

THE AMERICAN ARCHITECT

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FIG. 1. MESSRS. CARRERE & HASTINGS, ARCHITECTS

LATTICE: ITS USE AND ADAPTATION—PART II*

By ROY THOMAS PRYOR

BECAUSE of the exposed condition of exterior lattice work and the excessive dampness which must exist in it for a greater part of the time, it is almost needless to say that ordinary wire nails should never be used at any point in the construction. By far the best method of putting the work together is, as mentioned in the preceding article, by the use of copper screws. This process, however, is an expensive one for the strips must be drilled for every screw. In a very elaborate design,

however, this expense should be incurred because of the more permanent results.

Should circumstances not permit the use of copper screws, copper nails should be employed and when the strips are wired, as is sometimes the case in cheaper work, copper wire should always be used. The use of copper fastenings is a very important item and one which will contribute very materially to the life of the lattice.

In preparing the working details for lattice work—details which must be followed minutely by the mill man—special attention must be given to those parts which will in any way tend to retain water, and to any surfaces

* The major part of the photographs and drawings illustrating this article are illustrative of the work of Messrs. Carrere & Hastings and Mr. T. E. Blake. An acknowledgment is hereby made to them for their courtesy in connection with their reproduction.
For part I see issue December 30, 1914.

which will not readily shed melting snow and ice.

Attention to these details and the careful fitting of mitred, coped and rebated members which can be thoroughly filled with paint, will prove to be economical measures

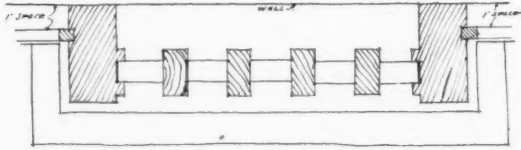


FIG. 2.

to the one who must eventually make necessary repairs and who must look carefully to the maintenance of the work.

While the general soaking of the structure by rain causes very little harm if it is in a position to thoroughly dry in good weather, the slightest amount of standing water or excessive dampness retained in loose fittings or on surfaces badly detailed will very shortly start decay.

Like in almost any other type of a decorative structure, the more stock put into the structure, just so much more liable is it to withstand the weather. Every advantage should be taken of the design to insert heavy members, as shown in Fig. 2, showing the plan of a pilaster. In order to depend as

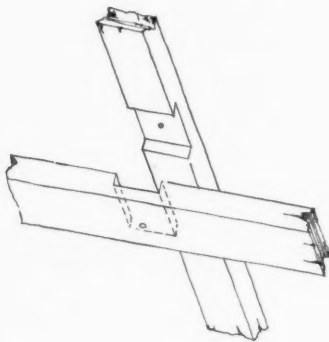


FIG. 3.

little as possible on the use of metal the rails should be rebated and the strips forming the field inserted at the time the work is assembled.

Since the natural tendency of all woods is

to warp to a more or less degree, it will be seen that most difficulty will occur at the points where the strips cross one another, as small pockets will form between the two surfaces of the wood. And because of this it is always well, where possible, to notch the strip at these points as in Fig. 3. The painting will later fill up any looseness and a perfect joint can be made.

The notching of the strips in the field of the design requires, however, a heavier material and its use again refers to the question of design and the design in this regard naturally depends on conditions of place, position and scale of surrounding work. In this connection it should be borne in mind that if the lattice is free standing, or nearly so, the

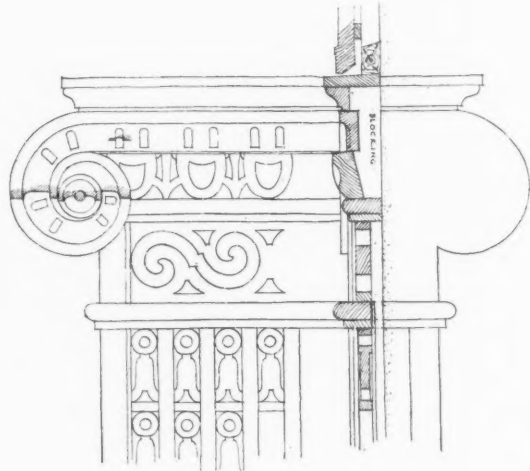


FIG. 4.

voids will make the members appear unusually light and heavier sections may be used than might at first seem practicable.

Main or constructive parts should always be framed into one another. Needless to say, no dependence should be made on glued joints, for joints so made are soon opened, and because of their closed condition at the time of painting are left unprotected a short time after exposure to the weather.

All members lying horizontally which are of greater dimensions than the field strips, and these too if they are unusually heavy, should be cut with a wash. Horizontal strips should never be carried across at the lower portions where they will form a sill back of which a pocket will be formed, for dirt will



FIG. 5.

MESSRS. CARRERE & HASTINGS, ARCHITECTS

collect and form a dry rot in some of the most important members of the lattice.

In Fig. 4 is illustrated a method of draining the lower portion of a lattice attached to a wall. Note how even the grounding on the wall itself and to which this lattice is attached has been constructed with a wash.

All of the precautions for wash and drain are to take care of the water which falls on the woodwork and back of it. As great care should be taken to protect the structure from water running down from the wall surface above it, and to this end broad projections

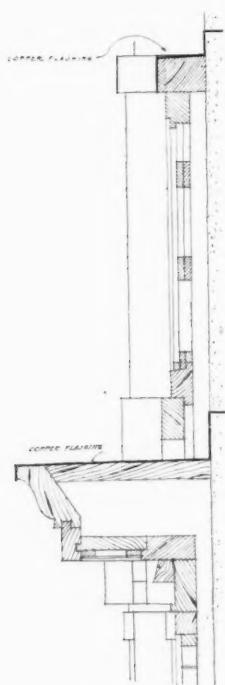


FIG. 6.

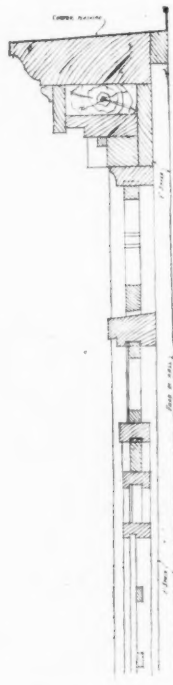


FIG. 7.

and cornices should be thoroughly flashed with copper as in Fig. 6, and the flashing carried into a reglet in the wall.

Where lattice work is to be placed against a wall there are two methods employed in fastening it in place, the use of vertical grounds or strips previously applied to the wall, and the use of metal anchors by which the entire structure is suspended in such a manner that there is a sufficient space between it and the wall to allow the water coming down the wall above or between the strips to flow freely over the entire surface back of

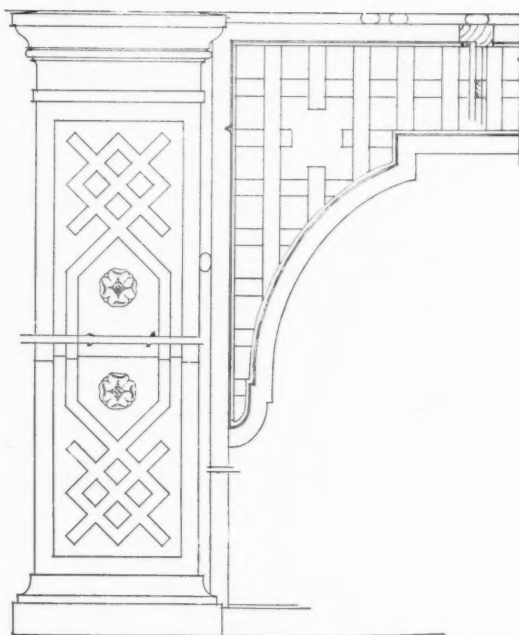


FIG. 8.

the lattice. The first method is a good one, and makes a solid structure, but of course is not as permanent as the second, for the wooden grounds will eventually decay and ruin the foundation to which the finished work is applied. When grounds are employed they

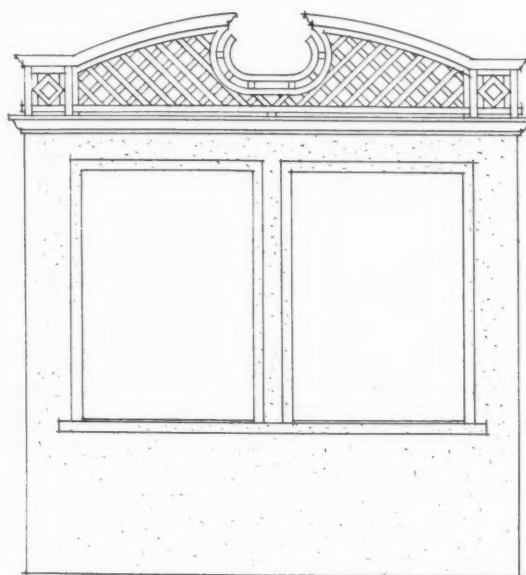


FIG. 9

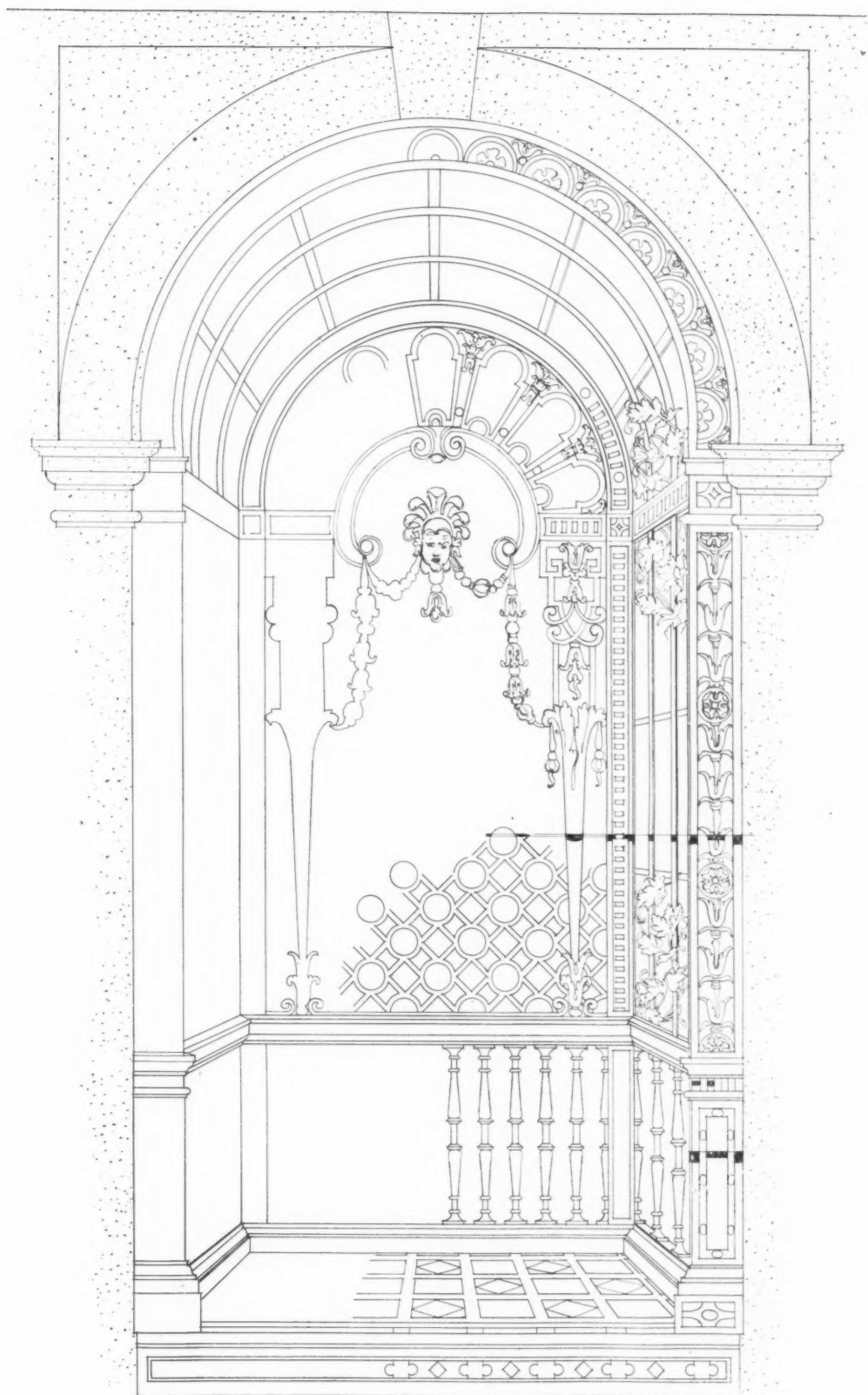


FIG. 10

should be substantial and occur behind only those heavy vertical members composing the framework of the structure. Grounds ought never to be laid horizontally except possibly behind some lower member, or in such a position that they will not retain the dirt washed down from the surface above.

Where anchors are used they should be of

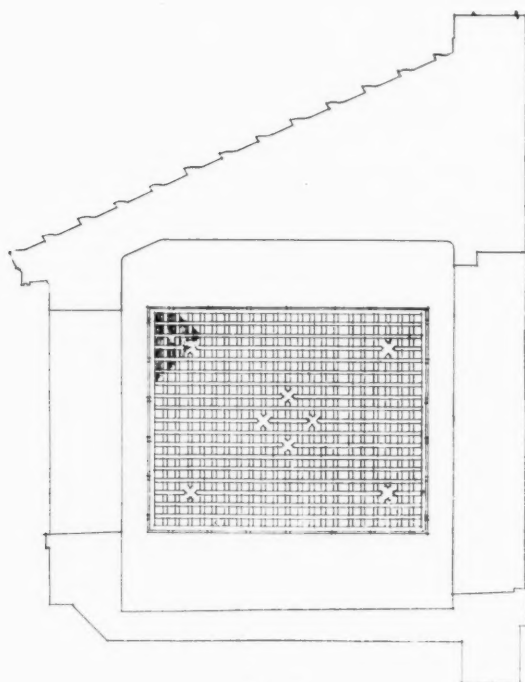


FIG. 11

copper, and of a size ample to carry the weight imposed upon them, for the framework of the lattice in which the field work has been installed and the ornament attached is to be hung from them, leaving a space of about one inch between the lattice and the wall behind.

In Fig. 7 is shown the use of grounds as a backing and the manner in which all members are kept one inch from the finished wall surface.

While upon the proper choice of material, proper use of metal in construction and attention to detail depend materially the life of the lattice, the painting of the work during construction and after erection will give a greater guarantee of stability and longevity than any other item mentioned herein.

It is by the free use of paint in crevices, cracks and joints as well as on the broad surfaces, that the work is protected from the elements and the ever present danger of decay is avoided or lessened. Each piece should be thoroughly primed in the shop before they are all assembled or put together, especial care being taken at all notches and surfaces to be jointed and where the pieces will touch one another.

After the separate pieces are assembled into sections, the first coat of paint should be applied, the same care being taken that all junctures and fitting surfaces be well filled with paint, causing the smallest openings to be thoroughly closed. When the sections are completely assembled the work should again be painted, the above conditions being just as carefully followed.

All of these coats of paint, except the priming coat, are base colors and should be

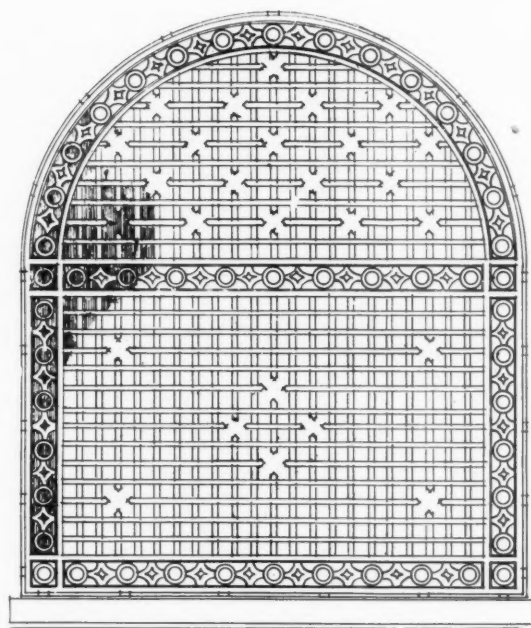


FIG. 12

of the same general tone as the final tint which is desired.

The color in which the trellis is to be painted is again a question merely of design and conditions. Of all colors employed perhaps the one most predominantly used is green, and of this color the shade known as

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Mitas Green gives perhaps the most pleasing effect because of its approach in shade to the foliage which so often forms a part of the composition in which lattice is used. Green is predominant, but in a shady isle of trees, or by a lake or pond, the charm of a white bosquet or Tea house cannot fail to be appreciated.

It is perhaps needless to say that lattice work must have the same attention after its erection as any other exterior painted work.

It must receive periodical overhauling, renovating and re-painting for only in this way can the parts be expected to remain in-

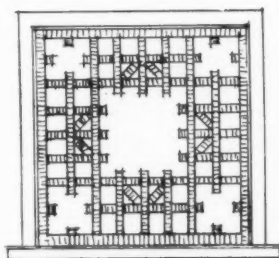


FIG. 13

proof buildings where no wood-work is permitted. The use of wood lattice is especially prohibited on the interiors of places of public amusement and in public buildings of a semi-public character where oftentimes a trellis design is desired.

The Fire Laws of New York do not permit lattice on exterior walls above a certain height, the rules governing such con-

struction being referred in the laws discussing the construction of wooden fences. There are many instances, however, where the nature of the structure to which it is attached and the position of the lattice are such that a special examination and rulings will allow the work to be executed in variance with the rules formed by the existing law.

If an objection as to height and position is made by the Building Department in a city, and in the mind of the applicant no fire hazard is incurred, an appeal from the

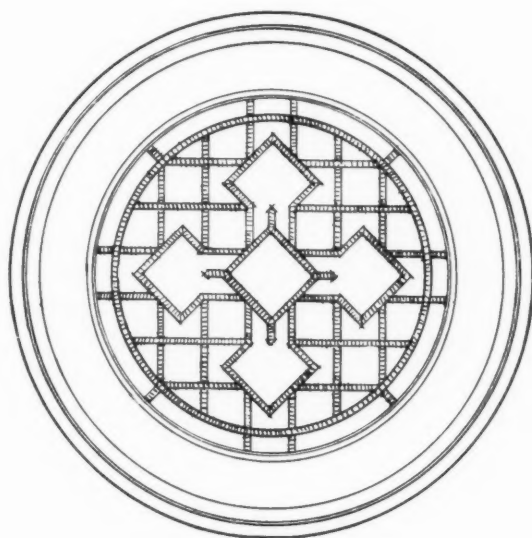


FIG. 14

tact and the charm of the lattice as a decoration be retained.

The above paragraphs refer generally to the construction of exterior wood lattice where no unusual conditions are to be complied with, and where lattice in its strictest sense is intended.

