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Atlanta, Ga., A Representative Southern City

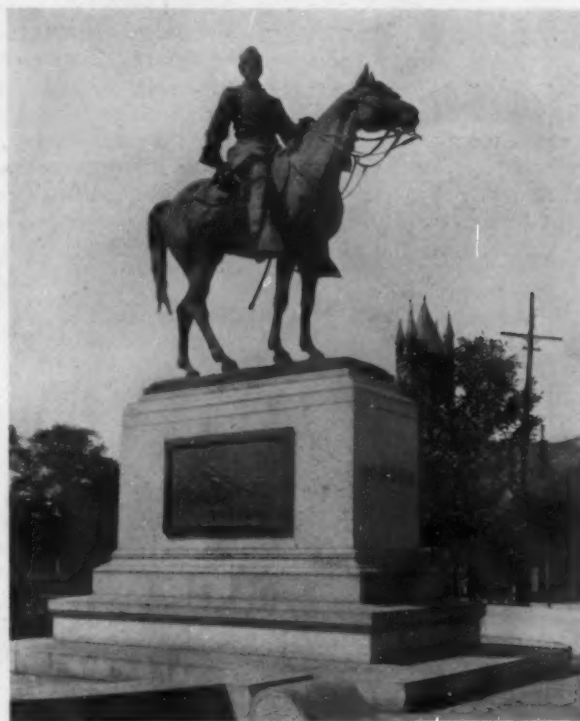
THAT the city of Atlanta is so progressive and successful is at first a matter of wonder to visitors. A study of the people and their methods shows that a naturally wideawake and earnest native citizenship has endeavored to make the most of what natural advantages the city's location possesses, and has drawn to itself a large number of energetic Northern people, who are making the city the center and distributing point of the Southern States. Atlanta is set upon a great ridge of over one thousand feet above the level of the sea, and the climate is nearly ideal, being much the same as that of Southern California without its excessive humidity. The fact that the large Northern corporations have here their general offices for the Southern States has made possible the erection of many modern fireproof office buildings, and it is claimed that there are now in Atlanta more of these structures than in any other city of equal population in the country. Many railroads enter Atlanta; the transportation facilities are of the best; and it is because of this fact the city has become a great manufacturing center.

Atlanta is a new city, in the sense that it has practically all been built in the last forty years. When General Sherman and his army trailed their devastating way through Georgia, Atlanta was left in smoking ruins. There were a few buildings left, and there are remaining but a few, perhaps four or five, examples of the interesting ante-bellum Southern colonial architecture. In smaller cities not far from Atlanta, where the army's vandalism was not so cruelly felt, there are many beau-

tiful examples of the old Southern home, with its columned porticos, gardens outlined with century-old box hedges, and the atmosphere redolent of the true Southern hospitality and chivalry of bygone days.

As in most new and rapidly growing communities, the buildings of Atlanta have, until the past few years, been successful only in so far as they were cheaply and quickly built. But in the last ten or twelve years there have been drawn to the city many of the younger and more enthusiastic generation of architects, who were graduated from the best architectural schools of the country, and who obtained their practical experience in some of the largest of the Eastern offices. These men have brought with them the highest ideals of professional conduct and artistic effort, and their influence is increasingly felt every year; the people, on their side, are making possible, and are expecting, the most carefully studied design and construction. The commercial and residence work of the past few years compares favorably with the best work being done in the East.

There are two pariahs of the profession very much in evidence in Atlanta and throughout the South. One is the "Architect," or, "Architect and Builder," and the other has been termed the "Traveling Salesman Architect." The first named individual will build you a house, or more often a "bungalow," for a certain stipulated contract price; will make his own plans and specifications (for which he charges you nothing), draw his own contract, superintend his own work, and generally manage the whole thing from start



GENERAL GORDON MONUMENT

ATLANTA, GA.



GEORGIA STATE CAPITOL

ATLANTA, GA.

to finish. His "plan" is perhaps taken from "design No. 23" in "Ninety-seven bungalow plans for one dollar," which has attracted the prospective builder, and, sad to say, the house, when completed, is very often "plastered" with liens. "The Traveling Salesman Architect," who usually goes about with an "and Co." after his name, hurries from town to town with a trunk full of drawings, "water color perspectives," and blandly sells a board of county commissioners a \$50,000 plan for their proposed \$15,000 court house one day. On the next, he dons his long-tailed coat and sanctimonious air, and suavely persuades a somewhat suspicious church committee that the church building, of which he shows them a rather dog-eared water-colored drawing, can be "very easily built for \$18,000" by changing to galvanized iron a few columns and other "stone trimmings" on the exterior of the thing.

It is difficult to say which of the two men is more pernicious in his influence. The "Architect" deprives of a commission the struggling young architect who is trying to build up a practice along legitimate and professional lines, and builds the owner a structure which is a permanent example of execrable, tawdry taste, and cheap, flimsy methods of construction. The "Traveling Salesman Architect" is a person of whom it is difficult to speak in printable language. He carries his "samples" from place to place; often, if he has a large and prosperous busi-

ness, employing a man who stays "on the road" all the time, and who "works on" the county commissioners even before the court house bond election is held, or while the ruins of the burned schoolhouse are still hot. He "pulls wires" of every conceivable sort. He decries his competitors and their plans. He tries to hoodwink them into believing that he of all men is the man to get them something for nothing, *i.e.*, to build a \$50,000 building for \$20,000; he will guarantee the cost of the building according to his proposed sketches—will even furnish a bond to that effect if it be requested. In fact, will do or say anything that his long experience in this kind of thing tells him is necessary to "land the job." It is probably true that this type of man is more numerous and perniciously active in the South than in any other part of the country to-day; but it is also true that there are many men practising their

art in an honorable and professional way who are doing all in their power to offset the influence of such individuals, and whose efforts are certainly not being wasted.

The Atlanta Chapter of the American Institute of Architects comprises in its membership nearly all of the stronger men in the profession in the city, and has made its influence felt in many ways for the betterment of conditions of practice; its members are lending their time and talent to further a city beautiful scheme which has been proposed and fathered by the Chamber of Commerce. There are great opportunities along the

lines being followed by some of the cities in the North and West. Atlanta has the advantage over some other communities in possessing many diagonal and irregular streets, which offer rich possibilities for the location of a civic center, about which might be grouped the proposed new municipal buildings, as well as places for small parks and locations for monuments or public memorials throughout the city. Movements have recently been started having for their object many new school buildings, a new court house and city hall, a public market, a public bath house, and a public comfort building in the center of the city. The greatest opportunity has presented itself for a municipal art commission, which would be composed of representative architects, artists and laymen, and which would be clothed with the necessary legal authority empowering it to control and pass upon the loca-



CENTURY BUILDING

ATLANTA, GA.



W. T. DOWNING

ARCHITECT

tion and design of all public buildings and monuments. Such a commission exists in many Northern cities, notably New York City, and in some instances immense sums of money are being expended to rectify the mistakes of former years.

In Atlanta, where the city is still in a formative state and the people are beginning to direct their attention more and more to the necessity and desirability of these things, it is indeed a critical time; and it is to be earnestly hoped that the patriotic citizens will avail themselves of the opportunity that lies before them before it is too late, that is—before the proposed municipal works are designed and located in situations without regard to their relation to the future development and beauty of the city, profiting by the unfortunate experience of other municipalities.

Many influences are at work along the line of right development which will naturally contribute to the pleasure and profit of the practice of architecture and its allied arts in Atlanta. The building code of the city is now undergoing revision at the hands of a committee composed of architects, engineers, fire underwriters and city officials. A revision of the city charter is proposed and a possible commission form of municipal government is being investigated by a commission of representative citizens. The Georgia School of Technology, in Atlanta, has established a course in architecture which is expected to be unusually successful, and which for the last year has been under the direction of an architect who brings to his work an unusual enthusiasm for teaching and the highest ideals of the profession.

A RECENT LEGAL DECISION

EFFECT OF PROVISION AS TO ARCHITECT'S CERTIFICATE.

When the parties to a building contract have made the certificate of an architect or engineer a condition precedent to the assertion of a right thereunder, such a provision is valid, and the party claiming such right must show by proper allegations the performance of the condition, a valid reason for non-compliance therewith, or a waiver thereof.

Korbly v. Loomis (Supreme Court of Indiana), 88 N. E., 699.

THE FORSYTH THEATER AND OFFICE BUILDING, ATLANTA, GA.

BY A. TEN EYCK BROWN, ARCHITECT.

This building is a part of a comprehensive scheme for the development of what is now known as the North Forsyth section of the city.

As the business district of Atlanta has always been entirely too much congested for development of business property on a reasonable, rentable basis, there has been taken over from the owners a frontage on Forsyth Street, in the heart of the business section, of approximately 500 feet, to start an entirely new business quarter within a stone's throw of the present one. For, as is usual in a great many cities of a moderate size throughout the country, this concentration of business on one long thoroughfare is a difficult question to better. But in this case, by practically reclaiming a large area intersected by streets that are natural arteries, and making them so by regrading and repaving, the difficulty has been obviated—and indeed in time will be entirely done away with, leaving the business section composed of good streets and first-class buildings, many of which will be fireproof, that any city in any section of this country might well be proud of.

Besides this theater and office building there is planned for erection in the near future, for which sketches have already been prepared, a trust building 75 by 150 feet, twelve stories high; an insurance building 80 by 150 feet, ten stories high, and a hotel 80 by 150 feet, twelve stories high, adjoining the trust building, with the idea of throwing them together when it has developed as to which of these two classes of buildings are the most successful, besides several minor operations for other purposes, either under construction or about to be erected.

The theater and office building now in course of erection has eight stories and roof garden, and is situated on the northwest corner of North Forsyth and Luckie Streets and across the street from the Piedmont Hotel, a ten-story structure, and within one block of the new million-dollar post office and court house, now almost finished, putting this building in the midst of the hotel and theater district.

