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THE MINNEAPOLIS MUSEUM OF THE FINE ARTS

THE history of the commercial growth of Minneapolis in the twentieth century does not differ materially from that of most western cities, but it has been accompanied by a healthy development of interest in the arts that has received the ready acknowledgment of the east. Under the moving spirit of the Minneapolis Society of Fine Arts, it has undertaken to provide its citizens with excellent facilities for the study of the fine arts in the form of collections of painting and sculpture, housed in a dignified and noble building which, when fully completed, will easily take rank with the foremost art museums of America.

Largeness of conception and boldness of enterprise are the characteristics of this movement, which began to take definite shape early in the year 1911. A splendid site was given through the generosity of Clinton Morrison, and the money raised for the nucleus of the structure with willing alacrity on the part of the city's prominent and wealthy citizens. The building committee, of whom John R. Vanderlip was chairman, engaged Prof.

Laird, of the University of Pennsylvania, to conduct a competition, inviting Messrs. Carrere & Hastings, McKim, Mead & White, Hewitt & Brown, Pell & Corbett, and Shepley, Rutan & Coolidge to take part. The result of this competition, completed December, 1911, is well known; its requirements included, besides space for administration, school and exhibition purposes, a library, a lecture hall and a symphony hall for the use of the city's celebrated orchestra.

Ground was broken on July 1, 1912, for the first section of the structure, which includes the central portion of the main façade, whose final interior arrangement will be devoted only to exhibition galleries, but which now is used in part by the school and the administrative offices. The corner-stone was laid July 30, 1913, and on January 8, 1915, the doors were thrown open to the public. The working of the museum is under the direction of Mr. Joseph Breck, formerly assistant curator at the Metropolitan Museum of Art.

The executed building is an excellent example of economical design, and



DETAIL OF CORRIDOR

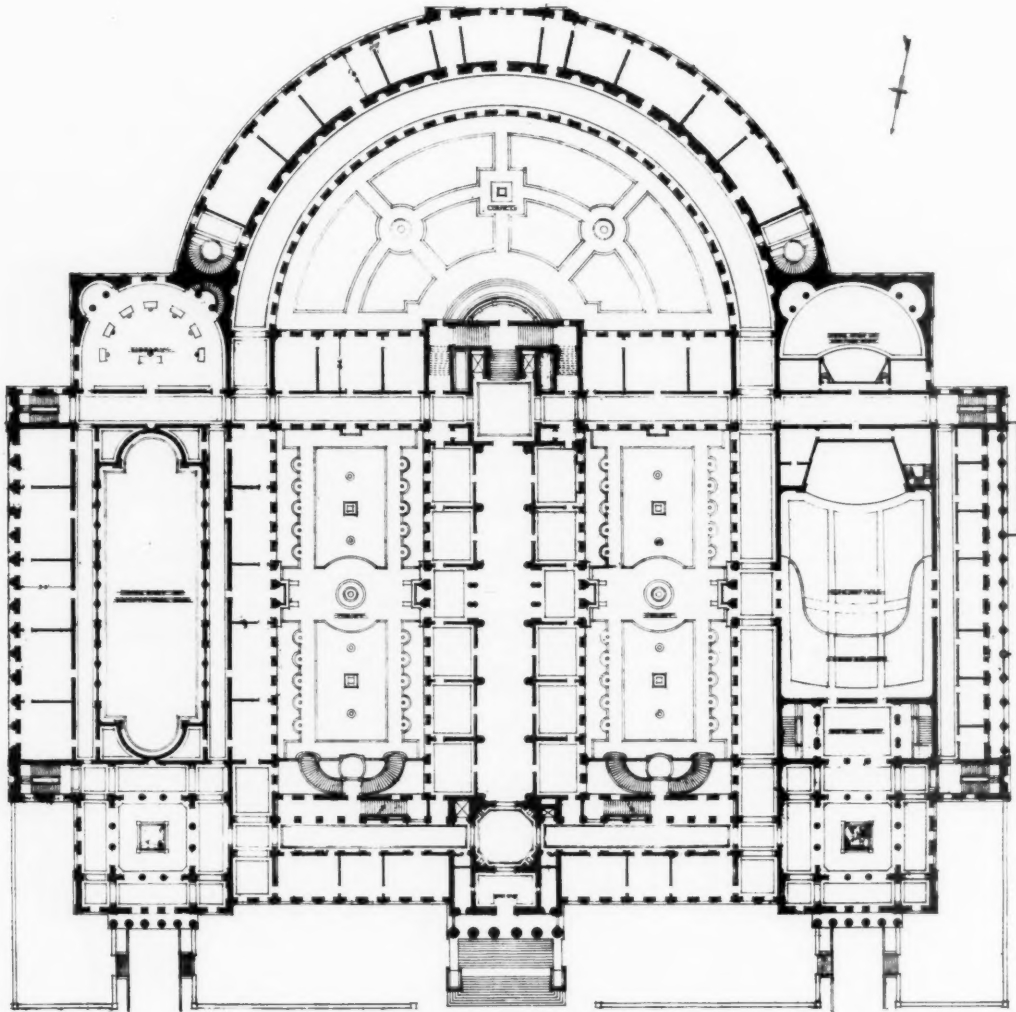
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the limitations of expense, so often a vexatious problem for the architect, have, in this instance, produced simplicity without sacrifice of dignity. The exterior façade of granite is handled with quiet and restrained sobriety, while the axial feature, an Ionic portico of six columns, is proportioned with

molded brick work forming the architraves of the circular-headed windows. Beyond this, the walls are plain and unfinished and will remind the citizens of Minneapolis of their duty in pushing to an early completion the project so auspiciously begun.

One enters through a vestibule of Bot-



FIRST FLOOR PLAN OF BUILDING WHEN DEVELOPED

unusual refinement. All breaks and moldings are designed in terms of the material, and owe much of their appropriateness to the preliminary study of full-size models of portions set up at the actual height.

The rear façade includes one side of the interior courts of the completed structure, executed in Kitanning brick, with simple

ticino marble at once to the centre of the structure, an octagonal room whose walls are of the same material; the flat-vaulted ceiling of tile construction, modeled in low relief, is pierced by an open bull's-eye, which admits light from the large gallery above. Leading from the octagon, on the central axis, is a long barrel-vaulted gallery, whose

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first bay only is included in the present building. A Corinthian order marks the divisions of the bays; this gallery is monumental in scale, and in the completed design will form its grandest feature.

From the octagon, on the transverse axis, one enters the circulating corridors with a line of columns that mark the stair wells. A wide flight of marble stairs, with wrought iron balusters and molded newels and string, leads to the second floor and similarly descends to the basement level, where are now found the school class-rooms, lunch and smoking rooms.

the main story are laid in pink Tennessee marble tiles.

The heating system is entirely separate from the ventilation, and is of the vacuum return line low-pressure steam type, with radiators situated beneath the windows and in the centre of the second floor galleries. The careful preservation of art exhibits demands two necessary conditions: an even degree of temperature and humidity. The first is obtained by an automatically-controlled pneumatic thermostat system; the second by a supply of fresh air filtered, heated and moistened, which is introduced



SECOND FLOOR CORRIDOR

The galleries for painting on the second floor are lighted entirely by central skylights, the ceiling being formed by ceiling lights and a deep plaster cove running around the rooms. The central hall is a room of considerable size; the walls are hung with fabric, while the ceiling light is supported by a series of penetrated arches. The material of the floors of this story is wood blocks of oak laid in mastic directly upon the concrete without the use of an under floor, while the floors of the halls and corridors of

into each room. Ventilation is effected by exhausting the air mechanically from each separate gallery.

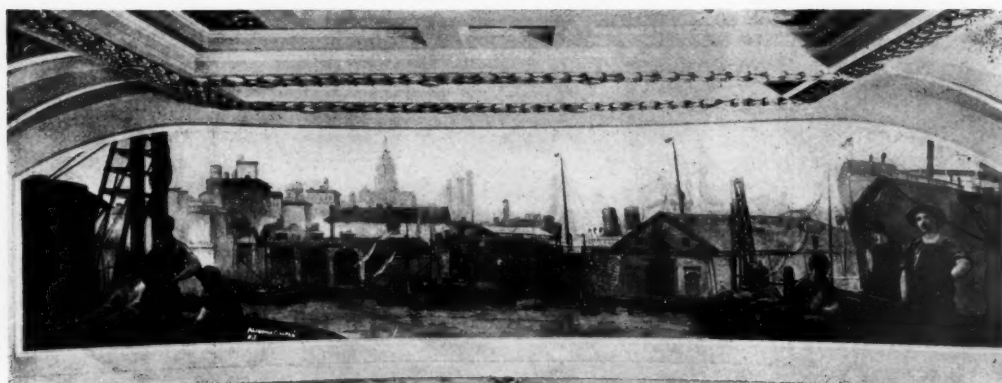
The scheme of lighting is divided into three systems: that of general lighting, of night or watchman lighting, and of provisions for the lighting of exhibition cases. The most interesting feature of this work is the method of lighting the painting galleries. Above the diffusing glass of the ceiling lights are suspended specially-designed cone reflectors; each separate panel of glass is

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illuminated by an individual light and the entire ceiling sash is thus equally lighted, while a separate system of outlets provides for the possible use of a continuous reflector to give more brilliant illumination of exhibits.

The ideal museum is obviously one in which the architecture becomes little more than a harmonious background for its con-

tents; in the light of this interpretation, the Minneapolis Museum fulfills its functions admirably. Unostentatious, but thoroughly studied, it bears the stamp of character without and within, and should be a forceful influence in the civic life of Minneapolis, where it has already become an object of pride and inspiration.



LARGE MURAL PAINTING (8x13 FEET) THE PORT OF SAN FRANCISCO
IN DEPUTY COLLECTOR'S ROOM, SAN FRANCISCO CUSTOM HOUSE

A. LINCOLN COOPER, PAINTER

FEDERAL AID IN MURAL DECORATION

WHEN Mr. Edwin H. Blashfield, some two years ago, addressed the convention of the American Institute of Architects, on "Considerations on Mural Painting," he dwelt at length on the apathy of men in public life toward questions of art, and their reluctance to agree to the expenditure of public money in the attainment of artistic effects. To most of them, art in the form of mural decoration was meritorious and they demanded what they called the strict realities, which, perhaps, is but another term for the commonplace. Yet this attitude has not been able to entirely prevent the introduction of the allied arts into architectural design. Our public buildings, are, year by year, receiving better decorative treatment. Fortunately, those who are striving for higher and better things have the assistance and valuable co-operation of Mr. Oscar Wenderoth, the Supervising Architect of the Treasury Department, and through this sympathetic attitude, the cause of good

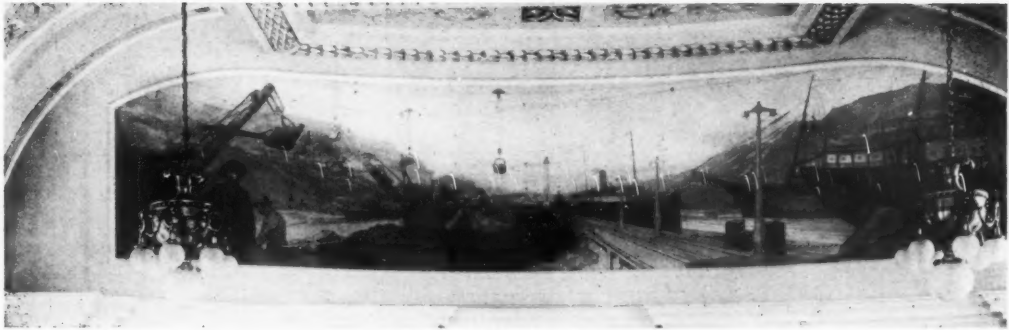
mural decoration in our public buildings has received a vital stimulus. Naturally, the very valuable experience that was Mr. Wenderoth's before he assumed his present important office, would tend to create sympathy, not only with the art of the mural painter, but also for those other arts which are regarded as allied to architecture.

The assertion, by those in association with Mr. Wenderoth, that it is his purpose to create in our Federal buildings the same features of good decoration that would be urged on a private client will receive ready credence.

