

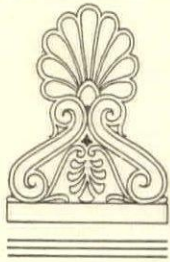


THROUGH THE AGES

JULY, 1924

“For my part, I think a noble surface of marble much fairer than most architectural features which it is caused to assume.”

—*Lamp of Power*: RUSKIN



THROUGH THE AGES



VOL. 2

JULY, 1924

NO. 3

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Entrance to the Equitable Building, Baltimore, Maryland. These marbles came unscathed through the fire of 1904, that leveled hundreds of buildings built of brick and other materials.

THROUGH THE AGES

A Monthly Magazine devoted to
the uses of Marble - its universal
adaptability, beauty, permanency
and economy.

VOL. 2

JULY, 1924

NO. 3

BALTIMORE'S OLDEST SKYSCRAPER

The Marbles In the Equitable Building Withstood the
Intense Heat of the Big Baltimore Fire

LONG before the great Baltimore fire of 1904, and coincident with the advent of electric cars, and almost as early as the appearance of the first cable cars in the country, there was erected in Baltimore an office building that at the time was considered the finest in the South. The site was in the very heart of the city, opposite the fine Court House and Post Office and a block from the City Hall. These three public buildings, each of white marble from Maryland, and each occupying a whole city block in area, were then, as they are today, one of the most interesting and imposing groups of municipal structures in the country. The new office building that was constructed back in 1891 was a worthy complement to its neighbors, and today it stands as a monument to the foresight and good business judgment of its sponsors.

When the Equitable Building was built, its nine stories were considered as wondrously high. A magazine of that period, speaking of that feature, says: "Its great height, towering as it does over the loftiest of the downtown structures, and the happy combination of materials chosen, produce an

effect of beauty and grandeur. The majestic monument stands an appropriate and lasting monument to the enterprise of its promoters."

The "lasting" qualities were not exaggerated, for after thirty-three years, it appears as stable, if not almost as fresh, as it did when it was first built. Its exterior may show traces of its battle with the grime and smoke of a bustling city, but a glance at the interior shows no indication of the passage of time. The marbles in the lobby and the upper corridors look every bit as new as if installed yesterday and the daily tramping of hundreds of feet has left but scant impression on the marble steps.

The architectural style is the Italian Renaissance, and the general plan adopted in its construction was that known as the cage form, where a system of columns and girders is employed to support the entire floor loads and the interior of the building throughout. The outside walls are sufficiently thick to support their own weight and that of the ornamental overhanging cornices, which are imitations of those of the famous Riccardi Palace in Rome. The constructional



The Main Corridor, looking toward the elevators, in the Equitable Building.
The marbles are Tennessee and Carrara White Vein Italian.

columns are built within these walls and rise in sections from the massive foundation piers to the top of the building. The girder beams and floor beams, securely braced, anchored and bolted to the main columns, form altogether a complete iron cage, self-supporting and independent of the walls. At the time, this method of construction was unique, the Equitable Building in New York, which had only recently been finished, being one of the first, if not the original, to adopt such a system. Another feature that attracted attention was the construction of the inner court walls, of hollow brick faced with English enameled brick, built very thin and in sections. Each story is carried on an iron girder independent of

all others, from bottom to top, with slabs of white marble under each window, and a continuous string piece of marble at the tops of the windows.

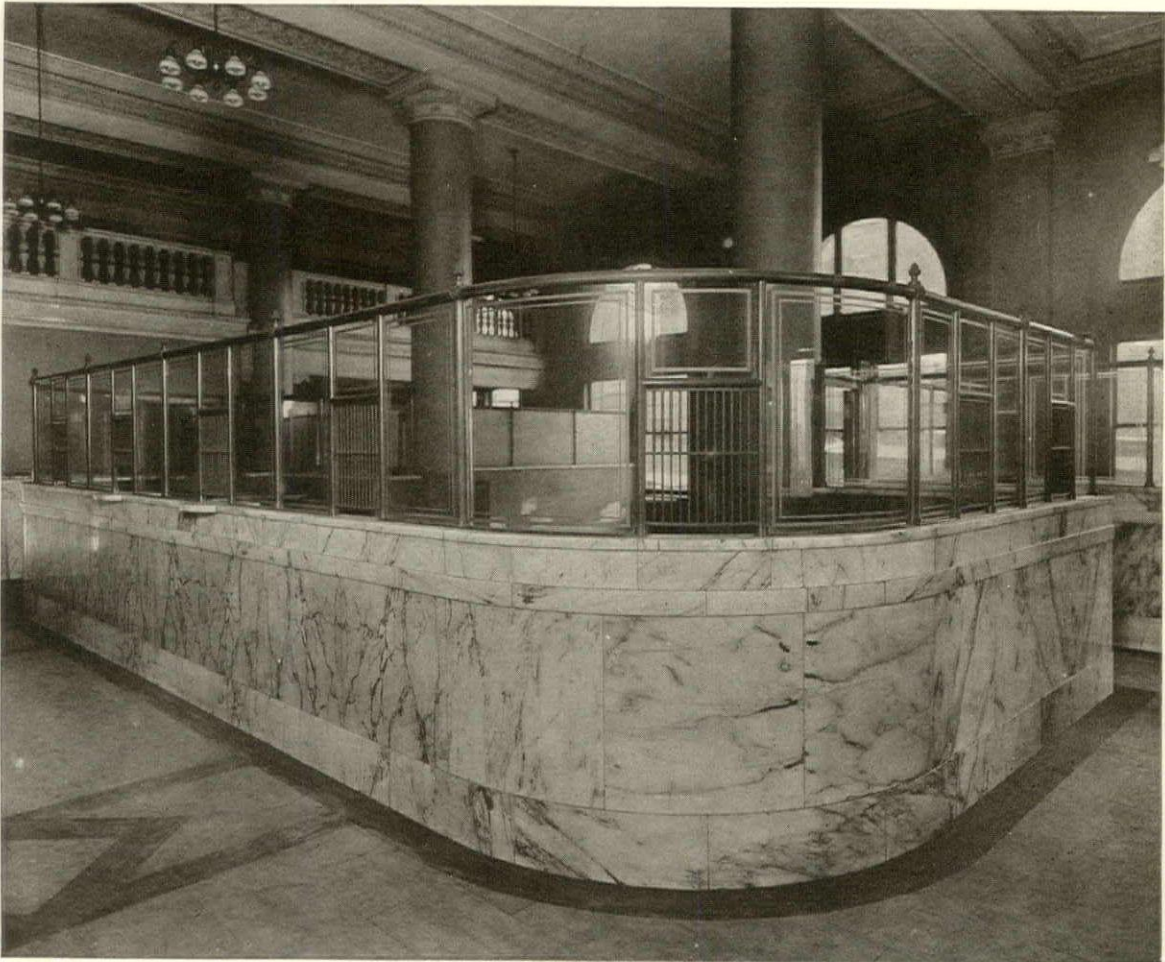
In 1901 the company controlling the Equitable Building acquired the site adjoining on the west and began the erection of another office building. The two occupy the whole block bounded by Calvert, Fayette and St. Paul Streets and Bank Lane. A somewhat different style of architecture was adopted in the later edifice, brick and stone both being used for the exterior; but, after the fire of 1904, the bricks between the stone voussoirs were covered over with concrete and finished to give the whole wall surface the appearance of stone. The Cal-

vert Building was carried up twelve stories in height and given the form of three sides of a square, the open side fronting on the main street, Fayette. The first two floors and basement, however, were built up across the opening, and the entrance placed in the center, between the two wings. This arrangement gives the appearance of two separate structures, unless one is directly in front of the entrance way.

Marble was used extensively throughout both these buildings, especially in the entrance foyers, and it is a matter of record that this material passed successfully through the test of the big fire. Though situated directly in the path of the flames that leveled hundreds of other Baltimore build-

ings, these two suffered comparatively small damage. The marbles in both entrance halls are today just as originally installed, even to the marble mosaics.

The Calvert Street entrance of the older building is through a spacious and lofty vestibule, vaulted with marble to the main corridor, twenty-two feet wide. The floors are of Tennessee marble, and a double stairway meeting at the entrance to the main corridor contains handsome balusters, elaborately carved. White Italian Veined Statuary marble was used for this stairway, and the walls are lined with Tavernelle panels and pilasters alternating with mosaic marble panels framed in Tennessee. The arched ceiling, wholly of marble, is panelled with



One of the two Banking Rooms on the ground floor of the Equitable Building.
The floors are Tennessee, the counters and wainscoting Pavonazzo marble.



Lobby of the Calvert Building. These marbles successfully withstood the Baltimore fire.

conventional mosaic designs and adds greatly to the impressiveness of this entrance way.

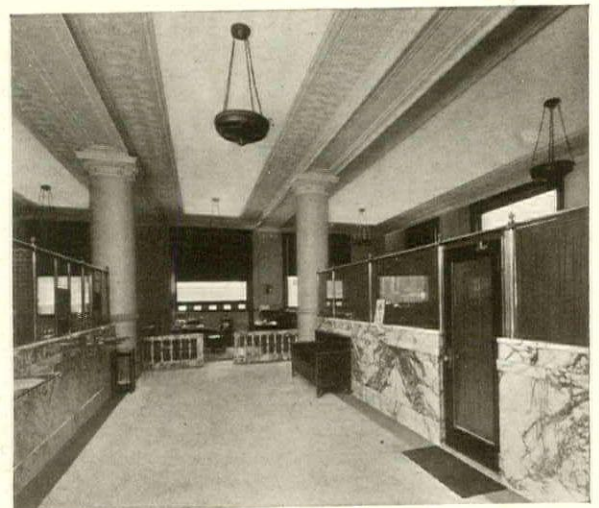
Within, the corridor leads to a cross corridor giving access to the elevators. Here are Tennessee marble floors, Italian marble walls and white marble columns with a marble balcony at the mezzanine floor level. To either side near the main entrance are large banking rooms, each about fifty by one hundred feet, equipped with large vaults and having ceilings twenty feet high. These are wainscoted in marble, and the one on the north shows an especially handsome installation of Pavonazzo marble, not only in the wainscoting but in the counters as well.

The entrance to the Calvert Building is equally rich in white marbles, the large columns near the elevators being particularly effective. The treatment of the first floor is different from that in the Equitable Building, except in the west banking room, occu-

ried by the W. W. Lanhahan & Company.

In the main corridor, an unusual note is struck by the manner in which the columns are placed in relation to the pilasters, as well as the treatment of the Ionic capitals. In front of each pilaster, with an intervening space of some three feet, is a column of the same height. Along the front and along most of each side, these are true columns, with a slight entasis. In the rear, these are square—practically piers—but having the same base and capital treatment

as the true columns. These capitals have the centers of the volutes joined by curved wreaths of graceful design, and this same scheme of decoration is continued in the capitals of the pilasters. Above the columns is a frieze of classic type, surmounted by a dentil course suggesting a cornice. The ceil-



The West Banking Room on the ground floor of the Calvert Building.

ing is a low-arched glass skylight, extending from side to side of the corridor, and affording an abundance of light. The floor is built of rectangular blocks of Tennessee marble, and the walls are wainscoted to a height of six feet with White Veined Statuary marble. Here, too, the original marbles installed before the fire are still to be seen, not even marred by the subjection to such extreme heat.

In the upper floors of both buildings, the corridors are of marble mosaic with borders of Verde Antique; while all the toilets are of Tennessee Pink marble with tile floors. Despite the age of the buildings, they are equipped with many modern devices and systems. Some, like the Cutler Mail chutes and the ventilation system, were installed originally and have proved remarkably efficient. The ventilation of the various apartments is through openings into the corridors connected with the main stairway, at the

top of which are large ejecting ventilators. The toilet rooms have a special forced ventilation. The lighting is so arranged as to be supplied from the street service or from a generating plant in the basement built on specially prepared foundations isolated from the building foundations, and all the steam and exhaust piping is carried in trenches. The panel board system of wiring, at that time an innovation, was used. Other features have been added from time to time and these structures bear out the contention that it is possible to keep an office building of steel or stone type thoroughly up-to-date by the proper management.

The architect of the older building was Charles L. Carson. After Mr. Carson's death Joseph Evans Sperry, who was associated with him, was delegated to complete the drawings and carry on the work, and it was he who designed, some ten years later, the Calvert Building.



The Banking House of W. W. Lanahan & Co.,
in the Calvert Building, Baltimore.

