

THE AMERICAN ARCHITECT

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MODELS AND THEIR MAKING

By J. PHILIP McDONNELL

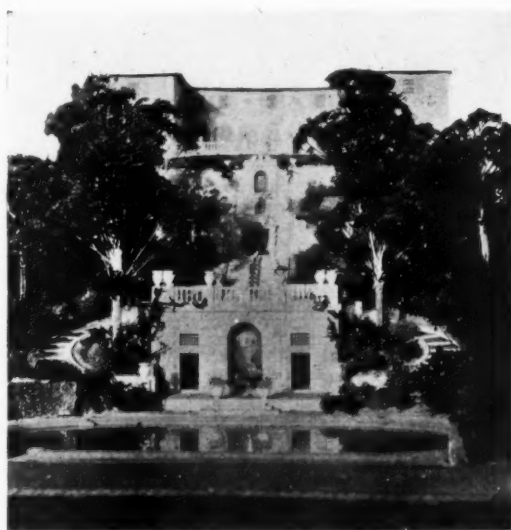
TO VISUALIZE the idea, to construct in the mental eye the complete unity of the finished structure, is a task that ever confronts the architect, and the successful fulfilment of it is one of the secrets of good architecture. The designer, well grounded in the elements of descriptive geometry, usually depends entirely upon his imaginative faculty to carry his design from the incipient stage of the sketch to the final accuracy of the working drawing; but if he limits his study to working on the draughting board, at no time does he have a more definite check upon his mental picture than that afforded by the rules of perspective.

This is at best only an approximation, and its limits are narrow and well defined. For simple designs involving few planes and projections, the perspective stands a fair chance of affording a true representation of the facts and, when completed by the addition of color and the introduction of accessories of human interest, gives both the client and the architect an adequate pictorial conception of what the result will be. In problems, however, that include salient projections or unusual heights,

curved lines or oblique angles, the most careful draughtsman must revise his results to meet the requirements of the eye, or, in the vernacular, must "fake" the picture.

In designs where the third dimension is essentially involved, the scale model does, however, offer to the architect an opportunity for further study not afforded by drawings, while the client may see a concrete representation of the desired building far more intelligible to the lay mind than any perspective. This is especially true with respect to country houses, where an accurate idea of the levels of the surrounding grounds with the location of existing natural features may be seen at a glance.

Unfortunately the details of the making of small models is not sufficiently understood by the average draughtsman, whose skill rarely extends beyond the range of the simplest cardboard model. These limits are, however, easily extended by a knowledge of the few involved principles to include all the component parts of country house as well as other models. The materials required are few and simple, and the necessary proficiency will be found to be quickly developed. We will



ONE-EIGHTH SCALE MODEL FOR McCORMACK GARDEN

MR. CHARLES A. PLATT, ARCHITECT

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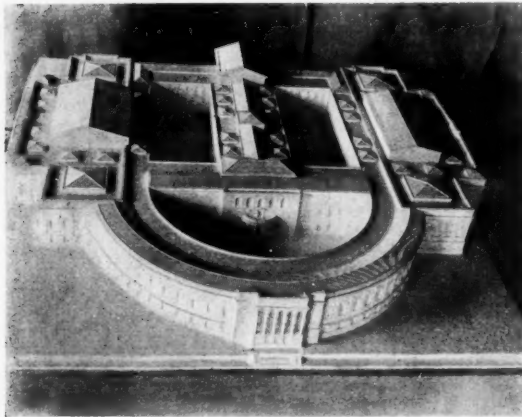
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attempt to describe in a somewhat detailed fashion the method of procedure in making a model similar to those illustrated.

Preliminary to the actual work, the scale and extreme dimensions must first be deter-

its lightness for smaller ones. The extreme differences in levels of the plot must first be ascertained, and if this is found to be less than one-half inch or thereabouts, first lay out the plan of the house, paths, garden, etc., then draw cross section lines to correspond with the survey and finally coat lightly with shellac (as a protection from the grease in the plastic clay mentioned further on). Pins or nails are now driven in at the intersection of the cross sections, whose top will mark the grade level at that point, the top of the nail at the lowest level being one-half inch above the foundation. Other nails should also be driven to locate house, garden and existing trees, etc.

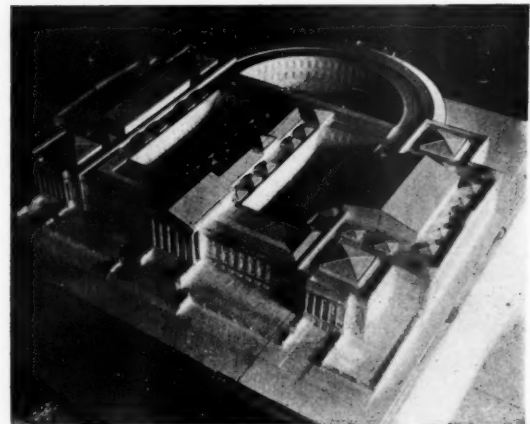
After this is done, the model of the house



ONE-EIGHTH SCALE MODEL OF THE MINNEAPOLIS MUSEUM

MESSRS. McKIM, MEAD & WHITE, ARCHITECTS

mined. The most practical scale, generally speaking, is one-eighth, while for very small and easily portable models, one-sixteenth will be amply large; for gate lodges or gar-



ONE-EIGHTH SCALE MODEL OF THE MINNEAPOLIS MUSEUM

MESSRS. McKIM, MEAD & WHITE, ARCHITECTS



ONE-EIGHTH SCALE MODEL OF CAMP IN ADIRONDACKS

MESSRS. JACKSON, ROSENCRANS & WATERBURY, ARCHITECTS

den features, one-fourth is more adequate.

The first step is that of selecting a foundation; a draughting board will serve the requirements of an average size model, while compo board commends itself by reason of

may be commenced. The four façades of the main portion should first be laid out, inked and rendered in water color on egg shell board of adequate thickness, two contiguous façades being preferably on the same piece. If the model is at one-sixteenth scale, the reveals of the openings need not be shown; if larger, the windows and doors should be cut with a sharp knife (a mat-maker's knife being preferable). A slightly larger piece for the reveals should be cut out of thicker cardboard and glued to the back (as illustrated in the sketch). If each individual window is allowed to dry thoroughly under the pressure of weights, no difficulty will be experienced in gluing under favorable weather conditions, but no model

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ONE-SIXTEENTH SCALE MODEL FOR A COUNTRY HOUSE
MESSRS. TROWBRIDGE & ACKERMAN, ARCHITECTS

should be attempted in wet or rainy weather. The sash may now be applied; they may be drawn on cardboard with shades and curtains indicated, chinese white being used to indicate muntins, or the rough side of a developed but unexposed film will better represent the glass, the muntins being similarly drawn with Chinese white. Shutters and blinds are more effective if cut out of separate pieces and glued on.

After scoring the outside corners lightly with a knife, the sides of the house should now be bent and glued together with small flaps and braced laterally inside with several pieces of cardboard held in position by cloth adhesive tape. A better method of bracing includes one or more pieces cut the full transverse section of the house, and these afford added stiffness to the roof.

The wings and projections of the house may next be laid out and applied to the main body of the house, after which it is ready for the roof. This requires great care in laying out and gluing together; dormers and chimneys should be glued to it before it is fastened to the main body of the house.

The sides of the model should be cut to extend to the foundations and shellaced below grade. Before gluing down, nails should be driven in at the corners of the house to give an added

stiffness, after which it may be applied to the board with a small flap. Porches, fences and garden house and walls should next be made and glued to the board after shellacing below grade, and we are now ready to develop the grounds.