The degree of success in these matters of Art as applied to architecture depends wholly upon the proper coöperation between the architect and the mural painter.

This coöperation of two men of artistic perceptions should never be difficult. Each, with the proper respect for the other, will strive for a result insuring that the art of one will dignify and enhance the art of the other.

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THE PANAMA CANAL, MURAL PAINTING IN U. S. CUSTOM HOUSE, SAN FRANCISCO
THIS PAINTING MEASURES 8x31 FEET

A. LINCOLN COOPER, PAINTER

It will, perhaps, be of interest to set down briefly the method pursued in the office of the supervising architect in the matter of securing artists to undertake such work in mural decoration as has been sanctioned under an appropriation for a specific building.

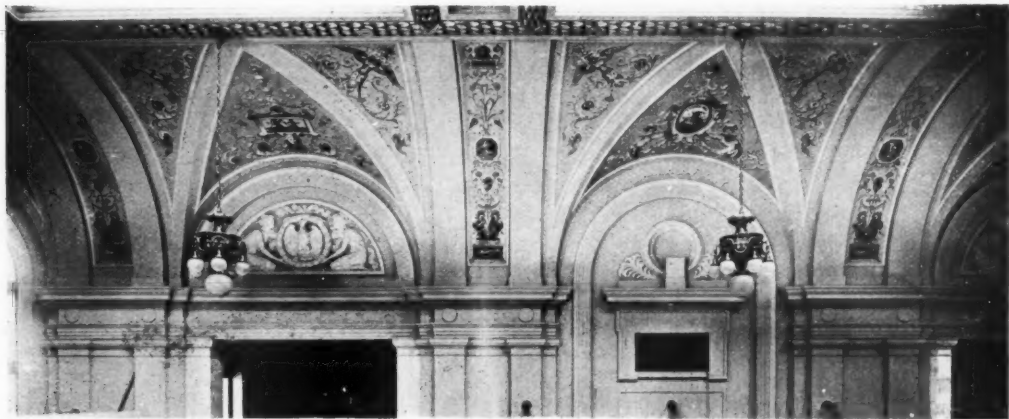
The design and scheme of color is placed, as are all tenders in connection with government work, on a competitive basis. Plans of the interiors are furnished a number of mural painters with an invitation to submit sketches showing the scheme of decoration proposed for the spaces involved. It is not required that the sketches should be detailed drawings, but they must be sufficiently definite to indicate whether it is proposed to use figures or depend wholly on geometric or

free ornament, or whether the color scheme is to be a monotone or the effect secured through a harmonious combination of colors.

The freest scope is given to the competing artists in submitting sketches and the award of the commission to execute the work is made by a board of examiners in the office of the supervising architect.

The results obtained in two instances where the plan above outlined was followed are shown by the accompanying illustrations.

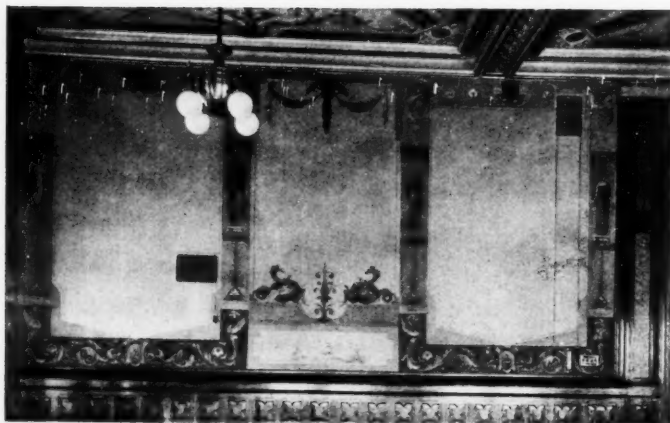
In carrying out the decorative schemes in connection with these buildings the artist adhered to the principles of symbolizing the activities for which the building was erected. Thus it will be seen that the principal mural decorations in the Columbus Court House represent Justice, Drama, Equality, Freedom, Time, Knowledge, Motherhood, etc.,



MURAL DECORATIONS IN THE U. S. CUSTOM HOUSE, SAN FRANCISCO, CAL.

A. LINCOLN COOPER, PAINTER

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WALL DECORATIONS IN COURT HOUSE AND POST OFFICE BUILDING, COLUMBUS, O.

A. LINCOLN COOPER, PAINTER

As a starting point, and to rid ourselves of the monotony of this comment, it would seem that the artistic treatment of our government buildings offers a good opportunity. It is hoped that the present tendency to foster and promote the art of mural decoration in such buildings will be developed and continued.

And in this development of what is perhaps the most important branch of decorative art, an opportunity will be afforded to extend to American mural painters material encouragement of their efforts in a phase of art of which there are so many well qualified exponents.

while the two important paintings in the San Francisco Custom House depict the Panama Canal through its various construction phases from start to completion and also the Port of San Francisco.

With each concrete example as an object lesson for future work, the embellishment of our public buildings will, in time, become a matter of course and not viewed as a concession to meet the whims of a few of an artistic bent.

Perhaps the greatest value to be derived from Federal interest in mural decoration is its strong influence toward the inculcation of a respect for good art in the minds of the public. The accessibility and the extensive inspection of government buildings presents, in the most forceful way to a great number of people, examples of good art and its utility in all phases of government activity.

There is probably no criticism of the American people more frequently voiced by foreign visitors than the familiar one concerning our lack of artistic appreciation.



WALL DECORATIONS, DISTRICT COURT, COLUMBUS, OHIO

A. LINCOLN COOPER, PAINTER

HOW TO GET GOOD RESULTS WITH PAINT

By G. W. THOMPSON

WHILE there is no "royal road" to follow for the obtainment of good results with paint, there are certain general rules which can be observed with this end in view. Royal roads usually lead to disappointment. The good things of life are not obtained in this way, and the same is true specifically with regard to paint. Knowledge, patience, and a decent regard for the laws of nature—these are necessary for good painting, just as they are for every other result that is worth working for.

Knowledge in this branch of industry must include as its subjects the surfaces to be painted, the paint itself, and the materials entering into its composition. We have a general knowledge that wood is an organic material composed of interlacing fibres, between which there is more or less moisture. Wood is absorbent in most cases, the variation in absorptive power being very great. Woods also have a grain, which is variable as to the kind of wood, and the expansion and contraction across the grain differs somewhat in radial and in tangential directions. Woods containing various percentages of resinous matters, thus whitewood (*Liriodendron*) contains only a small amount, while cypress may contain as much as 16 per cent. We have, therefore, in the case of wood certain generic properties which vary quantitatively with the species of wood to be painted. We will find farther on that there are certain rules to be followed based upon the generic character of wood, but which must be modified in considering the specific cases.

Plaster, cement, concrete and stucco are all closely related in their generic qualities. Here we have, instead of an organic material to consider, as in the case of wood, mineral matter subject more or less to changes of a chemical and physical nature. All of these materials are porous, just as wood is porous, but they do not have that fibrous structure which characterizes wood.

Iron and steel and metals in general are non-porous in character and, therefore, such

substances have requirements in the matter of painting in general different from the two groups already considered.

Paint is composed of fine solid particles suspended in a vehicle. Part of this vehicle may be volatile, such part being known as the volatile thinner. It is usually added for the purpose of giving to the paint proper working qualities and also a proper penetration of the surface painted. The non-volatile liquid portion of the paint is a binding material or binder, as it may be called for short, and usually consists of a drying oil such as linseed oil, which, on exposure to the air, gradually hardens by being changed from a liquid into a semi-solid substance. The proportioning of pigment, binder and volatile thinner is a very important factor in the production of desirable results in painting. While in general the under coats of paint for outside exposure should contain more pigment than the outer coats, for priming coats on wood and plaster this is not strictly true, as sufficient oil should be added to satisfy the absorbent powers of the wood. For inside work the reverse may be true in some cases. The proportion of binder should never be less than what will properly secure the pigment to the surface and bind the particles of the pigment together. The less the percentage of binder in proportion to pigment the more flat the paint is, and, on the other hand, the more binder there is present with respect to the pigment the more glossy the paint will be.

As to the materials that enter into the composition of paint as affecting the results obtained, there is this to be said: All of the materials used in paint have their legitimate place and may perform useful services. Any thought, however, of substitution simply for cheapness' sake is dictated by false notions of economy. As a general proposition, the highpriced paint material adopted for a certain kind of work is the best paint material to use and good results can not be obtained unless this thought is kept constantly in mind. Such a thought does not

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involve any waste of money in painting, but simply recognizes an economic truth that price is a measure of value. If there are exceptions to this rule, they are very few in number, and are the temporary exceptions that disappear in the long run.

Having thus outlined in as few words as possible the principal points of general knowledge regarding materials to be painted and paints themselves, we submit the following suggestions, based upon this knowledge: We are confronted first with the question of the surfaces to be painted. We will assume that it is new work. Painting work, except that of iron and steel, is usually the last work which is done, and if we say that in order to get good results with paint patience and good workmanship are essential, we are immediately confronted with the fact that with a great deal of new work the patience of the architect, the builder and the owner is often exhausted about the time that paint is to be applied. Delays of all kinds have occurred, and the owner is usually anxious that there should be no delay in the application of the paint. This is exceedingly unfortunate, and is responsible for a great deal of the trouble which is experienced in the application of paint. The workmen who have gone before have left their work for the painter to cover up; plaster surfaces may be dirty; woodwork may be spotted with plaster. Exposed iron work requires careful cleaning to put it in shape for painting. Then, too, the plaster may be wet, and, being wet, fills the air with moisture, which moisture is more or less absorbed by the wood. Under these conditions, if the owner is impatient and insists upon having painting work go on, it is almost impossible to obtain good results. Patience at this point is essential. It is exceedingly important that all of the surfaces painted should be dry.

If the work is interior painting, heat should be applied to dry out all of the plaster and woodwork, so as to bring it to a proper condition for painting. Fresh plaster, even when apparently dry, may contain considerable moisture and may be in a more or less alkaline condition, which makes it difficult to paint satisfactorily. The old practice of having open stoves by which the gaseous products of combustion enter the room is

particularly serviceable in maturing plaster. If the plaster can not be matured in this way, and time can not be allowed for it to mature naturally, recourse may be had to various chemical treatments, such as the use of zinc sulphate. In general, however, they

(Continued on page 255.)

NORTHERN ITALIAN DETAILS

NO. 24—WINDOW, ROYAL INSTITUTE GENOA

ALTHOUGH the building of the Royal Institute is not of great age, and hence does not belong directly to the long line of Genoese Renaissance palaces, it is easily seen to have been designed by a mind steeped in ancient traditions and by a hand trained by careful study of their proportions and details. Its profiles and contours are redolent of Alessi's masterpieces, in which a vigorous and almost brutal force is tempered by subtle distinctions and delicate refinements.

The masque carved on the keyblock may be taken as the dominant note of the design. Its rude austerity is repeated in the strong rusticated stone coursings and in the heavy solid window guards. If a more detailed examination is made, it will, however, disclose refining touches and delicate differences of proportion. Note the ingenious way the architect has produced the effect of a rusticated frame and the refined differences which he has made in the spacing of the quoins. At the top this effect is continued by proportionately large voussoirs, while a strongly marked sill supports the frame, and is, in turn, supported by blocky consoles.

The architrave is confessedly thin and meagre, but some excuse can be offered for its slightness since, in reality, it does not frame the opening, but merely provides a proper finish for the rustication. The iron grille effectually conceals this lack of width, and its members are continued past the extreme outside line. Characteristically delicate are the brass finials of the grille. Here again one may note the astute mind of the artist who scorns to place any fine bit of detail far above the level of the eye, but introduces these refined and graceful spots of ornament at a point nearest to the observer.

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ART AS A COMMERCIAL ASSET

MUCH has been written during recent years concerning the inherent value of art. We have also been told that art is an economic resource; further, that an artistic quality can be imparted not only to the buildings that are erected, to the landscapes that are developed, and to the larger products of human skill and ingenuity, but to the smallest article with which we come in contact, or that is used in the regular routine of our lives. These matters have, however, in general, been dealt with in the abstract. Statements have been made and reiterated that such or such an article, material or thing could be greatly increased in value if given an artistic expression, but concrete examples of articles or products that have been made valuable by the process proposed have usually been lacking.