THE HOUSE OFFICE BUILDING

The Real Working Quarters of Our Congressional
Representatives in Washington

NEARLY everyone is familiar with the appearance of the Capitol in Washington, either by sight or hearsay. This also holds true of such well-known structures as the White House, the Monument, Lincoln Memorial and others equally famous. There are, however, two buildings in the nation's capital that, while not so widely known, are equally worthy examples of the architect's skill and as closely associated with our political life as the Capitol itself. These are the office buildings, one for the House of Representatives, the other for the Senate, finished in 1908 and 1909 respectively.

The House Building was authorized by an act of Congress approved March 3, 1903, and its purpose was to provide committee rooms and necessary office rooms for the House members. The committee appointed to supervise its construction was headed by Joseph G. Cannon and one of its first acts was to select a site. Square 690 of the District of Columbia was chosen, a tract immediately southeast of the Capitol, and bounded by B, First and C Streets, and New Jersey Avenue. The total frontage of this lot is 1,747 feet or approximately one-third of a mile.

The B Street and New Jersey Avenue fronts have been set back from the curb about 55 feet, and the space between the building and the sidewalks has been devoted to terraces, to give the structure an adequate architectural setting.

The building is planned in the form of a hollow square, the open part in the center being a court nearly 300 feet in diameter.

The design of the Capitol was followed in that the principal front (B Street) of the House Building shows three stories above ground, while the grade falls away so rapidly on New Jersey Avenue and First Street that the rear on C Street is five stories above ground, the lowest story being a sub-basement on a level with the street and court. This has made it possible to arrange ample driveway entrances in the center of the C Street wing, on the street level. These entrances open on a large room for handling mail supplies. A subway leads from the corner of B Street and New Jersey directly to the Capitol, and this feature made possible the elimination of the old sidewalk lifts that were such unsightly features of the last approach to the Capitol.

At the meetings of the Commission, the presence, advice and counsel of men, eminent as engineers and experienced in the construction of great buildings was possible, among them Mr. Bernard P. Green and Colonel, then Captain, John Stephen Sewell, the latter a member, at that time of the Engineer Corps of the United States Army. A consulting architect was employed, Mr. Thomas Hastings, of New York, who was to be responsible for the correct architectural details of the exterior and the proper fitness of the interior.

Chief among the problems that developed in the very beginning was that of the heating, lighting and power systems. The Congressional Library had its own plant, and it was originally planned to install another plant in the House Office Building that would be sufficient to take care, also, of the



Rotunda of the House Office Building, Washington, D.C.

Capitol. The Senate had, however, under consideration the proposition to erect an office building for the use of the Senators, and it was deemed impracticable to extend the plant to cover the new situation. The result was the decision to establish a central plant that would not only furnish heat, light and power to the Capitol, the House Building, the Congressional Library and the proposed Senate Building, but would have sufficient capacity to supply any other structures that might be erected on the site adjacent to the Capitol grounds. This plant was located on a reservation south of the Capitol known as Garfield Park, some 50 feet below the levels of the Congressional Buildings, thus providing for steam transmission with suitable return drainage.

The exterior of the House Office Building is classic in design, being Roman Doric in its order. It suggests, in its general division of parts, the Gardo Meubla on the Place de la Concorde, Paris, while the pavilions are modeled on those of the Colonnade du Louvre. The front is divided, architecturally, into two parts, with the lower story forming a rusticated base; and a colonnade, topped by an entablature and balustrade, extending through the upper stories.

The B Street façade is distinguished by a multiplicity of columns. Between the two pavilions, a distance of nearly 300 feet, are to be seen a total of fifty-two columns, each one about 20 feet high and $3\frac{1}{2}$ feet in diameter. Thirty-two of these are placed in pairs, in seventeen "bays" with a single column at each end. The remaining eighteen are elsewhere on the pavilion.

A large circular head window at the entrance is set off by carved emblematic panels in the angles between the circular architraves and the pilasters, with two free-standing columns on either side extending from the second floor level to the bottom of

the architraves of the cornice entablature. The entrance door to the vestibule has a segmental head, with broad, deep-seated paneled jambs.

The principal decoration of the First Street elevation is the pavilion at the corner of B Street. This extends through the third and fourth stories of the building. The ornamentation consists of four pairs of twin columns, set on plinths that receive the cap of the balustrade, the columns being adorned with turned balustrades and molded bases. The lintel course, molded on the face and soffit, forms a part of the entablature over the pavilion. Three sunk panels form the ceiling.

The C Street elevation is ornamented with balconies resting on heavy carved corbels with a balustrade of turned marble and heavy molded caps. The walls of the first story are decorated with rustic marble, which continues around the building, stopping against the walls of the First Street pavilion.

The New Jersey Avenue side has no colonnade, but pilasters are used instead; the other two façades are devoid of columnar treatment, except for the short series of eight columns at the extreme north end of First Street, as mentioned above. The design of the exterior is such that, while interesting upon close examination, neither their size nor their treatment is able to detract from the effect of the Capitol. The long unbroken cornice lines lead up naturally to the larger and more stately edifice, whose great dome is the crowning and dominating unit of the group.

Marble quarried in South Dover, New York, was used for the New Jersey Avenue and B Street fronts, while that used for the other fronts came from what is known as the Ball Grounds Quarries in Georgia. On B Street there are fifty courses of marble in



Exterior of House Office Building, showing front entrance on B Street.

sight while C Street shows sixty-one. These courses are generally 1 foot $4\frac{1}{2}$ inches in height. The marble ashlar facing of the walls alternates in thickness from 8 to 12 inches. The 8-inch ashlar was anchored to the brickwork with two galvanized iron anchors $1\frac{1}{4}$ inches wide, 12 inches long and $\frac{1}{4}$ inch thick.

All projecting courses of marble had bearing on the walls from 12 to 18 inches, according to the size of the stone and the size of its projection from the face of the walls. All marble was given a full coat of anti-hydrone paint to prevent any stain from the cement mortar of the brickwork showing on the face of the ashlar.

The contract for the exterior and the

limestone used on the court fronts, and the marble used in the Rotunda and the Main Stair, was the largest single cut stone contract executed in this country up to that time. It called for the furnishing and setting of between 285,000 and 290,000 cubic feet of stone. The amount of the contract was over \$1,100,000.

The building has four marble approaches to the main entrance. In extent they cover the breaks in the walls formed by the projecting features of the corner pavilions. The main approach, at B Street and New Jersey Avenue, architecturally forms the base for the pavilions at this point. The floor of this approach is reached by two flights of steps, and back of these, on top of



Classic severity distinguishes this fine doorway.

the platform, are other marble steps leading directly to the entrances, built between large marble pedestals.

Large quantities of marble were used in the interior. It is found chiefly in the rotunda; the magnificent stairway in the rear; the jambs, architraves and pediments of the entrance doors to conference rooms; the two flights of marble steps immediately under the main steps; and the marble steps and risers of the two fine flights of stairs east and west of the rotunda.

The rotunda itself is an imposing chamber, with its second floor arcade extending completely around the room. Eighteen rectangular piers, starting at the marble floor, are joined by circular arches, and these support a circular entablature course. Just over

each pair is a column and between the columns is a molded marble balustrade. Up to the top of the columns, all of the material in sight is marble, including the tile floor of the arcade. The diameter of the rotunda is a little over 57 feet, but the encircling wall is about 75 feet. The height is 87 feet, considerably less than that of the Capitol.

The main stairway from the rotunda is in two flights, and was cut out of South Dover marble. The heavy ornamental balustrades and marble wainscoting extending to the height of the top landing at the entrance to the conference room, add to the effect.

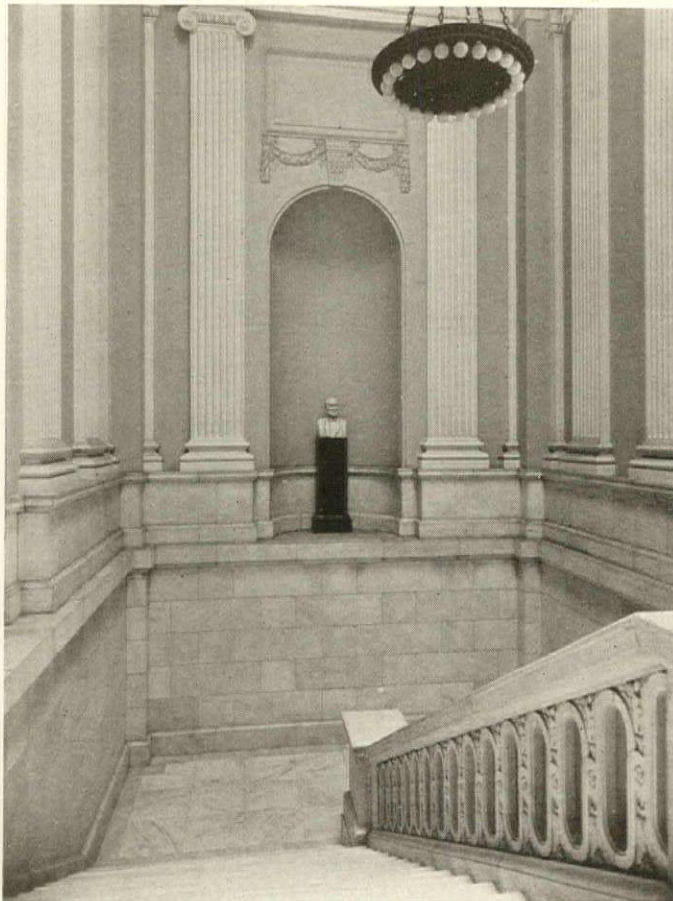
The conference room, about 86 feet long and 54 feet wide, has a floor of marble laid with a ground of White Vermont, with small squares of black, placed to form a geo-

metrical combination, and a border of two lines of dark marble. The wall base is of molded marble, bevelled at the top. This room is used for public hearings before House Committees when a large attendance is expected, and relieves the overcrowded condition of the Capitol Building. It is also frequently used for caucuses.

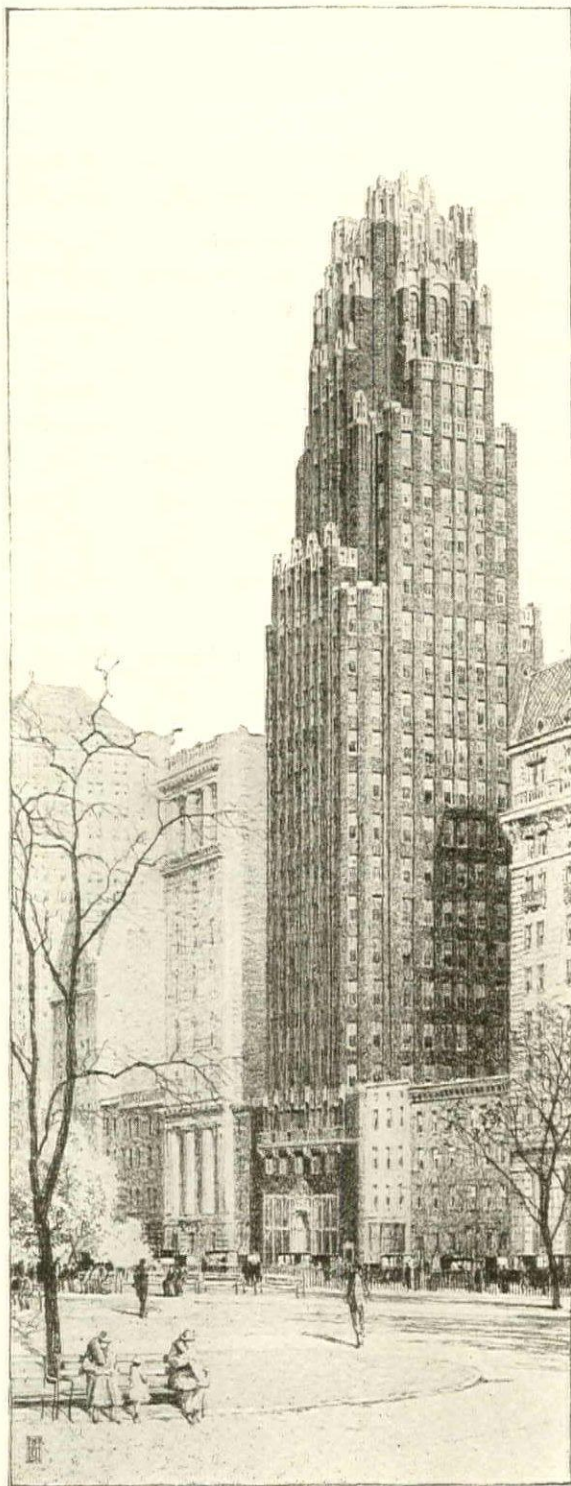
The floors generally of the corridors throughout the building are of marble tiles, while the barber shop and toilets have floors of Tennessee. The latter rooms are completed with marble from Georgia.

