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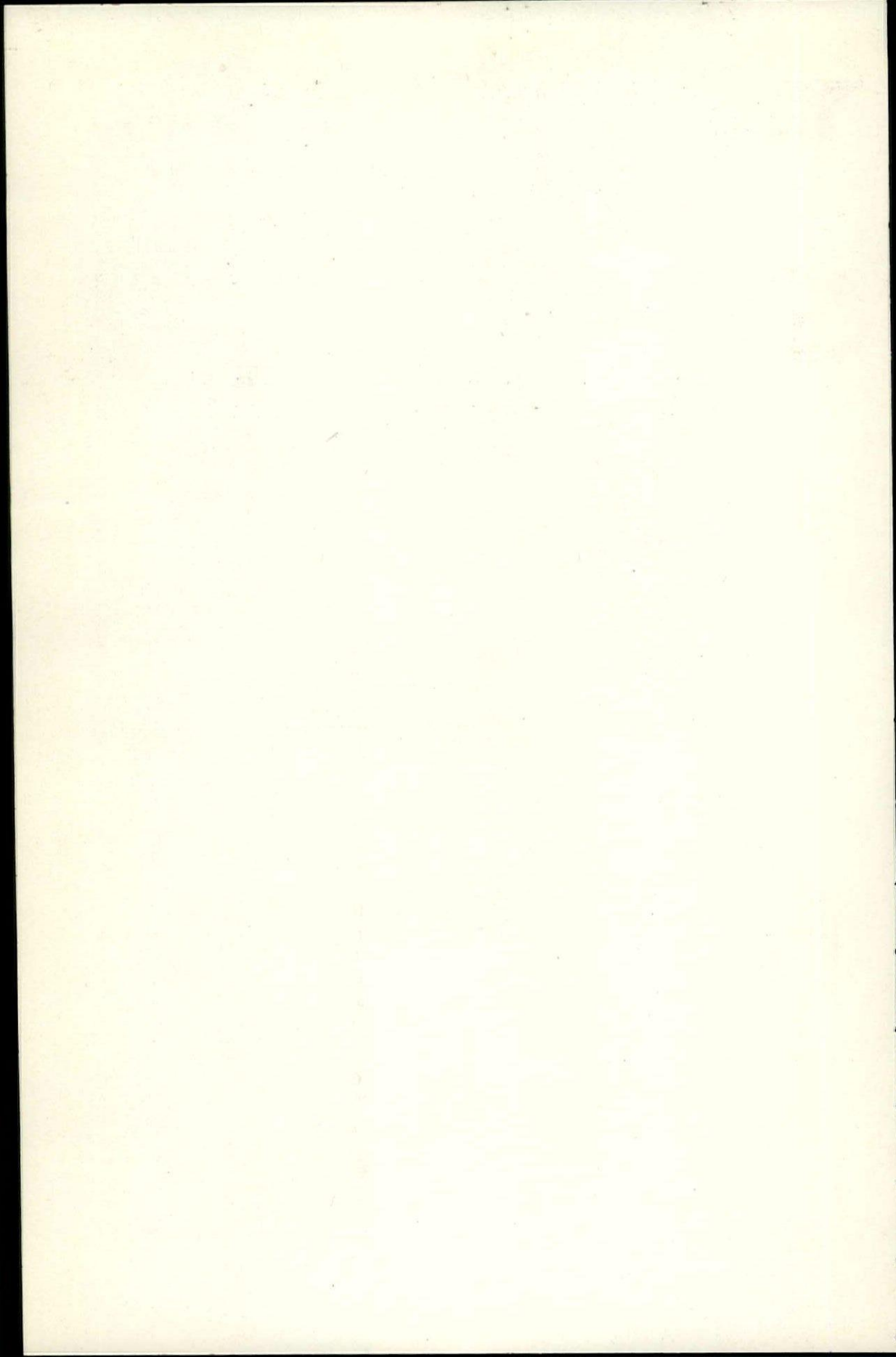
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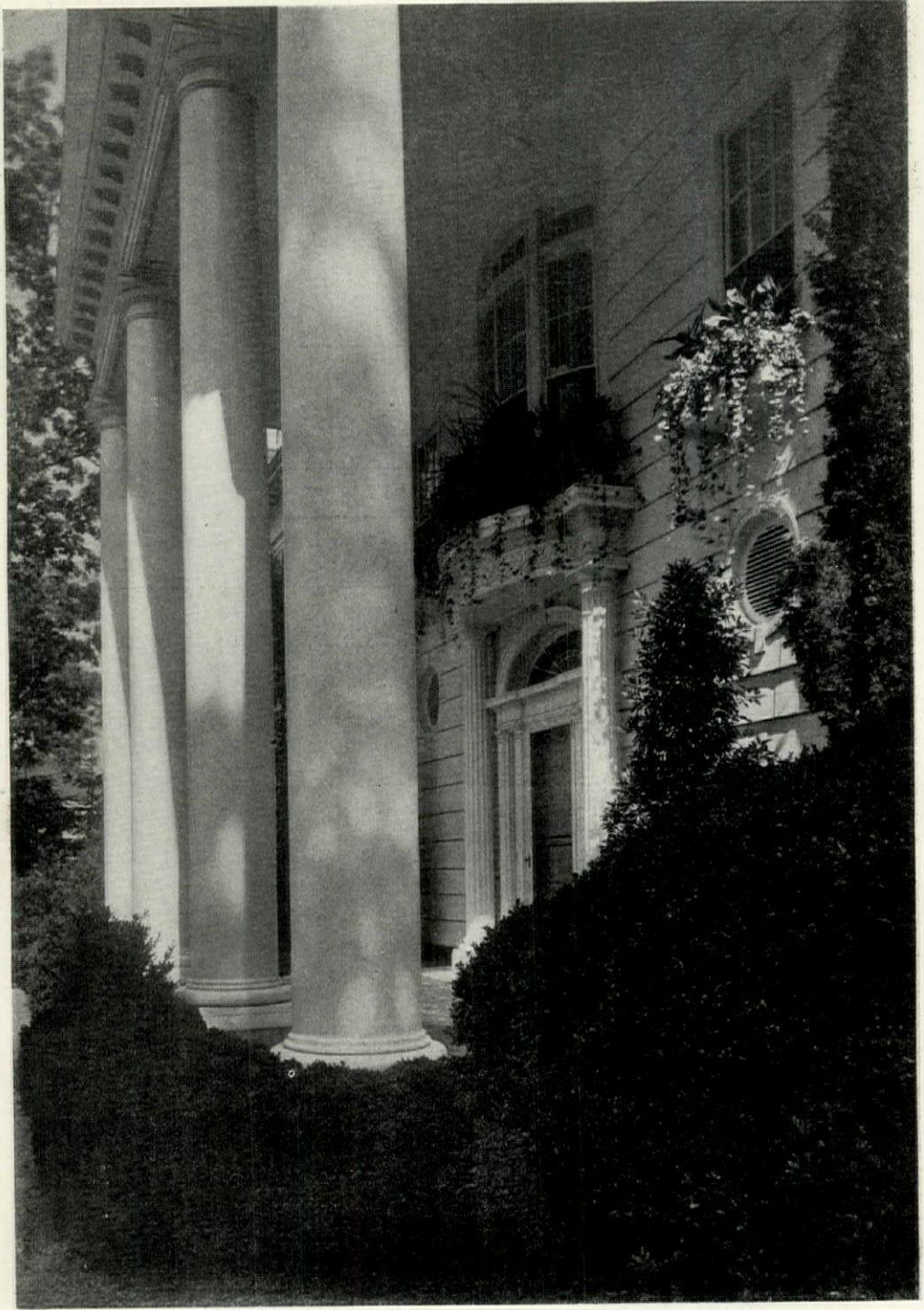
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MAIN DOORWAY, UNDER ENTRANCE PORTICO—
RESIDENCE OF J. W. HARRIMAN, ESQ., BROOK-
VILLE, L. I. ALFRED C. BOSSOM, ARCHITECT.

THE ARCHITECTURAL RECORD

VOLUME XLIII



NUMBER I

JANUARY, 1918

The COUNTRY HOUSE *of* J. W. HARRIMAN, Esq. BROOKVILLE, L. I.

ALFRED C. BOSSOM, ARCHITECT

By John Taylor Boyd, Jr.

THE residence of Mr. J. W. Harriman, at Brookville, Long Island, designed by Mr. Alfred C. Bossom, of New York, is an ample, roomy, home-like place, of open terraces overlooking meadows, and with long, low proportions well fitted to the ground somewhat in the fashion of the old Georgian houses which are grouped about the cathedral close in Salisbury, England. The quiet privacy and cheerful seclusion of it leave no trace of the conventional appearance that injures so many of the larger American country houses.

The Harriman residence has a charming outlook from the garden front southward over rolling Long Island meadows, broken here and there with trees, where the sheep graze as in many a similar English landscape. Besides the low

proportions referred to, three terraces assist to harmonize the house with the terrain—one, at nearly the first floor level, extending out some seventy feet, mostly open except for a few trees; and two others below, which are destined for flower gardens.

As might be expected of a rather long house, the entrance is in the middle, through a fine portico of four columns and a pediment, in the stately, hospitable old manner of American houses over a century ago. The drive curves up to the ridge on which the house stands, rising some sixty feet or more through an old natural wood, now fringed with rhododendrons, one of the very few woods not man-made on Long Island.

This open yet quiet situation was in keeping with the owner's wish for a com-

fortable and livable informal outdoor place having plenty of sunlit porches—a house that should appear permanent, substantial, not merely a summer home. Such an informal yet substantial appearance Mr. Bossom has skillfully obtained. The dominant features of porches and entrance portico, which might easily have become austere or too imposing, have been detailed in a sensitively appropriate domestic scale; nor, in the garden front, do the many porches and sleeping porches appear to be overdone. On a brick house they might have destroyed the unity, but here the even color of the wood insures a simple effect.

The plan of the house also is interesting, having been most carefully worked out. An old building on the site was made use of in the central portion, but its form has disappeared in the new residence. The porches along the garden front that were built by Mr. Bossom occupy positions formerly taken up with bay windows, and the terrace was lengthened out at each end. For so long a house—the whole structure, including the laundry and servants' court, is over two hundred feet in length—it has no waste space, and, owing to the central entrance, there is no undue length of narrow hallways.

Inside, the double stairway behind the arches, meeting in a landing over the front door, will at once draw the attention. Here again a feature which might easily have been too monumental for a private residence has been treated in an agreeable, homelike scale; and the interesting device of half concealing the stairs behind the arches heightens the effect of domesticity. Coat closets and a ladies' room occur near the entrance, as in most large houses. An unusual feature is the three guest rooms for men on the ground floor, at the northwest corner of the house. Correctly placed, the important rooms are along the south, on the garden, with the double-decked porches and connecting pergola between acting as alcoves to them. Another convenient element is the wash room near this part, opening off the library.

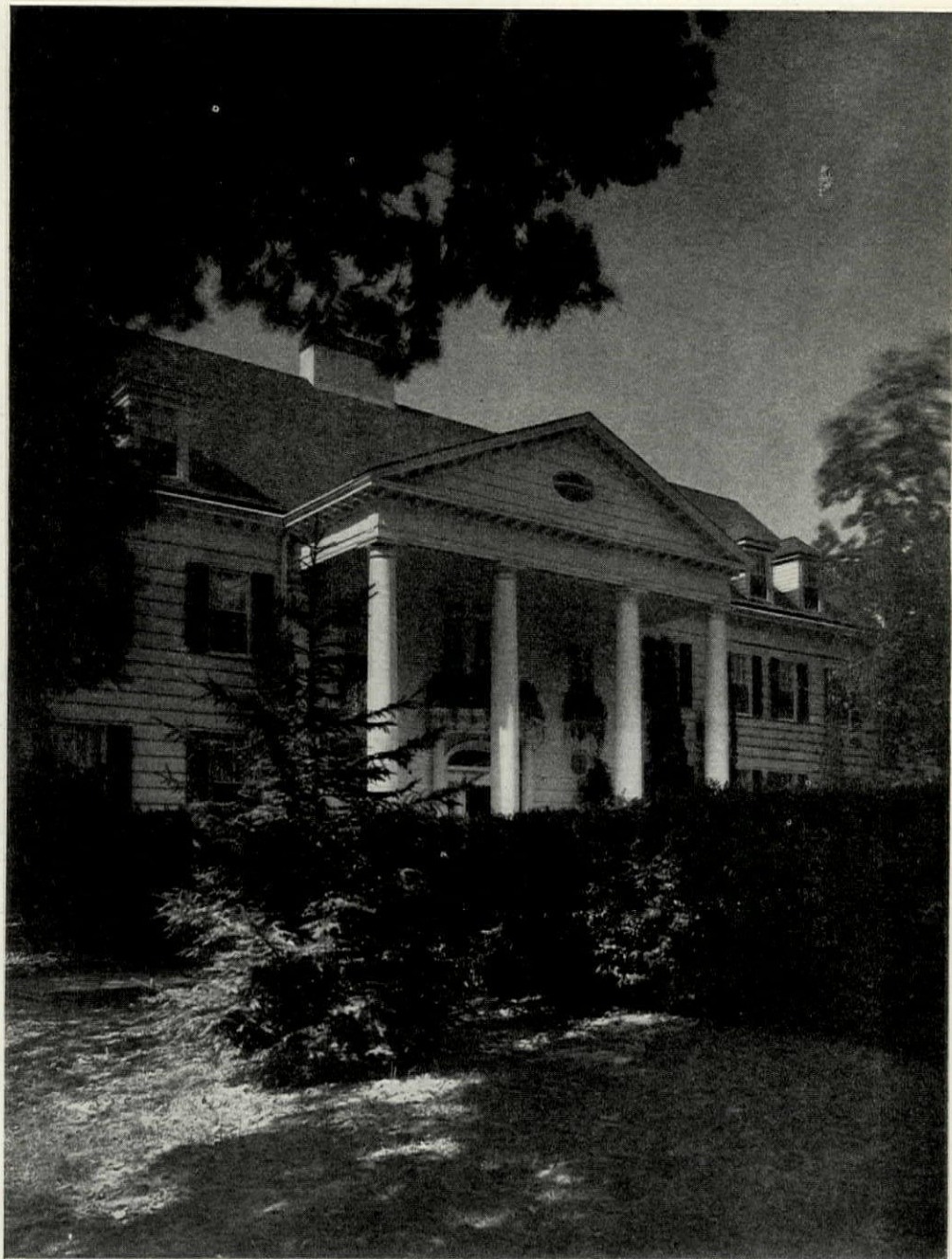
On the first floor, one of the porches

is a breakfast room, the other a lounging room. On the second floor, both are open sleeping porches, each of which is connected with one of the two principal bedrooms. Two other sleeping porches are really loggias inside the line of the house.

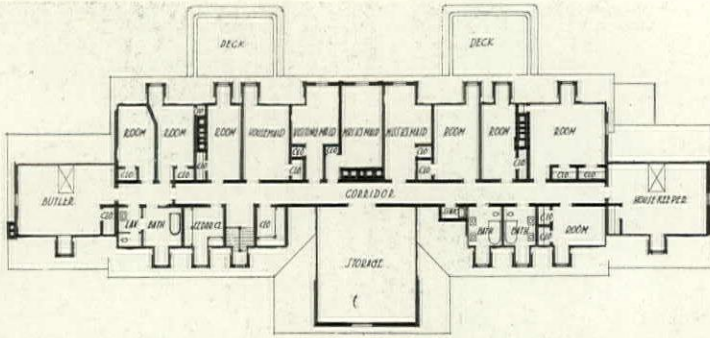
It is rarely that one sees a house with such a complete, even sumptuous, service wing. I have remarked elsewhere the elaborate lengths that owners are forced to go in order to keep servants in the country. One might believe, after seeing the arrangements for them in the Harriman residence, that the only step left to take would be to allot the main part of the house to the servants. In the Harriman house they have individual rooms, with very many baths, besides the dining room porches set apart for their use, and a large enclosed court at the end of the service wing belongs to them exclusively.

The second floor of the house is given over to bedrooms with their appurtenances—of a somewhat modest size for so large a house. The description of the plan is finished by noting that there is no second floor to the service wing; instead, the entire third floor of the main house is given over to the servants' rooms and baths.

How this excellent plan works out is evident in the photographs. They show the more formal and at the same time simpler north entrance front, with its portico, and the south garden front, also symmetrical but more diversified and more informal. Of the two, the long, unbroken entrance façade is the more reposeful in its proportions and its details. The four plain columns of the entrance are perfect examples of the best early American style, and, when considered in conjunction with the design of the entrance doorway itself and of the windows on each side of it, form a most attractive bit of architectural composition, displaying an unusually sensitive understanding of the interest and charm that may properly be expressed in a wall behind the porch of a residence. It is technically a different case from the portico of a public building, where the entrance is apt to be simpler,



ENTRANCE FRONT — RESIDENCE OF
J. W. HARRIMAN, ESQ., BROOKVILLE,
L. I. ALFRED C. BOSSOM, ARCHITECT.



ATTIC FLOOR PLAN—RESIDENCE OF J. W. HARRIMAN, ESQ., BROOKVILLE, L. I.
Alfred C. Bossom, Architect.

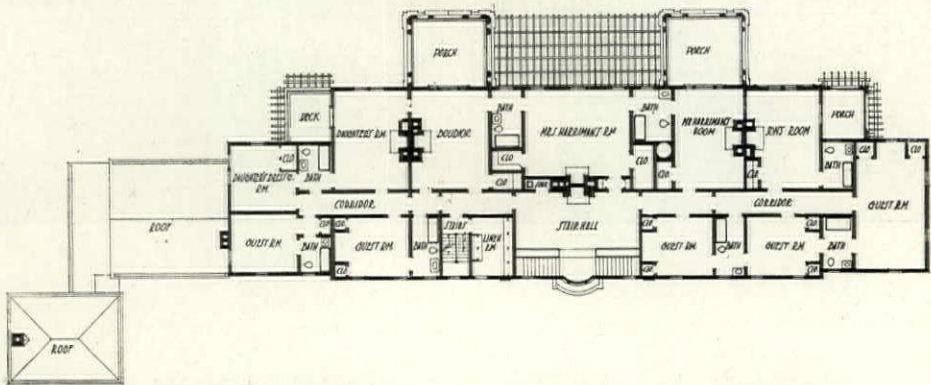
allowing the decorative emphasis to be put on the columns. In this house the impression of the doorway is such that one may feel instinctively that one enters a home and not a library or a town hall.

In this north wall the broad horizontal banding of the shingle courses shows particularly well. It affords an ideal scale for a wooden wall—either that or the extremely narrow clapboarding of certain parts of New England, which is in courses of not more than three and one-half inches, and, in the best examples, only two and three-quarter inches.

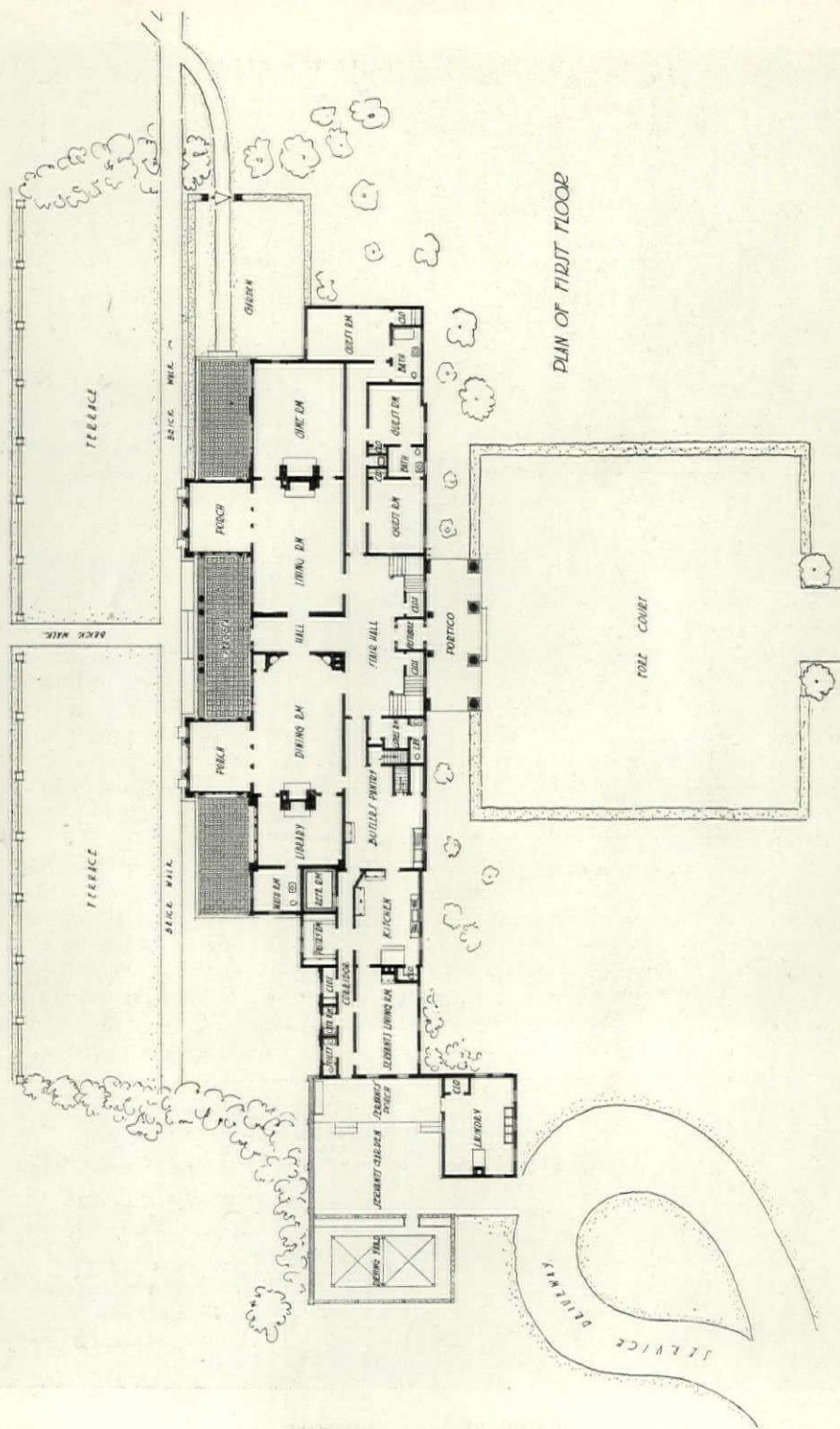
The garden front presents a most cheerful, vigorous effect as a whole, making the house a very interesting feature on the site. The fine contrast between the simple, low service wing and the lattice-spotted brick work of the servants' court adds immensely to the scheme. If some of the details of the main house on the south front are not entirely reposeful,

this is clearly due to the old part of the house. There is a rather marked diversity of window openings, and some of the architectural lines meet in an unusual manner. But it should be said that double-tiered sleeping porches are most difficult things to design and that the architect has boldly chosen to make them strongly modeled with a variety of projections and gables and pediments and awnings, thus providing a fine play of light and shade and shadow, all of which seem to harmonize the front. It accords admirably with the planting. Such strong modeling is rather more of a sculptor's conception than an architect's. It leans toward the school of architecture that Michael Angelo inspired in Renaissance architecture—in his earlier work, that is, before he developed into the extremes of his Baroque mannerisms.

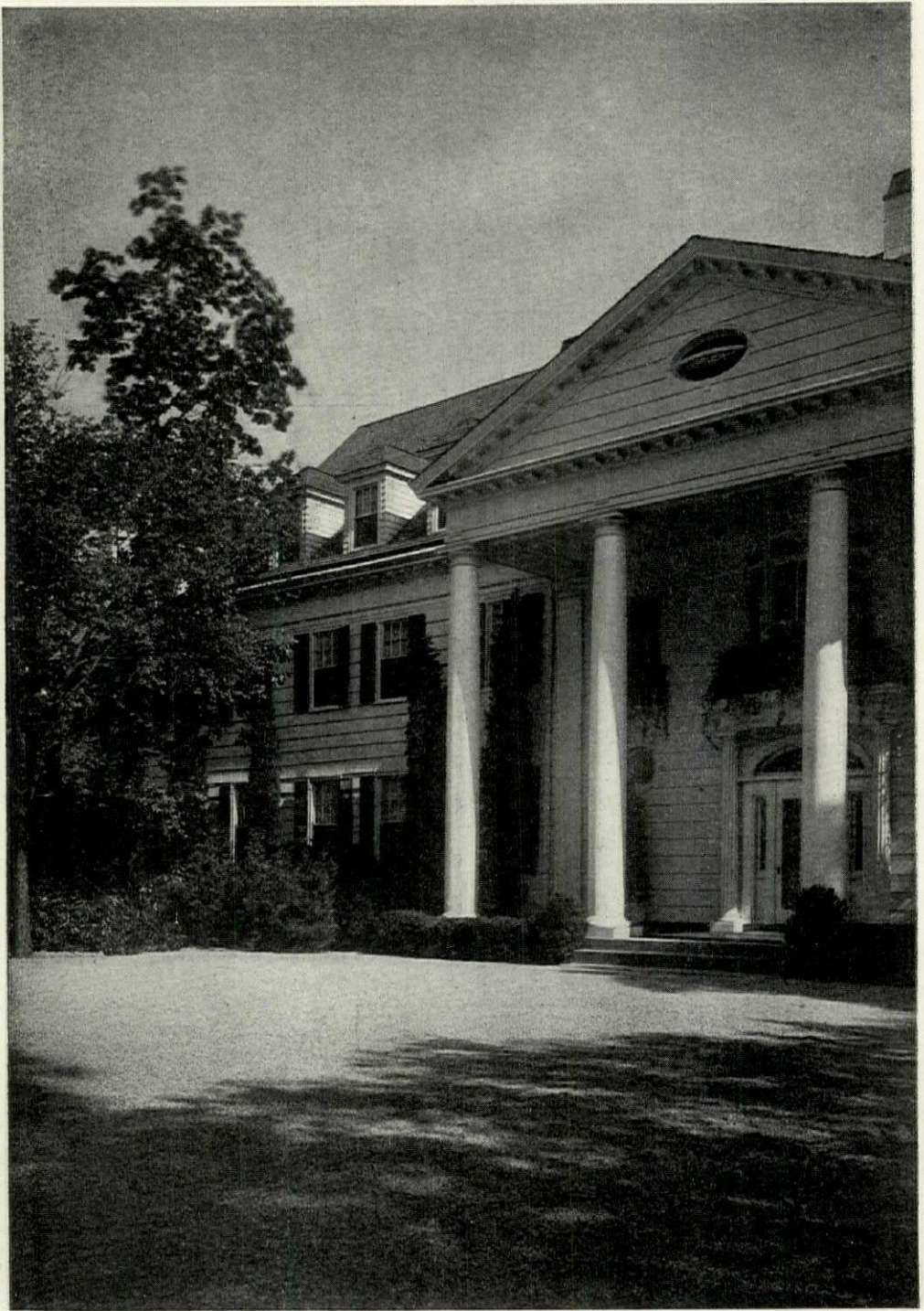
The service wing is an excellent piece of American design. Attention is called to the treatment of the brick wall, here,



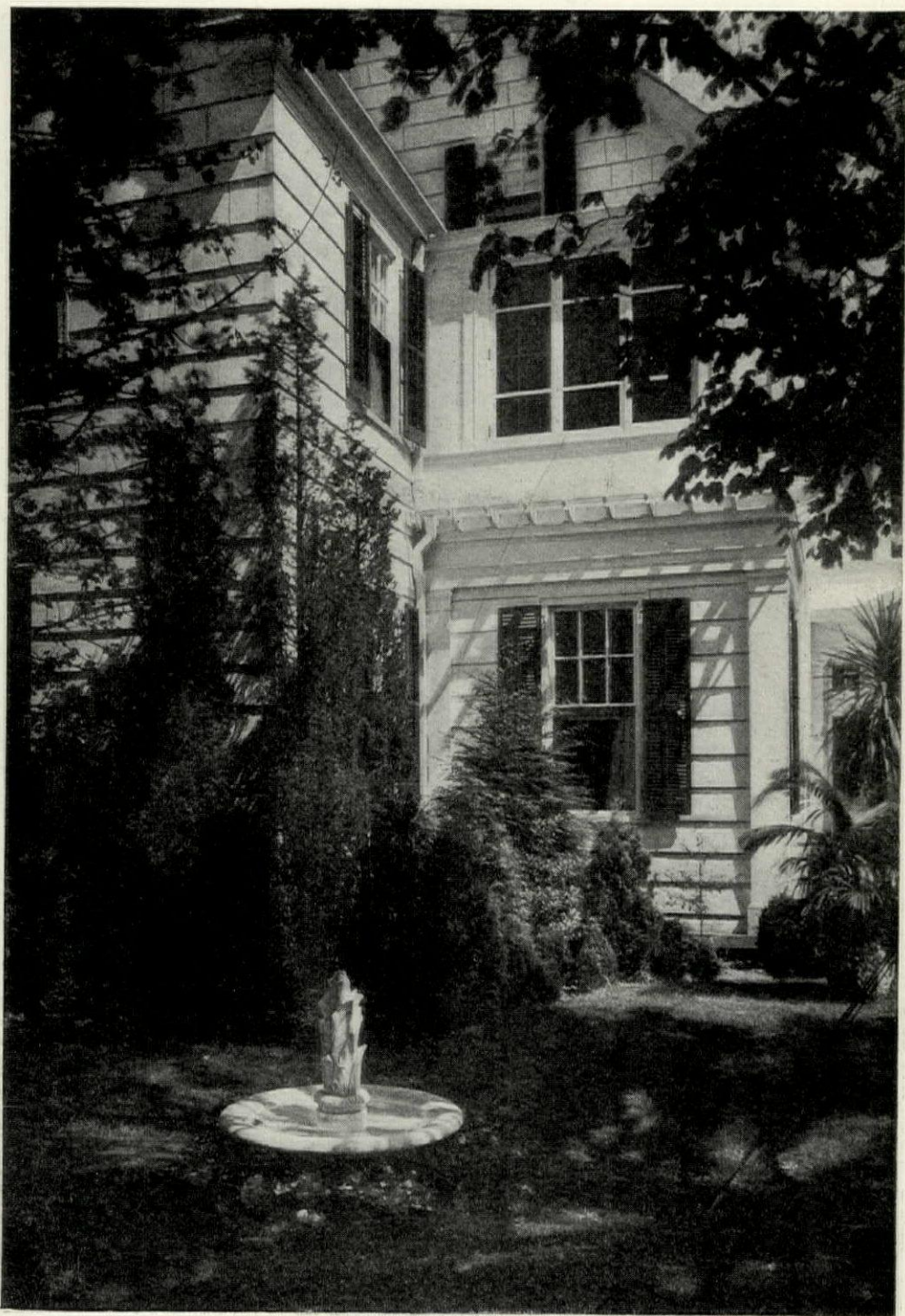
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Alfred C. Bossom, Architect.



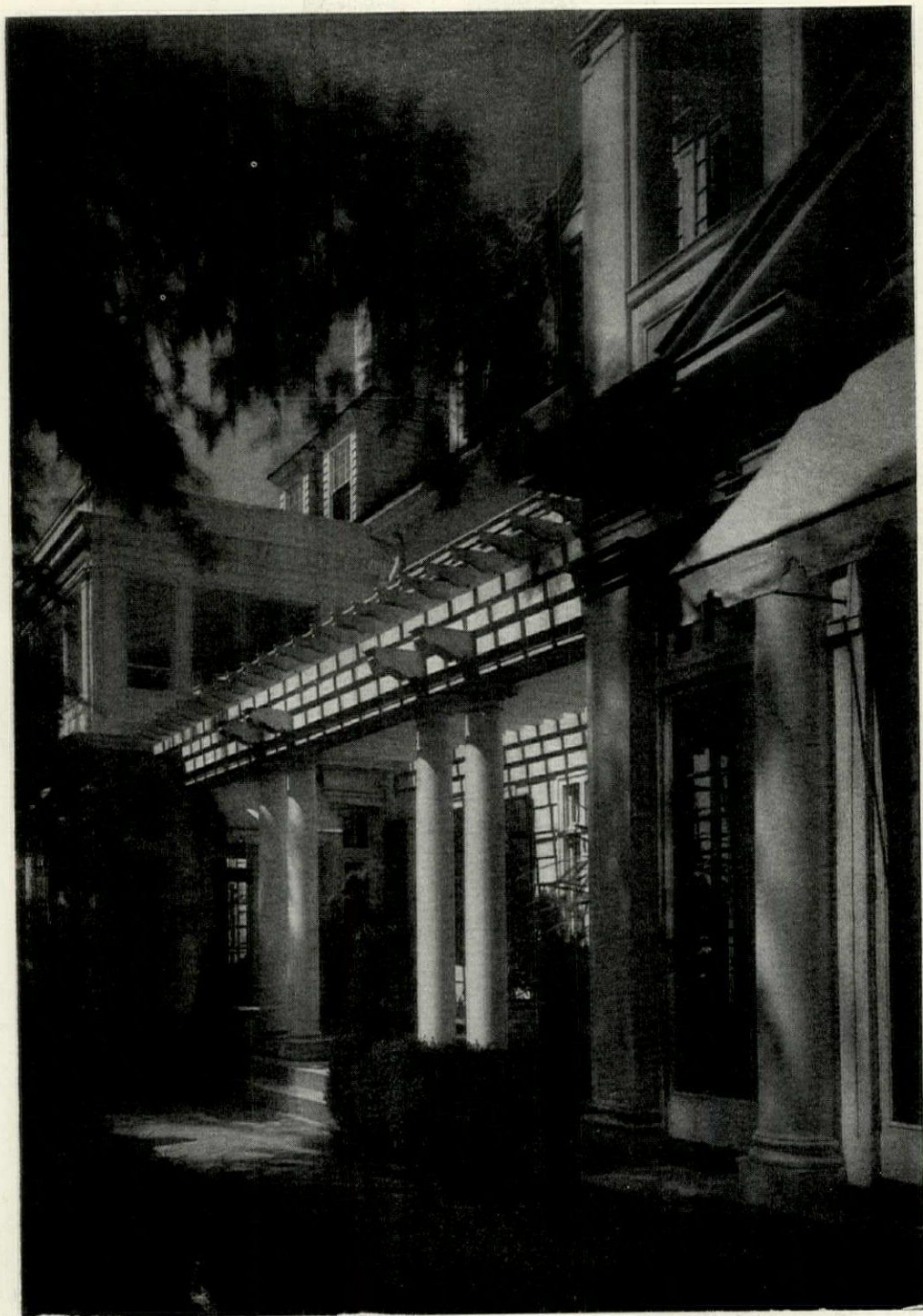
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 J. W. HARRIMAN, ESQ., BROOKVILLE,
 L. I. ALFRED C. BOSSOM, ARCHITECT.



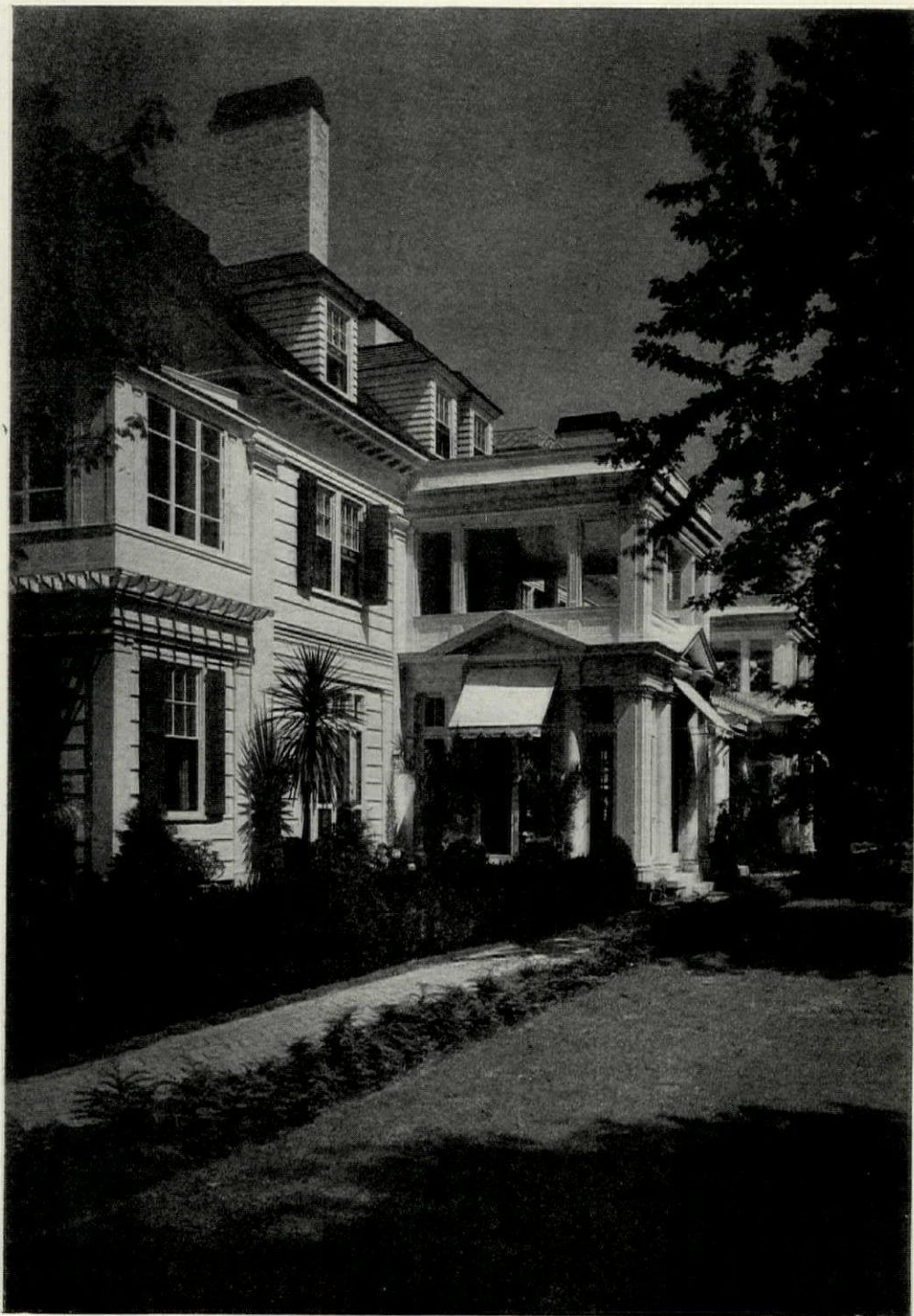
ENTRANCE PORTICO, ON NORTH SIDE—RESIDENCE OF J. W. HARRIMAN, ESQ., BROOKVILLE, L. I. ALFRED C. BOSSOM, ARCHITECT.