As of primary interest, the problem comes first, and consists of the unique—at least in this section of the country—proposition of housing retail stores, offices,



HARRY LESLIE WALKER

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NORMAN & FAULKNER

ARCHITECTS

theater, roof garden and rathskeller under one roof. And in order to give these different parts their proper relation the final scheme, as shown in the accompanying illustration, was decided upon.

The main difficulties in theater planning are the proper number of entrances and exits, both for ordinary and extraordinary occasions, to give free ingress and egress to a large number of people at one time. In this instance this was accomplished by the broad, short lobby in the center of the Forsyth Street or main front, 20 by 30 feet, opening into the foyer with wide and numerous openings, which runs across the entire rear of the orchestra or first floor, forming, with the emergency courts, a complete circuit of exits around three sides of the theater proper. Besides the main entrance doors there are three exits on each side of the theater opening from the orchestra floor, balcony floor and the gallery floor, into the broad emergency courts, and by concrete staircases and corridors directly to the streets, with as few turnings as possible to avoid unnecessary congestion.

There are eleven staircases in the building, all of them fireproof, as is the whole building, eight of which are in the theater portion, made necessary by, first, an effort to have as thoroughly a modern theater as possible, and, second, by the new laws which have recently been made throughout the country relating to matters of fire protection and safety—especially under the same roof with other accommodations for various purposes. Therefore, the whole economic layout of the seats, aisles and stairs has been figured out with the exact relation of one to the other always kept in mind—the stairs, for instance, being controlled in number and width by the number of people who will use them in case of an emergency or in the ordinary course of a performance.

The balcony is served for entrance by the two staircases running up on either side of the foyer and the gallery by broad stairs entered immediately from the Forsyth Street front on the north side. With the exception of the gallery, the ticket takers control both the orchestra and balcony at the main doors with a directing usher, in this way making the organization more compact. The main or orchestra floor is divided into sections by one center and two side aisles, with seats running from 20 inches to 21 inches wide on this floor, with ample space

in the rows and in the aisles. The boxes are raised slightly above the stage, as in most foreign theaters and some Eastern theaters, making it possible to get about sixty more seats on the main floor and making the boxes much more useful than on the old plan, and certainly more private. The latter are approached by private stairs and have a small anteroom off of each for coats, etc. These boxes seat eight people each, or sixty-four in all. The orchestra floor seats 660, the balcony about 420, the gallery 300, making in all about 1,450 to 1,500 seats, which could easily be increased in number by reducing the present generous spacing adopted for the seats according to the legal requirements.

On the right of the lobby on Forsyth Street is a store with a show window opening both on the street and lobby, for cigars, tobacco, etc. Immediately adjoining the latter is the ticket office, running through to the right hand entrance and serving also as gallery ticket office, with a communicating room immediately adjoining the north entrance for use as the manager's private office. On the left of the lobby is a similar store to be used as a soda fountain or as a part of the corner store, which will probably be rented to a drug company. Immediately adjoining these stores in the rear, and opening on Luckie Street, are the office building entrance, elevators and staircase, which in turn opens into the main lobby and gives the latter another outlet if necessary. In this office entrance is also the stairs to the basement and rathskeller, the elevators for both the basement and upper floors of the building, including access to the roof garden, for which purpose are provided three high speed elevators and a dumbwaiter, the latter to serve the roof garden from the rathskeller kitchen. In this connection and in order of sequence is the rathskeller, occupying, with its adjuncts, the entire front basement, with access as above from the main entrance and through aisles under the northern balcony stairs from the theater. It is designed with the idea of having a beam ceiling with plaster panels, a high wood wainscot, stained Flemish oak, with deep green burlap panels, topped by wide plate rack, all developed with ornaments, having a German feeling in contour and carving. This room extends out under the sidewalk, and by the use of a segmental arched plaster ceiling at this point the effect of a German vault is secured, giving some variety to the general scheme. As will be noted, adjoining this room are the



W. T. DOWNING

ARCHITECT



HARRY LESLIE WALKER

ARCHITECT

usual adjuncts, such as kitchen, serving rooms and men's and women's toilets, etc., the rear of the basement being almost entirely devoted to the boilers, fan room and space below stage, with exterior entrances for supplies, scenery, etc., the corridor on the Luckie Street side connecting the two portions of the basement. The area under the auditorium was not excavated, on account of the absence of natural light and the expense for columns and beams to support such a heavy load, and also by the necessity for the numerous concrete heating ducts which would have come down into the head room.

The design and materials used in the interior of the theater are generally in French Renaissance and are an attempt to secure some architectural symmetry and beauty to the subject—at least in this country almost always left to the tender mercies of an indifferent painter and usually butchered up for the sole purpose of the sight lines and sounding boards. Both are, however, necessities, but in this instance the axis of the house and the wall decoration are emphasized, first by the dome in the center of the ceiling, and second by the accenting of the perpendicular axis by the arrangement of panels, which is excusable in this instance owing to the difficulty of extending the design further toward the rear. Architectural forms are also used, but the column is omitted and in the treatment of the proscenium box and gallery fronts, ceiling of gallery, balcony and foyer, the simple forms of Renaissance moldings have been carried throughout to give the whole effect one of simplicity and eliminating the necessity for an elaborate scheme of decoration. The color scheme to be used is a creamy white tone on all the moldings and ornament, the latter to be high-lighted with French gold and the panels and other plain surfaces to be brushed in with the proper shades of green in metallic paints; the seating and other woodwork not trimmed to be in metallic greens and the upholstering and curtains, etc., to be in delicate shades of green velour; the domes and ceilings to have plain colors in flat tones, with simple stencilled friezes of a Greek key motive or something equally simple. The main foyer is to be cut off from the seats by plain brass rails and curtains during the acts; all the lighting of the theater to be done as much as possible with concealed border lights, and where not possible simple candleabra will be used in the lobbies and foyer and under the balconies, as shown on the sections. The lighting

of the stage is accomplished by the regular footlights, four rows of border lights overhead and floor pockets sufficient in number in the floor off stage and in the fly galleries for special lighting effects.

The main feature of this theater is, of course, the remarkable construction whereby the use of large beams and columns is entirely eliminated. The work of building the forms for this complicated construction and pouring the concrete after properly placing the iron at all sorts of levels and at all sorts of angles was a distinct and difficult accomplishment both in design and construction.

The stage is not a large one, but is complete in every respect as to equipment, property room, entrance for scenery and baggage and complete outfits for fly-galleries, rigging lofts, switchboard, dimmer plates on same and tier after tier of dressing rooms. This stage is capable of anything from a vaudeville stunt to a full staged extravaganza.

The heating of the theatre is accomplished by the plenum system with a fan and coil under the floor forcing the air after heating through a concrete duct, with branches to every other seat in the house at a low, pleasant velocity. The auditorium is vented by a powerful fan at the top of the theater on the roof, which connects with vents at all levels, making a perfect circulation and continual change of air, the balance of the building being heated by direct steam in the low pressure vapor system. Twenty cubic feet of air per minute for each person is provided.

The balance of this building, except the roof, is occupied entirely by offices, which extend over the theater and stage, as the floors rise high enough to pass the different levels. This, as will be seen, has required extremely difficult construction, and the spans of some of the large carrying beams are very great.

The office building is served by the elevators and stairs already referred to, which are reached by the lobby, the entrance to which is on the Luckie Street side, but can also be reached from the theater lobby through the arched opening on that side. These offices are complete in every respect, with cabinets for coats, individual lavatories, electric lights, telephone and signal service, with the toilet rooms on each floor accessible



W. T. DOWNING

ARCHITECT

only to those carrying office keys. The barber shop is on the eighth floor in the inner angle of the court. The slight bays in these offices add considerably to the attraction and renting features. All corridors have terraza floors and base, as also do all the toilets. Elevator grilles and stair rails are of green bronze.

The exterior of this building is so simple that it can be described in a few words. The base is of granite, the walls and piers of deep purple paving brick, measuring 9 by 3 by 4 inches, with rounded edges, and laid with $\frac{1}{2}$ -inch joint in black mortar, raked back $\frac{1}{2}$ inch to give fabric to the walls. The marquees and lamps are to be of green bronze. All the ornamental details are to be of terra cotta in limestone color. The roof garden columns and beams between the towers are of wood. The finials are of terra cotta. The tile roofs are of red tile. The idea of the design was to get a scheme that would have a minimum of expensive detail and at the same time present an interesting silhouette, and for this purpose the projecting balconies were adopted, which also act as a canopy for the bay windows and give a lace-like border to the corona of the entire building. The panels shown on the façade are to be of colored tile.

The entire construction is of reinforced concrete. The floors being laid on a concrete slab are of different finishes, as the usage demands.

The roof garden is arranged so that the elevators and stairs land in the rear of the seats. It has a complete miniature stage with rolling scenery and sufficient number of borders, together with footlights and switchboard. The central portion is arranged with fixed seats, and the raised outer rim is to be provided with tables and chairs for parties, the whole having service from the rathskeller kitchen and the first floor soda fountain and cigar stand concessions, all of which are served by means of an electrically operated dumbwaiter, which is shown beside the elevators.

All inflammable material possible has been and will be excluded from the work throughout.

The plumbing, lighting, heating and all other features are to be first class in every respect, and no expense will be spared to make a structure as near perfect as human ingenuity can make it.

COST OF REINFORCED CONCRETE BUILDINGS.* BY EMILE G. PERROT, M. AM. SOC. C. E., PHILADELPHIA.

The use of plain concrete for footings, foundations and as a substitute for massive masonry wall construction, has come to be generally accepted by the building world of to-day. Even the most skeptical as to its use for columns and beams do not hesitate to use concrete in the above manner. As the constitutional infirmities of plain concrete became more evident and its use consequently restricted, means for overcoming these weaknesses by reinforcing the material with iron or steel rods at once opened up the field of application of concrete, so that to-day entire structures from footing to

top of cornice or parapet are constructed solely of this material.

