

# THE AMERICAN ARCHITECT



ILLUSTRATIONS  
AND READING  
MATTER PERTAIN-  
ING TO ARCHITECT-  
URE AND ALLIED  
ARTS

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VOLUME CVIII AUGUST 18, 1915 NUMBER 2069

# The Creosoted Lath

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and furnishes facts and figures to prove that Bishopric Board cuts the cost at least 25%.

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THE AMERICAN ARCHITECT



14

DETAIL OF MIDDLE DOOR

CATHEDRAL, SIENA, ITALY (1380)

# THE AMERICAN ARCHITECT

VOL. CVIII

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PALAZZO VECCHIO, FLORENCE

MICHELOZZI, ARCHITECT

## THE LIFE AND WORKS OF MICHELOZZI\*

By J. R. ABBOT

**H**ARDLY less interesting than the life of the great Florentine artist Brunelleschi, who gave the first definite expression in architecture to the ideals of the Renaissance, is the career of his younger contemporary and compatriot, the craftsman-architect Michelozzi.

\*Part of the work required in the theses for the degree of Master of Architecture in the School of Architecture, Harvard University, in the course of History, is the preparation of a thesis on some topic selected by the student. The accompanying essay by Mr. Abbot is selected from among those submitted as showing the very thorough method employed in approaching the subject.

At the close of the fourteenth century, the time of Michelozzi's birth, Italy was beginning to feel that great movement of civilization, the Renaissance. This movement appeared first in literature and philosophic thought, and did not make its influence felt in the fine arts until later. In fact, it was not until the beginning of the fifteenth century, shortly after the birth of Michelozzi, that the Renaissance began to manifest itself

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with distinctness in the branches of sculpture and architecture.

It was natural, too, that the germs of this phase of the Renaissance should mature and bear fruit first in Florence, Michelozzi's native city, for Florence was at that time by far the most advanced and progressive city of Italy. The first great name in the history of Renaissance architecture was that of Filippo Brunelleschi, who preceded Michelozzi by nineteen years, and was already well on his way to fame when Michelozzi began his career.

Michelozzo di Bartolommeo (his surname Michelozzi was invented later) was born at Florence in the year 1396. He was the second son of Bartolommeo di Gherado, a Florentine tailor of humble means.

Early in his youth Michelozzi began the study of sculpture and design under Lorenzo Ghiberti, the famous Florentine scul-

tor, then at the height of his career. Michelozzi, while not noted amongst his fellows for striking brilliancy or originality, was a consistent worker. Although Ghiberti seems to have employed him for the most part in minor duties, he is said to have worked with the master on the well-known statue of St. Matthew. It is certain also that he assisted Ghiberti in modeling and casting the bronze doors for the Baptistry of Florence.

Concerning Michelozzi's relations with Donatello, a younger contemporary of Ghiberti and fully as brilliant a sculptor, we are much better informed. Michelozzi had acquired great proficiency in works of marble and bronze, and Donatello usually entrusted to him the casting of his most important bronzes. Later Michelozzi was employed to design the architectural settings of many of the monuments in which

they collaborated. The two were associated in several important works of sculpture. In 1426 they executed together the tomb of Pope John XXIII (Giovanni Coscia) in the Baptistry of Florence. One thousand florins were spent upon this piece of work, which consisted of a naturalistic sepulchral effigy lying on a couch of gilded bronze. The base of the monument was decorated with three niches containing beautiful marble statuettes of Faith, Hope and Charity. The figure of Faith was executed by Michelozzi. Another tomb by these two artists was that of Cardinal Brancacci in Sant' Angelo at Naples, done in the year 1427. The two also worked together on the extremely beautiful exterior pulpit of the Cathedral at Prato.

By this time Michelozzi had won independent recognition as an artist of high merit, and we find him carrying out several works entirely alone, though still often associated with Donatello. Over the sacristy opposite to San Giovanni, Michelozzi executed a San Giovannino in full relief, which is finished with great



CHURCH OF S. EUSTORGIO, MILAN  
MICHELOZZI, ARCHITECT

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care and was much praised. In 1427 he designed and carried out his greatest work of sculpture, the Aragazzi tomb in the cathedral at Montepulciano. The tomb was later destroyed, but some of the fragments are still extant and show the characteristics of a master hand. The most interesting fragment is that of the figure of Christ, whose personality was portrayed by Michelozzi in a most striking manner.

The partnership with Donatello seems to have been terminated when Michelozzi entered the service of Cosimo de Medici, the great merchant prince of Florence. Cosimo, though claiming to be only a private citizen, was virtually the absolute ruler of the republic. He was also a munificent patron of art and literature, and assembled around him artists and learned men of every nation. Michelozzi soon became Cosimo's firm friend and art advisor.

It was at this time that Michelozzi's interest in architecture was awakened. With the advantage of a thorough knowledge of ancient art as a foundation, he soon secured in architecture a reputation second only to that of Brunelleschi. His relations with the latter, though always sincere and friendly, were not very close, due in part probably to their difference in age.

Michelozzi's design for Cosimo's palace, later known as the Palazzo Riccardi, was undoubtedly his masterpiece. It was a composition of remarkable grandeur and beauty. Michelozzi had designed a building which set the type for the Renaissance palaces of after years. The palace was enlarged by Cardinal Riccardi in 1639, but fortunately in the same style, so that Michelozzi's work is still extant and unchanged.

The palace has three stories and a cellar, the latter containing a buttery and various storerooms. On the ground floor the main feature is the large open colonnaded courtyard, entered through a narrow passage



CHAPEL IN THE CHURCH OF S. EUSTORGIO, MILAN

MICHELOZZI, ARCHITECT

from the great front door. The columns in the courtyard have very interesting Ionic capitals of original design. Michelozzi seems to have had an especial liking for the Ionic order, and we find him using it wherever possible. This is remarkable in view of the fact that Brunelleschi and most of his immediate successors and contemporaries in most instances used a form of Corinthian capital.

Opening from this court on the ground floor are the various offices and service rooms of the palace. From one corner of the court the grand staircase leads to the upper floors, where are the apartments of state for the reception of visitors of exalted rank, and also the salons and private apartments of the family.

The exterior of the palace derives its beauty from its simplicity of treatment and

## THE AMERICAN ARCHITECT

the delicacy of its proportions. The stories diminish in height and robustness from ground to cornice. The first story is 31½ ft. high, and built of heavy rusticated blocks of stone. The second story is 23 ft. high, and of coursed ashlar with strong draft lines, while the upper story, 16 ft. high, is built of smooth blocks of smaller size. Each story has a crowning string course proportioned to its height, while the whole build-

Albizzi, Michelozzi accompanied him into exile. They went first to Padua, and then to Venice, where Michelozzi made many designs for both public and private buildings. The most important of these was the library of the monastery of San Giorgio Maggiore, built and furnished at the command and expense of Cosimo.

Cosimo's exile lasted only a year, and in 1434 he and Michelozzi returned to Flor-



COURTYARD, MONASTERY OF S. MARCO, FLORENCE

MICHELOZZI, ARCHITECT

ing is capped by a magnificent 7 ft. cornice of Corinthian type, beautifully designed, both with reference to the building itself and to the narrowness of the street on which it stands. The windows are of the arcade type with round heads and simple tracery. They rest on the string courses, which mark the sill line. The whole façade makes an harmonious composition.

In the year 1433, when Cosimo de Medici was banished from Florence by Rinaldo

ence. Michelozzi was immediately set to work remodeling the palace of the Signoria or Palazzo Vecchio. He was later commissioned to rebuild the walls of the palace and to undertake other alterations on the exterior and the interior. His doorway leading from the courtyard is a most successful piece of design.

Michelozzi's next reconstructed the monastery of San Marco. The work was begun in 1437, and carried on with great industry.

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The fresco decorations were executed by Fra Angelico, and are famous the world over. Cosimo is said to have spent 36,000 ducats on the works. The convent was considered to be the most perfectly arranged and the most beautiful building of its kind in Italy, and is a lasting monument to the skill and genius of Michelozzi.

After Brunelleschi's death, in 1446, Michelozzi was employed in completing some of his predecessor's important unfin-

a convent of great beauty for the Monks of Saint Francis. He also made extensive alterations in the Villa Careggi, the charming country residence of Cosimo.

Up to this time all Michelozzi's work had been in or about Florence, except for his year of exile with Cosimo at Venice, but about the year 1460 he went to Milan and undertook several works of importance there. Chief of these was the enlargement of the Palazzo Vismara, which had been



COURTYARD, PALAZZO VECCHIO, FLORENCE

MICHELOZZI, ARCHITECT

ished works, notably the lantern surmounting the magnificent dome of the Cathedral of Florence. Among the works of minor importance which Michelozzi did for his rich patron Cosimo was the fortress-like palace of Cafaggiuolo, in Mugello, with its thick bastions and surrounding trenches. The grounds of the estate he laid out with gardens, fountains and groves in the typical style of the Italian villa. Nearby this place in the Friar's Wood, Michelozzi built

presented to Cosimo de Medici by Francesco Sforza, duke of Milan. The sculptured portal, which Michelozzi executed for this palace, was a masterpiece of simple and elegant design and became the prototype of many such palace entrances of later times in the cities of Lombardy.

Before leaving Milan, Michelozzi erected a sumptuous chapel in the Church of Sant' Eustorgio. This chapel was modeled on that built by Brunelleschi for the Pazzi fam-

## THE AMERICAN ARCHITECT

ily in the cloister of Sante Croce. It shows, however, many strongly marked Lombard characteristics in its details and workmanship, due to the use of brick and terra-cotta and the influence of the Lombard craftsmen.

In 1464 Cosimo de Medici died. Cosimo was succeeded by his son Piero, at whose instigation Michelozzi built the beautiful marble chapel of the crucifix in the center of the Church of San Miniato sul Monte.

This was the last important undertaking of Michelozzi. Michelozzi died, in 1472, at the age of sixty-eight, and was buried in his own tomb in the Church of San Marco at Florence.

While to Brunelleschi belongs the honor of having been the pioneer of Italian Renaissance architecture and the originator of its forms, we must accord to Michelozzi his just due, for it was he who precised and fixed the forms introduced by his predecessors.



CHAPEL IN THE CHURCH OF S. CROCE, FLORENCE

MICHELOZZI, ARCHITECT

## THE AMERICAN ARCHITECT



PALAZZO RICCARDI, FLORENCE

MICHELOZZI, ARCHITECT

### Programs for Theses in Degree for Master of Architecture, School of Architecture, Harvard University

*See Illustrations in Plate Form*

There are illustrated in this issue a number of drawings, in each instance selected from the full set required for a thesis of degree of Master of Architecture, in the School of Architecture, Harvard University.

The requirements of the school exact, in each set of thesis drawings, all the principal floor plans, elevations, sections and two sheets of details, together with the calculations of construction.

As a means of studying modern educational methods in our architectural schools, we believe these illustrations and the theses printed will be found of much interest.

Principal provisions of programs for various theses are printed herewith.

### A CHURCH AND PARISH HOUSE

By JAMES H. STONE

*General.* On an ample site facing the Common of a New England town there is to be erected a church and parish house for the Protestant Episcopal parish of the town.

*Building.* The building is to consist of two parts, (1) the church, (2) the parish house.

(1) *The Church.* (a) Entrance vestibule. Stairs to gallery. (b) Nave and aisles having an area of about 4,800 square feet. (The average area of King's Chapel, North Church, and Arlington Street Church.) (c) Chancel, for stalls, pulpit, lecturn and organ console with an adjacent space for the organ. (d) Apse, for the sanctuary, for altar, etc. (e) Sacristies, for priests and for the choir.

(2) *The Parish House.* (a) Chapel about 2,000 square feet with a small apse for an altar, which may be used for incidental services and for Sunday school services. (b) In the basement with ample stairway provision there will be a large hall for the social gatherings of the parish. (c) A small kitchen and other dependencies. (d) Space for heating and ventilating apparatus and a room for the janitor.

*Drawings Required.* Plan of basement, one-eighth inch; plan of first floor, one-eighth inch; plan of roof, one-sixteenth inch; three elevations, one-eighth inch; (two sides and rear).

Transverse section drawn showing: Front elevation of Parish House, one-eighth inch; front elevation of church, one-quarter inch; longitudinal section of nave, one-eighth inch; section of Parish House, one-eighth inch.

*Details:* One sheet exterior showing construction and materials completely, three-quarter inch; one sheet interior showing construction and materials completely, three-quarter inch; modern heating and ventilating system; computations as required by Professor Killam.

### A COLLEGE CLUB HOUSE

By ALAN McDONALD

A social club in one of the older colleges proposes to erect a club house in the immediate vicinity of the college campus. The building shall conform in some degree to the character of the college buildings, which are in general of the Colonial type. It shall be fire-proof in its main construction.

The building shall include on the entrance floor: Strangers' room, living room, dining room, billiard room and accessories.