GARDEN BEYOND GAME ROOM AND BACHELORS' WING—RESIDENCE OF J. W. HARRIMAN, ESQ., BROOKVILLE, L. I. ALFRED C. BOSSOM, ARCHITECT.



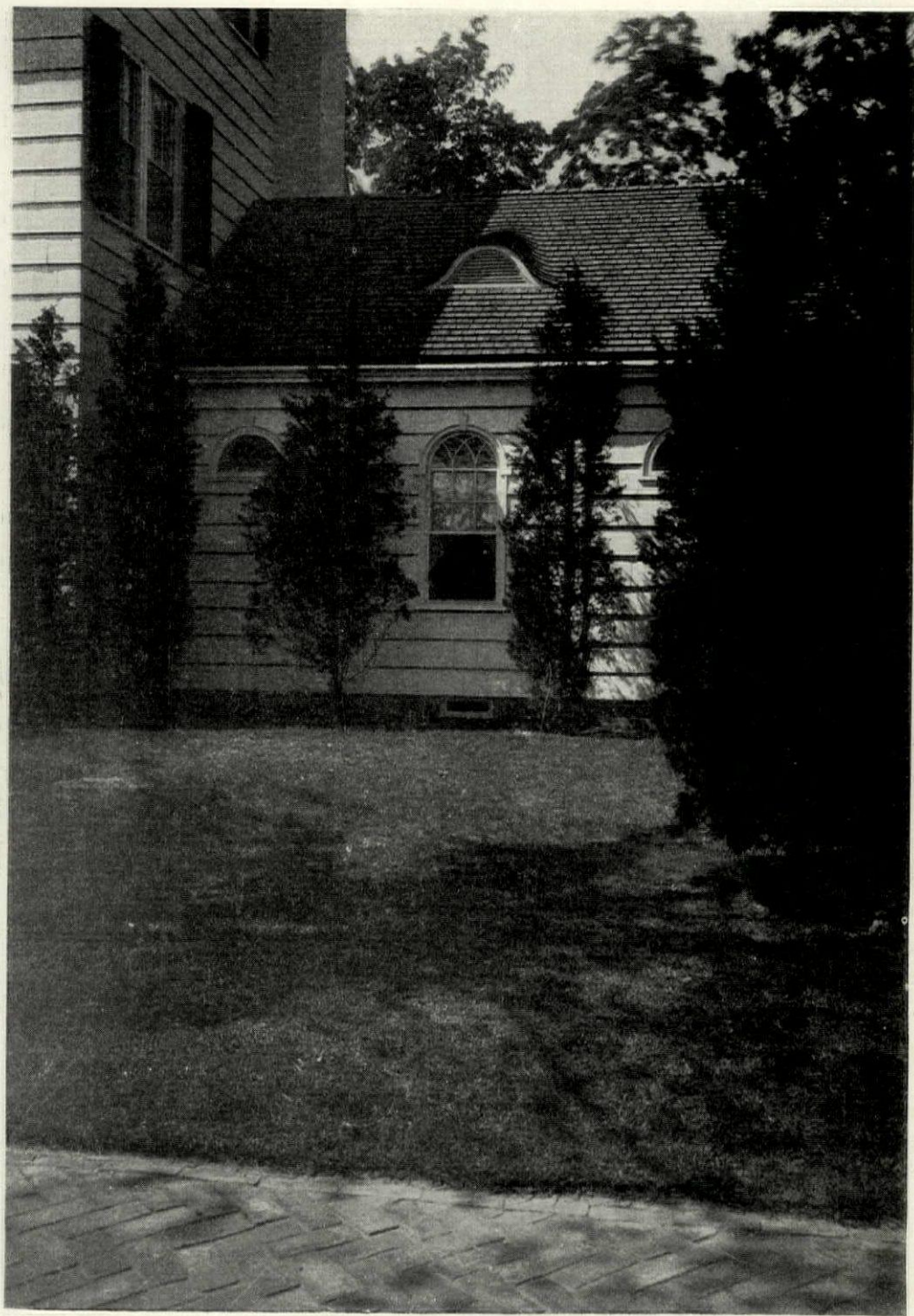
PERGOLA BETWEEN THE PORCHES ON GARDEN
FRONT—RESIDENCE OF J. W. HARRIMAN, ESQ.,
BROOKVILLE, L. I. ALFRED C. BOSSOM, ARCHITECT.



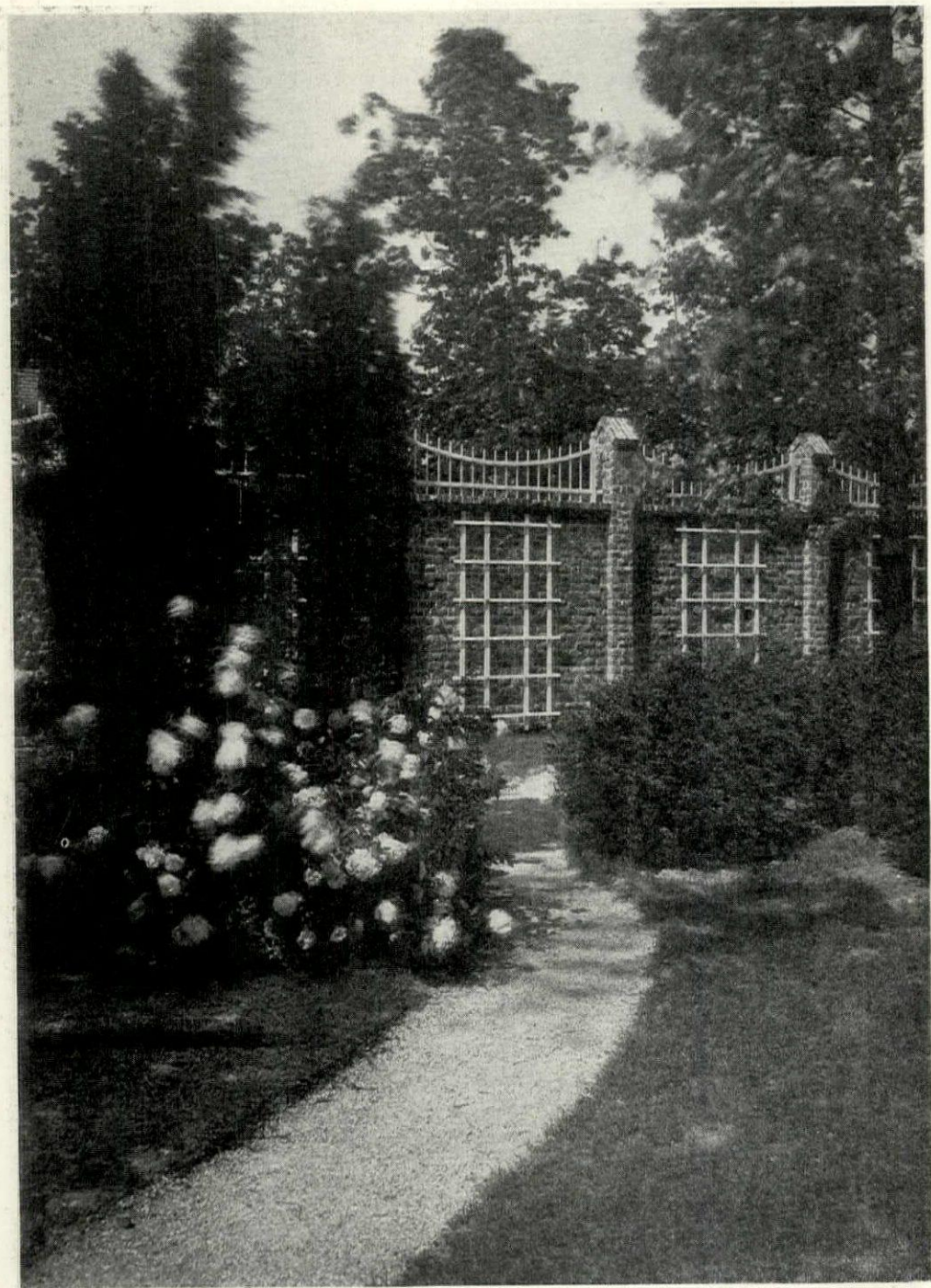
GARDEN FRONT, FROM THE SOUTHWEST—
RESIDENCE OF J. W. HARRIMAN, ESQ., BROOK-
VILLE, L. I. ALFRED C. BOSSOM, ARCHITECT.



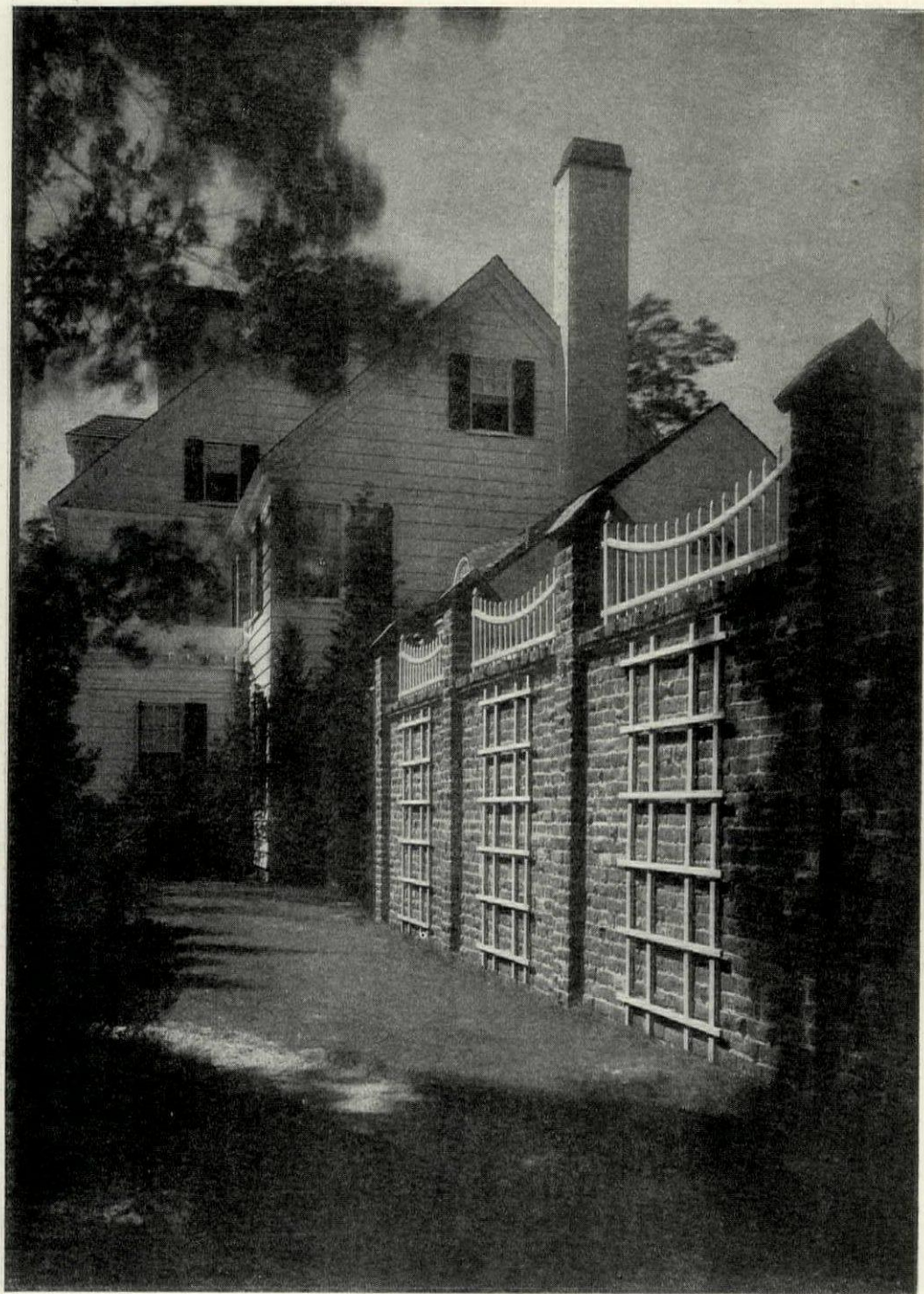
SOUTHEAST CORNER OF MAIN HOUSE—RESIDENCE OF J. W. HARRIMAN, ESQ., BROOKVILLE, L. I. ALFRED C. BOSSOM, ARCHITECT.



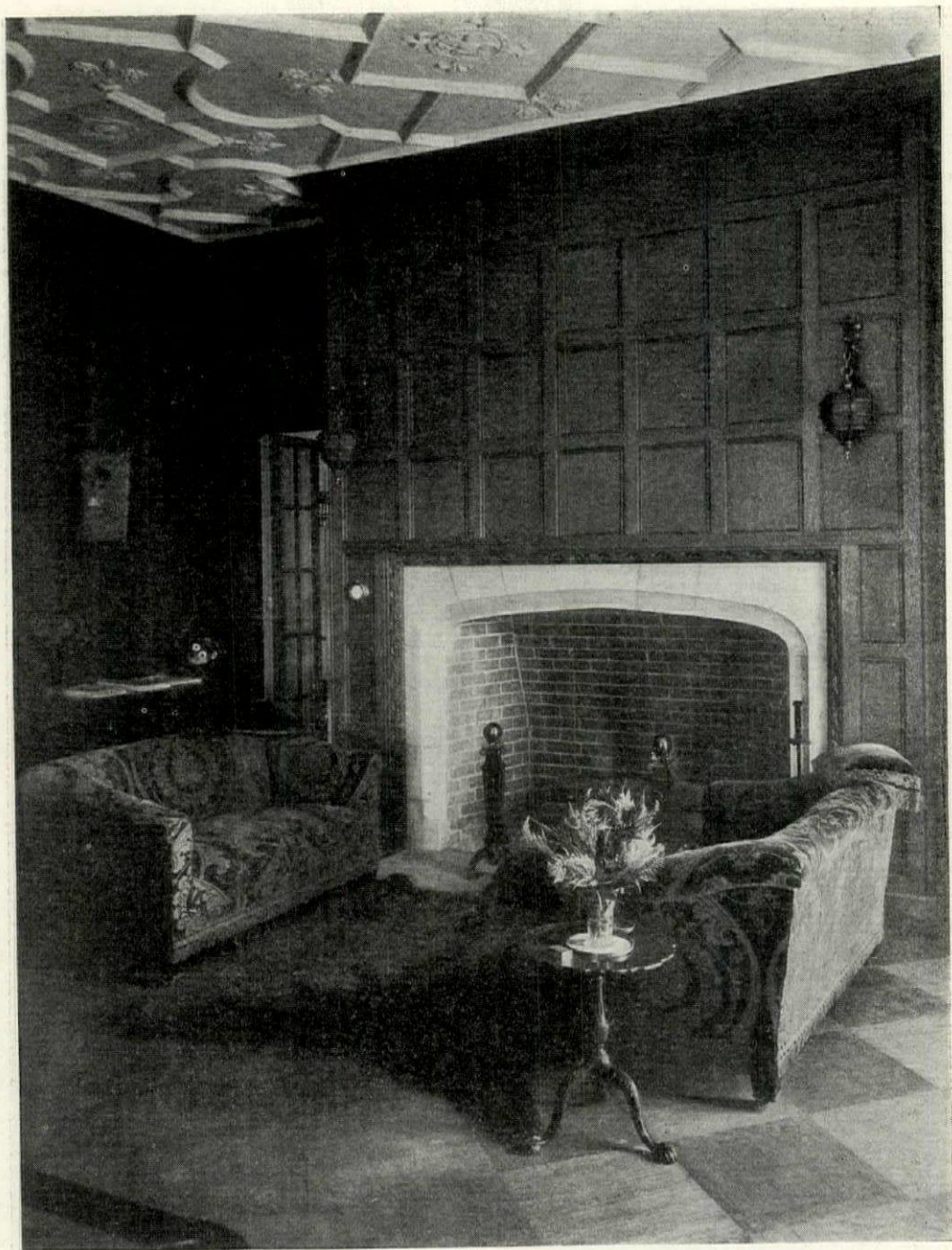
KITCHEN WING—RESIDENCE OF J. W.
HARRIMAN, ESQ., BROOKVILLE, L. I.
ALFRED C. BOSSOM, ARCHITECT.



WALL OF SERVICE COURTYARD—RESIDENCE
OF J. W. HARRIMAN, ESQ., BROOKVILLE,
L. I. ALFRED C. BOSSOM, ARCHITECT.



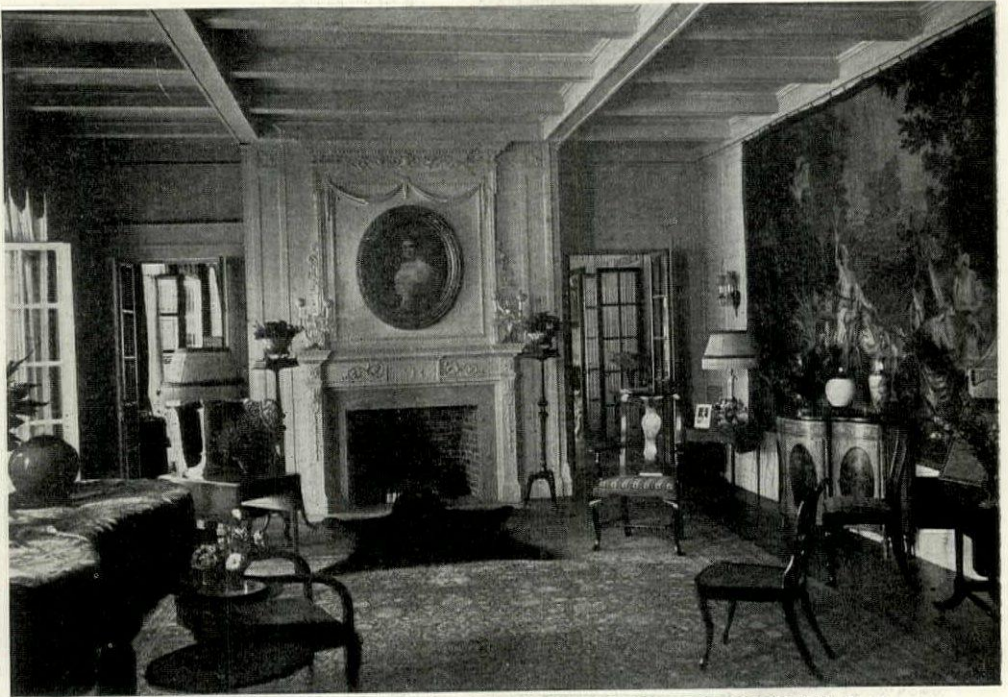
WALL OF SERVICE COURTYARD AND KITCHEN
WING—RESIDENCE OF J. W. HARRIMAN, ESQ.,
BROOKVILLE, L. I. ALFRED C. BOSSOM, ARCHITECT.



FIREPLACE IN GAME ROOM—RESIDENCE
OF J. W. HARRIMAN, ESQ., BROOKVILLE,
L. I. ALFRED C. BOSSOM, ARCHITECT.



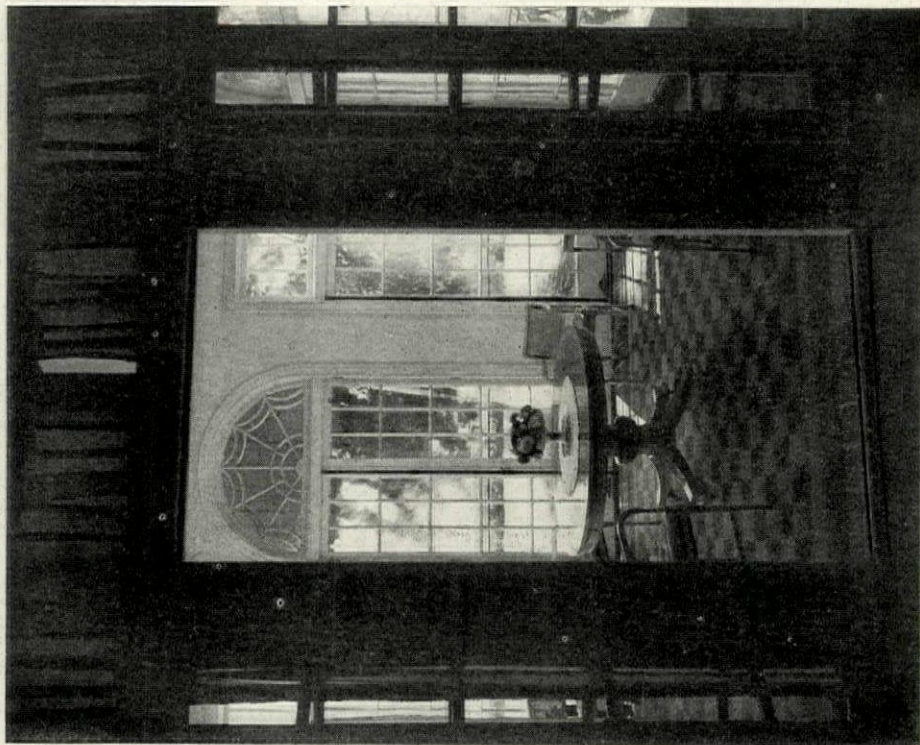
CORNER OF STAIR HALL—RESIDENCE OF
J. W. HARRIMAN, ESQ., BROOKVILLE,
L. I. ALFRED C. BOSSOM, ARCHITECT.



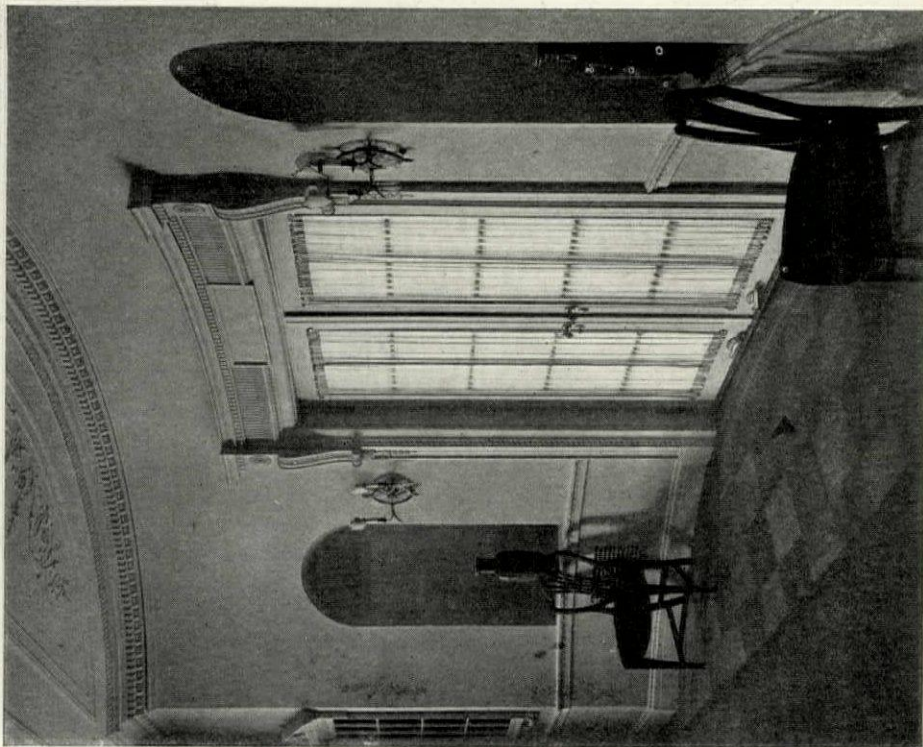
MUSIC ROOM—RESIDENCE OF J. W. HARRIMAN, ESQ., BROOKVILLE, L. I.
Alfred C. Bossom, Architect.



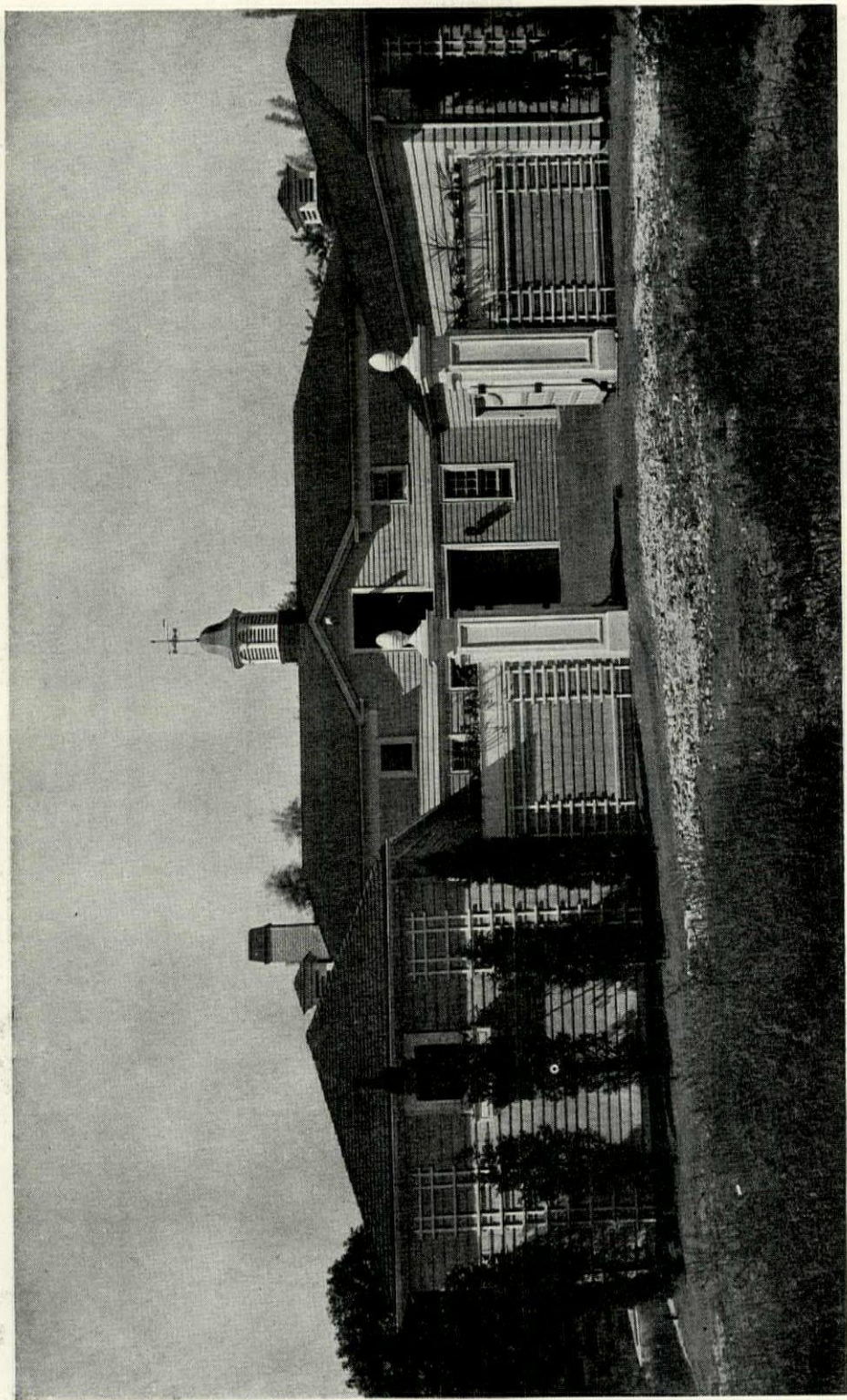
DINING ROOM—RESIDENCE OF J. W. HARRIMAN, ESQ., BROOKVILLE, L. I.
Alfred C. Bossom, Architect.



BREAKFAST ROOM—RESIDENCE OF J. W. HARRIMAN, ESQ.,
BROOKVILLE, L. I.
Alfred C. Bossom, Architect.



ENTRANCE TO DINING ROOM—RESIDENCE OF J. W. HARRIMAN, ESQ.,
BROOKVILLE, L. I.
Alfred C. Bossom, Architect.



STABLES—ESTATE OF J. W. HARRIMAN, ESQ., BROOKVILLE, L. I.
ALFRED C. BOSSOM, ARCHITECT.

too, modeled excellently, of a good rough texture, relieved by the interesting lattice and railing, continuing the play of tiny points of light which runs through the design of the whole south front. Altogether the interesting massings and groupings of this front, with its vigorous light and shade, are refreshing after the somewhat thin, austere, uninterestingly correct residences so often to be found in our countrysides. And this effect is well carried out in the planting along the front, at the corners especially, to soften the angles. The homelike appearance has been maintained throughout, particularly in the little garden off the bachelors' rooms in the west end of the house. As a detail, the tennis court is hidden from the house, being reached by a path through the woods, thus avoiding the unfortunate effect that a court with its nets is bound to make.

Inside, the rooms are richly yet simply done. The more important rooms, except the game room on the west, are painted old white—not "wiped," but a straight flat color. The exquisitely treated design of the entrance hall has been mentioned. In its paneling, stairs, arches and cornice it is a sympathetic rendering of the more sophisticated early native style, of the type developed in the mansions of the cities. The music room is a fine apartment. Its scheme of deco-

ration is to offset the effect of light of the large windows against a great tapestry on the opposite wall—a scheme used also in the dining room. The beamed ceiling of the living room seems too heavy for the delicacy of the decorations below, but this is a legacy of the older part of the house.

A formal Adam design is the dining room, with somewhat less stiffness that is too often a characteristic of such rooms. As a detail one could have wished the doors to be solid, for there is evidently enough glazed sashes in the house. Interesting, too, is the breakfast room and the fine rich harmony of the English game room, with its decorated ceiling, large fireplace and crimson coloring. Upstairs the bedrooms are of the same old white coloring, simply decorated in molded panels (in the case of Mrs. Harriman's boudoir materials are inserted in the panels) that has become the style in our large country houses.

It is evident that this work of Mr. Bossom's typifies the best kind of our modern architecture, boldly imagined as it is, executed in high technical skill and in the best of taste—that is, quiet taste—for it embodies the ideals of simple living, ideals that the stern demands of the times will force upon even the most heedless.



ARCH OF TITUS AND
THE COLOSSEUM, ROME.



THE CASE AGAINST ROMAN ARCHITECTURE



By ARTHUR KINGSLEY PORTER

IN the course of an article published in the *Architectural Record* some months ago, my old teacher, Professor Hamlin, quoted with disapproval certain criticisms of Roman art from my youthful work on *Medieval Architecture*. That the ideas in question are such as might readily find no favor with Professor Hamlin does not surprise me. It is entirely orthodox to admire Roman architecture. Of all historic styles it presents the closest analogies with the architecture of the nineteenth century in America. It is the style upon which our modern architectural education is based. It is also, of all historic styles, evidently the least illustrative, the most material. Something over a decade ago I came to the rather impulsive conclusion that the thoughtless admiration and imitation of the Roman style was producing a deleterious effect upon contemporary American art. In writing my *Medieval Architecture* I felt it almost a duty to do what I could to call attention to the prosaic character of Roman architecture.

The difference of opinion between Professor Hamlin and myself is, therefore, deep-seated. *De gustibus non est disputandum*. In matters of this sort there is no absolute proof to which one can have recourse. It is a question of feeling—really of creed—and as differences of religion are commonly the ones to which men cling most tenaciously, for which they are ready to sacrifice themselves and wrong others, so for the lover of art his esthetic creed is, perhaps, the most deeply rooted part of his inner being, that which touches him most nearly when questioned by another.

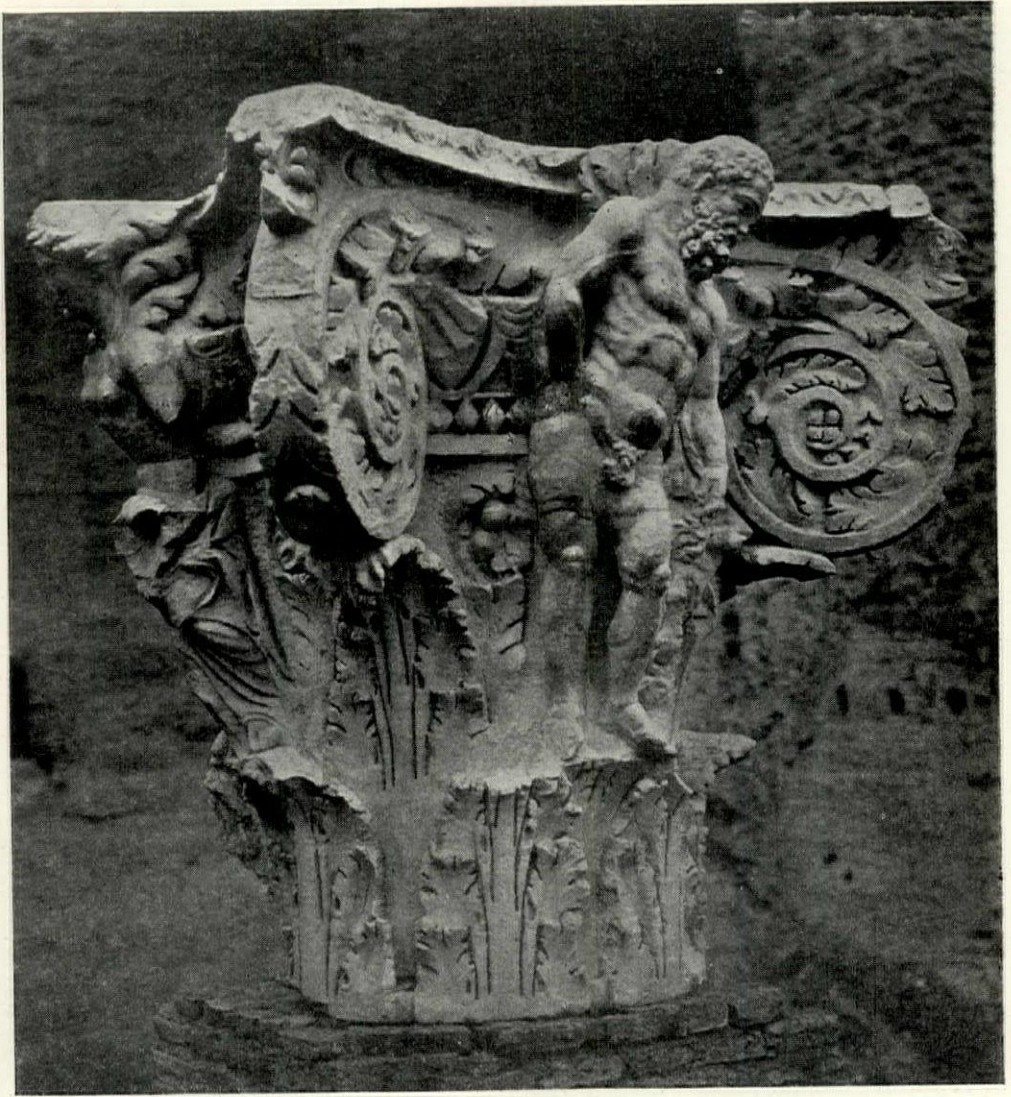
The years that have passed since I wrote *Medieval Architecture* have brought changes in my point of view. Further study has proved to me that the deficiencies of contemporary art cannot

altogether be laid at the door of Rome. Inspired by the same models, Palladio produced an architecture highly intellectual and McIntire an art infinitely refined. Very poor indeed has been much of the architecture imitated from the most exalted models of Greece and of the Middle Ages. The conclusion seems to be forced that for the production of good architecture it matters little *what* one copies, but it matters very vitally *how*.

As for Roman architecture itself, I have come to know it much better since the days when my first book was written. At that time my lips had barely touched the golden cup of Italian beauty. Since, the opportunity has come to linger long in Rome; to draw and photograph among the ruins of the Agro, to poetize with Carducci on the Aventine or in the Baths of Caracalla. Often as I have stood in the august presence of the Roman Forum it has never been without emotion. I have studied, with a feeling almost of homesickness, the engravings of the eighteenth century, stimulating my imagination to conceive of the City enhanced by the solitude and silence the modern age so discordantly breaks.