Apart from the mere adaptability of a material for building purposes, owners when investing large sums of money in real estate, must take into consideration the economical aspect of the construction. Aside from the desire to conserve their property (that is, to build so as not to burn), the saving on the insurance premium is very often a controlling factor in the selection of a type of construction to use. Twenty-five years ago the idea of making buildings of the factory type fireproof was uncommon; almost any sort of structure was deemed fit to use for manufacturing purposes. As the ascendancy of the United States in the manufacturing world became great and we commenced to lead in the manufacture of the world's products, architects and engineers at once saw a field for their labors that had heretofore been left to the caprice of untrained minds, it being the exception for an architect or engineer to be consulted in the designing of a strictly factory building. To-day, however, thanks to the persistence of the insurance companies on higher standards, the design of almost all manufacturing buildings is attended with much study and they are usually built under the supervision of a competent architect or engineer. This change in methods has led to a much higher standard of building, and with the advent of reinforced concrete has come the commencement of a period when fireproof factory buildings are to be the rule instead of the exception.

We all know how the so-called "slow-burning" type of mill construction supplanted the joist constructed building a few years back; how the building laws of large cities classifies the buildings into first, second, third class, etc., according to their degree of fireproofness; how insurance companies are lowering the premium on fireproof buildings; in fact, the tendency to-day is toward a better grade of buildings. And it is right that it should be so, since what a farce would be our boasted twentieth century civilization should we still be content with the undesirable fire-traps erected by our forefathers.

We hear to-day a great deal concerning the scarcity of lumber; perhaps it is a good thing that lumber is becoming more expensive and the price almost prohibitive, for then we turn our thoughts to a substitute, and in doing so improve upon the methods that have been in vogue. The optimist's reply to the lumber question is, use reinforced concrete or concrete lumber, build so as not to burn, make your work permanent; reduce the cost of maintenance on your building, get lower insurance rates, or, better still, eliminate insurance. What is the need of insurance when the amount of inflammable material is reduced to a minimum? The cost of a building is very little more, and the interest on the additional investment is usually less than the insurance premium.

That the science of reinforced concrete has arrived at that state where we can with a certainty declare its adaptability for fireproof building construction, is a question beyond a doubt, as instanced by the many hundred reinforced concrete buildings erected and in use in this country, as well as by the result of actual fires that have taken place in such buildings. The writer

* Paper read before the National Association of Cement Users.

(Continued on page 68)

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CONTENTS

ATLANTA, GEORGIA	61
FORSYTHE THEATER AND OFFICE BUILDING.....	63
COST OF REINFORCED CONCRETE BUILDINGS.....	66
EDITORIAL COMMENT	
Tendency to accept unquestioned the conclusions of others.	
The controversy on artists' rights continued.	
ILLUSTRATIONS:	
The Forsythe Theater and Office Building, Atlanta, Ga. (8 plates).	
The Ponce de Leon Avenue Baptist Church, Atlanta, Ga. (4 plates).	

Frontispiece:

Figure for a fountain, by Jonathan Scott Hartley, N.A.

CERTAIN foreign professional journals have been discussing with much earnestness the "Tyranny of Scientific Dogma" in which it is alleged most men engaged in professional work accept without question or hesitation the pronouncement of men who have attained some eminence in their calling. It is urged that the conclusions arrived at by these leaders in their respective fields be less readily received by their co-workers. That each member of the profession make exhaustive examination and study of announced results of scientific investigations, experiment or research before accepting and classifying as fact.

WHILE the discussion indulged in, and the observations made have practically all had for their subject the professional engineer, a little reflection only is needed to make it apparent to all that small reason exists for so limiting the field of application. For example, the profession of architecture probably furnishes numerous members of the school that finds it easier to accept the conclusions of men of prominence in their calling, than to bestow much time and independent thought on any of the numerous problems that are constantly confronting it. Probably no tendency has done more to retard progress in not only architecture, but all fields of endeavor where development is dependent quite as much on painstaking study and research as upon the possession of undeniable genius, than that to receive and follow blindly the dictates of those who

perhaps temporarily are much before the profession and the public. It is a tendency that marks any period of stagnation.

OF course it is not to be understood that precedent and example shall be disregarded. The result of such a course would undoubtedly be infinitely worse than to follow and imitate slavishly. The greatest progress may be expected only when both new and existing records and examples are examined and studied with sympathy and understanding, neither accepting nor rejecting on account of origin or authorship, but selecting in the light of thorough knowledge those elements that commend themselves as useful and appropriate in the realization of one's own conception.

THE adverse criticism that led the Secretary of the Treasury to stop the coinage of the new "Lincoln pennies" until the initials of the designer, Mr. Victor D. Brenner, could be removed from the die, again brings to the fore the broad question of the desirability or propriety of an artist attaching his name or initials to all work executed by him. In the case of Government work, which it is understood has ordinarily been required without distinguishing mark sufficient to enable identification by anyone not informed as to the authorship, it is quite possible that designers will continue to be deprived of recognition. Government officials and law-makers, being identified largely with commercial pursuits, have generally experienced marked difficulty in distinguishing between honor and advertising. It seems that they are unable to understand why an artist should desire credit for his praiseworthy accomplishment, unless it be that he seeks publicity, and they righteously decline to permit anyone to advertise himself or his wares at the Government expense. But this narrow and perverted view would be of small consequence, perhaps, were it not for the effect it has had on the country at large. Columns have been printed in the popular press from Maine to California, of a character calculated to give the general impression that the artist had undertaken to exploit himself in a wholly reprehensible manner; that he had partially succeeded, before anyone was aware of his action, but that the matter had been acknowledged and corrected as soon as brought to the attention of government officials. Incalculable harm is done by the promulgation of such impressions. No one stops to consider that there is probably no possible way in which the artist's initials or name on the coin could work harm to any person or thing. On the contrary it would be a distinct advantage if the names of artists belonging to every department of art were better known. If, for example, architects generally were required to sign their buildings the net result would undoubtedly be to very greatly improve the character of architecture in this country. This result would be attained partly through the sense of added responsibility the architect would feel for a structure that would perpetuate his name, but it would also be due partly to a more general knowledge on the part of the public of "who's who," followed inevitably by more discriminating selections, which would lead to certain ultimate eliminations.

COST OF REINFORCED CONCRETE BUILDINGS

(Continued from page 66)

has had to do with one such building where a fire completely destroyed the japanning kilns in the upper floor of a building without in any way affecting the concrete construction.

As to the increased cost of reinforced concrete over slow burning mill construction, everything else being equal, it varies from 10 to 30 per cent, according to the heaviness of the construction and the size of the building, also the number of times the forms can be reused.

Some buildings have been erected in which the floor loads were such as to preclude the use of heavy yellow pine timbers, as the sizes required would have been larger than it is practicable to obtain. On the other hand, the use of steel beam girders fireproofed would have added to the cost sufficiently to make the composite construction equal the cost of a pure reinforced concrete building.

In addition to the saving on insurance by having a fireproof reinforced concrete building, there must be taken into consideration the effect of wear and tear on the building if of the ordinary type; this is especially true where vibrating machinery is used, such as an instance of a leather factory, where the glazing machines are situated on the third floor. These machines were formerly in an upper story of a brick and joist constructed building, and produced so much vibration as to cause alarm to the owners, as well as making necessary constant attention to the shafting and machinery in the way of adjustment, and consequently adding considerably to the running expense. In their new location the vibration is absent and the cost of up-keep on machinery and shafting is reduced so much as to amount to very little compared to the cost in the former building.

In comparing the cost of reinforced concrete construction with steel construction fireproofed, we find that concrete construction is cheaper than the steel construction fireproofed. Actual bids on the two types of construction for the same buildings obtained reveal some interesting facts.

For the Ketterlinus building in Philadelphia, which is an eight-story and basement building, reinforced concrete was decidedly cheaper by about 20 per cent., and made a much stiffer building to resist the shocks of the heavy lithographic presses in the fifth and sixth stories of the building. This building has heavy concrete wall piers on the street fronts, veneered with four inches of mottled brick secured with copper ties. There are heavy reinforced concrete brackets connecting columns with girders and beams, and the floor system consists of deep girders and beams spaced about 4 feet 6 inches center to center for beams, the slab being 4 inches thick. The column footings are reinforced concrete, but the interior columns for five stories are of structural steel fireproofed.

Another notable instance of the saving effected by the use of reinforced concrete is the Boyertown building, Philadelphia. The owners saved about \$60,000 by the skillful use of reinforced concrete for the entire construction, representing a saving of about 30 per cent. It is ten stories and basement, built of a concrete cage

having the front veneered with granite in the first story and brick and terra cotta in the upper stories. The side walls are adjacent to party lines having simple reinforced concrete columns spaced about every 8 feet 6 inches centers to carry the floors and roof. Those in the basement were set back from the party lines sufficiently far to build a continuous reinforced concrete footing within the property lines of the building, thus compelling the use of heavy reinforced concrete cantilever girders at the first floor level to carry the wall columns above; the load on the end of the cantilevers is 385,000 pounds, and the leverage 29 inches. The rear wall of the building is carried on cantilevers at each floor, due to a recess in the first story of the building for a shipping department. These cantilevers are seven feet long, but while they are much longer than those carrying the side walls, they carry less load, since there are cantilevers at each floor on the rear, while on the sides they exist only at the first floor level and carry nine floors and a roof. These are the heaviest concrete cantilevers ever built in Philadelphia, as far as I know. The reinforcement used throughout is cold twisted steel rods, except the columns in the interior, and some of the front wall columns where structural steel cores are used.

