

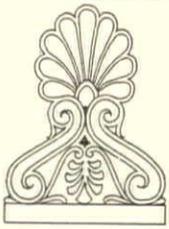


# THROUGH THE AGES

JUNE, 1924

“The true colours of architecture are those of natural stone, and I would fain see these taken advantage of to the full.”

—*Lamp of Truth*: RUSKIN



# THROUGH THE AGES



VOL. 2

JUNE, 1924

NO. 2

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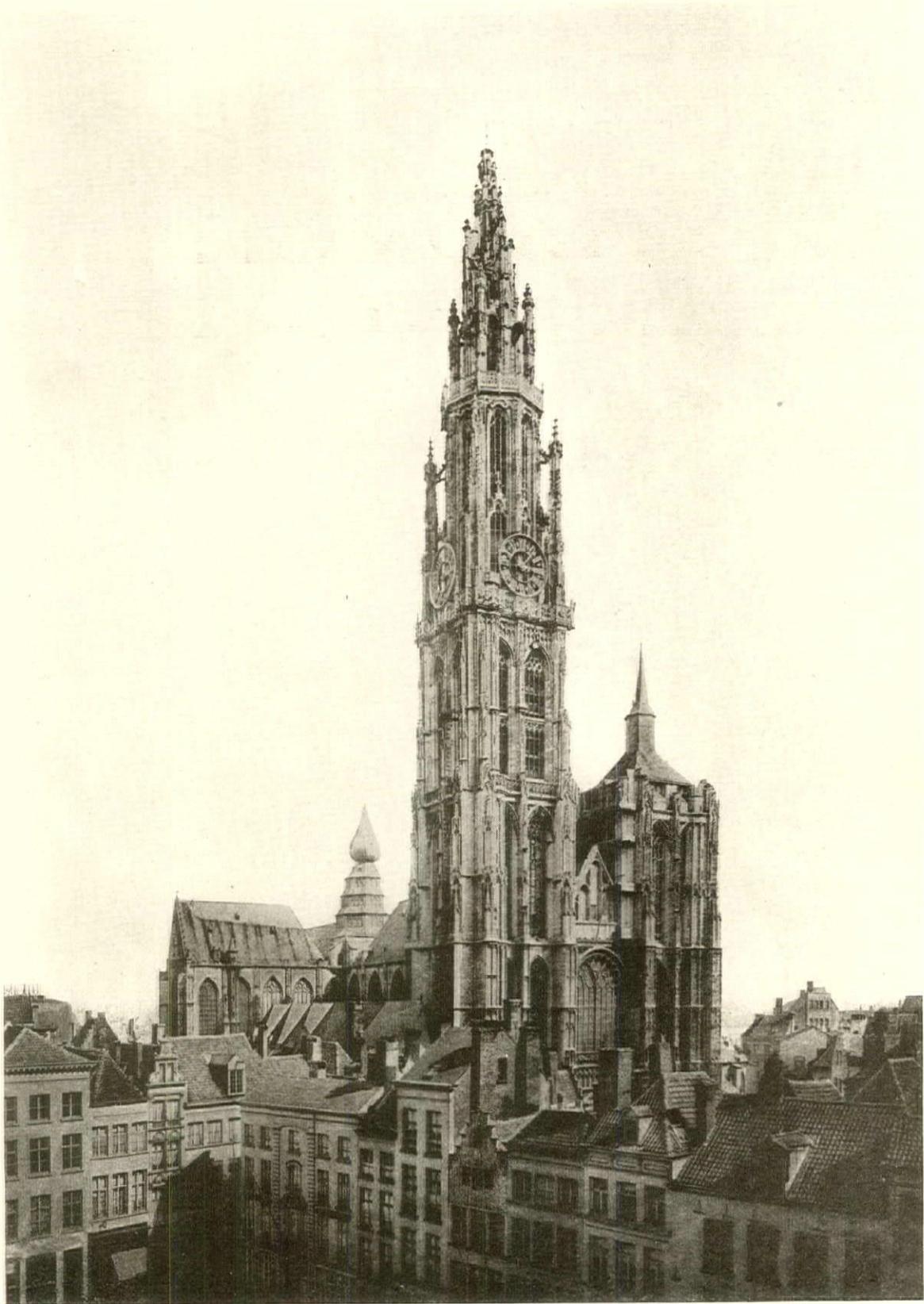
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West Front of Antwerp Cathedral.

# THROUGH THE AGES



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

VOL. 2

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## THE NEW YORK CENTRAL RAILROAD STATION AT UTICA, N.Y.

The Ancient Egyptian Temple of Apah Served as a Model  
for the Columnar Treatment

THE architects of America have been called on to develop many new lines of building construction. No doubt the master craftsmen of Greece and Rome had unusual problems with which to contend, and, as an added handicap, they had little in the way of precedent to keep them from going wrong. The wonder is that, in rearing their wonderful structures, they were able to set an impregnable standard for the designers of the future.

On the other hand, they were faced by none of the complexities of modern commercial life. It was comparatively easy to combine beauty and utility in the erection of their temples and forums. The towering office building of the twentieth century was yet a long way off, and so too were many other forms which have thrust themselves forward to perplex the architect of today.

In the forefront of these evolutions of the present stands the American railway station. This type of building has literally grown up with the country. Designers have labored persistently to adapt it to the ever-growing

throng of travelers. They have sought to make it a thing of beauty and yet take nothing away from its capacity to handle the resistless rush of passengers. Above all they have kept closely in touch with the engineers, lest the practical problems of the railroads might be overlooked.

With the advent of each new metropolitan station, there are those who would proclaim that the ideal has been reached, that the perfect pattern is at hand. Then, almost overnight it seems, comes some change in methods of transportation, overturning accepted plans and theories, and calling for a modified viewpoint and a changed working basis. Thus it is that the art of station building maintains its character as one of the new outgrowths of architecture. Nor can anyone say definitely as to when it may begin to grow old.

Among the larger stations which have already been reared there are few indeed which have no marble in their make-up. Frequently it has been applied with a free hand and often with rare good taste. Nor



The Main Waiting Room, showing the extensive use of marble.

does this apply to the big cities alone. Many of the smaller centers have their own distinctive marble halls for the comfort and inspiration of those who travel.

In this latter group the New York Central Station at Utica holds a unique position, a prominence that may be attributed in large measure to the individuality of the column work. This, of course, is entirely apart from the studied arrangement of its various departments and the outstanding merit of its architecture. From the very nature of the plans the structure is certain to have the kind of practical beauty which is needed in the railway world. Yet there is no denying that it gains much in dignity and impressiveness from the rows of massive marble columns which transform the inner court into a vaulted enclosure not unlike the interior of some old-world temple.

In truth, we are told it was from an ancient temple that the architects, Stern and Felheimer, drew the column scheme for the Utica Station. In far-away Egypt, on an oasis between the populous cities of Cairo and Khartoum, rose the great trading center Wahel Khargeh, attracting unto itself the business of a vast territory. There it was that the stately Temple of Apah was built, the pride of every inhabitant of central Egypt. And the columns in the station at Utica are very similar in form to the pillars in the famed Temple of Apah. It was thought that this thriving American city, a favored contender for trade leadership in Central New York, might well hold something in common with the one-time teeming metropolis of old Egypt.

It is only in the form of the columns however that the new resembles the old. Other-

wise, there are all the differences which must necessarily exist between a temple and a railway station. Even the marble for the huge monoliths has an imagery of color and veining unlike anything known to the Egyptians. It is a variety listed as Royal Antique, quarried in the mountains of Vermont.

Royal Antique is a marble which is specially adapted for large spaces. In fact, it must have ample room in order to display the richness and resourcefulness of its variegated surface.

The Vermont State geologist says that "it is impossible to describe the strangely twisted and waved arrangement of the clouds, bands and veins in Royal Antique. They often resemble the grain in a very knotty piece of wood. The ground is bluish-white and pure white, while the pattern is spread through this in every conceivable manner and direction. This pattern, if so it may be called for lack of a better name, is in shades of green and olive, of many tones from almost white to very dark green and black. Here there may be wide white bands with light effect and there the darker shades prevail. There is a certain blending of shades

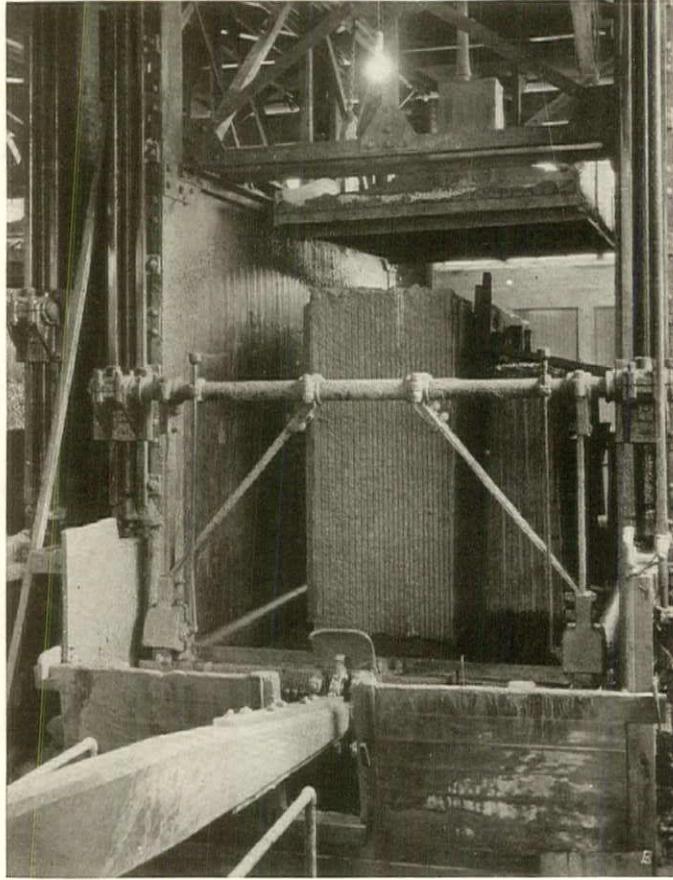
everywhere and yet there is also everywhere distinctness. If a common expression may be permitted, there is something doing in all parts of a slab or column of this marble."

It is quite apparent that the Utica Station is a most fitting vehicle for the introduction of Royal Antique. Whether it be in the solid columns, or in the facing for the square steel piers, or in the broad expanses of wall work, the effect is entirely in harmony with the architectural plan, a plan which seems to have the unstinted approval of both the railroad and the public. And that, be it noted, is no small triumph—to please the workers and the travelers, and yet bring everything together without violating the basic laws of art.

In the construction of stations, as in other forms of building work, marble may be trusted to do its part in bringing about the elusive feeling of unity. Its colors are assembled in nature's faultless way, and in themselves they cannot be wrong. The one essential thing is that the right marble be applied in the right place, and that the other materials be made to blend with it. Then and then only will the ends of beauty and durability be rightly served.