Yet I cannot with intellectual integrity say that my feelings toward Roman architecture have essentially changed in these twelve years. Visions of the magic of Rome, the cypresses of Tivoli, the sweeping lines of the Campagna, the snow-capped encircling mountains, the glorious color of the weathered brickwork, haunt my memory; yet I still see, as I did a decade ago, in Roman architecture emptiness, pomposity, vulgarity.

But very little of ancient Rome has come down to us intact. The charm which invests the Baths of Caracalla or the ruins of the Palatine today was assuredly never dreamed of by the build-



CAPITAL FROM THE BATHS
OF CARACALLA, ROME.

ers. The picturesque masses, the colors, are the work of time—the most clever of artists. To conceive of these Roman buildings as they were, we must have recourse to archeology and modern restorations on paper. But do these imaginary reconstructions give an accurate idea of the esthetic effect of the architecture as it really was? May we not have missed some touch which possibly redeemed the lack of refinement? Imagine that all the scores of Wagner's *Nibelungen Trilogy* had been lost, and that some inferior musician should try to rewrite the work on the basis merely of the plot and a few snatches of melody. The result might easily be as meretricious as the restorations of Roman ruins. How can we prove that something like this may not have happened in the case of Rome? When we contrast the actual beauty of the ruins of the Forum with the monotony of the paper restorations, when we note in the latter the lack of balance in the mass, and the excessive symmetry in the details, how can we be certain that the ancient buildings may not have possessed some secret of beauty, some use of color or of asymmetry unknown to modern archeologists, but which redeemed a design that, only because of our lack of knowledge, seems lifeless and banal?

Future investigations may possibly show that Roman architecture was not as dull as it now appears. I fear, however, that this is exceedingly unlikely. The frescoes of Pompeii quickly dispel any illusion that the Romans possessed a sense for color. An abundance of Roman architectural detail has come down to us in good condition; and this, with very rare exceptions, is not such as to lead us to suppose that the Romans possessed sensitive esthetic perceptions in architectural art. Poor detail is not necessarily incompatible with good architecture (although the modern idea that good architecture must necessarily have had detail is obviously false); nevertheless, the detail is apt to be eloquent of the spirit of the whole. When we find detail that is made commercially, mechanically, thoughtlessly, perfunctorily, we have the work, not of an artist, but of a

materialist, and the larger features of the design are nearly certain to be permeated by the same qualities. The true artist may delight in the broad effect; he may take pleasure in producing that effect in simple materials, but he can never be satisfied with commercial detail. It is this lack of sensitiveness in Roman architecture, the absence of an artistic conscience, the readiness to subordinate all means to the end of an immediate effect, the obviousness, the lack of depth, with which I quarrel. There are two kinds of architecture, as there are two kinds of painting, of sculpture, and of literature: One is artistic, created for the joy of bringing into the world a beautiful thing—material compensation may or may not be given, but is secondary; the other is commercial, made primarily for expediency, for money, for fame. Roman art is of the commercial variety. Of that poetry which breathes so potently from the existing ruins, the same monuments, when new, must have been singularly deprived. They were opportunist structures, lacking in intellectual and emotional content.

There is a curious parallelism between the art, the literature and the life of Imperial Rome. I experience the same sensation of inexpressible weariness in studying Roman architecture and in reading of Roman banquets, as, to cite one example among many, in the *Satyricon* of Petronius. What a bore these feasts, this endless over-eating and over-drinking must have been! How useless the magnificence, the throngs of slaves, the expert cooks able to prepare pork so that the entire company mistook it for duck! As Mr. Clapp renders Palazzeschi:

With luxury's glamor
the table is spread.
Exuberant flowers,
gold vases and silver . . .
The dishes before them
change hurriedly ever;
soups steaming and purées
delicious and patés
most tasty by thousands . . .
From gardens forbidden
herbs skilfully seasoned,
woodcock and pheasant
pass by in the dishes
of these the unhappy;

most tender of green things
and sweetmeats the rarest,
incredible sweetmeats,
fruits red as a ruby,
wines too of all colors. . . .

This effort, this expense of energy failed of its purpose, because there was lacking the spirit of joy. I suspect that the modern *contadino* takes far greater delight in his *pasta* and wine in the *osteria* that nestles among ruins of the Palatine, perhaps on the very site of the golden house where Trimalchio gloried and drank deep. It is evident that the Romans themselves grew tired of the unending series of gluttonous revels. Petronius doubtless exaggerates the grossness and stupidity of Roman society; he nevertheless was an eye-witness of its excesses, and his testimony carries weight. This is how he describes an episode at a banquet, when the impossible Trimalchio calls his architect (*lapidarius*) Habinnas and orders his tomb:

"Trimalchio then ordered a copy of his will to be brought, and this he read from one end to the other, while the whole company heaved sighs. Then looking at Habinnas, he said, How about it, my friend? Have you built my tomb as I ordered? I ask you particularly to put at the foot of my statue my little dog, crowns and a box of perfumery. . . . Moreover let the tomb measure one hundred by two hundred feet; and let there be planted about it all sorts of fruit trees and many vines, for it would be absurd that I should be said to have cultivated my lands while I lived; but neglected those where I must inhabit so long. Therefore I should like to have this inscription placed on the tomb:

"This Monument does not Belong to My Heirs.

"Furthermore, I shall take care in my will that no one injures me after my death; for I shall appoint one of my freedmen to guard my tomb, to see that no one commits there any nuisance. I charge you also, Habinnas, to sculpture on my tomb ships under full sail [this in reference to the sources of Trimalchio's wealth], and my portrait is to show me sitting on a tribunal with five golden

rings on my fingers, giving silver coins to the populace out of a sack; for you know well I have given a public banquet and two pieces of money to all who came. You may therefore also represent, if you please, the dining hall and all the people eating with pleasure. At my right you will place a statue of my wife Fortunata holding a dove in one hand and leading a dog on a leash with the other, and you will put there also my dear Cicaron and great jars of wine well corked up. One only of these shall be broken, and a child shall be weeping over it. In the middle of the sun-dial shall be an inscription so placed that any one reading the hour must perforce see my name. As for the epitaph, see if you think this is suitable:

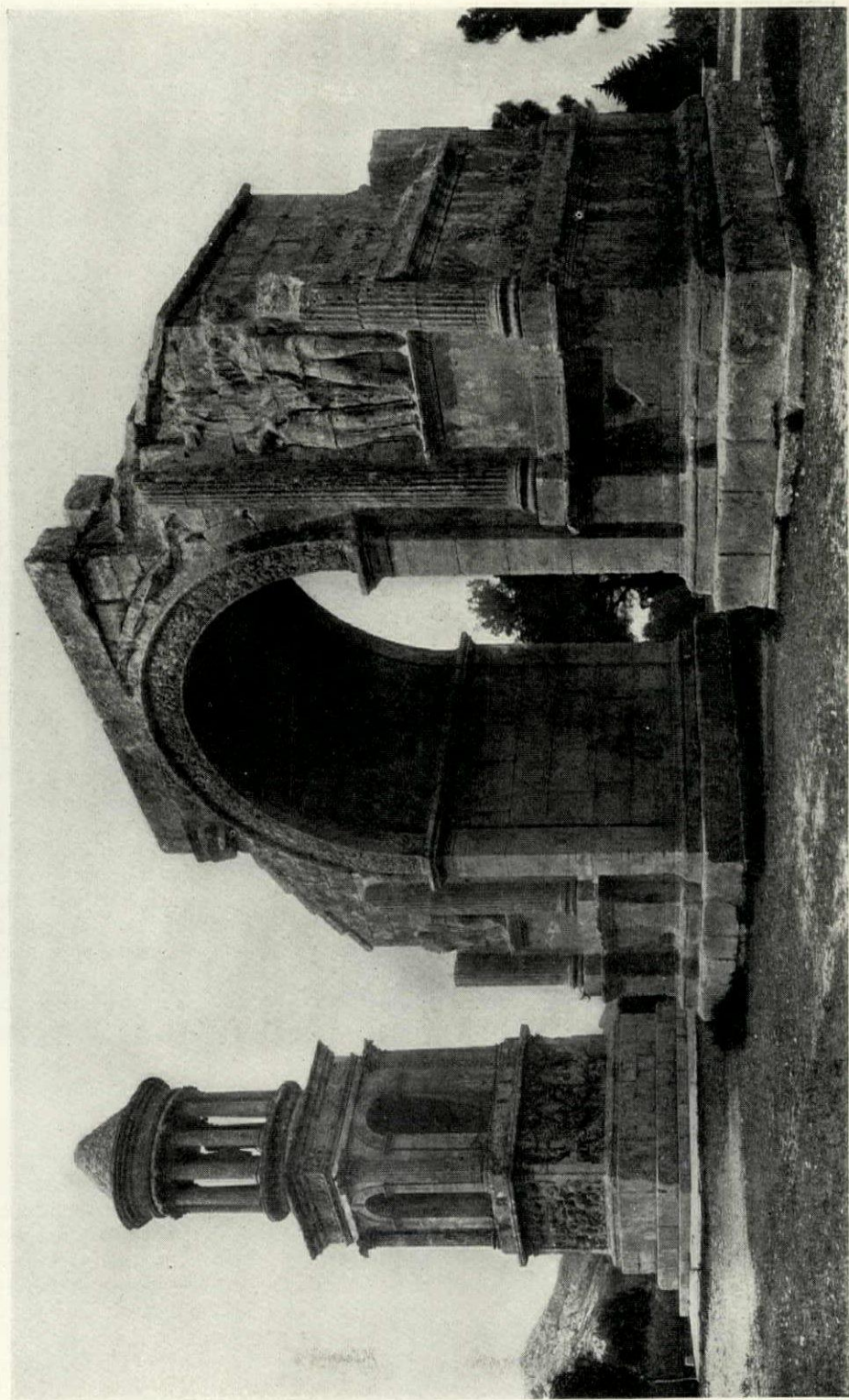
"Caius Pompeius Trimalchio, the Patron of Art, rests here. He never wished to hear the discourse of philosophers. May thou do the same . . .

"Thanks to Mercury, I have built this palace of mine in which we now are; as you know it was a house, but now it is imposing as a temple; it has four drawing-rooms, twenty bed-chambers, two marble porticoes, a tower above in which I myself sleep, apartments for my wife, an excellent porter's lodge and slaves' quarters able to accommodate a thousand persons."

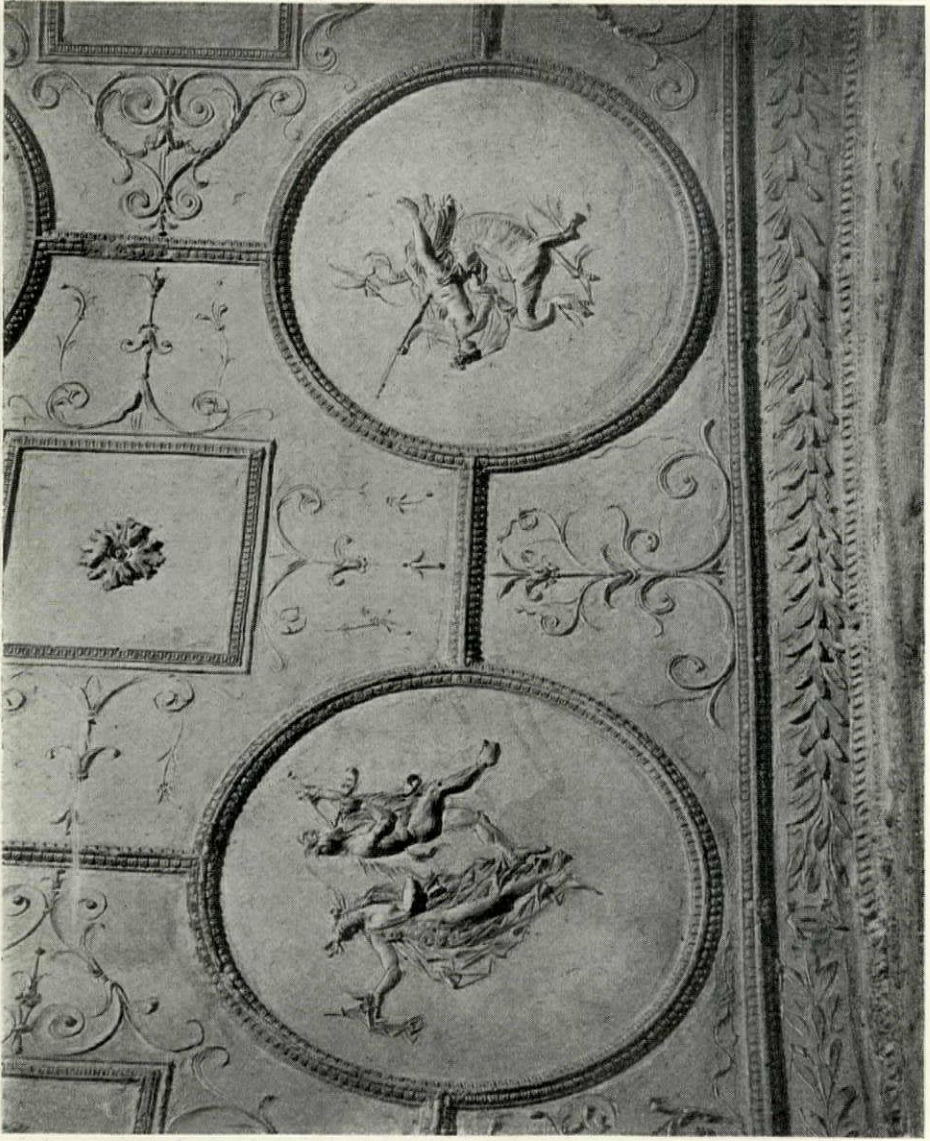
The satirist has painted for us most admirably the spirit, not only of Imperial Roman society, but of Imperial Roman art. Indeed of the inferiority of that art Petronius himself is well aware. Farther on in the same satire he explicitly complains:

"The fine arts have perished, and especially painting has left of itself only the least traces. We do not create art, but only criticize that of antiquity" (*i. e., Greece*).

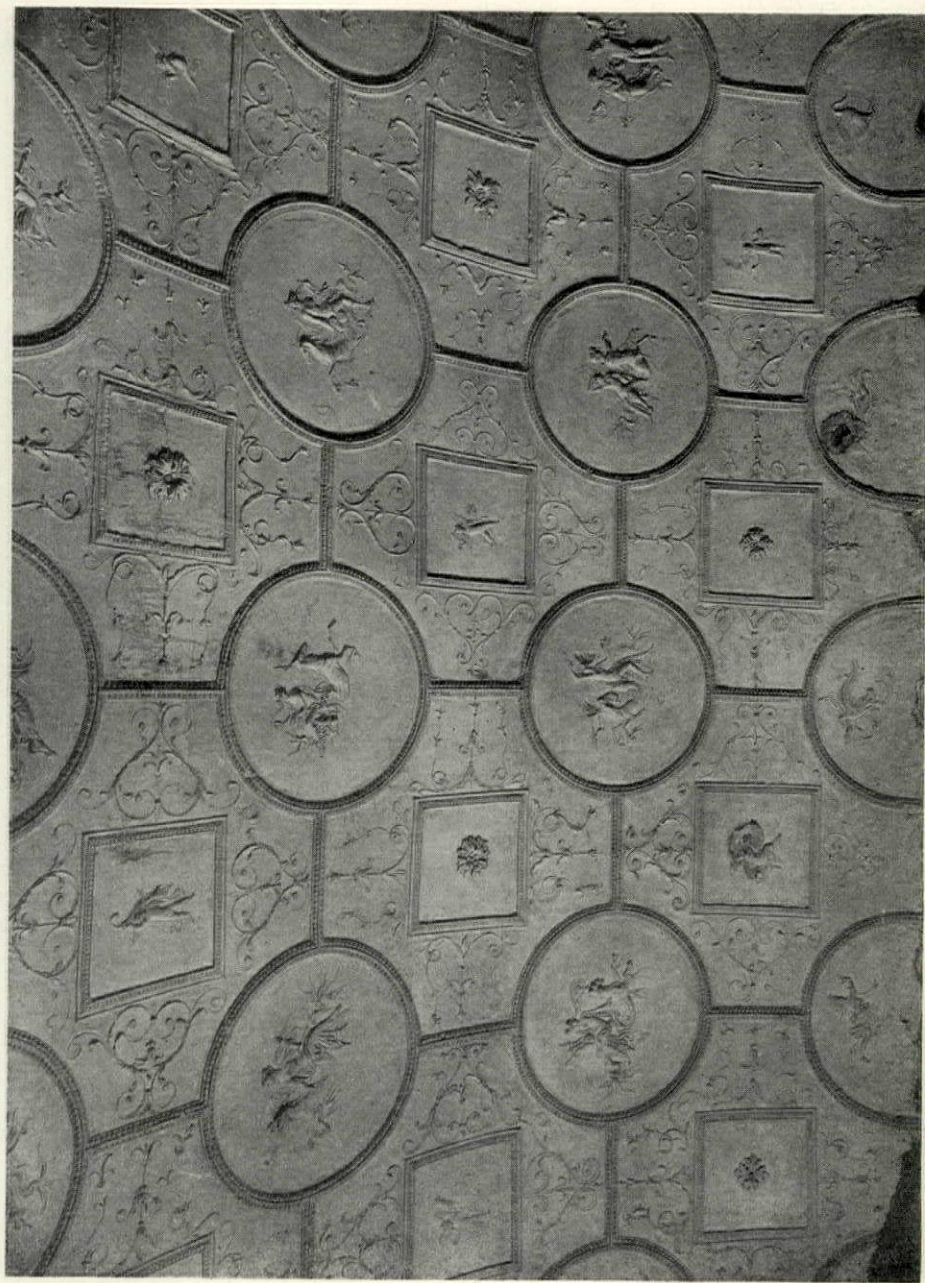
It would obviously be untrue to maintain that all Roman architecture lacks artistic vitality. Probably no generality is ever strictly true. The stucco reliefs of certain tombs on the Via Latina were modeled by a man or men who felt beauty, and who were singularly successful in transmitting that impression by a few powerful strokes on the wet plaster. Occasionally, in the carved ornament, as in the arch at St.-Remi, a real artist



ARCH OF TRIUMPH AND MAU-
SOLEUM, ST.-REMI, FRANCE.



DETAIL OF STUCCO CEILING IN
TOMB ON THE VIA LATINA, ROME.



DETAIL OF STUCCO CEILING IN
TOMB ON THE VIA LATINA, ROME.



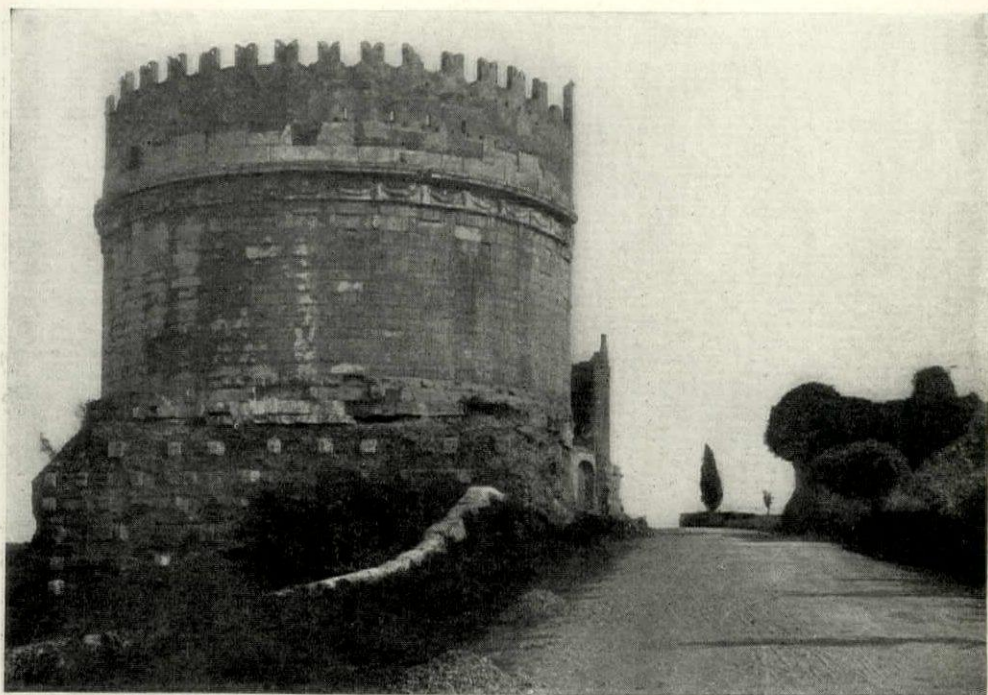
ROMAN FORUM, SHOWING THE TEMPLE OF VESPASIAN AND TITUS, THE ARCH OF SEPTIMIUS SEVERUS AND THE TEMPLE OF SATURN.

showed what life could be given to a traditional motive. Such flashes, however, only deepen the general impression of perfunctoriness in Roman work. Notwithstanding the variety of type, the skill in planning and engineering, the varied materials, the colossal scale (perhaps even because of the latter), the art as a whole is joyless, like a painful task performed more or less conscientiously, without enthusiasm. One feels intuitively that the builders cared little for the selfish Caesars in whose honor they erected triumphal arches and palaces; that they cared little for the populace, to shelter whom they built unending colonnades on the streets and forums; and, least of all, for the temples to strange, cold gods. The yoke of the taskmaster lies heavy upon their arm, as it lies upon the arm of the worker in a modern factory.

It is by this token, perhaps, that the failure of Roman architecture is most clearly proved. For the essence of all great art is joy: the joy of grandeur, the joy of poetry, the joy of gloom, the joy

of tears perhaps, but always joy. The genius imbues the object of his art with a spark of this divine joy, so that it may awaken in others the same, or a kindred, emotion. Many may feel such emotion without the ability to express it; many may have the ability for expression without feeling the joy to communicate. Such will endeavor in vain to simulate or force an emotion which is not genuine. They may succeed in deluding even the keenest critics for a while, but the eternal difference of value abides unchanged, unchangeable. If there be not joy in creation, all is in vain.

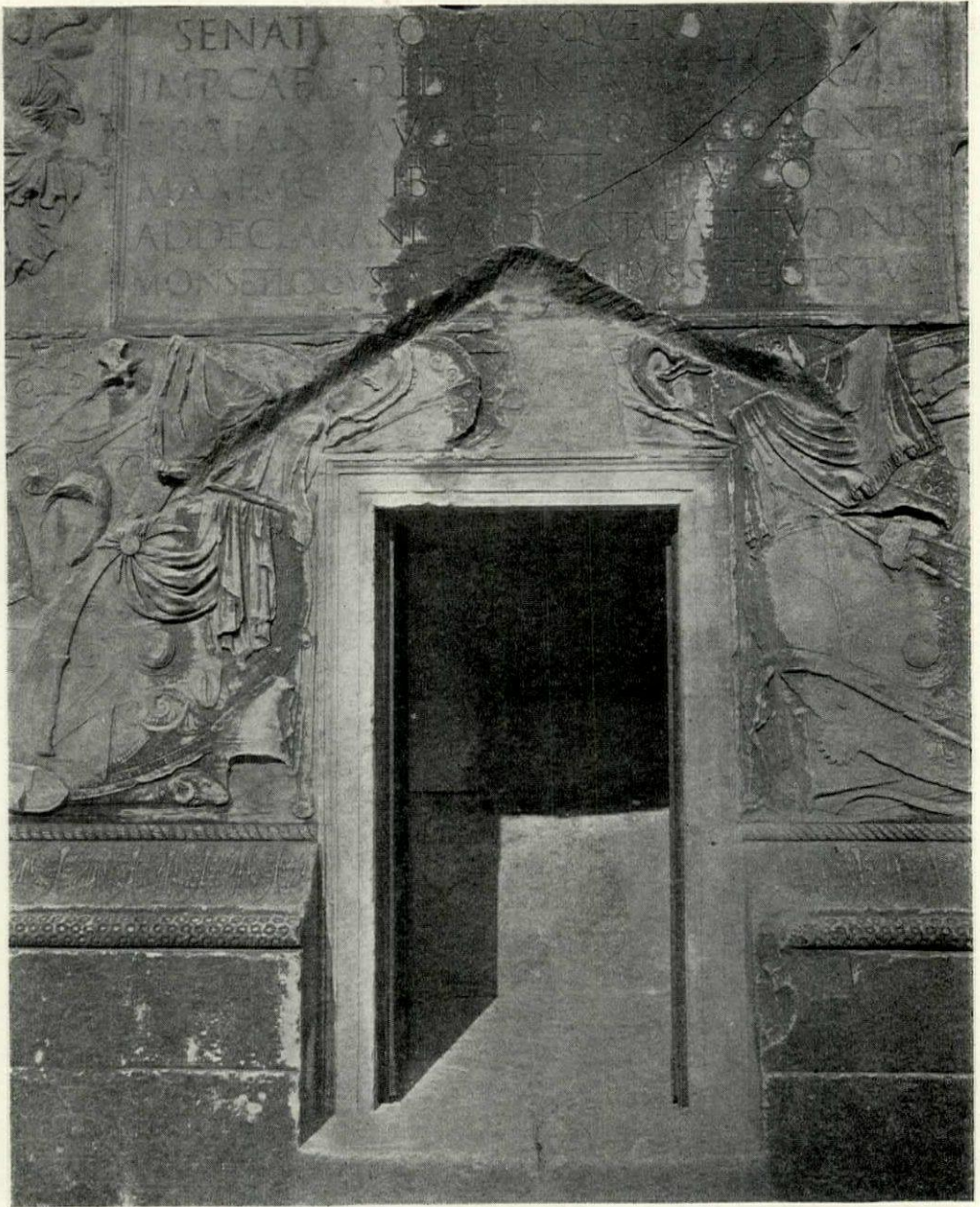
The truth of this may be illustrated in a sister art. If the *Virgin of the Rocks* at London were an original by Leonardo da Vinci, its importance would be incalculable. If it is a copy of Leonardo's painting by his pupil, Ambrogio da Predis, all the world will esteem it much less. In either case the picture is intrinsically the same. The keenest critics have been proved quite capable of mistaking the copy for the original. Is the original prized and the copy depre-



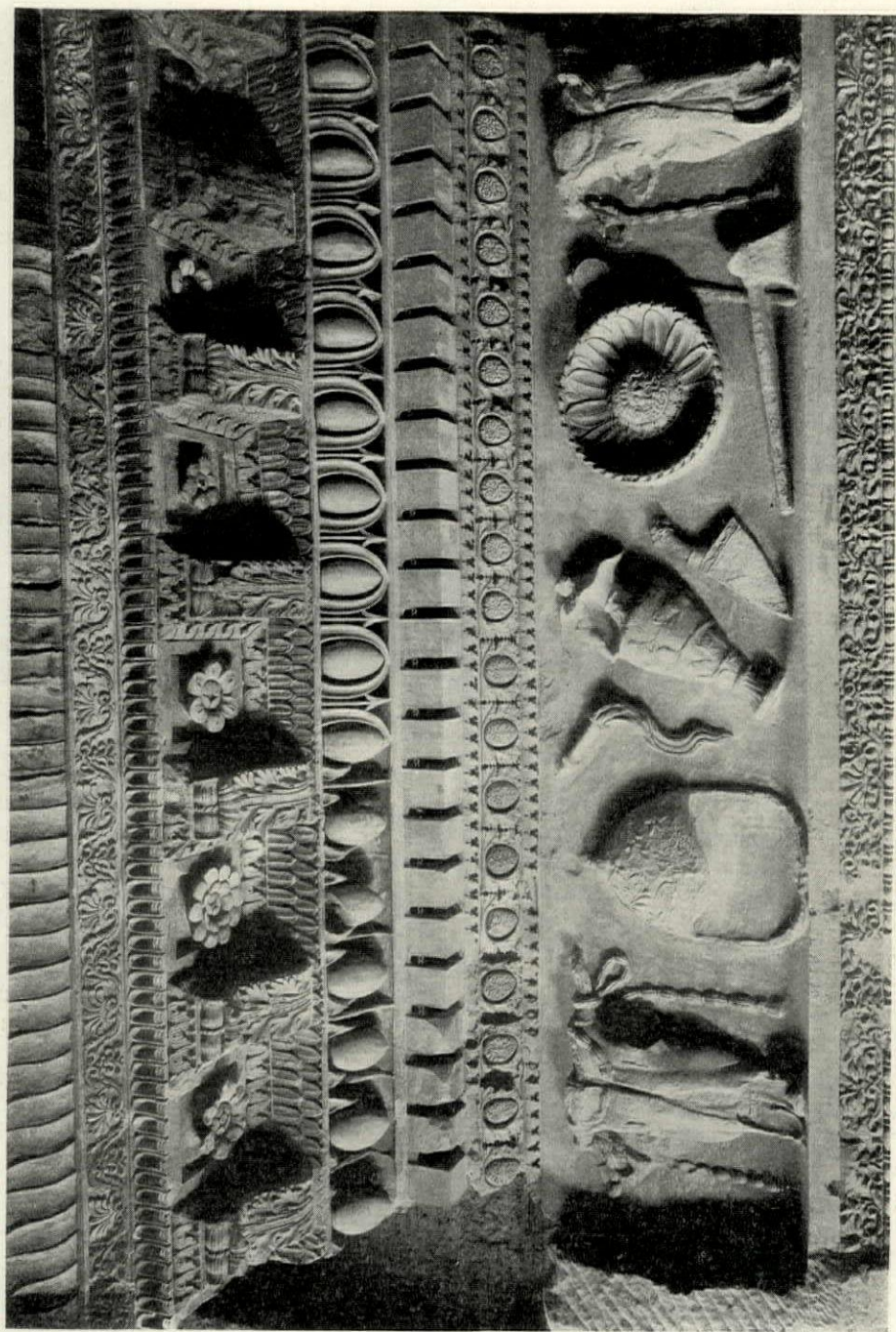
VIA APPIA, ROME, WITH THE TOMB OF CECILIA METELLA.



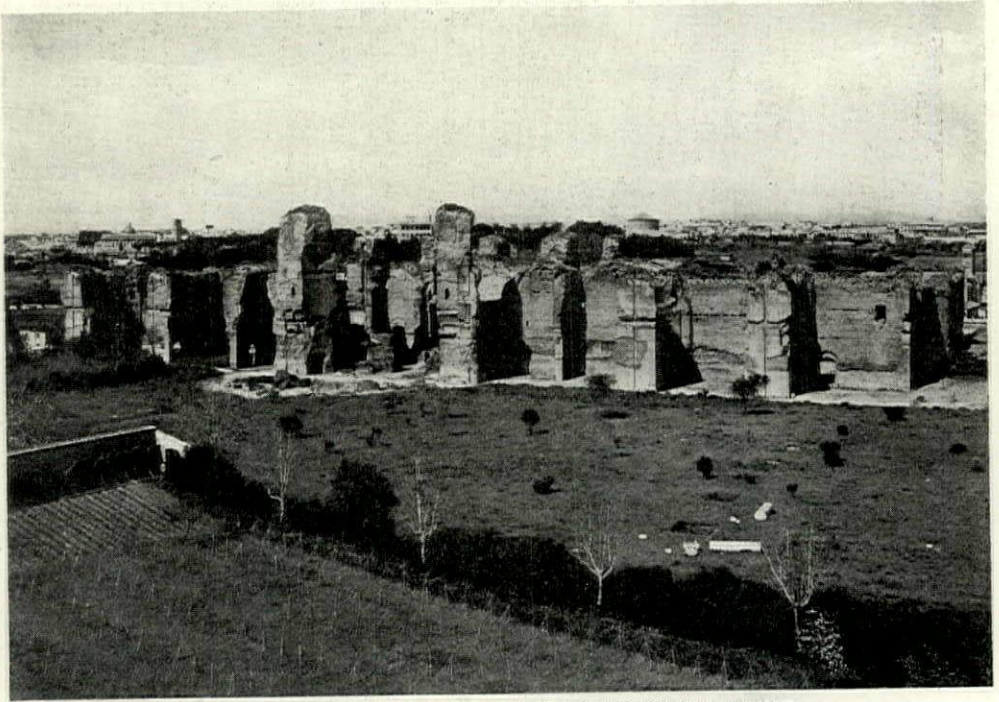
VILLA ADRIANA, TIVOLI.



DETAIL OF THE BASE OF THE
COLUMN OF TRAJAN, ROME.



RESTORATION BY VALADIER OF THE CORNICE OF
THE TEMPLE OF VESPASIAN AND TITUS, ROME.
FROM THE ORIGINAL IN THE TABULARIUM.



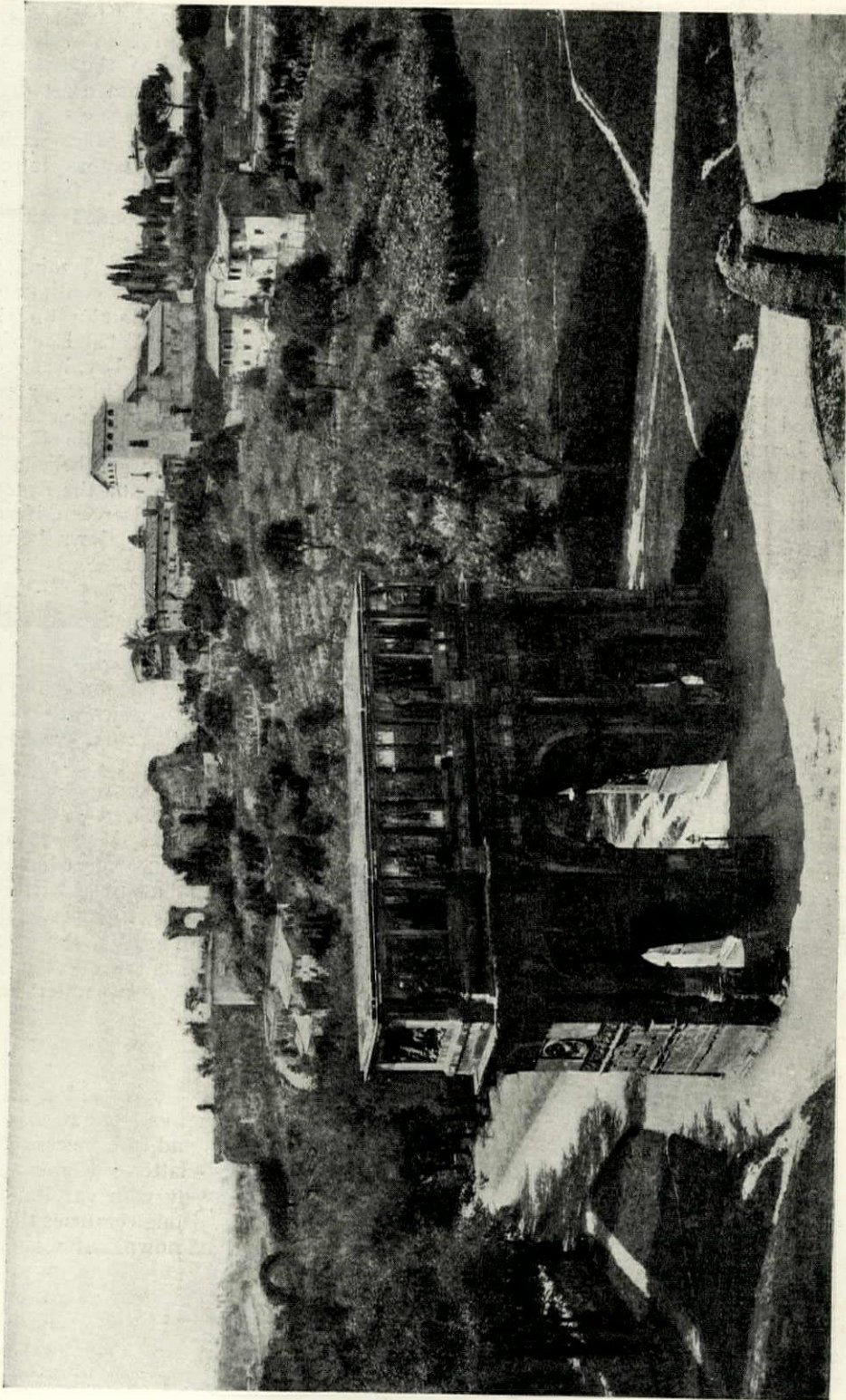
GENERAL VIEW OF THE BATHS OF CARACALLA, ROME.

ciated because we are such fools as to be guided in our artistic preferences by a name? I think not. The Paris original possesses an intrinsic value which the London copy lacks. The absoluteness of this value continues none the less to exist, even if it be mistaken by critics who happen to have gone astray. The value of an original lies in the fact that it communicates to us directly the conception—the impression of joy—of the creator; whereas in a copy the impression is almost necessarily blunted by transmission through another hand.

I have often heard architects, in speaking of some *projet*, use the phrase, "great fun." In fact, the words have almost become current architectural slang. They are vastly significant. They express simply, and without pretension, that joy which is equaled by no other, the joy of creative work. The element of joyousness is thus not altogether lacking in our modern architecture. It is to be regretted that it does not more often extend downward from the architect to his office force, and that it is frequently crushed out entirely by the combined

forces of steam heat, plumbing, and labor unions.