A very marked saving was effected by the use of concrete over brick for the wall construction of the buildings of the Janesville Iron Works, erected at Hazelton, Pa. This plant consists of a machine shop, foundry, pattern and pattern storage buildings, power-house and office buildings. All walls of these buildings are concrete and are monolithic. Concrete was decided upon for use in the walls because it effected a considerable saving over brick walls. As the site of the plant was such as to require considerable grading, and there were large quantities of rocks or mountain stones on the premises, the problem of bringing the ground to grade was most economically met by making the walls of the buildings of concrete.

Where sanitary precautions and immunity from deterioration are the controlling factors, reinforced concrete offers one of the best forms of construction; this is exemplified in the new plant of the Crane Ice Cream Company of Philadelphia, in which reinforced concrete was decided upon after an extended test to determine the action of salt water used in their business on the concrete and steel. The preliminary test and the actual use of the building for the past three years has demonstrated the fitness of reinforced concrete for this type of building. The plant is considered ideal, and its cost of construction was below the average for reinforced concrete construction.

To sum up, the cost of reinforced concrete buildings can best be considered by classifying them under several headings:

First—Warehouses and manufactories. Cost, 8 to 11 cents per cubic foot.

Second—Stores and loft buildings. Cost, 11 to 17 cents per cubic foot.

Third—Miscellaneous, such as schools and hospitals. Cost, 15 to 20 cents per cubic foot.

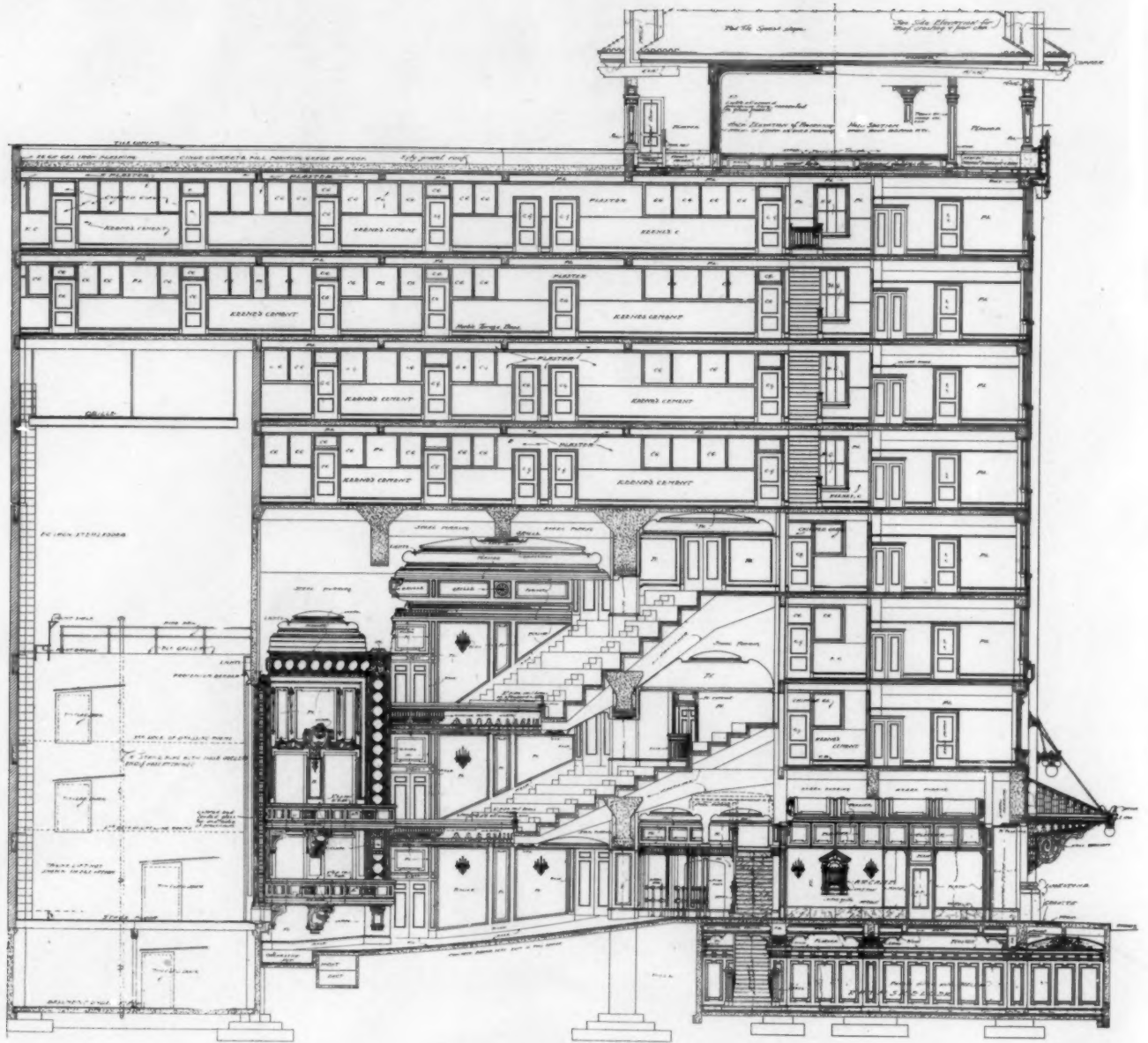
These costs include the building complete, omitting power, heat, light, elevators and decorations.



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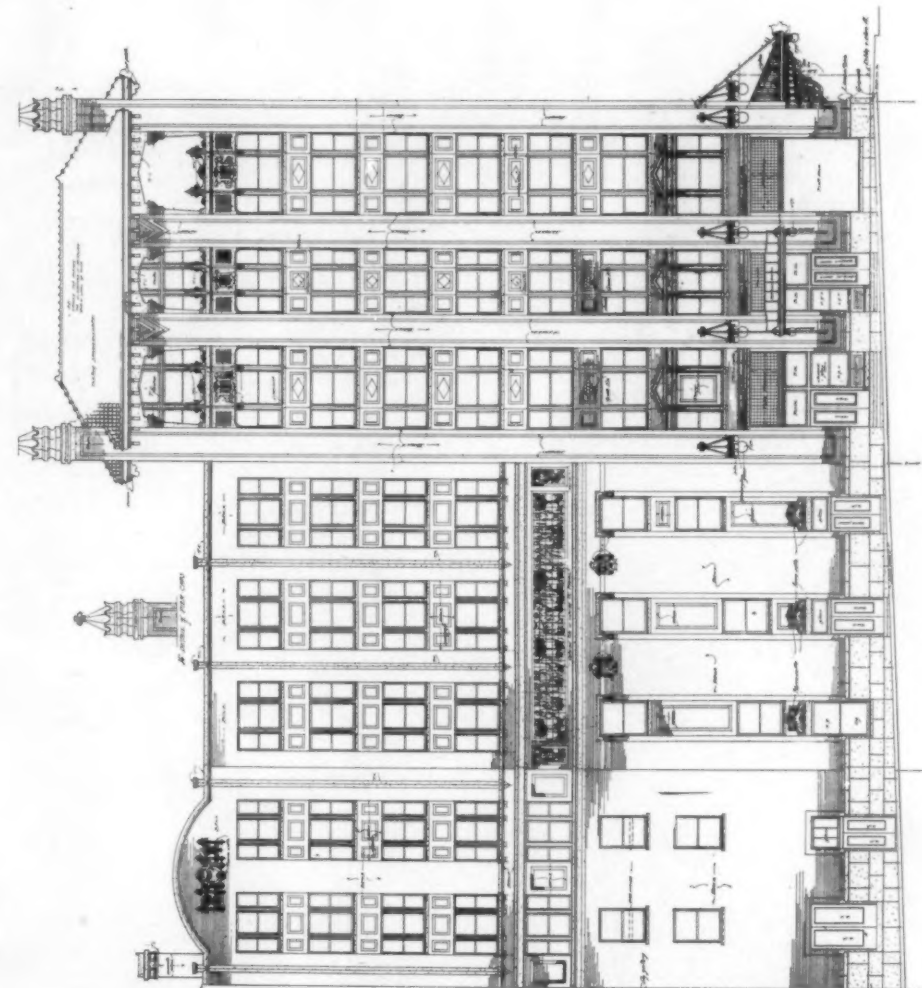


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LONGITUDINAL SECTION

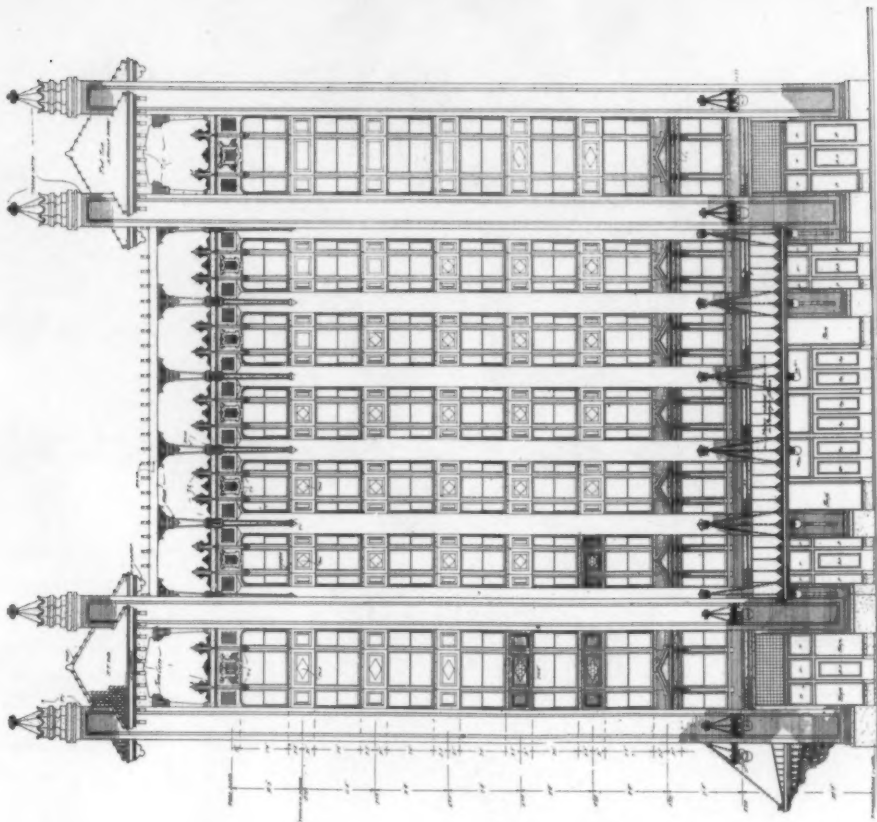
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LUCKIE STREET ELEVATION

