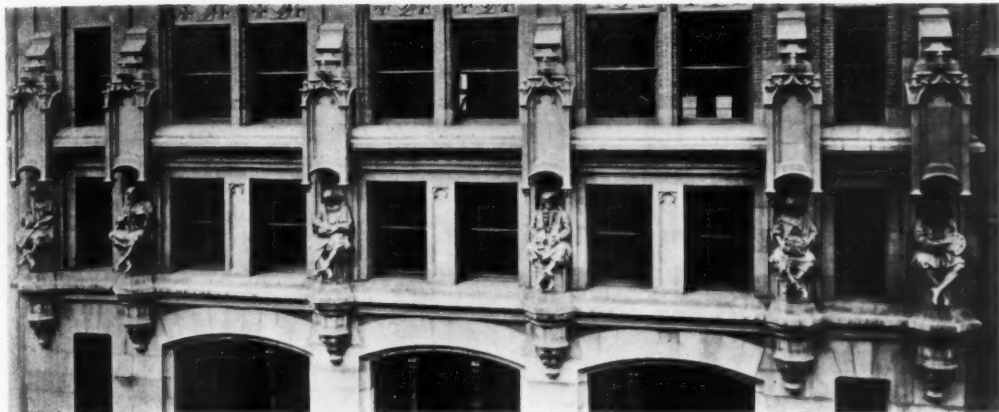


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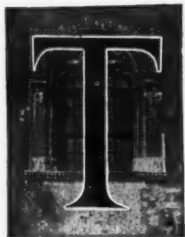
NUMBER 1950



DETAIL OF LOWER STORIES, LEWISOHN BUILDING, WEST 40TH STREET
MESSRS. MAYNICKE & FRANKE, ARCHITECTS

PROGRESSIVE TENDENCIES IN RECENT NEW YORK COMMERCIAL BUILDINGS

By HENRY W. FROHNE



THE constant uptown trend of business in New York is producing some interesting building developments in the rapidly growing commercial section in the neighborhood of Forty-second Street and Broadway and in the

side streets immediately adjacent thereto. So much have land values increased in this district of the metropolis during the past few years that the familiar metropolitan type of loft building of twelve stories is beginning to be the exception among the newer structures of the neighborhood. Also, the development of the locality referred to herein has radically departed in another particular from the practice in sections further downtown. Profiting by the experience of owners in the west side loft zone

between Fourteenth and Twenty-third Streets, the projectors of the most recent enterprises around West Forty-second Street are purchasing for their structures permanent light on all sides above the roofs of the lower adjacent buildings. This is the result of having learned through bitter experience that permanently well-lighted floor space is absolutely essential to a stable investment in a commercial building. In most instances the ground area combined is larger than has been the case in the past; ten to fifteen thousand square feet and more seems now to be not uncommon, with frontage on more than one street as an added advantage for the tenant. The quality of the construction and the planning are receiving a corresponding degree of consideration; greater attention is being paid to the essential of thorough fireproofing, adequate elevator service, and efficient

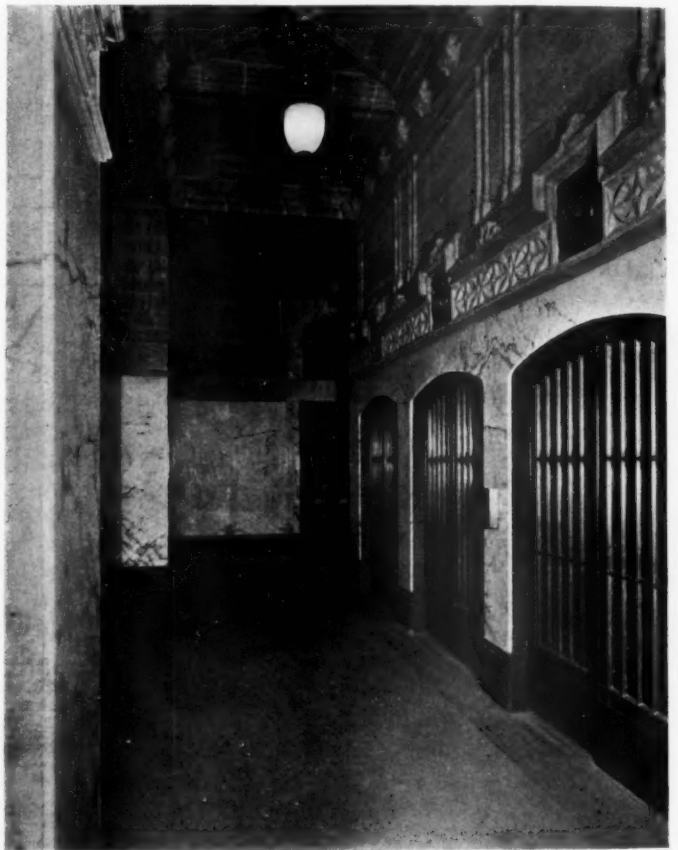
THE AMERICAN ARCHITECT

means of escape in case of fire. The most approved form of fire-escapes consist of staircases isolated in smoke-proof masonry towers reached at each floor by balconies so placed as to afford ready access from each floor.

To take the fullest advantage of light the direction pointed by certain architectural designers, who have long striven to convince the profession at large of the folly of persisting in classical tradition in the exterior architectural treatment of business buildings,—has found new adherents. One of the essential elements of all Roman or Renaissance—derived motives of exterior design these pioneers of architectural progress have pointed out, is the projecting horizontal member, be it entablature, cornice, string or pedestal course, supported on uprights of a proportional relation of height to width or diameter,—an arrangement which was never calculated to produce the most advantageous results for commercial structures of many stories requiring a maximum of daylight throughout. The vertical members in such a system of composition if agreeably proportioned, seriously handicap the designer in securing a satisfactory disposition of masonry piers and the necessary width for his openings to light deep rooms, while the projections of horizontal members already referred to are his most active enemies in that they shut out the most valuable source of light from the sky. To escape these very serious obstacles to permanently rentable floor space, notable efforts have been made, and such designs as the West Street Building, Liberty Tower and Woolworth Building, all in New York, seem to establish the fact not only that buildings of many stories can be better lighted but that they can be rendered more attractive externally by adopting in place

of the Roman or Renaissance motives of design at least the superficial decorative elements of mediæval architecture, of which the vertical line is the keynote. The earlier architects of Chicago, generally acknowledged the birthplace of the modern skyscraper, while succeeding in solving, perhaps more successfully than their contemporaries in New York, the utilitarian questions of the tall building, were not entirely successful in evolving a system of architectural treatment externally as satisfying to the eye as the interior was to the tenant and to the investor's purse. The designers of the New York structures above mentioned have in this respect advanced a long step towards rationalizing a definite architectural type peculiar to American commercial progress.

Reference has already been made to the



ENTRANCE DETAIL
LEWISOHN BUILDING, WEST 40TH STREET
MESSRS. MAYNICKE & FRANKE, ARCHITECTS

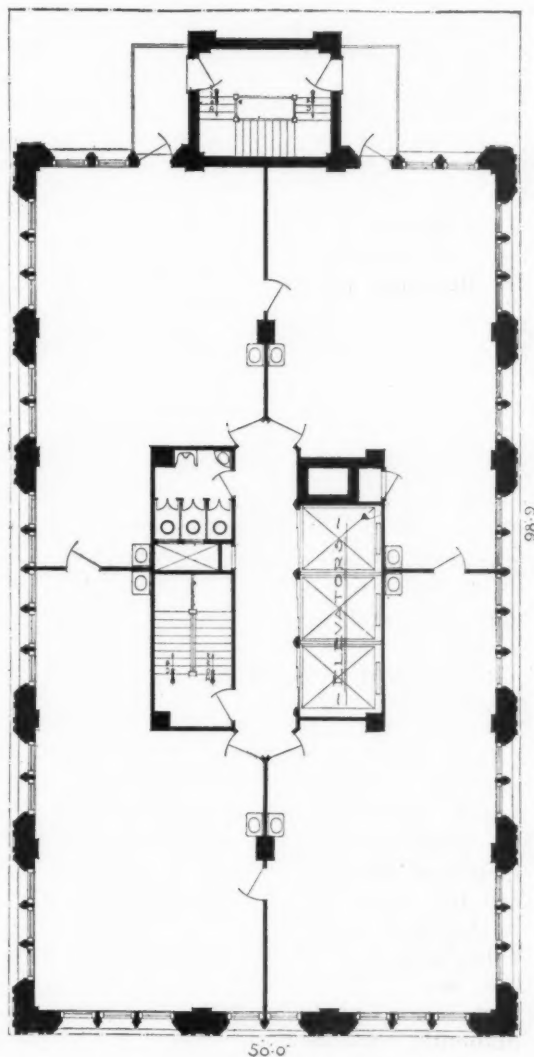
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arrangements whereby it is sought to insure permanent side light in certain recent commercial structures and it is precisely the introduction of this new element into the solution of the problem which is paving the way for yet more substantial progress in the matter of exterior design. Too often the architectural composition of the tall building has, in the end, been reduced to making a mere street front having little inherent relation to the structural facts and interior planning of the building. But with the complete isolation of all walls above a certain height the tall building becomes more and more an architectural problem rather than one of mere surface decoration.