There remains, it is true, a deep mystery in Roman architecture. If we grant that it is lacking in the spirit of joyousness, and that joy is the essence of great art, how are we to explain the admiration, the adulation, that for centuries has been heaped upon the Roman style? It is necessary, first of all, to concede that it is no new thing for artists, and even for critics, to mistake a crow for a swan. The vogue of the eclectic painters, whose art is so closely akin to that of ancient Rome, lasted until yesterday. Perhaps we have already touched upon the inner essence of the matter in discussing the relative values of original and copy, and the necessary inferiority of the latter. Roman art is a copy, a free copy with variations, but still a copy. For long centuries the original remained unknown. It was unsuspected that Roman architecture was a copy. Men praised it for a beauty it possessed only at second hand. Winckelmann set the modern world upon the track of discovering the original. When Greek



ARCH OF CONSTANTINE
AND THE PALATINE, ROME.

architecture had once been brought to light, the inferiority of the Roman replica became manifest. It was at once clear to architects, critics and public alike (at least in America) that the spirit of joy, of enthusiasm, of poetry was present in Greek work, and that Roman architecture possessed these qualities only by reflection. There ensued the Greek revival. However, a little knowledge proved a dangerous thing; modern architecture imitated from the imperfectly comprehended Greek was seen to be less successful than that inspired by the more tangible Roman style. Hence the profession sought to reinstate the sadly shattered idol on her paper throne.

Furthermore, in accounting for the popularity of Roman architecture, we must constantly bear in mind that the art exists only in imagination. Each person has had to reconstruct his own visual image of the appearance of the build-

ings. Former centuries did not possess our prosaic archeological information. Inspired by the beauty of the ruins, a Piranesi might imagine Roman art fired with an originality, a joyousness, which the Romans never knew. Many architects, notably our own Thomas Jefferson, have done precisely this. Thus the shade of Rome was shrouded with a phantom glory.

From what has been said, I think, it will be evident that I must continue to differ from Professor Hamlin on the question of Roman art. What I felt instinctively, intuitively, as a boy, has been confirmed by the most careful study and thought of which I am capable. I believe, and I believe deeply, in Greek, Romanesque and Gothic. I believe in the Italian Quattrocento, and the American Colonial, even in the Barocco, if you will; but I refuse to bow down before the Goddess Rome.



BATHS OF CARACALLA, ROME.



LATROBE'S DESIGNS FOR THE CATHEDRAL OF BALTIMORE

BY FISKE KIMBALL



Part II

OF the two designs which Latrobe first submitted for the Baltimore Cathedral, the Roman one involved a far less radical break with Colonial academic traditions than the Gothic, and proved to be the one that was favored. Although the architect had determined what he felt to be the minimum size for the choir, and had made the rest of the church dependent upon this, the authorities felt it to be too expensive. Accordingly on July 9 Latrobe submitted a reduced design (III), which, he stated, "retains also the form of a Latin cross, has a dome, and is so contrived that the porticoes, and indeed the internal columns, may be the work of a future day." In response to Bishop Carroll's suggestion, he adds, "the circular form of the end of the choir has been adopted." The design thus described must have been not wholly dissimilar from the later one (V), according to which the execution was commenced, but was considerably smaller, with the internal height of the dome only thirty-six feet five inches. The authorities were willing to go beyond this. A similar scheme (IV) with somewhat greater dimensions, still retaining porticoes on the transepts, was unanimously adopted before the close of 1805.

All the designs so far had provided for seating all the worshipers in the nave, with very narrow aisles intended merely as passages which should preserve the canonical form of the church. Influenced perhaps by the wide-aisled Colonial churches which they knew, the Trustees desired the enlargement of the side aisles by ten feet. This demand, as Latrobe wrote, "involved the principle of his design," and to satisfy it and yet secure the other necessary relationships he had to ask for some extension in length also. On the Bishop's request, the porticoes of the flank were dispensed with, and the transepts extended as far

as these had projected. With the resulting design (V) Latrobe expressed himself satisfied, the Trustees acquiesced in his changes, and he finished the first of the working drawings in March, 1806.

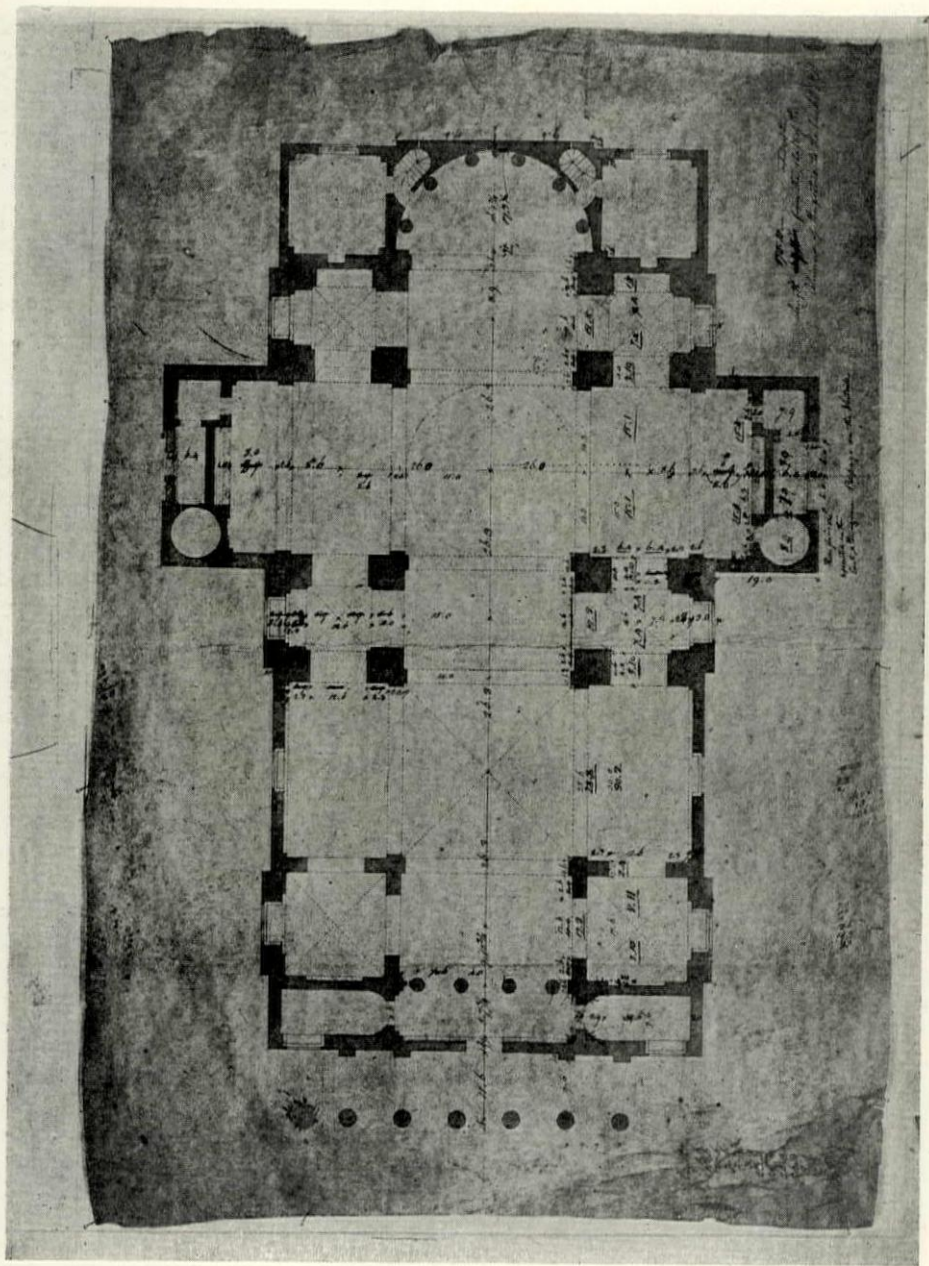
The scheme of this design is fundamentally different from the first Roman scheme, and has its own merits. There is no longer any suggestion of the Greek cross. The whole is essentially a rectangular mass with a nave of alternating bays, three narrow and two wide, having one of the wide bays slightly extended to form the transept. The crossing is no greater in diameter than the groined vault of the large nave bay, but it is accentuated by a dome. The tallness and smallness of this dome in relation to the exterior Latrobe sought to remedy by an outer section much flatter and broader, although this led him into Soufflot's difficulty, that there was no satisfactory bearing for the outer wall of the drum. The effort to eliminate interior columns, which had formerly been used to decrease the span of the arches in the nave, forced the adoption of segmental arches and vaults. This greatly reduced the lunettes, so that windows were introduced into the aisle walls. The floor of the church was raised five steps above that of the portico, to keep the exterior columns in proportion to the height of the attic. In spite of Latrobe's efforts, the design, especially on the interior, had become more Renaissance than classical.

The execution of the design was no sooner begun, under the supervision of Rohrbach, a Baltimore builder who had been selected with Latrobe's consent as clerk of the works, when difficulties were created which forced Latrobe to fight for the preservation of the plan. Although the building committee and the Trustees had agreed that no alterations should be made without the architect's consent, many were made in the founda-

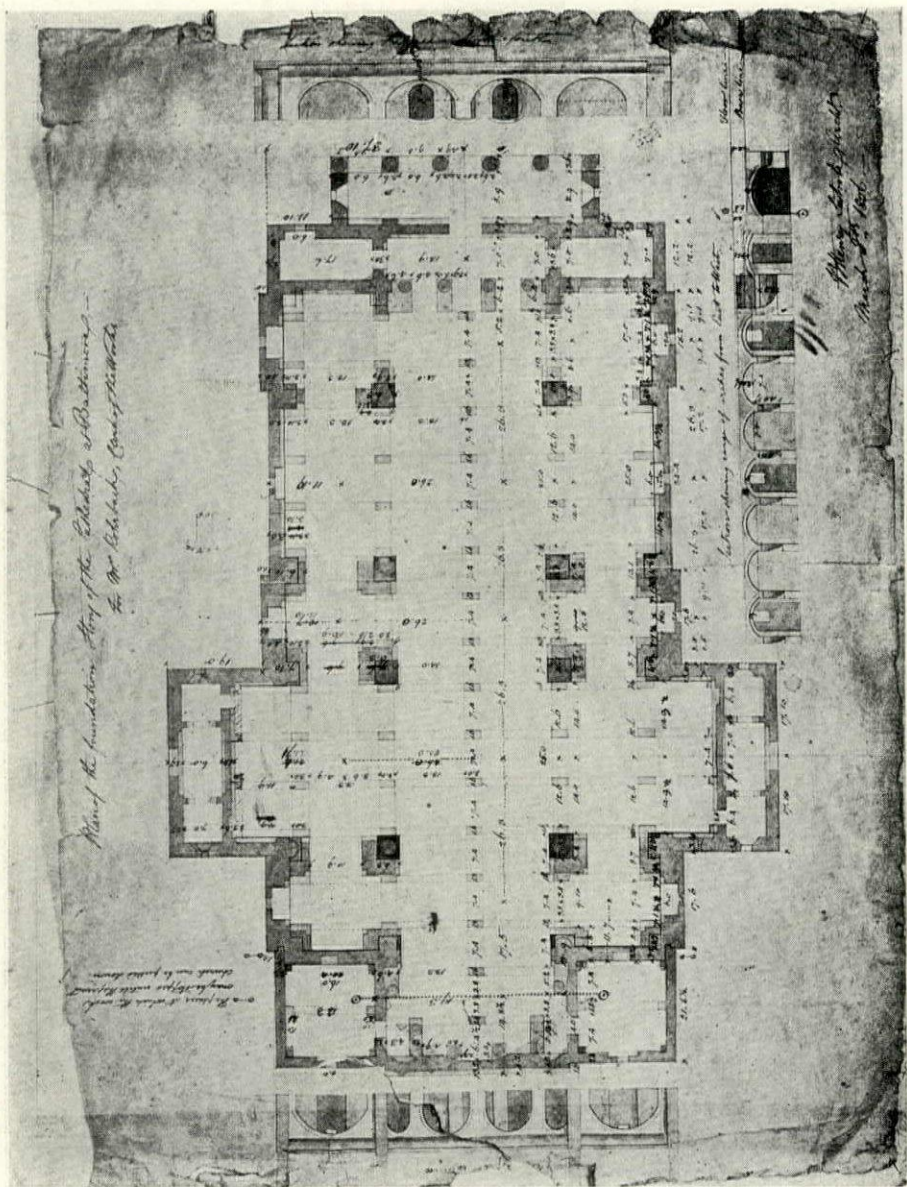
tions during his absence, by Rohrbach, acting under the personal orders of John Hillen, the chairman of the committee. In truth both Rohrbach and Hillen were little prepared either to understand or to sympathize with Latrobe's intentions. The German Lutheran church in Baltimore, then under construction from Rohrbach's design, which gives some measure of his architectural knowledge, is of a vernacular Gothic or Romanesque character with corbeled cornices and pointed arches having square jambs. The vaulted crypt shown in Latrobe's drawing of the foundations was so far beyond his ideas that he looked at the sections of it upside down and supposed it a foundation of inverted arches. The masonry vaulting of the church itself, unprecedented in America, was looked upon as chimerical, and Rohrbach with Hillen's support carelessly altered Latrobe's drawings and circulated a plan of his own. In spite of strict mandates from the Trustees, these unauthorized actions continued so that Latrobe was three times forced to demand his drawings and withdraw from the work. The Bishop's support of him, however, finally insured Rohrbach's subordination, and Hillen in March, 1807, resigned his chairmanship. The modifications in the foundations necessitated a somewhat revised plan (VI), agreeing as well as possible with the work already executed. Even then the committee insisted on a reduction in the height of the crypt, dropping the floor of the church to the level of the floor of the portico. This, as Latrobe warned them, destroyed the relation between the external order and the attic. "But," he wrote philosophically, "notwithstanding, let the alteration be made. I will devote the necessary time to a new design, and hope it shall succeed. I do not see how at present, but the resources of art are infinite." The only solution, as he foresaw, was "to place the principal cornice at the height of the building," thus producing "as handsome a front as could be desired." This step, from which he had been hitherto deterred only by the expense, he was now forced to take, producing the exterior shown in the first

perspective drawing. He abandoned the lunettes, and also eliminated the false bearing of the large saucer dome of his fifth scheme, securing sufficient importance for a smaller dome by raising it on a peristylar drum. On a perspective drawing of this beautiful design he lavished all the resources of finished draftsmanship, doubtless in the hope of arresting the imagination of his clients and fixing it finally on this one scheme.

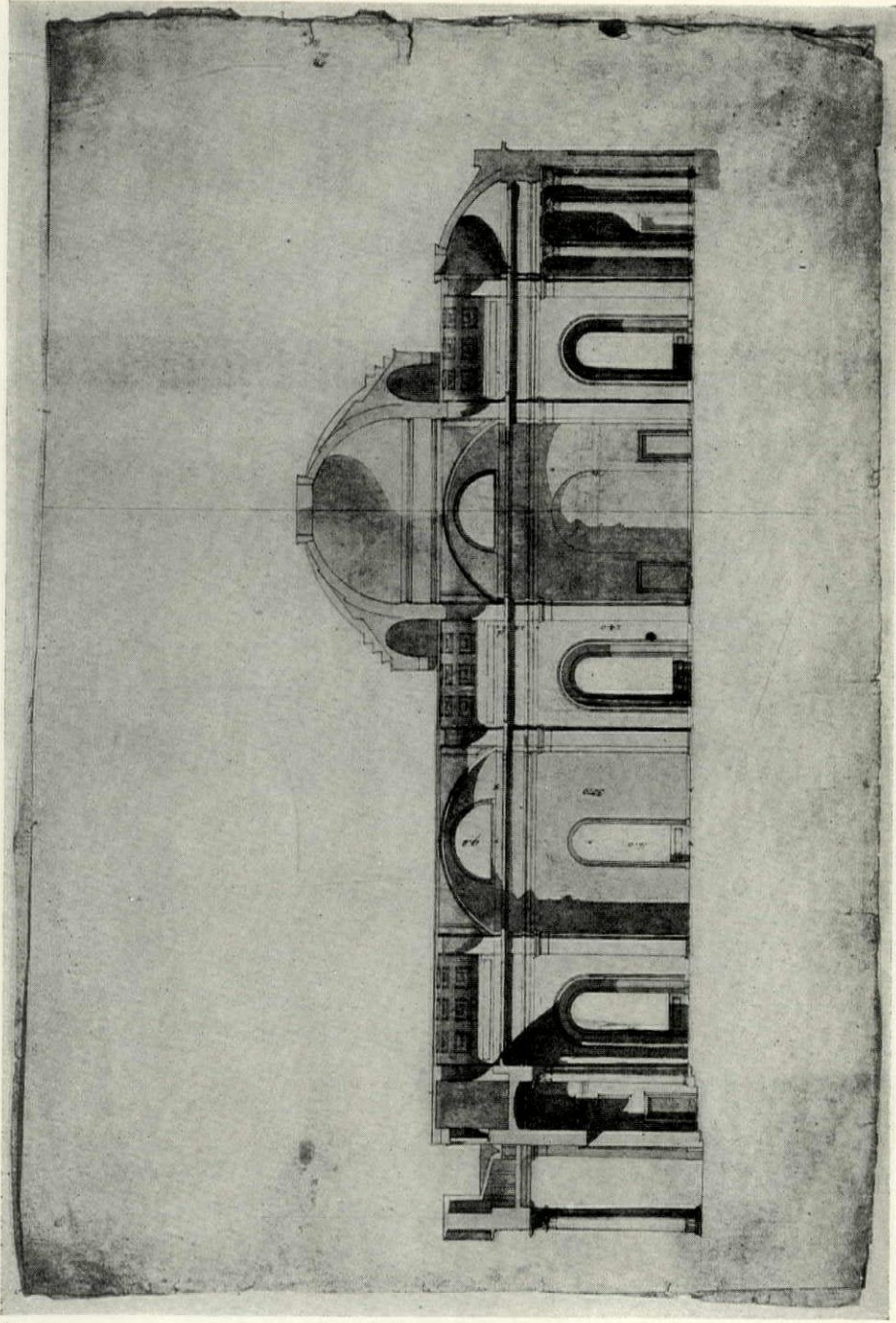
A single practical difficulty only remained, and although it was not of his making, Latrobe was not satisfied until it was removed. The widening of the aisles at the instance of the Trustees had made them of consequence in the room of the church, and the piers were thus too big. When it came time to furnish the working sections Latrobe attempted to correct this. In an ingenious scheme drawn over the abandoned basement plan of the fifth design, he tried the experiment of substituting columns for all the piers. This scheme, reducing the church to a vaulted basilica with alternating bays, like San Salvatore in Venice, seems not to have wholly pleased him, for he turned to an alternative expedient of getting rid entirely of the four centre piers of the church. This he accomplished by returning to the principle of his first Roman design, making the rotunda at the crossing as wide as both nave and aisles together, with the aisles opening into it diagonally. The wider aisles now gave the scheme more the proportions of the similar arrangement in the plan of St. Paul's. The greater diameter given to the crossing also permitted a return to the saucer dome of Roman proportions both inside and out, now descending on adequate bearings. This final solution (VII), which Latrobe embodied in a new rendered section and perspective, was the consummation of his wishes so far as past restrictions permitted them to be realized. Although reducing the size of the choir, it gave the church a central feature of Roman character and monumental scale, which has continued to dominate the church in spite of successive enlargements of the sanctuary.



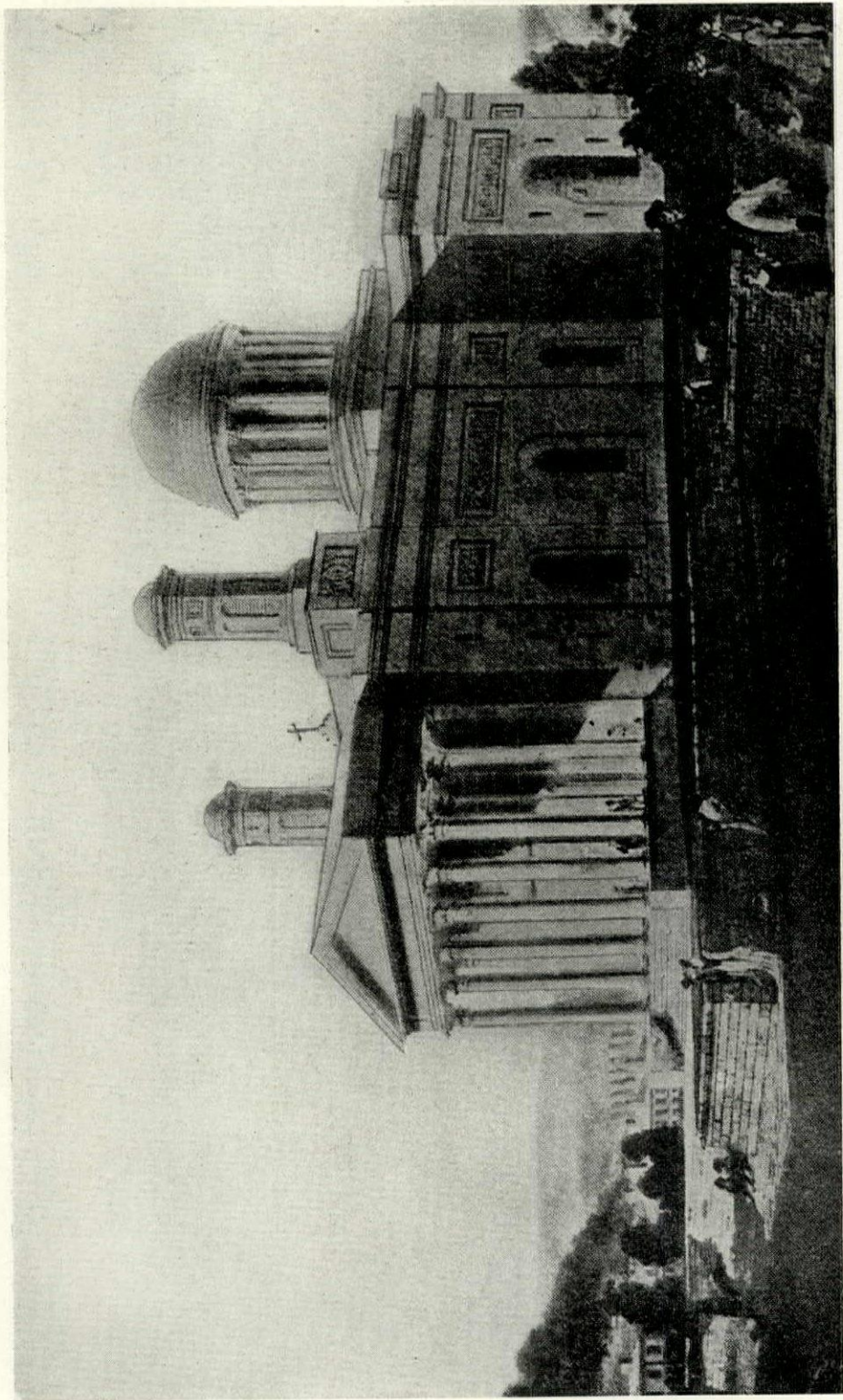
PLAN OF LATROBE'S DESIGN ON WHICH THE EXECUTION WAS COMMENCED (V). A FAINT LINE MARKS THE POSITION OF THE ENLARGED ROTUNDA IN DESIGN (VID).



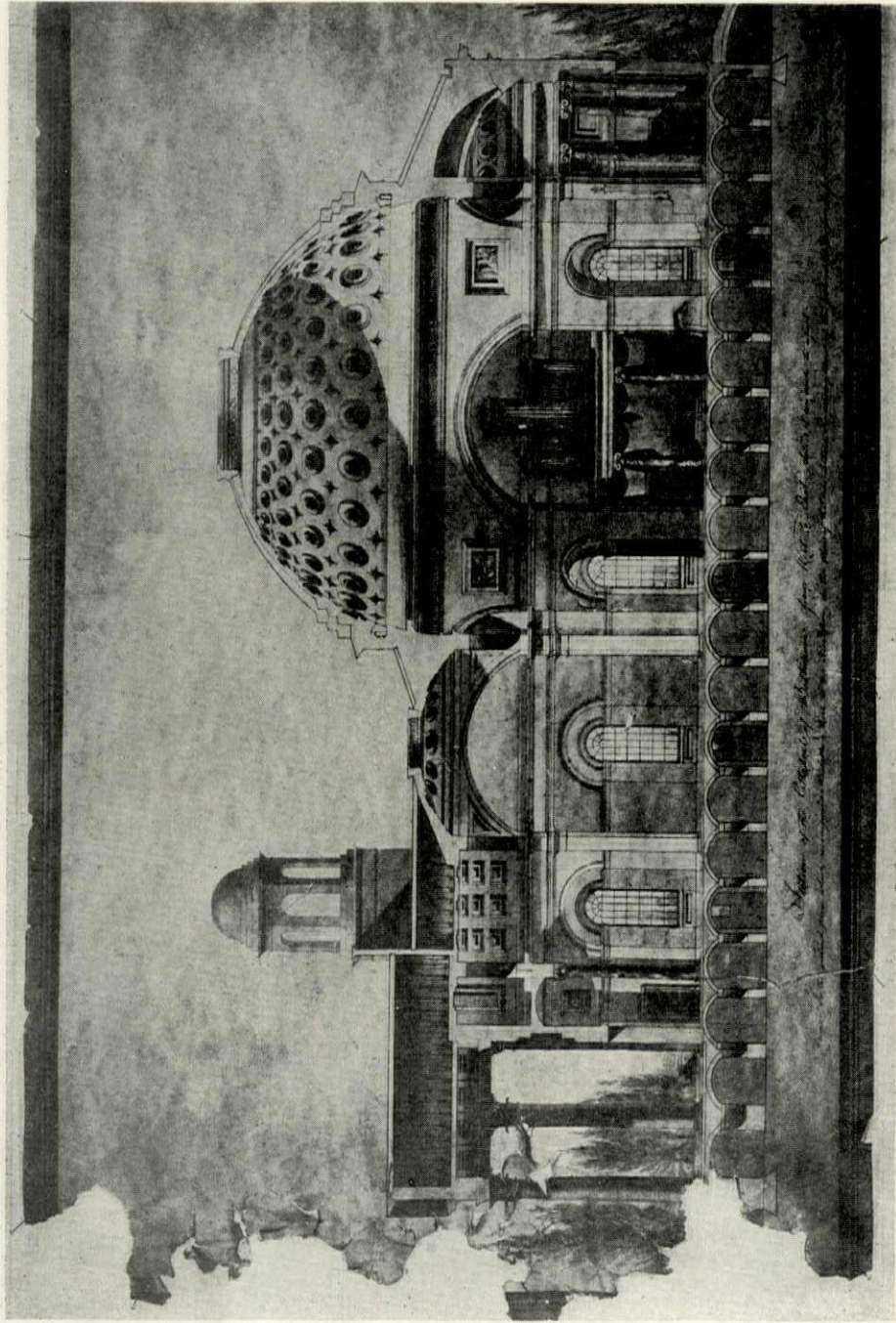
PLAN OF THE FOUNDATION ON WHICH THE EXECUTION WAS COMMENCED (V). OVER IT IS DRAWN A STUDY FOR SUBSTITUTING COLUMNS FOR THE PIERS OF THE UPPER CHURCH.



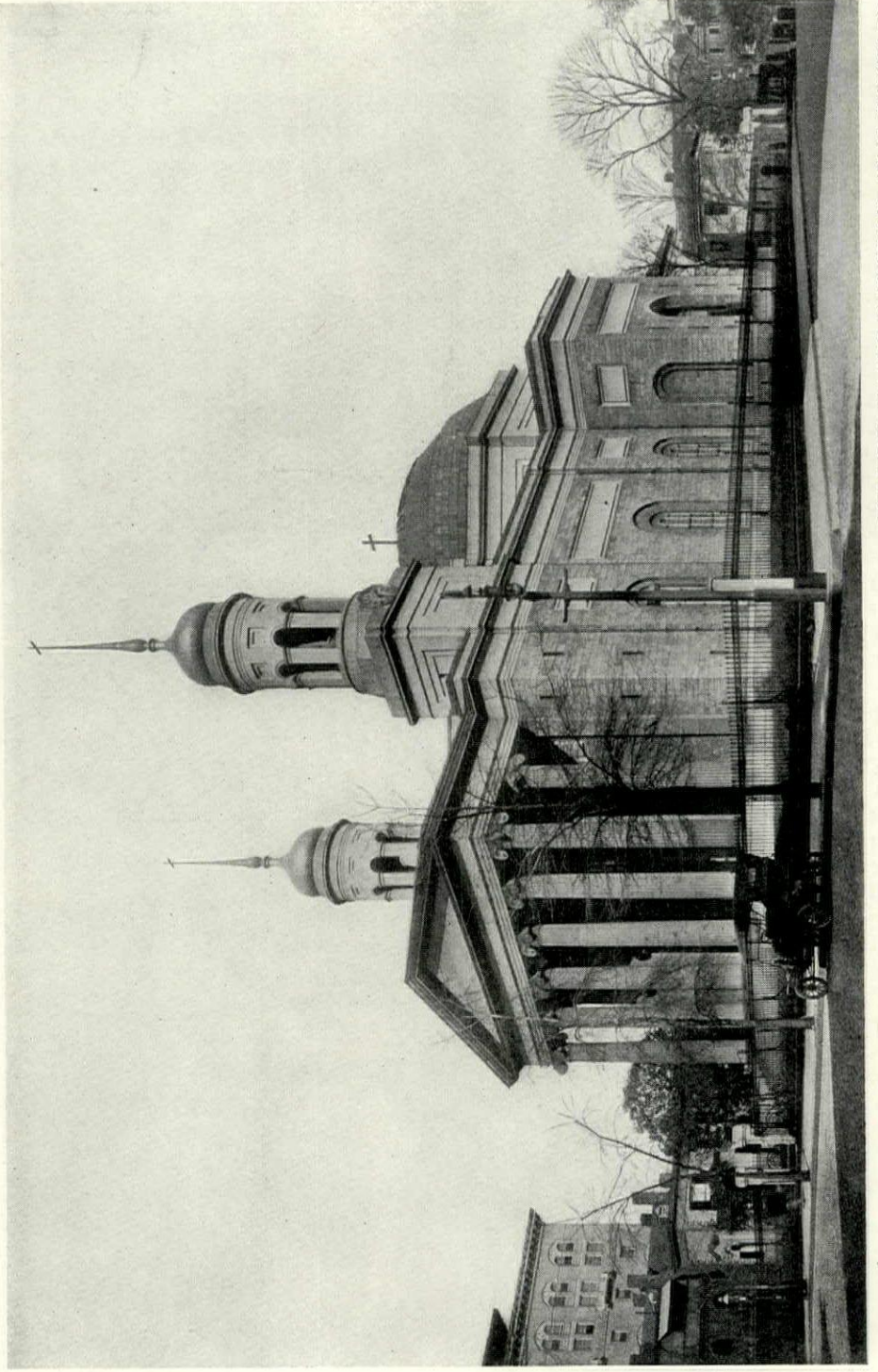
SECTION OF LATROBE'S DESIGN ON WHICH
THE EXECUTION WAS COMMENCED (V).



THE MODIFIED EXTERIOR
OF LATROBE'S DESIGN (VI).



SECTION OF LATROBE'S
FINAL DESIGN (VII).



EXTERIOR OF THE CATHEDRAL AS IT STANDS TO-DAY. THE TERMINATIONS OF THE TOWERS ARE UN-FORTUNATE ADDITIONS TO THE ORIGINAL DESIGN.

From the adoption of this scheme in March, 1808, work on the cathedral went happily forward. In spite of an interruption from 1811 to 1817, caused by war conditions, it progressed so that in 1818, before Latrobe's departure for New Orleans, he had the satisfaction of seeing his great work entirely covered in, and the belfries under construction. On May 31, 1821, the cathedral was dedicated. The portico, to be sure, was not added until the seventies, when John H. B. Latrobe, the son of the architect, supplied details conforming to the Ionic order of the north porch of the Erechtheum. Already before 1832 the unfortunate turnip-shaped roofs had been added to the belfries, so strikingly incongruous with Latrobe's design. To accommodate the increasing numbers of clergy at great festivals, the church has been twice lengthened toward the east, in 1879 and 1890. As the nave bays have thus been duplicated in the choir the result is merely to supplement and enhance the original scheme.

As it stands today, the cathedral, in spite of the belfry roofs and the somewhat meretricious decoration of the interior, may well command respect, judged by any standards. The frankness and impressiveness of its paneled granite walls—reminiscent, in their absence of columnar decoration, of Chalgrin and the Arc de l'Etoile—are an object lesson in *architecture raisonné*. The interior affords an equally valuable lesson in the composition of spatial forms. The great central rotunda has a majesty truly Roman. Thus, although a hundred years have passed since its building, the patriarchal cathedral still remains without question the finest classical church in America.

That the founders well knew the boon conferred on them by the skill and artis-

try of their architect, is witnessed by their letter to Latrobe on his final departure from Baltimore in 1820, a unique testimonial which many an architect might envy:

"Under the blessing of Divine Providence," they write, "this magnificent building, the design and plan of which are entirely yours, is fast approaching completion, and bids fair to stand for ages as a monument, not only to the piety of those who have contributed to its construction, but likewise to your genius and architectural skill and taste, for having availed themselves of which, the Trustees consider themselves singularly fortunate. The Trustees perform a pleasing duty, in bearing testimony to the accuracy of your estimates of expense, whenever they were called for, and they look back with great satisfaction to the harmony and good understanding which has ever subsisted between you and themselves. It is true that objections were sometimes made to parts of your plans, the propriety and connection of which their inexperience did not permit them at the time to discern clearly; but now that the various details of the building form one grand and beautiful whole, they are fully convinced of the propriety of having on such occasions given way to your greater experience and better judgment. Rest assured, Sir, that the Trustees will ever cherish the memory of your distinguished services, and in taking leave of you, which they do with the utmost regret, they will indulge the hope that your great abilities will meet with the encouragement to which they are so eminently entitled, and they fervently pray the Almighty Being, to whom you have erected the most splendid temple, on this side of the Atlantic, to take you under his special protection."

ARCHITECTURAL WALL PAINTING

By Charles H. Moore

A THEORY has prevailed in very modern times that painting on walls for architectural embellishment should have a different character from that which belongs to what we commonly understand by picture painting. It is thought that the ornamental purpose of a wall painting and the conditions under which it must be seen require that it should differ fundamentally from an easel picture enclosed within a frame and viewed independently under favorable light.

The most distinguished exponent of this theory was the late Eugène Viollet le Duc, who, in the article *Peinture*, in his *Dictionnaire Raisoné de L'Architecture Française*, maintains that in order to secure the relationship that should exist between architecture and any painting with which it may be adorned, the painting must conform to and emphasize the structural forms and have a conventional character wholly different from that of purely pictorial painting. Picture painting and wall painting, he tells us, should proceed on different lines and reach different results. A picture, according to him, is a representation of a scene, with light falling in one direction and with unity of effect. To view such a picture from any other than the true station point is, he thinks, painful to a sensitive eye. The primary function of an easel picture is, he affirms, to produce optical illusion, which is incompatible with the ends of monumental painting on walls. Therefore, he tells us, the most brilliant epochs of art admitted no such enormities as those of pictures with their horizons above the eye and their perspective centres possibly far to the right or left of it.

In support of this view the author cites historic examples and affirms that the further we go back in the history of the art the closer relations do we find

between architecture and any ornamental painting on its walls, arising from conformity of the painting with the structural forms, and from the absence of developed pictorial qualities. He reminds us that in France during the Middle Ages, such wall painting as there was retained the character of the more ancient art, and thus fulfilled the conditions that he thinks essential to effective ornament. He observes, however, that the Byzantine mosaics, so freely employed in the early medieval monuments of Italy, are not always in accord with the architectural forms; and on this account, as well as because of what he considers an objectionable metallic quality, he characterizes them as barbaric. It is certain, he remarks, that the Greeks of antiquity, though they held color decoration to be necessary to architecture, were too appreciative of form to admit such works in their monuments. Save in these mosaics the color decoration of walls did not, he affirms, lose the conventional character that he considers essential, until the time of the Italian Renaissance, when isolated pictures, painted in the studio, were substituted for paintings directly on the walls.

In discussing further what he considers the proper difference between wall painting and independent picture painting, he maintains that those peoples who are commonly thought to be the finest colorists—as the Venetians and the Flemings—are not colorists in the sense that the Chinese, the Japanese and the Persians are colorists. To give an effect of reality in a picture by delicate half-tones, as in the works of Titian or of Rembrandt, and to make a shawl of Tibet which pleases the eye by nothing more than an harmonious combination of flat colors, requires, he thinks, two very different operations of mind.