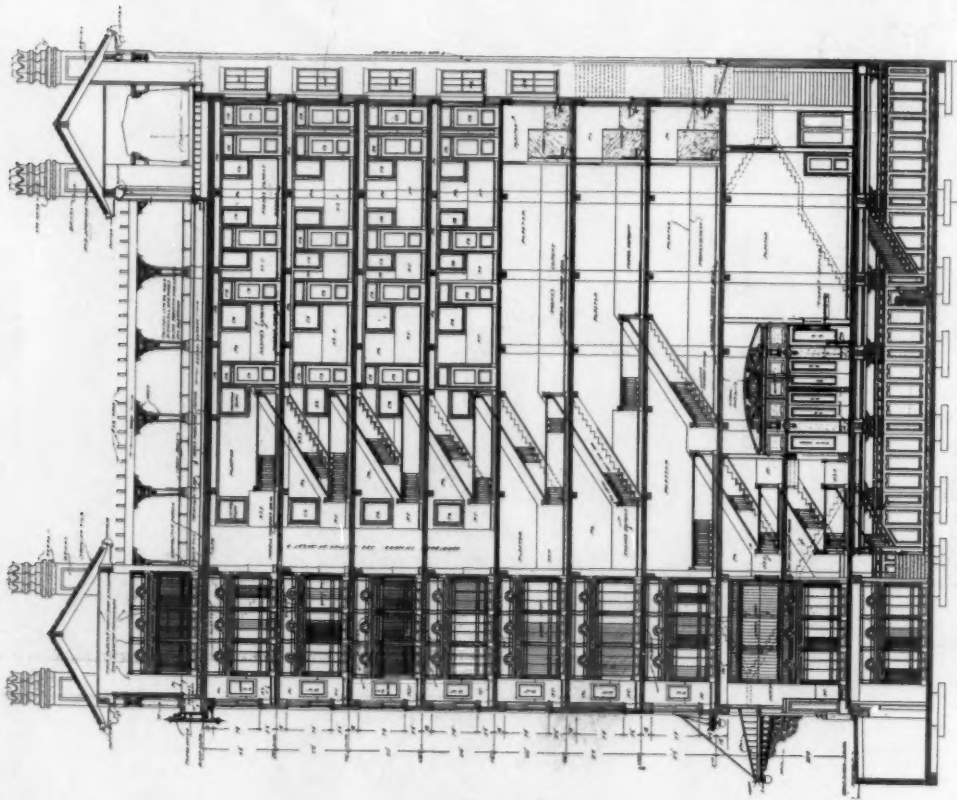
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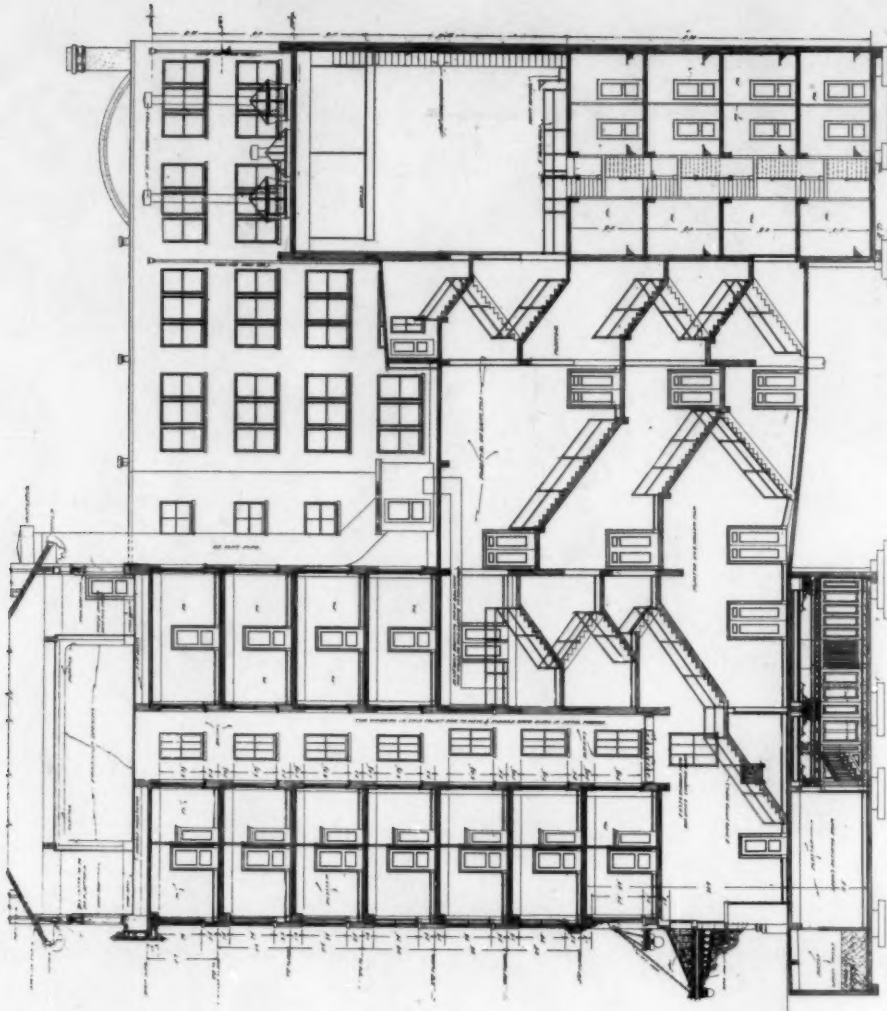
FRONT ELEVATION ON FORSYTH STREET

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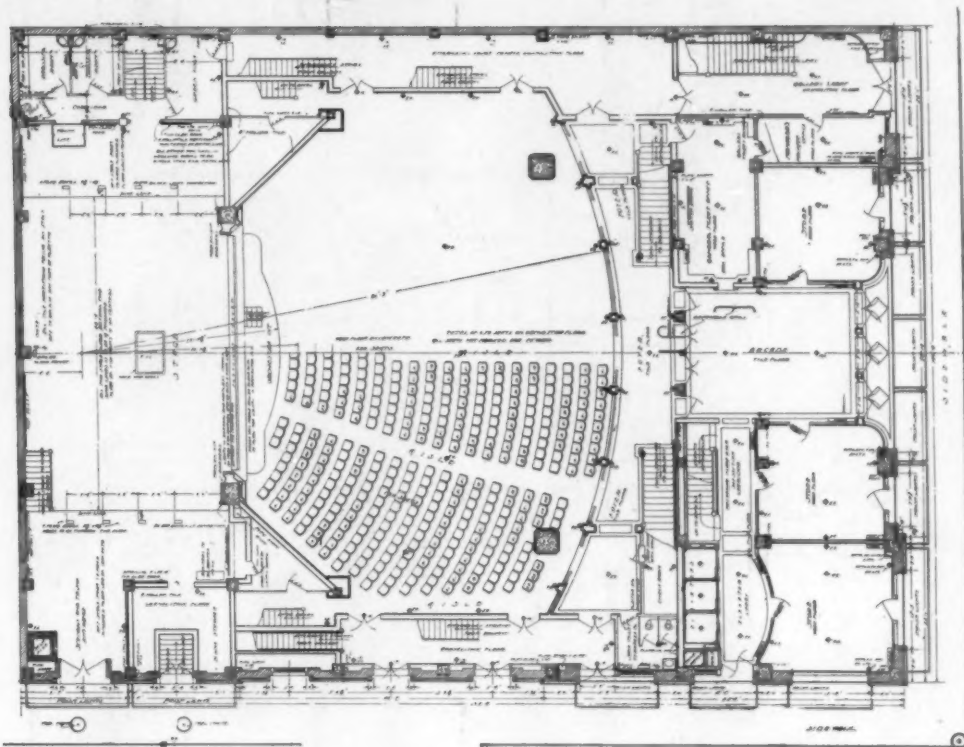


CROSS SECTION
FORSYTH THEATER AND OFFICE BUILDING
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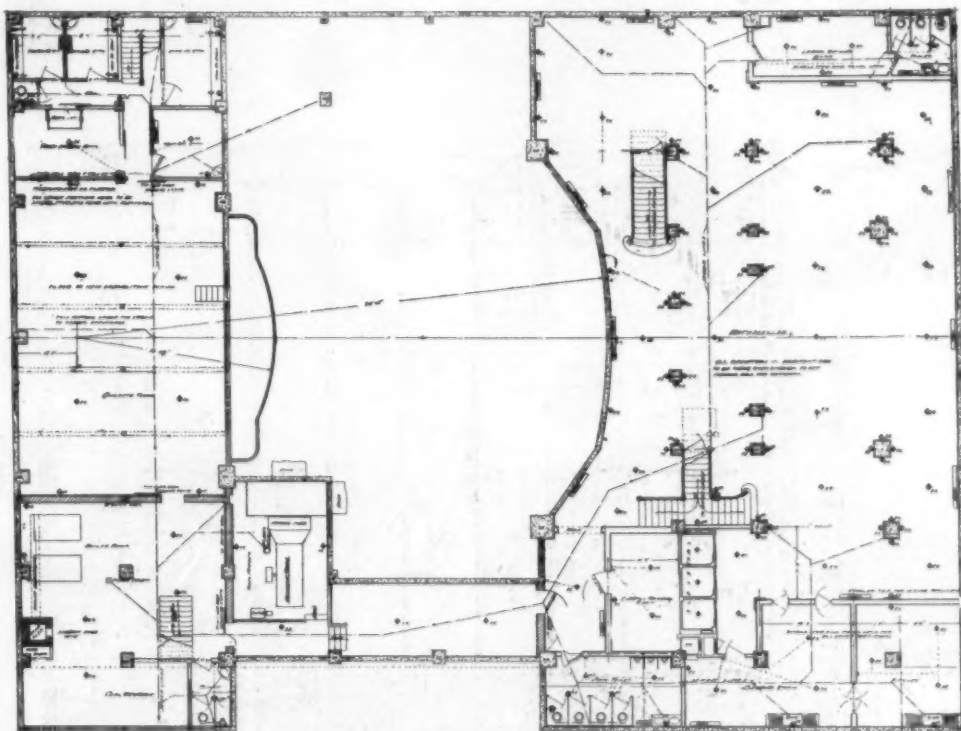