The most eminently suitable material for the representation of this is plastic clay or plastoline, obtainable from any art store in a variety of colors. Green is used to indicate grass, while paths may be shown in grey and brick walks in brown. This should be applied with a few simple modeller's tools over the entire surface, just covering the heads of the nails. The walks and terraces will be located by the projecting nails and the color approximated as mentioned before. If any additional surface treatment is desired, sand or sawdust sprayed with green ink may be used.

The number of means of representing trees and vegetation will only be limited by the ingenuity of the maker and the accessibility of the materials. Fine bath or loofah sponges make excellent evergreens when cut to shape and sprayed with green ink (the shades may be varied by an addition of brown or blue), or bits of real evergreens dipped in hot paraffine or sprayed with shellac may be used. A stick put through the



ONE-SIXTEENTH SCALE MODEL FOR A COUNTRY HOUSE
MESSRS. TROWBRIDGE & ACKERMAN, ARCHITECTS

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centre and into the plastoline will hold them in place. Maples, beeches, etc., may be shown by artificial moss, obtainable at any dealer in artificial flowers; this should be similarly sprayed and stuck on twigs, preferably boxwood. Elms and oaks are excellently shown by sprays of a species of goldenrod, obtainable in any woods growing in sandy soil.

Although expensive, rubber sponges make the best boxwood trees and hedges. A visit to the Japanese shops and the dealers in artificial flowers will be repaid by the discovery of many bits of foliage that may be successfully adapted to special types of foliage.

If the plot of ground to be modelled

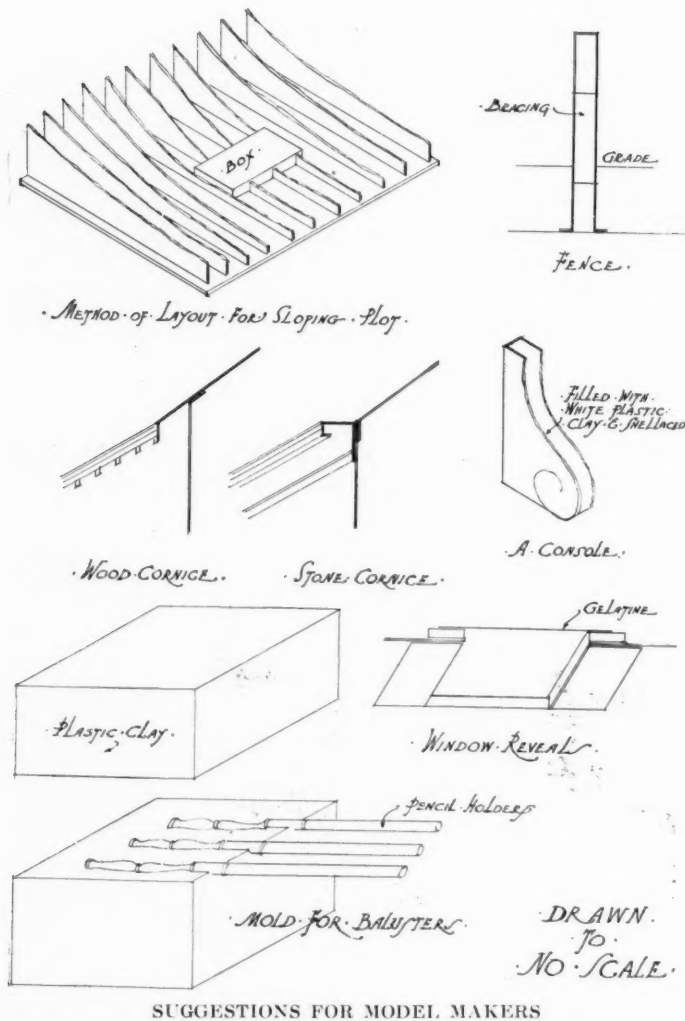
shows considerable variation in levels, or is sloping, the layout must be varied in the following manner: The foundation having been chosen, exact sections taken at convenient distances apart should be laid out on the compo board and cut out with saw and knife; these are then put in place with cloth adhesive tape and braced laterally (see sketch). Stiff cardboard or cigar boxes should be placed under the house and all other flat surfaces, such as terraces or parterres. After the house model is completed and set in place, these compo board sections are covered with pieces of cardboard glued in place and shellaced. In the model of the McCormack garden, the system of underbracing necessary was even more elaborate

than that described above, but still within the possibility of an amateur.

Returning to the house, the illustrations indicate many suggestions that will be found helpful. At one-eighth scale or smaller, the roof surfaces are best left flat and the indication limited to drawing, but at larger scale, shingles or slate may be shown with overlapping pieces of thin cardboard. Tiles may be similarly indicated by strips of paper folded into an inverted V shape.

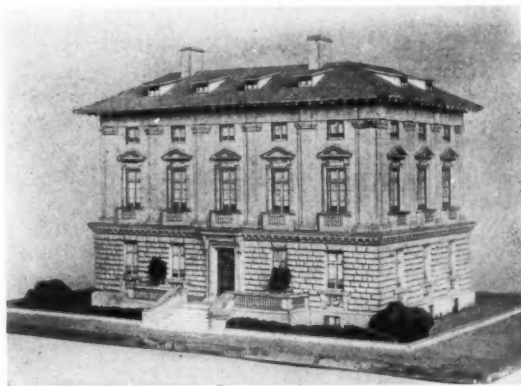
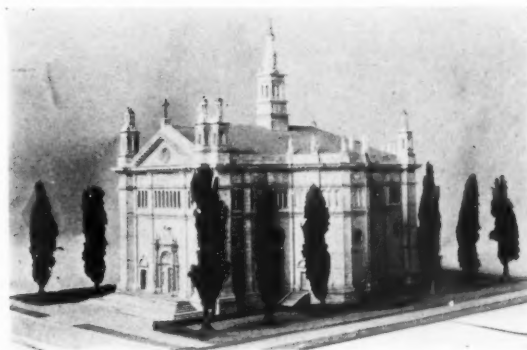
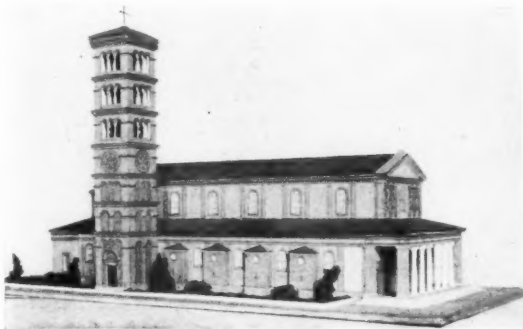
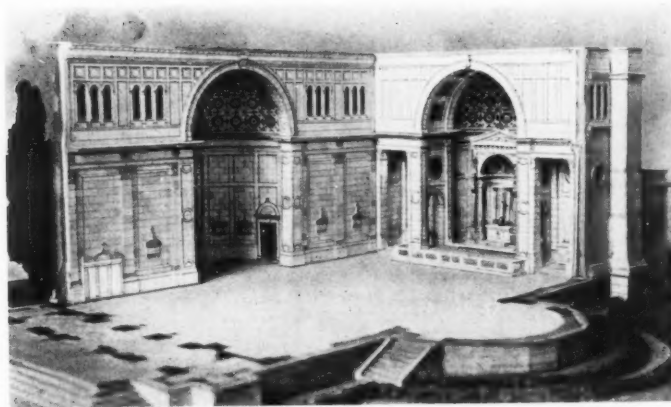
Columns are made from unfinished pencils painted with Chinese white; on a careful model, it is sometimes advisable to have these made in plaster by a professional modeller, and the slight additional expense will be fully repaid by the enhanced appearance.