The unusual dimensions of the building required considerable study in order to provide ample elevators and staircases. The twelve elevators and eight stairways meet all demands and the latter are lighted by

windows so arranged that the long corridors separating the rows of offices are fully illuminated. There are four hundred and ten rooms available for offices and committees, without including rooms devoted to special uses. The total cost of the building and site was slightly under four million dollars, and the whole work was done by the government acting as its own general contractor, letting out a large number of separate contracts. It is claimed that this method effected a saving of several hundred thousand dollars, as well as a saving in construction time, though it entailed a very considerable amount of bookkeeping, drafting and general supervision which the system of the general contracts places on the general contractor.



Main stairway of House Office Building, showing bust of Joseph G. Cannon.



The new twenty-three-story American Radiator Building, at 40 West Fortieth Street, New York City. Raymond M. Hood, architect.

BLACK AND GOLD

American Radiator Company's Building, in New York,
Presents an Unique Color Scheme

ONE of the distinctive additions to New York's office buildings, and one that represents a radical departure in architectural treatment, is the new American Radiator Building at 40 West 40th Street, facing Bryant Park. The park itself represents a restful oasis in midtown New York's throbbing life, and it is rapidly becoming walled in on every side by towering skyscrapers; but not one of them has attracted such widespread attention nor aroused so much comment as this new twenty-three-story building.

The exterior color scheme and the scheme of set-backs are the features that make this one of the most unusual structures in the city. In addition to these, the night effect, secured by a special plan of illumination, is also worthy of comment.

The general style of architecture combines that of the south of France, the Romanesque and the Gothic, with the latter predominating, though the treatment is free at all times. The first set-back occurs at the fourth story, and is repeated at the twelfth, seventeenth, twenty-second and twenty-third floors. The top of the building terminates in a circular tank built around a smokestack or chimney, mounted on a superstructure, and the whole enclosed in masonry; while the turrets, placed at various points around the upper parts, suggest the feudal castles of old England.

The exterior color scheme is black and gold, and the brick and stone used in the building were especially treated to obtain these colors. The black was obtained by dipping ordinary clay brick in manganese

and burning them. Carved corbels that symbolize the emotions and the physical elements that arouse heat are placed at the beginning of the first set-back. As the eye follows the perpendicular lines upwards, the color scheme becomes more and more picked out with gold, until at the top the golden stone is used exclusively, with surfaces in high relief covered with gold leaf.

Raymond M. Hood, architect, who, associated with John M. Howells, took the first prize for the Chicago Tribune Building in the International Competition held last year, designed the building. Of its unique features Mr. Hood says:

"The radical departure from standard practise arose from a feeling that so many office buildings are monotonous if not ugly. Monotony and ugliness in office buildings seem to come from the fact that the windows are actually black holes, and the regular spacing of these black holes makes the building look like waffles or doormats hung up to dry. The solution to this problem lay in finding a color that would tie together the black holes and make them less apparent. But as the building progressed we found that it struck a very cheerful note. The idea of gold trimming came next and caught the fancy of us all. Precedent, at least in Europe, pointed to other periods of architecture where black has been used effectively, particularly, for example, in the Grand Place of the Hotel de Ville, Brussels. In Pompeii and in France at the time of the empire, whole rooms were done in black with only a slight relief of color.

"We felt that the old problem in office

building design demanded a new solution and that just as other architects have broken away from the conventional treatment in certain directions and raised the standard to higher levels, we might contribute a new plan of coloring which would make for progress."

The interior of the building is as fascinating as its exterior. The outside vestibule is paneled in bronze and red Verona marble and is bordered by bronze strips reaching to the vaulted ceiling, which is also dressed in red Verona marble and bronze. There are bronze medallions of the phoenix and the salamander—two more characters symbolizing heat on either side. The ceiling of this outside vestibule is approximately 20 feet high.

The inside vestibule is built up with glass, and ornamental bronze screens hide massive steam radiators. Heavy glass and bronze doors lead directly into the elevator lobby and main corridors. These are paneled from floor to ceiling with South American Monte Aurate marble of black with gold veins. The floor of the lobby is of Napoleon Gray marble with a border and medallions of Belgian Black. The flooring is divided into panels with ornamental brass strips, and the ceiling and cornice are of ornamental plaster, antiqued.

The three electric elevators are of the latest type developed by the Otis Elevator Company, and are controlled by a micro-leveling device which stops the car at a level with the floor.

A novel feature of the American Radiator Building will be the display basement. This will be reached by stairs leading down a series of platforms upon which will be exhibited furnaces and radiators. The lowest level will contain the boiler-room and five American Radiator Company boilers which will not only heat the building but will serve for demonstrations to prospective customers.

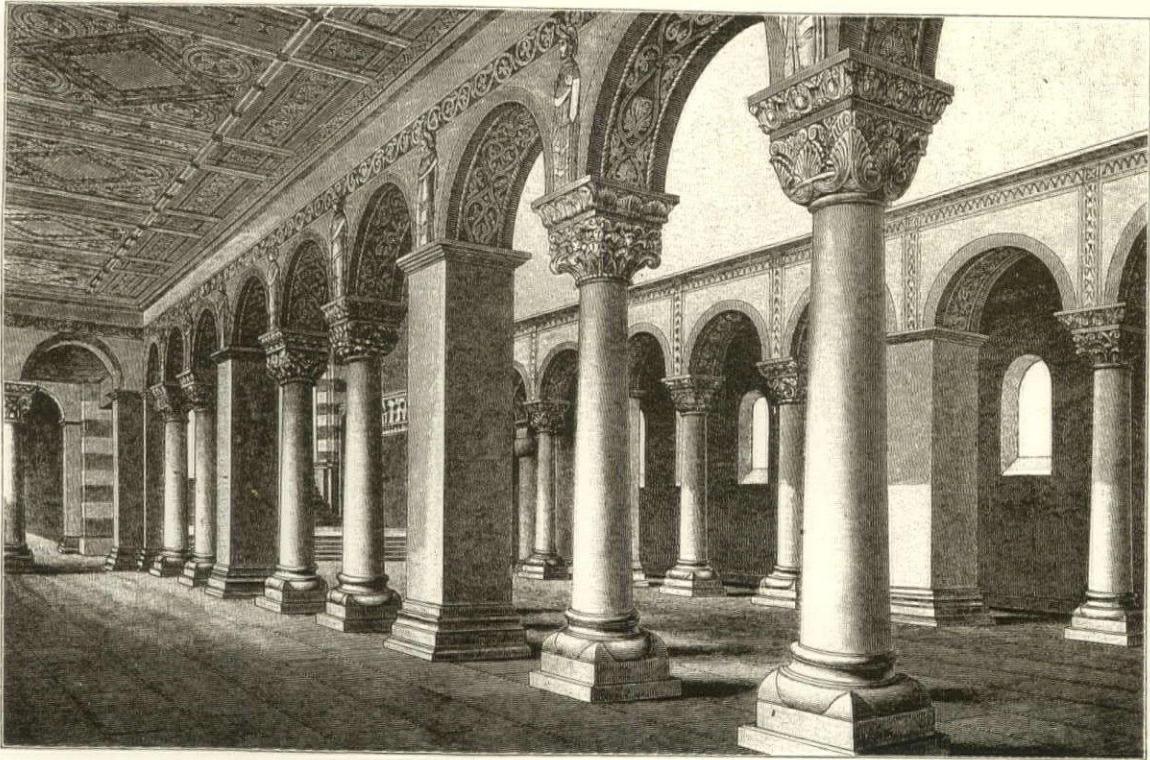
The boiler-room has a stone floor and wainscot, and a decorated vaulted ceiling. This basement, with its heavy carpets and decorative scheme, will be one of the most unusual showrooms in the city. Stoking will be done by uniformed stokers who will transport their coal on rubber-tired wagons.

Over 90 per cent of the approximately 77,000 square feet of floor space of the building is within 25 feet of the windows. Twenty-two thousand feet of this will be utilized by the American Radiator Company, which will occupy one of the stores, the third and fourth, and the sixteenth to the twenty-third floor inclusive.

Twenty-five hundred lights will illuminate the interior of the building and 230 H.P. motors will operate the elevators, pump and ventilating system.

To make the building stand out at night, Mr. Bassett Jones has devised a scheme of exterior illumination which will seemingly transform the structure into a pillar of fire. At each set-back there will be a bank of lights which will give the appearance of pools of liquid fire or semi-cool lava. Blood-red lights will illuminate that portion containing the red and buff brick; rose and amber lights will play upon the first section of golden stone, and as the higher points are reached, amber then white lights will be used. The whole will result in one of the most startlingly attractive night pictures to be found anywhere and observers at a distance will, by this ingenious arrangement of electric lights, be given the impression of a seething furnace roaring above the skyline of the Greater City.

The building was erected by the Hegeman, Harris Company, Inc., builders, and occupies a plot of 77 feet front by 100 feet deep. It is estimated that the building, including land, when fully completed will cost in the neighborhood of \$2,000,000.



St. Michael in Hildesheim.

(From an old woodcut)

CHURCH ARCHITECTURE

Honest Materials are of Paramount Importance
in Present-Day Ecclesiastical Designing

IF," as Ralph Adams Cram wrote, "in the year 1885 or thereabouts, one had ventured to predict that in twenty-five years the architectural magazines would be printing special issues devoted wholly to contemporary ecclesiastical architecture, he would have been considered a fit subject 'de lunatico inquirendo'." Church architecture was then in an unusually decadent condition and it was the practice to embellish the interiors of the so-called Jeffersonian mode with "aesthetic stenciling in tertiary colors and sunflower patterns, and to paint those of the former three shades of olive green without, while filling their windows with

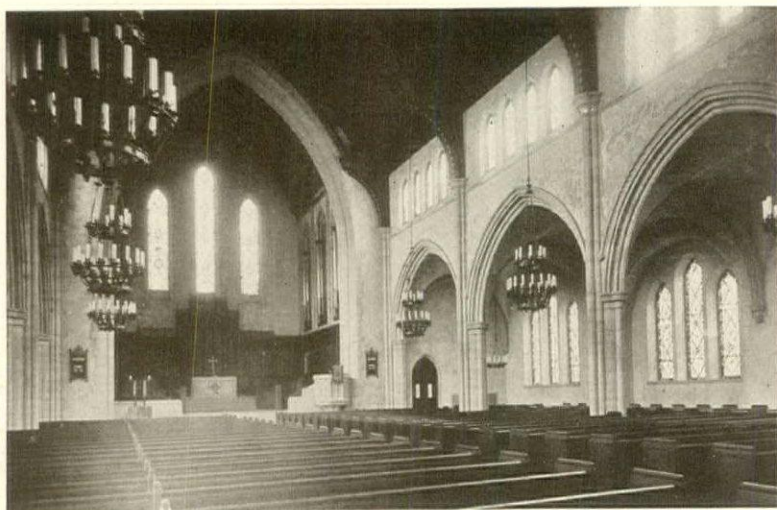
preposterous stained glass." The Episcopal Church adhered to the Victorian Gothic, the Protestant denominations were copying the successors of Richardson, and the Roman Church was beginning to build multitudes of the poorest religious structures it had ever conceived.

The following thirty-five years have seen such changes as astound the understanding. America has developed a domestic architecture that is beautiful and distinctive; a commercial architecture that is original and logical; a public architecture that is mostly refined and sometimes noble; and a church architecture that gives the promise of being



Canopy and Altar of American Cream Lens stone in the Church of Ste. Genevieve, Ste. Genevieve, Missouri.

Pulpit of the Second Congregational Church at Holyoke, Massachusetts, executed in English Bath Stone.



View of the interior of the Second Congregational Church at Holyoke, Massachusetts. Allen and Collins, of Boston, were the architects. The marble used was English Bath Stone.