A vista of majestic columns in the Utica Station.



Photograph by The New York Edison Company.

A block of marble cut into slabs and ready to be taken from the sawing compartment.

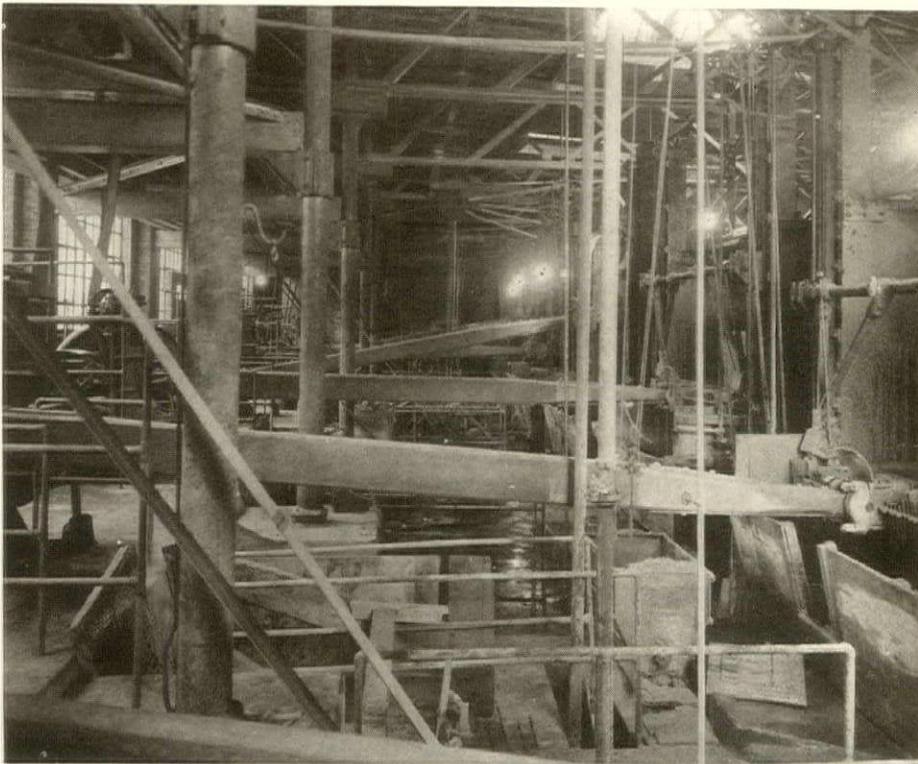
## INCH BY INCH

By permission of *The Edison Monthly*, with deletions by the Editor.

THE ancient Greeks were the first to endow marble, that lifeless stone, with the genius that created the beautiful statues and the magnificent buildings of the past. On the island of Paros, in the Ægean Sea, they were fortunately blessed with an abundant supply of the purest marble yet discovered. From this celebrated "Parian" marble, they produced the unparalleled interiors of their temples and homes, and other public buildings.

Few who look upon the ruins of Athens and Rome think of the enormous labor in-

involved in quarrying and cutting the marble used so successfully to enchant the eye. The primitive methods then employed were very slow and laborious. To cut the quarried blocks holes were drilled and porous wooden plugs were inserted. Water was poured in, and with the swelling of the wood, rough uneven slabs were broken off. This method eventually gave way to sawing with water and sand, a method which, with the addition of electric motors instead of hand power is used today. Even now with the modern electrically operated equipment it often takes



Photograph by The New York Edison Company.

The great arms which connect the gangs of saws with the motor-driven shaft. A motor of 100 horsepower operates the saws at the yard of this New York marble sawing plant in the Bronx.

two weeks of continuous sawing, with but an hour's rest in every twenty-four, to cut through a fair sized block.

Since the discovery of marble, men have endeavored to devise a system of quarrying and cutting that would eliminate the great waste usually encountered. The stone is much too easily broken to permit the general use of blasting powders, although they are still employed in some of the Italian quarries.

The ancient method of using porous wood plugs and water to cut the marble blocks was also used in the quarrying. Today in the quarries electric channeling machines have superseded this and other wasteful and obsolete processes, such as the hand chisels and drills.

The channeler consists of a row of long chisels set in a strong traveling framework.

These chisels vibrate up and down, drilling a series of holes in the face of the marble ledge. This channel varies in depth, according to the size of block needed. When the groove is sufficiently long and deep, the machine is reversed, cross channels are cut, and the bottom perforated. Wedges are carefully driven in behind the block and it gently falls over to be lifted by the giant electric cranes to flat cars, and shipped for further treatment.

Much of the marble used for New York's buildings reaches the city in great blocks, and at local marble yards is cut into slabs according to the architect's specifications. Typical of the great plants throughout the country where this work is done is that one of the city's marble sawing yards here illustrated. Great piles of marble tower high in the air, silhouetting themselves against

the sky. This huge mass of blocks, each weighing from one-half to forty tons, and much of it imported from France, Italy, Greece and Germany, represents a value of more than a million dollars.

The yard itself takes up about two square blocks. On one side is a warehouse where samples and cut slabs may be stored. On the other side, directly opposite the warehouse, is the long two-story sawing building. One half of the length of the lower floor is taken up by the huge sawing compartments. The other half is devoted to the motors and long shafts that connect motors and saws.

There are seven sawing compartments, each having a large sliding door opening into the yard to let the cars in and out with the marble blocks. The saws are driven from a horizontal shaft operated by a one-hundred horsepower electric motor. Each of these saws has seventy-two toothless iron blades, one-quarter of an inch thick. After they have been set according to the desired width, they are passed swiftly backward and forward over the surface of the block, upon which a continual stream of sand and water is fed. In this manner the blades rub the

mixture against the marble and gradually wear it away. Thus they cut about one-half an inch an hour, or about twelve inches a day. While still on their carriages, the cut slabs are run into the yard again. There, they are loaded on trucks to be delivered to the customer.

A seventy-five horsepower alternating current motor belted to a direct current generator furnishes the power for the two traveling cranes which handle the heavy uncut blocks.

Before The New York Edison Company's service was installed a steam plant was used to operate the saws and cranes. Since the installation of electrical equipment served by Central Station Service, not a single delay due to power plant breakdown has occurred.

Night and day the big force of the marble sawing plant works steadily on, never stopping but for their one hour of rest. Cutting the marble that will decorate New York's buildings for years to come, they are not unlike the ancients who strove for a similar purpose. And it is upon the beauty and art found in the decorations of the marble workers of old that our modern skill is based.



Photograph by The New York Edison Company.

Great piles of marble, some domestic and some imported, represent a value of more than a million dollars.



## THE ILLINOIS STATE CAPITOL

THERE is nothing that illustrates so forcibly the extreme rapidity of this country's growth as the changes made by the different states in their capitol buildings. This is especially noticeable in our middle western states. Not only were older buildings rebuilt to meet the needs of enlarged activities, but in many cases the government seats were moved to other regions entirely—and sometimes these lo-

cations were changed several times before the present capitols became definitely fixed.

Such is the history of the State of Illinois. The first capitol was at Kaskaskia. Removal was later made to Vandalia, and later, in 1837, Springfield was selected as a permanent site. For thirty years the original building erected at Springfield was used by the State, but in 1867 the need for larger quarters became so pressing that the Twenty-



North Corridor on First Floor, showing both domestic and imported marbles.

fifth General Assembly passed an act authorizing the erection of a new State House.

This act authorized the governor to convey to Sangamon County and the city of Springfield the old capitol building and grounds. This building is now the Sangamon County Court House, and it stands in the middle of the Public Square of Springfield. In return, the State received the sum of \$200,000 and the site for the new capitol. The act limited the cost of the new structure to \$3,000,000, though this was later found inadequate. The Constitution of 1870 placed a limit of an extra half-million dollars to the original sum; the people voted in 1884 to appropriate an additional amount to complete the building, so that in 1885, when it was completely finished, the cost was about \$4,500,000.

A prize of \$3,000 was offered by the Board of State House Commissioners for the best design and was won by John C. Cochrane, of Chicago, from among twenty competitors. His compensation was fixed at 2½ per cent of the building's cost. At different times during the construction period, W. D. Clark, A. H. Piquenard, M. E. Bell and W. W. Boyington were also employed in the architectural work.

The Illinois State Capitol Building is in the form of a Latin cross. It is situated in a plot of ground eight and a half acres in extent, bounded on the east by Second Street, on the west by Spring Street, while Monroe and Charles Streets adjoin it on the north and south respectively.

The grounds surrounding the structure are beautifully kept, and the curving drive-

ways bordered by ornamental lamp posts wind gracefully through the fine trees. At the eastern entrance, which is the main approach to the Capitol, is Andrew O'Connor's statue of Abraham Lincoln, which was dedicated on October 5, 1918. This impressive work, over ten feet in height, cost \$50,000. To the north is placed a statue of Stephen A. Douglas by Gilbert P. Riswold. At the extreme southeast corner is a statue of Pierre Menard, the first Lieutenant-Governor of the State, and a famous Indian trader.

Approaching the eastern façade of the building, the towering dome seems to rise majestically from behind the entrance portico, the cupola at the summit giving it a vague resemblance to the graceful style of

the marble temples of India. This effect is somewhat increased by the minarets that flank the portico and are broken out from the otherwise straight sides of the entrance wing.

The style of the interior is of the Composite Order of Roman architecture. The circular foundation upon which the great dome of the Capitol rests is ninety-two and a half feet in diameter, and is twenty-five and a half feet below the grade line based upon the solid rock. The walls supporting the dome are seventeen feet in thickness from the foundation to the floor of the first story. The foundation for the outer walls is from eleven to sixteen feet thick below the grade line, and nine feet thick up to the first floor. The extreme length of the build-



The Stairway in the West Corridor, built entirely of marble on a framework of iron. Notice the handsome columns.



East Corridor on the Second Floor.

ing from north to south is three hundred and seventy-nine feet, and from east to west two hundred and sixty-eight feet. The height from the ground line to the top of the dome is three hundred and sixty-one feet, and to the tip of the flagstaff four hundred and five feet.

The eastern portico contains ten huge polished pillars, with Corinthian capitals, that supports the Corinthian gables. Similar porticoes are found at the ends of the other wings. Around the base of the dome, the walls of which recede in graduated stories or "set-backs," provision is made for the transition from the square to the circular shape, by an arrangement on each of the four sides of eight columns that support a balcony almost two hundred feet above the street level; while just above, and completely encircling the dome, are twenty round-arched windows, in alternating groups of two and three openings, the groups separated by columns. Between each pair there is also a column, an arrangement that is carried out in the windows of the second floor. The whole produces an impression of unusually extensive employment of column

and arch, and the effect is altogether fine and interesting.