It may be found that conditions will sometimes be imposed which will not permit the use of wood in trellis, such instances being those where the lattice is to be placed on city walls above a certain height, or on non-fire-proof buildings and in connection with fire-

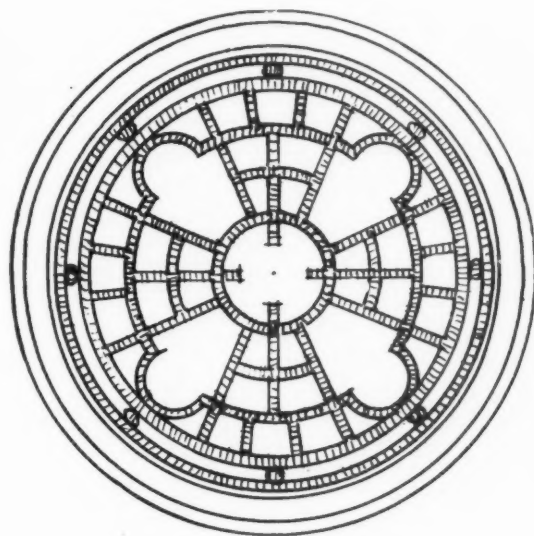


FIG. 15

objection will cause the specific case to be more thoroughly examined and oftentimes result in the objection being over-ruled.

Up to the present time the only methods of reproducing fireproof lattice is by the use of metal and plaster, the latter being of

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course confined to interior work. Where metal is used the most satisfactory course is the use of cast iron, but because of its excessive cost precludes its extensive use.

When this course is adopted a complete pattern must first be made of the design desired, and from this pattern is cast the finished piece. The design shown in Figure 10 was prepared in this manner, and is cast in a thickness of about $\frac{3}{4}$ of an inch. The outer sections forming the radiating lines are each one of deeper section forming a slight true perspective to the false perspective, and giv-

method of using copper is in the use of hand-hammered sheets or copper covered strips. These later methods are far too expensive for any other than the smallest quantities of lattice work, and could not be economically applied to work of such an extensive character as indicated in the preceding designs.

Fireproof wood for exterior lattice within the fire limits is prohibited in a city, and, of course, is a useless expense where ordinary wood may be installed. The objection to fireproof wood is that the action of the elements will in a short space of time eradicate

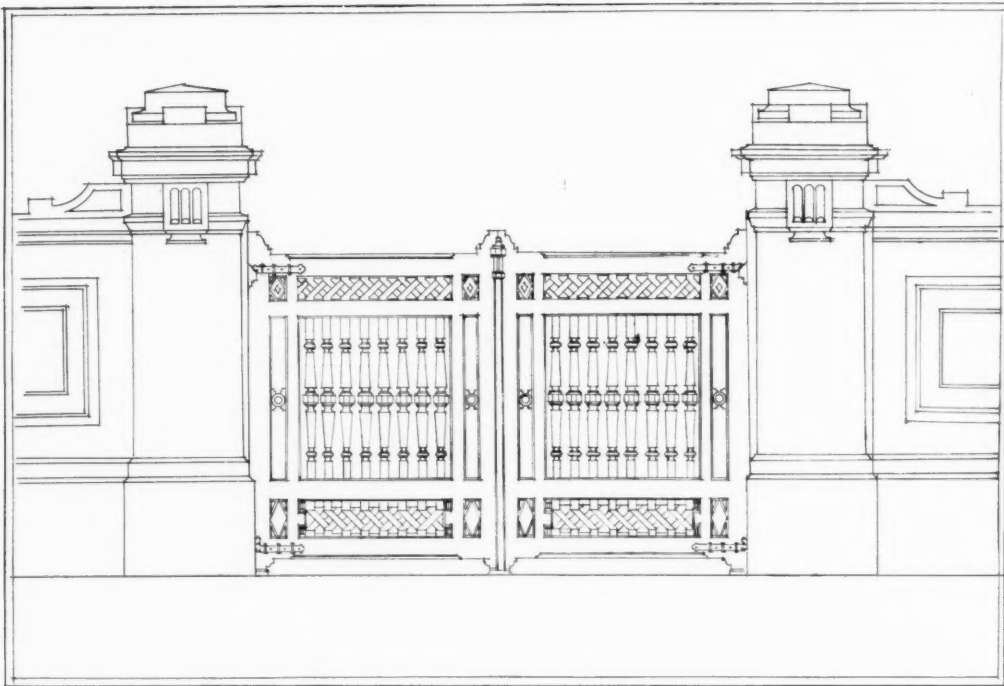


FIG. 17

ing the necessary added strength to the heavier material.

Stamped copper is sometimes employed more or less successfully as in Fig. 8, and has the advantage of a lesser cost than cast iron. The background is "painted out" as in interior plaster lattice.

In the use of stamped copper, however, it is necessary to curtail the design to a very considerable extent, as it is almost needless to say machinery necessary for its manufacture can scarcely be had for stamping any work of an intricate pattern. The only other

the fireproofing solution contained in the wood and cause the structure to become a fire hazard and unlawful.

The lasting quality of the wood is also lost by the chemical action and disintegration will soon ruin the structure.

Practically all of the safeguards mentioned above refer as shown to lattice applied to the walls of other structures. Where the trellis is to be a free standing one the difficulties are somewhat lessened, for, as a general rule, it is possible to have access at

(Continued on page 239)

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THE GROWING IMPORTANCE AND VALUE OF THE LANDSCAPE ARCHITECT'S SERV- ICES

THE profession of landscape architecture as it has been developed and practiced in this country during the present century is one that is probably as little understood and appreciated as any with which the greater majority of people come in more or less intimate contact. The landscape architect has, whether wisely or not, apparently taken a position in a sense intermediary between the architect and the gardener. The reason is probably due to an undeniable demand for such service, for, while the science of road building, the choice of trees and shrubs, and the design of the garden and its accessories are properly within the sphere of the architect, the complex knowledge which is demanded of him in connection with the design and construction of buildings proper demand so much study and attention that the landscape problems are more easily and usually more satisfactorily solved by one who, while he has been trained to visualize the architect's ideals, has yet had time to master the details of garden construction.

In the development of a comprehensive or elaborate estate the landscape architect's services are, of course, now in general demand, and practically all of our finer modern gardens are products of his genius. In the planning of smaller or simpler country places, however, or in arranging the setting of houses located on plots of ground of restricted area, his worth is not yet fully appreciated, and it is to the architects, and through them to the owners of this type of house that we desire to urge the importance of architectural settings. The client, frequently exhausted by the financial and mental strain of home building, is quite apt to regard the landscape architect as a somewhat unnecessary additional expense and to feel that once he has occupied his house, nature may be trusted to arrange a satisfactory setting. It is, therefore, largely incumbent upon the architect of the buildings to present the landscape architect's case, and if his services are fully appreciated, and their importance, while planning the house, insisted upon by the architect, clients would eventually come to regard the employment of the landscape architect as equally necessary to that of the architect of the house, and would set aside, before beginning their operations of building, a proper proportion of the total sum to be expended, for purposes of landscape work, and the employment of a competent adviser on the subject.

The advantages to the architect in a proper setting for his work are manifest. That he should plan for it at the outset, and not regard his labors as finished until it is adequately provided for is equally obvious, and unless he feels that he is himself fully competent to plan the development of the grounds as well as the structures for his clients, insistence upon the employment of a landscape architect whose labors would properly supplement his own would seem to be not only wise, but necessary to a satisfactory final result.

By this it is not intended to imply that such a result is impossible without the aid of the landscape architect. There are exceptions to all general rules, but in this case they are only as numerous as are men in the profession of sufficient versatility to excel in dual roles.

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LANDSCAPE ARCHITECTURE AS DISTINGUISHED FROM THE CALLING OF THE HORTICULTURIST

WHILE horticulture is admittedly an important calling, and one which is closely identified in some of its aspects with that of architectural practice, those of its followers, and, happily, they are growing fewer each year, who assume that their knowledge of flowers and shrubs fits them for the practice of landscape architecture err in a manner that is usually apparent to the practiced eye, even though its owner may not have the technical knowledge that would enable him to construct a garden.

Ability in design is the result of the development of faculties which exist quite separate and apart from those required for proper study and mastery of the science of horticulture. As a matter of fact, what might almost be called genius in the handling and planting of a garden is very often combined with absolute lack of perception in the matter of its design. While gardening is a craft—or, by extension of its domain, a science—the designing of the garden is, primarily, an art. The gardener may occasionally be an artist, and the designer of gardens may at times have a thorough knowledge of the science of the horticulturalist or gardener, but their respective spheres are ordinarily distinctly separate, although the two duties are performed by one person in innumerable cases when nothing more is desired than a restricted tract of ground displaying a luxuriance of bloom and foliage.

The passion for gardening, which is inherent in the majority of people, unhappily does

not indicate a universal appreciation of intelligent garden design. Most people admire the effects of a well-planned garden or estate, without comprehending that these effects are due to the studying and developing of a definite scheme. Popular garden knowledge and information is apt to concentrate chiefly upon the production of the individual flower, and to resent the introduction of any formal architectural plan as foreign to the purposes of nature. This prejudice is, fortunately, no longer a growing one. It is the result of a state of mind produced by failing to grasp the essential meanings of order and design. One imbued with this prejudice imagines himself coöperating with nature by allowing her to run riot. It is probably safe to say that this feeling would disappear more rapidly if we had in this country more frequent examples comparable to the fine, old gardens of England, where the effect of architectural planning is sometimes softened by century-old vegetation and where time has added a rich quality of maturity to the original scheme. Only in gardens like these can the harmony and fitness of a definite architectural design be brought out in its full and proper value.

The garden is, in reality, almost as close to our home life, when properly designed and planned, as the house itself, and the same order and arrangement should be employed to fit both to the domestic life of the occupants. The architect who builds the house, studying the plan of the rooms and their decoration, should be allowed to complete his work by laying out, in collaboration with the landscape architect, the main lines of the gardens, and in fitting the house into the setting of the landscape.

Lattice

(Continued from page 236)

all times to every part of the erected work. The painting should be none the less thoroughly done and the members should be as carefully put together.

It is not so necessary to cut the smaller

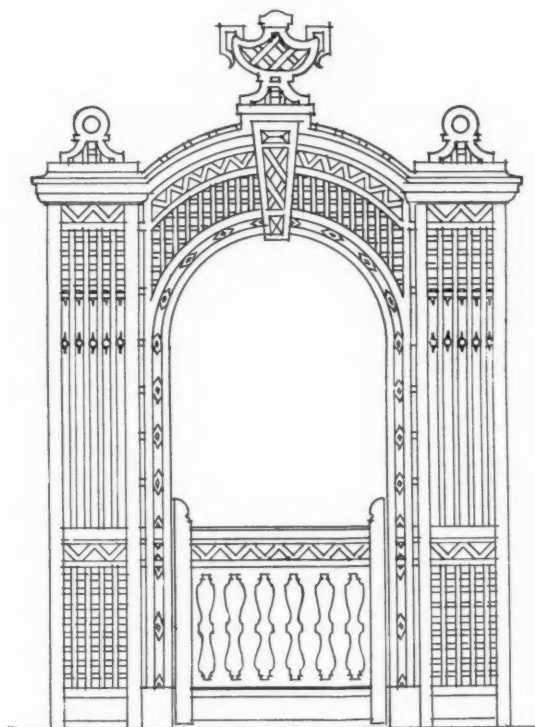


FIG. 19

members with washes and, except in special cases, flashing may be eliminated.

In the type of free standing lattice may be found designs for the treatment of win-

dow openings, dormer window caps, voids in walls, and screens of various patterns.

In Fig. 9 the usual treatment of cornice has been omitted and a free standing lattice crown has been installed, while in Fig. 11 the open end of a porch has been screened from a service yard. Note the simplicity yet effective design formed by the cutting of certain of the strips which would have proved a monotonous surface if they had not been so treated. In Figs. 14 and 15 the designs are made to cover openings in a tower in which a clock dial is eventually to be placed, and

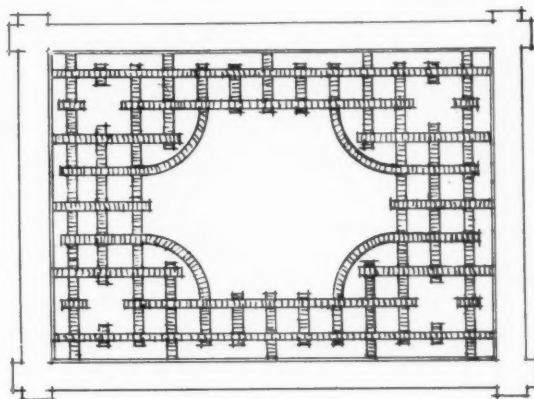


FIG. 16

until the clock is installed removes the unsightliness from the board filling which would otherwise mar the beauty of the otherwise finished elevation.

The lattice shown in Fig. 12 covers the window giving ventilation and light to toilet rooms which because of a peculiarity of plan were placed on a prominent elevation. The essential ventilation is unimpaired and practically no amount of light is kept away.

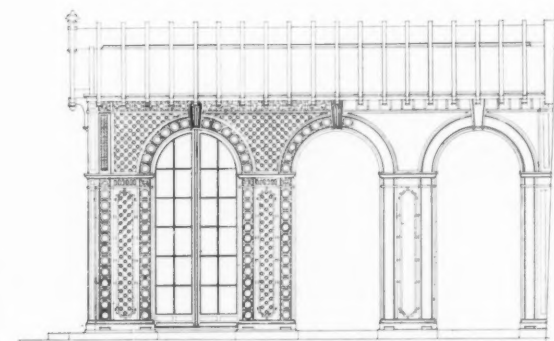
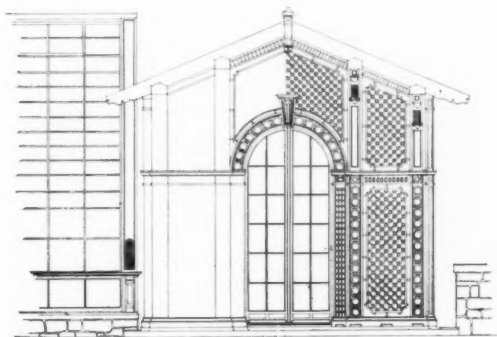


FIG. 20

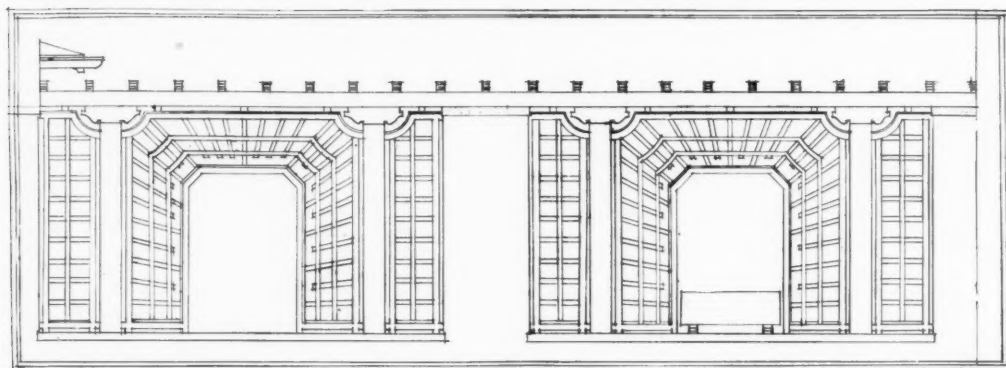


FIG. 22

In the design of gates, arbors and bosquets there is a wide range of possibility. A gate may be built entirely for service and therefore be made simple, as in Fig. 17, or it may be the entrance in a garden wall to form the entrance to a wooded isle as in Fig. 19. In the service gate jig-saw work is combined with turned spindles and wrought iron hinges to make a massive barrier to the stable yard to which it forms an entrance.

The entrance to the garden wall forms a charming combination of wood with brick and foliage, and in its simplicity seems to be a frame for the one spot of white in the background. As already suggested, the idea of an arbor generally suggests a trellis for grape vines or rambling roses, but in the development of lattice as a decoration a trellis arbor may now mean anything from its use in this regard to the very elaborate arbor as shown in elevation in Fig. 20.

In this structure the floor is of marble and the roof completely finished. The walls of lattice are open but the heavy members are

so detailed that in winter months the walls may be lined with glass and casement doors installed transforming the summer arbor into a delightful sun parlor or winter garden. This is the extreme of arbor design and is a far cry from the ancient wire strung raking grape arbor so easily brought to mind.

In Fig. 21 is a design only less pretentious in that it is a summer structure only and no attempt is made to convert it to winter uses. The roof is only a series of rafters laid flat with jig-sawn ends and the dome is open lattice.

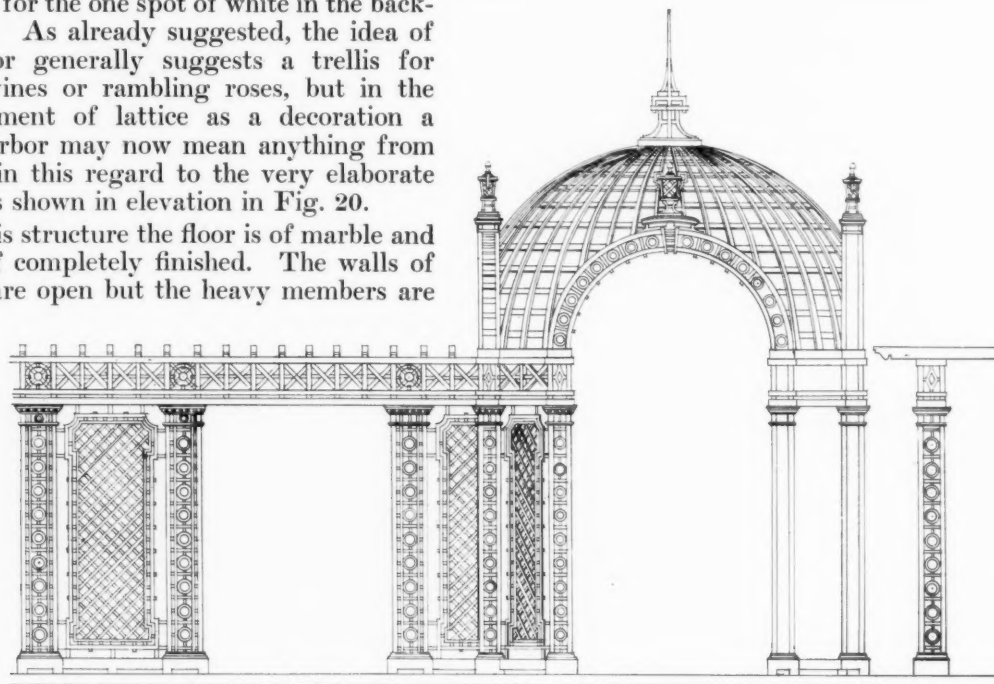


FIG. 21

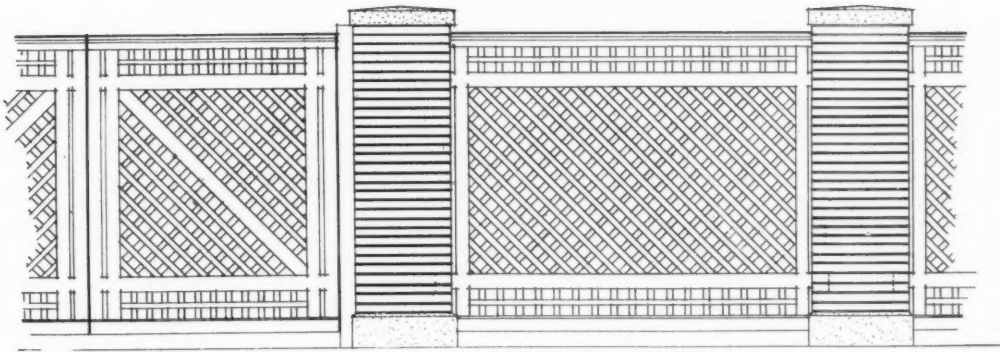


FIG. 24

For simple lattice more applicable to a greater number of places Fig. 22 is an excellent example. This design may be employed where a very long arbor is desired for the bays built in perspective will break the monotony of the otherwise repeating sections.