If the practice of securing light by agreement with adjacent building property owners or by retrenchment of the building on the sides of the lot, finds general favor in urban building, the evils caused by the concentration of tall buildings, as on lower Broadway and in the adjacent financial district in New York, need not be feared in connection with the future of the new uptown business sections, and the problem of interior lighting will practically take care of itself. The result, architecturally, will be a city of towers in the true sense of the word, and many of the building restrictions proposed in recent years by architects who have devoted special study to the problem will be unnecessary. It has been established by experience that any departure from custom in building, which has been brought about through realization, on the part of the owner, projector, or promoter, as the case may be, that such departure is advantageous to him, has yielded invariably more advantage to the quality of the buildings in question than a restriction arbitrarily imposed by law. In the case of the voluntary innovation the maximum result is striven for whereas with the imposed reform the tendency has always been to regard it as a curtailment of vested rights and to seek any possible avenue to escape the effect of its provisions or to nullify its force by some counter move that the lawmaker has overlooked or failed to perceive in his necessarily imperfect knowledge of all the actual conditions.

For example, it would be well-nigh impossible to speedily secure, by law, the

substantial building progress promised by the tendencies discernible in the business buildings in question. In the past, perhaps, an owner's greatest concern, next to the cost of the land and of the operation on which he was about to embark, has been to



TYPICAL FLOOR PLAN

NOS. 110-112 WEST 40TH STREET, NEW YORK
MESSRS. BUCKMAN & FOX, ARCHITECTS

assure himself that every possible square foot of his property was being built upon, believing that therein lay his greatest gain. But when now, he has without persuasion arrived at the conclusion that the maximum of perfectly daylighted floor space must be his goal if his investment is to be most

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advantageous and that of the two elements the light is probably the least dispensable, he is in a far more receptive frame of mind towards the architect who can lead him on to further progress by advising against shoddy methods and materials and for durable fireproofing materials, careful workmanship and well considered planning and studied design as economics not to be lightly disposed of. The owner thus is gaining a truer perspective of his relation and duties towards the community and in a way that does not antagonize his own judgment and point of view.

Conspicuous among commercial buildings now nearing completion in the business section embraced in these reflections are the Candler Building, Messrs. Willauer, Shape & Bready, Architects, on Forty-first and Forty-second Streets, West of Seventh Avenue; the Lewisohn Building, Messrs. Maynicke & Franke, Architects, and the No. 110-112 West Fortieth Street Building, Messrs. Buchman & Fox, Architects.

The building at No. 110-112 West Fortieth Street, a structure of twenty-three stories high, with a tower rising five stories above the main roof is one of the most interesting as regards exterior treatment. Breaking completely with architectural precedent it exemplifies most clearly the points of departure remarked above as characteristic of the new attempts at a more rational system of external architectural design for the tall building. Above its adjacent five and six-story neighbors its four walls are unobstructed and are given a continuous architectural garb of white glazed terra cotta to the very top of the tower. Cornices are reduced to mere string courses and each wall is a succession of windows separated only by masonry mullions as called for in a design inspired by mediæval decorative motives. The effect is one of ornateness, obtained at a minimum expense by a judicious variation of ornamental features readily modeled in terra cotta. This is an expedient of design worthy of imitation where the expenditure for a purely pretentious exterior must, perforce, be kept as low as is possible with a certain standard of effect. There are, in our large cities, perhaps, many buildings of equal cost and extent having but a single embellished façade on which as much money

has been expended as on the four faces of this one and with less telling results. In this case the depth of the rooms to be daylighted is less than is now usual in large commercial buildings and for this reason the designer was, perhaps, justified in setting his glass far back of the face of the wall, securing an effect of massiveness, a quality generally prohibitively costly in tall buildings of this kind.

The Lewisohn Building across the street and extending through the back to Forty-first Street, exhibits similar traits of design in a less marked degree. Though of about the same height the problem of lighting was here more difficult on account of greater frontage and depth. Its plan being, therefore, essentially different further comparison of their exterior treatments would be to no purpose except perhaps in the matter of the color selected for the exterior masonry work which here is buff and, consequently, less striking and quieter in its decorative handling although not unattractive.

The Candler Building on Forty-second Street, though not adhering as closely to mediæval inspiration in its external decorative motives as the two foregoing examples, takes the fullest advantage of securing daylight by employing the shallowest window reveals consistent with stability of appearance, and thus more than compensates for the broader masonry piers between window bays required by the character of the design. The treatment of its roof termination is more pleasing than that in the 110-112 West Fortieth Street building, exhibiting a more palpable relation of tower to the shaft and terminating in a visible pyramidal roof which seems adequate for the entire building though it covers a smaller area than the stories below.

These three buildings embody distinct improvements practically as well as artistically over a majority of past performances of their class. They are probably as proof against a general internal conflagration and as proof against one from without as the present stage of fireproofing practice can make them; they provide the safest and most adequate means known of escape for their inmates and lastly, they are distinct architectural adornments to their respective environments.



VIEW FROM SOUTHEAST

CANDLER BUILDING, WEST FORTY-SECOND STREET, NEW YORK
MESSRS. WILLAUER, SHAPE & BREADY, ARCHITECTS

TEAK OF COMMERCE

THE teak (*Tectona grandis*) is one of the most important timber trees in India and yields one of the few woods of that country, which are imported into the United States. Like true mahogany it was first used in ship building, but its numerous admirable qualities admitted it in the class of structural timbers used for a great variety of purposes. The qualities of this wood are so universally well known to timber merchants, architects, and wood users generally that a lengthy description is hardly necessary. In India it finds its greatest use for building, in the form of beams, rafters, battens, posts and boards, for decks of ships and backing to armor plates of battleships, for boat building, masts, spars and oars. It is also used for making railroad cars, wagons, and for all parts of lighter vehicles. While teak was formerly used as extensively as our white oak for crossties, it is now too valuable for this purpose, and is employed chiefly in carpentry, turnery, and carving. The best grades of teak are shipped into China and Japan, where the wood is carved by hand into many curious designs. Its early use in this country was exclusively for ship building and for many years large quantities were brought here from England for this purpose.

More than twenty years ago a number of teak logs were shipped to the Washington Navy Yard, where they were floated in the Potomac River. They soon became water soaked and sank to the bottom. In deepening the channel several years ago these logs were recovered and found to be in perfect condition. While all woods are more durable under water than in contact with soil and air, teak is very durable under all conditions. It favors mahogany in some respects and is now used for many of the purposes for which the true mahogany was formerly employed. A century ago mahogany was used for the planking and interior finish of ships, but teak has now displaced mahogany in naval construction. Teak is used at the present time in the construction of many private yachts, not so much on account of its beauty, as it is for its great strength and durability. It is naturally less inflammable than any other wood suitable for naval construction.

Teak is imported into the United States to the extent of about 1,000,000 feet annually. The bulk of this is used for armor backing and for the construction of boats. It has also proved a most suitable wood for the manufacture of companion ways, seats, rails, and joiner's work in boats. This good, sound and serviceable wood is used also for interior finish, fixtures, cars (Pullman sleepers), parquet flooring, and for fine types of carved furniture and cabinet work either in the natural or stained. Nearly all of the teak used in this country is shipped here from England. It is derived from Burma, India, Ceylon, and Siam. About nine-tenths of the commercial teak comes originally from Burma. The wood is sold by the ton and the price varies considerably depending upon the demand there is for the wood and upon the grade. The best logs of over one ton bring about \$56 per ton of fifty cubic feet. This is the price quoted at the shipping depots. In this country the average price of teak is about \$230 per 1,000 board feet, which is the price f.o.b. factory. New Jersey ranked first in the use of teak lumber in 1911, with a consumption of a little more than 300,000 feet. New York consumed about 200,000 feet, and Pennsylvania and Virginia each about 50,000 feet. The four states named together used about two-thirds of the entire amount imported.

ARCHITECTURAL COMPOSITION

THERE is an inspiration in the art of composition which is revealed to the composer alone. In literature, one of its sources is a sympathetic intercourse with the writings of the masters of prose; another is the power of imaginative reasoning. In music, the composer voices the universal speech. In painting, Nature supplies the suggestion. Architecture, the mistress of the arts, is at once the most coy and elusive of interpretation.

Possibly the reason why modern architectural design is often so inherently weak is the relative neglect of the composition of the subordinate parts of individual buildings, as well as a lack of consonance in their assemblage. The designer of to-

(Continued on page 224)

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No. 1950

COMMITTEE INVESTIGATES CON- DITIONS OF EMPLOYMENT OF CIVIL ENGINEERS

THE tendency of the times is in a sense reflected by the recent action of the American Society of Civil Engineers in appointing a committee, of which Mr. Alfred Noble is chairman, to investigate the conditions of the employment and compensation of civil engineers throughout the country, to collect statistics and data in regard thereto and to report the results of such investigation to the Society.