Within the building, marbles have been extensively used. The marble was set in a full bed of cement and after almost fifty years of service is practically unimpaired—a mute testimonial of the excellence of this material where permanence as well as beauty is desired. In the floors of the corridors and in the wainscoting and panelling are seen vari-colored domestic and imported marbles, including Verde Antique, Glen Falls, Tennessee, Concord Vermont, Carthage Imperial Gray, Georgia Pink, Lisbon, White Italian, Alps Green, and other varieties. The field of the floor is a gray marble; there are embellishments of reddish marble, and a border of purple and sage green. The rotunda from the second floor is formed of a succession of marble, granite and bronze, to a height where a huge frieze, forty feet high, completely encircles the dome. Above is a succession of highly decorated mouldings that extend upwards some twenty feet, above which, in turn, are twenty-four columns, sixty feet high and four feet in diameter, apparently of Siena

marble. In reality they are synthetic, with capitals and vases in imitation of antique bronze.

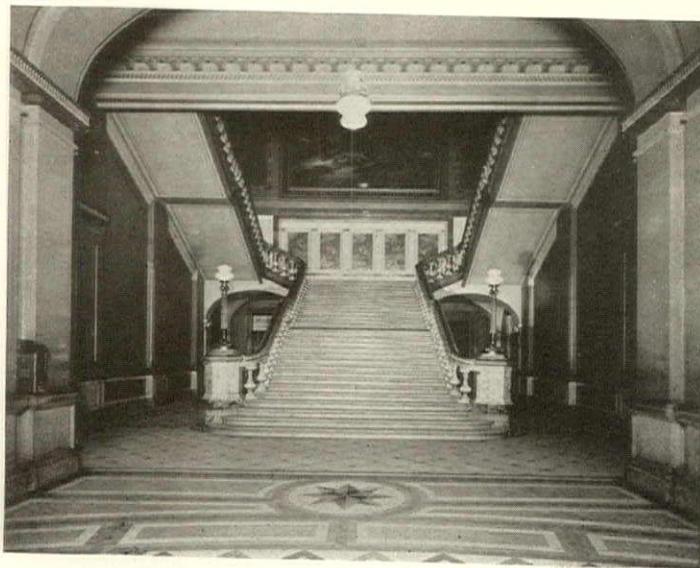
The upper dome is built of galvanized iron, decorated and panelled with relief ornaments, all of which are treated in atmospheric colors to give distance to a structure already reaching to a height of over two hundred feet. Blue and gold are the predominating colors. There is a circle in the very top of the dome about fourteen feet in diameter and this is finished with stained glass on which the principal design of ornamentation is the coat-of-arms of the State of Illinois. The dome decorations are arranged in a manner to show both its gigantic proportions and its enormous height.

The main feature of the first floor is the grand stairway in the west corridor, composed solidly of marble with a framework of iron. The ceiling of this west wing is a succession of arches and panels, and the decorations of fresco paintings are emphasized by the use of oriental shades of red and gold. At the stair head is a large painting twenty by forty feet, representing George Rogers Clark completing his Indian Treaty before Fort Kaskaskia.

The east corridor, with its floor of marble, and its three-foot high marble wainscot, has a series of marble shafts supporting the ceiling. The other wings are decorated in French Renaissance fresco design, in keeping with the rest of the building.

The murals throughout the Springfield Capitol are both plentiful and praiseworthy. They depict mythological characters, as well as noted scenes, events and personages of Illinois history. When they were first made, they attracted much attention, and were regarded at that time as wonderful specimens of such work, as indeed they were, even in comparison with more recent accomplishments.

When the Capitol building was erected it was considered so large as to be entirely out of proportion to the needs of the State. At the close of the first half century of its existence, and after forty-eight years of actual use, it is so overcrowded that the Supreme Court building afterwards constructed and the Centennial Memorial building are actually needed to carry on conveniently and efficiently the work of the various activities of the executive departments of the State of Illinois.



Grand Stairway on Second Floor, Illinois State Capitol.



Town Hall at Bruges.

## GOTHIC ARCHITECTURE IN BELGIUM AND HOLLAND

CONTRASTING with the very commonplace Gothic architecture of Northern Germany, the finely balanced style of the churches of Belgium are not only much more interesting, but they are much closer to the French style, both in plan and decoration. This is to be expected, since the geographical position of the country brought it more within the influence of French thought and custom. There was, of course, a certain effect exercised by the architecture of Germany, but this was not nearly so predominant in Belgium as it was in Holland.

During the thirteenth century, there ex-

isted close relations between the clergy of Tournay and Noyon. As this grew in volume and intimacy, not only did the churches show the French spirit, but the town halls, guild houses, market halls, and even private houses evidenced a similar trend. Such cathedrals as those of Tournay, Antwerp, Brussels, Malines, Mons and Louvain were the equal, in scale and treatment, of the best of the Continental Gothic buildings, while the Cloth Hall at Ypres, the Market Hall at Bruges and the Town Halls of Louvain and Brussels were splendid examples of Gothic in secular works.

Illustrations through the courtesy of Thomas Machen, architect, Baltimore, Md.

The first true Gothic building in Belgium was the choir at Sainte Gudule, at Brussels, built in 1225. Next in point of time were the choir and transepts of Tournay in 1242. Here we find a plan with pointed vaults, side chapels and a complete chevet, after the French system. The large clerestory windows contained five lights, the transept ends were round, and the high main arcade was stilted after the fashion of late Gothic; while the window tracery was purely geometrical, and belonged to the style of a much earlier period. There was a curious mixture here of styles, a condition that was not unusual in Belgian Gothic. This was probably due to the lack of originality generally noticed, if we except one class of architectural feature, the tower. The builders seemed to have depended more on imitations of French and even English Gothic than on any working out of their own plans. In St. Jacques, at Liege, an interesting parish church of the first rank, built in 1522-58, there was window tracery that was almost certainly copied from the English Perpendicular. The interior of this structure did not compare with the exterior for excellence of plan or decoration, although the vault plan was quite elaborate and color was used lavishly. There was a certain tawdriness that was doubtless due to the drop tracery that fringes the main arcade. A similar treatment is seen in St. Sebald at Nuremburg. St. Jacques, in spite of its late date, was remarkable for the absence of Renaissance details.

The cathedral of Antwerp was perhaps the best known of all the Belgian churches. Built in 1352-

1422, it covered about 70,000 square feet. The late war played havoc with many of the buildings of this section, and Antwerp was among those structures that met with injury. Nicholas Aleyns laid the cornerstone and Jean Amel, of Cologne, had prepared the plans for the mighty structure, and continued to direct the construction until his death, when he was succeeded by his son. It had seven aisles, and narrow transepts and its exterior was truly noble in its conception. Within, owing to a poverty of details and a lack of proportion, it was somewhat disappointing. The arcades and vaulting-ribs developed straight out of the piers, without the use of capitals. This suppression of the impost was frequently found in late Gothic in both France and England.



Interior of Antwerp Cathedral.



Antwerp Cathedral, looking across the Place Verte, showing the statue to Rubens in the foreground.

The later west front, built in 1422-1518, displayed the "florid taste of the wealthy Flemish burgher population of that period, but is so rich and elegant, especially its lofty and splendid north spire, that its over-decoration is pardonable." (Hamlin's *History of Architecture*.)

Antwerp Cathedral was the crowning glory of the Commercial Capital of Brabant and no other church of northern Europe of that day equalled it in the imposing grandeur of its exterior or the variety and richness of its internal decorations. "Statuary of unrivalled magnificence, paintings by the greatest masters of art, moldings in bronze, and carvings in wood by the most cunning

hands of the world's artisans . . . made it the pride of its citizens and the delight and wonder of strangers from other lands." (F. H. Allen.) Napoleon compared the tower, topped by a spire soaring upward for hundreds of feet, to Mechlin lace. The porch was of black marble. Within was an uninterrupted view through the choir to the high altar, above which was the famous painting by Rubens of "The Assumption." Other paintings by this artist were placed in the north and south transepts, the one in the latter called "The Descent From the Cross" being the best of this artist's work. So closely was Rubens identified with the Cathedral that it is impossible to think of



The Church of Notre Dame at Bruges, founded by St. Boniface in 745. A vast irregular pile illustrating all periods of architecture in which Gothic predominates.

Antwerp and not recall the works of this master.

Both Belgium and Holland abounded with a distinct type of Gothic, a type that developed through the use of a special material. Such churches as were built at Bruges, Utrecht and other places, of brick showed a certain hardness of style that would never have developed had stone been used. They illustrate very well the effect of material on style. Details and mouldings had to be simplified, and the ingenious methods of these builders in adapting Gothic forms to brick is strikingly shown by such a façade as is found in the Rue de l'Amour at Louvain.

In nearly every city of Belgium at this

time of the late Gothic period were erected edifices of a secular nature. These buildings, mostly town halls and guild halls, were usually the most conspicuous monuments in the town, and they remind us that this was the beginning of civic and domestic architecture. Formerly, besides the churches, there were built such massive piles as the castles of Amboise and Pembroke.

These were not really architecture, but feats of engineering. Occasionally, in Germany or in France, were built certain civic structures that showed the same architectural treatment of the contemporary period. But it is only in Belgium that such works assumed any greater importance. The reason is simple. These fine halls and market buildings were erected at a time when private individuals of certain cities were beginning to find themselves, through their commercial power, almost on an equality with their rulers. The architecture of the



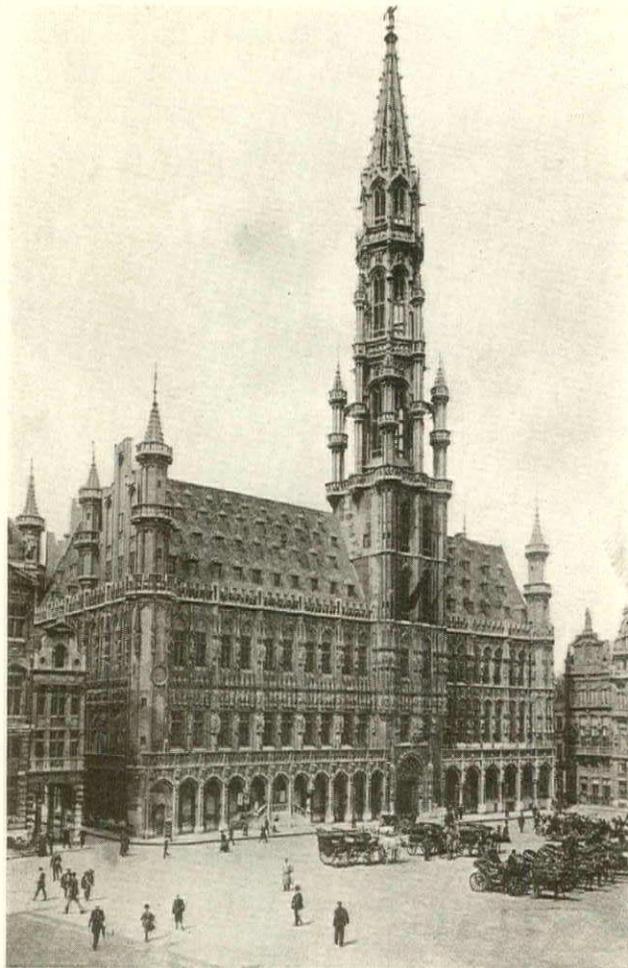
Cathedral of Ste. Gudule at Brussels.

time was quick to reflect this rise of the common people and such buildings as the Cloth Hall of Ypres (1304), and similar halls at Bruges, Louvain, Malines, Ghent were quick to rise.

