrean inscription—*PORTICVM AD·CIRCVM·FLAMINIVM·QVAM·SYM·APPELLARI·PASSVS EX·NOMINE·EIVS·QVI·PRIOREM·EODEM·IN·SOLO·FECERAT·OCTAVIAM*. The *Porticus Octavia* was close to the Theatre of Pompey, but no remains of it are known to exist. It must have been an exceptionally magnificent building. Pliny describes it as being a double *porticus*, with doors and thresholds of fine Greek bronze. The capitals of its Corinthian columns were also of bronze. From these capitals the building was sometimes called the *Porticus Corinthia*; see Hist. Nat. xxxiv. 13.1

To return to the other group of buildings, the *Porticus Octavioe* consisted of a very large cloister-like quadrangle with an open colonnade all round it and on one side a central porch with pedimental roof. Within this enclosure stood two temples, dedicated to *Jupiter Stator* and *Juno Regina*, both of which were founded in the second century B.C. but were probably completely rebuilt by Augustus. The *Temple of Juno* was first built and dedicated by M. Aemilius Lepidus in 179 B.C. as a thank-offering for his victories over the Ligurians, and the *Temple of Jupiter Stator* was consecrated at the same time; see Livy, xxxix. 2, and xl. 52.

According to Pliny (Hist. Nat. xxxvi. 43) the statues of Juno and Jupiter were each carried by mistake into the wrong

1. The Pantheon was another example of the use of bronze capitals; see vol. ii. p. 122.
temple, and were allowed to remain there because it thus appeared that each deity had in this way specially chosen a resting-place.

On this account, he says, the paintings and ornaments appropriate to Juno were in the Temple of Jupiter and vice versa. Pliny also says (ib. 42) that the architects of the two temples, when they were rebuilt by Augustus, were two Laconian Greeks called Saurus and Batrachos, whose names mean “lizard” and “frog,” and that when they were forbidden to inscribe their names upon the temples they introduced lizards and frogs among the ornaments of the bases (spirae), to serve as artists’ signatures.

Reliefs of both these reptiles are very skilfully introduced into the eyes of the volutes of the Ionic capital of a fine ancient column which now exists in the nave of S. Lorenzo fuori le mura. It is very probable that this is one of the columns mentioned by Pliny, in spite of the reptiles being among the ornaments of the capital instead of the base. There is no place in the base of a column where such reliefs could well be introduced, and it is probable either that the word spirae is a corrupt reading, or that Pliny was mistaken in this detail. Winckelmann is certainly right (Euvres, ii. p. 589) in attributing this well sculptured column to the Augustan age; it is of exceptionally fine workmanship.

_Opera Octaviae._ Several other handsome buildings which adjoined the _Porticus Octaviae_ appear to have been arranged round the great quadrangle. These consisted of a hall for meetings of the Senate and other public bodies, two libraries, and a set of notaries’ offices, called respectively the _Curia, Bibliothecae, and Schola Octaviae_; see Plutarch, Marc. 30; Dion Cass. xlix. 43; lxvi. 24. The _Bibliotheca Octaviae_, founded by Augustus, appears to have been the second public library in Rome. The first had been instituted in 37 B.C. by Asinius Pollio, both for Greek and Latin books.\(^1\) Pliny (Hist. Nat.

\(^1\) The third was the Palatine library; see vol. i. p. 156. A fourth, the
xxxv. 10) speaks of Pollio’s library as being decorated with portraits. This appears to have been usual in Roman libraries; statues, busts, and medallion reliefs of famous authors were frequently ranged round the walls; see vol. ii. p. 254.

The whole group, including these buildings and the Porticus, was known as the Opera Octaviae; see Pliny, Hist. Nat. xxxvi. 15. Pliny mentions a number of fine works of art by distinguished Greek sculptors which adorned various parts of this magnificent group of buildings.

Statues of Aesculapius and Diana, by Cephsodotus the son of Praxiteles, stood in the Temple of Juno. The statues of Juno and Jupiter in their respective temples were by Dionysius and Polycles.

In the Temple of Juno was also a statue of Venus by Philiscus, and several statues by Praxiteles. In the Temple of Jupiter (Hist. Nat. xxxvi. 34) was a group of the struggle between Pan and Olympus, the work of Heliodorus; a Venus at the bath by Daedalus, and another statue of Venus by Polycharmus. Pliny also says (ib. 22) that in the Schola was the much-admired Thespian Cupid by Praxiteles; see also Cicero, In Verrem, II. iv. 2, 3 and 60.

In some part of the porticus was a statue of Aphrodite by Pheidias, which Pliny says (Hist. Nat. xxxvi. 15) was of extraordinary beauty. In the Curia was a statue of Cupid holding a thunderbolt, but by what sculptor had been forgotten. Pliny mentions this (Hist. Nat. xxxvi. 28) as one of the instances of Roman indifference in artistic matters.

In the Schola Octaviae were also fine paintings of Hesione and Philip of Macedon, Alexander the Great and Minerva, the work of Antiphilos (Hist. Nat. xxxv. 114); and many fine

Bibliotheca Tiberiana, was formed by Tiberius in his palace on the Palatine. The fifth and sixth State libraries were those in Vespasian’s Forum Vetus, and the largest of all in Trajan’s Forum; see vol. ii. p. 26.

1 See Hist. Nat. xxxvi. 22, 29, 34, 35, 42, etc. A complete list is given in the appendix to this chapter.
statues by unknown sculptors, namely, four satyrs, one bearing on his shoulders Liber Pater (Bacchus) veiled with a palla, another carrying Libera (Proserpine), a third bearing a weeping child, and a fourth giving another figure drink out of a cup. There were also two statues of Aurore, female figures representing the Winds, veiling themselves with their robes; Hist. Nat. xxxvi. 29.

In some part of the Opera Octaviae were a number of fine pictures by Artemon, the death and ascent into heaven of Herakles, the bargain made by Laomedon with Herakles and Poseidon as to the rebuilding of the walls of Troy, and others; see Pliny, Hist. Nat. xxxv. 139.

In front of the original Porticus Metelli, which had occupied part of the site of the Porticus Octaviae, had been placed bronze statues of Alexander the Great and twenty-four of his friends, represented as horsemen, the work of Lysippus, made in commemoration of the death of many of Alexander's officers at the battle of Granicus. These twenty-five equestrian statues were brought to Rome by Metellus in 146 B.C., from their original position at Dium, and after the destruction of the Porticus Metelli they were set in the Porticus Octaviae; see Pliny, Hist. Nat. xxxiv. 64; Vell. Pat. i. 11, 3; Arrian, Anab. i. xvi. 4.

Pliny (Hist. Nat. xxxvi. 35) mentions Dionysius, with Timarchides his father, and Polycles his uncle, as having been fellow-workers on the sculpture which adorned the Porticus of Metellus. These names occur on the base of a statue of Roman date found at Delos; see Homolle, Bull. Cor. Hell. 1881, v. p. 390 and pl. xii.; and Jour. Hell. Stud. vii. p. 245.

Another famous statue which was placed in the Porticus Octaviae was a seated figure of Cornelia, the mother of the Gracchi; see Pliny, Hist. Nat. xxxiv. 31. Here too was probably placed the celebrated ivory statue of Jupiter by Pasiteles, a Graeco-Roman sculptor of the early part of the first century B.C.; see Pliny, Hist. Nat. xxxvi. 40.
Other works of art among these richly decorated buildings are mentioned by various authors.

The Curia Octavia was frequently used for meetings of the Senate, as, for example, when they assembled to do honour to Vespasian and Titus after the taking of Jerusalem; see Josephus, Bell. Jud. vii. 5. 4.

In the reign of Vespasian the whole group of buildings was destroyed by fire (Dion Cass. lxvi. 24), and not rebuilt till the time of Severus in 203 A.D., as is recorded in the existing inscription over the porch, which led into the enclosed area of the porticus.

Existing remains. This porch, which formed the principal entrance into the Porticus Octaviae, is still fairly well preserved; it stood close by the old Pescaria, the fishmarket of the Ghetto, which is now destroyed.

It is built of brick-faced concrete, once faced with thin slabs of marble, and has Corinthian columns, pediments, and entablatures of solid marble. In its original form the porch was like the front of a hexastyle temple, repeated twice with a roofed space between; but in the fifth century some of the Corinthian columns were replaced by brick and concrete arches and piers, probably after damage done by an earthquake in 442 A.D.

The demolition of the Jewish Quarter or Ghetto, with its picturesque fishmarket, has exposed part of the colonnade of the Porticus Octaviae. One portion consists of four monolithic marble columns, with fragments of the entablature, adjoining the main existing entrance to the porticus. The capitals, which are of the Corinthian order, are so much broken that it is difficult to judge of their style, but they appear too poor in workmanship to belong to the original porticus as it was built.

1 Some of the pedimental sculpture existed in the last century, and is shown by Piranesi in his etching of this porticus. In the centre is a winged figure, apparently a Victory, with another female figure on each side, with rays of light round their heads.
by Augustus; see Notiz. d. Scavi, vol. for 1887. On the whole, the destruction of this mediaeval part of Rome has brought to light comparatively little that is of value, though it has done much to diminish the picturesque beauty and historical interest of the city.

Other columns of the Porticus of Octavia exist, built into various houses, and into the walls of the Church of S. Angelo in Pescaria.

Some portions also exist of the Temples of Jupiter and Juno, which stood in the centre of the enclosure.

Contigliozzi, in his Portici di Ottavia, 1861, the Ann. Inst. 1868, p. 108, and the Notiz. d. Scavi for 1887, give the results of excavations which have determined the extent of the whole porticus. The south-west side of the enclosure ran along the line of the Via della Catena di Pescheria, and had at each angle a four-way entrance, like the existing arch of Janus Quadrifrons in the Velabrum.

The north-west side crossed the Church of S. Ambrogio, and passed along the line of the Palazzo Righetti to a point near S. Caterina da' Funari, where the north-east side began, extending as far as to the Palazzo Capizucchi.

The south-east side runs past the monastery of the Madre di Dio. Remains of the Temple of Juno, consisting of three marble columns with Composite capitals, which formed the western angle of the temple, exist in No. 11 Via di Sant' Angelo.

In the Church of S. Maria in Portico¹ are built up some remains of the Temple of Jupiter Stator, and the space between the two temples is marked by the width of the Via della Tribuna. Near the middle of this street remains were discovered of the Schola Octaviae, which stood at the back of the temples.

Behind the Schola were the libraries, one for Latin and the other for Greek books, with the Curia Octaviae between them.

¹ So called from its position within the Porticus Octaviae.
TEMPLE OF HERCULES MUSARUM. The fragment of the Marble Plan which shows the Porticus Octaviae shows also on its north-west side the enclosure round the Temple of Hercules Musarum (the Greek Hercules Musagetai), only separated from the porticus by a street. This temple was built by M. Fulvius Nobilior, the friend of the poet Ennius, probably out of the rich spoils taken by him from the Aetolians in 187 B.C.; Livy (xxxix. 5) gives a list of the immense treasures which formed this spoil. In this temple were placed statues of Hercules playing the lyre, surrounded by the nine Muses, hence the epithet Musagetae; these statues were modelled in terra cotta (flavina opera) by the celebrated painter Zeuxis; see Pliny, Hist. Nat. xxxvi. 66, and Mart. Ep. v. 49, 2.

Porticus Philippa. The above-mentioned fragment of the marble plan which is inscribed AEDIS - HERCVLI - MVSAR(VM) does not show the temple itself, but only a part of its surrounding porticus or quadrangular colonnade, which was added by L. Marcius Philippus, the stepfather of Augustus, who also rebuilt the temple itself; see Suet. Aug. 29; Martial, v. 49, 12; and Ovid, Fast. vi. 799. Pliny (Hist. Nat. xxxv. 114) calls this enclosure the Porticus Philippa, and says that in it were three pictures by the Graeco-Egyptian painter Antipholus—Liber Pater, Alexander the Great as a boy, and the death of Hippolytus when his horses were frightened by the bull sent by Poseidon.

Very little remains of these buildings are now visible, but some portions of the walls were discovered during the demolition of the old street to the north-west of the Porticus Octaviae.

The Temple of Apollo ad Octaviae Porticum is mentioned above; see vol. ii. p. 70.

OTHER BUILDINGS IN THE CAMPUS.

The Porticus Neptuni or Poseidonium was a handsome Porticus built by Agrippa to commemorate his naval victories. On,
its walls were paintings of the adventures of Jason and the Argonauts, whence it was also called the Porticus Argonautarum; see Dion Cass. liii. 27, and lxvi. 24; Martial, iii. 20; and Spartan. Haur. 19.

Pliny (Hist. Nat. xxxvi. 26) mentions a Temple of Neptune in the Regio Circus Flaminius, which was built by Cn. Domitius; see also Gruter, Inscr. 318, 5. It seems probable that the Porticus Neptuni was built by Agrippa as an enclosure round the Temple of Neptune.

The existing remains of a temple enclosed in the walls of the old Dogana di terra in the Piazza di Pietra may with much probability be identified with the Temple of Neptune, especially since it has been discovered that a large porticus existed round this building. Fig. 84 shows the existing remains of the temple and its court.

The Poseidonium stood not far from the Pantheon, and the existing remains in the Dogana vecchia agree very well with its probable site. The parts of the temple which still exist are eleven fine Corinthian columns of Luna marble with their entablature, a long piece of the side wall of the cela, and a short bit of one of the end walls; these are built of long blocks of peperino once cased with marble. The podium on which the temple stands is now buried below the modern ground-level.

The ceiling of the peristyle, instead of having the usual marble slabs with moulded coffers (lacunaria), is formed by a concrete barrel vault, once decorated with painted stucco reliefs. This and the second-rate style of the Corinthian capitals and enriched cornice with its pulteinated or swelling frieze show that the building is considerably later than the time of Augustus, which, however, is not conclusive against its being the Temple of Neptune, for that was much injured in the fire of 80 A.D., and may have been mostly rebuilt.

Palladio (Arch. lib. iv.) gives a plan and elevation of this temple which show it in a complete state, a very valuable
record now that it is in a very different condition. Palladio's figured measurements show that he is not giving an imaginary restoration. He makes it hexastyle with fifteen columns on the flanks.

The existing piece of the *cella* wall has recently been exposed to view by the removal of the modern wall which blocked up the eleven columns.

In 1878 excavations made under the surrounding houses exposed remains of an extensive *peribolus*, forming a court or *porticus* nearly 330 feet square, which is probably the above-mentioned *Porticus Neptuni* or *Porticus Argonautarum*. The remains of the temple are in the centre of this court; see fig. 84.

The outer wall of the *porticus* was of peperino faced with
marble, and within were rows of columns forming a covered walk all round, like a cathedral cloister. The columns which flanked the four entrances were of pannonazetto, the rest were of white marble; see Bull. Comm. Arch. Mun. Rom. vi. Tav. iv.

Another supposition, but a far less probable one, about this building is that it was the Temple of Hadrian, mentioned in the Mirabilia Romae as being near this site; see Urlichs, Codex topogr. p. 107.

**Temple and Column of M. Aurelius.** Near these remains in the Dogana is a slight elevation called Monte Citarrio, on which stands the modern Palace of the Deputies or Parliament House.

It is very probable that this mound is formed by remains of the once large and magnificent temple of Marcus Aurelius, whose sculptured column stands near. Parts of a very massive travertine wall and arcade are visible in the walls of several modern palaces by and on Monte Citarrio.

The existing column of M. Aurelius, which is described below, at p. 312, stood in front of the temple which was dedicated to him, and the whole was surrounded by an extensive peribolus forming a sort of Forum not unlike that of Trajan, though on a less magnificent scale; see Ann. Inst. 1852, p. 338, and Mon. Inst. v. Tav. 40.

**The Diribitorium.** No remains now exist of the immense hall called the Diribitorium, which was built by Agrippa as a place for scrutiny of the votes given by the Comitia in the adjacent Septa Julia. The Diribitores were the officials who divided and counted the votes when taken out of the ballot boxes (cidae) to determine the majority. The word is a compound of dis and habere, implying separation. The Diribitorium was remarkable for the enormous span of its wooden roof, which Pliny (Hist. Nat. xxxvi. 102) mentions as one of the wonders of Rome, and which, according to Dion Cassius (iv. 8), exceeded that of any other roof in the world. It was used under the later Empire for theatrical shows; Suet.
Cal. 18. In the reign of Severus it was pulled down on account of the roof having become unsafe; Dion Cass. loc. cit.

The Septa or Saepta Julia appears to have been an immensely long covered porticus or rectangular building supported by rows of piers, forming seven parallel lines of aisles. It was begun by Julius Caesar (Cicero, Ad Att. iv. 16) and completed by Agrippa in the same year when the Pantheon was consecrated, 27 B.C.; Dion Cass. liii. 23. It was called the Septa Julia in honour of its deified founder Julius Caesar.

The Septa Julia was intended as a voting place for the Comitia Centuriata, who originally had met in an open space in the Campus Martius divided into compartments (ovilia), one for each Century, by stakes and ropes stretched across. Juvenal (Sat. vi. 529) speaks of the Septa Julia as the ovile or "sheepfold," from its pen-like divisions for the voters.

The Septa Julia was very magnificently decorated with marble linings and rows of statues, among which Pliny (Hist. Nat. xxxvi. 29) mentions statues of Olympus, Pan, and Chiron with his pupil Achilles, the authorship of which in his time had been forgotten. It also contained Rostro for orations, and sometimes was even used for gladiatorial fights; see Dion Cass. lvi. 1, and lv. 8; and Suet. Aug. 43. In later times the Septa appears to have become a great bazaar or exchange; see Martial, ii. 14, 15, and x. 80, 4.

Fragments of the Marble Plan represent this building as it was in the time of Severus; the plan, which is inscribed SAEPTA JULIA, agrees with the existing remains under the Church of S. Maria in Via Lata, the Palazzo Doria, and adjacent buildings.

Eight rows of travertine piers, 3 feet 4 inches square, are still visible; five rows under the church, each consisting of five piers, and three rows under the Doria Palace, each with eight or nine piers. The travertine appears to have been covered with painted stucco or marble casing.
The position of the Septa Julia was on the verge of the Campus Martius, along the side of the Via Lata, just before it ran into its continuation—the Via Flaminia (modern Corso).

The Villa Publica was another large hall near the Septa Julia, on the east side of the Campus Martius; it was built in 431 B.C.; see Livy, iv. 22, xxxiv. 44, and Varro, Re Rust. iii. 2. In 82 B.C., after the defeat of the Samnites and the Democrats at the Porta Collina, Sulla massacred from three to four thousand prisoners in the Villa Publica. Their shrieks were heard by the Senate, who were then assembled in the neighbouring Temple of Bellona; see above, vol. ii. p. 71.

No remains of this building are now visible, but it is represented on a denarius of the first century B.C., struck by a monetarius of the Gens Didia, as a lofty building in two stories, with an arcade below and a trabeated colonnade above; the accompanying legend is T. DIDI - IMP. VII. PFV.

We now return to the part of the Campus Martius near the Pantheon.

The Temple of Minerva (Chalcidica) stood on the site of the Dominican Church of S. Maria sopra Minerva, as the name of the church records. It was founded by Pompey the Great about 60 B.C., according to Pliny, Hist. Nat. vii. 97; and its dedication is recorded in an inscription now lost, which was copied by Marliano, and is quoted by Nardini, Roma Antica, ed. Nibby, 1820, iii. p. 130.

It is, however, possible that it was another temple to Minerva which Pompey built out of his Oriental spoils, as Dion Cassius attributes to Augustus the founding of the "Temple of Minerva, which was called Chalcidicum." Dion Cassins (lxvi. 24) also records that the Temple of Minerva

4 According to Plutarch (Sulla, 39) six thousand prisoners were murdered. He mentions the Circus Flaminius as being the scene of this horrible deed. The Circus was close by the Villa Publica.
Chalcidice was restored by Domitian after the very destructive fire in 80 A.D., together with the adjoining Isaeum and Serapaeum.

Fulvio and Marliano describe extensive remains of the temple as existing in the sixteenth century, adjoining the Dominican Church of S. Maria sopra Minerva, but at the present day all traces have vanished of this once magnificent temple.

The Isaeum and Serapaeum. In the second and third centuries A.D. the worship of Egyptian deities became more than ever popular in Rome, especially under Commodus, Caracalla, and Severus Alexander.

Temples dedicated to Isis and Serapis were built close by the Temple of Minerva, and appear to have been decorated with numerous statues and obelisks imported from Egypt. Juvenal (Sat. vi. 529) mentions the Temple of Isis as being near the Septa Julia.

A large number of Egyptian pieces of sculpture have been at different times found under and near the Church of S. Stefano del Cacco. Among them are three small obelisks, one of which stands in the Piazza of the Pantheon, another in the Piazza di S. Maria sopra Minerva, and a third, discovered in 1882, inscribed with the name of Rameses II., has been erected in front of the railway station in honour of the soldiers killed at Dagoia in Africa in January 1887. With the last-mentioned obelisk was discovered a very curious grey granite column, round which are carved reliefs of Egyptian deities, resembling in style sculpture of the late Egypto-Roman period. This column and a piece of another similar one are now in the courtyard of the Capitoline Museum.

1 This little obelisk, 17 feet high, was set in its present position on the back of a marble elephant by Bernini in 1667. It is interesting to note that the design of this monument, an elephant bearing an obelisk, was copied by Bernini from one of the very beautiful woodcuts in Colonna's Poliphili Hypnerotomachia, Aldus, Venice, 1499.

On this site were found the two Egyptian lions in granite, which have recently been moved into the Capitoline Museum from their former site at the foot of the great flight of steps leading up to the Capitol; their places are now occupied by modern copies. The statue of Isis in the “hall of the dying gladiator” in the Capitol, and the colossal figure of the Nile surrounded by boys (see vol. ii. p. 14) in the Vatican, were also found here. The statue of Minerva, which is near that of the Nile, according to one account was also found on the site of the Temple of Minerva.

The three temples to Minerva Chalcidica, Isis, and Serapis, are catalogued in the Curiosum under Regio IX.; see Urichs, Codex topogr. p. 14. Part of the Serapaeum or Temple of Serapis is shown on one of the fragments of the Marble Plan, on which are inscribed the words ISAEVM ET SERAPAEVM; see Jordan, Forma urbis Romae.

A large extent of the Campus Martius to the north and west of the Pantheon was occupied by the statinum, curipus, and Horti of Agrippa; the latter contained a great number of fine Greek statues. In this part of the Campus Agrippa also constructed a temple and a great porticus of Bonus Eventus; see Ovid, Pont. i. 8. 38; and Amm. Marcell. xxix. 6. 17. Some immensely large Corinthian capitals of marble, which belonged to this porticus Bonus Eventus, have been found at various places, showing that the extent of the porticus was very great.

Their discovery, and the evidence for the attribution of these capitals, is discussed in a valuable paper by the Comm. Lanciani in Bull. Comm. Arch. Rom. 1891, p. 224 seq.

In September 1890 a discovery of very great interest was made in the Campus Martius, on the left bank of the Tiber, between the Bridge of S. Angelo and the Church of S. Giovanni de’ Fiorentini. Many fragments were found of two
inscribed marble columns, which had been set up to commemorate the celebration of the *Ludi Saeculares* at two different periods.

The earlier of the two gives a list of the various sacrifices, feasts, processions, games, dramatic performances, and the like, which took place when Augustus, in 17 B.C., celebrated the *Ludi Saeculares* with unusual zeal and magnificence, and when Horace, as Court poet, wrote his famous *Carmen Saeculare*; in the words of the inscription *CARMEN COMPOSVIT Q. HORTAVS FLACCVS*. It is recorded on the column that the *Carmen* was sung twice by a choir of twenty-seven boys and twenty-seven girls, with a sacred orchestral accompaniment; once when the grand procession was on its way from the temple of Apollo Palatins to the Capitoline Hill, and again when the *Pompa* was on its way back.

The column on which this most interesting inscription is cut appears to have been, when complete, about 13 feet high and 3 feet 8 inches in diameter.

The other column, found at the same place, is inscribed with the record of the celebration of the *Ludi Saeculares* in the year 204 A.D., during the reign of Sept. Severus and his son. It is interesting to note that two of the officiating Vestals, who stood by the side of the Empress Julia Domna, were Terentia Flavola and Numisia Maximilla, the inscribed bases of whose statues are mentioned as having been discovered in the House of the Vestals; see vol. i, pp. 323, 324.

The inscriptions on these two pillars have been edited by Mommsen, *Reale Accad. de' Lincei, Mon. Ant.* vol. i, part iii, 1891. A short but valuable account of the columns was published by Comm. Lanciani in the *Athenaeum*, 14th November 1891. They are now placed in the Museo delle Terme.
APPENDIX TO CHAPTER VI

The following list gives the references to Pliny's descriptions of the buildings in the Campus Martius and the works of art they contained:

References to Pliny, Historia Naturalis.

xxxiv. 13. Porticus built by Cneius Octavius after triumph over King Perseus (Livy, xlv. 42) in 168 B.C.; called "Corinthian" from its bronze Corinthian capitals. The Pantheon also had capitals (inside) of Syracusean bronze.


40. Colossal Statue of Jupiter (probably of bronze) in the Campus, dedicated by Claudius; it looked small from being near the great Theatre of Pompey.

62. Bronze Apoxyomenos by Lysippus; set by Agrippa in front of his Thermæ; removed by Tiberius, and replaced owing to popular clamour. [Marble copy in the Vatican.]

64. In the Porticus Metelli, twenty-four equestrian statues by Lysippus of generals of Alexander who fell at Granicus, brought by Metellus from Diunum, 146 B.C., and afterwards placed in the Porticus Octaviae.

xxxv. 26. In his Thermæ Agrippa placed some small pictures (tabellae) framed in marble, in the hottest room, removed a short while ago (Pliny says) during restoration.

59. In the Porticus of Pompey a picture (tabula) by Polygnutus, which was in front of the Curia of Pompey.

66. In the Porticus of Philippus a picture of Helen by
Zeuxis. Clay figures of the Muses [and Heracles Musagetus] by Zeuxis were placed by M. Fulv. Nobilius in his Temple of Heracles (near the Porticus Octaviae) in the middle of the Porticus Philippi.

xxxv. 114. In scola in Octaviae porticus were paintings of Hesione, and Alexander and Philip with Minerva by Antiphilus. In the Porticus Philippæ a picture of Liber Pater, Alexander as a boy, and Hippolytus with the bull frightening his horses, by Antiphilus. In the Porticus of Pompey Cadmus and Europa, also painted by Antiphilus.

126. In the Porticus of Pompey a picture by Pausias of Sicyon of a Sacrifice of Oxen; now removed. Remarkable for its violent foreshortening, and strong effect of light and shade—dark on light ground.

132. In the Porticus of Pompey a picture of Alexander (and others?) by Antidotus, the master of Nicias.

139. In the Porticus of Octavia ("in Octaviae operibus") a painting of Heracles ascending to heaven from his pyre on Mt. Oeta in Doria; and another of Laomedon bargaining with Heracles and Neptune [for rebuilding the walls of Troy].

144. In the Porticus of Pompey a series of pictures of the Trojan War by Theorus (v. loc. Theodorus).

xxxvi. 15. In Octaviae operibus a marble Aphrodite by Phidias, of very great beauty.

22. In Octaviae Scholis an Eros by Praxiteles of marble, dedicated at Thebes in Boeotia [by Phryne].

24. In the Temple of Juno, within the Porticus of Octavia, marble statues of Aesculapius and Diana by Cephisodotus, son of Praxiteles.

26. In the Temple [of Neptune] built by Cneius Domitius Ahenobarbus by the Circus Flaminius, a marble group by Scopas, the most esteemed of all his works, of Neptune, Thetis, Achilles, Nereids on dolphins, whales, sea-horses, the train of Phorcys and other sea-monsters—wonderful even if all Scopas' life had been spent on them. And in the Temple [of Mars] by the Circus Flaminius, built by Brutus Callaclus [conqueror of Callasca], a colossal Mars also by Scopas, and in the same place a nude Venus.

28. In the Temple of Apollo Sosianus [cedar statue of Apollo originally brought from Selencia by C. Soesia, the
Quaestor of M. Lepidus; Livy, xxvii. 37) the Dying Children of Niobe [copies in Uffizi, and one in Vatican, which is perhaps an original statue] doubtful whether by Scopas or Praxiteles. There is the same doubt (Pliny says) about a statue of Cupid holding a thunderbolt which is in the Curia of Octavia.

xxxvi. 29. "In eadem schola," fine statues of unknown authorship, of four Satyrs, one bearing Liber Pater robed in the palla, another bearing Libera [Persephone not Ariadne as Ovid, Hist. iii. 512]. A third Satyr quietly a child, a fourth gives drink to a child. Also two Zephyrs with wind-blown drapery.

In the Saecula Julia statues of Olympus, Pan, Chiron and Achilles by unknown hands.

34. In the Porticus of Octavia in the Temple of Apollo, a statue of Apollo called Sosianus by Philiscus of Rhodes. This is the cedar-wood statue mentioned by Pliny, Hist. Nat. xxxvi. 28. Near it were statues of Latona and Diana, the nine Muses, and another Apollo, nude.

In the same temple Apollo with lyre, by Timarchides.

In the Temple of June in the Porticus Octaviae, two statues of Juno by Dionysius and Polycleus, and some statues by Praxiteles.

In the adjoining Temple of Jupiter a statue of Jupiter by the above-named Polycleus and Dionysius the son of Timarchides; and group of Pan and Olympus wrestling by Heliodorus.

Also Venus at the Bath by Daedalus, and a standing Venus by Polycharmus.

40. On the way to the Campus Martius ("qua Campus petitur"), in the temple built by Metellus [Macedonius], an ivory statue of Jupiter by Paseikles: he was sculptor of (bronze) Venus Genetrix in Foro Julii; cf. Hist. Nat. xxxv. 156, 156.

41. Round the Porticus of Pompey fourteen statues of Nations by Coponius (quoting Varro).

42. The temples in the Porticus of Octavia, dedicated to Jupiter Stator and Juno Regina, were built by Saurus and Ratracbus of Sparta. Their emblems, a lizard and a frog, are cut on the spirae of the columns.

71 and 72. Obelisk erected in the Campus Martius by Augustus.

It serves as the gnomon of a great sun-dial, the lines
for the hours being marked with lines of bronze inlaid in the stone pavement. A gilt ball was placed on the apex of the obelisk. For thirty years (Pliny says) the sun-dial has been wrong, either from derangement of the sun's course, or from the earth having moved, or else from earthquake or settlement moving the paving.
CHAPTER VII

VARIOUS TEMPLES AND OTHER BUILDINGS

We pass now to another quarter of Rome, returning to the neighbourhood of the Forum, a few hundred feet from its eastern end, where there are considerable remains of one of the most magnificent temples which was ever built by the Romans.

The Temple of Venus and Rome, the largest of all the temples in Rome, was designed by the Emperor Hadrian, and criticised by the distinguished Greek architect and engineer Apollodorus of Damascus, who designed the magnificent group of buildings which composed the Forum of Trajan; Spartan. Hadr. 19, and Dion Cass. lxix. 4; see vol. ii. p. 28.

Apolloodorus remarked that the temple should be raised on a high stylobate, so as to command the Suum Via, and that the space under it should be utilised to contain scenery and machinery for use in the neighbouring amphitheatre, that is, the Colosseum. It appears from the existing remains that Hadrian adopted these suggestions; and there is probably no truth in Dion Cassius' statement that Apollodorus was put to death by Hadrian in revenge for his criticism—an act which would have been at variance with what is known about Hadrian's character.

This temple, which consists of two cellae set back to back, was dedicated to Venus Felix and Roma Aeterna; it was left unfinished by Hadrian, and completed by Antoninus Pius. In the reign of Maxentius it was much injured by fire, and its
restoration was begun by him, and carried out by Constantine; Amm. Marcell. xvi. 10. It was a *decastylo*, *pseudo-
dipteral* building, having, that is, ten columns at each end, and those at the side set at a considerable distance from the

*cella* wall; see fig. 85. Those columns were of white Athenian marble of the Corinthian order. Being dedicated to
two deities the *cella* was made double, thus forming two
nearly square halls with large apses at one end of each.
Externally the double character of the temple did not appear,
as the two cellae were treated as one, being surrounded with one continuous peristyle.

In the aepses were colossal statues of Venus and Rome, the pedestals for which still partly exist. 1

The side walls of the cellae were surrounded on the interior with rows of monolithic porphyry and granite columns, set between niches containing statues. The vaults of the cellae were of barrel or semicircular form, enriched with deeply sunk coffers decorated with stucco mouldings and rosettes, all richly gilt and painted. 2 The vaults over the two aepses are still well preserved, and retain some of their rich ornaments modelled in coacimentum marmongum.

They are perhaps the finest existing examples of the kind in Rome. The best preserved portion can only be seen from the garden of the Monastery of S. Francesca Romana, which is partly built over the western of the two cellae; see plan in fig. 85.

The walls are of brick-faced concrete, once wholly lined both inside and out with slabs of marble; restorations after the fire in the reign of Maxentius can be traced among the existing walls of the cellae; in which brick-stamps exist both of the time of Hadrian and of Maxentius and Constantine.

The pediment was decorated with sculpture, as is shown on several First Brasés of Hadrian, with the legend ROMAE AETERNAE OR VENERI - FELICI; see fig. 85A.

A fragment of a bas-relief shows the sculpture in the

1 Silver statues to Marcus Aurelius and his wife Faustina were placed here by the Senate, and in front of them an altar, at which sacrifice was commonly offered by newly married people; Dion Cass. Ixxi. 31.

2 Similar lacunaria are illustrated in fig. 13, vol. I. p. 71.
tymanum of one of the pediments representing Mars and
Rhea Sylvia, the wolf and the twins with Faustulus standing
by, and other figures.

The roof of the temple was covered with bronze tiles
plated with gold, which remained in their place till they were
stripped off by Pope Honorius I (625-40) and used to cover
the Basilica of St. Peter; see Anastasius Biblio. Vitae Honor.
I. ed. Bianchini, 1718. These bronze tiles were stolen by
the Saracens during their invasion of the Leonine City in
846 A.D.

The floor of the temple was in rich opus sectile mosaic of
coloured marbles and red and green porphyry; many loose
fragments of this have been found.

This enormous temple stood in an outer peribolus or
porticus with a colonnade of about 180 gigantic columns in
red and grey Egyptian granite and red porphyry, forming a
vast sort of cloister enclosing rows of statues; a few pieces of
granite columns still remain scattered about the peribolus.

The temple and its whole peribolus stood on an immense
platform, formed at the end towards the Forum by cutting
away the tufa rock of a ridge which once connected the
Palatine and the Esquiline Hills, probably the ancient Velia;
see vol. i. p. 220.1

At the other end the platform extends beyond the slope
of the hill into the valley of the Colosseum, and here its level
is raised by an enormous bulk of concrete poured in a fluid
mass and set as hard as a rock. The concrete which came
under the walls or columns of the temple is made of broken

1 Hadrian also completed a temple of more than equal size and magni-
ficence at Athens—that dedicated to Olympian Zeus, which had been
founded but not completed many centuries before. Fifteen of the columns
of its dipteral peristyle are still standing. The Athenian temple was,
however, not decaestyle but octaestyle, as Mr. Penrose's recent excavations
have proved, thus confirming the statement of Vitruvius, iii. 2. 8, the
accuracy of which had previously been questioned.
bits of lava, while the main mass is of the softer tufa concrete, used wherever it had little weight to bear.

The probable use of the chambers formed in the concrete mass of the platform is mentioned at vol. ii. p. 86. These are chambers purposely constructed, and not merely voids left by the removal of blocks of stone, as has been asserted.

Similar chambers appear to have been constructed under all the temples of Rome which were set on lofty podiums, as, for example, in the Temples of Concord, Saturn, Castor, and Divus Julius; see vol. i. chap. v.

Owing to the almost complete disappearance of this once immense peribolus colonnade, it is very difficult now to realise the stupendous effect of grandeur which must have been produced by this stately porticus and the magnificent temple within its area.

It extended, as is shown on fig. 85, along the whole rise of the Sacra Via, and reached across to the edge of the Esquiline Hill, where it was bordered by some remains of Nero’s Golden House which had escaped the demolition of Vespasian and Titus; see vol. ii. p. 227. Near the Church of S. Francesca Romana some marble steps still exist, which mark its limit at the end which faced towards the Forum Romanum.

At the other end, where the platform rises high above the level of the valley, access was given by a flight of steps winding up at each angle; the concrete core of these stairs alone remains.

The extreme scantiness of even fragments of marble and granite, of which this temple once possessed so enormous a quantity, is accounted for by the fact that for centuries its ruins were used as a quarry; and finally, during the most architecturally degraded period of the history of Rome, the ninth to the twelfth centuries, all that remained of its marble columns, cornices, and other decorations, were burnt into lime in a number of kilns which were constructed in the area of the building out of the fireproof porphyry columns with which
the external porticus and the interior of the two cellae were decorated.

The identification of these remains with the Temple of Venus and Rome admits of no doubt; its brickwork contains stamps dated 123 and 134 A.D. in the reign of Hadrian. Spartianus describes it as standing on the former site of the Colossus of Nero, and Apollodorus' criticism shows that it was near the Sacra Via and the Colosseum. Moreover, no other double temple of anything approaching the size of this one existed in Rome. Bianchini, Palazzo dei Cesari, 1738, pl. xvi., gives a plan of the Temple of Venus and Rome which shows that a great deal more of the two cellae existed in his time than is to be seen now. He omits, however, the whole of the great double peristyle which had been destroyed long before the eighteenth century.

It need hardly be said that Mr. Parker's theory, set forth in Archaeologia and elsewhere, as to the Temple of Venus and Rome being the Porticus Liviae is quite without foundation. An existing fragment of the Marble Plan shows that the Porticus Liviae had no resemblance to these remains; and the Porticus Liviae is recorded to have been in the third Regio, while this building is in the fourth, the one in which the Temple of Venus and Rome is catalogued; see Notitia, Urlichs, Codex topog. pp. 5-7.

Moreover, Prof. Lanciani has pointed out that the fragment of the Marble Plan which contains part of the Porticus Liviae fits on to another fragment with a portion of the Thermae of Titus, thus definitely fixing the position of the Porticus Liviae a little distance to the north of the Thermae, between the modern Via Cavour and the Via delle sette sale; see Bull. Rom. Com. Arch. 1886, p. 270.

**Basilica of Constantine.**

The Basilica of Constantine was begun by Maxentius, but
left unfinished at his death in 312 A.D., and completed soon afterwards by Constantine; Aur. Victor, Caes. 40, 26.

In the Notitia, Regio iv., it is catalogued as the Basilica Constanzitana, and comes in order between the Sacra Via and the Templum Faustinae; in the Curiosum it is called the Basilica Nova, being probably quite new when the catalogue was made; Uriels, Cod. top. pp. 6 and 7.¹

Little of this once magnificent building exists except the three vaulted chambers, 68 feet in span, which opened out of the great central hall on the north-east side; see fig. 86, and Ligorio's plan given below in fig. 87, p. 227. The central one

![Diagram of Basilica of Maxentius and Constantine](image)

Section of the Basilica of Maxentius and Constantine.

of these recesses has an apsidal end, containing the pedestal for a colossal statue, and four niches for other statues on each side of it.

The floors of these niches are formed by a massive marble shelf like a cornice, partly supported by marble corbels between the niches, each rudely carved with figures of Victory and coarse foliage.

A marble seat and steps run all round the apse, which appears to have been a sort of tribunal for the emperor or other presiding judge. This tribunal was separated from the rest of the hall by two columns and bronze screens, the marks of which still exist on the large marble slabs of the pavement.

¹ The mediaeval antiquaries mistook the Basilica of Constantine for Vespasian's Templum Pacis.
The other halls at the sides of this have no apses; all three are covered with magnificent barrel vaults in concrete, decorated with sunk coffers and enriched stucco mouldings once richly decorated with gold and colour.

The great central hall must have been a most magnificent chamber. It was more than 80 feet wide, and was vaulted in three bays with quadripartite groining, also decorated with sunk panels, like many others of the great concrete vaults of ancient Rome. The proportion and whole design of Constantine's hall are very similar to the central hall in the Thermae of Caracalla, which is shown in vol. ii. p. 165.

Three bits of the springing of this vault alone remain in place, and one of these is a very striking example of the strength of the Roman concrete, and the fact that these great vaults were cast in one mass and were not built as arches with lateral thrust.

This piece of the springing of the vault was originally designed to rest on a great Corinthian column, from which it appeared to spring, as the vault does in fig. 77; the column, however, has been removed, and yet this great piece of vaulting still stands though it has no support under it, and is merely kept up by its adherence at the back to the wall behind. Some fine fragments of the fallen vault now lie on the floor below. The real construction of the vault, with its absence of any arch principle, can be very clearly seen in one of the large pieces of the fallen vault of the main hall.

The last of the columns, which was removed by Paul V. at the beginning of the seventeenth century, now stands in the piazza opposite the main entrance to S. Maria Maggiore; all the rest have perished or exist unrecognised in some church of Rome.

The end of the Basilica towards the Colosseum is occupied by a long hall forming an antechamber. This is possibly what
Fig. 87.
Lugdunus plan of the Basilica of Constantine and (C), part of the Golden House of Nero. The twin colossi of the Temple of Venus and Roma are shown below, but are not drawn to scale, P.H.
Vitruvius (v. 1 and 2) calls the *Chalcidicum*, a hall which he says may be added if there is room for it at the end of a Basilica. In these chapters Vitruvius gives many interesting details with regard to the arrangement of *Foro* and *Basilicae*.

The back of the existing part of the building was decorated with two orders of engaged columns, and arches supporting marble entablatures, which are shown in several sixteenth-century drawings, especially in the great oil-painting of Rome in the museum at Mantua, published by De Rossi, *Pianta di Roma anteriore al sec. xvi.* 1879, folding plate.

Fig. 87, from a sketch in Ligorio's Bodleian Manuscript, shows the complete plan of the *Basilica of Constantine*, and also, adjoining it, part of the enormous *Golden House of Nero*, with a grand flight of steps leading up to an open court. Part of the Golden House shown in this plan still exists, and can be seen bordering the road that leads from the Basilica towards the Colosseum, on the north-east side of the *Temple of Venus and Roma*.

The front of the Basilica towards the *Sacra Via* was probably even more magnificent than the rest, having red porphyry columns set off by their background of white marble, and a long flight of marble steps leading up from the road to the level of the main floor of the Basilica. The existing fragments of porphyry columns probably belonged to this front, but are not now in their right position.

The whole interior of the building was richly decorated with various coloured marbles, granites, and porphyries, except the vault which was covered with moulded stucco once painted and gilt.

The external cornice at the top of the building on the end towards the Colosseum is not of solid marble, but is formed by marble corbels or *consules* which support courses of large tiles; these tiles were covered with hard stucco worked in

---

1 Said to have been so called from its being an invention of an architect of Chalcidice.
mouldings with enriched members, and then decorated by painting.

This method of forming cornices, which were too high to be examined closely, was a very common one in Rome, especially under the late Empire. Examples exist round the exterior of the Pantheon, at the Thermæ of Diocletian, and also on the front of the Curia (now the Church of S. Adriano) which Diocletian rebuilt. It is possible that the Pantheon cornice is not of Agrippa's time, but dates from the restoration of Severus in 202 A.D.

REMAINS ON THE CAELIAN HILL.

That part of the Caelian Hill which immediately faces upon the Colosseum is covered with very extensive remains of a building partly constructed of massive blocks of travertine and partly of brick-faced concrete. Of the latter is built the enormous peribolus wall which surrounded the whole of this spur of the hill; a great part of it is still very well preserved, though stripped of its marble columns and linings. Its brickwork is of the Flavian period. The external face of this massive and lofty wall is decorated with a series of tall apsidal recesses and niches, apparently meant to contain colossal statues. Remains of mosaic pavements show that this great building once extended over and beyond the new road, called the Via Claudia, which now leads from the Colosseum to S. Stefano Rotondo.

Under the Campanile and Passionist Monastery of SS. Giovanni e Paolo, within this great peribolus, there still exists part of a massive travertine arcade, with engaged columns very like that of the Colosseum, and equally coarse in detail.¹ That part on which the Campanile² rests is very well

¹ The garden of this monastery occupies most of the space enclosed by the peribolus wall.
² The Campanile itself, which stands a few feet distant from the
preserved, and is a fine specimen of massive, well cut masonry.

A long length of this arcade existed in the sixteenth century, and is shown in several drawings of that period, but the greater part has been removed for building material. What this extensive building was remains at present doubtful, and will be so till further excavations are made.

According to one theory it is the Temple of Claudius, built by Vespasian (Suet. Vesp. 9); but Bunsen's suggestion (Reschr. iii. p. 476) is much more probable, namely, that it was the house of Vectillius (Domus Vectiliana), bought and probably enlarged by Commodus, Hist. Aug. Comm. 16, and connected with the Colosseum by a subterranean passage or Cryptoporticus.

Such a passage actually exists and has been partially cleared out; see vol. ii. p. 108. It was in this passage that the unsuccessful attempt to stab Commodus was made; he was murdered shortly after in the Domus Vectiliana. He is said to have taken up his abode in this house because he could get no sleep on the Palatine; and also, partly, in order to be near the amphitheatre and its scenes of butchery, in which he took such keen delight.

Nero's continuation of the Claudian aqueduct passes close by this building, and a branch aqueduct diverges as if to supply it and the Colosseum below with water.

A large number of chambers and extensive passages exist under the great peribolus, excavated in the rock; these are merely cavities left by quarrying the tufa, and there is no foundation for the popular notion that they were vicaria, dens for beasts ready for use in the Colosseum. As was so often entrance façade of the Church of SS. Giovanni e Paolo, is one of the finest Roman examples of these beautiful thirteenth-century bell-towers. It is ornamented with the brilliantly coloured ciotole, discs or plates of enamelled pottery, which are usually said to be of Oriental origin, and were the prototypes of the later maiolica ware of Italy.
the case with old quarries, some of these chambers appear to have been used in later times as cisterns for storing water.¹

Christian House. Some very interesting remains of a Roman house of the fourth century A.D. have been discovered under the Church of SS. Giovanni e Paolo. These remains consist of a row of brick-faced vaulted chambers, each with a wide archway opening on to a lava-paved street. Behind these is another series of inner rooms, some with coarse mosaic floors. Some of the painted decorations in these chambers are well preserved; especially one room which has its barrel vault covered with scroll-work of vines, among which are sportive genii, animals, and birds. Below the vault is a deep frieze painted with nude male figures standing and supporting festoons of flowers. Between them are peacocks, cranes, and other large birds. Other parts of these interesting remains have wall-paintings of the ninth century, with scenes of Christ's passion. At a higher level are some very decorative frescoes a secco of the thirteenth century.

Some of the oldest paintings on the walls clearly represent Biblical and Christian subjects, such as hitherto have only been found in Catacombs, never on the walls of a private house in Rome of as early a date as the fourth century A.D.

According to ecclesiastical tradition this house was the dwelling of the two martyrs, under the persecution of Julian, to whom the church is dedicated, and also was the scene of their martyrdom. Its remains have now been made accessible from the interior of the church. There are no less than fifteen rooms, mostly well preserved, and others still remain unexcavated.

When the present church was remodelled in the twelfth century² the room in this house where the martyrs' tombs had

¹ Compare the rock-cut cisterns under the Temple of Jupiter Victor (so called) on the Palatine; see vol. I. p. 164.
² Part of the church is much older than the twelfth century, but it
been deposited was made into the Confessio, under the high altar of the upper church. A paper on the house, with a plan by Padre Germano, is published in the American Jour. Arch. 1890, p. 261; see also Bull. Com. Arch. 1887, pp. 151 and 321, and Bull. Arch. Crist. 1888-89, pp. 68 and 89.

"Temple of Minerva Medica" (so called) on the Esquiline, near the Porta S. Lorenzo. This title is a misnomer, which partly originated in the supposed discovery of a statue of Minerva, which is now in the Vatican, among the ruins of the building, and also from the fact that a Temple to Minerva Medica is catalogued in the Notitia, Regio v. It appears, however, that the statue of Minerva really was found by the Temple of Minerva Chalcidica (S. Maria sopra Minerva); see vol. ii. p. 211.

The building appears to be a Nymphaeum, or a part of some baths of about the time of Gallienus, 263-268 A.D. In the Middle Ages it was known as the Terme di Gallucio, a name for which it is difficult to account. It is a very curiously planned building, having a central decagonal hall, with a skillfully constructed domical vault, originally surrounded with a number of rooms radiating from it. It was once richly decorated with marble and porphyry, and contained a large quantity of statues, many of which have been disinterred at different times, among them statues of Hercules, Adonis, Venus, Pomona, Aesculapius, and others.

The site of the real Temple of Minerva Medica was discovered in 1887 between the new Via Macchiavelli and the Via Bonnaro, about 7 feet below the present ground level. Remains of an early cella built of blocks of tufa were discovered, and in and round it an immense number of votive thank-offerings for health restored in terra cotta and bronze. One fragment of a vase has incised in archaic letters the dedication [M]E[NERVÆ - DONO - DE[DET]; see Notiz. d. Scavi, 1887, p. 179. was much altered by the English Pope Nicholas Brakespear, Hadrian IV., who reigned from 1154 to 1159.
This inscription has the common form II for E. Minerva Medica was resorted to in all sorts of bodily complaints and defects. Gruter, 1067, 4, gives the following, Minervae memoris Tulli A. Superians restitutione facta sibi capillorum; this is the inscription on the thank-offering of a lady whose hair grew again after falling off.

Sessorium (supposed). Somewhat similar ruins to those of the Nymphaeum mentioned above, by the neighbouring Basilica of S. Croce in Gerusalemme, have been supposed to be part of a Nymphaeum of Severus Alexander, 222-235, also mentioned in the Notitiae, under Regio v.; but a more probable suggestion is that of Becker (Handbuch, pp. 547, 548), who thinks that they are part of the Sessorium, a Court of Justice, which is mentioned by the Scholiast on Horace (Schol. Caroq. ad Hor. Epod. v. 100), and by other later writers. The building was so called from the sessorium or throne of the presiding judge.

Praetorian Camp.

The Praetorian Guard, who afterwards became so powerful and unscrupulous in the making and dethroning of the emperors of Rome,\(^1\) were first established in a permanent camp by Tiberius, outside the limits of the city, as they existed at that time; Suet. Tib. 37. A considerable part of Tiberius' enclosure wall still exists, and is among the most interesting of the existing remains of Rome.\(^2\)

The Praetorian Camp is represented (see fig. 88) on a curious aureus of Claudius, with the words IMPERATORI RECEPTO on the long, low external wall. Within the camp some

---

\(^1\) In 6 a.d., when the Aequarium Militare was instituted, there were nine cohorts of Praetorians, including about 10,000 men; the rest of the army then contained twenty-five legions, composed of Roman citizens, as well as a large number of foreign auxiliaries.

\(^2\) It can best be examined from the outside of the city, by going out of the modern Porta Pia.
loftier buildings are shown, including an aedicula containing a statue of *Roma* (I) and a military standard.

Within the walls of the camp the Empire was put up to auction by the Praetorians, after the murder of Pertinax in 193 A.D., and knocked down to Didius Julianus at the cost of a bribe of about £300 to each member of the Guard; see Herodian. ii. 6, and Spartian. *Julian*, i.; see also Tac. *Ann.* iv. 1, and *Hist.* i. 40, and ii. 94.

The Praetorians were finally disbanded by Constantine, who demolished the inner wall of the camp on the side towards the city. The other walls were spared, because they had been included by Aurelianus in his great circuit wall all round Rome, and so formed part of the defences of the city. In this way the camp forms a large projection at the north-east angle of the city, about 500 yards long; see plans of Rome.

When the wall of Aurelian was built (about 270 to 275 A.D.) the walls of the Praetorian Camp were raised to more than three times their original height, the upper part of the gate towers was demolished, and the entrances were blocked up; but it is still possible to trace a long piece of the original wall of Tiberius' time, and the positions of the *Porta Decumana* and the *Porta Principalis dextra*. The plan of the camp and the arrangement of its gates was like that of any other Roman camp in an enemy's country.¹

The annexed figure shows the best preserved part of Tiberius' Camp with the later walls of Aurelian, Honorius, and of mediaeval times added on the top of the comparatively low wall of the original camp. It requires a close examination to distinguish the limits of Tiberius' wall, with its battlements, which are embedded in the later wall of Aurelian. The original wall of the camp, about 10 feet high, still exists to

¹ An interesting account of the usual plan and arrangement of Roman camps is given by Josephus, *Bell. Jud.* iii. 5.
This shows the last preserved piece of the ancient Camp of Titus, at the Porta Principalis Dextra, with the wall of

A. shows the section of the string-course below the battlements, made of three projecting courses of tiles.
B. gives the detail of the bases of the pillars which flank the entrance, made of molded brick.
C. shows the small windows in the towers on each side of the gate, with their arched heads formed out of two slabs of terra cotta.
D. shows the section of the arched slabs and their label moulds.
its full height at this part, but the upper portion of the towers
which flanked the entrance is lost.

It is built of massive concrete, with a very neat facing of
brickwork, quite unlike the additions and rebuilding of
Aurelian's time and later. It had small square battlements,
about 2 feet 6 inches wide, with moulded capping; at rare
intervals, about 20 feet being left between them. A little
way below is a simple string-course of moulded bricks (A
on fig. 89).

The central gate on the north side, shown on fig. 89, is
the best preserved. Its opening is decorated with tall brick
pilasters, with moulded terra-cotta bases (B on fig. 89), and
on each side are two small windows, 10 inches wide (C on
fig. 89), with arched heads formed in one slab of terra cotta;
other slabs, with moulded edges built in sideways, form the
label-mould.

D on fig. 89 shows the section of the arch of this curious
little window. Though the whole head of the window is
formed with one slab of terra cotta, an arch is marked upon
it with incised lines, so as to look as if it were built with
minute brick voussoirs.

The brick facing of the pilasters, 1 foot 11 inches wide,
which flank the central opening, the Porta Principalis dextro, is
especially neat and close jointed, with bricks 1 ¼ inch thick,
and joints barely ¼ inch, of fine, hard, red clay; in other
places the joints are slightly thicker, but the whole surface is
very neat and regular, and was not covered with stucco; it is
a very fine example of the most beautiful kind of brick facing.

The modern road outside the Aurelian walls has been
evacuated down to a level several feet lower than the old one,
and thus has exposed the foundations of the camp, except
where they are hidden by a bank of earth.

This wall of Tiberius' time can be traced all along the
north side, and along a great part of the east side. Built
against the inside of the wall, along its whole length, is a row
of small vaulted chambers, probably rooms for some of the Praetorian guard.

In some places, owing to the fall of the ground, the wall of the camp is much higher than the part shown in fig. 89, reaching to from 20 to 25 feet in height. Some remains still exist of the other entrances into the camp; they are similar in design and detail, but the moulded brick bases of the pilasters have all perished since the drawing in fig. 89 was made.

When the camp was included in the line of the Aurelian wall, its south wall was rebuilt on a new line, and the rest of the wall was greatly increased in height all along the three sides which project beyond the main line of the city. This addition is shown on fig. 89. This upper and later wall is of several different dates, partly of Aurelian's time and partly of the time of Honorius, with many later restorations and clumsy patchings.

Some of the internal buildings of the Praetorian Camp were decorated in the usual Roman way with marble wall-linings and mosaic pavements. A large piece of mosaic found there has recently been placed in the Museo delle Terme; it represents a tame tiger led by two men, coarsely executed, and probably dating from the time of Sept. Severus.

PRIVATE HOUSES.

Examples of private houses, in a good state of preservation, are comparatively rare, but the recent laying out of new quarters on the Esquiline, Viminal, and Quirinal Hills, and the formation of the Tiber embankment, have brought to light a large number of houses, both the domus of the rich, and the crowded insulae or blocks, which contained one or more families on each flat, as is the modern custom in Rome and other Italian cities.¹

¹ The remarks of Vitruvius (vi. 3) refer to the isolated house or domus. The absence of originality in Roman domestic as in religious architecture
Unhappily, in most cases the discovery of these most interesting remains has been immediately followed by their destruction, so that the transference to Rome of the Capital of Italy has had, from an archaeological point of view, the most disastrous effects.

A large number of interesting plans of Roman houses, though of unknown ownership, are shown on various fragments of the Marble Plan.

With regard to the general plan and arrangement of Roman houses it should be noted that both in the city and in the country the Romans usually built their houses many stories high, and some of the best and most important rooms appear to have been on an upper floor.

That interesting mosaic picture of a country villa which was found in Algeria (see vol. ii. p. 123) shows a very extensive mansion with four and five stories of rooms, designed very much like a modern Roman palazzo, that is to say, the ground story has only a few windows with heavy iron gratings, probably storerooms and offices. The first floor, on the other hand, is well lighted with numerous large, arched windows, which evidently open into the principal rooms of the house.

It is a common mistake in examining the existing remains of Roman houses, of which, as a rule, only the lowest story remains, to expect to find on this one ground-floor all the chief rooms of the house including reception-rooms and bedrooms. In those rare cases in which one or more upper floors of a Roman house exist we see from their decoration, lighting, and other points that they were, at least in some respects, the best rooms in the house. As examples of this we may note the Palatine Palace of Severus, the Atrium Vestae and the specially interesting but now almost wholly

is shown by the fact that nearly all the names for the different parts of the house are Greek, e.g. Triclinium, Accus, Peristylium, Exedra, Hypothesis, etc.
destroyed House of Sallust which is described in the following pages.

On the whole, the most complete private house in Rome, and a very good typical example of a rich man's dwelling before the Christian era, is that on the Palatine Hill, known as the House of Livia or Germanicus; its plan is given in fig. 25, vol. i. p. 177.

Another fine private house, supposed to be the Villa of Mæcenas, was discovered in 1874, on the line of the Servian wall and Agger, not far from S. Maria Maggiore. It is built of concrete faced with fine opus reticulatum unmixed with any brickwork, and probably dates from the time of Augustus. In construction it closely resembles the Palatine house.

One room only has been preserved; this is a rectangular hall with apsidal end. All round the walls are tiers of high steps looking something like seats, and on account of these the hall has been called the Auditorium of Mæcenas, and has been supposed to be the place where poets and other writers read their works to an assembly of Mæcenas and his friends.

Prof. Mohr (Bull. Inst. 1875) has, however, shown that it really is a greenhouse, and that the apparent seats are stages on which rows of flower-pots were set. The Romans were fond of the cultivation of flowers and shrubs in this way; see also Bull. Arch. Comm. Rom. 1874.

On each side of the hall are six recesses, very gracefully decorated with paintings of garden scenes, with flowers and fountains treated in a very realistic way, as if the back of each niche were a window opening on to a garden. The whole walls and vault were covered with similar paintings of trees and flowers very skilfully executed, and apparently contemporary with the building. The hall was covered with a barrel vault in which openings were formed to admit light, there being no windows in the wall.

Pliny (Hist. Nat. xxxv. 116) describes this style of wall decoration; he mentions an artist named Tarlius, who lived in
the reign of Augustus and was famous for this style of painting. Some MSS. read Ladius as the artist’s name, but Tudius seems the more probable reading. Unfortunately the passage is corrupt and doubtful in other places.

These fine paintings have sadly perished since they were discovered, both by the fading of the colours and from the crumbling away of the stucco.

This once very extensive villa extended over the Servian wall, a long piece of which had been removed to make room for it. The construction of the villa and gardens of Maecenas over the site of the once squalid pauper cemetery is mentioned in vol. i. p. 133.

The pavements of Roman houses were specially remarkable for the frequent elaboration of their designs in mosaic. The earlier houses, till the time of Augustus, had mosaics of a very simple character, with merely geometrical patterns formed of grey and white tesserae only. Under the Empire the mosaics gradually became more pictorial in character, and great varieties of coloured marbles, imported from all over the Roman Empire, were used to give realistic effects to the picture-like designs which the bad taste of the Romans made so popular. In some cases large river scenes, especially views on the Nile, were represented. Other rooms had the floor covered with various sorts of fishes, most cleverly treated with great spirit and realism. A common mosaic in triclinia represented an unswept floor after a feast, with scraps of all sorts—nut-shells, fish-bones, and the like—scattered all over the surface; this pattern is called asaro by Pliny, Hist. Nat. xxxvi. 184. Examples of this are to be seen in the Lateran Museum. One very grim mosaic is preserved, among many others, in the Museo delle Terme. This represents a skeleton, in black on a white ground, under which are the words ἘΝΤΩΛΑΙ ΚΑΤΩΝ, know thyself, one of the phrases inscribed by the Wise Men on the front of the Temple of Apollo at Delphi.
Another very curious mosaic from a house on the Esquiline Hill has a representation of the ground-plan of a large and elaborate house drawn to a large scale, with the figured dimensions of each room (in feet) inserted in large numerals. Baths and fountains are indicated by covering the area of each with blue tesserae. The whole effect is strange rather than decorative. This mosaic is now in the Palazzo dei Conservatori.

The houses of wealthy Romans, especially during the second and third centuries A.D., not unfrequently had their walls covered with very elaborate mosaics of pictorial style, minutely executed with very small tesserae of brilliantly coloured paste and glass. Even vaults were sometimes decorated with glass mosaics, as, for example, the now destroyed vault of the crypto-porticus in Caligula’s palace; see vol. i. p. 197.

A whole volume might be written to describe the countless varieties of subject and style which were used in the mosaics of Roman houses, alike for floors, walls, and ceilings. On the technique of the mosaics see vol. i. p. 80.

**Horti Sallustiani.**

The House of Sallust stood in the Barberini estate; afterwards called the Spithoeover Gardens, now destroyed, like the neighbouring Ludovisi Gardens, to make room for a series of new streets. This villa, with its extensive gardens in the valley between the Quirinal and Pincian Hills near the Porta Collina, was originally built by the historian Sallust, with the wealth which he acquired during his administration of the Roman Province of Numidia. After the historian’s death it passed to his heir Sallustius Crispus; and when he died in the reign of Tiberius the whole estate became the property of the Crown, and was used by many of the emperors as a favourite residence till as late as the fourth century A.D. It
was probably burnt by Alaric, together with the rest of this part of Rome, in 410; Procop. Bell. Vandal. i. 2.

The site of this house is indicated by Tacitus, Ann. xiii. 47, and by Procopius (loc. cit.); Tacitus mentions that the house was occupied by Nero, Vespasian, Nerva, Severus Alexander, Aurelianus, and other emperors resided there; Dion Cass. lxvi. 10; Hist. Aug. Aurel. 49. During excavations made in 1876, lead pipes were found in the existing remains of the villa, inscribed with the capacity of the pipe, the name of the estate, the Imperial owner, and the plumber who made it, thus—

XIII. ORTOVVM · SALLVSTIANOR  
IMP · SEV · ALEXANDR · AVG ·  
NAEIVS · MANES · FECIT.1

During recent excavations many fine pieces of sculpture and architectural decorations were discovered, and a number of fine rooms, in parts four stories high, were exposed.

The house occupies an unusual position; it is built partly in the valley at the foot of the cliff of the Quirinal, where its upper edge was skirted by the wall of Servius. Part of this wall had been removed and the upper stories of the house extended over the higher level of the hill, so that the third floor of the part of the house which stood in the valley was level with the ground floor on the top of the hill. Some of the existing walls are over 70 feet in height. The rooms on the higher level are mostly destroyed, though scattered lengths of wall show how wide the extent of the house once was. These walls are of concrete faced with mixed brick and opus reticulatum, and evidently belong to the first century A.D.

At a little distance there were some immensely thick and lofty walls formed of cast concrete without any facing, dating probably from the second century A.D. The print of the boards and the upright timbers of the framing in which the fluid concrete was poured, were very clear and sharp. These

1 Lanciani, Comment. di Fronto, 1880, p. 224.
rock-like walls were blown up with gunpowder in 1884, and broken into lumps to use in the foundations of the new boulevards, which are being built here.

The same fate has attended the valuable remains of the wall of Servius near this site, except that it was much easier to demolish than the solid concrete walls of the Empire. The great blocks of tufa were removed one by one, and broken up to make the rubble walls of the new "jerry-built" houses. Still further devastations are being committed, and the whole aspect of this once lovely quarter of Rome is now completely changed.

The valley which contained the Villa and Gardens of Sallust is now being rapidly filled up to a level with the top of the cliff, thus obliterating the contours of both the Quirinal and Pincian Hills on this side. This is only a part of a wholesale scheme called the Piano regolare, the object of which is, as much as possible to get rid of the hills and valleys of Rome, and lay out a new city resembling a Parisian suburb.