It has long been felt by many of its members that the engineering profession has not always received the recognition that the importance of the work accomplished by it, merits. Both in matters of credit and remuneration the average engineer has not fared well in comparison with the emoluments enjoyed by members of other learned professions. From such knowledge as is gained by more or less casual contact with members of the profession, it appears probable that conditions are susceptible of much improvement and obviously the method of procedure adopted, of requesting data concerning the actual practice of members throughout the country upon which to base recommendations for action, is one that above all others might be expected to supply definite and authori-

tative information. With a membership of nearly 7,000 engineers practicing in every section of the world, the task of collecting comprehensive facts and figures should not be difficult.

SPECIFICATIONS

AMONG the gradual improvements to be noted as taking effect in connection with methods employed by the architect in the direction and conduct of his operations, is a tendency more or less marked, to eliminate wherever feasible all uncertainty due to lack of definite information concerning materials, devices or equipment described and enumerated in the ordinary building specification. Of course, the time-honored but nevertheless indefensible "or equal" clause still obtains in specifications to a much greater extent than could be wished, but in offices where improvement in methods as well as architectural design is regarded as of real importance, it has practically disappeared. In some instances a definite, and what is frequently termed "non-competitive" specification, in which particular materials, devices and equipment are specified without alternative, has been substituted. In others, a plan has been adopted by which competitive features are retained without leaving the matter indefinite to an extent requiring final adjustment after contracts are awarded.

Probably as satisfactory a plan as any thus far brought to our notice, and one embodying the definite feature together with the possibility of competitive bids on equipment, is that suggested by Mr. J. C. Clow, and printed in our issue of November 27th, 1912. In accordance with its provisions, written primarily for use in plumbing specifications, but adaptable to other trades, the specification contains a definite requirement but in addition stipulates that the contractor may submit alternative bids on not more than two other lists of equipment considered by him fully equal to those specified; the alternative lists to contain specific information so that there can be no doubt as to what it is proposed to furnish as a substitute. The right is reserved by the architect to award the contract either on the goods specified or on any accepted substitutes proposed

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in the alternative bids submitted; after the award, however, no substitutions of goods for those mentioned in the accepted bid are to be permitted.

It would seem that such a clause provides, first, the very desirable feature of absolute competition as to labor, profits, etc., on the installation of a certain definite equipment. Second, it overcomes any objection on the grounds of monopoly and prevents any possibility of a manufacturer taking advantage of a definite, exclusive specification to increase price or reduce service (although there is little likelihood of such a thing occurring where the goods of responsible, standard manufacturers are specified). Third, it enables a selection of the device or equipment with the cost and all

information concerning it complete and at hand before contract is awarded, thus preventing annoyance, dispute and frequently unsatisfactory adjustment of the matter at some subsequent date during construction.

Viewing the matter broadly, there seems to be little excuse or reason for a continuation of a practice that has undoubtedly contributed a large share to the dissatisfaction, trouble, disappointment and loss which have too often resulted from building operations. In fact, the complete elimination of the "or equal" clause from specifications will mark a distinct advance in methods of conducting building operations and its early accomplishment is greatly to be hoped for.

ARCHITECTURAL COMPOSITION

(Continued from page 222)

day not infrequently sets out to design his buildings piecemeal, striving to arrive at an early result without first arming himself with a conception of the completed structure. Composition and design are synonymous terms; both imply the presence of a central and guiding intelligence, a system of unity from which the subordinate parts emerge.

The academic in architectural composition is dependent on the constant exercise of the critical faculty. There must be continual reference to the highest models. A standard of taste must exist by which the value of the latest creations can be attested. The architect through years of study makes himself familiar with the diversity of structures forming the landmarks of style; he then has stored in his imagination a series of motifs to draw upon.—A. E. R., in *Architects & Builders Journal*.

A RECENT LEGAL DECISION

PROOF OF DEFECTS IN PERFORMANCE OF BUILDING CONTRACT—DAMAGES FOR DELAYING CONTRACTOR

A building contractor engaged in the erection of a building was delayed in his work by a controversy which arose between the owner and the adjoining owner regarding a partition wall, which lasted for several weeks. The contractor brought suit for the damages he had sustained by the

delay. The owner counterclaimed for failure to make the basement story of the agreed-on height and the cement floor of the proper thickness, etc. The contract called for a basement floor four inches thick and required the basement to be seven feet high. It was undisputed that the actual height of the basement story as made was six feet six inches, and that the thickness of the cement floor was approximately only three inches. A settlement had been made between the parties which purported to be a full settlement for the contract price and extras. It affirmatively appeared that some of the defects complained of in the counterclaim were known to the defendant and complained of by him prior to the settlement. As to other defects, it did not appear whether he knew of them or not. The burden was upon the defendant, in support of his counterclaim, to show, at least, want of knowledge on his part of the defects claimed for in his counterclaim at the time of settlement. The facts were ordinary, and it required no expert knowledge to comprehend them.

It was held that the contractor was entitled to recover the additional cost incurred for labor in performing the work because of the delay caused by the owner, together with loss of time by reason of the delay, and loss of materials and partially completed work.

Soldal v. Jacobsen, Iowa Supreme Court, 135 N. W. 18.

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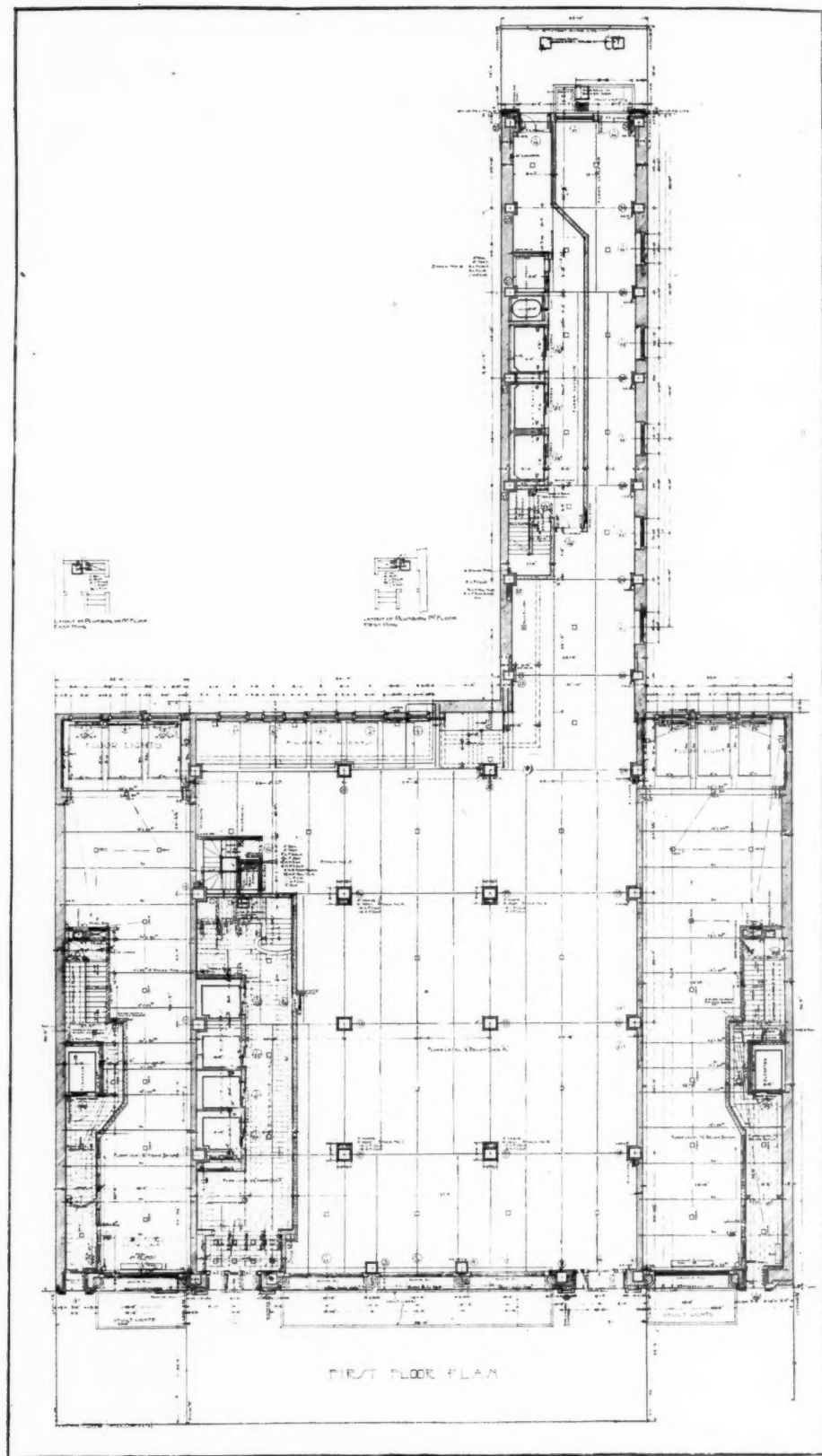