SECTION THROUGH EMERGENCY COURTS
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FIRST FLOOR PLAN

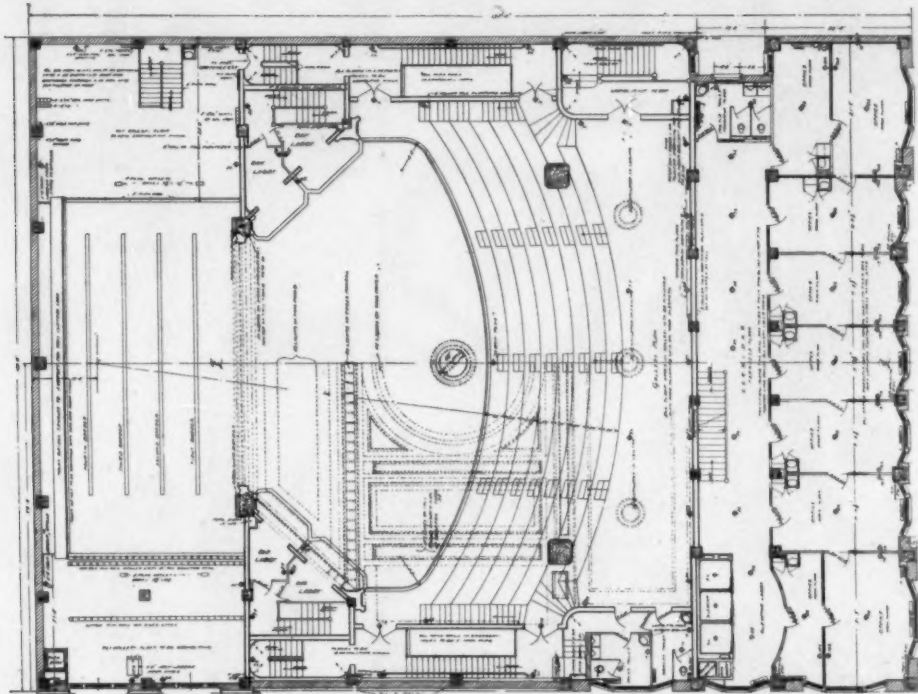


BASEMENT PLAN

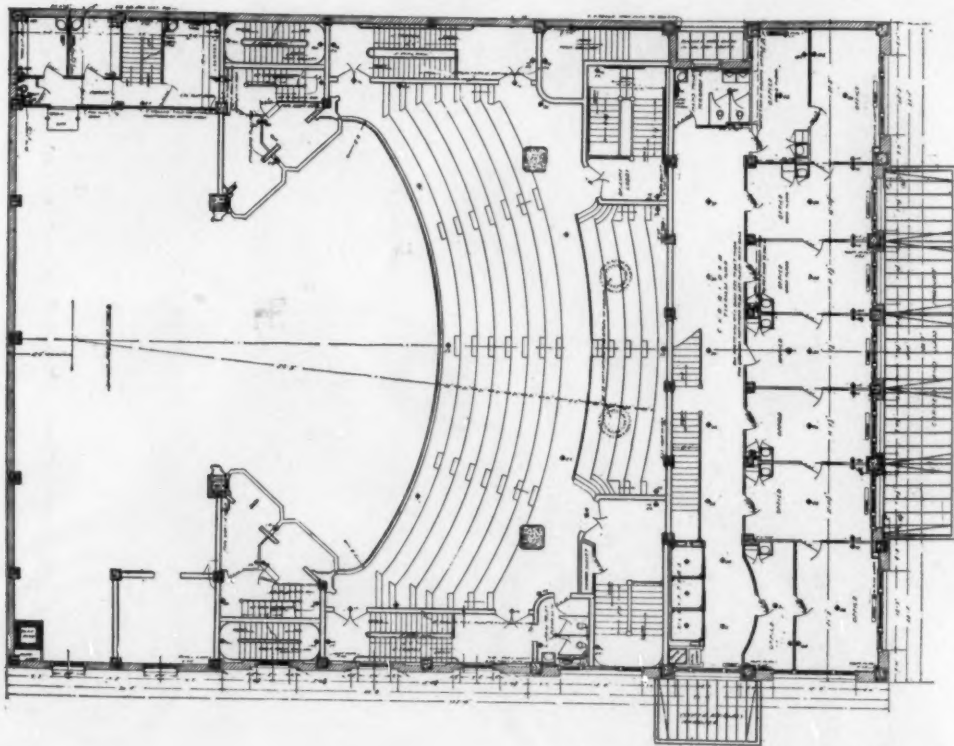
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GALLERY AND TYPICAL THIRD AND FOURTH FLOOR PLAN

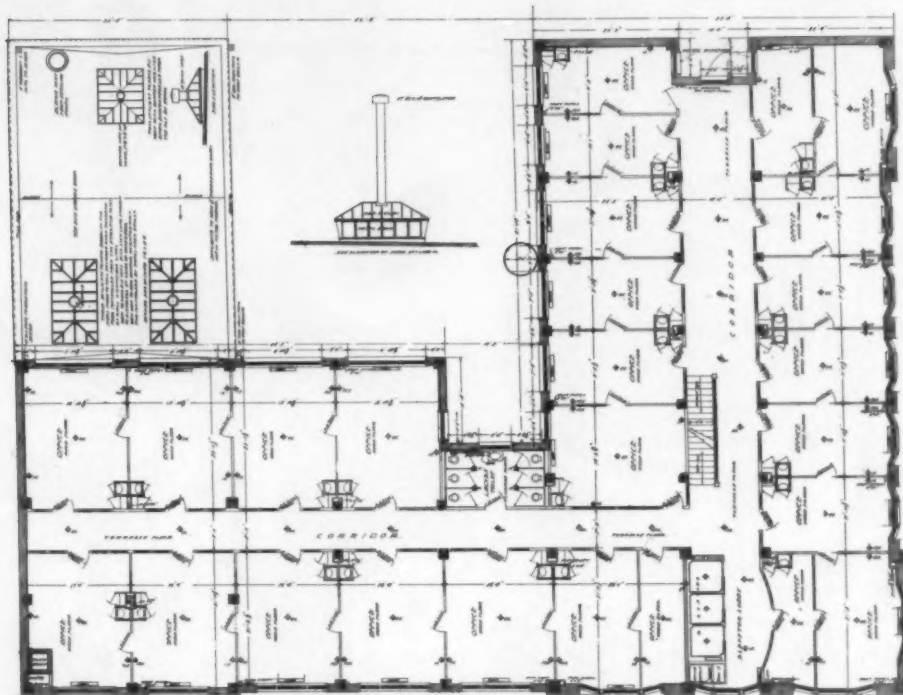


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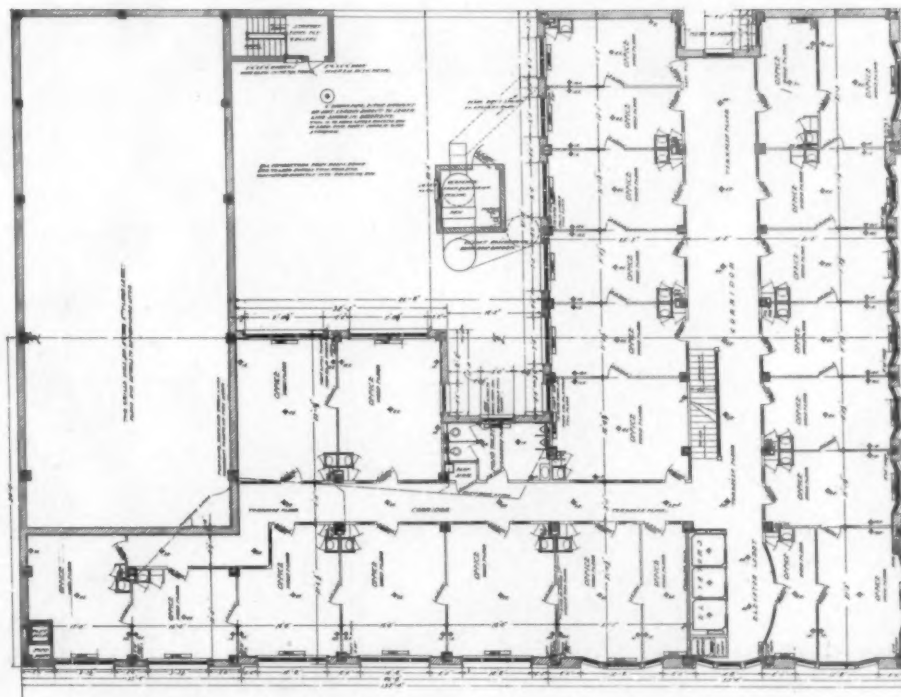
BALCONY AND SECOND FLOOR PLAN