That part of the House of Sallust which stands at the foot of the Quirinal cliff was till recently well preserved; see fig. 90. The central room is a large circular hall covered with a lofty dome, on to which other rooms open. This hall is a nobly designed room of good proportions, once lined with rich marble, and decorated with statues in semicircular niches. A wide and handsome staircase leads out of a square vaulted room which is separated from the circular hall by an antechamber. On the side towards the cliff is an open court, with four or five stories of rooms on two sides of it.

The cliff itself is masked by a brick-faced concrete wall with stepped offsets, set against it as a retaining wall to prevent the tufa rock crumbling away. Round three sides of this open court, at a great height from the ground, a projecting gallery ran, supported by brick-faced arches resting on large travertine corbels, all decorated richly with stucco reliefs, in much the same way as the so-called "bridge" in Caligula's
Palace on the Palatine. A similar balcony-like gallery was continued round the upper part of the front of the circular hall.

From the last-mentioned court a staircase starts, planned in a curious winding way so as to occupy little space. It led from the lowest level up to one floor after another till it
reached the top of the cliff, and thus to the rest of the house at the higher level. The steps and dado of the stairs are of marble, and the landings of simple mosaic patterns, while the upper part of the walls and the raking vault over the stairs are covered with paintings on stucco. The whole effect of this lofty house is very stately, and many most interesting details are well preserved.

The upper floors were in some cases of concrete; others had wooden joists supported on rows of travertine corbels. Examples still exist here of concrete floors formed without any curve or arch, but simply flat slabs about a foot thick, treated exactly as if the concrete were a solid piece of stone, like that in the House of the Vestals, shown in vol. i. p. 308.

The facing of the concrete walls in this lower part of the house is of brick only, no *opus reticulatum* is used as it is in the stories above the top of the hill. This brickwork is very neat and regular, with hard well-burnt red bricks 1½ to 1¾ inch thick and 12 inches long, with joints ¼ to ⅝ inch thick. This facing is studded with marble plugs and metal nails to form the key for the cement.

Part of the wall of the open court is covered with the usual fine hard stucco made of pounded marble (the *caementum marmoreum* of Vitruvius) with a highly polished surface, which once must have looked almost exactly like real marble, and was nearly as hard and durable. In order to increase the imitative effect the stucco was divided by a series of sunk lines into sham blocks of marble with draughted edges, such as were often cut in real marble to make the blocks seem smaller than they really were, and so increase the apparent size of the building; see vol. ii. p. 12. In spite of its deeply sunk position the house appears to have been kept perfectly dry by the massive retaining wall against the cliff, and by a complicated system of large *cisternae* which run under the lowest floor of the building.

*Supposed Circus of Sallust.* The form of part of the valley
(now almost filled up) in which the house stands seems to indicate that a circus existed in it. This also appears probable from the discovery, in the supposed site of this "Cirens of Sallust," of the obelisk which now stands at the top of the Trinità de’ Monti stairs; obelisks being very commonly set on the spinae of the Circi of Rome.

The Porticus, a thousand yards long, in which Aurelianus is said to have been in the habit of riding, and which is mentioned as being part of the estate of Sallust, very probably was round the circus; Vopisc. Aurel. 49. The statement (Livy, xxx. 38) that it was once proposed to hold the games in honour of Apollo by the Temple of Venus Erycina, which stood in these gardens, has been supposed to indicate that a circus existed here in the time of Livy, who died in 17 A.D.

The name of this estate, which it retained for more than three centuries after it had become Imperial property, was the Gardens of Sallust (Horti Sallustiani); though the actual house, built by the historian at the end of the reign of Julius Caesar, probably disappeared very soon under the Imperial additions and reconstructions. Nothing is now visible which appears to be earlier than the Christian era.\(^1\)

The Temple of Venus Erycina,\(^2\) which was built by the Dumnvir L. Porcius Licinus in the year 181 B.C. (Livy, xl. 34), stood within the limits of what was afterwards the Horti Sallustiani, close outside the Servian Porta Collina. Ovid (Fast. iv. 871) speaks of this temple as Collineae proccina portae; see also Gruter, Inscrip. xxxix. 4, and cii. 1, and Livy, xxx. 38. This shows that these beautiful gardens must have extended beyond the modern Via Venti Settembre, and the Ministero delle Finanze, under which was the site of the Colline gate.

\(^1\) This description was written in 1884, when these most interesting remains were still untouched by the devastating hand of the speculating builder.

\(^2\) So called from the early Phoenician sanctuary of the Oriental Aphrodite on the Acropolis of Eryx in the north of Sicily.
Some enormously massive concrete foundations, which the Comm. Lanciani thought were the substructions of the Temple of Venus Erycina, were exposed during the construction of the Ministero delle Finanze and then destroyed. The Comm. Lanciani has also suggested that a very magnificent oval or circular structure which was discovered at this place in the sixteenth century was the Temple of Venus Erycina itself. Flaminio Vacco, writing in 1594,\(^1\) describes the building as a richly decorated oval hall surrounded with a peristyle of Corinthian columns, monoliths of Numidian *giallo*, 12 feet long. This chamber had four entrances with descending marble steps, and by each doorway were two columns of translucent alabaster. It had rich marble pavements, and beneath was a large cloaca. The *giallo* columns were cut up and partly used to make the altar-rails for the Church of S. Pietro in Montorio; the alabaster columns have disappeared.

What has been supposed to be part of the marble throne of the *cultus* statue of Venus Erycina was discovered in these gardens in 1887. The reliefs on this curiously shaped block of Parian marble are of great beauty and purely Hellenic style, treated with a certain amount of archaistic severity, except in the case of a realistically treated nude seated figure of a girl musician on one of the sides; see *Bull. Comm. Arch. Mus. Rom.* vol. xv. pl. xv. and xvi. The head of the *cultus* statue of Venus is thought to exist among the sculpture in the Palazzo Ludovisi.

Not far from the Temple of Venus Erycina, on the outside of the *Porta Collina*, was the Campus Sceleratus with a mound of earth (*agger*) containing the subterranean tomb-chamber in which Vestals who had broken their vow of chastity were buried alive in the presence of the Pontifex Maximus; see Dionys. ii. 67, and iii. 67; Livy, viii. 15; and Plutarch, *Numa*, 10.

During the construction of the foundations of the hideous new streets which now occupy the site of the beautiful Lando- visi Gardens an inscription was found which is of interest from the way in which it distinguishes between the words "aedes" and "templum; aedes (ναός) being used for the actual shrine or "cella" of the deity, while "templum (ἱερόν) includes the whole enclosed area round the temple."¹

```
NUMINI DOM AVG
T MARIVS PROCESSVS
SIGNVM DEI SILVANI
[Two lines cut out]
AEDEM IPSIVS MAR
MORATAM A SOLO SV
A PECYNIA FECIT ET
TEMPLVM MARMORIS
STRAVIT IDEMQ DEDIC
```

**RIVER-SIDE HOUSES**

During the removal of a great piece of the right bank of the Tiber in preparation for the new embankment, several fine private houses were found, facing close on to the river. These were richly decorated in the usual Roman way with marble columns and wall-linings over the brick-faced walls of concrete, and had many fine mosaic pavements. Some of the rooms, especially those in a house in that part of the Villa Farnesina Gardens which has been cut away, were magnificently decorated with paintings and stucco reliefs, probably the finest that have yet been found in any Roman house, and evidently dating from the early part of the first century A.D. In many cases not only the walls but also the barrel vaults of the...

¹ See Bull. Com. Arch. 1887, p. 223. So also in the Lex Coloni Accecosti (Cor. In. Lat. 41. 10234) the same distinction is made in the phrase "aedes Divi Titi in templo Deorum."
rooms were completely covered with reliefs in *marmoreum*.

The wall-paintings were executed by the same methods as those of Pompeii and the house on the Palatine (see vol. i. p. 97), but a few were of unusual style, simpler in treatment than the common Roman types, and of a much more refined and truly decorative style, almost pure Greek in design, and having much resemblance to the beautiful though sketchy paintings on the white funeral vases (*lecythi*), so many of which have been found in the tombs of Attica and Euboea, dating mostly from the first half of the fourth century B.C.

In these the painting is kept very flat, the design being mostly expressed by firm painted outlines, as on most Greek vases. One very beautiful figure, thoroughly Greek in style, represents a young lady clad in a *stola* with very graceful and simple folds, and with a veil over her head; she is seated, and pours perfume from a small *argybolos* into an *alabastos*; see fig. 91.

One of the paintings in this villa in the Farnesina Gardens which was discovered and then destroyed was signed by its artist with the Greek name *Seleukos*.

A very fine collection of these wall-paintings is now preserved in the Museo delle Terme. Some of the small panels, about six inches square, have figure subjects painted with wonderful delicacy and minuteness, almost equal to that of a mediaeval illuminated MS. Others, rather larger in scale, which recall the style of the Attic *lecythi*, are painted on a white ground with pale, delicate tints of yellow, blue, and violet. In these much of the design is done with lines, rather than with broad touches of pigment, and not only the design but even the technique is thoroughly Greek in style.

*Stucco reliefs*. Some of the stucco reliefs with figure sub-

---

1 The painting of Argus, Hermes, and Io, in the "House of Livia," though probably by a Greek artist, belongs to that debased form of Greek art which passes for Roman.
jects, which are arranged in panels with moulded framing and scroll foliage round them, are of extraordinary beauty, both for modelling and composition, in some respects even finer than the wonderful tomb on the Via Latina, which has reliefs of subjects from Homer's *Iliad*; see vol. ii. p. 265.

Those in the house by the Tiber are of earlier date—early in the first century A.D., and are modelled with marvellous spirit and refined taste, executed rapidly by the artist in the
quick-setting wet stucco, made of marble dust and gypsum, which he applied in lumps on to the already hard ground of the panel; then, quickly, before the stucco had time to harden, he moulded the figures into shape with his fingers and thumb, assisted by a few simple wooden tools.

The decision and rapid skill with which every touch on the wet stucco was applied are most admirable, and the result is that an amount of vigour and life appears in these hastily executed reliefs such as it would have been impossible quite to equal by the slow process of chiselling a hard substance. Apparently the only guide which the sculptor had to help him was a mere sketch in outline, incised before beginning on the flat surface of the panel. It would be difficult to find any other examples equal to these in the perfection of combined training of hand and eye.

Many of the scenes represented are Dionysiac—fauns playing on the double pipes, nymphs with timbrels and other musical instruments, sportive genii bearing the thyrsus or bunches of grapes, and Silenus reeling under the influence of wine.

Some figures of winged Victories are marvels of delicate grace in their pose, lightly poised on their large wings, with the flowing curves of their drapery gently floating behind them to indicate their forward movement. These especially are of pure Hellenic style, and resemble the beautiful reverse on a Syracusan tetradrachm of Agathocles, about 308 B.C., which has a standing figure of Victory fixing armour to a trophy.

Some draped figures of Bacchanals are remarkable for their dignity of movement and for their simply designed drapery, slightly indicating the form beneath. The modelling of the nude, especially in some of the faun-musicians, shows very complete knowledge of the human form; the play of the muscles under the supple skin is rendered with perfect taste,

---

1 See above, vol. i. p. 75, and Vitruv. vii. 3. 3. Pliny, Hist. Nat. xxxv. 153, mentions the use of gypsum by Greek sculptors.
Greek style. quite free from the anatomical exaggerations of the late Athenian school. The sculptors of these reliefs probably aimed at no originality, but had the good taste to select the most excellent models from among the countless works of Greek art of all periods with which Rome was then crowded to an almost inconceivable degree.

The reliefs are arranged in panels of various shapes and sizes, each being framed in a delicate moulding ornamented with the egg and dart enrichment. These moldings are not modelled by hand, but are impressed from stamps or moulds in long lengths, and the junctions are afterwards completed with a modelling tool.

As appears to have been always the case, these exquisite reliefs are tinted with colour to increase their decorative effect; in some cases very slightly, the figures themselves being left white and merely the ground of the panel coloured. The enriched moldings which formed frames round the panel subjects were more freely coloured, and in many places gold was introduced, especially among the egg and dart enrichments, of which the Romans were specially fond.

Though the houses which were so sumptuously decorated have been completely destroyed by the widening of the river, some of the paintings and reliefs were cut off the walls and have been preserved, though in a sadly damaged condition. They are now in the museum which has been formed in the Monastery of S. Maria degli Angeli, in part of Diocletian's Baths. Apart from this they have suffered greatly by removal, as a great part of their beauty depended on their perfect adaptation to their architectural surroundings and the unity of the whole wall design of which each picture or relief formed an essential part; they are illustrated in Mon. Inst. Arch, Rom. Suppl. 1891, pl. 32 to 36.

For a description of the houses found in the Farnesina Gardens see Lanciani, Not. d. Scavi, 1880, p. 138 seq.

In addition to the wall-reliefs of this kind modelled by
hand in soft stucco, the Roman houses and temples were very largely decorated with reliefs in plaster or clay (terra cotta) made by casting or pressing in moulds; these were called typi or sigilla.

Cicero (ad Att. i. 10) writes, Præterea typos tibi mundo, ques in testorio (in the wall plaster) atriolis possim includere. Pliny (Hist. Nat. xxxv. 151) thus describes the process of making terra-cotta reliefs, impressa argilla typum fecit et cum ceteris fictilibus induratum igni proposit. Other architectural decorations, made by pressing soft clay into moulds, Pliny (ib. 152) calls prostopa, eclypa, and plastae.

Even statues in the round were often made of cast gypsum, exactly like modern plaster casts, and were then decorated by colouring, just as if they had been marble statues; see Pliny, Hist. Nat. xxxv. 153.

Portrait casts in plaster, either from life or from the dead face, were also made; see Pliny, Hist. Nat. xxxv. 153. The Central Museum in Athens possesses a very striking cast from the face of a young man which was found in a tomb of the Roman period in the Outer Cerameicus. It appears to have been taken after death.

As in modern times, plaster casts, from the original clay model or propylasma, were used by sculptors to work from; see Pliny, Hist. Nat. xxxv. 153-157.

**OTHER HOUSES.**

In 1884, near the Porta S. Lorenzo, during the excavations made for the construction of the new road and gateway in the Aurelian wall, which is now cut by the side of the ancient gateway of Augustus' time (Porta San Lorenzo), extensive remains were exposed of a long street of houses, against the back of which the wall of Aurelian had been built.

An interesting example of plaster portrait reliefs of famous authors used to decorate a Roman library is described below at p. 254.
Some of these houses were faced with neat opus reticulatum of the first century B.C.; others, which had the finest and most closely jointed brick facings, dated from the first century of the Empire; they were richly decorated with marbles and mosaic. Many of these houses had been built against the piers of the aqueduct which conducted the Aquae Juliae, Tepula, and Marcia, one arch of which, rebuilt by Augustus, forms the Porta S. Lorenzo; see vol. ii. p. 340.

A number of the piers of this aqueduct, built of massive blocks of tufa and peperino, existed at this place as high as the springing of the arches, and had evidently been partly hidden by this long row of houses. The whole of these interesting remains and the piers of the aqueduct have been destroyed since 1884.

In June of 1884 a fine house of the end of the first century B.C., with walls covered with painted decoration, was discovered in digging foundations on the slope of the Quirinal near the Colonna Gardens, and shared the fate of countless other fine buildings that have been found during the recent laying out of new lines of boulevards.

In December 1883 remains of an interesting Roman house were exposed while digging foundations in the modern Via dello Statuto. One of the rooms afforded a good typical example of the usual Roman way of fitting up and decorating a library. The lower part of the wall, to a height of about 3 feet 6 inches, was quite plain, because against it was fitted a series of cupboards (armaria) to hold the manuscript books.

Above the armaria the wall was decorated with panels divided, at intervals of 5 feet, by shallow fluted pilasters supporting a frieze, and in each space there had been a medallion relief 2 feet in diameter, with the bust of an author, all worked in fine hard stucco.

The names of the authors represented were inscribed on.

1 See Lanciani, Ancient Rome, p. 191.
the frames of the bust. On the best preserved of the medallions was the name APOLONIUS (sic) THYANEVS. As the Comm. Lanciani points out, the ancient arrangement of libraries still survives in the large room of the Vatican library, where all the books are hidden in a series of low presses.

BARRACKS OF THE VIGILES.

The Roman *Vigiles* in Imperial times\(^1\) were a very large and important body, under military discipline, who performed the various duties of police, firemen, and lamplighters. After a serious fire in 6 B.C. Augustus increased their number; see Suet. *Aug.* 30. The *Vigiles* were divided then into seven Cohorts, each commanded by three officers of rank, a Praefect, a Sub-Praefect, and a Tribune, with seven Centurions as subordinates. The full strength of a Cohort in the time of Caracalla appears to have been about 1000 men, including a considerable proportion of horsemen. These seven Cohorts had seven *stationes* or headquarters, and in addition fourteen smaller barracks (*exubitoria*), one in each *Regio* of the city; some of these barracks have been recently discovered in Rome.

The *Praefectus Vigilum* acted as a Metropolitan Magistrate, inquired into the causes of any fires that occurred, and had a certain control over the supply of water in Rome.

Those of the *Vigiles* who acted as firemen were commonly called *Sparteoli*, possibly from the *funici spartei* or ropes of *esparto* grass which formed an important part of their equipment; see Cato, *De Re Rust.* xi. These ropes with hooks at the end were of use in pulling down the woodwork of burning houses. The firemen also were provided with axes, saws, and pickaxes for the same purpose, with ladders and with buckets to carry water.

\(^1\) Under the Republic three magistrates called *Triumviri nocturni* were responsible for the safety and order of the streets at night, and also were in command of a body of *servi publici* who acted as firemen.
Some of these firemen were called *Aquarii* and *Siponarii*, the *siphon* being a kind of force-pump.¹

Others of the *Vigiles* who had charge of the lighting of the city were called *Schaciarii* (cf. *sebun*, *sebaeus*). From the time of Caracalla, who did much (c. 210 to 215 A.D.) to enlarge and organise the body of *Vigiles*, the streets of Rome appear to have been lighted with torches which were set in sockets fixed obliquely to the walls.

Examples of these torches which have been found in some of the *excubitoria* are of bronze, 4 feet long, formed hollow to hold sponges soaked in naphtha (see Pliny, *Hist. Nat.* xxxv. 179) or some combustible resinous substance; the pierced top where the flame issued forth is shaped like a fir cone.

In earlier times the streets of Rome do not appear to have been lighted at all; torches or lanterns were carried by passengers or by their slaves ² (*servi producentes et laterarit*); see Suet. *Aug.* 29, and Cic. *Pis.* 9, 20.

The great *Thermæ* were not lighted at night till the time of Severus Alexander, nearly twenty years after Caracalla had provided for the street-lighting of Rome.

Five *stationes* of the *Vigiles* have been discovered in the following places—(Cohort I.) at the foot of the Quirinal near the Via Dataria; (Cohort II.) on the Esquiline near the *Temple of Minerva Medica* (so called); (Cohort III.) near the *Thermæ of Diocletian*; see *Bull. Com. Arch. Rom.* 1873;

¹ Not only ordinary lifting pumps but force-pumps were known to the *Romana*. One form of the latter, which would be useful in throwing up a stream of water on conflagrations, is described by Vitruvius (v. 7) under the name of *Machina Oesobica*. It was invented by Oesibius in the reign of Ptolemy VII. (170-117 B.C.), and is described in an extant work by his pupil Hiero of Alexandria. The *siphon* used by firemen is mentioned by Pliny the younger, *Epist. to Trajan*, v. 33 (42).

² One of the paintings in the central room of the "House of Livia" on the Palatine shows a lady issuing from her house at night attended by a slave-girl: they carry a lantern and a torch; cf. Suet. *Jul. Caesar*, 37.
(Cohort IV.) on the Aventine near the Church of S. Saba; (Cohort V.) on the Caelian Hill in the gardens of the Villa Mattei, now Villa Hoffman. The statio of the sixth Cohort was probably near the Forum Romanum, and the seventh in the Transtiberine part of the city.

The stationes appear to have been buildings of great splendour, with marble halls, mosaic pavements, columns of richly coloured marbles and porphyry, and many statues and other works of art. The statio of the first Cohort, which was also the central depot of the whole body of Vigiles and the office of the Praefectus, was discovered in 1644 under the Palazzo Muti-Savorelli (now the Palazzo Balestra) and the Convent of S. Marcello at the northern end of the Piazza dei SS. Apostoli.

A contemporary writer describes it as a building of unusual magnificence, with marble profusely used throughout, and decorated with fine wall-paintings and numerous statues of emperors, deities, and the Genii of the Vigiles.

The fourteen excubitoria or subsidiary barracks, though less magnificent than the seven stationes, seem to have been large and handsome buildings.

The most perfect that now exists is one of the two excubitoria of the seventh Cohort, whose district was the Transtiberine quarter of Rome.

It was discovered a few years ago near the Church of S. Crisogono in Trastevere. It is a fine house of the second century A.D., with a large open court or Atrium paved with mosaic, round which a number of rooms were arranged two or three stories high; some of these were handsomely decorated with marble wall-linings. On one side a porch projects into the Atrium, of the usual brick-faced concrete, with rich decorations in moulded terra cotta; this entrance has an

---

1 The entrance is by a doorway in the middle of the little court called Contrada Monte di Fiore. A long flight of modern stairs leads down to the ancient ground level.
archway between two Corinthian pilasters which carry an entablature and pediment. The Corinthian capitals and all the mouldings are of terra cotta, very similar in style to those of the Amphitheatreum Castrum, and like them were once decorated with brilliant colours, with which the various members of the mouldings were picked out. Within the projecting porch there is a graceful little chapel (lararium) with stuccoed walls richly decorated with painting.

One room at some distance from the Atrium contains a large marble-lined plunge-bath. At the end of the room is an apec, in which is a small recess containing a marble statue. This bath-room is exceptionally interesting from the good preservation of the thin marble slabs with which the walls are lined. Bands and panels of various-coloured marble are framed and separated by thin slips of marble with a rounded edge built in sideways, thus forming a simple projecting "bead moulding." A considerable part of this exuvillatorum still remains unexcavated. The ground floor is about 25 feet below the modern level of the street.

Some inscriptions scratched on the walls are of special interest for their record of the milites sebacii, and of the Genius exuvillatorii, to whom the little chapel appears to have been dedicated. Two of them are as follows; the first is dated by the names of the Consul 227 A.D.

OCTAVIVS - FELIX - MIL - COH - VII
VIGI - SEVERIANES - T - MAXIMI
SEBACIIARIA - FECI - ALRINO - II
MAXIMO - COS - MES - OCTOB
FE[liciter]

T - MAXIMI - VETTI - F
LORENTINI
SEBACIIARIA
FECI - MENSE
IVNO - GRATASA.
Another of these scratched inscriptions runs thus—

COH VII VIG GORDIANI D N
MARCELIANI EGRILLI RVFINIANI
SVBACIARIAM TVTA FECIT
OLEV CVR AVRELIUM AGRIPINVM OPTIOE
SEBACIA
LVCINIUM
LVCERNAS
AD PORTA[M]
AD POMPAS

Many of them give names with the title Sebaciarius; e.g. Sebaciarii and S IVLI AEMILIANVS SEBACIARIUS CENTVRIA EQVES FACTVS. Emitteriis.

Others mention an officer called Emitterius, the meaning of which is unknown; see Bull. Com. Arch. 1886, p. 251, and 1887, p. 77; and a monograph by C. Nocella, Le iscrizioni graffite nell' escubitorio della VII C B Coorte dei Vigili, Rome, 1887.


Barracks of the Equites Singulares. In 1886, in the Via Tasso near the Lateran Basilica, extensive remains were discovered of the very magnificent barracks of the Equites Singulares, one of the most honoured divisions of the Roman army. Part of this building, which was constructed of concrete faced with opus reticulatum, consisted of a great hall, over 90 feet long, in which were found no less than forty-three inscribed bases of statues of various deities.

Most of the inscriptions of this large and interesting series
record the dedication of statues as thank-offerings from veterans who had been honourably discharged after faithful service, *missi honesta missions*; see Lanciani in *Notiz. d. Scavi*, 1886, pp. 12 to 22.

The *Equites Singulares* were a special body of horse-guards attached to the person of the Emperor; see Henzen in *Ann. Inst.* 1850, pp. 5 to 53, and 1885, pp. 235 to 291.

**THE HORREA OF ROME.**

Among the most extensive buildings of ancient Rome were the great magazines or storehouses (*horrea and emporia*) in which food and merchandise of all kinds were stored in enormous quantities; see Livy, xxxv. 10 and xli. 27 and 32.

One of the chief of these, the *Horrea Galbæ* ¹ et *Antiquam*, occupied an immense area at the foot of the Aventine Hill, near the principal landing-quay of the Tiber, and reaching as far as *Monte Testaccio*. It consisted of a great series of open courts surrounded by chambers two stories high for storage of provisions and foreign imports of all sorts. One of its brick-faced arches still exists, close under the Church of S. Sabina, spanning the road which leads along the *Marmoratum*.² The *Horrea Galbæ* is mentioned in *Regio XIII.* of the *Catalogues*, together with thirty-five other storehouses in the same *Regio*. Its name was derived from Sulpicius Galba, on whose property this enormous State magazine was built.

The Comm. Lanciani excavated part of the *Horrea Galbæ* and found various store-chambers containing, among other

¹ *Galbae, Galba, Galbae* are various forms of the genitive used in inscriptions from the first century a.c. The adjectival forms *Horrea Galbana* and *Galbiana* are also used.

² This arch has recently been destroyed, together with many other portions of the *horrea*, during the widening of the road and the construction of a new quarter of barrack-like houses near Monte Testaccio and the river-side.
things, stores of lentils, of fine sand for sawing marble, numbers of amphiors, and a great mass of elephants' tusks, containing no less than 675 cubic feet of ivory; see Lanciani, Anc. Rome, p. 250.

These public magazines were of much importance as part of the great Roman system for feeding the population of Rome, which has been estimated at about two millions during the most populous period of the city. A whole fleet of ships were constantly bringing corn and other provisions from the ports of Africa, Spain, Sicily, and other corn-growing countries, so that immense depots were needed for the storage of their cargoes.

In 1885, outside the Porta Salaria, an interesting inscription was found with a large portion of the Lex Horreorum Caesaris, of the time of Hadrian; see Bull. Com. Arch. 1885, p. 110.

In the sixteenth century extensive and lofty remains of the Horrea Galbae still existed. They are shown in Du Pérac's Festini, pl. 23, extending for a great distance between the Tiber and the foot of the Aventine Hill.

In 1886 the tomb of the owner of the site of the Horrea was found. It is a simple rectangular monument of tufa, resting on a podium of peperino. Its inscription is, SER Sulpicius - SER - F. - GALBA - COS - PEDES - QUADRATI - XXX. Sergius Galba, the father of the occupant of this tomb, was Consul in 108 B.C.

The Horrea Galbae was only one of an enormous group of Horrea, Emporia, corn-mills, and bakers' shops which extended for about a mile along the bank of the Tiber. Among them stood the Statio Annonae ² Urbis Romae, which was the central

1 See Cov. In. Lat. viii. 8480, Molas propter annonam publicam a eestibus institutas, reformatos et instrumento pistorio exornatos, ad annonam publicam coctionem pistoribus tribuit.
² Annona, the year's produce of corn, was personified on many Roman coins as a draped female holding a coronaepia, and with a modius or wheat-measure at her feet.
administrative office for the distribution of food; see De Rossi, *Ann. Inst.* 1885.

Enormous quantities of corn were stored in the *Horrea* of Rome; according to Spartianus, *Sept. Sec.* 8 and 23, sufficient corn to last for seven years was kept in store by Septimius Severus, reckoning the consumption at the rate of 75,000 *modii* a day. The scholiast to Lucan, i. 319 (ed. of Weber, vol. iii. p. 64), records that 80,000 *modii* of corn were consumed daily in the city. A large fraction of the people of Rome received a free supply of corn from the State; Julius Caesar reduced the number of people on the free list from 320,000 to 150,000; J. Caes. *Bell. Civ.* iii. 42.

Different *Horrea* were provided to hold the various kinds of goods, such as the *Horrea candelaria, chartaria,*1 *piperaria,* for candles, paper, and spices, and many others. In the time of Constantine there were no less than 290 public *Horrea* in Rome. See G. Gatti in the *Bull. Ist. Arch. Germ.* vol. i. 1886, p. 65 seq.; Preller, *Regionen,* p. 101 seq.; Jordan, *Topogr.* ii. p. 67; and *For. Ur. Rom.* pp. 43 to 44, and Pl. xxi. 169.

1 Paper (*charta*) made in Egypt from the *papyrus* which grew in the Delta was a very important article of import. It was the substance chiefly used by the Romans for books and manuscripts of all kinds; see Pliny, *Hist. Nat.* xiii. 74 seq. Under the Empire paper manufactories were also established in Rome and other places in Italy; see Middleton, *Illuminated Manuscripts,* Cambridge, 1892, page 24.
CHAPTER VIII.

TOMBS AND HONORARY MONUMENTS.

As was the case with the Etruscans, the Romans sometimes burnt their dead, and sometimes buried them unburnt. It is common to find in the same Roman tomb-chamber examples of both methods. On the whole, burning was the most common; but some families, such as the Gens Cornelia, adhered to the other custom, at least for the greater part of the Republican period. Sulla the dictator is recorded to have been the first member of the Cornelian family whose body was burnt; see Cic. De Leg. ii. 22; and Pliny, Hist. Nat. vii. 187.

The bodies of the emperors and their consorts during the first three centuries of the Empire were usually burnt on very magnificent pyres, from which an eagle was set free as the flames kindled, and by its upward flight symbolised the escaping soul of the dead emperor or empress; see Herodian, iv. 2. This scene is represented on many coins, with the legend CONSECRATIO, and was usually followed by the deification of the dead person.

On the pedestal of the column of Antoninus Pius in the Giardino della pigna in the Vatican, a relief represents the emperor and his wife Faustina borne heavenwards by a Genius with spreading wings; on each side an eagle is flying upwards. Allegorical figures of Rome and the Campus Martius point out the scene of the funeral rites; see vol. ii. p. 311.

According to the law of the XII. Tables, which mentions
both burning and whole interment, burial within the walls of Rome was strictly prohibited, except in the case of the Vestal Virgins, and was only permitted by the Senate in a few rare cases as a special honour. This honour was granted to P. Valerius Publicola, whose modesty in moving his residence to a humble position was highly appreciated; Plutarch, Public., and Cic. De Leg. ii. 23; see vol. i. p. 220.

The tombs of Rome were arranged in various ways; one was to have extensive Columbaria or Catacombs, which were sometimes the property of one wealthy genus. Under the Empire such columbaria occasionally belonged to a sort of company, which sold chambers or recesses to any buyers. Others belonged to scholae or funeral guilds, whose constitution somewhat resembled that of the mediasval religious and social guilds. These burial chambers were either wholly excavated below the ground, or in the side of a hill, or were partly built above ground, with rows of niches like pigeon-holes all over the walls, whence came the name columbarium (dove-cot). Each of the niches contained a vase (olla) with the ashes of one person.

During the time of the Empire it appears to have been frequently the custom for the members of wealthy families to be buried unburnt in sarcophagi, while their slaves and freedmen were burnt, and their ashes set in niches in the walls of the large chambers in which the sarcophagi stood.

One of the commonest forms of tomb was an isolated monument set by the side of one of the roads which radiate

1 An interesting account of these scholae is given by Prof. Baldwin Brown in his book entitled From Schola to Cathedral, 1888.

2 In many cases the cinerary urns were not set in niches, but on long shelves, moulded like a cornice, raised 7 or 8 feet above the floor; or sometimes with several tiers of shelves one above another. This was the arrangement in the tomb of the Pancratii on the Via Latina, the vault of which is decorated in the most magnificent way with stucco reliefs and painting, as is described below.
from Rome. The line of the ancient roads, and consequently the position of the gates in the Servian wall, has in many cases been established by the discovery of the long line of tombs which bordered the road, commencing immediately outside the gate.

Many of these road-side tombs, such as some of those which still exist in the Via Latina, are built in the form of chapels or aediculae above the ground, with one or more mortuary chambers beneath containing sarcophagi or niches for cinerary urns. Some chambers have both.

The chief of those on the Via Latina are of concrete neatly faced with brick and then decorated either with marble veneer or with fine stucco. The capitals of the pilasters and the richly decorated cornices are frequently modelled in terra cotta with great delicacy and spirit.

They are in the form of a small temple, either with no columns or else with merely a prostyle portico. These upper chambers, which contained statues of deities and portraits of the dead who were buried below, served as mortuary chapels in which the friends and relations met to celebrate the anniversaries of the death of the occupants of the tomb below. Feasts were held on these memorial occasions, and offerings of food and flowers were made to the souls of the dead.

The subterranean tomb-chamber is, in some cases, ornamented in the most magnificent way with reliefs moulded in fine hard stucco (opus albarium), and then richly decorated with gold and colour. Some of the tombs on the Via Latina have reliefs of the finest Graeco-Roman style, with Homeric and other purely Greek subjects treated with wonderful skill and good taste.

No existing examples of Roman decorative art can surpass the best stucco work of this sort, such as that in the Tomb of the Pancratii, which is still remarkably well preserved. The whole of the vault and a deep frieze round the walls are richly
ornamented with reliefs of wonderful beauty, of almost pure Hellenic style, like those mentioned in vol. ii. p. 251. Most of these subject-reliefs are in low or mezzo-relievo, but there are also larger decorative figures of winged Victories, attached to the walls at the springing of the domical vault, which are almost completely modelled in the round.

The colouring of this stucco work is exceptionally well preserved. The principal reliefs are left white, but the subsidiary panels and enrichments round them are brilliantly coloured with blue, vermilion, chocolate, and other pigments, applied with much taste and producing a very rich and harmoniously beautiful effect. In the centre of this inner chamber there is a very large, but quite plain, marble sarcophagus, containing two skeletons. Ollae containing ashes were placed on a shelf which runs all round the room at a height of about six feet from the floor. Above this tomb, at the ground level, there was the usual aedicula, but that is now destroyed, and a modern shed has been erected to protect the remains below. On the opposite side of the road there is another tomb with equally beautiful stucco reliefs on the barrel vault, but these are left the natural creamy white of the caementum marmoreum. Both these tombs appear to date from the early part of the second century A.D. They are about 2½ miles outside the Lateran Gate.

In ancient times all the roads which radiated out from Rome seem to have been closely lined with tombs and monuments of various kinds, extending on some roads for many miles outside the city.

The frontage on to the principal roads thus became of great value, and the monuments usually had at the end of their sepulchral inscription (titulus sepulcralis) a record of the exact frontage along the road, and the depth inwards toward the fields which belonged to the family who owned the tomb. Examples occur still in situ on the Via Appia, the Via Latina, and other roads which radiate from Rome, usually in this

A sepulchral inscription of a typical kind, built into the walls of the narthex of S. Maria in Trastevere, records in a common formula that a freedman named Ambrosius lived for forty-five years and eleven days with his wife Coccia, without one quarrel. It concludes with the usual statement of the size of the plot of land, IN. FRONTE P[EDES] XVI. IN. AGRÒ P. XXII.

Some sepulchral inscriptions have other indications of the precise limits of the plot of land; and in some cases they conclude with a threat of penalties to be inflicted if any one alienates or violates the tomb.

For example, an inscription on the tomb of Statilia Euhódia, which was found in 1890 in the Vigna Torlonia, ends by threatening a fine of twenty thousand sesterces (about £200) in these words—SI. QVIS VOLET. MANVS. INICERE SIVE VENDERE SIVE ABALENARE. DABET. POENAE. NOMINE AERARIO POPVLI ROMANI. HS. XX. M. See Bull. Com. Arch. 1890, p. 335.

The usual sepulchral system of measurement is quoted by Horace, Sat. i. viii. 12—

Mille pedes in fronte, trecentos cippus in agrum
Hic dubat; herculea monumentum ut sequitur.

In the same passage Horace describes the squalid appearance of a cemetery on the Esquiline, outside the Agger of Servius, in which paupers and uncared-for slaves were buried (without burning) in shallow graves, so that the ground was strewn with bleaching bones.

This site, as Horace mentions, was afterwards laid out with beautiful gardens and a park by Maecenas, who built himself a villa on the line of the ancient agger; see vol. ii. p. 239.

1 A large proportion of Roman epitaphs of married people contain a similar statement as to absence of quarrels during their wedded life.
The Tomb of the Gens Cornelia. This is one of the most ancient of the Roman family burial-places which are now known to exist; it is excavated in the tufa rock at a point facing on to the Via Appia, near the Thermae of Caracalla, and extends a considerable distance into the fork formed by the junction of the Via Latina with the Via Appia.

It was first opened in 1780, and in it were found a large number of slabs of peperino, inscribed with the names and titles of many members of the Scipio family.

Owing to the custom of interment without burning, which was kept up by the Cornelian Gens, the bodies were laid in loculi, rock-cut recesses, the side of each loculus being closed by a large slab of stone, on which the sepulchral inscription was cut, and the incised letters then coloured red. The "Tomb of the Scipios" consists of a number of narrow passages cut in the tufa rock, winding about in various directions, and excavated at different times as more room was required. At the opening from the Via Appia into the tomb an entrance façade exists, built of massive blocks of peperino, with a plain semicircular arch, 5 feet in span, supporting a simple moulded architrave.

The inscriptions (tituli sepulcrales), of which many exist dating from as early as the beginning of the third century B.C., are among the most important extant examples of archaic Latin palaeography. The originals have been removed, and have mostly been placed in the Vatican; their places are supplied by modern copies, many of which are blundered. The form of some of the letters differs from that afterwards used, especially the I and R, which resemble the early Attic.

1 This is not, strictly speaking, a columbarium, as it contains large recesses for the corpses, not the small niches (cellaria) like pigeon-holes which were used to hold ashes.

Greek form of these characters. The forms I for E and II for E also occur.

The most important discovery made was a large sarcophagus, cut out of one block of peperino, and inscribed with the epitaph of Lucius Cornelius Scipio Barbatus, who was Consul in 298 B.C. (Livy, x. 12, 13), and was the great-grandfather of Scipio Africanus, who was elected Consul in 134 B.C. The sarcophagus (now in the Vatican) is decorated with a frieze, consisting of Doric or Tuscan triglyphs with rosettes in the metopes; it has a simple cornice with large cymatium and dentils. The inscription is incised and painted red on the lower plain part of the sarcophagus, which occupies the place of the architrave, below which there is a moulded plinth. The lid was cut out of another block, and is decorated with volutes at its angles. It was broken when the tomb was rifled in 1780, and about half of the lid is a modern restoration; the rest of the sarcophagus is as perfectly preserved as if it were only a few years old.

The inscription, in rude Saturnian verse, runs thus—

CORNELIVS · LYCVS · SCIPIO · BARRATVS · GNAIVOD · PATRE
| PROGNATVS · FORTIS · VIR · SAPIENSQUE · QVOIVS · FORMA
| VIRTVTIS · PARISVMA · FVIT · CONSOL · CENSOR · AIDILIS · QVEI
| FVIT · APVD · VOS · TAVRASIA · CISAVNA · SAMNIO · CEPIT —
| SVRIGIT · OMNE · LOVCANA · OPSIDESQUE · ABDVCT; I. E. C."Cornelius Lucius Scipio Barbatus (the bearded), born of his father Gaevus, a brave man and a wise; whose form was fully equal to his worth, who was among you as Consul, Censor, Aedile; Taursasia, Cisavna he took from the Samnites; he subdued all Lucania, and carried away hostages. Many interesting archaisms occur in this inscription."

When the sarcophagus was broken open the skeleton of Scipio in a good state of preservation was found in it, and on one of the fingers was a gold signet ring with an engraved gem, which Pius VI. gave to the French antiquary Dutens, from whom it passed into the possession of Lord Beverley,
and finally into the Collection of the Duke of Northumberland. The stone in this ring is a sard or carnelian, engraved with a standing figure of a winged Victory holding a palm-branch, a very common device on the engraved gems of the Republican period.

The poet Ennius was buried in this tomb, and his statue was placed in front of the entrance. The name of Ennius has been given, but without reason, to a youthful bust crowned with laurel, cut in peperino, which was found in the tomb, and is now placed on the sarcophagus of Scipio Barbatus.

Other inscriptions were found over the graves of Lucius Cornelius Scipio, the son of Barbatus, who was Consul in 269 B.C., when he seized Corsica and Sardinia after the defeat of the Carthaginian Hannibal; and those of two sons of Scipio Africanus, and his brother Scipio Asiaticus, with other members of the family. The great Scipio Africanus, who died in 185 B.C., was not buried among his ancestors, but near his villa at Liternum: Seneca, Ep. 86.

This very ancient burial-place continued in use under the Empire, and was continually enlarged. The roof of the passages and chambers, which are excavated in the soft tufa rock, are in various places supported by brick-faced concrete of the second century A.D.

Imperial Columbarium. Besides the Tomb of the Scipios, a great part of the fork made by the Via Appia and the Via Latina contains many other burial-places in the form of columbaria. Five of these are accessible, two can be entered from a door in the wall of the Vigna Codini, close by the Porta Latina, and others from the Appian Way.

These columbaria are mostly excellent and well-preserved specimens of the methods of interment used under the Empire.

1 This priceless ring is now at Alnwick Castle, among the other gems in the Northumberland Collection; see Middleton, Engraved Gems of Classical Times, 1891, p. 47.

2 Or, according to Polybius, in 183 B.C.
Some of them were used for servants and officials in the household of the Emperors, such as the Imperial physicians (medicus), accoucheurs (obstetrix), musicians (auletes), silversmiths (argentarius), librarians (bibliothecarius), secretaries (scribae), footmen (pedissequeus), jesters (lusor), and a lady’s maid (ornatrix). One of the servants was a dumb man, buffoon to Tiberius (T. Caesaris lusor), whom he amused by mimicking the gestures of legal advocates, as is recorded in his epitaph.

The librarians are mentioned as being in charge of the library in the Porticus Octaviae, and in that of Apollo Palatinus. In one case the ashes of a lapdog are placed in a niche with an inscription calling the dog “the delight of its mistress.”

These columbaria are sunk in the tufa rock, and their walls lined with concrete faced with brick, or with opus reticulatum; they are in some cases decorated with stucco reliefs or mosaic. The niches are arranged in many tiers reaching to the top of the lofty walls of the chambers; those for slaves are usually small semicircular recesses (ollaria), just large enough to hold a small earthenware pot (olla).

Other recesses for officials of rank are frequently square niches about 2 feet wide, lined with marble or enriched stucco, and containing miniature marble sarcophagi or urns to hold the ashes, many of which are richly ornamented with sculptured reliefs. In some cases the cineraria are cut into the form of small temples or aediculae, worked with the most minutely detailed ornaments and figures.

A cinerary urn, now in the Museum of the Palazzo dei Conservatori on the Capitol (terra-cotta room), is of the most costly description; it is a plain circular vessel cut out of a block of the beautiful translucent Oriental alabaster, the much-valued onyx of Pliny. This is enclosed in a leaden vessel, and

1 The amount of splendid decorations lavished on the sepulchral chambers of Rome is very remarkable. Most of them, such as the magnificent tombs on the Via Latina, can only have been lighted by lamps, and were probably but seldom seen.
the whole is protected by being set in a large earthenware jar or dolium. This precious cinerary urn must have been a foreign import. Similar ones frequently are found in tombs among the Greek Islands, and in Phoenicia and other Oriental countries.

Large glass vases of graceful shape were often used to contain ashes, and these were usually enclosed in an outer jar of coarse pottery, or else in a lead box.

In some cases there has been one or more tiers of projecting wooden galleries corbelled out from the face of the wall, so as to give access to the higher rows of niches. The main stairs leading down to the tombs were of marble or frequently of large tiles, tegulae bipedales.

In some of the earlier Roman tombs, which were sunk below the level of the ground, access was given in a very curious way. A number of clay cylinders were made on the wheel by a potter, just large enough to admit the body of a man, and these were piled one above another, reaching up to the surface of the ground, exactly like a large chimney; foothold was given by a series of holes or sinkings in the sides of the cylinders, and the top was closed by a circular terracotta lid.¹

One of these curious staircases, to descend which must have required almost the skill of a chimney-sweep, is preserved in the same room of the Capitoline Museum as the alabaster urn; on the lid is painted a name—EGO • C • ANTONIS—in archaic Latin characters, apparently dating from the third or second century B.C.

The same method of forming shafts for access to underground tombs with cylinders of pottery is of common occurrence in Phoenician cemeteries, both in Phoenicia itself and in the island colonies; especially in the burials of the fifth to the second century B.C.

¹ Roman wells were often lined in the same way with large clay cylinders. A number of examples of this still exist round the lower slopes of the Athenian Acropolis.
One of the largest of the *columbaria* which was discovered on the *Via Appia* at the beginning of the last century has now wholly disappeared, with the exception of more than 300 of its inscribed slabs, which are preserved in the Capitoline and Vatican collections. The importance of this tomb, which contained the ashes of the freedmen of Augustus and his wife Livia, may be judged from a well-illustrated work published soon after its discovery by Gori, *Columbarium libert. et serv. Liviae*, Rome, 1727.

Space will not allow of a description of the other numerous *columbaria*, immense numbers of which have been discovered in Rome, especially during the extensive building operations of the last fifteen years. We may, however, note the positions of a few of the principal ones.

A large group of *columbaria* was discovered a few years ago near the so-called *Temple of Minerva Medica*, in the fork between the *Via Praenestina* and *Labicana*, but after being rifled of their contents, and much injured in the search for statues and other objects, these columbaria were again buried in earth. Many hundreds of terra-cotta lamps, and vessels in both fictile ware and glass, with over 200 inscribed marble slabs, and countless other objects, were taken from these interesting and now lost remains.

Another *columbarium* by the *Via Praenestina*, not far from those last mentioned, is interesting as having been constructed by the historian of the Punic Wars, Lucius Arruntins, who was Consul in 6 B.C., as a burial-place for his slaves and freedmen. This was recorded on an inscribed slab placed over the entrance.

Near it is another tomb consisting of one vaulted chamber, decorated with paintings and stucco reliefs. This *columbarium* has as yet escaped destruction, but will probably soon be destroyed.

In the garden of the Villa Wolkonsky a fine *columbarium* has been exposed, three stories high, with concrete walls faced...
mainly with opus reticulatum, dating from about the middle of
the first century A.D. It is the burial-place of the family of
an architect called Tiberius Claudius Vitalis, and was built by
another architect named Eutychius. Some interesting bas-
reliefs in marble, apparently representing buildings designed
by Vitalis, were found within one of the chambers.

The fine columbaria recently discovered in the park of the
Villa Pamfili-Doria have suffered the usual fate of these
buildings in and near Rome; being first rifled of their con-
tents, and then again buried in a sadly damaged condition.

A small chamber of classical construction, with two tiers of
marble-lined niches, exists below the high altar of S. Maria in
Cosmedin, and is made into the confessio of the church. This
is the Church in which are built up the remains of the Templum
Ceresis ad Circum Maximum described in vol. ii. p. 193. This
curious little chamber has been called a columbarium by some
writers, but its position within the circuit of the Servian wall
makes this very improbable.

Tomb of Eurygenses the baker. One of the towers with which
Honoris had strengthened the double Porta Praenestina and
Labicana concealed this tomb till 1838, when the tower was
pulled down and the tomb found embedded in its thick
concrete walls. It now stands clear of the gate, modern Porta
Maggiore. The tomb of Eurygenses was originally built in the
fork of two roads, the Via Labicana and Via Praenestina, and
this accounts for its not being rectangular on plan, as two of
its sides faced on to and were parallel to these radiating
roads.

The whole design of this tomb is very eccentric. It con-
sists of a high, plain basement, on which stands an upper
structure cut in the shape of three tiers of large circular
basins, with their mouths outwards; these are supposed to
represent kneading bowls, such as were used by the baker to
whom the monument was erected. At the angles are slightly
projecting pilasters. The part immediately under the tiers of
bowls is formed in the shape of a row of tall cylinders, which probably represent a number of measures for grain.

The internal mass of the tomb is of concrete, the lower part being of blocks of tufa faced with travertine; the outer casing and the sculpture of the upper part is also of travertine. Above the rows of bowls the tomb is decorated with a sculptured frieze, surmounted by a simple semi-Corinthian cornice, with consoles and rosettes under the cymatium, which is much too small for its place.

On the frieze is represented a variety of scenes connected with the trade of a baker—the bringing and grinding of wheat, kneading the bread, raking fuel into the oven, weighing and distributing the loaves, executed with vigour but without much refinement of detail—partly, no doubt, on account of the unsuitable nature of travertine for such small figures. ¹

This monument probably dates from about the middle or early part of the first century B.C.; it is inscribed with an interesting epitaph in rather archaic spelling, which is repeated three times on the plain string-course which separates the upper and lower stages of the structure. It runs thus—

EST - HOC - MONIMENTVM - MARCEI - VERGILII - EVRYSCAES
PISTORIS - REDEMPTOR[IS] - APPARENT[ORIBVS]; This is the monument of Marcus Vergilius Euryaces, a baker; bread-contractor to the apparatuses.² The apparatuses were the public servants of the magistrates of Rome. By it stood a somewhat similar tomb to his wife Atistia, of which only part of the inscription now exists—

FVIT - ATISTIA - VXSOR - MIHEI——FEMINA - GPTVMA - VEIXSIT
——QVOIVS - CORPORIS - RELIQVIAE——QVOD - (sic) SYPERANT
SVNT: IN——HOC - PANARIO; Atistia was my wife; she lived the best
of women; of whose body the remains which exist are in this breal-

¹ The more delicate details of these reliefs were probably executed in the coating of marble-dust cement with which stone appears usually to have been covered in the time of the Republic and of the early Empire.
² The later form is apparatus.
This extraordinary phrase probably refers to the fact that the monument was made in the shape of a *panarium*. In these inscriptions the diphthong *ei* is used for long *i*, as was usual till the reign of Augustus, and *xs* for the double letter *x*.

Some fragments of sculptured travertine, now set by the side of the modern road, appear to belong either to Atistia's tomb or to the tomb of some other baker. On these fragments are carved in relief representations of flat round loaves, marked with a cross like hot-cross buns, many of which were found at Pompeii.

In the Lateran Museum is preserved the sarcophagus of another Roman baker named L. Annius Octavius. On it there is a sculptured relief representing slaves making bread, with the following melancholy inscription—

*Euneri, effugi. Spes et Fortuna caede; Nil nisi vos bene; ludissima alios.*

The Tomb of Bibulus, or rather part of it, still exists by the side of the *Via Latina* about 60 yards outside the *Porta Latina*, built into a modern house in the *Via di Marforio*. It is built of concrete faced with large blocks of travertine, and is formed in the shape of a small house with a plain base, above which the wall is decorated by simple Tuscan pilasters supporting an entablature with enriched frieze, sculptured with garlands and

---

1 This inscription is now in the cloister of the Museo delle Terme.

2 It is interesting to compare this method of writing the double consonant with the archaic form of the corresponding Greek letter the Σ, which till about the end of the fifth century B.C. was usually written by Attic Greeks Ξ, e.g. ΕΥΞΙΟΣΕΟΣ for ΕΥΞΙΟΕΟΣ.

3 Bunsen (Bach der Stadt Rom, iii. p. 35) is mistaken in thinking that this tomb was within the line of the Serlian wall; remains of the wall and the *Porta Latina* have recently been found under a house, No. 8, in the *Via di Marforio*, showing that the tomb of Bibulus was not an exception to the law of the XII Tables against intramural burial; see vol. i. p. 128.
rosettes between ox-skulls, of which only one fragment remains at the south angle. In one of the panels formed by the pilasters there is a large window with a moulded architrave, and in the other narrower spaces two small tablets with miniature cornice. The tomb originally extended beyond the angle of the street, and there was probably another large window in the missing half.

On the plain dado is an interesting incised inscription, again repeated on the end of the tomb which is partly concealed by the modern house—To Caius Publicio Bibulus, the son of Lucius, Aedile of the Plebs, on account of his honour and worth, by a decree of the Senate, and by the command of the people, a place has been publicly given for a monument, in which he and his posterity may be interred.

\[C\cdot PUBLICIO\cdot L\cdot F\cdot BIBVLO\cdot AED\cdot PL\cdot HONORIS\]
\[VIRTVISQVE\cdot CAVS\cdot SENATVS\]
\[CONSUL\cdot POPVLIQVE\cdot IVSSV\cdot LOCVS\]
\[MONVMNTO\cdot QVO\cdot IPSE\cdot POSTEREOQVE\]
\[EI\Vs\cdot INFERRENTRVR\cdot PVBLICE\cdot DATVS\cdot EST\]

Nothing certain is known about this highly honoured Roman; he can hardly be the C. Bibulus mentioned by Tacitus, Ann. iii. 52, as being aedile in 22 A.D., since the style of the tomb appears to be earlier than this.

Remains of other tombs flanking the Vía Lata exist a little beyond this one, built into the modern houses of the Vía di Marforio; little except their concrete core now remains.¹

**Tombs outside the Porta Salaria.** Remains of several tombs were exposed to view by the destruction in 1871 of the towers

¹ The house with a tablet to record that the painter Giulio Romano was born in it is partly constructed out of the remains of one of these tombs. Parts of the Vía di Marforio, together with the remains of several ancient tombs, have been destroyed to make room for the monument of Victor Emmanuel on the Arx of the Capitol.
which flanked the *Porta Salaria* of Aurelian. One of these just outside the modern gate, on the right, closely resembles in its design the tomb of Bibulus, and is probably of about the same date. It is specially interesting from its curious mixed construction of several materials, and as an example of the sparing way in which marble, afterwards so common, was frequently used in the first century B.C.

This tomb was nearly square on plan; the front facing on the ancient road is decorated with four pilasters and a large central window above a richly moulded plinth; on the other existing side there are three pilasters but no window. The main bulk of the walls is of *opus quadratum* of peperino, very neatly worked and jointed; the deep moulded plinth and the pilasters are of white marble, and a small sub-base under each pilaster is of black marble. The upper part of the tomb and its entablature are missing; no inscription exists to show whose monument it was.

By the side of this tomb remains exist of another monument built of travertine, surmounted by a coarsely designed cornice; a large marble slab with moulded frame is let into its front, but the panel is uninscribed; possibly the inscription was only painted.

On the other side of the road, close by the gate, there are remains of a large hemicycle of massive stone masonry. This appears to have been one of the recesses with a stone bench along its curve, which were frequently erected for public use by the road-side, either as a separate structure or in connection with a tomb.

During the demolition of the Aurelian towers of the same gate a marble *cippus* or monument, cut out of one block of marble, was found built into the wall. This commemorates the death of a schoolboy named Q. Sulpicius Maximus, who won the prize for a copy of Greek verses on the subject of

---

1 The towers had been partly destroyed by the cannon of the Italian army when they entered Rome on 20th September 1870.
a supposed lecture given by Jupiter to Apollo Helios for his rashness in allowing his son Phaeton to drive the chariot of the sun. This unfortunate boy died at the age of eleven, an early victim to competitive examinations. Part of his prize poem is incised on the monument, as well as a full-length portrait relief of the young author holding a scroll in his hand. This interesting epigram, now in the Capitoline Museum, dates from the reign of Domitian, who in 86 A.D. instituted this competition, which was called the Agon Capitolinus. The verses are very creditable to the youthful poet.

In 1885-86 a large number of interesting tombs were discovered while digging the foundations of new houses near the Porta Salaria, both inside and outside the Aurelian wall.

Tombs of the Gens Licinia. The most historically interesting of these discoveries was that of the vaulted tomb chamber of several members of the Gens Licinia, in the ground of the Villa Bonaparte, just inside the gate. The vault contained seven marble receptacles for ashes (cineraria), each hollowed out of a solid block, with a separate slab, decorated with a pediment, to form the lid. They averaged about 3 feet long, and a little more in height.

The chief of these contained the ashes of L. Calpurnius Piso Licinius, who was adopted as his successor, with the title of Caesar, by the Emperor Galba only four days before they were both murdered by the partisans of Otho in 69 A.D. Piso was barely thirty-one years of age. His widow Verania bought the mutilated body of her husband from Otho, had it decently burnt, and then constructed this handsome tomb to receive the ashes, and her own after her death. The inscription on the tomb is—

DIUS MANIBVS
L - CALPVNI - PISONIS
FRGOI - LICINIANI
XV - VIR - S - F (socris fucinulis)
ET - VERANIAE
Another similar cinerarium contained the ashes of Piso’s father, M. Licinius Crassus, who was Consul in 27 A.D., and also held the offices of Pontifex, Praetor Urbanus, and Legate of the Emperor Claudius.

The third cinerarium contained the ashes of Piso’s elder brother; and the other four contained the ashes of other members of the same family.

The tympana of the pediments, angles, and friezes of these cineraria are decorated in the usual Roman fashion with reliefs of garlands, ox-skulls, acanthus leaves, and animals. None are of any importance as works of art, but merely the stock productions of the monumental marble mason. A very graceful bronze statuette, about 2 feet high, was found in the same vaulted chamber, but it has been surreptitiously sold and removed from Rome.

Marble sarcophagi. Close by the tomb of Piso and his family several other subterranean vaulted chambers were discovered, and in them eight large marble sarcophagi, six of them richly sculptured. These belong to the second century A.D., a time when the old practice of cremation was beginning to die out, and the richer classes embalmed their dead, and placed them in very massive and costly sarcophagi, instead of the smaller receptacle for ashes.

The skeletons in these sarcophagi were well preserved; and with the bones were found large lumps of some aromatic gum, resembling that used by the embalmers of Egyptian mummies.

No inscription was found to give any clue to the identity of the persons who were here entombed, but from the size and elaboration of their sarcophagi they must have belonged to some wealthy family.
The finest of these sarcophagi measures, without the lid, about 7 feet in length by nearly 2 feet high. On the front and ends are reliefs representing Silenus with sportive Fauns and Bacchanals, dancing and playing on musical instruments; in all fifteen figures, executed with much vigour of movement and some grace in execution. Part of this relief was unfinished, the forms being merely blocked out, without the use of any "points" or other aids to the sculptor's eye.

Another sarcophagus is decorated with a relief of the rape of the daughters of Leneippus by Castor and Pollux. In the centre the mother is raising her arms in despairing appeal for help; on one side Castor is carrying off Phoebe, and on the other Pollux bears Hilaire away in his arms. Beyond are warriors fighting, and on each end one of the Dioscuri is represented carrying away his bride in a quadriga.

This subject, which occurs on several other Roman sarcophagi, may very possibly be a traditional copy from the celebrated painting by Polygnotus on the walls of the Temple of the Dioscuri in Athens, executed about the middle of the fifth century B.C.; see Pausan. i. 18, 1.

Another of these sarcophagi has its lid carved to represent the roof of a house, with its tiles and ante-fiasae at the eaves. At each angle is a winged Victory, and along the upper part there is a frieze of hanging garlands supported by cupids, and a small portrait bust introduced on each side of a central Gorgon's head.

One sarcophagus has a relief of the birth of Bacchus, with Silenus and other attendant figures. Others have hunting scenes, men on foot and horseback pursuing lions, bears, and other animals.

One of the largest is quite undecorated, but is remarkable for being a double sarcophagus hollowed out of one immense block of marble.

The two bodies were separated by a thin slab, probably of
wood, which slid in grooves cut for it in the marble sides of the sarcophagus.

A strong Greek influence is evident in most of these reliefs; many of the figures are obviously copied from much older originals of Hellenic origin, so that the motives are as a rule superior to the execution.

These sarcophagi, together with other sepulchral sculpture from the same site, are now preserved in the gardens of the Palazzo Campanari in the Via Nazionale, where they may be seen with the permission of the owner, Signor Maraini.

Mausoleum of Lucilius Poetus. About half a mile outside the Porta Salaria, in the garden of the Cav. Bertone, an interesting mausoleum has been discovered, built to contain the ashes of Lucilius Poetus and his sister Lucilia Polla. The mausoleum consisted of a great drum of neatly-jointed blocks of travertine, 114 feet in diameter, and about 10 feet 6 inches high; on this circular base rested a great cone of brick-faced concrete, 55 feet high.

This form of tomb is an interesting survival of the pre-historic earthen tumulus, with its base strengthened by a mere ring of stones, examples of which still exist in the Troad and elsewhere. In later times the rough ring of stone developed into a carefully built drum of masonry, and the heap of earth was replaced by a cone of stone or marble. A well-preserved Greek example of this still exists in the Necropolis of Cyrene in northern Africa. It is very similar in form to this Roman tomb of Lucilius Poetus.

A still further development is represented by the tomb of Cecilia Metella and the great mausoleum of Hadrian, in which the drum of masonry became the chief part of the monument, the cone on the top being proportionally reduced in size.

In the mausoleum of Augustus the old traditions survived so far that the drum was surmounted by a mound of earth instead of a cone of brick or stone.

To return to the newly discovered tomb, its inscription is
cut, on the outside of the drum, in fine large characters marked with red, dating (as their form shows) from the time of Augustus. It runs thus—

V. LVSCILIVS • M. F. SCA • PAETVS
TRIB • MILIT • PRAEF • FABR • PRAEF
EQVIT
LVCILIA • M. F. POLLA • SOROR

This inscription records that Lucilius Poetus held the important offices of Praefectus of the Tribuni Militum (the superior officers of the Roman legions) and of Praefectus Fabrum, "Commander of the Pioneers," an important body among the military engineers of Rome.

A vaulted passage 36 feet long, with rows of loculi or recesses for ashes on each side, leads to the small central chamber, which is 9 feet 9 inches long by 6 feet 6 inches wide. On three sides of the tomb chamber are niches to hold the marble chests in which were placed the ashes of the principal persons buried here. Unfortunately the whole mausoleum had been rifled, and used as a common place of burial in the fourth century A.D., and so the original sarcophagi are missing.

Near the entrance of the mausoleum is a descending approach to a long catacomb passage excavated in the tufa on which the building stands. This passage is nearly 100 feet long, and contains a number of small loculi. It was apparently excavated in late times after the mausoleum had been opened and put to more common use.

Tomb of Menander. About 70 yards outside the Porta Salaria a tomb of unusual form was discovered in 1886. This is a large semicircular monument built of blocks of tufa with a cornice of peperino.

Its inscription runs thus, M. IVNIVS • M. L. MENANDER
SCR. • LIBR. • AED. • CVR. • PRINCEPS • ET • Q
V. IVNIA • M. L.
CALLISTE. IVNIA • O. L. SOPHIE • VIXIT • ANN. VIII. The
Freedman Menander was scriba librarius or secretary to the Aediles and Quaestors; see Bull. Com. Arch. 1886, p. 371.

**Tomb of the Genii Sempronii.** Remains of a fine tomb of the Genii Sempronii were discovered in 1863, on the slope of the Quirinal, in the modern Via della Dataria. This tomb stands a short distance outside the site of the ancient Servian Porta Sanquális, and was set by the side of the road which passed out of that gate. A part only of the front remains, which appears to date from about the middle of the first century B.C.

It is built of large, neatly-jointed blocks of travertine. The front has a moulded plinth and a well-designed entablature with enriched frieze, sculptured with the Greek honeysuckle pattern. In the centre is a round arched window about 5 feet wide, devoid of any moulding or ornament. Over this window, on the plain surface of the wall, is an incised inscription—

\[ CN[AEVVS] \cdot SEMPRONIVS \cdot CN[AEI] \cdot F[HIVS] \cdot ROM[ANVS] \\
SEMPRONIA \cdot CN[AEI] \cdot F[ILIA] \cdot SOROR \\
LARCIJA \cdot MV[NATHI] \cdot F[ILIA] \cdot MATER \]

This tomb is illustrated in the Bull. Com. Arch. Rom. vol. iv.

A large and important group of tombs was found in 1887 on the Via Portuensis, about a mile outside the walls of Rome; see Bull. Com. Arch. July 1887.

Every volume of this periodical and the Notizie degli Scavi contains notices of newly discovered tombs.

**The Tomb of Cestius** near the Porta Ostiensis in the Aurelian wall dates from the latter part of the first century B.C., when the conquest of Egypt had begun to cause the introduction into Rome of an Egyptian class of artistic and religious ideas. This tomb is in the form of a pyramid 118 feet high with a base 96 feet square, formed of concrete cases with blocks of white marble. The whole rests on a massive footing-course of travertine. In the centre of the concrete mass is a small
sepulchral chamber, which probably once contained a handsome sarcophagus. The walls and vault of the room are lined with sineco, decorated with paintings of female figures and graceful scroll-foliage, now almost invisible from the damp and smoke to which they have been exposed since 1663, when the tomb was opened.\(^1\)

A small doorway on one side now gives access to this chamber, but is not the ancient entrance. At a little distance from the two angles of the pyramid, inside the Aurelian wall, two marble fluted columns have been placed, but it is doubtful whether they are in their original positions; they may be part of a colonnade or porticus which once surrounded the whole monument.