FORTY-SECOND STREET FRONT

CANDLER BUILDING, WEST 42D STREET, NEW YORK

MESSRS. WILLAUER, SHAPIRO & BREADY, ARCHITECTS

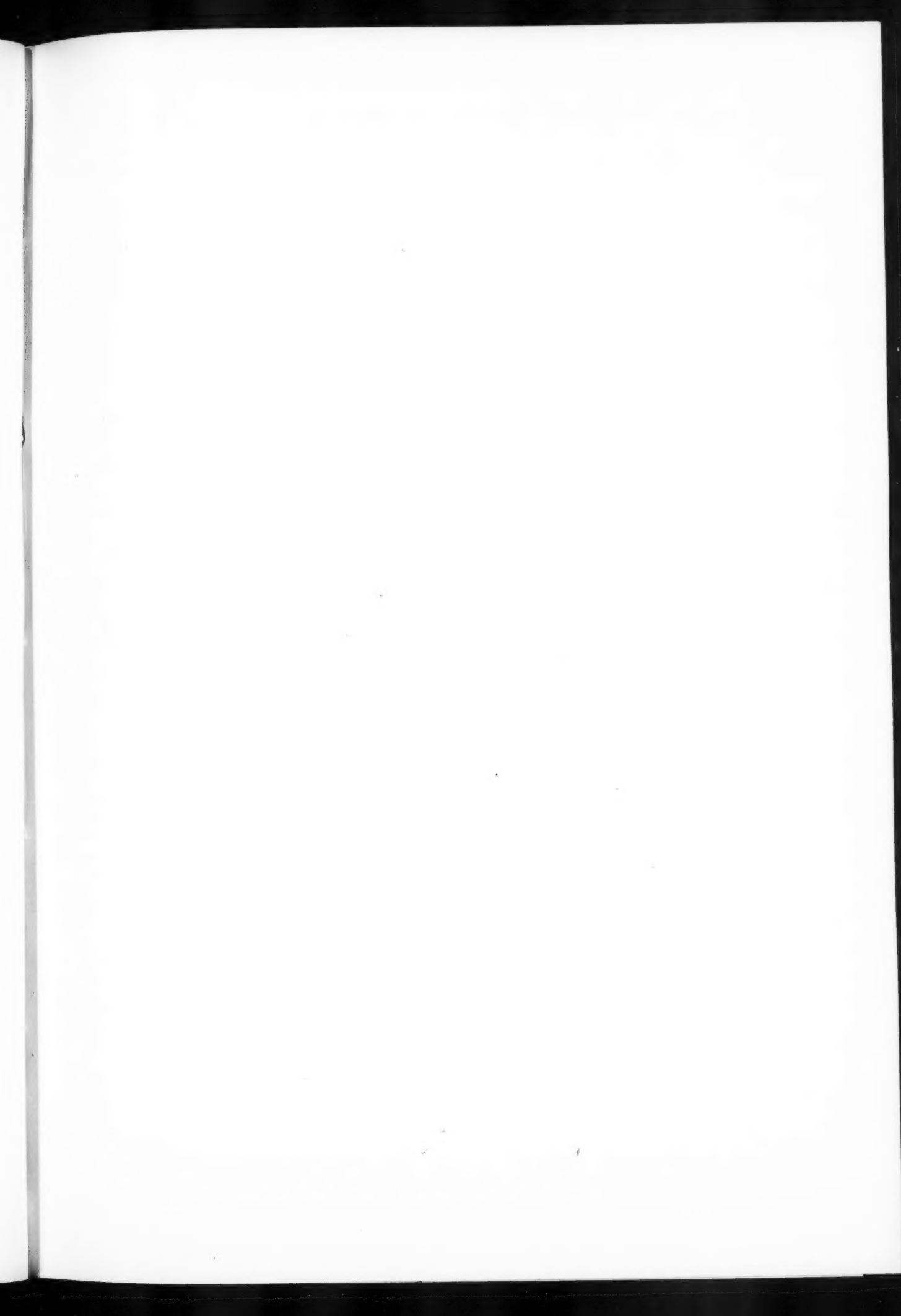


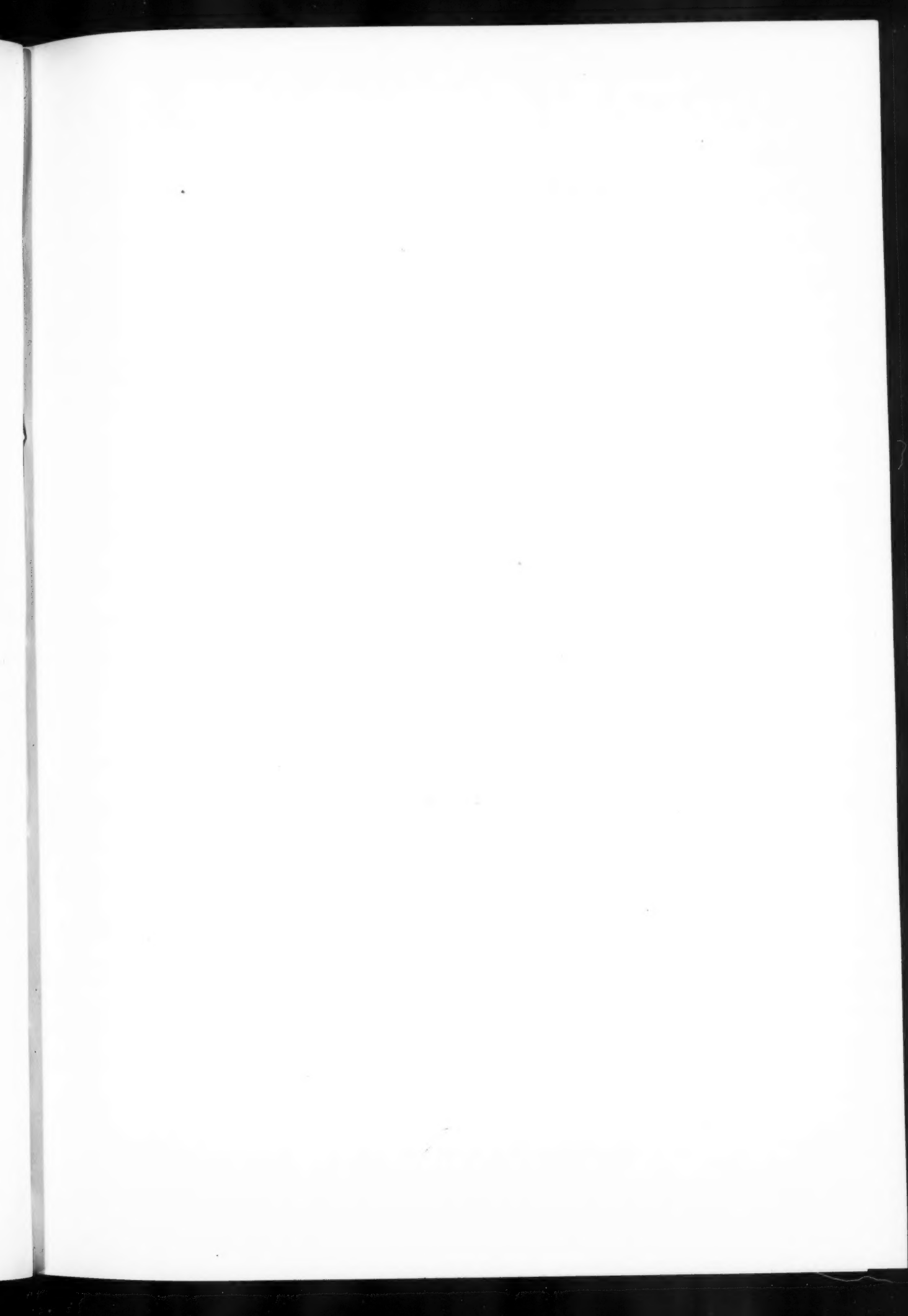