On the second floor: A large meeting hall, which may be used for dances, plays or other entertainments; a library, writing room, card room, treasurer's room.

On the third floor: Living quarters for eight men, showers, baths and toilets; servants' quarters.

In the basement: Kitchens and dependencies, squash courts with locker room and showers, heating, etc.

*Drawings Required, Requirements.* Plans, showing indication of ventilation, heating and plumbing, at one-quarter inch scale. Basement, first floor, second floor, third floor, roof.

## THE AMERICAN ARCHITECT

Four elevations at one-quarter inch scale. Two sections at one-quarter inch scale. Two sheets (double-elephant size) of details showing exterior, interior and construction details. Computations.

### A GARDEN PAVILION

By JOHN P. CURTIS

On a large country estate laid out in the Italian style, the owner proposes to erect a pavilion to accommodate the bachelor guests at his numerous house parties. This owner, a patron of outdoor sports, has installed on the estate numerous facilities for their enjoyment. Among these is a pool for swimming. It is intended that this pool, with its fountain or grotto accessories, shall be an integral part of the architectural composition of the pavilion.

The requirements of the pavilion are:

*First Floor.* Main club room, billiard room, card room, breakfast room. Loggias, stairs (main and service), simple kitchen arrangements and space for valet service. Toilets.

*Second Floor.* Eight or nine bedrooms, baths, etc.

*Basement.* Heating arrangements. Heat will be furnished from the main house in the shape of steam or hot water.

*Drawings Required.* General plant at one-eighth inch scale, showing pavilion, pool and grotto. Plans of pavilion only at one-quarter inch scale. Basement and foundation plan, first floor plan, second floor plan. Elevations of pavilion at one-quarter inch scale. Front, rear and side. Section through pavilion, garden and grotto at one-eighth inch scale. Section through pavilion at one-quarter inch scale. Two sheets of details at three-quarter inch scale. One sheet of a perspective or further details. Ventilation, heating and computations.

### A COLLEGE GYMNASIUM

By LLOYD M. HENDRICK, JR.

*Introduction.* A university of 5,000 students, needing a new gymnasium, has received contributions from generous alumni sufficient to carry out the desired project.

*Site.* The site selected for the purpose is a slightly sloping area on the university grounds, and is such that approach to the proposed building may be had from all directions.

*Requirements.* A gymnasium room proper of not more than 20,000 square feet floor area. In connection with this shall be arrangements for spectators at gymnastic exhibitions and games. A running track. A swimming pool with gallery for spectators. A trophy room of dignified character and proportions to receive the many trophies representing the university's success in athletics. The purpose of this room may be combined with that of a lobby or *salle d'attente*. Showers and lockers. Office for official in charge. Adequate provisions for physical culture director. Rooms for fencing, wrestling, boxing, etc. Bowling alleys.

*Drawings Required.* Plans (5) Basement, first and second floors at one-eighth inch scale. Roof at one-sixteenth inch scale. Plot plan at one-thirty-second inch scale. Sections (2) Longitudinal and transverse at one-eighth inch scale. Elevations (3) Front, side and rear at one-eighth inch scale. Details (2) Two sheets of details (double-elephant size) at three-quarter inch scale, showing masonry, wood work, iron work, interior decoration and construction of same. Computations of construction as directed by Professor Killam.

## NORTHERN ITALIAN DETAILS

No. 37—GARDEN DETAILS, PALAZZO DELLA ORE-QUIRICO, VICENZA

THE Vicenzan landscape architect often found almost ideal conditions for the exercise of his art. An abundance of water, a luxuriance of soil and vegetation, and a scenic background formed by the snowclad Alps need little but arrangement to produce gardens of great charm. Beyond the picturesque Bacchiglione with its busy mill wheels lies the Palazzo della Ore-Quirico. The palace itself is of no great merit, but opportunity has been taken of the verdant meadows behind it to construct in its rear a beautiful and pretentious garden. Practically all that remains today is a long alley of ilex trees bordered with statues and pedestals that forms a delightful vista to a circular tempi-

etto erected upon a slight elevation about five hundred feet distant from the house.

The pedestals illustrated in this week's issue are alternated, interspaced along the borders of this alley, with statues and trees and form a delightful promenade from which are obtained superb views of the not far distant Alps. Nearer the palace the grounds are intersected by a quiet stream, bordered with large shade trees, which is spanned by a picturesque bridge. It was found impractical to give an entire plan of this alley because of its extreme length, but some idea of its arrangement, it is hoped, may be obtained from the photographs which show it and the circular tempietto lying just beyond.

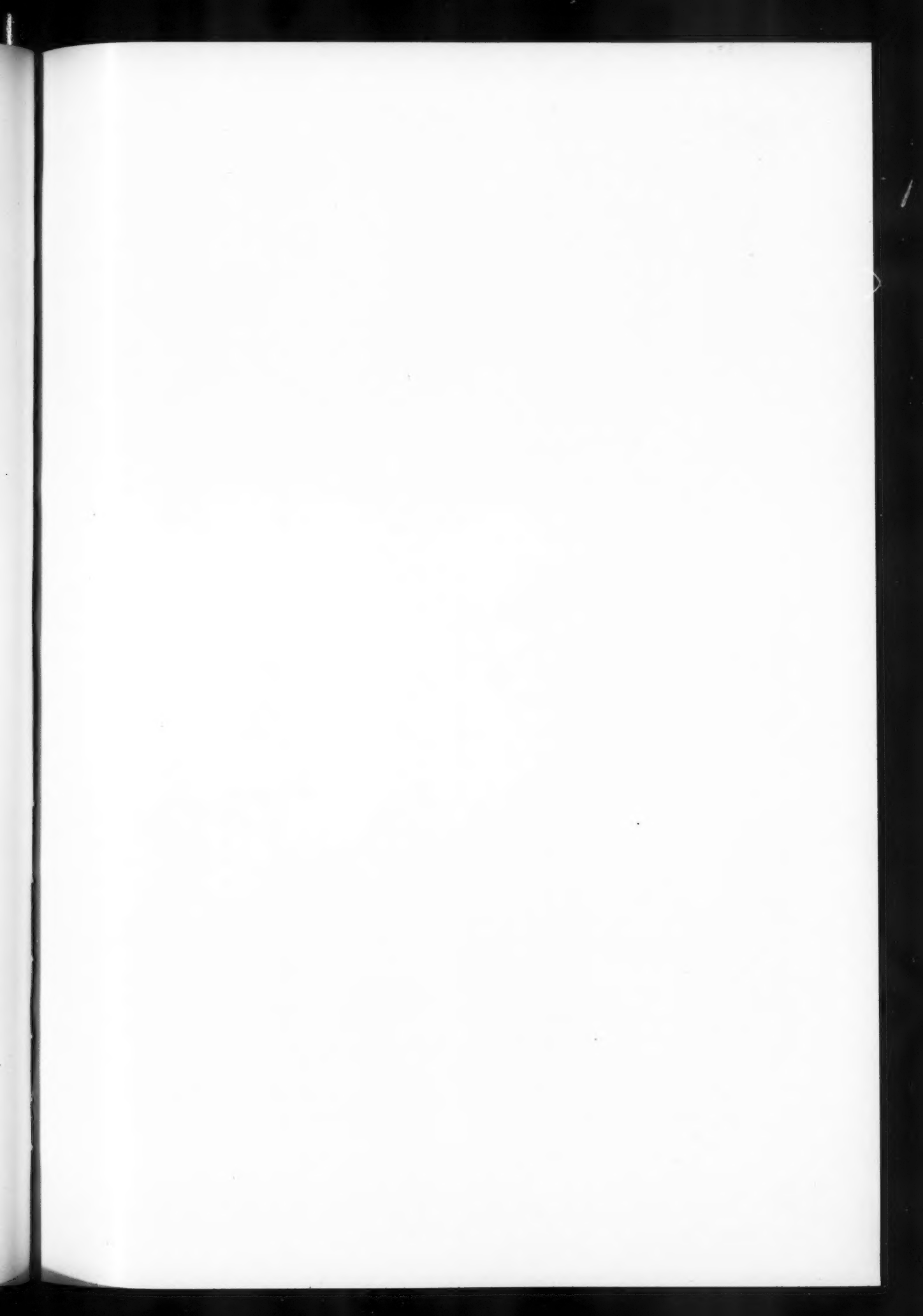
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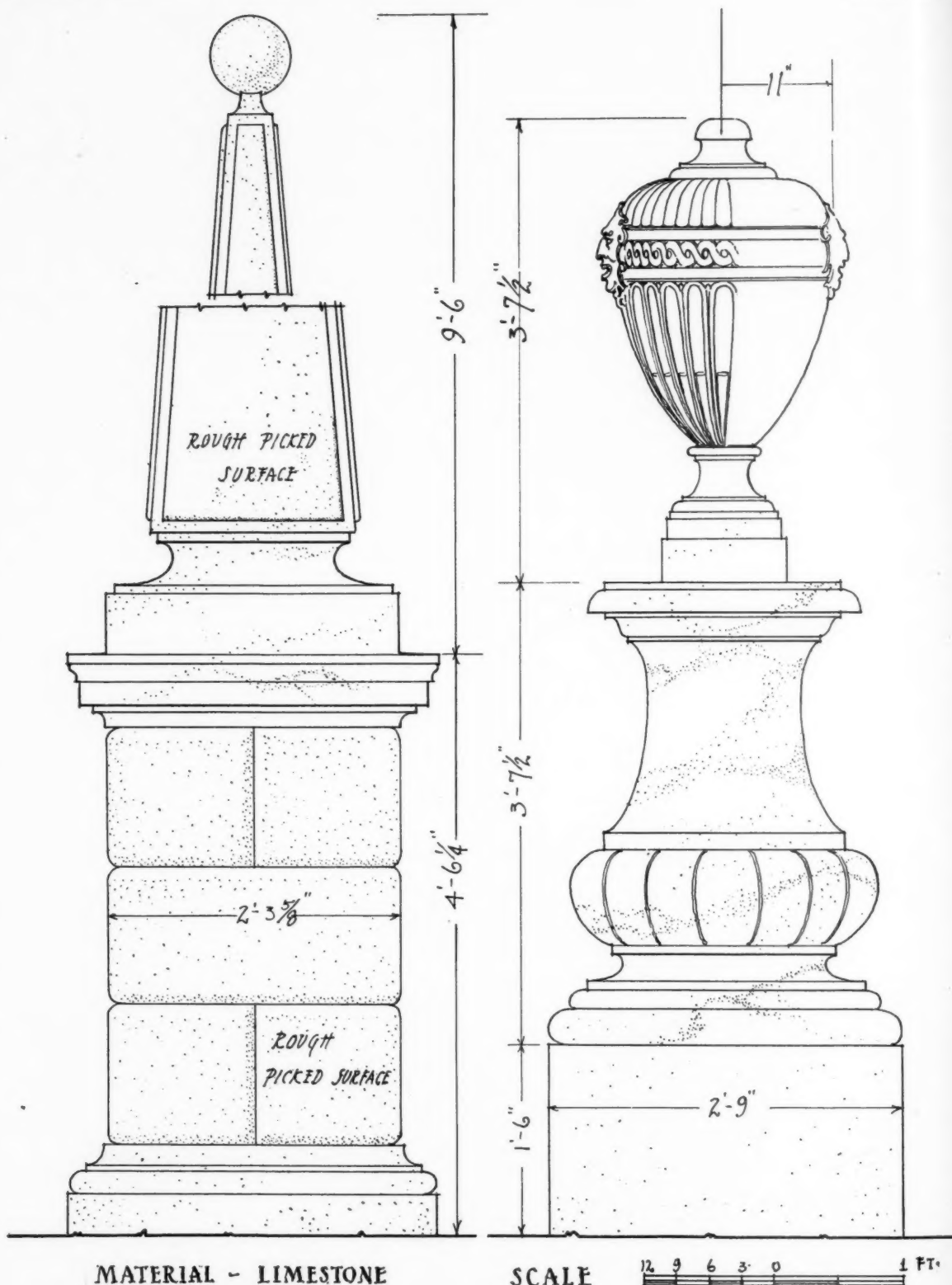