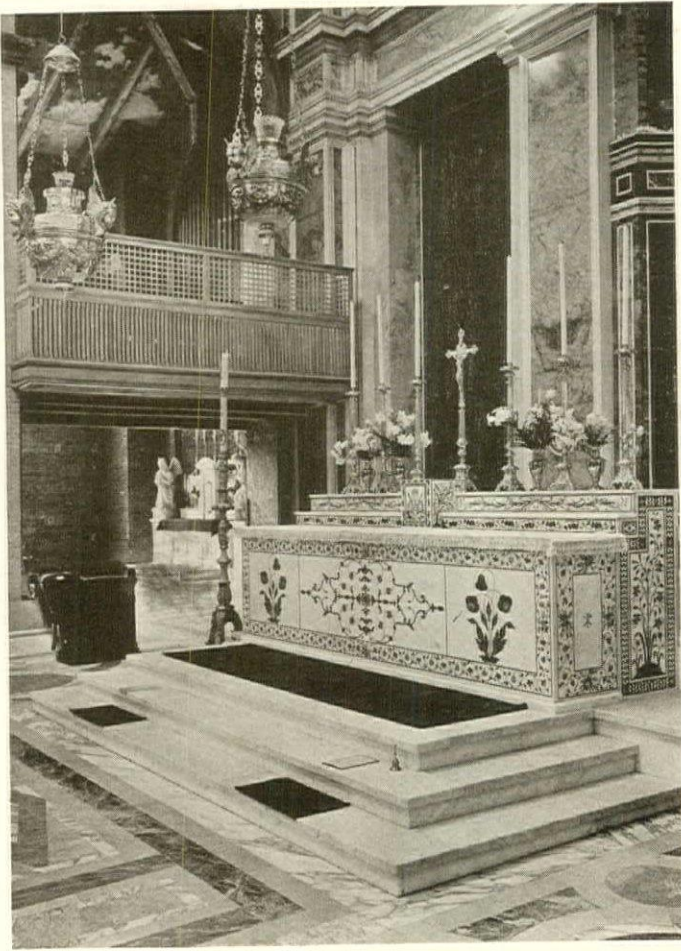
In this church at Zell, Missouri, American Cream-White Lens marble was used.



Pulpit in the St. Albans National Cathedral, donated by the men and women of Canterbury, England.

Interior of St. Albans, in Washington, D.C. The white marble is Carrara, the steps to the altar Pink Tennessee and the dark squares in the floor Royal Red. Frohman, Robb and Little, of Boston, were the architects.



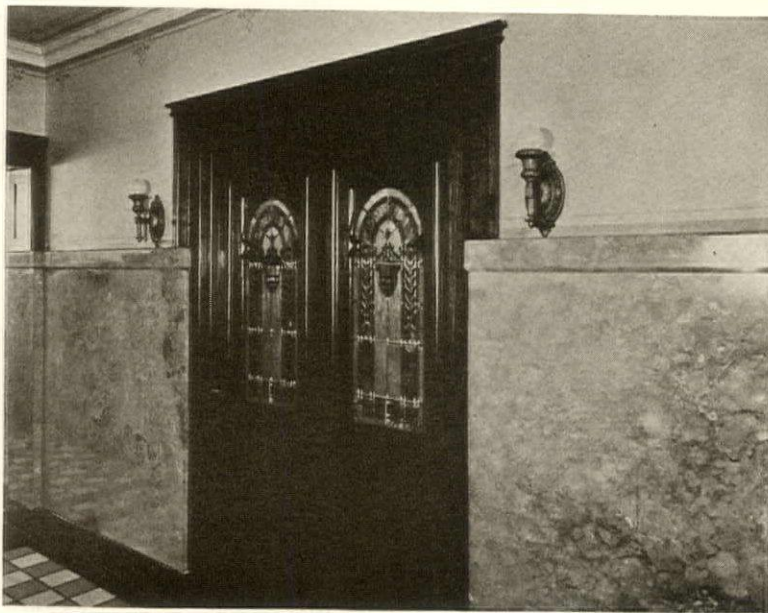
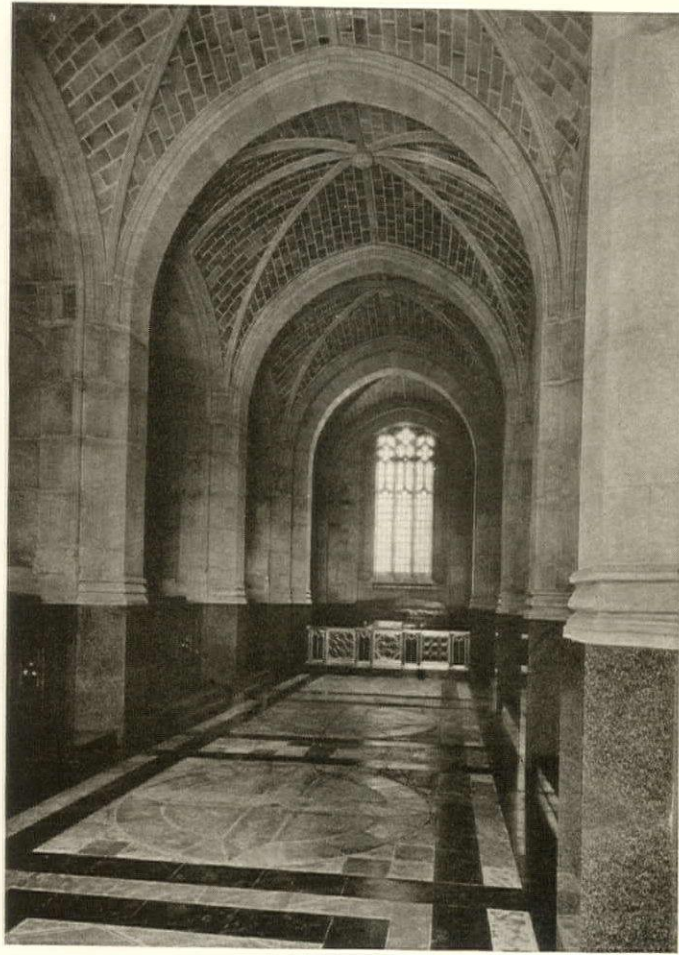


St. Matthew's Catholic Church, on Rhode Island Avenue, Washington, D.C., recently remodeled after plans by C. G. La Farge, of New York. Imported and domestic marbles were used in profusion.

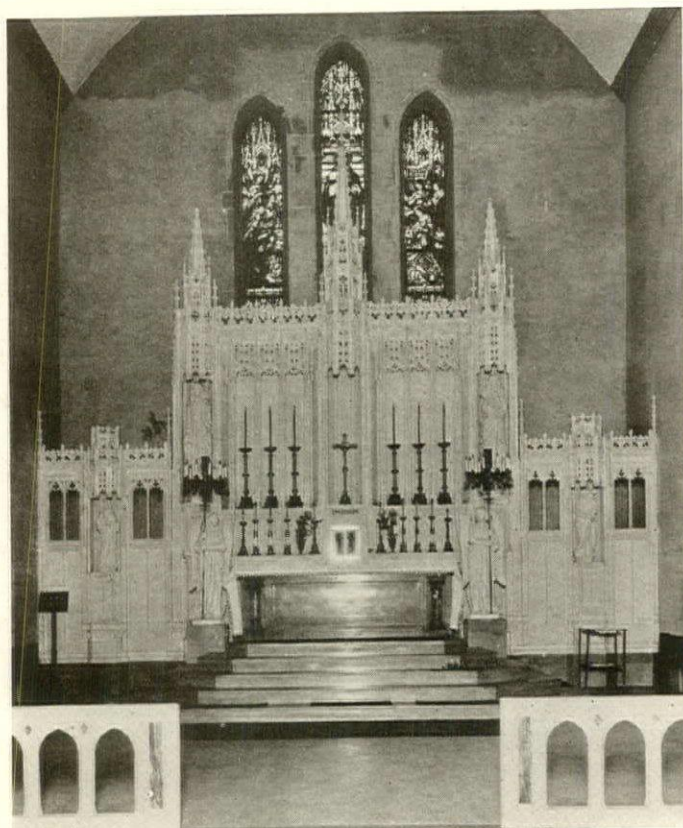
Interior of a small church at Georgetown, in Washington, showing a marble altar and marble figures. Typical example of over-elaboration.



Nave of the Nelson Memorial Building in George Washington Cemetery, Kansas City, Missouri. The floor is Pink Kasota with Belgian Black. The former is also used in the side walls.



This chapel at St. Louis, Missouri, has its walls lined with Golden Veined Onondago marble, very rich in color and veining.



© Underwood & Underwood, N.Y.

Altar of the Holy Name Church, Philadelphia. Maginnis and Walsh, the architects, specified American Cream-White Lens marble.

the equal in expression of that of the great Middle Ages.

The Episcopal Church took the lead in the beginning, followed closely by the Presbyterians. The Romans followed suit and of late the Christian Scientists have joined the select class; while the the Methodists and Baptists seem, as a whole, satisfied with the standards of the past generation.

This development has followed along three periods of style: English Gothic, Lombard and Colonial. All are being treated with great skill and individualism. The first is the choice of the Episcopalians and the Presbyterians, the second of the Roman Catholics, and the third of the Congregationalists. There occur, of course, Roman Catholic Gothic and Presbyterian Lombard,

but Colonial churches are now rare, while the Christian Scientists, except for an occasional Roman Catholic structure, are the only ones using the modern classic.

Whatever the style and whatever the sect, we find that there is a trend toward a development in richness and refinement from the beginning, in the country chapel. This is especially the case with the city church, where any suspicion of rudeness is out of the question, and where picturesque effects are futile. One of our most prominent architects, speaking of this phase of church architecture, said: "Here the material must be refined and delicate, rough stone is barred and in its place must come stone that has a smooth and well-dressed surface. Ornamentation must be finely cut and carefully

placed: everything must be refined, reserved—even formal. It also seems right that the last vestige of domesticity—if I may call it so—of homeliness, if you like, should be done away with, that the church may take on the qualities of power, formality, even of grandeur, that fit it for its new position."

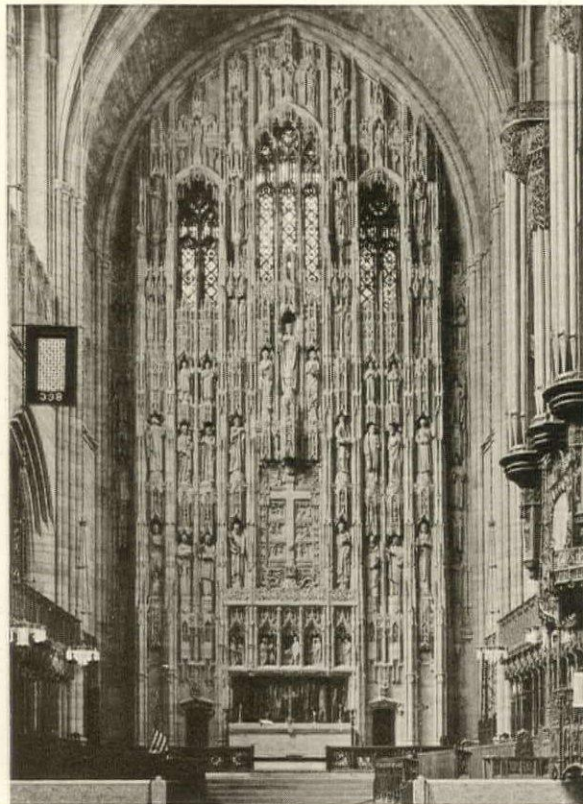
These qualities are not a mere matter of pride, or desirable merely because they flatter the feelings of a certain congregation, but because they "show a right impelling spirit . . . and because they are the least unworthy of the material treasures of this life that may be offered in the worship of God."

Nothing is more out of place than the use of cheap materials in an ecclesiastical structure, of imitation marbles, of make-believe chimes and stained glass. There has been far too much of this sort of thing in civil

and domestic architecture, but when they enter into the question of church-building and ornamentation, they became unpardonable.

"We may study the monuments of the great past until we are surfeited with erudition. We may measure and sketch and photograph the work of the Middle Ages until we could almost reconstruct any given monument. We may try to build with archaeological exactness, and in this we may succeed; but we may as well understand at once that, until we realize that beauty of whatever kind in any church is put there to the glory of God and not to the vain admiration of the passers-by, we may study and labor in vain.

"If a church is not honest—honest in its design, its construction, its decoration—it is nothing; and any added richness, if it is the richness of falsity, is an added shame."



The Reredos of St. Thomas Church, New York City, is 80 feet high. G. B. Goodhue was the architect. It is carved out of Dunville Stone from Wisconsin.

EARLY RENAISSANCE IN ITALY

Florence, the Birthplace of the Revival of Learning
in the Fifteenth Century

THE rebirth of classical architecture occurred in the country where it was originally conceived. In Italy, the land where the fire of Roman Art once burned brightly, the flame has really never gone out. It had burned low indeed, during the middle of the Gothic period, being almost extinguished, but it had at least remained alive. It was fanned into a great blaze of brilliant achievement by the intellectual movement which spread over Europe during the fifteenth and sixteenth centuries.

The revolution in art was the concomitant of the revolution in men's minds caused by

what we know as the Revival of Learning. The beliefs and dogmas of the Mediæval Period were abandoned. The Latin authors were rediscovered. Virgil and Cicero became names of paramount importance, and the architecture of the age that produced these men became a standard for imitation.