Not the least acceptable uses to which lattice work may be put is the enclosure of service yards. Unless some such method is employed, or heavy planting is resorted to, the problem of properly screening the service portions of a house and the necessary area nearby, is a difficult one to handle. The lattice fence has solved this problem, and has in addition formed an added embellishment to the landscape which forms a part in the design of a country house. By the judicious use of planting the wooden wall is made doubly attractive and the fact that a prosaic service entrance is screened and the goings and comings of the menial part of a household are hidden does not become evident or detract

from the attractiveness of the ornamental fence.

From these more elaborate designs one may turn to those shown in Figs. 24 and 25 and feel sure that though less ornate the result will be worth the expense and the care in design and execution. That section which is often the cause of much worry and which is always a problem at best to make inconspicuous is easily screened and hidden by the simplest type of lattice.

Bosquets are just little pleasure spots. They cover some favorite statue or they break into the monotony of a growth of formal planting, and end the long line of a vista which needs just that spot of tracery and color to tell you that the view ends there.

In Fig. 25, half over-grown with shrubbery, almost hidden in the green, the niches are sheltering antique vases which are only visible if you are directly facing arched openings, or go down the narrower paths leading to the enclosing wall.

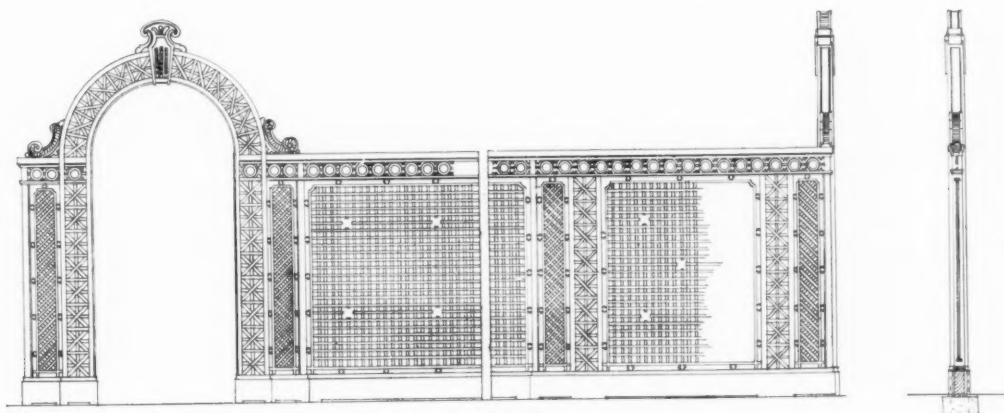


FIG. 23

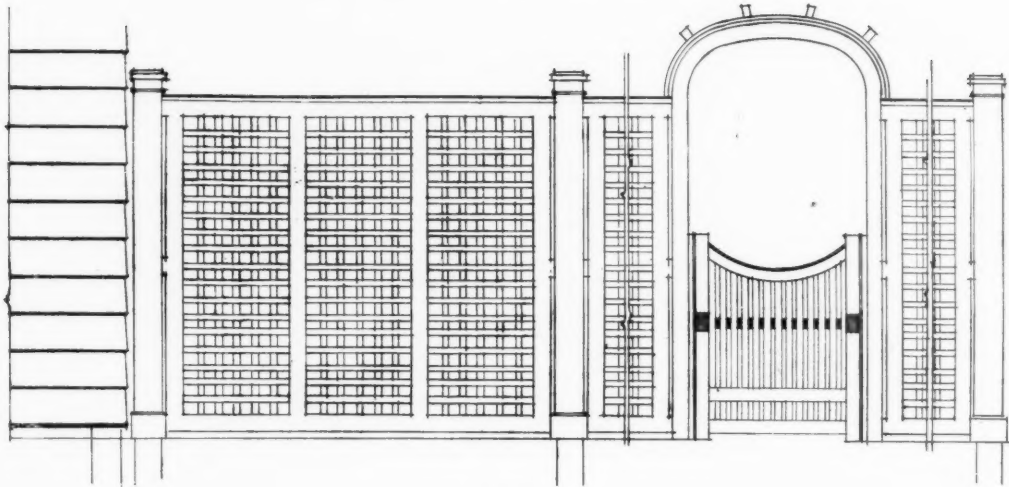


FIG. 25

CURRENT NEWS AND COMMENT

The Marble Columns of the Lincoln Memorial

A recent issue of *The Scientific American* contains an account of the marble columns to be placed in the Lincoln Memorial at Washington, in which appears the following:

"When Congress made the appropriation of \$2,500,000 for the Lincoln Memorial at Washington, D. C., few realized the magnitude of this great memorial, although figures were published in papers throughout the United States.

"One can not help but be impressed, however, with the mammoth proportions of the columns now being formed. They will be the largest columns of their kind in the world. Each block of marble as it comes from the quarry weighs about thirty-five tons, and twelve of these huge blocks are required for each column. There will be thirty-eight big columns in the Lincoln Memorial, and each column will be 46 feet high, weigh 192 tons when completed, and will be valued at \$15,000. As the thirty-eight columns will require four hundred and fifty-six blocks of about 25 tons each, the total weight of marble will approximate 11,400 tons. This mass of stone is being shaped into columns at Marble, Colo."

South Bend, Ind., Architectural Club Confers Annual Award

The South Bend, Ind., Architectural Club has, this year, conferred, with appropriate ceremonies, its annual award of a bronze tablet to the owner of the best designed house during the preceding year. Mr. Ernest W. Young was the architect.

To Limit Heights of Buildings in Albany

A bill, the purpose of which is stated to be the preservation of a uniform skyline in Albany, is reported to have been introduced in the New York State legislature. By its provisions the heights of buildings in certain districts are limited to 80 feet.

Ohio State Architects' Association

At the recent organization meeting of the Ohio State Architects' Association, the following officers were elected: President, George U. Anderson, of Cincinnati; Vice-President, C. W. Bellows, Columbus; Herbert M. Briggs, Secretary and Treasurer.

Common Sense in Art

The members of the State Commission in charge of a \$50,000 fund to build a memorial to Commodore Perry in the city of Erie, Pa., have received a vigorous protest from the Art Club of that city against the erection of a proposed arch. While the Art Club is in sympathy with any movement to do honor to Commodore Perry, it does not regard the present plan as of sufficient dignity to warrant its execution. Its protest is couched in the following language:

"We believe enduring structures should be considered, both with regard to the present and future development of aesthetic ideas, so that the coming generation need not be offended by the mistaken and uncultured efforts of our own.

"The arch as an architectural form has inherent beauty, but to stand alone and apart from any suitable approaches over a busy portion of the principal street, and constructed of any sort of artificial material, makes it not only useless and inappropriate, but an inartistic offense."

Personals

Mr. James Philip Sweeney, architect, Huntington, W. Va., informs us that he has opened an office in the Robson-Prichard Building, where he will practice his profession. He desires manufacturers' samples and catalogues.

Mr. J. L. Bothwell, architect, Dallas, Texas, announces he has opened offices in the Busch Building. He would like to receive samples and catalogues.

Mr. G. Lloyd Preacher, architect, Augusta, Ga., has opened a branch office at Washington, Ga., with Mr. Willis Irvin in charge. He requests manufacturers' samples and catalogues.

Messrs. Hoffman & Mosse, architects, Rochester, Minn., announce the opening of a branch office in the Jones Building, Albert Lea, Minn. They desire to receive manufacturers' catalogues and samples at the new office.

BOOK NOTES

STRUCTURAL DESIGN. VOL. II. DESIGN OF SIMPLE STRUCTURES. By Horace R. Thayer. Illustrated. Full Cloth. 495 pp. Size, 6 x 9 inches. Price, \$4.00. New York, D. Van Nostrand Co.

This work, the second of a series, discusses the design of such structures and parts thereof as beams, girders, viaducts, trusses and buildings. The subjects are treated from both theoretical and practical standpoints and many concrete examples are set forth.

While the author in treating his topic presupposes that his readers will have a knowledge of mechanics and stresses and the mathematics necessarily applying to these, the work will have some measure of value to those who are not expert in these matters.

STRUCTURAL STEEL DRAFTING AND ELEMENTARY DESIGN. By Charles D. Conklin, Jr., C.E. Full cloth, 154 pages. Size, 9 x 12 inches. Price, \$2.50. New York, John Wiley & Sons, Inc.; London, Chapman & Hall, Ltd.

This is a work treating of shop detail drawings and structural steel work prepared by one who is eminently fitted for the task he has assumed. The book will be found of great value and a positive and dependable aid to the student of engineering practice.

In the opinion of the author, based on observation and experience, the average technical graduate needs to supplement his education by a good working knowledge of structural steel drafting. While this will naturally be best acquired in actual practice, knowledge of certain basic principles will hasten forward the desired proficiency, and it is with the view of supplying this that the work has been prepared.

The various chapters treat of the drafting room, its organization and conduct, estimating, designing, detailing, rivets and riveted connections, and through the various phases of wall, girder, column and roof construction in detail, and that of highway and railroad bridges.

INDUSTRIAL INFORMATION

Permanent Fortifications

Under the above title, The Armstrong Cork and Insulation Company, Pittsburgh, Pa., has issued a pamphlet treating of the subject of heat insulation. It is stated that refrigerating plants may truthfully be said to be constantly at war with heat. First, it is a struggle to keep the heat inside the boiler and steam lines where it belongs; then, when the conflict is transferred to the brine and ammonia lines, the freezing tank and the cold storage rooms, conditions are reversed, and it becomes a never-ending struggle to keep the heat out. Under these conditions, it is deemed essential that the greatest care and foresight be exercised in planning the insulation—the permanent fortifications—which, after all, determine whether or not a plant is to operate on a truly economical basis.

It is stated that this company has made a special study for the past twelve years, endeavoring to discover, first, what materials are best fitted to make permanent fortifications for the refrigerating plant, and second, how to apply them and adapt them most effectively in individual cases. As a result of this study, four distinct types of insulation have been evolved, all bearing the name of "Nonpareil," signifying "having no equal." The salient facts regarding each of these products are given in the pages of the booklet referred to. The various forms are: Corkboard insulation, Cork Pipe covering, Nonpareil Insulating Brick, and Nonpareil High Pressure covering for steam lines, feed water heaters and pumps.

It would seem that a perusal of this booklet by those engaged in the problem of heat insulation would well repay the effort. It will be sent upon application.

Just About Boilers

Under the above title, The Badenhause Company, 1429 Chestnut Street, Philadelphia, Pa., has issued a book made up of a technical description of the principles of

boiler design, illustrated by diagrams and drawings of boilers installed in various buildings and plants throughout the country. It is claimed that a final resumé of the principles and advantages possessed by the various types of boilers results in a demonstration of the superiority of the Badenhause boiler over other types in the matter of circulation, steam disengaging surface and steam space. An attempt is then made to demonstrate how this boiler carries out mechanically the additional points of safety, ease of cleaning, simplicity of erection, facility of repairs, and ability to withstand severe service.

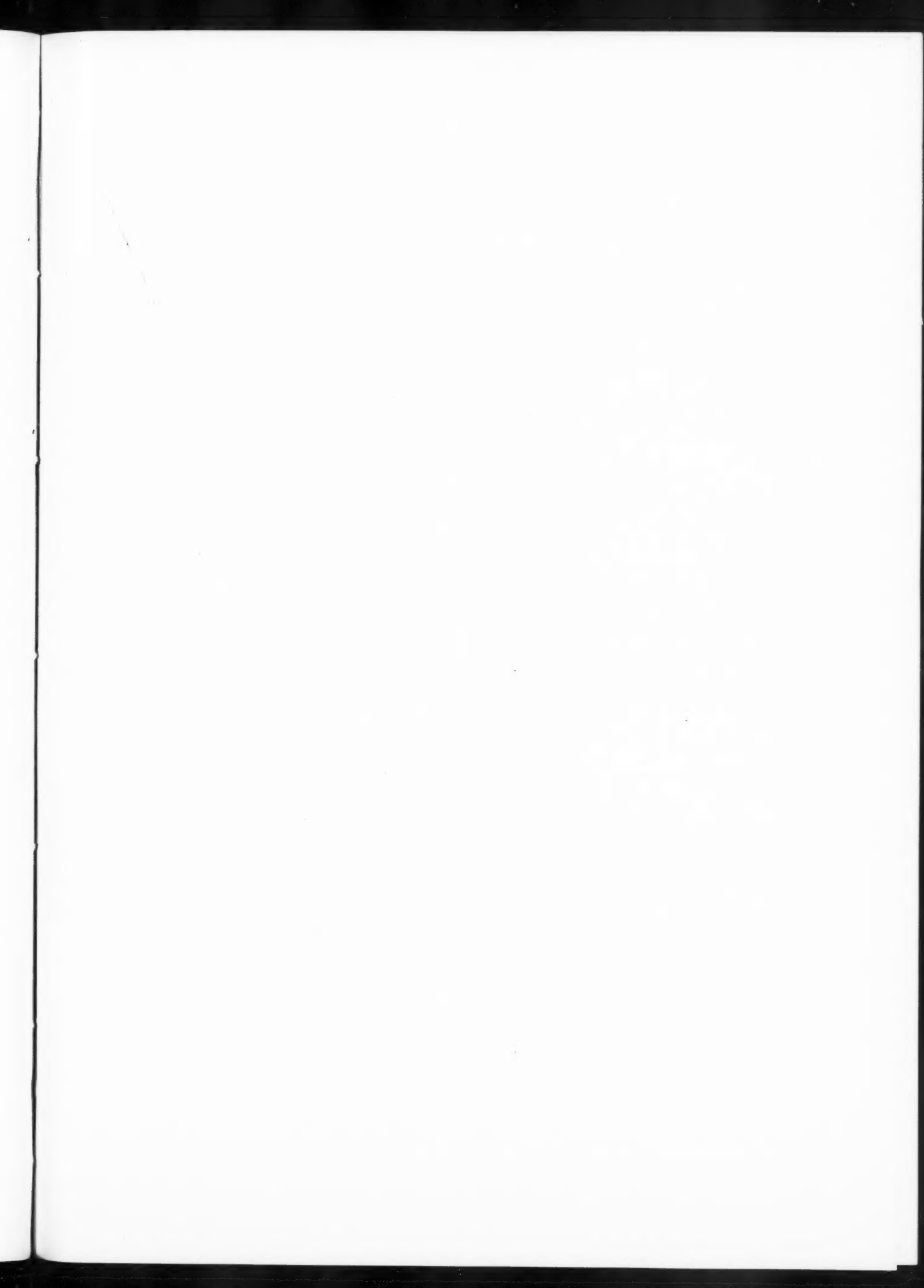
The book referred to would seem to contain much of interest to those engaged in the selection or design of boilers. It will be furnished free upon request.

Steelcrete System

The third edition of a handbook of design, containing tables, standards and useful information appertaining to the Steelcrete System of reinforced concrete, has recently been issued by the Consolidated Expanded Metal Companies of Pittsburgh and New York. This handbook is of the looseleaf form, and it is stated as the intention of the publishers to forward from time to time for addition such material as concerns cost of installations, data compiled from tests, and illustrations from construction methods.

The handbook presents a description of Steelcrete expanded metal, tables of proportions for mixing concrete, decimal standards for Steelcrete mesh, slab tables, description of metal lath, tanks, highway bridges and culverts, retaining walls, report of load tests on floor slabs, methods of fireproofing beams, approved designs for cinder concrete floor construction for New York City, and much other information.

A copy of this handbook may be had upon application.