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SEVENTH FLOOR PLAN

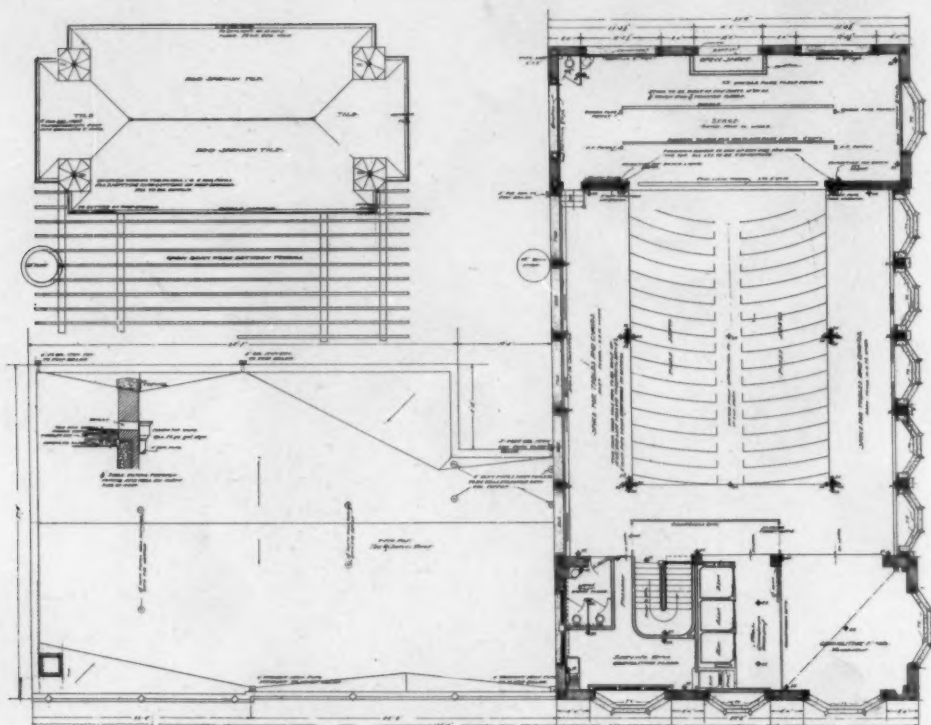


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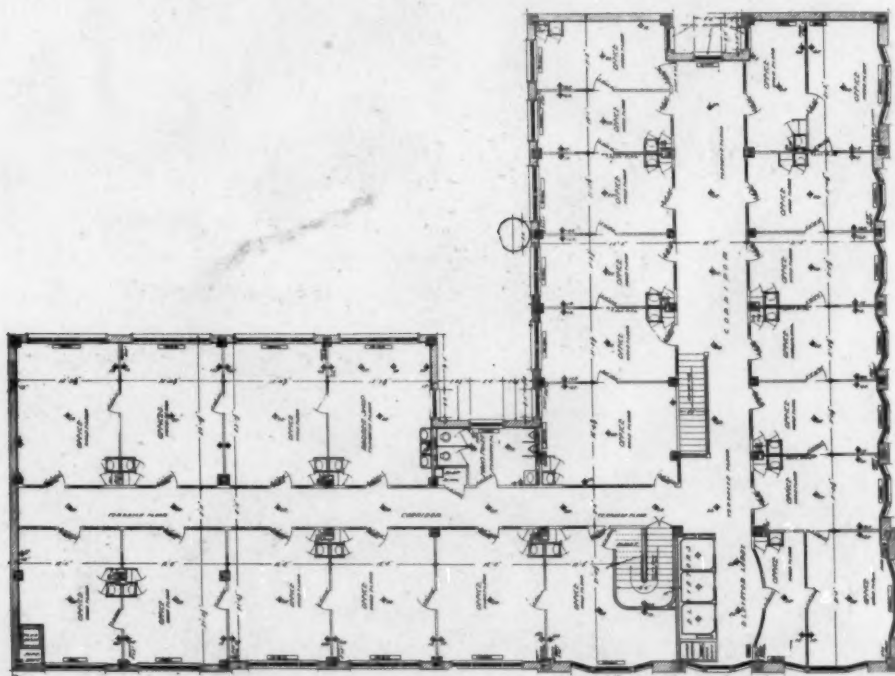
FIFTH AND SIXTH TYPICAL FLOOR PLAN

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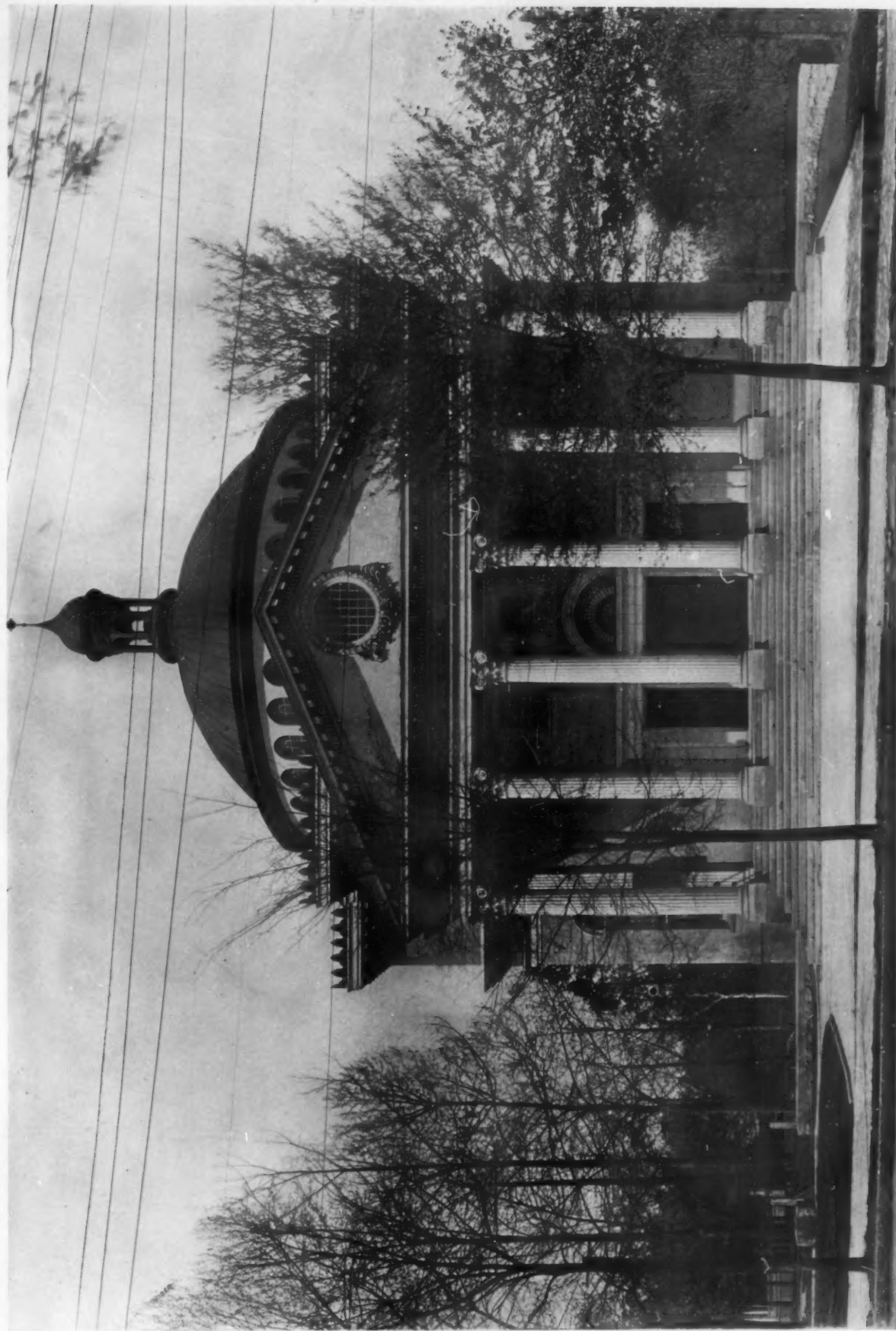
ROOF GARDEN