In this, patriotic feeling played its part. "The same national pride with which the Italian, when he came to know them, remembered that Virgil and Cicero had been his fellow countrymen reminded him also that the arts of ancient Rome were the work of his ancestors" (T. G. Jackson). During the Middle Ages, little regard was paid to antiquity. The building arts that developed after Charlemagne and the ruins of the empire were something quite different, and the men of the Romanesque and Gothic periods rejoiced in their new possessions and paid no attention to ancient buildings. They despised the works of the Romans as pagan, and used them only as fortresses, or what was even worse, as quarries. Not until Petrarch began to arouse public sentiment against such vandalism, did the value of age begin to be appreciated. For the first time architecture began to look backward for her inspiration, and in looking backward, went forward to greater glories and accomplishments.

Strangely enough, Italy, the parent of classical literature, lagged behind other countries during the earlier Middle Ages in noticing old authors. France and England were the first to show an interest in classical learning. During the seventh and eighth centuries, Italy was in a semi-barbaric state,

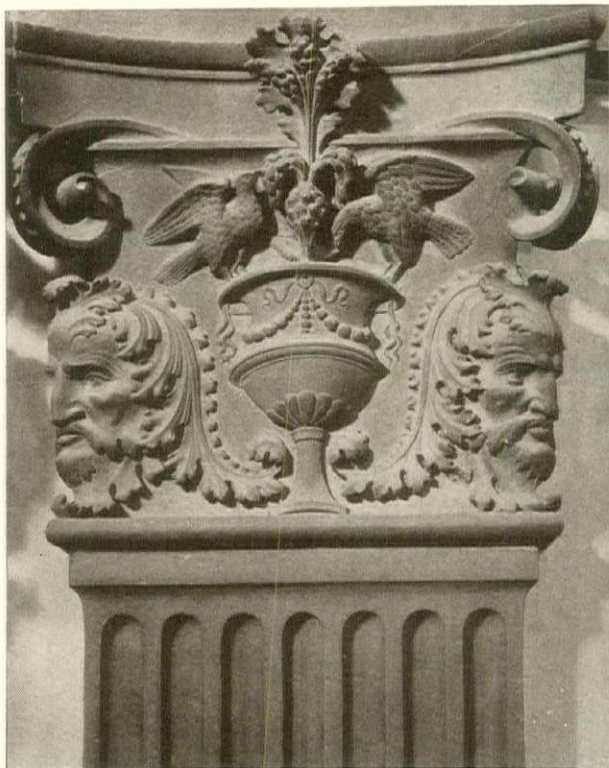


Illustration courtesy Thomas Machen, Architect, Balto., Md.

A capital of one of the pilasters in the Church of S. Spirito, Florence. The architect was Sansovino.

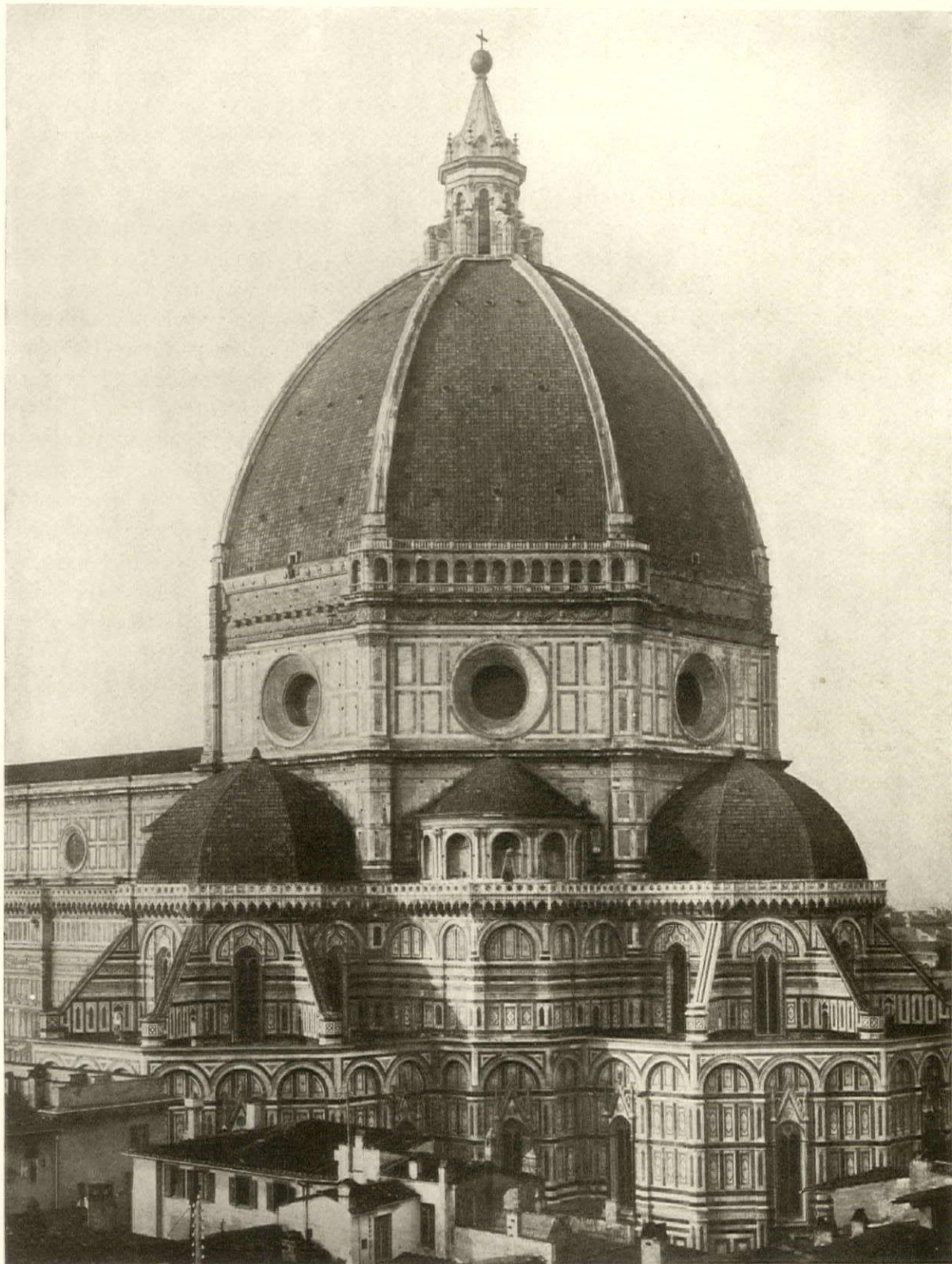


Illustration courtesy Thomas Machen, Architect, Balto., Md.

The Cupola of Brunelleschi, on the Cathedral at Florence, Italy,
begun about 1296 by Arnolfo.



Illustration courtesy University Prints, Boston.

Exterior of the Palazzo Riccardi, Florence.
The architect was Michelozzi.

and the centers of learning were in Britain and Ireland. The School of York, according to Hallem, may claim to be the oldest grammar school in Christendom, for we are told that there were no schools either in Italy or France.

The beginnings of the Renaissance movement were discernible at Tuscany, and especially at Florence, in the first quarter of the fifteenth century. There the conditions were more turbulent than in other sections and the acts of the government were the acts of the people. The Commune of Florence was constantly disturbed by revolu-

tions, but at all events, life was vitally active and free, and art grew remarkably. This was the time of Orcagna and Arnolfo; of S. Croce and the foundation of the Duomo; of Giotto's famous tower, and of Andrea Pisano's Baptistery Gates.

It is impossible to understand why the Italians should abandon a style of architecture which they were practising with skill, and revert to an imitation of a style that belonged to a dead period, unless we also understand the cause and the tendency of the great movement of the Revival of Learning. Italian Gothic, it is true, had never reached the perfection of spirit found elsewhere, but on the other hand, it had shown no sign of decrepitude. Yet this new art pervaded the whole of the country before the end of the fifteenth century. Naturally, there was practised for some time a mixture of Gothic and Classic, as in any other transitional period between any

two styles; but, "after the second or third decade of the sixteenth century Gothic architecture was condemned by the men of enlightenment as a barbarous German style, from which Vasari beseeches Providence to deliver mankind" (Jackson).

An important point to be remembered in the contemplation of this reversion to the style of ancient Rome is that architectural design became "a conscious artistic effort, the outcome, not of habit, but of choice and culture; the expression, not of national but of individual taste and style" (Statham). In Gothic the change from phase to phase,

as from decorated to perpendicular, for instance, was gradual, and due to improvements fostered in the schools of the craftsmen. It is impossible to trace the changes to any individual artist. At the classic Renaissance, however, each change was sudden, almost violent, and the authors of these changes were well known. We go from Brunelleschi, Alberti and Michelozzi to Bramante, San Gallo and Michelangelo; and from them to Palladia, Vignola and Sansovino.

The revolution in architecture at this time was as closely linked to the name of Filippo Brunelleschi as was the revolution in letters to the name of Petrarch. Vasari says of him that: "Filippo was like Giotto, meagre in person, but of genius so lofty that we may say that he was given to us by heaven to reform architecture that had been for many centuries deformed."

Born in 1377, Brunelleschi at an early age became a goldsmith and soon surpassed his master, Donatello. He spent some time in Rome, where the ancient buildings of the majestic city took hold of his imagination to such an extent that he gave himself entirely to the study of the old classic structures.

Later he was appointed architect of the still incompletd S. Maria dei Fiore at Florence. The dome, cupola and lantern were finished according to his plans. The problem was to construct the great dome, whose diameter was 136 feet, without

centering—something no other architect had been able to do. We have no particulars to tell us how the difficulties of building without centering on so vast a scale were overcome. The details of the cupola show the coming of the new style. The frieze, with its heads of cherubs and dependent foliage, and the arcaded gallery that surrounds the cupola at its springing from the top of the drum, are in pronounced classic taste.

The beauty of Brunelleschi's dome is universally admired, and his art combined in one consistent design the whole composition



Illustration courtesy University Prints, Boston.

Façade of the Palazzo Rucellai, Florence.
Alberti was the architect.



Illustration courtesy University Prints, Boston.

Court of the Palazzo Riccardi, Florence, a Renaissance product of the fifteenth century.

of cupola and tribunes. This masterpiece brought the neo-classic style in architecture to birth and a recent writer declares that all the buildings in Florence down to the time of Michelangelo bear the Brunelleschi stamp. (*Italia Artistica, Firenze*).

Florence continued as the home of the Renaissance without a check. The Medici and other great families took it up and the patronage of princes and rulers carried the new art forward with incomparable swiftness. Buildings, mostly churches and palaces, were begun in the style which Brunelleschi had revived and such famous masters as Alberti, Michelozzi and Benedetto da Majano gave their best efforts in carrying it forward.

The manner in which the columnar order was used constituted, eventually, the fundamental characteristic of the Italian Renais-

sance. Another essential was the "emphasizing of the horizontal line, especially by the adoption of the classical cornice, or a variation of it, as the crowning feature." In Florence the style always preserved a certain staid severity, but elsewhere there was a freedom which to the classic purist must seem like license.

Two of the earliest palaces built in the new spirit of Florence were the Pitti Palace by Brunelleschi and the Medici—Riccardi Palace by Michelozzi. The former, built about 1435, illustrated the effect that could be produced with a great mass by a very simple design. The scale and breadth of treatment and the rusticated masonry gave it a dignity entirely unknown up to that time in buildings of a secular nature.

The Riccardi Palace was a solemn pile of architecture 300 feet long and 90 feet high

standing flush with the street, and showing an unbroken front rising from a plain ground story that contained only the entrance doorways and small windows for the offices above. The arched windows, with center shafts and geometrical tracery in the head, showed a certain amount of mediæval feeling. The first story was rusticated; the other two, smooth faced. A fine cornice finished the design. The windows above the first floor were divided into two lights by a colonnade carrying two arches with a medallion in the shield. All the arches were round and the work was slightly recessed.

The Rucellai Palace, built in Florence about 1460, showed three stories with flat pilasters, changing from Doric capitals on the ground floor, to Corinthian in the upper stages. The architect, Alberti, a member of a noble family, produced some very beauti-

ful works, but his introduction of pilasters was the beginning of the use, for mere ornament, of features that were purely constructional; and it led to the abuse of using columns without any reason, making them, though improper for the occasion, necessary parts of a design pretending to be classic. In Florence, however, the worst of these excesses was prevented by common sense.