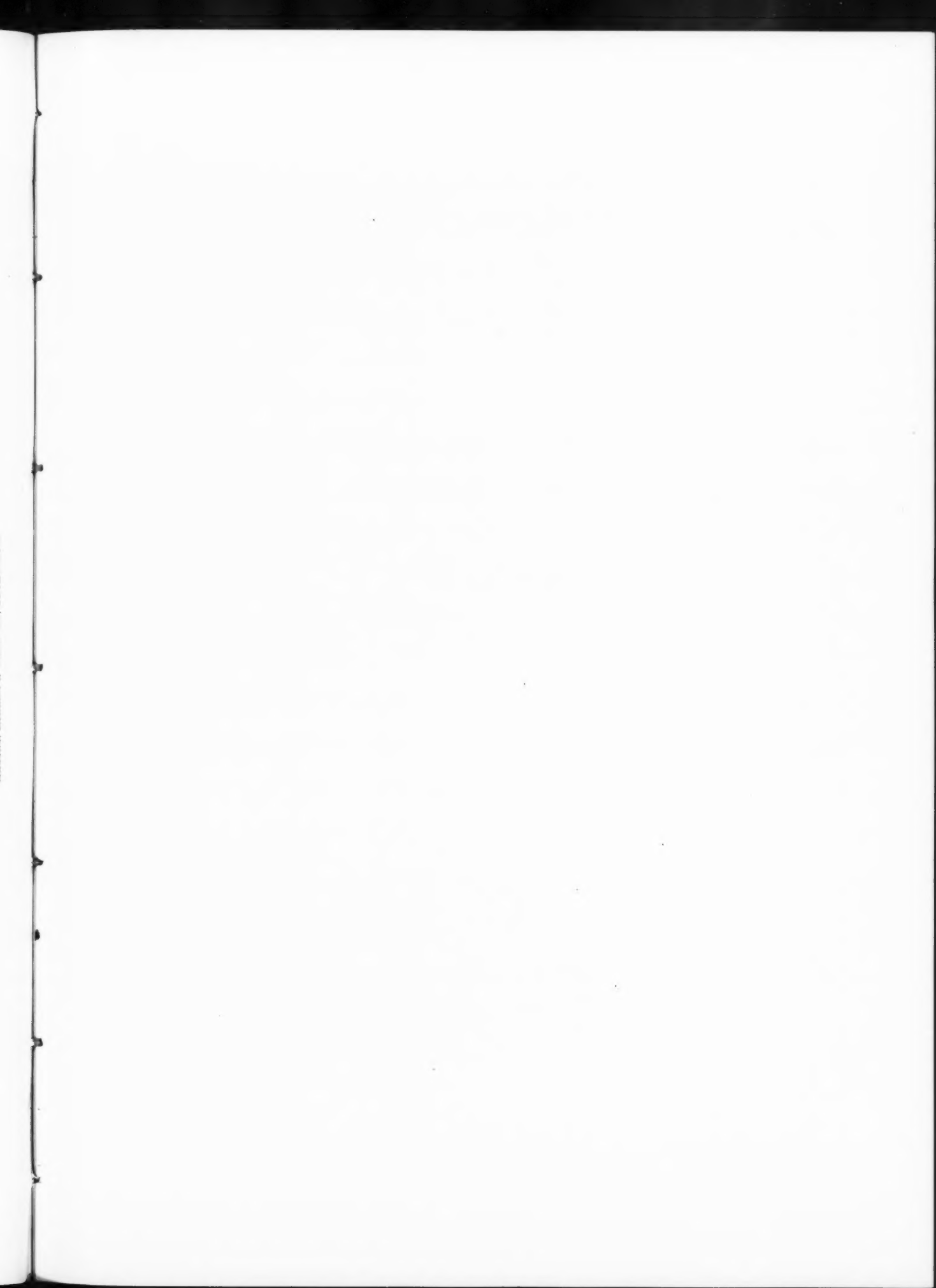




NORTH FRONT

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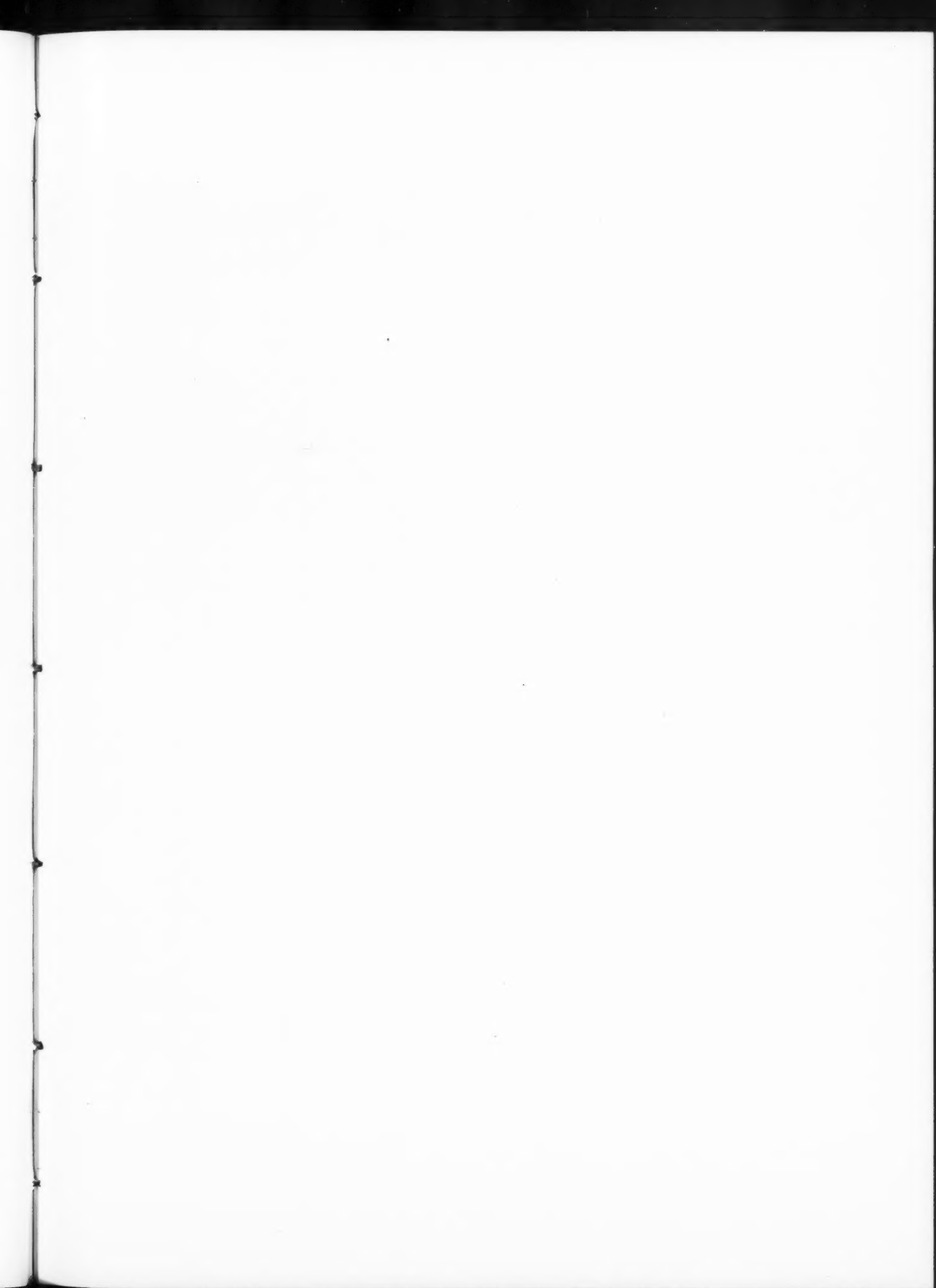
MESSRS. MILLER & MALLORY, ARCHITECTS

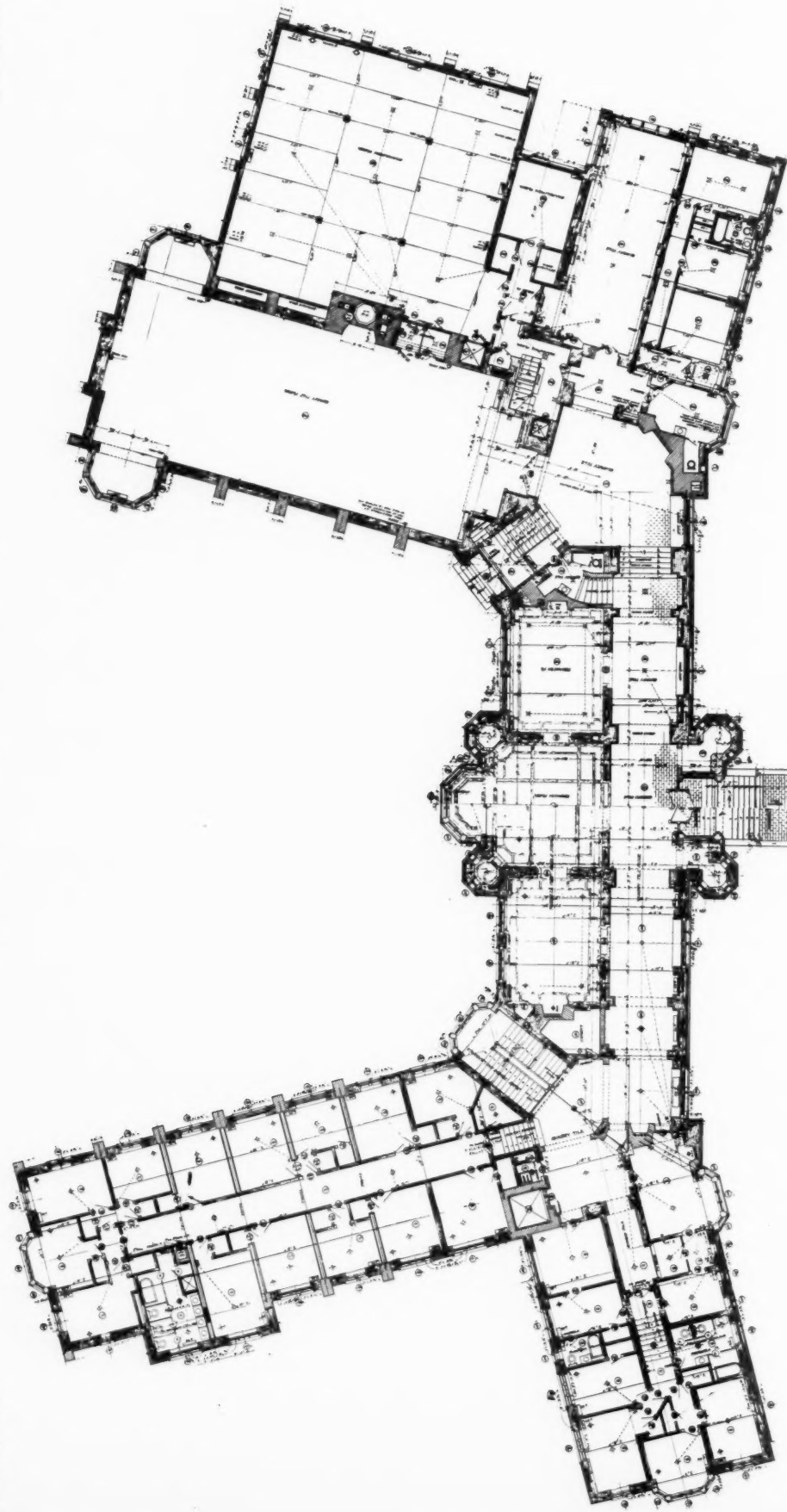




COURT

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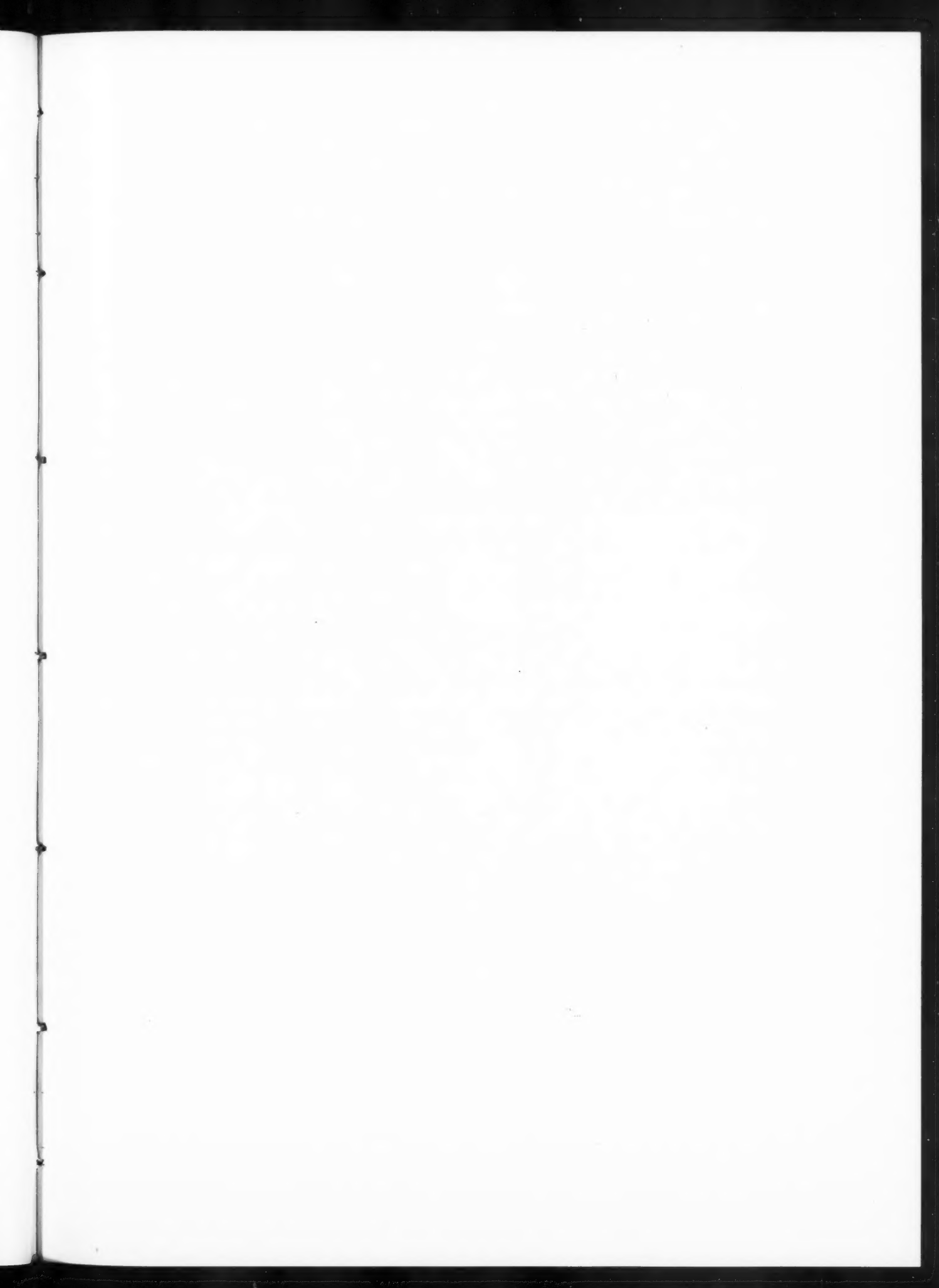


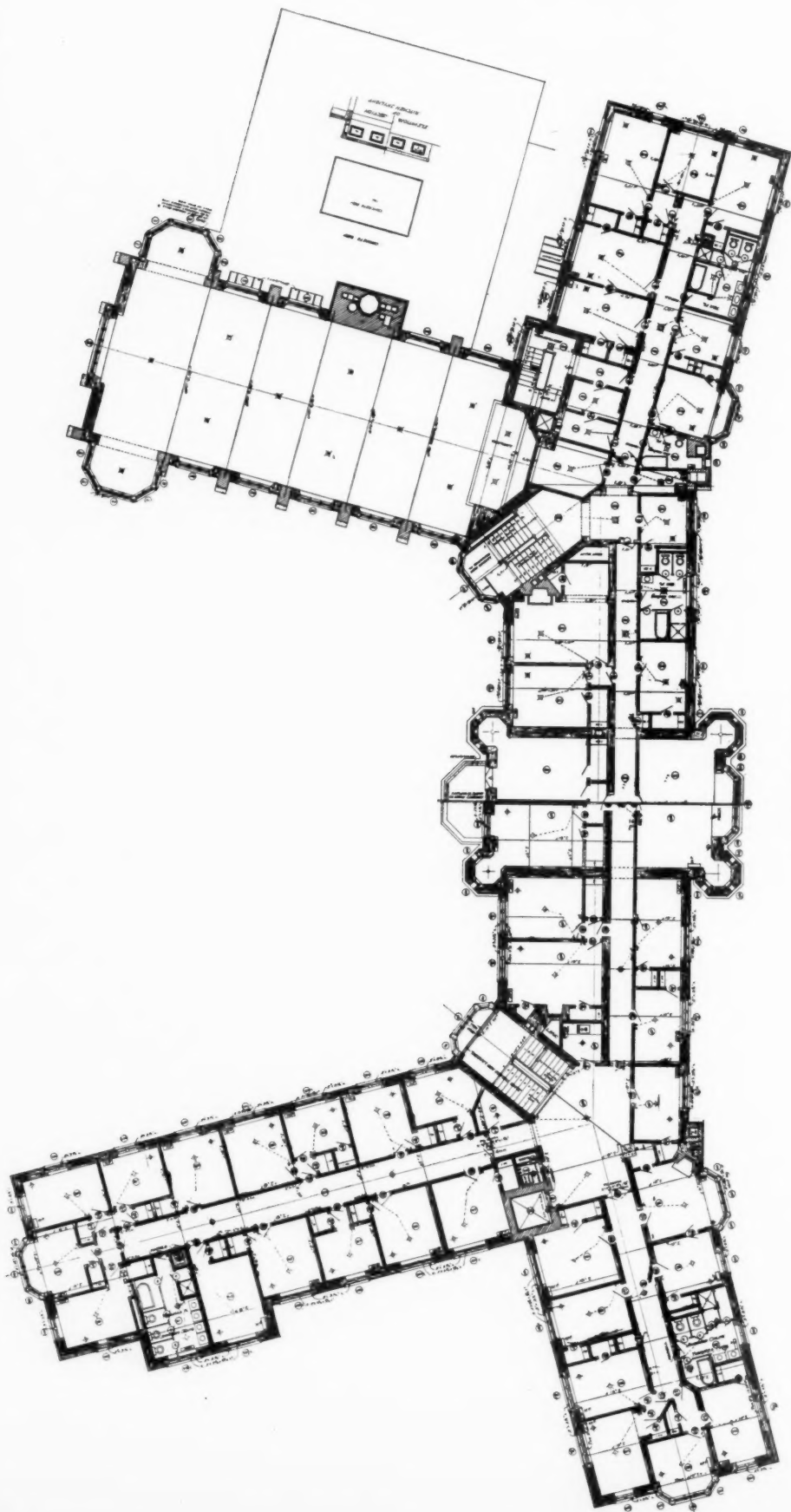


FIRST FLOOR PLAN

PRUDENCE RISLEY HALL, CORNELL UNIVERSITY

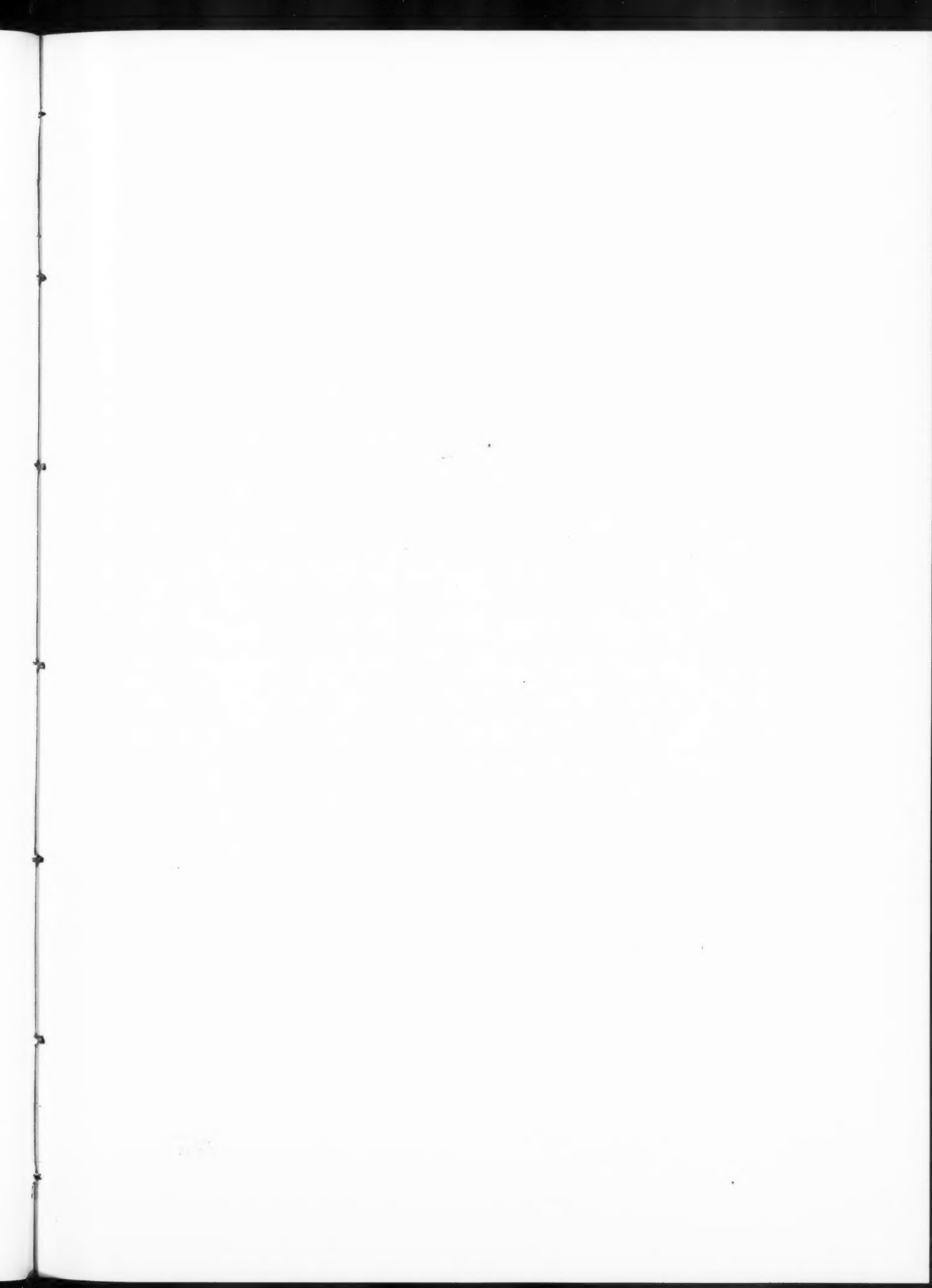
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SECOND FLOOR PLAN