Balusters and small vases may be easily cast in plaster. One or more small models should be first cut out of wood with a knife. A mold can then be made from plastoline (as per sketch) and poured with very soft plaster of paris; this will set in twenty minutes, and the resulting casts can then be removed. To indicate water, paper colored with water colors should be



SUGGESTIONS FOR MODEL MAKERS

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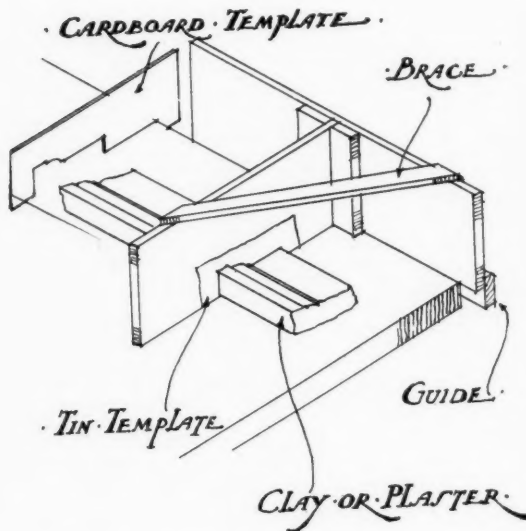
ONE-EIGHTH SCALE MODELS
MR. FRANK J. HELMLE, ARCHITECT

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placed under a sheet of plain glass; this is infinitely better than the use of mirrors.

This type of model is readily adapted to the requirements of any office; by elimination or substitution, almost any small building may be executed in miniature

with the assistance of an intelligent plasterer, and a brief description of the methods may be appropriate. Tin templates that represent vertical sections taken through various portions of the building are first made with file and scissors and placed in a



METHOD OF RUNNING MOULDINGS

with small outlay of time or money. The models illustrated show the exceedingly wide scope of cardboard models and need little further explanation. The Widener library model is unique in that its cornice and columns were carved in boxwood, an expensive procedure but one fully justified by the increased precision obtained. The church model made in Mr. Helmle's office is the most complete miniature illustrated. It is made entirely from cardboard in parts; the plan of the plot and structure, showing the marble floor, the four walls which show exterior and interior, and similarly the roof with the interior ceiling.

Careful scale models in plaster of monumental buildings lie entirely outside the range of an architectural office, and the practical problems that they involve can only be solved by a trained artisan. Sometimes, however, it may be found feasible to make a rough model out of plaster



ONE-QUARTER SCALE MODEL OF A GARDEN FEATURE

MESSRS ALBRO & LINDBERG, ARCHITECTS

frame, such as is illustrated. Plaster sections are then run from them, which are attached by shellac or plaster of paris to the cast flat wall sections. Windows and doors are cast and inserted, repeated ornament is carved



ONE-EIGHTH SCALE MODEL OF WIDENER LIBRARY

MR. HORACE TRUMBACER, ARCHITECT

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THREE-INCH SCALE MODEL OF A FACADE
MR. ELECTUS D. LITCHFIELD, ARCHITECT

and cast in sections, free ornament is either cast or carved. The whole is then erected on a wood frame with a liberal use of plaster and all joints carefully filled over.

The running of moldings at full size is an enlightening method of study, and its extensive use in the office of Mr. Platt accounts for much of the refinement and delicacy of his detail. A stiff cardboard template, shellac and a lump of clay are all that is required; for interior detailing, this is especially valuable since the resulting molding of a cornice, for example, may be seen at once in its final relation to the eye.

Much might be said of the making of full size models, but unfortunately little that would materially aid the architect or alter his status of dependence upon the modeller for this branch of the work. The use of clay or plaster in large quantities is impracticable in an ordinary office, while its handling de-

mands a technical skill quite outside the draughtman's training.

It is interesting to note that many prominent architects are fully realizing the vast range and value of the model and are placing more and more importance upon its use even to the extent of supplanting full size drawings, particularly of ornament. In fact, a well-known New York firm make full size models from quarter scale drawings working on the principle that exterior ornament that cannot be adequately shown on the quarter scale drawing, cannot be appreciated by the eye. The considerable extra amount of patience expended by this method has been found to be justified by the results obtained, and it holds a suggestion that might be more fully tried out.

Concrete representations are, when all is said and done, the only ones which leave nothing to the uncertainties and limitations of the imagination, and even the most skilful draughtsman will find extended use of the model profitable.



ONE-EIGHTH SCALE MODEL FOR McCORMACK
GARDEN

MR. CHARLES A. PLATT, ARCHITECT

NORTHERN ITALIAN DETAILS

No. 26 — INTERIOR DOORWAYS, S. PIETRO INCORONATO, VERONA

BECAUSE of the scarcity of wood in Italy, its interior architecture is forced to express itself chiefly in other materials and to abstain from the beauties of grain and coloring that are inherent qualities of wood. But when the Italian artist is permitted to work in wood, he treats it with an affectionate care that shows how precious it has become to him. Being compelled to restrain himself from an extended use of it, he places it where its contrast with other materials is pronounced, and studies its details and profiles with solicitude. Fortunately for him, the most accessible kind of wood is walnut—not the deep chocolate-colored wood that is a characteristic of our own post bellum furniture, but the native Italian walnut, in color a warm brown that

ranges from tawny hues to rich sepias. He is always content to leave it in its natural state without the addition of varnish or paint, and how well it harmonizes with other materials every traveler returning from Italy knows.

The interior doors illustrated this week approach in design the ordinary problems of our own domestic work, and are therefore full of suggestion. They have no ornamental accessories and their beauty depends upon the most fundamental elements of proportion. Their mouldings are almost the ultimate word in studied profiles, while the proportions of the doors are exquisite. In the depth of relief the most subtle and delicately fine distinctions are preserved. The incised lettering of the inscription is executed with a classic feeling of restraint.