This argument, it appears to me, pro-

ceeds on a mistaken notion. It rests on a misconception of what it is that gives ornamental value to wall painting, on the one hand, and ignores, on the other hand, the ornamental quality that underlies even the most realistic art, if it be art at all. What may be called the fundamental qualities of color design are common to painting in all its forms. While there is, indeed, a great difference between a painting by Titian and the abstract color composition of an Eastern fabric, there is not such a difference as to justify the affirmation that they proceed on different lines and have nothing in common. A little consideration will show, I think, that the art of Titian is but a development of that of the Eastern weaver. For the abstract color patches of the fabric may give place to suggestions of the figures of men and animals, and the historic development of figure painting, from that of the most primitive art to that of Titian, consists in little more than giving to the grotesque symbolism of the ancient composer a more natural character, by improved delineation, by the addition of tones and gradations that suggest relief, and by the introduction of groupings in receding planes with gradually perfecting perspective. The distinguished writer whose theory we are considering has failed to perceive the essential oneness of all painting, whether on the walls of buildings or on isolated panels or canvases. Thus the fact that suitable conventions in all forms of art take care of themselves when the artist works without sophistication has escaped him, and he does not see that no vital art is the outcome of a theory.

In order to reach a clear understanding of the true principles of wall painting it will be well to consider (1) what constitutes the ornamental value of such painting and to what extent naturalism may be consistent with it; (2) how far pictorial art unconnected with architecture should have an ornamental quality; (3) how far historic monuments justify the notion that wall painting must be essentially different from other painting; and (4) what line of distinction can be drawn between ornamental wall

painting and painting that is primarily pictorial in motive.

I.

In order that painting may have value as ornament it must present a broadly effective color harmony; it can admit nothing inconsistent with this. But all color composition is of necessity based on form of some kind. Even Viollet le Duc's shawl of Tibet has its color patches proportioned and limited by some sort of outlines, and the ornamental painting of more cultivated peoples—as that of the medieval French illuminators—is on a foundation of beautiful linear composition, which is essential to the total effect of the color scheme, since this depends on the magnitude and location of every patch and speck of color, and these are fixed by the lines. In such art the eye is charmed by beauty of line and color apart from any representative character or suggestion that may be included; and this I conceive to be what constitutes the ornamental quality of painting.

But ornamental painting need not be exclusively of this very abstract character. It may admit a considerable amount of pictorial naturalism. Even perspective and chiaroscuro are quite compatible with ornamental effectiveness, so long as the principle of form and color harmony is kept dominant. There is no ground for Viollet le Duc's affirmation that a picture can be viewed with comfort from no other than its exact perspective station point. A picture is rarely seen from precisely this point, and it may be viewed from many points far distant from it without material disadvantage. The eye makes large allowance in this matter, and it would puzzle the average beholder to find the true station point from which the perspective of almost any given composition was determined. Moreover, few, if any, great works of art are rigorously correct in perspective. Considered as ornament, what we regard in wall painting is not verisimilitude, but, as already remarked, the broad division of the surface into proportioned spaces of harmonious color on a beautiful linear basis. On this foundation it is hard to fix a limit to the degree of naturalism that may be allowed.

II.

What we commonly understand by pictorial art—art not associated with architecture—is not properly mere imitation of nature with a view to illusion, though the idea that it is so has widely prevailed in times of technical advancement in the means of imitation, both ancient and modern. It was not unnatural that such an idea should arise in the popular mind after painting had become dissociated from architecture, and skill enough to make illusive suggestion possible had been attained. But so long as the art was mainly confined to wall surfaces and the embellishment of small objects, including the pages of hand-written books, naturalism was not developed to an extent that could give rise to illusive imitation. With the advent of the easel picture, however, the idea of likeness to nature was strengthened and at length became so engrossing that the ornamental principle was lost sight of. This condition is indicated by the remarks of ancient writers about likeness to nature in the works of their great artists, as in the story of the horse neighing at a picture of a horse by Apelles.

In modern times this idea of nature began to be strongly manifest in the sixteenth century, and the writings of Vasari abound in indications of it. Vasari's estimates of works of art are, as every reader of his writings is aware, largely based on the notion that lifelikeness constitutes the chief merit of painting; and he finds little to commend in the works of early masters, save where he thinks they show some degree of developing naturalism. His conception of pictorial excellence is fairly set forth in the following remarks on the so-called *Mona Lisa* of Leonardo da Vinci:

"Whoever shall desire to see how far art can imitate nature may do so to perfection in this head, wherein every particular that could be depicted by the utmost subtlety of the pencil has been faithfully reproduced. The eyes have the lustrous brightness and moisture which are seen in life, and around them are those pale red and slightly livid circles, also proper to nature, with the lashes, which can only be copied as they are

with the greatest difficulty. The eyebrows are also represented with closest exactitude, where fuller and where more thinly set, with the separate hairs delineated as they issue from the skin, every turn being followed, and all the pores exhibited in a manner that could not be more natural than it is; the nose, with its beautiful and delicately roseate nostrils, might be easily believed to be alive; the mouth, admirable in its outline, has the lips uniting the rose tints of their color with that of the face in the utmost perfection, and the carnations of the cheeks do not appear to be painted, but truly of flesh and blood: he who looks earnestly at the pit of the throat cannot but believe that he sees the beating of the pulses, and it may be truly said that this work is painted in a manner well calculated to make the boldest master tremble, and astonishes all who behold it, however well accustomed to the marvels of art."*

This is, of course, gross exaggeration. No such ridiculous elaboration will be found in the picture, highly finished in detail though it is. But the remarks give the measure of Vasari's notions of pictorial merit.

The same ideas had prevailed, as I have said, in the times of later Greek and Greco-Roman art, and found expression in the writings of Vitruvius and of Pliny; from whom, no doubt, Vasari largely drew his ideas. Most modern writers also have based their judgments on the same ideas. The more recent among them employ new phrases, as "tactile values" and "space composition," but the meaning is the same. Such people forget that representation of nature does not constitute a work of art and that optical illusion is not the aim of a great artist. The great artist does not strive to trick the eye, but to illustrate beauty through the natural conventions of art. He appeals to the imagination by truthful suggestion; but with whatever degree of naturalism he may clothe his idea, his primary object is to produce a harmony of form and color. The most naturalistic work of a true art-

**Lives of the Most Eminent Painters, Sculptors and Architects.* By Giorgio Vasari. Translated by Mrs. Foster, London: 1876, vol. II, p. 384.

ist has thus an ornamental value apart from any idea of representation that may be included.

III.

The notion that wall painting should be essentially different from other painting finds no support in the art of the past. It is true, indeed, that a great deal of ancient painting on walls was very conventional and consisted only of child-like outline and flat color with no perspective and nothing of what we understand by pictorial composition. But that this character was not given from any theory that wall painting should be different from other painting is shown by the fact that all other painting of the time had the same character. The wall paintings of the tombs and temples of the Nile and the paintings on papyrus rolls and mummy cases are identical. The conventions of ancient Egyptian wall painting were thus, it appears, due to the undeveloped state of the art at the time and not to any notion that they were particularly appropriate to painting on walls.

We know nothing from extant remains of wall painting among the Greeks in the best time of their artistic culture; but of Greco-Roman wall painting—which without doubt reflects, though imperfectly, the lost art of Greece—we have abundant knowledge from existing examples. These, of which there are many in excellent condition, answer to the account given by Pliny, who speaks of the decoration of walls in the time of Augustus, "with representations of villas, harbors, landscape gardens, sacred groves, woods, hills, fishponds, straits, streams, and shores."* The rich collection of such paintings, preserved in the Naples Museum, shows that a remarkable degree of naturalism was common in them. Although by inferior workmen, often faulty in drawing and always coarse in execution, these works exhibit advanced qualities, including perspective and chiaroscuro of very modern appearance. But there is no difference between the wall paintings and the easel pictures,

both of which are numerous in the collection.

Coming now to the Middle Ages, we find that in France and elsewhere wall painting was more archaic in manner than that of ancient Rome. With the breaking up of the old civilization the ancient skill in the arts was lost, and on the medieval revival a fresh start had to be made, with such help as could be got from tradition as embodied in the Byzantine manuscript illuminations and small ivory carvings that were widely circulated in the monastic libraries of Western Europe.

Little of the French medieval wall painting survives, however, and in the Ile de France—where the finest art of the Middle Ages was produced—there is almost none at all. But such mutilated fragments as may be found, as in the wall arcades of the Ste. Chapelle of Paris, make it clear that it had the same character as the contemporaneous manuscript illuminations, of which great numbers are preserved. This miniature painting, on the pages of missals and other books, has no perspective save such as belongs to the most childlike attempts at foreshortening. Forms are described by firm outlines in black or dark brown, colors are laid in nearly flat fields, though there is some suggestion of modeling. Cheeks are rouged, lips are reddened, eyes and hair are colored. But there is no expression of light coming from one direction. Lights and shades may occur equally on both sides of an object. Backgrounds are mostly flat—either of color or of gold—and while symbolic representations of architecture and furniture occur, neither these nor the human and animal figures have any ground to stand on. Thus wall painting and other painting were alike in France during the Middle Ages.

The most important wall painting in the history of art is that of Italy from the fourteenth to the sixteenth centuries; but this painting, even from its beginnings, has a distinctly pictorial as well as an ornamental motive. The frescoes of Giotto and of Lorenzetti do not at all conform to the theory of Viollet le Duc. They have little of the flatness and sym-

**The Elder Pliny's Chapters on the History of Art.* Translated by K. Jex-Blake, p. 147.

bolic abstraction of the earlier French work supposed by him to be essential to architectural effectiveness. Giotto's figures are as natural as he could make them. They are grouped in receding planes; they are modeled with great fullness; there is much freedom of action and of foreshortening, and they have ground under their feet, with landscape and architectural backgrounds in the best perspective that the early master could manage. Each composition is a complete picture, though it is harmoniously related to the general ornamental scheme of the series to which it may belong. That these frescoes are architecturally effective is not because of any avoidance of pictorial development, but because they are founded on those broad principles of harmony in form and color that constitute, as I have said, the ornamental quality of painting. Therefore they illuminate the walls of the churches and cloisters where they occur, just as the works of the French ornamenter illuminate the pages of a missal. And the frescoes of Giotto on the walls differ not at all in pictorial character from his panel pictures in tempera.

The progress of Italian wall painting, from Giotto to Raphael, exhibits a steady advance in natural pictorial development; and at every step of this advance it corresponds entirely with all other Italian painting of its time. There is no difference at all between a fresco on a wall and a panel picture on an altar, in so far as concerns the principles on which they are respectively composed. Compare the frescoes of Michael Angelo on the vault of the Sistine with the Holy Family by the same master in the gallery of the Uffizi; or compare the frescoes of Raphael in the Vatican chambers with the Saint Cecilia by him in the gallery of Bologna. In such wall compositions as the School of Athens and the Expulsion of Heliodorus, Raphael has done all that he could, by means of perspective and chiaroscuro, to give relief to his figure groups and retirement to his architectural vistas. Thus, before the resort to pictures painted in the studio, as substitutes for painting directly on the walls, we find that same development of pic-

torial qualities in wall decoration which Viollet le Duc attributes to the studio pictures.

It is thus clear that no support for the notion that wall painting should be different from other painting can be drawn from the art of the past; and there is therefore no historic ground for the theory that wall painting and picture painting proceed on different lines and involve essentially different operations of mind.

IV.

Does it follow, then, that there is no necessary difference between effective wall painting and other pictorial art? It appears to me that there is only this difference—namely, that in the one case what I have called the ornamental quality of painting is made to predominate, while in the other the pictorial element counts for more. Both must have ornamental value; but the wall painting fulfills its function primarily by its ornamental quality, while in the easel picture we look more for the suggestion of nature. It is hard to find any other difference, save that which results from the different materials employed—on which a word may be said.

Nearly all wall painting of ancient times and of the Middle Ages was executed in fresco, a process which has a peculiar fitness on architectural adornment, both on account of its durability and its quiet effect. The pigments available in fresco painting are for the most part ground earths that are comparatively dull, and therefore fresco painting does not lend itself to great brilliancy of coloring. Moreover, the colors in fresco, being mixed with water only, sink into the wet plaster on which they are laid and dry with a dead surface. They have thus a different effect from colors tempered with size or oil laid on a dry ground and afterwards varnished, as in tempera or oil painting. In fresco, too, since the plaster dries quickly, it is necessary for the artist to work with comparative speed; and as no retouching is possible after the ground is dry, any degree of elaborate finish requires great dexterity and is usually avoided.

The conventions of mosaic are radically different from those of any kind of painting proper. The small cubes of stone or glass of which the picture is made up cannot give the finer gradations and blendings that are readily attained with ground pigments laid on with the pencil; and although it is possible by the use of very fine tesserae to obtain somewhat fine transitions and interblendings, such refinements cannot approach those of the pencil and are destructive of the natural qualities of mosaic art. The best wall mosaics—the best because they bring out the proper qualities of the materials employed—are made up of measurably large stones, the smallest being rarely less than three-eighths of an inch in diameter, which have their effect as cubes even when the work is viewed from a considerable distance. The true mosaic worker seeks no refinements that are not compatible with a frank expression of the nature of stone inlay.

As for stained glass, which in the Middle Ages gave splendor to the great openings of Gothic churches, normal design

in this material is a translucent kind of mosaic, with conventions even more severe than those of any other mode of color decoration. The fact that it must be seen by transmitted light differentiates it fundamentally. In its integrity it is composed of small bits of glass, each one of which is held in place by a frame of lead that gives a thick dark outline. There is nothing in good medieval glass that can be called painting, and such delineation as occurs is of the simplest and most conventional kind. Under these conditions it is obvious that pictorial qualities cannot be developed with any fullness. Only the most abstract and symbolic suggestions of things are possible without loss of that jewel-like splendor which is the distinctive quality of design in glass. The worker in stained glass who appreciates its qualities and ends does not seek to overstep its natural limitations. He perceives that the essential value of his art is a consequence of them, and that he cannot develop his compositions pictorially without doing violence to its principles.



BIRD'S-EYE VIEW OF PART OF CAMP LEWIS.

CAMP LEWIS AMERICAN LAKE, WASH.

BY
CARL F. PILAT

CAMP LEWIS, at American Lake, Wash., is the largest of the cantonments built for the National Army. It lies on Puget Sound, about sixteen miles south of Tacoma. Comprising an area of nine square miles, containing 1,757 major buildings, with 422 minor structures, provided with all the essential public utilities of a municipality, and having a population of about 50,000 soldiers, it is the fourth largest city in the State, and was constructed in the remarkably short time of eight weeks.

This achievement is all the more noteworthy, when it is considered that Camp Lewis is but one of sixteen National Army cantonments, housing 35,000 to 50,000 men each, all of which were built in approximately the same period. The total construction cost of Camp Lewis was about \$6,865,000, representing a per capita cost of less than \$138 for the military population. Both in rapidity and in economy of construction, Camp Lewis is typical of the entire group of National Army cantonments built by the Government, as it is typical also of the sanitary and military arrangements of all the cantonments within the group.

At the moment when a state of war was declared to exist with Germany, it

became necessary to undertake a tremendous volume of military construction work. The prosecution of this work fell partly to the Navy and other departments, but more especially to the War Department; and the provision of sixteen National Army cantonments and an equal number of National Guard mobilization camps, together with warehouses, embarkation depots, etc., was entrusted to the office of the Cantonment Construction Division of the Quartermaster's Corps in the War Department. This office, which is under the direction of General I. W. Littell, contains an Engineering Division, a Material Division, a Construction Division and an Accounting Division.

The Engineering Division prepared typical or standard plans for the cantonments, covering both engineering and building operations. Plans originating in this division were submitted by General Littell to the Committee on Emergency Construction of the Council of National Defense. The Material Division, in consultation with the various supply committees of the Munitions Board of the Council, placed contracts for materials, equipment, etc., and, in consultation with the Transportation Committee of the

Munitions Board, worked out the transportation requirements connected with the construction of the several cantonments. The Construction Division had immediate charge of operations in the field; and the Accounting Division handled both the accounts of the Office of Cantonment Construction and the accounts of the individual contractors on cantonment work.

Construction contracts were let, not on the usual competitive basis, but on a percentage of cost basis. The contractors, it will be seen, were relieved of a large share of the responsibilities and duties incident to the customary operating contract; and were in a position to give undivided attention to such problems as the employment and management of labor, the timely assembling of materials, the prompt unloading of cars and the like.

The work of each cantonment was under the immediate charge of a constructing quartermaster. The constructing quartermaster at Camp Lewis was Major Stone, who had two civilian advisers, W. J. Roberts, who acted as chief engineer of water and sewers, and the writer, who acted as cantonment planner and consulting engineer.

The presence of the two civilian advisers on Major Stone's staff may perhaps require a word of explanation. Upon the passage of the bill creating the new National Army, it was apparent that many large camps must be built; and a number of members of the National Conference on City Planning and of the

American Society of Landscape Architects promptly offered their services in selecting and laying out the sites of the camps. The offer was made to the Federal Government through the Council of National Defense, the spokesman being Mr. Frederick Law Olmsted, president of the Conference and an official also of the society. Invited to submit a report in writing to the Munitions Board of the Council, Mr. Olmsted recommended that the selection of sites and the preparation of plans for the individual sites be entrusted to three experts for each site, namely, a city planner, a water and sewer engineer, and an officer of the Quartermaster's Corps who was to be charged with the construction of the cantonment. Before these recommendations could be acted upon, the sites, with perhaps one or two exceptions, had been definitely selected. However, the recommendations were adopted before any work had been done on the sites, with the result that, in the case of each of the sixteen National Army cantonments, the planning in the field was carried out by a city planner and a water and sewer engineer, acting under a constructing quartermaster.

On the basis of instructions received from the Army, a typical or standard layout was drafted in the Office of Cantonment Construction. The layout covered the requirements of the military units in a normal division of the National Army. It comprised plans showing the arrangement of buildings for each unit: for ex-



BIRD'S-EYE VIEW OF PART OF CAMP LEWIS.

ample, a regiment of infantry; and also a diagram giving an ideal grouping of units, besides indicating the general outlines of the water supply and sewage disposal systems, the roads, lighting, heating and fire protection. Plans, elevations and structural details were furnished for all buildings.

The problem in the case of each cantonment consisted in approximating the standard layout as nearly as local conditions would permit. The military units, of course, were not identical in all the cantonments; and no two cantonments offered quite the same availability with respect to water supply, drainage, railroad service, highways, drill and maneuver grounds, rifle and artillery ranges, hospital plants, remount stations and the like. Furthermore, in the interest of economy, it was necessary to avoid extensive grading and heavy excavation for road, water and sewer construction.

It is believed that Camp Lewis was built in somewhat less time and at a much lower per capita cost than any of the other cantonments. If so, this was due largely to the fact that Major Stone and his civilian advisers were in the fortunate position of being able to choose the site. The site is part of a tract of 140,000 acres of rolling prairie, grass-covered and underlain to a depth of one hundred to two hundred feet with gravel and other debris from an old terminal moraine. The general level of the prairie is about two hundred feet above the sea, with a gradual slope of from ten to fifteen feet per mile toward Puget Sound. Hills, rising in some instances to a height of two hundred feet above the prairie, are wooded with great conifers, but have very little underbrush.

The soil is of negligible value for agriculture, because of its gravelly nature and because of the long, dry season; but owing to its excellent surface drainage and to its great area unobstructed by farms or villages, it has been used by the State of Washington for military purposes. As soon as it became known that cantonments would be needed the people of Pierce County, in which the prairie for the most part lies, voted to bond the county for \$2,000,000 to ac-

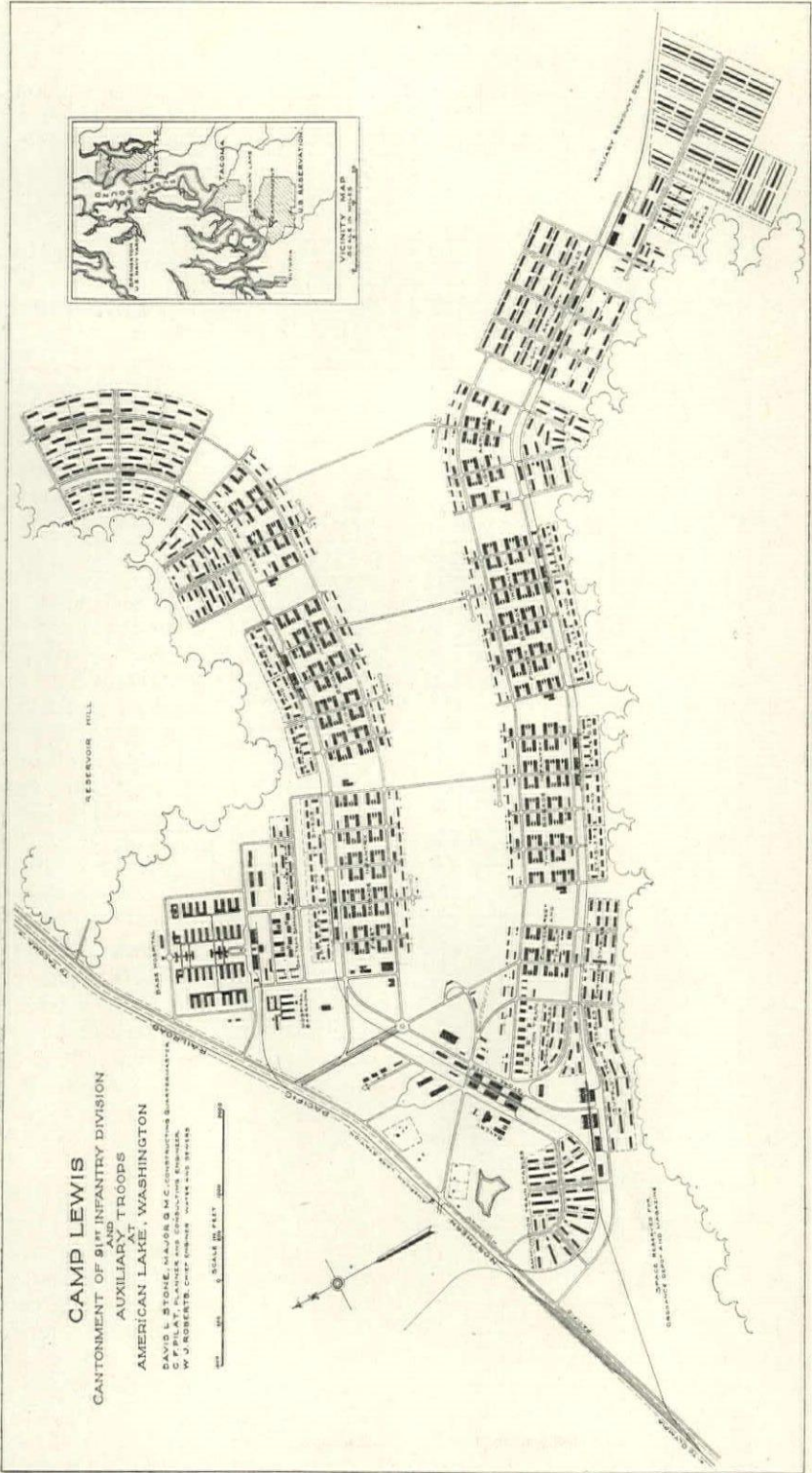
quire about 70,000 acres of the tract with a view to presenting it to the Federal Government. When a site for Camp Lewis was under consideration it was possible to select 6,000 acres from the larger tract. Deeds of possession covering the camp site were at once turned over to the Government, while condemnation proceedings were continued for the acquisition of the remainder of the 70,000 acres.

The work of selecting the site was greatly simplified, because an accurate topographical map of this part of the tract had previously been made by Major A. R. Ehrnbeck of the Engineer Corps of the Western Department. The presence of a railroad, on ground which enabled the tracks to be extended at low cost, was one of the factors in deciding the location of the cantonment. The site was equally favored in respect to other important considerations, such as water supply, sewage disposal, surface drainage, existing highways, road building and grading, and light and power lines.

During the period of construction the Northern Pacific was the only railroad available for supplying materials and for transporting workmen to and from their work. It was understood, however, that the Chicago, Milwaukee & St. Paul and the Great Northern were to extend their tracks to the reservation in time for the movement of troops. A broad, well-paved highway, known as the Pacific Highway, provided direct communication with the important nearby cities of Tacoma, Olympia and Seattle.

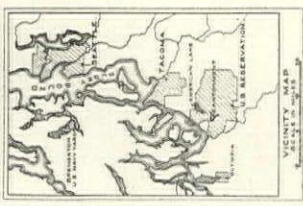
The cantonment is laid out in the shape of a U. The service railroad running from one tip of the U around the base to the other tip is some five miles long. The streets are numbered, and each building carries its number and designation.

The first work undertaken was the securing of a temporary water supply from driven wells. An ample source of pure water was eventually developed on a strip of gravel which separates American Lake from Sequallitchew Lake, about a mile north of the encampment. The level of American Lake is twenty-five feet higher than that of Sequallitchew



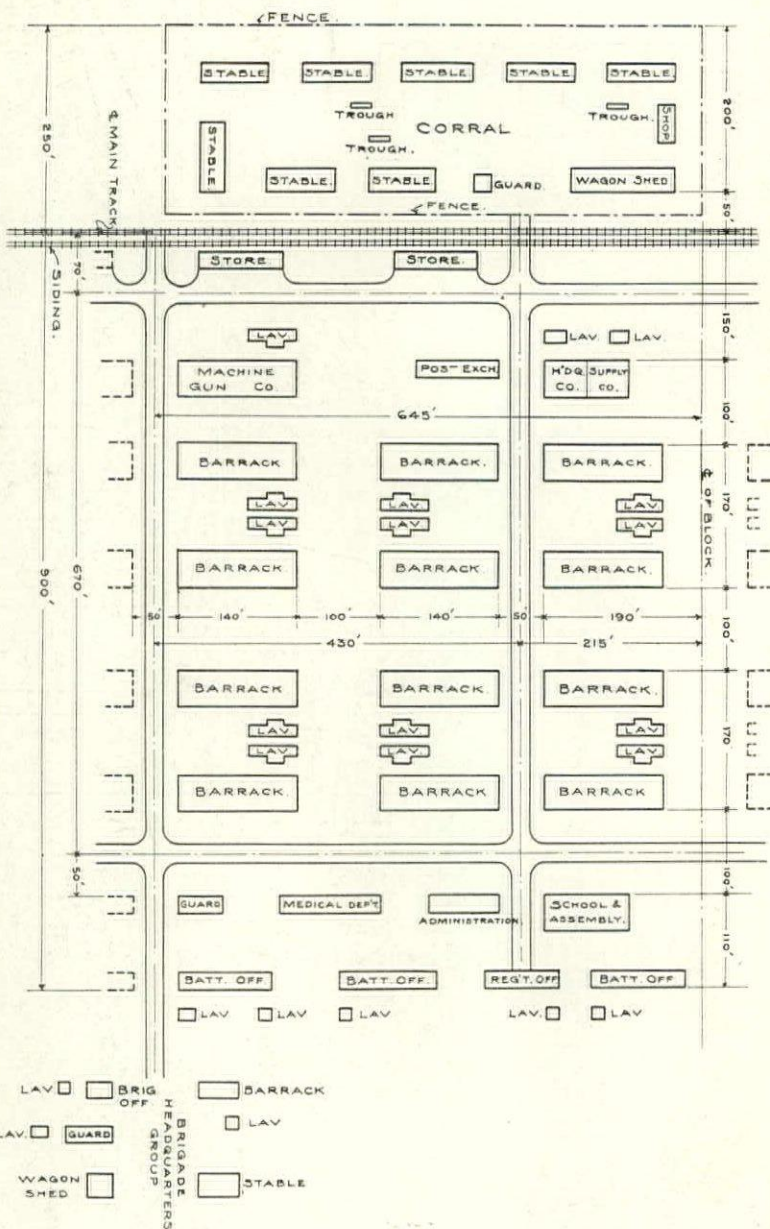
CAMP LEWIS
 CANTONMENT OF 91ST INFANTRY DIVISION
 AND TROOPS
 AUXILIARY
 AMERICAN LAKE, WASHINGTON
 BATTAL 1 STONE MAJOR S MC CONNORS 3RD INFANTRY
 C P HILL 4TH REGIMENT 10TH DIVISION
 W J ROBERTS COMP ENGINEERS 10TH DIVISION

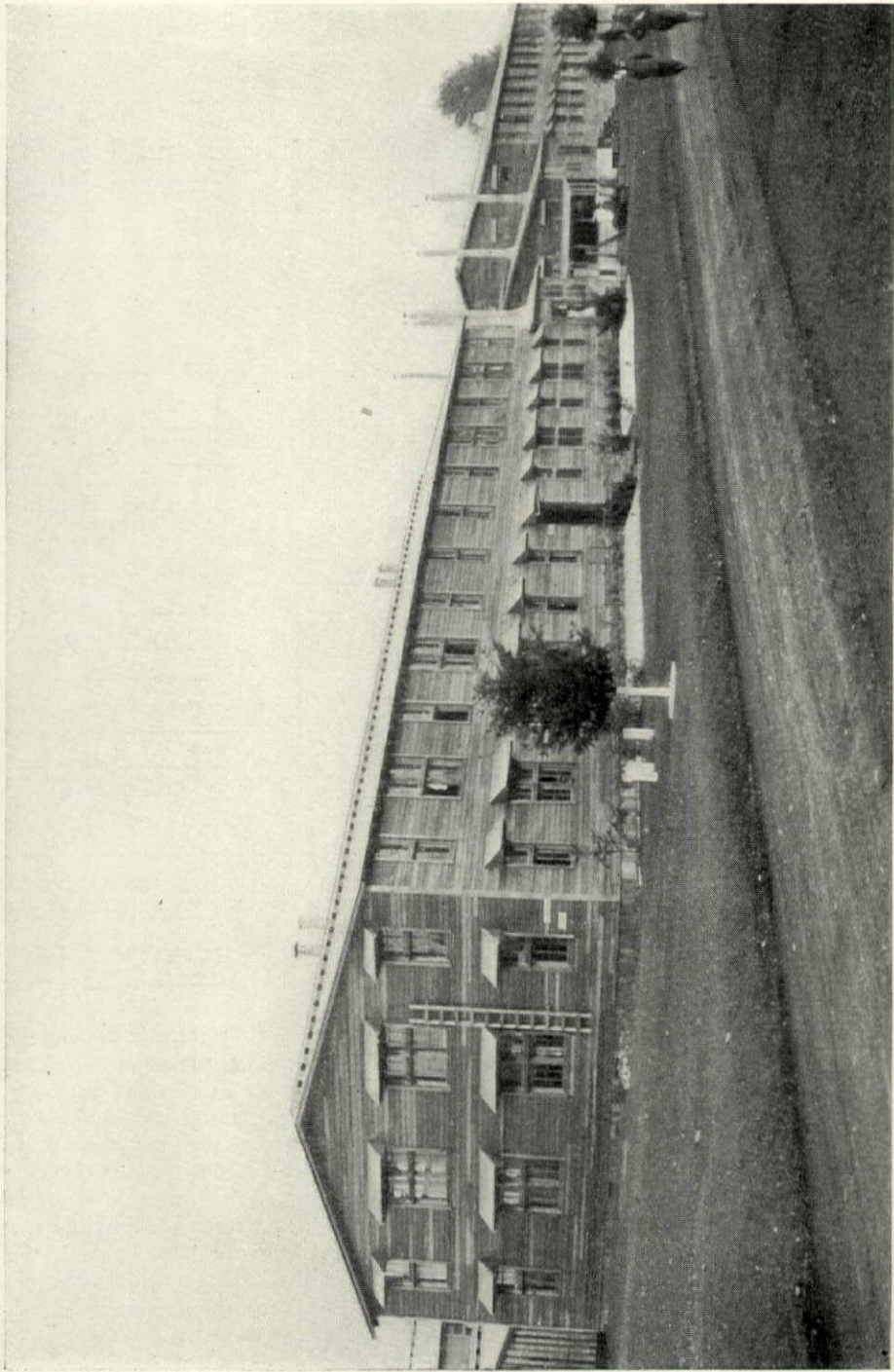
SCALE 1/4" = 100 FEET



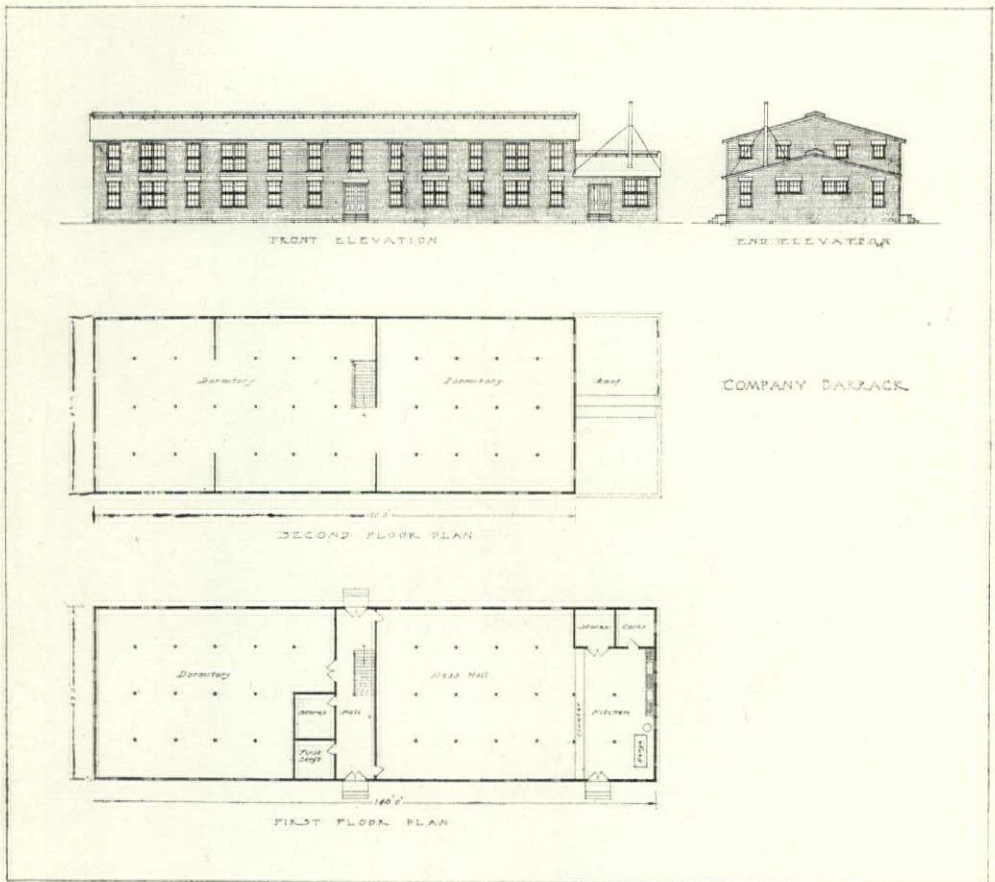
THIS PLAN SHOWS THE GENERAL ARRANGEMENT OF BUILDINGS, ALTHOUGH THE DISTRIBUTION OF TROOPS CONTEMPLATED WAS SUBSEQUENTLY CHANGED. FOR FULLER EXPLANATION, SEE TEXT.

TYPICAL ARRANGEMENT OF CANTONMENT BUILDINGS FOR
REGIMENT OF INFANTRY AND BRIGADE HEADQUARTERS





INFANTRY BARRACK, PLANNED FOR TWO HUNDRED MEN, BUT OCCUPIED BY ONE HUNDRED AND FIFTY IN CONSEQUENCE OF ARMY REORGANIZATION.



BARRACK DESIGNED FOR A COMPANY OF TWO HUNDRED MEN. WHEN THE NUMBER OF MEN IN A COMPANY WAS RAISED TO TWO HUNDRED AND FIFTY, TWO BARRACKS WERE ASSIGNED TO EACH COMPANY.

Lake. Near the head of the latter are a number of flowing springs. Here an area of one hundred and fifty feet by seventy-five was scooped out to make a pool ten feet deep. The excavated gravel was used to build a dike between the pool and the lake. Consequently, if the pumping should at any time exceed the capacity of the springs, water will percolate through the dike from the lake, thus affording a filtered emergency supply.

The main pumping units, consisting of two electric pumps, are installed at the pool. Two other pumping units are established at driven wells. Besides these four pumps, operated by electricity, it is the intention to install a gasoline pump at an additional well, for use if

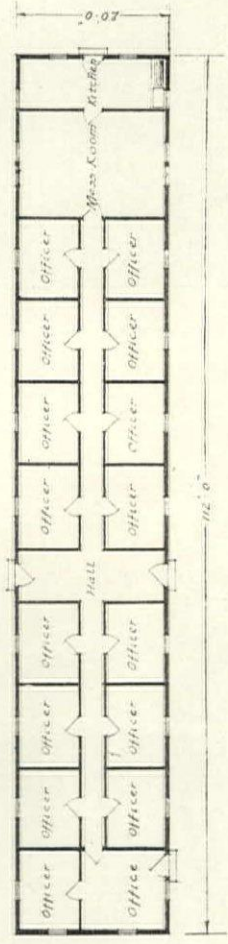
anything should happen to the electric power.