Alberti was employed to remodel the Duomo at Rimini in 1450, but he died before completing it, and it has never been finished. The flank of the nave is faced with a fine screen of square piers supporting round arches, between which were deep recesses back to the wall of the Gothic nave. These piers rest on a lofty podium, with its top beautifully decorated with a frieze of foliage and emblems. The pointed arches of the Gothic interior remain, but the piers are

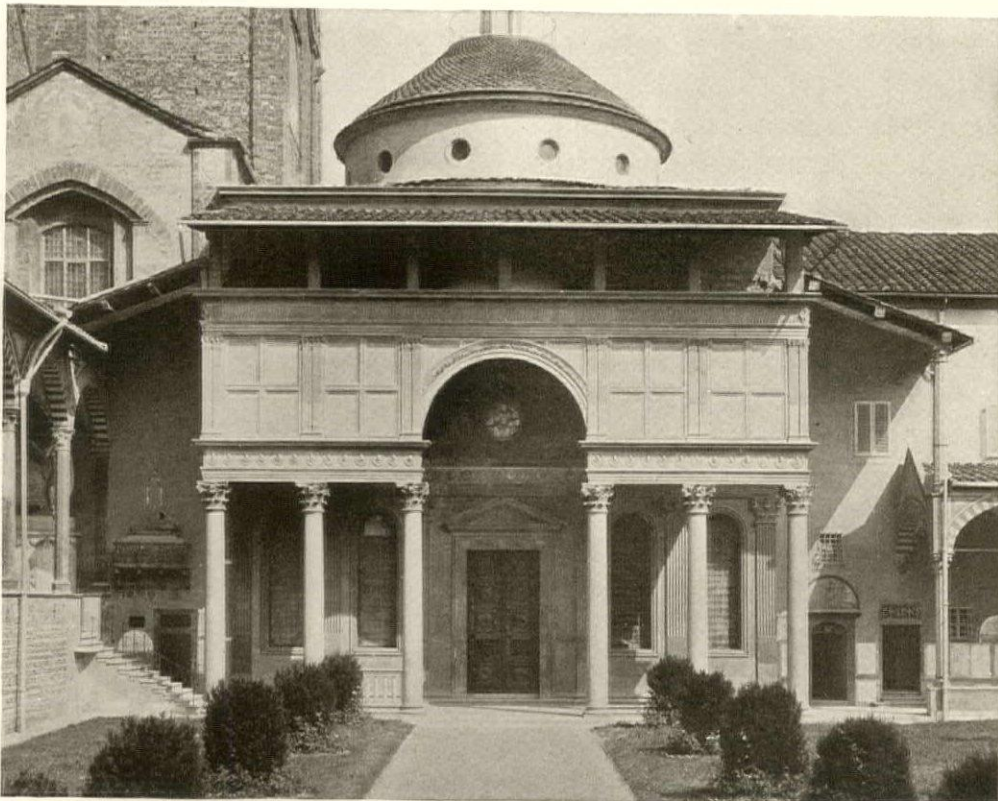


Illustration courtesy University Prints, Boston.

The Pazzi Chapel, Florence, a fifteenth century Renaissance church by Brunelleschi.



Illustration courtesy University Prints, Boston.

Nave of Sant' Andrea, at Mantua, built in the fifteenth century.
The architect was Alberti.

cased with marble panels containing delicate figure reliefs, said to be the work of Agostino Duccio.

The Strozzi Palace, at Florence, was built in 1489 and there exists some doubt whether its builder was Cronaco or Benedetto da Majano. Most writers attribute it to the former, however. It was very similar to the Riccardi, except that the three stories were rusticated, so that it lacked the happy graduation of the former.

Up to the time of the beginning of the Renaissance, as we have noted, architecture was represented almost exclusively by churches. It is significant that with the fifteenth century, we find with but few exceptions, these chiefly such great monuments as St. Peter's and St. Paul's and some churches of more ordinary dimensions, that the classical Renaissance is represented

mainly by palaces and mansions. Among the churches of the early period were two by Brunelleschi at Florence which are worth mentioning. The first, that of the Pazzi Chapel, built about 1415, was in an original manner, the graceful portico supported by slender columns and the general design unlike anything either Roman or Gothic. The other, Santo Spirito, had an arcaded interior, with the columns having at the top a square feature with the three members of an entablature—architrave, frieze and cornice—returned round it, in the position occupied by the pulvina in Byzantine architecture. It was illogical and "an absurd concession to the dogma of the Orders."

Alberti designed St. Andrea, at Mantua, on the Basilican plan, with a transept added and a dome over the intersection of the transept. The dome became the chief fea-

ture, in later works, for church form in Italy. Another church, the one at Lodi by Bramante, was interesting because it foreshadowed the general composition afterward adopted by Michelangelo for St. Peter's.

Alberti was the first among modern artists to write about the art he practised, but he was soon followed by Serlio, Vignola, Palladio and others, with writings concerning the Orders. In 1414, Poggio discovered in the monastery of S. Galena, a manuscript by Vitruvius that contained much useful matter and revealed the methods of antiquity. Immediately, the enthusiasts of the Renaissance accepted it as their Bible. When they found from Vitruvius that the structures of old Rome were designed in certain proportion to a module, which was the radius of the column at its base, and that each part, even to the details, had to be so

many times this length, they thought the key to the lost art was found. The column came to be regarded as the principle element in architecture and was tabulated into as many orders as there were kinds of columns.

Columnar architecture was adopted for all buildings, public and private. The fashion begun by Alberti in the Rucellai Palace spread rapidly and the column, with pilasters, was used lavishly on buildings where, as we have said, they were not only useless, but improper.

Up to the time of Bramante, the new art had led a natural life, unfettered by formulas. That was its Golden Age. After Bramante the art was enslaved by dogma, and precept and authority established their rule. One is led to conjecture what would have happened had not the manuscript of Vitruvius been discovered and the secret of the Modulus never been found.



Details of the façade of S. Bernardino at Perugia, built by Agostino Florence (1461).



Commercial National Bank Building at
High Point, North Carolina.

TWO SOUTHERN STRUCTURES

Modern Office Buildings Recently Erected in High Point
and Greensboro, North Carolina

DOWN in North Carolina there is a town of less than twenty-five thousand that boasts of an annual production of manufactured articles amounting in value to twenty-five million dollars; a town that contains a ten-story office building that cost over one million dollars, thirty-five churches, besides a fine Y.W.C.A. and a Y.M.C.A. building, two railroad systems, thirty miles of paved streets and a population almost one hundred per cent native. Incidentally four out of every five people own their homes. This bustling town is High Point and North Carolinians call it their "Industrial City." The aptness of this title is substantially borne out by its one hundred and fifty industries, mostly furniture factories, wood-working plants and textile mills. In fact, High Point is the center of the furniture industry in the South, the trade having its general headquarters in the big Southern Furniture Exposition Building, with its six and a quarter acres of floor space. The story of the growth and development of the town is equally the story of the financial institution that was the strength back of the financial progress—the Commercial National Bank of

High Point.

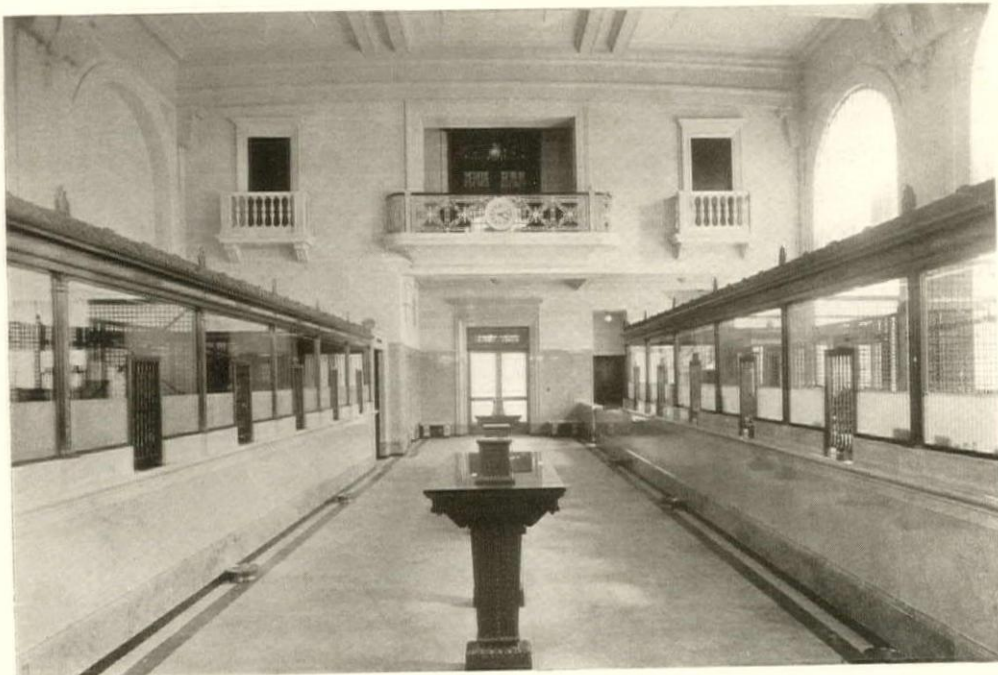
Organized thirty-three years ago with a capital stock of fifty thousand dollars, it opened for business in 1891 with twenty-five thousand dollars capital paid in. Today its capital stock is half a million. An even more vivid comparison is shown by the difference between the resources then and today. The records of the first day's business disclose the fact that deposits totaling about five thousand dollars were made, and the total resources were about thirty thousand dollars. A recent statement shows resources of nearly nine millions with deposits of close on to six millions of dollars.

The growth of the bank soon brought to the front the question of enlarged quarters, with the result that about three years ago, a lot was purchased on South Main and West Commerce Streets, fifty by one hundred and fifty feet, in the business center and across from the Post Office. Here was erected a nine-story building, the first floor, as well as the basement and mezza-

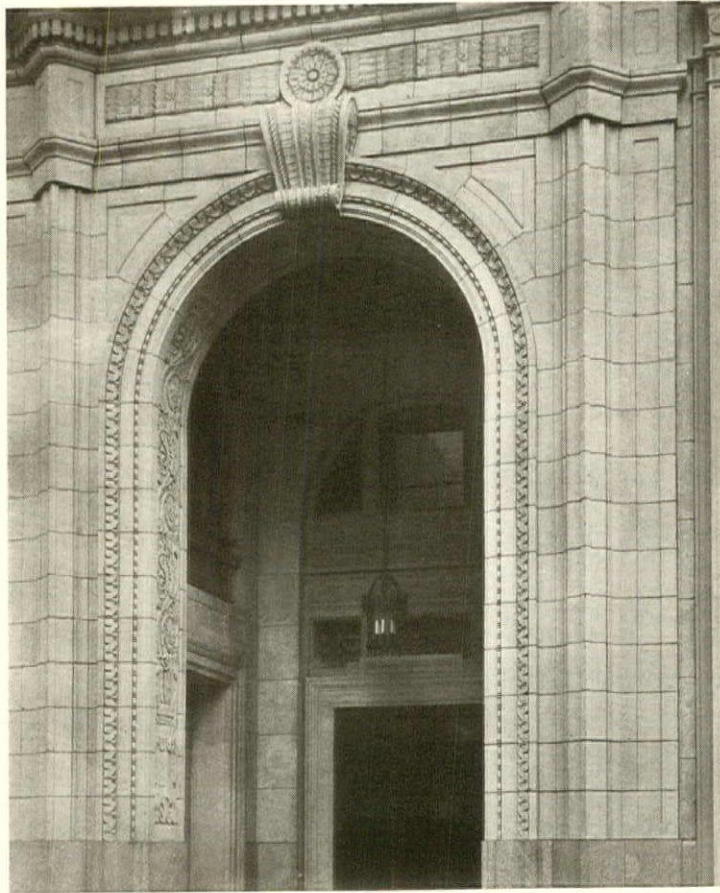
nine, being occupied by the Bank, with the remainder rented out as offices.

The architect, C. C. Hartmann, of Greensboro, North Carolina, had in mind the position of dignity and character the institution had always occupied in the community, and made free use of marble in the structure. The large entrance lobby, as well as the elevator lobby, is finished in imported marble, this material appearing in the floors and walls as well as in the circular stairways. The banking room, entered directly from the building entrance lobby, has walls, floors and counters entirely of marble. Caen stone was used for the walls, while both imported and domestic marbles were used in floors and counters. The room, done in the Italian Renaissance style, affords a clear unobstructed working space, free from columns, and well lighted by the large arched windows that extend to the top of the high ceiling.

The vault equipment is especially comprehensive, a total of four vaults, two in the



Interior of the Commercial National Bank, High Point, North Carolina.



Main Entrance to the Jefferson Standard Life Building on North Elm Street, Greensboro, North Carolina.

basement and two on the main floor, comprising a feature of safety that was considered desirable. Very modern methods were used in their construction, as well as in the heating and ventilating systems. The building is one which meets a real community need, and it is a most valuable addition to that thriving Southern town.