GARDEN DETAILS: PALAZZO DELLA ORE QUIRICO, VINCENZA

PHOTOGRAPHS AND DRAWINGS  
BY W. G. THOMAS AND J. T. FALLON

ARCHITECTURAL DETAILS  
OF NORTHERN ITALY—PLATE NO. 79



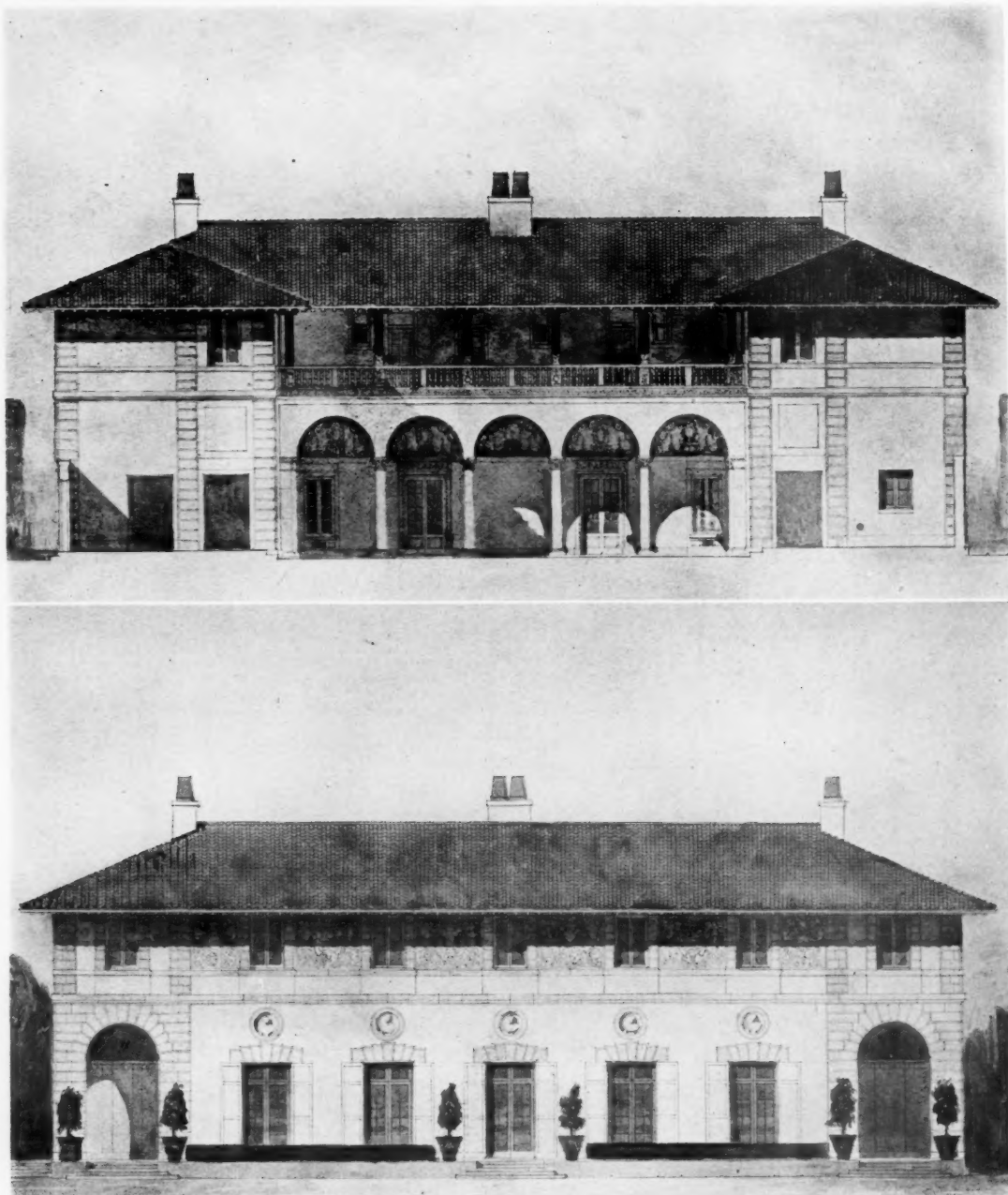


GARDEN DETAILS: PALAZZO DELLA ORE QUIRICO, VINCENZA

PHOTOGRAPHS AND DRAWINGS  
BY W. G. THOMAS AND J. T. FALLON

ARCHITECTURAL DETAILS  
OF NORTHERN ITALY—PLATE NO. 80



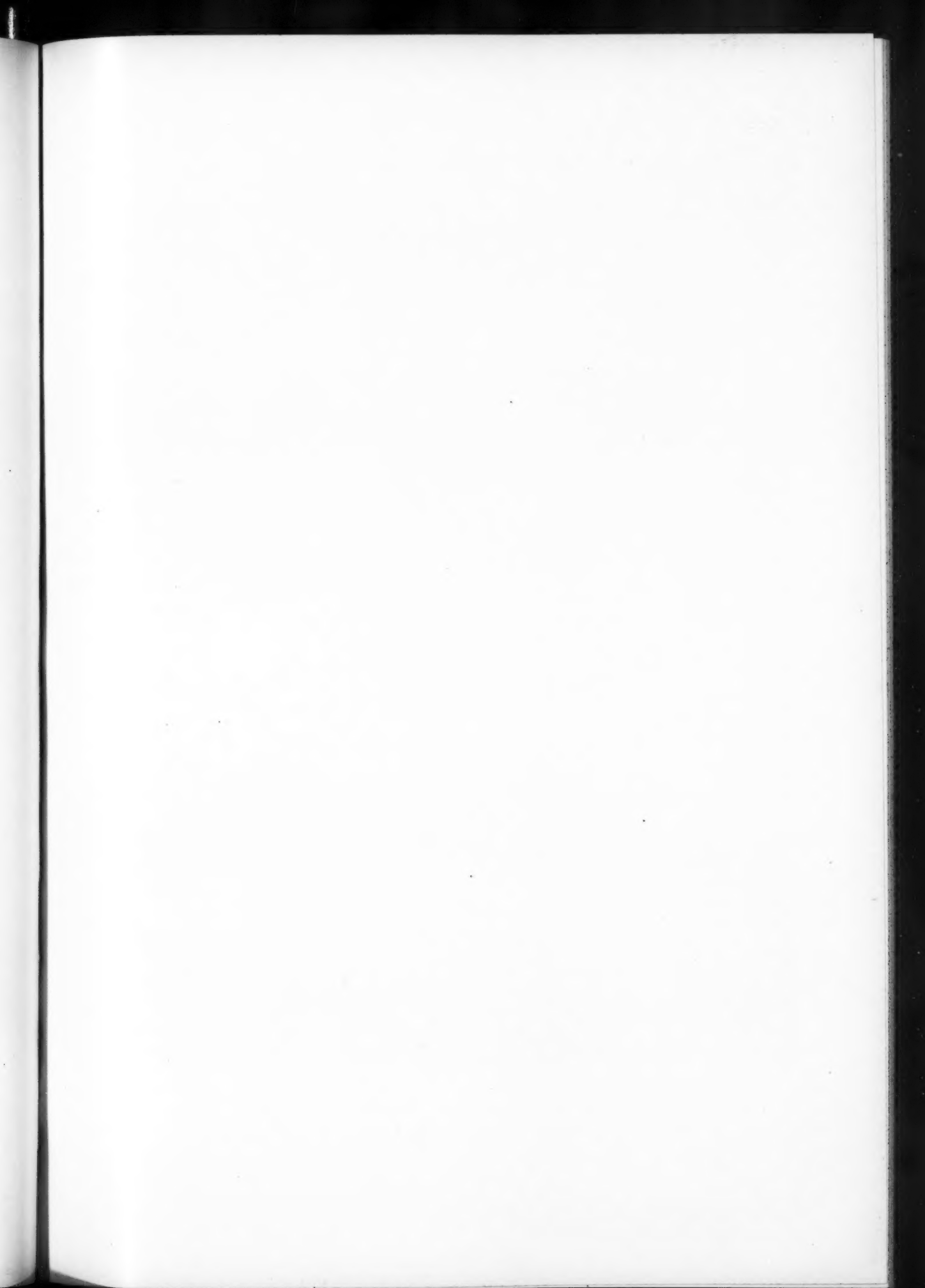


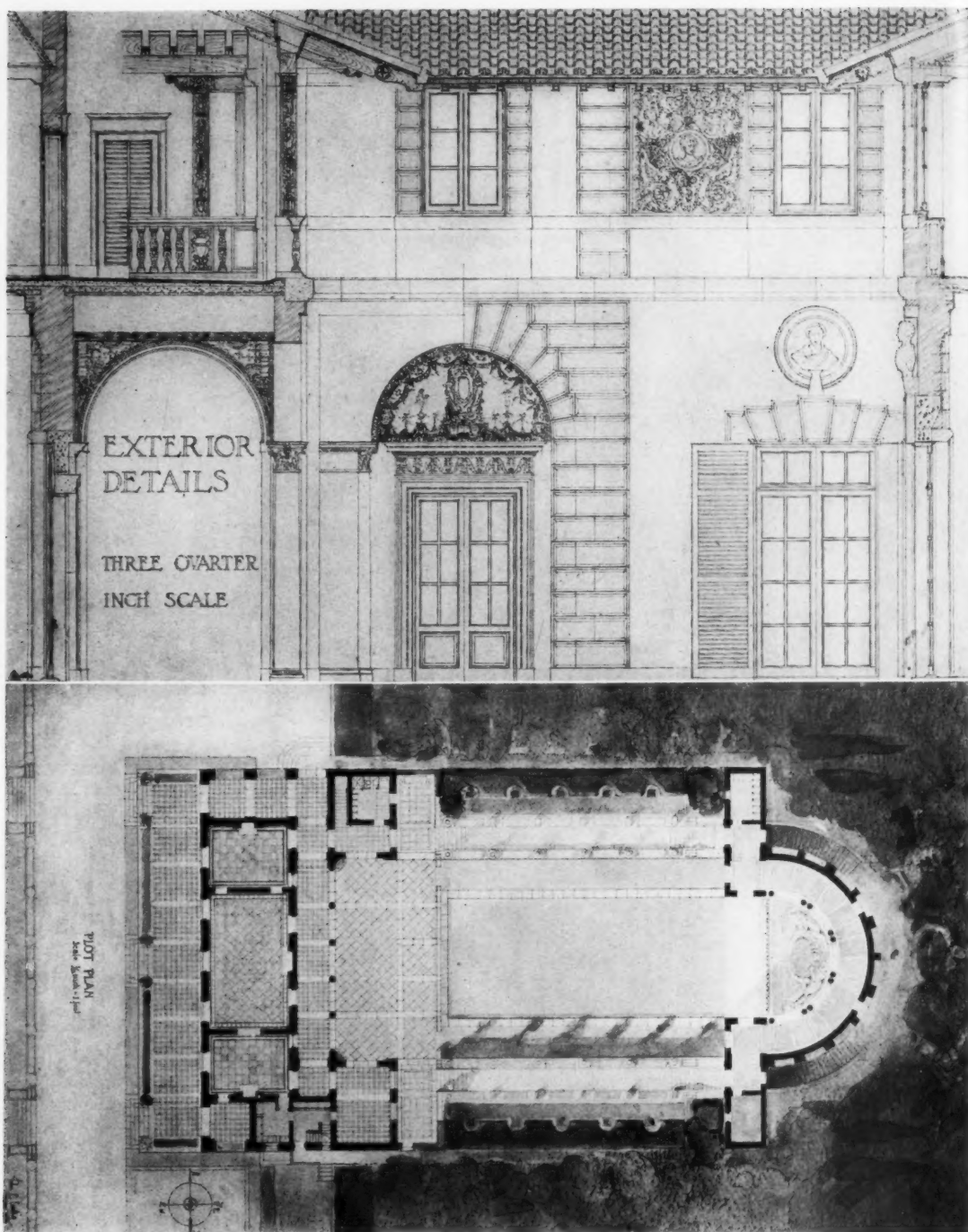
A GUEST HOUSE

BY JOHN P. CURTIS

SCHOOL OF ARCHITECTURE, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

*Selected from set of drawings required for Thesis for Degree of Master in Architecture*