RELEASE OF SURETIES FOR BUILDING CONTRACTORS—III

By JOHN W. SIMPSON

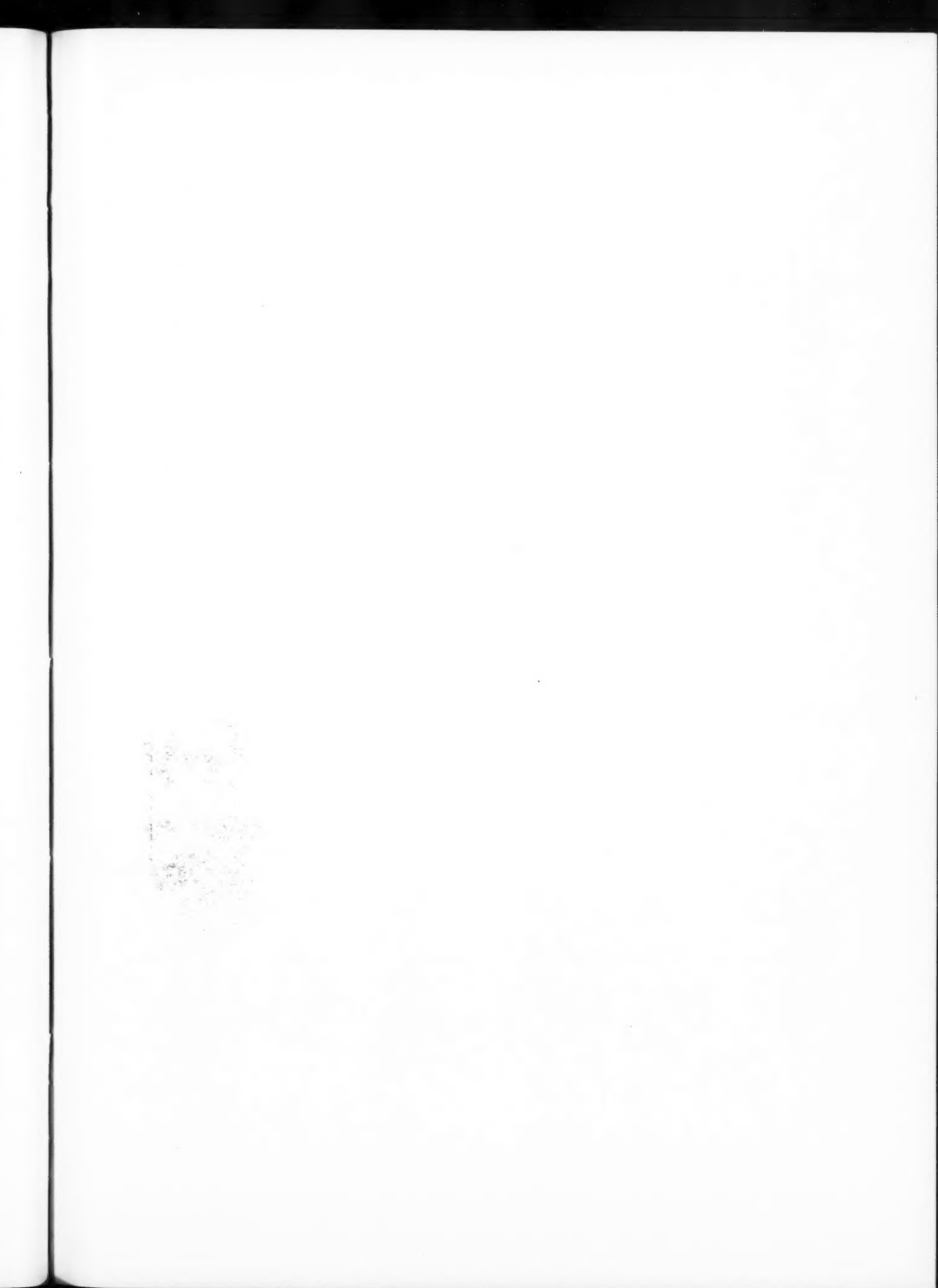
Failure to Insure

WHERE a building contract provides that the owner of the building shall insure it and keep it insured during construction, his failure to do so, if loss or destruction of the property follows which injuriously affects the rights of the sureties of the contractor, release them from their liability under their bond.

The earliest case on the subject is the English case of *Watts v. Shuttleworth* (1860), 5 H. & N. 235, 7 H. & N. 353. That action was on a guaranty, and the breach alleged was that one Harrap had not completed certain fittings or fixtures in accordance with an agreement entered into by him with the plaintiff. By this agreement

Harrap agreed, in consideration of £3,450, to execute certain fittings for a warehouse for the plaintiff. One of the stipulations was: "That the said Samuel Watts (the plaintiff) shall and may insure the fittings from risk or accident by fire at such time and to such amount as the architects aforesaid may consider necessary, and deduct the cost of such insurance for the time during which the works are unfinished from the amount of the contract." The defendant signed an agreement binding himself to guarantee to the plaintiff the due performance of the contract. The plaintiff advanced to Harrap £1,800. A number of fittings, to the value of £2,300, were made and placed in a room in Harrap's workshop, where they were destroyed by an accidental fire. Harrap be-

(Continued on page 288)





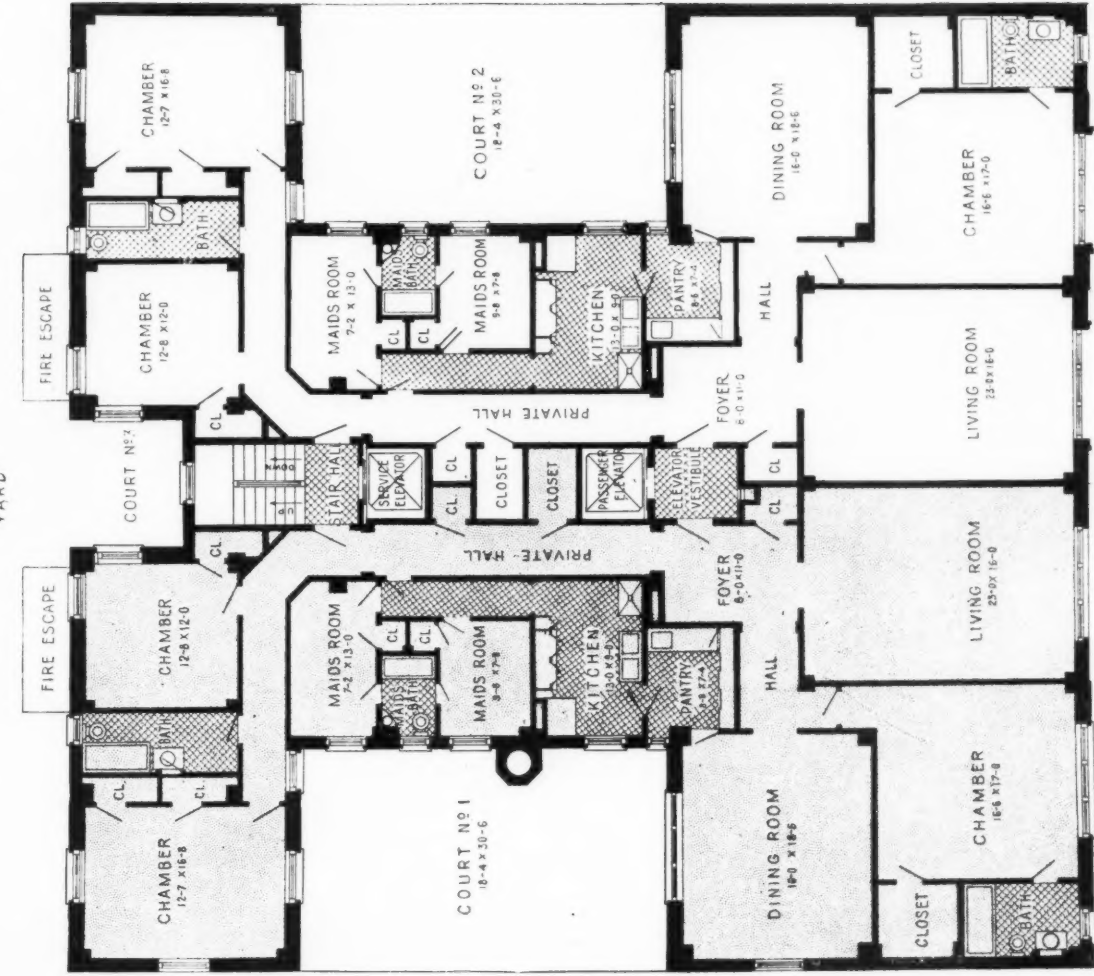
PHOTOGRAPHS AND DRAWINGS
BY W. G. THOMAS AND J. T. FALLON