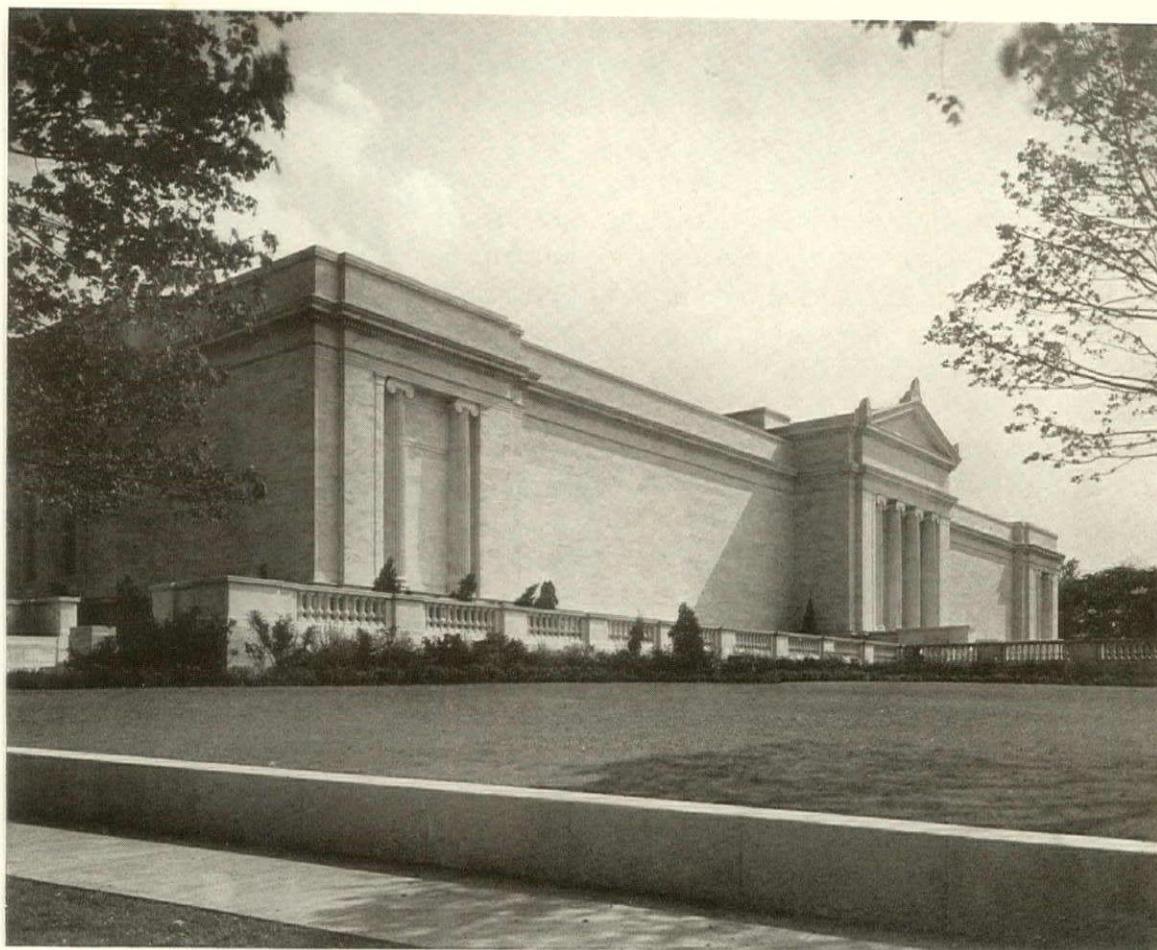
The Town Hall of Bruges, built in 1377, was the first building of this type, and the Town Hall of Brussels, begun in the fifteenth century, with its very graceful tower, was one of the best known. That of Louvain (1448-63) and Oudenärde (early in the sixteenth century) are very elaborately ornamented, but are not, after all, as dignified nor as impressive as the structures that preceded them. The Town Hall of Louvain, incidentally, was most fortunately spared

by the Germans in the World War.

We have mentioned previously the originality shown by the Belgians in one respect: the construction of towers that exhibit a character peculiarly their own. The towers of Antwerp and Malines were splendid monuments that any country would be proud to own. They rivaled the towers of Cologne and Vienna in height and lightness of appearance and combined with these qualities, a more Masonic type of design. Another group that exhibited a fine individuality was composed of the twin western towers of Sainte Gudule at Brussels, which differed only in simplicity of design from the Malines tower.



Town Hall at Brussels.



## THE CLEVELAND MUSEUM OF ART

IN designing the building for the Cleveland Museum of Art, the architects, Hubbell and Benes, of that city, were confronted with the problem of contriving a structure that could accommodate large numbers of visitors at one time; and, at the same time, provide ample facilities for a very complete working staff. That they succeeded in meeting fully these requirements, and that in so doing they attained a degree of architectural skill above the ordinary, is shown by the following quotation from a story by I. T. Frary that appeared in the *Architectural Record* for Sep-

tember of 1916, the year that the building was dedicated. "There has been thrown open to the public recently in the city of Cleveland a new structure to house the collections of the Cleveland Museum of Art. The beauty of its design, the completeness of its equipment and the convenience of its arrangement have attracted widespread attention from those interested in buildings of this character, and representatives from the staffs of the leading art museums of the country, who were present at the formal opening expressed the opinion that nowhere had they seen a building more

perfectly adapted to its requirements."

The funds for the erection of the Museum were contributed mainly by three generous-minded citizens of Cleveland. John Huntington, Horace Kelly and H. B. Hurlbut, who had left considerable sums of money in their wills, for the purpose of establishing and maintaining in Cleveland a gallery and museum of art. Since the trustees provided by the Huntington and Kelly wills were independent of each other, there was considerable legal difficulty in effecting a working combination between the two trusts. An agreement was finally reached by which a single building was to be erected; and while the parts of this building were to be susceptible of legal control, the outward result, as far as it concerned the public, would be a single institution. Some years elapsed before this difficulty was overcome, during which the available funds increased sufficiently to guarantee the erection of a building quite adequate for its purpose and capable of housing those widespread museum and educational activities which had been conceived in the minds of the donors.

A splendid site was offered to the building committee by Mr. and Mrs. J. H. Wade in Wade Park, overlooking the beautiful lake. Sufficient ground was included to provide for future additions. The slope to the water was of such extent as to afford a fine opportunity for a large forecourt, with fountains, lagoon and a formal garden; the surrounding trees furnished a charming setting, and the approaches added greatly to the beauty of the building.

Work was begun in May, 1913, and the structure formally turned over to the trustees on Tuesday, June 6, 1916. The exterior presents a main front, on the south, that is extremely simple, the straight plan broken only by the slight projection of the end pavilions and the entrance portico.

These pavilions are decorated by two low relief panels set between pairs of engaged columns, that carry out the theme of a quartette of similar columns that support the portico roof. Besides the usual features incident to the use of the Ionic order, there is no other enrichment of the façade, the white walls of Georgia marble not even containing windows, since the illumination on this side of the building is cared for by top-lighting. The whole effect is unusually severe but not unimposing.

White Georgia marble was used for facing all four sides of the building and as the length was three hundred feet with a width of one hundred and twenty feet, it was necessary to use sixty thousand cubic feet of this material for the walls alone. Seven thousand additional cubic feet were used in the approach work, which consisted mainly of a low marble balustrade extending clear across the front of the terrace upon which the building rests. The portico columns that support the pediment at the main entrance are each twenty-seven feet high and four and a half feet in diameter at the base. The shafts of these columns were cut from single blocks of marble nearly four feet in width. The question of the exterior material was considered very carefully, and for a time it was almost a certainty that sandstone would be selected instead of marble or granite, since one of the donors was very much interested in the sandstone business. The white Georgia marble was finally decided upon, while a gray Canyon sandstone was chosen for parts of the interior, chiefly in the upper walls of the Court of Casts, and in the Rotunda. The columns in the latter, however, as well as the caps, were quarried in Maryland. The bases of these columns, as well as the bases under the sandstone walls are of Tennessee marble and the same stone was used for the floors, stair treads and



View of South Front of Cleveland Museum of Art, Cleveland, Ohio,  
looking across East Boulevard.

risers throughout the interior. The balustrade of the stairs, as well as the wainscoting of the exhibition and picture galleries, is in Marvella, a marble quarried in Maryland, and was selected by the architects because of its neutral color. The wainscot on the ground floor lobby and entrance is of a fine English Vein marble, while in the Garden Court are found many of the older materials that were brought from Italy and in use in the first century.

The three other sides of the exterior differ from that of the south by having windows pierced in the walls for the lighting of the galleries; and the north façade gives the effect of an additional story by the elimination of the terrace. This provides entrances to the ground floor level, where are located the lecture hall, storage vaults, officers' quarters and the like. From the main entrance a lobby leads to the rotunda which

opens to either side on large rectangular courts.

The exhibition galleries surround this central group completely, with check room, phone booths and catalogue counter located near the main entrance. These galleries contain numerous openings, and are so arranged as to provide natural and logical circuits without confusion or crowding.

The Rotunda contains examples of classic art. The last court is called the Court of Tapestries and Metal Work because of its contents; the west court is laid out as a garden, with flowers, shrubbery, walks and a fountain, and numerous examples of architectural sculpture placed about in suitable spots. The brick walls are devoid of ornamentation and the court is intended by its very simplicity as a place of rest and relaxation for the tired visitor.

Descending to the ground floor, the care-



North Front, showing entrances to ground floor.



In the Rotunda, the columns are of Maryland marble;  
the floor and bases are of Tennessee.