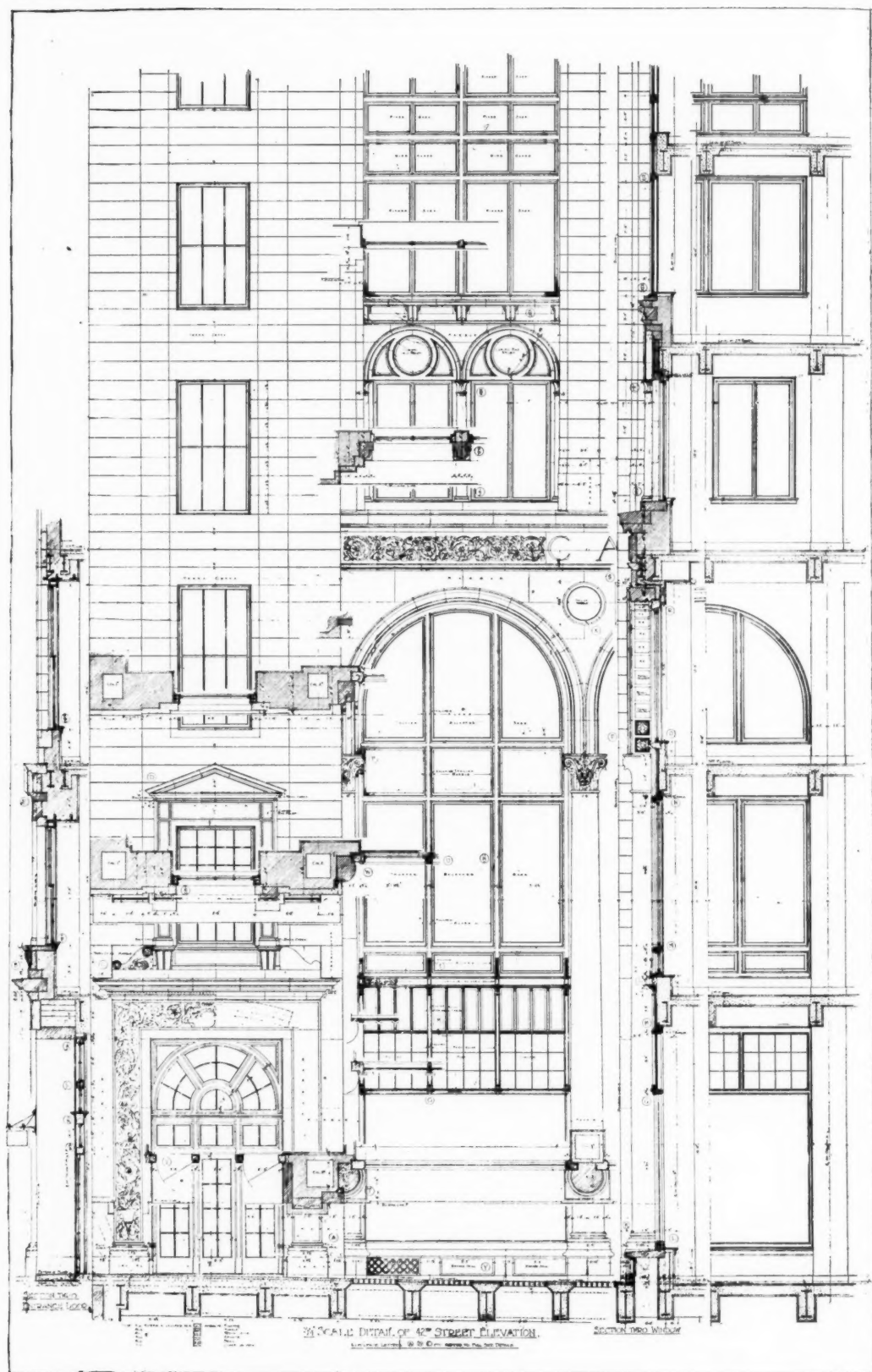
FIRST FLOOR PLAN

CANDLER BUILDING, WEST 42^D STREET, NEW YORK

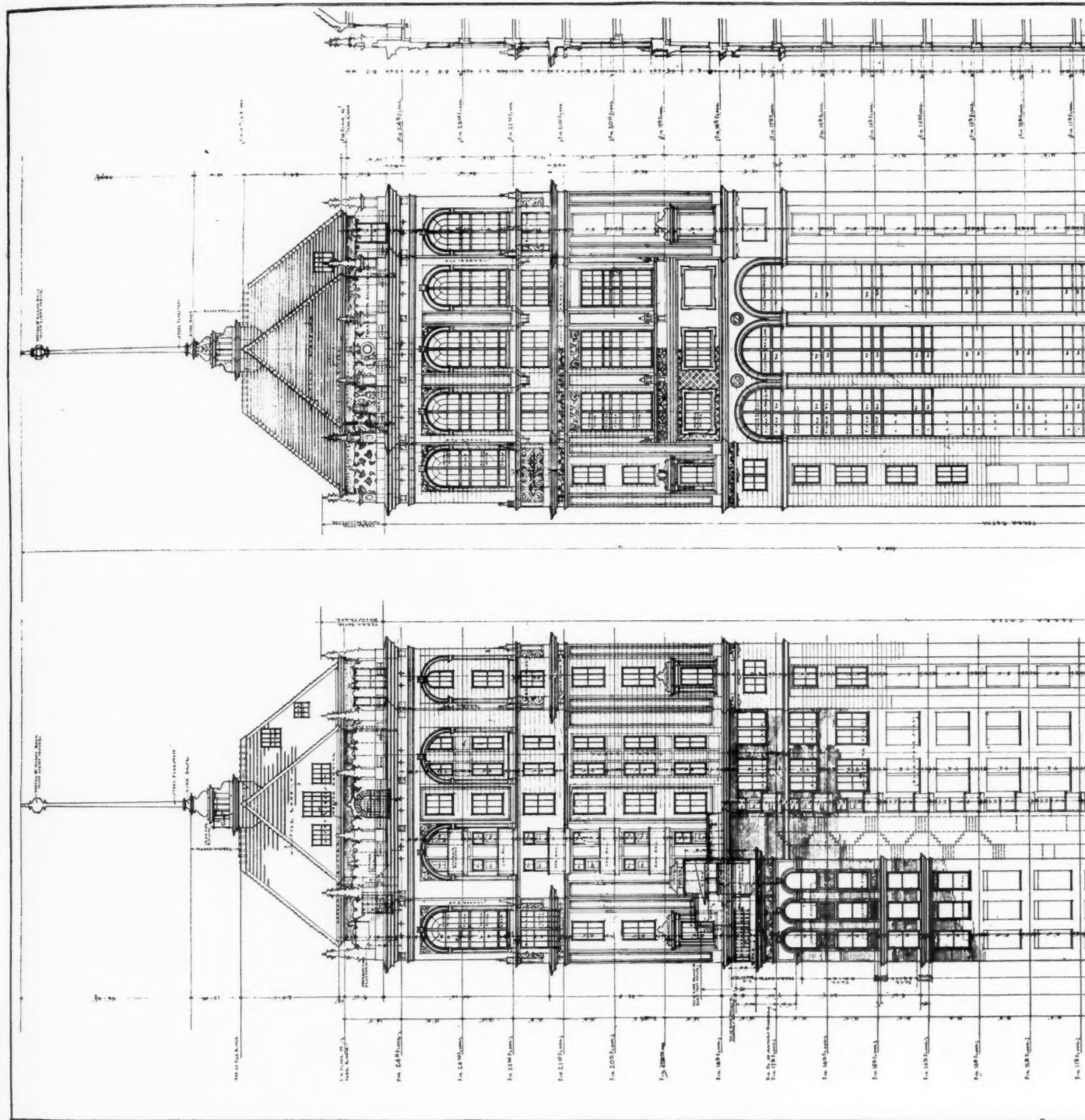
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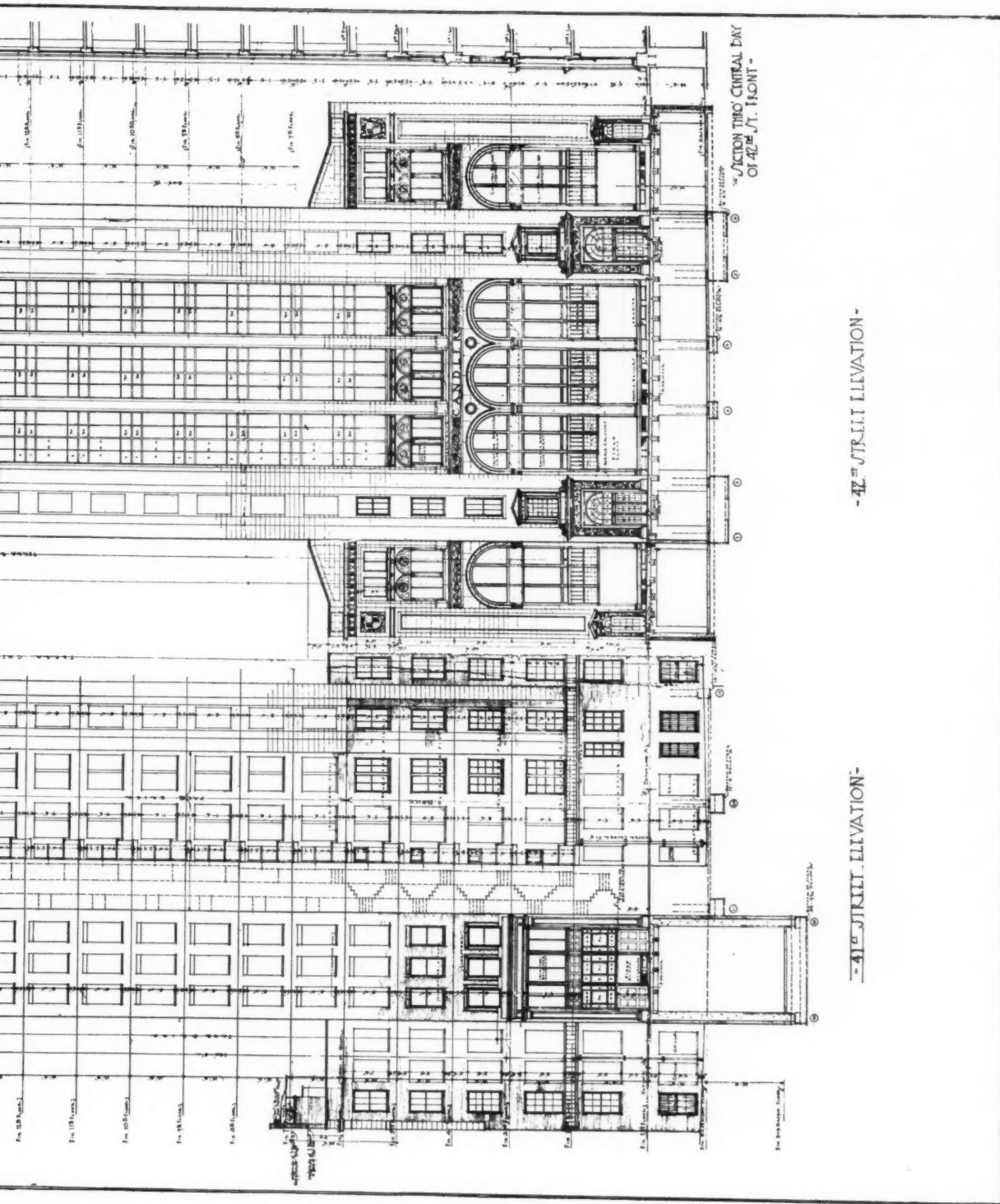