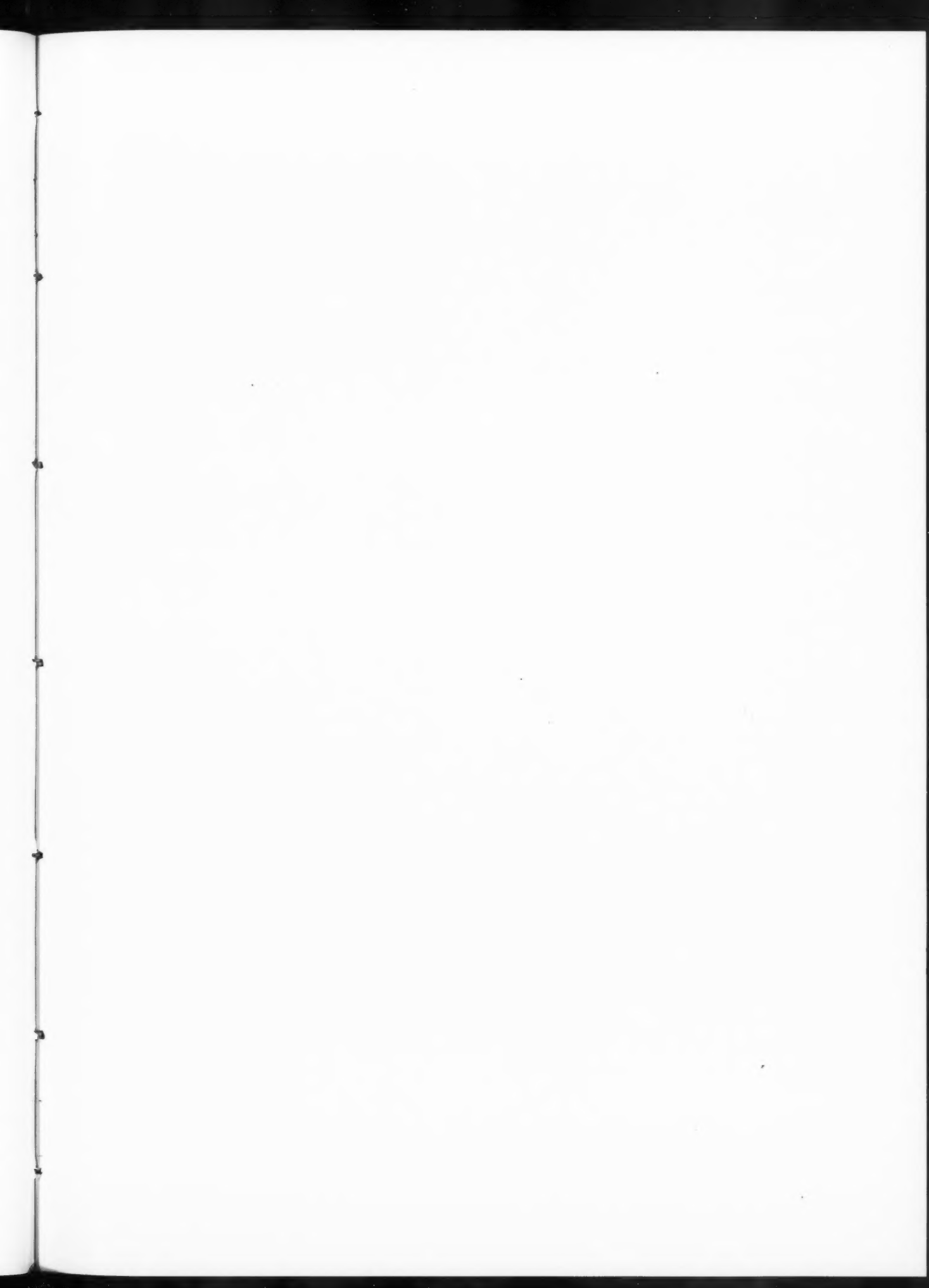
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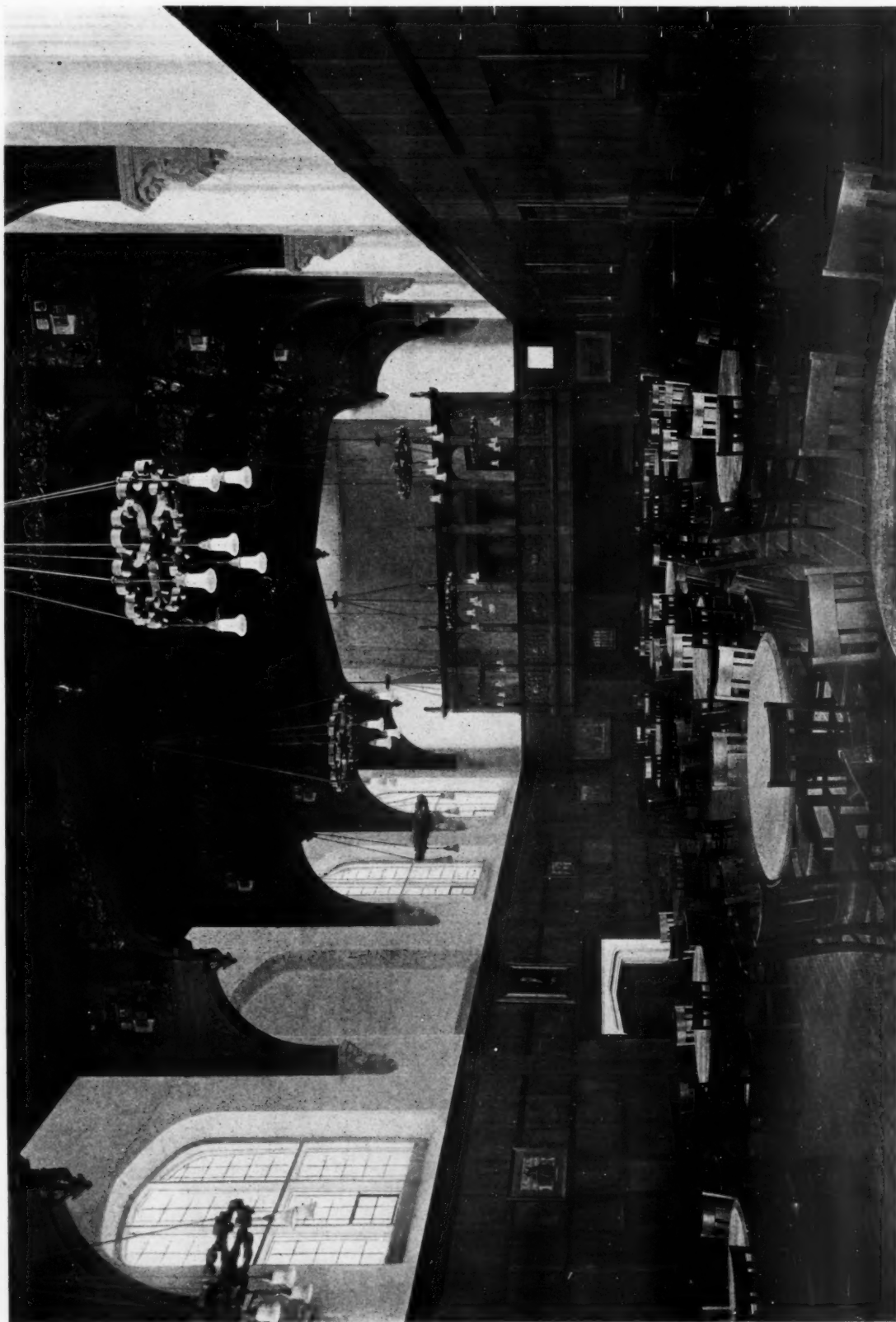




GALLERY

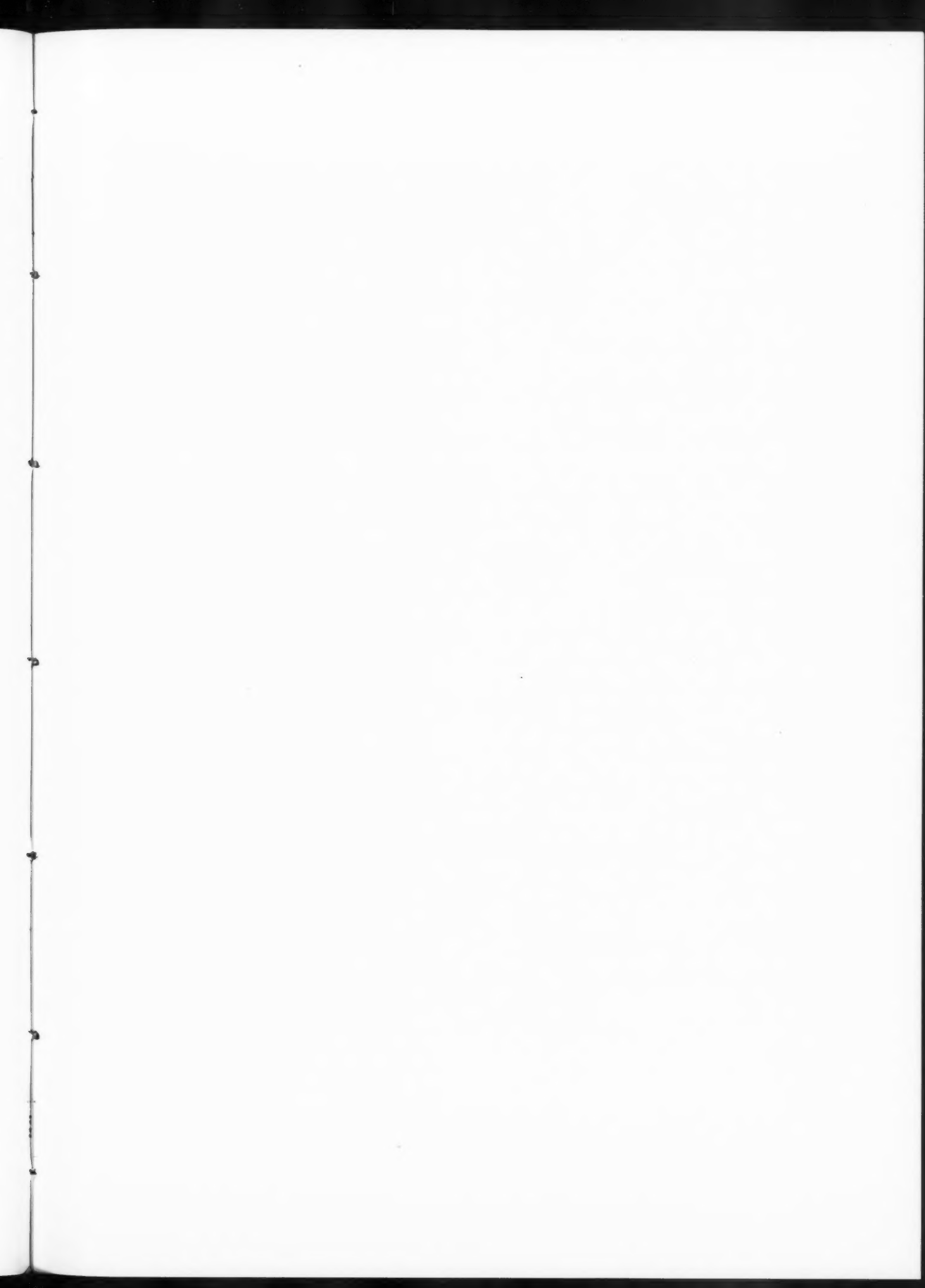
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DINING HALL

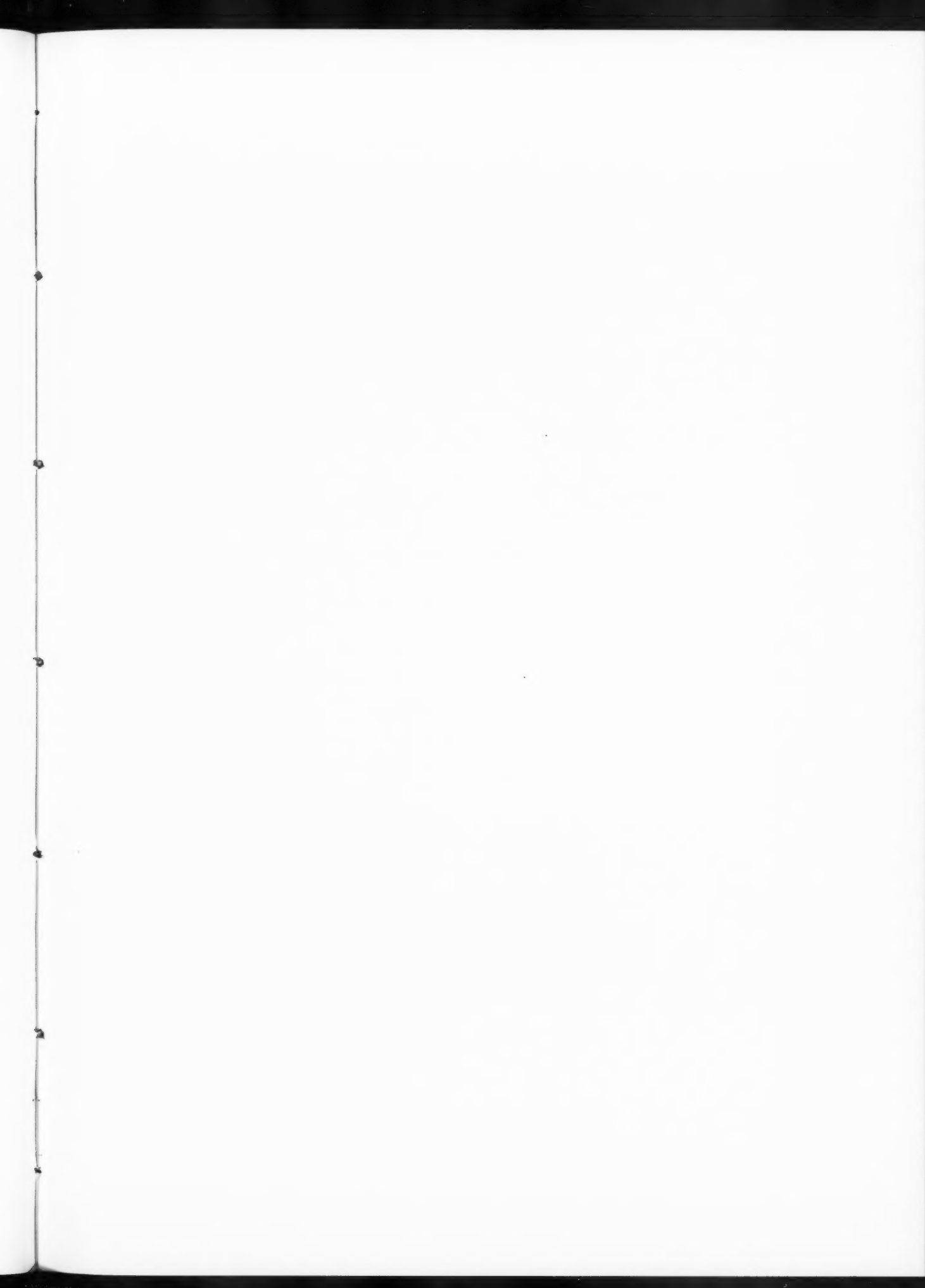
PRUDENCE RISLEY HALL, CORNELL UNIVERSITY
MESSRS. MILLER & MALLORY, ARCHITECTS





CENTER DRAWING ROOM

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MESSRS. MILLER & MALLORY, ARCHITECTS