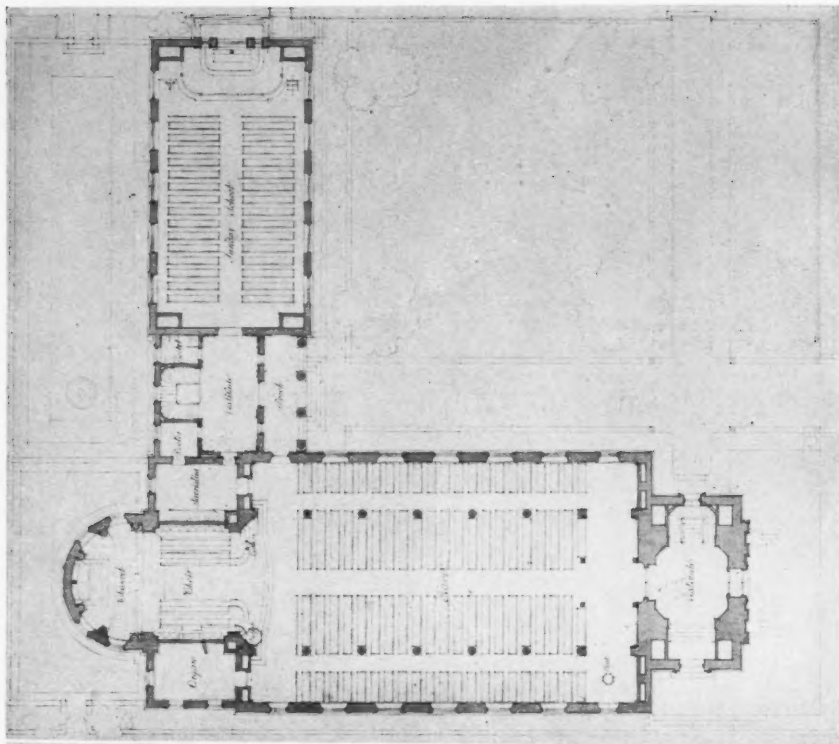
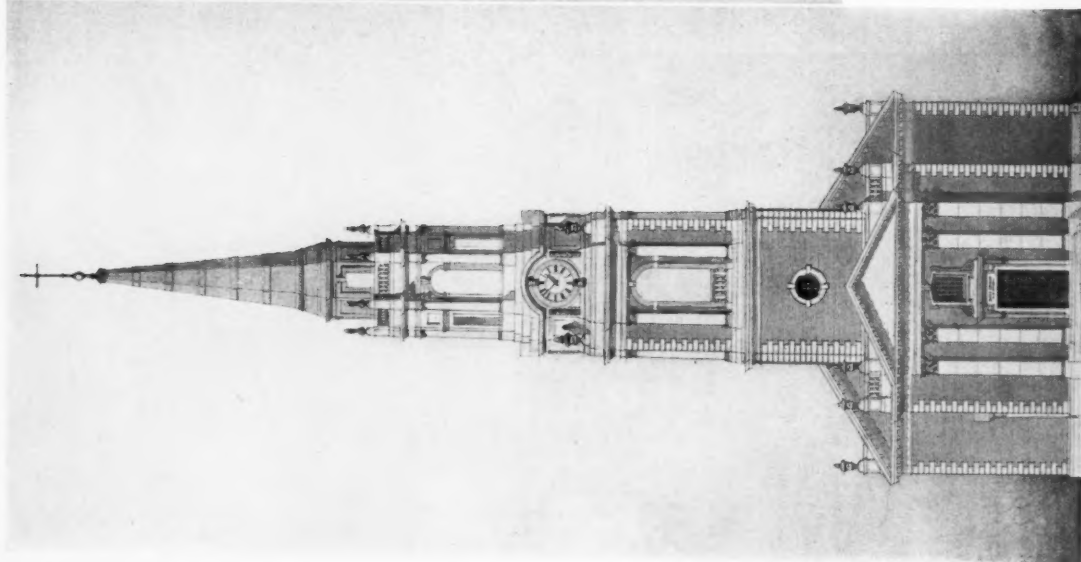
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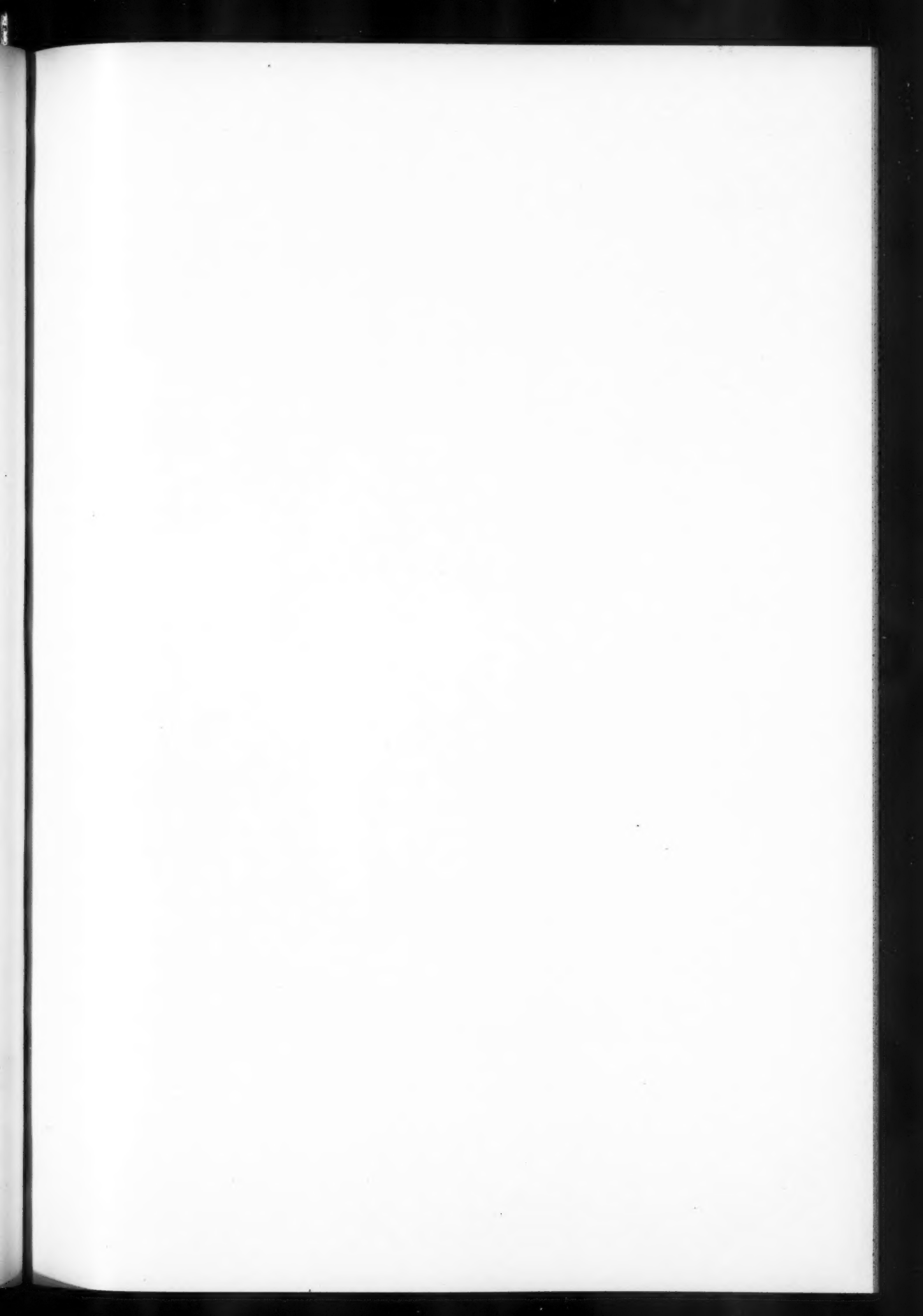


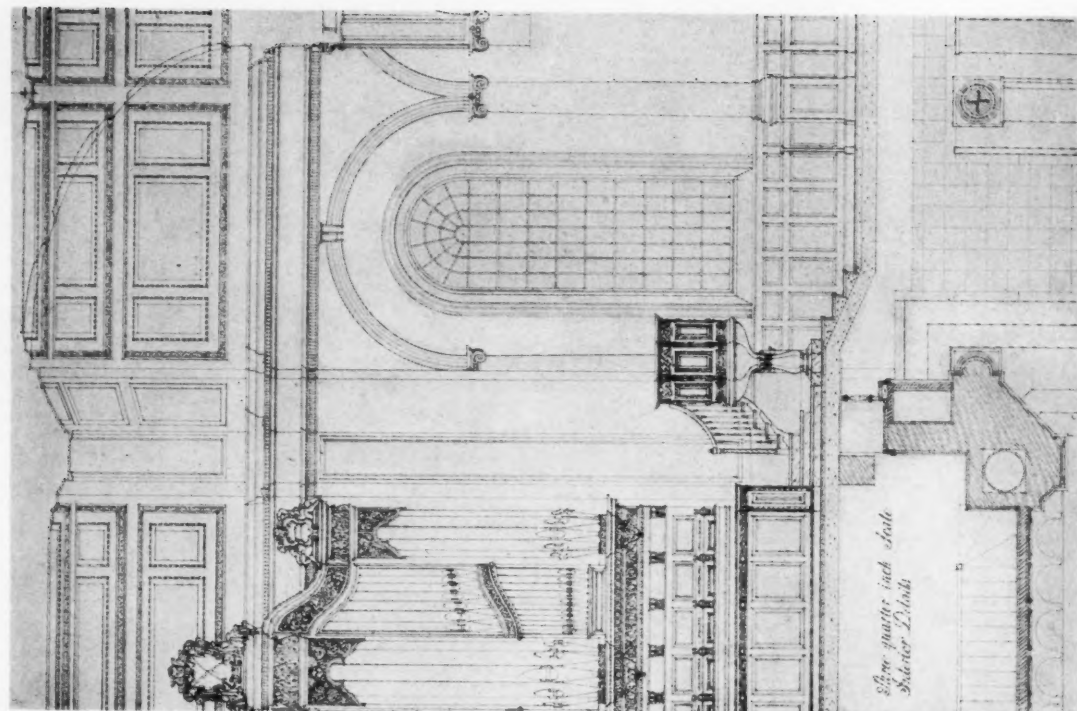
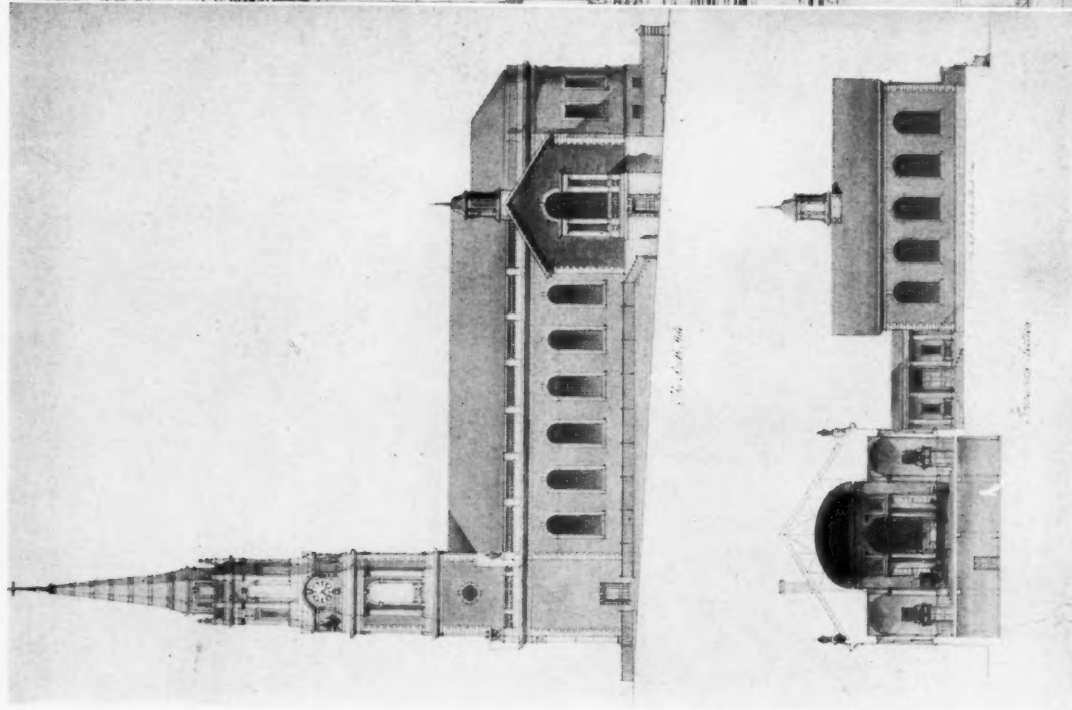
A CHURCH AND PARISH HOUSE

BY JAMES H. STONE

SCHOOL OF ARCHITECTURE, HARVARD UNIVERSITY,  
CAMBRIDGE, MASS.