There has recently been brought to our attention, however, the text of an address delivered not long since by Mr. Maurice I. Flagg, director of the Minnesota State Art Commission, in which specific instances of the dollar and cents value of art are cited. If this value cannot in every case be entered

up in figures, the evidence of it is at least sufficient to convince even the most skeptical that it runs, in the case of a number of European countries, well into the millions each year. The following excerpts taken from Mr. Flagg's speech seem to merit wide circulation and study among those who are in a position to influence artistic development and direct and establish standards of taste, as are architects. In referring to Old World art treasures, he remarked that "To inspect the consular reports or the current trade journals is to realize that art needs no defense as a practical, vital force in the economic and industrial development of Europe. There have been coming into this country for years past certain significant trade-marks—such labels as 'Made in Germany,' 'Made in France,' 'Made in Sweden.' These trade-marks are accepted by the American people as evidence of quality and a guarantee of beauty. The American people have had faith to believe in these products; they have created a demand, and we are willing to pay the price. We have had, in fact, no choice, for there has been little or no American competition. Not only are we willing to pay the price, but we insist on going abroad for the purpose of purchasing. During 1913, citizens of the United States paid \$400,000,000 for the privilege of enjoying the beauty of Europe.

An interesting and significant report was made some years ago by a Royal High Commission appointed by the British Parliament to investigate German manufacturing and export trade. Two years were spent in gathering statistics. The report states that Germany produced no better raw material than England; that the prices are no lower; that the quality of the product is no better, but that the German design had added sufficient intrinsic value to the appearance of the package or article to make German exports in certain lines exceed the combined exports of all other countries.

Here we have a very frank admission on the part of a great power that its competitor, Germany, was putting into its product *beauty*, and that this beauty was an industrial and economic asset. Only a few years ago it is stated that the industrial arts of France, or handicrafts as we have come to think of them, exceeded in their economic

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value in one year the total valuation of the American wheat crop.

It is asserted that the greatest asset of Germany, France, England, Italy, Austria, and Sweden is an asset of beauty, not only as related to merchandise and export product, but a beauty which has produced both civic pride and individual welfare. In Germany, a properly planned city for both use and beauty is the background for industrial development. It is the foundation of Germany's industrial success. It has been made possible by organization, by carefully planned industrial programs, and by trade schools for the purpose of training efficient and skilled workmen, not only to put into their products good workmanship and excellent technic, but originality of design and individuality of expression."

It thus appears that even manufacturing is fundamentally an art problem.

Mr. Flagg proceeds to further point out, in the course of his address, how Minnesota's resources offer art opportunities; how to reach the maximum economic value of her resources, and then calls attention to instances which indicate that we as a people are coming into a fuller and clearer realization of beauty as an economic asset. Cities, states and towns, as well as corporations and individuals, are annually giving more and more attention to the problem of home conditions and community development. In fact, evidence is accumulating on every hand that the intelligent American citizen no longer questions the wisdom of an investment in beauty, if it is advisedly made.

It is obvious that this movement which increases the value of art in the popular mind automatically increases the importance of the artistic professions, and places a correspondingly greater responsibility upon those engaged in artistic pursuits. Architects, painters, sculptors, and, according to the new order of things, the artisan and craftsman employed in the creation of products of every description, are in positions that make them natural leaders in art development work. That they are realizing the responsibility resting upon them and making the most of their opportunities cannot be doubted by any one who is familiar with the earnestness of purpose which of late years has almost, without exception, characterized the attitude of the artist in America.

DEFINITE STEPS TAKEN TOWARD THE IMPROVEMENT OF RURAL ARCHITECTURE

THE desire to improve farm buildings now evident on all sides is only a legitimate outgrowth of an interest in the farmer's economic status. Just as scientific agriculture has directed attention to his wasteful processes of tilling the soil, and has tried to inculcate in him modern ideas of efficient crop raising, so the gradually improving tastes of the age have made evident the fact that some real stimulus towards a higher ideal is needed in his building operations. From two states widely separated geographically, viz.: Massachusetts and Minnesota, come significant evidences of the growing interest in the farmer's well-being.

In these states plans for model farmhouses have been prepared by well known architects for the use of the farmer, and it is notable that they are not the impracticable schemes of dreaming altruists, but designs sufficiently workable for the average farmhouse and measured in actual terms of the average farmer's life. Copies of these plans are to be had by the farmer builder at a nominal cost, and while at first they will probably be untouched by the very ones whom it is most necessary to reach, when a sufficient number of concrete examples are actually built, even the most hard-headed and practical farmer will come to see the obvious advantages of a well planned and attractive house over the makeshift structure that is now so typical.

The idea is an excellent one and should lead not only to better buildings, but to a more uniform style, and, as it were, set a certain standard in rural architecture. Of course, it is hardly to be expected that the project in its present form will meet with immediate success. But it is safe to say that a plan possessing so great a degree of merit will ultimately succeed, and present an example of notable accomplishment to other states that have not been so prompt in responding to the needs of their agricultural population.

In the meantime it is only by a slow and convincing accumulation of good examples that the farmer will be convinced of the value to him of this new movement.

How to Get Good Results With Paint

(Continued from page 252.)

can not be recommended. In some cases, if it is desirable that the work should be completed promptly, it is a good plan to apply calcimine on interior plaster, cement and stucco until such time as the surfaces have dried and matured sufficiently so as to be in good condition for painting. The calcimine can then be washed off and the paint applied. Wood dries more rapidly, but it is very essential that it should be thoroughly dry be-



FIG. 1. NORTH CAROLINA PINE SHOWING SHRINKAGE BETWEEN RESIN LAYERS

fore painting, as otherwise the joints will open up and unsatisfactory results appear after the work is completed.

Coming now to exterior painting, if the outer surface is wood, it is of great importance that lumber of good quality is used. We show here a photograph (Fig. 1) of North Carolina Pine painted with a good paint, but in which the wood between the resinous layers has shrunk so much that no good paint could stay upon it. Originally, the surface was smooth, and when painted it was reasonably smooth. After about a year's exposure, the paint flaked off, due to the shrinkage referred to. In the case of certain woods sold as Red Cedar, which contain water-soluble matter, it is quite important that they should be weathered before painting, as otherwise this water-soluble matter will ooze out through the paint and give stains like tobacco juice (Fig. 2). The safe thing to do in such cases is to allow the

wood to weather for a while before painting.

Certain kinds of wooden construction are very difficult to paint and obtain good results. We refer particularly to such construction as does not allow for the expansion and contraction of the wood. Surfaces made of tongue and grooved wood with nothing applied over the joints will shrink on drying out, and will then expand on absorption of moisture so that the joints can not be kept filled, even with the best putty that can be made, and water will often work in through the joints and produce peeling.

In the painting of iron and steel some of this work has to be done before erection, and some in process of erection. Here the most important factors in securing good results are cleanliness and supervision. By cleanliness we refer to the cleanliness of the steel, which should be free from all rust, loose mill scale, plaster, etc. By supervision we refer to the careful watching of the painting, to

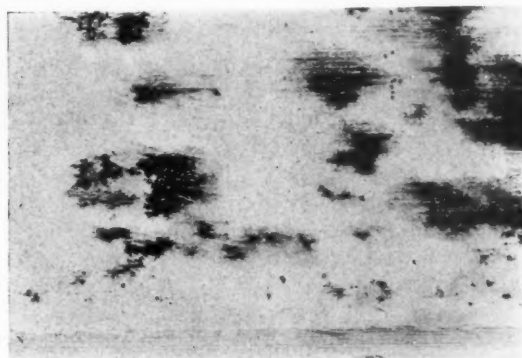


FIG. 2. SO-CALLED RED CEDAR SHOWING SPOTS LIKE TOBACCO JUICE

see that there are no parts unprotected by paint. One of the great advantages of red lead as a paint lies in its color. When applied to iron and steel imperfections in workmanship can readily be noted. If on re-coating with red lead lampblack is added to the paint, imperfections in the application of that coat are also readily observable. In the protection of iron and steel, the important thing is to secure good workmanship. Furthermore, as iron and steel are not absorbent, the paints must be of a character to attach themselves firmly to the surface painted.

As a general proposition, it may be stated that the attainment of good results in paint-

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ing depends upon the paint that is applied becoming more or less an integral part of the surface painted. Particularly is this true in the case of the painting of porous materials. Practically all surfaces that are to be painted differ extremely from the paint that is applied, in physical and chemical characteristics. In order, therefore, to overcome these differences it is necessary to develop a bond of some kind between the surface painted and the paint. This bond is accomplished in two ways, one by allowing plenty of time for the bond to develop, and the other by avoiding the presence of all materials which tend to prevent the bond from becoming as nearly perfect as may be.

Let us illustrate this by two examples. In the painting of cypress, difficulty may be experienced in having the paint actually penetrate and lock itself to the wood on account of the wood being more or less covered with the resinous matter contained in cypress. Undoubtedly the best method for treating cypress would be to dissolve off from the surface all this resinous matter, by treatment either with benzole or some other suitable solvent. Such a treatment would leave the surface in a condition whereby a reasonable amount of penetration of the paint into the wood would naturally result. Another method of treatment would be to add to the priming coat a suitable solvent, so that the resinous matter would be carried into the priming coat and cease to be a layer under it. In this way penetration of the surface would result and a proper bond be obtained.

Another example is to be found in the painting of plaster. The difficulty usually experienced here lies in the fact that paint applied to plaster is very apt to show the differences in absorptive power of the plaster, and also "fire cracks" are developed. Fire cracks and "hot spots" are due to the plaster shrinking unevenly and also to uneven troweling. In some cases the alkalinity may be greater in hot spots, but this is not necessarily so. Hot spots are very absorbent. One coat of paint applied to plaster would show these inequalities of surface very markedly, provided the paint has penetrated the plaster. Sometimes these inequalities will appear on a second coat of paint, but usually when three coats of paint are applied

the inequalities of surface are covered up and a good, solid finish is obtained. Now, suppose, for cheapness' sake, an endeavor is made to paint plaster and cover up the inequalities of surface with two coats of paint. It can be done in some cases, but if it has been done, it has been due to the fact that the first coat of paint has not penetrated the plaster and has been rather repellent to it than absorbed by it. Such a coat of paint may be coated with another coat, and for a while good results may be apparent. The practice, however, is bad, and in very many cases such a paint will peel away from the plaster with results that are anything but pleasing. In the painting of plaster, just as in the painting of wood, all the inequalities of the surface painted should show themselves up in the first coat of paint, and, in some cases, even in the second. Otherwise they will develop later on, either in the form of paint scales or the imperfections may work through the paint with a mottled appearance.

We repeat—good results in painting depend upon the paint that is applied becoming more or less an integral part of the surface painted. This result is obtained by proper penetration, where penetration is possible, and the gradual building up of the paint upon the surface to the finishing coat. Undoubtedly in some cases temporarily passable results can be obtained by two thick coats of paint, but as a general proposition this is a bad practice. Each coat of paint should be comparatively thin, so that it can properly mature before another coat of paint is applied over it. Each coat should be well brushed in, so as to make it an integral part of the surface painted or of the coat of paint preceding it.

In the painting of iron and steel we have a different problem. Here there is no absorption, and all that can be done is to select paint which gives the effect of penetration; that is to say, to use a paint that sticks tight to the surface painted. Just why some paints do this better than others it is hard to say, but there appears to be some relation between the hardness of coat produced and the hardness of the surface painted. The softer the surface, the softer should be the paint; the harder the surface, the harder the paint should become. In the painting of

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iron and steel, therefore, paint should be used which produces, at least in contact with the metal, the hardest paint coats practicable to obtain, thereby in effect producing conditions in which the paint has become an integral part of the iron and steel painted.

The insuring of good painting work may be accomplished by

(1) Having all under coats harder than the following outer coats.

(2) Allowing ample time between coats for the maturing of all surface inequalities and defects.

(3) Having all paint as nearly as may be an integral part of the surface painted.

(4) Good workmanship—and the having of all under coats well brushed in.

(5) Using good and suitable materials and avoiding false notions of economy, both in labor and materials.

(6) Proper inspection of materials and workmanship.