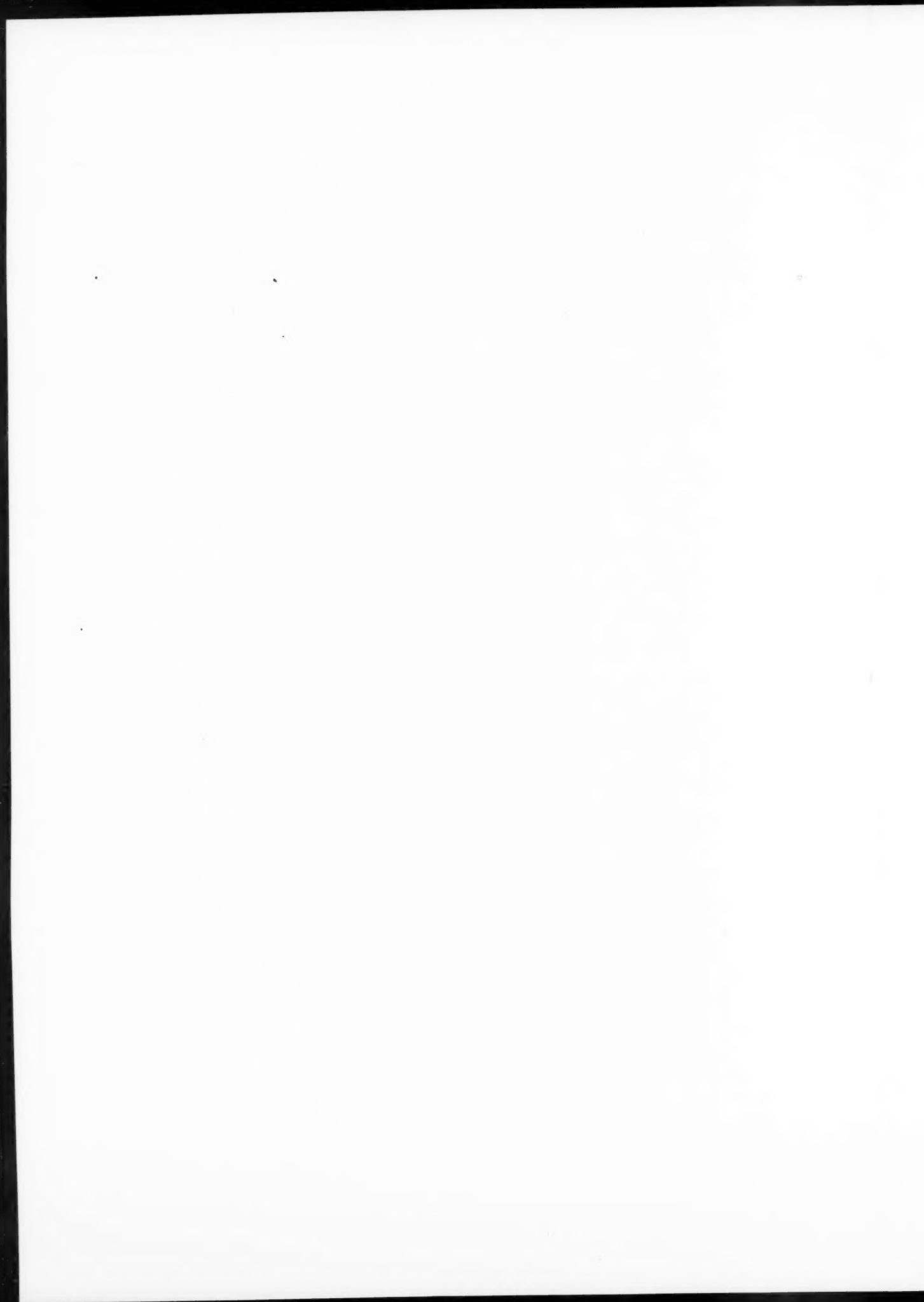
CANDLER BUILDING, WEST 42^D STREET, NEW YORK

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CANDLER BUILDING, WEST 42^D STREET, NEW YORK
 MESSRS. WILLAUER, SHAPE & BREADY, ARCHITECTS



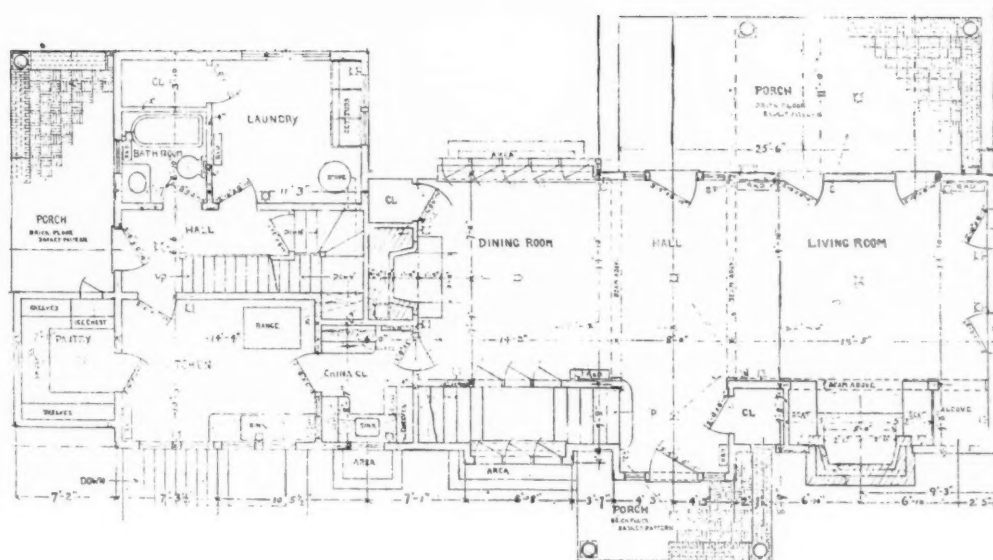


At Left,—LEWISOHN BUILDING, EXTENDING THROUGH FROM FORTIETH TO THIRTY-NINTH STREET

MESSRS. MAYNICKE & FRANKE, ARCHITECTS

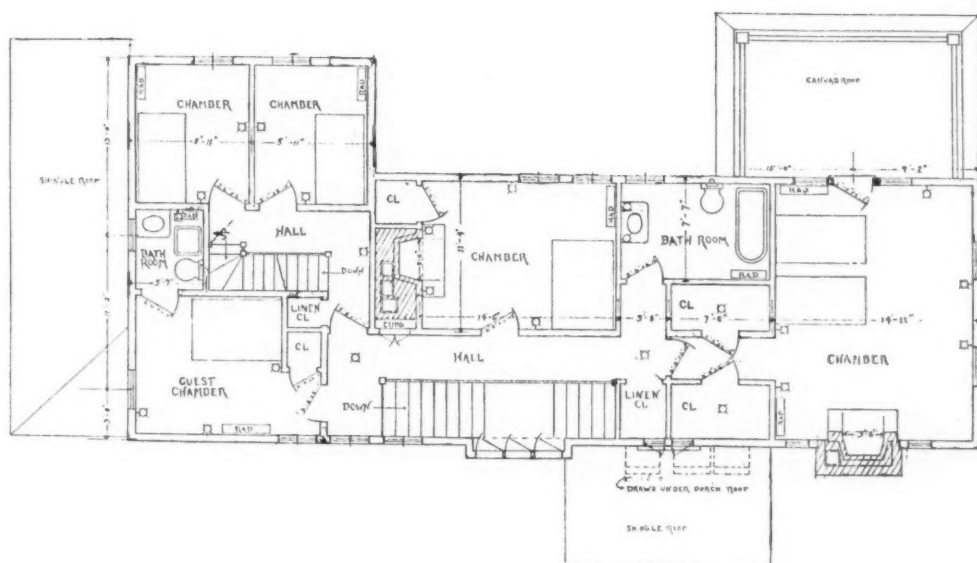
At Right,—BUILDING NOS. 110-112 WEST FORTIETH STREET