The water is pumped through two twelve-inch mains to wooden tanks on top of Reservoir Hill. The capacity of the tanks is six hundred thousand gallons, and the elevation approximately three hundred and twenty-five feet. From the tanks the water is distributed through two fourteen-inch mains to the cantonment. From these mains, which run under the drill ground to the south leg of the cantonment, two twelve-inch lines extend to the east and two ten-inch lines to the west of the south leg. Similarly, on the north leg, two twelve-inch lines extend to the east and two ten-inch lines to the west, connecting in a loop on the westerly side of the cantonment. The



SIDE ELEVATION

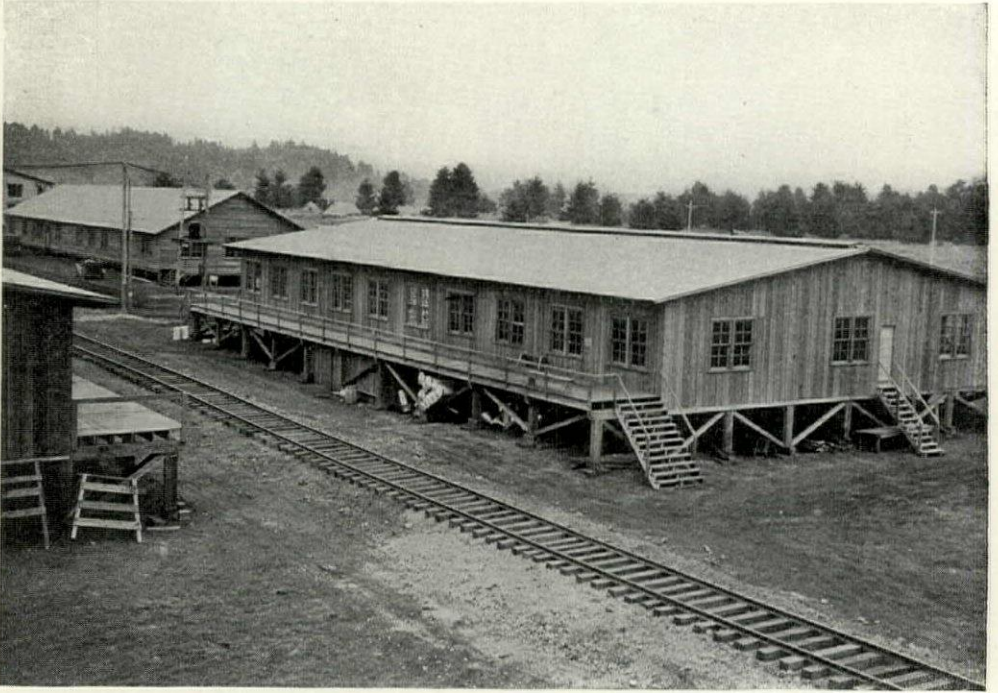
END ELEVATION



OFFICERS' QUARTERS

PLAN

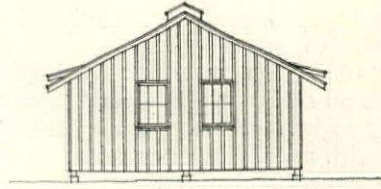
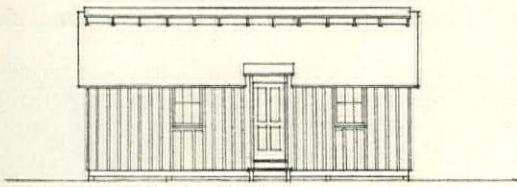
BARRACK FOR REGI-
MENTAL OFFICERS.



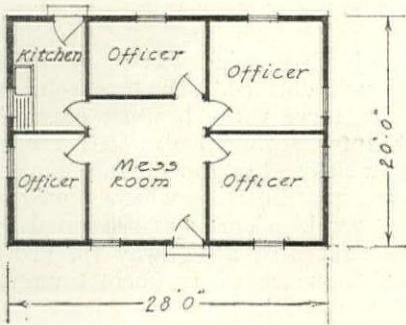
TYPICAL WAREHOUSE, CAMP LEWIS.



TYPICAL POST-EXCHANGE BUILDING, CAMP LEWIS.



FRONT ELEVATION · END ELEVATION



PLAN

BRIGADE OFFICERS' BARRACK, CAMP LEWIS.

OFFICERS
QUARTERS

double line of pipe is an important factor of safety.

There are seventy-five thousand feet of wood-stave pipe in sizes from six inches to fourteen inches, and one hundred and twenty-five thousand feet of iron pipe in sizes from three-fourths of an inch to two inches; making about seventeen miles of wood-stave pipe and twenty-four miles of iron pipe.

No difficulties of any consequence were encountered in providing for the sewage disposal. The prairie has a gradual slope toward the west, to Puget Sound, making it a very simple matter to construct a trunk sewer with only slight fills and cuts, in no place exceeding ten feet, from the cantonment to the cliff at Puget Sound. A steel penstock was provided to carry the sewer down the cliff to the Sound.

When it was found that there was a scarcity of twenty-four inch to thirty-inch vitrified pipe, but plenty of cement pipe of these sizes, the constructing

quartermaster decided to use the supplies which could be procured locally.

The only problem which developed in laying out the sewer system was in the case of the connections with the artillery groups, especially on the north leg. At this place there was a break in the grade; and had the typical plans been followed, it would have necessitated a cut of over twenty feet in depth for a considerable distance. In order to avoid this, the plans were modified so that all the barracks of the three regimental units were grouped together on the high land; the cut was thus reduced to less than ten feet in depth and shortened in length. By this change a substantial saving in money and time was effected. The sewage disposal system contains one hundred and fifteen thousand feet of vitrified pipe, varying from six inches to twenty-four inches in diameter; fifty thousand feet of six-inch to thirty-inch concrete pipe, and five hundred and sixty-eight feet of twelve-inch steel pipe for the

penstock; making approximately thirty-one miles of sewer pipe.

The roads were built of local gravel with an oil surfacing. Recently, approximately eight miles have been hard surfaced with asphaltic concrete.

The streets and buildings of the cantonment are lighted by electricity, current being obtained from a public service company and distributed on Government poles. The barracks are heated by stoves and the officers' quarters by individual steam plants. The hospital buildings are heated from a central steam plant. Telephone and telegraph lines are installed on the Government poles.

The construction of buildings was begun almost simultaneously with the commencement of the engineering work already mentioned. The level ground called for very little grading. Local lumber was used, and ten saw-mills, established on the grounds, cut it into the required dimensions, after which it was delivered at the building sites by rail or auto truck.

The plan indicating the number and location of buildings of each type to be constructed was put into the hands of the contractors on July 3. In accordance with the Tables of Organization of the National Army, approved on May 31, the plan provided accommodations for the following primary units:

Twelve regiments of infantry, grouped in four brigades of three regiments each;

Three regiments of light artillery, grouped in one brigade;

Three regiments of heavy artillery, grouped in one brigade;

One regiment of engineers;

One engineer train;

One ammunition train;

One supply train;

One sanitary train;

One field signal battalion.

Each of the foregoing regimental units was to form a self-contained group. Other units provided for were a division headquarters and division storehouses. A hospital group containing 1,000 beds and occupying approximately sixty acres, an ordnance depot, an incinerator, a bakery and an auxiliary remount station

to accommodate about 7,000 animals were later authorized and built.

Each brigade of infantry comprised three regiments; each regiment, three battalions; each battalion, four companies; making twelve companies to a regiment and thirty-six to a brigade. Each company, of two hundred men, was to occupy a single two-story wooden barrack, of which the lower story was to contain sleeping quarters at one end and a messroom and a kitchen at the other, with a hallway separating the sleeping quarters from the messroom. The upper story was to be occupied for sleeping quarters.

Each barrack was to be served by a small detached structure equipped as a lavatory, with showers, etc. Each infantry regiment also had a number of stables and wagon sheds, a workshop and a guardhouse, which constituted a "corral." This was separated from the barracks by a highway for provisioning a sequence of regimental units. Each regiment had special barracks for battalion and regimental officers. The officers' quarters were grouped with an administration building, a school and assembly building, a building for the medical department and other special buildings; and this group also was separated from the barracks of the men by a road.

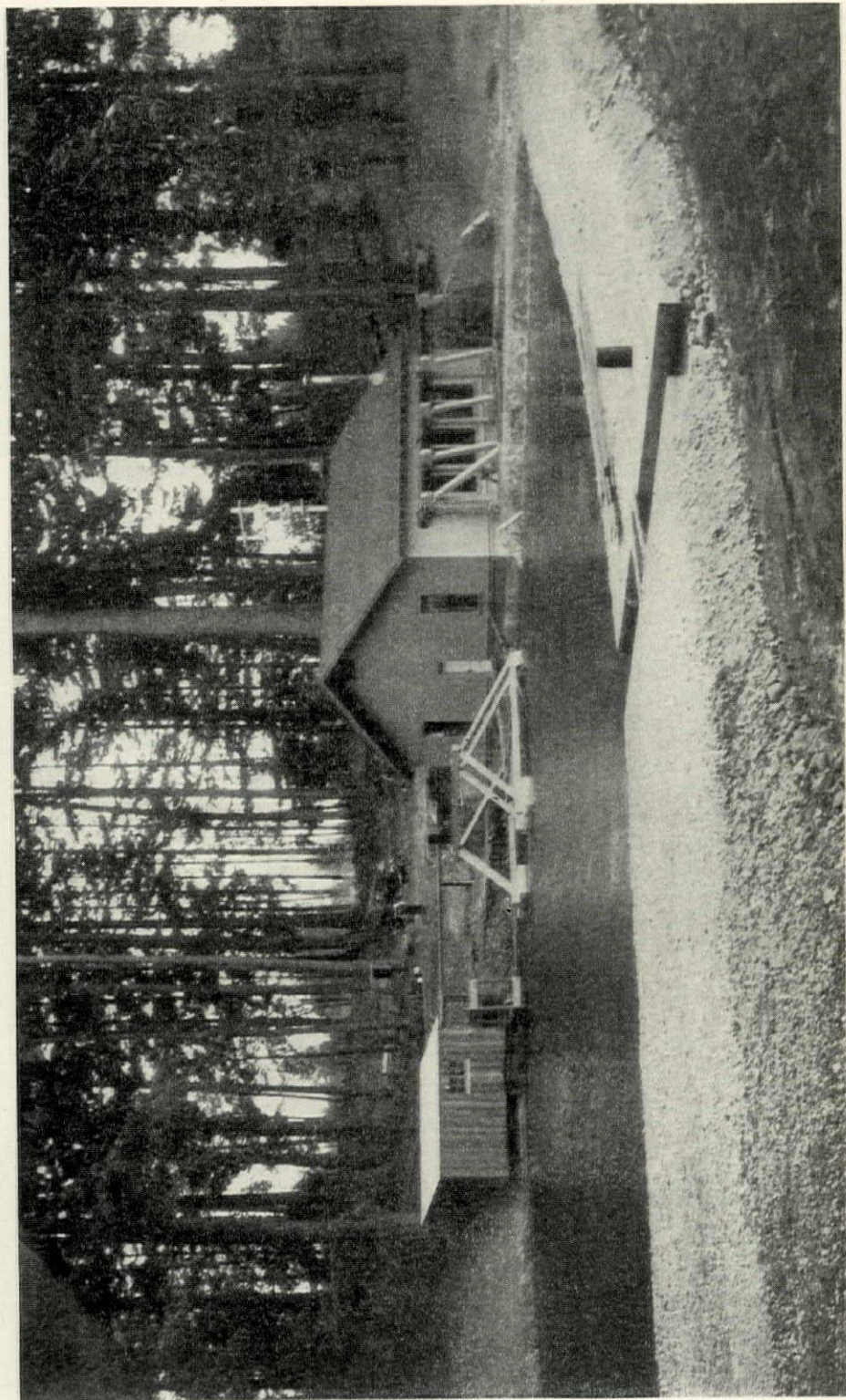
Each regimental unit provided buildings for a machine gun company, a supply company and a headquarters company, together with a post-exchange.

Each brigade was to have its own brigade headquarters, in front of the middle one of the three regiments of the brigade.

A typical plan of the arrangement of buildings for a regiment of infantry and brigade headquarters is reproduced herewith.

The typical arrangements for artillery units and the various trains naturally differed because of specific military requirements. These units were grouped at the ends and at the base of the U-shaped cantonments, while the infantry regiments occupied the central space in the legs of the U.

While the work of construction was under way, a change of army organiza-



PUMPING PLANT AT LAKE
SEQUALLITCHEW, CAMP LEWIS.

tion was made in consequence of recommendations by the British and French Commissions. The number of men in a company was increased to two hundred and fifty and the composition of brigade units was also changed. Instead of four infantry brigades of three regiments each, there are now two infantry brigades of two regiments each. A machine-gun battalion was added to each brigade. The heavy artillery brigade was eliminated, but a trench mortar battery was added to the field artillery brigade.

Under the new army organization it was determined to quarter fewer men in a barrack. This made it necessary to alter some buildings and also to increase the number of buildings. At present a company of infantry occupies, not a single barrack, but two barracks, one of one hundred and fifty men and another of one hundred men.

According to the Tables of Organization of August 3, Camp Lewis was designated to accommodate the Ninety-first Infantry Division with auxiliary troops; and in September, buildings to house six auxiliary battalions, each of 1,000 men, were authorized.

The changes of army organization which took place during the building of the cantonment, while radical from a military standpoint, did not materially alter the layout of the cantonment, including the grouping of buildings. However, in reading the plan of the cantonment and the plan of a regimental unit published herewith, the fact should be kept in mind that the distribution of troops indicated on these plans no longer applies.

It is to be noted also that since the work under these plans was started, thus fixing the general arrangement and character of the buildings, a number of non-military activities in the interest of the soldiers have been authorized, which call for numerous additional constructions. Thus for every brigade there are now,

or soon will be, one Y. M. C. A. building, while a great Y. M. C. A. auditorium serves as a community centre for the cantonment. Housing provision has also been made for the Knights of Columbus and for the Y. W. C. A., whose Hostess House is intended for the use of women visitors to the encampment.

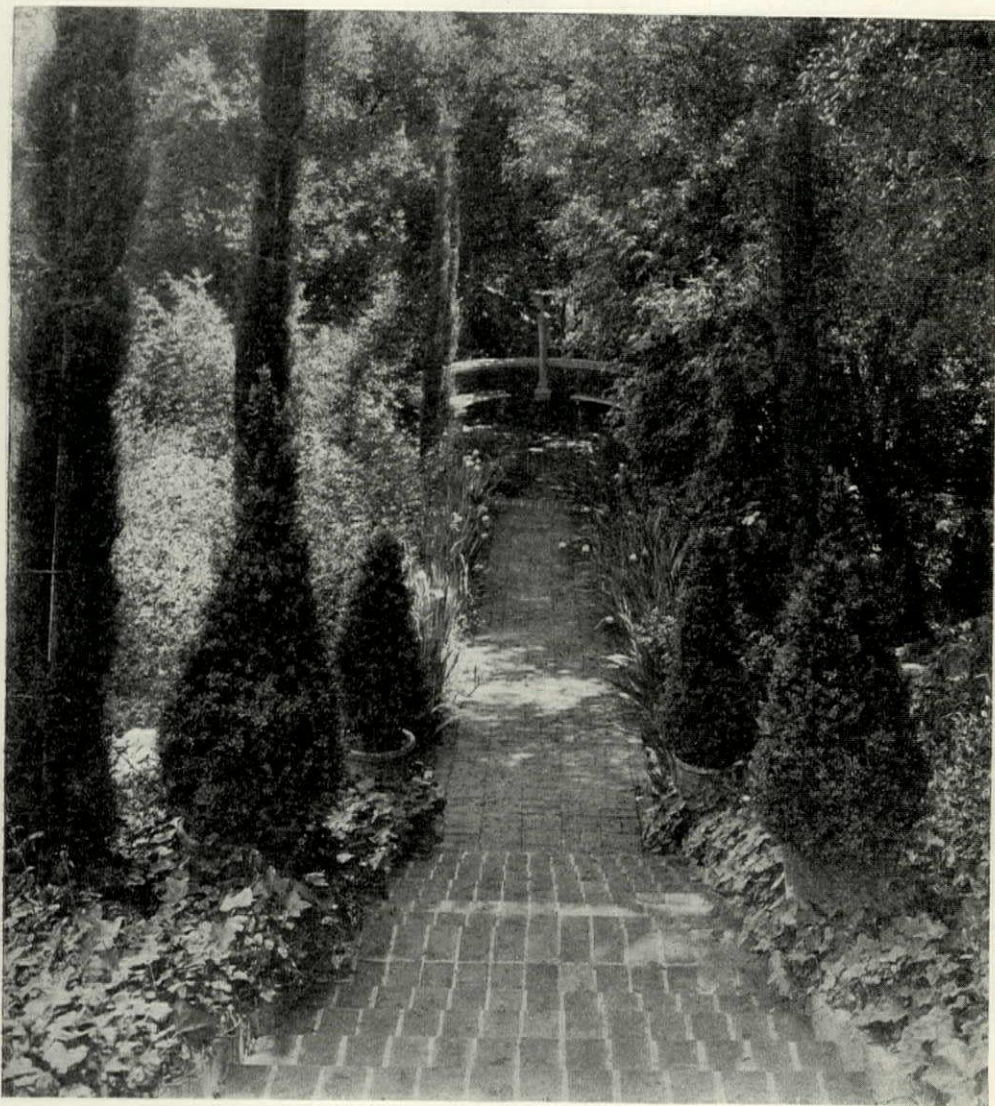
All the cantonment buildings are of frame construction. The barracks and officers' quarters have double floors with paper lining; the walls are ceiled on the inside and are covered with building paper and siding on the outside. Two-ply roofing paper is used throughout the construction. The warehouses, stables and other minor buildings are finished on the outside with one-ply roofing paper with battens. The hospital buildings are of better construction and have wall-board partitions and ceilings.

Labor was obtained from Tacoma, Seattle, Spokane, Portland and San Francisco. The work began with approximately 5,000 men employed, but the number eventually exceeded 10,000. Eight hours constituted the day's work, and the standard scale prevailing in Tacoma at the time the contract was awarded prevailed throughout the period of construction. The commissary department of the contractors boarded all the men who wished to live in the camp, and those who preferred to live in Tacoma, about sixteen miles distant, went back and forth on special trains or by motor cars and auto trucks.

There were no serious labor troubles to interrupt the progress of the work; and the health of the construction force was effectively safeguarded by the sanitary officer, Major Eugene Northington.

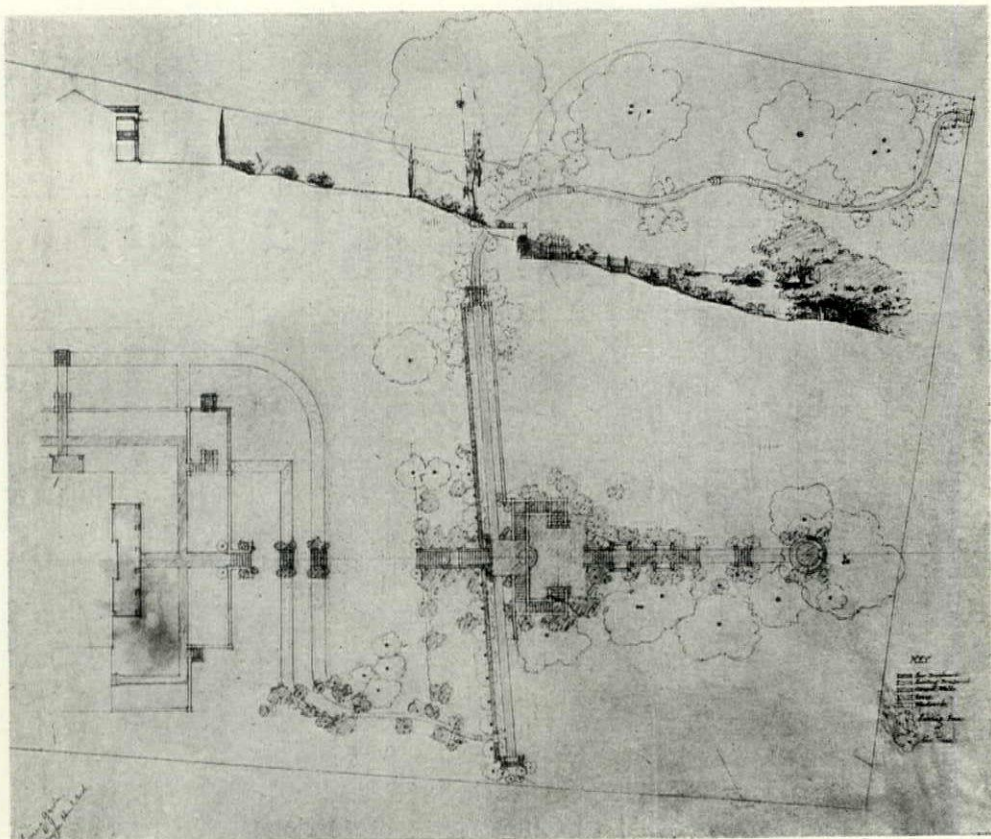
The construction contract for Camp Lewis was awarded on June 14, the building plan was placed in the hands of the contractors on July 3, and the housing for the soldiers was ready to receive them when they began to arrive on September 3.

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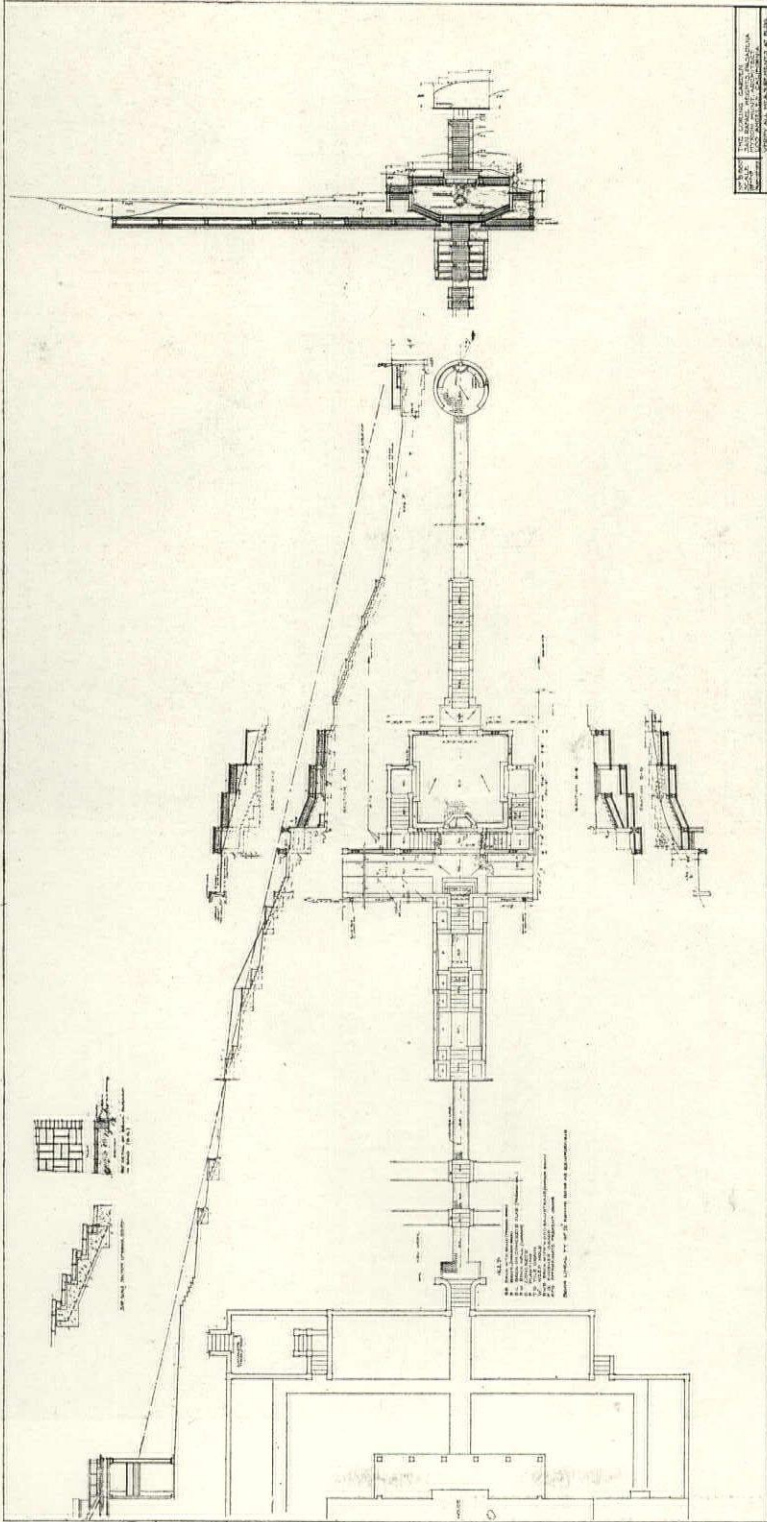


Photographs by
Miss Frances Benjamin Johnson.

THE LORING GARDEN, SAN RAFAEL HEIGHTS,
PASADENA, CAL. MYRON HUNT, ARCHITECT.