EIGHTH FLOOR PLAN

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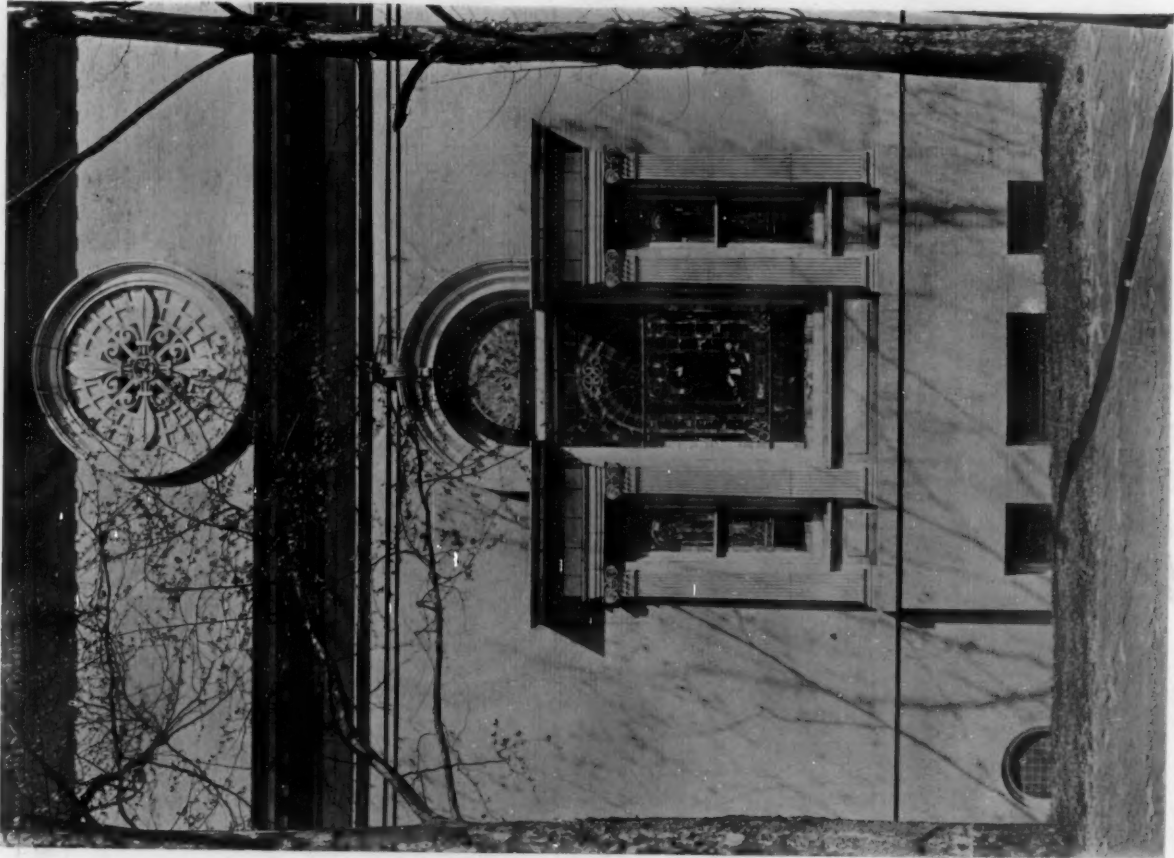
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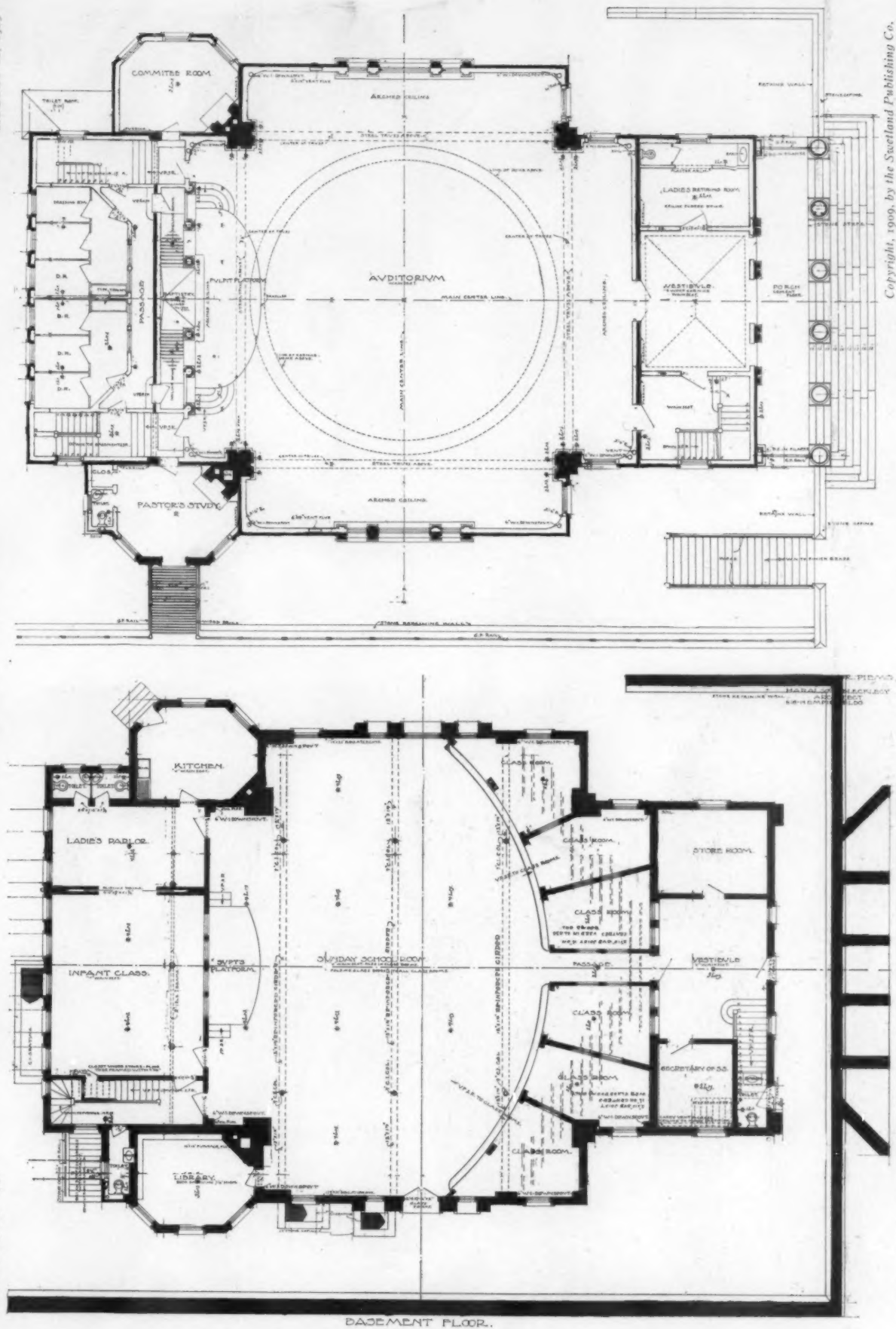
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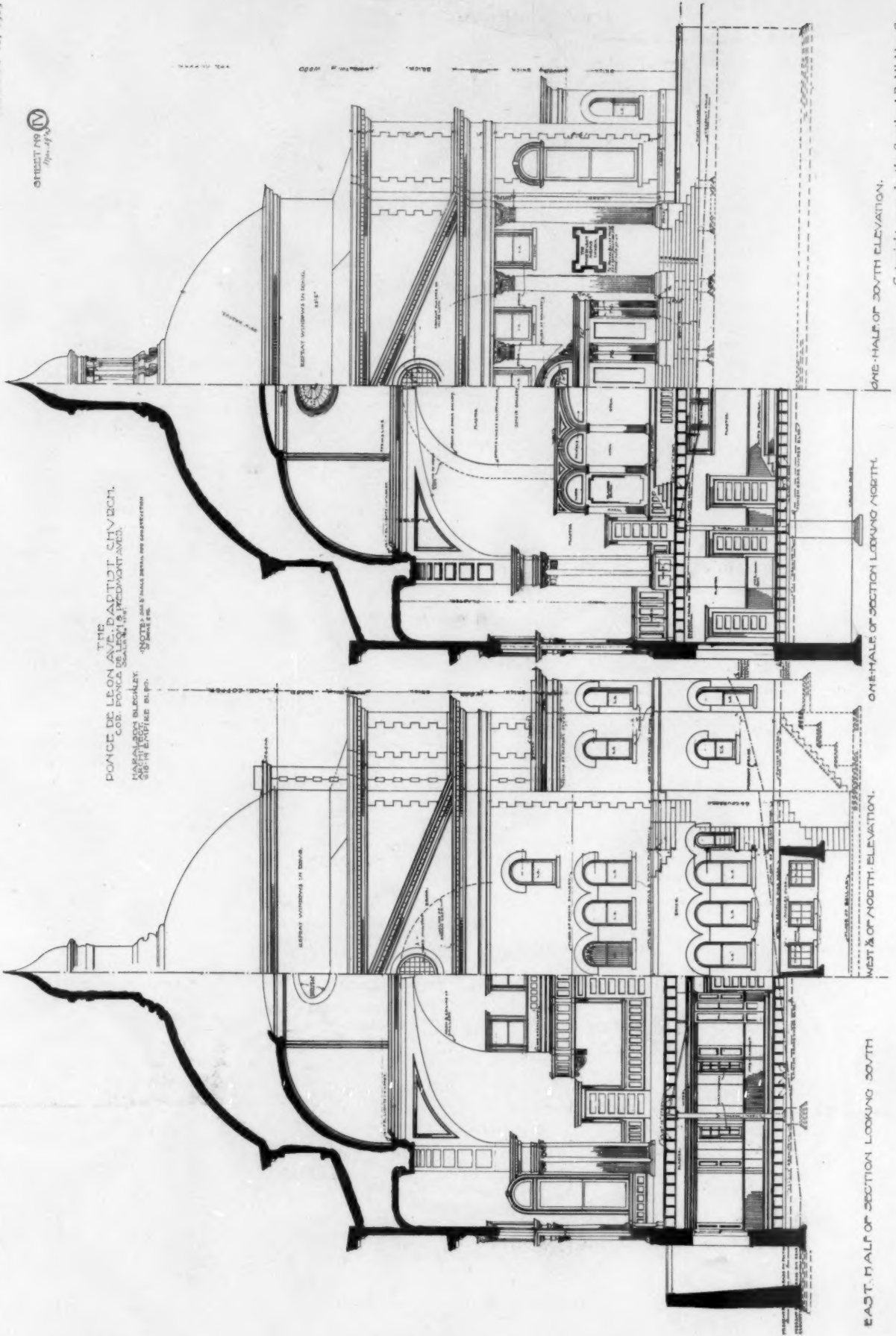


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ATLANTA, GA.

OFFICE NO. 10
100 N. 4th St.

THE
PONCE DE LEON AVE. BAPTIST CHURCH.
COR. PONCE DE LEON & BEDFORD STS.,
N. W. ATLANTA, GA.
MR. HARALSON BLECKLEY,
ARCHITECT.
NOTE: SEE 100 N. 4TH ST. FOR
SOUTH ELEVATION.



EAST HALF OF SECTION LOOKING SOUTH

WEST HALF OF SECTION LOOKING NORTH

ONE-HALF OF SECTION LOOKING NORTH

ONE-HALF OF SECTION LOOKING SOUTH

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DETAIL OF THE CATHEDRAL AT LUCCA, ITALY.