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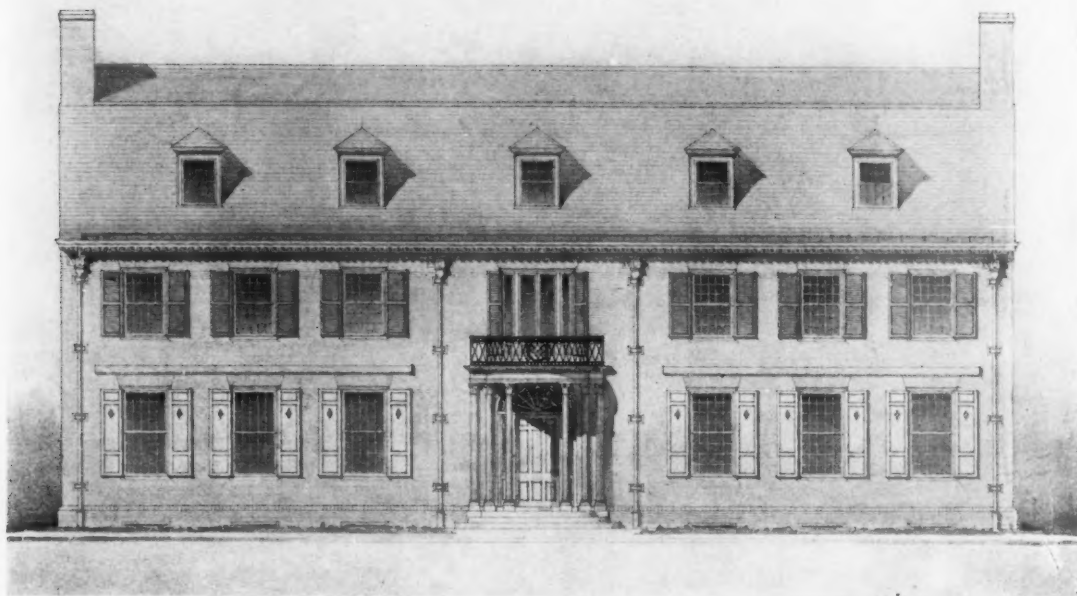
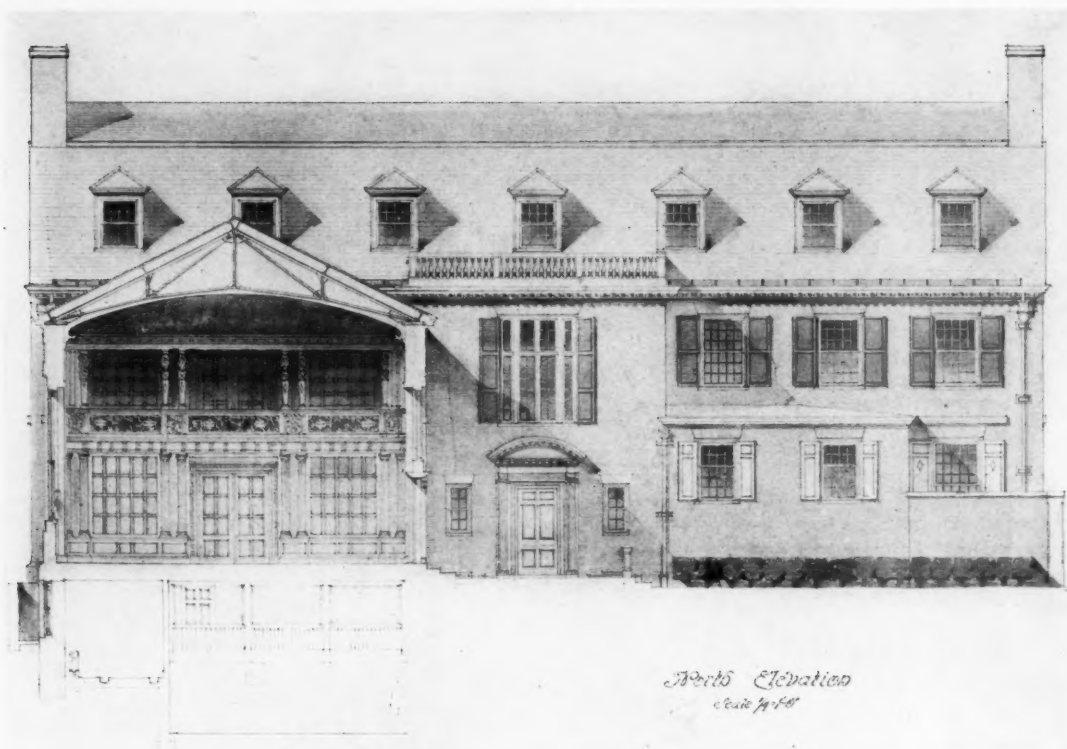
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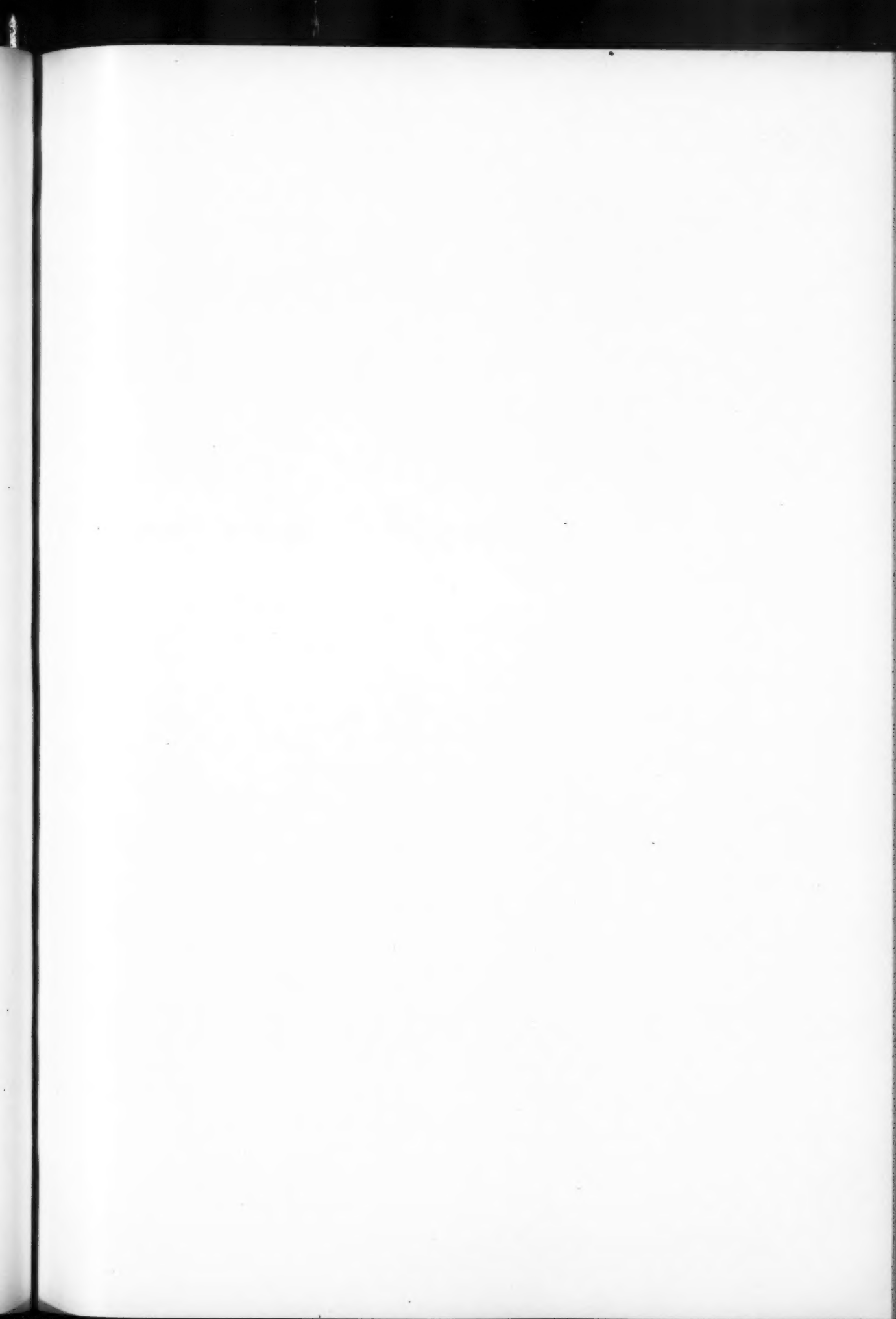


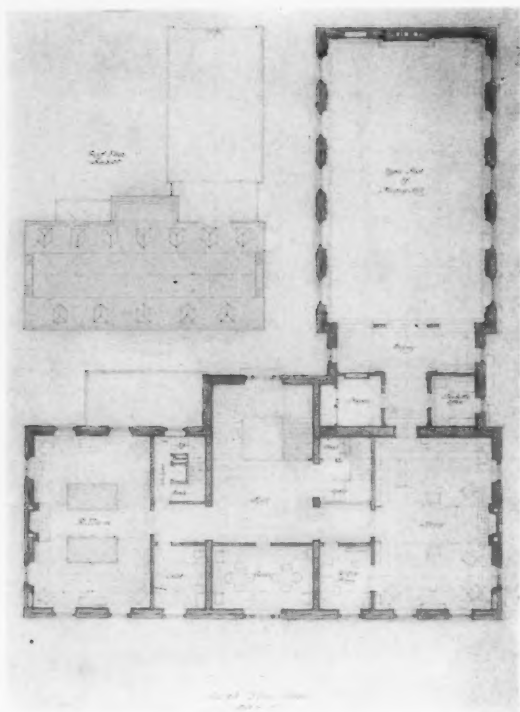
A COLLEGE CLUB HOUSE

BY ALAN McDONALD

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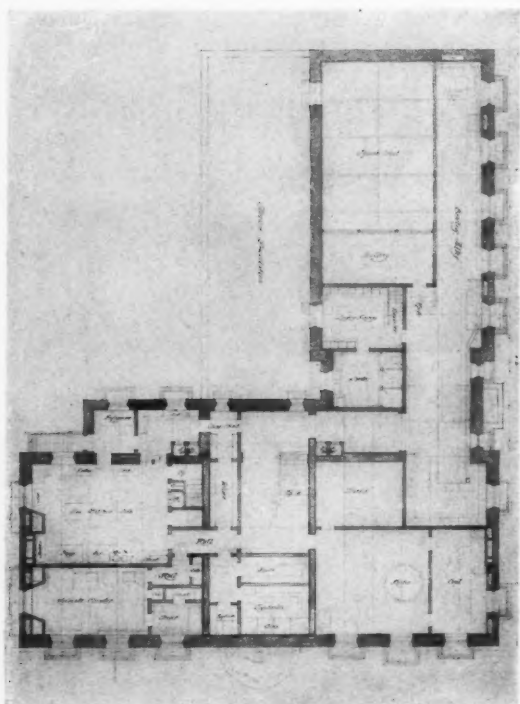


SECOND FLOOR PLAN

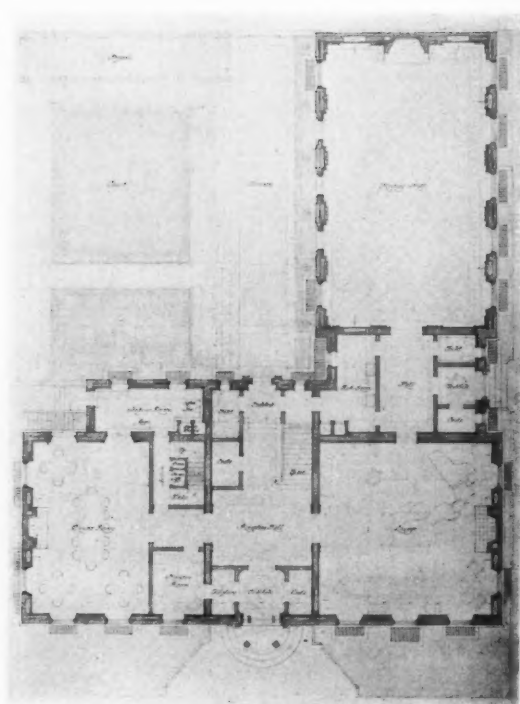
A COLLEGE CLUB HOUSE  
BY ALAN McDONALD

SCHOOL OF ARCHITECTURE,  
HARVARD UNIVERSITY,  
CAMBRIDGE, MASS.