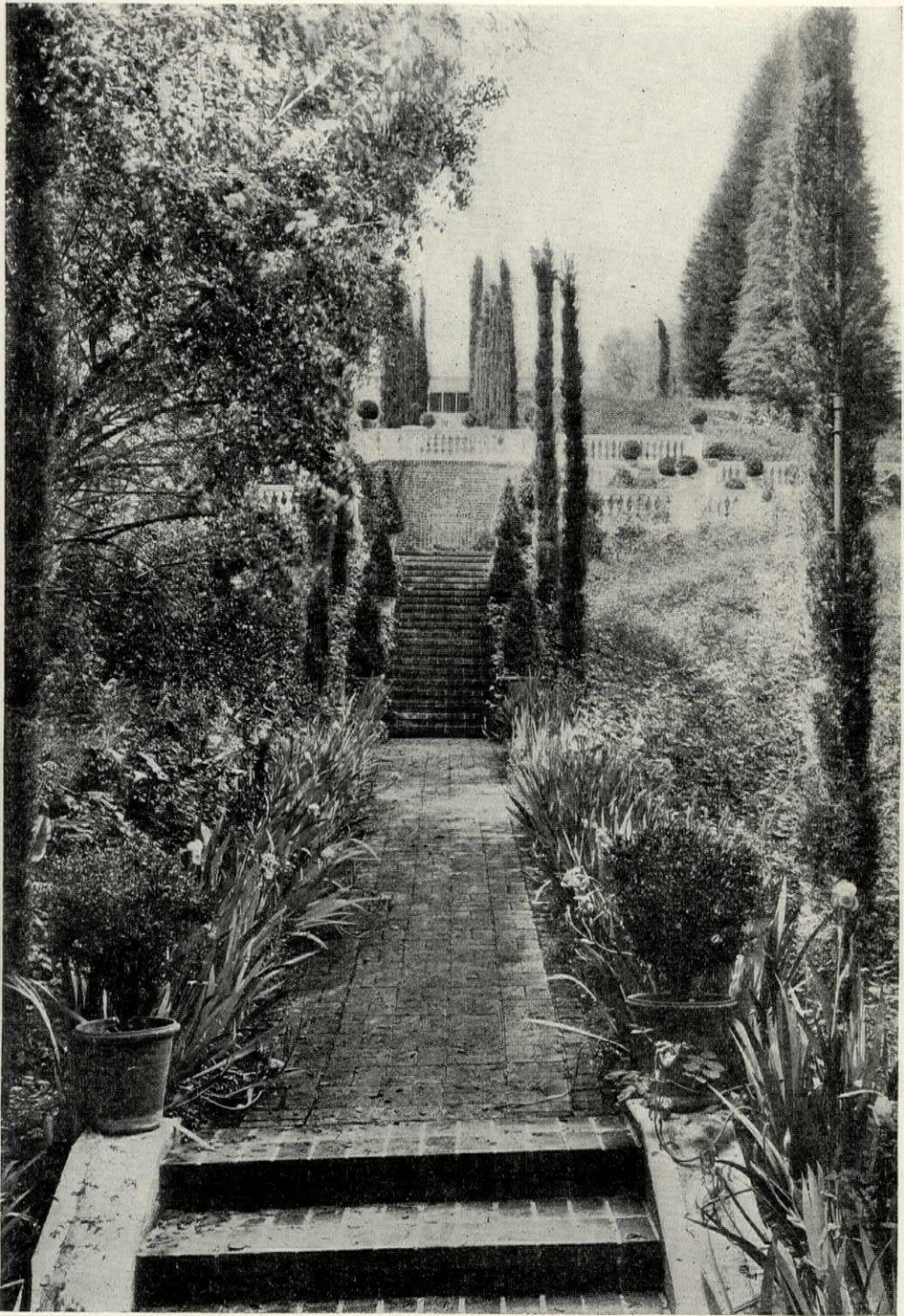
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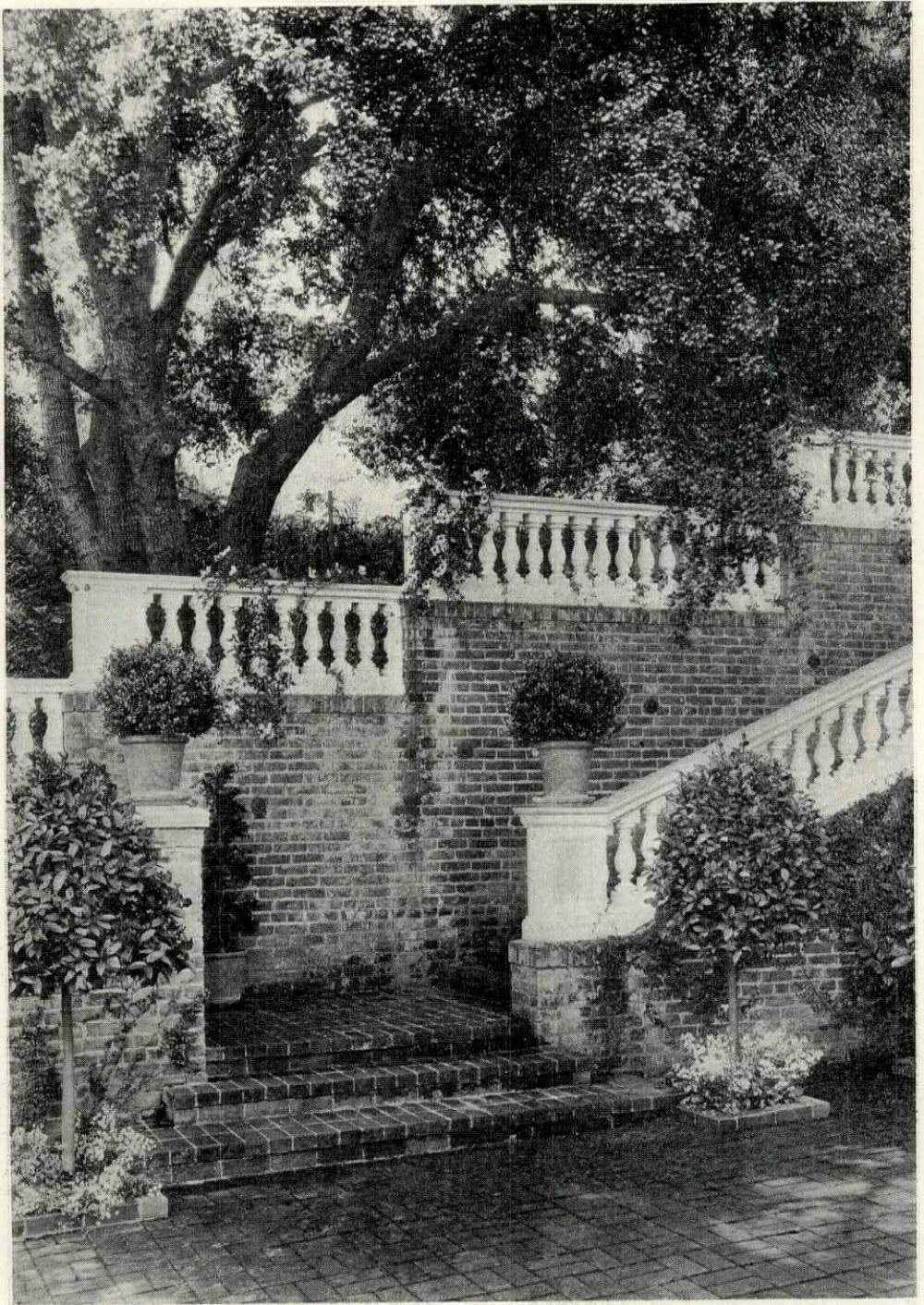
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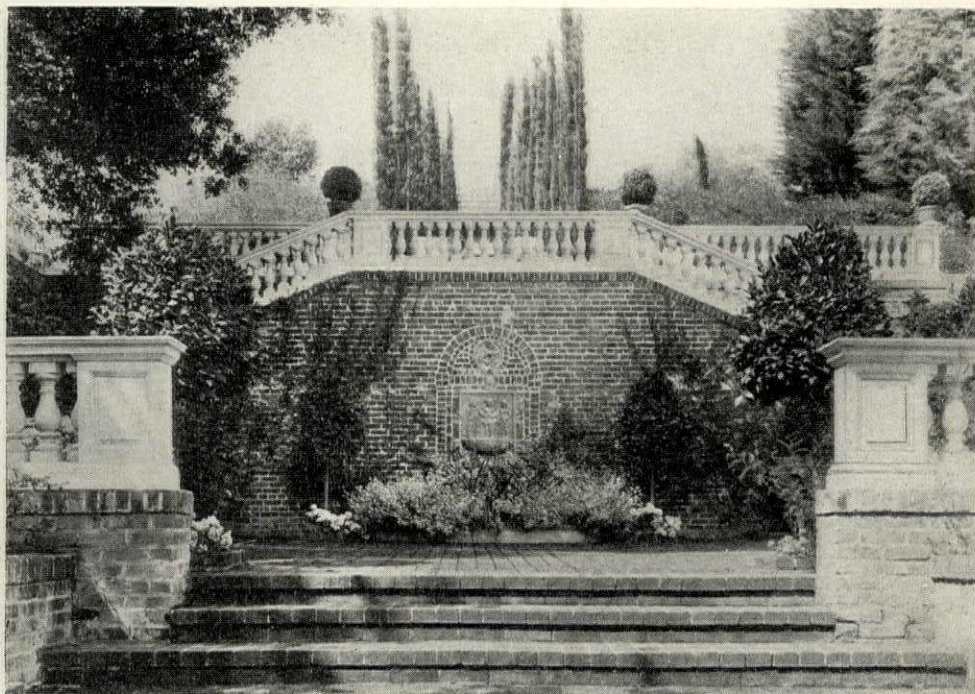
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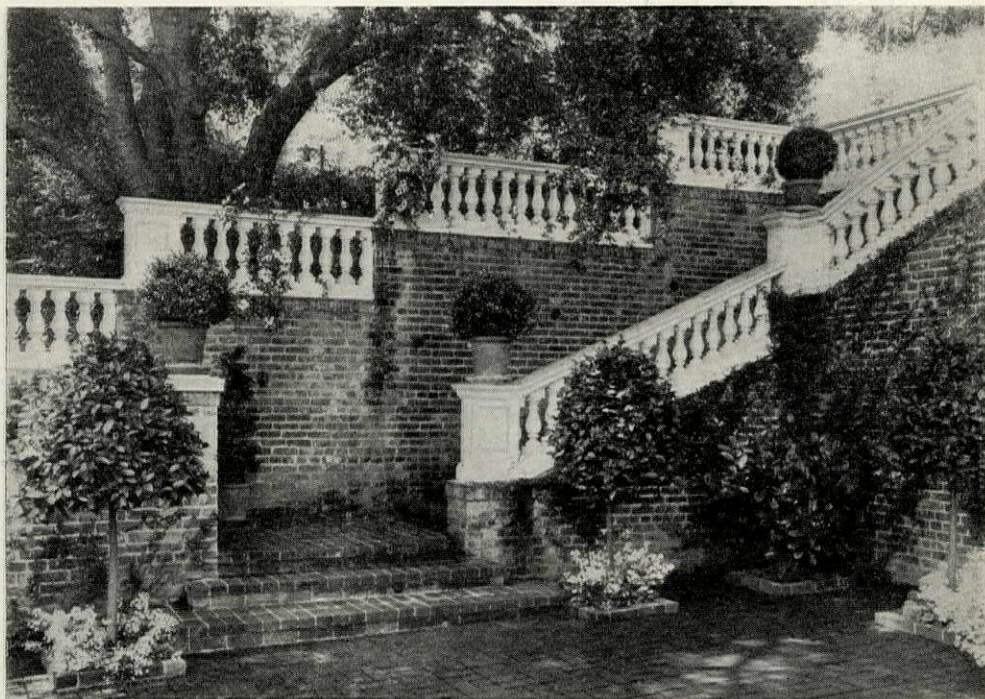
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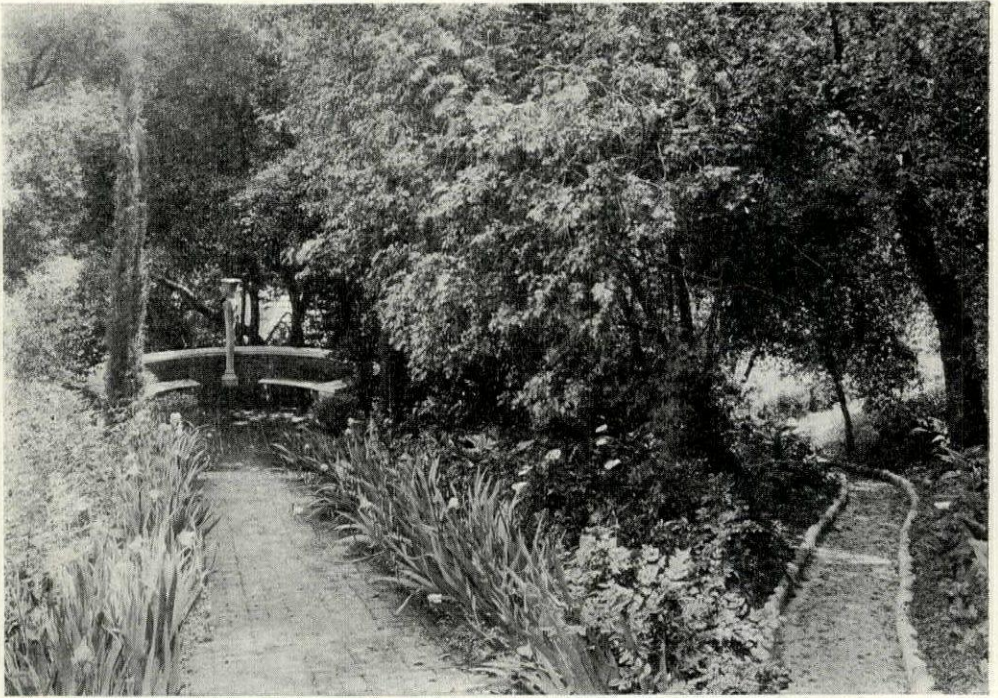
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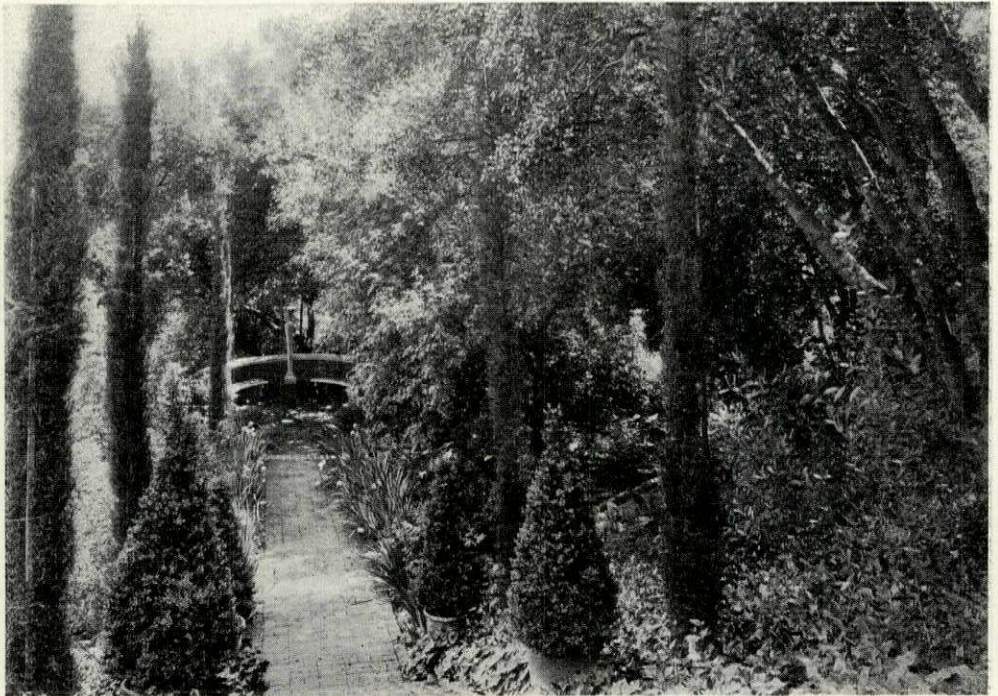
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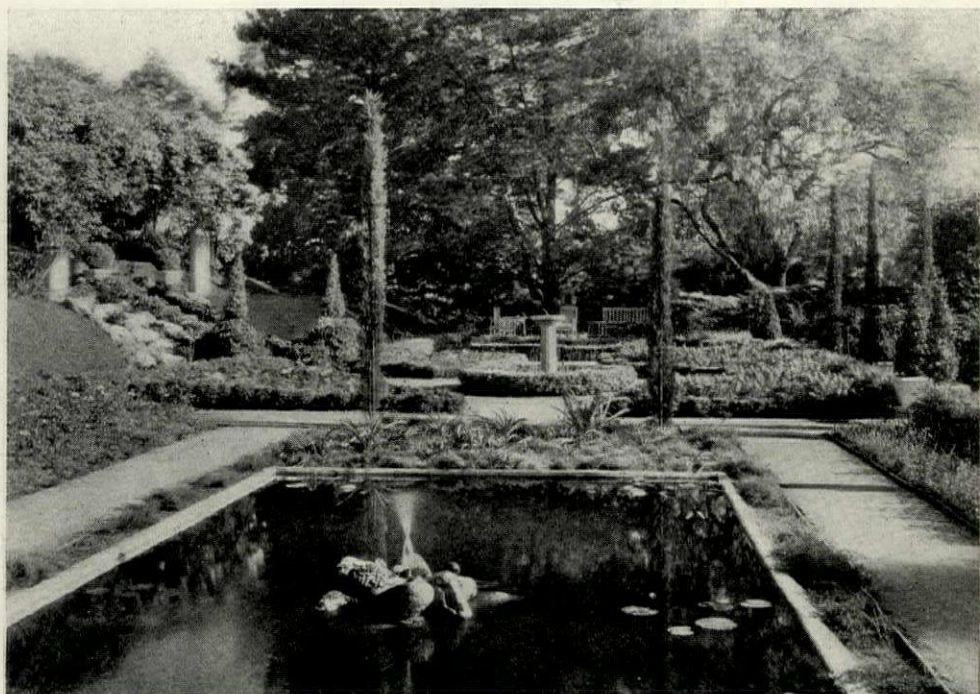
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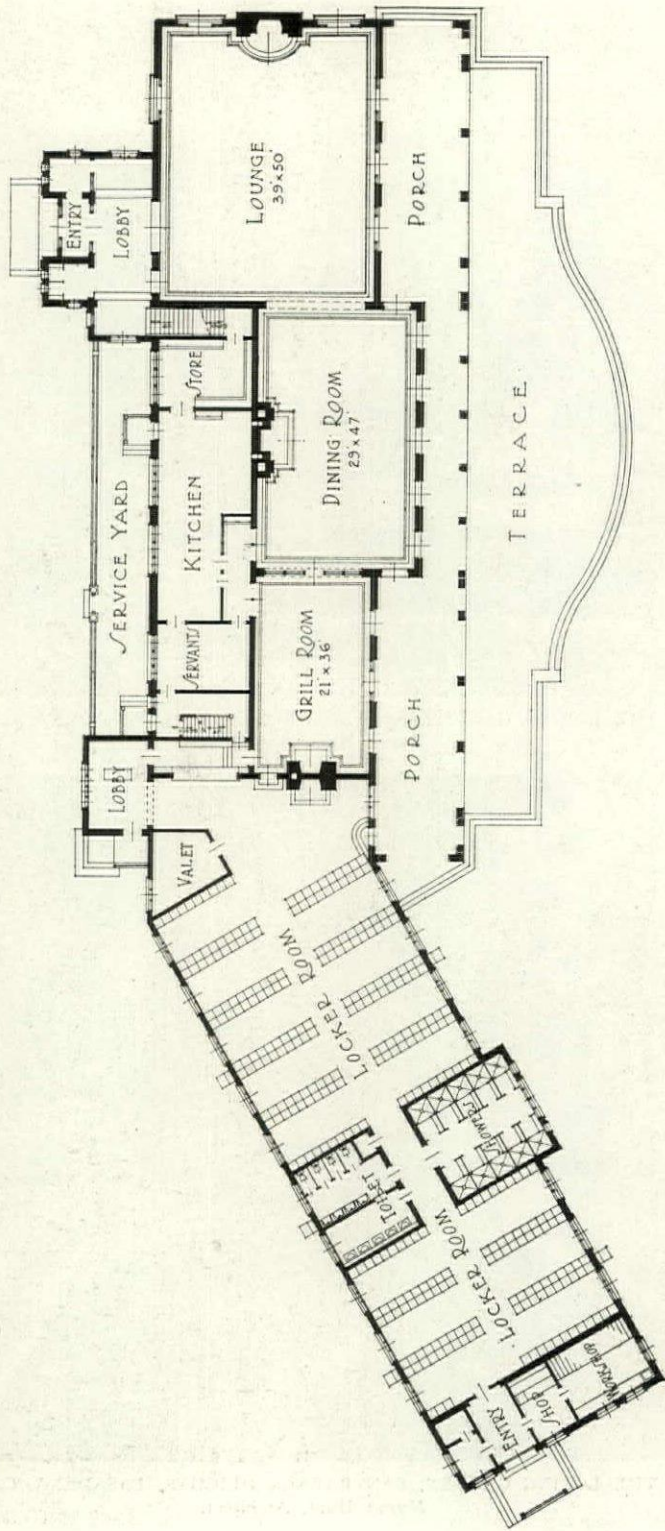
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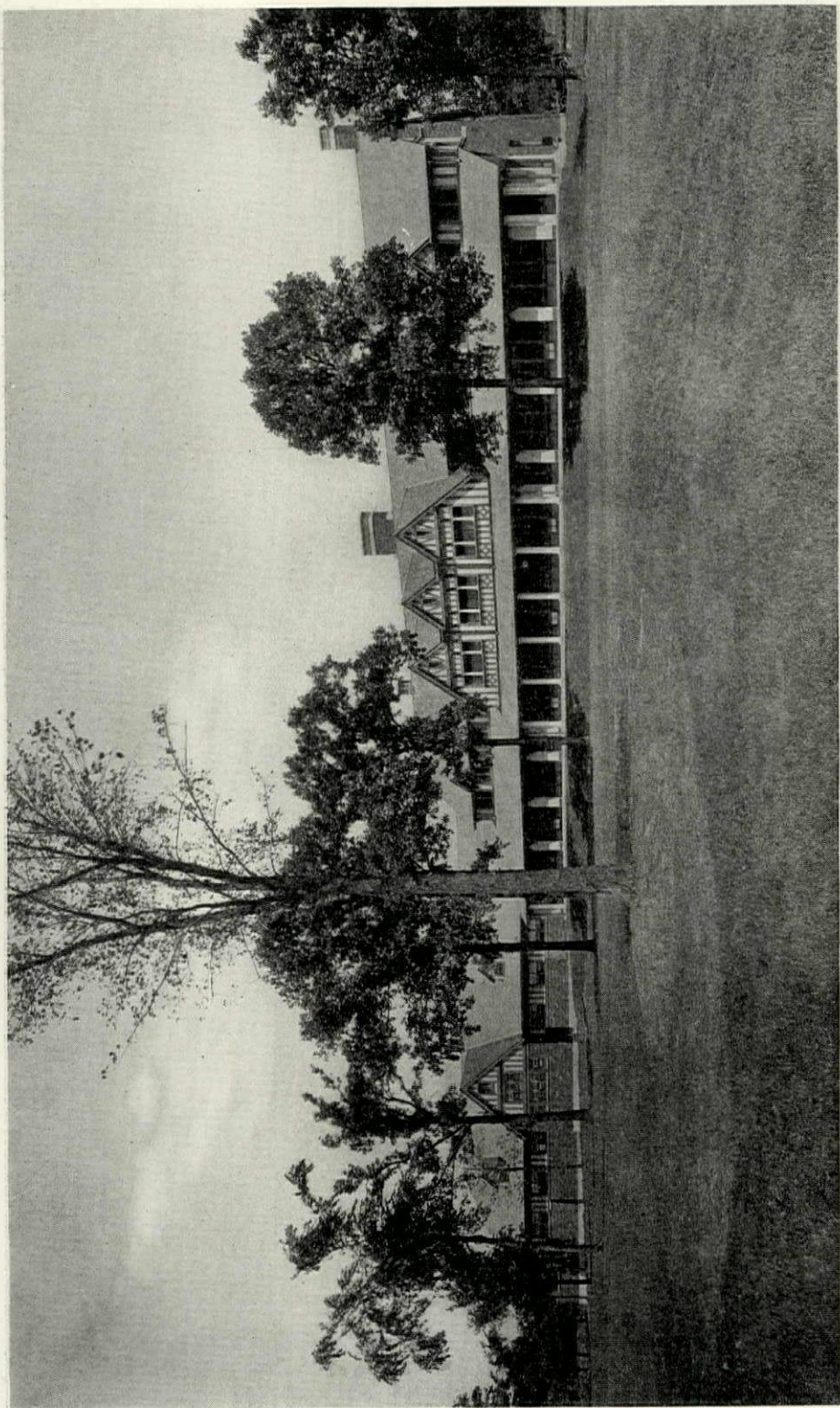
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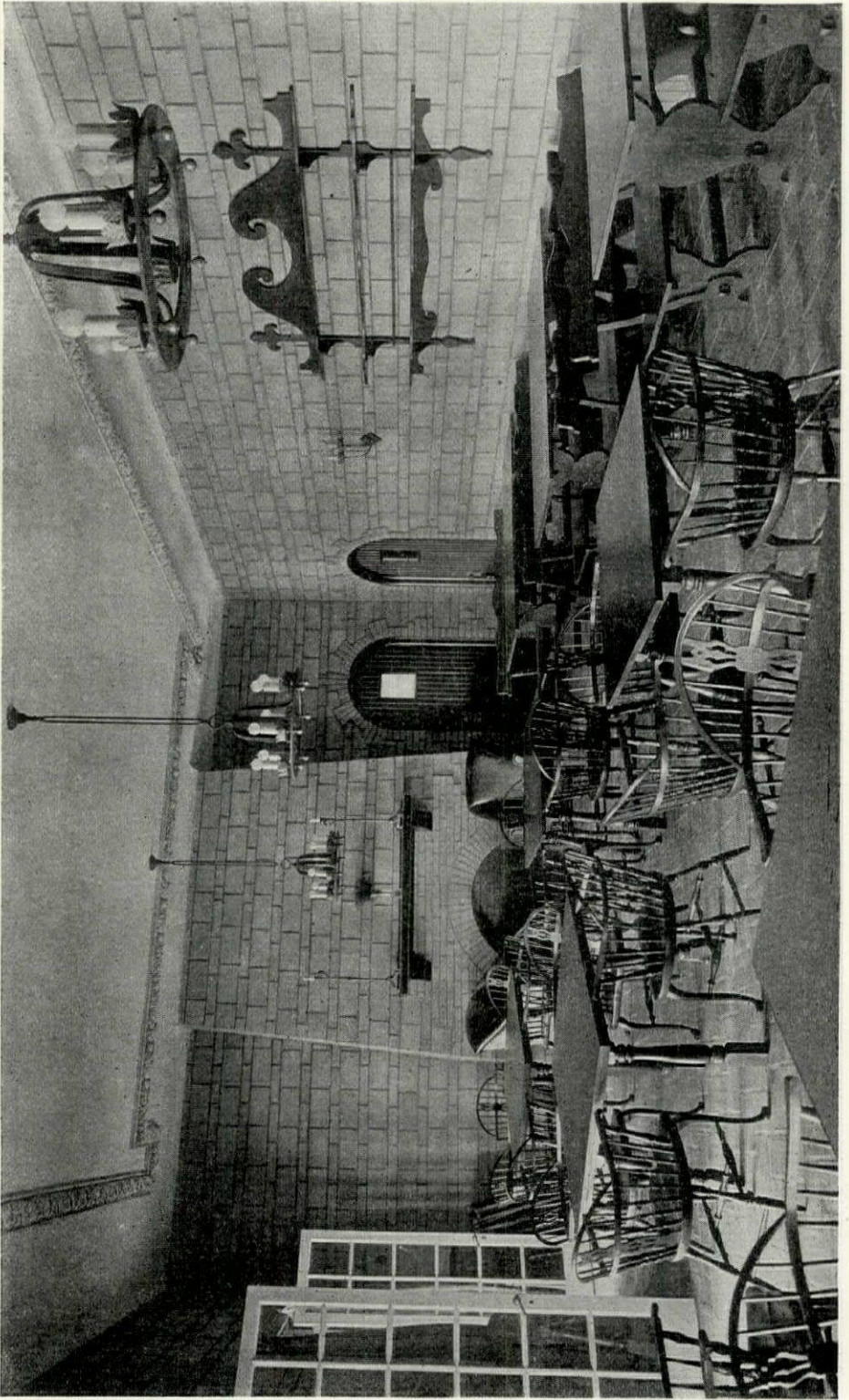
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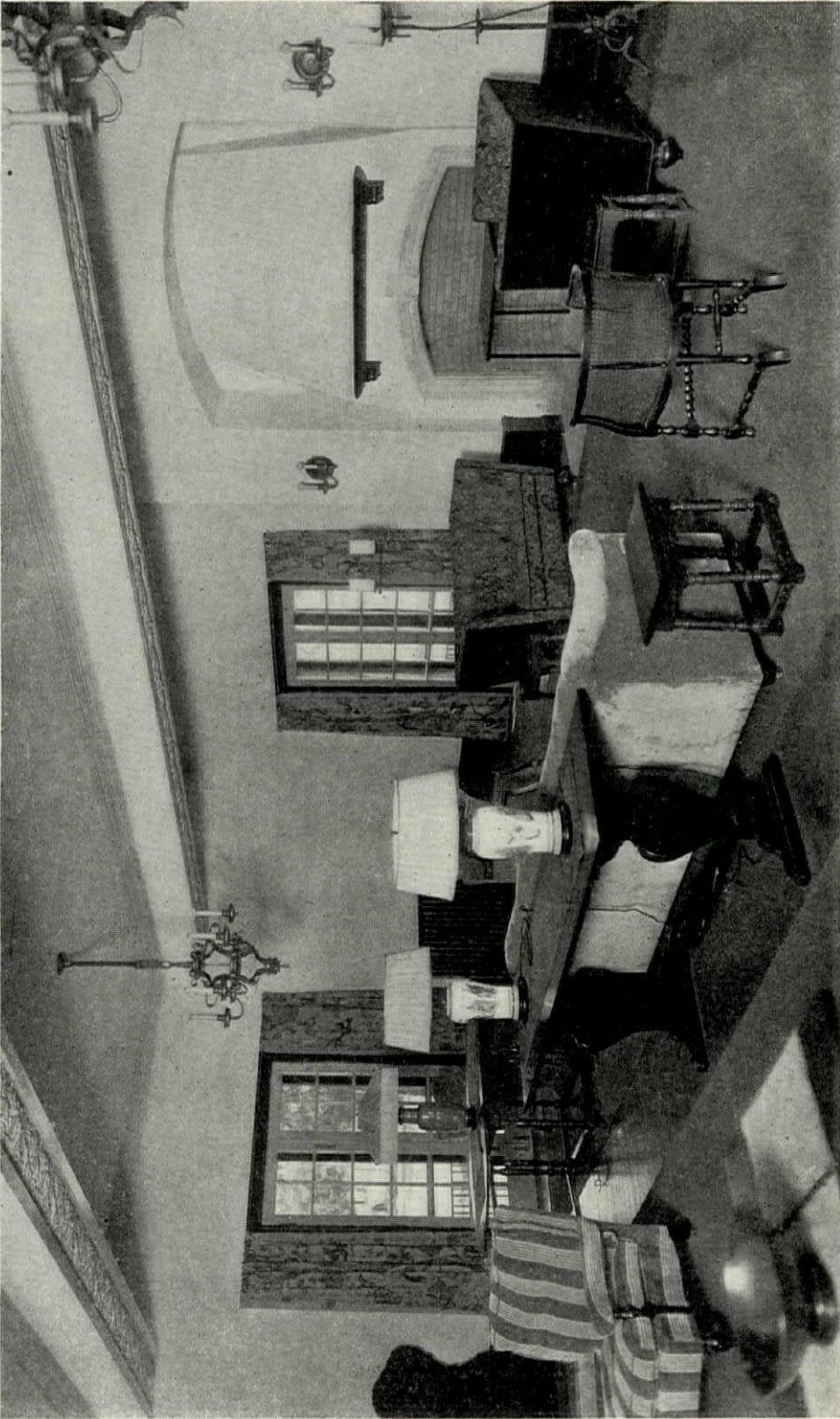
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BOB O'LINK GOLF CLUB, HIGHLAND PARK,
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GRILL ROOM — BOB O'LINK GOLF CLUB, HIGHLAND PARK, ILL. — BROWN & WALCOTT, ARCHITECTS.



LOUNGE ROOM.—BOB O'LINK GOLF CLUB, HIGH-
LAND PARK, ILL. BROWN & WALCOTT, ARCHITECTS.



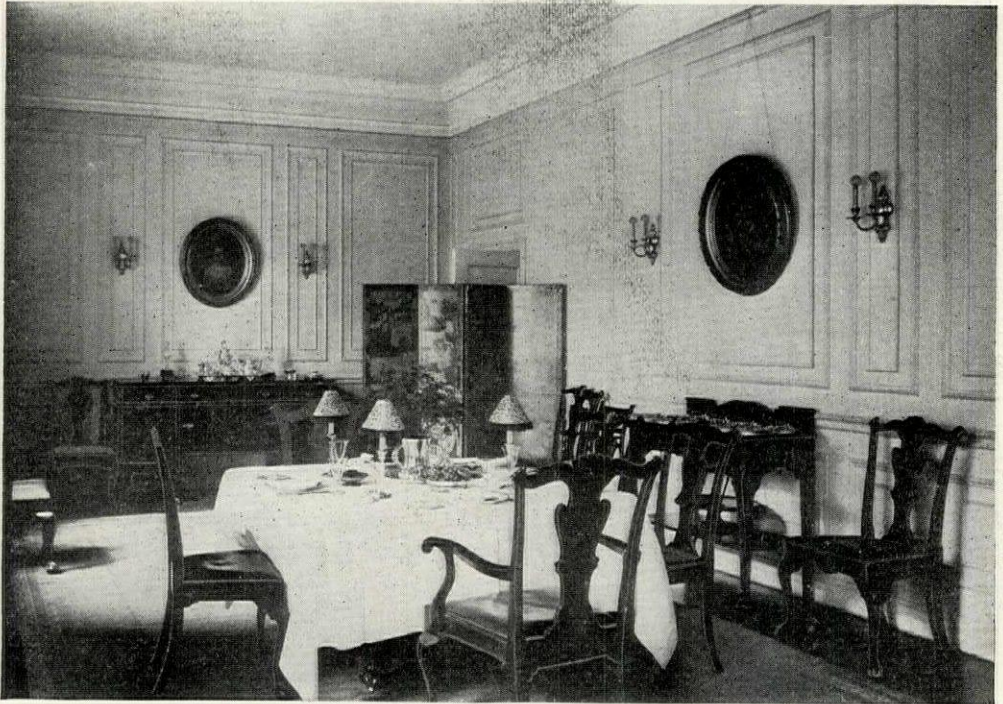
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KENNETH M. MURCHISON, ARCHITECT.



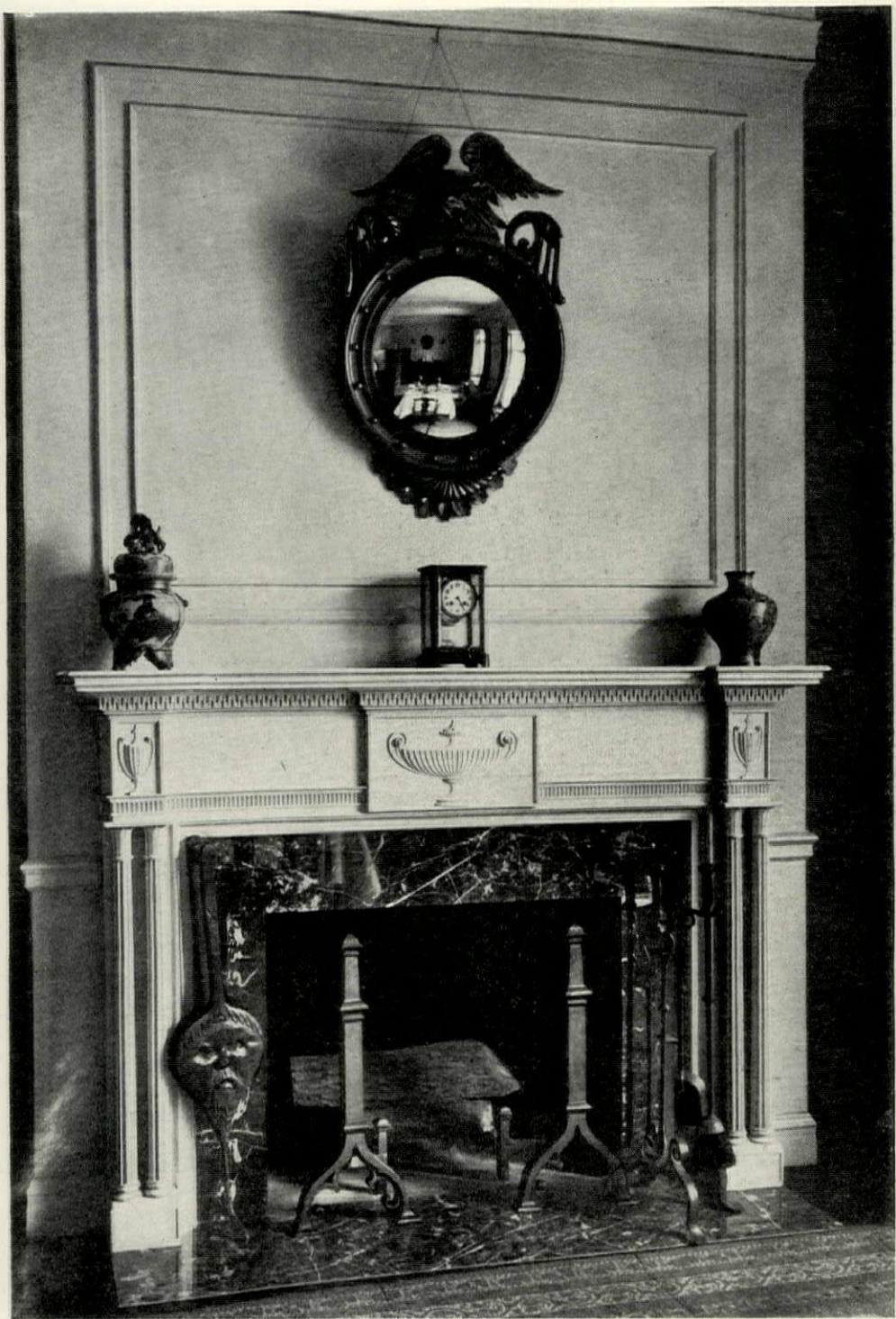
RESIDENCE OF THOMAS A. HOWELL,
ESQ., NEW YORK CITY. KEN-
NETH M. MURCHISON, ARCHITECT.



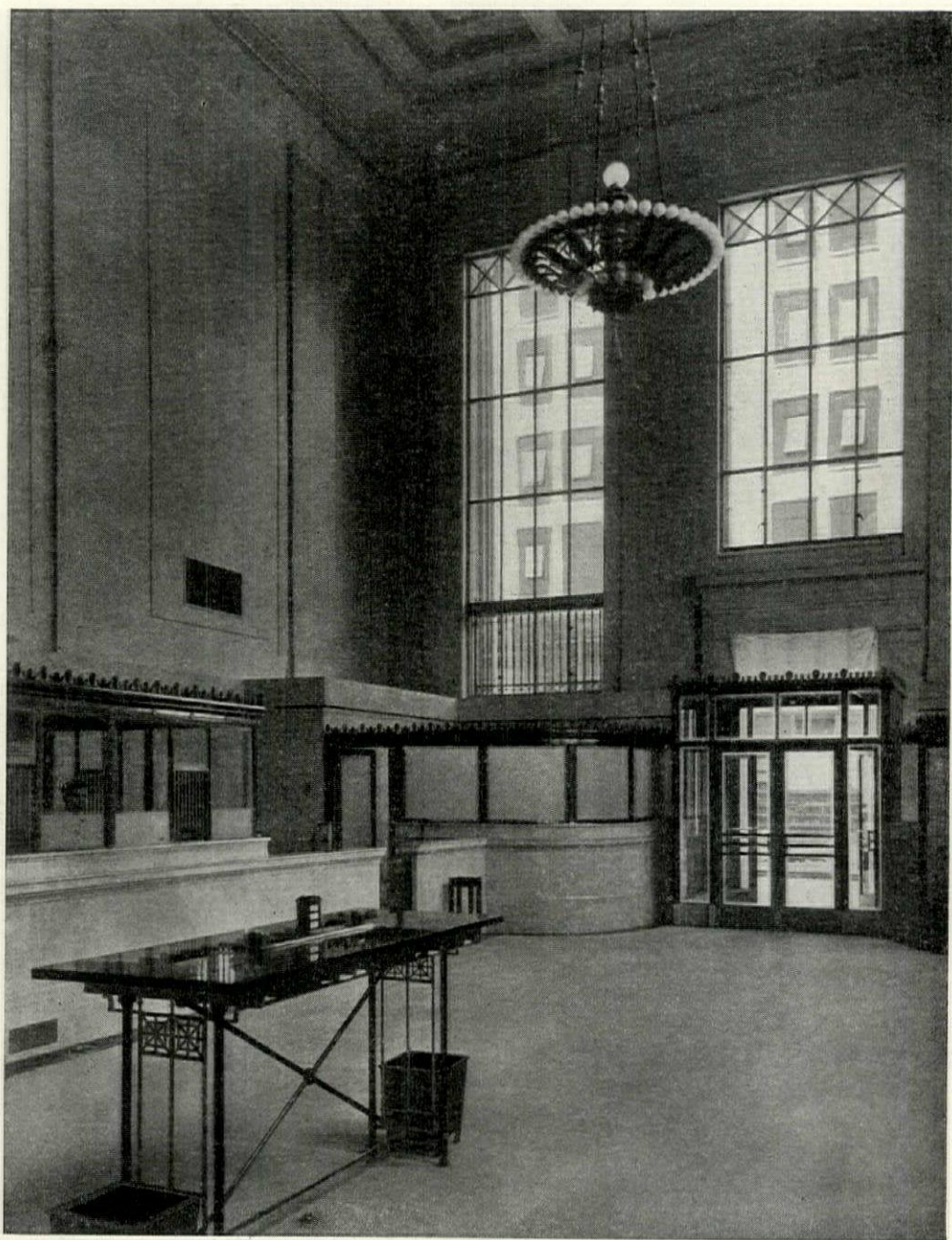
LIVING ROOM—RESIDENCE OF THOMAS A. HOWELL, ESQ., NEW YORK CITY.
Kenneth M. Murchison, Architect.



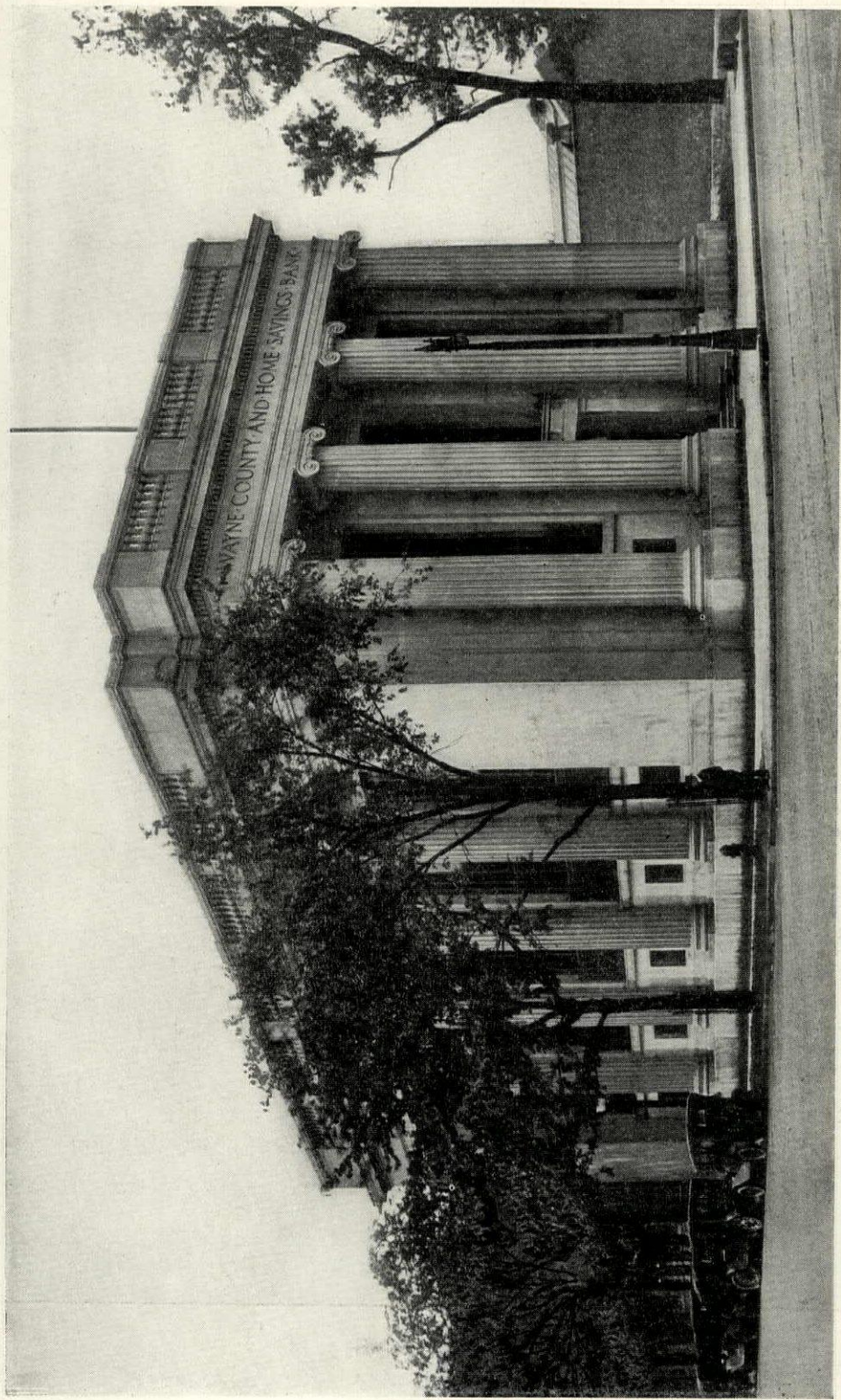
DINING ROOM—RESIDENCE OF THOMAS A. HOWELL, ESQ., NEW YORK CITY.
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DINING ROOM FIREPLACE—RESIDENCE OF
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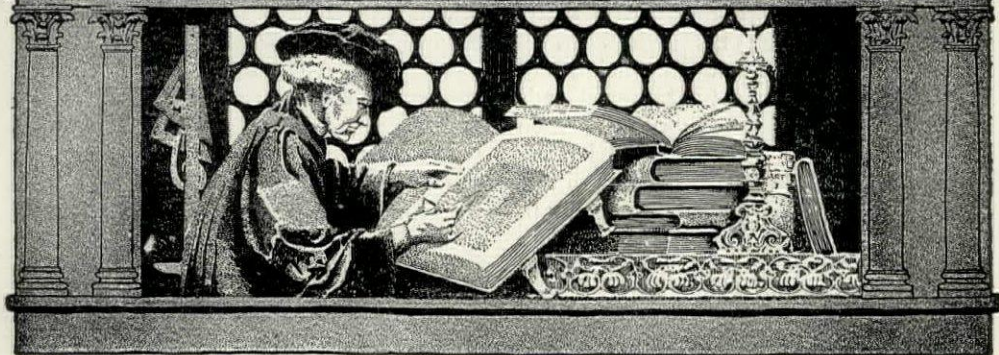


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STUDIES ON ADAM AND BERNINI

By RICHARD F. BACH

Curator, School of Architecture, Columbia University

IN view of the steady development of a larger interest in our national Colonial heritage in architecture, an interest which—after many vagaries and a miserable period of misguided understanding and misinterpretation—is at last assuming a consistent form and following a channel of organic evolution, any book offering a thorough and exact, yet concise and well illustrated, examination of the work of Robert Adam and his associates has a particular bearing and indisputable value, for the so-called Adam manner was one of the fountain sources from which our early builders drew their inspiration, notably in the years from 1775 to the opening of the ill-begotten age of the Greek Revival. Such a book is that by John Swarbrick, entitled: *Robert Adam and His Brothers*, their lives, work and influence on English architecture, decoration and furniture (Quarto, pp. x + 316; and 224 illustrations. London; B. T. Batsford, and New York; Charles Scribner's Sons; 1916. \$20.00).