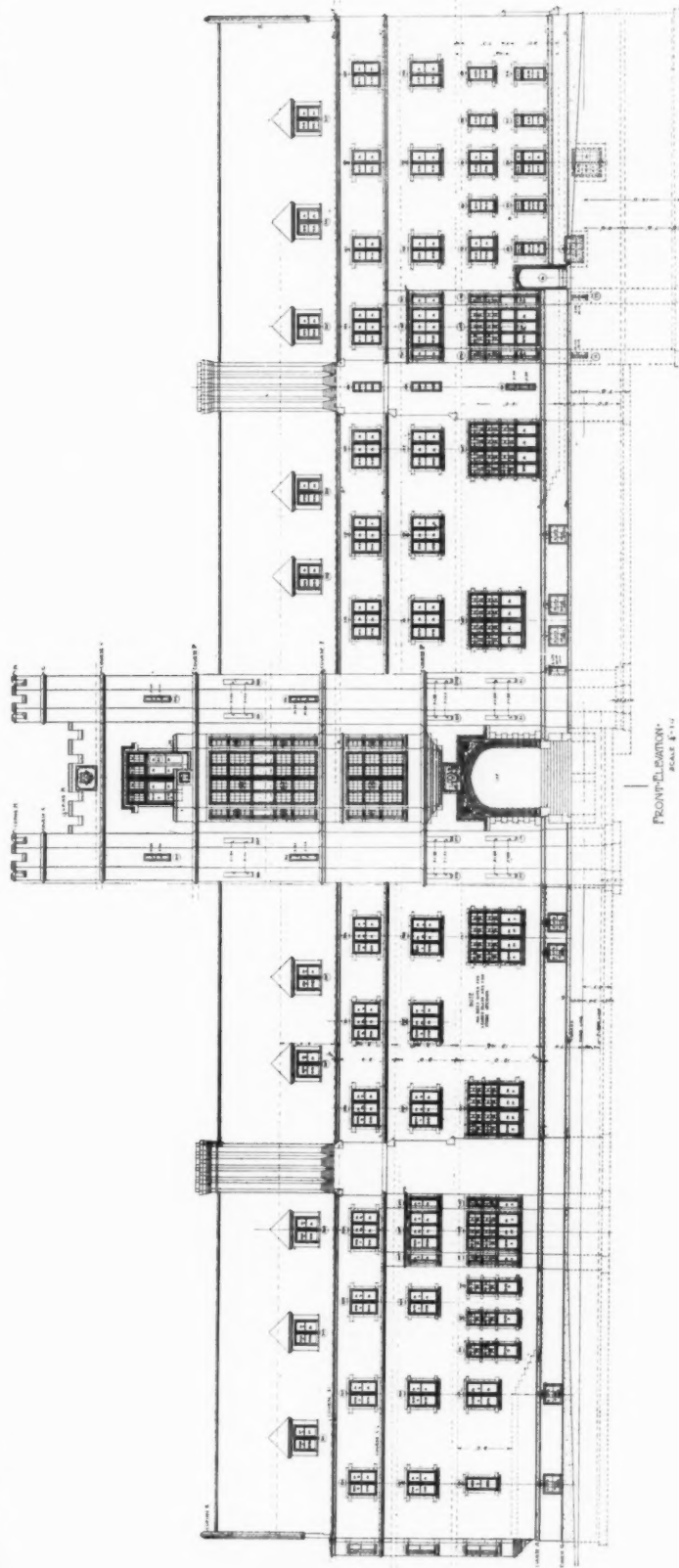




DINING HALL BAY

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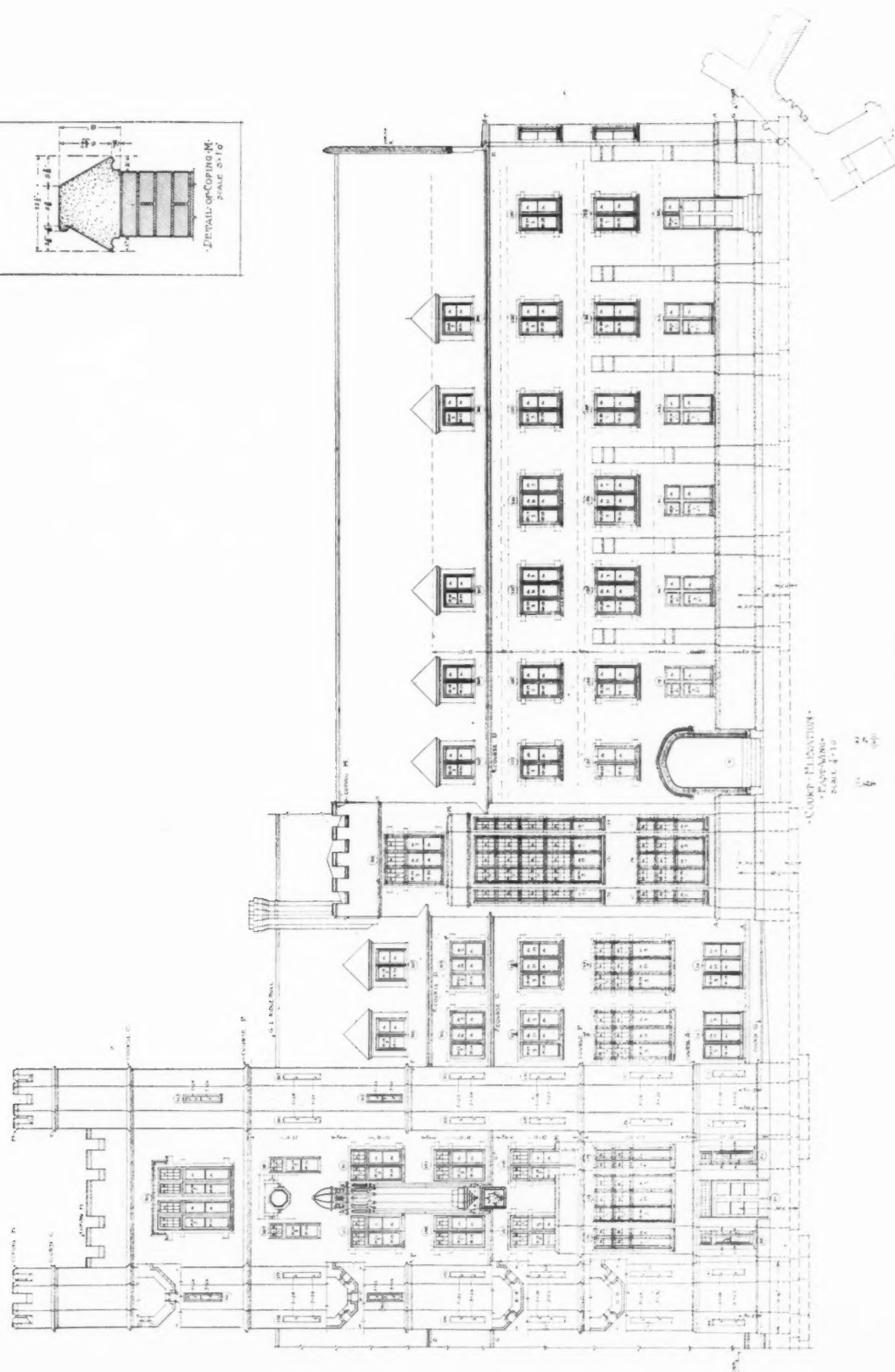
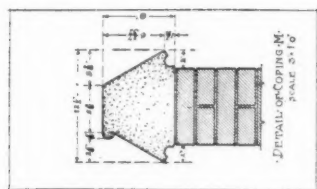


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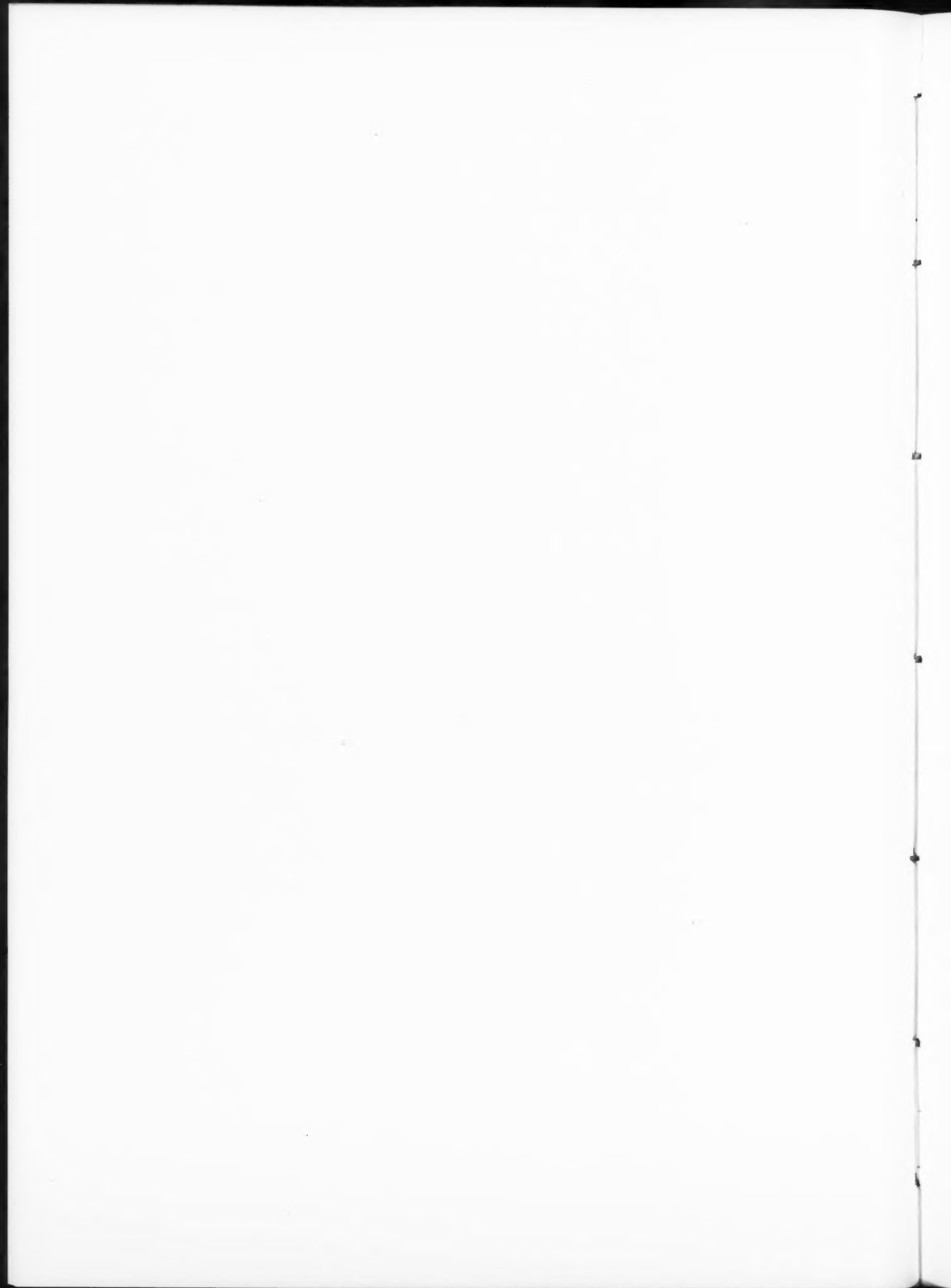
THE AMERICAN ARCHITECT