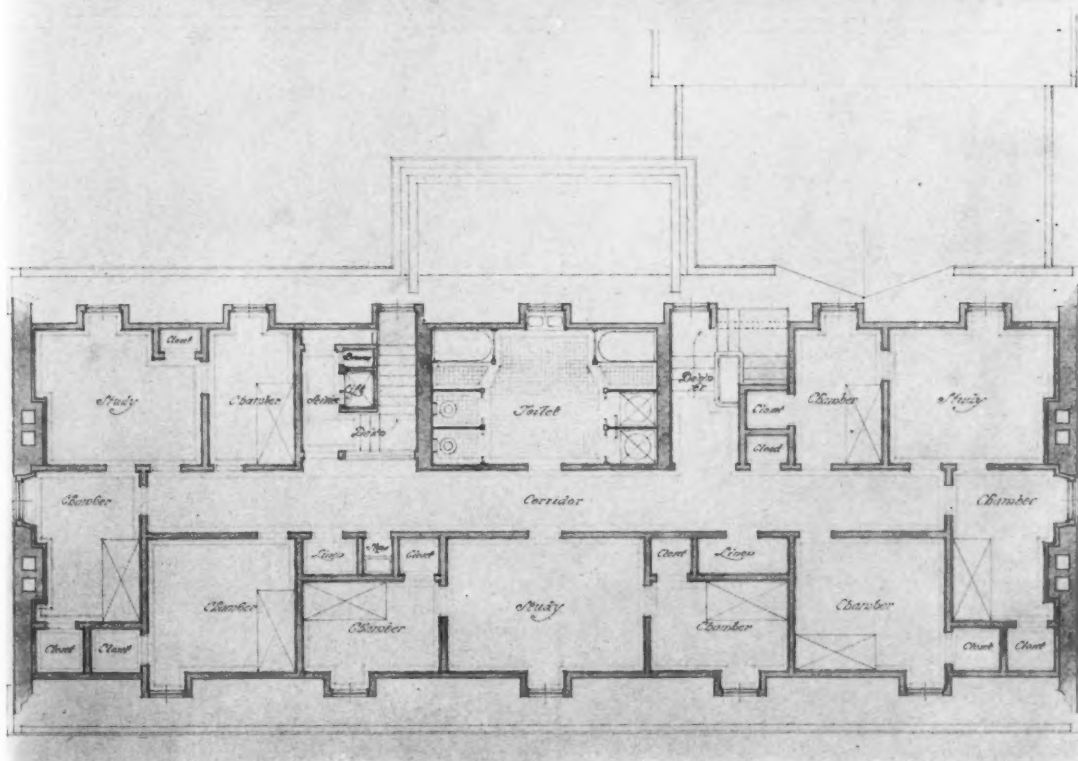
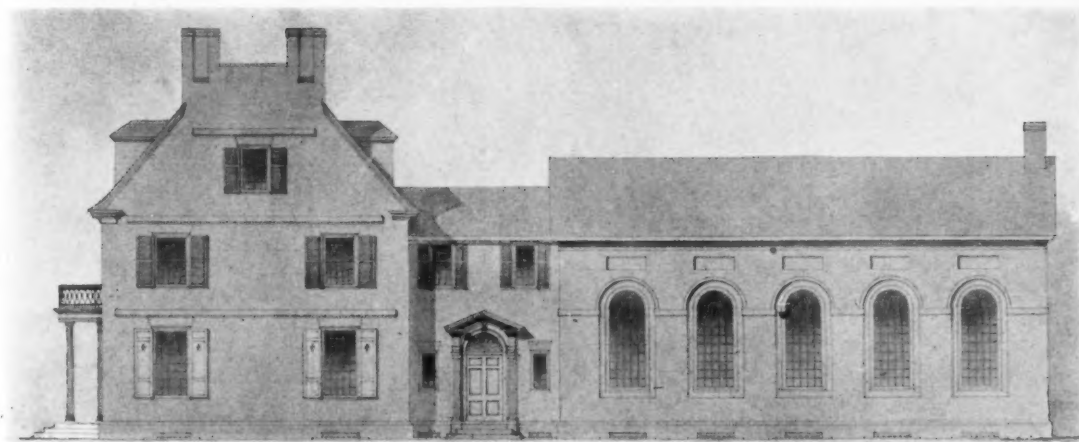
*Selected from set of drawings required for  
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Architecture*



BASEMENT PLAN



FIRST FLOOR PLAN



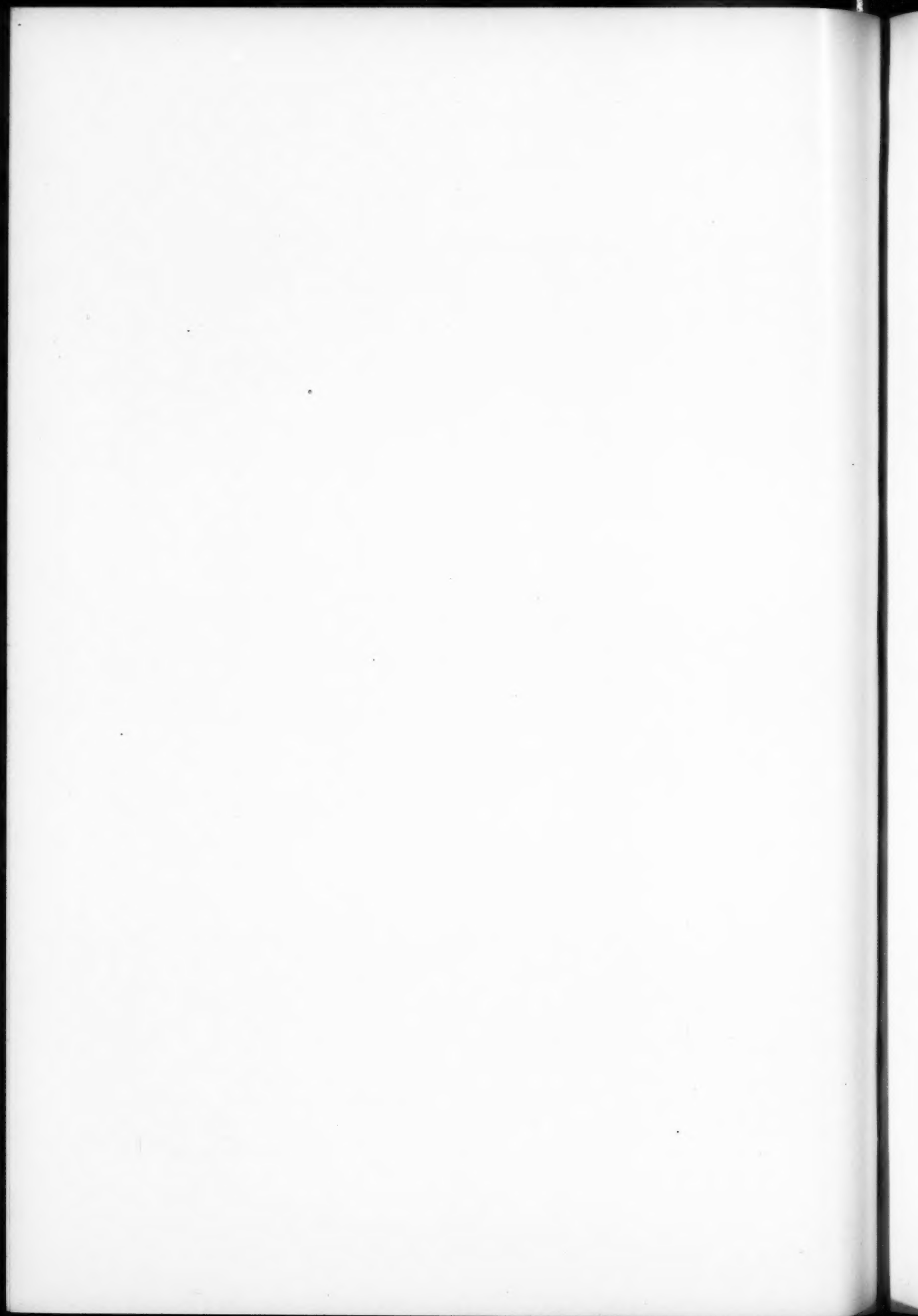
A COLLEGE CLUB HOUSE

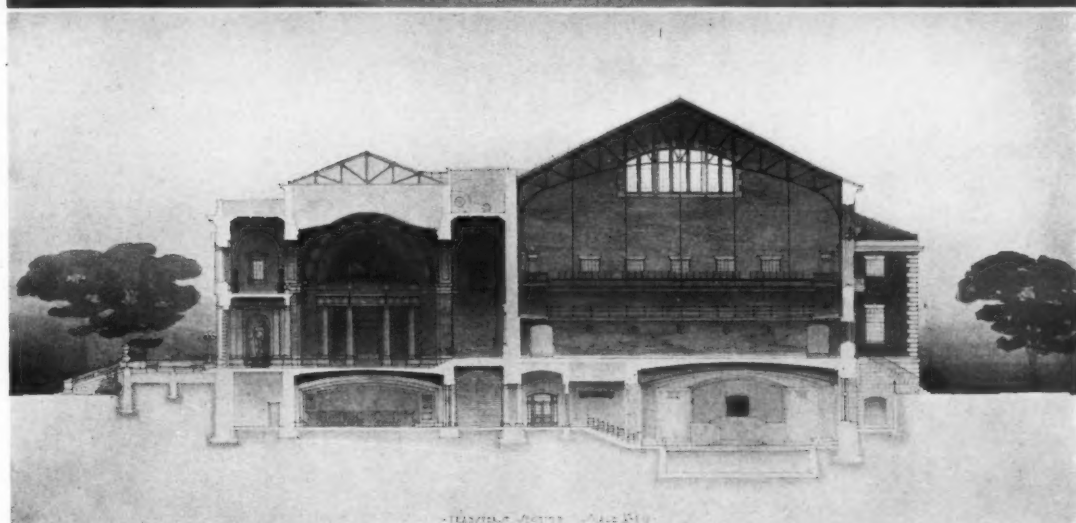
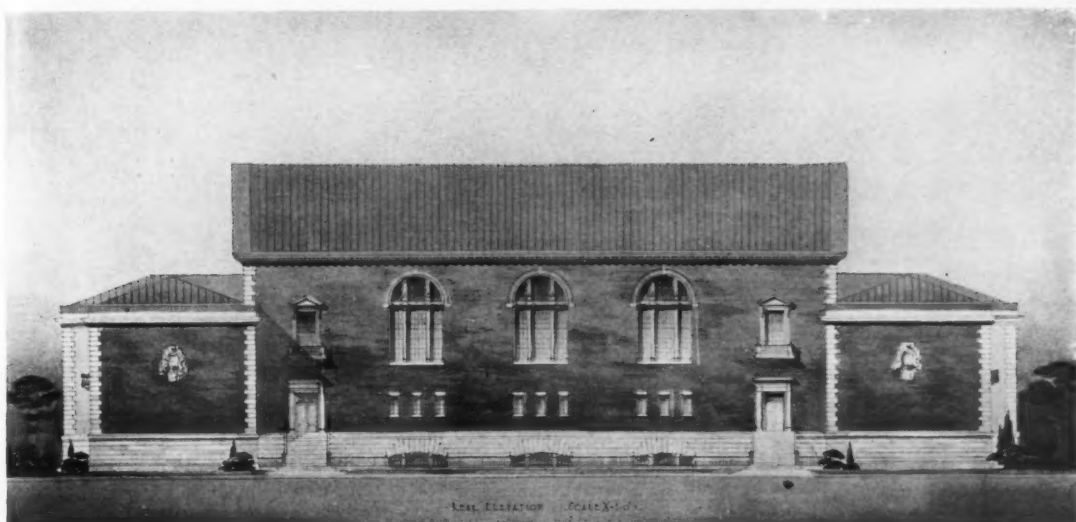
THIRD FLOOR PLAN

BY ALAN McDONALD

SCHOOL OF ARCHITECTURE, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

*Selected from set of drawings required for Thesis for Degree of Master in Architecture*





A COLLEGE GYMNASIUM

BY LLOYD M. HENDRICK, JR.

SCHOOL OF ARCHITECTURE, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

*Selected from set of drawings required for Thesis for Degree of Master in Architecture*









HOUSE OF MR. JOHN B. WHITEHEAD, GUILFORD, MD.