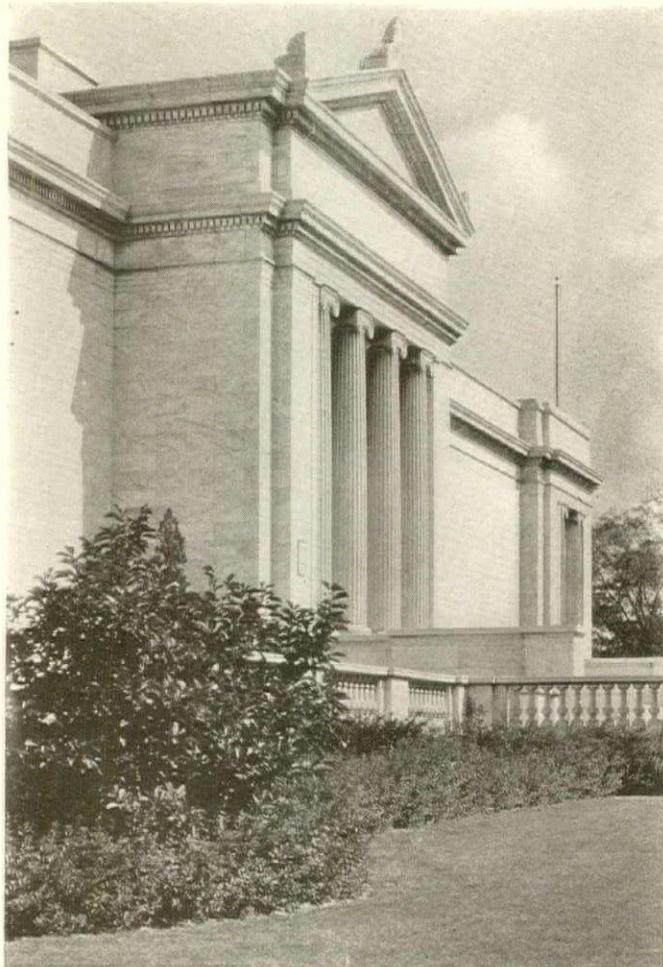
ful planning of the architects becomes quickly apparent. Here the administration offices are located in such a way as to provide for all possible future expansion. In addition they are so compactly grouped that the various officials can readily be found. Besides this ingenious office arrangement, there are other features that are worthy of special mention. One of these is the system used for storing pictures. Mr. Frary describes it as follows: "A series of vertical, sliding metal frames the height of the room are placed at right angles to the wall. These frames are covered with a heavy wire netting, upon which are hung the pictures which are to be stored. Being placed side by side, and hanging from an overhead track which permits of their being drawn forward

easily like the drying racks in a laundry, the frames occupy a minimum of space, and yet the pictures upon them are as accessible, as though hung upon the walls of a room. Each frame is numbered, so it is a simple matter to locate any picture in storage by referring to the office records. Inasmuch as this room is well lighted and easily accessible, all the pictures kept there are available for inspection at any time. This simple solution of the storage problem, which was studied out by members of the museum staff, has attracted much favorable comment from visiting museum officials."

Perhaps the most original as well as interesting feature of the equipment is the lighting system in the top-lighted galleries. This consists of a series of adjustable metal

shutters or louvers placed between the upper and lower skylights, and which are controlled from the gallery below. The angles of these are changed according to the variation of the sun, so that a uniform illumination is maintained all through the day. For night lighting, lamps surrounded by scoop-shaded reflectors throw a light upon the lower skylight, while the use of daylight lamps of bluish glass gives such a close approximation to day-time conditions that the transition from one method to the other is hardly noticeable below.

Cleveland is to be commended for divorcing her fine museum from the group of public buildings developing in the downtown section. It was at first urged to include the structure in that group, but better judgment prevailed. As a consequence, there has sprung up a distinctly individual and educational center around University Circle, that includes the buildings of Western Reserve University, Case School of Applied Science, the Western Reserve Historical Society and the Cleveland School of Art and others.



The marble garden furniture in the Garden Court came from a villa at Boscoreale, a town which was destroyed at the same time as Pompeii, 79 A.D., by an eruption of Vesuvius.



## THE EASTMAN SCHOOL OF MUSIC AND EASTMAN THEATER

THE new Eastman School of Music, a college of the University of Rochester, at Rochester, New York, with the Eastman Theater in connection therewith is "a practical solution of a purely idealistic conception."

Mr. George Eastman has contributed a site in the heart of the retail business section of the city, and erected thereon and equipped a building costing approximately \$5,000,000, in addition to which he has provided an endowment for the School of over \$2,000,000.

As the desire of the donor was to benefit as many of the people as possible by bringing to them the satisfactions and enjoy-

ments to be obtained by hearing and knowing fine music, he felt that the ideal institution would not only provide a place to instruct performers, but what was really as important, would also educate "listeners." Following out this thought, he hit upon the idea of building a great theater for motion pictures, in the development and betterment of which he is also greatly interested, at which the pictures would be supplemented and accompanied by a fine orchestra. It is further planned, and so far with very gratifying success, to have the profit from the motion picture performances meet the customary annual deficit of practically all

symphony orchestras, the endowment fund furnished being entirely for the School and not for the theater.

The building as finally completed, while appearing from the street elevation as a single structure, is in reality two distinct buildings separated by an open court.

The peculiar shape of the lot and the complex nature of the problem required an unusual plan, which was carefully worked out to the last detail by Messrs. Gordon and Kaelber, under the constant supervision of Mr. Eastman, after which the firm of McKim, Mead and White, of New York, was called in to assist in the design of the exterior of the building, and the interior of the theater and other important rooms.

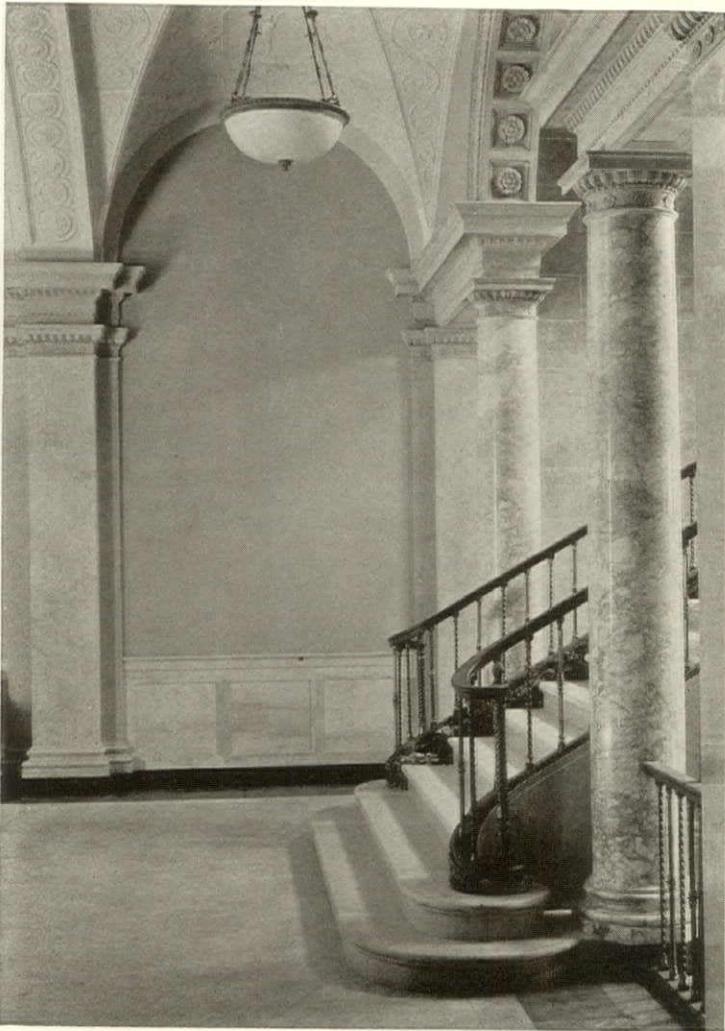
"The exterior is built of limestone in a free adaptation of the Italian Renaissance style. The dignity of a public institution is

emphasized rather than the gaiety of a theater. An order of Ionic pilasters, broken at the two entrances by engaged columns of Vermont marble (by a curious coincidence, known to the trade as 'Eastman Green') serves to give unity to the main façade. The Music School proper marks the highest development in America in musical equipment."

On the top floor, in addition to several lecture rooms and studios for general work, there is an organ department with two large organ-teaching studios and thirteen organ-practice rooms, all of the organs proper being placed in an attic floor and speaking through the ceiling of the various rooms. In addition, there are in the building many studios and class rooms, rest rooms for the students and faculty, large studios for the principal members of the staff, and the



Main Corridor, with Tennessee marble floor bordered with Belgian Black.  
The walls are Botticino, with bases of Black and Gold.



Foot of Grand Staircase. The columns are Gray Siena marble.

Sibley Music Library containing many rare manuscripts, besides a full working library, offices for the director, the general administrative offices, and seventeen piano practice rooms. (After about one year of operation it became necessary to acquire an additional adjoining house and remodel this to provide some twenty additional practice rooms.)

"On the ground floor, a wide corridor runs the whole depth of the lot, forming a connecting link between the School of Music and the Auditorium." It has, therefore, been given a monumental treatment, with a Roman Doric order of Botticino marble sup-

porting a segmental barrel vault with occasional penetrations. The floor of this corridor is of Tennessee marble tile with border of Belgian black marble; the walls have a base of Black and Gold marble and a dado about three feet high of light Botticino marble, together with the pilasters above referred to.

At the Swan Street end, screened by columns of gray Siena marble, is an imposing staircase with treads and risers of gray Tennessee marble, and strings of Black and Gold marble, giving access to a corridor on the floor above, which, though of the same area as the one below, is lower, with a flat ceiling supported by an Ionic order. This corridor also connects with the Auditorium at the Balcony Foyer level. Its floor is of gray Tennessee marble laid in pattern with occasional diamond and circular shaped inserts of Levanto and Verde Tinos; its walls have a low dado of Botticino marble, with Black and Gold marble bases, and are divided into panels by Botticino marble pilas-

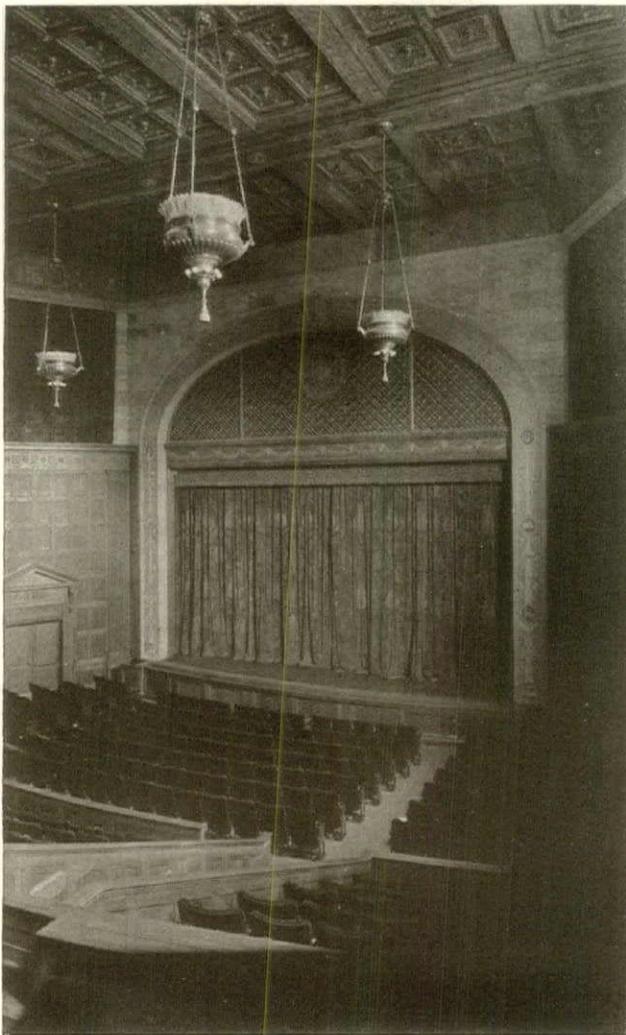
ters, the panels proper being covered with a gray cloth forming an excellent background for paintings, which by an arrangement with the Memorial Art Gallery will be changed monthly.