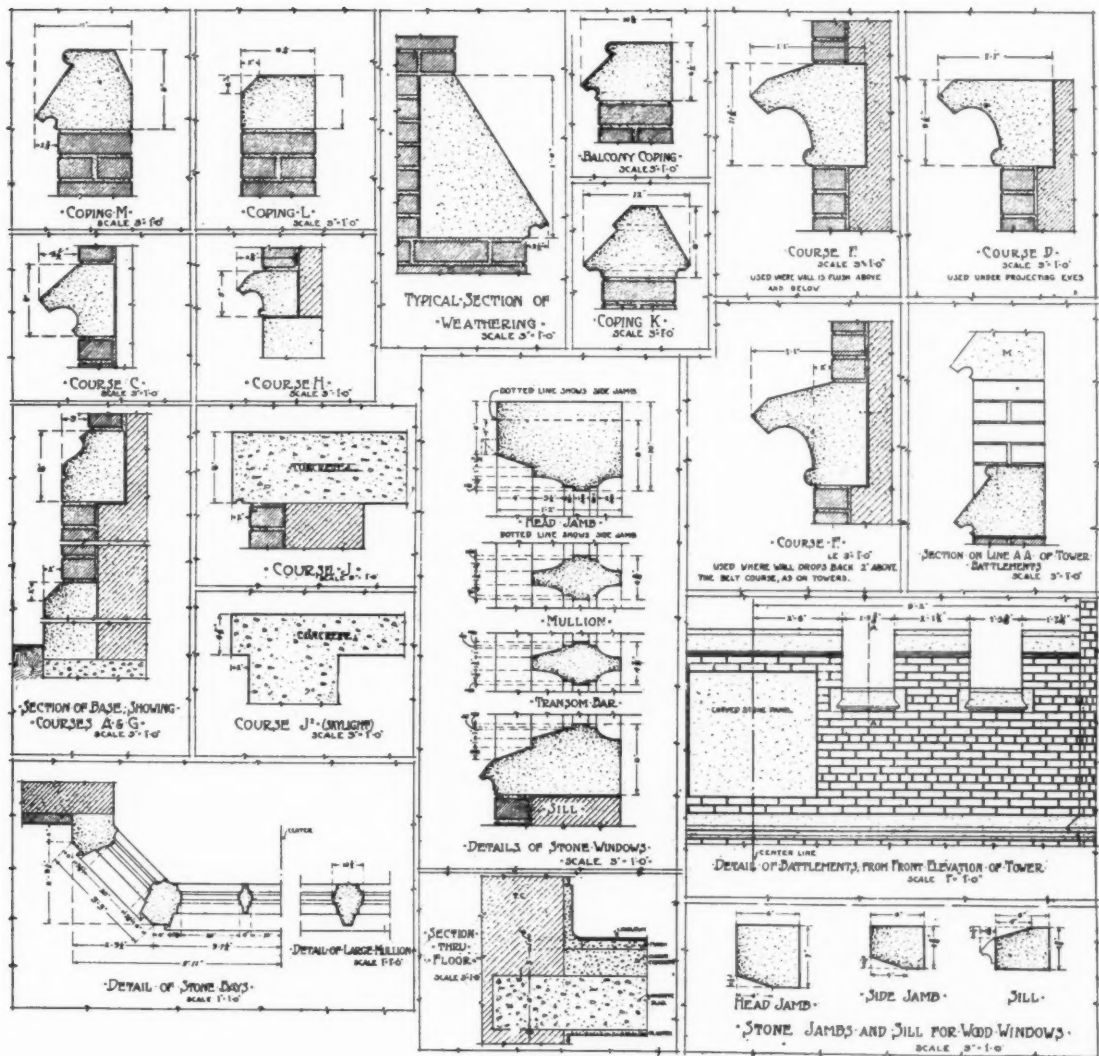
VOL. CVII, NO. 2051

APRIL 14, 1915



EAST HALF COURT FRONT
PRUDENCE RISLEY HALL, CORNELL UNIVERSITY
MESSRS. MILLER & MALLORY, ARCHITECTS

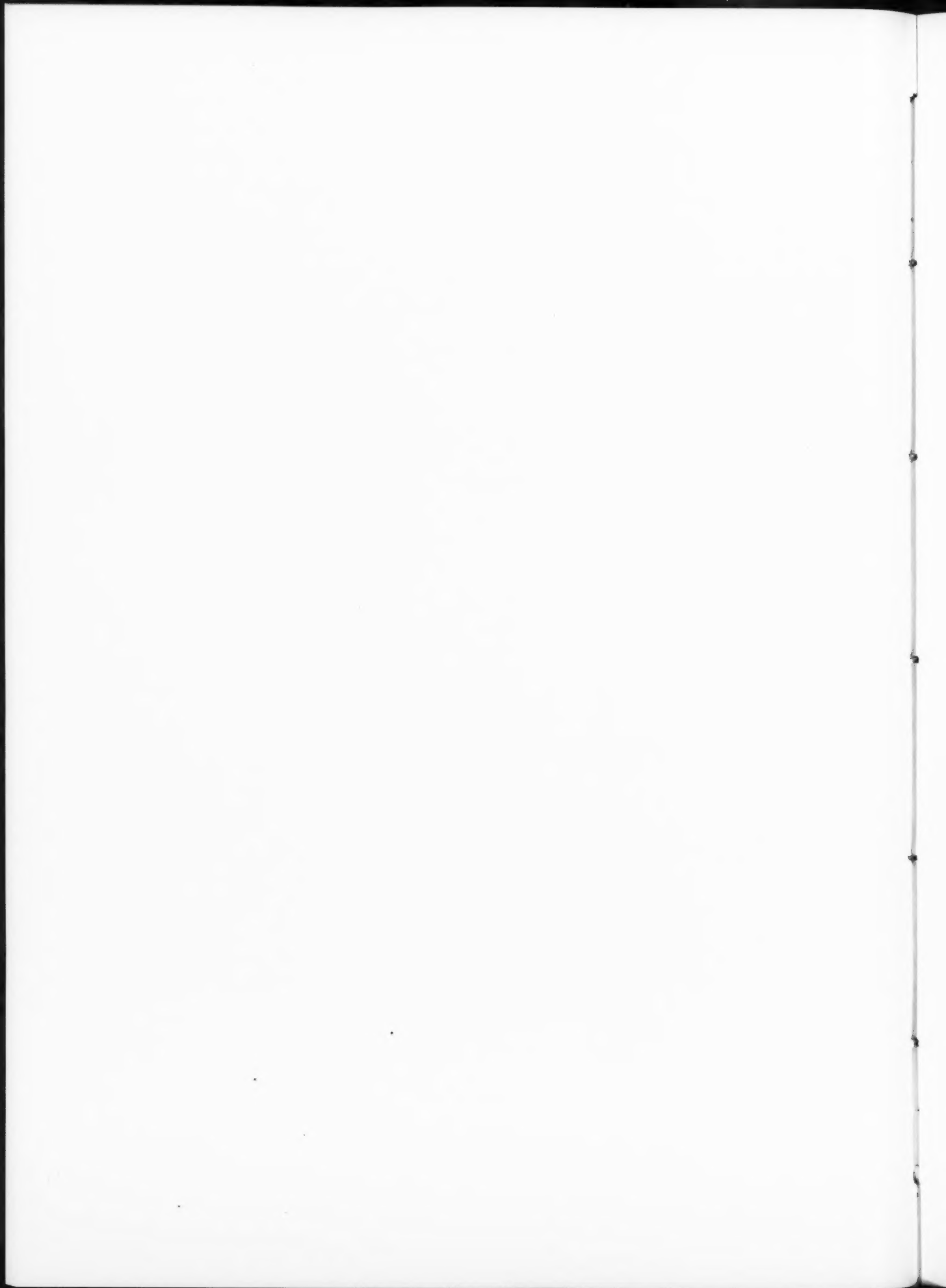




STONE DETAILS

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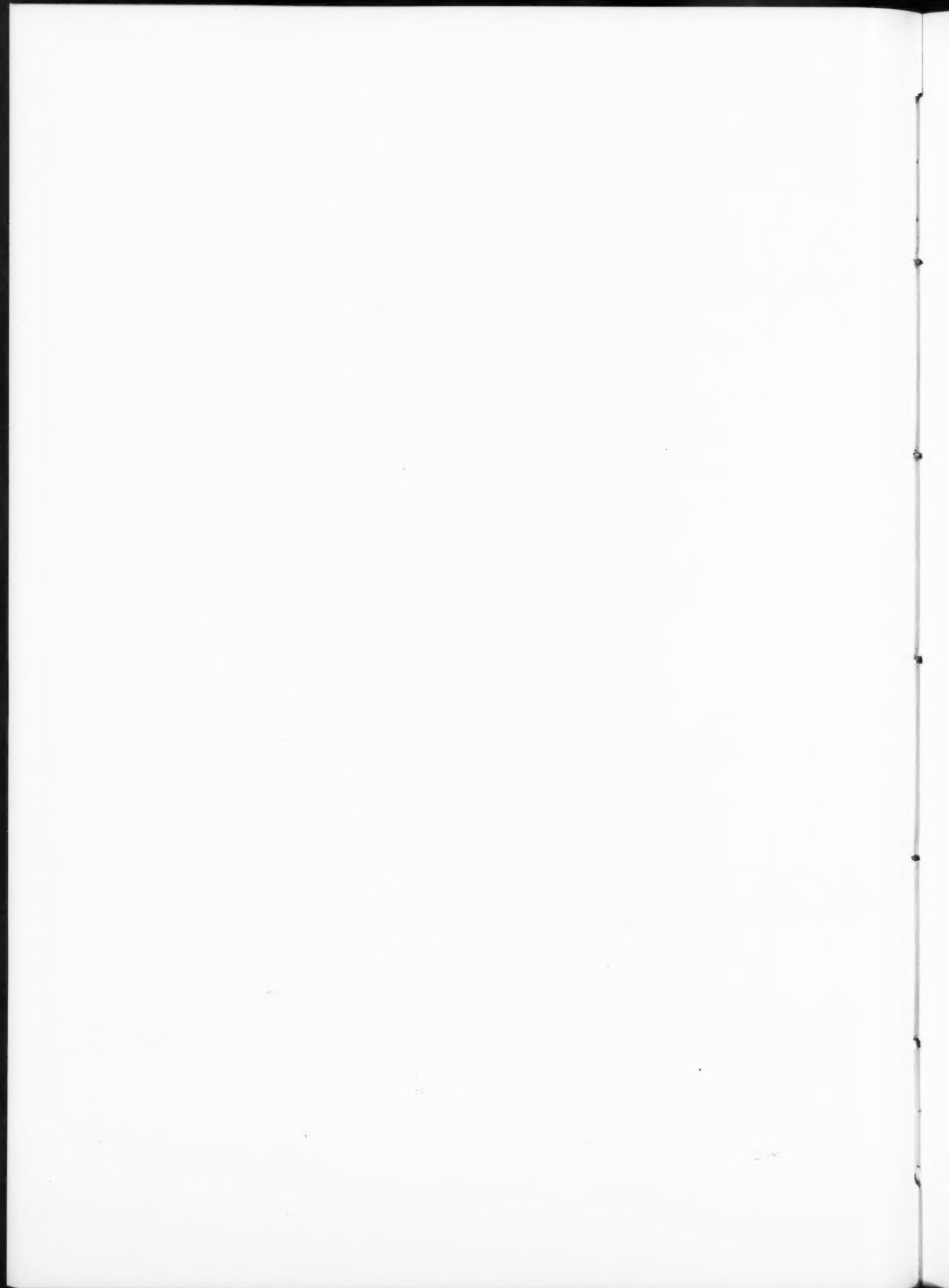
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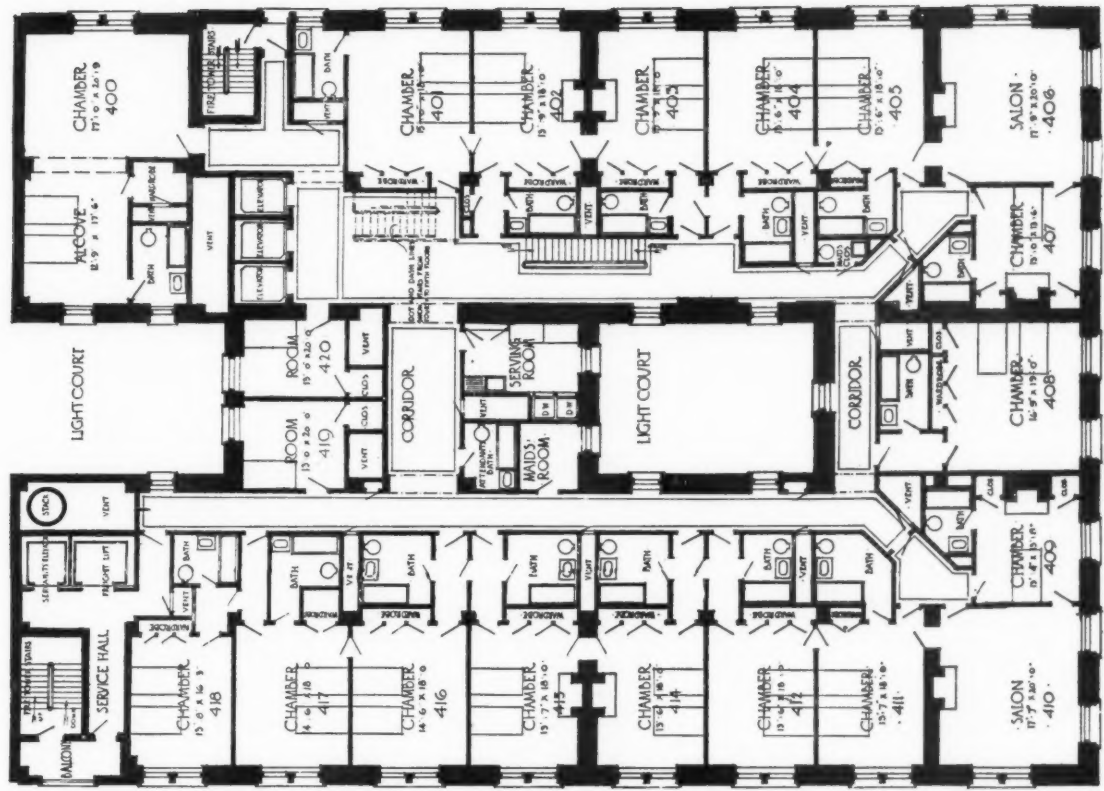
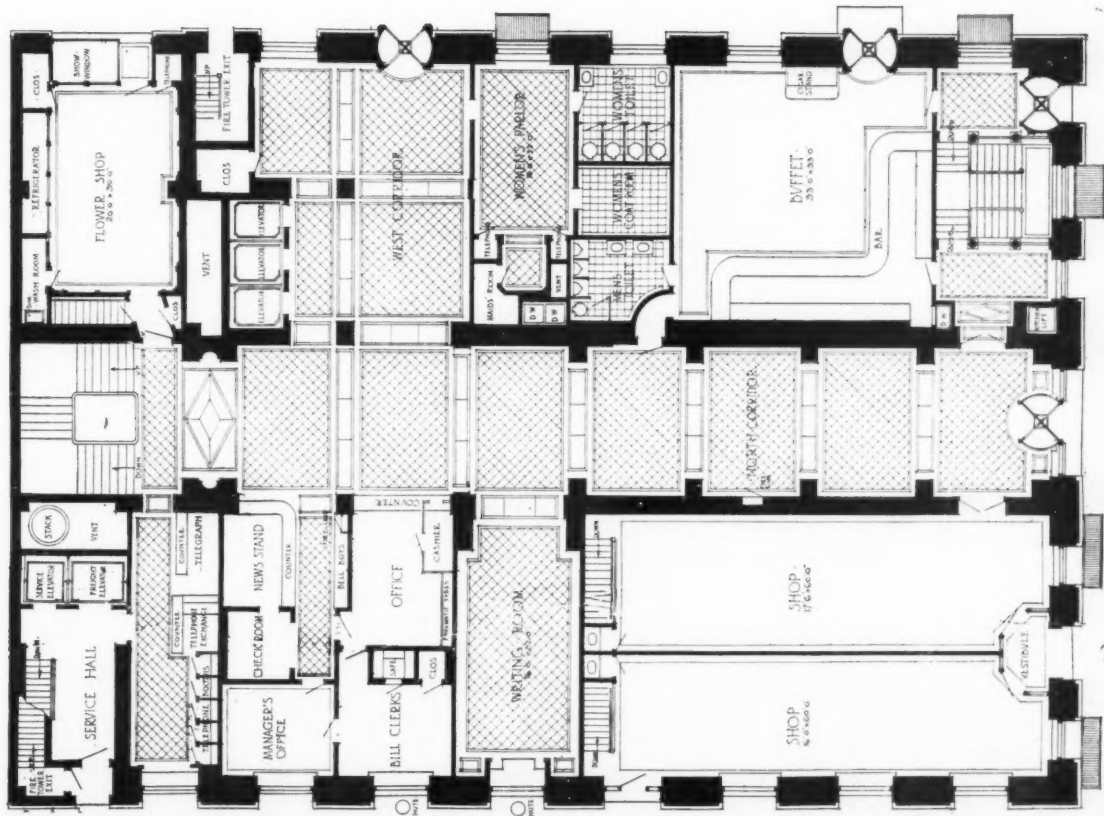
THE NEW RITZ-CARLTON HOTEL, PHILADELPHIA, PA.

MR. HORACE TRUMBAUER, ARCHITECT



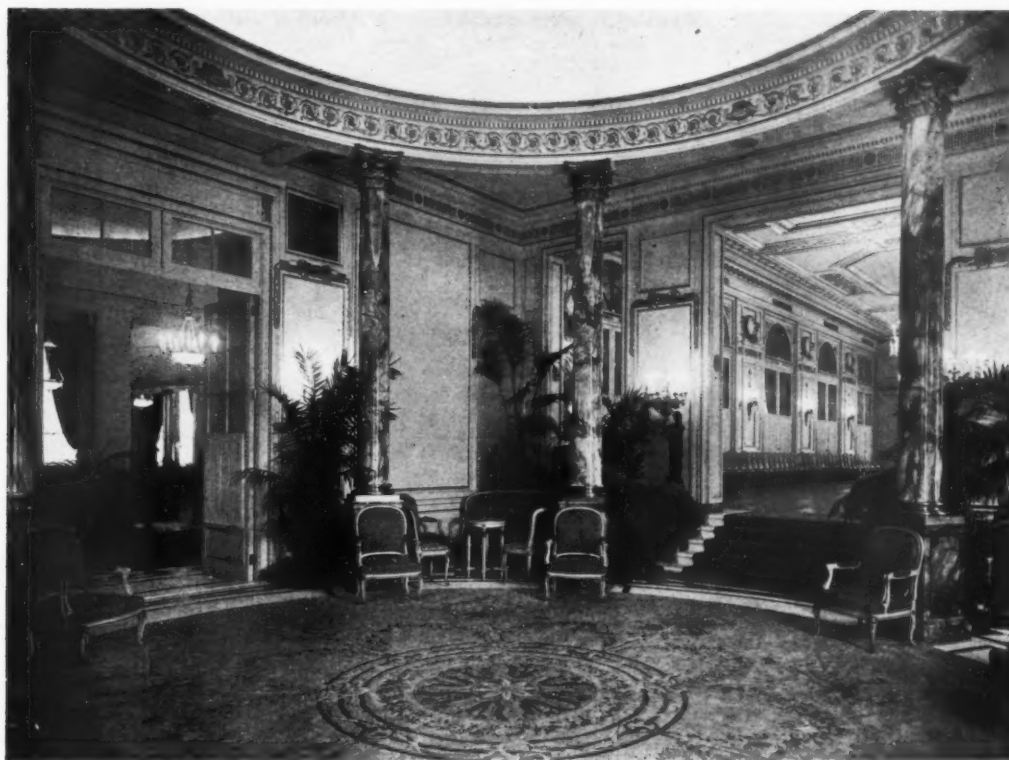
THE AMERICAN ARCHITECT

APRIL 14, 1913



THE NEW RITZ-CARLTON HOTEL, PHILADELPHIA, PA.

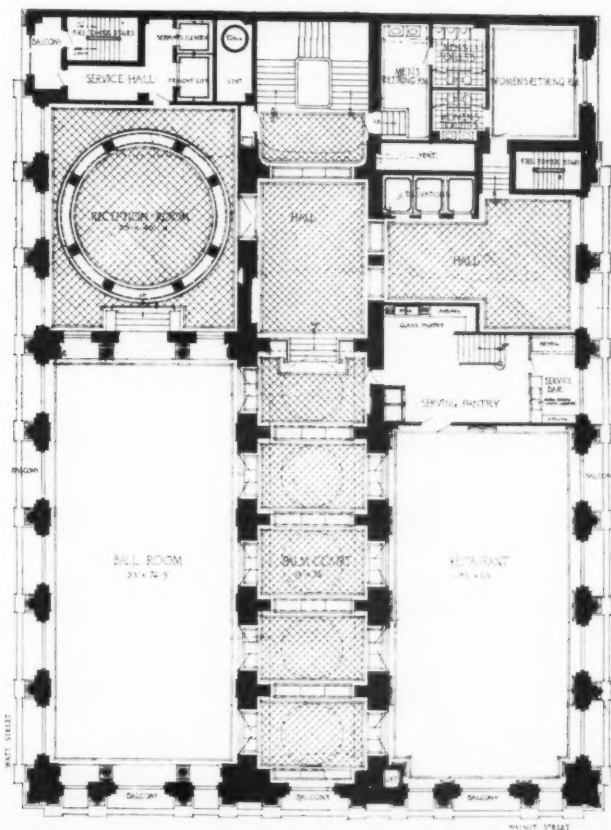
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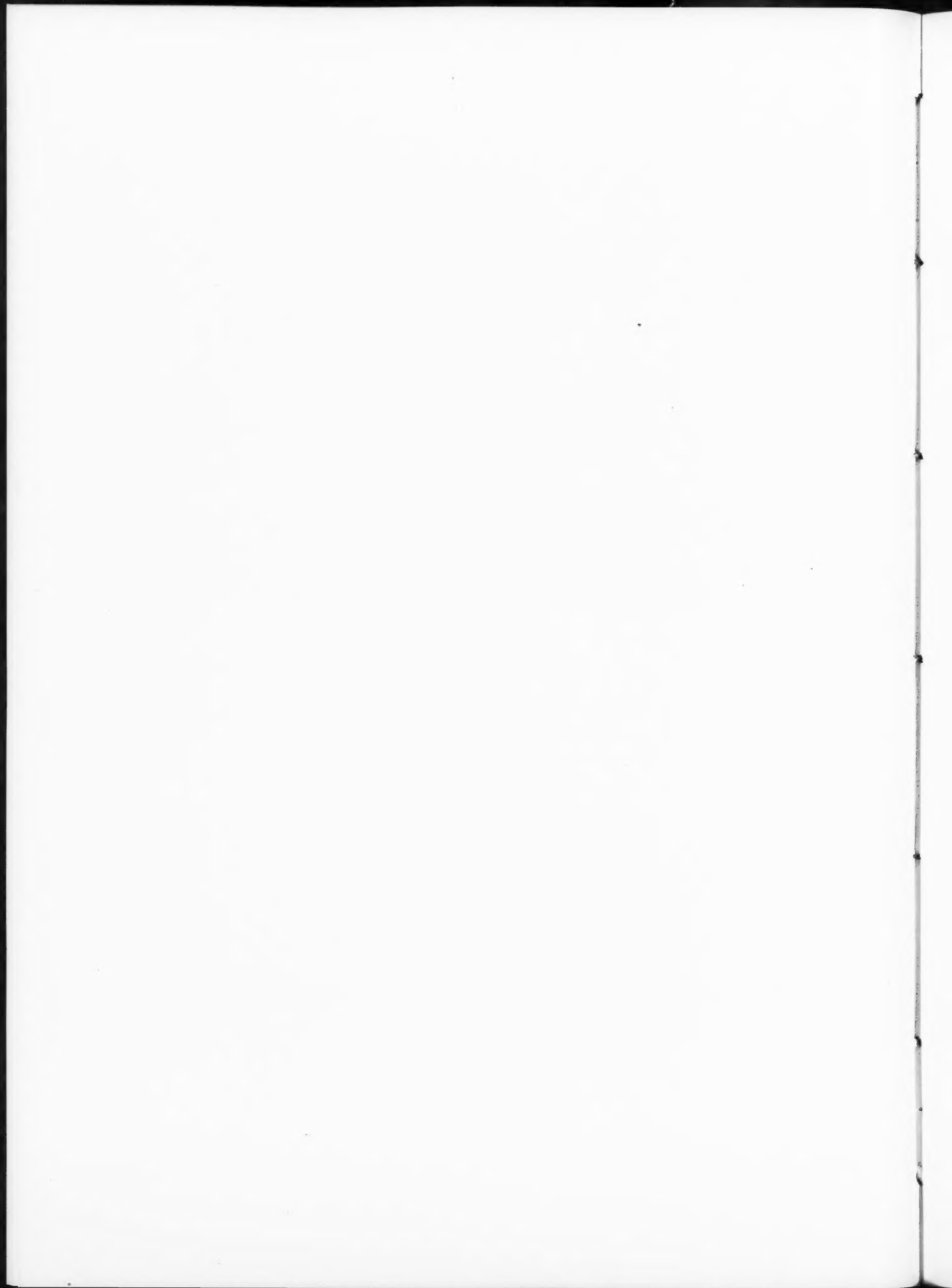
RECEPTION ROOM, LEADING TO BALL ROOM

THE NEW
RITZ-CARLTON HOTEL,
PHILADELPHIA, PA.