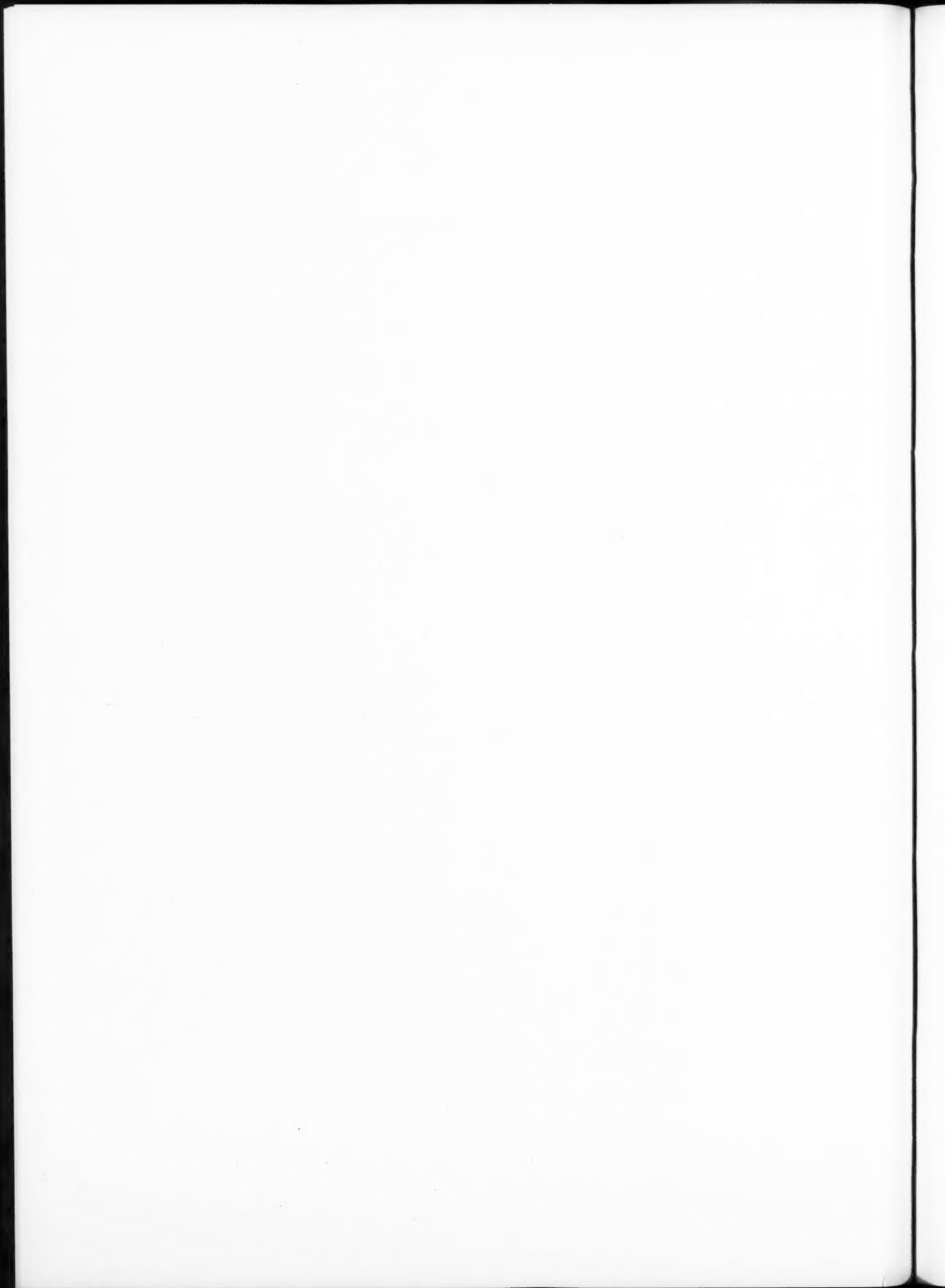
INTERIOR DOORS, S. PIETRO INCORONATO, VERONA



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AN UNACCOUNTABLY NEGLECTED DETAIL OF CITY IMPROVEMENT

THE modern movement, having for its object the improvement not only of the physical aspects of cities, but also their utilitarian features, is still in its infancy in this country, and on that score the fact that many of its advocates have scarcely begun to give attention to all of its possible phases, may perhaps be in a measure explained and excused. It seems remarkable, however, and also deplorable, that interest in so important a feature of the subject as that of the city backyard and its contiguous walls and fences should be so generally neglected, as the slightest investigation of the matter will demonstrate is the case.

The few spasmodic protests against present practice, as it affects rear and side walls, backyards and areas, that have been uttered from time to time in the press and from the platform, have apparently failed to produce any great amount of actual improvement, or to awaken general interest among owners of property, or for that matter if we are to judge by results alone, among architects.

Not only in the poorer tenement districts,

but even in the highest class and most exclusive residential sections of our cities the same unsatisfactory conditions exist to a considerable extent. While street façades are as a matter of course given attractive architectural treatment, the rear and side-walls of our buildings are more frequently than otherwise designed with little or no thought bestowed upon their exterior appearance. This lack of interest in any but the street façade is carried even further, for while front doors and windows are frequently made attractive with palms and window boxes, the backyards of dwellings of all classes are quite generally left untreated and uncared for. In almost no instance is the rear of the house thought worthy of more than casual architectural notice, and gaunt, bare walls forming the background for spaces of hard-packed earth or cement with lines of irregular and ill-kept fences, and only an occasional tree and bush to suggest a cheerful or attractive note, is the general rule.

Perhaps this neglect of so vital a detail in connection with the city plan problem is only an expression of what European nations call "a national lack of thoroughness and a desire to expend the greater part of our money and efforts where they will make the most show." It is of course natural, as well as traditional, to treat the front of the city house more elaborately than the rear, but the present utter disregard for the aspect of the side and rear walls, as well as the plot of contiguous ground usually designated "the yard," that obtains in America at the present time, seems to almost denote an unbalanced sense of relative values.

If the problem was an entirely new one, our neglect might not be so obvious, but as it exists to-day, it is difficult to understand the reasons for our failure to learn the lessons which are taught by a study of what has been done in the treatment of the backyard and its architectural setting in Europe; particularly when we have followed European examples so closely in other features of our city architecture. The European architect is trained, by a study of existing buildings, to regard the rear of the city house as having an importance only second to that of the principal façade, and to suggest in its

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design some modified form of the architectural treatment of the front.

In old Italian palaces, the rear, even if facing only a modest garden of restricted area, was thought worthy of study, while the garden itself was almost invariably laid out with gravel walks, shrubs, flowers and an attractive fountain or other architectural feature, to add interest to the composition. The same situation obtains in France, while in England and Holland, the rear yards are often veritable masses of foliage banked against what frequently appear to be plain walls. Upon closer study, however, they are often found to possess much interest of line, proportion and detail.

The subject is one in which, apparently, the architect and owner share responsibility; the former because he has failed to sufficiently impress upon his client the added value to be obtained at slight additional expense, and the latter, when the matter has been presented to him, for losing sight of the advantages which would accrue, not only to his own property, but to all that lying in his neighborhood. The expense involved,—which is so often the deciding factor,—in well designed and simply treated side and rear walls, with the addition of appropriate vine-covered fences, or hedges, and a few gravel walks, if the area of yard is sufficient, is so small, and the added value is so obvious that it is exceedingly difficult to comprehend the attitude of mind of an owner who declines

to undertake the work if the matter is fully and earnestly presented to him. Viewed from this angle it would appear that the architect's responsibility was greater. But regardless of the matter of responsibility for a condition which is now found to exist, the backyards and rear walls of the majority of our modern residences and buildings practically constitute a reflection upon our pretensions to refinement, and indicate, if not actual insincerity in our movement for city improvement, at least a lack of appreciation of the possibilities a complete study of the subject afford.