Large, well-cut inscriptions exist on two faces of the marble lining of the pyramid; these record that the monument was erected in honour of C. Cestius Publicius, who was Praetor, Tribunus of the Plebs, and one of the Septemviri of the Epulones—

\[\text{C・Cestivs・L・F・Pob・Epvlo・Pr・Tr・Pl—VII・VIR・Epvlonvm.}\]

The second inscription, on the side of the pyramid which is outside the wall of Rome, records that the monument was built in 330 days, in accordance with C. Cestius' will, by his heir Pontius Mela, and his freedman Pothus—

\[\text{Opvs・Absolvvtvm・Ex・Testamento・Diebvs・CCXXX}\]
\[\text{Arbitratv・Ponti・P・F・Cla・Melae・Heredis・Et・Pothi・L.}\]

The Epulones were a Collegium of priests who managed the banquets in honour of the gods; the institution of triumviris epulones is recorded by Livy (xxxiii. 42) to have taken place in 196 B.C. Their number was afterwards increased to seven.

\(^1\) An interesting account of the opening of the tomb, and a drawing of its paintings, made before they were injured by exposure, is given by Ott. Falconieri, \textit{Descrizzo intorno alla pyramide di C. Cestio}, 1664, reprinted in the fourth volume of Nibby's edition of \textit{Roma Antica}, by Nardini, 1829, pp. 1-43.
Nothing further is known about this C. Cestius except the facts recorded in the inscription quoted below. He may possibly be the Roman knight mentioned by Cicero, *Pro Flacco*, xiii., and *Ad Att. v.* 13.

The date of his death is, however, roughly indicated by two marble inscribed pedestals, which were found near the pyramid in 1663, when the ground round it was excavated to the original level.

The inscription, repeated on each of these bases, was as follows—*Marcus Valerius Messalla Corvinus P. Nytilius Lupus Iunius Silanus L. Ponticus Mela D. Marius Niger Haereses C. Cestius Et L. Cestius Qvae Ex Parte Ex Evm Fratris Haereditas M. Agrippae Myrene Pervenit Ex ea Pescenia Qvam Pro Svis Partibus Recepter Ex Venditione A. Attalicorym Qvae Eis Per Edictum Aedilis In Sepvlorory C. Cestii Ex Testamento Eivs Inferre Non Liciyt.

This inscription records that C. Cestius died in the reign of Augustus, during the lifetime of M. Agrippa, who died in 12 B.C., and that the bronze statues which stood upon the pedestals were paid for by the sale of some robes made of gold tissue, called *attalica*,¹ in which C. Cestius had desired to be buried. As, however, this was contrary to law (Cicero, *De leg.* II. xxiv. 60), the heirs and executors spent the value of the gold stuffs in erecting the two bronze statues. The foot of one of these statues still exists,² fixed to the pedestal; it is colossal in size, showing that the value of the cloth of gold must have been very great.

When the wall of Aurelian was constructed the tomb of Cestius was built into it so as to form part of the line of

¹ On *attalica*, see Pliny, *Hist. Nat.* viii. 196, and xxxiii. 63; cloth of gold was so called from its having been largely used by the wealthy Attalid Kings of Pergamus.

² This bronze foot with the inscribed pedestal is preserved in the "Bronze room" in the Capitoline Palazzo del Conservatori.
defence. The old Protestant cemetery with the grave of Keats is under the shadow of this pyramid.

The marble lining was restored in 1663 by Alexander VII., who disfigured one side by cutting a new inscription on it.

Other tomb pyramids. At least two other sepulchral pyramids existed in Rome as late as the fifteenth century. One of these, known popularly as the "Tomb of Romulus" or Memoria Romuli, stood between the Castle of S. Angelo and the Vatican, and was destroyed by Pope Alexander VI. (Borgia) in 1497, when he rebuilt part of the covered bridge which unites these two buildings. It is shown in a very interesting relief on the bronze doors which belonged to the ancient Basilica of S. Peter, and now form the central entrance in the narthex of the present church; several other classical buildings are represented on these doors, and are all rendered with much minuteness. The so-called Memoria Romuli is mentioned by Petrarch in one of his Epistles.

Another pyramidal monument stood at the side of the Via Flaminia, by the site of the modern Church of S. Maria dei Miracoli in the Piazza del Popolo. This is shown in several old views of Rome made in the fifteenth and sixteenth centuries, and pieces of it were discovered a few years ago when the Aurelian Porta Flaminia was pulled down; see Bull. Com. Arch. Mun. Rom. vol. v. Tav. 20; and De Rossi, Pinture di Roma antiche al sec. xvi. Rome, 1879.

Shelley's grave, on which it has been proposed to erect a costly monument, is in the adjoining enclosure.

These noble pieces of bronze casting were made for Eugenius IV., about 1435, by Antonio Filarete and Simone di Ghini. They are described by Vasari in his life of the former with some minuteness; he is, however, mistaken in calling Simone a brother of Donatello. A magnificent bronze effigy in the Lateran Basilica is by the second of these artists, the Florentine sculptor and goldsmith, Simone di Ghini. The doors of St. Peter's show distinctly the work of two hands; the large panels are very inferior to the small reliefs and the rich foliage in the borders.
The Comm. Lanciani has recorded (*Ana. Rome*, p. 281) the discovery of a tomb, on the summit of Monte Mario outside Rome, which is of special interest. It was a small sepulchral chamber, about 26 feet square, containing the sarcophagi of the *Gen. Minucia*. One of the epitaphs records the death of that accomplished and beautiful girl, whose early death, at the age of thirteen, soon after her betrothal, is mentioned by the younger Pliny (*Ep. v. 16*) with such affectionate sympathy and sorrow. The inscription runs thus, *D. M. MINICIAE (sic) MARCELLAE* *FVDNANI P. VIX A. XII M. XI D. VII*. Her father was C. Minucius Fundanus, Consul in 107 A.D. Pliny speaks of her as not yet fourteen, but the epitaph records that she was a few days short of her thirteenth birthday when she died.

This tomb, which is in the form of a large altar-like *cippus* of white marble, is now in the cloister of the Museo delle Terme.

**IMPERIAL SEPULCHRES.**

*Mausoleum of Augustus* (modern *Teatro Correo*). This stands near the Tiber, in the *Campus Martius*. It is described by Strabo (*v. 3, 8*) as a mountain of earth, planted with evergreen trees, raised on a lofty base of white marble 220 feet in diameter. On the summit was a colossal bronze statue of Augustus, and at the sides of the entrance were two bronze columns, inscribed with a long inscription, *index rerum gestarum*, in honour of Augustus, a copy of which exists in both Greek and Latin incised on the marble walls of the *Temple of Augustus* at Ancyra. An account of this most important inscription is given at vol. i. p. 384.

Suetonius (*Aug. 100*) says that the mausoleum stood between the *Via Flaminia* and the river, and that it was built by Augustus during his sixth consulship, that is, in the year 28 B.C. Owing to this monument being surmounted by a
mound of earth, it is called a Tumulus by Tacitus, Ann. iii. 9, and Virgil, Aev. vi. 875.1

In this respect the form of the Mausoleum of Augustus was a curious survival of the primitive method of burial under great mounds of earth or tumuli, the great drum of masonry being a development of the simple stone curb which surrounded the bases of the prehistoric tumuli; see above, vol. ii. p. 282.

As late as the sixteenth century the Mausoleum of Augustus still preserved much of its original form; the mound of earth, and even the garden on its summit, still existed, and also portions of its marble decorations round the lower story; see Du Perac, Festig di Roma, who gives an illustration of its state in the middle of the sixteenth century. This etching shows a statue on each side of the central doorway, and a colossal head over it; in front is a large sarcophagus. The garden on the top is laid out in the stiff Dutch fashion.

Nothing now exists but the core of the mausoleum stripped of its once splendid marble linings. It is built of massive concrete faced with neat opus reticulatum, which can best be seen in the courtyard of the Palazzo Valdambrini, in the Via Ripetta.

Besides the central circular chamber, which contained the sarcophagus with the ashes of Augustus, a series of fourteen smaller chambers two stories high were formed all round it. The arrangement of these chambers may be roughly represented in plan by a cart wheel, the felloe occupying the place

---

1 The name Mausoleum, given to this and other magnificent sepulchral monuments, was taken from the celebrated Tomb of Mausolus at Halicarnassus, erected by his wife Artemisia, which was called one of the seven wonders of the world. Mausolus, or Mausollus as he is called on his coins, was Satrap and finally independent sovereign of Caria from 377 to 339 B.C. Remains of this monument, with its sculpture of the school of Scopas and Praxiteles, were found by Sir Charles Newton in 1860. The decorative portions are now in the British Museum.
of the central chamber. In each of these radiating tomb chambers some member of the Julian family was interred, and many of the succeeding emperors till the time of Nerva's death.

The whole interior is disfigured and hidden by a modern circus, which has caused much damage to the sepulchral chambers.

The square travertine basement, on which the drum or circular portion stands, is wholly buried below the modern ground level. Near the apse of the neighbouring Church of S. Rocco traces still exist of a portico with rows of columns, which formed the entrance on the south towards the river to a porticus which enclosed the mausoleum.

Many inscriptions, pieces of sculpture, sarcophagi, and cinerary urns from the Mausoleum of Augustus still exist at various places in Rome; one of these is a fine urn of Oriental alabaster now in the Vatican. The inscribed pedestal which supported the cinerary urn of Agrippina, the mother of Caligula, is now in the courtyard of the Palazzo de' Conservatori on the Capitol. It is inscribed OSSA AGRIPPINAE M. AGRIPPAE FILIAE DIVI AVG NEPTIS VXORIS GERMANICI CAESARIS MATRIS C. CAESARIS AVG GERMANICI PRINCIPI.

The first interment in the Mausoleum of Augustus was that of the young Marcellus, nephew of Augustus, who died in 23 B.C.; see Dion Cass. liii. 32, and liv. 26, and cf. Virgil, Aen. vi. 873-884. M. Agrippa was next buried there in 12 B.C.; being the son-in-law of Augustus, he was interred with the Julian family.

Among the other Imperial persons buried in this tomb were Octavia the sister of Augustus, Drusus the elder, Caius and Lucius the two grandsons of Augustus, then Augustus himself, with his wife Livia, and subsequently Tiberius.

1 In mediæval times the cinerarium of Agrippina was used as a standard measure for wheat.
Claudius, and Britannicus. Nerva's was the last interment here, in A.D. 98; after which the tomb was full.

Two obelisks, which are now by the Quirinal Palace and the Church of S. Maria Maggiore, were placed by the sides of the entrance to the Mausoleum of Augustus, about the end of the first century A.D.

In 410 A.D. Alaric and his Goths broke the mausoleum open, and shattered the sepulchral urns in their search for gold. In the twelfth century it was used as a fortress by the Colonna family, and was much damaged by an attack made on them in 1167, and again by another siege in 1241. In the seventeenth century, during an earthquake, the central vault fell in, and at the end of the eighteenth century the remains of the mausoleum were converted into an open-air theatre for bull-baiting and the like.

The Ustrina Caesarum. Near the mausoleum, Strabo records (v. 3, 8), there was a large marble-paved enclosure, surrounded with iron railings, and planted with poplar trees, the καυστρα or Ustrina Caesarum, where the dead whose ashes were to be interred in the adjoining tomb were burnt.\(^1\) The site of the Ustrina on the side towards the Via Flaminia (Corso) has been identified by the discovery of six travertine cippi, inscribed with records of the persons whose bodies had been burnt there. Five of these are preserved in the Vatican, in the "Galleria delle statue."\(^3\)

The persons mentioned on these cippi are three children of

\(^1\) The ceremonies performed at the funerals of rich men and the apotheosis of the emperors, are minutely described by Herodian, iv. 2.

\(^3\) It should be observed that these and other inscribed cippi and pedestals in the Vatican have statues placed upon them with which they have no connection. For example, a statue of Lucius Verus is set on the pedestal which is inscribed with the name of Gaius Caesar (Caligula), and many other statues have inscriptions under them which are very liable to mislead the student, who naturally assumes that the statues and pedestals belong to each other.
Germanicus—Tiberius Caesar, Caligula, Livilla, and also a son of Drusus named Titus, and one member of the Flavian family.

The record of the burning of Caligula’s body is this—

\[
\]

Another form used on some of the epigrafix is Hic situs est.

Since the burial of Nerva in 98 A.D. had filled the last vacant space in the Mausoleum of Augustus, the ashes of his successor Trajan, who died in 116 A.D., were placed in a gold vase under his great sculptured column; Dion Cass. lxviii. 16, and lxix. 2. Hadrian then built another enormous mausoleum for himself and his successors to the Empire.

The Mausoleum of Hadrian, now the Castle of S. Angelo, which far exceeded in size and splendour the world-famed Tomb of Mausolus, was begun by Hadrian in 135 A.D. It was built near the bank of the Tiber, and was approached by the \textit{Pons Aelius}, which Hadrian made to connect it with the \textit{Campus Martius} on the other side of the river. The bridge is so placed as to lead directly to the central axis of the mausoleum. At present the bridge only reaches across the river, but originally it had other arches which led straight to the entrance of the \textit{mausoleum}. This missing part of the bridge is shown in more than one mediaeval drawing, published by Mariano in the work mentioned below; see p. 298.

Nothing remains but the stone and concrete core, so that it is now very difficult to realise its original magnificence, when it was wholly lined with white Parian marble, and surrounded by rows of statues of marble and gilt bronze placed between columns of richly coloured Oriental marbles and porphyry.

Its splendour is described by Procopius (\textit{Bell. Goth.} i. 22), and a representation of its exterior, made in the middle of the fifteenth century, gives some notion of its appearance. This is a relief on one of the bronze doors of S. Peter’s, mentioned above, vol. ii. p. 287; see also Mariano’s work, \textit{inf. cit.}. 

\[\text{Inscribed epigrafix.}\

\text{Mausoleum of Hadrian.}\

\text{Mausoleum of mausoleum.}\

\[\text{Inscribed epigrafix.}\]
The general design of this mausoleum consisted of an immense circular drum set on a square basement or podium. The circular part, most probably, was surmounted by a conical marble dome; very similar on a greatly enlarged scale to the existing Tomb of Caecilia Metella on the Appian Way, and to the Tomb of the Plautii, on the road from Rome to Tivoli.

The lower square story was divided into panels by a series of columns or pilasters. The main circular story appears to have been decorated with external aisles or colonnades in two tiers, along which statues were ranged, one in each inter-columnar space. A great number of statues were also placed on the top of the square podium, at the foot of the circular drum.

The whole of the visible exterior was of marble, mostly white, with columns of richly coloured foreign marbles and porphyries; the inner core, which still exists in a much mutilated state, is built of large blocks of peperino and travertine surrounding an inner mass of concrete, in which are formed the central sepulchral chamber, and the passages which lead to it; see figs. 92 and 93.

The mass of concrete which forms the walls of the drum is of enormous thickness and strength.

The main circular story was, with its marble casing, more than 230 feet in diameter, and each side of the square basement measured about 300 feet.

The central vaulted chamber (A on fig. 92) which contained Hadrian's sarcophagus and those of later emperors is still well preserved;¹ it is lined with large blocks of peperino and travertine, and was once faced with rich Oriental marbles, and paved with mosaic, as were also the winding passages which lead with a gentle slope up from the entrance at the ground level to this large chamber, which is nearly at the top of the circular drum; see B on fig. 92.

¹ The Castle of S. Angelo is now used as a military barrack, and can only be visited by a special permission from the Commandants.
The sarcophagus of Hadrian, which stood in a large recess, has been destroyed, but its immense lid, of polished Egyptian porphyry, is now used as a font in the Baptistery of S. Peter's. The sarcophagus itself was used as a tomb for Innocent II., 1143, but it was destroyed in the fire which ruined the Lateran Basilica in the fourteenth century.

The access to the main sepulchral chamber is formed in a very complicated way by various passages gently sloping upwards in a series of inclined planes, so as to admit of heavy sarcophagi being introduced and dragged up on rollers. Midway this passage opens out into another chamber, below the principal one; and here the sloping way is broken at two places by a sort of trap-door arrangement, so as to cut off communication and prevent the tomb chamber from being reached; see fig. 93.

There are also vertical shafts reaching from the main floor down to the basement of the building.

The whole structure is very complicated in design, and it has been so much altered at various periods to fit the mausoleum for use as a fortress that it is now very difficult to understand its original plan.

The upper part is now occupied by a number of very handsome rooms, some of them large and richly decorated with stucco reliefs. These chambers were mostly added in the sixteenth century by Paul III. and other Popes to make the castle a Papal residence.

Fig. 92 shows the present plan of the mausoleum above the podium but below the level of the principal tomb chamber.

1 The lid was first used as a tomb for the Emperor Otto II., who died in 983 A.D., but when his bones were removed to the crypt it was converted to its present use.

2 Compare the shafts which run upwards and downwards in the pyramid of Cheops. Openings to the outer air in Egyptian tombs were probably made in order that the Ka or "double" of the dead man might pass freely in and out of the grave.
Plan of the Mausoleum of Hadrian as it now exists, with alterations made in mediaeval times to fit it for use as a fortress.

A. Central Chamber.
B. Sloping passage winding round the drum of the Mausoleum.
C. Another sloping passage, the floor of which is notched into very shallow steps.
DD. Mediaeval Chambers excavated out of the solid concrete mass of the Mausoleum.
EE and FF. Series of Cisterns and Store-rooms to hold water and food for the garrison.
Most of the other chambers shown in this plan are of mediaeval date, quarried, as it were, out of the solid concrete mass. The circular chambers are tanks to hold water for the use of the garrison during a siege; others are store-rooms for oil and solid provisions.

In the seventeenth century several statues were found in the moat round the building, and probably many others still lie buried there, as it is recorded by Procopius (Bell. Goth. i. 22) that the statues which decorated the external colonnades were hurled down by the garrison upon the heads of the Goths under Vitiges, who assaulted the place in A.D. 537.

Among these statues are the Dancing Faun in the Uffizi at Florence, the Barberini Faun now at Munich, and the colossal head of Hadrian, now in the Vatican Rotonda. The beautiful peacocks, most skilfully and tastefully worked in gilt bronze with almost Japanese realism during a very good period of Graeco-Roman art, which now stand by the colossal fir cone in the Vatican Court, are said (probably wrongly) to have come from this mausoleum.

After the death of Hadrian in A.D. 138, his mausoleum was used as the burial-place for the families of successive emperors till the time of Sept. Severus, who is said to have built a new mausoleum on the Via Appia; Hist. Aug. Sept. Sec. 19 and 24. The first burial in it was that of Hadrian's son Aelius (Hist. Aug. Ael. 6), and the last was probably that of Commodus in 192 A.D. In the sixteenth century the inscriptions in memory of Antoninus Pius and Faustina the Elder were still in situ; others, which existed in the ninth century, are quoted in the Einsiedlen MS.

The sepulchral chambers were first rifled by the Goths under Alaric in 410 A.D. A few years afterwards the mausoleum is said to have been converted into a fortress by Belisarius; see Donati, Roma vetus ac recent, 1665, p. 476 seq. In the Pontificate of Gregory the Great (590-604) it was consecrated under the name of S. Angelus inter tubas, in consequence
Section of the Mausoleum of Hadrian showing the inclined plane to admit the sarcophagus, and on the summit of the building the rooms added in the sixteenth century.
of a dream in which the Pope saw the Archangel S. Michael sheathing his sword after a plague which had been devastating Rome.

In the tenth century the Castle of S. Angelo was seized by the Count of Tusculum, and for some centuries was the centre of constant party struggles. It has at various times been called by different names, e.g. the Castle of Theodoric in the sixth century, and the Castle of Crescentius in the eleventh.

Owing to the enormous thickness and strength of the concrete mass, in which the passages and chambers form voids of proportional insignificance, the Castle of S. Angelo formed, in the Middle Ages, a quite impregnable fortress, in which, at moments of danger, the Popes could take refuge, escaping to the castle from the Vatican Palace by means of a covered passage.

The modern rooms, some of which are very beautifully decorated with frescoes and stucco reliefs (see top of fig. 93), and the upper part of the castle, are mainly the work of Alexander VI. in 1495, and the Farnese Paul III., 1534-50. The colossal bronze angel on the roof was made in 1770 by a Dutch sculptor named Verschaffelt. The long covered bridge which connects the castle and the Vatican was built about 1411 by Pope John XXIII., and was restored by Alexander VI. and other Popes.1

During the sack of Rome by the Constable de Bourbon’s army in 1527, the Castle of S. Angelo alone resisted the besiegers, and in it Pope Clement VII. remained safe, though a prisoner, till peace was made. The story of the defence of the castle is most vividly told by Benvenuto Cellini in his Autobiography, I. xxxiv. to xxxix.

The bronze pigna in the Vatican. There is evidently no

1 A very interesting monograph on the Mausoleum of Hadrian and its alterations into the existing form of the Castel S. Angelo was published by B. Mariano in Rome in 1899. This book gives facsimiles of many interesting mediaeval drawings, which show much that is now lost.
truth in the tradition that the bronze fir cone ever surmounted
the roof of Hadrian’s Mausoleum. As the Comm. Lanciani
has pointed out (Ancient Rome, p. 286), the pigna is pierced
with holes, at the root of each of its scales, from which jets of
water issued, and it must therefore have been always the
centre-piece of a fountain, as it was when it stood in the
Atrium of S. Peter’s Basilica.

A very interesting inscription is cut twice over round the
lower part of this immense piece of bronze casting, which
measures nearly 11 feet high; this inscription, which records
the name of the bronze-founder who made it, is as follows,
P·CINCIVS·P·L·CALVIVS·FECIT, “Publius Cincius Calvius,
freedman of Publius (Cincius Calvius) made it.”

This bronze fir cone was placed by Pope Symmachus
(498-514) in the centre of a very handsome fountain which he
had made to stand in the middle of the open atrium in front
of the main entrances into Constantine’s Vatican Basilica of S.
Peter. It is shown in this position in one of the frescoes in
the Church of S. Martino ai Monti, and probably remained
there till the old Basilica was destroyed by Pope Julius II.,
when he determined to build a new church of still greater
magnificence to hold his tomb by Michelangelo.

The bronze peacocks appear to have been placed as angle
ornaments on the top of the façade of Constantine’s Basilica.
They are shown in this position in a very interesting drawing
of the façade of the Vatican Basilica in a manuscript of the
ninth century, which is preserved in the library of Eton
College.¹ The garden court in the Vatican Palace, where the
peacocks and the fir cone now stand, is called from the latter
the Giardino della Pigna.

¹ I owe my knowledge of this important drawing to my friend and col-
league Mr. Montague R. James.
CHAPTER IX

TRIUMPHAL ARCHES.¹

DURING the later Empire there were in Rome about thirty-eight important triumphal arches. The earliest were two erected—one in the Forum Boarium, and the other in the Circus Maxinus—in 196 B.C., by L. Stertinius out of spoils gained during his campaign in Spain. They were surmounted by gilt statues, probably of bronze. This is recorded by Livy (xxxiii. 27), who says, L. Stertinius ... de manubiiis duos fornices in Foro Boario ante Fortunae aedem et Matris Matutae, unum in Maxino Circo fecit, et his fornicibus signa aurata imposuit. Livy also tells us that Stertinius deposited in the public aeraurium 50,000 pounds weight of silver from the same spoils.

In 190 B.C. an arch was erected in honour of P. Cornelius Scipio Africanus across the road leading up to the Temple of Jupiter Capitolinus; see Livy, xxxvii. 3. On it were fixed seven statues (signa aurata) and two horses of gilt bronze, and in front of it two marble basins (labra). Nothing now remains of these early arches; and that of Nero on the Capitol (see fig. 94), with many others, has now wholly disappeared.

The Arch of Claudius, erected in 43 A.D. to commemorate his imaginary victories in Britain, stood across the Via Latina (the Corso), between the Palazzo Sciarra and the Church of S. Francesco Saverio (Xavier). Its foundations were found in 1882; see Bull. Comm. Arch. Rom. vi. Tav. 4. This arch

¹ For the Arch of Fabius, Augustus, Tiberius, and Severus see vol. i. chap. vii. on the Forum.
existed in an almost perfect state till the seventeenth century, when it was destroyed by Alexander VII. The only parts now preserved are half the inscribed panel on the attic, which is about 7 feet high, and portions of two large reliefs, much mutilated, which are now in the porch of the Villa Borghese.

The inscription, or rather half of it, now in the garden of the Barberini Palace, was found buried by the Palazzo Sciarra in 1641; see Vacca, Memorie scritte nell' anno 1594, printed in Nardini, Roma Antica, ed. Nibby, vol. iv. p. 15. It has been restored as follows:

TI. CLAUDIUS DRUSUS F. CAES.
AVGVSTO GERMANICO PIO
PONTIFICE MAX. TR. P. ET
COS. V. IMP. X. P. P.
SENAVS. POP. Q. ROM. QUOD
REGES. BRITANNIE SINE
VILLA. LACTVRA DOMERIT
GENTESQUE BARBARAS
PRIMVS. INDICIO SUBGERIT.

The reliefs in the Villa Borghese are noble in style, but are much damaged; they represent colossal figures of Roman generals and standard-bearers, probably in a procession, or listening to an address from the emperor.

This arch is represented on both aurei and denarii of Claudius, with the legend DE BRITAN[NIS] inscribed over the arch. On the top is the emperor in a quadriga between trophies of armour, which were probably all of gilt bronze.

The *Arch of Nero*, of which no remains now exist, was erected in the central space between the two peaks of the Capitoline Hill in honour of victory over the Parthians; see Tac. Ann. xvi. 18. It is shown on the rev. of a *First Brass* of Nero as a single arch richly decorated with statues and reliefs. On the attic is a triumphal quadriga between statues of *VICTORY* and *ABUNDANTIA*; at the angles of the entablature are
smaller statues. Figures in relief are carved all round the sides and top of the archway, and in a niche at the end of the monument is a colossal statue of Mars. The whole of the arch is very minutely represented in perspective so as to show one end as well as the principal front. Except the usual reverse legend on this very fine coin.

The Arch of Marcus Aurelius stood in the Via Flaminia, a continuation of the Via Lata, not far from the Arch of Claudius, in the modern Corso, at the corner of the Via della Vite. It also was destroyed in 1563, and six of its sculptured panels were placed in the Capitoline Palazzo de' Conservatori. They are now on the walls of the staircase.

Some of these reliefs appear to have been removed from the same arch at an earlier period, and were found in the sixteenth century under the Church of S. Martina by the Forum Romanum. These are not only unusually fine specimens of Roman sculpture, but are also of special interest for their topographical indications and architectural backgrounds.

The subjects represented are these: (1) the Emperor offering sacrifice in front of the triple Temple of Jupiter Capitolinus —this relief is of great value for its representation of that

---

1 The Arch of M. Aurelius, as it existed shortly before its destruction in 1563, is shown by Donatus, Roma vetus, 1695, in the engraving opposite p. 242. In this drawing two of the reliefs which are now in the Capitoline Museum are represented in situ.

2 The original place of the reliefs found under the church is not known; and it is possible that all the reliefs may not have belonged to the same arch, though they agree so closely in style and scale as to make it probable that they did.
temple; see vol. i. p. 364; (2) the entry of Marcus Aurelius into Rome after his German victories; with a figure of the goddess Roma, who receives him at the gate; (3) Roma presents him with the orb of empire; (4) he grants terms of peace to the conquered Germans; (5) he gives an address (ullocutio) to the army; (6) the Apotheosis of Marcus Aurelius and the younger Faustina—very similar in treatment to the Apotheosis of Antoninus Pius and Faustina the elder on the pedestal in the Vatican; see vol. ii. p. 311. Another of this fine series of reliefs is in the possession of the heirs of the banker Prince Torlonia.

The Arch of Titus, in Pentelic marble, was erected on the Summa Sacra Via by Domitian, in honour of Vespasian and Titus, to commemorate the taking of Jerusalem; Josephus, Bell. Jud. vii. 3, 5.

The inscription to "Divus Titus" shows that the arch was erected after his death—Senatus. Popul. deique. Romanus. Divi. Titus. Divi. Vespasiani. F. Vespasiano. Augusto. The central part only of the existing arch is original; the sides were restored in 1823.

In the twelfth century the tower of a fortress, the stronghold of the Frangipani family, stood over the Arch of Titus; this was known as the Turris Curtulius or Record Tower. Remains of this tower, consisting of a massive concrete wall made of broken bits of marble, still exist near the arch, set among the ruins of an unnamed building in peperino and travertine; see vol. i. p. 229.

The capitals of the engaged columns on each side of the Arch of Titus are of the Composite style, of which they are the earliest existing examples.

On the inner jambs of the arch are two fine reliefs representing the triumphal procession of Titus and his army bearing the spoils from Jerusalem. On one side the short, stout figure of Titus crowned by Victory is represented in a quadriga, the horses of which are led by the goddess Roma; he
is passing under a triumphal arch on which stand two quadrigae, and he is surrounded by liectors bearing fasces without axes.

On the opposite side is the famous relief showing that part of the triumphal procession in which the golden spoils from the Jewish temple are being carried along; the seven-branched candlestick, the table for shewbread, and the golden trumpets, are the principal objects. These spoils were deposited by Vespasian in the Temple of Peace, which occupied the centre of his Forum; Joseph. Bell. Jud. vii. 5, 7; see vol. ii. p. 13. Two female heads in slight relief, crowned with laurel, which are part of this panel, are of great beauty.

On the soffit of the richly coffered arch is a relief of the Apotheosis of Titus, represented in the usual way, with the Emperor borne upwards by an eagle. The external frieze has small sculptured figures representing sacrificial scenes. In the spandrels of the arch are figures of winged Victories bearing trophies, and the keystones are decorated with figures of Roma and Fortuna, the latter with a cornucopiae.

Another arch in honour of Titus to commemorate the same conquest had been erected in the Circus Maximus during his lifetime, in 80 A.D. Its inscription is given in the Einsiedlen MS.; see also Gruter, Inscrip. pp. 244-246.

This interesting inscription, which is now lost, was as follows: IMP. TITO. CAESARI. DIVI. VESPASIANI. F. VESPASIANO. AVG. PONTIFICI. MAXIMO. THIB. POT. X. IMP. XVII. COS. VIII. P. P. PRINCIPI. SVO. S. P. Q. R. QVOD. PRAECEPTIS. PATRIS. CONSILII. SVQV. ET. AVSPICIS. GENTEM. IVDAEORVM. DOMVIT. ET. VRBEM. HIEROSOLYMAM. OMNIBVS. ANTE. SE. DIVIBVS. REGIBVS. GENTIBVSQVE. AVT. EYSTRA. PETITAM. AVT. OMNINO. INTENTATAM. DELEVIT.

Arch of Severus in the Forum Boarium. The richly decorated but coarsely sculptured gateway which led from the

1 The Arch of Severus in the Forum Romanum has already been described; see vol. i. p. 242.
Velabrum into the Forum Boarium is not, accurately speaking, an arch, but a gateway with a flat lintel, richly decorated on its underside or sufit with carved rosettes in deeply sunk panels or coffers (lacunaria). Its inscription originally recorded that it was erected in honour of Sept. Severus, his wife Julia Domna, and his sons Geta and Caracalla, by the silversmiths or bankers and other merchants of the Forum Boarium (argentarii et negociantes Boarrii), in the year 204 A.D. After the murder of Geta in 212 A.D., the year after the death of Severus at York, Caracalla destroyed all sculptured representations of his brother, and erased his name from all honorary inscriptions; see vol. i. p. 344.¹

On this gateway, as on the Arch of Severus in the Forum Romanum, Geta's name was replaced by additional titles of Caracalla, and his figure was cut away from a relief on the inside of the gate, in which he and his brother had been represented offering sacrifice. On the opposite side there is a similar scene, with a portrait figure of Severus, and on the exposed end of the gate a relief of Roman soldiers conducting Oriental prisoners. Other smaller sacrificial scenes are represented under the large panels. The whole of this sculpture is very poor both in design and execution.² The whole is of

¹ An extraordinary instance exists of the strictness of Caracalla's orders for the obliteration of Geta's name. A lead pipe in the Museo Kircheriano, found at Palestina, has the following inscription—

**RX INDIVIGENTIA B N SEVERI**

**ANTONINI ET ORTE AVGO L F**

In the second line the name of Geta has been erased. This may have been done, as the Comm. Lancellati suggests (Comm. di Frontino, p. 269), on the occasion of repairs being made; or more probably it was a pipe which the plumber had in stock at the time when this edict was issued by Caracalla. The joint rule of Caracalla and Geta had lasted less than a year when Geta was stabbed by his brother.

² The second half of the second century A.D. was a time of the most rapid decline in art. The relief of Antinous in the Villa Albani, and
white marble, except the lower part of the gate, which is of travertine.

The twelfth-century campanile of S. Giorgio in Velabro stands partly on one end of this gate, and conceals two of its sculptured faces; see Bull. Inst. 1867, p. 217, and 1871, p. 233.

Arch of Janus Quadrifrons. Close by it stands one of those fourway arches, set at the intersection of two streets, which were called arches of Janus Quadrifrons; it is partly built of older architectural fragments, and is a work of the most degraded period, possibly even later than the time of Constantine. The inside of this archway is vaulted with a simple quadripartite vault, which is constructionally of interest as being the prototype of the Gothic vaults of the mediaeval period.

The Arch of Constantine. The reliefs with which the Arch of Constantine is decorated are described in vol. ii. pp. 35 to 38. This arch was erected to commemorate Constantine's victory over Maxentius at the Pons Milvius, 312 A.D.; and this battle is represented on the very coarsely sculptured band over the right-hand side arch, on the front away from the Colosseum.

The general design and proportion of this arch are exceedingly good (see fig. 95), and are probably copied from the Arch of Trajan; from which are also taken not only the fine sculptured panels with scenes in the life of Trajan, but also the main entablature, and the eight magnificent fluted columns

other portraits of him made in the reign of Hadrian (117-138 A.D.), are among the most beautiful existing specimens of Roman or Graeco-Roman sculpture, while after the accession of Sept. Severus in 193 A.D., no sculpture of any real artistic merit seems to have been produced in Rome.

The throne of the High Priest of Dionysus in the great theatre in Athens, which dates from the time of Hadrian, has reliefs which rival fine Greek work of the fourth century B.C.

1 More correctly Milvius.
of the Corinthian order which decorated the two fronts of the arch. These columns are large monoliths of Numidian giallo antico; one is now replaced by a white marble column, the original one having been placed in the Lateran Church, where it still exists.

The clumsily sculptured Victories in the spandrels of the central arch, the river-gods over the side arches, the medallions of the rising and setting sun at the ends, the Victories on the pedestals of the giallo columns, and the bands over the side arches, are all of Constantine's time, and show the miserably degraded state into which Roman art had sunk by the beginning of the fourth century A.D.

The following interesting inscription is cut in the centre of the attic, but no exact indication of the date is given in it. IMP CAES FL CONSTANTINO MAXIMO P F AVGSTO S P Q R QVOD INSTINCTIV DIVINITATIS MENTIS MAGNITUDINE CVM EXERCITV SVO TAM DE TYRANNO QVAM DE OMNI EIVS FACTIONE VNO TEMPORE IVSTIS
REM-PVBLICAM - VITVS - EST - ARMIS - ARCVM - TRIUMPHIS
INSIGNEM-DICAVIT-LIBERATORI-VRBIS-FVNDATORI-QVETIS;
(and at the sides) VOTIS - X - VOTIS - XX - SIC - X - SIC
XX. The words SIC - X - SIC - XX show that the arch was
erected after the tenth year of Constantine's reign (315 A.D.),
the meaning being—as he has reigned ten years, so may he reign
twenty. The title Maximus, which is used in the main inscrip-
tion, occurs only on coins of Constantine which were struck
after his tenth year; and the phrase by divine inspiration
(instinctu divinilatis) appears also to point to a time when
Constantine was more under Christian influence than he was
in the early years of his reign. 1

A staircase formed in the thickness of the arch is entered
from a door at some height above the ground, in the end
towards the Palatine.

The Arch of Dolabella is not a triumphal arch; its original
use is not known. It stands on the Caelian Hill, and the con-
tinuation of the Claudian aqueduct which Nero built passes
over it, branching in two directions. The concrete mass of the
aqueduct partly conceals one of the piers of Dolabella's Arch.

This gateway consists of a plain arch, built of large blocks
of travertine, and on it is an incised inscription recording that
it was erected by order of the Senate by the Consuls Publius
Cornelius Dolabella and C. Junius Silanus, i.e. in the year 10
A.D. The latter, as the inscription records, was Flamen Marts-
alis, and it has been suggested that this gateway led into the
Campus Martialis, an open space on the Caelian Hill, which
was used for games in honour of Mars at times when the great
Campus Martius was inundated.

The Arch of Drusus, wrongly so called, is described in vol.
ii. p. 172.

The Arch of Galienus was built close against the outside of
the Porta Esquilina, in the Servian agger; see vol. i. p. 133.

1 It, however, seems probable, from some existing marks on the marble,
that these words were added in place of some earlier phrase.
It was originally a triple arch surmounted by a central pediment; it is shown so in the Mantuan picture; see De Rossi, Pianta di Roma, etc., 1879, and Bellori, Vet. Arc. xxii.; the two side arches and the pediment were removed in the sixteenth century, but the central arch is still well preserved.

On each side of it there is a Corinthian pilaster which supports the entablature, the frieze of which is incised with a laudatory inscription recording its erection in 262 A.D. by the Praefect of the city, M. Aurelius Victor, in honour of Gallienus and his wife Salonina. The whole is built of massive blocks of travertine.

Several of the triumphal arches of Rome which are now destroyed are illustrated by Bellori, Veleres Arcus Augustorum, Rome, 1690; see also Fea, Archi triumph. Rome, 1832.

HONORARY COLUMNS.

Columna Maeniana. One of the earliest honorary columns in Rome was that erected by C. Maenius, who fixed the bronze beaks to the Rostra in 338 B.C.; see Pliny, Hist. Nat. xxxiv. 21. This column appears to have been placed in the Forum, but its exact site is doubtful.

The Columna Duiliana was set up by C. Duilius in 260 B.C., in the Forum, near the Rostra, in commemoration of his victory over the Carthaginian fleet; Pliny, loc. cit. It was adorned with bronze rostra from the captured Punic ships. Part of its inscribed base is preserved in the Capitoline Museum;¹ it was found near the Arch of Severus in the sixteenth century, and was restored by Michelangelo.

Two reproductions of a similar column now stand on the slope of the Pincian Hill by the road which leads up from the

¹ In the entrance hall of the Palazzo dei Conservatori. This inscribed base appears to be an archaistic copy of the original one, made during the Imperial period.
Piazza del Popolo. Such monuments, called *columnae rostratae*, were frequently set up in honour of naval victories; see Servius, *Ad Geor.* iii. 29. Livy (xlii. 20) mentions another *columna rostrata* which was erected on the Capitol after the first Punic war by the Consul M. Fulvius.

*The Column of Minucius.* A third column of Republican date is shown on the *reverse* of a denarius struck about 130 B.C. with the legend *c. avuncius*; the column is surmounted by a statue, and two bells hang from its capital; at the sides stand an augur with the *liturn*, and another figure bearing a *patena* and a loaf of bread. This appears to be a column erected outside the *Porta Triginta*, in honour of L. Minucius, who was *Profectus Annones* in 439 B.C., on account of his reducing the price of bread; see Pliny, *Hist. Nat.* xxxiv. 21. Livy (iv.) 16 does not mention the column, but says that a gilt (bronze) statue of an ox was set up in honour of this good deed.

*The Column of Antoninus Pius*¹ stood in front of the *Temple of Antoninus Pius*, the remains of which (on Monte Citorio) are wholly buried. The pedestal of the column remained *in situ* till it was set by Benedict XIV. near the obelisk in the Piazza di Monte Citorio. Gregory XVI. moved it to the Giardino della Pigna in the Vatican, where it still stands. The shaft of the column, which was a monolith of red Egyptian granite, had been overthrown and broken into many pieces. Its fragments were discovered under a house at the north-west angle of the Piazza in 1704, and were cut up and used to mend the obelisk of Monte Citorio. On the base of this column was an interesting quarry inscription, recording that two blocks of granite, 50 feet long, were sent from Egypt by Dioskouroes, a quarry superintendent, and Aristeides an architect, in the ninth year of Trajan’s reign, 106 A.D. The inscription, now in the Vatican Museum, runs thus—

¹ For the Column of Julius Caesar see vol. i. p. 255. The Column of Trajan is described in vol. ii. p. 30.
ΔΙΟΚΟΣΤΟΥΤΟΥ
ΑΘΩ - ΤΡΑΙΑΝΟΥ
ΔΟΤΟ - ΑΝΑ - ΠΟΔΕΚ - Ν
ΑΡΙΣΤΕΙΔΟΥ - ΑΡΧΙΤΕΚΤΟΥ

The ΑΘ means the year nine, Α or Λ being derived from an ancient Egyptian symbol meaning year, adopted in Ptolemaic and Roman times instead of the proper Greek form ΕΤΟΤΖ. ΠΟΔΕΚ is a blunder for ΠΟΔΑΚ, and the Ν is the Greek numeral 50.

This column was not erected till after the death of Antoninus Pius in 161 A.D. The inscription on the pedestal records that it was set up by his adopted sons, M. Aurelius Antoninus and Lucius Verus—

DIVO - ANTINO - AUGVSTO - PIO
ANTONINVS - AUGVSTVS - ET
VERVS - AUGVSTVS - FILII

On one side of the pedestal are very high reliefs with soldiers, both cavalry and infantry, arranged in a very tasteless way in three tiers one above another. The other relief is very superior as a work of art; it represents the apotheosis of Antoninus Pius and Faustina; see vol. ii. p. 263. A youth reclining on the ground and holding a tall obelisk represents the Campus Martius. On the other side of the relief is a fine seated figure of the goddess Roma. On the summit of the column stood a colossal statue of Antoninus in gilt bronze; this is shown on the coin mentioned below, p. 313.

The Egyptian obelisk, to mend which the above-mentioned granite column of Antoninus was cut up, now stands in the Piazza di Monte Citorio; it has the following inscription on its pedestal, recording that it was erected by Augustus in 10 B.C. in honour of the solar deity, and to record his conquest of Egypt. The inscription is as follows, IMP - CAESAR - DIVI F - AUGVSTVS - PONTIFEX - MAXIMVS - IMP - XII - COS - XI - TRIB POT - XIV - AEGYPTO - IN - POTESTATEM - POPVL. - ROMAN. - REDACTA - SOLI - DONVM - DEDIT. This obelisk was set up by
Augustus in an open paved space in the Campus Martius, where it served as the gnomon of a huge sun-dial, the hours being marked on the pavement round it by lines inlaid in bronze. It is described by Pliny, Hist. Nat. xxxvi. 72.

In the sixteenth century part of this pavement was discovered during excavations made for the foundations of a new palace. It consisted of great slabs of travertine, in which deeply cut lines were filled in with strips of bronze.

The other obelisk which Augustus brought from Egypt was erected on the spina of the Circus Maximus; it is a monolith of granite 78 feet high. It now stands in the Piazza del Popolo. On this and other obelisks in Rome see Pliny, Hist. Nat. xxxvi. 64 to 74.

**Column of M. Aurelius.** With the exception of its lower pedestal and the statue at the top, the Column of Marcus Aurelius is still well preserved. It is almost a copy of Trajan's column, and, not counting the pedestal, is exactly the same height—100 Roman feet, or 97 feet 6 inches English measure, whence these were called columnae centenariae. The pedestal was in two stages, one of which is now buried below the modern Piazza, which is about 16 feet above the old ground level. On the upper part of the lower stage was a sculptured band, with reliefs of Victories holding garlands; these are shown by Du Perae, Vestigi di Roma, and by other sixteenth-century antiquaries. The upper stage of the pedestal has been completely renewed. On the top of the column was a colossal statue of M. Aurelius in gilt bronze.

The column itself is built of Luna marble; it is nearly 12 Roman feet in diameter at the base, and has an internal winding staircase of 190 steps. It had a special custodian (procurator); a decree of the Emperor Sept. Severus granting him a house (solarium) to live in still exists incised on marble,

1. Cf. the ancient name of the Parthenon, called Heomatopodion from its being 100 feet long.
2. The word solarium, which originally meant an upper room exposed
and is preserved in the *Galleria lapidaria* of the Vatican. This inscription is long, and contains many interesting details relating to the site and materials of the custodian’s house.

The spiral reliefs, which wind round the column in 20 tiers, represent scenes in the four campaigns of Marcus Aurelius against the German tribes north of the Danube, 167-179 A.D. In both design and workmanship these sculptures show a considerable decadence since the time when Trajan’s column was executed.

Like the column of Trajan, the Column of M. Aurelius stood in front of a temple dedicated to the deified Emperor, and was surrounded by a large *porticus* or enclosure with rows of columns; see *Ann. Inst.* 1852, p. 338, and *Mon. Inst.* v. Tav. 40.

For a long time this column was wrongly thought to have been erected in honour of Antoninus Pius on account of its resemblance to the column shown on a First Brass with the head of Antoninus and the *legend* *divo* - *pio*.

It is now known that the *Column of Antoninus Pius* was the granite monolith mentioned above.

The representation on the coin is interesting because it shows the marble screen (*cancelli*) which originally enclosed a small square area, paved with marble, in the middle of which the granite column stood.


to the sun, in this inscription appears to be used for a whole house. Compare the mediaeval English *solar*, which was an upper room, usually at the dais end of the hall.

*The elevation called Monte Citorio is probably formed by the buried remains of the Temple of Marcus Aurelius; see above, vol. ii. p. 208.*
CHAPTER X

THE WATER SUPPLY OF ROME.

Till the year 312 B.C., when the Censor, Appius Claudius Caeceus, constructed the first aqueduct—the Aqua Appia—the Romans were dependent for their water supply on the Tiber, or on wells and springs. Frontinus, in his interesting work, De aquaeductibus Urbis Romae (§ 4), says, Ab urbe condita per annum CCCXL (till 312 B.C.) contenti fuerant Romani usu aquarum quas aut ex Tiberi, aut ex puteis, aut ex fontibus hauriebant.

This book, to which (together with Vitruvius, viii. 6) we owe a great part of our knowledge of the details of the water supply of Rome and the laws which regulated it, was written by Sextus Julius Frontinus, who was Praetor Urbanus in 70 A.D., and Governor of Britain (under Vespasian) in 75 A.D., when he conquered the Silures. In the reigns of Nerva and Trajan, 97 to 106 A.D., Frontinus occupied the very important post of Curator Aquarum, or general Superintendent of all the aqueducts, reservoirs, and fountains, used for the public and private water supply of Rome. He was also Consul Suffectus in 97 A.D., and Consul in 100 A.D. A new edition of his work, together with much additional information about the aqueducts, has been published by the Comm. Lanciani, Comentari di Frontino, Rome, 1880.¹

¹ Pliny's remarks (Hist. Nat. xxxi. 37, and xxxvi. 121 to 123) about the water supply of Rome are interesting, but are mostly taken from Vitruvius, viii. 6.
Much interesting information with regard to aqueducts and water-pipes generally is given by Vitruvius in cap. 6 of book viii. In all the early printed editions of Vitruvius, beginning with the Editio Princeps, Rome, 1486, the Commentary of Frontinus is printed at the end of the volume. Vitruvius goes much more into practical details than Frontinus does with regard to the construction of aqueducts, cisterns, filters, lead pipes, and the like, while Frontinus gives accurate figures as to the length of each aqueduct and the amount of water it supplied. His work is a sort of official report on the water supply of Rome in the reign of Trajan.

Some of the early rock-cut cisterns for storing spring water, and the well-shafts which communicate with them, still exist on the Palatine Hill, and are mentioned in chap. iii.; see vol. i. pp. 113 and 162, and fig. 16. Other springs of water, such as the sacred Fons Juturnae in the Forum (see vol. i. p. 284), were preserved in later times for ornamental and religious reasons; but a large proportion of the small streams which once formed open brooks, draining the main valleys of Rome, were, after the wide growth of the city and the construction of the aqueducts, no longer allowed to run along the surface of the ground, but were turned into the great Cloaca, which they helped to keep clean and wholesome, just as in London is the case with the Fleet and other once open streams of water, which now run in sewers under the streets.

The earlier aqueducts were not constructed on the lofty tiers of arches which afterwards were built to supply the upper stories of the lofty buildings of Imperial Rome, but ran for the most part in subterranean channels along the ground level of the Campagna. The first aqueduct, the Aqua Appia, was almost wholly underground; the second, the Anio Vetus, the channel of which was 43 miles long, ran only for about a quarter of a mile above the ground.

The Romans were thoroughly acquainted with the simple hydraulic law that water in a closed pipe finds its own level,
or, as Pliny puts it,—*subit altitudinem exortus sui* (Hist. Nat. xxxi. 57), and they took advantage of this fact by constructing pipes reaching to the top of lofty fountains, and "rising mains" to supply the upper rooms of houses, which branched off right and left from a main pipe laid under the pavement of the streets, just as is done in modern towns; see fig. 98. Many of these mains and their service-branches have been found during recent excavations in the streets of Ostia.

So, at viii. 6. 5 to 6, Vitruvius describes the method of carrying water in a closed pipe down one hill and up another.

It was not, therefore, from ignorance of this law of Nature that the Romans constructed almost level water-channels carried on long lines of arches, but simply because it was the most economical way to bring a large supply of water from a distance. Even in recent times this method has been resorted to with advantage, in spite of the modern improvements in iron casting, which allow iron pipes to be made cheaply and of great strength and capacity; whereas the Roman pipes had to be made of the more costly and weaker lead, or, in places of especial pressure, of the still more expensive bronze.

It was doubly convenient to employ channels which were always readily accessible, and could be cleared out without any difficulty, on account of the calcareous deposit with which water from the neighbourhood of Rome so rapidly encrusts pipes and water-channels.

One peculiarity in the construction of the Roman aqueducts is very difficult to account for; that is the very circuitous course which some of them follow, in some cases about doubling the distance in a straight line. This, according to

1 As, for example, in the great Croton Aqueduct, 40 miles long, which supplies New York city, constructed between 1837 and 1842.

2 The modern water companies of Rome constantly find their pipes almost closed up in a very short time after they are laid. In the old system the water had deposited the greater part of its dissolved carbonate of lime before reaching the lead pipes of distribution in the city.
Frontinus, was to prevent the slope of the channel from being too steep, when the source of the water was high above the required level of distribution in Rome. But it is not easy to say why step-like falls of water could not have been arranged for at any required points along the course of the aqueduct. The gradient (librumentum) for the channel of an aqueduct recommended by Vitruvius (viii. 6. 1) is a fall of 6 inches in each 100 feet.

Administration of the water-works. The following were the officials and workmen who had charge of the water supply of Rome.

Till the last century of the Republic the Censors had charge of all aqueducts and rivi subterranei; see Livy, xxxix. 44; and then, for a short time, they were under the Quaestors and Aediles.

This lasted till the reign of Augustus, who instituted a new and very complete system of management, directed by a Curator Aquarum, who was appointed for life. It was an office of great dignity, resembling in function that of a Curator Viarum or Frumenti. The first Curator Aquarum was M. Agrippa (Front. 98, 99), who held the office till his death in 12 B.C. The Curator was surrounded by a number of minor officials and personal attendants (apparitores), such as secretaries (scribae librarii); ushers (accessii); cryers (praecones); three public slaves (servi publici); several engineers (architecti); and, when outside the walls of Rome, two lictors.

The public office of the Curator was called the Statio Aquarum, and to it were attached clerks, called Tabularii Stationis.

Other subordinate officials were the two Adiutores, men of Senatorial rank, one Procurator Aquarum, usually an Imperial Freedman, and a Tribunus Aquarum. The artisans who worked under the Curator were classed as belonging to the Familia aquaria publica and Familia aquaria Cœsarica. These included Aquarii or Villici, presided over by a Proconsul, who made and laid the lead supply pipes; Libratores, who measured the
levels of the water; Castellarii, who kept the Castella or reservoirs in order; Circitores, inspectors of the works; Silicarii, who took up and relaid the silic (lava) pavement of the street, when mains were laid or repaired; Tectores, tilers, and other workmen, such as bricklayers, masons, and Pesitores, crushers of pottery (testae tenuae), to make the opus signinum for lining the channels and reservoirs.¹

Considering how copious the water supply was in Rome, the silicarii must have been constantly at work, pulling up and relaying the pavements of the streets when the mains or their branches needed repair. But in some cases, in the more important streets, the Romans, wiser than our modern water companies, formed tunnels in which the pipes were laid and could be repaired without breaking up the street.

Moreover, the Roman pipes are made of much thicker substance of lead than modern pipes, and so would far less frequently need repair.

The construction of new aqueducts was carried out by public contractors, redemptores operum publicorum. Frontinus mentions the cost of some of the aqueducts, which seems extraordinarily small. It must, however, be remembered that they were built by slave labour, and that the materials used, such as tufa, peperino, pozzolana, and clay for bricks, were chiefly State property, and were mostly found close at hand, and so cost but little for carriage.

Thus the actual cost of these and other great public works would very commonly be merely the cost of providing cheap food for the requisite number of slave workmen.

The Aqua Claudia and the Anio Novus, both begun by Caligula and completed by Claudius in 50 A.D., are stated by Frontinus (quoting Fenestella) to have cost only 55½ millions of sesterces, about £555,000. These are two of the longest

¹ Immense quantities of this must have been used, and it appears probable that the great heap of broken pottery called Monte Testaccio was stored for this purpose; see vol. i. p. 79.
and most lofty of the aqueducts; they were built of massive blocks of tufa. They certainly could not now be built for anything like that amount.

A strip of land, 30 feet wide, was reserved all along the course of the channel or arches of all aqueducts, and no one was allowed, under penalty of a heavy fine, either to plant trees or in any way to encroach upon this reserved strip. The margin of this strip, along three of the older aqueducts, was marked with cippi iugulares, or boundary stones, set at intervals of two actus or 240 feet, marked with distances to show the length of the channel from its termination in the castellum in Rome. These cippi appear to have been used only by the earlier emperors; out of thirty-one, twenty-six are of the time of Augustus, three of Tiberius, and two of Claudius.

An example of the inscriptions on the cippi of Augustus is quoted below; see p. 341.

Laws and penalties relating to the Aqueducts. The laws relating to water supply, Jus ducendae locandae Aquae, are given by Frontinus. From these it appears that Imperial concessions of water to individuals, ex indulgentia or liberalitate Imperatoris, were granted only for life, and were not enjoyed by the heirs without a fresh concession.

A list of penalties for various offences is given—namely, for irrigating land with water from a public aqueduct; for throwing dirt into the water; for cultivating or encroaching in any way on the 30 feet strip; for any injury to pipes or channels; for inserting a pipe larger than the concession allowed; for inserting a pipe into the spedicus of an aqueduct instead of the castellum. In the last two cases the concession of water was forfeited. It was also forbidden to use water from leaks (aqua caduca) without permission, in order to prevent leaky places being made by wilful injury. Heavy fines were inflicted on any official who connived at any of these misdemeanours.

In spite of the penalties, fraud appears to have been not
uncommon, and the aquarii were often bribed to insert a larger pipe than had been conceded.

In order to prevent this, the junction between a public main or reservoir (castellum) and the lead pipe for a private supply (erogatio) was made with a pipe of bronze (calix), the exact capacity of which (lumen) was stamped on it—est calix modulus aequus, as Frontinus says; it was to be at least 12 digiti long (9 inches). The two existing specimens of calices are stamped with an owner's name, as well as the capacity (Fl. GREGORI V D and Fl. RVSTICI V H); one is in the Vatican, another in the Museo Kircheriano.¹

Disputes occasionally arose in Rome between private persons or corporations and the administration of the water supply.

Inscriptions recently discovered on the Esquiline Hill record a lengthy trial before the Chief of the Police, the Praefectus Vigilum, between the Curator aquarum on one side, and on the other the Collegium Fullorum, Corporation of Fullers, who claimed a certain supply of water free of charge. This legal process dragged on from 226 A.D. to 244 A.D., when a final decision was given by the Praefectus Vigilum; see Lanciani, Anc. Rome, p. 223.

Construction of water channels. Aqueducts with channels built of stone or concrete are called canales structiles by Vitruvius (viii. 6. 1). Vitruvius also mentions two other methods of carrying water—namely, lead pipes (fistulae plumbeae), and clay pipes (tubuli fictiles); the latter were mainly used, as they are now, for agricultural purposes.

Rain-water pipes and overflow pipes from fountains were commonly made of pottery (tubuli). The down-pipes which carried the rain water from the roofs of Roman houses into the street sewer are, as a rule, carefully-made socket-jointed pipes like the circular smoke flue shown at J on fig. 65, vol. ii. p. 121.

¹ Now called Museo del Collegio Romano.
These down-pipes are frequently embedded in the concrete mass of the wall as shown in the last-named fig. 65. Examples in abundance may be seen in the Thermæ of Caracalla and other similar buildings, and also in the walls of the cryptoporticus described in vol. i. p. 196.

When the roof was large, and the down-flow of rain water copious, down-pipes of greater capacity (bumen) were made in the concrete walls by forming square channels with tiles, as is described in vol. ii. p. 174, and is shown at K in fig. 65, vol. ii. p. 121.

In some cases, as, for example, among the houses of Pompeii, the down-pipes for rain water are fixed on the exterior of the house; and in that case lead pipes (fistulae) are used, instead of the cheaper tubuli.

The Romans seem, as a rule, to have been careful not to let the rain water drip from the eaves into the street. In the same way in ancient Athens there was a law forbidding the rain-water gutters of the houses to discharge in an open stream on to the street; see Aristot. PoL Athen. § 50.

In Roman buildings of the Imperial period lead is generally used in the most unsparing way, mainly owing to the enormous quantities which were obtained and imported into Italy by the Romans from the very rich mines in the Mendip Hills, and in Derbyshire and elsewhere in Britain.¹

The open mouths of overflow pipes in fountains and cisterns, whether they were made of lead or clay, were commonly guarded with a perforated strainer, like the "rose"

¹ Many examples of blocks or "pigs" of lead have been found at various places in Britain with inscriptions recording from what mines and under what superintendent the lead had been obtained. A "pig" from Brough in Yorkshire is inscribed thus—C. IVL. PROTV. BRIT. LVT. EX ARQ; C. JUIt. PROTV BRITANVICVM [plumbum] Lutudææ ex argentariis, meaning "British lead prepared from the silver-lead ore of Lutudæ under (the superintendent) C. Julius Protus." Lutudææ was probably in Derbyshire; see Haverfield, Rom. Inscr. Brit. 1888-90, No. 53.
of a water-pot, to prevent stoppage of the drain from floating objects.

Similar strainers were used at various points where supply-pipes of drinking water issued from tanks and cisterns, and in every way the greatest care was taken to keep the water supply as pure as possible.

In cap. 1 of lib. viii. Vitruvius gives a number of sensible suggestions as to the selection of water for drinking; cap. 2 is on the use of rain water. The source was usually either an open spring (fons) or a well (puleus); frequently several springs were conducted to one reservoir at the commencement of an aqueduct. At the fountain-head a large reservoir (piscina) was formed, which answered the purpose of a settling-tank. Other reservoirs for the same purpose, and filtering tanks arranged so that the water passed through a bed of gravel (piscinae limariae), were constructed at various points along the course of the aqueducts.

The covered channel along which the water flowed was called the specus, and was always thickly lined with a very hard cement (opus signinum), made of lime, pozzolana, and pounded pottery or brick. Even the roof of the specus was lined with this cement, and at the bottom of the channel it was rounded off into a circular depression; see fig. 96.

The method of making this hydraulic cement is described by Vitruvius, viii. 6. 14, and at ii. 5. 1. On its name, *opus signinum*, see Pliny (Hist. Nat. xxxv. 165), who derives it from the ancient city of Signa.

In the earlier aqueducts the specus, like the arches below, was built of large blocks of tufa, and when two or more specus came close one over another, the intermediate floor was often formed by a large slab of travertine, so as not to waste space. This is the case where the three specus of the Aqua Julia, Tepula, and Marcus, rebuilt by Augustus, pass over the Porta San Lorenzo; see figs. 96 and 99.

In later times the aqueducts and their specus were made of
concrete faced with brick on the outside. In some cases the roof of the *specus* was formed by two large tiles (*tepulae bipedales*) set leaning together, acting as centering to support the mass of concrete which was poured in above—a method frequently employed in the smaller Cloacae.

E on fig. 96 shows an example of this taken from a restoration. Section through one of the arches of an Aqueduct near the Porta S. Lorenzo.

A, B, C. Specus of the Aquae Julia, Tepula, and Marcia; the top and bottom of each is of travertine, the sides of tufa or peperino; they are lined with opus signinum.

D. Peperino arch.

E. Specus of the Aqua Julia at another point, where it has been restored in concrete and brick.

Fig. 96.

Specus of the *Aqua Tepula* near the aqueduct arch of Augustus. At intervals of a few yards blow-holes (*spiramina*) were made for imprisoned air to escape, and also for ventilation when the water was temporarily cut off, and the workmen were crawling along the *specus* to get at a place where repairs were needed. These apertures passed straight up through
the top of the channel, or if there were another *specus* above, the holes were carried out at the side.

When the *specus* of an aqueduct was buried below the ground level, "inspection-shafts" were built at intervals to enable workmen to reach the subterranean channel. Vitruvius (viii. 6, 3) calls these shafts *pulei*, and directs that they should be constructed at intervals of one *actus*, that is, every 120 feet. An existing example of one of these *pulei* is described below, at p. 337.

**Castella.** At the termination of the aqueduct in the city a large reservoir was built called a *Castellum aqurum*, from which the water was distributed over the quarter that it supplied. Vitruvius (viii. 6, 2) says that each *castellum* is to be divided into three compartments, each with a separate main, one to supply *public fountains*, *basins*, and *jets* (*fontes*, *lacus*, *et salientes*), one to supply *public baths*, and a third for *private houses*; cf. Pliny, *Hist. Nat.* xxxvi. 121.

In later times the arrangement was much more complicated, and in the time of Frontinus many other subdivisions of *Castella* existed—(1) For *Castro*, military camps; (2) *Opera publica*, places of amusement and public buildings generally, except those which had been built by the emperors, which were classed (3) *Nomine Caesaris*; (4) *Laci et salientes*, public troughs, pools or basins and jets of water; (5) *Munera*, large ornamental fountains; (6) *Beneficia Caesaris*, Imperial grants of water to guilds, corporations, or private persons; (7) *Usibus privatis*, private houses generally. Under class (2) would come places such as the Baths of Agrippa and other public buildings constructed by citizens of Rome; class (3) included the *Colosseum*, the *Thermae of Titus* and *Caracalla*, and all buildings constructed by the emperors.

Some of the *Castella* were architecturally very magnificent, being lined with rich marbles, and decorated with statuary and a large public fountain.

**Castellum of the Aqua Julia.** The reservoir built by Severus
Alexander as a Castellum for the Aqua Julia on the Esquiline, remains of which still exist in the modern Piazza Vittorio Emmanuele, was a large and splendid example, with a very complicated system of chambers for subdividing and filtering the water. Externally it was surrounded with a magnificent series of marble fountains, basins of water, and miniature waterfalls, decorated with sculpture and columns of coloured marble. It is shown with some minuteness on medallions of Severus Alexander; see Froehner, Méd. Rom. p. 169.

This appears, however, not to have been the Castellum for immediate distribution, but mainly a very large and elaborate fountain, the water from which, after being displayed in a series of cascades and jets, was run off from a lower basin to a number of less magnificent reservoirs, from which the water was distributed in lead pipes. This complicated structure was excavated, and careful drawings of it were made by some Prix de Rome students in 1832. It was again and more completely exposed in 1877, but no lead pipes were found leading from it, as would have been the case if it had been an ordinary Castellum for the croyntio.

The so-called "trophies of Marius," made in the reign of Domitian, were set on the exterior of this building, where they are shown in Du Perac's etching; see Vestigi di Roma. In the sixteenth century they were moved to the top of the Capitoline stairs; see vol. i. p. 25, note 2.

In addition to the large central Castellum, each aqueduct had a number of smaller ones placed at various points in the Regiones it supplied. Some, such as the Aqua Marcia, had over fifty of these subordinate Castella.