In the painting of old work the same general precepts apply as in the case of new work, with some few other considerations. It is obvious that all loose old paint should be removed. We would also add that accumulated layers of old paint are not good to paint over. If the old paint is too thick it should be sandpapered down to a proper thickness. In some cases it may be well to remove the old paint by a burner or paint remover, so as to start the new paint work right from the wood or plaster. This is not essential in the case of iron or steel. Here it is usually only necessary to clean the metal thoroughly at all rusted places and work into these places with a stiff brush a fairly thick paint suitable for the purpose. Some old paint is so hard and unabsorbent as to make it difficult to repaint without first sandpapering it thoroughly to give it the proper tooth.

CURRENT NEWS AND COMMENT

Scholarship in Architecture

The Managing Committee of the John Stewardson Memorial Scholarship in Architecture announces that a competition for the scholarship which awards one thousand dollars for travel and study will be held this year as usual. The decision to hold the competition at this time was reached only after careful consideration, there being some uncertainty as to the wisdom of sending a man abroad during the present unsettled conditions in Europe. On this account, the committee reserves the right to determine where and under what conditions the recipient of the scholarship shall pursue his studies. Only residents of the State of Pennsylvania are eligible to compete for the scholarship, and candidates must be under thirty years of age on May 3, 1915.

The scholarship, which was founded as a memorial by the admirers of the late John Stewardson, a prominent Philadelphia architect, has been awarded annually since 1897, with the exception of the year 1907. The

decision of the committee not to break the continuity of the awards this year is welcomed by many candidates, who next year will be ineligible to compete, on account of passing the thirty-year age limit or because of removing their residence outside the State of Pennsylvania.

Inquires regarding the competition may be addressed to Professor Warren P. Laird, School of Architecture, University of Pennsylvania, Philadelphia, Pa.

The Michigan State License Law

In discussing the bill now pending before the Michigan legislature requiring the registration of architects practising in that State, a prominent Detroit architect is quoted as stating:—

"It can be maintained without fear of successful contradiction that not one of the professions, trades or callings now under state supervision touches the public welfare in more numerous and vital points, nor is

there one upon which the safety of the life and property, health and happiness of the public depends than upon the architectural profession. If, then, the state has deemed it wise to establish a certain standard of education and fitness in professions and occupations not so important as the practice of architecture, it should establish, by a registration law, a similar requirement for the practice of architects."

Nebraska Architects for Nebraska Buildings

After a lively controversy by members of a committee of the Nebraska state senate the Bedford bill (S. F. 255) was recommended for passage. It requires the university regents and state board of control to engage Nebraska architects only. Action was precipitated largely by regents giving a \$130,000 building to an outside architect. An interesting argument was offered by a member, who is quoted as saying: The president of the National Association of Architects lived in Omaha and that architects have a uniform scale of prices, and therefore nothing could be gained by going out of the state. Two members said the field should be left open to all, but the open-door policy was unpopular. One senator said republicans should take their own protection medicine and support the bill.

Thus proceeds the making of law in the popular assemblies of the enlightened free country.—*The Improvement Bulletin*.

National Academy Exhibitions Free to the Public

For the first time in its history the National Academy of Design has made admission to its exhibitions free at all times to the public. As the most important art exhibition held in this country, this action will have a large influence in popularizing good art and tend to create conditions that will no doubt be far reaching. In fact, the attendance at the exhibition opened on March 19 has been unprecedented, the galleries being crowded at all hours.

Cities Lack Air Space

The United States Census calls "metropolitan districts" the land within the city boundaries of large cities and within a radius of ten miles outside of city boundaries. The metropolitan district of New York comprises 617,000 acres; of Philadelphia, 437,000 acres; of Chicago, 409,000 acres; of Pittsburgh, 405,000 acres; of Boston, 335,000 acres, and of San Francisco and Oakland, 289,000. In order to understand what these big figures mean one must remember that the city of Paris at the time of the French revolution comprised only 8,325 acres, on which 600,000 people were crowded. Even to-day the city of Paris proper crowds its 2,840,000 people on an area of only 19,500 acres, and Berlin proper crowds over two million people on 15,008 acres.

How can any standard of air space in private or public buildings, and especially in gardens, public playgrounds and parks, that has been developed by these antiquated cities ever be used in looking for the solution of the problems of the new city?—Athens, Ga., *Banner*.

Personals

The firm of Benjamin & Ball, architects, Jacksonville, Fla., has been dissolved by mutual consent. Mr. R. A. Benjamin will retain his offices in the Bisbee Building, Jacksonville, and Mr. Richard G. Ball will be located in the Duval Building, Room No. 405, Jacksonville, Fla.

Mr. H. P. Knowles, architect, announces the removal of his offices to Vanderbilt Concourse Building, 52 Vanderbilt Avenue, New York.

Messrs. Rogers & Bonnah, architects, 1332 Penobscot Building, Detroit, Mich., announce that Mr. Walter Crane Chaffer has become a member of the firm, which will continue as Rogers, Bonnah & Chaffer.

Howard Rogers, until recently connected with the office of the New York State Department of Architecture, has opened offices in the Arkay Building, Albany, N. Y., where he will practice his profession.

St. Louis Quantity Surveyor Law

Following a campaign by civil engineers of St. Louis through their organization, the city assembly, passed an ordinance authorizing the mayor, with the approval of the council, to appoint quantity surveyors. The number is not limited. The appointees must be skilled in building construction or estimating. They must give bonds in \$10,000. Patrons of quantity surveyors, who sustain loss by reason of their negligence, incompetence or misconduct can sue on the bond any time in five years. The appointments hold for four years. The charges authorized are the fees agreed upon between surveyor and clients, until a list of fees can be prepared by the Engineers' Club, St. Louis Chapter A. I. A., and the Building Industries Association.

Thus is introduced the system which has been so much talked of by architects, engineers and builders; and so much discussed in their journals during recent years. The results of the St. Louis law will be awaited with lively interest by the users of the old competitive system of bidding for contracts.

The success of the departure at St. Louis would mean the appearance of a new class of experts in the building field of the city.

Supplementing the ordinance of St. Louis, or reinforcing it, a state law is being prepared requiring a detailed quantity list with every architectural and engineering plan.

This action by the friends of quantity surveying to tie up the state to it shows determination at least. Needless to say, there is conservative sentiment in favor of going slow.

English contractors, we understand, like to do business with architects who employ quantity surveyors because the "list" relieves the contractor from the expense and trouble of the estimator's department. If the contractors like the simplified transaction there, it is reasonable to suppose that they will here.—*The Improvement Bulletin*.

Building Operations, February, 1915

According to figures compiled by *Building Construction*, the total operations in eighty-four principal cities show a loss as compared with the corresponding month last year of approximately seven per cent.

The following cities showed an increase of building operations:

Albany, Atlanta, Baltimore, Bridgeport, Cincinnati, Cleveland, Indianapolis, Louisville, Minneapolis, New York, Philadelphia, St. Paul, Syracuse and Washington, D. C.

Congestion in Office of Supervising Architect

It is reported from Washington that efforts will be made in the next Congress by Texas Senators, to have the force in the office of the Supervising Architect of the Treasury Department largely increased, so that work on public buildings for which appropriations have been made may be expedited.

It is stated that the existing accumulation will afford constant employment for the present force for approximately five years, and for this reason it appears useless to look forward to securing the most necessary of structures until after 1920 unless steps are taken to relieve the situation in which the Supervising Architect is placed since the repeal of the Tarsney Act.

Contract Documents Ratified

After a series of meetings, and careful discussion, extending over a period of two years, the joint committees of the American Institute of Architects and the National Association of Builders' Exchanges have ratified the forms of contracts between architects, builders and owners that have been under consideration.

It is stated that as soon as these new forms can be published, they will be distributed for general use.

INDUSTRIAL INFORMATION

Fans

The L. J. Wing Mfg. Co., 352 West 13th Street, New York City, has issued Bulletin No. 28, devoted to an exposition of the various features of the Wing Disc Fan. It is stated that this make of fan is the original of its type. It is constructed of but three parts. The hub, which is of cast-iron, the blades, rolled and formed of open-hearth sheet steel, and the arms, which are made from soft machinery steel, to which the plates are riveted, threaded on one end so as to screw into the hub with a lock nut holding it in position.

The fan construction, it is stated, allows the blades to be adjusted to suit the conditions under which the fan is to operate. It is claimed that at all ordinary speeds the Wing Disc Fan is practically noiseless, and when in operation it does not obstruct the light.

The catalogue referred to contains tables of capacities and horsepowers which, it is stated, are guaranteed for free air. There are also presented in this catalogue illustrations of a number of buildings in which these fans have been installed. A long list of names and addresses of users of the Wing Fan is printed on the closing pages of the catalogue.

To those interested this booklet or any desired information will be furnished upon request.

Polar Bear Alca Stucco

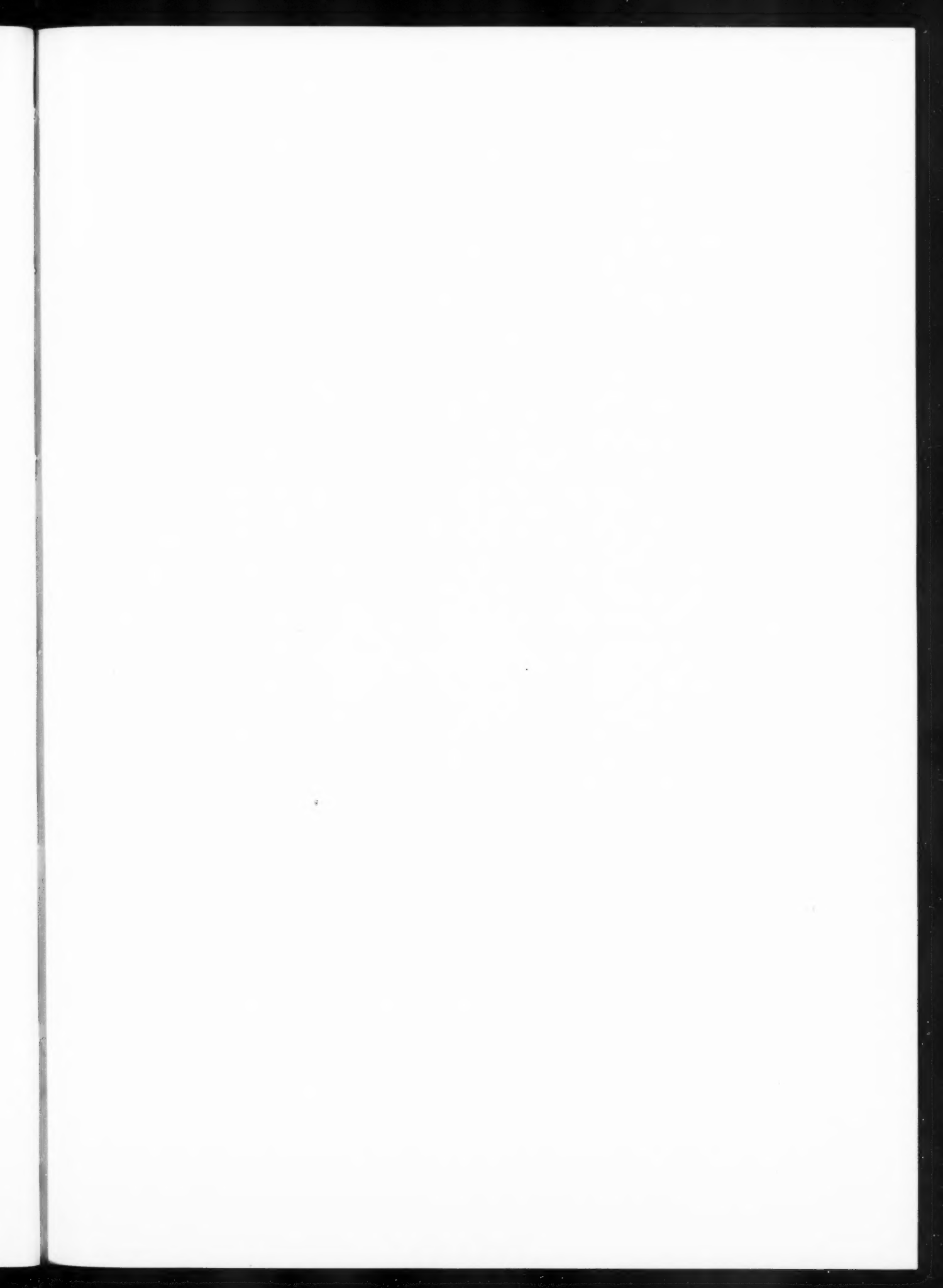
The Woodville Lime and Cement Company, Toledo, Ohio, has recently issued a catalogue containing a number of examples of buildings which, it is claimed, have been