MR. HORACE TRUMBAUER,
ARCHITECT



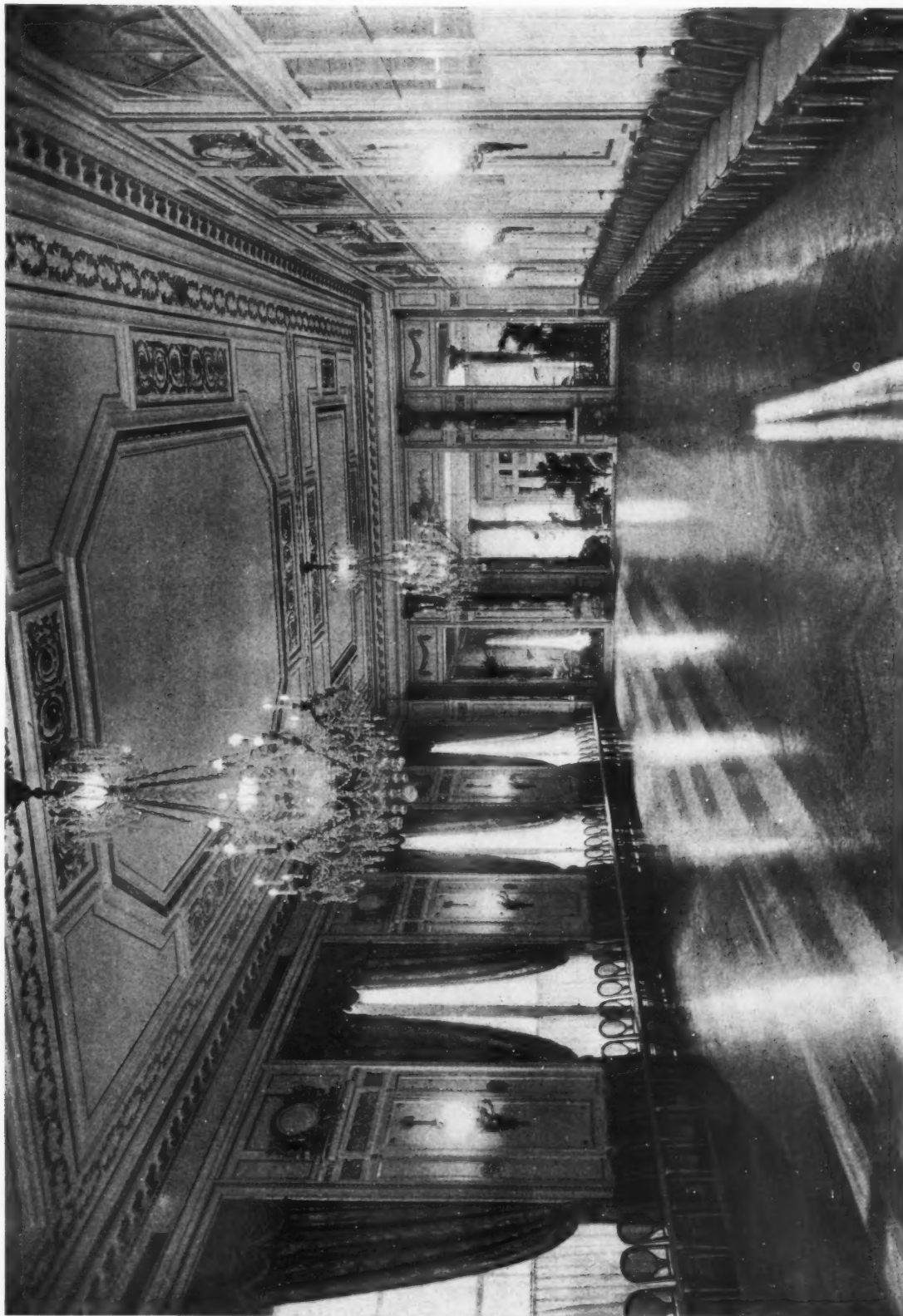
BALL ROOM AND RESTAURANT FLOOR PLAN



THE AMERICAN ARCHITECT

VOL. CVII, NO. 2051

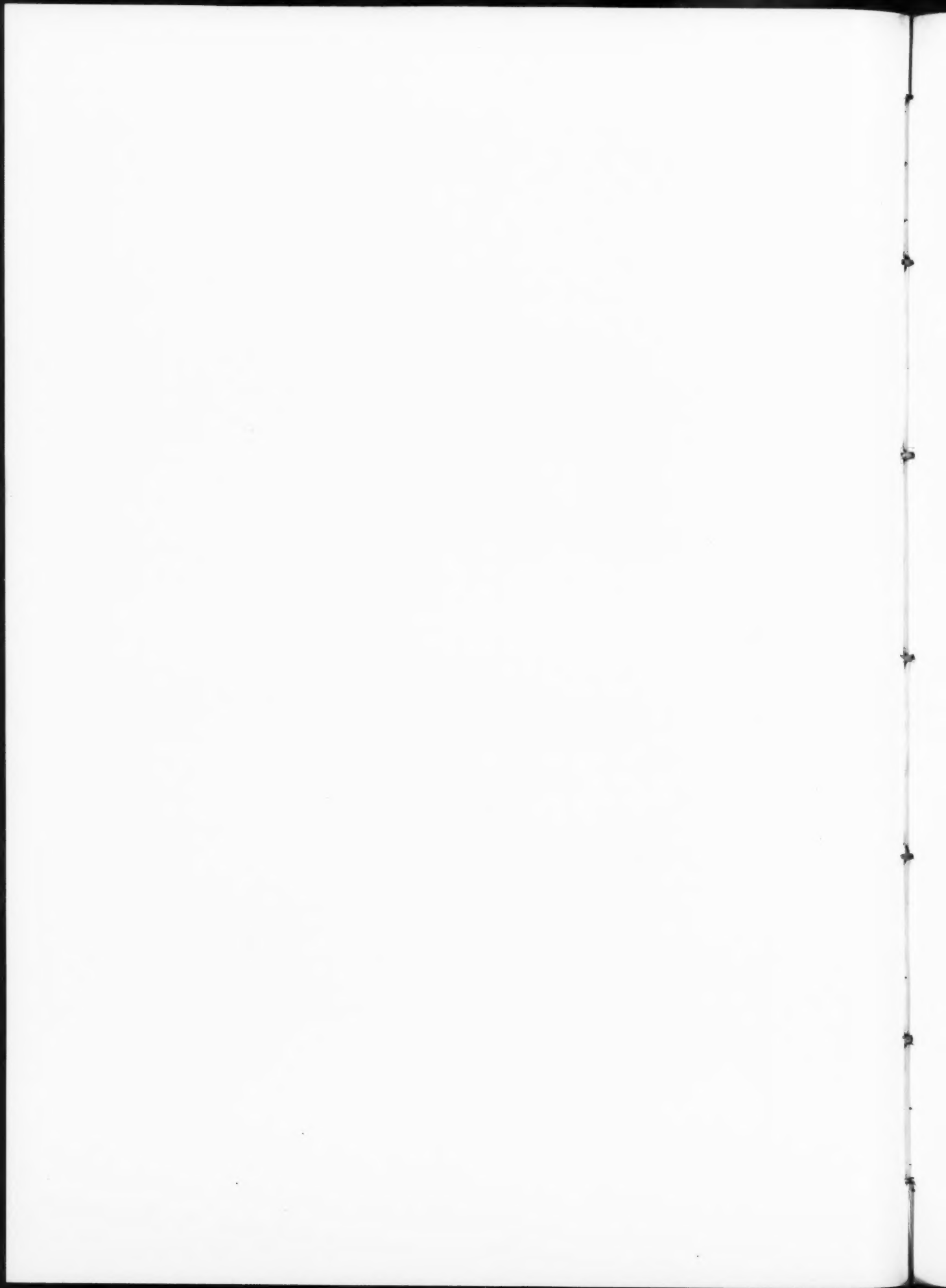
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BALL ROOM

THE NEW RITZ-CARLTON HOTEL, PHILADELPHIA, PA.

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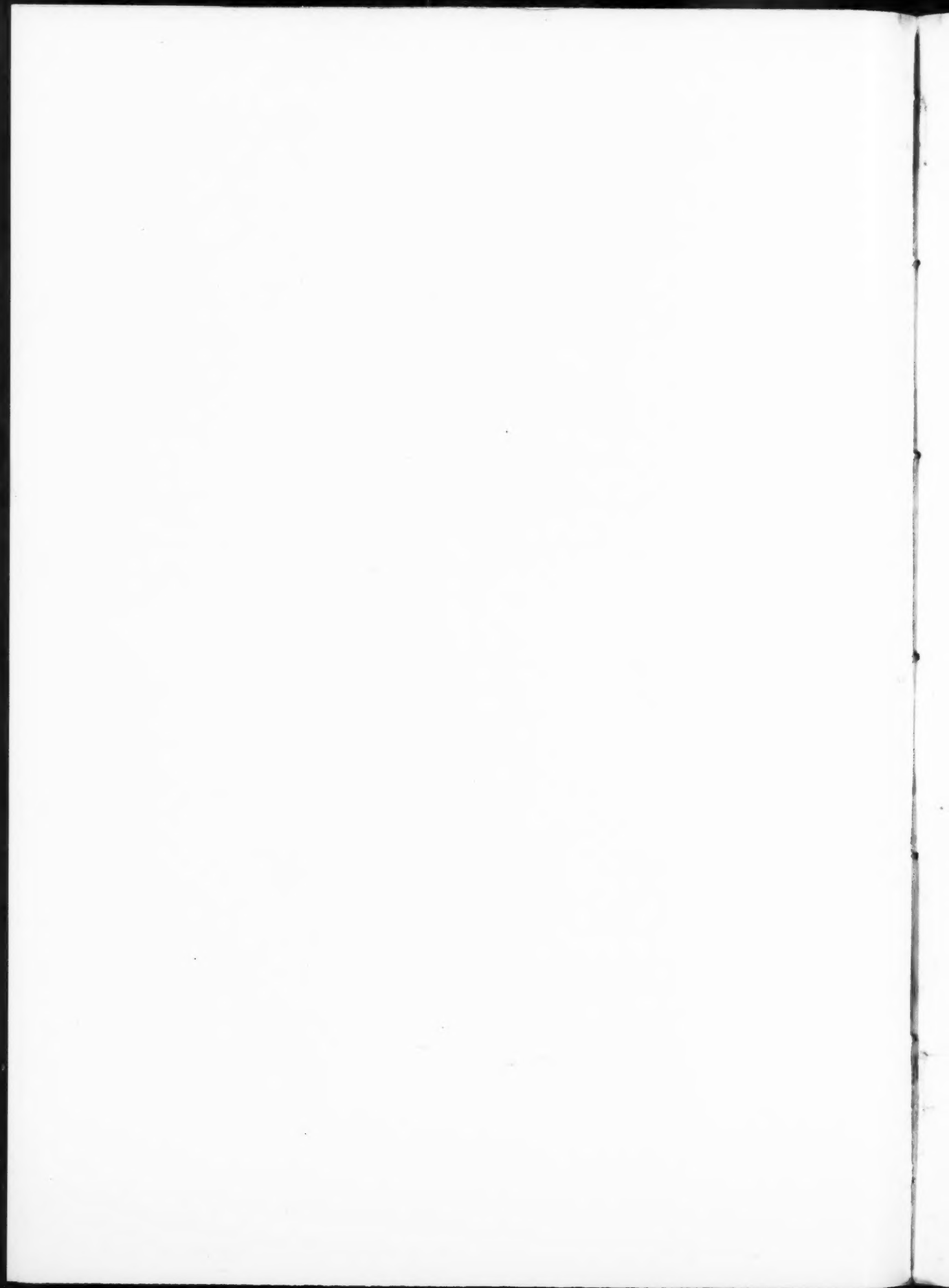
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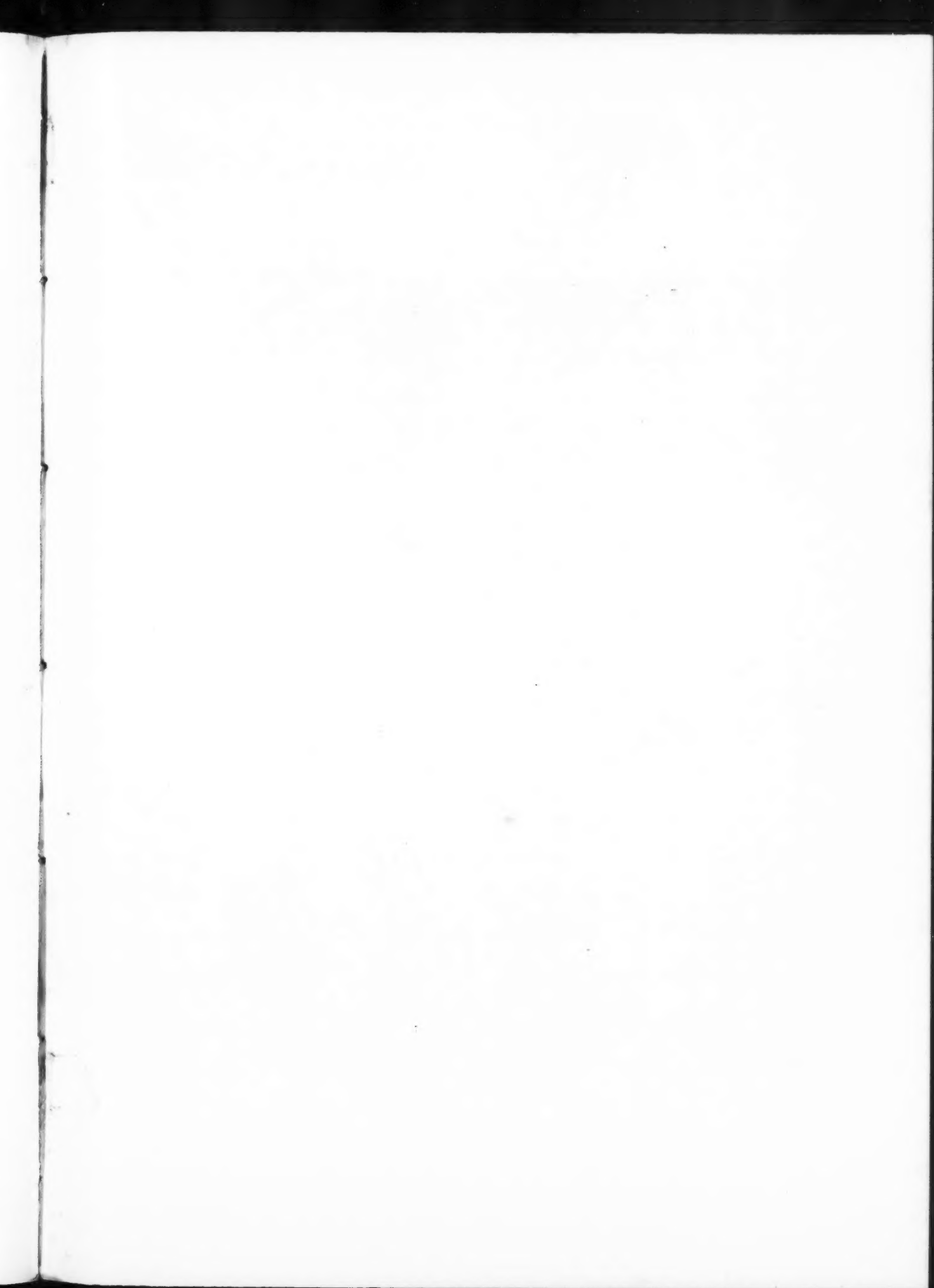


PALM COURT

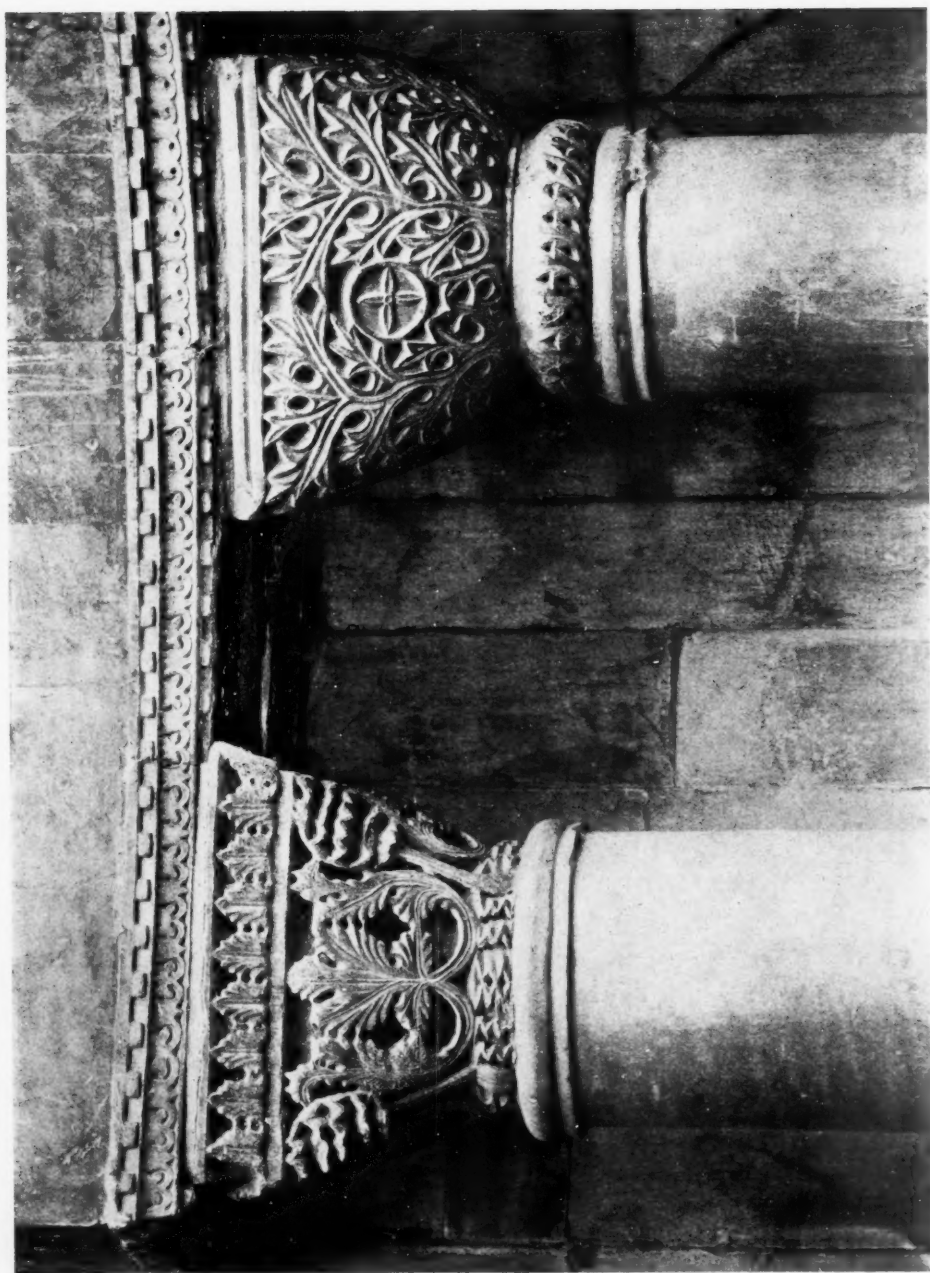
THE NEW RITZ-CARLTON HOTEL, PHILADELPHIA, PA.

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THE AMERICAN ARCHITECT



TWO CAPITALS FROM THE CHURCH OF S. MARK, VENICE