Greensboro, North Carolina, has the distinction of being the home of the largest insurance company in the South. The Jefferson Standard Life Insurance Company, organized on a modest basis not so many years ago, surprised its sponsors by its rapid growth, until today it occupies a most favorable position in its particular field. The Company very rapidly reached the point where it was deemed advisable to

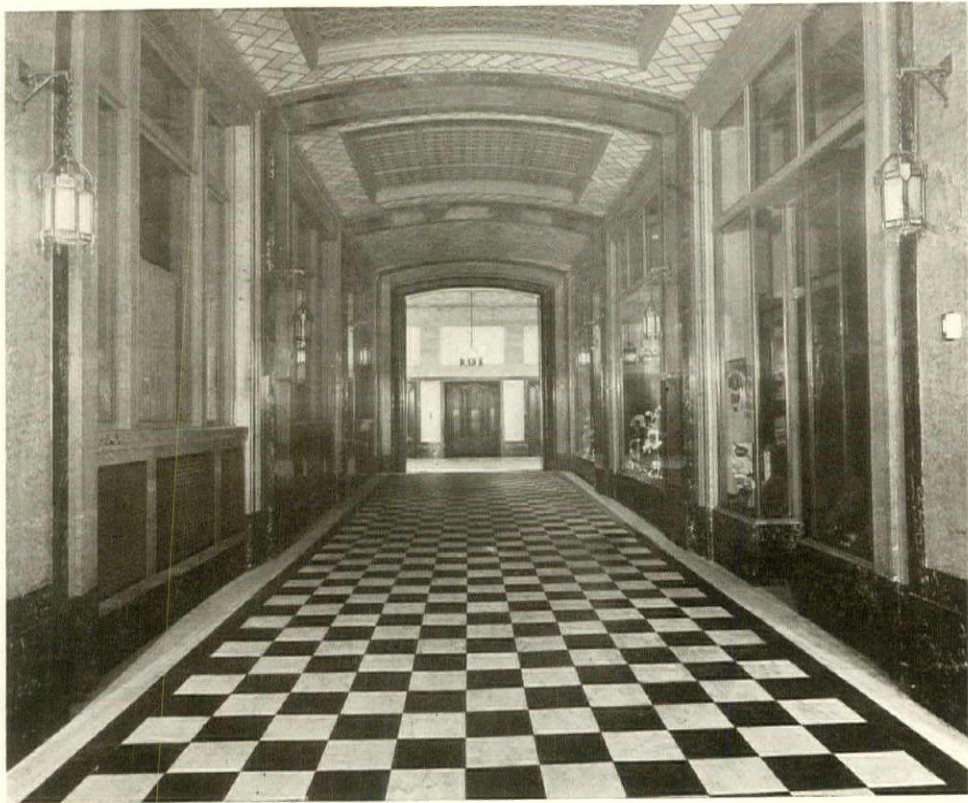
build a new home for itself, and the new Jefferson Standard Building, recently built after plans by a Greensboro architect, Charles C. Hartmann, reflects confidence in the future of the South.

The structure was especially designed to comply with the requirements of conducting the insurance business along the lines that had proved so successful in the past, and all the modern features that experience had shown to be necessary were installed on the floors intended to be occupied by the Company. The Jefferson Standard, as a result, possesses quarters that, in planning and equipment, are perhaps second to none in the country.

The Insurance Company occupies the six top floors of this seventeen-story office



The fine seventeen-story office building owned by the Jefferson Standard Life Insurance Company, of Greensboro, North Carolina.



Main Lobby, Jefferson Standard Building. Black and Gold, Tavernelle, Belgian Black and Alabama Cream A marbles were used here.

building. The seventeenth floor is given over partly to a company restaurant, with all the machinery attendant upon a complete culinary department; and partly to the social or recreation rooms of the men and women employees of the Company. The possibilities of this type of welfare work are rapidly gaining country-wide recognition. These rooms, located as they are in the very top of the building, are especially suitable for their purpose, as they offer a full view of the surrounding country for many miles in all directions.

The building contains, besides the Insurance Company's quarters, three hundred modern business offices above the ground floor and basement. The ground floor is devoted to the ample and modern quarters of the Atlantic Bank and Trust Company, a fast growing banking institution, whose

rooms are one of the chief features of the building. There are also on this floor, five spacious stores containing all up-to-date requirements for the carrying on of retail trade, with both street and building entrances.

There are two large public entrances to the building, and these enter under a spacious arcade leading directly to the elevators, five in number. Both entrances and arcade are finished in a beautiful combination of various marbles. The entire floor is laid out in checkerboard pattern with white and black squares of White Alabama and Belgian Black marbles. The wall up to the ceiling and including the arched ceiling beams is a treatment of Rosetta marble panels trimmed with Black and Gold marble base and stiles. The ceiling treatment is of Gultavin's tiles, of colors in

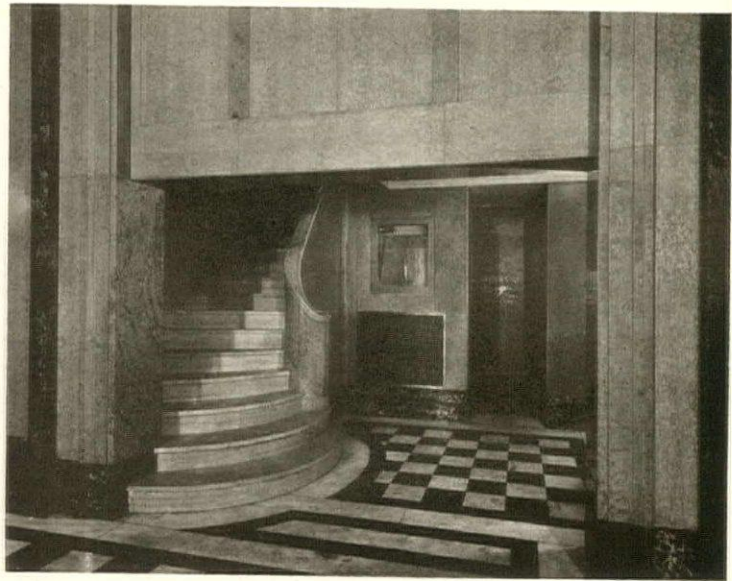
strict harmony with the marble treatment of the walls. Over the five elevators are mosaic tile panels in which are incorporated the state and city seals, surrounded by the state flowers; the well-known historical portrait of Thomas Jefferson, after whom the Jefferson Standard Life Insurance Company is named, signing the Declaration of Independence; and historical views of the city's important street, shown in the mosaic panel treatment. This lofty and broad arcade with its rich and dignified combination of domestic and imported marbles, is decidedly attractive and it is a fine example of intelligent architectural design employing materials that are at the same time beautiful and durable.

The building is served by five high-speed, multi-voltage, micro-drive Otis elevators of the latest design, so as to automatically

stop flush with every floor, and each car is fully equipped with the most modern safety appliances.

Throughout the typical floor, elevator lobbies and office corridors, and in all toilet rooms, Cream A Alabama marble has been installed as a wall lining, with a marble mosaic floor of a combination of domestic marbles, with a white field and a three-colored border.

In speaking of the season for choosing these materials, the architect said: "By having these corridor and elevator lobbies entirely of marble, there results an appearance of cleanliness, solidity and permanency which cannot be equaled by the use of any other material. However, there is no heaviness or undue



The Stairway leading from Lobby to Mezzanine Floor. In the slab of Alabama Cream marble forming the bottom of the soffit was found a coiled snake, petrified.



The Atlantic Bank and Trust Company's quarters in the Jefferson Standard Building.

severity; rather the general effect is one of dignified simplicity most practical for a building continually in use day and night by the general public."

The quarters occupied by the Atlantic Bank and Trust Company on the ground floor, mezzanine and basement portions are devoted entirely to the banking business. The Safe Deposit Department with its modern fireproof and burglar-proof vaults, is in the basement. These vaults are the largest of any Southern bank and were designed in conformity with the specifications and methods approved by the Federal Reserve Bank of New York. The floor treatment throughout this portion is of marble terrazzo panels with borders and inserts of Gray Knoxville marble. The wall lining and pilaster and cornice treatment of the cages and office counters is all of Pink Tennessee marble, selected and matched for veining of simple design. The surface sustains a highly polished finish. Above, the walls and ceilings are treated in jointed Caen stone in harmony with the marble below, and they blend in design and color. This treatment, together with the thirty-inch thick steel vault door and steel vault facing, gives a feeling of security and strength to this particular department of the institution.

The main banking room, on the ground

level, is entered from both streets and also from the building arcade. The street entrances are especially handsome, with Gray Knoxville marble on the outside and Tavernelle within. The head stones are beautifully carved. The floor of the main banking room is of marble tile. The wall lining is composed of coined blocks of selected Tavernelle Claire marble; the carved caps, the offices, the counters, rail, as well as banking cages, cornices, pilasters and crestings, are all of selected Tavernelle Claire marble of polished and honed finish designed in the Italian Renaissance period. These give the banking room an appearance of refinement and richness in keeping with the dignity of the institution. The wall above the marble treatment is laid up of Travertine stone slightly embellished with historical shields. Above, the plaster-tinted ceiling with its unbroken treatment of coffers, sets off the room and makes it one of the best proportioned banking chambers in the South.

The exterior design is mostly free Romanesque, with a Gothic influence, with a classic lower-story treatment. Granite, marble and terra cotta in combination were used for the full height. While the building is seventeen stories above the street, the long, vertical lines accentuate the height, causing it to appear much loftier than it actually is.



A typical upper corridor in the Jefferson Building, showing use of Alabama Cream A marble

A LIST OF THE WORLD'S MARBLES

By J. J. McClymont

Note—In a past issue, Mr. McClymont proposed, for the sake of convenience, to divide the different marbles into four groups. These arbitrary groupings were as follows:

GROUP A—Any marble or stone sold to the trade in fair-sized slabs or blocks of commercial size, rectangular shape and guaranteed by the seller to be sound, free from natural defects, that can be finished at a minimum cost, and sold to the consumer as sound marble.

GROUP B—Any marble or stone sold to the trade in slabs or blocks of fair or medium size, generally rectangular shape, guaranteed to be sound and free from natural defects, the finishing of which, because of texture, the size of slabs, the shape and size of blocks, is somewhat more expensive than those in Group A.

GROUP C—Any marble or stone that cannot be sold as sound but contains a minimum amount of natural defects, such as dry seams, old fractures, partially or completely healed surface voids, etc., to be treated by the manufacturer in the most approved manner, reinforced where necessary by liners on back or metal inlays and sold to the consumer as semi-sound marble.

GROUP D—All marble, stone and so-called serpentine marbles, and Onyx, which, by their peculiar formation are known to be fragile, such as Breccias and nearly all highly colored marbles and serpentines, and that are sold to the trade in irregular shaped blocks or slabs without a guarantee as to their soundness, treated by the manufacturer in the most approved manner, reinforced where necessary by liners on back or metal inlays and sold to the consumer as unsound marble.

Framont

Framon Quarries, Vosges, France.
White, sometimes tinged with pink or pearl gray. (Blagrove)

Frankenwald—See Bavarian Green, Bavarian Red and Bavarian Rose.

Frasnes

Quarried at Frasnes, Hainaut, Belgium.
Gray showing fossils. (Blagrove)
Takes medium polish.

Fratelli

Name of one of the quarries producing veined Statuary Italian.

Frederic Marbles

This name is given to certain marbles quarried in Hainaut, Belgium. See Landelies and Fontaine-l'Eveque.

Frederick County Marble—See Potomac.

Freedley Cloud or Cloud.

Tunnel Quarry, Freedley, Vermont. (Opened about 1790.)
Very light bluish gray with a medium gray bed about two inches wide and irregular gray spots near. (Vermont State Geological Survey.)

Freedley White or White Freedley.

Open Quarry, Freedley, Vermont. (Opened in 1909.)

Extremely light bluish gray. (Vermont State Geological Survey.)

Freestone (Sandstone)

Are so called because they work freely in any direction.

French Alabaster—See Alabaster (French).

French Broad River

Near the junction of this river and the Holston, which form the head waters of the Tennessee, are located some of the many Tennessee quarries.

French Grand Antique—Same as Grand Antique and Grand Antique Pyrenees.

French Griotte—See Griotte De Sost and Griotte D'Italie.

French Onyx—See Stalagmite Du Bedat.

French Pink—Same as Knox Pink.

French Pyrenees—See Pyrenean.

French Serpentine—See Vert Maurin.

French Statuary—See Blanc De St. Beat.

Friendsville

Town in Blount County, Tennessee, near which are located marble quarries.