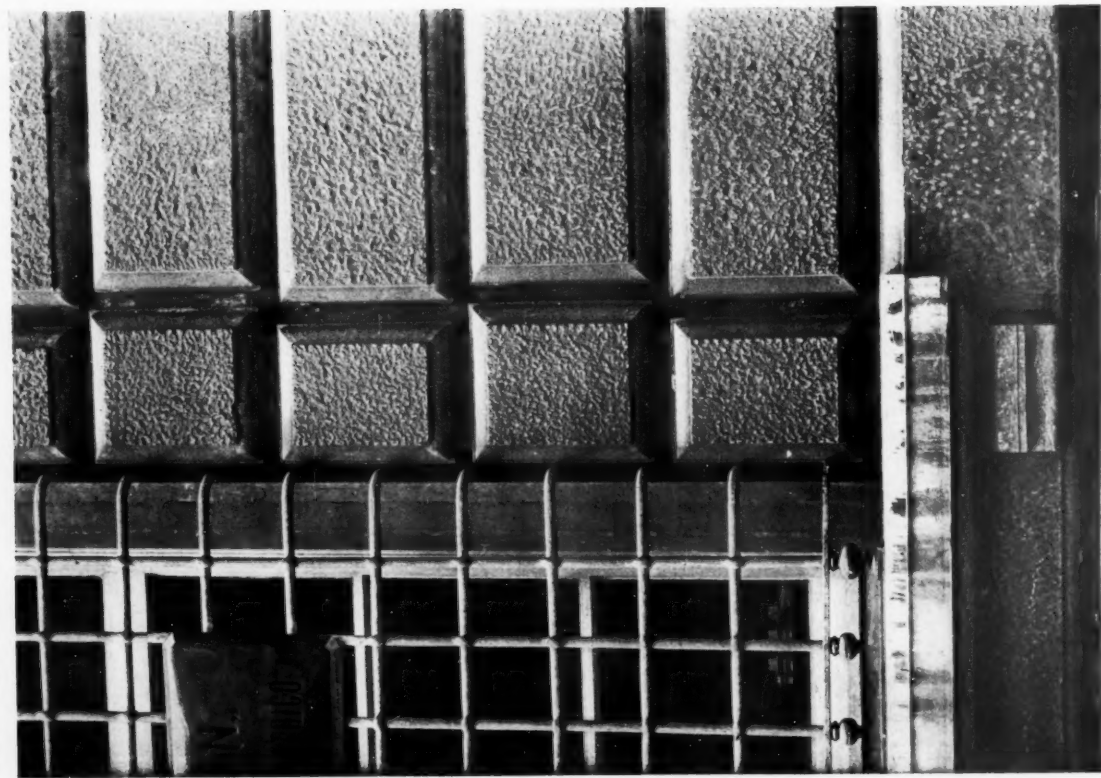
plastered in some instances, and the exterior walls stuccoed in others, with this company's product.

It is stated that there has been within recent years a brisk demand, increasing each year, for the outside finishing material, commonly known as stucco. It is further stated that cement has heretofore been used almost exclusively in the manufacture of stucco. Polar Bear Alca Stucco is a patented material designed to take the place of cement stucco. It is said to be composed of a mixture of magnesium, white lime and calcium aluminate. The action of calcium aluminate in this stucco is to give it a fairly quick set (5 to 6 hours), and to impart hydraulic properties. Magnesium is used to give it a white, even color and secure permanence of construction. This stucco is described as a very plastic material that can be applied readily to metal lath, brick or tile. When applied it is said to give an even white color, free from cracks, and, owing to the white base, can be tinted to any commercial color. However, according to this booklet, there are very few coloring materials on the market which will not fade under the action of the elements, and for this reason it is recommended that the color be controlled by the color of the sand used, or that a concrete paint be sprayed on the walls.

Specifications and much information concerning the application of this stucco, and also a description of Enamel Alca Plaster, described as a hydraulic plaster for interior plastering, except white coating, is given in this catalogue.

Copy will be sent to architects upon request.



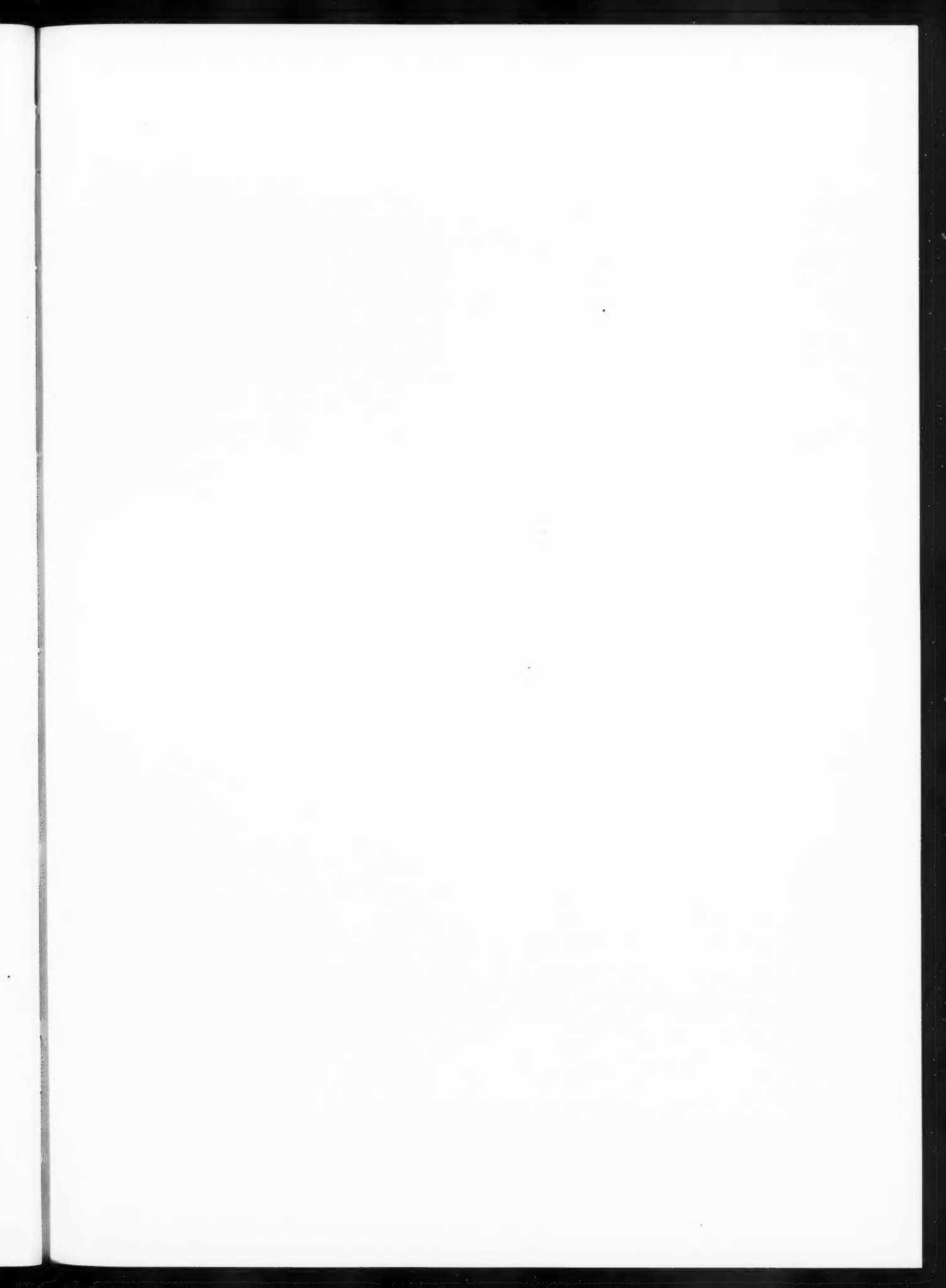


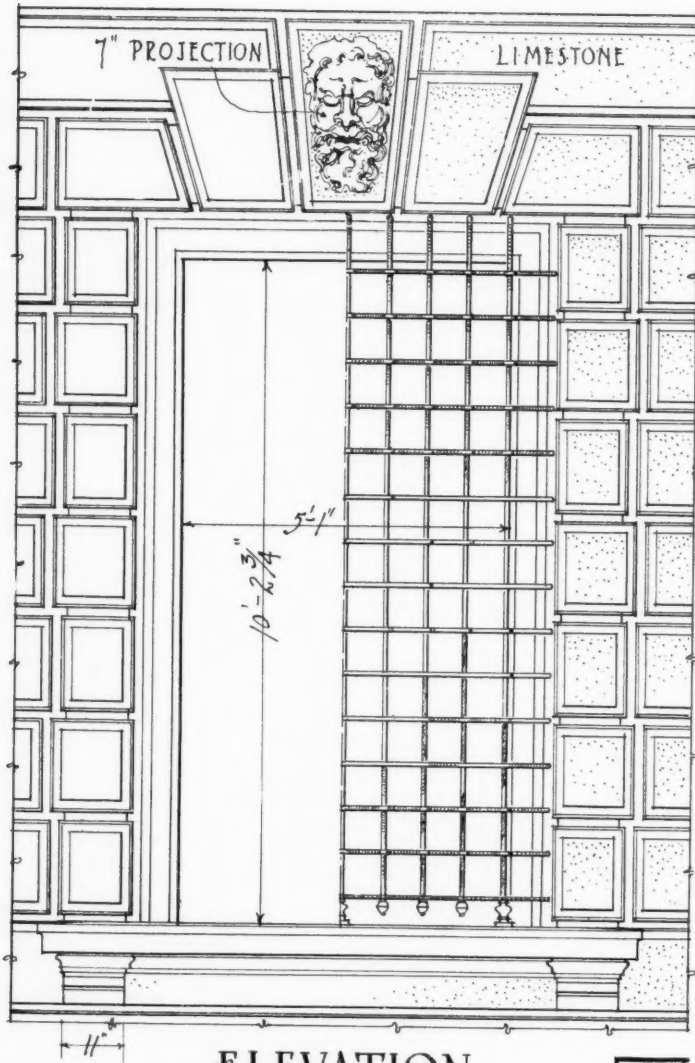
WINDOW—ROYAL INSTITUTE, GENOA

PHOTOGRAPHS AND DRAWINGS
BY W. G. THOMAS AND J. T. FALLON



ARCHITECTURAL DETAILS
OF NORTHERN ITALY—PLATE NO. 52



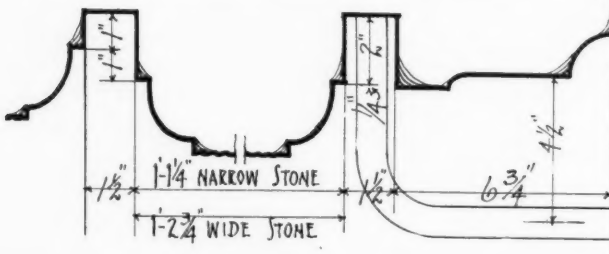


ELEVATION

SCALE FOR ELEVATION

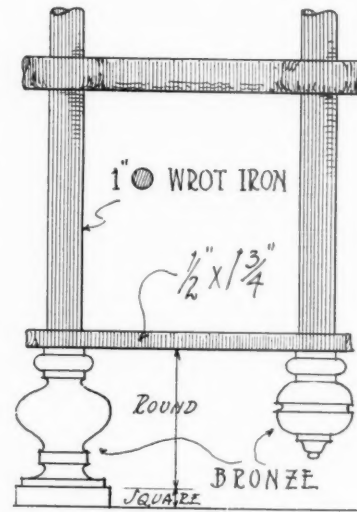


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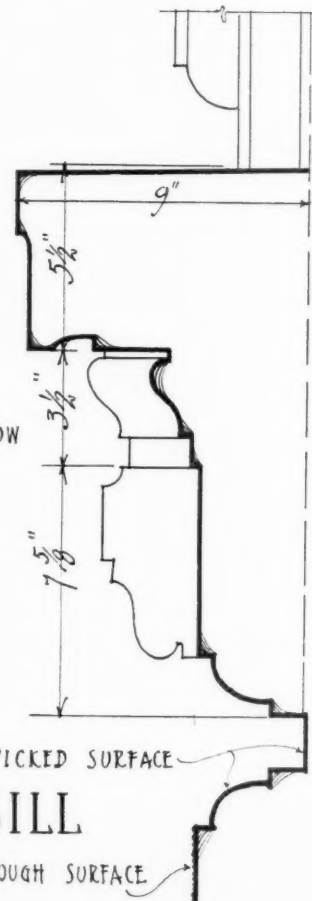