MESSRS. BUCHMAN & FOX, ARCHITECTS



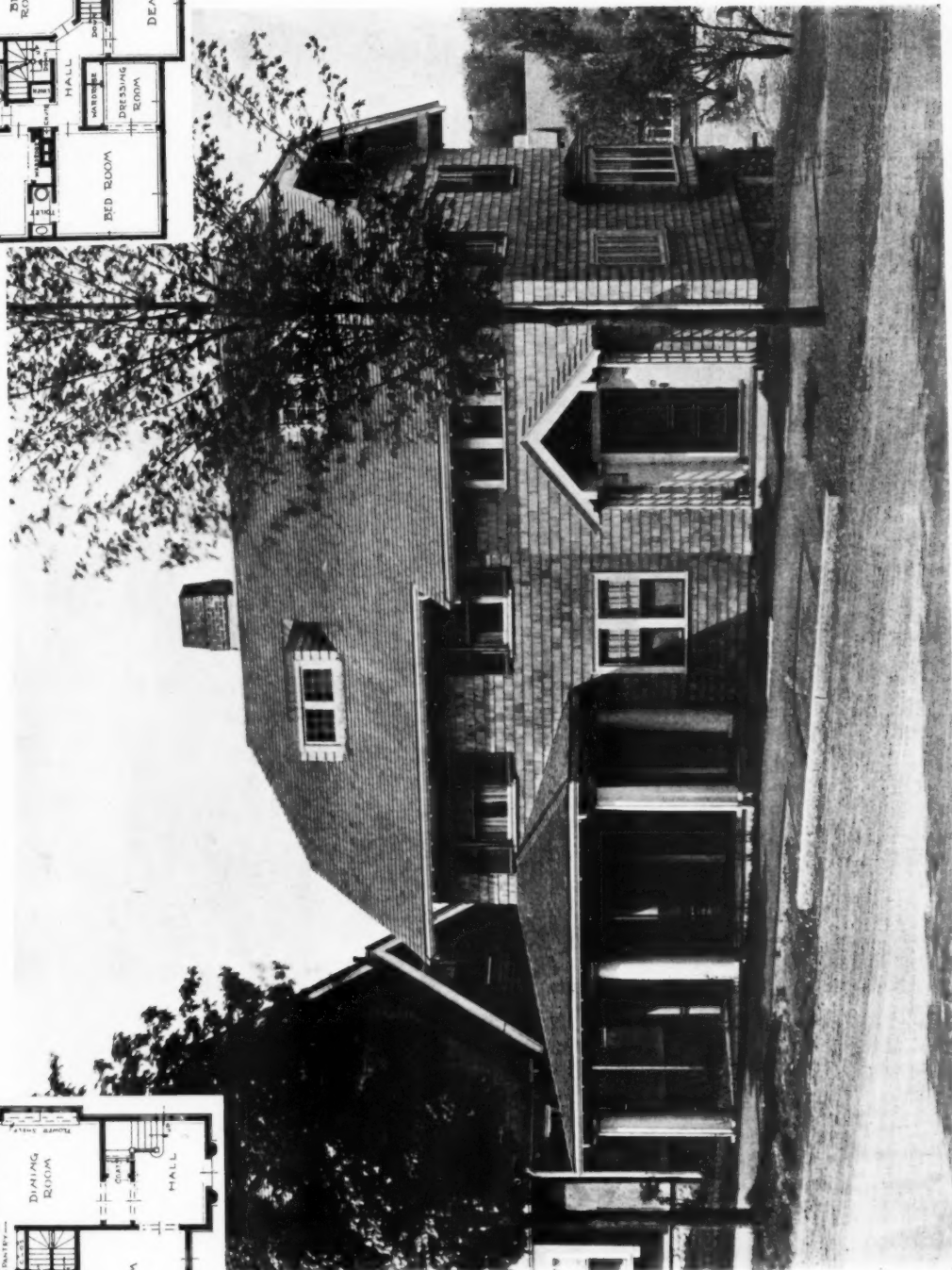
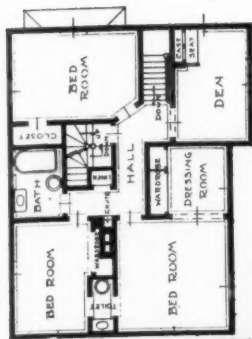
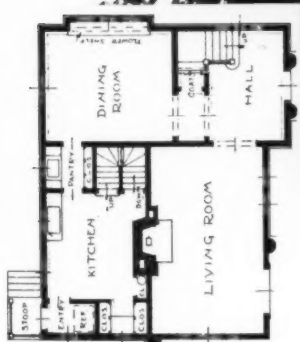
HOUSE OF MR. M. T. CURTIS, CHESTNUT HILL, MASS.

MESSRS. PUTNAM & COX, ARCHITECTS

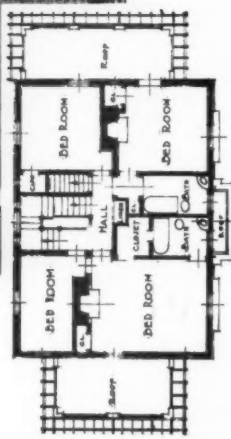
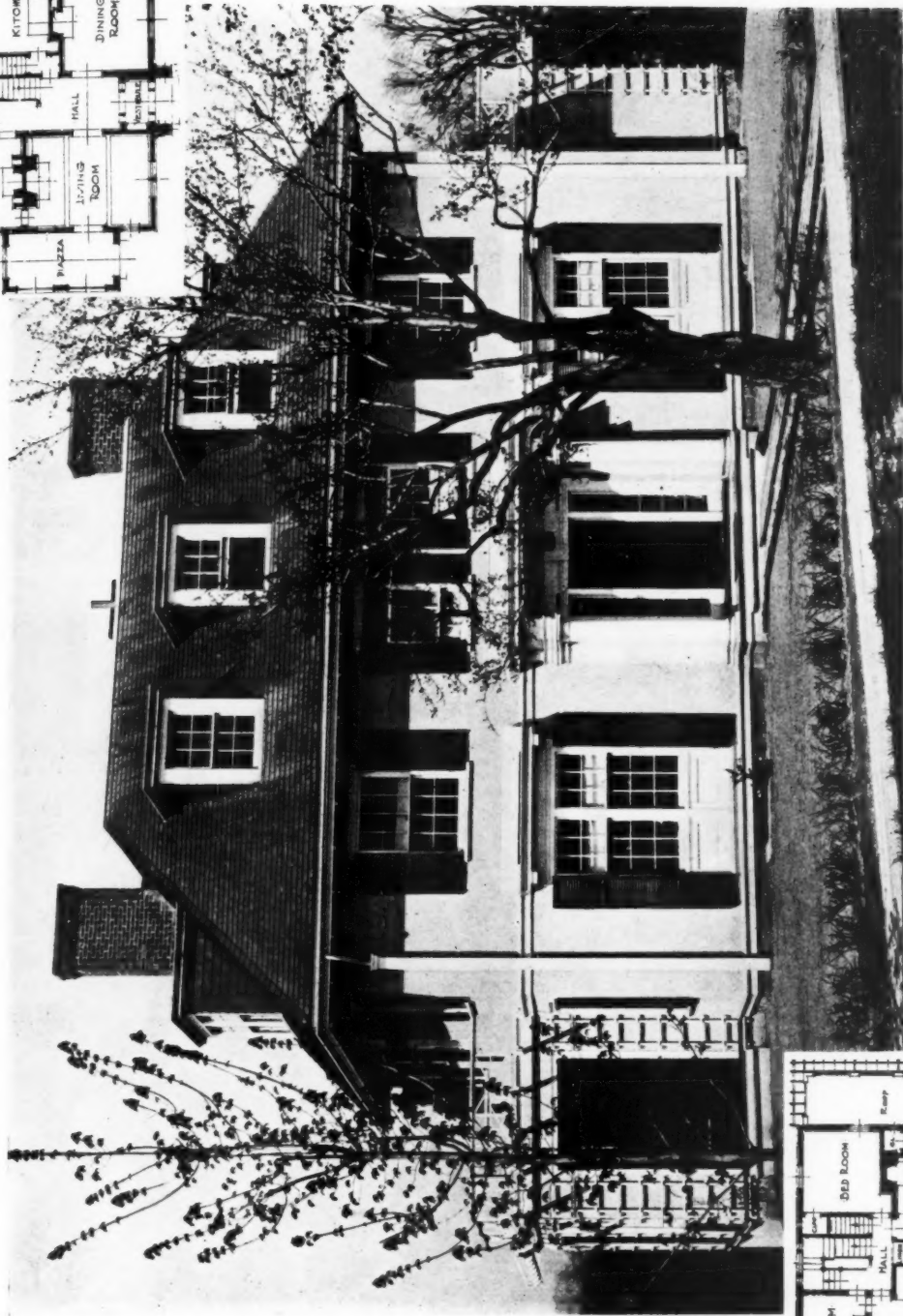
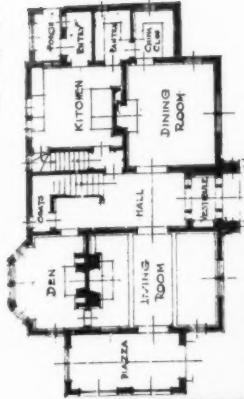