Great care was always taken by the Romans to purify their drinking water by passing it through series of filtering tanks and settling tanks—piscinae liminaris as they are called

The seventeenth-century castellum on the top of the Janiculan Hill behind S. Pietro in Montorio, much resembles one of the ancient castella, from its magnificent flood of water constantly poured into a great locus.
by Frontinus, De Aquaed. 15. Every important Castellum contained a number of vaulted chambers for this purpose, in addition to those which were constructed near the source of the aqueduct, and at intermediate points between the source and its termination in Rome.

Reservoirs. Important buildings had reservoirs of their own (piscinae) with a series of vaulted settling-chambers, usually arranged in two stories. Existing examples are the so-called sette sale, a reservoir built by Nero to supply his Golden House; see vol. ii. p. 156; and those which belonged to the Thermae of Caracalla and Diocletian; see vol. ii. p. 171, and fig. in vol. ii. p. 183. The cisterns in private houses were called castella domestica; but except in very grand houses these appear not to have been much used, as the inhabitants of ancient Rome possessed the great advantage of having a constant water supply, and so had no need of storage.

Water-pipes. Vitruvius (viii. 6. 1) mentions two sorts of pipes in addition to the built specus—Ductus: aquae fiant generitos tribus, rivos per canales structiles, aut fistulis plumbeis, seu tubulis fictilibus. Clay pipes were mostly used for agricultural purposes under the Empire, and many examples of these have been found, but in earlier times they were occasionally used for drinking-water, in which case Vitruvius says the joints should be strengthened at points of special pressure by stone rings.

A number of socket-jointed clay pipes, about 5 inches in diameter and about 18 inches long, are preserved in the Museo delle Terme. These pipes are made in short lengths for convenience in rapidly moulding them on the potter's wheel. Angle pipes with junctions of various forms are to be seen in the same collection, together with many other interesting objects connected with the Roman water supply.

Lead pipes. Vitruvius (viii. 6. 10) recommends clay in preference to lead pipes, on account of the risk of lead-poisoning, multa salubrior est ex tubulis (clay pipes) aqua quam ex fistulis (lead
pipes); *quod per plumbum rideat esce ido vitioua, quod ex eo lead pipes. cerusse nascitur.* In Rome, however, there was no risk of this, owing to the calcareous deposit with which lead pipes were rapidly lined,¹ and therefore under the Empire they were universally used, except in a few rare cases where pipes of bronze were introduced in places where there was heavy hydraulic pressure, which might have burst leaden pipes; see Hor. Ep. I. x. 20—

*Parior in vicis aqua tendid rumpere plumbum.*

Pliny mentions wooden pipes, made of elm or fir; no examples of these have been found in Rome, but there is no doubt that they would last a long while,² as wood which is kept constantly wet does not decay as it does if it is sometimes wet and sometimes dry. Stone pipes were used at a very early period, and many examples of these have been found in various parts of Italy; some from Arezzo, of the Republican period, are very large, measuring nearly 2 feet in internal diameter.

* Fistulas plumbeas.* Lead pipes (see fig. 97) were made by rolling thick plates of cast lead in lengths of 10 feet round a wooden core, the edges were brought together and soldered with melted lead, *in rotundationem flectantur (laminae),* as Vitruvius says; see D, on fig. 97. The Roman pipes were made of much thicker lead than is the custom now. Some, which are 5 inches in diameter, are made of lead weighing more than 20 pounds to the square foot.

¹ The fact is, that except when they are quite new, there is no danger caused by the use of lead water-pipes. The lead very soon becomes coated with an insoluble carbonate, and this protects it from further decomposition.

² A few years ago wooden pipes, laid by the New River Company, and probably two centuries old, were taken up in some of the streets of London in good preservation. Similar wooden pipes, each made of a tree with its centre drilled out, have been found in the monastic buildings of Westminster Abbey. These were made of willow wood.
The lead plates were probably cast, as is done now, on a smooth bed of sand, in sheets 10 feet long and probably rather less in width. These sheets were then cut up into strips of the right widths to roll into pipes. It was of course desirable to cast rather long sheets of lead, in order that when made

**Fig. 97.**

Lead Pipes and Turncocks.

A. Main pipe with two service branch pipes, inscribed with the name of Severus Alexander.
B. Fourway pipe.
C. Junction formed by enlarged lead cylinder.
D. Section of pipe and soldered joint to larger scale.
G. Owner's name and capacity of pipe (20 quinariae) inscribed in raised letters.
H. Method of joining two lengths of pipe.

Inscriptions.

into pipes there might be as few joints as possible. This is why Vitruvius (viii. 6. 4) advises, *futulae se minus longe pedum doneum fundantur.* Inscriptions were cut in relief on stamps of wood or marble, and then impressed on the sand-bed, so that the cast plate of lead received the letters in relief. Pipes were joined endwise, by one end being enlarged
by hammering, and the end of the next pipe reduced in size so as to slip into the larger one; solder was then fused all round the junction; see H, on fig. 97.

Strainers formed of caps of lead, pierced with many small holes, were often fixed at the end of the pipes which discharged into a cistern or fountain.

The taps and turncocks by which the water could be drawn off from cisterns and shut off from the main during repairs were made of bronze, of very skilful workmanship, soldered to the lead pipes—*epistoma fistulis adplumbeta*, as Ulpian calls them; see E, F, on fig. 97. A very large one, now in the Museum in Naples, was found at Pompeii half full of water; till recently it could be heard to splash when it was moved.

The ordinary water-taps were commonly made in the form of an animal's head.

Fountains in houses were frequently arranged so that the constant stream of water spouted or poured through a shell, a fish, or some other object held in the hand of a bronze statuette, the lead supply pipe being concealed inside the hollow bronze figure. Some of these fountain statuettes are of the finest quality as works of art; figures of Cupid occur most frequently.

The junctions, where service-pipes to private houses branched off from the main in the street, were often formed in the shape of a cubical lead box—a stronger method than soldering one pipe directly into another, as is shown at A in fig. 98.

Pipes of different capacity had different names, such as *quinario, senario, septenario,* etc. According to Vitruvius (viii, 6. 4), they were named from the width of the plate before it was rolled into a tube, e.g. *fistula quinquagenaria*, from its plate being fifty *digitri*1 wide (3 feet ½ inch). Frontinus, however, who mentions this statement of Vitruvius, thinks it more probable that the names came from the size of the diameter

1 The Roman *pala* or foot, which was about ¼ inch shorter than the modern English foot, contained sixteen *digitri* or twelve *uncia* (inches).
of the finished pipe, e.g. that a *pistula quinaria* was so called a *diametro quinque quadrantum*, the *quadrans* being the fourth of the *digitus*, and the *quinaria* therefore measuring 5⁄4 of a *digitus* (or 1 2⁄5 *digitus*) in diameter; see Front. 25.

The capacity of pipes was measured in *quinariae* units; the ten-*quinariae* pipe measured about 1 2⁄5 inch in internal diameter at the widest part of the irregular or pear-shaped oval—a form produced by the way in which the pipes were rolled round the wooden core. The twenty-*quinariae* pipe measures about 2 1⁄2 inches, and the other sizes in proportion. A pipe in the Museo delle Terme is inscribed CXX to show that its capacity is 120 *quinariae*; it measures about 18 inches in diameter.

*Inscriptions on lead pipes.* The importance of inscriptions on lead pipes has only been realised within the last few years, mainly owing to the care of Comm. Lanciani, who with wonderful industry has collected an immense number and published them in his valuable *Commentarii di Frontino*.

Many tons weight of these interesting documents (as inscribed pipes may be called) have been melted down without any note being taken of their inscriptions. Even as late as 1878, Prince Alessandro Torlonia melted over 2000 pounds weight of inscribed lead pipes, which were dug up in his estate in Rome, and the few that it has been thought worth while to put in museums are usually scattered and hidden.
away, so as to be almost inaccessible for purposes of study and comparison.\(^1\)

With the aid of inscriptions on *fistulae*, Comm. Lanciani has identified the sites of eighty-one houses in Rome from the owner's name being inscribed on the pipes, and also eighty-eight suburban estates or villas. He has also gained much interesting information as to the distribution of water from the various *Castella* of Rome and many collateral historical and topographical facts.

The earliest existing inscribed pipes date from the reign of Augustus, and they continue in an almost unbroken series down to the fourth century A.D. The most numerous are of the reigns of Domitian, Nerva, Trajan, Severus, and Caracalla; after Trajanus Decius the number steadily declines. These inscriptions record a large number of facts, such as the name of the reigning Emperor, with sometimes the Consuls for the year; the name of the *Procurator Aquarum*, and other officials under the *Curator*; the plumber who made the pipe; the owner of the house, with, more rarely, the name of the house or estate; and lastly the fact of the water being an Imperial concession.

The capacity (*lumen*) of the tube is sometimes, but not always, inscribed on it in large numerals, giving the number of *quinariae*; see fig. 97. The smallest existing specimen is marked III., and the largest pipes reach to over CCC *quinariae*.

A few pipes are recorded by Gruter and others to have been inscribed with the name of the water they carried, but these are probably spurious, with perhaps the exception of one of about the year 366 A.D., which has the inscription *AQUA PINCIANA·D·N·VALENTINIANI·AVG*. This pipe was found in 1757 in the *Horti Sallustiani*.

The lists of emperors' names on pipe inscriptions include

\(^1\) A large collection of inscribed pipes found in Rome and at Ostia is preserved in the great Museo delle Terme.
nearly all from the reign of Augustus down to Valentinianus II., 375 A.D., when the Imperial series closes; see fig. 97 A.

Several pipes inscribed with the name of Pope John I., 523-526, were found in 1707, near S. Lorenzo fuori le mura, but this is almost an isolated example; the inscription was SALVO · PAPA · IOHANNE · STPAN · PR · (Stefanus Praepositus) REPARAVIT.

Names of Emperors, Consuls, and other officials. The earlier examples have the name of the emperor only, as, for example, TRIB · CAESAR · AVG (Tiberius) or NERONIS · CAESARIS · AVG (Nero). Another from the Thermæ of Nero, near the Pantheon, has the Procurator's name in addition, SVB · ONESIO · AVG LIBERETO · PROCV · NERONIS · CLAVDI · CAES · AVG. The Greek name Ιωσήφ occurs in many of these inscriptions. One of Vespasian has on it the name of the water-works office in Rome—IMP · AVG · VESPASIANI · STATIO · VVRBANA · AVG.

One of Nerva is marked as belonging to a private statio of the emperor's—IMP · NERVAE · CAES · AVG · STAT · PATRIMONI AVG · N. Another has IMP · ANTONINI · AVG · PH · STATIONIS PATRIMONIS · SVB · CVRA · DIOSCORI.

The commonest formula on pipes of the latter part of the first and the second century gives first the Emperor's name, then the Procurator's, and last the plumber's, e.g. IMP · CAES · TRAIAN · HADRIANI · AVG · SVB · CVRA · HYLAE · AVG · LIB · PROC · A · LARCIUS · EUTYCHES · FEC; i.e. in the reign of Hadrian, under the care of the Procurator Hylas a freedman of Augustus, A. Larcius Eutyches made it.

In some cases the exact year is indicated by the number of the Emperor's consulship, e.g. IMP · DOMIT · AVG · GER·M · XVI COS (93 A.D.); or by the names of the two consuls for the year, e.g. PISONE · ET · IVLIANO · COS (175 A.D.), TESSERA · CASTRORVR [sis]; this interesting inscription was found in the Praetorian Camp in 1862.¹

¹ The tessera was the watchword for the night written on a slip of wood, and sent round the camp before dark; see Livy, xxvii. 46; and the
Another pipe inscription found on the Quirinal in 1876 is dated by the Consuls' names in the joint reign of Marcus Aurelius and Lucius Verus, 162-163 A.D., thus—

IMP. CAES. AVRELI. ANTONINI. ET. AVRELI. VER.
SVB. CVRA. CAECAI. DEXTRIANI. PROISMAL. F
AVRELI. CAES. III. ET. COMM. II. COS

A pipe found at Ostia in 1867 has the names of Severus and his two sons Caracalla and Geta—IMP. L. SEPTIMI.
SEVERI. ET. M. AVR. ANTONINI. AVGG. ET. GETAE. CAESAR.
SVB. CVRA. PROC. VENVS. AVG. LIBERT. EX. OFF. T.
FLAVI. TITI. LIB.; i.e. in the time of the two Augusti Severus and Caracalla, and of the Caesar Geta, under the care of the Procurator Venustus, an imperial freedman; out of the workshop of the freedman T. Flavius Titidates.

Imperial concessions of water are recorded by the words EX. INDIVIGENTIA. OR. EX. LIBERALITATE, followed by the Emperor's name; see vol. ii. p. 319.

Names of Empresses also occur, e.g. PLOTINAE. AVG., on a pipe found near the Emporium, and MATIDIAE. AUGUSTI. FILIAE.
Q. PUBL. SECVNDVS. FECIT—of Matidia the daughter of Augustus; Q. Publius Secundus made it.

Other officials' names, instead of the Procurator Aquarum, sometimes occur, such as the Tribunus Aquarum, and the Scribae or secretaries of the Curator, but these varieties are rare. The chief official of all, the Curator, did not impress his name on the pipes, except in the case of those in his own private house; see below.

Plumbers' names. Plumbers' names, like those of brick-makers, are given either in the nominative with FECIT, or in the genitive after EX. OFFICINA; one of the pipes found in the tesserarius was the soldier who distributed information as to the watch-word; see Orelli, Jascr. No. 3462. Its meaning inscribed on a pipe is not clear; it may simply mean stamp of the Praetorian Camp.

Caracalla is usually called Marcus Aurelius Antonius (Pius).
Horti Sallustiani in 1886 was inscribed thus, OFFICINA - FORTUNI.
A considerable number of female plumbers' names occur, e.g. IVLIA - CLEOPATRA - FECIT; another pipe has FLAVIA - GLYCERA - FECIT.

Names of house-owners. The names of private owners are very numerous; several names often occur on one pipe, e.g. M - POSTVMI - FESTI - ET - PAVLLAE - EIVS - ET - PILORVM ET - POMPEI - HELIODORI—Marcus Postumus Festus and Pauila his wife and his sons, and Pompeius Heliodorus.

A pipe recently found on the Esquiline has M - COCCEN NER[VAR]. M. Cocceius Nerva was Curator Aquarum from 24-33 A.D., but his name is here inscribed in his private capacity of a consumer of water. He was Consul-Suffectus in 22 A.D., and his name is inscribed on the front of the Tullianum as one of its restorers; see vol. i. p. 153. M. C. Nerva was an intimate friend of Tiberius, and in 33 A.D. committed suicide from grief at the cruelties and murders committed by the Emperor, over whom he had lost all influence.

On some pipes is recorded the fact that the imperial concession of water was renewed to a man's heirs, e.g. HEREDVM SPVRII - MAXIMI - EGREGII - VIRI.

The names of lady house-owners are common, as, for example, LAVE - AGACLYTI - SABINAE - AVG - SOROR; and CORNELIAE - PRAETEXTATAE - Caii - Filiae; and SEPTIMIAE - CALLICRATIAE; and JULIAE - CALICES - ET - LIBERT - EIVS - ET - ALYIITI AVG - L - LIBERT; that is, the right to the water was shared by Julia Galice, her freedman, and Alyptus an Imperial freedman.

This last inscription is on a lead pipe of 15 quintariae capacity, which was found in the Via Alessandrina.

Topographical indications, such as names of estates, sometimes occur, but are rare. A pipe from the Palatine has [DOM]VA - AVGVSTANAEM. Some marked as belonging to Sallust's estate are mentioned in vol. ii. p. 242.

1 Probably these were women who owned a plumber's officina worked with slave labour.
Donati (Roma, p. 400) and other old topographers, mention a pipe found near the Pantheon, which was marked Temple of Matidia—Templo·Matidiaé; but this inscription is suspicious, from the word templo instead of the nominative templum being used.

A pipe of the sixth century A.D., in the Museo Kircheriano, is inscribed + XEΝOΔ·ORFANΟNT (ξενοδοκείων ὀρφανο-τροφείον); a Xenodochium or Asylum for the orphan children of foreigners, possibly that which Belisarius is recorded to have built; see Bull. Com. Arch. Rom. vii p. 124.

Several pipes have been found in the Praetorian Camp inscribed CASTR(a) PRAEΤΟR(iα); see also vol. ii p. 332.

In the same place was found the following interesting inscription on a pipe which is now in the Museo Kircheriano—IMP·L·SEVERO·III·ET·ANTONINO·COS·(202 A.D.) CVRA·GEN·FYRIO·FESTO·TRIBUNO·COHORTIS·VII·PRAEPOSITO·OPERUM·MINORUM·CVRATORE·MESSIO·ATTICO·CHOR·VII·PI.¹

These include nearly all the known examples of Roman pipes inscribed with the name of the building to which they belonged.

The Aqueducts of Rome.

In the time of Frontinus, Curator Aquarum from 97 to 106 A.D., there were nine aqueducts to supply Rome.

1. The Aqua Appia was built at the same time that the Via Appia was constructed by the Censor Appius Claudius Caecus, 313 B.C., whose Censorship was prolonged to allow him to complete the work; see Livy, ix. 29; Diod. Sic. xx. 36; Front. 79. The start of the water-channel is mentioned by Frontinus (§ 5) as being by the Via Prænestina, between the seventh and eighth milestones, measured from the Porta Esquilina.

This appears to be a mistake; the real source has been

¹ On this inscription see Henzen in Ann. Inst. 1864, p. 6; and Mommsen, Bull. Inst. 1866, p. 127.
discovered in the reservoirs formed in the ancient quarries, now called *tumulo della Rustica*, about 50 feet below the level of the ground. Lanciani suggests the probable emendation *Via Caffarina* instead of *Praenestina*.

The subterranean *specus* of this aqueduct has been at various times discovered in several places in Rome; at one point it is now accessible, and is well preserved for a long distance, namely, where it passes through the old tufa quarries in the Aventine near the Church of S. Saba. Its line near this point is now traversed by the modern *Via di Porta*; see Descemet, *Fouilles a S. Sabina*, Paris, 1863.

The termination of the *Aqua Appia* was near the Tiber bank, close by the *Marmaratum*; the last part of its course for a few hundred yards was on low arches close inside the line of the Servian wall; with this exception the *specus* of the *Aqua Appia* was subterranean. Additional springs were brought to the *Aqua Appia* by a branch added by Augustus, which was called the *Aqua Appia Augusta*.

II. The *Anio Vetus* was begun in 272 B.C., forty years later than the *Appia*, by the Censor Manius Curius Dentatus out of the spoils won from Pyrrhus, and in 270 B.C. was completed by M. Fulvius Flaccus, who had been appointed, together with Dentatus, *diuiner aquae perdendae*; see Front. 80, and Livy, ix. 29. Its length was 43 miles; 10\(^1\) miles from its source in the hills to a *piscina* near Tibur (Tivoli), and 33 miles thence to Rome; its course being very circuitous; see Aur. Victor, *Fixi ill. 43*; and Livy, ix. 29, and x1. 51.

Of this long channel only about a quarter of a mile was above ground.

The *specus* of the *Anio Vetus* has been identified below the Claudian Aqueduct at the Porta Maggiore; other pieces of the channel and remains of large cisterns were discovered in 1873-79, while laying out the new *Via Principe Amadeo*, Carlo Alberto, and Napoleone III.

¹ Not 20, as is sometimes stated.
A long piece of the *specus* was formed in the earth of the agger of Servius, and ran parallel to the wall. Where the *specus* was above ground, it was built of massive blocks of peperino; see Lanciani, *Com. di Front.*, Tav. iv.

At one point about 30 feet outside the remains of the Servian wall and agger, near the railway station, there is still well preserved a curious *inspection-shaft* (*ptolcus*), made to enable workmen to reach the subterranean *specus* of this aqueduct; see Vitr. viii. 6. 3. It stands up above the excavated ground-level like a small circular tower, about 12 feet high and 10 feet in diameter. It is built of massive blocks of tufa and travertine, and has a small door for access, in the sill of which are the pivot-holes of two wooden folding doors.

A branch subdividing the water of the *Anio Vetus* into two parts was built by Augustus, starting from the old *specus* about 3 miles from its termination in Rome, then passing by the *Amphitheatrum Castrense*, and for some distance along the line of the Aurelian wall towards the *Porta Latina*. The existing remains of this branch are of concrete faced with *opus reticulatum*.

III. The *Aqua Marcia* was built by the Praetor Q. Marcius Rex in 144 B.C., by order of the Senate at the same time that they had the two existing aqueducts restored; see Dion Cass. xlix. 42; Front. 81; and Pliny, *Hist. Nat.* xxxi. 41, and xxxvi. 121. Frontinus, quoting Fenestella, tells us that 180 million sesterces were voted to build this aqueduct, that is, about £1,800,000. This is commemorated on a *denarius* of the *Gens Marcia* with *obverse* a head of King Ancus Martius and the *legend ANCVS*; *reverse* a rude representation of the arches of an aqueduct inscribed *AQVA-MARCIA*; on it is an equestrian statue—*legend, PHILIPVS*. The supposed descent of the *Gens* from Ancus Martius, and the construction of the Marcian Aqueduct, were the two chief distinctions of the family, and were therefore commemorated on the *denarii* struck by *monetarii* of this *Gens*. 

VOL. II
The source of this aqueduct is about 38 miles from Rome, 3 miles to the south of the Via Faleria; its last 6 miles are on massive peperino arches, many of which are still well preserved, but about seven-eighths of the length of the specus was subterranean. Remains of the specus still exist in the Sabine Hills above Tivoli, and also on the slopes below it. The water was brought into Rome at a level high enough to supply the Capitoline Ars.

A short branch, called the Aqua Augustus, was added by Augustus, and this doubled the original supply of water, as is recorded in the Ancyrlean inscription—AQVAM - QVAE - MARCIA APPELLATVR - DVPPLICAVI - FONTE - NOVO - IN - RIVVM - EIVS INMISSO. Its water is exceptionally pure and cold—nicex et frigore ducex Marcia, as Statius calls it, Silv. I. v. 25; see also Mart. vi. 42, 18, and Vitr. viii. 3. 1.

One of the cippi jugerales, set up by Augustus to mark the band of ground, 30 feet wide, belonging to this aqueduct, has been found; it is inscribed—MAR(cia) · IMP · CAESAR · DIVI · F AVGVSTVS · EX · S · C · § · CXCVII · P·C(aes) · CCL, i.e. Marcian (Aqueduct) the Imperator Augustus (adopted) son of the divine Caesar, by command of the Senate; Cippus Number 1197, distance from the end 250 feet; L for 50, the archaic form of L, is used here. This interesting inscription is now built into a wall over the place where it was found.

Two inscriptions, now preserved by the main entrance of the Basilica of S. Lorenzo, record the restorations and increased water supply with which Titus and Caracalla improved the Marcian aqueduct. They are as follows—IMP TITVS · CAES · DIVI · F · VESPASIANVS · AVG · FONTE · MAX · TRI-

1 The Via Valeria was a continuation of the Via Tiburtina, from Tibur (Tivoli) onwards over the Sabine Hills.

2 The Roman numeral for 50 passed through three stages, first ϊ, as on the earliest gold sixty-sestertii pieces struck about 217 B.C., then L, and lastly from the middle of the first century A.D. onwards the form L was used.
Evniciae - Potest - IX - (80 A.D.) IMP - XV - Cens - Cos - VII
Design - VIII - Rivom - Aqvae - Marciae - Restauravit - Dilapi-
Sam - Refecit - Et - AqVam - Qvae - In - Vsv - Esse - Desierat
Redvxit. The other, of Caracalla's time, runs thus—IMP
Caes - M - Avrelius - Antoninus - Pius - Felix - Avg - Part
Max - Brit - Maximvs - Pontifex - Maximvs - AqVam - Mar-
Ciam - Varius - Casibus - Impeditam - Purgato - Fonte - Excisis
Et - Perforatis - Montibus - Restitvta - Forma - Acquisitio
Etiam - Fonte - Novo - Antoniniano - In - Sacram - Vrbeem
Svam - Perduendam - Uvratv.

The Marcian Aqueduct ended near the Porta Capena and
was distributed over Regio II., the Caelian Hill. Its specus
can be well examined where it passes over the arch built by
Augustus (now the Porta S. Lorenzo), below the specus of the
Aqua Julia and Tepula; see fig. 99. At this point, where the
aqueduct spanned an ancient road, the whole is of travertine;
at other places peperino and tufa blocks were used. Some
of the piers of this triple aqueduct were destroyed in 1884;
see vol. ii. p. 254. The Marcian water is still brought to
Rome under the name of the Aqua Pia, a restoration com-
pleted in 1870, and solemnly inaugurated by Pope Pius IX.,
only a few days before the Italian army entered Rome, putting
an end to the temporal power of the Pope.

IV. The Aqua Tepula was constructed by the Censors Cn.
Servilius Caepio and L. Cassius Longinus, in 127 B.C.; see
Front. 82. It began about a mile and a half from the tenth
milestone on the Via Latina. Its specus is shown on fig. 99,
between the Aqua Marcia and Julia. This water was called
tepula, a form of tepida, from its being slightly warm.

V. The Aqua Julia; see Front. 83. This and the two last-
mentioned aqueducts were for a long distance carried on the
same row of arches, which were rebuilt in the reign of Augustus.

About half of the course of the Aqua Julia was subter-
anean; the other half being carried either on solid subtruc-
tions or on stone arches.
This new aqueduct, with the addition of the *Aqua Julia*, was constructed by M. Agrippa, when aedile, in 33 B.C. From

Arch built by Augustus where a triple Aqueduct passes over a Road—now the Porta S. Lorenzo.

A. Original inscription of Augustus.
B. Inscription recording restorations by Titus; the moulding of the pediment has been cut away to make room for this.
C. Inscription added by Caracalla; the architrave moulding has been cut away to make room for it.
D. Peristyle arch of the Aqueduct.
E. F. G. Specus of the *Aqua Marcia*, *Tepula*, and *Julia*, now exposed by the removal of their sides.
H. Part of one of the towers of Aurelian's wall.

*Fig. 99.*

Tinus (cap. 19) says its level was the third in order, coming after the *Anio Novus*, which was the highest, and the *Aqua*
Claudia, which was the second. Its specus is shown in fig. 99, above the *Aqua Tepula* and *Marcia*.

The rebuilding of this part of the aqueduct by Augustus in 5 B.C. is recorded by an inscription on the side of the upper specus at the place marked A in fig. 99, *Aqua Julia*—IMP CAESAR - DIVI - IVLI - AVGVSTVS - PONTIFEX - MAXIMVS - COS XII - TRIBVNIC - POTESTAT - XIX - IMP - XIXII - RIVOS - AQRARVM OMNIVM - REFEKIT. Below this another inscription on the side of the specus of the *Aqua Tepula* records a restoration by Titus in 79 A.D.; see B in fig. 99.

Other restorations were carried out by Severus in 196 A.D., and by Caracalla in 212 A.D.; the latter is recorded by an inscription added under the cornice at C on fig. 99. Not only has the pediment been cut away, but even the mouldings of the architrave were hacked off to make room for the inscription of Caracalla. On the inner keystone of this fine arch an ox's head is carved, on the outside an ox's skull. All the moulded details, the cornice and caps of the columns and pilasters, are very finely designed and well executed.

In Rome itself the three specus were separated and carried in different directions. Ruins of the once magnificent *Castellum* of the *Aqua Julia*, built by Severus Alexander, exist in the modern Piazza Vitt. Emanuele; see vol. ii. p. 325.

The source of the *Aqua Julia* was a spring about a mile above the Monastery of Grottaferrata, not far from the twelfth milestone on the *Via Latina*. At various places near the source no less than nine of the original *cippi* of Augustus have been found in 1886-87. Each of them is inscribed thus—AQUA IVLIA - IMP - CAESAR - DIVI - F - AVGVSTVS - EX - S - C - CIVI pedes - CCX I.1 The first number is different in each, as it records the distance from the *castellum* in Rome. The second number is the same on all; it merely states the intervals of two *actus* at which the *cippi* were placed; see Lanciani in *Notiz. d. Scavi*, 1887, p. 558.

1 The archaic L for L is used.
VI. The *Aqua Virgo*; this aqueduct also was begun by Agrippa, while aedile in 33 B.C.; see FRONT. 84; Dion Cass. liv. 11; and Pliny, *Hist. Nat.* xxxi. 42. In the same year Agrippa, who was appointed by Augustus to the newly-instituted office of Curator Aquarum, is recorded (Pliny, *Hist. Nat.* xxxvi. 121) to have constructed for public use no less than 700 basins or pools (*lacus*), 500 fountains (*palientes*), and 130 *castella*, many of them richly decorated with statues and columns. Three hundred statues of marble and bronze, and 400 marble columns, were used in these works, all of which, Pliny says, were erected in one year, 33 B.C., which can hardly have been the case.

The main object of the *Aqua Virgo* aqueduct was to supply the *Thermae of Agrippa*; its source, as Frontinus says, was near the eighth milestone of the *Via Collatina*, fed by a spring, which, according to the story, was first pointed out by a girl to some thirsty soldiers, and was therefore called the *Aqua Virgo*. This aqueduct has been restored, and still brings a large quantity of pure cool water to Rome, supplying the magnificent Trevi fountain, and those in the Piazza di Spagna and the Piazza Navona, together with ten smaller ones, and a large number of streets.

Some of the original arches of this aqueduct as built by Agrippa have recently been discovered at three places; namely, in the garden of the Palazzo Bufalo (now Castellani); at the angle of the *Via delle Maratte* and the *Via della Vergine*; and in the court of the Palazzo Sciarra; see *Bull. Cam. Arch.* 1888, p. 61, and *Notiz. d. Scavi*, 1887, p. 447. The main *castellum* of the *Aqua Virgo* was on the Pincian Hill. Only about one-thirteenth of the course of the *specus* was above ground.

Another well-preserved piece of the ancient *specus* can be seen below the level of the street, in the court of No. 12 *Via del Nazareno*, behind the Trevi fountain. At this point a house has recently been pulled down so that this bit of the aqueduct is now visible from the street. The upper parts of
three arches, with engaged columns between them, are now exposed. Above them the spiculæ of massive travertine, decorated with an entablature, is visible, and is perfectly preserved. The top of the spiculæ is nearly level with the paving of the modern street. On both sides of the frieze is an inscription recording that this part was rebuilt by Claudius in 52 A.D., after the aqueduct had been injured by Caligula, probably while constructing his wooden amphitheatre near the Septa Julia; Suet. Cal. 21.

The inscription runs thus—TI. CLAVDIVS. DRUSI. F. CAESAR.
AVGVSTVS. GERMANICVS. PONTIFEX. MAXIM. TRIB. POTEST.
V. IMP. XI. P. P. COS. DESIG. III. ARCUS. DVCTVS. AQVAE
VIRGINIS. DISTVRBATOS. PER. C. CAESAREM. A. FUNDAMENTIS
NOVOS. FECIT. AC. RESTITVIT.

The date of this inscription (given by the tribunicia potestate V. etc.) is 52 A.D. The special ornamentation of this piece of the aqueduct is due to its being a part where a road passed under it, as is the case with portions of other aqueducts at the Porta Maggiore, the Porta S. Lorenzo, and the so-called "Arch of Drusus" near the Thermæ of Caracalla; see vol. ii. p. 172.

Another piece of the arches of the Aqua Virgo existed in the sixteenth century, where it crossed the Corso at the angle of the Via di Caravita. Other parts were found under the Church of St. Ignazio. The water of this aqueduct was distributed from eighteen Castello, in Regions vii., ix., and xiv.

VII. The Aqua Alietina was constructed by Augustus mainly to supply his great Naumachia, on the Transtiberine side of Rome. Frontinus (§ 85) says, tota extra Urbem consumitur, nomine Caesaris quinariorum, privatis quinariae egressi. It was supplied by the Locus Alietinus, now called Lago di Martignano, which was near the fourteenth milestone of the Via Claudia. The water was not fit to drink, and its level was the lowest of all the aqueducts—omnibus humidior Alietina est, as Frontinus (§ 11) says. The Naumachia of Augustus was in the plain between S. Cosimato, S. Francesco a Ripa, and...
the foot of the Janiculan Hill, where some remains of it have been discovered.

In 1887 an inscribed stone slab, covering part of the *specus* of a branch aqueduct from the Lago di Bracciano, was found near the *Via Claudia*, about 15 miles from the Porta del Popolo. Its inscription is the only epigraphic record of the *Aqua Albaetina* which is known. As restored by Prof. Barnabei it runs thus, (IMP - CAESAR - DIVI - F) AVGVSTVS - PONTIF - MAX (FOR)MAMMENTIS - ATTRIB - IN - RIVO - AQVAE - AVGVSTAE - QVAE PERVERIT - IN - NEMVS - CAESARVM - ET - EX - EO - RIVALIBVS QVI - (PER - B)VCCINAM - ACCIPIERANT - AQUAM - PERENNEM DEDIT). See Notiz. d. Scavi, 1887, pp. 181-186.

VIII. The *Aqua Claudia*, and IX. The *Anio Novus*, were both begun by Caligula in 38 A.D., and completed by Claudius in 52 A.D. The total length of the magnificent aqueduct which carries the *specus* of the *Aqua Claudia* is over 45 miles, of which 9½ miles are on lofty arches, and about 1000 yards on solid masonry.

The *Anio Novus* was nearly 62 miles long, of which about 9½ miles were above ground, some of the arches being as much as 109 feet high. As is mentioned below, these two aqueducts met about 3 miles from Rome, and from that point both *specus* are carried on the same arches. These are the finest of all the Roman aqueducts in length, height, and massive construction; see Front. 86.

The source of the *Aqua Claudia* was by the thirty-eighth milestone of the *Via Sublacensis*, near the start of the *Aqua Marcia*; it was fed by two springs, the *Fons Coerules* and *Fons Curtius*, as is recorded in the inscription on the *specus* over the double travertine gateway of the *Via Labicana* and *Practestina* (now the Porta Maggiore).

The *Anio Novus* started from a stream of that name near the forty-second milestone of the *Via Sublacensis*, where remains of its *incile* or inlet from the river-bank and * piscina* still exist. Near the city these two streams were united and
carried on the same arches, the *specus* of the *Anio Novus* being above that of the *Aqua Claudia*. Within the city the two waters were mixed—*Claudia et Anio Novus extra urbe proprio quaque rivo erogabantur, intra urbe confundebantur*, as Frontinus says, § 86.

That very splendid piece of this double aqueduct, which now forms the *Porta Maggiore*, is worthy of close examination, as the two *specus* are well preserved, and the whole structure is a very noble piece of masonry. These special arches were built with exceptionally elaborate architectural decorations, because two roads passed under them, the *Via Praenestina* and the *Via Labicana*. It was an invariable custom among the Romans to build in a decorative way any arch of an aqueduct under which a road happened to pass.

The inscription on the upper *specus* over the *Porta Maggiore* is—

```
TI CLAVDIVS DRUSI F CAISAR AVGVSTVS GERMANICVS PONTIF MAXIM TRIBVNICIA POTESTATE XII COS V IMPERATOR XXVII PATR PRAE. A QVM CLAVDIAM EX FONTIBVS QYT VOCABANTVR CAERULEVS ET CVRTIVS A MILLIARIO XXX XV ITEM ANIENEM NOVAM A MILLIARIO LXII SVA IMPENSA IN VREEM PERDVCENDAS CVRAVIT.
```

The lengths of the aqueducts given in this inscription, namely, the *Aqua Claudia* 45 miles long, and the *Anio Novus* 62 miles, were the actual length of the *specus*, not the shortest distance from point to point; compare Pliny, *Hist. Nat.* xxxvi. 122.

Below this, on the *specus* of the *Aqua Claudia*, is another inscription, recording the restoration of this aqueduct by Vespasian in 71 A.D., *AQUAS ... INTERMISSAS ... DILAPSAS QVE*. It must have been badly built to need repair within twenty years of its construction.

A third inscription, lower still, records another restoration by Titus in 81 A.D., the last year of his reign. About 200 A.D. it was again restored by Severus and Caracalla, who built...
brick-faced concrete arches under many of the stone arches of Claudius.

In the reign of Nero this Claudian aqueduct was extended over the Caelian to the Palatine, by a magnificent series of double arches of concrete, faced with unusually neat brickwork. A great number of the arches of this extension still exist in good preservation, with, in places, later arches built under them by Severus in 201 A.D., probably to support them after injury by an earthquake.

A number of the arches, two tiers high, near the Lateran Basilica, are specially well preserved. The later arches are added as supports in the upper tier of arches of Nero’s aqueduct: their brick facing is very inferior in neatness to the more beautiful work of Nero’s time, when, in colour, quality, and fineness of jointing, Roman brickwork was at its highest point of perfection.

A branch built by Nero, part of which is still well preserved, diverges from the main line of his extension, passing over the Arch of Dolabella on the Caelian towards the Colosseum, while the rest of the water was carried on to the Palatine.

A fine lofty gateway where a road passes under this aqueduct exists near the Porta Maggiore, decorated with moulded brick imposts and short string-courses. A large marble slab for an inscription once existed over this archway on both sides; the slabs are gone, but the holes to fix them are visible.

Magnificent remains of the Claudian Aqueduct, built of massive blocks of tufa, still exist for many miles across the Campagna.

1 The impost moulding at the springing of the arch is a large cymatium, formed of sixteen courses of brick. This part of Nero’s aqueduct, with its lofty archway spanning the road, is one of the finest examples of brick-faced concrete which exists; the facing of the arches, with their two rings of tegulae bipolatae, or 2-feet tiles, is extraordinarily neat and close-jointed.
In addition to the above-mentioned nine aqueducts which existed in the time of Frontinus, two others were added later.

X. The *Aqua Trajana* was constructed by Trajan in 109 A.D., three years after the death of Frontinus, to supply the Transtiberine quarter of Rome. Its level was high enough to bring water to the highest part of the Janiculan Hill. The completion of this aqueduct is recorded on the reverses of bronze coins of the year 110 A.D., with the *legend Aqua Traiana*, and a representation of the water as a river-god reclining on the ground holding a reed, and with one arm resting on an urn from which issues a stream of water; over him is an arched canopy supported by columns.

In 1880 a slab of travertine was found on the course of this aqueduct, about 10 miles from Rome, with an inscription recording its construction, and the purchase by Trajan of a strip of land 30 feet wide, the usual width for the reserved strip on which no planting was allowed. After the name and titles of the Emperor, with the date 109 A.D. (*TR. POT. XIII*), the inscription runs—

*AQUA* *TRAIANA*

*PRCVNIA* *SVA IN VRBM PERDVXIT EMPTIS LOCIS PER LATITVD [edus] XXX.

The source of this aqueduct was derived from a number of springs near the *Lacus Sustinum*, the modern *Lago di Bracciano*. Its termination was at a magnificent *castellum*, on the top of the Janiculan Hill, which is shown on several coins of Trajan, adorned with columns and a reclining male figure with an urn; the legend is *S. C. AQUA TRAIANA*.

This aqueduct was restored by Belisarius, after being cut by the Gothic leader Vitiges in 537 A.D. It was repaired by several of the Popes, and still supplies with a copious flood of water the great Fontana Paolina behind S. Pietro in Montorio, and the fountains in front of S. Peter's, together with a large area of the Transtiberine city.

1. Besides this and the above-mentioned *Aqua Vercine*, there are two others of the old aqueducts the water of which is still brought to supply
The Fontana Paolina, with a magnificent flood of water pouring into a large stone basin, stands on the site of the ancient castellum of Trajan. It was constructed in 1611 by Pope Paul V.

XI. The *Aqua Alexandrina* was constructed about 226 A.D. by Severus Alexander, to supply his enlargement of the *Thermoe of Nero* in the *Campus Martius*, near the Pantheon, called after him the *Thermoe Alexandrinas*; see vol. ii. p. 144. Its source was between Gabii and Lake Regillus, about 14 miles from Rome. It is the same water which now supplies Rome under the name of the *Aqua Felice*, by means of a restoration made in 1586. The ancient course of the *Aqua Alexandrina*, after reaching the walls of Rome, is very uncertain.

This was the last aqueduct which was constructed, and the whole number of separate aqueducts never exceeded eleven.Procopius makes up the number to fourteen, by counting as distinct aqueducts (ὄχητοι) 1 what were really only branches, made to tap the existing specus of certain of the pre-existing aqueducts.

Thus he includes the *Specus Octavianus* leading from the *Anio Vetus*, and the *Specus Antoninianus*, a branch from another aqueduct, made to supply the Baths of Caracalla; and thirdly, he counts the *Aqua Augusti*, constructed by Augustus to supply certain country estates of his, but which did not come near to Rome. The *Aqua Algentina* appears to have been a name invented from a corrupt reading of *Alsalina*; see Jordan, Topogr. p. 223 seq., and Lanciani, *Com. di Franc*. p. 185.

Rome. These are the *Aqua Pia* (ancient *Aqua Marcia*) and the *Aqua Felice* (*Aqua Claudia*).

1 More correctly ὄχητος was used in a more limited sense, meaning the actual water-channel or *specus*, the whole aqueduct being called ἱππαργύγας. Compare an interesting inscription in the Louvre (*Greek* census, No. 133), which records the construction of an aqueduct at Mylassa in the time of Philip Aridaeus, 323 to 317 B.C.
The amount of pure water which was continually being poured into Rome by all these aqueducts must have been something enormous, probably not less than about 340 millions of gallons a day, far exceeding the supply of any modern city. It is not without reason that Pliny and Frontinus speak of the Roman aqueducts as being among the chief wonders of the world.

Public Fountains. Fountains existed in enormous quantities all over the city, either in the form of large basins of water (lacus) or upward-spouting jets of water (sulientes). The number of these set up by M. Agrippa in the reign of Augustus is mentioned above, vol. ii. p. 342.

The Regiomontan Catalogues give the number of lacus in each Regio of the city, in many cases amounting to as many as eighty in one Regio; see Urlichs, Ged. Topogr. pp. 3 to 27. The larger fountains combined both lacus and sulientes, large marble basins and spouting jets of water; many of these were large and magnificent structures, usually decorated with marble columns, linings, and statues in niches both of marble and of gilt bronze.

The Nymphaeum of Severus Alexander, which received the Aquis Julia, is the finest existing example of one of these; see vol. ii. p. 325.

The meta sudans (so called) by the Colosseum is almost the only existing example of a fountain which had jets of water pouring into a large circular basin. Nothing now exists but the brick and concrete core of the lower part of the fountain, which was originally more than three times its present height; in shape it was a tall marble-lined cone, with water issuing from the summit, and from various points below.

Its original form is shown on a sculptured sarcophagus now in the galleria lapidaria of the Vatican. Near the base were niches for statues holding urns, which can still be traced in the existing though much restored core of the lower part.
A central circular hollow, 2 feet 3 inches in diameter, contained the rising lead pipes to supply the upper jets.

The brick facing appears to be of Flavian work, and the fountain is shown on coins of Domitian by the side of the Colosseum, so it is probably of about the same date as the great Flavian Amphitheatre. The name *meta sudans* does not occur earlier than the *Regiomontana Catalogues* of the fourth century A.D. Any tall circular object was called a *meta*; the form of this fountain resembled somewhat the *metae* or goals at the ends of the *spinae* in the Circi; the epithet *sudans* (sweating) was probably applied on account of the way in which the water seemed to ooze from it.

The colossal bronze pine cone, now in the Vatican, was a magnificent and fanciful sort of fountain. Large numbers of small jets spouted out from its whole surface. The effect of such a mass of gold-plated bronze in the centre of a large marble basin of water must have been very splendid. A further description of it is given above in vol. ii. p. 299.

Some small *lacus* or shallow basins of water have been exposed among the row of buildings along the north-east side of the *Via Nova*, near the Arch of Titus. These are divided into several shallow rectangular basins lined with the hard *opus signinum*, or cement made of pounded brick, which was always used for water-channels and cisterns; see vol. i. p. 79. The various compartments are arranged so that one overflowed into the other; they look as if they were intended for washing clothes. A great number of isolated fountains appear to be shown on many fragments of the *Marble Plan of Rome*; see Jordan, *Forma Urbis Romae*.

*Private Fountains*. An enormous number of small fountains existed in the courts and gardens of the private houses of Rome. Many of these were very beautiful and costly structures made of white and coloured marbles and porphyries, decorated with statuettes in marble and gilt bronze. Great invention and fancy is shown in the endless variety of the
designs of these private fountains. In many of them the jet of water spouts from a fish, a shell, or some other object held by a figure of Cupid or a Nymph. In some cases the fountain is in the form of a small marble aedicula; the water issuing from the miniature building and running down its steps into the surrounding basin. A very pretty example of this is preserved in the cloister of the Museo delle Terme. Some of the most graceful fountains are in the form of a large delicately fluted basin of paronazetto or other richly coloured marble, set on a slender stalk of Oriental alabaster. A jet of water sprang up from the middle of the basin.

A favourite kind of fountain, especially in gardens and open courts, was in the form of a niche lined with brilliant glass mosaics bordered with an inlay of shells; below the niche was a marble tank or basin into which the water poured from a statuette or from a lion's head set in the glass-lined niche. Some very perfect examples of this have been found at Pompeii; those found in Rome are mostly in an inferior state of preservation. In many cases flowers and water-plants were placed round the margins of the fountains, either in pots or in earth which filled hollow channels at the edge of the water. The size of the fountains, of course, depended on the amount of water which had been conceded to the owner of the house; some poured forth a very copious stream; others were devised to make the most of a minute trickle of water of no greater volume than would be supplied through a goose-quill.

In ancient Rome, as in Rome of Papal times, the public and private fountains must have been one of the most beautiful and striking features of the city, on account of their enormous number, their graceful designs and rich materials, and also from the astonishing volume of pure crystal-like water which, during winter and summer, day and night, was always being poured forth, sparkling in the brilliant sunshine, which in Rome is so seldom broken by rain or clouds.
CHAPTER XI

ROADS AND BRIDGES OF ROME.

THE ROADS OF ROME.

The Roads of Rome ranked with the Aqueducts, as being among the most costly and carefully constructed pieces of engineering which the inartistic but practical Romans produced with such skill and disregard of human labour.

The construction of the paved roads, which were called viae silice stratae, resembled that described by Vitruvius, vii. 1, for ordinary pavements; see vol. i. p. 80. Great care was taken to carry off rapidly the rain water that fell on the impervious closely-jointed paving.

At v. 9, 7, Vitruvius gives directions for the formation of clauces along both sides of the whole course of each new-made road, with drain-pipes at intervals to carry the surface water from the road into the drains.

Certain modifications were employed according to the different character of the ground over which each road passed; in a rocky place the statumen or lower bed of rough stones was omitted, and the rock was carefully levelled to receive the radius and nucleus, on which lava paving (silex) was bedded.

On marshy ground the statumen was replaced by wooden piles; and where the road passed over a valley it was frequently kept to an even level by being raised on a viaduct of massive masonry, like that of an aqueduct, either constructed
with a solid wall or with rows of arches,¹ according to its height. This latter kind of road was called *Via fornicata*; see Livy, xxii. 36. The oldest of the roads of Rome, the *Via Appia*, is built on substructures of solid masonry where it passes through the valley of Ariccia and elsewhere. In other places, to avoid *débours* and to keep the road as level as possible, deep cuttings through the hill were formed, in some cases 50 or 60 feet deep, sunk through the solid rock.

In other cases actual tunnels were quarried out, in order to carry a road straight through a hill. The most remarkable example of this is between Naples and Puteoli, where the road passes through a magnificent rock-cut tunnel about half a mile long, nearly 30 feet wide, and varying in height from 25 to 30 feet, except at the entrance, where the height is nearly 90 feet. This tunnel, which is mentioned by Seneca and Petronius, probably dates from the time of Augustus. It is still in use.

Some details with regard to the formation of a Roman road are described by Statius (Silv. iv. 3, and 40 to 53) in his account of the repair of part of the *Via Appia* by Domitian. The margins of the road were marked out by the digging of two ditches, *fossae*, within which the *gremium* or enclosed space was first excavated and then filled in with the foundations for the paving, *dorsum*, so called from its being curved to throw off the rain water.

The paving of the central part of the *Via Appia* and other chief roads was made of large blocks of lava (*silex*), of polygonal shape, jointed with the most minute accuracy. The larger pieces measured about 4 feet by 3 feet. These blocks have in most places been carelessly relaid in late times, and present

¹ The *Pont du Gard*, near Nimes (*Nemaeus*), is the finest existing example of a combination of aqueduct and viaduct crossing a valley on three tiers of arches. The road is carried on the top of the second tier of arches, the water-channel being at the summit on the third tier.
a very different appearance from what they did under the Republic and early Empire.

The one fragment of ancient road in the Forum which still exists in its original state, with closely fitting joints, is figured above in vol. i. p. 251.

The principal roads varied in width from 10 to 15 feet; but some of the small cross roads were only 4 feet wide. The lava paving was bordered by a massive curb, usually of tufa, peperino, or travertine. The latter was used in the Forum Romanum along the Sacra Via, and the road which skirted the opposite side of the central paved space.

The side pathways (margines) appear to have been laid with gravel (glecco) outside Rome, and inside the city with rectangular slabs of travertine or other hard stone like modern flagging, **suse quadrato strate**. The phrase used for constructing a road was **viam munire or sternet**; see inscriptions and coins quoted below at pp. 357 and 358.

The earliest road which was constructed in this solid way was the **Via Appia**, which led from Rome to Capua, and was extended in later times to Brundusium (Brindisi). It was made, according to Frontinus and Livy, ix. 29, by the Censor Appius Claudius Caecus in 313 B.C., at the same time that he constructed the first aqueduct which brought the **Aqua Appia** to Rome. Earlier roads of course existed, but were probably not paved with stone.

An abundant supply of lava for paving was quarried out of the great stream which had flowed from the Alban Hills to within 3 miles of Rome; this is still quarried for the paving of the modern streets at a place near the tomb of Caecilia Metella. For some miles the **Via Appia** passes over this extensive flood of lava, and a great part of its old paving still exists, especially near the foot of the Alban Hills, for 2 or 3 miles towards Rome.

\[1\] In some places along the **Via Latina** the curb as well as the central paving is made of lava.
Livy (x. 23) mentions the use of saeurn quadratum, or rectangular slabs of stone for small paths; he says that a foot-road (semita) was laid in this way by the two Ogulni, aediles for the year 296 B.C., out of the fines they imposed, from the Porta Capena to the Temple of Mars, which stood outside the gate. At xli. 27, Livy appears to say that as late as 174 B.C., roads were silice stratae only within the city, and that gravel was used outside; but the passage is much mutilated, and he is probably referring only to the gravel side-walks. In this passage he states that the Clivus Capitolinus and the Emperor by the Tiber quay, together with various other covered walks or porticus, were paved with lava in 174 B.C. The fragment of road shown in vol. i. p. 251 may possibly be of that date.

Gaius Gracchus did much in the way of paving the Roman roads and constructing new ones, some of them on raised viaducts. He also set up milestones, and in other ways improved the means of traffic; see Plutar. G. Gracch. 7.

Administration of the roads. During the early years of the Republic the roads were under the care of the Censors (see Cicero, De Leg. iii. 3, and Aur. Victor, Vit. III. 72), and failing them under the Aediles. In the second century B.C. four officials, called quattuor-viri viarum, were appointed, and inscriptions show that these lasted till the reign of Hadrian or later; oie te tēsarsei oie tōn en τo ἀστει ὀδών ἐπιμελούμενοι, as Dion Cassius (liv. 26) calls them.

Suetonius seems to say that the Quaestors had charge of the roads in the reign of Claudius, but that the Emperor gave them instead the management of gladiatorial shows; see Suet. Claud. 24, Collegio Quaestorum pro stratura viarum gladiatorum manus inuicit. In the reign of Augustus, M. Agrippa when aedile appears to have had the management of the necessary repairs to the roads added to his numerous other duties.

Curatores Viarum. In most cases, however, the extension or repairs were managed by a separate curator for each road—
an office of much dignity and importance. 1 Julius Caesar was curato of the Via Appia (see Plutarch, Cees, 5), and A. Minucius Thermus, in 65 B.C., was curato of the Via Flaminia; see Cicero, Ad Att. i. 1. Several of the emperors assumed this title, as is recorded in many inscriptions; see Gruter, Inscrip. cxlix.-elix.

Under the curato of each road were a number of mancipes or contractors, who carried out repairs and new works. One of these is mentioned on a monument erected to him by his wife, as MANCIPI - VIAE - APPIAE; see Orell. Inscrip. 3221.

The duty of supplying horses and mules free of charge for officials travelling on State business was a heavy burden on farmers and others. It was one of Nerva's generous acts to remit this form of impost, as is recorded on the rev. of one of his First Brasses, with two mules feeding, just liberated from their yokes, which are shown behind them; the legend is VEHICOVATIONE - ITALIAE - REMISSA. This coin is exceptionally fine as a work of art; it was struck in 97 A.D.

In later times the supply of horses and vehicles for posting on each road was managed by a class of postmasters called juniores junctarii. Both these subordinate officials are mentioned in a dedicatory inscription on the pedestal of a statue of Caracalla, which was found in 1884 in the House of the Vestals. This statue was set up by the MANCIPIES - ET IVNCTORES - IVMENTARII - VIARVM - APPIAE - TRAIANAE - ITEM ANNIAE - CVM - RAMVLIS.

The Via Trajana was a branch of the Via Appia, so called from Trajan who constructed it. This is recorded on the rev. of a common denarius of Trajan, which has a recumbent female figure holding a wheel, with the legend VIA - TRAIANA. The ramuli are the small cross roads leading from the three important roads mentioned before.

1 Pliny the younger, Ep. v. 14, speaks of the great honour that was conferred on Cornutus Tertullus when he was appointed curato of the Via Asculia.
The whole inscription records that this honorary statue of
Caracalla was jointly dedicated in 214 A.D. by the contractors
and postmasters of the Via Appia, Traiana and Annae with
their branch roads, who had received certain benefits from
the Emperor, under the patronage of three officials, Praefecti
vehiculorum, "Praefects of the posting carriages." This
pedestal still stands in the Atrium Vestae by the side of the
statues of the Vestals. It is dated by the names of the
Consuls for 214 A.D. placed at the side of the pedestal, as is
the case with other pedestals; see vol. i. p. 325.

Special rates were levied for the repair of the roads, the
inhabitants of each house in the city being taxed for the piece
of paving opposite.

The small country roads (Viae vicinales) were paid for by a
sort of parish rate (Sicul. Flacc. De Cond. Agr., ed. Goes. p. 9),
and were under the care of local officers called magistri pagorum.
The great roads were paid for either by grants from the public
aerarium, or by private munificence; very frequently the curator
of a road spent large sums on it out of his private fortune.
Many inscribed cippi have been found with records of the
liberality of different curatores.

An example of this is recorded in an inscription quoted by
Panvinio, Urbis Romae, p. 68—1. APPVLEIVS C F ANI
NIGER IIVIR CVRATOR VIARVM STERNENDARVM PEDVM
DECEM MILLIA VIAM SVA PECUNIA FRUIT.

A similar act of munificence on the part of Augustus,
who restored the Flaminian road, is recorded on an interesting
aureus, struck in 17 B.C. On the obverse is a head of
Augustus with legend, S P Q R IMP CAESARI; on the
reverse is shown part of the Via Flaminia carried on arches,
and surmounted by a triumphal arch, on which stands the
Emperor Augustus crowned by Victory, in a biga drawn by
two elephants; legend, QVOD VIAE MVNITAE SVNT. An inscrip-
tion given by Gruter, Inscipp. p. 149, records that this restoration
by Augustus was superintended by his nephew Gaius Caesar.
Another coin of Augustus, struck both in gold and silver, has on the rev. a very remarkable type recording the improvement of other roads by the Emperor; a *cippus* is represented inscribed: S - P - Q - R - IMP - CAESARI - QVOD - VITAE MUNDITAE - Suntu - EX - EA - Pecunia - Quam - IS - AD - SERVARIUM DETULIT, and round it is the *legend* L - VINICIUS - L - P IIIVIR.

The labour employed on Roman roads, as on their other great works, was mainly that of slaves or convicts. Suetonius mentions among the cruelties committed by Caligula that he ordered many people of high rank to be branded and sent to labour in the quarries and on the high roads, *ad metallam et ad viarum munitiones . . . condemnavit*; Suet. Cal. 27.

A class of workmen employed to take up and relay the paving blocks of lava (*silex*) were called *silvarei*; a large number of these were employed by the *curatores* of the aqueducts; see vol. ii. p. 318. An immense amount of labour must have been wasted in this way by the incessant changes in the concessions of water to private houses, necessitating constant alteration of the supply pipes under the streets.

**Milaburse.** Millarium. Along the sides of the roads milestones (*millia*ri*a*) were set up, recording the distance from the gate in the Servian wall from which the road issued. Under the Empire these were short marble columns, with simple base moulding and necking. The first milestone on the *Via Appia* was found *in situ* in 1584, and is now set at the top of the Capitoline steps; in addition to the numeral I, it has the name of the Emperor Nerva, who set it up, probably in place of an older one of tufa or peperino.

By measuring back one mile from the site of this milestone along the course of the road, Mr. Parker discovered the exact line of the Servian wall and its gate, the *Porta Capena*, through which the *Via Appia* issued.

The *Millarium Aureum* set up by Augustus in 28 B.C.,
was not a milestone, but an *itinerary*, or list of the chief places on the roads which radiated from Rome in all directions; with a record of their distances from the various gates of the city; see vol. i. p. 264.

Three interesting itineraries, giving the names and distances of the various posting-stages and resting-places on the road from Rome to Cadiz, have been found engraved on silver vases which had been thrown as votive offerings to Apollo into the hot springs at Vicarello near Lake Bracciano, the ancient *Aqua Apollinares*, probably by some Spanish colonist who had derived benefit from a visit to the baths of Apollo. These inscribed cups, which date from the Flavian period, were found in the hot spring, and are now in the Museo Kircheriano in the Collegio Romano.

The following are the principal roads which radiated from the gates of Rome, beginning on the south:—

I. *Via Ostiensis*, which passed out from Rome through the Servian *Porta Trigemina* and the Aurelian *Porta Ostiensis*; its course was along the left bank of the Tiber to its mouth at Ostia.

II. *Via Appia* issued from the Servian *Porta Capena* and the Aurelian *Porta Appia* (modern S. Sebastiano); this road was constructed in 313 B.C. as far as Capua, and afterwards extended to Brundisium; see Livy, vii. 39; ix. 29; and xxii. 1. It was often called the *Regina Viarum*, as being the oldest and finest of the Roman roads; Stat. Silv. ii. 2, 12.

1 Owing to the fact that the Roman roads extended into almost all parts of the Empire, and that the smaller provincial roads were branches from the main arteries of traffic, the saying "All roads lead to Rome," had once more than a metaphorical meaning. Various words were used to mean different sorts of roads: *iter*, a foot or horse path; *senvia*, a narrow footpath (*semister*); *actus*, a cart-road. *Actus* and *iter* were specially legal terms, used in the laws about rights of way through private property, which was called the *jus suddi*; these burdens on land were called *servitudes*; Gaius, iv. 3.
The *Via Ardeatina*, which led to Ardea, was probably a branch of the *Via Appia*.

**III. Via Latina.** This branched from the *Via Appia*, a few hundred yards outside the *Porta Capena*, it then passed through the Aurelian *Porta Latina*, and, like the Appian road, ended at Brandusium, passing along a more inland course.

**IV. Via Labicana.** Issued from the Servian *Porta Esquiline*, and then passed through an arch of the double aqueduct gate built by Claudius (modern *Porta Maggiore*); it was carried on to Labieum, and then joined the *Via Latina* near the thirtieth milestone.

**V. Via Praenestina.** Branched from the *Via Labicana* just before passing through the other archway of Claudius' aqueduct. It led to Gabii, and hence it was once called the *Via Gabina*, then to Praeneste, finally joining the *Via Latina* near Anagnia.

**VI. Via Tiburtina.** Started from the *Porta Flaminia* in the Servian Agger, then through the aqueduct gate of Augustus (shown at vol. ii. p. 340), modern *Porta S. Lorenzo*. Thence it led to Tibur (Tivoli) and the Sabine country; and finally on to the shore of the Adriatic. The latter part of this road was called the *Via Valeria*.

**VII. Via Nomentana.** Issued from the *Porta Collina* at the north end of the Servian Agger, passed through the Aurelian *Porta Nomentana* to Nomentum, and finally branched into the *Via Salaria* at Eretum.

**VIII. Via Salaria.** Also from the Colline gate, then through the Aurelian *Porta Salaria*, and north-east to the Adriatic, finally joining the *Via Flaminia* at Ancona.

**IX. Via Flaminia.** This very important northern road is said by Livy (Epit. xx.) to have been constructed by the Censor C. Flamininus, at the same time that he built the great *Circus Flaminius*, which afterwards gave its name to the ninth *Regio* of Augustus. C. Flamininus constructed the road as far as Ariminum (Rimini) during his consulship in 187 B.C., and
his colleague, M. Aemilius Lepidus, continued it, under the name of the Via Aemilia, to Placentia (Piacenza). It was afterwards extended to Mediolanum (Milan), and farther north in Cisalpine Gaul.

The Via Flaminia started from the Via Lata, which issued from the Servian Porta Batumena, and passed along the line of the modern Corso out through the Aurelian Porta Flaminia, which was exactly on the site of the present Porta del Popolo, not higher up the Pincian Hill as was once believed on the strength of a misunderstood passage of Procopius; Bell. Goth. i. 23. The true site of this gate was discovered in 1879, when the Aurelian towers which flanked it were pulled down to widen the Porta del Popolo. The restoration of the Via Flaminia and its bridges by Augustus is mentioned in the Ancyrean inscription, thus—

CONSUL. VII. VIAM. FLAMINIAM. AB. URBE
AD. ARIMINUM. FECI. ET. PONTES. OMNES,
PRAETOR. MULVII. ET. MINUCIUM.

X. Via Aurelia issued from the gate of that name on the Janiculan Hill, passed northwards along the west coast to Pisa, and so on to the north of Italy and Gaul.

XI. Via Portuensis, which also started from the Trans-Tiberine side of Rome, issued from the Aurelian Porta Portuensis, and passed along the right bank of the Tiber to Portus Augusti, near its mouth.

For an account of the roads of Rome see Bergier, Histoire des grands chemins de l'empire Romain, 1622; Nibby, Vie degli Antichi, in vol. iv. of his edition of Nardini, Roma Antica, 1820; Becker, De Romae Muris et Portis, Leipsic, 1842; and the article Viae by Mr. H. Perry in Smith's Dictionary of Antiquities, new edition, 1891.
THE BRIDGES OF ROME AND THE TIBER ISLAND.

Among the Romans, as among many other races, there existed in early times a belief that the erection of a bridge is an impious act—an injury done to the god of the river, who is robbed of a certain number of victims who would otherwise have been drowned while attempting to cross the river. For this reason the most primitive duty of the Roman Pontifex or bridge-builder was to propitiate Father Tiber by expiatory sacrifices—at first in the form of living human victims, and afterwards by throwing into the river every year thirty dummies made of rushes which were called Argei; see Ovid, Fast. v. 622. Whenever the Pons sublicius, the oldest of the Roman bridges, needed repair, special expiatory sacrifices had to be offered, and for similar reasons it was unlawful to use iron nails or other metal in any part of the woodwork of the bridge; see Plut. Num. 9.

Dionysius, iii. 45, speaks of it as τὴν ξυλίνην γέφυραν ἦν ἀνευ χαλκοῦ καὶ σιδήρου θέμας ὑπ’ αὐτῶν διακρατεῖσθαι τῶν ξύλων; and Pliny (Hist. Nat. xxxvi. 100) mentions as a matter of religions import its contignulio sine ferreis clavis.

So also it would have been unlawful to rebuild this earliest bridge in stone, the notion being that a slight and as it were temporary structure was less of an offence to Father Tiber than a solid piece of masonry. In historical times the real meaning of the rules and ritual connected with the Pons sublicius had been forgotten, and the prevalent notion was that it was always repaired in wood only on account of the danger from which Rome had been saved by the cutting away of its timbers before the enemy were able to cross.

The Pons sublicius, which was so called from the sublicae or wooden beams of which it was constructed, was for a long time

1 Quoted below at p. 363. The meaning of the word Argei is very doubtful.
the only bridge across the Tiber. One of the chief reasons for its construction was to connect, with the help of "long walls," the outlying Servian fortress on the Janiculan Hill with the city on the other side of the river; Livy, i. 33. Livy (ii. 10) tells the familiar story of its destruction by the Roman garrison while the heroic Horatius Cocles kept back the Etruscan host under Lars Porsenna, who, after capturing the Janiculan fortress, were advancing upon Rome to reinstate the fallen dynasty of the Tarquins. 1

The construction of the Pons Sublicius was traditionally assigned to Ancus Martius; Livy, i. 33. In later times it was restored by several of the emperors, and its piers were rebuilt in stone, though the bridge itself was probably, for religious reasons, always of wood; see Livy, xl. 51; Varro, Lin. Lat. v. 15; and Plutarch, Numa, 9.