PROFILE OF TRIM

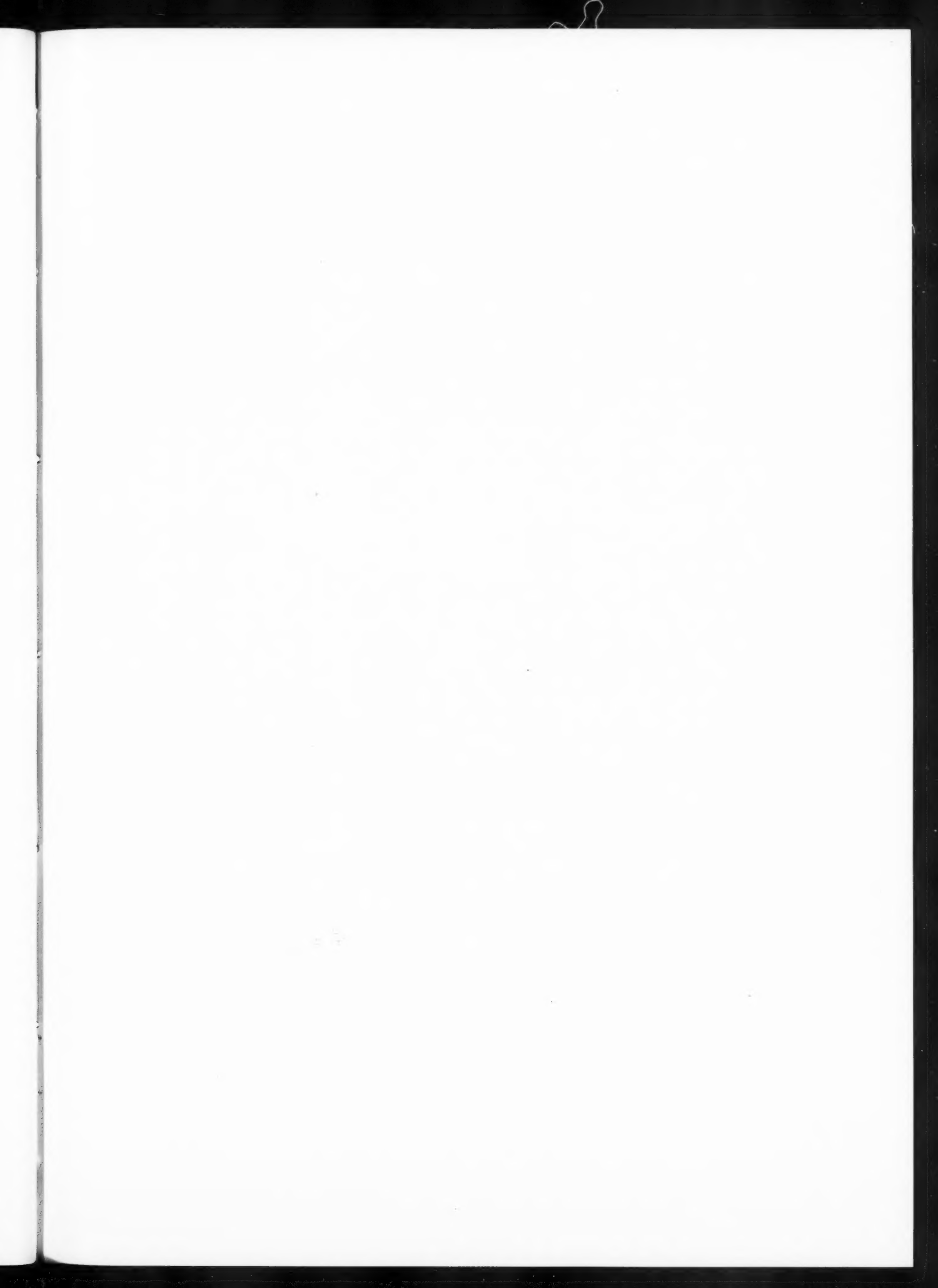
WINDOW—ROYAL INSTITUTE, GENOA



GRILLE



SILL

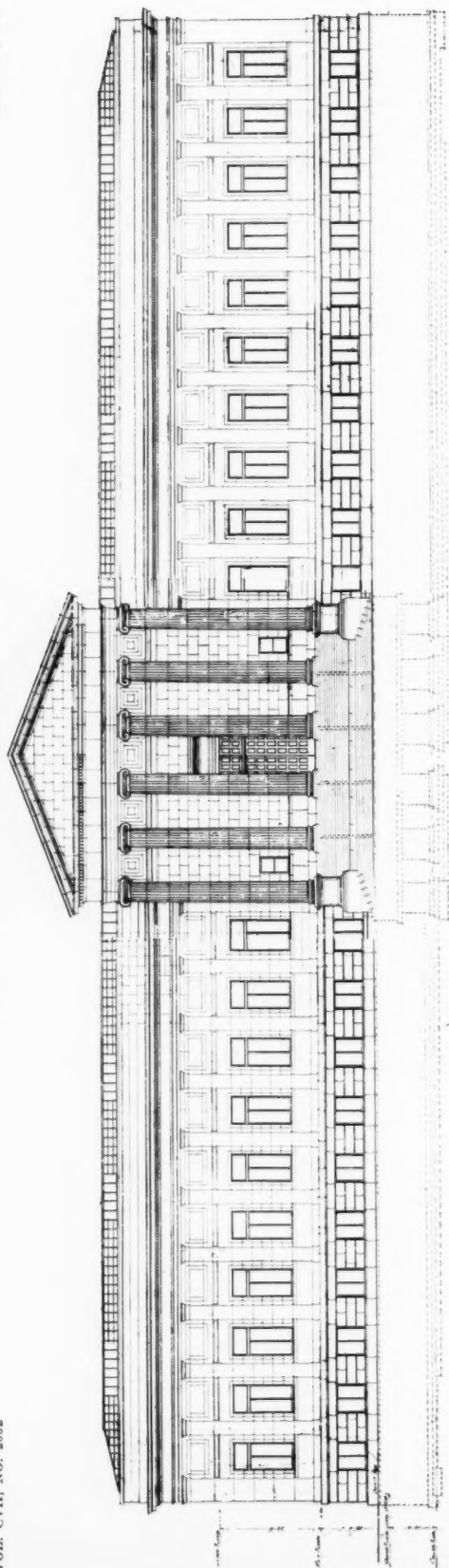




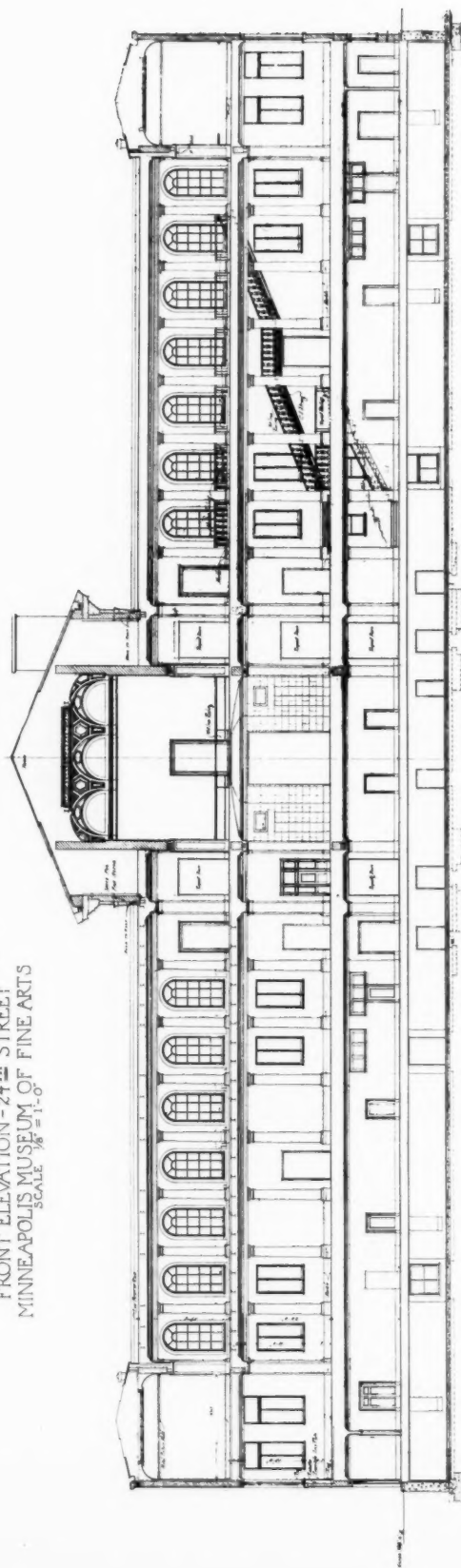
MUSEUM OF FINE-ARTS, MINNEAPOLIS, MINN.

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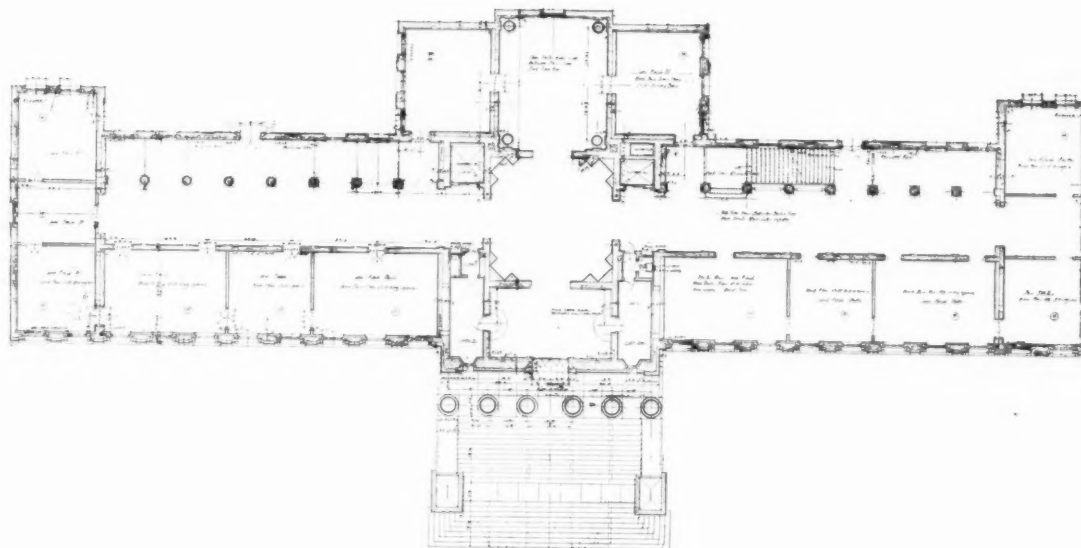
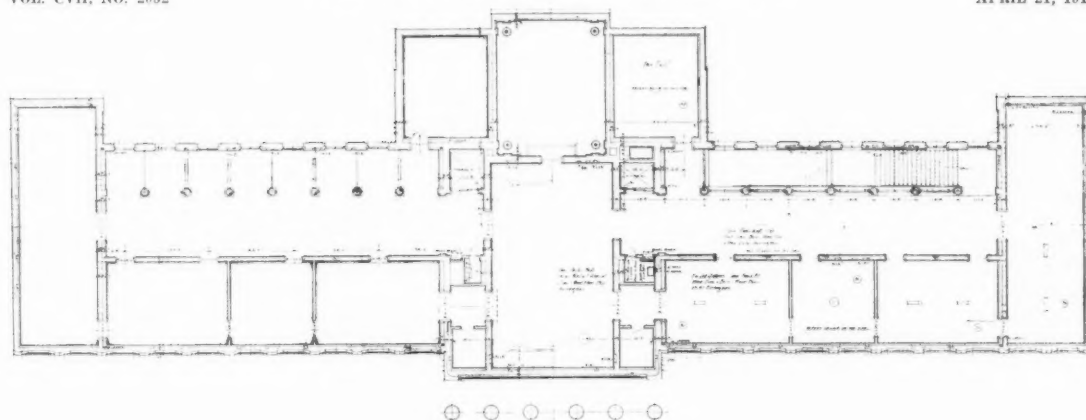