There are, of course, notable exceptions to the general rule of neglect of the features here referred to, and it is hoped that these comparatively few examples, indicating as they do what may be accomplished by a little thought and a small amount of money added to the irreducible minimum of expense to cover a given building project, will lead to a general improvement in the not distant future.

The members of the profession can probably do more to bring about the desired change than any other class of men, and it would seem as though their duty to their clients had not been fully performed until they had exercised every proper means to induce them to see the value of architectural thought and treatment bestowed upon every part and feature of the house, as well as the land areas belonging to it.

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DETAIL OF LOWER STORIES

APARTMENT HOUSE. NO. 126 W. 55TH STREET, NEW YORK

MESSRS. WALLIS & GOODWILLIE, ARCHITECTS

Release of Sureties for Building Contractors—III

(Continued from page 284)

came insolvent, and the fittings were never put up. The plaintiff had not been repaid the £1,800, and had been obliged to pay £340 beyond the sum of £3,450 to another builder to do the work. It was admitted that the fittings destroyed were of the value before stated, and had not been insured by the plaintiff. A verdict was entered in the lower court for the plaintiff for £2,140. The defendant moved that the verdict should be entered for him on equitable grounds, on account of the plaintiff's failure to insure the fittings according to the contract. This was done, Vollock, C. B., saying: "The substantial question in the case is, whether the omission to insure discharges the defendant, the surety. The rule upon the subject seems to be that if the person guaranteed does any act injurious to the surety, or inconsistent with his rights, or if he omits any act which his duty enjoins him to do, and the omission proves injurious to the surety, the latter will be discharged . . . We think the plaintiff ought to have insured. It, therefore, seems to us that the plaintiff has omitted to do an act which his duty towards the defendant required him to do; that if he had done it the defendant would have been relieved to the extent of the insurance; that the omission, therefore, was injurious to him, and that he has been thereby discharged from the suretyship." On appeal (7 H. & N. 353) it was held that the surety was discharged entirely, and not merely to the extent of the benefit he would have derived from the insurance, if effected, the case being analogous to those where a surety has been held discharged by time having been given to the debtor.

In a contract for the construction of a building for a church, it was provided that the church should insure the property to cover its interest therein when payments had been made to the contractors. The contractors gave a bond signed by certain sureties. While in course of construction the building was totally destroyed by fire. The church had insurance on the property in the sum of \$10,000 only. Prior to the date of the destruction of the building it had paid to the contractors \$14,489.59. The church sued the contractors and the sureties on their

bond to recover the money paid to the contractors under the contract. It was held, applying the rule laid down in *Watts v. Shuttlecock*, (1) that the failure of the church to keep the building insured to the extent of its interest therein was a complete defense for the sureties; (2) that the object of the provision in the contract requiring the church to insure its interest in the property was to lessen the risks taken by the sureties; (3) that the sureties were under no obligation to make inquiries from time to time to ascertain if the church had complied with its contract to insure its interest in the property; (4) that the sureties had a right to suppose that the church would comply with its contract in that respect, and that if the building should be destroyed before its acceptance by the church, and they were called upon to and did make good the loss, they would be entitled by subrogation or otherwise to the benefit of the insurance effected on the property by the church; (5) that the question as to whether the destruction of the building was the result of the negligence of the contractors was an immaterial issue; (6) that the church could not excuse its failure to comply with its part of the contract on the ground that its performance would have been of no value to the sureties, because the loss of the building through the negligence of their principals would defeat a recovery of the insurance if it had been effected; (7) that its duty was to insure the property, and when the loss sued for occurred and was paid by the sureties, to transfer to them the insurance contracts, and leave the sureties and the insurance companies to litigate the question of the latter's liability; (8) that the fact that the church was unable to procure responsible insurance companies to write insurance on the building to the extent of its interest therein did not relieve it from the performance of its agreement to insure the property to the extent of its interest. *Gallagher v. St. Patrick's Church* (1895), 45 Neb. 535, 63 N. W. 864.

But the surety is not released if no loss occurs through the failure of the owner to insure. In *Hohn v. Shideler* (1904), 164 Ind. 242, it appeared that the owner was to insure the buildings and the materials on the premises in his own name or in the name of the contractor against loss by fire, the pro-

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ceeds of the policy to be paid to the builder and owner as their interests might appear; but that the owner insured the dwelling-house to the amount of \$1,500 for five years in his own name, the policy containing a clause making the proceeds payable to a mortgagee, as his interest might appear. This policy was not such as the contract described, and the question was, did the failure of the owner to insure the buildings and materials in the manner required by the contract release the surety? In this case there was no loss by fire. It was held that, if the rights of a surety are to be determined upon the equitable principles stated in the adjudicated cases, it would seem to follow that although the owner of the property failed to insure the structure and materials on the premises, yet, as they were not damaged by fire, and no loss occurred which such insurance would have covered, the surety was not injured by the default of the owner, and hence was not discharged thereby. If the property had been injured or destroyed by fire, as in *Watts v. Shuttleworth*, a different result would have followed. "There was here," the court said, "no alteration of the

contract, nor any omission on the part of the owner of the property which was injurious to the surety, and it would be inequitable to hold that the surety was released on account of an omission which proved to be entirely harmless." This case was followed in *Schreiber v. Worm* (1904), 164 Ind. 7, where it was said that where sureties ask to be discharged from liability because of some violation of or departure from the terms of the principal contract, they must, if they would succeed, show that they have sustained some damage by such breach, and then they are entitled to be discharged only *pro tanto*, or to the extent of the injury sustained. This language would appear to indicate that the court did not adopt the ruling in *Watts v. Shuttleworth* on appeal, 7 H. & N. 353, that the omission to insure discharged the surety *in toto*, and not merely to the extent of the benefit he would have received if the required insurance had been effected. In *Roland v. Lindsey* (1912), 104 Ark. 49, 146 S. W. 115, Ann. Cas. 1914 C, where there was a similar agreement by the owner to insure, no loss by fire occurred, and it was held that the sureties were not injured and not released by the owner's failure to insure.

CURRENT NEWS AND COMMENT

Building Regulations

A building code is primarily for the protection of the public. The average citizen lacks the special knowledge to make him competent to judge between good materials and poor materials and between good design and bad design. Incidentally, a good building code protects the manufacturers of good materials and the contractor with skill and honest motives, from manufacturers of inferior materials and from contractors who are either ignorant or dishonest, or both. The intended effect, then, of well considered building regulations is quite simple and desirable, and nobody whose opinion is worth while can object to them. Such regulations benefit everybody who deserves to be benefited. It is obviously to the advantage of builders and manufacturers of building

materials to make special efforts toward the adoption of suitable building regulations in every community.

The errors come simply because building regulations are formulated and adopted by human beings in whom error is common. While it is best to be sure that the public is amply safeguarded, it is of great importance that justice does not lean backward in trying to stand too straight. If the public is prevented, by the ignorance or biased views of the framers of the regulations, from the fullest possible use of good materials and legitimate methods, then the resulting injustice is different in minor degree only, and not at all different in kind, from the injustice of regulations which are too feeble in their provisions for safety. — *Concrete-Cement Age*.

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The Rise and Progress of the Art of Sculpture in America

Mr. Lorado Taft, sculptor, of Chicago, during a recent address, referred to the rise and progress of the art of sculpture in this country in the following words:

"William Rush, of New England, carved some figureheads for sailing vessels that were much admired in Europe; John Frazee, a tombstone carver, made many portrait busts and a statue of a little girl eating a piece of pie, until just about the year 1900 when Hiram Powers and the sculptor Reno made the first things worthy of the name of sculpture.