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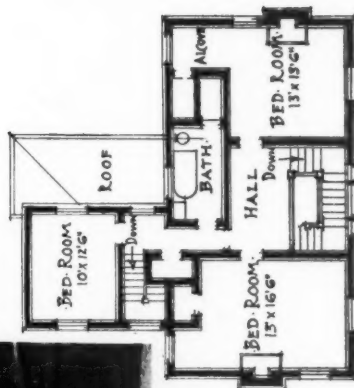
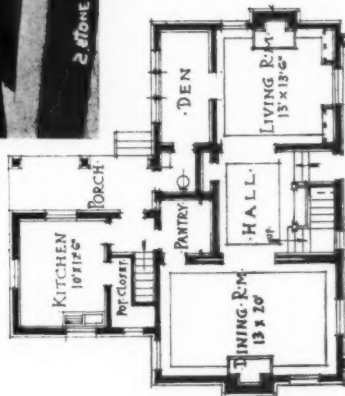
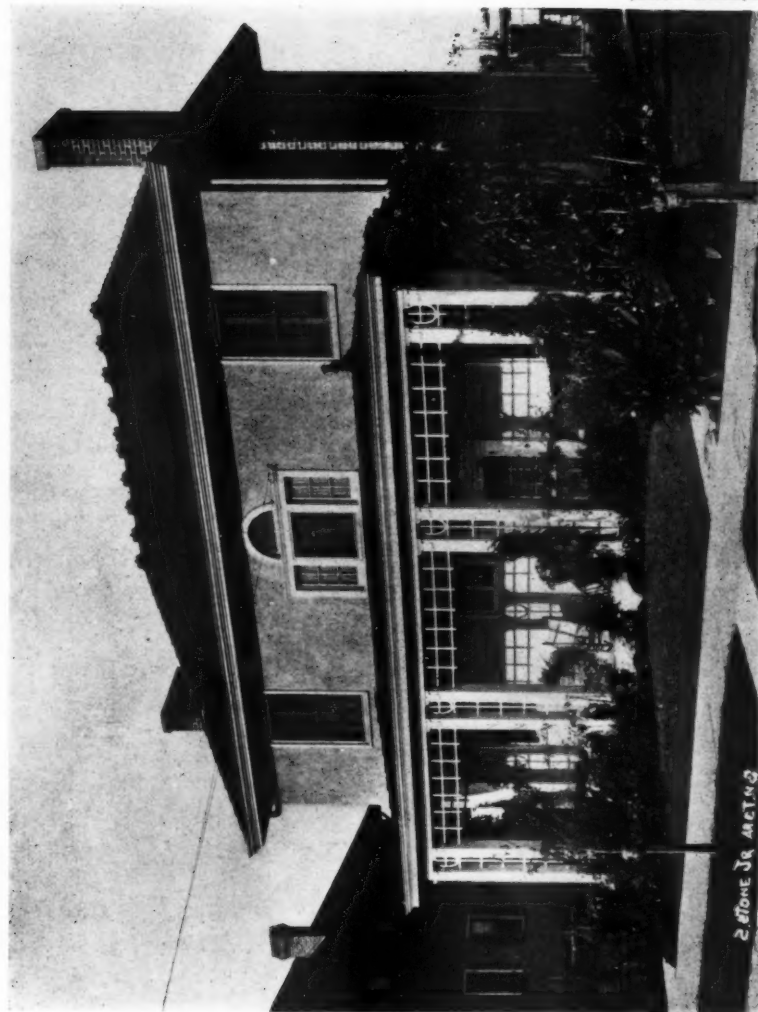


HOUSE OF J. N. MANNING, ESQ., BROOKLINE, MASS.
MR. H. A. PERKINS, ARCHITECT



A HOUSE ON WILLARD ROAD, BROOKLINE, MASS.
MR. BENJAMIN PROCTOR, JR., ARCHITECT

THE AMERICAN ARCHITECT



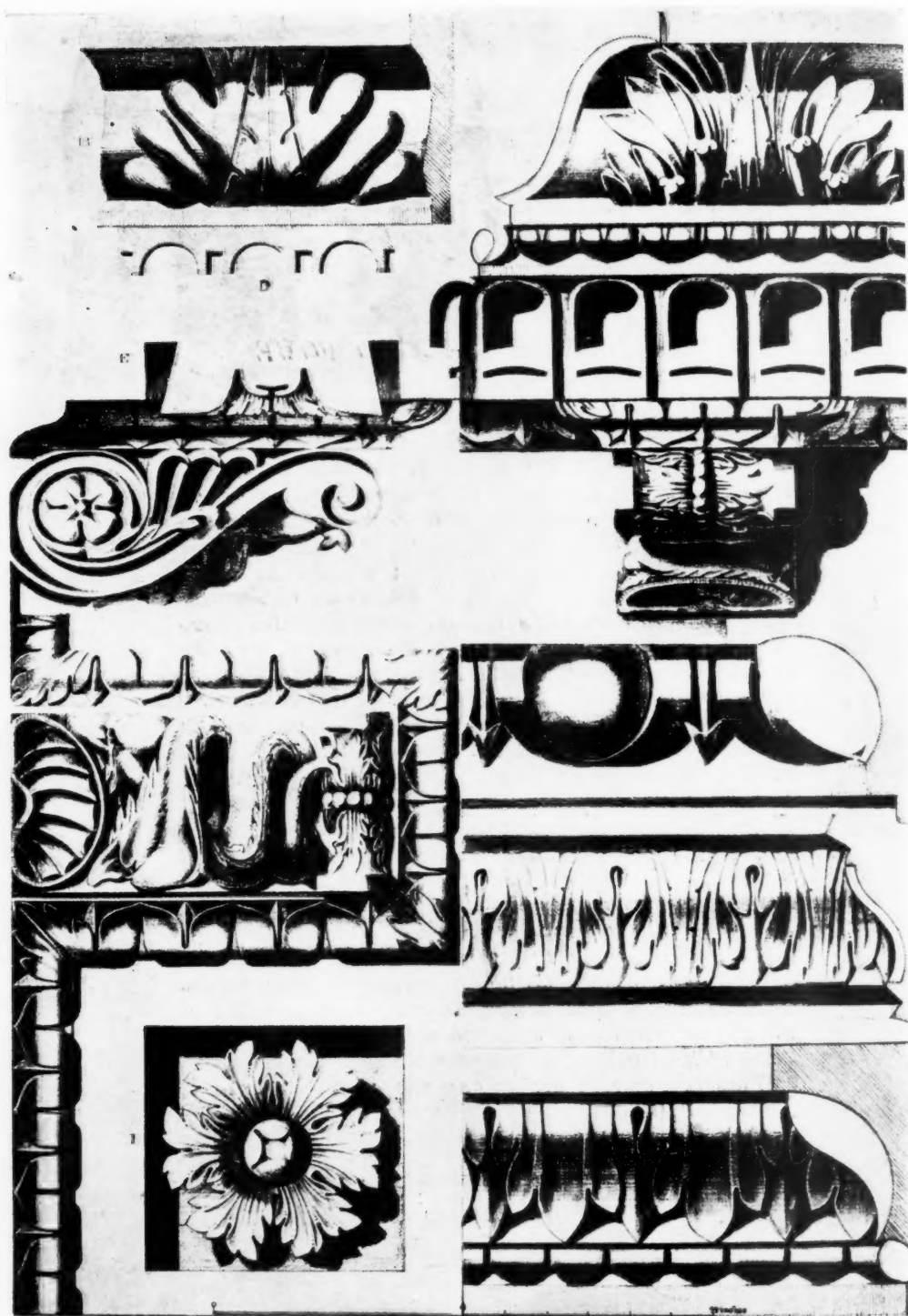
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NEW ORLEANS, LA.
MR. SAM STONE, JR., ARCHITECT

THE ARCH OF TITUS AT ROME

Various members of the entablature

THIS Triumphal Arch, built of massive blocks of white Paros marble, was erected by the Senate and citizens of Rome in honor of Titus (79-81 A.D.), son of the Emperor Vespasian, after his conquest of Judea, and is most exquisitely executed. The cyma of the cornice, shown on this plate, is much mutilated but sufficient remains to indicate the character of its ornamentation which consists of two types of separate leaves, the alternate leaf (B) being peculiar to this structure. The flutes in the face of the corona are very deeply cut as the plan section (D) indicates. The coffers in the soffit of the cornice are deeply sunk and contain rosettes which vary in design and of which one is here shown, while the modillions are peculiarly fanciful having dolphins as a decoration instead of a leaf, it is thought that they have some reference to the achievements of the navy in the conquest. The ovolo is decorated with the egg-and-dart which is highly relieved but which has a plain shell instead of the fluted-face shell observable in many other examples, while the lower member of the cornice, shown directly under the ovolo, has a peculiar but very graceful type of leaf ornament. The upper member of the architrave is ornamented with an interesting but altogether different type of leaf having no center stem although there are slightly raised veins at the eyes.

These ornaments are among the most successful of Roman Details.



VARIOUS MEMBERS OF THE ENTABLATURE

THE ARCH OF TITUS, ROME, ITALY

(For description, see preceding page)