At each end of the second story corridor there is a screen of gray Siena marble columns. The two corridors mentioned are used on Wednesday nights (which are reserved for concerts) as promenades during the intermission; and from both of these corridors access is had to Kilbourn Hall, a beautiful room for chamber music and small recitals, seating about five hundred, and built as a memorial to Mr. Eastman's

mother, Maria Kilbourn Eastman. An effect of grandeur was not desired in this room, but rather one of intimacy, so that the attention of the listener would not be distracted from the music by too assertive decoration. Therefore, the polychrome ceiling and frieze of cupids and garlands, though rich in color and gold, are subdued in tone. These dec-



Upper Corridor, with Tennessee marble floor, inset with Levanto and Verte Tinos. The dado and pilasters are Botticino and the columns at each end are Gray Siena.



Kilbourn Hall.

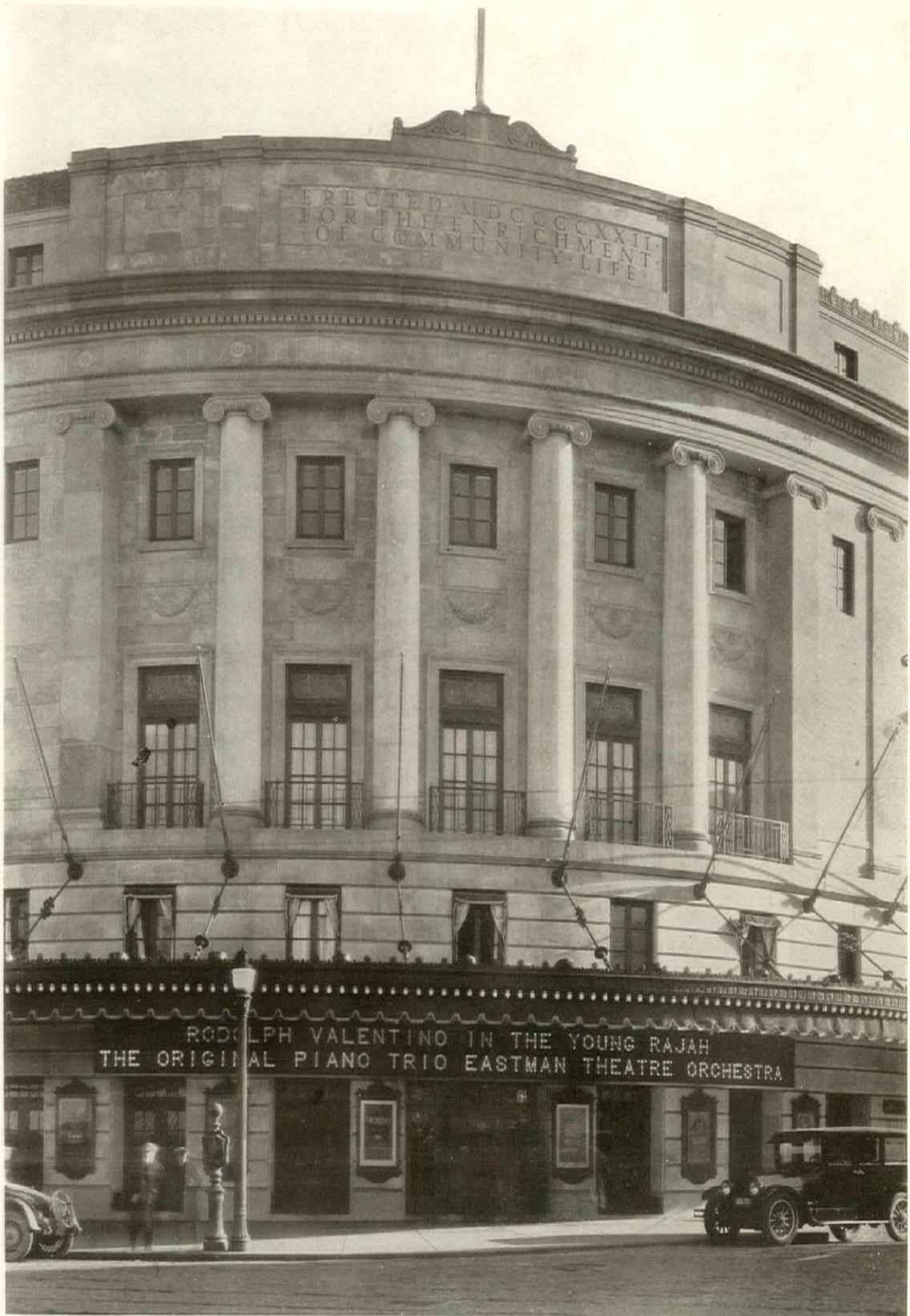
orations were designed and painted by Mr. Ezra Winter, the frieze having been modelled by Mr. C. P. Jennewein. The room is further enriched by six blue velvet hangings, stenciled in gold by the Hewlett Studios, and the lower part of the walls is panelled in walnut.

The organ, one of the finest in quality in the country, is located above the stage and speaks through a gilded grille in the proscenium arch, and through some of the perforated ceiling coffers.

The Lobby of Kilbourn Hall is finished with a floor of Travertine stone having a marble border, and the entire height of the walls show panels whose stiles, rails and caps are Botticino marble and fields of mixed gray and yellow Siena.

All corridors throughout the entire building have six-inch high bases of "French Gray" domestic marble; the main stairs have Gray Tennessee marble treads and risers; and all toilet rooms are finished in Gray Tennessee marble, with marble stiles and caps, no metal being used.

The entrance to the large auditorium is at the corner of Main and Gibbs Streets, where the curve of the façade occurs; and, after



Main Entrance of the Eastman Theater at Rochester, N.Y.



Main Entrance Lobby, showing reproductions of Lafitte's "Cupid and Psyche," painted for Napoleon.

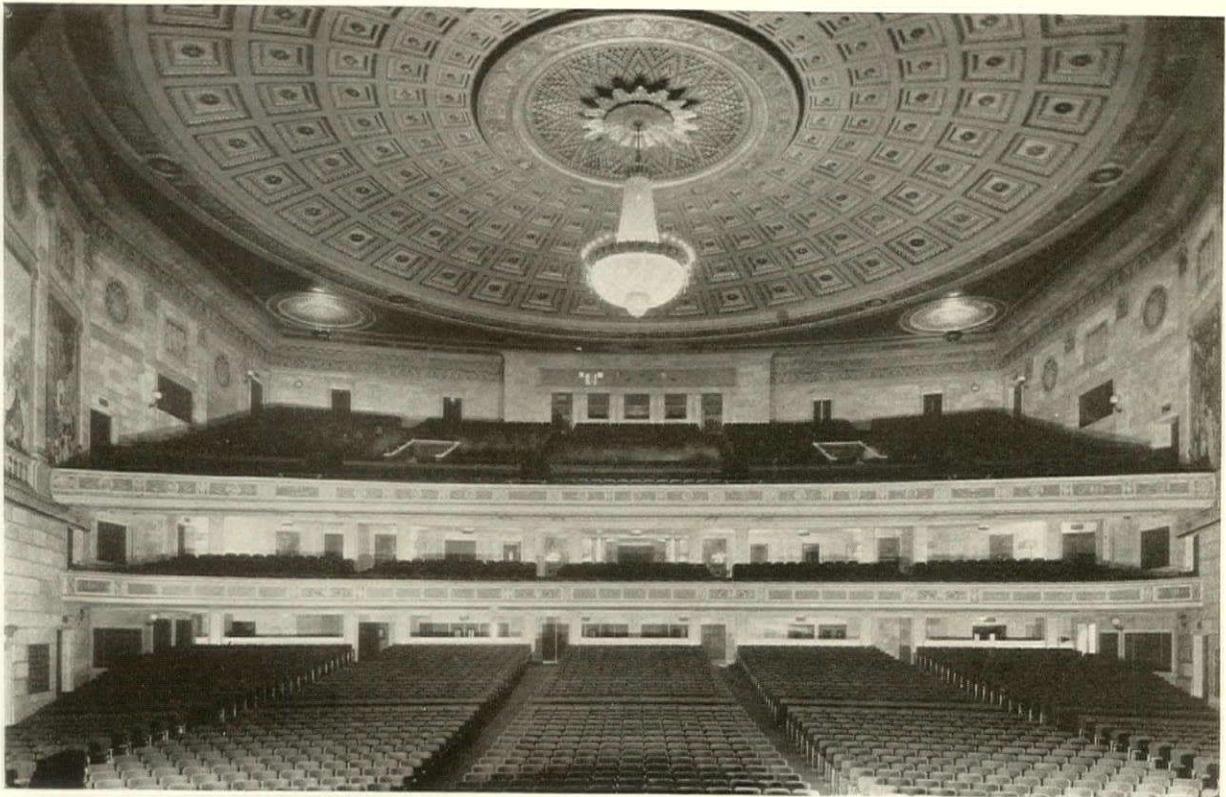
considerable study, an elliptical shape was decided on, as that best allowed the street doors to come where desired and also permitted offsetting the inner doors so that the entering audience is delivered near the center of the theater. An entirely separate exit vestibule is provided so that there is no conflict between those entering and leaving.

The Main Lobby has a floor of Travertine stone with border of Belgian Black marble, and is finished with pilasters and dado of Botticino marble, with Black and Gold marble base and six Black and Gold marble columns. The room is furnished in the center with a very large carved Botticino marble table, covering a bank of radiators, and several carved Botticino marble benches. Two circular panels on the ceiling are painted by Mr. Ezra Winter and Mr. Barry Faulkner, and on the walls are reproduc-

tions of the famous "Cupid and Psyche" decorations which were painted by the French artist, Lafitte, for the great Napoleon. These are printed by hand from the original wood blocks, of which over one thousand five hundred were required.

From the Lobby, access is had through a secondary vestibule, also finished entirely in Botticino marble, with a floor of Gray Tennessee marble, to the rear of the Auditorium, which has a capacity of approximately 3,500. From this vestibule rises also the Main Staircase, again of marble, to the upper levels.

There are no boxes in the theater, but instead a small mezzanine gallery, six rows deep, has been provided, with an ample foyer at the rear, which will contain the most expensive seats. This gallery has a carpeted floor, with a base of dark marble.



Rear of Main Auditorium, seen from the stage, the chandelier is said to be the largest ever made. Marbles, principally Botticino and Travertine, were extensively used in this interior.

walls of Silverdale stone and pilasters and columns of Botticino and gray Siena marbles.