"Imagine the difficulty these men had working without precedent. Powers from being a clock maker became a modeler of wax figures. His mechanical genius suggested that these figures be made to move by clockwork. 'Dante's Inferno' was the atrocity this combination of abilities made possible.

"We are developing. There are hundreds of pictures of men's work that I might show you. Comparing the many who are now turning out good things, to the few who turned out atrocities a hundred years ago, might be your means of estimating just how great the art in America is becoming."

Report of Comptroller Commends New York Department of Architecture

Comptroller Travis has completed an investigation of the New York State Department of Architecture, and in his report pays tribute to improved conditions and efficiency at present existing.

The report states that all construction work is now practically completed, and that on the adjournment of the Legislature the department will be prepared to undertake the preliminary work of construction or improvement of buildings that have been authorized and for which appropriations have been made.

Alessandro Leopardi, a Worker in Bronze

Alessandro Leopardi, to whom are attributed the three bronze mast stands in front of St. Mark's, was the same eminent worker in bronze who, in 1495, completed what has been held to be the most magnificent equestrian statue in existence, that of Bartolommeo Colleoni, which, however, was modeled by Verrocchio, Leopardi merely casting it and designing the pedestal. Leopardi lived in the heyday of Venetian excellence in bronze-work. Before his time, the best metal-work was done by foreigners, that of native origin being curiously coarse and crude. In his day, and in the succeeding century, the metal-work of the city owed much to a large colony of Moslem craftsmen who seem to have settled there, and who greatly influenced the character of all the work of their period. From these mast stands the banners of the Republic were unfurled.—*Architects' and Builders' Journal*.

Personals

Messrs. Harry I. Day and G. Roy McKinnon have associated for the practice of architecture, under the firm name of Day & McKinnon, with offices in the Academy of Music Building, Haverhill, Mass. They would like to receive manufacturers' samples and catalogues of material and equipment.

Mr. Albert Sturr, architect, with offices at 63 East 179th street, New York City, would like to receive manufacturers' catalogues and samples.

Mr. Ludwig W. Eisinger, architect, has opened an office in the Vanderbilt Concourse Building, 52 Vanderbilt avenue, New York City, where he will practice his profession. He requests manufacturers' samples.

Mr. William Thomas Marchant, architect, has opened an office in the First National Bank Building, 50 State Street, Hartford, Conn., for the practice of his profession, and would like to receive manufacturers' catalogues and samples.

INDUSTRIAL INFORMATION

Hardware Specialties

Catalogue No. 10 of hardware specialties, including Smith's Improved Panic exit locks and metal window fixtures, manufactured by the Frank F. Smith Metal Window Hardware Company, 83 Clay Street, Newark, N. J., has just been issued.

This catalogue illustrates by means of halftone cuts and detailed line drawings the operation both of panic exit locks and window fastenings for various types of metal doors and windows. The locks for the panic exits are of the gravity type without springs, and doors equipped with this device can be opened from inside at all times by a slight touch against the cross-bar at any point. Locks are at top and bottom. For some styles there is no outside hardware.

These fastenings are furnished in a variety of styles adapted to different types of doors in various buildings. A special style of lock has the cylinder lock and knob on outside, allowing door to be opened or locked from outside, but it is at any time ready to be opened from inside by a slight touch against the cross-bar at any point.

Locks are furnished in cast brass or cast bronze. Both single and double doors may be equipped with this hardware.

Metal window fixtures include fasteners, sash lifts, pulley plates, sash pulleys, pivoted window fixtures, pivoted window locks, reinforcing plates, hinge window locks, etc.

Catalogue will be furnished upon request.

Metal Doors

The Dahlstrom Metallic Door Company, Jamestown, N. Y., has just published a booklet, entitled, "Safety First for Schools." This pamphlet contains reference to a number of disastrous fires in schools of the United States during recent years and points out the responsibility which rests with members of boards of education and architects, to whom the people at large look, and upon whom they depend to provide proper safeguards against fire in modern school-houses. It is acknowledged that architects are generally eager to build safely, but are

hampered by restrictions as to cost. To insure safety it is just as important that the interior should be fireproof, as it is for the exterior and structural members to be so.

The basic principle of fireproofing is stated as isolation, division, separation, protection of things beyond the immediate zone of fire, and prevention of the fire from spreading; confining it to its place of origin, where it can be stamped out. To do this, all wall openings must be safeguarded. For this purpose fireproof doors and trim have now become a necessity in the equipment of modern buildings. The use of hollow metal doors and trim in a building in other respects non-combustible makes that building really fireproof, in the opinion of this company.

Dahlstrom hollow metal doors have, it is stated, been subjected to severe fire tests, and are approved by the Underwriters' Laboratories of Chicago, as well as by the British Fire Prevention Committee of London, England. These doors are sanitary and appear to be artistic in design and finish and are said to be built to last.

Further information or a copy of the booklet may be had upon application.

Degraco-Tone

The Detroit Graphite Company, Detroit, Mich., has issued a folder describing and showing by means of colored cards the various shades in which Degraco-Tone—described as a flat wall finish for interiors—can be furnished. In considering the selection of a flat wall finish, it is stated that it would be proper for an architect to insist that it possess the following qualities: That it be sanitary; that the color chosen be permanent; that it will not chip, crack or peel when properly applied; that when washed with ivory or castile soap and water, its original appearance may be restored without injury.

It is stated that Degraco-Tone is manufactured and sold with these service requirements always in mind, and its durability is well proven. Colors shown in the folder are chosen from many in use. Special shades

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will be matched, provided the above qualities are possible of incorporation in their manufacture.

It is claimed that this product can be used with excellent results on most all interior surfaces. Among them, the following: Smooth plaster or sand finished walls and ceilings; woodwork; radiators; burlap; metal ceilings; wall paper, window shades.

Degraco-Tone is said to be an oil paint with a flat finish. It is recommended for use in private residences, office buildings, public buildings, hotels, churches, and hospitals. Specifications for the proper use of this material are given, and the hope is expressed that the company's success in paint making during the last quarter of a century will insure for the new product the consideration which its worth justifies.

A copy of the folder or further information will be supplied upon request.

The Montclair System

A booklet issued by the Montclair Refrigerating Corporation, with main office in the Woolworth Building, New York City, carries the above title, and purports to give information concerning a small, inexpensive, safe and sanitary method of refrigeration.

Refrigeration and the sanitary care of food articles in the modern home is a problem confronting every householder. A modern system of refrigeration must contain every element of safety, sanitation and convenience, and should conserve the household energy and comfort in the same manner as do the telephone, electric light and vacuum cleaner.

It is stated that the Montclair Refrigerating Corporation has been able to produce a small, compact, cheap, mechanical device, by means of which refrigeration can be obtained at a nominal daily cost. The difficulties of the past have been, according to this booklet, that the systems in use for producing artificial ice have usually required large, bulky and expensive machinery. The refrigerator here described does not use ammonia or any other dangerous refrigerating agent, nor does it use a heavy compression system. No water or ice is exposed, therefore, it is claimed there can be no dampness. The food is always kept fresh, clean and wholesome. The temperature of

the food container is automatically regulated. This apparatus belongs to the compression type of machine, in which the abstraction of heat is effected by the vaporizing of a volatile refrigerant, which is subsequently returned to its original liquid state by mechanical compression and cooling. In this process, ethyl chloride, which is said to be a harmless neutral chemical of the alcohol group, is used. A one-quarter horse power motor is used on the Type "B" machine and from eight to ten gallons of water are consumed per hour during operation, the amount of water used depending upon its temperature.