Tacitus, Hist. i. 86, records that in 69 A.D. the Sublician bridge was carried away by a flood. Ovid, writing in the time of Augustus, speaks of it as being then a wooden bridge—

*Tunc quoque praxios virgo simulacra victorum<br>Mithere roboreo virpes poute iacet.*

_Fast. v. 622._

The site of the Pons Sublicius is not certain; the existing foundations of a bridge near the site of the Porta Trigemina by the *marmoratum* have been supposed to belong to it, but it is much more probable that the Pons Sublicius led out of the Forum Boarium not far from the existing circular temple: and that it is one of the two bridges mentioned by Ovid, *Fast. vi.* 477, in connection with the *Circus Maximus* and the *Forum Boarium—*

_Pontibus et magno juncta est celeberrima Circum<br>Arca, quae postea de bovi nomen habet._

The foundations near the *Marmoratum* are now believed to

1 H. Cocles and the Sublician bridge are represented on a fine bronze medallion of Antoninus Pius: Froehner, _Méd. de l'Empire Rom._ 1878, p. 60.
be those of a bridge built about 288 A.D. by the Emperor Probus. 1

The Pons Aemilius. The first stone bridge was not constructed till the time when the conquest of Etruria and the defeat of Hannibal had put an end to fears of invasion. This was called the Pons Aemilius, from the Pontifex Maximus and Censor M. Aemilius Lepidus, the builder of the Basilica Aemilia, who founded the bridge, together with his colleague M. Fulvius Nobilior, in 179 B.C.; Livy, xI. 51. This bridge is represented on denarii of the gens Aemilia of the first century B.C.

Only the piers of the bridge were built by M. Aemilius Lepidus, and it was not completed till 142 B.C., when the arches were added by the Censors P. Scipio Africanus Nasica and L. Munnius, surnamed Achaicus; Livy, xI. 51, and Juv. vi. 32. It was sometimes called the Pons lapidem, as being for some time the only stone bridge in Rome; Plut. Num. 9. The name Pulatius is an invention of the mediaeval writers.

The Fasti Capraniici describe it as being ad theatrum Marcello, and the Cosmographia of Aethicus as ad Forum Boarium. The Pons Aemilius is the second of the two bridges mentioned by Ovid in the above-quoted passage; Fast. vi. 477.

The modern Ponte Rotto is on the site of this bridge, and part of the ancient basalt-paved road leading on to it is still visible near the House of Crescentius. This road was on the inside of the Servian wall, and led immediately out of the Forum Boarium.

In 1886, during the construction of the new Tiber embankment, the start of the Pons Aemilius was exposed, constructed of large blocks of tufa; Bull. Com. Arch. 1886, p. 368.

The existing remains are mainly of mediaeval date, as the bridge was rebuilt or refaced after its partial destruction by a flood in the Pontificates of Honorius III. 1216-27. In 1598 about half the bridge was destroyed by another flood, and the

1 See Becker, De Româs navis et portis, Leipsic, 1842, p. 78; and Mayerhöfer, Die Brücken im alten Rom, 1884.
gap was for some years bridged over by a modern iron structure. In 1890 all that remained of this fine bridge, with the exception of one arch, was destroyed, and a hideous iron bridge was erected by the side of it. This single arch, which stands in the middle of the river, will probably soon disappear.

The Insula Tiberina. Livy (ii. 5) gives the fable of the formation of this island from the corn which was cut in the Ager Tarquinius (Campus Martius) and thrown into the Tiber after the expulsion of the Tyrant Tarquinius Superbus.

The Insula Tiberina seems to have been devoted to sacred purposes. Its principal building was the Temple and Porticus of Aesculapius, whither the deity was supposed to have come from the Asclepieion, near Epidaurus, in the form of a serpent; Livy, xxix. 11, and xliii. 6. To this temple the Romans resorted for cure in all kinds of diseases. Sick slaves were often deposited in the porticus on the island, and left to the care of the god and his priests.

In case of recovery the slave became a sacred attendant at the temple; see Val. Max. De Mem. i. 8; Plut. Quaes. Rom. 94; and Suet. Claud. 25.

The whole arrangement and worship carried on at the sacred hospital on the Tiber Island appears to have been very similar to the Asklepieion at Epidaurus, in Athens, and other Greek cities. Great numbers of votive offerings were presented by patients who had been cured by Aesculapius and his priests.

In 1885, close by the approach to the Pons Fabricius, while digging foundations of the new embankment, remains were found of one of the shops where cheap votive offerings were sold for presentation in the temple. ²

These offerings consisted chiefly of models in painted terra

¹ The sacred enclosure of Asklepios near Epidaurus in the north-east of the Peloponnesus has, during recent years, been excavated, and large groups of very interesting and handsome buildings have been discovered.

² A large collection of these votive offerings is preserved in the Museo delle Terme.
cotta, wax, or plaster, of various parts of the human body. More costly thank-offerings were made of gold or silver, or carved in marble, as, for example, a very curious representation of a human body, cut open, so as to display the viscera _majors_, which is in the Vatican sculpture gallery.

On the same island there were smaller shrines of Faunus and Velovis. These temples are mentioned by Vitruvius as examples of _Prostyle_ buildings; that is, of temples with columns at the end but not at the sides.

The whole island was cut into the form of a colossal ship, the prow, stern, and sides of which were represented by a massive quay wall of _tessellae_, cut into the necessary form.

On one side of the ship there existed till recently a relief of an ox's head, and a serpent coiled round a stick as an emblem of Aesculapius.

In the centre of the island a tall obelisk represented the mast of the ship; its pedestal was found in 1676 in the Piazza of S. Bartolomeo.

All the interesting stonework of this immense ship has recently been destroyed during the wholesale alterations of the Tiber banks, which has done so much to destroy the beauty of this part of Rome. Even the shape of the island has been altered, and little of interest now remains in what used to be one of the most picturesque and interesting places in Rome.

The Church of S. Bartolomeo, built on the site of the Temple of Aesculapius, contains a number of fine monolithic granite columns taken from the ruined temple.

The serpent was originally associated with Asklepios to mark his special _Chthonian_ character. Aid was in early times given to his votaries in the form of advice suggested in dreams, dreams being, in the Greek mind, closely connected with the realms below the earth. In later times Asklepios gradually lost his original Chthonian character, and became connected with the celestial Healer Apollo. The serpent was then explained as being a symbol of renewal of health on account of its habit of casting its skin, and thus apparently gaining every year new youth and strength.
The *Pons Fabricius*, which united the island to the left bank of the Tiber, was built by L. Fabricius, one of the *Curatores Viarum*, in 62 B.C.; Dion Cass. xxxviii. 45. This is recorded by an existing inscription, repeated on both sides, deeply cut in large letters, across one of the arches—*L. FABRICIVS. C. F. CVR. VIAR. FACIUNDVM. COERAVIT. EIDEMQ. PROBAVIT*. The latter part, in smaller letters over the intermediate arch for storm water, is now illegible; it ran as follows—*Q. LEPIDVS. M. F. M. LOLLIVS. M. F. COSS. S. C. PROBAVERVNT*. The whole is given by Pirro Ligorio in his MS. book of notes in the Bodleian library, *Canonic MSS.* 138. Q. Aemilius Lepidus and M. Lollius were consuls in 21 B.C., when they repaired the bridge of Fabricius, built about forty years earlier.

The *Pons Fabricius* consists of two semicircular arches, with an opening for flood water over the central pier; like the other Roman bridges it is built of peperino and tufa, faced on both sides with massive blocks of travertine. Travertine corbels, to support the wooden centering, are built in at the springing of the arches, a frequent Roman custom, used not only in bridges but also in aqueducts and other lofty arches, where it would have been difficult or expensive to support the centering by tall posts resting on the ground; this method was especially convenient for repairs or partial rebuilding; see vol. i. p. 69, fig. 12.

Part of the ancient balustrade or screen along the sides of

---

1 See a bronze medallion of Anton. Pius; Froehner, *Med. Rom.* p. 53. The Fabrician bridge is also shown on a *denarius* of about 60 B.C., with the legend *L. FABRICIVS*, and a snake to indicate the proximity of the *Temple of Asclepius* on the island, and the story of the advent of the god from Epidaurus in the form of a serpent.

Asclepius is also said to have taken up his abode in Siyon in serpent form; see Pausan. ii. 10 and iii. 23.

2 See a paper by the present writer in *Archaeologia*, vol. ii. 1858, pp. 489-508.
the bridge still exists, namely, one of its upright pilasters crowned by a quadruple head or *Janus Quadrifrons*; from this is taken the modern name of the bridge, *Ponte dei quattro capi*. The pilaster is grooved to receive a bronze open screen, which filled up the intermediate space between the pilasters.

In the same way the whole line of the ancient river embankment was fenced by massive upright blocks of travertine (*cippi*) placed at regular intervals; the intermediate spaces being filled in by bronze or marble screens. On these *cippi* were cut the inscriptions mentioned in vol. i. p. 146.

During the Middle Ages the *Pons Fabricius* was commonly known as the *Pons Judaeus*, from its proximity to the Ghetto or Jews' quarter, which is now destroyed.

The *Pons Cestius*, which unites the island with the opposite or Janiculan side of the river, has only one arch, with an opening for flood water on each side of it. It was probably built by L. Cestius, Praefect of the city in 46 B.C.; see Dion Cass. xxxvii. 45.

On one of the large marble slabs which form the parapet of the bridge, is a long inscription recording its restoration in 370 A.D. by Valentinianus, Valens, and Gratian. There are remains of an earlier inscription over one of the arches. The bridge is now called after the adjacent Church of S. Bartolomeo.

Both these bridges to the Tiber island must have occupied the place of much earlier wooden structures. On account of the two bridges the Tiber island was known as the *Insula inter duos pontes*; see Plutar. *Publ.* 8.

The *Pons Agrippae*. In 1887 the foundation of a hitherto unknown three-arched bridge, built of massive blocks of travertine, was found about 130 yards above the Ponte Sisto. Near it a *cippus* was found recording that the Curatores alvi had repaired a piece of the embankment wall *a Trigarium ad Pontem Agrippae*. The *Trigarium* was a part of *Regio IX*. of unknown extent; this inscription shows that it bordered the Tiber; it is cut on a great block of travertine which is now
placed in the cloister of the Museo delle Terme. The newly-found bridge appears to have been destroyed during Imperial times, probably in the reign of Severns and Caracalla, when a great part of the river embankment was rebuilt; and the river-bed widened in certain places.

There can be little doubt that the newly-discovered bridge is the *Pons Agrippae* of the *cippus*; see *Notiz. d. Savvi*, 1887, pp. 322-327; *Bull. Com. Arch.* 1887, p. 307; *Bull. Cor. Arch.* 1888, p. 92, and Tav. iv. and v.

The *Pons Aelius* (modern Ponte di S. Angelo) was built in 135 A.D. by Hadrian, to connect his *mausoleum* with the *Campus Martius*; see *Dion Cass. lxix. 23*, and Spartan. *Hadr. 19*. It is shown on the reverses of bronze coins of Hadrian dated from his third consulship.¹ As is mentioned above, vol. ii. p. 292, the bridge originally reached not only across the river but right up to the central door of the *mausoleum*. The *Einsiedlen MS.* gives the dedicatory inscription over the arches of the bridge which is now lost—IM·P·CAESAR·DIVI·TRAIAI·PARTHICI·FILIVS·DIVI·NERVARI·NEPOS·TRAIANVS·HADRIANVS·AVG·PONT·MAX·TRIB·POT·XVIII (135 A.D.)·COS·III·P·P·FECIT. The name of the bridge was taken either from Hadrian’s praenomen *Aelius*, or else from that of his son, who died during his father’s lifetime, and was the first person interred in the *mausoleum*.

The five arches of this fine bridge are of peperino faced with travertine; near it, along the left bank, were extensive remains of the ancient embankment wall, built of massive blocks of peperino; this wall is now being rapidly destroyed to make the new river embankment.

The *Pons Aelius* is now called after the adjoining Castle of S. Angelo; it is mentioned by Dante in one of his most vivid similes, in which the coming and returning procession of sinners scourged by demons in the eighth circle of hell is

¹ The medallion with this reverse is a forgery; but genuine coins of this type are known.

*Vol. II*
said to resemble the crowd which thronged the bridge in the year of Jubilee 1300, half of the people being on their way to St. Peter’s, and the other half, separated by a wooden barrier, passing in the opposite direction towards the Mount.

\[\text{Come i Romani, per l'esercito molto,}\]
\[\text{L'anno del Giubileo, su per lo ponte}\]
\[\text{Hanno a passar la gente molto tolto,}\]
\[\text{Che dall' un tato tutti hanno la fronte}\]
\[\text{Verso il castello, e vanno a Santo Pietro;}\]
\[\text{Dall' altra spina vanno verso il monte.}\]

Infer. xviii. 28-33.

The Mount mentioned by Dante is probably that on which the Lateran Basilica stands, which, after St. Peter’s, was the greatest attraction to the pilgrims who crowded to Rome. Like most, if not all the Roman bridges, the Pons Aelius formerly had an arched gateway at both ends. These gateways existed till the mediaeval period; they are shown in various drawings published by Mariano, Castel Sant’Angelo, Rome, 1890.

The Pons Aurelius, mentioned in the Notitia, was probably on the site of the modern Ponte Sisto. The date of its founding is not known, but Marlianus (Topogr. Rom. cap. cxxi.) gives an inscription, now lost, which recorded its restoration in the time of Hadrian. The names Janiculensis and Antoninianus, which are sometimes given to this bridge, appear to be inventions of the mediaeval topographers.

The Pons Neronianus or Vaticanus was begun by Caligula and completed by Nero, to give an approach to the Horti Agrippinae and the great circus which stood by the Basilica of St. Peter. Some foundations of this still exist, a little way below the Pons Aelius, and are visible when the river is low.

The Pons Triumphiatus was probably not a separate bridge but a title given to the Pons Neronianus.

The Pons Probol was the last of the Roman bridges. It was built by the Emperor Probus about 280 A.D. Foundations of
its piers exist near the *marmoratum* at the foot of the Aventine Hill.

The *Pons Molius* (or *Mulvius*), modern *Ponte Molle*, is about a mile and a half outside the Aurelian Wall of Rome, higher up the river, where the *Via Flaminia* crosses the Tiber. It was built by the Censor M. Aemilius Scaurus in 109 B.C.; see Aur. Victor, *Vit. illus.* xxvii. 8, and Livy, xxvii. 51. It was on this bridge that Cicero arrested the ambassadors of the Gaulish Allobroges during the Catiline conspiracy; see Cic. *In Cat.* iii. 2. And in 312 A.D. it was the scene of the death of Maxentius and the utter defeat of his army by means of the superior strategic talents of Constantine.

As it still is at the present day, the *Pons Molius* was, under the Empire, a favourite holiday resort for the lower classes of Rome; see Tac. *Ann.* xiii. 47.

CHAPTER XII

THE WALLS OF AURELIANUS.

During the long period when the Roman power existed almost without a rival, and quite free from any dread of attack at home, no fortifications were needed to defend the city. Even under the Republic Rome had far outgrown the limits of the Servian enclosure, and under the Empire the greater part of the primitive wall had been pulled down and its very site obliterated by the buildings of the rapidly growing city. Thus Dionysius (iv. 13) speaks of the Servian wall as being in his time (first century B.C.) συνεταφητων, hard to find, on account of the houses built over it.

The fourteen regiones of Augustus included not only the thickly populated area of Rome as it was in his time, but also in some directions a wide extent of suburb beyond the houses which, under the later Empire, became the site of still farther extension of the city.

The boundaries of these regiones appear to a great extent to have determined the line of the great wall which Aurelianus planned and partly carried out in 270-275 A.D., his circuit being formed, at least on the left bank of the river, to skirt the outer limits of the Augustan regiones; see Plans of Rome. But on the Transtiberine side the Aurelian wall only included a small part of Regio xiv., or Transtiberina.

Towards the end of the third century A.D. not only was the Roman power on the decline, but the city of Rome itself was beginning to be in danger from the invasions of the
Germans and other northern races—especially dangerous at a time when the great armies of the Empire were fully occupied with campaigns in distant Oriental countries. It was on this account that Aurelianus constructed the wonderfully strong and extensive line of fortification which resisted all the attempts of the Goths to destroy it, and has in great part lasted down to the present day.

After the speedy death of Aurelianus in 275 A.D., the work was carried on by Probus and completed by him in 280 A.D.; see Zosimus, i. 49. About a century later the walls were restored and strengthened by the addition of a number of gate-towers, replacing in many places the original towers of Aurelian. This was mainly the work of Arcadius and Honorius, 395-425 A.D., as is recorded by existing inscriptions over several of the gates; see Procop. Bell. Goth. i. 19. These inscriptions mostly run thus—S.P.Q.R. IMP. CAESS. D. D INVICTISSIMIS • PRINCIPIVS • ARCADIO • ET • HONORIO • VICTORIBVS • AC • TRIVMPHATORIBVS • SEMPER • AVG • OB • INSTAVRATOS • VREIS • AETERNAE • MVROS • PORTAS • AC • TVRRES • EGESTIS • IMMENSI • RVDERIVS • • •; the rest of the inscription records the erection of honorary statues to Arcadius and Honorius to commemorate the work.

One of these inscriptions can most conveniently be examined outside the Porta Maggiore. The gate itself was pulled down in 1838, partly with the object of exposing the Tomb of Eurysaces; and its upper part, with a row of arched windows from the upper story of the tower, is now set up by the side of the road.

The Aurelian walls suffered much injury from the repeated attacks of the Goths (see Procop. Bell. Goth. iii. 23, 24), and were frequently restored, especially by Theodoric about 500-512 A.D., and by Belisarius about 560 A.D., as well as by many of the Popes in the eighth and ninth centuries, and in fact throughout the Middle Ages.

1 See Vopiscus, Aurel. 23 and 39; Zosimus, i. 37, 49; and Estrop. ix. 15.
An interesting and minute account of the wall and its gates is given in the Einsiedlen MS., the unknown writer of which appears to have visited Rome in the ninth century. He gives a description of the complete circuit, counting, from gate to gate, the number of towers, the windows, the necessaria, and even the battlements, in the following way—

\[A \text{ Porta Latina usque ad Appiam, torres xii., propugnacula clxxv., necessaria vi., fenestrae maiores forinseus lxxv., minores lxxv.}\]

He numbers 14 gates in all and 383 towers; the 14 gates still exist, but many of the towers have disappeared.¹

With the exception of the part where the wall skirted the Tiber, most of the circuit of the main city still exists, but a great part of the line round the Transtiberine quarter has now disappeared; see Becker, Hamil. i. p. 192.

By far the most perfect piece of wall is that which is near the hideous modern suburb of "jerry-built" stuccoed houses, which now occupy the site of the once lovely gardens of the Villa Ludovisi,² near the edge of the Pincian Hill. Other well-preserved parts are those near the Amphitheatrum Castrense, and between the Porta Latina and Porta Ostiensis.

In most cases the towers have been cut down from their original height, but two or three still exist near the site of the Ludovisi Gardens, almost perfect, together with the stairs leading to the top of the wall and the upper chambers in the towers.

Figs. 100 to 102 show the most perfect of the towers and the adjacent arcade. With but little variation this form of wall and tower was repeated round the whole circuit of the city.

¹ Other accounts of the wall and its gates are given by Procopius, Hist. Goth. I. 19; by William of Malmesbury (eleventh century), and in the Graphia Aurea Urbis (thirteenth century), the latter mentions 362 towers as then existing; see Uulrichs, Cod. Topogr. Rom. p. 114.

² The Ludovisi Gardens, which were among the loveliest in the world and the most charming spot in all Rome, were destroyed by the speculating builder in 1886-87.
The only omission in these drawings is the parapet with battlements which crowned the top of the wall. These battlements are missing on the otherwise perfect piece of wall which is here represented.

The whole of the wall and the towers are built of tufa concrete, mixed with some broken brick, with the usual facing of triangular bricks from $1\frac{1}{2}$ to $1\frac{3}{4}$ inch thick, and joints $1\frac{1}{4}$ to $1\frac{3}{4}$ inch. The curtain wall between the towers is about 12 feet thick, with a vaulted sentinels' passage running all round the circuit of the city, a length of about 12 miles; see A, B on figs. 100 and 101, and the general plans of Rome.
This passage, which is formed in the thickness of the wall,

Fig. 101.

Section of the Wall of Aurelian. The references refer both to figs. 100 and 101.

AA. Sentinels’ passage.
B. Stone string-course.
CCC. Windows into the lower room in the tower.
D. Travertine corbels to support the necessaria at the top of the wall.
E. Door opening from the tower on to the top of the wall.

is open on the side towards the city with a row of tall semi-
circular arches; there are usually six of these arches between each pair of towers.

The floor of the passage is in most places 8 to 10 feet above the ground inside. On the outside the ground is in many places much lower than on the interior, owing to the wall being built along the edge of a cliff or slope. Thus the wall is in parts about 60 feet high on the outside, and only 40 feet on the inside.

At regular intervals of about 45 feet\(^1\) tall square towers

![Diagram of Aurelian's Wall](image)

were built, with their projection on the outside of the wall, so as to give a flank attack on the enemy while working their battering-rams. Arched doorways high up in the towers opened on to the top of the wall, so that its summit formed a continuous walk for the garrison over the vaulted roof of the sentinels' passage below; see E on fig. 101. The top of the wall was once defended on the outside with a battlemented parapet, but this has almost wholly disappeared. Each tower was divided by vaulted floors into three stories, with a

\(^1\) That is, the distance in the clear from tower to tower is about 45 feet.
narrow stair winding round two sides of the tower (see plan on fig. 102) leading to its upper chambers and so on to the top of the wall.

Small slits for shooting through, set in semicircular niches, are formed in the walls of the towers and all along the sentinels' passage.

The lower part of the wall, which was most exposed to the battering-rams of assailants, was formed of solid concrete 12 feet thick, unweakened by any cavity; see section on fig. 101. The upper portion of the wall, which is weakened by the sentinels' passage running along it, is sufficiently high above the ground to be out of reach of all battering machines.

In a similar way the lower part of the towers is quite solid, while the upper portion contains the three stories of chambers, each about 11 feet 6 inches by 13 feet, not counting the space occupied by the stairs. The lowest chamber opens with round arches into the sentinels' passage, which is thus not interrupted, but passes behind the towers without a break all along the circuit.

On the side towards the city the towers are lighted by arched windows, of which three, each 3 feet 10 inches wide, open into the lowest chamber. In some cases the floor of this chamber is raised a few steps above the passage, while in other parts of the wall both floors are at the same level.

At some places on the outside, in the angle between the tower and the wall, at its highest point, long travertine corbels are built in to support necessario; see fig. 101, D.

The battlements appear not to have been corbelled out; they still exist on some of the towers and over the Porta Latina, where they are formed of slabs of travertine; they are mostly plain square battlements, exactly like those which were commonly used in mediaeval times, but those on the tower above the Porta San Lorenzo have triangular or pointed tops.
Circuit of the Existing Wall and its Gates.

The best way to study the walls of Rome is first to walk round on the outside, starting from the Ostian Gate, and re-entering Rome by the Porta del Popolo. The interior of the wall, with its passage and tower chambers, can best be examined at the Ludovisi site mentioned above, and near the Lateran Gate from the Basilica to the Amphitheatrum Castrense.

Beginning by the left bank of the Tiber on the south of the city, there is a long well-preserved piece of wall, with all its internal rows of arches, as far as where it abuts against the Pyramid of C. Cestius, close by the Ostian Gate.

The Porto Ostiensis is one of the finest and best preserved of all the gates. The central part, with its arched doorway, is of travertine. The outer arch is grooved to receive a portcullis (capharacta), and from the inner and higher arch two travertine corbels project, which received the upper pivots of the doors; the lower ones being let into holes in a massive travertine threshold.

Above this stone archway is a battlemented wall of brick-faced concrete pierced with a row of seven arched windows, opening into a gate chamber with similar windows on the inside. On each side are two brick-faced towers; each is built with semicircular projection on the outside.

The top story of these towers is pierced with arched windows, and over one of them a brick cross, inlaid in the facing, marks that it was built by the Christian Emperor Honorius.

Then comes a long piece of well-preserved wall of Aurelian's time, with the internal arches very perfect, but the external facing a good deal patched and restored.

In many places the modern road, which encircles the main part of Rome outside the walls, is cut below the level of the
foundations, and has exposed the soft tufa rock on which the wall is set;¹ see fig. 89, in vol. ii. p. 235.

**Earlier House.** At one point between the Ostian and Appian gates, where the wall makes a sharp angle, a very fine bit of an older building is included in the line. This was an archway flanked by two engaged Corinthian columns with enriched architrave and capitals, all neatly moulded in terracotta; the brick facing, which is of extraordinary beauty and neatness, appears to date from the first century A.D.

Little now remains of the Corinthian columns, but their outline and parts of the capitals can be traced.

When this archway, probably part of some suburban villa, was included in the wall, it was blocked up, and it was certainly not the gateway of an older line of defence, as was stated by Mr. Parker, who calls it the *Porta Metronia*, the real site of which was probably where a long piece of wall was rebuilt in the sixteenth century by Ant. Sangallo, at a point a little farther on.

It will be observed from the *Plan of Rome* that the wall of Aurelian projects outward, forming a sort of "promontory," with the *Porta Appia* and the *Porta Latina* in its most projecting part. This great loop appears to have been formed beyond the general line of the circuit of Rome so as to include the *Thermae of Caracalla* and the populous quarter which had grown up near it.

Many marble tablets let into the external face of the wall near here, record repairs by Alexander VI., Innocent X., and other Popes.

The *Porta Appia* is the finest of all the existing gates; it appears to be of the time of Honorius.

The central archway and the lower part of the two flanking towers are of large blocks of fine white marble, backed with concrete. These blocks have evidently been taken from

¹ Much injury is being done to the walls at many places by this careless undermining of the foundations.
some earlier building; possibly the Temple of Mars, which stood outside the Porta Capena. The keystone of the inner arch is incised with a cross within a circle, and the words ΧΑΠΙΦΣ·ΑΠΙΕ·ΚΩΝΟΝ·ΑΠΙΕΠΙΓΕΡΠΙΤ, "Mercy, Saint Konon, Saint George!"

On one of the marble jambs is an incised figure of St. Michael and the devil, with a fourteenth-century inscription recording a conflict which took place at this gate. As in the Porta Ostiensis, the wall over the marble gate is of brick-faced concrete, and has five windows.

The third and uppermost story of the towers has a semi-circular projection pierced with windows. The second story, which is also faced with brick, except part of one tower which is of tufa, is square like the lower marble stage. This gate also had a portcullis.

Next comes a piece of Aurelian's wall, with many external repairs of various dates, and some slabs with the arms of Pius IV. (Medici) and Urban VIII. (Barberini).

The Porta Latina, now blocked up, is built of travertine, between two semicircular brick-faced towers. It also is of the time of Arcadius and Honorius, as was recorded in an inscription under its row of five windows; see Nibby's edition of Nardini, Roma Antica, i. p. 68, where a similar inscription from the Porta Portuensis is quoted.

The semicircular arched window-heads, like those in some of the other gates, are cut out of one slab of travertine. The keystone of the inner arch has an incised cross within a circle, and had corbels with pivot-holes on which the door swung. The outer keystone has the Christian monogram ☧ between A and Ω.

The next piece of wall is much restored, but some of Aurelian's towers are well preserved, except that they have lost the story which rose above the top of the wall.

Between the Porta Latina and the Lateran Basilica an open
stream, the *Grabra*, passed under the wall in its course towards
the *Cerus Maximus*, round which it flowed, forming a *curus*
or open channel enclosing the central space. Over this stream
there is an archway in the wall, now blocked up; this was
merely a postern gate.

*Domus Laterana.* A little farther on, the wall abuts
against extensive remains of the ancient Lateran villa (*Domus*
*Laterana*), one angle of which projects some distance beyond
the Aurelian line of circuit. The original house on this site
was built by Plautius Lateranus, a senator who was put to
death by Nero; see Juv. x. 15. It afterwards came into the
possession of a later Lateranus, a member of a different family,
to whom it was presented by Severus in 197 A.D. This house
was finally given by Constantine to the Bishop of Rome
(Sylvester) as a site for the new church, which was hence
called the *Lateran Basilica*.

The existing building, which is of great height and solidity,
appears to date from the early part of the third century A.D.
Some of its rooms extended much farther beyond the line of
Aurelian's wall, but were destroyed, leaving only that part
which could be worked in with the new circuit wall round
the city. The start of some of the cross walls of this destroyed
part can still be traced; they were 15 feet thick, made of
massive concrete faced with brick.

In the upper part of the existing wall of this great house
there are rows of arched windows, and above them a number
of travertine corbels which once carried projecting battlements.
Another part of the wall has a series of buttress-like pilasters,
and the whole building was one of unusual strength and
adaptability for defence, on account of which it was in part
preserved as a link in Aurelian's wall. That part of the house
which was not included in the Aurelian circuit was probably
destroyed in the reign of Constantine, when the Lateran
Basilica was built. Remains of the walls and mosaic pave-
ments of this large house were exposed in 1880, while
excavations were being made for the foundations of the new apse of the Basilica.

The *Porta Asinaria* (now closed) is a few paces beyond the remains of the *Domus Lateralis*; the origin of its name is unknown. It is a fine and well-preserved gate, wholly faced with brick, and, like the former gates, is probably of the time of Honorius. On each side is a massive tower, with semi-circular projection of unusual size.

On the inside this gateway is exceptionally well preserved, although buried in accumulated earth to above the top of the entrance. It had large vaulted rooms in the towers behind the circular projection, as well as the usual long narrow chamber over the gate, two stories high, lighted by rows of arched windows.

Though so much buried in rubbish on the inside, the outside of this stately gateway is exposed to its full height.

A few yards farther on is the sixteenth-century *Porta San Giovanni*, which is now used instead of the blocked-up *Porta Asinaria*.

Next comes a long piece of very well preserved Aurelian wall, with its sentinels' passage and rows of inner arches in a very complete state of preservation.

The *Amphitheaterum Castrense*. Near the Basilica of S. Croce in Gerusalemme the wall includes in its circuit the *Amphitheaterum Castrense*, the arches of which were built up at the time when Aurelian included it in his wall; see vol. ii. p. 110.

Here again the wall makes a sharply projecting angle, evidently in order to include some important buildings, of which the supposed *Securium* is one.

Passing on from the *Amphitheaterum Castrense*, after a long piece of wall which has been mostly rebuilt in mediaeval and modern times, a place is reached where the Aurelian wall is built along the line of the great Claudian Aqueduct, as far as the double archway built by Claudius to carry the water-channels of the *Anio Novus* and *Claudius* over the fork of the
roads leading to Praeneste and Labicum, the modern Porta Maggiore; see vol. ii. p. 345.

*Porta Praenestina and Labicana.* By this aqueduct gate is set the inscription in honour of Arcadius and Honorius, which used to stand over the entrance; the gate of Honorius, destroyed in 1838, was built of travertine, and resembled the *Porta Latina.*

Its upper row of five arched windows, with the letters *S F Q R* between them, is set by the road-side. The inscription is cut under the sills of the windows.

Many of the tufa piers of the Claudian Aqueduct are embedded in Aurelian’s wall near this gate. Some of the great blocks of the aqueduct are incised with masons’ marks, especially a monogram made of the letters *A L,* which is repeated several times.

The next length of wall is much restored on its outer face, and is cut through by the modern railway arch. A good deal of restoration is done with blocks of tufa taken from older buildings, probably the work of Belisarius in the sixth century.

At some distance from the Porta Maggiore a flat-arched gate has been at some time inserted in the Aurelian wall. It is built with travertine quoins, and long lintel stones meeting in the middle with a small keystone. The name and date of this gate are unknown; it has for long been blocked up, and was probably not one of the main entrances of the city.

*Castellum Aquarum.* Next comes an older building which has been included in the Aurelian line of wall. This is a large reservoir or *Castellum* of the *Aqua Tepula* of the time of Severus Alexander, about 230 A.D.

At the south angle the opening for the *spars* of the aqueduct which supplied it can be seen; it has a triangular top, formed by two large tiles leaning together, as shown in vol. ii. p. 323. It is now blocked up.

The upper part of this great *Castellum* has several door-openings, which appear to have opened on to wooden galleries.
running along the outside of the wall. The lower of these floors was partly supported by a long row of travertine corbels; the upper floor had wooden joists projecting from the wall, the holes for which are visible immediately below the door-
way at the higher level.

After that the Aurelian walls skirted the triple aqueduct of the *Aqua Julia*, *Tepula*, and *Marcia*; many of the tufa piers of this fine structure were destroyed in 1884, see vol. ii. p. 254.

The *Porta Tiburtina* (modern P. S. Lorenzo) is flanked on the outside by two of the original square towers of Aurelian. The central part, which is of travertine, with six round-headed windows over the entrance, resembles the *Porta Latina*; this part is of the time of Arcadius and Honorius, as is recorded by an inscription below the windows, like that given in vol. ii. p. 373. Honorius also added two towers, partly built of massive blocks of travertine, on the inside of the gate. These towers were destroyed in 1869 by Pius IX. in order to use the materials for a monument on the Janiculan Hill to commemorate the Eccumenical Council, the erection of which was prevented by the entrance of the Italian army in the following year.

Close against the inside of the existing gateway is the fine travertine arch shown in vol. ii. p. 340, which was built by Augustus to carry the three *spices* of the *Aqua Julia*, *Tepula*, and *Marcia*. The base of this arch is at a much lower level than the adjoining one, owing to accumulations of earth and rubbish during the four centuries which had elapsed between the time of Augustus and that of Honorius.

By the side of this interesting old gateway a new gateway has been broken through the walls of Rome in order that there might be an opening at the end of one of the new boulevards for the tram-cars to pass through.

Then follows a long piece of wall much patched and restored, from the time of Belisarius downwards, reaching
as far as the Praetorian Camp, which is described in vol. ii. p. 233.

**Porta Claudio.** In the angle where the Aurelian wall joins the camp, there is a gateway known as the *Porta Claudio* or *closed gate*. It appears to have been blocked up as early as the ninth century, as it is not mentioned in the list given in the Einsiedlen MS. This gate is built of massive blocks of travertine, with six round-headed windows over the entrance archway, like the *Porta Latina*, and is evidently the work of Honorius. Its ancient name is unknown.

The *Porta Nomentana*, now blocked up, comes a little way beyond the *Praetorian Camp*. It was flanked with two semicircular projecting towers, one of which remains, and appears to be of the time of Aurelian. Close by is the modern *Porta Pia*, so called after Pius IV. Two of Aurelian’s towers were destroyed to make room for it. By the side of the *Porta Pia* is the modern filling up of the breach made by the Italian army when they entered Rome on the 20th of September 1870.

The *Porta Salaria*, which is a little beyond the *Porta Pia*, was flanked with two semicircular towers like those of the *Porta Nomentana*, but these have been recently destroyed, and a new gateway built, the modern *Porta Salaria*.

The tombs which were found here embedded in the towers are described in vol. ii. p. 277. According to Varro, *Re Rvsl. i. 14, 3*, the name *Salaria* is derived from the salt which was exported from Rome through this gate to Tibur and the Sabine Mountains.

Beyond the *Porta Salaria* first comes a much-restored length of wall, and then the best preserved piece of all, that which skirts the site of the Ludovisi Gardens, with its inner arcade quite complete, and some of the towers nearly so, up to their full height. At one point a piece of the moulded brick cornice, which ran along the top of the wall below the battlements, still remains.

The *Porta Pinciana*, now closed, comes next. This pic-
turesque gate is set in an angle of the wall, so that the semi-
circular towers, which project on each side of it, are set askew
in plan. These are partly faced with brick, and partly with
mixed brick and tufa.

The entrance archway is of massive travertine. The key-
stone of the arch has a cross within a circle incised upon it,
like those on the Porta Appia and Latina. Unlike the other
gates of Honorius, this has no row of windows over the
entrance, but only small slit-holes. Then follows a long piece
of much-restored wall.

_Muro torto._ At the most northern point of the circuit, the
Aurelian wall runs into the massive remains of a very lofty
building faced with beautifully neat _opus reticulatum_, dating
probably from about the middle of the first century B.C. The
walls are of tufa concrete, of immense height and thickness,
and on the outside were decorated with a series of semi-
circular niches, high above the ground. Owing to the failure
of the foundation, part of this wall has sunk and fallen for-
ward, probably soon after it was built. It is mentioned by
Procopius as the "broken wall," περίβολον διεφραγμένα; see
_Bell. Goth._ i. 24; hence it is now called the _muro torto_. These
remains evidently belonged to the substructures of some im-
portant building on the _Collis Hortorum_ (Pincian Hill), but
nothing more can be asserted about them.¹

The greater part of this noble wall, with its carefully fitted
_ matchups reticulatum_ and rows of niches, has recently been concealed
by a modern stuccoed wall along the eastern edge of the
Pincian Gardens—an utterly needless piece of barbarism.

The part which still remains visible is well worth careful
examination. A considerable part of this enormous structure
is set against a scarped side of the Pincian Hill, thus acting
as a "retaining-wall," as well as a substructure to the lofty
building above it. The face of this retaining-wall is studded

¹ These remains have been said to belong to the _Tomb of the Domiti_,
but without sufficient reason.
with pipes as "weep-holes," to carry off safely any water which might otherwise lodge behind the wall, and so endanger its stability. Many a modern retaining-wall has given way owing to the omission of this precaution. These drain-pipes are made of clay, in two halves, and are square in section, set lozenge-wise so as to range with two squares of the very neat reticulated facing. They are set at intervals of about 2 feet 6 inches.

After passing round the angle of the muro torto, but little remains of the Aurelian wall for some distance.

One piece of wall appears to have been wholly rebuilt at the founding of the Church of S. Maria del Popolo, which stands close to the line of the old wall.

The Porta Flaminia, now the Porta del Popolo, was flanked by two towers of Aurelian, which have been recently destroyed. That this is the exact site of the Porta Flaminia is mentioned in vol. ii. p. 361. Thence to the Tiber the wall is much injured and the towers mostly destroyed.

After reaching the bank the wall skirted the river for some distance, following the curve of the Tiber all along the Campus Martius. Of this part nothing remains but the foundations, parts of which are sometimes visible when the water is low. At a point nearly opposite the Theatre of Pompey, the wall passed to the other side of the Tiber, forming a great loop, including the Janiculian Hill, and the plain between it and the Tiber.

The Porta Septimiana is near the river-bank; only part of the side-walls exist, and they are in a much-mutilated state. The present arch was built about 1500 A.D., and has a row of small machicolations over it.

The original archway was probably the entrance to the Thermæ of Sept. Severus, which was included by Aurelian in the circuit of his wall; and hence came the name of this gate. The Porta Septimiana is not included in the sixth-century list of Procopius or in the ninth-century Einsiedlen MS., possibly
because, at that early time, it still led into the enclosure of Severus' Baths, and was not one of the exits from the city.

From this gate the wall runs up a slope of the Janiculan Hill to the modern *Porta S. Pancrazio*, which is on the site of the ancient *Porta Aurelia*. Little remains of this piece of wall, and what does exist is much hidden by houses.

From the *Porta Aurelia* issued the *Via Aurelia vetus*. Hence the wall makes a sharp angle and again descends to the river. Very little of this part now exists.

Near the bank of the Tiber is the site of the Aurelian *Porta Portuensis*, which was destroyed by Urban VIII. A drawing of this lost gate is given in Nardini, *Roma Ant.* 1818, vol. i. p. 68. The modern wall and the *Porta Portese* are not in the place of Aurelian's wall and gate, but some distance from them on the inside.

The wall then recrossed the Tiber, and recommenced on the other side near the great *Emporium*, an immense building with wharfs along the river, used to store goods which were brought to Rome by water. Thence it again skirted the left bank till it reached the south-west angle of the city, the point at which this short account of the Aurelian circuit started. But little exists of this piece except the lower parts and foundations of the walls and towers.
INDEX

A

AEGEUS, King of Athens, submission of, on the Arch of Severus, i. 344
Abundantia; statue of, ii. 301
Achaeia, temples of, restored by Augustus, i. 387
Achilles, statue of, in the Septa Julia, ii. 210
Acron, King of the Cassineians, spoils taken from, i. 357
Acropolis, Athenian, ii. 128
Actium, victory of Augustus at, i. 249, 252, 284, 286
Adonis, statue of, ii. 232
Adriano, S., church of, the Curia, i. 229, 240, 250, 283; ii. 228
Aedae Larum, i. 221
— Penusium, i. 220, 221, 234
— sacra of the Romans, i. 32
— Seta, the, in Nero’s Golden House, ii. 148
— and templum, inscription distinguishing between the words, ii. 248
Aeolus, temple of Victory rebuilt from fines collected by the, i. 189
— public baths under the supervision of the, ii. 114
— the water supply under the administration of the, ii. 317
Aegina, pottery discovered in the Island of, i. 108; bronze from Island of, ii. 129 note
Aelius, son of Hadrian, burial of, ii. 296
Aemilia, Basilica, i. 252, 332; ii. 13 note
Aemillianus, defeat of, by Severus, i. 344

Aemilius Paullus, Greek spoils sent to Rome by, i. 29; conquest of Macedonia by, i. 390 note
Aeneas, traditional arrival of, in Rome, i. 106; the Palladium brought from Troy by, i. 294; statue of, in the Forum of Augustus, ii. 7
Anarium Militare, institution of the, ii. 238 note
— Sanctuary, the, i. 268
— of Saturn, i. 266
Aesculapius, name of, on travertine pedestal found during the excavations for the new Tiber embankment, i. 149; statues of, i. 338; ii. 202, 232; temple of, i. 333; ii. 365, 366; the serpent an emblem of, ii. 366 and note
Aetolian, spoils taken from the, by M. Fulvius Nobilior, ii. 206
Aegistheus, Syracusean tetradrachm of, ii. 251
Ager Tarquinius, the Campus Martius originally called, i. 375
Agæas, one of the sculptors of the Laxeson group, ii. 157
Agger, the, of Servius, i. 132, 133, 136-140
Agnese, S., catacomb of, ii. 79 note; church of, ii. 59
— fuori le mura, S., church of, i. 205
Agon Capitolinus, the competition so named by Domitian, ii. 279
Agrigentum, the great Doric Olymposion of, i. 30 note
Agrippa appointed to the office of Curator Aquarum, ii. 317, 342; Aqua Julia constructed by, ii.
INDEX

340; the Aqua Virgo begun by, ii. 342; bridge of, l. 387; Campus and Septa of, l. 382 and note; the Distributio in the Campus Martius built by, ii. 209; Eoripus of, ii. 213; fountains set up by, ii. 349; Horti of, ii. 213; has the management of the roads, ii. 355; the Pantheon begun by, ii. 128; dedication of the Pantheon by, ii. 136; date of the Pantheon of, i. 61; Porticus of Neptune built by, ii. 290; portrait head of, on coin, ii. 136 note; the Septa Julia completed by, ii. 210; inspects the sewers of Rome, l. 142; stagnum of, ii. 213; statue of, ii. 137 and note; thermae of, i. 83, 92, 379, 382, 387, 388; ii. 6, 114, 117, 126, 127, 141-144, 158 note, 324, 342; burial of, ii. 290; various benefactions of, ii. 342

Agrippina, mother of Caligula, inscribed astra urn of, ii. 290 and note

Ahens, the, for the hot water supply in baths, ii. 118

Ailes in the Basilica of Domitian's Palace, l. 205

Aius loquens, altar of, l. 174, 175 and note, 191

Ajax, picture of, in the Temple of Vesta, ii. 4

Alabaster, perfume bottles made of, l. 21; vases of, &c.; quarries of, &c.

Alaric, Valens's house burnt by, ii. 242; Mausoleum of Augustus broken open by, ii. 291; Mausoleum of Hadrian rifled by, ii. 296

Alba Longa, the centre of the cult of Vesta transferred from, to Rome, i. 291 and note

Alban Hills, volcanoes composing the, i. 1; extinct craters in the, i. 44; concrete composed of lava from the, i. 45; ii. 354; stone, i. 6, 7

Albari, Villa, l. 305 note

Albergo di Catena on site of Temple of Apollo, ii. 70

Alchibades, statue of, l. 245

Alexander the Great, defeat of Darius by; at the battle of Issus, l. 84; pictures of, ii. 7, 68, 202, 212; bronze statue of, ii. 180, 293; tomb of, ii. 7

Alexander, Severus, buildings of, ii. 170; the Aqua Alexandrinia constructed by, ii. 348; Castellum of the Aqua Julia built by, ii. 325, 341; medallion of, showing the Castellum of the Aqua Julia, ii. 325; baths of Caracalla completed by, ii. 158; restoration of the Colosseum by, 81, 93; the Colosseum represented on brass of, ii. 80; the Nymphaeum of, l. 381; ii. 349; Opus Alexandrinum alleged to have been introduced into Rome by, i. 83; Salinis's house occupied by, ii. 242; Stadium of Domitian restored by, ii. 59; thermae of, l. 383; ii. 144, 348

— VI, Ptolemy bridge connecting the Castle of S. Angelo with the Vatican restored by, ii. 298; additions to the Castle of S. Angelo by, &c.; repair of the Aurelian wall by, ii. 380; "Tomb of Romulus," destroyed by, ii. 287

— VII, Ptolemy, ancient bronze doors removed from the Curia by, l. 241; marble lining of the tomb of Cestina restored by, ii. 287; Arch of Claudius destroyed by, ii. 301

Alfred the Great, coins of, found in the Atrium Vestae, l. 318

Allobroges, victory of Q. Fabius Maximus over the Gaulish, l. 330

Alnwick Castle, ring of Scipio in the possession of the Duke of Northumberland at, l. 270 and note

Alstinas, Lake, l. 348

Alta Sestina, the regio, l. 332

Altar discovered on the Quirinal, l. 90; of Consus, l. 51; of Saturn, l. 282; of Vulcan, &c.; to the unknown God, l. 178, 174

— of a Vicus, l. 379, 380

Altars, dedication of, as a protection against fire, l. 90

— marble, found in the Colosseum, ii. 33

— Prehistoric, of the Circus Maximus, ii. 41
INDEX

Amastra, the changed name of a Vestal Virgin, l. 192 and note
Ambrogio, S., church of, in the Porticus of Octavia, l. 205
Ambianas Marcellinus on the Circus Maximus, ii. 45 ; on the Sibylline books in the Temple of Apollo, l. 186
Amphion, Group of Dirce being fastened to the wild bull by, ii. 176
Amphitheatrum, origin of, i. 75 ; of Rome, ii. 75-112 ; of Curio, ii. 64 ; of Nero, ii. 78 ; of Taurus, ii. 77
Amphitheatre, Castrense, i. 381, 388 ; ii. 73, 110-112, 228, 337, 379, 383
Anphonae, stamped handles of the large Roman, i. 13 note
Anastasia, S., church of, over part of the Circus Maximus, ii. 54 and note
Anastasius Bibliothecarius, ii. 21
Ancus Martinus, head of, on a coin, ii. 337 ; the fortification of the Janiculum Hill said to be the work of, i. 124 ; the construction of the Subelian bridge ascribed to, ii. 363
Anconia, temple at, l. 384 ; ii. 238
Ancrean Inscription, i. 110, 121, 221, 238, 270, 278, 285, 293 note, 305, 338, 338 and note, 335 ; ii. 1, 6, 7, 44, 51 note, 59, 63, 70, 200, 338, 361
Andronicus, name of, inscribed on pedestal in the Thessalon of Titus, ii. 157
Angelo, S., bridge of, i. 149 ; ii. 213 ; castle of, ii. 193, 237, 292, 293, 298, 369
— in Pescaria, S., church of, in the Porticus of Octavia, ii. 205
Angelus, S., inter nubes, Mausoleum of Hadrian consecrated under the name of, ii. 296, 297
Anio, the river, i. 2 ; beds of travertine stone along the river, i. 7 ; tuft quarries on the banks of the, i. 6
— Novus, i. 388 ; ii. 318, 340, 344, 345, 383
— Vetus, ii. 318, 336, 337, 348
Aphrodite, coins of, found in the Atrium Vestae, i. 318
Annunciation, church of the, ii. 9
Antinous, relief of, i. 33 ; ii. 28, 305 note
Antiochus III., tetraetriochoem of, representing the Omphalos, i. 264
— Epiphanes selects Cosmatas to design the Temple of Olympian Zeus in Athens, i. 29
Antipholos, paintings by, in the Porticus of Octavia, ii. 68, 202, 206
Antium, capture of the Latin fleet at, i. 244, 260
Antoninus Pius, apotheosis of, ii. 303, 311 ; column of, ii. 310-313 ; restoration of the Temple of Augustus by, i. 274 ; restoration of the Colosseum by, ii. 81 ; coins struck in honour of Faustina by, i. 296, 331 ; restoration of the Gracacostas by, i. 263 ; statue of, ii. 311 ; the three cultus statues in the Capitoline Temple represented on a medallion of, i. 365 note ; temple of, i. 385, 383 ; ii. 310 ; Temple of Faustina erected by, i. 330 ; Temple of Venus and Roma completed by, ii. 219 ; scene of Attus Naurus cutting the stone represented on medallion of, i. 245 note ; inscription in memory of, ii. 296 ; relief representing, being borne heavenwards, ii. 263 ; coin of, representing his column, ii. 318 ; Horatius Cocles and the Subelian bridge represented on medallion of, ii. 363 ; bronze medallion of, showing the Pont Fabricius, ii. 367 note
Antony, M., crown offered to Julius Caesar by, i. 260 ; shows the body of Caesar from the Rostra, i. 250 ; murder of Cicero by, i. 260 and note
Anulis, the Egyptian god, i. 209
Apex, statue in green granite of the sacred Egyptian, i. 25
Apelles, wax pigments of, i. 96 ; picture of Venus Anadyomene by, ii. 4 ; pictures representing war and the triumph of Alexander by, ii. 7
Aphrodite, statue of, by Phidias, in the Porticus of Octavia, ii. 202
Apodyterium, the, of the Thermes
INDEX

of Caracalla, ii. 169; i.o. of Titus, ii. 155; the undressing-room of the bath, ii. 117

Apolibare, S., church of, l. 150

Apollo, area of, on the Palatine, i. 158, 210; baths of, ii. 359; libraries of, l. 186, ii. 271; group of, in a quadriga, l. 156; status of, l. 185, 187, 337, 369; ii. 7, 51; temples of, l. 182, 185, 248; note, 254, 356-357; iii. 58, 70, 71, 214, 240; theatre by the temple of, l. 356; votive offerings to, thrown into a hot spring, ii. 359

— and Artemis, group of, in a quadriga, l. 184, 185

— and Diana, group of, the slaughter of Niobe's children by, ii. 70

Apollodorus employed in Rome, l. 29; the architect of the buildings of the Trajan Forum, ii. 28; builds stone bridge over the Ister, δ., note; suggestion by, concerning the stylobate on which the Temple of Venus and Rome was to stand, ii. 86, 87; criticism of the Temple of Venus and Rome by, ii. 219, 224

Apollonius, terror of Hares by, in the Vatican, i. 17; ii. 69 and note; group of Diere by the Rhodian sculptor called, ii. 176

Apollonius Thyamas, bust of, on stucco relief, ii. 255

Apostolus, St., church of the, ii. 35

Apoxyomenos, the, of Lyaiipus, ii. 117, 141 and note

Appianus on the Basilica Aemilia, l. 247; on the Curia of Pompey, ii. 68; on the Regia, l. 305; on the Rostra, l. 244; on the Temple of Concord, l. 332; on the Temple of Julius, l. 295; on wooden theatres, ii. 62

Appalina, L., curator viarum, ii. 357

Apsa in the Basilica of Domitian's Palace, l. 205; of the Basilica Ulpia, ii. 26

Aqueduct, the, for the Bath of Caracalla, ii. 172; of the Anio Novus, l. 388; aqueduct channels, iii. 322; the Albula aqueduct, ii. 147; Alexandrine, ii. 348; Alcántara, δ.; Alcaicmate, l. 343, 344; Antonine, l. 389; Appian, ii. 314, 315, 335, 336, 354, 356; Augustan, ii. 338, 348; Caesarian, ii. 101; Claudian, l. 218, 338; ii. 147, 150, 318, 336, 340, 341, 344-346, 383, 384; Creton, ii. 316 note; Aquila Felice, ii. 138, 348; Julian, l. 188; ii. 254, 329, 324, 339, 341, 349, 355; Marcellus, ii. 130, 336, 383; ii. 172, 254, 322, 326, 337-341, 344, 355; Aqua Flia, ii. 339; Tepulum, i. 138; ii. 254, 322, 323, 339, 341, 354, 355; Trajan, ii. 347; Aqua Virgo, l. 387; ii. 142, 342, 343

Aqueducts carried through the Agger of Servius, l. 138; cost of, ii. 318; advantage of, ii. 316; circuitous course of, ii. 316, 317; early, ii. 315; laws and penalties relating to, ii. 319, 329

Arabia, alabaster quarries in, l. 21

Ara Coeli, church of, on the Capitoline Hill, l. 255, 323

Arcades of Republican date on the Palatine, l. 187; stone, on the Caesarian Hill, ii. 228, 230

Arcadian Evander, the story of, L. 196

Arcadius, inscription in honour of, ii. 334; restoration of the wall of Aurelian by, ii. 373; marble pedestal of an equestrian statue of, l. 348, 349; statue of, ii. 373

Arcosilaeus, statues by, l. 399; ii. 3

Archermos of Chios, sculptor, l. 185 note

Arch at foot of the stairs of the Tabularium, l. 376

— in the Forum of Nerva, l. 22

— leading into the Forum of Trajan, ii. 26

Archae, the, of the Thatched Bath of Caracalla, l. 173

— of the Circa Maxima, l. 41, 45

— in the outer façade of the Colosseum, l. 87 and note, 89

— chambranle, l. 88-90

— triumphal, of Augustus, l. 254; of Claudius, l. 300; of Constantine, l. 35, 300; of Fabius, l.
INDEX

Ashlar facing, l. 41, 42
Ass, an, turning a corn-mill, relief of, l. 209
Assyrian architectural style, i. 27
Athelstan, coins of, found in the Atrium Vestae, i. 313
Athenaeum, the, mentioned by Dion Cassius in connection with the Curia Julia, i. 238
Athene, temple of, at Elis, I. 73
Athenian Acropolis, ii. 272 note
Athens, son of Archermus, bronze statue by, in the Temple of Apollo Palatinus, i. 185
Athenodorus, one of the three sculptors of the Lacocon group, ii. 157
Athene, crude brick used for the walls of, i. 11, 56; Temple of Olympian Zeus at, i. 29; marble throne of the High Priest of Dionysus in, i. 34; united to its harbours of Piraeus and Phalerum, i. 124; the Erechtheum in, i. 261 note; ancient plaster cast in the central museum of, ii. 253; law concerning rainwater gutters in ancient, ii. 321
Athlete, bronze statue of, found near the Porta Fontinalis, I. 129, 130
Attica, wife of Euryssaces the baker, tomb and epitaph of, ii. 275, 276
Atrax, the lapis Atracus from, l. 20
Atreus, tomb of, at Mycenae, l. 145
Attalica, cloth of gold, ii. 286
Attalid kings, crude brick used for the palace of the, at Tralles, i. 11
Attalus, King, bids for a painting of Bacchus by Aristides, ii. 194; works of art collected by, ii. 194 note; votive offering of, in the Temple of Jupiter Capitolinus, i. 381
Attila, tombs of, ii. 249
Attus Navina, the sacred fig tree miraculously transported to the Comitium by, l. 121; represented on a medallion of Antoninus Pius, l. 245 note
Atys, Phrygian marble, according to the legend, stained with the blood of, i. 18
Auguraculum, the, on the Capitol, I. 369
Auguratorium, the, i. 158, 160

330; of Janus Quadrifrons, ii. 23, 306; ofMarcus Aurelius, ii. 302; ofNero, ii. 301; of Severus, I. 343; ii. 304; of Titus, II. 268; of Titus, II. 303; of Trajan, II. 26
Archway in the Capitoline Tabularium, i. 375
Archways of the Forum of Augustus, ii. 9
Arco della Glambella, ii. 144
Area, central, of the Forum, i. 238, 345-352
— Palatina, theatrical shows in the, i. 183
Arena, the, of the Circus Maximus, ii. 51
— of the Colosseum, ii. 95, 106-109
Arceo, wooden water-pipes from, ii. 327
Arceo, wooden water-pipes from, ii. 327
Argean chapels, I. 124, 131
Argiletum, the street called the, ending in the Forum, i. 234
Argive chapels, I. 124, 131
Argonauts, porticus of the, ii. 207, 208
Argus and Io, painting of, I. 249 note
Arinna, viaduct through the valley of, ii. 353
Aristides, picture of Banchus by, ii. 194
Arruntius, Lucius, the historian of the Punic wars, ii. 273; Columbarium for the slaves of, vi.
Art, degradation of Romans, during the fourth century, i. 34, 349
Artemana, King of Parthia, defeat of, i. 344
 Artemisia, group of Apollo and, in a quadriga, I. 184, 185
Artemisia, tomb of Mnasus erected by, ii. 289 note
Artemon, pictures by, in the Porticus of Octavia, ii. 203
Arval Brothers, i. 315 and note, 316, 362; ii. 83; college of, ii. 47, 84 and note; grove of, in, ii. 84, 128; inscription of, ii. 332; ii. 84, 85
Aryan symbols, i. 27 and note
As liberalis, the, i. 326
Asconius on the Maeniana in the Forum, I. 235; on the removal of the Rostra, I. 252
INDEX

Augusta, sulpicius, in. 386 and note
Augusta, Livia, votive offering of, in. the Temple of Capitolinus Jupiter, i. 371

Augusta, Aqua Alleletina, constructed by, ii. 343; construction of the Aqua Augusta by, ii. 345; branch subdividing the water of the Anio Vetus built by, ii. 337; arch of the Aqua Julia rebuilt by, ii. 338, 340; restoration of the Aqua Julia by, ii. 341; inscribed sulpici of the Aqua Julia of, 46; the aquae of the Aqua Julia, Teqla, and Marcia rebuilt by, ii. 322; branch added to the Aqua Marcia by, ii. 323; sulpici jugerales of the Aqua Marcia set up by, 46; new system of management of the water supply invented by, ii. 317; arch of, i. 250, 282, 324, 285, 346; ii. 339, 335; the Basilica Julia completed by, i. 270, 271; buildings in Rome restored or built by, i. 385-387; original sulpici of, found during the construction of the new Tiber embankment, i. 147; the Circus Maximus restored by, ii. 45; bronze coin of, representing the Rostra Julia, i. 287; coin of, recording the improvement of roads by, ii. 358; rules for admission to the Circus made by, ii. 33, 34; columbaria for the slaves of, ii. 273; the Curia Cornelia demolished and rebuilt by, i. 238, 268; denarius of, ii. 13; presentation of the Denus Publicus to the Vestals by, i. 306, 308; Forum of, i. 6, 48, 382, 386; ii. 2, 6-13, 21; funeral orations in honour of, i. 228, 227; house of, i. 200, 210; celebration of the Ludi Saeclares by, ii. 214; public shows provided for the people of Rome by, i. 386, 387; magistrates of, i. 380; beasts that he found Rome of brick and left it of marble, i. 15; Mausoleum of, i. 382, 384; ii. 282, 285-292; the Milliariun Aureum erected by, i. 264; ii. 358; Naumachia built by, ii. 59; 343, 344; picture of the Nymph Nemean dedicated by, in the Curia, i. 288; obelisk of, in the Circus Maximus; ii. 45; the Bibliotheca Octavia founded by, ii. 291; palace of, i. 183; the aedes Pontif- stium and the aedes Larum rebuilt by, i. 221; the Rostra and the Heroon of Julius Caesar built by, i. 252; Porticus Octavia built by, ii. 290; Regions of, i. 379-383; ii. 196, 372; river works of, i. 145; head of, on coin, ii. 357; statues of, i. 17, 186; ii. 187 and note, 288; statues of elephants in the Temple of Concord; presented by, i. 388; statue of James brought from Egypt by, i. 249; sun-dial obelisk erected by, ii. 311, 312; temple of, i. 273, 274, figured 275, 385 and note; ii. 288; the Palace of Apollo built by, i. 185; Temple of Ceres at Circum Maximus partly rebuilt by, i. 194; Temple of Julius built by, i. 225; Temple of Jupiter Fecundus rebuilt by, i. 365, 568; assists in the restoration of the Capitolium, the Temple of Jupiter, i. 361, 365; Temple of Vesta built by, ii. 288; Temple of Victory rebuilt by, i. 189; Theatre of Marcellus finished by, ii. 70; Pompey's Theatre restored by, ii. 66; victories of, i. 155, 249, 284-286, 371; dedication of the picture of Venus Anadyomene by, ii. 4; the Via Flaminia restored by, ii. 357, 361; the Vigiles of, i. 380; votive offering of, in the Temple of Capitolinus Jupiter, i. 371; votive temple to Mars Ultor by, ii. 6; inscribed water-pipe bearing the name of, ii. 332; name of the house of, inscribed on water-pipe, ii. 334; lists of the deeds of, on the walls of the temple at Anzio, i. 384-387; best period of Roman art during the age of, i. 33

Aulus Gallus, the libraries of the Basilica Ulpia, ii. 27; on the treasure chambers of the Capitoline Hill, i. 355; on a statue of Horatius Cocles on the Comitium, i. 245; on the library of the Forum Pacis, ii. 15; on the Regia, i. 365;
INDEX

Awnings along the valley of the Valabrum, i. 235
— over the Forum, i. 235 note
— first introduction of, into theatres, ii. 163 note

B

BABYLON, natural springs of naphtha:
— i. 96 note: representation of the taking of, on the Arch of Severus, l. 344

Bacchanals, draped figures of, in stucco reliefs, ii. 251

Bacchus, relief representing the birth of, ii. 281: painting of, by Nicias, l. 335: picture of, by Aristides, ii. 194: bronze statue of, found in the bed of the Tiber, i. 130: porphyry statue of, i. 294 note: temple of, i. 881
— and Proserpine identified with Liber and Libera, ii. 193 note

Bastylia, the sun-god of Eunea worshipped in the form of a, i. 299

Balbina, S., church of, i. 134
Balbus, theatre of, i. 21, 352, 387:
— ii. 73, 74, 197

Balconies of the Colosseum, ii. 97

Baldassarre, the, of S. Peter’s, made of bronze from the Pantheon, ii. 183

Ballot boxes, used on the Comitium, shown on a coin, l. 348

Balsamores, ii. 114

Balastrading, frequent; design for, i. 194

Banquets after gladiatorial fights, i. 235

Barberini estate, ii. 241: palace, i. 190: ii. 301: Villa, remains of the Servian Wall discovered near the, i. 131

Barracks of the Equites Singulares, ii. 259: of the Vigiles, ii. 255-259

Barrel vaults, i. 70

Bartolomeo, S., church of, ii. 366, 368

Basalt paved roads of the Forum, i. 250: other roads of, ii. 352-361

Basilica, introduction of, into Rome, i. 23

on the Porticus of the Forum of Trajan, ii. 27: on the Aedes of Veiovis, i. 355: on the Temple of Vesta, i. 295: on the mode of selecting the Vestal Virgin, i. 291

Aurum, statues of, in the Porticus of Octavia, ii. 203

Aurelian’s, wall of, i. 53, 61, 339
— note: ii. 57, 102, 110-112, 172

Aurelius, Marcus, relief representing the Apotheosis of, ii. 303: Arch of, i. 366, 362: ii. 302: edict of, concerning bathing, ii. 114: column of, i. 32, 208, 312, 313: statues of, ii. 277 note: ii. 184, 221 note: temple of, i. 383: ii. 78, 208, 313: relief representing entry into Rome of, after his German victories, ii. 303: victories of, over the Germans, i. 313

Aurelius Victor on the Anio Vetus, ii. 336: on the Circus Maximus, ii. 44: on the Pons Milvius, ii. 371: on real officials, i. 355: on the rebuilding of the Temple of Jupiter Capitolinus, i. 361

Auriga, basts of victorious, ii. 47, 49: of the four factions shown in a mosaic, ii. 53

Aventine Hill, enclosure of, i. 123: flat implements found on, l. 104: fortification of, by Romulus, i. 122 and note: marble swarf below the, i. 26: not included in the regions of Servius, i. 125: the region, i. 383: remains of the Servian wall on the, i. 37, 134, 149: Etruscan style of the tombs on the, i. 104: tus arch discovered at the foot of the, i. 135: tuft from the quarries in the, i. 6
INDEX

Basilinu, the Consul, restoration of the Colossus by, ii. 82

Batavus, promiscuous, efforts against, ii. 114

Baths, marble, i. 161, 317; in the Atrium Vestae, i. 312; hot rooms of, occasionally used as a means of death, ii. 122 note; private, ii. 186, 187; of the Romans generally, ii. 113-118; ruins of, in the Palace of Severus, i. 215

Baton, statues of Apollo and Juno by, i. 337

Batzchias, Spartan architect, a carved frog as signature, ii. 201

Battles, the, of the Aurelian Wall, ii. 378

"Beehive" tombs of prehistoric Greece, i. 145

Belisarius, the Aqua Trajana restored by, ii. 347; restoration of the Aurelian Wall by, ii. 375, 384; the Mausoleum of Hadrian converted into a fortress by, ii. 296; orphan asylum built by, ii. 335

Bell, bronze, found in the baths of Diocletian, ii. 181 and note

Bella, temple of, ii. 71, 211

Belzoni, drawings by, of fragments of the Marble Plan of Rome, ii. 18

Belvedere, court of the Vatican, ii. 118 note

Belvou, inscription found by, in one of the Nile granite quarries, i. 25 note

Benedictus, shrine of, on the Capitol, i. 368

Bentiqo palace, the, ii. 182

Bernard, S., church of, ii. 180

Bernini, Baldacchino made by, for S. Peter's, out of bronze from the Pantheon, ii. 133

Bertone, Cav., Mausoleum in the garden of, ii. 282

Beverley, Lord, ring of Scipio formerly in the possession of, ii. 269

Bibulus, tomb of, i. 128, 382; ii. 276 and note, 277; inscription, ii. 277; epitaph, ib.