FRONT ELEVATION - 24TH STREET
MINNEAPOLIS MUSEUM OF FINE ARTS
SCALE $\frac{1}{8}" = 1'-0"$



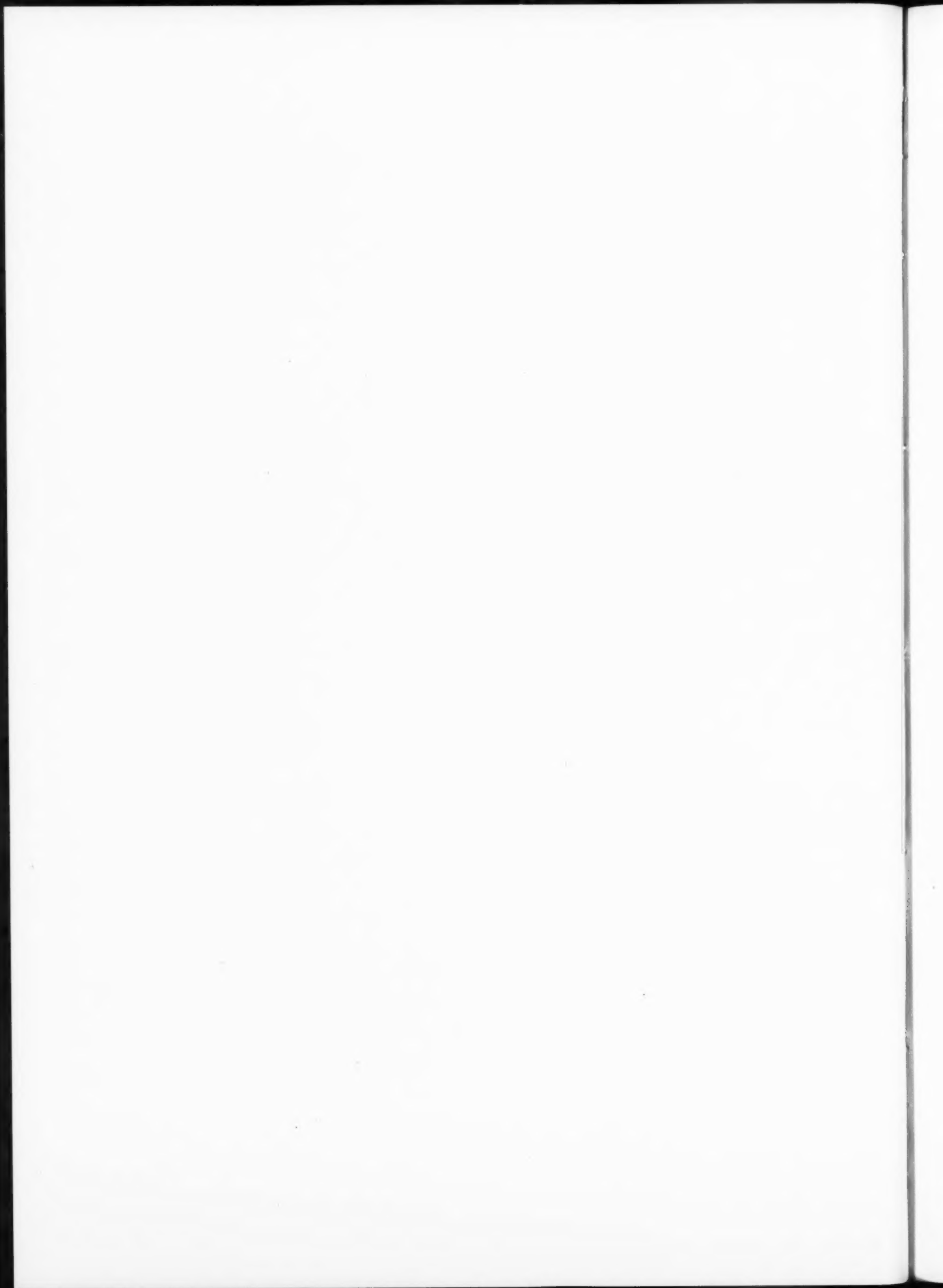
LONGITUDINAL SECTION - LOOKING SOUTH
MINNEAPOLIS MUSEUM OF FINE ARTS
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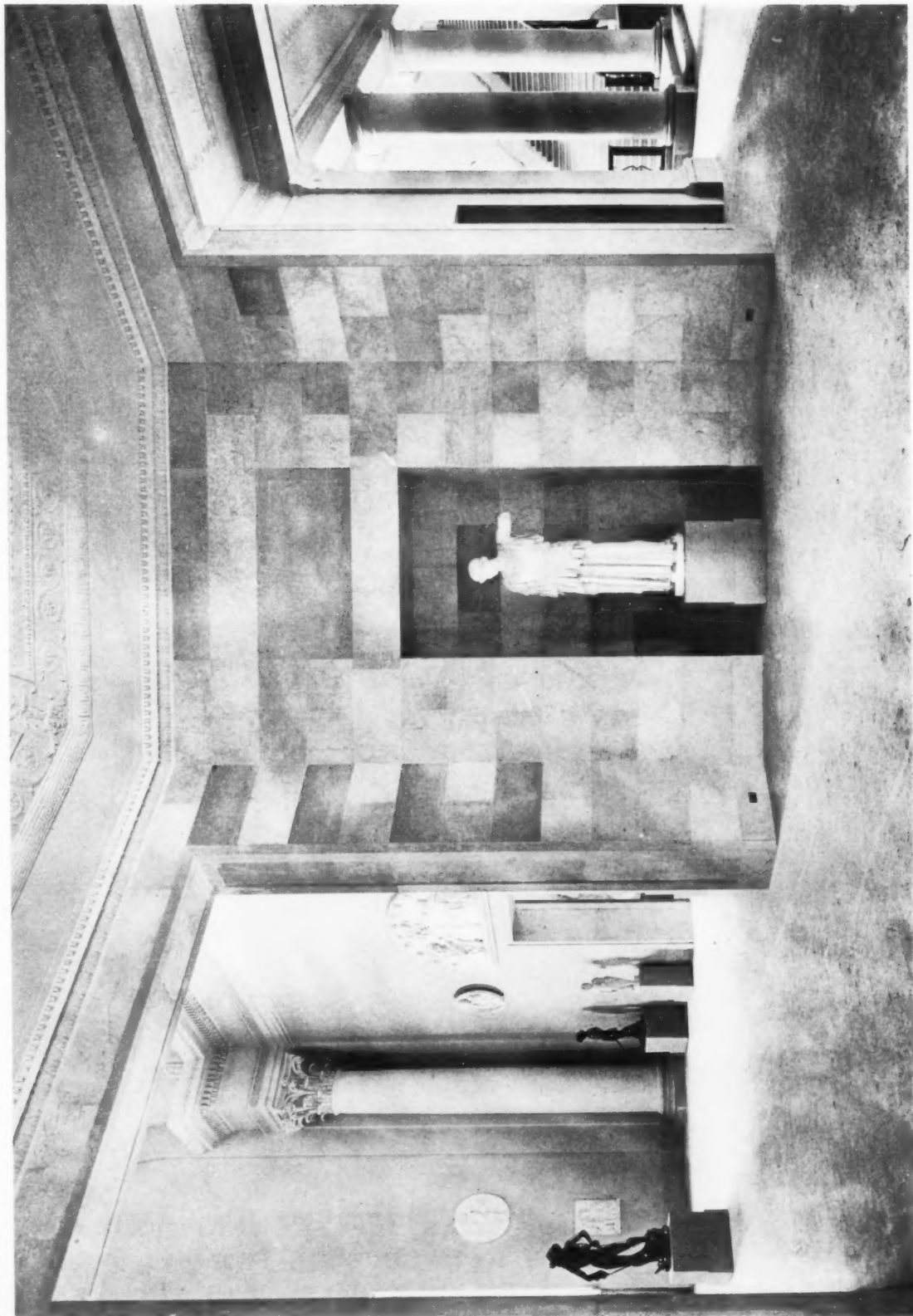
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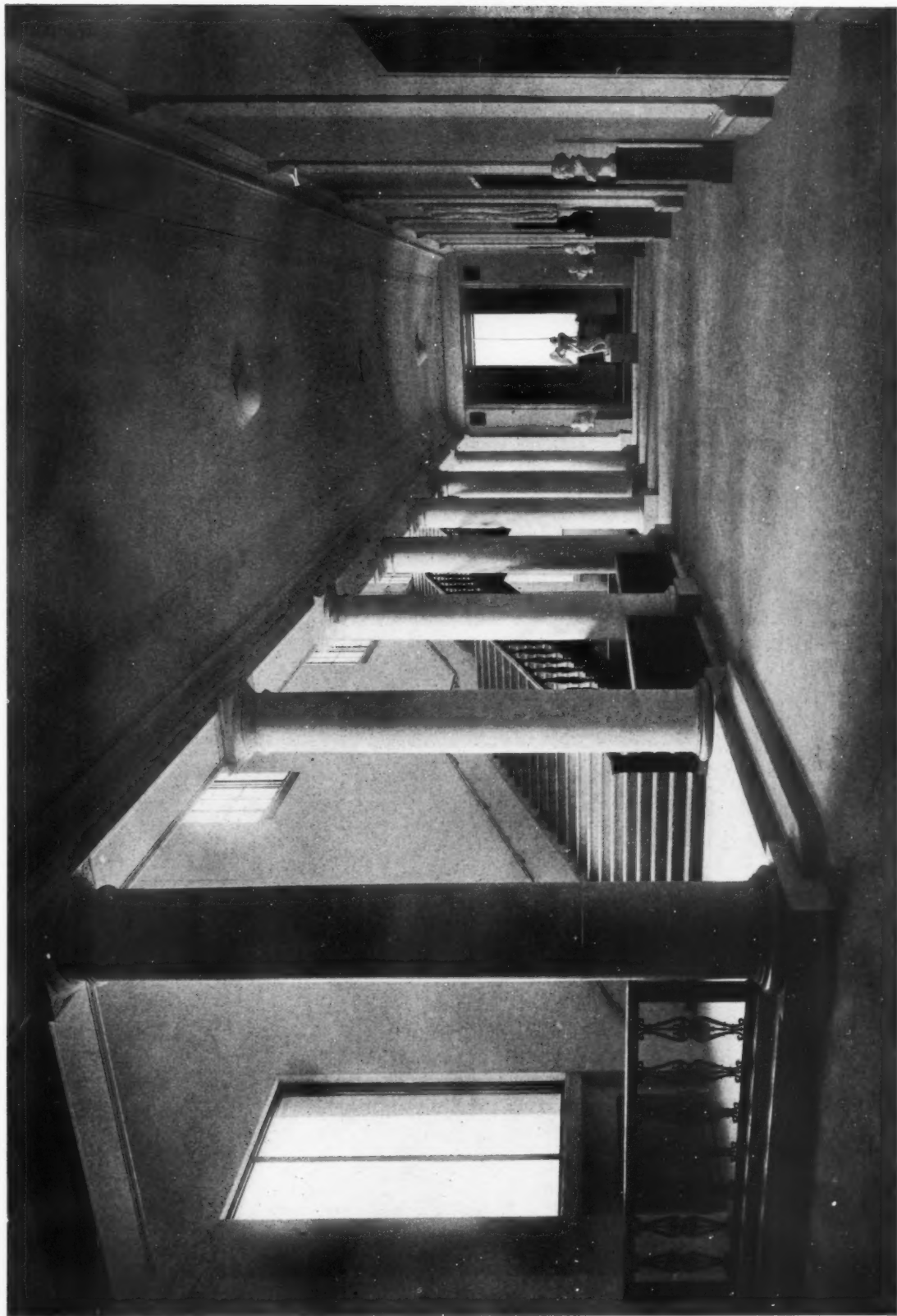