MR. LAURENCE H. FOWLER, ARCHITECT





HOUSE OF MR. JOHN B. WHITEHEAD, GUILFORD, MD.  
MR. LAURENCE H. FOWLER, ARCHITECT



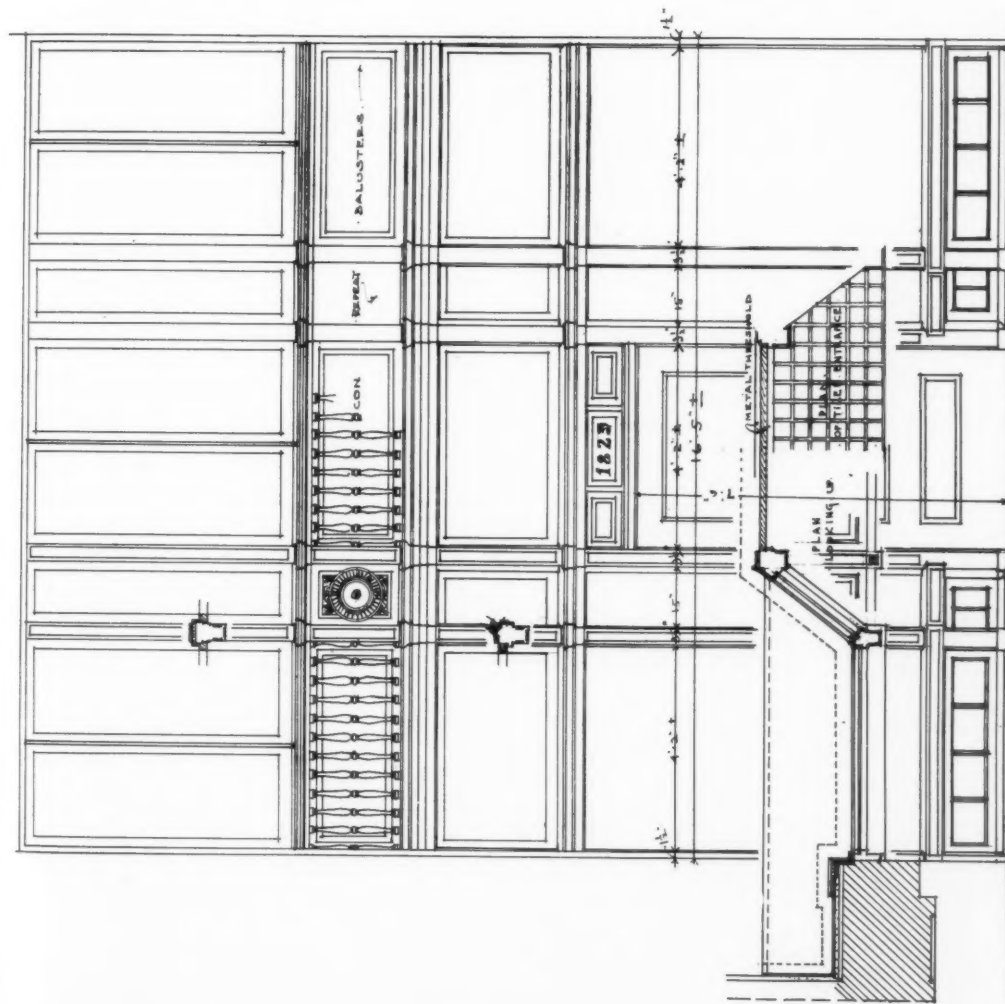


ALTERATIONS AND ADDITIONS TO STORE, 1823 MARKET STREET, PHILADELPHIA, PA.  
MESSRS. HEACOCK & HOKANSON, ARCHITECTS







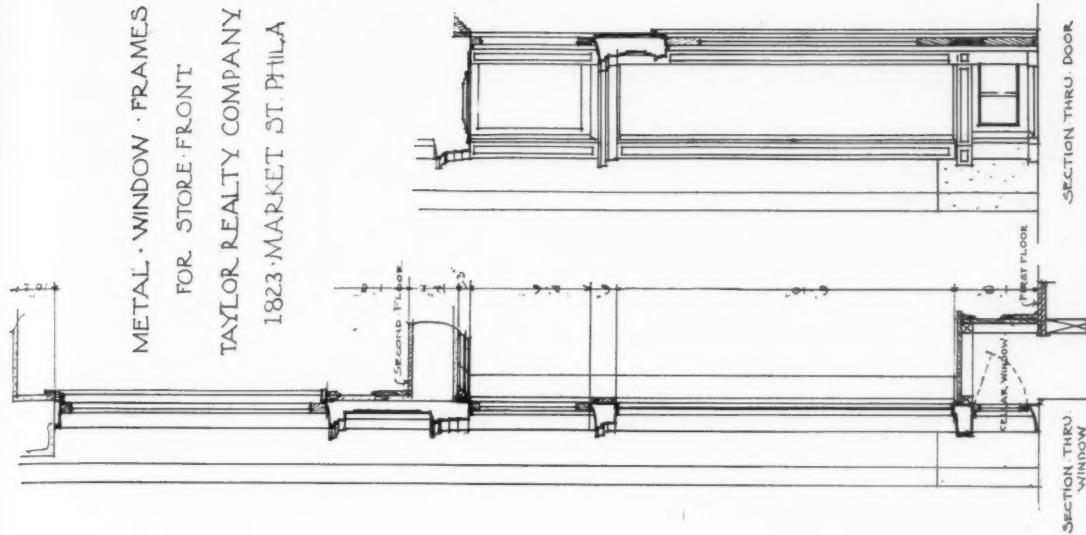


ELEVATION

ALTERATIONS AND ADDITIONS TO STORE, 1823 MARKET STREET, PHILADELPHIA, PA.

MESSRS. HEACOCK & HOKANSON, ARCHITECTS

METAL WINDOW FRAMES  
FOR STORE FRONT  
TAYLOR REALTY COMPANY  
1823 MARKET ST. PHILA



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## THE AMERICAN ARCHITECT

### THE AMERICAN ARCHITECT

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#### AMERICAN ARCHITECTURE OF THE TWENTIETH CENTURY

THE dominant impressions gained by reviewing the architecture of the twentieth century are a realization of the appreciably broadening type of mind that the architect of today possesses in contrast to that of his immediate predecessor, and a less conscious and therefore more natural straining after so-called purity of style. Preciseness and nicety in the use of architectural styles is prone to be the expression of a mind of insufficient breadth handling unfamiliar materials; this same mental attitude is evinced by formulations of creeds and doctrines.

The opening decade and a half of the present century has erected a definite milestone in American architecture. It marks with considerable clearness the close of the period of general assimilation among the profession of the ideas of the present classic revival, applying this term in its largest and most inclusive sense. The spread of architectural education throughout this country and the broadening of its reach to include even the poorest draughtsman is also a work of this century. As general education tends to eliminate narrow prejudices and bigoted creeds in a nation, so architectural education

similarly brings a broadened viewpoint that reflects itself clearly in our modern buildings. The educated architect of the present day has many advantages over his predecessors. Not only is his technical training more complete, but he has usually had a collateral or supplementary course that has affected all his faculties in the same way that his technical training has improved his skill. He has, moreover, a much wider range of completed work to study, a richer literature, opportunities for travel, intercourse with other members of his profession and with the general public, through societies and organizations, all a development of recent years.

This cultivation enjoyed by the modern architect is having its natural effect. It has raised him to a point where he is beginning to see that neither in rigid precision nor in free originality does the actual truth in design lie, but rather in a middle ground tempered by both but dominated by neither. Given the background of broadened taste that education has bestowed upon the architect of today, and the natural originality of the American mind, the classic revival of recent years bids fair to become the basis of a sane and permanent development rather than a sporadic growth like its predecessor of a hundred years ago. Our present attitude of mind divests it of the enslaving qualities which it had for our ancestors and gives us complete mastery over it.

#### OPPORTUNITIES FOR ARTISTIC EXPRESSION AFFORDED BY THE LINCOLN HIGHWAY

IT is confidently believed by many who have given the matter much consideration that the Lincoln Highway is destined to some day be the most traveled road in America. If this belief is well founded it seems of vital importance that the educational possibilities presented should be realized and taken advantage of in the fullest degree. The exploitation of this highway by the billboard interests is not to be considered for an instant. On the other hand, it is perfectly obvious that every detail in connection with the physical accomplishment of the project should receive most careful thought and represent the highest art in road making and road beautification.

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Under present conditions we are decades behind Europe in the matter of good roads. This, perhaps, is accounted for by the fact that Europe's roads were, in general, constructed before the era of railroads, and hence represented a vital economic necessity. In America, the railroad has furnished means of transportation ever since the development of the country reached a stage where good roads were possible, and until the advent of the motor car the demand for highways providing smooth and solid roadbeds during all seasons of the year was insufficient to warrant their construction.

At the present time we are sorely in need of education upon the entire subject of good roads, their value to the community, and their importance to the country at large, and it would seem that the construction of the Lincoln Highway offers an exceptional opportunity to place before the public an example of what a principal highway should be. No one can doubt that such an example would more than repay the amount of money required to produce it, in the effect it would have on road construction from coast to coast.

The committee of the American Institute of Architects is performing excellent service by visiting communities along the route of the highway, and in urging a proper appreciation of the artistic possibilities offered. That the fullest utilization of these possibilities is only second in importance to the construction of a roadway proper of the highest type should be realized by the public before interests, the result of whose activities now mar the landscape along most of the railroads of the country, have secured "rights" along the route which it will be difficult or impossible to overcome.

### THE EXAMPLE FURNISHED BY AN ACTIVE AND EFFECTIVE STATE ART COMMISSION

**T**HE Minnesota State Art Commission is setting an example which should bring to similar bodies throughout the country a realization of the potentialities of their organizations as positive educational forces. For some time past this organization of practical

men has been carrying on an active educational propaganda within the state, and has systematically disseminated information relative to home building and furnishing, landscape development and town planning. As an important feature of this work, plans of model farm and village houses, designed by reputable architects, are furnished at nominal cost, amounting in fact to little more than the expense of producing a set of blue prints.

In addition to the aid given to individuals, assistance is extended upon request to cities and towns engaged in solving problems of plan or character of improvements. Exhibits illustrating modern developments in these various directions, as well as in the art industries and handicrafts, are collected, arranged and circulated among the towns, schools and clubs of the state.

To encourage the production of artistic articles of everyday use, the Commission extends its patronage to products possessing artistic merit, by creating and developing markets for their disposal. Lectures upon the subjects here mentioned and others related to them are prepared and delivered in various cities of the state, under the Commission's auspices.

The State of Minnesota has previously given evidence of being among the most progressive in the Union in its handling of sociological and artistic matters, and the work of its Art Commission is but another instance of efficiency in the public service for which the representatives of that state have gained an enviable reputation.

In America we are accustomed to see civic and state commissions, as bodies, exercise a somewhat perfunctory rather than an active influence in the development of the matters over which they have jurisdiction. As a result we have not perhaps realized the possibilities lying dormant in a properly constituted art commission or similar body, nor the immense benefits to be derived from active control of public art in the manner undertaken in Minnesota.

It is to be hoped the example furnished will have the effect of rendering art commissions more active and effective everywhere.

## RELEASE OF SURETIES FOR BUILDING CONTRACTORS—IV

By JOHN W. SIMPSON

### *Extra Work*

THE question of what constitutes "extra work" depends as a general rule, upon the construction of the contract. When the construction of an entire work is called for, at a fixed compensation, the hazards of the undertaking are assumed by the contractor, and he can not recover for increased cost as extra work, upon discovering that he has made a mistake in his estimate of the cost, or that the work is more difficult or expensive than he anticipated. *Hennessey v. Fleming Bros.*, 40 Colo. 27, 90 Pac. 77.

The distinction between extra work and additional work has been said to be that the former is work arising outside and entirely independent of the contract—something not required in its performance, the latter being something necessarily required in the performance of the contract, and without which it could not be carried out. *Shields v. City of New York*, 82 N. Y. Supp. 1023, 84 App. Div. 502, 1. O. O. F. v. *Pulse*, 47 Ind. App. 466. The following cases show the advisability of conforming to the provisions of the contract relating to the ordering of extra work: Elsewhere, "extra work" has been defined as extra work necessitated by a change of plan, *People v. Snedeker*, 108 N. Y. App. Div. 89, 94 N. Y. Supp. 319.

Under one clause of a building contract the owner could, of his own volition, at any time change the drawings and specifications. It was held that this meant extra work, and that it should be connected with another clause which positively prohibited extra work unless it was understood and agreed upon in writing before it was commenced. Extra work was done to the amount of about \$1,000 on a \$6,813.20 contract, without being put in writing. It was held that, while the provision in the contract was for the protection of the owner, it none the less served to protect the sureties of the contractor, and the failure to put in writing released them.

*Chapman v. Eneberg* (1902), 95 Mo. App. 127.

In an action on a surety bond given for the contractor for the construction of a concrete dam and power house, it appeared that, after the execution of the bond, it was decided to extend the depth of the foundation for the dam. The cost of this additional work was included in the estimates allowed the contractor. This was claimed by the defendant as an alteration of the contract which released the surety. A section of the contract read as follows: "The contractor agrees to do such extra work as may be necessary for the completion of the job, and shall receive as compensation therefor whatever labor and material he shall have paid for, plus 10 per cent. of such cost." It was held that the extension of the foundation was clearly extra work within the meaning of the contract, and was not a modification which would release the surety upon the bond. *City of Fergus Falls v. Illinois Surety Co.* (1910), 112 Minn. 462, 128 N. W. 820. The court cited the case of *George A. Hormel & Co. v. American Bonding Co.* (1910), 112 Minn. 288, 128 N. W. 12, where it was claimed by the surety company that it was released by a change in the contract, which was for the erection of a cold storage warehouse for \$19,500, by an unauthorized ordering of extras. The only basis for the claim was that changes were made in the work and extras ordered amounting in value to \$1,804.39. Those ordered in writing amounted only to \$442.80, and there was a clause in the contract providing that no alterations should be made in the work except upon written order of the architect. There was, however, evidence that the whole of the changes and extras was audited and allowed by the architect before payment. The contract expressly reserved the right of the owner to make such changes and order extras without limit. It was, therefore, held that a failure to give a written order for them could in no event prejudice

the insurer or release the bond to any greater extent than the value of the extras ordered orally; for delay or increased risk, if any, due to the increase in the amount of work to be done would be the same, whether or not the order was in writing. If a building contract, the court said, the performance of which by the contractor is secured by a bond of guaranty insurance, reserved the right of the owner to make changes in the work and order extras without limitation, the mere fact that such changes are made and extras ordered verbally, but the architects' audits and allows the amount thereof before payment, does not release the insurer.

In another Minnesota case, where a contract for the remodeling of a building was concerned, extra work was performed by the contractor without a written order or agreement for it. The contract contained provisions which showed that the possibility of extra work was contemplated, but provided for a written agreement therefor. It was held that this was not such a departure from the contract as relieved the surety from liability. *Brandrup v. Empire State Surety Co.*, 111 Minn. 376, 127 N. W. 424.