Above this level is placed the "Grand Balcony," approached through the "Balcony Foyer," a very long curved room, reached by Tennessee marble stairs and ramp, which is carpeted and as beautifully finished in every respect as the more exclusive mezzanine. The base is of Black and Gold marble, and the walls are panelled by using Botticino marble pilasters at frequent intervals. At one end is a painting made expressly for this place by Maxfield Parrish, and nearby (to overcome some difficult ramp problems) a triangular fountain, with a bowl in the shape of a ship of marble, with a figure of a cupid and dolphin after an original by Giovanni de Bologna; and a beautiful allegorical painting of the Renaissance period, formerly in a well-known collection.

Every effort was made to have the cheapest and highest seat as desirable as those on the lower levels and the spectators in the upper balcony have the finest view of the great mural paintings which are the most interesting decorative feature of the room. Groups of figures, representing different kinds of music, are depicted against an Italian landscape background, seen, as it were, through openings in the side walls. The paintings on the left are by Ezra Winter, and represent a music festival, lyric music, martial music, and sylvan music. The corresponding decorations on the right are by Barry Faulkner, illustrating sacred music, hunting music, pastoral music and dramatic music.

The entire color scheme of the interior of the two auditoriums was selected and supervised by Mr. Ezra Winter. The success of

the decorations is entirely due to him, and it is hoped that this precedent of selecting an artist of national reputation in this capacity will be followed elsewhere. The walls are of a tawny yellow, enriched with Corinthian pilasters. Over the two doors near the stage are heroic busts of Bach and Beethoven, and fifteen medallions on the face of the balcony rail contain portraits in relief of famous musicians. The ceiling is slightly domed and treated with coffers enriched with color and gold. From a gilded sunburst, in the center, hangs one of the largest chandeliers in existence, from which a flood of light is thrown upon the ceiling. It is not, however, entirely an indirect fixture as there is also enough direct illumination to produce brilliancy in the crystals of the fixture itself. A completely wired full-size model of this fixture was made for experimental purposes.

The main auditorium has throughout a

base of dark marble, the openings are cased with Travertine stone, and the columns and the railing at the rear of the seats are of Botticino marble.

The stage is completely equipped for the most elaborate grand opera performance, and has also the largest theater organ in the world.

In addition, there is at the front of the house on the sixth floor, a room equipped with a complete projection booth and a fine three-manual organ for the teaching of motion picture accompaniment.

Ample and luxurious smoking rooms and women's rooms are provided on all floors, each with liberal toilet rooms. These are all finished with Tennessee marble floors, walls, and partitions; in fact, every detail of comfort and convenience, as well as perfection from an operating standpoint, has been provided.





East Lobby in the Main Office. The floor is Pink Tennessee, the walls Botticino, the counters Pavonazzo with Verde Antique bases, and the benches White Italian Statuary marble.

## THE PRESIDENT'S BANK

A Washington Institution Patronized by the Political Leaders  
of the Country

**E**IGHTY-EIGHT years ago, there was organized in Washington, D.C., a private institution that was known as the banking firm of Corcoran and Riggs. One of the members, William C. Corcoran, was also the founder of the Corcoran Gallery of Art, that nationally famous collection of statuary and paintings housed within a beautiful structure of white marble.

Later, under the name of Riggs and Com-

pany the bank acquired an international reputation as one of the country's leading financial institutions. In 1896, the bank was nationalized and the name changed to that by which it is known today, the Riggs National Bank.

The main office of the institution is located on historic Pennsylvania Avenue, that wide thoroughfare that has seen the passage of all of our country's presidents



The Safe Deposit Department has Tennessee marble floors, with Botticino walls and Verde Antique bases.

and the lesser lights of our political history. Opposite its main entrance, stands the United States Treasury Department, and only a stone's throw away is the White House itself.

It was only natural that an organization so advantageously situated should enjoy the patronage of persons prominent in the life of the nation. The Riggs National Bank has, in fact, numbered among its patrons more distinguished persons than any other bank in this country. Most of the presidents and a large portion of those officials high up in the Federal Government who have resided in Washington from time to time, as well as many members of the Diplomatic Corps, have carried their accounts at the Riggs National Bank, and it has always enjoyed the prestige of being the leading bank of the Nation's Capital. It is owing to this intimate relationship with such leaders that it is called "The President's Bank."

The Riggs National Bank is interesting from an architectural standpoint, both because the design of the main office is in

keeping with the character of the buildings erected by the Government in the National Capital and because the design of the four buildings occupied by the branches in other sections of the city, have been copied from that of the parent building. Recently there was completed a large addition to this original building. The changes made greatly enlarged the banking floor, which was entirely rearranged and refinished.

The exterior is of a light pink stone in the style of the Grecian Ionic. Surrounding the entrance doors is a convention-

alized swastika carving, while on either side rises a drum-column two stories in height, with voluted capitals. The cornice above is dentilated, while the pediment shows a richly carved eagle with outspread wings, flanked by an intricate design in high relief. To right and left of the portal columns are broken-out pedestals upon which stand bronze light standards contrasting vividly with the white blankness of the wall. The



West Lobby in the Main Office.



Main Office, Riggs National Bank, Washington, D.C.

architect for the addition and the remodeling was Appleton P. Clark, Jr., of Washington, D.C.

In the Dupont Circle branch exterior, there is the same general style, but the sculpture in the pediment is lacking, the eagle design appearing on either side of the architrave instead.

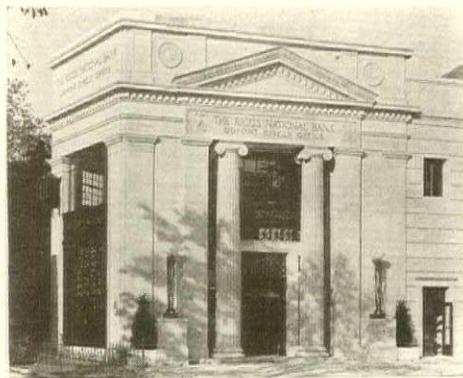
The interior of the main banking room, in the main building, is extensively finished in marble, with combinations of foreign and domestic varieties worked out in a fine decorative scheme. The walls are faced with Botticino marble to a height of about twelve feet and this marble blends into the warm soft-toned color scheme of the walls above. A prominent feature in the main room is the bank vault, which is directly opposite the entrance, cased in marble and surmounted with a bronze clock in a special frame set in the balustrade over the vault. The Botticino marble is also carried down a handsome staircase into the Safe Deposit Department, located in the basement, and the walls of this section are entirely faced with the same marble.

In the main banking room the Botticino marble was also used and toned into the wall treatment so as to form a background for the more colorful treatment of the bank-

ing fixtures. There was on hand in the former banking room some sections of fixtures faced with Italian Pavonazzo marble of unusual beauty and it was thought desirable to retain this. Consequently this was used in the reconstruction, and additional material secured to match it, though it was found difficult to obtain stone that was suitable, and a diligent search was necessary. A Vermont Verde Antique base was supplied to the Pavonazzo screen, and the framework above was carried out in richly wrought bronze.

The Pavonazzo marble used has a rich warm ground which tones into the Botticino background and fully harmonizes with it, notwithstanding the fact that the former is a much more highly decorative material. The floor has a border of Vermont Verde Antique marble, with the main body composed of light Tennessee marble. A cartouche of bronze is worked into this floor, and this carries in its center the monogram of the bank.

The treatment of the marble work of the bank has attracted much favorable comment. While it is unusually rich for the use intended, yet at the same time there is never any loudness or garishness, and the whole effect is one of quiet feeling and repose.



The Dupont Circle Branch of the Riggs National Bank.

# 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.

*Fareau*

Quarried at La Fare, near Gap, France.  
Deep black. (Blagrove)  
Takes high polish.

*Farleigh Down Stone*

Quarried near Bath, Somersetshire, England.  
Warm cream. (Freestone)  
Takes no polish.

*Farnocchia Quarries*—See Bardiglio Fiorito.

*Fasciato*—See Giallo Antico Fasciato.

*Fauche*

Quarried near the mountain of Fauche, Eastern Pyrenees, France.  
Gray with white veins. (Blagrove).

*Fauld Quarries*—See Alabaster, English.

*Fauski*

Near this town in Norway are located the quarries producing Antique Fonce, Breche Rose, Citron Furuli and White Salten.

*Fausse Griotte*—Same as False Griotte (Blagrove).

*Faux Cervelas*—Same as False Cervelas (Blagrove).

*Faux Portor*—Same as False Portor (Blagrove).

*Fave*—Drab.

*Favo*—Honeycombed.

*Favosites*—Coral fossils.

*Favositidoe*

Quarried near Plymouth, Devonshire, England.

Brown with numerous white fossils. (Renwick)

*Feldspar*

A mineral consisting of Aluminum Silicate with Potassium, Sodium, Calcium or Barium.

*FelinesD'Hautpoul*—See Griotte de Felines.

*Feluy-Arquenne*—Group C.

Feluy-Arquenne Quarries, near Nivelles, Hainault, Belgium.

Gray with white veins. (Watson)  
Takes good polish.

*Fendre*—Crack.

*Fendu*—Cracked.

*Fermanagh County, Ireland.*

Produces a black marble of which we have no particulars.

*Ferme*—Closed or firm.

*Fernbrook*

Quarried at Fernbrook, N.S.W., Australia.

Light fawn with rich red angular patches and markings to a dark purplish brown with pink fragments scattered through the mass. (Watson)

*Fernbrook Jasper*

Quarried at Fernbrook, N.S.W., Australia.

Rich red tint dominates the mass. (Watson)

*Feronville*—Somewhat similar to Hauteville.

Quarried at Feronville, Meuse, France.

Yellowish gray. (Blagrove).

Takes high polish.

*Ferrous*—To or from iron.

*Fe-Shu Ngan*—See Chinese White.

*Fetlar Serpentine*

Quarried on the Island of Fetlar, Shetland Isles.

*Ficalho Mountains*

Merrill mentions marbles from the mountains of Ficalho that are of good color and take good polish.

*Figline Quarry*—See Verde di Prato.

*Filabres, Sierra de Las*—See Sierra de Las Filabres.

*Finistere (French)*—See Granitello.

*Fior di Persica* or *Fior di Pesca* and *Fleur de Pecher*.

Quarried at Seravezza, Tuscany, Italy.

Variiegated violet, with white and green veins.

Note this marble is said to resemble Marmor Molossium. Merrill mentions a *Fior di Persica* as coming from Albania which probably is one among the following list from Pullen:

*Fiore di Persico* or *Marmor Molossium*, an ancient marble from Epirus; perhaps some of the varieties came from Elba; in form and disposition of markings, though not in color, it sometimes bears a strong resemblance to *Cottanello* in lilac, peach blossom, red, and white flowery patterns, of which Pullen lists the following varieties:

*Fiore di Persico Brecciato*—Lilac and white with red pebbles.

*Fiore di Persico Bruniccio*—Purple and white, in form of flames with stains of brown and red.

*Fiore di Persico Chiaro*—Very light lavender.