Friendsville Pink

Quarried at Friendsville, Blount County, Tennessee.

Lightly variegated pink with few veins or crowfeet.

Takes high polish.

Frise—Curly.

Frome Marbles

The marbles quarried at Frome, Somersetshire, England, are generally dark brown, brownish red, and warm brownish gray with veins of yellow and gray. (Blagrove).

Frosterley

Quarry at Harehope, near Frosterley, Durham, England.

Dark grayish brown with large white fossils.

Takes high polish.

Frouquet Breche

Quarried at Frouquet, Tournon, Lot-et-Garonne, France.

Yellowish-white with brownish-gray veins and spots. (Blagrove)

Frozen Green—Pennsylvania Green.

Quarried at Easton, Pa.

Variegated green.

Takes high polish.

Fuchsite (Chrome-Mica-Schist)

Quarried in Shrewsbury, Vermont.

Brilliant dark emerald green with veins and spots of lighter shade.

Funfkirchen Quarries—See Ungarisch Grau

Furst-Kerber Travertine

Quarried near Bedford, Indiana.

Is a buff limestone containing numerous small voids.

Furuli—See Antique Fonce, Breche Rose, Citron Furuli and White Salten.

Frutticolosa—Italian name for conglomerates.

Gabbro

Is a rock somewhat similar to Diabase.

The term as applied to serpentine, which is sometimes done, is misleading. The rock occurs in various parts of the world.

The black variety found in rounded boulders is popularly known as Niggerhead. (Merrill)

It is used for construction work but not as an ornamental stone.

Gabii—See Peperino

Gaconniere

Quarried in Deux-Sevres, France.

Black with blackish-gray veins. (Blagrove)

Galena—Native lead sulphide.

Galena Siena

This general term is applied by American importers to all Siena marbles not including Brocatello Siena or Old Convent Gray or Yellow. See Siena Gray, Mixed and Yellow.

Galimi

A small town on the Island of Marmora near which are located the Cherani Quarries. See Marmora.

Gallie

Ancient name for France and a large portion of Europe.

Galway Gray—Group B.

Clonford Quarries near Galway, County Galway, Ireland.

Nearly black with small spots of white.

Takes good polish.

Galway Marbles—See Connemara, Connemara (Dark), Connemara (Light), Galway Black, Galway Gray and Pinka Green.

Galway Serpentine—See the Connemaras.

Gamping—See Java Onyx.

Gandrieux

Quarries at Gandrieux, Nord, France.
Gray and black with white veins. (Blagrove)

Gap—See Eglier du Roi, Le Clarence, Morgon and St. Maurice.

Garatonio

Quarried near the banks of the Arno, Italy.
Red with golden veins. (Blagrove)

Gard Marble—See Languedoc.

Garfagnana Quarries—See Molina Rosa.

Garofano Luma—Light pink.

Garofano—Pink.

Gassino

Quarried at Gassino, near Turin, Piedmont, Italy.
Clear gray spotted with fossils. (Blagrove)

Gazzo Mountain Onyx—See Alabastro del Gazzo.

Gebel Oorakam—Same as Egyptian Onyx.

Genoa Alabaster (Onyx)—See Alabastro del Gazzo.

Genoa Green—See Genova Green.

Genoa Quarries

The quarries near Genoa produce many marbles among which are Egyptian Green, Italian Green and Genova Green.

Genova Green—Group D.

Same as Alps Green, Polzevarra di Genova, and Verde di Genova.
Ponte Decimo Quarries, Pietra Lavezaria, near Genoa, Liguria, Italy.
Dark green with light green veins and occasional white markings.
Takes high polish.

Genuine Hauteville—See Hauteville.

Georgia—One of the Champlain Quarries.

Georgia Cherokee—Group A.

Quarry at Tate, Pickens County, Georgia.
Light gray background slightly clouded and veined.
Large supply available.
Takes high polish.

Georgia Creole—Group A.

Quarry at Tate, Pickens County, Georgia.
Deep mottled blending of bluish-black and white and gray.
Takes high polish.

Georgia Etowah—Group A.

Quarry at Tate, Pickens County, Georgia.
From light flesh color to dark red.
Takes high polish.

Georgia Green or *Georgia Verde Antique*—Group A.

Holly Springs Quarry, Cherokee, Georgia.
Dark grass green with small specks of white and some mottles.
Takes high polish.

Georgia Kennesaw—Group A.

Quarry at Tate, Pickens County, Georgia.
White with very slight markings.
Takes high polish.

Georgia Marbles

According to U.S. Geological Survey Stone 1921, only the following marbles were being produced in 1921:

Georgia Cherokee	Georgia Kenesaw
Georgia Creole	Georgia Green
Georgia Etowah	Georgia Mezzotint
	Georgia Silver Gray

All from the Long Swamp Valley Quarries at Tate, Pickens County, Georgia.
This is one of the largest deposits of marble known and apparently it has remained in its original position without movement of any kind.

LIST OF QUARRIES AND MARBLE MANUFACTURERS

REPRESENTED IN THE MEMBERSHIP OF THE
NATIONAL ASSOCIATION OF MARBLE DEALERS

<i>City and State</i>	<i>Company</i>	<i>Representative</i>
Akron, Ohio.	Flower Marble and Tile Company	Jas. T. Flower
Atlanta, Ga.	Reeves Marble Company	Alex. Reeves
Baltimore, Md.	Hilgartner Marble Company	A. H. Hilgartner
Baltimore, Md.	Jos. B. Dunn & Sons, Inc.	Chas. Scheidt
Baltimore, Md.	P. B. and W. Marble and Tile Co., Inc.	Richard T. Salter
Birmingham, Ala.	Alabama Marble Company	John S. Sewell
Boston, Mass.	Troy Bros. & Company	M. W. O'Brien
Buffalo, N.Y.	Geo. W. Maltby & Son Company	Wm. C. Maltby
Buffalo, N.Y.	Lautz Marble Corporation	R. K. Glass
Carthage, Mo.	Arnosti Marble Company	A. Arnosti
Carthage, Mo.	Carthage Marble and White Lime Co.	Geo. S. Beimdiek
Carthage, Mo.	Consolidated Marble and Stone Co.	Millard Bryan
Carthage, Mo.	Ozark Quarries Co.	T. R. Givens
Carthage, Mo.	F. W. Steadley & Company, Inc.	K. D. Steadley
Carthage, Mo.	Lautz Missouri Marble Company	John E. O'Keefe
Carthage, Mo.	Spring River Stone Company	T. J. Murphy
Chicago, Ill.	American Marble Mill Company	J. J. Bauer
Chicago, Ill.	Black & Gold Marble Company	C. N. Marthens
Chicago, Ill.	C. N. Marthens Marble Company	B. F. Meservey
Chicago, Ill.	Corley-Meservey Marble Company	Humbert Davia
Chicago, Ill.	Davia Bros. Marble Company	Thos. A. Knudson
Chicago, Ill.	Enterprise Marble Company	F. A. Flavin
Chicago, Ill.	Flavin Marble Mill	Frank P. Bauer
Chicago, Ill.	Frank P. Bauer Marble Company	H. K. Townsend
Chicago, Ill.	Henry Marble Company	Jos. Little, Jr.
Chicago, Ill.	Jas. B. Clow & Sons Company	Thos. F. Keating
Chicago, Ill.	M. Keating & Sons Company	Thos. Naughton
Chicago, Ill.	Naughton Marble Company	Frank J. Peerling
Chicago, Ill.	Peerling Marble Company	C. R. Borchardt
Chicago, Ill.	Standard Mosaic Tile Company	Geo. W. Bower
Chicago, Ill.	Taylor Marble Company	George Wilde
Cicero, Ill.	National Mosaic Tile Company	H. L. Pike
Cincinnati, Ohio	Cincinnati Marble Company	R. M. Allen
Cleveland, Ohio	Allen Marble Company	W. J. Haworth
Cleveland, Ohio	Empire Marble Company	E. M. Fritz
Cleveland, Ohio	Haworth Marble Company	S. J. Weingarten
Cleveland, Ohio	Interior Marble and Stone Co.	L. G. Yeau
Cleveland, Ohio	Prospect Mantel and Tile Company	C. F. Wege
Cleveland, Ohio	Roy-Cliff Marble Company	J. C. Bruggen
Columbus, Ohio	Wege Marble and Tile Company	J. Desco
Dallas, Texas	J. Desco & Son	William Jessop
Dallas, Texas	Southwest Marble Company	D. C. McElhinney
Dallas, Texas	McElhinney Tile and Marble Co.	W. D. Watson
Denver, Col.	Denver Mantel and Tile Company	J. R. Golden
Denver, Col.	Des Moines Marble and Mantel Co.	H. F. McAdow
Des Moines, Iowa	Holbrook Marble and Tile Company	E. L. Leavenworth
Des Moines, Iowa	Christa-Batchelder Marble Co	B. L. Cummins
Detroit, Mich.	Detroit Marble Company	
Detroit, Mich.		

THROUGH THE AGES

<i>City and State</i>	<i>Company</i>	<i>Representative</i>
East Cambridge, Mass.	Johnson Marble Company	T. J. Johnson
Fort Worth, Texas	Good Marble Company	H. G. Good
Houston, Texas	Salt Lake Marble and Supply Co.	Geo. E. Rieder
Indianapolis, Ind.	F. E. Gates Marble and Tile Co.	F. E. Gates
Kansas City, Mo.	Kansas City Marble and Tile Co.	G. F. Keller
Kansas City, Mo.	Phenix Marble Company	Mastin Simpson
Kansas City, Mo.	Sutermeister Stone Company	C. O. Sutermeister
Kasota, Minn.	Babcock & Willcox	Tyrell S. Willcox
Kasota, Minn.	Breen Stone and Marble Co.	Tyrell S. Willcox
Knoxville, Tenn.	Candoro Marble Company	Craig C. Day
Knoxville, Tenn.	Gray Eagle Marble Company	E. F. Klein
Knoxville, Tenn.	Gray Knox Marble Company	J. B. Jones
Knoxville, Tenn.	John J. Craig Company	John J. Craig
Knoxville, Tenn.	Knoxville Marble Co.	John M. Ross
Knoxville, Tenn.	Ross & Republic Marble Co.	W. E. Moses
Knoxville, Tenn.	Salomone-O'Brien Marble Company	Walter O'Brien
Knoxville, Tenn.	Tennessee Producers Marble Co.	B. L. Pease
Little Rock, Ark.	Southwestern Tile Company	R. E. Overman
Long Island City, N.Y.	Clarendon Marble Company	Alexander Thomson
Louisville, Ky.	Peter & Burghard Stone Co.	Jos. E. Burghard
Memphis, Tenn.	Central Mosaic and Tile Co.	Louis B. Marus
Milwaukee, Wis.	Andres Stone and Marble Company	Edgar Andres
Milwaukee, Wis.	Breidster Marble Company	Fred. W. Breidster
Milwaukee, Wis.	McClymont Marble Company	J. J. McClymont
Minneapolis, Minn.	Twin City Tile and Marble Co.	F. O. Streed
Minneapolis, Minn.	Northwestern Marble and Tile Co.	Chas. Gramling
New Orleans, La.	Albert Weiblen Marble and Granite Co.	Albert Weiblen
Oklahoma City, Okla.	Taylor Marble and Tile Company	G. W. Taylor
Omaha, Neb.	Sunderland Bros. Company	J. P. Williams
Peoria, Ill.	Peoria Stone and Marble Works	H. A. Farley
Pittsburgh, Pa.	American Marble Company	Max Weiner
Pittsburgh, Pa.	Iron City Marble Company	George L. Sibel
Pittsburgh, Pa.	Pennsylvania Marble and Mosaic Co.	John A. Fiore
Somerville, Mass.	Phil. H. Butler & Son Company	P. H. Butler
St. Louis, Mo.	Bradbury Marble Company	I. P. Morton
St. Louis, Mo.	Pickel Marble and Granite Co.	H. A. Feldman
St. Louis, Mo.	St. Louis Marble and Tile Co.	R. C. McDonald
St. Louis, Mo.	Shaw Marble and Tile Company	A. Coerver
St. Louis, Mo.	Union Marble and Tile Company	W. C. Fox
St. Louis, Mo.	Weis & Jennett Marble Company	Joseph Weis
St. Paul, Minn.	Drake Marble and Tile Company	W. E. Andrews
Tate, Ga.	Georgia Marble Company	Sam Tate
Wichita, Kan.	Hawkins Interior Marble Company	M. K. Hawkins
Wilmington, Del.	Geo. W. McCaulley & Sons, Inc.	C. W. McCaulley
Winchester, Mass.	Puffer Mfg. Company	A. W. Puffer

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