Black Death, the, in England, i. 34 note

Boarding, marks of, on concrete walls, i. 49, 291

Bonaparte, Villa, tombs of the Genio Lacinia in, ii. 279

Bonas Evnus, portion of, ii. 213; temple of, ib.

Borgese, family, foreign marbles in the private chapel of the, i. 88

Bouleum, festival of the, in Athens, i. 243

Bourbon, Constable de, sack of Rome by the army of, the, ii. 298

Bowl, glass, found at Trèves with representation of a circus, ii. 43

Boxer, State, of the Circus Maximus, ii. 46, 47, 49

Braccio, Lake, i. 1; ii. 344, 347

Brunamante, of Urbino, the architect of Card. Balbi's Palace, ii. 69 and note

Breccia, corallina, columns of, in the Atrium Vestae, i. 315

Brescia, ivory diptych in the Musco Quarimiano at, ii. 47

Brick, crude, use of, i. 10, 11, 56, 74; protected by a coat of stucco, i. 11; restrictions on the use of, at Utica, ib.; square, i. 12; varieties of, ib.

— facing in the Colosseum, ii. 92; of the Thermes of Diocletian, ii. 181; in Domitian's Palace, i. 207; of the Rotunda of the Pantheon, ii. 194; of the Otostra, i. 254; in the Palantine Stadium, i. 210; in Hadrian's Palace, i. 214, 215; of the Deum Publicus, i. 301; of Salinas's house, ii. 245

— floors, i. 81

— stamps, i. 12, 13; ii. 158, 221, 224

— triangles, i. 11

— walls, absence of solid, in the buildings of classical Rome, i. 37

Bricks, burnt, i. 50; colours of, in Roman buildings, i. 12; kiln-baked, i. 10; length of, i. 62; prevention of the warping of, i. 12; walls in Rome not built of solid, i. 50, 57; inscribed, i. 18, 190; ii. 144; tax on, i. 13; used as facing for concrete, i. 54; archives of, only skin deep, i. 55; sizes of, a guide to date, i. 61

Brickwork of the Amphitheatre at Carthage, ii. 111

— dates of, i. 60, 61
INDEX

Bridge, first stone, ii. 364
Bridges, the, of Rome, ii. 362-371
Britannicus, burial of, ii. 291
Brunelleschi builds the great dome of the Florentine cathedral without using any kind of centering, i. 69, 70 note
Brutus, M., nicknames Caesar the "Palatine Venus," i. 14, 170
Brutto on quarry-marks, i. 25, 26 note
Bryzgus, name of, on pedestal in the Forum, i. 251
Bubalus, C. Junius, Temple of Salus built by, i. 191
Building Acts, i. 88, 89; ii. 146
--- trades, rules of, i. 59 note
Bull, bronze status of a, in the Forum Boarium, i. 109
Bull-fights in Spain, ii. 40 note
Bupalo, son of Archermos, bronze status by, in the Temple of Apollo, i. 195
Burial, intramural, prohibited, ii. 284; Roman modes of, ii. 263-264
Buried house in valley once dividing the Palatine Hill into two portions, i. 206, 201
--- rooms in Hadrian's Palace, i. 213
--- villa under the Thermes of Caracalla, ii. 159
Butchery in the Circus Maximus, ii. 43, 44, 51 and note; in the Colosseum, ii. 79 note, 81, 82; in the Forum Boarium, ii. 188; in theatres, ii. 65, 66
Byzantium, development of art in the time of the Emperor Justinian at, i. 34

C

Caesura, stairs of, i. 119, 120 note, 129
Cadmus, painting of, by Antiphilos, ii. 62
Cassius, Appius Claudius, construction of the Aqua Appia by, ii. 314, 335, 354
Caetan Hill, enclosure of the, i. 123; why so called, i. 125 note, 276; Camp of the Corpo called Peregrini on the, i. 209; valley of the, i. 213, 215; remains on the, ii. 228-233
Caulimontana, the Regia, i. 381
Caementum marmonseum, i. 75-80; ii. 119, 122, 175, 221, 249, 266
Cæsarc, Cn. Servilius, one of the constructors of the Aqua Tepula, ii. 339
Caesars, escape of the Vestals to, i. 295
Caesar, Julius, awnings put over the Forum by, i. 235 note; ii. 103 note; rebuilding of the Circus Maximus by, ii. 42, 43; construction of a canal in the Circus Maximus by, ii. 51; crown offered to, by M. Antony, i. 260; The Curia Julia built in honour of, i. 238; Forum of, i. 382; reduction of the number of people on the free list by, ii. 262; Heroon and Rostra of, built by Augustus, i. 252; house of, in the Subura, i. 299; Theatre of Marcellus begun by, ii. 70; murder of, i. 332; ii. 63; the body of, shown by Antony, i. 260; the spot where his body was burnt, i. 306; funeral pyre, i. 285; date of the Rostra of, i. 61; Rostra rebuilt by, i. 244 note, 252; removal of the Rostra by, i. 246; statues, etc., transferred from the old to the new Rostra by, i. 260; the Septa Julia begun by, ii. 210; statues of, i. 260; i. 4; money left by, stored in the Temple of Ops, i. 268; advocates his Agrarian law in the Temple of Castor, i. 283; Temple to Venus Genetrix vowed by, ii. 2; places pictures of Medea and Ajax in the Temple of Venus Genetrix, ii. 4; Triumphal entry into Rome of, ii. 2; Curator of the Via Appia, ii. 356
Cairo, Mosque of Mehemet Ali on the citadel of, faced with Oriental alabaster, i. 21
Calatium, M. Attilius, Temple of Spes founded by, ii. 198
Calidarium, the hot room of a bath, ii. 119, 120, 167, 189
INDEX

Caligula, one of the amusements of, throwing money from the roof of the Basilica Julia into the Forum, i. 278; wooden amphitheatre of, ii. 343; the Aqua Claudia and Anio Novus begun by, ii. 318, 344; First Brass of, representing the Emperor offering sacrifice in front of the Temple of Capitoline Jupiter, i. 364; bridge of, i. 204, 258; cremation of, ii. 292; poisoning of the chariot-drivers of his rivals by, ii. 53; circus of, i. 383; ii. 58, 59; crucifix of, ii. 358; murder of, i. 153; palace of, i. 54, 55, 170, 171, 182, 190-193, 206, 216, 223, 516; ii. 33, 241, 244; restoration of Pompey's Theatre by, ii. 67; Pons Vaticanus completed by, i. 370; the Temple of Augustus completed by, i. 273, 274

Calistus, S., catacomb of, ii. 57

Callicles, Janius Brutus, Temple of Mars re-built by, ii. 71

Calpurinia Proctorata, chief Vestal, i. 292 note; inscribed base of her statue, i. 324

Calpurinius, Plautius Nepos, one of the curators of the Tiber bank, i. 147

Calpurina, his description of the Roman Amphitheatre, ii. 55, 56

Calvinus, C. Sextus, altar dedicated to an unknown God by, i. 173, 174

Calvinus, Domitius, one of Caesar's generals, i. 184; rebuilds the Regis, i. 165, 303; victor in Spain of, i. 365

Calvisius, Publius Cincius, brewery for corn made by, i. 290

Calx used to whitewash walls, i. 79 note

Camelina in Rhodes, pottery discovered at, i. 196

Camillus, capture of the Latin fleet at Antium by, i. 244

L. Furius, statue of, in the Forum, i. 345; the founder of the Temple of Concord, i. 382; the Temple of June Moneta founded by, i. 395

M. Furius, Temple to Mater Matuta rebuilt by, ii. 189, 190

Campagna, pozzolan beds in the, i. 44

Campanile, the, of the Monastery of SS. Giovanni e Paolo, ii. 229 and note

Campo Carlo, entrance to Trajan's Forum in the, ii. 23 note

Campus Equiullium, i. 133; Flaminius, ii. 57; Martialis, ii. 196 note, 206; Martius, i. 3, 4, 26, 142, 144, 146, 149-151, 234 note, 353, 378; ii. 58, 59, 62, 64, 71, 78, 184 note, 188 note, 195-197, 213, 215-218, 311, 312, 320, 345, 369, 383; Seeferatu, i. 122, 294; ii. 247; Vaticans, ii. 59

Carpinus, fragments of the Arch of Titus found by, i. 269; excavations of the Basilica Julia by, i. 271; interior view of the Basilica Ulpia as restored by, ii. 29; remains of the Millarium found by, i. 263; the Portico of the Divi Consentes restored by, i. 342; supposed restoration of the Temple of the Sun by, ii. 184 note; his works on Rome useless to the student, i. 36 note

Carneae, slaughter at, ii. 58 note

Capitoline Arch, i. 354; ii. 328

—— Fortresses, the, i. 127

—— Hill, the, i. 353-377; approach to the, from the side of the Campus Martius and the Forum Romanum, i. 4; works of art on the, i. 369; the entrances to, i. 127, 128 note; the, not included in the regions of Servius, i. 125; enclosure of, i. 123; fortification of, by Romulus, i. 122 and note; temples on the, i. 357-372

—— Museum, columns of the Temple of Concord now in the, i. 334; granite column now in the courtyard of the, ii. 212; granite lions in the, ii. 213; mosaic found in Hadrian's Villa, now in the, i. 83; marble copies of the Plan of Rome let into the walls of the, ii. 18; statues of fauns in the, i. 19; pedestal of a statue of the elder Paolina, i. 268; statue of the wolf suckling the twins in the, i. 121 and note
INDEX

Capitoline Stairs, trophies of Marius removed to, ii. 325
—— Talismanum, the, i. 372-377
Capitolium, the south-western peak of the Capitoline Hill known as, i. 354; and note, 356, 357; fall of rock from the cliff of, i. 286, 287; primitive wall of the, i. 113; 114 note
—— Vetus, i. 354, 382
Capsa, amphitheatre at, ii. 77 and note
Caput Africae, i. 381
Carceres, the, or the Circus Flaminius, ii. 65; of the Circus of Maxentius, i. 57; of the Circus Maximus, ii. 41, 42, 44, 48, 49, 52, 188, 195
Carmenta, the nymph, i. 127
Carres, siege of, on the Arch of Severus, i. 344
Carthage, capture of, by L. Hostilius Mancinus, i. 198
Carthaginian fleet, defeat of, by Dullus, i. 309
Carduuan, Monastery on the site of the Thermae of Diocletian, ii. 180
Carvlini, Sp., bronze statue of, on the Capitol, i. 369, 370
Caryatides, a row of, round the Pantheon, ii. 128
Caryatid, column, i. 15, ii. 99
Caryatid, marble from, i. 18, 331
Caroniana, restoration of the Aquæ Claudia by, i. 345; restoration of the Aquæ Julia by, i. 341; additions to the Marcian aqueduct by, ii. 338, 339; baths of, ii. 158-177; Thermæ of Agrippa restored by, ii. 142; brick stamps of, ii. 158 note; Circus Maximus represented on coin of, ii. 45; murder of Geta by, i. 344; destruction by, of all sculptured representations of Geta, ii. 395; restoration of the Pantheon by, i. 157; statue of, i. 243; ii. 356, 357; titles and honours of, i. 344; inscribed water pipe bearing the name of, ii. 333 and note
Cassandra, picture of, by Theaenus in the Temple of Concord, i. 338
Cassianus, T. Licinius Cassianus, sacrifice offered to the Dea Dia in the Temple of Concord by, i. 332

Casaleum, on the Carceres of the Circus Maximus, ii. 48; letters of, on the Ludi Circenses, ii. 54
Casina, Spurian, dedication of the Temple of Ceres, Liber and Libera, by, i. 193 and note
Casina aquaerum, ii. 324-326, 331, 343
Casineum of the Aqua Tepula, ii. 384; Aqua Virgo, ii. 342
Catar, Temple of, ii. 46, 65, 270 to 288; ii. 24, 152, 223; columns of lapid Atracis by the temple of, i. 20
—— and Pollux, statues of, ii. 283; ii. 74, 186; apparition in the Forum of the twin brothers, i. 277; relief representing the rape of the daughters of Leucippos by, ii. 281
Castrum peregrinum, i. 381
Catamusia, ii. 57, 254
Caterina dei funari, S., church of, in the Circus Flaminius, ii. 58, 205
Catiline conspirators, execution of, in the Mamertine Prison, i. 154
—— house of, i. 170
Cato, M. Porcius, builds a small shrine to Victory, i. 190; the founder of the Basilica called after him the Basilica Porcius, i. 247
Catulus, Q., sawings first introduced into theatres by, ii. 103 note; house of, i. 170; spoils taken from the Cinibri by, i. 170; shrine to the Nymph Futunia built by, i. 284 note; finishes the Temple of Jupiter Capitolinus, i. 361; the builder of the Tabularium, i. 170, 361, 372
Cavus, the, of the Circus Maximus, ii. 46, 55; of the Colesium, ii. 85, 97-101; of the Greek theatre, ii. 61; of the Theatre of Pompey, ii. 85, 66
Cecilia, St., bath of, ii. 186
Ceilings of baths as described by Vitruvius, ii. 119, 129
Celery: a Greek by training, i. 29; one of the architects employed by Nero for the rebuilding of Rome, i. 89
Cells of the temple at Amysa, i. 20
INDEX

384 ; of the Temple of Castor, i. 281 ; of the Temple of Concord, i. 333, 334, 335, 347 ; of the Temple of Ceres ad Circum Maximum, ii. 194 ; of the Temple of Farnesius, i. 331 ; in the Temple of Hercules in the Forum Boarium, ii. 192 ; of the Temple of Honos and Virtus, i. 308 ; in the Temple of Julius, i. 287 ; of the Temple of Jupiter Capitolinus, i. 357-360, 362, 363, of the Temple of Juno, i. 279 ; of the Temple of Mars, ii. 12 ; of the Temple to Mater Matuta, ii. 190 ; of the Temple of Minerva, i. 371, ii. 21 ; of the Temple of Neptune, ii. 268 ; of the Temple of Saturn, i. 267 ; of the Temple of Venus and Rome, ii. 219-221, 229 ; of the Temple of Vespasian, i. 339, 340 ; early, opposite the summit of the Stairs of Caecus, i. 159 ; Roman tendency to increase the aim of, i. 30 ; solarii of the Thermae of Caracalla, ii. 165.

Cement, backing, i. 55, 57; floors, i. 77.
Cements, method of making, i. 73-80; see also cementation.

Censor, the water supply under the administration of, ii. 317.

Censum, tribunals of the, i. 272.

Cephasidots, statues of Asculapius and Diana by, ii. 202; of Latona by, i. 185.

Cera Fumus, the finest kind of white wax used by painters, i. 97.

Cerealia, tomb in the Forum, in Athens, ii. 253.

Cerdo, Quinctius Statilium, sculptor to the Vestals, i. 324.

Ceres, statue of, i. 338 ; temple of, i. 25 and note, 29, 333.
— ad Circum Maximum, temple of, ii. 193-195, 274.
— Liber and Libera, temple of, ii. 193 and note, 194.

Cestius, tomb of, ii. 284-287; epitaph, 285 and note.
— L., the builder of the Pons Cestius, ii. 368.

Cithernus, Temple of, i. 362.

Chancery, of the of the Basilica of Domitian, i. 265.

Chalcidicum, the of the Basilica of Constantine, ii. 227 ; adjoining the Curia, built by Augustus, i. 355 ; mentioned by Dion Cassius in connection with the Curia Julia, i. 288.

Chapter House, the of the Regia, i. 365.

Chares, bronze bust by, on the Capitol Hill, i. 370.

Chesnon, the Arch, statue of, ii. 14.

Cheops, pyramid of, ii. 294 note.

Chimney stacks, roof pierced by a number of, ii. 123.

Chips marble, i. 19.


Christian house, remains of, i. 231 ;—paintings, ii. 231.

Christians, some of the Vestals become, i. 329.
— forced to work at the construction of the Baths of Diocletian, legend of, ii. 173.

Chryzerus, Flavius, name of, inscribed on pedestal in the Thermes of Titus, ii. 157.

Cibae, family, foreign marbles in the private chapel of, i. 88.

Cicero, the ambassadors of the Gaulish Allobroges arrested on the Pons Mulvius by, ii. 371; announcing the death of the Catiline conspirators, i. 54; house of, i. 170, 190; first oration against Catiline delivered in the temple of Jupiter Stator, i. 168; orations in the Temple of Concord by, i. 232; recall from exile of, i. 283; murder of, by Antony, i. 260 and note; on an altar dedicated to the unknown God, i. 174; on the Balmain in Rome, ii. 118; on modes of burial, ii. 263; on intramural burial, ii. 284; on the house of Cicatullus, i. 170; the Comitium, i. 267; the slave-players of the Forum, i. 273; Arch of Flavius, i. 330; Tabernae of the Forum, i. 233; Forum Julia, ii. 2; Septa Julia, ii. 210; the Graecostasis, i. 263.
INDEX

the purchase of his house, l. 170;
the Novis Vis, l. 222; Lecus Ser-
vilus, l. 252; the lighting of
Roman streets, ii. 256; the Palat-
dini, l. 294; the Porta Flaminia
near the bank of the Tiber, l. 126;
Porta Triumphalis, l. 127; Publica-
ola's house, l. 220; read officials,
i. 255, 356; the Curia of Pompey,
i. 68; on reliefs in private houses,
i. 253; the Rostra, i. 244, 252;
the statues on the Rostra, l. 246,
260; the statues on the Capitolini,
hill, l. 371; the Temple of Castor,
i. 233; of House and Virtus, i. 368;
of Venus, ii. 4; the Tribunal Aure-
lum, l. 283; the frieze of Verres,
i. 252; the Vicus Maurus, l. 276;
the Lacta Vestae, ii. 316.
Clavihi, spoils taken by Catulus and
Marinus from the, l. 170, 308.
Cligaeus jugularis, the, of the Aqua
Marcia, ii. 338.
Clunaria, ii. 284 note, 279, 280, 290.
Circuit wall, the, of the Regal
period, l. 123; of Trajan's Forum,
i. 33; of Augustus' Forum, ii. 8;
of Vespasian's Forum, ii. 15; of
Nerva's Forum, ii. 22; of Aureli-
anus, ii. 372-378.
Circus drivers, whose, of ii. 52, 55;
mosaic representations of, ii. 53;
portrait busts of, ii. 47.
Flaminia, l. 382; ii. 57, 58,
65, 196, 211 note.
Maximus, l. 91, 109, 219; ii. 13
note, 40-56, 195, 300, 304, 312, 382.
Cistercian Monastery on the site of
Dicketian's Baths, ii. 129.
Cistern, ancient rock-cut, behind
the Wall of Roman, l. 116, 117; in
the floor of the Tribunal, l. 153;
remains of an early, by the Scala
Ceci, quoted, l. 160.
Cisterns, early, ii. 315; rock-cut, ii.
231; and note, ii. 217, 218.
Ciada, the, on the Quirinal Hill, l.
354 note.
of the Capitolini Hill, l. 354,
356.
Citrugola, the tower of the Palazzo
Matti, called, ii. 58.
Clamps used in masonry, l. 40.
Clarius, separation of, in the Circus
Maximus, l. 42.
Clavus aqueduct, i. 280, 308.
Cleudius, Cecilia, inscribed pedestal
for, i. 323, 329.
Cleudius, the Aqua Claudia and Anio
Novus completed by, ii. 318, 344;
restoration of the Aqua Virgo by,
ii. 343; arch of, ii. 300-302; aureus
of, i. 238, 234; the Circus Maxi-
minus enlarged by, ii. 44; inscrip-
tion of, over the Porta Maggiore,
ii. 345; temple of, l. 281; ii. 230;
present of a porphyry statue to, i.
203; downfall of, l. 259; burial
of, ii. 291.
Clavus annalis in the cells of the
Temple of Minerva, l. 358.
Clay, paintings on, i. 91, 92.
Clement VII., Pope, takes refuge in
the Castle of S. Angelo, ii. 293.
Chopitra, pearls belonging to, dedi-
cated in the Pantheon, l. 128,
129; inscribed water pipe, bearing
the name of, ii. 334.
Clivus Argentarius, i. 128 note, 154.
Campitoorio, l. 225, 251, 252,
266, 342, 343, 355, 373; ii. 355.
Palatinus, l. 169.
Publicus, ii. 70.
Vicatiae, l. 118, 192, 194, 222, 309.
Clusus, the, in the Atrium Vestae, l.
316.
Maximus, l. 126 and note, 142
and note, 148, 153, 231, 232, 239,
316, 348, 350.
Clusae, draining by means of the,
l. 8; Errusian, l. 145; of the
Coloseum, ii. 93; of the Forum
Julium, l. 9.
Clodius, house of, l. 170, 190; forti-
ifies himself in the Temple of Castor,
l. 283; intrigue of, with Censor's
wife in the Domus Publica, l. 299;
riot at the funeral of, l. 238, 247;
funeral pyre, i. 348; statue, de-
stroyed in the fire at the funeral
of, l. 269.
Cloth of gold, ii. 230.
Casina Ovulana, dedication of a
brass statue of the wolf suckling
the twins by, l. 121.
Cudina, the "Eon-tomb" at, i. 30

Coles, Horatius, and the Sabellian bridge, ii. 333 and note; statue of, i. 245

Collins, one of the regions of Serrus, i. 125

Colonna family, the Mausoleum of Augustus used as a fortress by the, ii. 291
— gardens, i. 129; ii. 184, 254
— palace, ii. 184

Colossae along the podium of the Colosseum, i. 194; of Domitian's Palace, i. 298; of the Porticus Octaviae, ii. 294, 295

Colosseum, the, i. 37, 42, 91, 199; ii. 77 and note, 78-110, 219

Colus the Parian, pupil of Pasteltes, i. 390

Colombraria, ii. 284, 270, 278, 274, 277

Columnar ruin found in the Ludovisi Gardens, ii. 52

Columnus, the, of the Arch of Constantine, i. 306, 307; of the Basilica of Constantine, ii. 226; of the Thermes of Caracalla, ii. 163, 164; of the Thermes of Diocletian, i. 179
— honorary, ii. 309; of Antoninus, ii. 310; of Duilius, ii. 309; of M. Aurelius, ii. 312; of Minucius, ii. 310; of Phocas, i. 350; of Trajan, ii. 29; of the Forum of Nerva, ii. 25; statues on the summit of lofty, ii. 32; of the Temple of Venüsia, i. 339; Columnus coelus of the Basilica Ulphia, ii. 26, 27; Columnus Duillus, ii. 383; Columnus Maxima, ii. 263; Columnus Centenaria, ii. 30, 312; Columnas Rostratae, ii. 309, 310

Comitia Centuriae, ii. 197, 210

— Curia, the, i. 236, 242

— Tribunus, the, i. 236

Comitia, the, i. 236-238; ii. 243-245, 252, 251, 346, 348, 350

Commodus, baths of, i. 281; underground passage added to the Colosseum by, i. 81; palace of, i. 281; ii. 81, 105, 250; portrait head of, ii. 110; attempted murder of, ii. 108; murder of, ii. 230; burial of, ii. 296

Composite style of architecture, i. 30; earliest example of, ii. 303

Concord, area of, i. 347; seated figure of, i. 337; shrine of, i. 360 and note; temple of, i. 31, 33, 46, 87, 128, 246, 247, 266 and note; ii. 352-354, 377 note; ii. 81, 128, 139, 176, 222; works of art in the temple of, i. 337, 338

Concrete arches, i. 216; backing, i. 14; east, i. 47, 291; centering for, i. 68; early and extensive use of, i. 45, 44; examples of, i. 50; date of the first use of, in Rome, i. 141; note; faced and unfaced, i. 50; floors, i. 70-72, 317; foundations, ii. 172; materials of, i. 45, 46; stairs, i. 64, 65; durability and strength of the Roman, i. 9, 42, 59, 63-65; support for, i. 62, 63; timid use of, i. 46; vaults, i. 35, 66, 190; walls, i. 11, 46-48, 51, 56, 57, 59, 207; ii. 242-245

Cone, bronze fif, in the Vatican, ii. 298, 299, 330

Conteria, the, in the Baths of Caracalla, i. 171

Conso, the Greek historian, on the removal of the hut of Romulus, i. 122

Constantine, portrait status of, ii. 184

— II., Emperor, gold-plated tiles taken from the dome of the Pantheon by, ii. 152, 153; death of, ii. 133

Constantinus, arch of, i. 18, 256, 272; ii. 26, 28, 35-38, 398-399; of the Forum of Nerva, ii. 25; statues on the summit of lofty, ii. 32; of the Temple of Venusia, i. 339; Columnus coelus of the Basilica Ulphia, ii. 26, 27; Columnus Duillus, ii. 383; Columnus Maxima, ii. 263; Columnus Centenaria, ii. 30, 312; Columnas Rostratae, ii. 309, 310

Constantius Maximus, by, ii. 44; Donna Laura, given by, to Pope Sylvester, ii. 382; pedestal of the bronze equestrian statue of, i. 348; the Praetorians disbanded by, ii. 234; status of, ii. 184; strategic talents of, ii. 371; Temple of Romulus
rededicated by, II. 20; restoration of the Temple of Venus and Rome carried out by, ii. 220; victory of, over Maxentius at the Pons Milvius, ii. 396 and note.

Constantinople, Roman reservoir at, ii. 182.

Constantius, Fl. Juliius, marble pedestal of an equestrian statue of, i. 349; obelisk placed on the spina of the Circus Maximus by, ii. 44.

Consualia, a sacred festival, i. 109, 110; held in the Circus Maximus, ii. 41.

Consular Fasti, their probable position, i. 307.

Cosmas, altar of, i. 190 and note; 110 and note; II. 41, 51; sacrifices offered to, by the drivers of chariots in the Circus赛车, i. 119 note.

Corbela, centering for stone arches supported on, I. 69, 70; remains of the Servian wall with carved, I. 148 and note; travertine in the Palace of Severus, I. 217 and note.

Corinth, taking of, by Munnusius, I. 28, 103, 390.

Corinthian lounge, ii. 129
— columns in the Area of Apollo, I. 184; in the Temple of Neptune, ii. 207; in the Temple of Castor, I. 277 and note; in the Temple of Minerva, ii. 22; in the Temple of Vesta, i. 298; in the Temple of Venus and Rome, ii. 220—style of architecture, i. 30.

Corn-mill in the Atrium Vestae, i. 314.

Cornelia, Curia, i. 262 note
— seated figure of, ii. 203.
— burying alive of the Vestal, I. 294.
— gens, tombs of the, ii. 263, 265.

Corneto, painted sarcophagi from, I. 92.

Corne, external, of the Basilica of Constantine, ii. 227, 228; in the Temple of Romulus, I. 38; details of the, in the Temple of Comond, I. 335; in the Temple of Vespasian, I. 340.

Corinna, the, of the Baths of Diocletian, ii. 151.

Coral on fluor-spar, i. 22.

Corne, taken by Lucius C. Scipio, ii. 279.

Corinini Chapel in the Lateran Basilica, Molossian marble used in the, i. 29—family, foreign marbles in the private chapel of the, ii. 35

Cosmas and Damianus, SS., church of, I. 223 note; the Templum Urbis and Templum Romuli converted into a church dedicated to, ii. 21.

Cosmatus, Roman architect, I. 29, 30.

Crobra, the brook, ii. 382.

Crassus, L., atrium of, II. 63; house of, I. 14, 169; nicknamed the Palatine Venus, I. 189, 170.
— M., probable stealer of gold from the Temple of Jupiter Capitoline, I. 359, 360.
— M. Licinius, ashes of, ii. 280.
— P. Licinius, banquets at the funeral of, I. 235.

Crescentius, castle of, ii. 293; house of, ii. 364.

Crispus, C. Juliius, dedicates pedestal to the Vestal Prastaxata, I. 324.

Criego in Trastevere, S., church of, ii. 257.

Criscina, Temple of Vesta shown on medallion of, I. 297.

Crisos in Jerusalem, SS., Basilica of, I. 110, 233.

Crocodiles, slaughter of, in the Theatre of Scaurus, II. 66.

Cruelty, supposed caricature of the, in the Domus Geoliana, I. 298.

Crypto-porticus, Caligula's, I. 105, 200; of Domitian's Palace, I. 265; by the House of Livia, I. 181, 182.

Ctesibius, the inventor of the forcepump called Machina Ctesibica, I. 256 note.

Ctesiphon, siege of, on the Arch of Severus, I. 344.

Cupid riding upon a goose, vase in the form of, I. 105 note
— statue of, the Thespian, by Praxiteles, II. 202.

Cupidine, relief representing chariot race of, in the Circus Maximus, I. 50; frieze sculptured with, I. 134.

Curator Aquarium, ii. 314, 317, 342.

Curia, the, I. 287-240, 385; II. 139.
Curia Hostilia, i. 110, 237, 238, 243.
Cornelia, the, i. 238, 252 note.
Curia Vetereae, i. 116, 237 and note.
Curio, C. Scribonius, amphitheatres of, ii. 64, 126 note.
Curtius, Lake of, i. 3, 232; Gulf of, i. 346.
Caryle Aediles, golden quadriga on the Capitol dedicated by the, i. 370.
Cybele, statue of, i. 165, 166 and note; ii. 51; temple of, i. 165, 385, 388.
Cyclope, painting of, ii. 15.
Cyprian, alabaster, etc., found in the tombs of, i. 21.
Cyrene, early tumulus in the Necropolis of, ii. 282.
Cyzicus, electrum staters of, i. 264 note.

D

Daulian Captives, representation of, on Constantine's Arch, ii. 33; statue of, in the Temple of Trajan, ii. 28.

Dacian, trophy taken from the, ii. 30; Trajan's victories over the, ii. 31.

Daidalos, status of Venus at the bath ascribed to, ii. 202.

Dagob, obelisk used as monument to soldiers killed at, ii. 212.

Danaids, mural paintings in the Temple of Ceres, Liber and Libera, by, i. 193.

Danaida, statues of, in the Temple of Apollo Palatina, i. 167.

Dante, on the story of Trajan and the wife, ii. 36 note; the Pons Aelius mentioned by, ii. 365, 370.

Darius, mosaic found at Pompeii representing the defeat of, by Alexander, i. 54.

Dea Dia, the goddess, i. 315, 322; ii. 84 note.

Decennalia, King, Trajan's defeat of, ii. 31.

Decius, bronze bust by, on the Capitol Hill, i. 370.

Deira, frieze found in the sanctuary of the island of, i. 331; bronze of the island of, ii. 129 note.

Delphi, representation of the Gaullish pillagers at, on doors in the Temple of Apollo, i. 156.

Demosthenes, attack on the Porta Collina by the, i. 132; defeat of the, at the Porta Collina, ii. 211.

Denari for beasts under the arena of the Colosseum, ii. 106, 107.

Dentatus, Manius Curio, the Anio Vetus begun by, ii. 330; Apollo was from Pyrrhus by, i. 9.

Derybaih, lead mines in, worked by the Romans, ii. 321.

Diana, statues of, i. 165; ii. 35, 202; temple of, on the Aventine, i. 333.

Doric players, the, of the Forum, i. 273.

Didius Julianus, the Empire put up to auction by the Praetorians and knocked down to, ii. 234.

Dii Consentes, i. 251, 375; Forticus of the, i. 341, 342.

Dium, temple of, i. 385.

Dioeces, supposed atomen, i. 169.

Diocletian, baths of, i. 66, 240, 392; ii. 132, 165, 177-182, 238, 252, 326; the Curia of, i. 238, 239; restoration of the Grassosthis by, i. 283; the Basilica Julia restored by, i. 270; statue of a Vestal in the Thermes of, i. 319 note.

Diodorus Siculus on the Aqua Appia, ii. 335.

Diogenes, sculptor of the Pantheon Caryatides, ii. 128.

Dios Cassius, references to, as follows: On the Aqua Marcia, ii. 357; the Aqua Virgo, ii. 242; Palatine Temple of Apollo, i. 156; Arch of Augustus, i. 254; Mausoleum of Augustus, ii. 290; Theatre of Balbus, ii. 74; Temple of Castor, i. 277; political struggles in the Temple of Castor, ii. 283; Court of Centumviri, i. 278; Circus Maximus, ii. 43, 50; butchery in the Colosseum, ii. 81, 82; avnning of the caves of the Colosseum, ii. 105; restoration of the Colosseum.
INDEX

by Heliodorus, ii. 81; the Diri-
bitorium of the Campus Martius, ii. 209; attempt of Cl. Pompe-
ianus to murder Commodus, ii. 105; Curia Cornelia, l. 233; de-
fest of King Decebalus by Trajan, ii. 31; Basilica Julia, l. 270; the
Chalcedon and Athenaenum in connection with the Curia Julia, l. 238; Rostra
Julia, l. 286; Septa
Julia, li. 210; Temple of Julias, l. 285; rebuilding of the Temple of
Jupiter Capitolinus, l. 361, 362; the Mamertine Prison, i. 151; Temple of Mars, ii. 7; Millarium
Aureum, l. 284; Temple of Minerva, ii. 211; Fortuna of Neptune, ii. 207; Curia Octavia, ii. 204; the
Pantheon, ii. 128; Temple of Peace, ii. 13; Theatre of Pompey, ii. 65; Pons Aselli, ii. 299; Casti,
tius, ii. 368; Fabrician, ii. 367; Donatus Publius of the Pontifex
Maximus, l. 300; the Regia, l. 305; inventa on earlier Romulus
than the traditional one, i. 107; on the Hut of Romulus, l. 121; removal of the Rostra, l. 246, 252;
statues on the Rostra, l. 246, 260; house of Salvini, ii. 242; ashes of
Trajan, ii. 292; Column of Trajan, ii. 28; on the architect of the
buildings of the Trajan Forum, ii. 28; Amphitheatre of Taurus, ii. 77; libraries of the Basilica Ulpi,
ii. 26; Temple of Vesta Genitrix, ii. 2; Temple of Venus and Rome, ii. 319;
Dionysus scene on reliefs of rivers,
side houses, ii. 251; Dionysus, statue of Jupiter by, ii. 202; at work on the sculpture of
the Porticus Metelli, ii. 293; Dionysus of Halicarnassus, references to, as follows: Campus Scelerat,
i. 247; fortification of the Capitolinus and Aventine Hills, l. 122, 127; Temple of Castor, l. 277; Temple of Ceres, Liber
and Libera, ii. 193; Colosseum of
Rome, l. 142; Circus Maximus, ii. 41, 42; Lake Curtius, l. 232; Pons Jutarius, l. 294; Temple of
Fortuna, ii. 189; survivals over
the Forum, l. 235 note; site of the Forum, l. 3; Temple of Jupiter
Capitolinus, i. 358, 360, 362; Temple of Jupiter Feretrius, i. 357; Temple of Jupiter Stator, l. 167; Lupercal Cave, l. 120; Porta
Collina, l. 191; Temple of Pictus, ii. 71; Pomonaemum, i. 198; seven
mysterious relics, l. 294; Pons
Subulatius, ii. 362; gates in the Wall of Romulus, l. 118; Hut of
Romulus, l. 121; Alar of Saturn and Volcan, l. 252, 253; Temple of
Saturn, l. 266; the Scamium, l. 247; Agger of Servius, l. 132;
136, 138; Servian circuit wall, l. 129; ii. 372; circuit wall built by
Tarquinius Priscus and Servius
Tullius, ii. 123; legend of Tarpeia, i. 354-356; marble gateway in
honour of Severus in the Velabrum, l. 223; Temple of Vesta, l. 285, 295; Temple of Vestal Vir-
gins, l. 291; penalties for breach of
chastity by the Vestals, l. 294; Temple of Victory, l. 189; Vicus
Tasiani, l. 231; Dionysus, throne of the High Priest
of, l. 34; ii. 306 note; Dioscorides, Greek artist, name of, on
glass mosaic found at Pompeii, l. 83; 84; Dioscuri, relief of the, carrying away
their horses, li. 231; temple of the, 46; Disokos, quarry superintendent, ii. 310; Diptych, ivory, in the Museo Quirin-
sian at Brescia, ii. 47; Dice and the bull, group of, ii. 176; Diribitores, the, ii. 209; Dirilitorium, the, in the Campus
Martius, ii. 209; Dis, altar to, li. 198; Dodwell's Journey to Greece, refer-
ence to, on the working of the
quarries in Mount Marpessa, l. 17; Dog, bronze statue of, ii. in the
Capitoline Colla of Juno, l. 370; Dolabella, arch of, ii. 305, 346; Domus, the, of the Baths of Caracalla,
li. 165; the, of the Pantheon, ii. 139-139.
Domed hall in the Baths of Diocletian, ii. 180

Domitian, erection of a votive altar by, i. 90; Bibliotheca, i. 166; Second Brass, showing the Temple of Jupiter Capitolinus, i. 364; bronze columns on the Capitoline Hill dedicated by, i. 371; Temple of Capitolinus Jupiter rebuilt by, i. 362; the Circus Maximus restored by, ii. 44; Colosseum shown on coins of, ii. 80; the Curia burn and rebuilt in the reign of, i. 238; the Flavian Palace mostly built by, i. 199; the Meta sudans shown on coins of, ii. 350; Temple of Minerva restored by, ii. 212; Naumachia of, ii. 60; palace of, i. 61, 156, 199, 200, 256 note; ii. 92; the Palatine Stadium begun by, i. 210, 211; the Pantheon restored by, ii. 137 note; peristyle of, i. 167; walls of the porticus of, lined with phenigites, ii. 145 note; Stadium of, i. 59, 144; status of, i. 255; supposed pedestal of the statue of, i. 348; Arch of Titus erected by, ii. 303; Temple of Vespasian built by, i. 359; Via Appia repaired by, ii. 338; death of, i. 348

Domitian, tomb of, ii. 387 note

Domitian, Temple of Neptune built by, ii. 207

Donus Gelotians, i. 111, 116, 208

- Publicus, the, of the Pontifex Maximus, i. 281, 299-303, 305, 310

Doorway of the Temple of Romulus, ii. 19

- Mocked, in: the Capitolinus Tabularium, i. 375

Doric style of architecture, i. 30

- temple, i. 254 note

Doves in masonry, i. 40

Drills worked with diamond dust, i. 23

- diamond, i. 85 note

Dreams, arch of, i. 381; ii. 172 and note, 308, 345; bust of, i. 293, 204 note; Temple of Castor rebuilt by, i. 277; Censor's house originally built by, i. 170; Temple of Concord rebuilt by, i. 382; spoils won in Germany by, ib.; ii. 8

- the Elder, burial of, ii. 290

- Dullius, column of, i. 263; ii. 309, 310; victory of, over the Carthaginian fleet, ii. 308

Dutch, the antiquary, ring of Scipio given by, Fins VI. to, ii. 269

K

Eadmus, Eruins of, found in the Atrium Vestae, i. 318

Eadward, coins of, i. 318

Earth, the goddess, figure of, i. 351; and note

Earthquake, ii. 82, 160; note, 294, 291

Easter, Italy, i. 291

Ecbatana, natural springs of naphtha in, i. 99 note

Egeria, Fountain of, i. 315; Sacred Grove and Spring of, i. 381

Eggs, marble, at the end of the Spina of the Circus Maximus, ii. 50

Egypt, Upper, red porphyry quarries in, i. 24

Egyptian granite columns, ii. 99

- duties, worship of, in Rome, ii. 212

- eumastic, i. 99, 100

- painting, i. 98

- sculpture, ii. 212

- tombs, painters' pigments, etc., found in, i. 100, 101; oyx cups, etc., found in, i. 21

Elenchos, the, of the Thermes of Titus, ii. 155; of the Baths of Caracalla, ii. 189

Elita, granites from, i. 25

Elephants, statues of, in: the Temple of Concord, i. 328

Emery dust used to cut marble, i. 23

Enneas, sun-god of, i. 299

Emperor, officers called, ii. 259

Emperors, statues of, in: the Forum of Nerva, ii. 24

Empelton masonry, i. 39

Emporium, the, i. 52, ii. 389

Encaustic, Egyptian, i. 99, 100

- method in the house of Livis, i. 179

- painting in wax, i. 96-98

English coins found in: the ruins of the Atrium Vestae, i. 313, 319; and note
INDEX

Ebusus, the poet, ii. 206; tomb of, ii. 270
Ephesus, the, in the Baths of Caracalla, ii. 171
Epidauros, excavations at, ii. 61; Tholus in the Asclepieum of, i. 225 note
Euphania, the Secretary of Samus restored by, i. 242
Euphoius, the, ii. 285
Eurinia, the, instituted by Romulus in honour of Mars, ii. 196
Equites Singulares, barracks of the, ii. 259, 260
Erechtheum, Athenian, i. 231 note; 337 note; ii. 126, 132 note
Eros, the, of Praxiteles, i. 17; reliefs of, on the shrines of the High Priest of Dionysus at Athens, i. 54
Esquilina, one of the regions of Servius, i. 125, 231, 352; its derivation, i. 125
Esquilina Hill, i. 124, 126, 322 note, 379, 381; ii. 233, 337 — Neapolis, i. 104-106 note — painted tombs on the, i. 102
Etruria, conquest of, ii. 364
Etruscan ceremony before founding a new town, i. 108 — decoration, i. 28 — period of art, i. 26, 27 — statues brought to Rome, i. 339 — style of the tombs found on the Aventine, i. 104 note — style in early Roman paintings, i. 102
Etruscans, fusion of, with the Latins, Sabines, and Greek colonists, i. 123 note
Eugeusius IV., bronze doors made for, ii. 287 note
Euhodias, Statilia, inscription on the tomb of, ii. 267
Euphranor, group of Latona by, i. 337, 338
Euphrates, river god of the, i. 344
Europan, painting of, by Antiphilos, ii. 68
Euripus, the, in the Circus Maximus, ii. 51, 52
Eurynome, the baker, tomb of, ii. 274, 275 and note, 373; epitaph, ii. 275

Eutyches, A. Luccius, inscribed water-pipe bearing the name of, ii. 322
Eutyches season, Columbarium built by the architect, ii. 274; name of, inscribed on leaden pipe in the house of Livia, i. 178
Evander, Valentina, an ancient name for the city of, i. 107
Excubitoria, the, of the Vigiles, i. 237
Exodra of Hadrian in the Palatine Stadium, i. 211

F

Fabiola, arch of, i. 248, 330 — surnamed Pictor, i. 102
— Maximus, Q., victory of, over the Gaulish Allobrogies, i. 350
Fbelinius, pictures by, in the Golden House of Nero, ii. 147
Farnese Palace, ii. 176 and note
Farnesina Villa, gardens of the, ii. 248, 249, 252
Fates, the three, near the Temple of Janus, i. 250
Faun, the Barberini, at Munich, ii. 296; the dancing, in the Uffizi at Florence, ii. 296
Faunus, reliefs of, on the shrines of the High Priest of Dionysus at Athens, i. 34; statues of, in roccio antico, i. 19
Faunus, shrine of, ii. 366; temple of, i. 381 — a traditional primitive king of Rome, i. 106
Festina, apotheosis of, ii. 303, 311; horses struck by Antoninus Pius in memory of, i. 296, 331; inscription in memory of, ii. 296; marble pedestal dedicated to, i. 341; pedestal of a statue of, i. 266; relief representing, being borne heavenwards, ii. 288; shrine of, i. 266 note; silver statue of, ii. 221 note; temple of, i. 18, 39, 38 note, 225, 233, 330, 331; ii. 225; Temple of Vesta shown on medallion of, i. 297
Feast, marble steps found in the Arch of Severus by, l. 343.
Felicitas, temple of, ii. 65.
Felix IV., Pope, converts the Temple of Urbs and Templum Romuli into a church, ii. 20, 21.
Festus, Marcus Postumus, water-pipe inscribed with the name of, ii. 334.
—— on the derivation of the name Porta Romana, i. 118; on the vestment called the Suffultulum, l. 320.
Florentian cista, engraving on the, ii. 115 note.
Florus, Rummis, l. 245.
Flumen, fall of a wooden amphitheatre at, ii. 65; statues of the ambassadors killed at, l. 299.
Flora, temple of, l. 367, 383.
Fig tree, sacred, l. 131, 346, 347.
Filla, Antonio, bronze doors made by, ii. 257 note.
Filtering tanks, ii. 325, 326.
Flavian, Minister della, built over the Colline Gate, ii. 346, 247.
Fire-altar of Vesta, l. 295.
Fire-drill, the, l. 290 note.
Firemen of Rome, ii. 255.
Fire in Rome, causes of, l. 90, 91.
—— sacred, ii. 289, 290, 295.
Flaccus, M. Fulvius, the Aula Vestae completed by, ii. 336.
Flamen Dialis, l. 32.
—— Martialis, ii. 308.
Flaminus Nepos, C., Circus Flaminianus founded by, ii. 57.
“Flange tiles” used as wall-linings, l. 180, 181.
Flavio Amphitheatre, the, l. 381; ii. 78-112, 260.
—— Basilica, l. 194, 198.
—— emperors, decadence of art during the reigns of, l. 32.
—— library, mosaics in the, l. 184.
—— Triclinium, the, l. 164.
Flavians, the Secretarium Senatorum built by, l. 242.
Flavians, the Capitoline, l. 355, 365.

Flavius, Ch., Aedilica of Concord dedicated by, l. 338.
Flavula, Tertullia, the Vestal, l. 323, 324; ii. 214.
Florid, the, of 1877, l. 297.
Floors, cement, l. 77; concrete hypocaust, l. 70-72; mosaic, l. 80, 292; ii. 240.
Flora, portrait of a Roman countess named, in the Temple of Castor, l. 277.
—— Bocca, of, at Naples, ii. 176.
Florence, the great dome of the cathedral of, l. 69 note.
—— Vicus alber in the Uffizi in, l. 350.
Flower-bed in the Atrium Vestae, l. 316.
Flues, the, of the Thermæ of Caracalla, ii. 174.
—— wall, for heating baths, ii. 123 and note, 125.
Floor-spar, l. 22, 23.
Fluted columns, discovery of, near the Porta Fontinalis, l. 129.
Fons Cecilius, ii. 344.
—— Curtius, ii. 344.
—— Juturnae, l. 277, 284; ii. 315.
Fontana, architect, R. 58.
—— Poli, ii. 347, 348.
Fora, the Imperial, ii. 1-39.
Fortunus, Aedes of, l. 189; statue of, i. 80; temple of, l. 76, 382; ii. 65, 138, 189.
—— Mutilæria, temple of, l. 889.
—— Virilla, so-called temple of, l. 80; ii. 138, 161.
Fortunus, inscribed water-pipe bearing the name of, ii. 334.
Forum Boarium, l. 109, 222, 234, 297, 307; ii. 12 note, 40, 41, 45, 70, 71, 73 note, 188-195, 197, 300, 304, 305, 368.
—— Olitorium, the, l. 382; ii. 71, 165, 197-199.
—— of Augustus, l. 6; Juliæ, l. 27 of Nerva, l. 21; of Trajan, ii. 34.
—— Paris, l. 12; arch in (figured), i. 41, 42.
—— Pisicatorium, the, l. 247; ii. 39.
—— Romanum, l. 231-332.
<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forum Suanarium, i. 382, ii. 39</td>
<td></td>
</tr>
<tr>
<td>Transitorium, ii. 21</td>
<td></td>
</tr>
<tr>
<td>Foundations, masonry and concrete, l. 65, 66</td>
<td></td>
</tr>
<tr>
<td>Fountain in the supposed Christian Basilica of S. Maria Antiqua, l. 227</td>
<td></td>
</tr>
<tr>
<td>— on the Nova Via, l. 223, 224</td>
<td></td>
</tr>
<tr>
<td>Fountain, perfumed, ii. 86 and note</td>
<td></td>
</tr>
<tr>
<td>— private, ii. 329, 350, 351</td>
<td></td>
</tr>
<tr>
<td>— public, l. 344, 350</td>
<td></td>
</tr>
<tr>
<td>Francesca Romana, S., church of, ii. 231, 233</td>
<td></td>
</tr>
<tr>
<td>Francesco di Paolo, S., church of, l. 143</td>
<td></td>
</tr>
<tr>
<td>Saverio, S., church of, ii. 300</td>
<td></td>
</tr>
<tr>
<td>Frangipani family, ii. 309</td>
<td></td>
</tr>
<tr>
<td>Fresco paintings, Roman, i. 94, 95</td>
<td></td>
</tr>
<tr>
<td>Frieze, the, of the Baths of Caracalla, ii. 175; on the Arch of Constantine, ii. 85; sculptured, of the Forum Nervae, ii. 23; inscribed, in the Temple of Saturn, ii. 267; of the Temple of Vespasian, l. 340</td>
<td></td>
</tr>
<tr>
<td>Frigidarium, the, of the Thermæ of Caracalla, ii. 163; of the Thermæ of Diocletian, ii. 177; of the Thermæ of Titus, ii. 155</td>
<td></td>
</tr>
<tr>
<td>Frountinus on the aqueducts of Rome, l. 314, 349; cost of aqueducts, ii. 318; laws and penalties relating to aqueducts, ii. 319; Antoninus, ii. 336; Aqua Alia, ii. 343; Aqua Appia, ii. 335; Aqua Claudia and Aqua Novia, ii. 345; Aqua Julia, ii. 339, 340; Aqua Marcia, ii. 337; Aqua Tepula, ii. 339; Aqua Virgo, ii. 342; names and capacities of water-pipes, ii. 330; on the Via Appia, ii. 354; conquers the Shores, ii. 314; Curator Aquarum, ib.; consul, ib.</td>
<td></td>
</tr>
<tr>
<td>Fronto, Q. Pustulius, consul, l. 84</td>
<td></td>
</tr>
<tr>
<td>Fronto, amphitheatre of, ii. 83</td>
<td></td>
</tr>
<tr>
<td>Fronto, Aurelius, dedicat to Coelis Claudiana, l. 329</td>
<td></td>
</tr>
<tr>
<td>Fullers, Corporation of, lawsuit between the Curator Aquarum and the, ii. 320</td>
<td></td>
</tr>
<tr>
<td>Fulvia, M., the founder of the Basilica named after him, Basilica Fulvia, l. 247; one of the founders of the Pons Asinianus, ii. 394; columns of, ii. 310</td>
<td></td>
</tr>
<tr>
<td>Fulvius Nobilius, M., Temple of Hercules Musarum built by, ii. 206; spolia taken from the Acteolus by, ib.</td>
<td></td>
</tr>
<tr>
<td>Funeral guilds, ii. 284</td>
<td></td>
</tr>
<tr>
<td>— pyres, ii. 253</td>
<td></td>
</tr>
<tr>
<td>— rites, gladiatorial combats as, l. 285; ii. 75, 76</td>
<td></td>
</tr>
<tr>
<td>Furinus, M., mention of the Hut of Romulus by, l. 122</td>
<td></td>
</tr>
<tr>
<td>Furnace in the Atrium Vestae, l. 312, 313 and note</td>
<td></td>
</tr>
<tr>
<td>— for heating baths, ii. 122</td>
<td></td>
</tr>
</tbody>
</table>

**G**

<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germanus, house of, i. 175, 195</td>
<td></td>
</tr>
<tr>
<td>198; victories of, l. 293, 332; ii. 255</td>
<td></td>
</tr>
<tr>
<td>Page</td>
<td>Text</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>412</td>
<td>INDEX</td>
</tr>
<tr>
<td></td>
<td>8.; recovery by, of the standards lost by Varrus, i. 269</td>
</tr>
<tr>
<td></td>
<td>Geta, horst of, i. 383, 389; murder of, i. 344, ii. 505; destruction of sculptured representations of, by Caracalla, &amp;c; statue of, i. 343; statue and reliefs of, ordered by Caracalla to be destroyed, i. 344, 345; inscribed water-pipe bearing the name of, ii. 333</td>
</tr>
<tr>
<td></td>
<td>Ghini, Simon, bronze doors made by, ii. 287 note</td>
</tr>
<tr>
<td></td>
<td>Gigantomachia, relief representing the On the Pantheon, i. 129, 137</td>
</tr>
<tr>
<td></td>
<td>Giorgio in Velabro, S., church of, i. 221; campanile of, ii. 306</td>
</tr>
<tr>
<td></td>
<td>Giovanni de' Fiorentini, S., church of, ii. 213</td>
</tr>
<tr>
<td></td>
<td>a Paolo, S.S., Christian house found under the church of, ii. 231, 282; campanile of, ii. 73</td>
</tr>
<tr>
<td></td>
<td>Girder, iron, of the Thermes de Caracalla, i. 163</td>
</tr>
<tr>
<td></td>
<td>Glacio, M. Aetius, Temple of Pictas built by, ii. 71 note</td>
</tr>
<tr>
<td></td>
<td>Gladiator, bronze statue of, found near the Porta Fontinalis, i. 130</td>
</tr>
<tr>
<td></td>
<td>Gladiatorial lights, i. 284, 285, 336; ii. 40, 51, 65, 75, 216, 355</td>
</tr>
<tr>
<td></td>
<td>Gladiators, figures of, in mosaic, ii. 169 and note</td>
</tr>
<tr>
<td></td>
<td>Glass mosaic, i. 83; ii. 162</td>
</tr>
<tr>
<td></td>
<td>Gloucester Cathedral, survival of classical style in, i. 9 note</td>
</tr>
<tr>
<td></td>
<td>Glycera, Flavia, inscribed water-pipe bearing the name of, ii. 334</td>
</tr>
<tr>
<td></td>
<td>Glycon, statue of Hercules signed by, ii. 176</td>
</tr>
<tr>
<td></td>
<td>Goedic gene, i. 209</td>
</tr>
<tr>
<td></td>
<td>— worship, scene of, i. 209</td>
</tr>
<tr>
<td></td>
<td>Gold, store of, in the Temple of Jupiter Capitolinus, i. 359</td>
</tr>
<tr>
<td></td>
<td>Golden Mount, the name for the Janiculum Hill, i. 2</td>
</tr>
<tr>
<td></td>
<td>Gordianus III, restoration of the Colosseum by, ii. 85; medallion of, ii. 45, 46, 51 note, 80, 89, 110</td>
</tr>
<tr>
<td></td>
<td>Gorgon, mural paintings in the Temple of Ceres, Liber and Libera, ii. 193</td>
</tr>
<tr>
<td></td>
<td>Golea, attacks of the, on the Aurelian Wall, ii. 375</td>
</tr>
<tr>
<td></td>
<td>Graecina, Graecia, house of, i. 233 note; paves and constructs new roads, ii. 355; pulls down the grand stands in the Forum, i. 235</td>
</tr>
<tr>
<td></td>
<td>Graecus Monetae, i. 333, 353, 373</td>
</tr>
<tr>
<td></td>
<td>Gracac, Magnus, conquest of, i. 29</td>
</tr>
<tr>
<td></td>
<td>Graeco-Roman style, i. 29</td>
</tr>
<tr>
<td></td>
<td>Graeco-Sarmatian, the, on the Comitium, i. 257, 252, 256, 161-264, 338</td>
</tr>
<tr>
<td></td>
<td>Graffiti in the Domus Galotiana, i. 203, 209</td>
</tr>
<tr>
<td></td>
<td>Granicus, statues to commemorate the battle of, ii. 203</td>
</tr>
<tr>
<td></td>
<td>Granite columns from the Porticus of Pompey, ii. 69 and note</td>
</tr>
<tr>
<td></td>
<td>Granites, introduction of into Rome, i. 23, 25</td>
</tr>
<tr>
<td></td>
<td>Grata, restoration of the Pons Constations by, ii. 388</td>
</tr>
<tr>
<td></td>
<td>Gravel used for concrete in Rome, i. 19</td>
</tr>
<tr>
<td></td>
<td>Gravascia, stone sewer at, i. 145</td>
</tr>
<tr>
<td></td>
<td>Greece, &quot;beehive&quot; tombs of prehistoric, i. 145</td>
</tr>
<tr>
<td></td>
<td>Greek architects employed in Rome, i. 29</td>
</tr>
<tr>
<td></td>
<td>— colonists, fusion of, with the Etruscans, Latins, and Sabines, i. 123 note</td>
</tr>
<tr>
<td></td>
<td>— sacred fires, i. 289</td>
</tr>
<tr>
<td></td>
<td>— Palaestra, ii. 115</td>
</tr>
<tr>
<td></td>
<td>— spoils brought to Rome after the conquests of L. Munius, i. 103</td>
</tr>
<tr>
<td></td>
<td>— statue brought to Rome, i. 389-391</td>
</tr>
<tr>
<td></td>
<td>— style, i. 26, 27, 29</td>
</tr>
<tr>
<td></td>
<td>— temples, examples of, with windows, unknown, i. 31 note</td>
</tr>
<tr>
<td></td>
<td>— theatres, ii. 61</td>
</tr>
<tr>
<td></td>
<td>Green Fiction, the, of the Circus, ii. 52, 53</td>
</tr>
<tr>
<td></td>
<td>Greenhouse, Roman, ii. 239</td>
</tr>
<tr>
<td></td>
<td>Gregorio, S., church of, i. 124</td>
</tr>
<tr>
<td></td>
<td>Gregory the Great, Pope, dream of, i. 298</td>
</tr>
<tr>
<td></td>
<td>Gregory, XVI, removal of the Antonine Column by, ii. 310</td>
</tr>
<tr>
<td></td>
<td>Grinunt, Card. Domenico, statue of Agrippa sent to Venice by, ii. 137 note</td>
</tr>
<tr>
<td></td>
<td>Grottaferrata, monastery of, ii. 341</td>
</tr>
<tr>
<td></td>
<td>Guard-houses, the Domus Galotiana once a, i. 209</td>
</tr>
<tr>
<td></td>
<td>Gypsum, use of, for wall-reliefs, etc., i. 76</td>
</tr>
</tbody>
</table>
INDEX

Hanastas, Baths of Agrippa restored by, ii. 142, 143; edict concerning bathing by, ii. 114; circus of, ii. 59; exedra of, i. 51; colossal head of, ii. 296; revival of Hellenistic art in the reign of, i. 33; Manoeum of, ii. 59, 282-292 to 299; medalion of, showing the statues of Jupiter, Minerva, and Juno, l. 264, 305; palace of, i. 70, 71, 212-215; ii. 133; the Palatine Stadium mostly built by, i. 210, 211; the Pantheon restored by, ii. 126, 127, 137, 140; the Pons Asellus built by, ii. 569; bronze coin of, representing the Resta Julia, l. 237; remission of taxes by, i. 347; temple of, ii. 203; Temple of Trajan dedicated by, ii. 28; Temple of Venus and Rome designed by, ii. 88, 110, 219; Temple of Venus and Rome shown on a First Brass of, ii. 221; villa of, i. 54, 38, 333; inscribed water-pipe bearing the name of, ii. 332; death of, ii. 296.

Halicarnassus, Manoeum at, l. 370.

Hall, central, of the Basilica of Constantia, ii. 229.

Hanging floors in baths, ii. 152.

Hannibal, defeat of, ii. 304; encampment of, outside the Porta Collina, l. 132; the Tabernae of the Forum put up to auction by, l. 293.

Hanno, defeat of, ii. 270.

Hadrian, gold shield in the Temple of Jupiter Capitolinus dedicated from the spoils of, i. 360.

Hatra, siege of, on the Arch of Severus, i. 344.

Heating, modes of, l. 72, 226.

Hectostompedon, the ancient name of the Parthenon, ii. 312; note.

Hectostylum, the Porticus Pompeii known as, the ii. 69.

Helena, S., tomb of, i. 56; note.

Heliodorus, group of the struggle between Pan and Olympia by, ii. 202.

Helogabalus, baths of, l. 226, ii. 133; Baths of Caracalla completed by, ii. 158, 170; restoration of the Colosseum begun by, ii. 81; transfer of the Vestal fire by, to his temple in honour of his favourite sun-god of Eumenes, l. 288, 289.

Heliopolis, obelisk from, on the spina of the Circus Maximus, ii. 41.

Helle, statue of, ii. 51.

Apollo, head of, used to replace the head of Nereus, ii. 110 and note.

Hera, temple of, crude brick used for the, at Olympia, l. 74; note.

Hermes, picture of the death and ascent into heaven of, ii. 203; statue of, i. 137, ii. 69; torso of, by Apollonios, in the Vatican, i. 17, ii. 69 and note; Ara Maxima sacred to, l. 109; the Altar of Saturn set up by the companions of, l. 232, 353 and note; statue of, i. 204; note, 359; ii. 38, 68, 176, 191, 206, 282; temple of, l. 102, 383; ii. 101; a traditional primitive dweller in Rome, l. 106.

Hercules Custos, temple of, ii. 71.

Minerva, temple of, ii. 286.

Pompeianum, temple of, l. 29.

Hermes, M. Aurelius, dedicates pedestal to Flavia Publica, i. 328.

Hermelius, Temple of Jupiter designed by, l. 108.

Hermopolis the designer of the Temple of Mars, ii. 71.

Hercules, painting of, by Timanthes, ii. 10.

Herculanum on the funeral pyres of the emperors, ii. 263; on the ceremonies performed at the funerals of the rich, etc., ii. 291; note; on the Palladium of the Temple of Vesta, l. 296.

Hesiodus on the ring of Polycrates, l. 339.


Hieratic rules of the Vestals, i. 315.

Hieronicus of Alexandria, pupil of Ostia, ii. 256; note.

Hilaris, daughter of Lecippus, relief representing the rape of, ii. 281.

Hilaris, Bishop, bronze doors in the Lateran Baptistery given by, ii. 29; note.