*Fiore di Persico Confuso*—Curiously mottled light gray, white and chocolate.

*Fiore di Persico Giallastro*—Lilac and lavender, with yellowish hue.

*Fiore di Persico Macchiato*—Light lavender, with foilated veins of darker hue, purple spots and tinges of pinkish yellow.

*Fiore di Persico Minuto*—Markings very small.

*Fiore di Persico Pavonazzo*—Flushed lilac, veined with purple and streaked with fleecy white.

*Fiore di Persico Picchiettato*—Veined lilac, pricked with purple and spotted with yellowish white.

*Fiore di Persico Reticolare*—Lilac in several shades, with crossed lines like network.

*Fiore di Persico Rossigno*—Pinkish brick, red and grayish-white veins of light transparent blue.

*Fiore di Persico Rosso*—Red, white and lilac, streaked with yellow.

*Fiore di Persico Sanguigno*—Blood-red stains.

*Fiore di Persico Violetto*—Shades of violet.

*Fiorito*

An ancient marble from unknown quarry. Red variegated. (Blagrove)  
According to Pullen, Fiorito (flowery) was a name given to ancient Alabaster. See Alabastro Fiorito.

*Fiorito di Arno*

Quarried near the banks of the Arno, Italy.  
Varied shades of yellow, with black specks. (Blagrove).

*Fiorito di Seravezza*—Same as Bardiglio Fiorito.

*Fiorito Listato*—Same as Bardiglio Fiorato Listato.

*Fire Marble*—See Lumachelle.

*Firenze*

Quarried near Firenze, Tuscany, Italy.  
Clear green.

*Fish Black*—See Swanton Black.

*Fixin*

Quarried at Fixin, Cote d'Or, France.  
Red veined with white. (Blagrove)

*Fleur*—Flower, Blossom, Bloom, Choice.

*Fleur de Lys*

Quarried near Pola, Italy.  
Light buff somewhat similar to Cavar-nelle.  
Takes medium polish.  
Material is easy to work because it is softer than marble.

*Fleur de Peche*—Same as Fior di Persica.

*Fleur de Pecher* (Flower of the Peach)

Is the French name for the Italian Fior di Persica.

*Fleur de Pecher*

Quarried at Bise, Garonne, France.  
Peach color shades with white, pink and brown. (Blagrove)

*Fleur de Pecher* or Peach Blossom.

Quarried at Savennieres, Maine-et-Loire, France.  
Grayish-white with red veins. (Blagrove)

*Fleur Marble*

Quarried at Carcassonne, Aude, France.  
Dark brown with light red markings. (Blagrove).  
Takes high polish.

*Flint*

Quartz in any kind of rock is commonly known to quarrymen and stone workers as flint. True flint (according to Merrill) is amorphous silica, occurring in nodular form in chalk beds.

*Florence Alabaster*—See Alabaster, Italian.

*Florence*—Name given to some Belgian Marbles. See Lesves, Philippeville, Thon and Samson.

*Florence No. 1*

Hogback Quarries, near Florence Station, Pittsford, Vermont.  
Light bluish gray, with fine dark gray streaks.  
Is sawed across the bed.  
Takes medium polish.

*Florence No. 2*

Hogback Quarries, near Florence Station, Pittsford, Vermont.  
Light bluish gray with irregular mottlings of dark gray.  
Is sawed with the bed.  
Takes medium polish.

*Florentine Agate* (Alabaster)

Castellina Quarries, Tuscany, Italy.  
Variegated resembling agate.  
This is a mottled variety of Alabaster.  
Takes low polish.

*Florentine Alabaster*—See Florentine Marble.

*Florentine Blue*

Vermont Marble Company's quarry, east of Biddie Knob, one and a quarter miles west of Florence, Pittsford Township, Vermont.

Light or dark dove blue, besides the numerous dark blue lines there are a few that are nearly black and as in most of the blue marbles there are white spots. (Vermont State Geological Survey.)

*Florentine Gray (Alabaster)*

Castellina Quarries, Tuscany, Italy.  
Light gray.  
Takes low polish.

*Florentine Marble*

A large amount of Italian Alabaster is used in the making of vases, etc., and the pure white is made into statuettes. Much of this work is done in or near Florence, Italy. The finished articles are mostly exported and sold as Florentine or Parian Marble, although in some cases the latter name is given to a composition that in appearance resembles pure white marble. After being treated it is often hard for even an experienced marble man to detect the difference between Alabaster and real Statuary unless some simple test is made.

*Florentine White or White Alabaster*

Castellina Quarries, Tuscany, Italy.  
Clear white.  
Takes low polish.

*Florentine Yellow*

Castellina Quarries, Tuscany, Italy.  
Light yellow.  
Takes low polish.

*Floriac*

Floriac Quarries, Lot, France.  
Yellow spotted with gray and red. (Blagrove)

*Florimont Marbles*

Quarried near Florimont, Dordogne, France.

Are generally white and yellow mottled with gray and black veins. (Blagrove).

*Fluor Spar* or Fluorite, or Calcium Fluoride and Fluss-Spath.

Found in certain stones including marble. In its pure state large enough for commercial uses it is extremely scarce, but has been used for interior decorations, but principally for inlays, small vessels; as a flux in metallurgical operations, and as a source of hydrofluoric acid; etc.

See Blue John, Blue John Amethyst, White Fluor Spar and Yellow Ashover Spar.

*Fluss-Spath*—See Fluor Spar.

*Focato*—See Giall Antico Focato.

*Folsom Quarry*

An old abandoned Vermont Quarry.

*Fontaine-Henry Stone*—See Caen Stone.

*Fontaine l'Eveque* or Frederic

Quarried at Fontaine l'Eveque, Hainaut, Belgium.

Black with reddish gray markings and small gray and white veins running in all directions. (Blagrove)

*Fontaine l'Eveque (Breccia)*

Quarried at Fontaine l'Eveque, Hainaut, Belgium.

Reddish slightly varied with very small gray spots and white veins. (Blagrove)

*Fontibagni Alabaster*

Quarried at Fontibagni, Piedmont, Italy.  
Clouded cream-white.

*Fontenelle Marbles*

Quarried at Fontenelle, Aisne, France.  
Generally are bluish gray with white cloudy veins. (Blagrove)

*Forest Marble*—See Planicostata.

*Forest Stone*

A sand stone from the Dean Forest, England.

*Formay County Marble*—See Irish Dove.

*Formosa*

Is a large island off the southern coast of China, rich in mineral deposits and timber, but producing no marble.

According to some authorities the name Formosa as applied to marbles is a contraction of Foremost.

*Formosa*

Many marble men consider all of the following marbles as different brands of Formosa:

Bongard	Estellante
Edelfels	Pojizonazzo

While all of the above, including Formosa, come from the Lahn Quarries, each is known by the names given.

*Formosa*—Group D.

Lahn Quarries, Wetzlar, Nassau, Germany.

Mottled pink, gray and cream with orange-colored veins.

Takes high polish.

*Formosa Dark*—See Estellante.

*Formosa Gray*—See Bongard.

*Formosa Red*—See Pojizonazzo.

*Fort Dodge Alabaster* or Gypsum.

Quarried near Fort Dodge, Iowa.

White and white clouded.

Has been used to some extent for structural purposes, but mostly in the manufacture of plaster.

*Fortezzino*—See Bigio Antico Fortezzino.

*Fortezzino Alabastro*—Same as Alabastro Fortezzino.

*Fortezzino Lumachellato Alabastro*—Same as Alabastro Fortezzino Lumachellato.

*Fortezzino Occhiuto Alabastro*—Same as Alabastro Fortezzino Occhiuto.

*Fosco*—Dark.

*Fosse*

Quarried near Fosse, Belgium.

Gray with numerous white conical fossils. (Blagrove)

*Fossil Clouded Petitor*

Petitor Quarries, St. Mary's Church, Devonshire, England.

Pink and red with many fossils.

Takes high polish.

*Fossil Coral*—See Madrepore Marble.

*Fossil Forest*—See Petrified Wood.

*Fougeres*

Quarried at Fougeres, Herault, France.

Various shades of yellow and violet. (Blagrove)

*F.O. White Norwegian*—White Norwegian or Norwegian White.

Quarried near Fauskeidet, Northland, Norway.

White with slightly bluish cast rather loosely grained.

Takes low polish.

Quarry opened in 1890 by Norwegian interests who transferred the property to a Danish Company, who erected a large finishing plant at the quarry. The available information seems to indicate that they have not been successful, due perhaps to the softness of the material, which makes it unfit for exterior use in northern climes.

*Framayes*

Quarried near Macon, Saone-et-Loire, France.

Black. (Blagrove)

## LIST OF QUARRIES AND MARBLE MANUFACTURERS

REPRESENTED IN THE MEMBERSHIP OF THE  
NATIONAL ASSOCIATION OF MARBLE DEALERS

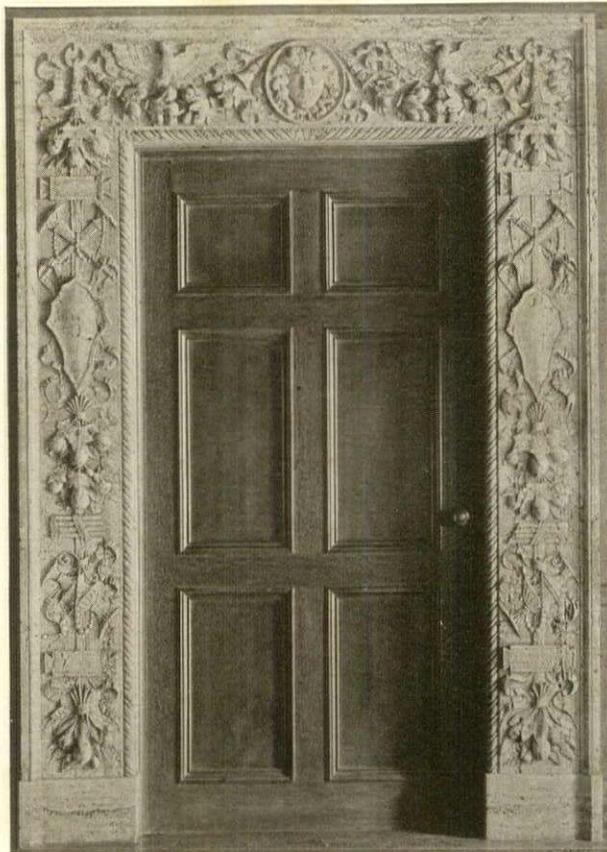
<i>City and State</i>	<i>Company</i>	<i>Representative</i>
Akron, Ohio.	Flower Marble and Tile Company	Jas. T. Flower
Atlanta, Ga.	Reeves Marble Company	Alex. Reeves
Baltimore, Md.	Hilgartner Marble Company	A. H. Hilgartner
Baltimore, Md.	Jos. B. Dunn & Sons, Inc.	Chas. Scheidt
Baltimore, Md.	P. B. and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

## 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	Maxtin 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
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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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