OCTAGONAL HALL
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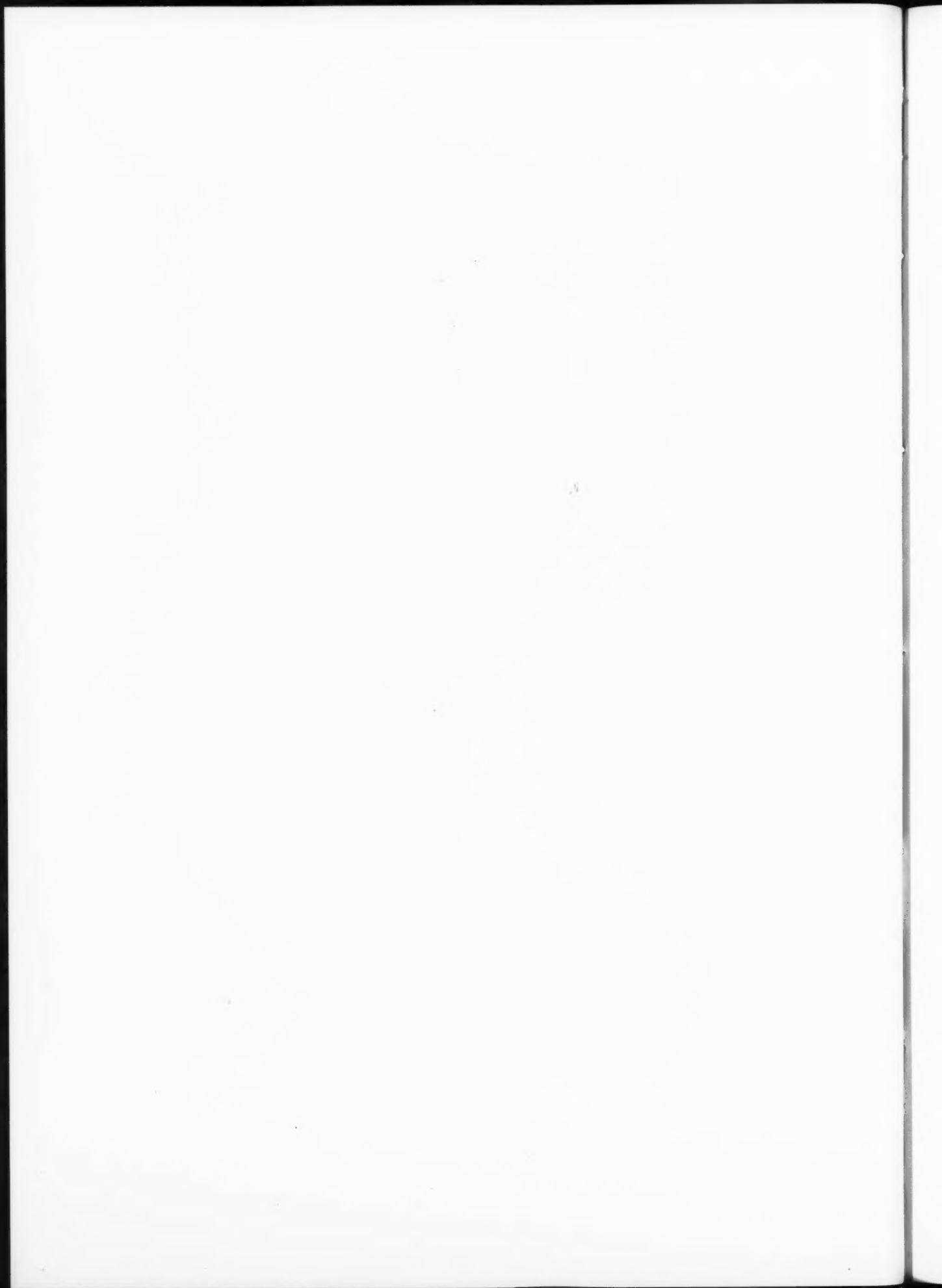
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VOL. CVII, NO. 2052

APRIL 21, 1915



FIRST FLOOR CORRIDOR AND STAIRWAY
MUSEUM OF FINE-ARTS, MINNEAPOLIS, MINN.
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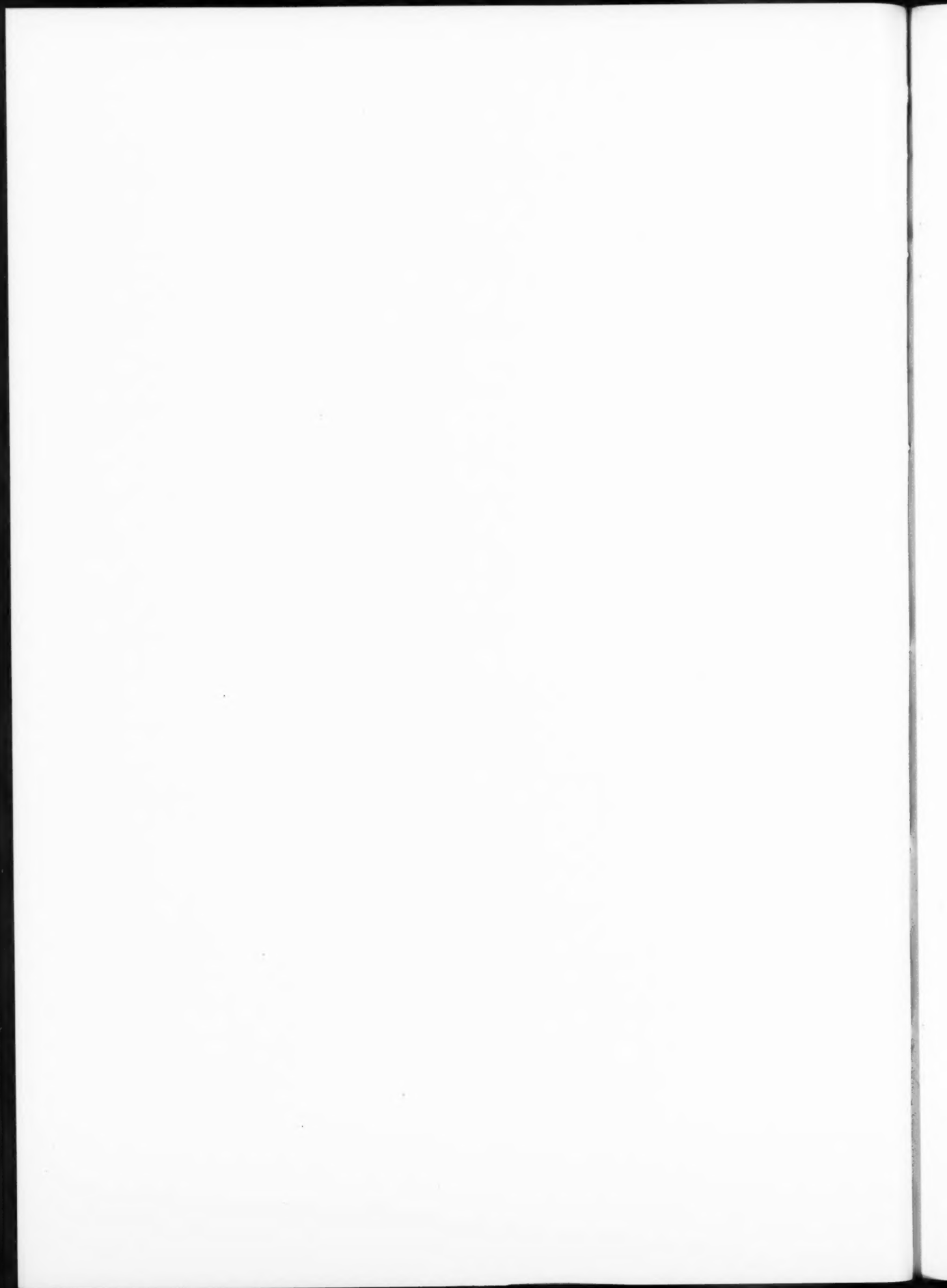
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MAIN GALLERY—SECOND FLOOR

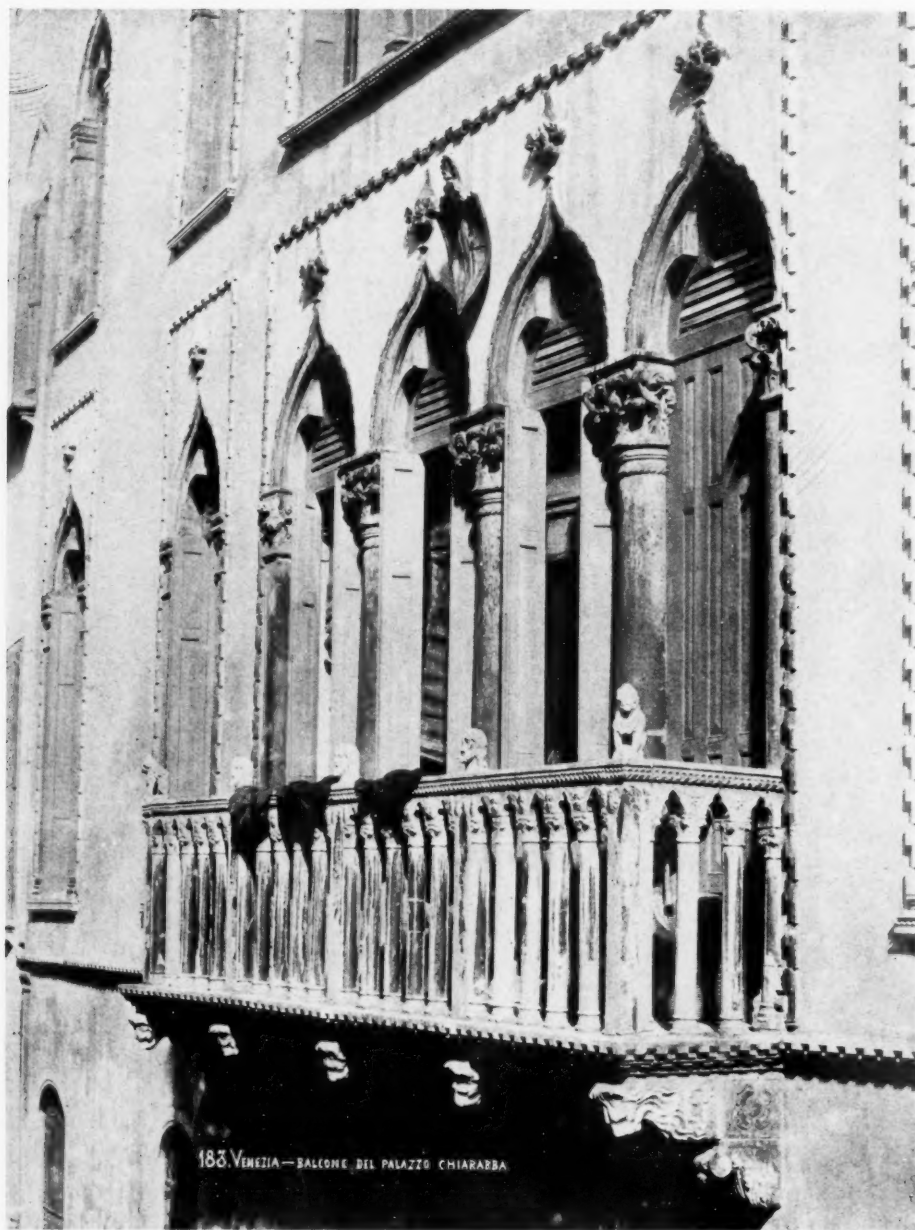
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BALCONY OF THE PALAZZO CHIARABBA, VENICE