Hippia, baths designed by, ii. 115.
<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>House-owners, names of, inscribed on water-pipes, ii. 334</td>
<td></td>
</tr>
<tr>
<td>Houses, private, ii. 237-235</td>
<td></td>
</tr>
<tr>
<td>— of Republican date, i. 166</td>
<td></td>
</tr>
<tr>
<td>Human sacrifices, ii. 185, 362</td>
<td></td>
</tr>
<tr>
<td>Hunting scenes represented on the Arch of Constantine, ii. 37, 38</td>
<td></td>
</tr>
<tr>
<td>Hycanthus, picture of, in the Temple of Augustus, i. 274</td>
<td></td>
</tr>
<tr>
<td>Hygaela, statue of, by Niematus, i. 338</td>
<td></td>
</tr>
<tr>
<td>Hydraulic cement, i. 9</td>
<td></td>
</tr>
<tr>
<td>Hyblae, the precursor, inscribed water-pipe bearing the name of, ii. 332</td>
<td></td>
</tr>
<tr>
<td>Hymettian marble, i. 18, 334; ii. 63</td>
<td></td>
</tr>
<tr>
<td>Hymnus, name of, inscribed on leaden pipe in the house of Livia, i. 178</td>
<td></td>
</tr>
<tr>
<td>Hypaethrum, the, of the battle of Diodotian, ii. 181</td>
<td></td>
</tr>
<tr>
<td>Hypocasts, hunting by, means of, i. 173, 215, 314, 316, 317; ii. 119, 124-128, 164, 166, 167, 171, 173, 173, 185, 187</td>
<td></td>
</tr>
<tr>
<td>IANSUS, picture of, ii. 14 and note</td>
<td></td>
</tr>
<tr>
<td>Isaacs, marble from, i. 18, 19</td>
<td></td>
</tr>
<tr>
<td>Ignazio, &amp;; church of, ii. 343</td>
<td></td>
</tr>
<tr>
<td>Ilmos, the veil of, i. 294</td>
<td></td>
</tr>
<tr>
<td>Influs Nova Vina, i. 221, 223</td>
<td></td>
</tr>
<tr>
<td>Innocent II, buried in the sarcophagus of Hadrian, ii. 294</td>
<td></td>
</tr>
<tr>
<td>— X., repair of the Aurelian Wall by, ii. 380</td>
<td></td>
</tr>
<tr>
<td>Inspection shafts of aqueducts, i. 139, 140; ii. 337</td>
<td></td>
</tr>
<tr>
<td>Io and Argus, painting of, i. 176, ii. 349 note</td>
<td></td>
</tr>
<tr>
<td>Ionic and Corinthian styles, i. 59</td>
<td></td>
</tr>
<tr>
<td>Isis, statue of, ii. 213</td>
<td></td>
</tr>
<tr>
<td>— and Serapis, the Regio of, i. 351; temple of, ii. 212, 213</td>
<td></td>
</tr>
<tr>
<td>Island pottery, i. 105</td>
<td></td>
</tr>
<tr>
<td>Isodomen, mayors called, i. 39</td>
<td></td>
</tr>
<tr>
<td>Issus, defeat of Daricus by Alexander at the battle of, i. 84</td>
<td></td>
</tr>
<tr>
<td>Ister, stone bridge over the, built by Apollodorus, ii. 28 note</td>
<td></td>
</tr>
<tr>
<td>Italian army, entry into Rome of the, ii. 278 note</td>
<td></td>
</tr>
</tbody>
</table>

| Itinerary lists, ii. 353, 359 and note |
INDEX

Lampadinus, the Colosseum restored by, i. 82
Lamplighters, a division of the Vigiles, ii. 255, 256
Laonais on the awning of the Caves of the Colosseum, ii. 193
Laurea, terra-cotta, great numbers found in Roman tombs, ii. 278
Landscape paintings in the house of Livia, i. 179
Lanuvium, temple and grove dedicated to Juno Sospita at, ii. 198
Lacaeco group, the, i. 185, 199; ii. 187
Lacoon, picture of the bargain made by, with Herakles and Poseidon as to the rebuilding of the walls of Troy, ii. 263
Lapa Albauna, ii. 8
Lato, ii. 29
Laurium, the so-called, in Domitian’s Palace, i. 294; of one of the ex-servitors of the Vigiles, ii. 258, 259
Lares, temple of, the, i. 385
Lara Porcius, capture of the Italian fort by, ii. 323
Lartius, T., the Temple of Saturn dedicated by, i. 266
Lateran Baptistry, built by Constantine, ii. 20 note
— Basilica, the Corna Chapel in, the, i. 29, 244, 371, 372; ii. 29, 45, 184, 259, 260, 294, 346, 370, 381, 382
— Gate, ii. 110, 266
— House, ii. 382, 383
— Museum, ii. 85, 176, 240, 278
Lateranus, Plautius, the original Domus Laterana built by, ii. 382; put to death by Nero, o.
Latin chiefs, the Comitium a meeting-place of the, i. 296
Latin, alliance of, with the Sabines, i. 258; defeat of, by the Sabines, i. 354; fusion of the, with the Etruscans, Sabines, and Greek colonists, i. 123 note
Latium, King, i. 107
Latium, victories of Camillus and Maecenas in, i. 348
Lato, statue of, by Cephisodorus, i. 185; group of Apollo, Diana, and i. 337

temple of, i. 167 and note, 168, 197, 224, 381; ii. 200, 205
Jupiter Tonnos, statue of, i. 370; temple of, i. 368; ii. 16, 368, 385
— Victor, temple of, i. 37, 162-166
Justinian, development of art in the time of the Emperor, at Byzantium, i. 34
Justinian’s Church of S. Sophia in Constantinople, ii. 132
Juturna, fountain of, i. 288; shrine to, i. 224 note
Juvenal on the admission to baths, ii. 114; on the Pons Asinarius, ii. 364; on the awning over Roman theatres, ii. 103; on the treasure-room in the Temple of Castor, i. 280, 281; on the Circus Maximus, ii. 45, 51; on a statue of Ganymus, ii. 14; on the Temple of Isis, ii. 212; on the Mausoleum Prison, i. 151; on the Roman aqueduct, i. 134; on the Temple of Mars, ii. 8; on Thryllian marble, i. 16; on the Septa Julia, i. 10
Juvanias, temple of, i. 383

K

Kalamis, bronze statue of Apollo by, i. 369; metal cups by, ii. 147
Krate, grave of, ii. 257

L

Labra, the, of the great Thermes, ii. 118 and note; of the Baths of Caracalla, ii. 176
Laconicum, the, of the Baths of Caracalla, ii. 159, 164-166; of the Thermes of Constantine, i. 182; of the Thermes of Diocletian, ii. 177, 180; of the Thermes of Titus, ii. 153; in the smaller baths, ii. 117, 118 and note, 119
Laconius on the Temple of Jupiter Capitolinus, i. 358
Lamins, i. Aline Pausias, consul, ii. 84
INDEX

Lava from the Alban Hills, l. 45
— for paving, l. 253, 254
Lavinium: the cradle of the Roman nation, l. 107
Lebada, inscription found at, i. 40
note, 97
Lecture-room, the so-called, of Domitian's Palace, l. 206
Leontius, bronze busts on the Capito-
line Hill presented by, l. 870; execu-
tion of, in the Mamertine Prison, l. 154
Leechcraft, statue of Jupiter Tonans by, l. 870
Leon, Pietro, the Theatre of Mar-
cellus made into a fortified palace
by, ii. 72
Leptis Magna, portions leading from
the Porta Funtinalis to the Temple of
Mars built by, l. 129; theatre built by, ii. 71
— M., the first to use Numid-
ian marble, l. 14
— M. Aemilius, the builder of
the Basilica Aemilia, l. 247; ii.
364; the founder of the Pons
Aemilius, Æ., Temple of Juno
Regina dedicated by, l. 200
— Q. Aemilius, repairs the Pons
Fabricius, ii. 967
Lesbian marriage, l. 17
Lencippus, relief representing the
tape of the daughters of, ii. 281.
Lerrelling of the Seven Hills, l. 8
Lex Horreorum, Caesar's, ii. 261
— Paps, l. 292
— Rosada, Theatralis, the, i. 98
note
Liber Pater, picture of, in the Porticus
Philippi, ii. 206
Library, the, of Domitian's Palace, l.
206; in the Forum Pacis, ii. 15; Roman
way of fitting up a, ii. 254
Libraries, the, of the Palatine Apollo, ii.
26; the, of the Basilica Ulpia, Æ.,
the various Roman public, ii.
201, 203
Licinius, tomb of the, ii. 279
Licinian, L. Porcius, Temple of Venus
Eryx was built by, ii. 246
Lifts for cages of beasts in the Colos-
seum, ii. 165, 166
Ligurio, Pirro, receipt for making
marble cement, l. 77 and note, 78;
inscriptions in the MS. notes of, recording the restoration of the
Tiber wall, l. 146, 147; sketch of the Curia (S. Adriano) by, l. 240;
sketch of the Temple of Augustus by, l. 275; sketch of the great
piscina of Diocletian by, l. 183
Licinianus, victories of M. Aemilius
Lepidus over the, ii. 200
Lions, basalt, within the Portico of the
Pantheon, l. 137, 138; granite,
now in the Capitolinus Museum, ii.
219
Livana, Temple of Concord dedicated
by, l. 232; Columbaria for the
slaves of, l. 273; house of, l. 3,
85, 100, 163, 166, 175-188, 198, 281, 303; ii. 229, 230; note, 256
note; Macellum of, l. 352; Pons
Porticus of, l. 224; burial of, ii.
290
Liviana, cemeteries of, l. 292
Livina, Civita, the modern, l. 107
note
Livy, reference to, as follows: On
the Basilica Aemilia, l. 247;
Arearium Sancti, l. 268; Circus
Maximus, ii. 41, 42, 60; Capito-
line Hill, l. 127, 128, 354; Capit-
ollum, l. 357; Golden Quadrigae
on the Capitol, l. 370; Temple of
Aesculapius, ii. 265; Anio Vetus,
ii. 338; Temple of Apollo, l. 70;
Aqua Appia, ii. 335; lapis Atraci-
us, l. 20; statue of Attus Navius,
ii. 245; Caelian Hill, l. 276; Cam-
pus Martius, ii. 192, 211; Campus
Sceleratus, ii. 247; Temple of Ceres
ad Circum Maximum, ii. 194;
Circus Flaminius, ii. 58; Temple
of Castor, l. 277; Comitium, l.
237, 242-244; Shrine of Concord,
l. 269; Temples of Concord, ii.
333; Locus Curtius, l. 232; Fabius
Pictor, ii. 209; Arch of Fabius, l.
339; Fons ruminalis, l. 245;
Temple of Flora, l. 358; Temple
of Fortune, l. 189; central open
space of the Forum, l. 233; Taber-
nae in the Forum, Æ.; bronze
shields for the decoration of the
Forum, l. 248; note; hatchery in
Forum Romanum, l. 185; gladi-
torial combats in the Forum, l.
234; Parian marble tiles in the Forum, i. 261; statues in the Forum, i. 348; the smaller Pecile, ii. 39; fire in the Forum Boarium, ii. 159; Forum Piscatorium, i. 247; gladiatorial banquets, i. 235; Temple of Hercules, ii. 191; Temple of Hercules Musarum, ii. 266; Temple of Honour and Virtue, founded by Marcellus, i. 134; status of Horatius Cocles on the Capitoline, i. 245; Curia Hostilia, i. 238; human sacrifice in the Forum Boarium, ii. 75; Jancilian fort, l. 124; Temple of Janus, i. 234, 249; Temple of Juno Moneta, i. 366, 367; Temple of Juno Sacra, ii. 126; Temple of Jupiter Capitolinus, i. 358, 261; thron of Jupiter Capitolinus, i. 259; Temple of Jupiter Feretrius, n. 357; status of Jupiter Emperor, i. 370; Temple of Jupiter Stator, i. 167; Temples of Jupiter Stator and Juno Regina, n. 200; Tullianum Prison, i. 151; portico leading from the Porta Fontinalis to the Temple of Mars, i. 129; Temple of Minerva, i. 258; Nova Via, i. 222; Pons Aemilius, i. 364; Pons sublicus, ii. 368; Domus Publica of the Pontifex Maximus, i. 299; Porta Carmentalis, i. 127; Porta Collina, l. 131; Porta Flumentiana, i. 120; Porta Fontinalis, 1. 129; Porta Salutaris, i. 151; Porta Saligna, i. 130; Porta Sosperta, i. 127; Porta Trigemina, i. 135; Pons Malvius, n. 371; carrying of paintings in triumphal procession, i. 100; Publicola's house, i. 229; gates in the Wall of Romulous, ii. 118; Hut of Romulus, i. 122; bronze statue of the wolf suckling the twins, i. 121; seven mysterious reliefs, i. 294; Horrea of Rome, ii. 260; on roads, ii. 353, 355; Rostra, i. 244; statues on the Rostra, i. 245, 246; Columnae Rostratae, ii. 319; Arch of Scipio, ii. 300; Aeratorium of Saturn, i. 266; Temple of Saturn, 1; Basilica Semproniana, i. 269; Sena-
culum, i. 246, 247; Agger of Servius, i. 122; spoils taken by l. Stertinus during his campaign in Spain, ii. 300; Temple of Spes, ii. 198; Sublician bridge, i. 135; capture of Syracuse by Marcellus, i. 29; Tabularia, i. 372; eck of Tarquinia, l. 29; circuit wall built by Tarquinius Priscus and Servius Tullius, i. 123; wooden theatres, ii. 62; battle of Lake Trasimenum, ii. 57; triumviri eulunis, i. 285; Tullianum or Mamertine Prison, i. 153; Umbilicus Romae, i. 264; Aedicularia Venus Cloacina, i. 230; Shrine of Venus Cloacina, i. 351; Temple of Venus Erycina, ii. 246; Via Appia, ii. 354, 359; Vestal Virgin, i. 291; Temple of Vesta, i. 293; Vestal fires, i. 290; penalties for breach of chastity by the Vestals, l. 294; Temple of Victory, i. 189; Vicus Jugarius, i. 268; status of Vorticulum, i. 276; Altar of Vacaen, i. 213; administration of the water supply of Rome, ii. 317; Lolliu, Gneo, demnarius of the, i. 126; Lolliunus, Quintus, dedicates pedestal to his sister Terentia Flavola, i. 323; honours and titles of, 1; Lollius, M., repairs the Pons Fabricius, ii. 367; Longinuus, Q. Cassius, atus theatre begun by, ii. 62; — i. Cassius, one of the constructors of the Aqua Tepula, ii. 359; Lorenzo, 1, Basiliss of, ii. 69, 333; Porta of, ii. 253, 254; — fueri le mura, 1, church of, l. 18; ii. 201, 333; — in Miranda, 1, church of, i. 351; Louvre, marble relief of the front of the Capitoline Temple in the, i. 364; Lucaurus, C. Terentius, gladiatorial combats exhibited by, in the Forum, i. 234; Luceria, capture of, by Q. Fabius Maximus Nallius, i. 102; Lucian on ancient baths, ii. 115; Lucullus on the processes of the bath, ii. 115.
Lucilla, Temple of Vesta shown on medallion of, l. 297
Lucina, Juno, sacrifice to, l. 305
Lucilus, L., the introducer of the black marble named after him, l. 14; Marmor Lucileum, so called from its use by, l. 20
— Lucina and Marcus, apollination by, during the Mithradatic and Macedonian war, l. 390
— M., bronze statue of Apollo, brought from Apollonia by, l. 369
Lusil. Apollinaris, ii. 58, 103, 196, 246
— Cirenceae, l. 110
— Sisamnare, ii. 196, 214
— Sonnici, ii. 58 note
Ludovisi Gardens, ii. 52, 241, 248, 374 and note, 386
Lucius Magnus, l. 381
Luke, &c., tomb of, at Ephesus, l. 297 note
Lucum marble, l. 14-16, 184, 204, 271, 308, 307, 321; ii. 11, 27, 99, 297, 312
Lupercal, the, cave of the she-wolf that suckled Romulus and Remus, l. 130, 385
Lupercas identified with the Greek Pan, l. 120
Lutudula, silver-lead ore from, ii. 321 note
Lycaon, mosaic at, representing the local circus, ii. 50
Lycurgus, group of Apollo and Artemis in a quadriga by, l. 185
Lystra, Corinthian Choragic monument of, l. 30 note
Lyaius, statue of Alexander by, ii. 186 note, 203; the Apoxyomenus by, ii. 117, 141 and note; bronze statue of an athlete of the school of, l. 130; statue of Alexander inscribed with the name of, l. 187; statue by, in the Forum Parisii, ii. 15 note; school of, ii. 185; imitation of the style of, by Graco-Roman artists, l. 33

INDEX

Macrobius on the Temple of Hercules in the Forum Boarium, ii. 191; on the Porta Janum, l. 119; on the removal of the Hut of Romulus, l. 121; on the Temple of Saturn, l. 266
Madre di Dio, monastery of, ii. 205
Maeonias, auditorium of, ii. 239; the Campus Esquilinus laid out as gardens by, l. 133; gardens of, l. 281; ii. 240, 267; villa of, l. 53, 133 and note; ii. 239, 240
Maeniana, the Columna, l. 263; ii. 309
— constructed for spectators at the gladiatorial fights in the Forum, l. 235
Maenianum, explanation of the word, ii. 83
Maenius, capture of the Latin fleet at Antium, l. 244; column of, ii. 309; statue of, in the Forum, l. 348
Magistrates, the, of Augustus, l. 380
Malmesbury, William, of; on the Aurelian Wall, ii. 374
Mamertine Prison, l. 123, 151-155, 333, 387; ii. 4, 5
Mamertinus, statue of, l. 151
Mamurra, wall linings of marble first used by, l. 14, 15; house of, l. 85
Manlius Capitolinus; Temple of Juno Moneta founded on the site of the house of, l. 365
— i., dedication of shrine to Concord by, l. 363; Anthony among the soldiers of, in Gaul, l. 369
Manlius, L. Hostilius, exhibits publicly a picture of his capture of Carthage, l. 193
Marcellus, Signor, sarcophagi in the possession of, l. 282
Marble, bond-courses of, l. 16; cement, receipt for making, l. 77; columns in the house of Crassus, l. 14; in the Basilica Aemilia, l. 248; of the Cave of the Colossus, ii. 98; of the Pantheon, l. 139; in Domitian's Palace, l. 201, 202; facing in the Baths of Caracalla, ii. 174 note; facing in the Pantheon, l. 135; linings, l. 78, 85-87, 210, 211; ii. 189;
INDEX

140: mausole, i. 28; paving in the Basilica Julia, i. 272; painting on, i. 22; plan of Rome, ii. 45, 66, 68, 72, 107, 210, 218, 224, 238, 350; quarries, i. 150, ii. 34; methods of sawing, i. 10; use of, in Rome, i. 14; not generally used in solid blocks, i. 15; varieties of, used in Rome, i. 16-20; wharf, i. 26, 149-151.

Marcella, tomb of, ii. 288; epitaph, ch.

Marcellus, S., convent of, ii. 237

Marcellus, the conqueror of Sicily, founds the temple of Honour and Valour, i. 134; capture of Syracuse by, 26, 134.

— nephew of Augustus, collection of gems dedicated by, in the Temple of Apollo, i. 188; theatre of, i. 382; ii. 66, 70-74, 197-199; burial of, ii. 290.

Marchion Tower, the, ii. 8

Marina, Gens, abnormis of the, ii. 337

Marcan aqueduct, i. 134, 138, 388

Marina, Q., Aqua Marina built by, ii. 337

Marcomanni, war with the, ii. 27.

Maria del Angel, S., church of, ii. 178; monastery of, i. 130 note; ii. 252

— Antiqua, S., supposed Basilica of, i. 226-228

— in Costadin, S., church of, i. 135; ii. 42, 56, 193-195; crypt of, ii. 274.

— Equissa, S., church of, ii. 196

in grotta piata, S., church of, ii. 60 note

— Liberatrice, S., church of, i. 197, 222, 311, 323 note

— Maggiore, S., church of, i. 16; ii. 226, 239, 291

— ad Martyres, S., church of, ii. 141

sopra Minerva, S., church of, ii. 14, 211, 213; Pazzi di, ii. 212

— dei Miracoli, S., church of, ii. 287

— del Popolo, S., marble statue of Jonah in the church of, ii. 277; church of, ii. 338

Maria in Portico, S., church of, ii. 205

— del Sole, S., church of, ii. 193

— in Trastevere, S., church of, ii. 267

— in Via Lata, S., church of, ii. 210

Marino, Alban stone worked at, i. 6

Marinus II., Pope; bronze fibula of, i. 319 and note

Maryus, Temple of Honours and Virtus built by, i. 368; heads of the chief victims of the prescription of, fixed on the Rostra, i. 244; spoils taken from the Chastell by, i. 176; spoils taken from the Tarentines and Cimbrians by, i. 368; trophies of, ii. 325

— C., the younger, throne treasury of the temple of Jupiter Capitolinus plundered by, i. 359

Marmoratum, the, i. 148 and note; ii. 206, 336

Marpesius, Mount, working of the marble quarries in, i. 17

Married people, epitaphs of, ii. 297 note

Mars, altar to, ii. 196; the aculna of, l. 294; the Equinae instituted by Romulus in honour of, ii. 196; the Pantheon a temple to, ii. 128; Sarmatian of, in the Regia, i. 305; sacred spears of, i. 356; statue of, i. 355; ii. 147, 302; temple of, i. 129, 184, 381; ii. 36, 71, 355, 381

— and Rhea Sylvia, bas-relief representing, ii. 222

— Ullor, temple of, i. 16, 380; ii. 4-8, 11-15, 21

Marsyas bound by Apollo, painting of, i. 358; statue of, i. 346 and note, 347

Martial on the officials of the seats in the Colosseum, ii. 85; on the Forum Pacis, ii. 13; on the Temple of Hercules Mussarum, ii. 296; on the Septa Julia, ii. 210; on the Marcan aqueduct, i. 154; ii. 338; on the statues of Marsyas, i. 347; on the Porticos of Neptune, ii. 297; on the Thermus of Nero, ii. 444; on the cost of books, ii. 26, 27 note; on the Thermes of
INDEX

Tinus, ii. 149; on the Atrium Vestae, i. 309; on the site of the Temple of Vesta, i. 297
Martius, S., church of, i. 242; ii. 302
Martius ai Monti, S., church of, ii. 138, 137, 188, 289
Martyrs' house on the Cardian, ii. 231, 232
Maccellum, Coscia, name of, on bronze stamp for marking tiles, dredged up in the Tiber, i. 14 note
Mucurny, Greek, i. 39
Mason's marks on the Servian wall, figured, i. 138, 139
Mater Idæa, the Phrygian goddess, i. 189
— Matuta, temple to, ii. 189, 190
Mutilia, temple of, ii. 335; inscribed water-pipe bearing the name of, ii. 333
Matlock, the fluor-spar found near, i. 29
Manolius, King, the correct spelling of his name, two notes; palace of, i. 11, 14, 20; tomb of, ii. 259 note, 292
Maxentius, Basilica of, ii. 18, 223; Realization of Constantines begun by, ii. 224; circus of, i. 62, 207, 208 note; ii. 19, 43, 52, 58, 57; defeat of, by Constantine, ii. 304; columns used by, to decorate the door of the temple to his son Romulus, i. 23; Temple of Romulus shown on a first brass of, ii. 29; restoration of the Temple of Venus and Roma begun by, ii. 220; death of, ii. 371
Maximilla, Numisia, chief Vestal, i. 324, 325; ii. 214
Maximanae, Baths of Diocletian begun by, ii. 177
Medallion relics on the Arch of Constantine, ii. 35, 37, 38
Mélardi-de-Pres, S., painter's tools and pigments discovered at, i. 101
Medusa, picture of, in the Temple of Venus, ii. 4; epigrams on the picture of, meditating the slaughter of her children, i. 96
Medici, Villa di, casts of reliefs on Trajan's column in the, ii. 31
Medusa heads in the caves of the Colosseum, ii. 98
Megalopolis, excavations at, ii. 61
Megellus, L. Postumius, the rebuild-er of the Temple of Victory, i. 189
Mahomet Ali, Oriental alabaster used in the mosque of, i. 21
Melager statue, of, of the Vatican Belvedere, i. 139
Melos, marble from the Island of, i. 20
Memphius, Quastur, dedicates pedestal to Flavia Publicia, i. 328
Menander, dedicates pedestal to Terentius flavola, chief Vestal, i. 324; tomb of, ii. 283, 234
Mendip Hills, lead mines in the, worked by the Romans, ii. 321
Memelaus, pupil of Pytheas, i. 390
Menio, Gna. Julius, Temple of Apollo founded by, ii. 58, 70
Menerva, Gate of the Etruscans, i. 117
Mercury, statue of, in the Temple of Concord, i. 337, 338; temple of, i. 333
Mesopotamia, victories of Severus in, i. 344
Messaia, M. Valerius, exhibits in the Curia Hostilia pictures of his own victories, i. 193
Messene, the stadium at, ii. 42
Meta sudans, the, ii. 80, 349, 350
Metas, the, of the Circus Maximus, ii. 51
Metella, Cecilia, tomb of, i. 1, 3; ii. 13 note, 282
Metallus, equestrian statue brought to Rome by, ii. 208; portrait of, ii. 183 note, 260, 263
— Dalmaticus, L., the Temple of Castor restored by, i. 277
— Lucius, saves the sacred relics of the Temple of Vesta from the flames, i. 295
Meteoric stone in the Temple of Victory, i. 189
Michael, S., and the devil, incised figure of, on the Porta Appia, ii. 281
Michelangelo, pedestal designed by, for the statue of M. Aurelius, i. 277 note; the Tepidarium of the Thermae of Diocletian made into the nave of the Carthusian Church of S. Maria degli Angeli
INDEX

by, ii. 179; column of Diuiniu restored by, ii. 309
Milestones, ii. 355, 359
Militia, secatiarii, inscription concerning the, ii. 158
Millarium Aureum, the, i. 264, 265
Minerva, painting of, ii. 202; gold relief of, ii. 22; sculpture of, i. 362; statue of, i. 23, 336, 365; ii. 213, 232; temple of, i. 258, 371, 383, 385; ii. 21, 22, 211, 213
— Chalcedicus, temple of, i. 383; ii. 232
— Medici, temple of, i. 382; ii. 262, 293, 273
Minucius, sarcophagi of the Gusa, ii. 238
Minucius, column of, ii. 310; consulship of, i. 266
Mithradates, Pompey's defeat of, ii. 66
Mithradatic war, i. 390
Mitylene, theatre imitated by Pompey at, ii. 66
Molossian marble, i. 20
Monolithic columns used by the Romans, ii. 136 and note
Mosa Oppius, ii. 149
Monte Cavallo, ii. 184
— Citerio, ii. 78 note, 208
— Gordiana, ii. 78
— Mario, ii. 298
— Testaceo, ii. 260, 318 note
Mortar, introduction of, in Greece and Rome, i. 37, 38; example of the early use of, in Rome, i. 163; use of, in the Tulliamum, i. 152, 153 and note
Mortuary chapels, ii. 265
Mosaic, in the Palace of Augustus, i. 184; in Caligula's Palace, i. 193; floors of the Theama of Caracalla, ii. 161, 162, 173, 176; foundations of the Colosseum, ii. 109; in the Church of SS. Cosmas and Damian, ii. 21; glass, i. 83; floors, rubbers for finishing, i. 81; floors in the house of the Vestals, i. 303; in the house of Livia, i. 183; patterns, i. 82; paving, i. 80, 81; ii. 249; pebble, i. 82; pictures, i. 83; sectile, i. 84;
vaunts, i. 83, 197; wall, i. 83; the technique and the various kinds of, i. 80-84
Mummius, L., arches of the Pont Asin utilize restored by, ii. 364; painting of Baccas carried off by, ii. 194; Corinth taken by, i. 29, 108, 399
Mummy portraits in encaustic painting, i. 99, 100 note
Musaeum, painting on stucco hung in the Comitium by, i. 245
Mural paintings in the house of Livia, i. 176, 177; in Nero's Golden House, ii. 150-152; pictures in Pliny's time, i. 99; removal of, i. 75; in river-side houses, ii. 240, 250; technique of, i. 92-102
Muro torsi, ii. 387, 388
Museo Gregoriano, i. 25
— Kircheriano, i. 23; ii. 365 note, 335, 359
— delle Terme, i. 91 note; ii. 48, 58, 128, 237, 240, 249, 276 note, 288, 326, 330, 331 note, 351, 365 note, 369
Musae, statues of the nine, in the Temple of Apollo, i. 185
Mussidia, shrine of Venus Closina alluded to on a denarius of the Gusa, i. 350, 351
Mutilus, C., the writer of an architectural book, i. 20, 30; the temple of Hons and Virtus designed by, i. 368
Myrmecus, concrete used for the floors of the houses in, i. 45; pottery discovered in the tomb of Upper Egypt, i. 105 note; prehistoric houses of, i. 26, 82
Myron, bronze statue of a bull in the Forum Boarium by, i. 109; statue by, in the Forum Pacis, ii. 15 note; ox of, i. 188; statues of oxen in the area of Apollo by, i. 157, 188; bronze statue of Hercules in the house of Pompey by, ii. 68
Myrrhina, i. 22, 23
Myrrhinous vases, i. 371
Mysticus, C. H., pedestal inscribed to Numidia Maximilla by, i. 324, 325
INDEX

<table>
<thead>
<tr>
<th>Page</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>227, 229, 326</td>
<td>market of, l. 381</td>
</tr>
<tr>
<td>257</td>
<td>name of, inscribed on water-pipe, ii. 332</td>
</tr>
<tr>
<td>220 and note</td>
<td>palace of, l. 329</td>
</tr>
<tr>
<td>228-230</td>
<td>pavement of, ii. 184</td>
</tr>
<tr>
<td>370</td>
<td>Nero Neronianus begun by, ii.</td>
</tr>
<tr>
<td>65</td>
<td>gilding of the Theatre of Pompey by, ii. 147</td>
</tr>
<tr>
<td>62</td>
<td>portrait of, ii.</td>
</tr>
<tr>
<td>60, 69</td>
<td>preparations of, for the rebuilding of Rome, l. 89</td>
</tr>
<tr>
<td>81 and note, 109 and note, 110</td>
<td>Sallust's house occupied by, ii. 242</td>
</tr>
<tr>
<td>60, 69, 83 note,</td>
<td>statue of, ii. 1147</td>
</tr>
<tr>
<td>100</td>
<td>temples of Rome robbed by,</td>
</tr>
<tr>
<td>147</td>
<td>for his palace, ii. 147</td>
</tr>
<tr>
<td>285 note</td>
<td>tribunal shown on bronze medal of, l. 285</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Page</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Nero antico, marble called, l. 19</td>
</tr>
<tr>
<td>350</td>
<td>Nero, First Brass of, ii.</td>
</tr>
<tr>
<td>307, 331</td>
<td>Forum of, l.</td>
</tr>
<tr>
<td>3, 11, 21-24</td>
<td>inscription on the outside of Domitian's Palace by, l. 200 note</td>
</tr>
<tr>
<td>356</td>
<td>Temple of Minerva and the Forum Palladium dedicated by, ii. 21</td>
</tr>
<tr>
<td>222 and note</td>
<td>Sallust's house occupied by, ii. 342</td>
</tr>
<tr>
<td>285</td>
<td>the impost of travelling free on State business remitted by, ii. 556</td>
</tr>
<tr>
<td>234</td>
<td>inscribed water-pipe bearing the name of, l. 332</td>
</tr>
<tr>
<td>291, 292</td>
<td>interment of,</td>
</tr>
<tr>
<td>58</td>
<td>M. Cocceius, one of the restorers of the Tullianum, ii. 334</td>
</tr>
<tr>
<td>55</td>
<td>outside of, l.</td>
</tr>
<tr>
<td>60</td>
<td>name of, inscribed on water-pipe, l. 334</td>
</tr>
<tr>
<td>59</td>
<td>New River Company, ii. 227 note</td>
</tr>
<tr>
<td>71</td>
<td>Niccolo in Carrara, S.,</td>
</tr>
<tr>
<td>199</td>
<td>plan of temples on the site of, l. 199</td>
</tr>
<tr>
<td>197</td>
<td>S., church of,</td>
</tr>
<tr>
<td>338</td>
<td>Niceratus, statues of Assenianius and Hygelda by, l.</td>
</tr>
<tr>
<td>333</td>
<td>Nicholas V., lead covering put on the dome of the Pantheon by, l. 133</td>
</tr>
<tr>
<td>68</td>
<td>Nicias, painting of Alexander by, ii.</td>
</tr>
<tr>
<td>338</td>
<td>painting of Bacchus by, l.</td>
</tr>
<tr>
<td>338, 339</td>
<td>picture of Hyacinthus by, l. 274</td>
</tr>
<tr>
<td>371</td>
<td>picture of the Nymph Nemes by, l. 238</td>
</tr>
<tr>
<td>215</td>
<td>Nicomachus, picture of Proserpina by, l. 371</td>
</tr>
<tr>
<td>15</td>
<td>picture of Scylla by,</td>
</tr>
<tr>
<td>1147</td>
<td>Niles, alabaster quarries on the, l. 21</td>
</tr>
<tr>
<td>215</td>
<td>statues of the, l. 1147</td>
</tr>
<tr>
<td>215, 216</td>
<td>Niobe, representation of the fate of the children of, on doors in the</td>
</tr>
</tbody>
</table>
INDEX

Temple of Apollo, i. 188: statue of the slaughter of the children of, ii. 70
Nisus, relief of, on the Arch of Severus, i. 344
Norman Period, architecture of the, resembles that of ancient Rome, i. 9 note
Nova Via, the, i. 145, 192, 196 note, 216, 222-224, 309, 311, 314, 317, 318; ii. 124
Nuns, the, Arcoerum Sacraria said to have been founded by, i. 124; the original Domus Publica said to have been built by, i. 299; the Temple of Jannus founded by, i. 234, 249; the Regia said to have been built by, i. 304; the supposed founder of the Temple of Vesta, i. 233, 291, 295
Numidia, administration of the Roman province of, by Ballista, ii. 241
Numidian marble, i. 14, 18, 335; ii. 11, 172
Nummery over the ruins of the Palace of Augustus, i. 185, 184
Nymphæum, ruins of, in the Palace of Severus, i. 215
Nymphæum, the, of Domitian's Palace, i. 202, 203, 207

O

Oak, sacred, on the Capitolium, i. 357
Obelisk formerly in the Circus of Caligula, ii. 58
Octavia, buildings of, ii. 201-204
Curia of, ii. 204; library of, ii. 201, 205, 271; portions of, i. 385, 389; ii. 58, 71, 72, 186 note, 189, 200, 204-206; schola of, ii. 202, 205; works of art in the Porticus of, ii. 215-217
— sister of Augustus, burial of, ii. 200
Octavius, portion of, ii. 129
— Curia, statue of, on the Rostra, i. 246
— L. Annius, a Roman baker, tomb of, ii. 276
Odoscer, King, ii. 54

Officials, the, of the Circus, ii. 53
Ognilius, Aedile, foot-road laid by the, ii. 355
Ogulinus, Ca. and Q., bronze statue of the wolf-suckling Romulus and Remus dedicated by, i. 121, 235
Olympia, stadium at, ii. 42
Olympian Zeus, temple of, at Athens, i. 29; excavation of the, i. 381 note
Olympiodorus, on the Thermon of Cornacchii, ii. 158 note
Olympus, statue of, ii. 210
Omphalos, the sacred, in the Temple of the Python Apoll on Delphi, i. 263, 264
Onyx, a Roman name for alabaster, i. 21; its rarity in Pliny's time, 26; 26, 8; Arabian columns of, ii. 74 and note
Ophites, Iapys, i. 20
Opimia, Basilica, the, i. 237
Optimus, L., rebuilds the Temple of Concord, i. 332
Oppius, M., i. 123
Ops, shrine of, i. 368; temple of, i. 268, 362
Ops-consiva, sacrarium of the goddess, in the Regia, i. 305
Opus albarium, i. 73, 74, 92, 162, 173, 272, 282, 358; ii. 10, 73, 110, 190, 245, 249, 265, 289; Alexandrium, i. 82, 83; incertum, i. 51, 52, 165; mixture, i. 62, 207, 211; musivum, i. 81; quadratum, i. 37, 306, 375; ii. 52, 278; salutatum, i. 52-54, 110, 183 note, 161, 165, 171, 172 and note, 175, 206, ii. 134, 149, 152, 153, 206, 242, 254, 259, 271, 274, 356, 357, 357; salutatum, i. 82, 382; section, i. 52, 202, 312; ii. 162, 222; signum, i. 79, 162, 173, 182, 224; ii. 101, 119, 156, 172, 173, 318 and note, 322, 350; spicatum, i. 81, 82; tectorium, ii. 91, 119; tessalatum, i. 82; testae- conum, ii. 123
Orniu, Serqua, heating by hypocaust introduced into Rome by, ii. 113
Orchestra, the, of Pompey's Theatre, ii. 66
— Greek, ii. 61
Orontes, the ashes of, i. 294
INDEX

Hercules in the Forum Boarium by, l. 102
Paeonagastria, puerorum, the, on the Casilin Hill, l. 335
Pestum, Greek stone temples at, coated with casenuvum marmorum, l. 74
Painters' boxes found in Egyptian tombs, etc., i. 100, 161
Paintings, historical, in Rome, i. 193
Paintings on panel sometimes carried in triumphal procession, i. 100
Palaestra, Greek, ii. 115, 171
Palatium, the Regio, i. 125, 333
Palatine Hill, the, i. 158-219; stone used in the prehistoric buildings of the, i. 2, 3; manner of the increased defence of the, i. 112; the two divisions of, i. 111; enclosure of, i. 123; private houses on, i. 169; plan of the, i. 156, 157; stucco mouldings among the fragments of early buildings on the, l. 76; Temple of Jupiter Victor on the, l. 37; House, protective against damp in the, i. 93; Library, l. 187; ii. 201 note; Palace, i. 273; Stadium, the, l. 210-212, 329; Venus, a nickname of Lucina Crisana, l. 14, 169, 170; and the Capitolium, the bridge by which Caligula connected the, i. 194
Palace Antonelli, i. 129, 141 note; Balestra, ii. 257; Bufalo, ii. 342; Caffarelli, i. 305; Campanari, ii. 282; della Cancelleria, ii. 69; dei Conservatori, i. 25, 393; ii. 241, 271, 272, 288, 392, 399 note; Doria, ii. 210; Giustiniani, ii. 144; Ludovisi, ii. 247; Madama, ii. 144; Mattei, i. 58; Mattei-Savorelli, ii. 257; Pio, ii. 66 and note; Righetti, ii. 265; Scarpa, ii. 300, 301, 343; Valdambrini, ii. 289
Palladium, the, i. 296, 299; the Forum, ii. 21
Pallas, standing figure of, i. 296; Forum of, ii. 21; Temple of, i. 381; ii. 22
Pallium, the, of the statues of Vestals, i. 321, 322

Ornament, excess of, in Roman architecture, i. 33
Orphan Asylum of Bellarius, ii. 335
Orosi, Barons, the, ii. 72
Ottone, Farnesi, i. 204
Oriolo, examples of tegulas manu-

ousate in the Opera del Duomo at,
l. 181
Ostia, recent excavations in, ii. 316; inscribed water-pipe found at, ii. 333
Otho, one of the conspirators who killed Galba, l. 264
— completion of the Golden House of Nero by, ii. 147
— II., tomb of the Emperor, ii. 294 note
Oseid-Atmenis, mosaic picture of a large country villa at, ii. 123
Ovid, references to, as follows: On the statues ofDanaids in the Temple of Apollo, l. 187; Temple of Castor, i. 277, 332; Circus Maximus, ii. 42, 51; Temple of Concord, l. 333, 338; Fust. vi. 401, quotation from, i. 3; Fons Juturnae, l. 284; statue of Fortuna, ii. 189; Forum Boarium, ii. 188; development of the Forum and Velabrum, i. 292; Temple of Hercules Musarum, ii. 296; Temple of Julius, i. 285, 288; Temple of Juno Moneta, i. 306; Temple of Jupiter Capitolinus, l. 358; gold statue of Jupiter on the Capitol, i. 371; Temple of Jupiter Stator, L. 167; Temple of Mars Ultor, ii. 6; Nova Via, i. 292; Fons Aemilius, ii. 304; Fons Subo- linus, ii. 306; Porta Capena, l. 184; the Regia, i. 304; the Regificium, l. 248 note; Hist. of Romulis, l. 292; Temple of Vesta, i. 288, 295 note; Vestal fires, l. 291; Vestal Virgins, 38.
On, the, of Myron, ii. 188 and note
Oxen, statues of four bronze, in the area of Apollo, l. 187, 188

P

Pacuvius, the tragic dramatist, paintings on the walls of the Temple of
INDEX

Pamphili-Doria, Villa, ii. 274
Pan, cave of, 121 note; statue of, ii. 210
— and Olympus, group of the, ii. 202
Pannason, paintings by, in the Temple of Athene at Elus, i. 73
Pannarium, monument in the shape of a, ii. 278
Pencratil, tomb of the, ii. 205, 266
Pantani, Arco di', ii. 9 and note, 10, 11
Pantheon, the, i. 18, 23, 25, 31, 60, 65, 70, 91, 204, 206, 301, 379, 382, 387, 388; ii. 20, 126-141, 144, 150, 207, 210, 212, 228
Paolo fiori la mura, &, i. 18, 21, 91, 248
Parian marble, i. 17, 321, 350; ii. 247, 292
Parnassii, Menta, composed of a variety of travertine, i. 7
Passa, Duke of, excavations by, i. 204
Parrhasius, picture of Thoetas by, i. 371
Parthenon, King of Armenia, Trajan receiving the homage of, i. 37
Parthenium, the, i. 218 note, 261
Parthenos, victories of Severus in, i. 343
Parthenos, flight of the, i. 344; Nero's arch in honour of victory over the, ii. 301
Pascal Candle, i. 291
Pausias, the Greek, sculptor, i. 390; ii. 293
Passages, rock-cut, on the Palatine Hill, i. 117
Paul, &, chapel of, in the Basilica of S. Maria Maggiore, ii. 22
— III., Pope, damage done to the Thermas of Caracalla by, ii. 176; rooms added to the Mausoleum of Hadrian by, ii. 294; additions to the Castle of S. Angelo by, ii. 298
— V., Pope, destroys the Temple of Minerva, ii. 32; granite column removed from the Basilica of Constantine by, ii. 220; the Fontana Paolina constructed by, ii. 348
Paulus Aquilinus, Basilica of, i. 247, 381; baths of, ii. 33 note; bronze shields fixed on the pediment of the Temple of Jupiter Capitolinus by, i. 360; portico leading from the Porta Fontinalis to the Temple of Mars built by, i. 129
Pausias on Pentelic marble, i. 17; use of the word παρευρ by, i. 17 note; on the porphyry found in Mount Taygetus, i. 24; on the Forum of Trajan, ii. 27; on the Temple of Vesta, i. 295 note; on the festival of the Boophinia, i. 243; on a statue of the Argive Cherson; ii. 14; on human sacrifices amongst the Greeks, ii. 75 note; on the picture of Hyacinthus in the Temple of Augustus, i. 274
Pausias, picture in the Curia of Pompey by, ii. 68
Paving the, of the Pantheon, ii. 140 — lava, ii. 353, 354
Peace, Forum of, i. 359; ii. 13-21; Temple of, i. 28, 381, 389; ii. 15-15, 304
"Peacock marble," i. 18
Peacocks, bronze, in the Vatican Court, ii. 296, 299
Pebble mosaic, i. 82
Pedestal, the, of the Column of Trajan, ii. 39
Pediciment of the Pantheon, ii. 128, 129, 139; of the Temple of Venus and Rome, ii. 221
Pentelic marble, i. 16, 17, 204, 256, 258, 261, 297, 277, 279, 321, 339, 343, 362, 365; ii. 27, 82, 89, 135, 138, 140, 142, 208
Peperino, important building material in Rome, i. 6
Peregrini, the corps called, i. 299
Perfumes, use of, by the Romans, ii. 155 and note
Peribolos, the, of the Thermes of Caracalla, ii. 158, 159, 161; of the Thermes of Constantine, ii. 164; of the Thermes of Diocletian, ii. 181, 182; surrounding the Temple of Faustina, i. 331; of the Temple of Venus and Rome, ii. 222, 223
— wall on the Caelian Hill, ii. 298
Péristyle, the, in the Palace of Augustus, i. 184; of the Thermes
of Caracalla, ii. 167-169; of the Temple of Ceres ad Circum Maximum, ii. 104; of the Palace of Domitian, i. 200, 201; of the Temple of Hercules, ii. 192; of the Temple of Mars, ii. 12; of the Temple of Neptune, ii. 267; of Nero’s Golden House, ii. 149, 151, 152; of the Baths of Titus, ii. 155; of the Forum of Trajan, ii. 27; of the Temple of Venus Erycina, ii. 247; of the Temple of Venus and Rome, ii. 221; of the Atrium Vestae, i. 309-316, 318, 319.

Perynna, Petronius, restoration of the Thermes of Constantine by, ii. 182 note.

Peruca, on the hieratic use of pottery, i. 316 note.

Pertinax, murder of, ii. 234.

Pestussi, Sallustio, bronze girders in the Pantheon sketched by, ii. 134 and note.

Pescaria, the, ii. 204.

Pescennius, name of, inscribed on leaning pipe in the house of Livia, i. 178; Niger, defeat of, by Severus, i. 244.

Peter, S., Basilica of, i. 362; ii. 58, 222, 287, 299, 370; bronze statue of, on the column of Trajan, ii. 30.

Peter’s, S., marble from Chios used for columns in the façade of, i. 19; the “holy door” of, framed with marble of Isæus, i. 19; dome of, ii. 136 and note; bronze doors of, ii. 292; baptistery of, ii. 294.

Peter’s, S., Pantheon on the Memoria Romuli, ii. 287.

Petrie, F., mechanical processes of ancient Egypt, his work on, i. 85 note.

Pharsalia, temple vowed by J. Caesar at the battle of, ii. 2.

Phidias, imitations of sculpture of the age of, by Graeco-Roman artists, i. 33; statue of Aphrodite by, ii. 269; statue of Zeus at Olympia by, i. 390 note; statue by, in the Forum Piazza, ii. 15 note; pedestal with name of, ii. 186.

Phidias, and Praxiteles, medieval legend about, ii. 156 note.

Phengites, the stone called, ii. 148 and note.

Philip of Macedon, painting of, ii. 292; possible bronze statue of, i. 139.

Philippe, Temple of Mars Ultor in memory of the battle of, ii. 6.

Phaloppus, L. Marcina, the Temple of Hercules Musarum rebuilt by, ii. 268; porticus of.


Philectras, name of, cut on a block of stone, i. 169.

Philozeus, defeat of Darius painted by, i. 84.

Phoca, column of, i. 256, 259, 345; 350; the Pantheon presented to Boniface IV, by, ii. 141.

Phoebe, daughter of Leucippus, relief representing the rape of, ii. 281.

Phobias, Messius, restoration of the Colosseum by, ii. 82.

Phoenician cemeteries, underground tombs in, ii. 279.

Phrygian marble, i. 18; ii. 99.

Piano-regulatore, the scheme called, for reducing hills and valleys to one level, i. 4; ii. 243.

Piazzas del SS. Apostoli, ii. 257; of S. Bartolommeo, ii. 366; Farra, ii. 118 note; Montanara, ii. 70; 71 note; di Monte Citorio, ii. 310, 311; Navona, ii. 57, 58, 342; di Pietra, ii. 297; del Popolo, ii. 43, 287, 310, 312; Ramandini, ii. 145; di Spagna, ii. 342; de’ Termini, ii. 150; S. Trinita, ii. 164; Vittorio Emanuel, ii. 325, 341.

Picas, a traditional primitive king of Rome, i. 196.

Pictus, temple of, ii. 71 and note, 198.

Pietro in Montorio, S., church of, i. 2; ii. 247, 347.

Pirla, the, of hypocausts, ii. 120-129, 125.

Pincian Hill, i. 2; ii. 57, 185, 209, 357.
INDEX

Pipes, earthenware, in the Palace of Caligula, i. 196, 197
  inscribed lead, in the house of Sallust, ii. 242; use of lead, for the Roman water supply, ii. 316, 320-322; method of making lead, ii. 327-330; inscriptions on lead, ii. 330-335; made of clay, ii. 326; made of wood, ii. 327; made of stone, ib.; lead (fyured), ii. 328, 330; rain-water, l. 197; ii. 330; for smoke flues (fyured), ii. 121, 123.

Piranese, piece of Servian wall shown by, in one of his etched plates, l. 146

Piscina, the, of the Baths of Caracalla, ii. 171; of the Baths of Diocletian, ii. 182, 183; near the house of Livy, l. 182; in the Palatine Stadium, l. 211.

Poblica, the Regio, l. 383

Pics, inscribed water-pipe bearing the name of, ii. 333

Picipnals, murder of, ii. 279; tomb of, ib.; epitaph, ib.

Pison, statue of Mars and Mercury by, l. 338

Pintos IV., arms of, l. 331

—— VI., gives ring of Scipio to the antiquary Datini, ii. 269.

—— IX., use of marble blocks for decorating churches by, l. 28; towers of the Porta Tiberina destroyed by, ii. 385.

Plebs, its effect on Roman art, i. 34

Placentia, Munatia, the Temple of Saturn rebuilt by, l. 266; Victory in a quadriga dedicated by the consul, l. 371.

Plato on painters of statues, l. 20

Plantil, tomb of, l. 393.

Plantia on the gold statue of Jupiter on the Capitol, l. 371; on the Porta Trigemina, l. 135; on the Velabrum, l. 221.

Pleuguenn, Archbishop of Canterbury, coins of, found in the Atrium Vestae, l. 318.

Pliny, references to, on the following:
  Basilica Aemilia, l. 248; various benefactions of Agrippa, l. 342; bronze statue of Apollo on the Capitolina Hill, l. 269; group of Apollo and Arctomedus in a quadriga by, Lysias, i. 155; statues of Apollo, Latona, and Diana in the Temple of Apollo, ib.; Roman aqueducts, ii. 249; Aqua Marcia, ii. 337; Aqua Virgo, ii. 342; Archimedes, the famous sculptor, l. 75; Attalicus, ii. 286; obelisks of Augustus, ii. 312; awnings over the Forum, l. 235; awnings of theatres, etc., ii. 103; Theatre of Balbus, l. 74; balneus peninsula, i. 122; baths, ii. 113, 115, 117; modes of burial, ii. 263; sculpture in the Thermae of Caracalla, ii. 176; extraneous site of the Palace of Caligula, i. 190; Circus of Caligula, ii. 25; Campus Martius, l. 373; ii. 209, 215-218; paintings on the Capitolina Hill, l. 371; statues of the Roman kings on the Capitolina Hill, l. 370; wild beasts slaine in the Circus and elsewhere in Rome, ii. 44; sports of the Circus, ii. 54; Circus Maximus, ii. 44, 45, 51; circus of Rome, l. 142; axle of the Circus, ii. 81, 95; lists of colours by, i. 101; colour for fresco painting, i. 95; paintings in the Comitium, l. 245; burying-galleys of the Vastal Cornelia, l. 294; Curia Cornelia, l. 233; house of Crassus, i. 169, 170; amphitheatre of Curio, ii. 64; drainage of Rome, l. 144; drills worked with diamond dust, i. 93; funeralistic, l. 28; Arch of Fabius, l. 330; sacred fig tree, l. 346; florum-spur, l. 22; removal of statues from the area of the Forum, i. 348; paintings in the galleries of the Forum, l. 238; Forum Julia, l. 2; gliding for private houses, l. 79; gladiatorial combats in the Forum, l. 234; Gracoctasia on the Comitium, l. 237; bringing of granite into Rome, l. 23; on granite from Syracuse, l. 25; Greek spolia brought to Rome after the conquests of L. Mummius, l. 103; use of gypsum, l. 73; bronze statue of Hercules on the Capitolina Hill, l. 369; picture of Ilymus, l. 14;
bronze statue of Janua, l. 234, 249; Basilica Julia, l. 272; statue of Julius in the Temple of Venus, l. 4; bronze statue of a dog in the Cella of Juno, l. 370; throne of Jupiter, l. 359; statue of Jupiter Capitolinus, l. 359; annual painting at the statue of Jupiter, l. 360; Temple of Jupiter Capitolinus, l. 361; votive treasures of the Capitolinian Jupiter, l. 371; statue of Jupiter Tonans on the Capitoline Hill, l. 370; Temple of Jupiter Tonans, l. 16, 388; Lacoesamenium viride, l. 24; Laocoön group, II. 157; tapis ophiæs, l. 29; Luna marble, I. 16; Apoxyomenus of Lysippus, ii. 117; Column of Maenius, ii. 309; Duilius, Sc. death of Marcellus, ii. 288; importation of marbles into Rome, l. 28; marble linings for walls, l. 36; methods of sawing marble, l. 16; Calcio marble, l. 19; Marmor Luculliæ, l. 20; Numidian marble, l. 18; marble Propylæa in the area of Apollo, l. 184; Pome marbles, l. 17; Proconnesian marble, l. 29; Tæstian, Lesbian, and Tyrian marbles, l. 17; statue of Marsyas, l. 346, 347; first use of marble for wall decoration, l. 14; first use of marble for decoration of private houses in Rome, l. 14, 15; use of marble in public buildings, l. 15; Milliarium Aureum, l. 264; column of Minucius, ii. 310; early use of mosaic in Rome, l. 52; glass mosaic, l. 83; Greek mosaic at Pergamus, Sc. mosaic in private houses, II. 240; removal of mural paintings, l. 75; picture of the Nymph Nomen, l. 238; Amphitheatre of Nero, II. 78; on the Golden House of Nero, II. 146, 147; Aedes Scotia in Nero's Golden House, II. 148; portrait of Nero in the Golden House, II. 147; statue of Nero by Zenodorus, Sc. statue of the Nile, II. 14; manner of announcing the hour of noon in early times, l. 263; onyx or alabastrinae of, l. 21; use of the word onyx by, l. 21; note; Opera Octaviana, II. 202, 203; opus scutatum, l. 83; opus signinum, II. 322; ox of Myros, II. 188; history of painting in Rome, l. 103; paintings on clay, l. 92; Greek inscriptions cut on bronze tabulae in the Palatine Library, l. 187; Palatine houses, l. 169; Caryatids of the Pantheon, II. 128; columns of the Pantheon, II. 129; ring of Polycrates, l. 538; works of art in the Curia of Pompey, l. 68; Theatre of Pompey, l. 65; date of the first porphyry statue sent to Rome, l. 23; red porphyry, l. 24; porphyry statue presented to the Emperor Claudius, l. 203; note; Porta Batimæa, l. 126; Porta Sublicium, l. 89; the Regia, l. 305 and note; process of making terra-cotta reliefs, l. 253; hothouses of crocodiles and hippopotami by Scœruæ, l. 64; Theatre of Scœruæ, l. 170; l. 63; wealth of Scœruæ, l. 54; Septa Julia, l. 210; siltz, l. 8; colouring of statues, l. 93; plaster statues, l. 253; statues, etc., in the Temple of Concord, l. 237, 338; statues of Pythagoras and Alcibiades, l. 245; statues on the Rostra, l. 246; statues brought from Vulci to Rome, l. 389; the "Stairs of Sighs," I. 134, 333; note; Temple of Apollo, II. 70; gems dedicated by Marcellus in the Temple of Apollo, l. 186; Temple of Augustus, l. 274; walls of the Temple of Athena at Ela, l. 75; painting and sculpture of the Temple of Ceres, l. 28; Temple of Ceres, Liber and Libera, l. 198; destruction by fire of the Temple of Jupiter Capitolinus, l. 369; Temple of Minerva, II. 211; Temple of Mars, l. 71; Temple of Peace, II. 13, 15; Temple of Pintus, II. 71; note; Temple of Salus, l. 102; Thermæ of Titus, l. 199; Temple of Venus, II. 2-4; Temple of Vestas, l. 205, 206; on tufa, l. 5, 6; the care taken of sick Vestals, l. 294; note; Altar of Vulcan, l. 239; wall decoration in private houses, II. 239; water supply of Rome, l.�
INDEX

314 note, 316; reservoirs, ii. 324; wooden water-pipes, ii. 337
Petrina, Empress, inscribed water-pipe bearing the name of, ii. 333
Plumbens, names of, on water-pipes, ii. 333, 334
Plutarch, reference to, on the following: Basilica Aemilia, i. 247;
Campus Scaligerus, ii. 247; Porta Carmentalis, i. 127 note; Tabularium of the Capitol, i. 361; marble quarries of Carystus, i. 18; the Temple of Castor, i. 277, 283; the Comitium, i. 239; Temple of Concord, i. 232; Altar of Consus, i. 110, ii. 41; Temple of Flora, i. 365; Gaulus Gracchus, i. 235; Greek Prytanæum fires, i. 289, 290; Greek stele sent to Rome by Paulius Aemilius, i. 29; picture of Ilium by Protogenes, i. 14; intramural burial, ii. 264; Temple of Juno Moneta, i. 266; Temple of Jupiter Capitoline, i. 358, 362; annual painting of the statue of Jupiter, i. 369; Temple of Jupiter Feretrum, i. 357; Temple of Jupiter Sator, i. 167, 168; conquest of Macedonia by Paulius Aemilius, i. 290 note; Tullianum in the Mamertine Prison, i. 154; Milliarium Aureum, i. 264; natural springs of naphtha in Babylon and Ecbatana, i. 96 note; the Clivus Palatinus, i. 169; Pons Sublictus, i. 362, 363; Domus Publica of the Pontifex Maximus, i. 229; Curia of Pompey, ii. 58; house of Pompey, ib.; Theatre of Pompey, ii. 55, 66; Basilica Porcia, i. 247; Publilia’s house, i. 229; Porta Hadriana, i. 126; the Regia, i. 304; the Regia Flavia, i. 243; Curators of roads, i. 356; but of Romans, i. 121; gates in the Wall of Rome, i. 118; Rostra of Julius Caesar, i. 280; Scala Caria, i. 120 and note; Somnia Sacra Vica, i. 223; colouring of statues, i. 98; Tiber Island, ii. 368; Tiber quay, i. 145; awnings along the valley of the Velabrum, i. 235 note; derivation of Velabrum, i. 221; Temple of Vesta, ii. 281, 293; cult of Vesta, i. 291; note; privileges of the Vestal Virgins, i. 293 note; Altar of Valesus, i. 233; Podium, the, of the Temple of Castor, i. 275-281; of the Colosseum, ii. 52 and note, 83, 95-97; of the Temple of Concord, i. 333, 334, 336; of the Mausoleum of Hadrian, ii. 293; of a Temple of Hercules, ii. 182; of the Temple of Julia, i. 285; of the Temple of Jupiter Capitoline, i. 360, 365; of the Temple of Mater Matuta, ii. 389; of the Temple of Neptune, i. 297, 298; of the Temple of Saturn, i. 267; of the Temple of Vesta and Rome, ii. 222, 223; the Temple of Vesta, i. 297, 298; Postas, Lucilina, tomb of, ii. 282, 283; epitaph, ii. 283; Pela, windows in the amphitheatre at, i. 31 note; Police, organization of the Roman, ii. 263; Polineikes, name of, inscribed on pedestal in the Therm of Titus, ii. 157; Polla, portions of, ii. 17; tomb of, ii. 282; Pollio, Asinius, public library of, i. 387; ii. 201, 202; Polycharmus, statue of Venus by, ii. 292; Polyeuctus, statue of Sicyon, bronze group by, i. 198; Polycleitus, statue of Juno by, ii. 292; at work on the sculpture of the Porticus of Metellus, ii. 266; Polyclitus, Greek sculptor, i. 351; Polycrates, ring of, i. 338; Polydorus, one of the sculptors of the Laconian group, ii. 157; Polygnathus, painting by, of the rape of the daughters of Leucippos by Castor and Pollux, ii. 291; Polyphemus, painting of the Cyclops in the house of Livius, i. 177; Pomponianus, the, i. 107-110; ii. 41, 71; Pomona, statue of, ii. 329; Pomponius, Claudius, attempt of, to stab Commodus, ii. 168; Pompeii, Baths at, ii. 114, 116, 118;
examples of private fountains found at, ii. 351; glass mosaics found at, i. 83, 84; painters' pigments, etc., found in, i. 100, 101; rain-water pipes of the house of, ii. 321; bronze water-tap found at, ii. 329; relief representations of round leaves on tombs at, ii. 276; examples of projecting upper stories at, i. 88; windows with glazed casements of bronze or wood found at, i. 32; painting in a house at, representing plasterers using wooden "floats," i. 78; examples of tegularia mammatae found in, l.181.

Pompeius, Sextus, Sicilian defeat of, by Augustus, l. 185.

Pompey, Curia of, ii. 65, 68; house of, ii. 68; defeat of Mithridates by, ii. 66; porticus of, ii. 65, 67-69; statue of, l. 260; ii. 68; Temple of Minerva founded by, ii. 211; theatre of, ii. 62, 65-69; myrrhinum vases brought to Rome by, i. 371.

Pomphilus, Marcus, and Calvis, names of, on travertine pedestal found during the excavations for the new Tiber embankment, i. 149.

Pons Aselli, l. 20, 149; ii. 292, 309, 370; Asculium, ii. 188, 189, 191, 197, 364, 365; Agrippae, i. 147; ii. 365, 369; Aurelius, ii. 370; Cecilia, i. 126 and note; iii. 363; Fabricius, i. 365, 367, 368; Jubaesus, ii. 363; Moli-

vius, ii. 300, 371; Neronicus, ii. 370; Probo, id., 371; Subileius, i. 124, 315; ii. 363, 373; Triumphalus, ii. 370; Vaticano, ii.

Ponte Garibaldi, ii. 261; Molle, ii. 371; Rotto, ii. 364; Sisto, ii. 365, 370; del quattro conti, ii. 368.

Pontifex Maximus, house of, the, i. 299-304; ii. 192; the Regia: the sanctuary of the, i. 305; office of, held by Augustus, l. 188, 300; Vestal's chosen by, l. 292; paternal guardian of the Vestals, i. 299; office of, held by J. Caesare, i. 170, 299.

Pontine Marshes, paved road through the, ii. 30.

Pontius, victories of Severus in, i. 344.

Popilius, M., removal of statues from the area of the Forum by, i. 348.

Porcellum, Chinese, i. 22 and note.

Porphyry, i. 16-20, 208, 294.

Porta—as follows: Appia, i. 134

note, ii. 350, 387; Asturias, ii. 112, 383; Aurelia, ii. 358; Cas-

limontanae, i. 134; Capena, 98; 218, 379, 380, 381; i. 36, 329, 356, 358; Carmentalia, i. 157, 185, 288; ii. 70, 138, 198; clausia, ii. 386; Collina, i. 131, 152, 294; ii. 177, 211, 241, 246, 247; Decem-

manus, ii. 234; Equilibria, i. 133; ii. 208, 335; Flaminia, ii. 257, 361, 383; Flaminiana, i. 126, 129; i. 188, 197; Fontinalis, i. 129; Januallia, i. 119; Labiciana, ii. 274, 354; Laurinallia, i. 135; Libitinensis, i. 52; Latina, ii. 270, 337, 378, 380, 381, 385-387; Maggiore, ii. 172 note; ii. 343, 345, 346, 375, 384; Metrovia, ii. 359; Mognia, i. 711, 116, 118, 167, 168, 206, 222; Naeria, i. 135; Nomentana, ii. 386; Osti-enaus, ii. 284, 379-381; Pandiana, i. 135; Pia, ii. 386; Pinciana, ii. 386, 387; Pompeii of the Circus Maximus, ii. 52; del Popolo, ii. 58, 344, 361, 379, 385; Portu-

canal, i. 47, 128, 351, 359; Prae-

nestina, ii. 274, 334; Principap-

dextra of the Praetorian Camp, i. 234; Quarratulena, i. 183; Rut-

am, i. 128, 129, 154; ii. 276 and note; Randuscina, i. 135; Ravenna, i. 118, 119; Romanula, l. 191, 195, 222, 225; Salario, ii. 65, 281, 277-279, 282, 283, 356; Salutarius, i. 130, 131; San Gio-

vanni, ii. 383; San Lorenzo, ii. 172 note, 322, 323, 339, 340, 343, 378; S. Pancrazio, ii. 389; San-

quality, i. 130; ii. 284; Santa, i. 261; Scelerata, i. 127; Septimia-

na, baths near the, l. 359; ii. 157, 158 note, 388; Thaurina, ii. 385; Trigemia, i. 135; ii. 310, 363, 389; Triumphalis, i. 127.

ii. 52, 184; Viminallia, i. 138, 177, 182.
Porticus Argentariae, l. 382; of the Temple of Aurelius, l. 313; of the Theatre of Balbus, l. 74; Corinthia, l. 294; Decurium Consentina, l. 289; in the Domus Gelatiana, l. 338; Liviae, l. 338, 331; of the Circus of Maxentius, l. 57; of Neptune, l. 207-209; Octaviae, l. 189-206; of Pompey, l. 67-69; of Philip, l. 296; along the line of the Sacra Via, l. 229; of the Forum of Trajan, l. 27; for worshippers, l. 32; meaning of the word, l. 271 note.

Porus marmoreus, l. 17.
Possidionum, the, of the Temple of Neptune, l. 257.
Postage, system of, l. 350.
Postumus, Julius, victory of, at Lake Regillus, l. 277; dedication of the Temple of Ceres, Liber and Libera, in fulfillment of a vow made by, l. 193.