A building contract provided that alterations might be made in the work described in the plans and specifications, upon the written order of the architects, and that when so made the value of the work so added or omitted should be added to or deducted from the contract price, and that the work of driving piling and increasing footings, in addition to the amount specified in the contract, should be paid for extra. The excavations and footings for the foundation of the building were materially increased, at an additional cost of \$865.77, without the written order of the architects. The surety claimed to be released thereby. It appeared that it became necessary to make additional excavations and increase the footings in order that the building should be erected on a sure foundation. It was held that the provision of the contract clearly indicated that it was in the minds of the parties to the contract that a contingency might arise which would necessitate the additional work, and, the emergency having been provided for in the contract, there was no necessity for a written order to carry out the provision expressed therein. *Burnes Estate v. Fidelity & D. Co.*, 96 Mo. App. 467.

In another case the contract contained a provision as to extra work, the contractor being required "not to proceed to make such work without a special bargain or contract for the same, and minuted on the original contract; otherwise it is not binding upon either of the parties." Extra work, valued at \$574, was done at the request of the owner, and upon her oral promise to pay, without special bargain or agreement minuted on the original contract, as therein required. It was held that the surety was thereby released, "the evident object of this clause being to prevent changes or alterations on mere suggestion, without fixing their extent, and to avoid controversy and litigation as to what were extras and their value." *Stillman v. Wickham* (1898), 106 Iowa 597, 76 N. W. 1008.

It has been held that the changing of the specifications for the foundation of a house requiring an extra number of brick at a cost of \$88.80, without a written order, was such a material change as to release the surety.

### House Without Nails

A specimen of the architectural and building abilities of George Washington is a brick house, still standing, in good repair, which was built by the father of his country in 1790 at Glasgow, Barren county, Ky., although it was in Fairfax county, Va., when it was built. The building is a residence constructed by Gen. Washington for the use of his cousin, Gen. Spotswoode, who was governor of Virginia at that time. Gen. Spotswoode was by nature of a very retiring disposition, and later became a recluse. The walls are of solid brick, thirty-six inches thick, and the floors are of hardwood, two inches thick, made of chestnut and laid with dowel pins. The original roof was hand-drawn chestnut shingles, one-half inch thick, and fastened with wooden pins. There is not a single nail in the entire building, for nails were not manufactured at that time. The glass used in the building was imported from France, as none was made here, and many of the original panes are still doing duty, but the action of the weather has had the effect of wearing them away, until they are now little thicker than a sheet of paper. —*Southern Architect and Building News.*

## CURRENT NEWS AND COMMENT

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### A Record of Historical Buildings

The University of Manchester, England, under the advice of a joint architecture committee, has decided to issue an annual Sketch Book, contributed by the more advanced students of the school, the intention being to record historic buildings in that city. The imminent risk of demolition of a number of nineteenth century buildings and some of earlier date has prompted this action. Any effort looking towards securing an accurate and permanent record of disappearing landmarks of architectural excellence is laudable and should be encouraged.

It is to be hoped that similar movements on a more extended scale will soon be undertaken in this country. With our numerous schools of architecture located in all sections of the United States we have ready at hand the men and the ability to do this work. All that is needed is organization and direction. Every year some monument or landmark disappears. The sooner concerted action is taken the greater will be its value to posterity.

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### North Carolina Architectural Association

The North Carolina Architectural Association held their tenth annual meeting at Wrightsville Beach, N. C., July 16th and 17th and the following officers were elected for the coming year: O. D. Wheeler, President; W. C. Northup, Vice-President; Harry Barton, Secretary and Treasurer; L. L. Hunter and J. F. Gause, directors. Charlotte was selected for the meeting place in January.

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### A Correction

A notice appearing in our issue of July 21st, announced the removal of Mr. John J. Breitman's offices to 106 E. 19th street, New York City. It should have been made to read Mr. Joseph J. Breitman. The error is greatly regretted.

### New York Architects Appointed Members Board of Registration

The Board of Regents has appointed the following architects as members of the Board for the registration of architects, provided for under Chapter 454 of the Laws of New York, 1915: Arnold W. Brunner, Manhattan, D. Everett Waid, Manhattan, William B. Bannister, Brooklyn, A. L. Brockway, Syracuse, and E. B. Green, Buffalo.

Under the law the fee for registration is \$25, to be paid to the State Board of Regents.

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### Personal

Mr. A. H. Hubbard, architect, Champaign, Ill., announces the admission to his firm of Mr. C. J. Pankow. In future the firm will be known as Hubbard & Pankow, with offices in both Champaign and Urbana, Ill. Mr. Hubbard will conduct the Champaign office, while Mr. Pankow will be in charge of the office in Urbana.

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### San Francisco Chapter, A. I. A.

The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held June 17, 1915. The meeting was called to order by W. B. Faville, President.

Sub-Committee on Competitions: The committee reported that the competition for the new wing of the San Francisco Hospital had been decided and Mr. Hermann Barth appointed architect for the work.

Legislative Committee: This committee was pleased to report that after many years of effort on the part of this Chapter and the Southern California Chapter, the statute known as the law of 1872 had been repealed by an act of Legislature and the bill signed governor. The repealing act becomes a law in August and will permit school and county boards to select an architect either

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by competition or appointment and will do away with the requirement of the architect furnishing a bond, and other obnoxious features which were embodied in the old act.

The amendment to the act regulating the practice of architecture, although having passed in the senate, was not reported out of committee in the house, and will therefore have to be taken up again.

The act to save the trees bordering on the Placerville road, which is to be part of the Lincoln Highway, passed both houses and was in the hands of the governor for signature.

**New Business:** It was decided that as advances had been received that an Institute meeting would be held in San Francisco from October 6 to October 12, 1915, that the secretary communicate with Mr. Burt L. Fenner, Secretary of the Institute, and Mr. Julian Clarence Levi, Chairman of the Committee on Arrangements, as to a program of the proceedings and entertainment during their stay in San Francisco.

Mr. Horace G. Simpson was elected to Chapter membership.

### Florida Architects' Law

Through the efforts of the Florida Association of Architects a law, creating a state board of examiners of architects and providing for the licensing of architects, similar to the Illinois law for the same purpose, has passed both houses of the Florida legislature and was signed by the governor May 27.

Before passage the bill was amended so as to make \$20 instead of \$25 the license and further amended so as not to apply to buildings costing less than \$5,000.

### National Fine Arts Commission

Charles Moore, of Detroit, has been elected to the Chairmanship of the National Fine Arts Commission, to succeed Daniel Chester French, sculptor, who had resigned.

### Personals

Mr. A. Lincoln Fechheimer, architect, Cincinnati, O., announces the removal of his offices to the Union Trust building.

The John H. Bickford Company, architects and engineers, Boston, Mass., announce their removal to new offices at 110 State street. They desire to receive manufacturers' samples and catalogues.

William A. Edwards announces that he has associated with him in partnership William J. Sayward for the practice of architecture under the firm name of Edwards & Sayward, with offices at 633 Candler Bldg., Atlanta, Ga.

Mr. A. V. McIver, Mr. C. C. Cohagen and Mr. W. V. Marshall have associated under the firm name of McIver, Cohagen and Marshall, and have opened offices for the general practice of architecture at 314-315 First National Bank Building, Great Falls, Montana. They would be pleased to receive manufacturers' samples and catalogues.

### BOOK NOTE

**STRUCTURAL ENGINEERING**, by J. E. Kirkham. Full cloth, 650 pp.; size, six by nine inches; price, \$5.00; Chicago, Myron C. Clark Publishing Co.; London, E. F. & N. Spon, Ltd.

The author, who is professor of structural engineering at the Iowa State College, states in a preface to this book that it is primarily intended as a textbook for college students and as a self-explanatory manual of structural engineering for practical men.

Architects will, therefore, be disposed to regard a work of this nature as one fulfilling certain of their requirements. It will be found a useful and convenient guide in the elucidation of many problems that occur in practice, which do not require an exhaustive knowledge of structural engineering for their solution.

## INDUSTRIAL INFORMATION

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### Lighting Fixtures

The Wahle-Phillips Company, of 101 Park avenue, New York City, has recently published a very attractive brochure illustrating the wide variety of lighting fixtures manufactured by this concern. The method employed in general has been to photograph the showrooms in which the various fixtures are hung on exhibition, but in some instances fixtures have been shown separate and apart from any room or architectural surrounding by means of large vignetted half-tone cuts.

It is stated that this company employs experts to co-operate with architects in the production of electric lighting fixtures to harmonize with their surroundings. The number of fixtures, number of lights in each, their location and whether they should be of the direct, semi-indirect or indirect type are questions which it is believed these experts are well qualified to answer, after an inspection of the premises to be lighted or a study of the drawings from which the room will be built.

To assist in the selection of fixtures, complete studios have been fitted up in which original designs are exhibited in relation to their surroundings. These designs embody various motifs that have been created or adopted especially for the various uses to which they are put. The brochure referred to may be had upon request.

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### Traction Elevators

The Otis Elevator Company, with offices in all principal cities of the world, has recently issued a handsome booklet describing and illustrating Otis Electric Traction elevators. It is stated that this elevator derives its name from the fact that motion is obtained by means of the traction existing between the driving sheave and the hoisting cables. In order to produce the necessary tension for this result the hoisting cables, from one end of which is suspended the car and from the other end the counterweight, pass partially around the traction driving

sheave, in lieu of a drum continuing around an idler leading sheave, thence again around the driving sheave, thereby forming a complete loop around these two sheaves. This principle and method of roping is shown in this booklet by means of diagrams, cuts, etc., which make the matter clear. The Gearless Traction Elevator, it is claimed, is the logical result of the present-day tendency toward simple construction, economical operation, and the highest possible degree of safety. In this type of elevator the working parts have been reduced to the fewest possible elements, and at the same time safety and perfection of operation have been secured by the application of a number of ingenious devices and controlling features.

A great number of cuts are shown illustrating installations of Otis elevators in many of the highest and most notable buildings in the world. Much information is contained in the text of this booklet which will repay reading by architects and engineers. It will be sent upon request.

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### Rovaque Tile

The New York State Sewer Pipe Company, Rochester, N. Y., has issued the second edition of its pamphlet illustrating and describing Rovaque tile. It is stated that as a result of actual experience in the manufacture and use of these tile, the company is able to produce a tile that is serviceable, is sanitary, and when properly laid and drained withstands the action of the elements in exposed places.

The body of the tile is said to be a blend of three clays selected and treated in a manner to insure a homogenous mixture. The tile are dried under what are described as favorable conditions, and afterward burned in kilns for six days. The burning process, it is stated, is similar to that adopted by the leading manufacturers of paving brick, the purpose being to produce a tile of low absorption and so annealed by the long cooling process as to make it tough but not brittle. The face of Rovaque tile is smooth

but not glossy, as it is believed that this adds to the richness of effect. The tile are square, unglazed, and pleasant to walk upon.

The effect striven for by the manufacturers is variety in tone and color. This varies, it is stated, from a rich cherry red to a dark purplish brown, with many shades between. They are classified into three shades, red, medium and dark. It is stated that a typical floor when laid should consist of about 10 per cent dark, 30 per cent medium and 60 per cent red. This combination of shades will, it is believed, give a very pleasing effect. The combinations possible in both pattern and border with these various shades of tile are innumerable. Diagonals are made by cutting the square tile from corner to corner.

It is claimed that the price of Rovaque tile is so reasonable that they can be used in almost any building, the cost being only a trifle more than a good grade of hardwood floor. They are made in 4 x 4, 6 x 6, 9 x 9 and 12 x 12 inches in size.

Buff colored tile, both in the square and diagonals, are furnished slightly variegated in color, running from light buff to a crisp biscuit color. They are said to be very effective when laid in designs with red tile.

The booklet referred to or any desired information, will be sent upon request.

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### Marsh Valves

A series of booklets, published by the Marsh Valve Company, with general offices in the Marine Bank Building, Erie, Pa., calls attention to four principal claims:

First, that all Marsh valves contain an upper seal, formed by composition disc and a finished metal seat in the bonnet, provid-

ing what is claimed to be a positive seal against leakage around stem when valve is fully opened. Second, that the Marsh Valve Company is in a position to furnish all the valves used in a heating system, including mill supply globe, angle and gate valves, for piping job, and any style of union bonnet or special screwed bonnet radiator pattern required for radiators. Third, that the discs in these valves, both upper and lower, are guaranteed to be of superior composition, the lower discs of the oblong hole type, standard size, and interchangeable with all the high-grade makes. Fourth, it is claimed that the union bonnet valves cost no more than any high-grade valve, and that the Marsh special radiator valves cost much less. Every Marsh valve, it is stated, is fully guaranteed.

These booklets, together with details, quotations, or any information desired, will be sent upon application.

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### Dutch Boy Painter

The house organ of the National Lead Company, whose offices are in principal cities of this country, published under the above title, is printing a series of articles by G. W. Thompson on "Paint Defects, Their Cause and Prevention."

These articles, the third of which is published in the current issue of the *Dutch Boy Painter*, give a great deal of practical information, which should be possessed by architects or others specifying paint and the processes by which it is to be applied.

For further information concerning these articles, or other matters in connection with the subject of painting, the company may be addressed at its New York office, 111 Broadway.