The classic elegance of Robert Adam's Anglicization of the manner of Louis

XVI, the careful study of actual ancient work which preceded his period of activity, the painstaking attention to every field of design that might illustrate his favored mode of expression, from mansion to mantel, from university buildings even to ladies' workbaskets—yet never with the least suggestion of a descent from sublime to ridiculous—and the vast territory covered by an enormous practice in which the design of buildings was but part of an interpretation of his style that affected every walk of cultured life—all of these factors together constituted a career of teeming activity that even in this era of crowded offices seems almost superhuman. In this we are reminded of that greatest of all careers in English architecture—namely, the career of Sir Christopher Wren. But unlike Wren, Robert Adam was in essence a good business man—indeed a rare type among artists. He was his own business manager, and we timidly aver that his convictions in the direction of the style with which he has been identified, as closely as Wren with his church towers or Vanbrugh with

his alleged megalomania, had to thank this same business sense for much of their popularity. Nor is this an aspersion upon the honored profession of the art of architecture; had his style been in a sense thin or vapid or superficial, had he been insincere, had he fathered fads with regard only for cash returns, then we might fairly say that he had left an ugly smudge upon the fair name of a fine profession. But Robert Adam was qualified for the position of preëminence which he filled in English life of his time, a position which he carved out for himself, for we are of the opinion that many a great man—and Robert Adam among them—has not been satisfied to hide his light under a bushel, as the ideal artist is supposed to do, with an ill-becoming modesty, awaiting chance discovery, but has boldly cut out for himself a path to his own liking. There are too many fatuous tales of the young man, preferably starving, whose ability has long been wasted upon the ignorant observer or upon the chance bird that perched upon his window sill, of course to inspire him, until the fortuitous appearance of nobility that promptly opened the gates of another world. Such kindly fate fell to the lot of Grinling Gibbons, as we read in Sir John Evelyn's punctilious diary, and many hundreds of other able minds have by such means been led to improve the world by their works; while on the other hand a multitude have by the same channel found degeneration or ruin. Between the two stands Robert Adam, and with him a very limited company of others whose own ability or fortunes or both combined, guided by sense and forethought, have been sufficient to open the world like an oyster. It is in our humble estimation one of the saving graces of Adam's career that he was able to make good his own convictions—for he surely had strong ideas of style and design—on the basis of carefully laid plans for his own development; and be it said a benevolent Providence abetted his course and granted him a long head and a level one. All of this by way of preamble to Mr. Swarbrick's well-written book, within whose pages we must

confess we have not found a similar attitude toward that great master's work. In fact, Mr. Swarbrick adopts no attitude at all, unless it be that of a sort of architectural Boswell.

The present volume begins with an introductory note on the classic influence in English architecture and furniture up to the time of the brothers Adam, stating the case completely, from Inigo Jones through every phase of influence from Italian and French and Low Countries sources, and their chief adherents and interpreters in England, to Lord Burlington, Stuart and Revett, the imported Italians—Leoni, Zucchi, Cipriani, and others—and finally the journeys of Robert Adam with Clérisseau to obtain the first hand familiarity with classic work that resulted immediately in the fine book on Spalatro, and formed ultimately the foundation of the Adam family's graceful translation of ancient motives for seventeenth century consumption. Then follow chapters on the work of the elder Adam and the early designs of the brothers, his sons; on the continental tour of Robert Adam and the latter's earlier work; the continental tour of James, the next in importance in this gifted family; and four sections on important architectural undertakings, namely, Lyon House and other contemporary work; Ken Wood, Bowood and Lansdowne House; Harewood House, Nostel Priory, Luton Hoo and Osterley; and the building of the Adelphi and certain contemporary events. Three later sections cover the period just preceding the American revolution, the years of the war itself and the time of Adam's erection of the Edinburgh University buildings and contemporary events. There are two copious indices, one for the text and a separate one for the 224 illustrations. The latter are of superb quality, but they are printed in with the text and not as separate plates; as a result the heavily sized paper required gives the volume an ungainly weight. However, we are willing to condone many sins in favor of good illustrations. The typography, binding and reproductions are well up to the accepted Batsford and Scribner traditions of quality. The text maintains the guise

of a chronicle rather than that of a critical estimate or analysis; the men are not themselves studied, but their works are very carefully catalogued and an excellent impartial history is the result. It is sometimes a mark of sheer restraint and well managed good sense for an author to content himself with the entire elimination of his own estimates of the work of his subjects. Mr. Swarbrick's book will be of great historic value and we commend it without reservation.

II.

A work ringing clear with the sincerity of original study is that by Richard Norton entitled: *Bernini and Other Studies in the History of Art* (Quarto; pp. xii + 217, and 69 plates. New York; The Macmillan Company; 1914. \$5), the publication of a gifted writer and leading authority, showing in the papers gathered together in this volume a breadth of understanding and a catholicity of appreciation compelling immediate attention, combined as they are in the present instance under the guidance of a trenchant critical faculty. As even a casual survey will prove, the book shows no deference to recognized opinions if the author's findings lead him to disregard the critical dicta of those that have gone before; in fact, it will probably be some time before some of the opinions stated by the author will find general acceptance. As a result, these studies are endowed with a wideawake quality which is not the least of its virtues.

The volume offers first, three studies on Bernini, then three more under the general head: Aspects of the Art of Sculpture, and finally two more on Giorgione. The sculpture studies begin with an excellent discussion of the art of portraiture, presenting most valuable standards for judging either the painted or the carved portrait. By way of corollary to this discussion fine distinctions are drawn to indicate the subtle differences between realism in portraiture as expressed by Greek and later by Roman hands. In a separate chapter we are made acquainted with possibly suspected

but not hitherto so plainly illuminated similarities between those two giants in sculptural art, Pheidias and Michelangelo; despite the centuries that separated them, certain fundamental inspirational qualities as well as indisputable marks of technical procedure surely were common to both. A further study on a head of Athena found at Cyrene gains particular interest because this distinct Athena type was discovered by the author himself in the course of excavations at Cyrene.

Giorgione is treated first from the point of view of the paintings generally attributed to him and second from the point of view of Mr. Norton's opinion of the true Giorgione, the ideal of the painter being attained largely through the agency of blue penciling traditionally accepted lists of Giorgione paintings and reconstituting the standing of the artist on the basis of the residue amplified by personal additions. Including copies, the process of revision leaves Giorgione no more than twenty-two pictures, among which are the Gypsy Madonna at Vienna, hitherto ascribed to Titian, an inadequately edited "Judgment of Solomon," and a head of Christ in Boston. Even the *fête champêtre* at the Louvre is excluded, and with the criticism that it is at best "only fanciful and pretty, but in no way striking . . . merely a perfectly charming *pasticcio*."

However, the first third of the book dealing with Bernini is of greatest interest to us in this review. In no less than forty-three pages the author gives us an estimate of Bernini that is masterly. He reviews sympathetically Bernini's chief sculptural work and establishes the prodigious figure in the plastic arts of the seventeenth century—when both architecture and sculpture were plastic arts—as a serious and highly sensitive nature gifted far beyond even the high average of the Italian Renaissance and the most perfect period of richness that characterized its last great century. There are flung at us such words as these, for instance: "Why then find fault with Bernini and think he erred in doing what all the world found good . . . why if the conventional and halting work of the nameless early artist is good, should

the masterly work of Bernini be considered bad the antagonism Bernini arouses is due to the fad for the primitive and incomplete. The very lack of power that every early artist tried to rid himself of is now thought to be his chief value and grace, and as in the daily press a missing word puzzle attracts more attention than a sonnet, so the halting early work finds more admirers than the later perfect art."

The burden of this estimate of the late Renaissance master is of course guided by the appreciation of his sculpture, and it might be well to quote in this connection Mr. Norton's concluding paragraphs: "Such was Bernini, one of the great artists of the world. It is true that he was revolutionary, but he destroyed not through ignorance or envy. He destroyed merely that he might then create. The arts in his day were strangled by academic rules and had become cold and lifeless. The intensity with which he felt things gave him strength to break these bonds and to make sculpture once more a means of conveying living thoughts and emotions. He was like the butterfly which tears away the stiff-plated chrysalis before it can spread its wings in the free air. It is useless to try to explain his technical skill; he was born with it, just as others are born with a keen sense of colour or a musical ear, but it is certain that without it he could never have carved such figures as the Saint Theresa or the portrait of Fonseca which show intense emotion brought on by loss of all sense of self in the contemplation of the mystical meaning of the Passion. Such feeling could not be shown by restrained action and quiet faces. Much movement was necessary and the works are successful and beautiful because the feeling shown is perfectly simple and natural and not forced and put on for the sake of effect. Bernini's technical power made him, however, a bad master for others to imitate. Not that the work of his followers is any more inane than that of the copies of Michael Angelo or of those of any other great man, but his peculiarities were such as are at least superficially easy to see. Where he quite easily and sim-

ply distinguished between the appearance of silk or flesh, his imitators wasted their energies on elaborate arrangements, the only object of which was to show technical dexterity. Where he carved figures that are racked and torn with feeling, the imitators gave forms that are contorted and as unemotional as gymnasts. But he is not to be blamed for their work. By no means was he one of the blind leading the blind. He was the seer, the prophet, by odd chance honoured in his own home, whose visions were so believed by his followers that they vainly tried to see the like. What their eyes strained towards and failed to see, his heart yearned for and gained. To them praise was a prize to win, to him it was a spur to renewed effort and further advance. He had faults, as who has not, but they were due to his being a path-breaker and having to find out for himself ways to carve and show figures such as no sculptor before him had ever dreamed of—they were not the faults of ignorance or stupidity. If it be well for us that we judge not lest we be judged, so, too, it is well, should we judge Bernini or other men, to judge not what there is in him of weakness or failure, but what there may be of noble intention and high endeavour. Doing this we shall see that Bernini, working always with bowed heart, but with uplifted spirit, broke down the middle wall of the partition between art and life."

This vigorous and enthusiastic estimate is followed by a chapter which makes a distinct contribution to the history of art by publishing a collection of clay models by Bernini, undoubtedly one of the most interesting records which has come down to us from the Renaissance. These models are of particular interest and value, because at that time sculptors carved directly in the marble by preference; witness above all the case of Michelangelo, who never used anything larger than a small wax model even for his figures of heroic size. Full size models may have existed in many cases, of course, but being of no use after the work was executed, and being themselves of more or less perishable material, they have not come down to us. Thus the present col-

lection of Bernini's models, the precise origin of which is not known, achieves a particular value for the study of Renaissance architecture.

The final study on Bernini deals with his designs for the piazza or atrium before Saint Peter's, and is based upon the fourteen sheets of the architect's very careful pen and ink sketches, which are in the Brandege collection in this country. Mr. Norton believes that a study of these drawings will show quite distinctly that the present form of the piazza of St. Peter's is due to no mere thoughtless and haphazard erection of colonnades and fountains, but is the result of a deeply considered plan and illustrative of a very large idea. In fact the drawings seem to show that Ber-

nini's circular piazza itself was intended to represent the world at large, while the colonnade symbolized the arms of the cross; this idea is actually developed in the sketches.

Mr. Norton's book is in every sense a contribution in its triple field. It will do—indeed, has done—much to establish Bernini in his proper position according to revised standards. It will undoubtedly make necessary a new and more careful weighing of the facts in regard to Giorgione, and it will in general cast a gratifying light upon sculpture, both Greek and Italian Renaissance. The text is splendid, in a compelling style; the illustrations, of which there are sixty-nine, are worthy to keep it company.



Spanish Architecture of the 16th Century.

By Arthur Byne and Mildred Stapley. 80 plates, 140 ills., 430 p., 7 by 10½ inches. New York: G. P. Putnam's Sons.

The Substance of Gothic. By Ralph Adams Cram. Six lectures on the development of architecture from Charlemagne to Henry VIII. 200 p., 5½ by 8 inches.

Boston: Marshall Jones Company.

The Italian Orders of Architecture. A practical book for the use of architects and craftsmen, consisting of letter press, with 32 plates, based on the orders of Vignola, Palladio, Gibbs, Chambers and other masters. By Charles Gourlay, professor of architecture and building in the Royal Technical College, Glasgow. 9½ by 12½ inches. New York. Longmans, Green & Co. \$2 net.

The Museum. By Margaret Talbot Jackson. 7 ills., 280 p., 7¾ by 5 inches. New York: Longmans, Green & Co. \$1.75.

The Livable House; Its Plan and Design. By Aymar Embury II. Many ills., 198 p., 10 by 7 inches. New York, Moffat, Yard & Co. \$2.50.

Domestic Architecture. By L. Eugene Robinson. 50 plates, 378 p., 7½ by 5 inches. New York: MacMillan Co. \$1.25.

Better City Planning for Bridgeport. By

John Nolen. Many photographs, surveys, maps, diagrams and plans, 159 p. 12 by 9 inches. Pittsburgh: Pittsburgh Architectural Club. \$1.

How to Make Concrete Garden Furniture and Accessories. By John T. Fallon.

Many ills., 105 p., 10 by 7 inches. New York: Robert M. McBride & Co. \$1.50.

Modern Theatre Construction. By Edward

Bernard Kinsila. Large type edition. 41 p. of ills. and copious marginal reference notes; 266 p., 7½ by 5 inches. New York: Chalmers Publishing Co.

The Elements of Graphic Statics. By

Ernest H. Sprague, A.M.C.E. 200 p., with worked examples and 163 ills., 4½ by 7½ inches. A text book for students, engineers and architects. The Broadway Series of Engineering Handbooks. New York Agents: The D. Van Nostrand Co. \$1.50 net.

The Studio Year Book of Decorative Art.

A review of the latest developments in the artistic construction, decoration and furnishing of the house. 148 p., many ills., 12 by 8 inches. New York: John Lane Co. Paper, \$2.50; cloth, \$3.

WAR BOOKS OF THE CATHEDRALS

By BARR FERREE

I.—REIMS

THE student of the French cathedrals may well be taken aback at the books which will crowd his shelves should he attempt to keep in touch with the very considerable literature that, almost from the beginning of the Great War, has grown up around the injured cathedrals or which is concerned with the cathedral cities included within the war zone.

No cathedral has produced so copious a literature as that of Reims. This is due not only to the overwhelming grandeur of the building, but more particularly to the utter maliciousness of its ruin. One may almost go so far as to state that anything relating to Reims has interest. Naturally, therefore, Reims has inspired the most sumptuous publication of the war, *La Cathédrale de Reims*. (Paris: Libraire Centrale des Beaux-Arts.) This is a magnificent book, planned to consist of nine parts, of which eight have reached the United States. The parts thus far published consist of illustrations only, exquisitely fine heliogravure plates after photographs; the introduction and notices by M. Paul Vitry (Conservateur adjoint des Musées Nationaux) not having yet appeared. The plates include an enormous number of details, the sculpture being reproduced, often on a large scale, to a quite unprecedented extent. The photographs from which the plates are copied are obviously the finest obtainable.

The same publishers have also issued *La Cathédrale de Reims*, by M. Etienne Moreau-Nélaton. It includes a hundred and thirty-six plates of illustrations reproduced in good style. The last few plates show some of the damages wrought by the early bombardment. The Passion of Reims now takes its permanent place in the illustrated literature of the cathedral. A more serious work is *La Cathédrale de Reims: une œuvre française* by M. Louis Bréhier (Paris: Laurens),

professor in the University of Clermont. If the illustrations are less ornate, they are numerous and adequate. M. Bréhier devotes the larger part of his work to a discussion of the sculptures of the cathedral; his treatment of the glass, which has almost wholly disappeared in the bombardment, seems inadequate. A useful little book, but handsomely illustrated, is *Reims: La Cathédrale*, by J. Mayor (Paris: Editions d'Art et d'Histoire). The author rapidly summarizes the history and description of the cathedral, and offers his text chiefly in the form of descriptive notes opposite his admirably reproduced illustrations. While the world interest in Reims needs no new demonstration, reference may be made to an Italian book on the cathedral, *Intorno ad una rovina. La Cattedrale di Reims e l'Arte Gotica in Francia* (Rome: Voghera, 1916) by Gino Modigliani.

These books are concerned with the cathedral of Reims as a whole, and with but secondary reference to the results of the bombardment. A very formidable list of books treat of the cathedral from this latter point of view. In this group first rank is taken by *Les Allemands destructeurs de Cathédrales et de Trésors du Passé* (Paris: Hachette, 1915), published without author's name, but subsequently attributed to M. St. Georges de Bouhélier. The author treats of devastations at Reims, Arras, Senlis, Soissons, etc., and gives photographs of bombarded structures and reproduces many notable documents. A temperate discussion of a very hideous record. The book entitled *Ce qu'ils ont détruit. La Cathédrale de Reims bombardée et incendiée par les Allemands en septembre, 1914*, by A. Demar-Latour (Paris: Les Editions pratiques et documentaires), deals almost exclusively with the bombardment and is an excellent summary of the first misfortunes of the cathedral. The brief book by Eugene Mercier, *Notre Dame*

de Reims, summarizes the intent of the sculptures and describes the devastations. More pretentious than these is *Reims et la Marne. Almanach de la guerre, 1914-1915* (Matot, Reims, 1916). It contains a vast quantity of interesting material, including chapters on the German occupation of Reims in 1914, notes on old Reims, the bombardment and burning of the cathedral, life in Reims during the war, and other papers dealing with matters in the Department of the Marne. *La Guerre et les Monuments*, by M. Lucien Magne (Paris: Berger-Levrault), treats of Reims and Arras and the ruined cities of Belgium. *Les Villes Martyres de France et de Belgique* (Paris: Payot), by M. Marius Vachon, treats of the devastations in Reims, Soissons, Senlis, Arras and other towns in France, as well as in many places in Belgium. *Le Livre de Souvenir*, by MM. Paul Ginisty and Arsène Alexandre (Paris: Flammarion), covers somewhat the same field, but in a wholly different way. It is offered as a *Guide du voyageur dans la France envahie en 1914* and supplies a trustworthy guide to destruction in Reims, Meaux, Senlis, Soissons and other places. The beautiful sketch, *La Cathédrale de Reims*, by M. Emile Mâle (Paris: Bloud & Gay, 1915), has, like all other recent books on Reims, been inspired by the bombardment.

The books thus far noted have more or less architectural character; but there is a host of other publications, written more particularly from the military standpoint or that of the general traveler, in which references to the cathedral are more or less meagre, but which have their rightful place in a list of war books of the cathedrals. *Among the Ruins* (London: Heinemann), by Gomez Carrillo, a Spanish journalist, and published also in Spanish and French, contains a chapter on Reims, as well as one on the battlefield of Verdun, with references to Meaux and Nancy. *With the Allies*, by Richard Harding Davis (New York: Scribners), contains chapters on the bombardment of Reims and the battle of Soissons. Rudyard Kipling's *France at War* (New York: Doubleday) includes

some notes on Reims, as do *Over There*, by Arnold Bennett (New York: Doran); *The Spirit of France*, by Owen Johnson (Boston: Little Brown); *The Campaign of 1914 in France and Belgium*, by G. H. Ferris (New York: Holt); *At the Front with Three Armies*, by Granville Fortescue (London: Melrose); *Behind the Scenes at the Front*, by George Adam (New York: Duffield), with notes on Laon, Verdun, Nancy, Soissons and Senlis. Lord Northcliffe describes his visits to Reims in his book, *At the War* (New York: Doran), as does Judge Grant in his little book, *Their Spirit* (Boston: Houghton Mifflin). Walter Hale's book, *By Motor to the Firing Line* (New York: Century), offers more substance in description, and is embellished with some of the author's fine etchings. In addition to Reims he visited Amiens, Arras, Nancy, Soissons and Verdun. Wadsworth Camp describes a visit to Reims in his *War's Dark Frame* (Dodd).

French books in the same class include M. Marcel Dupont's *En Campagne, 1914-1915* (Paris: Plon-Nourrit), with an account of a visit to Reims. *Pendant l'Orage*, by Remy de Gourmont (Paris: Mercure de France), offers some notes on Reims. 1914 *Près de la Guerre*, by Georges Wagnière (Geneva: Jullien), describes the observations of a Swiss journalist at Reims, Verdun and elsewhere in France. *Lettres de France*, by F. Chavannes (Lausanne: Tarin), consists of letters written to the "Gazette de Lausanne." A third Swiss journalist, M. Benjamin Vallotton, has gathered another group of letters to the same newspaper in his *A travers la France en Guerre. Souvenirs d'Alsace* (Lausanne: Rouge).

More elaborate than these is *Reims, (1er Aout—31 Decembre, 1914)*, by Jules Poirier (Paris: Payot), consisting of a daily journal of life in Reims and the bombardment for the first five months. A somewhat similar task is the personal diary of Mlle. Clotilde-Jehanne Remy in her *Sous les Bombes* (Paris: Noël), of which two volumes have appeared, bringing the story down to February 26, 1916. The most considerable publication in diary form is *Le Martyre de Reims*

(Paris: Etienne), written, for the most part, by M. Pierre Bienvenue and published in parts; it was discontinued with Part 41. It undertook to describe daily events in Reims throughout the bombardment, giving details as to the buildings injured and the names of persons killed or wounded. The censor and the shortage of paper combined to suppress this useful publication at too early a date. Another notable diary is the *Journal d'un Rémois*, by M. Henri Jadart, Librarian and Curator of the Musée de la Ville de Reims. Printed in the sumptuous publication *Les Champs de Bataille*, 1914-1915; *Les Cités Meurtries* in the *Collection du Tour de France*, edited by M. Octave Beauchamp, it covers the period from September 3 to October 6, 1914, and presents a graphic picture of the first days of the bombardment. The story is continued by Mlle. Alice Martin in *Reims sous les obus en 1915*; also included in the same publication. This series of *Le Cités Meurtries* also includes parts on Senlis, Meaux and Arras, all beautifully illustrated. *Sous les Obus et dans les caves* (Paris: Beauchesne), by Mlle. Martin, tells the story of the bombardment in 1914.

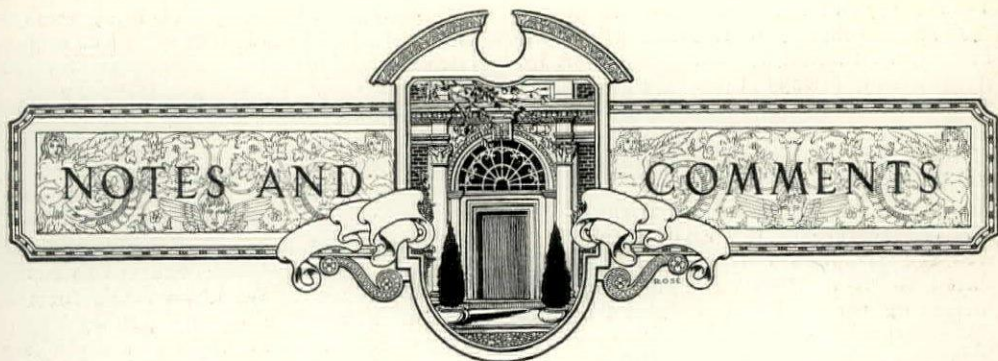
Of miscellaneous books mention should be made of the two volumes of *Les Cahiers Vaudois, Louvain-Reims* (Lausanne: Tarin, 1914-1915), reproducing many protests against the bombardment of the cathedral. A somewhat premature discussion of restoration is treated by Mgr. Lucien Lacroix in his *Faudra-t-il restaurer Notre Dame de Reims*. (Paris: Bloud & Gay, 1915). *L'Ame de la France à Reims* (Paris: Beauchesne, 1914) is an eloquent sermon by Mgr. Baudrillart inspired by the destruction of the cathedral. Facts and documents relating to the bombardment are brought together by "Vindex" in *La Basilique dévastée* (Paris: Bloud & Gay); and the crimes of the first bombardment are described by Diego Angeli in his *Reims e il suo Martiro* (Milan: Treves), in three letters originally published in the *Giornale d'Italia*. *Les Cathédrales de France devant les Barbares*, by Jean de Bonnefon (Paris: Societe d'Éditions), contains brief sketches of

the cathedrals of Reims, Soissons, Laon, Senlis, with drawings by Gautier de Soucy.

Of the innumerable magazine articles relating to the cathedral, none of which can be avoided by the collector of contemporary material, there is but space to speak of one or two only. *The Martyred Towns*, treating of Reims, Soissons, Senlis and Arras, by M. André Michel, and originally published in the *Revue Hebdomadaire*, has been translated into many languages that all the world may read of these architectural catastrophes. The magazine, *L'Art et les Artistes*, consecrated a special number to *La Cathédrale de Reims*, handsomely illustrated and with text by M. Camille Enlart. A later issue dealt with *L'Art Assassiné* with text by M. Camille Mauclair, and describes the general devastation throughout France, as well as at Reims.

Of poems the first place is unquestionably held by *Les Cathédralés* (Paris: Libraire Théâtrale, Artistique and Littéraire), the dramatic poem written by M. Eugène Morand for Mme. Sarah Bernhardt. *Sauvons la Cathédrale de Reims*, by Camille Le Senne (Paris: Editions & Librairie), includes both prose and poetry. *La Sublime Épopée*, by A. Chagneau-Saintipoly (Paris: La Renaissance du Livre), contains a poem on Reims. Others are *A la Gloire de Reims*, by M. Marcel Sézanne; *La Cathédrale de Reims*, by M. Paul Fort; *Ma Cathédrale*, by M. H. Richardot, and *L'Ange brisé*, by M. P. Antony-Thouret, inspired by the ruin of the famous statue known as the "Smile of Reims."

Of German books but one has escaped to America; this is the astonishing pamphlet *Die Beschiesung der Kathedrale von Reims* (Berlin: Reimer, 1915), issued by the Ministry of War, as explaining and excusing the bombardment of the cathedral. The war literature of Reims has been admirably summarized by M. Henri Jadart in his *Bibliographie Rémoise*, published originally in the *Travaux de l'Académie de Reims*, but also issued separately. It lists books and pamphlets only, omitting specific references to magazines.



**The
Boston
Exhibit.**

The annual exhibition of the Boston Architectural Club, held in November in Rogers Hall, showed evidences of the heavy burden laid by the war on the professions of architecture and landscape architecture. The organizers of the show were confronted by a very real obstacle at the start; if they had charged an entrance fee to a public contributing to war expenditures of all kinds they would have had practically no visitors at all. Not only was this means of financial support missing, but any great outlay for decorations seemed hardly advisable, either on the part of the club itself or on the part of the Boston Society of Landscape Architects, which shared in the exhibit. In the list of exhibitors some well-known names were absent altogether, which was not strange when so many architects have gone into the army or are doing Government work.

All this does not mean that the Boston exhibition was not successful, was not worth a visit. The promoters are to be congratulated for doing so well under the trying conditions, and their example should encourage other societies to maintain their exhibitions as long as patriotic necessities will permit. Indeed, it might be suggested that a considerable section of a show be given to displaying the varied war work performed by architects—map drawings, cantonment projects, or some of the new housing schemes that the Government is said to be contemplating for workmen.

One of the most interesting exhibits was the model of a large tuberculosis hospital designed by H. F. Kellogg, contrived of cardboard elevations roughly rendered and pasted together, evidently made in the architect's own office. Simple means of showing clients what to expect in the ap-

pearance of designs are worth study, for too much elaboration in models and perspectives is a great waste. As for Mr. Kellogg's design itself, it was a fine effect of well-contrasted groups of roofs and fenestrations combining early American motives, used in the bold, sure composition of the Beaux-Arts, without losing the scale or the refinement of our native style. Another building was one in a group of the Rice Institute, Texas. In the contrasts of the many arches with the great arch of the entrance passageway, Cram & Ferguson have produced a rarely vigorous and decorative and imaginatively composed work. Though some might find details in it not to their liking, it is refreshing beside the insipid correctness of which we have such a surfeit. Of the smaller works, the house shown by Harry B. Russell is a remarkable example of that bold, striking originality—yet well-reasoned good taste—that Boston occasionally produces. There was a hallway in the house, of tile floor and plain brick walls, decorated with a single strongly modeled round picture frame, and with the light cutting across the dark brickwork down from an immense window on one side of the hall. Even more astonishing appeared the dining room, most simply furnished, again with tile floor and brick walls, one of the few cases where brick has been successfully used in an interior. Such a design seems to point into the future, and its value is not lessened by the query as to whether it would appear too sombre and too bare the year round; assuredly it would not so appear to natures which eschew the luxurious and the pretty for the essential.

The landscape architects had a good exhibit, as was to be expected from the strong group in Boston. Here again the ravages of the war were apparent, for Olmsted Brothers carried most of the burden in a fine exhibit. Harvard and

Technology were there, with Technology the more sober and Harvard the more French, a situation not without humor, for it was not always thus. Besides these school exhibits was a beautiful drawing that bore the title, "René Mailand, winner of the Grand Prix de Rome, 1913, killed at Verdun." It bore witness to the price that civilization must pay to barbarism.

A fine feature of the Boston exhibition was the arts and crafts room—activities suited to New England and fortunately increasing there. Here one could admire the vigorously designed and richly colored pottery and tile, the jewelry and wrought iron hardware; also the splendid silverware of Boston, reviving creatively, not imitatively, the traditions of Paul Revere.

Such exhibiting is good, not for the public's "education" alone, as Arthur Shurtleff explained in a quietly humorous address before the Boston Society of Landscape Architects, but for the good that each individual architect derives when he spots his designs alongside others up on a wall. There his work appears somehow less imposing than on the drawing board in his own office, and faults before unnoticed or glossed over reveal themselves to him in grim rebuke.

JOHN T. BOYD, JR.

Zoning.

Districing, or zoning—as it has come to be known in city planning parlance—implies the limitation by law of certain regions of a city to certain specified industrial, manufacturing, residential or other well defined purposes, and the consequent segregation of factories and public buildings, as well as other distinct types of edifices, with the necessarily resultant limitation of their heights and areas. There remain, of course, the obvious exceptions of schools and churches and the like, which are not physically detrimental to residential districts, and several similar reservations.

In a recent annual report, the Philadelphia Housing Association has published an admirable summary of the case for scientific districting in these few paragraphs: Zoning recommends itself because—

It gives stability to property values; prevents deterioration of neighborhoods with the attendant wastes; allows for necessary changes, but prevents those of a shifting character.

It segregates obnoxious trades, preserves the character of residential areas and stimulates the use of natural advantages for the purposes for which they are best adapted.

It simplifies traffic regulations and expedites transit; by the distribution of homes and the encouragement of the erection of private dwellings, it tends to eliminate congestion by distributing the population.

It segregates factories along natural or artificial traffic lines and conduces to economy in industry. While providing for the general well being of the public, it improves the living conditions of the workers and aids in reducing the cost of living.

It reduces the amount of insanitation and attendant dangers, thereby making for public health. It establishes more equitable housing standards. It contributes to the beauty of the community and aids in the economical administration of municipal government.

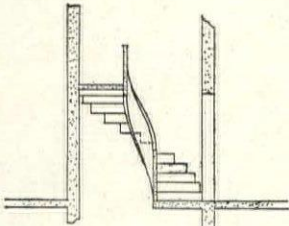
In these pithy sentences we have the entire gist of the zoning question very capably summed up. If these facts, thus succinctly stated, could be brought to public notice the benefits of zoning would no longer be among the poorly understood aspects of city planning.

RICHARD F. BACH.

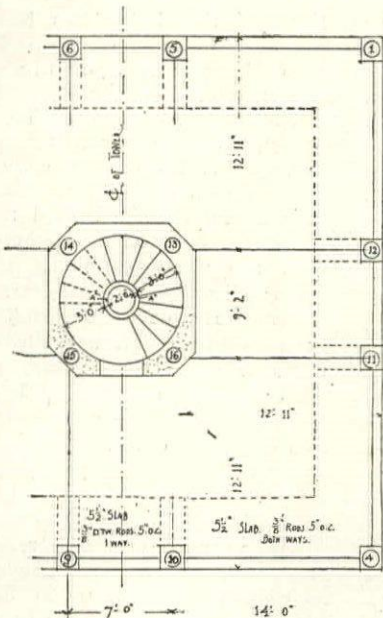
The Southwest Museum Again.

In emendation of our notice in the July issue of the Architectural Record concerning the Southwest Museum at Los Angeles, the following matter may prove of interest. The problem of silhouette treatment automatically became the dominant note in the design of the building, for the reason that requirements of site and approaches from all directions demanded a satisfactory first impression as seen from a distance. Therefore the mass composition of the structure, as apart from the detailed treatment of each component of the design, retains its importance until the spectator is at fairly close range. As a consequence the effect of exterior color became a secondary consideration; and this especially because of the entirely accessory and unqualified effectiveness of exterior color in Mission and old adobe buildings characteristic of the Southwest. When the actual color texture was finally determined upon a dark cream, approaching tan or *écru*, was found most satisfactory.

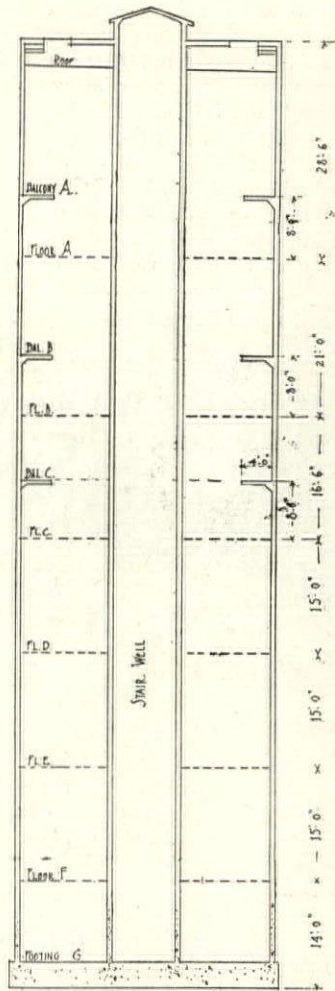
SOUTHWEST MUSEUM: LOS ANGELES:
 MESSRS. SUMNER HUNT AND S. R. BURNS, ARCHITECTS,
 LOS ANGELES.



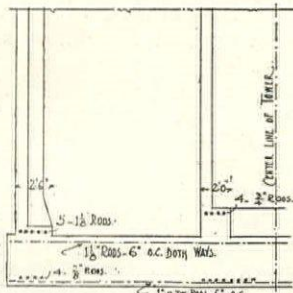
TYPICAL RUN OF STAIRS.



TYPICAL PLAN OF CARACOL TOWER AND STAIRS - $\frac{1}{4}$ SCALE.



TOWER SECTION - $\frac{1}{8}$ SCALE.

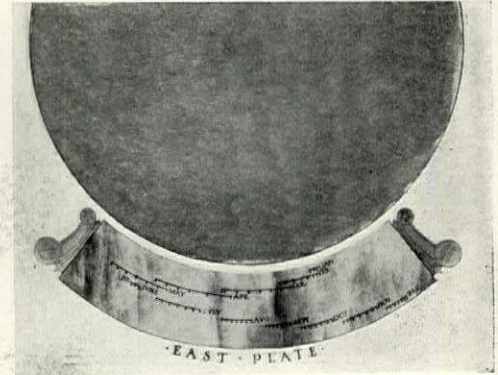


SECTION OF TOWER FOUNDATION - $\frac{1}{4}$ SCALE.

In the construction of the helical stairway, which is housed by the caracol tower, metal forms were used for the central or well section and wooden forms for the exterior section. The inner or metal forms were two in number, measuring respectively two feet and two feet eight inches in diameter, the outer of the two shaped to conform to the rise of the stairs. These metal forms, which were used for building only the well hole or rail side of the helical concrete stairway, were not of great length and were used as units raised from time to

time as the work progressed. It will be remembered that the caracol tower, rising to a height of about 125 feet, is carried on a solid slab of concrete thirty-six feet square and slightly less than three and one-half feet thick, reinforced both ways. The work will contribute largely to the advancement of concrete as a building material and will, above all, aid in establishing an attractive tradition of modern buildings in emulation of the one-time architectural charm of the Misons.

RICHARD F. BACH.



SUN-DIAL, WITH DETAIL OF PLATE, AT COLUMBIA UNIVERSITY, NEW YORK CITY.

**A
Granite
Ball as a
Sun-Dial.**

A granite ball, weighing fifteen tons, which stands on the campus of Columbia University, New York, forms a unique sun-dial. The ball casts a great oval shadow on the base supporting it, and it is from the moving edges of this shadow that the time is ascertained. There are really two shadow edges, and for this reason two bronze time plates, an east and a west plate, are necessary; one for each shadow.

Old-time sun-dials indicate solar time; modern watches and clocks show standard time. The two kinds of time differ very irregularly throughout the year, the difference in New York City being sometimes as great as twenty minutes. In order, therefore, that the Columbia dial should be a really accurate timekeeper, it was necessary to make it keep both standard and solar time. As this renders the dial a complicated affair, it was constructed to indicate time once only each day, at the moment of noon, New York standard time.

The method of using the dial is shown by the diagrams of the east and west plates.

Each of the dial plates has twelve concentric circular arcs engraved upon it, one for each month. Upon these circular arcs various dates in the several months are marked by small holes. To read the dial on any date, as for instance, July 4, one notes where the shadow edge cuts the hole marked 4 on the July circular arc. It will then be noon by standard time.

As it would have cumbered the plates with too many numbers to engrave on them all dates of the year, some of the intermediate dates of each month have been omitted. To use the dial on these dates it is only necessary to interpolate an engraved number and hole, suitably placed on the proper circular arc between two engraved dates.

ROBERT H. MOULTON.

The very interesting residence of C. Studebaker, Jr., at South Bend, Ind., shown in Figs. 67, 68 and 69 in Prof. Hamlin's article on "The American Country House," last October, was designed by Green & Wicks. Ralph M. Weinrichter was the landscape architect for the property, which is known as Elm Court.