Potency, hieratic use of, l. 315.
Pozzuoli, l. 6-9, 44, 77.
Pharnaces, spoils of, l. 370.
Præstabat, chief Vestal, inscribed pedestal to, l. 324.
Prætorian camp, l. 233-237, 382, 335, 386.
— conquerors, the slayers of Gallus, l. 284.
— Guard, l. 233; disbanded by Constantine, l. 234; the Empire put up to auction by the, l. 183.
Præses, X., steps to the high altar of, made of rosso antico, l. 19.
Prata Flaminia, l. 57.
Praxiteles, marble copy of the Apollo Sicyonianus, l. 183; the Thespian Cupid by, l. 202; the so-called Eros of, in the Vatican, l. 17; imitation of the style of, by Graeco-Roman artists, l. 33; name of, on pedestal, l. 351; l. 186; status of Janus possibly by, l. 249; statues by, l. 202; preference of, for Pentelie marble, l. 17.
Pre-Roman settlement, l. 106.
President of the games in the Circus Maximus, l. 48.
Priscus, Tarquinius, the great cleric of, l. 291; circuit wall of, l. 123, 124.

Probianus, Gabinius Vettius, the last restoration of the Basilica Julia by, l. 276, 271.
Probus, Emperor, foundations of a bridge built by, l. 364; Aurelian Wall completed by, l. 373.
Procession, religious, carrying statues, l. 70.
Proposobian marble, l. 20.
Propontis on the aqueducts of Rome, l. 348; on the Aurelian Wall, l. 373, 374 note; on the statues in the Forum Pacis, l. 14, 15 note; on the Mausoleum of Hadrian, l. 222, 290; on a Temple of Janus, l. 249; on the bronze tiles taken from the Temple of Jupiter Capitolinus, l. 363; on the maro torto, l. 387; on the house of Saltus, l. 242; on the sculpture of the Three Fates, l. 250.

Propertius on the bronze statues of seen by Myron in the area of Apollo, l. 188; on the splendid fonts of the Palatine Temple of Apollo, l. 185; on murrhina, l. 22; on the statue of Vortumnus, l. 276; on the legend of Terpea, l. 354.
Propylaea, marble, in the area of Apollo Palatinus, l. 184.
Proserpine, picture of, on the Capitoline Hill by Nicolaeschus, l. 371; altar to, l. 193.
Prosogma, picture of Ialyx, l. 14 and note.
Protus, G. Julius, British lead prepared by, l. 321 note.
Prytaneeum, the early Greek, l. 229, 291.
Pseudesodemus, a Greek form of masonry, l. 49.
Pullicola, Flavia, chief Vestal, inscribed pedestals to, l. 323-328.
Pullicola, P. Valerius, house of, l. 220 and note.
Pudensiana, X., bath below the church of, l. 186.
Pudicitia, shrine of, l. 191.
Pulvinus, M. Horatius, Temple of Jupiter Capitolinus dedicated by, l. 358.
Pulvinar in the Palace of Severus, l. 219.
Pumice, concrete made of, l. 173.
INDEX

Pumps, lifting and force, used by the Romans, ii. 256 and note
Punic spoils, i. 361 ; wars, i. 249 ; ii. 273 ; wax, i. 97, 98
Puteal at Pompeii, i. 284 note
— on the spot where the razor
— and whetstone of Attus Navus
— were buried, i. 284
— Lisbon, i. 284
— Sclibounum, i. 284
Puteoli, beds of porcellana at, i. 8 ;
— inscription found at, giving the
— contract for building a porch with
— folding doors, i. 79
Pyrrhus, spoils won from, ii. 336
Pythagoras, statue of, on the Rostra,
— i. 245

Q
Quadrige, the terracotta, made for
the pediment of the Temple of
Jupiter Capitolinus, i. 294, 359, 364
Quadrige, Golden, on the Capitolium,
— i. 370
Quaternary, the, and the charge of
the roads, ii. 355 ; the water supply
under the administration of the,
— ii. 317
Quarries, methods of working in the
Roman Empire, i. 25
Quarry-marks, i. 25 and note
Quattro Santi Incoronati, church of,
the, ii. 295 ; iii. 193
Quintilius, T., statue of Jupiter
Imperator dedicated by, i. 370
Quirinal Hill, the, i. 126 ; ii. 184,
— 195, 237 ; altar discovered on the,
— i. 90 ; citadel on the, i. 354 note;
— enclosure of the, i. 123 ; house on
the, ii. 254 ; inscribed pipe found
in the, ii. 383 ; ”Temple of the
Sun” on the, i. 4 ; gardens of the
— i. 130 ; palace, ii. 182, 183, 186
note, 291
Quirinuse, temple of, i. 382, 383

R
Rabirius, the architect, a Greek by
training, i. 29

VOL. II

Racing, modes of, in the Circus
Maximus, ii. 53
Rain-water pipes, ii. 174, 320
Raking shores to support concrete,
— i. 49
Raphael, report of, on the best
methods of preserving the ruins of
classical Rome, i. 58 and note;
— marble statue of Jonahe designed
— by, i. 277 ; the Villa Madama de-
signed by, i. 182
Regal period, the, i. 104-155
Regia, the, i. 250, 301, 304-307;
— ii. 192 ; the Domus Publica,
sometimes called the, i. 299
Regisfagnum, prehistoric ritual in the
Comitium called the, i. 243 and
— note
Regillus, Lake, ii. 341 ; victory of
Aulus Postumius at, i. 277 and note
Regina Sacrorum, the, i. 305
Regiones, the, of Augustus, i. 379
— to 383 ; ii. 146, 196, 372
Relief, ancient, showing the Rostra,
— i. 256, 257, 259
Reliefs on the column of Antoninus
Pius, ii. 311 ; on the Arch of M.
Aurelius, ii. 302, 303 ; on the
Arch of Claudius, ii. 301 ; on Con-
stantine’s Arch, ii. 35 ; in the
Baths of Diocletian, ii. 179 ; on the
tomb of Eurysaces the baker, ii.
275 ; in Nero’s Golden House, ii.
150 ; stucco, in river-side houses,
— ii. 249-253 ; in the Temple of
Jupiter Capitolinus, i. 282 ; on the
Arch of Severus, i. 344 ; on the
Arch of Titus, ii. 233 ; spiral
— round the shaft of the column of
Trajan, ii. 31
Reservoir, for the water supply of
the Thermes of Diocletian, ii. 182,
183 ; for the Thermes of Titus, ii.
156
Reservoirs, ii. 324-326
Rex Sacrificialis, house of the, i.
226, 299, 300 ; wife of the, offers
sacrifice, i. 305
Rhamesse II., obelisk inscribed with
the name of, ii. 212
Rheta Sylvia, bas-relief representing
Mars and, ii. 222
Riario, Cardinal, palace of, ii. 59
and note
INDEX

Reni, house of, l. 126
River-side houses, ii. 248-263
Road contractors, ii. 356
Roads of Rome, ii. 352-361; administration of, ii. 356, 358; list of the Roman, ii. 359-361
Rocco, S., church of, ii. 290
Rossatilla, Asmilla, dedicated pedestal to Flavia Publicia, l. 325
Rome, the goddess, figure of, ii. 36, 393; relief of, ii. 311; and Venus, Temple of, ii. 216-224.

Quadrata, l. 107-122; marble altar within the area of Apollo called, l. 189; remains of buildings on the outside of, l. 171; prehistoric buildings within the walls of, l. 158; circuit of, described by Solinus, l. 110; gates in, l. 117-123; Temple of Jupiter, Juno, and Minerva in, l. 357; Pomerium round, l. 221; prehistoric wall of, l. 97; derivation of the name, l. 107

Roman art, degradation of, during the fourth century, l. 349; baths, ii. 113-157; buildings, architectural styles of, i. 26-32; encaustic, i. 97; methods of construction and decoration, i. 36-103; houses, insecurity of, l. 89; reform in the construction of, under Nero, l. 89; power, decline of, the, ii. 372, 373; style, native, i. 34, 35; shopfronts, l. 192, 193; temples, l. 25, 30, 31; wall-paintings, l. 97

Romano, Gaius, painter, house of, ii. 277

Romane, the, an inartistic race, i. 27; the Ionic and Christian styles adopted by the, i. 36; practical skill of the ancient, i. 36; populae of the, by the Sabine inhabitants of the Capitoline Hill, l. 167

Rome, works of art in, l. 389-391; amphitheatres of, ii. 76-112; aqueducts of, ii. 335-351; architectural growth of, l. 376-381; use of unburnt brick in, l. 11; building materials employed in, l. 5-14; bridges of, ii. 362-371; Thermes of, ii. 141-187; Raphael's report on the best method of preserving the ruins of classical, i. 88 and note; the Circhi of, ii. 49-60; the cloaæ of, l. 142-145; decorative materials used in, l. 14-16; fires in, l. 4, 59-91; traditionally given time of the founding of, l. 104; the Gabine stone ordered by Nero to be used for the fronts of houses in, l. 7; Gaulish invasion of, l. 122; hills and ridges of, l. 3, 4; enclosure of seven of the hills of, by the large circuit wall, l. 125; Horrea of, ii. 260-282; period of the seven kings of, l. 123-126; levelling process in, l. 4; myths concerning the early inhabitants of, l. 106; technical methods employed in the mural paintings of, l. 91; Nero's scheme for a new, l. 89; plan of, ii. 17, 18; marble plan of, ii. 45, 65, 68, 72, 197, 210, 213, 224, 238, 350; varieties of marble and porphyries used in, l. 16, 17; varieties of marbles found in the ruins of, l. 19; Pliny on the importation of marble into, l. 26; modern changes in, l. 4, 5; banks of Tiber and Teverina around, l. 8; prehistoric remains in, l. 104; roads of, l. 350-361; sack of, ii. 298; abundance of sand in, l. 10; site of, l. 1, 3; statues of the kings of, on the Palatine Hill, l. 370; examples of togæe mammatis found in, l. 181; Templum Sacrum Urbis Romae, l. 351, 380; ii. 17, 18, 20; theatres in, l. 61-74; water supply of, l. 314-331

Romulus, fortification of the Capitoline and Aventine Hills by, l. 122; the Equus instituted by, in honour of Mars, i. 196; Hut of, l. 121, 123; asylum for fugitives established by, l. 354; Temple of Jupiter Feretrius founded by, l. 365; Temple of Jupiter Stator built by, i. 167; division of the Populus into tribes by, l. 238; statue of, ii. 7; treaty of, with the Sabine King Tatius, l. 234; temple of, l. 225 note, 581; ii. 16, 19-21, 139; the legendary founder of the Temple of Vesta, 295;
tomb of, ii. 287; wall of, i. 3; 33, 65, 108, 109, 112-117, 128, 208, 356; one of the two kings of Latin race, i. 123 note

Romulus and Remus, the cave where they were suckled, i. 120; the sacred fig tree under which they were found, i. 245; statue of the wolf suckling, i. 245.

— son of Maxentius, temple of, ii. 19-21

Rome’s excavations, i. 118

Rospigliosi Casesi dei’ Aureus, columns at the, i. 19

— palace, the, ii. 152

Rouso antico, a Greek marble, i. 19

Rostra, i. 237, 238 note, 244-246, 252-262, 265 note, 286, 287, 301, 343, 346, 347, 349; ii. 210, 309

Rotunda, the, of the Baths of Caracalla, ii. 166; of the Pantheon, ii. 184, 185

Rubble walls not used in Rome, i. 65

Ruggiero, Q. Fabius Maximus, capture of Luceria by, i. 102

Rumina, the goddess, presiding over the suckling of children, i. 121

S

Saba, X, church of, ii. 257, 336

Sabina, X, church of, i. 135; ii. 290

— seated figure of Vesta on gold coin of, i. 290

Sabine chiefs, the Comitium a meeting-place of, i. 236

— Hills, ii. 338 and note

— women, carrying off of, the, ii. 41

Sabines, alliance of, with the Latins, i. 238; the Capitoline Hill the stronghold of, i. 254; fusion of, with the Etruscans, Latins, and Greek colonists, i. 123

— Nabius opposed by Vitellius, i. 361

— the body of, thrown on the "Stairs of Sighs," i. 154, 333

Sacellum Larum, i. 110, 221

— Volscaie, i. 191


Sacred relics, the seven, i. 389

Sailors’ gallery in the Colosseum, ii. 104

Salamin, battle of, ii. 7 note

Salina del Grillo, the, ii. 8

Sallust, administration of the Roman province of Numidia by, ii. 241; circus of, i. 39, 245, 246; estate of, ii. 246, 334; gardens of, i. 59, 172, 332; ii. 241-248, 331, 334; house of, i. 131; ii. 236, 241-245; on the Mamertine Prison, i. 153, 154; porticus of, ii. 246

Salonica, wife of Gallienus, ii. 309

Salus, temple of, i. 102, 131

Salvatore in thermis, X, church of, ii. 145

Samnite, attack on the Porta Collina by, i. 132; defeat of the, at the Porta Collina, ii. 211; spoils taken from the, i. 369

Sand, abundance of, in Rome, i. 10

Sangallo, Antonio, rebuilding of a part of the Aurelian Wall by, ii. 359

Saracens, bronze tiles from the Basilica of S. Peter stolen by the, ii. 222

Sarcofagi, marble, ii. 280, 281, 282

Sarcofagi, marble, in Caligula’s Palace, i. 197; sculptured, showing the original form of the mosaics, ii. 349

Sardinia, seizure of, by Scipio, ii. 279

Saturn, Aenarium of, i. 206; altar of, i. 232, 265, 353 and note; one of the traditional primitive kings of Rome, i. 106; temple of, i. 25, 30, 31, 46, 235, 250, 291, 264-268, 291 note, 347, 353, 372; ii. 223

Saturini, Mons, the Capitoline Hill once called, i. 353

Scaurus, Spartan architect, ii. 201

Satyr, statue of, in the Porticus Octaviae, ii. 202

Savelli family, ii. 72

Saxum quadratum used for paving, ii. 355

Scalae Aquilares near the entrance to Caligula’s Palace, i. 196, 197

— Casci, i. 3, 52, 158-161; ii. 123 note
INDEX

SCALAE GRMONIAC.: I. 154, 333
SCAUSUS, butchery provided by, to please the Romani, ii. 64: house of Crassus becomes the property of, i. 170; Fons Mutilus built by, ii. 371; theatre of, i. 15, 83, 170; ii. 62-64; Tusculan villa of, ii. 64: wealth of, it.
SCEANA, the, of the theatre of Ballinus, ii. 74: of Pompey's Theatre, ii. 66, 67: of the Theatre of Scaurus, ii. 63
SCHOLA SCARRANA, the, i. 389
SCHOOL, the Domus Gelatiana once a, i. 209
SCIPPUS AFRICANUS, arch of, ii. 300; arches added to the Fons Aselli, by, ii. 384: primitive bath in the villa of, ii. 116
— Asilius, i. 108, 270
— Lucius C., of, ii. 269, 270; skeleton of, ii.; ring of, iii., 271
— P. Cornelius, removal of statues from the area of the Forum by, i. 348
SCIPPUS, sepulchre of the, i. 381; ii. 268-270
SCOPEUS, statue of Apollo by, i. 185: statue of Janus possibly by, i. 249: preference of, for Pentelic marble, i. 17
SCREENS, the, of the Basilica Julia, i. 272: marble, in the Palatine Stadium, i. 211: Roman windows in temples filled in with bronze, i. 31: of the Rostra, i. 255
SCYLLA, picture of, in the Temple of Peace, ii. 15
SEATS, arrangement of, in the Colosseum, ii. 83-85: inscription relating to, ii. 84
SEBACURRI, officers called, ii. 259
SEBASIAE, S., catacomb of, ii. 57
SECRETARIUM SENATI, a hall on the north-west side of the Curia, i. 242
SECRETILE MOSAIC, i. 84
SECONDUS, Q. Fabius, inscribed water-pipe bearing the name of, ii. 333
SEGUNUS, body of, stung on the "Stairs of Scauri," i. 154, 353
SELEUCIIDAE, Tetradrachms of the, i. 264 note
SELEUKOS, Greek painting signed by, ii. 249
SEMPRONIUS, tomb of the genus, ii. 284
—, Basilica, i. 269 and note
SEMPrONIUS, colleague of, i. 266: epitaph on tomb of, ii. 284
SENACULUM, the, i. 246, 247
SENATE, the, meet in the Temple of Castor, i. 282: in the Temple of Concord, i. 352
SENATUS DEORUM, the Divi Consentum called the, i. 342
SERA on the removal of the huge of Romulus, i. 121: on the Lacinum Servilia, i. 232: on lifts for cages in early place of amusement, ii. 106: on the statue of Marus, i. 347: on the new position of the Rostra, i. 246: on the Bath of Scipio Africanus, ii. 118: on the tomb of Scipio Africanus, ii. 270
SENTINEL'S passage in the Wall of Aurelian, ii. 376
SERAPIS, the, ii. 210-211
SEPTIMIUS, the seven hills known as the, i. 124, 383: original meaning of the word, i. 124 note
SEPTIMIUS, the, of the Palace of Severus, i. 218 and note, 219 and note
SEPULCHRES, imperial, ii. 288: and the whole of chap. viii. vol. ii.
SERAPIS, the, ii. 14
SERAPIS, theatrical scenic painter, i. 263
SERAPIS, temple of, ii. 212, 213
SERPENTINA, the emblem of Asculapius, i. 356 and note, 357 note
"SERPENTINUS, Precious," i. 20
SERVIUS, LUCAS, i. 232
SERVITUS, Agger of, i. 182 and note, 186, 188, 189; ii. 182 and note, 367, 368, 337; gates of, ii. 188; regions of, i. 124: Temple of Fortuna dedicated by, i. 148, 159: increases the number of the Vestal Virgins, i. 291: wall of, i. 87, 45, 50, 52, 123, 126-141, 218, 265, 256, 378: ii. 71, 177, 195, 197, 229, 240, 242, 243, 265, 274, 276 note, 333, 337, 358, 372: bibliography of, i. 141
Servius, the Schollast, called, on the
Doms Publica of the Pontifex
Maximus, l. 299; on the gates in
Roma Quadrata, 1. 117; on the
Temple of Janus, l. 23; on the
Regia, l. 299; on the Column of
Bostratine, l. 310; on Temple of
Saturn, l. 265, 266; on the Temple of
Vesta, l. 295
Sette Sale, the reservoir known as
the, l. 156 and note
Severus, Torumus of Agrippa restored
by, l. 142, 143; on restoration of
the Aqwa Claudia by, l. 345; restoration of the Aqwa Julia by,
l. 341; arch of, l. 225, 232, 242,
252, 256, 258, 261, 343, 344, 345,
348, l. 394, 395; decay of art
during his reign, l. 34; the
Basilica Julia restored by, l. 270;
baths of, l. 213, 331; l. 157, 158
note; l. 122 note, 358, 389; on brick
stamps of, l. 158 note; buildings of,
l. 358, 389; on death of,
l. 339; restoration of
Domitian's Palace by, l. 207;
Hadrian's Palace destroyed and
burned by, l. 212, 214; marble
plan of the Regia by, l. 306;
marble plan of, l. 17, 187;
Mausoleum built by, l. 299; palace of,
l. 13, 61, 70-72, 119, 213-219, 358;
l. 123 note, 288; the Palatine Stadiun finished
by, l. 210, 211; restoration of
the Pantheon by, l. 126, 127,
127, 140; porticoes with
sculpture of the doors of, l. 369;
portrait figure of, l. 395; Salust's house occupied by, l. 242;
statue of, l. 343; titles and
honours of, l. 344; marble gate-
way in the Velabrum in honour
of, l. 292; restoration of
the Temple of Vespasian by, l. 339
and note; the Temple of Vesta
rebuilt by, l. 295, 296; victories of,
in Mesopotamia and Pontus,
l. 344; inscription water-pipes
bearing the name of, l. 333; death of,
l. 305; the age of, l. 338-339
--- name of one of the architects
employed by Nero for the rebuild-
ing of Rome, l. 89

Sewers, various forms of, l. 144, 145; see also under Cloaca
Shelley, grave of, l. 287 note
Shop-fronts, Roman, l. 192-193
Sibyl's books in the Temple of
Apollo, l. 186
Sicily, conquest of, l. 29
Sidonius on the crypsts of the Cem
Maximus, l. 48; on the Porticus
of the Forum of Trajan, l. 27;
estate of, l. 27
Silius, C. Julius, one of the builders
of the Arch of Dolabella, l. 308;
picture of the Nymph Nemen
brought from Asia by, l. 238
Silchester, rubber for finishing mosaic
doors found at, l. 51 note
Silenus, relief representing, l. 251,
281
Siluhs, lava called, l. 8; used for
paving roads, l. 351-355
Silvanus, the, conquered by Frontinus,
l. 314
Sistris, coins of, found in the Atrium
Vestae, l. 318
Siptus V., the Baths of Diocletian
stripped of their marbles by, l. 179
Slaves' offices in the Atrium Vestae,
l. 313
Smaragdus, inscription on the
pedestal of the column of Phocas
built by, l. 350
Solarium, meaning of the word, l. 312
note
Soliman on the Temple of Hercules
in the Forum Boarium, l. 132; on
the Pomerium, l. 110, 111; on
the Porta Carmentalis, l. 127; on
the Porta Mugonia, l. 118; on
the Porta Trigemina, l. 135; on
the Scala Caeli, l. 120; on the house
of Tarquinia Priscus, l. 167; on
the house of Tullia Hostillia, l. 220
Sophia, S., Constantinople, church
of, l. 132
Solanius, C., cedar-wood statue of
Apollo presented by, l. 185; l. 70
Sossianus, Macrinus, dedicates pedes-
tal to chief Vestal, l. 329
Spain, victories of Ch. Domitian Cal-
virius in, l. 305; spoils from L.
Sertorius' campaign in, l. 300

INDEX
437
INDEX

Sparteola, the Vigiles called, ii. 255.
Spartans on the Thermæ of Caracalla, ii. 163; on the Forum of Rome, ii. 252; on the Pons Aelius, ii. 369; on the Temple of Venus and Rome, ii. 219, 224.

Specs., the, of the Ante Vetus, ii. 336, 337, 345; of the Aqua Apollis, ii. 326; of the Aqua Claudia, ii. 344; of the Aqua Julia, ii. 341; of the Aqua Marcia, ii. 338, 339; of the Aqua Aselli, ii. 329, 341; of the Aqua Virgo, i. 342, 343; of aqueducts, ii. 322-324.
— Antoninus, ii. 348.
— Octavianus, ii. 348.

Sperone, a volcanic stone, i. 6 note.
Spes, temple of, i. 282; ii. 198.
Sphaisteria, the, of the Baths of Caracalla, ii. 171.
Spina, the, of the Circus Maximus, ii. 49, 50; altar of Comus on the, ii. 41; of the Circus of Maximus, ii. 57.
Splinter, Lenticula, silk awnings first used by, ii. 108 note.
Spitalfields Gardens, ii. 241.
Stadium, the, of the Baths of Caracalla, ii. 171; the Greek, ii. 42; Palatine, i. 62, 210-212, 229, 388.
Stained-glass window, example of a Roman, i. 31.
Stairs of the Capitolium Tabularium, i. 374, 375.
— Stairs of Sighs,” i. 154, 155, 333.
Statio Annonae Urbis Romae, ii. 281 and note.

Stations of the Vigiles, ii. 257.

Statins on the wax pigments of Apelles, i. 90; on the legend concerning the staining of the Phrygian marble with the blood of Atys, i. 18; on the Aqua Marcia, ii. 338; on marble from Carystos, i. 18; on the clausura of the Circus Maximus, ii. 48; on the pedestal of a statue of Domitian, i. 348; on the Flavian Palace, i. 301; on the statue of Junius in the Temple of Venus, ii. 4; on the Temple of Julus, i. 255; on the Thermæ of Nero, ii. 144; on Roman roads, ii. 555.

Statues, colouring of, i. 98, 99; made of plaster, ii. 253; in the Thermæ of Titus, ii. 156.

Stefano del Caccio, S., church of, ii. 212.
— della Carraia, S., church of, ii. 193.
— Rotondo, S., church of, ii. 96 note; ii. 228.
Stephanus, pupil of Paintelles, i. 390.
Sertorius, L., arch of, ii. 189; campaign of, in Spain, ii. 300.
Stibium, statues of Ceres, Jupiter, and Minerva by, i. 338.
St/licho, gold reliefs of the ceilAge of the Temple of Capitoline Jupiter stripped off by, i. 362.
Stola, the, of the statues of Vestal, i. 321.

Stone arches, centering for, figured, i. 69.
— quarries round the Maenian Prison, i. 155.
Storishouses built along the quay of the Tiber, i. 149.

Strabo on the Mausoleum of Augustus, ii. 288; on the Campus Martius, i. 378; on the Capitolium Hill, i. 354; on Hymettian marble, i. 16; on the Imperial Utrina, ii. 291; on Luna marble, i. 16; on Marmara Caryatid, i. 16; on the working of the quarries in Mount Marpessa, i. 17; on Phrygian marble, i. 18; on the Portas Collina, i. 131; on the Portas Viminalia, i. 103; on the Agger of Servius, i. 132; tufa quarries mentioned by, i. 6.

Streets, three kinds of, on which Rome is built, i. 1, 2.

Struthia, the goddess of new-year gifts, i. 224.

Succone, bricks protected by a coat of l. 1, 11; columns in the Temple of Castor, i. 232; fine and coarse, i. 79; key for, i. 51; mouldings, i 75, 76, 94; for mural painting, preparation of, i. 92, 99; painted, i. 75, 302; polished, i. 93; reliefs in Caligula’s Palace, i. 194; reliefs in the house of Livius, i. 182; in a villa by the Tiber, ii. 248-253; on stones, i. 78; work of the Thermæ of Caracalla, ii. 174, 175.
INDEX

Various costs of, l. 93, 94; walls, painting on, l. 84; inscription on the covering of walls and vaults with, l. 78; perfection of the Greek, l. 75; made of powdered marble, l. 73; receipt for making of P. Ligorio, l. 77

Sahlician Bridge, l. 85; l. 188, 362 to 364

Subterranean water channels, ii. 324

Sabura, valley of, l. 142

Sabricana, one of the regions of Servius, l. 125 and note; its derivation, 56

Sudarium, the, of the Baths of Caracalla, l. 184

Suetonius, references to, as follows:

On the Ancyren inscription, l. 384; on the treasures within the cela of the Temple of Apollo, l. 188; funeral orations in honour of Augustus, l. 258; on the Forum of Augustus, ii. 2; on the Mausoleum of Augustus, ii. 288; on the river works of Augustus, l. 146; the silver statues of Augustus, l. 186; Temple of Augustus, l. 278; the Theatre of Balbus, ii. 74; the Dirichitorium of the Campus Martius, ii. 210; the Temple of Caesar, l. 277, 283, 332; Circus of Caligula, l. 58; Circus Maximus, l. 42, 44, 47, 51, 52; on the Colosseum, l. 79, 83, 84; Lactus Curtius, l. 232; Naumachia of Domitian, l. 60; Stadium of Domitian, l. 59; Forum Pacis, l. 13; the Domus Galotiana, l. 203; gladiatorial combats in the Forum, l. 234; Temple of Hercules Musurus, l. 206; doors of the Temple of Janus, l. 249; Forum Julius, l. 2; Basilia Julia, l. 270, 273; statues of Julius in the Temple of Venus, l. 4; Temple of Jupiter Capitolinus, l. 361, 362; votive treasuries of the Capitoline Jupiter, l. 371; Temple of Jupiter Tumulus, l. 395; Theatre of Marcellus, l. 70, 72; Temple of Mars Ultor, l. 6; Forum of Nerva, l. 21; Amphitheatre of Nero, l. 73; Nero's Building Act, l. 88; Golden House of Nero, l. 78, 146; Domus Publicus of the Pontifex Maximus, l. 299; Praetorian Guard, ii. 233; Curia and Porticus of Pompey, l. 68; Theatre of Pompey, l. 67; list by, of Roman embellishers of the city, l. 15; lighting of Rome, l. 256; Roman Vigiles, l. 255; the Rostra, l. 252; labour on roads, l. 358; road officials, l. 355; treasury of Saturn, l. 266; Scalae Anularias near the entrance to Caligula's Palace, l. 196, 197; Sibylline books in the Temple of Apollo, l. 156; "Stairs of Sighs," l. 154; Amphitheatre of Taurian, l. 77; Palace of Tiberius, l. 172; Thermae of Titus, l. 149; accidents in wooden theatres, l. 65; privileges of the Vestal Virgins, l. 292; penalties for a breach of chastity by the Vestals, l. 294; Temple of Vesta, l. 295

Suffolium, the vestment worn by the Vestals, l. 319, 320

Sulla, the first member of the Cornelian family whose body was burnt, l. 263; rebuilding of the Temple of Jupiter Capitolinus by, l. 361; the Curia rebuilt by, l. 238; massacre of prisoners by, l. 211; Lactus Servillus, the place where he exposed the heads of the murdered senators, l. 233; use of mosaic introduced into Italy by, l. 82; attack on the Porta Collina by, l. 132; bronze equestrian portrait of, l. 250; heads of the chief victims of the persecutions of, fixed on the Rostra, l. 244

Sulpicius Maximus, Q., monument commemorating the death of a schoolboy named, l. 278, 279

Summa Nova Via, l. 118, 167 note, 223, 224

Sacra Via, l. 118, 167 note, 168, 184, 220-222; l. 110, 305

San, the temple of the, l. 4, 127, 128 note, 352; l. 154 note

Suovetaurilia, the Roman, l. 345, 346 and note; l. 88

Suspensura, the, of Roman baths, l. 122, 123, 125

Sutrium, amphitheatre at, l. 76 and note
INDEX

Syracuse, granites from, l. 25
Symmachus, Pope, bronze ftr composed placed in centre of a fountain by, l. 299
Syracuse, capture of, by Marcellus, l. 29, 134
Syracusan bronze, l. 296; ii. 129
— extrarhachyum of Agathocles, ii. 251
Syria, solstitial quarrries in, l. 21

T
Tabernæ veteres, the line of shops in the Forum called, i. 233, 236
Tables of Law, the twelve, on the Rostra, i. 245; ii. 263, 264
Tablinum, the, of the Atrium Vestae, l. 392, 399, 311-315, 317; in the house of Livia, l. 176, 178
Tabularium, i. 37, 32, 336, 365, 366, 372-377
Tartus, reference to, as follows:
On the great hall in the Temple of Apollo, i. 187; Basilica Aemilia, l. 347; Mausoleum of Augustus, ii. 289; Caelian Hill, l. 276; entrances to the Capitolium Hill, l. 127, 128 note; Temple of Ceres, Liber and Libera, ii. 193; restoration of the Circum Maximus, ii. 44; Curia Vetere in, l. 237; fall of a wooden amphithetre at Sigidus, ii. 64, 65; Temple of Jupiter Capitolinus, i. 358, 361; the Millarium Aureum, l. 264; Amphithetre of Nero, ii. 78; Arch of Nero, ii. 291; Nero's Building Act, i. 89; Nero the cause of the great fire at Rome, l. 90; Pompeium, l. 108; Theatre of Pompey, ii. 67; Pons Subulæ, ii. 363; Sacellum Larum, i. 227; treasury of Saturn, ii. 266; "Stairs of Sighs," I. 154; site of Sallust's house, ii. 242; Arch of Tiberius, l. 206, 209; ii. 8; Palace of Tiberius, l. 172; Tabularium, i. 372; remanence of Vestal, l. 387; Temple of Vesta, I. 295; breaking of the Vitellian rioters into the Capitol, l. 376; hieratic rules of the Vestals, l. 315; fire-resisting qualities of the Galatian stone mentioned by, I. 7.
Tattius, artist mentioned by Pliny, ii. 239
Tarquent, sack of, i. 29
Tarquin, the Temple of Saturn said to have been founded by the last, i. 266
Tarquinii L, founder of the Temple of Jupiter Capitolinus, i. 358; the Circum Maximus drained and fitted with seats by, ii. 41; the claspe of Roma said to be the work of, i. 142; house of, l. 118, 167; shops built by, on the site of the Basilian Julia, l. 269; terra-cotta statue of Capitolinus Jupiter dedicated by, i. 370, 371; tradition concerning, i. 29; increases the number of the Vestal Virgins, i. 291; expulsion of, ii. 365
Tarquinius, field of, the, ii. 196
Tarpeia, treachery of, l. 354
Tarpeian Rock, the, i. 127, 223, 255, 356
Tarpeian, Mons, the Capitolium formerly known as the, l. 354
Tatius, the Sabine King, treaty with Romulus, i. 224; Temple of Juno Moneta founded on the site of the house of, l. 366
Tauriæse, the Rhodian sculptor, ii. 176
Taurus, Stadiæse, amphitheatre of, l. 382, 387; ii. 59, 77, 78, 128 note
Taygetus, great porphryy in Mount, i. 24
Teatro Tar di Roma, demolition of the, i. 149 and note
Telmachus, a monk, protest by, against the slaughter in the Colescuim, ii. 82, 83
Tellus, temple of, l. 381
Tempera pigmenta, i. 25
Temple, eariy of stuccoed stone, l. 161
Temples not places for public worship, l. 32
Templum, meanings of the word, l. 32 and note
Teodoro, S., the round church of, l. 116, 171 and note
Tabularium, the room of the bath called, ii. 119 and note, 121
INDEX

Tepidarium of the Baths of Caracalla, ii. 164, 165; of Diocletian, ii. 177, 179, 180 note, 181; of Titus, ii. 155.

Tertuir, deposit of travertine at, i. 2.

Terra-cotta ornaments of the Amphitheatre Carucina, ii. 111.

Tertullian on the Altar of Consus, i. 41.

Tertullus, Corntetus, curator of the Via Annula, ii. 356 note.

Testaceo, Monte, i. 14 note, 79, 80 note.

Tetons, spoils taken by Marcius from the, i. 368.

Thalina, gate of the Etruscan goddess, i. 117.

Theatin marbles, i. 17.

Theatre, the, in the Thermae of Diocletian, ii. 180; of the Thermae of Titus, ii. 155; of Longinus, ii. 62; of Scaurus, ii. 62-64; of Curio, ii. 64; of Pompey, ii. 65 to 67; of Marcus, ii. 70-73; of Balbus, ii. 73-74.

Theatros, Greek, ii. 61.

—— growth of, i. 1.

—— in Rome, ii. 61-74.

—— stone, ii. 62, 65.

—— wood, ii. 62.

Theodostius on the slaughter in the Colosseum, ii. 83.

Theodoric, King, ii. 54; restoration of the Aurelian Wall by, ii. 573; brick-stamps of, ii. 158 note.

Baths of Caracalla restored by, ii. 158; castle of, ii. 293; alterations of the Palatine Stadium by, i. 212.

Theodosia, marble pedestal of an equestrian statue of, i. 348, 349.

Theostus, picture of Cassandria by, i. 338.

Thermus, the great, ii. 113-187; of Agrrippa, ii. 141-144; of Nero, ii. 144-145; of Titus, ii. 145-157; of Trajan, ii. 157-158; of Caracalla, ii. 158-177; of Diocletian, ii. 177 to 182; of Constantine, ii. 182 to 186.

Thermus, A. Minucius, curator of the Via Flaminia, ii. 356.

Theseus, remains of stucco painting in the cells of, at Athens, i. 92.

Theseus, the Pontic marble of the interior of the temple of, at Athens, i. 78 note; picture of, on the Capitolins Hill, i. 371.

Thelas, the, in the Asclepion of Epidaurus, i. 295 note; of the Temple of Vesta, i. 293.

Thermae, marble, of the Temple of Venus Erycina, ii. 247; room in Domitian’s Palace, i. 203.

Thucydidus, account of the sufferings of Athenian prisoners imprisoned in the quarries of Naupea, i. 155 note.

Tiber, the, the defense of Rome, i. 126; bridges across the, i. 217 note; circular bronze stamp for marking tiles dredged up in the, i. 14 note; curators of the, i. 146; deepening of the, i. 146; new embankment of the, ii. 248, 364, 344; quay, i. 146, 148, ii. 355; inscriptions recording the restoration of the wall of the, i. 146, 147; inscription recording the restoration of one of the steps down to the, i. 148; inscribed pedestals of travertine found during the excavations for the construction of the new embankment of the, i. 149; travertine block dredged up from the, i. 148.

—— Island, bridges of the, ii. 365-367.

Tiberius, arch of, i. 253, 268, 269, 347; ii. 8, 194 note; the Temple of Augustus begun by, i. 273, 274; camp of, ii. 234-336; Temple of Castor rebuilt by, i. 277; Temple of Ceres ad Circum Maximun finished by, ii. 194; colon of, i. 31, 337; the Temple of Concord rebuilt by, i. 332; spoils won by, in Germany, i. 332; house of, i. 183; library of, ii. 293 note; palace of, i. 172, 264; scene of Pompey’s Theatre rebuilt by, i. 67; date of the Praetorian camp of, i. 61; curators of the Tiber organized by, i. 147; wall of, ii. 235, 296, 297; cremation of, ii. 292; burial of, ii. 290.

Tibullus, on the narrow Taurarium, i. 19; on Phrygian marble, i. 18.
INDEX

Tigris, river god of, l. 344
Timanthes, painting of Cyclops by, ii. 15; painting of a hero by, ii. 15; and note
Timarchides at work on the sculpture of the Portico of Metellus, ii. 303
Timarchus, Greek sculptor, l. 321
Timonachus, pictures of Medea and Ajax by, ii. 4
Timotheus, statue of, Diana by, l. 185
Tina, gate of the Etruscan god, l. 317
Tithon, T. Flavins, inscribed water-pipe bearing the name of, l. 333
Tiryns, concrete used for the floors of the houses of, l. 44, 45; prehistoric houses of, l. 56; pebble mosaic in the prehistoric palace at, l. 82; pottery in the style of, discovered in the tombs of Upper Egypt, l. 105; and note
Titus, apotheosis of, l. 304; restoration of the Aqua Claudia by, ii. 345; arch of, l. 26, 54, 61, 111, 118, 168, 220, 222, 224-226, 229, 239, 381; ii. 13, 79, 148, 303, 304, 350; baths of, l. 195; and note, 199, 224, 333; ii. 79, 80, 87, 108, 118; note, 145, 146, 148-150, 152-157, 224, 324; the Colosseum built by, l. 78; the Colossus shown on base of, l. 80; crowned by Victory, relief representing, l. 303; house of, l. 199, 300; additions to the Roman aqueduct by, ii. 338, 339; one of the destroyers of Nero’s Palace, l. 199; Pompey’s Theatre restored by, l. 67; small shrine of Vespassian dedicated to, l. 341
Tivoli, deposit of travertine at, l. 2; 77; window in the circular temple on the cliffs of, l. 31; primitive walls of, built of tufta, l. 40; and note
Tufts, real, l. 264, 265; penalties for violating, l. 267; of the Porta Salaria, ii. 277-279; underground, l. 272; and note; see also the whole of chap. viii. vol. ii.
Torches, Rome lighted by, l. 256
Torlonia, Prince Alessandro, melting of inscribed lead pipes by, l. 330, 331
Tower, Record, over the Arch of Titus, ii. 303
Towers, the, of the Aurelian Wall, ii. 377, 378
Trajan, the Aqua Trajana constructed by, l. 347; arch of, l. 15, 331; l. 26, 266; ashes of, l. 30, 266; baths of, l. 381, ii. 157, 158; charity of, l. 36, 37; additions to the Circus Maximus by, ii. 44; representation of the Circus Maximus on coin of, l. 45; coins of, l. 26; column of, l. 44 and note, 28, 30, 32, 312, 313; Courts of Justice, l. 272; demarcus of, l. 356; two Daechian campaigns of, l. 31; Forum of, l. 4, 61; note, 129, 192; note, 251; note, 582; ii. 24-29, 219; Forum and Basilica of, repaired by Theodoric, l. 312; library in the Forum of, l. 201; note; relics of, l. 35; relics of scenes in the reign of, l. 346; representations of, on reliefs, etc., of Constantine’s Arch, l. 35; bronze statue of, l. 30; story of, and the widow, l. 30; note; grey granite columns of the Basilica Ulpia of, l. 25; remission of taxes by, l. 347; temple of, l. 24, 25; the constructor of the Via Trajana, l. 356
Trajes, crude brick used for the palace of the Attalid kings at, l. 11
Transiberini, the Regio, l. 333
Trajanus, battle of Lake, l. 57
Travertine, quarries of, l. 6, 7
— stones, formation and properties of, l. 7, 8
— under-strata of, on the Aventine and Pincian Hills, l. 2
— use of, l. 40, 42
— and tufta, mixture of, in concrete, l. 42
Treasury chamber, the, in the Temple of Castor, l. 279, 281; in the Temple of Concord, l. 336
Treasury, the public, of Saturn, l. 266
— of the Temple of Mars, l. 8
— of Capitoline Jupiter, l. 339
Tremulus, Q. Marcus, status of, l. 277
INDEX

Trèves, gins bowl found at, with representation of a circus, ii. 48
Trevi fountain, ii. 342
Triumphal Aurelian, l. 238 and note — the, of the Basilica of Constantine, ii. 225
Trieste, the, in the Basilica of Domitian, i. 205
Triclinium, the, of the Palace of Domitian, l. 202; of the house of Livia, i. 178-181, 303
Triginta de’ Monti stairs, obelisk at the top of the, ii. 246
Tripods, gold, in the Temple of Apollo, i. 186
Tripycha, a usual Roman form of picture, i. 100
Triumphal arches, ii. 309-309; see Arch
Triumphs of the Capitolinae, the, i. 249
— nocturna, ii. 255 note
Tuscania, the Ludus Scenici instituted by, ii. 58 note
Tumuli, i. 5, 6, 37, 117
— and travertine, mixture of, in concrete, i. 42
— hills, formation of, i. 2
Tullium, the, i. 37, 141 note, 145, 161-165, 263; ii. 334
Tunula, road in, ii. 353
Turinian, statue of Jupiter modelled by, i. 359
Turris Chartularia, i. 45, 229 and note
Tuscan pilasters, ii. 276
Tusculum, Count of, castle of: s. Angelo suburb by, the, ii. 298
Tyrian marbles, i. 17
U

Uffizi Collection at Florence, ii. 134 and note; Dancing Faun in the at Florence, ii. 296
Ulpia, Basilica, ii. 24, 26, 29; library of, i. 178
Umbilicus Romae, i. 263, 264 and note
Umpire’s box in the Circus Maximus, ii. 49
Urban VIII, arms of, ii. 381; bronze removed from the dome of the Pantheon by, ii. 333; the Porta Porteseis destroyed by, ii. 359

Ursula, cinerary, in the Museum of the Palazzo dei Conservatori, ii. 271, 273
Ustria, the Imperial, l. 290-292
Usurrs’ quarter, the, of the Forum, l. 249
Utica, restrictions regarding the sale of bricks at, i. 11

V

Valens, restoration of the Pons Cestius by, ii. 368
Valentia an ancient name for the city of Rome, i. 107
Valentinius, restoration of the Pons Cestius by, ii. 368
Valerius Maximus on Balbus pensilus, ii. 122; on the house of Catulus, i. 170; on the Temple of Jupiter Capitolinus, l. 353; on the Temple of Senaculum, i. 246; on the Temple of Pietas, ii. 71 note
— Publicola, P., intramural burial of, ii. 364
Vallis Mucronis, i. 109, 162, 184; ii. 49 and note
Varro, references to, as follows: On the altar of Aesculapius, 175; Ara Consii, l. 110; Argeron sacraria, i. 124; Basilica Aemilia, l. 247; baths for women, ii. 114 note; Casilinum, i. 125 note, 276; Villa Publica in the Campus Martius, ii. 211; Capitolium Hill, i. 353; Capitolium, i. 354; early altars of the Circus Maximus, ii. 41; State boxes in the Circus Maximus, ii. 49; the Curia, i. 238; the Curiae Veteres, i. 119; draining of the Lacus Curtius, i. 232; Del Consentes, l. 342; derivation of the Esquiline Hill, l. 125; the Forum, l. 287; the Grassostasis, i. 255; stone quarries around the Mamertine Prison, i. 155; derivation of the name Muscula, i. 118; stairs in the Nova Via leading to the Forum, l. 223; ii. 223; derivation of the name Palatine, l. 125; Parian marble, l. 17; Pomerium, i. 108; Pons Sublicius, ii. 369; Porta Januaria, l.
119; Porta Narsis, Randuscula, and Lavernella, i. 135; Porta Salaria, ii. 336; modes of racing, ii. 53; Regia, ii. 305; enclosure of seven of the Roman hills, i. 124; gates in the Wall of Honulus, i. 117, 118; Sacra Via, i. 224, 226; Temple of Saturn, i. 265, 266; regions of Servius, i. 124; vestment called the suffultum, i. 320; Tullianum in the Mamertine Prison, i. 153; the Velabrum, i. 321, 222; Vella and Germain of the Palatine Hill, i. 219; derivation of the word Vella, i. 220, 221

Varro, the Aedile, painting on stucco hung in the Comitium by, i. 246

Varroianus, Consul, i. 329 and note

Vases, Myrrhae, i. 371

Vatican, status of the sacred Egyptian ape in green granite in the Museo Gregoriano, i. 25; statue of Augustus in the, i. 17; the so-called Eros of Praxiteles in the, i. 17; colossal head of Hadrian in the Rotonda of the, ii. 296; statue of Hercules in the, ii. 69; Torso of Hercules in the, i. 17; ii. 69 and note; the Apoxyomenos by Lysippos in the, ii. 117; Laocoon group in the, ii. 157; vase of lapis lazuli in the Galleria dei Candelabri of the, i. 21; drawings of fragments of the marble plan of Rome in the, ii. 18; mosaics from the Thermae of Caracalla in the, ii. 176; mural paintings in the, ii. 152; statue of the Nile in the, ii. 14; bronze peacocks in the court of the, ii. 296, 299; bronze pigeons in the, i. 299, 350; sarcophagi in the Sala della Bega in the, ii. 30; statue of Venus in the, ii. 2, 3; Venus altars in the, ii. 350

Galleria lapidaria in the, i. 313, 314; ii. 313, 349

Galleria delle Statue in the, ii. 291 and note

Giardino della pigna in the, ii. 263, 299, 310

Hill, remains of an ancient sea-beach around the, i. 2

Library, ii. 255

Vatican Museum, statues of fauns in the, i. 19

Vatican, the, of the Baths of Caracalla, ii. 162; in the Palace of Hadrian, i. 313

Vaults, barrel, i. 70; with sunk panels, figured, i. 71; arched, ii. 352, 353; concrete, i. 45, 66; ii. 181, 226; in Domitian's Palace, i. 297; mosaic, i. 83; stucco, in the Colosseum, ii. 91

Vestillum, house of, ii. 239

Vejovis, shrine of, i. 368; ii. 366

Velabrum, the, i. 8, 142, 171, 221 and note, 235 note, 259, 274; ii. 70, 185, 205, 206

Vella, the, i. 4, 219-224; ii. 148

Velleius Paterculus on the Palatine Temple of Apollo, i. 185; on the Temple of Mars, ii. 6

Venice, S. Marco's, columns of Procosian marble in, i. 20

Venus, the Pantheon a temple to, ii. 128; statue of, ii. 129, 202; temple of, i. 61, 220, 226

— and Rome, statues of, ii. 221; Temple of, ii. 86, 110, 148; 219-224

— Anadyomene, picture of, ii. 4

— Capitoline; shrine of, i. 388

— Clodia, shrine of, i. 250, 350, 331

— Erycina, statue of, ii. 247; temple of, ii. 246 and note, 247

— Genitrix, bronze statue of, ii. 2, 3; temple of, ii. 2-4

— Vactrix, shrine of, i. 368, ii. 65; temple of, ii. 62

Virgins, murder of, by her father, i. 250

Verses, the Praetor urbana, i. 276

— fraud of, by means of a pretended restoration of the Temple of Castor, i. 282

Vernicosus, Fabius, bronze statue of Hercules placed on the Capitol by, i. 269

Versailles, bronze angel on the roof of the Castle of S. Angelo by, ii. 298

Vetus, Lucina, arch of, i. 351, 352; statue of, ii. 291 note

— Ulpius, dedications made to Flavia Publica, i. 327
INDEX

Vesuvius, Aestuaria of, l. 340, 341; restoration of the Aqua Claudia, ii. 345; baths of, ii. 157; First Bracc of, showing the Temple of Jupiter Capitolinus, i. 354; Temple of Claudia built by, ii. 230; the Colosseum shown on brass of, ii. 80; the Colosseum built by, ii. 78; the Forum Pacis of, i. 41, 296; library in the Forum Pacis of, ii. 202 note; Temple of Peace dedicated by, ii. 15, 15; rebuilding of the Temple of Jupiter Capitolinus by, i. 361; Theatre of Marcellus restored by, ii. 72; munificence of, i. 387; one of the destroyers of Nero’s Palace, i. 199; Sallust’s house occupied by, ii. 242; temple of, i. 30, 33, 40, 41, 46, 266 note, 333-341, 376, 377 and note 347, 389; ii. 175; inscribed water-pipe bearing the name of, i. 332

Vesta, Atrium of, i. 216, 222, 223, 229, 283, 293, 297, 300, 302, 305 and note 307-329; ii. 124, 125, 238, 337; cult of, ii. 289; grove of, i. 175, 190, 191, 222, 310; seated figure of, on gold coin, i. 296; statue of, i. 310; purity of statues of, of the Graeco-Roman period, i. 296, 297 note; shrine of, i. 310; temple of, i. 155 note, 188, 189, 224, 225, 233, 245, 250, 259-299, 310, 335; ii. 129 note, 191

Vestal fires, i. 289, 290, 291, 295, 299
— Virgin, l. 188, 291, 293, 323-339, 334; ii. 83, 264

Vestalia, the, i. 295

Vestals buried alive, i. 132, 247; some of the, become Christians, ii. 329; house of the, i. 72, ii. 123 note, 124, 126, 214, 245, 350; political influence of, i. 325; inscribed pedestals to the chief of the, i. 323; punishment of unchaste, ii. 75 note; portrait statues of, i. 319-339; the last of the, i. 318 and note

Vestibule of the peristylo of the Thermæ of Caracalla, i. 169

Vettius Praetextatus, portions of the Dii Consentes restored by, i. 342

Veturius Marurinus, the mythical Volscian sculptor, l. 276

Via Aemilia, ii. 366, 361; Alessandrina, ii. 334; Appia, i. 54, 134, 218, 389; ii. 36, 58, 170, 172, 209, 268, 270, 273, 296, 355, 358, 354, 356, 359; Ardestina, ii. 360; Aurelia, ii. 361, 389; di S. Ronsinventura, l. 184, ii. 78; Bonilla, i. 242, ii. 9; Buonarroti, ii. 232; di Caravita, ii. 343; Carlo Alberto, ii. 336; Cavour, ii. 224; della Catena di Pescaria, ii. 205; de’ Chiavari, ii. 66; Claudia, ii. 298, 343, 344; Collatina, ii. 336, 342; della Dataria, ii. 254; Flamignia, i. 386, ii. 57, 211, 287, 288, 291, 302, 357, 360, 361, 371; Forintata, ii. 353; Gabina, ii. 360; dei Ginebonari, ii. 60; Labicana, ii. 273, 274, 344, 345, 360; Lata, i. 128, 129, 382; ii. 194, 211, 276, 377, 300, 302, 361; Latina, i. 134, 380; ii. 250, 265, 266, 270, 271, 329, 341, 354 note, 360; Machiavelli, ii. 222; delle Maratte, ii. 342; Marforio, i. 129, 151; ii. 6, 276, 277; di S. Maria in Campitelli, ii. 74; Marmorcella, ii. 44; Monuliana, the modern, i. 135; Napoleon III., ii. 336; Nazionale, i. 129, ii. 282; del Nazzareno, ii. 342; Nomentana, ii. 369; Nova, ii. 350; Ostiense, ii. 359; del Paradiso, ii. 66; Portomana, ii. 284, 361; Praenestina, ii. 273, 274, 355, 344, 345, 360; Principe Amadeo, ii. 336; del Principe Umberto, the modern, i. 138; Ripetta, ii. 289; Sacra, ii. 16; Salaria, ii. 360; di Sant’ Angelo, ii. 205; dello Stato, ii. 284; Sublacensi, ii. 344; Tasso, ii. 259; Tiburtina, ii. 360; Trajana, ii. 356, 357; della Tribuna, ii. 295; Valeria, ii. 333; and note; Venti Settembre, ii. 246; della Vergine, ii. 342; della Vite, ii. 302

Vesuvius, Caesius, the ally of Romulus, i. 274, 276

Vie d’ore, hot springs at, ii. 359
INDEX

Victor, M. Aurelius, Arch of Gallienus erected by, l. 309
—Emmanuel, monument to, i. 188, 189 note, 367; ii. 277 note
Victories, reliefs of, ii. 312; winged, ii. 250, 266.
Victory, figures of, ii. 225; in a quadriga, painting of, i. 371; statue of, ii. 51, 301; temple of, i. 118, 119, 189, 190; winged figure of, l. 337, 344, 351; ii. 270, 281.
Vicus Jugarius, l. 264, 267-271, 355-357; ii. 70.
—Thurmannus, l. 278.
—Tuscans, l. 171, 197, 221, 269, 274, 279and note, 280; ii. 70.
Vigilia, the, of Augustus, l. 280.
—barracks of the, i. 382, 383; ii. 255-259.
—officers of the, ii. 255, 256, 258.
—stations of the, ii. 255-269.
Vigurs Codini, ii. 279.
—Tasciuni, l. 135, 140; ii. 287.
Villa Borghese, ii. 301.
—Farnese Gardens, ii. 248.
—Hoffman, ii. 257.
—Madama, ii. 152 and note.
—Matteli, gardens of the, ii. 257.
—Mills, on the Palatine Hill, l. 262.
—mosaic picture of a country, ii. 238.
—Publicus, the, near the Septa Julia, ii. 211.
Viminal Hill, l. 124, 126; ii. 237.
Virgil, on the Mausoleum of Augustus, ii. 289; on the Porta Cestia, l. 127; on the uncertainty of seven of the Roman hills, l. 124; on the Tabularia, l. 372.
Virgo Vestalis Maxima, the name of the senior Vestal, l. 294 and note.
Vitalis, , Basilica of, ii. 56, 57.
Vitalis, Tiberius Claudius, burial-place of, i. 274.
Vitellian rioters, l. 370, 376.
Vitellius supported by the rioters against Sabinus, l. 361; body of, hung on the "Stairs of Sighs," l. 154 and note, 333.
Vitiges, assault upon the Mausoleum of Hadrian by, ii. 296; leader of the Goths, ii. 347.
Vito, , church of, l. 133.
Vitravius, references to, as follows:
—On the Thermes of Agrippa, ii. 144; inspection shaft of the Anio Vetus, ii. 387; Aqua Marcia, ii. 335; sahar facing, l. 42; Forum of Augustus, ii. 9; "Metropolitan Building Act," l. 85; baths, ii. 113-120; bricks for walls, l. 54, 55; remarks on sun-dried bricks, l. 10-11; the Castellum aquarum, ii. 324; old Greek cement used instead of marble for tops of tables, l. 75; process of making cement floors, l. 77; concrete used to form a bed for marble pavings and mosaics, l. 39; Temple of Ceres, Liber and Libera, ii. 193; Basilica of Constantine, ii. 227; the dowses need by the Romans, l. 40; encaustic process, l. 180; shrines of Faunus and Venus, l. 366; "range tiles," l. 181; true fresco-painting, l. 94, 95; differences between the Greek and Roman theatres, l. 61; Greek masonry, l. 39; Greek Palatina, ii. 171; use of gypsum, l. 76; Temple of Honos and Virtus, l. 388; on hypocausts, l. 150; on hodom, l. 39; Temple of Julian, l. 287; Cellae of the Temple of Jupiter Capitolinus, i. 360; Temple of Jupiter Stator, l. 185; styles of painting in the house of Livia, l. 180; painting of sham marbles on walls, l. 179; removal of mural paintings, l. 75; preservation of wall paintings from damp, l. 180; lead pipes, ii. 327; opus album, l. 73; opus incertum, i. 51; opus quadratum, i. 40; opus signinum, l. 79, ii. 322; opus spicatum, l. 81; Portices of Pompey, ii. 67; Theatre of Pompey, ii. 65; private house of Rome, ii. 237, 253 note; on pozzolans, l. 9, 144; Proconsular marble, l. 20; on palm-
INDEX

Wall linings of marble (figured), l. 86; in the Thermae of Caracalla, ii. 162:
— mosaic, i. 88
— mosaics in private houses, ii. 241
— the great circuit of, of the regal period, i. 123-141
Walls, hollow, i. 85
— inner, of the Colosseum, ii. 91; radiating, of the Colosseum, ii. 94
— limit of thickness of, i. 88, 89
— three classes of, in Roman construction, l. 37
Water channel in the Colosseum, ii. 101; in the substructures of the arena of the Colosseum, ii. 108
— channels, construction of, ii. 320, 321
— for drinking, suggestions concerning, ii. 322
— Imperial grants of, ii. 332, 334
— pipes, ii. 326-335; inscribed, ii. 350, 351 note 332-335
— supply of Rome, ii. 314-351; for the Palace of Searus, l. 217
— tank, oval, in the house of Livia, l. 178; in the Atrium Vestae, i. 315
— works, administration of the Roman, ii. 317, 318
Wax encaustic, l. 96-101
"Weep-holes" in a retaining wall, ii. 383
Weights and measures, verification of, in the Temple of Castor, i. 281
Well-shaft in the area of the Temple of Jupiter Victor, l. 163, 165
Westminster Abbey, wooden water-pipes found in, ii. 327 note
Windlass sockets in the substructures of the arena of the Colosseum, ii. 106
Window, grated, in the Pantheon, ii. 138
Windows, the, of the Capitoline Tabularium, i. 374; of the Temple of Concord, l. 387
— in temples, i. 31, 337 and note

Woolloom, i. 40; the force-pump used by the Romans, ii. 256 note; on roads, ii. 332; the three chief methods of building a Roman house, i. 44 note; on Roman baths, ii. 158; pedla of Roman temples, l. 279 note; Roman temples in the Etruscan style, l. 28, 29; water supply of Rome, ii. 314-317; removal of the Hut of Romulus, i. 121; on the ailer, i. 8; colouring of statues, i. 98; on stucco mouldings, l. 76, 94; polished stucco, l. 75, 194; methods of preparing stucco, i. 73, 95; preparation of stucco for mural painting, i. 93; manner of painting on stucco walls, l. 84; method of laying stucco on walls, ii. 174, 175; on tempera painting, l. 95; quarrying, etc., of tufa, i. 5; travertine stone, i. 7; Temple of Venus, ii. 3; on fortification walls, l. 182; on hollow walls, i. 85; on water channels, ii. 329, 324; water for drinking purposes, ii. 322; rain water, l. 8; on water-pipes, ii. 325, 330; lists of colours mentioned by, l. 101 note; mention of Cosmati and C. Mutius as architects by, i. 29, 30; directions for the painting of a flat vermilion ground, l. 97, 98; remarks on said, l. 10; a Greek by training, l. 29
Vltimae, the, around the head of the statues of Vesta, l. 322
Volta, sculptor, i. 359
Volcanoes, recent, near Rome, i. 1
Volcani, statues from, i. 389
Volterna, damarius of the Genio, showing the front of the Temple of Jupiter Capitolinus, i. 364
Volterra, alabaster quarried at, i. 21
Vopiscus on the libraries of the Basilica Ulpia, ii. 27
Vortumnaus, statue of, l. 289 note, 276
Votive offerings in the Capitolium Temple of Jupiter, i. 369, 361
Vulcan, area of, l. 245, 247, 338; altar of, i. 232; figure of, i. 383
Vulcanal, the, i. 381
Wolf, the, suckling the twins, statue of, 121 and note, 245
Wolkonsky, garden of the Villa, II. 273
Wood-centering, I. 67; for arches (figured), I. 68-69
— supports during the formation of walls with brick facings (figured), I. 48, 57, 58.

X

Xanthus, Schola of, I. 341, 342
Xysti, the, in the Baths of Caracalla, II. 171

Z

Zeno, Flavius, pedestal in the Thermae of Titus inscribed with the name of, II. 157
Zenodorus, sculptor, I. 390; bronze statue of Mars by, II. 147; statue of Nero by, II. 169, 147
Zena, statue of, at Olympia, I. 380; temple of, I. 82, 135, 243, 336 note, 361 and note
Zeuxis, painting of Marsyas bound by Apollo by, I. 338; statues of Hercules modelled in terra cotta by, II. 206

THE END

Printed by R. & R. Clark, Edinburgh.
THE

WAVERLEY NOVELS.

AUTHOR'S EDITIONS.

COMPLETE SETS


ADAM AND CHARLES BLACK

LONDON AND EDINBURGH
THE
COLLECTED WRITINGS
OF
THOMAS DE QUINCEY
"THE ENGLISH OPIUM-EATER."
NEW AND ENLARGED EDITION
EDITED BY DAVID MASSON, M.A., LL.D.,
PROFESSOR OF RHETORIC AND ENGLISH LITERATURE
IN THE UNIVERSITY OF EDINBURGH.
With Portraits and other Illustrations
Or in separate Volumes. Price 3s. 6d. each.
"Professor Masson's edition is the model of what an edition should be."—Athenæum.

THE
COMPLETE WORKS
OF
EDGAR ALLAN POE
EDITED BY JOHN H. INGRAM
WITH MEMOIR, PORTRAIT, AND OTHER ILLUSTRATIONS
Or in separate Volumes. Price 3s. 6d. each.

Vol. I. TALES GROTESQUE.
II. TALES ARABESQUE.
III. POEMS AND ESSAYS.
IV. AUTOGRAPHY AND CRITICISMS.

ADAM AND CHARLES BLACK
LONDON AND EDINBURGH
NOW READY.

PAGANISM

AND

CHRISTIANITY

BY

J. A. FARRER.

"Mr. Farrer has brought together many passages of great worth and beauty from the pages of the ancient philosophers." — Scotsman.

"This is a remarkable book." — The Presbyterian.

"Mr. Farrer's book will be found highly attractive." — Publishers' Circular.

"Will surprise many a reader by the curious evidence presented." — Liverpool Mercury.

"It contains much for which we can thank the author." — The Modern Church.

"The reader who would know what Paganism really was, and what it really means, cannot do better than make a careful study of this most interesting book." — Dundee Advertiser.

"Mr. Farrer has a vigorous pen as well as a robust understanding of his book will clear away some cobwebs of historical misconception." — Expository Times.

"It is a painstaking essay, written by one who is versed in ancient and modern philosophy." — Observer.

"Is a noteworthy book, both for its matter and its style. . . . He has certainly put the case with force and backed up his arguments with learning." — Manchester Guardian.

"This must interesting and, in many respects, able book." — Glasgow Herald.

"There is much interesting matter in 'Paganism and Christianity,'" — The Scottish Pulpit.

"The book is both well informed and interesting." — Review of Reviews.

"The author of this work has set himself a bold task, which he has grappled with successfully." — Evening Advertiser.

"The fruit of extensive reading." — Birmingham Post.


"This singularly able book." — Yorkshire Herald.

ADAM AND CHARLES BLACK

LONDON AND EDINBURGH.
MANUALS OF PRACTICAL LAW
In Crown 8vo. Price 5s. each.

"It is better for a layman to go to a law-book than to go to law.
Sentiment.

The Volumes now published in this Series are—

BANKING AND NEGOTIABLE INSTRUMENTS.
By Frank Tillyard.

BANKRUPTCY.
By Charles F. Morrill.

COPYRIGHT AND PATENTS.
By Wyndham Anstis-Bewes, LL.B.

PARTNERSHIP AND COMPANIES.
By Percy F. Wheeler.

WILLS AND INTESTATE SUCCESSION.
By James Williams, B.C.L. M.A.

INSURANCE.
By Charles F. Morrill.

EDUCATION.
By James Williams, B.C.L. M.A.

PRESS NOTICES.

"Well arranged."—St. James's Gazette.

"The series as a whole must prove of immense service to the classes mentioned, as well as to accountants, trustees, factors, agents, and others."—Glasgow Herald.

"Deservedly popular."—Eastern Morning News.

"Excellent."—Observer.

"Admirable five-shilling series."—Yorkshire Journal.

"A well-arranged series at a uniform price, and possessing certain distinct advantages to regard to method of treatment and style."—Liverpool Mercury.

"We wish Messrs. Black's admirable little series well."—Law Notes.

"A series whose issues so far are undoubtedly of great value to the financial, commercial, and trading communities."—Liverpool Post.

"The manuals, if used, as they are intended to be, ought certainly to be found of great assistance."—Whitehall Review.

ADAM AND CHARLES BLACK
LONDON AND EDINBURGH
"A book that is shut is but a block"

CENTRAL ARCHAEOLOGICAL LIBRARY
GOVT. OF INDIA
Department of Archaeology
NEW DELHI.

Please help us to keep the book clean and moving.