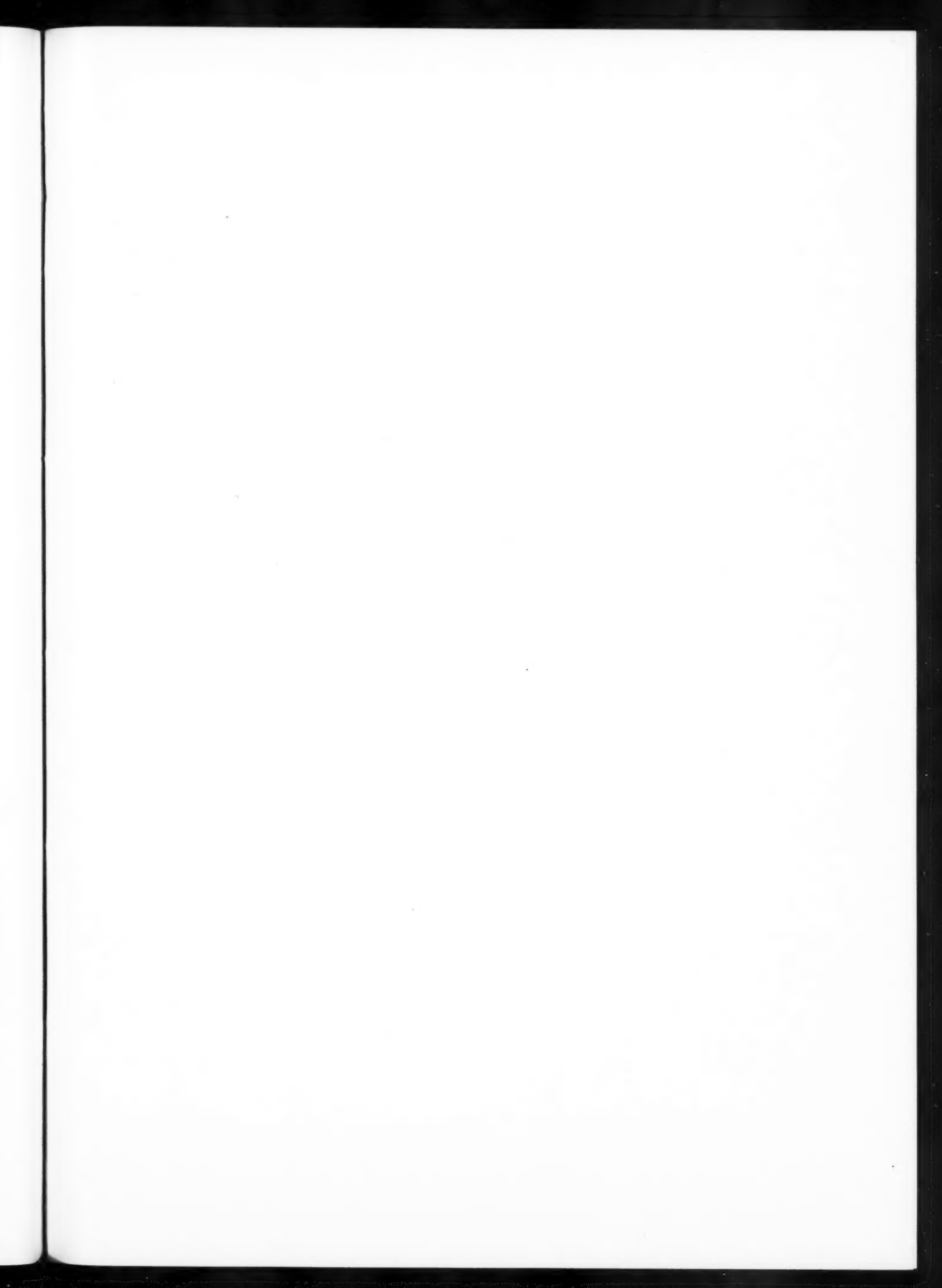
The ethyl chloride and lubricant contained in the machine should, it is said, last two or three years, and costs less than \$2.00 for recharging. There is no water or electricity used except when machine is in actual operation, which under ordinary conditions should not be more than six to eight hours per day in the average household.

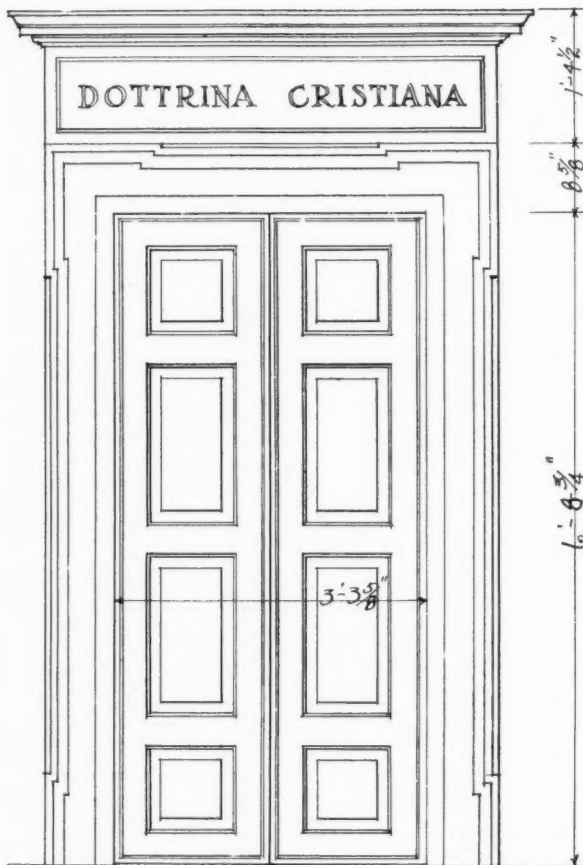
From these figures, the expense of operation can be readily calculated. There are many claims in addition to those of economy of operation, and to any one charged with the selection of refrigerating equipment for residences, clubs, etc., it would seem as though this booklet would give information that would be of value. It will be sent upon request.

Doorways

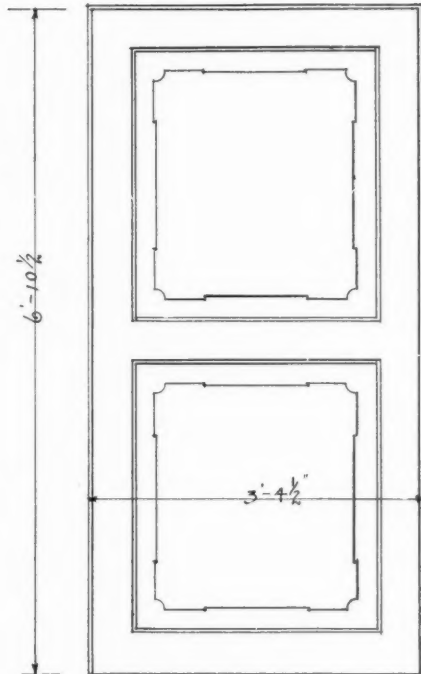
The Richards - Wilcox Manufacturing Company, Aurora, Ill., publishes a house organ under the title of "Doorways," which, it is stated, contains good sense and good humor, with a hunch for R-W products.

The April number of this publication presents, in addition to a preachment on "A Merchant's Duty to His Community," a short article on "Making Dreams Come True," and various bits of wit and humor. A number of types of R-W hangers for various positions in houses, barns and storage buildings are also presented. Accompanying the illustrations, and data concerning these hangers, are printed a number of cogent reasons for their adoption in preference to other types of door hangers. To those making application to the company, copies of this publication will be sent regularly each month.





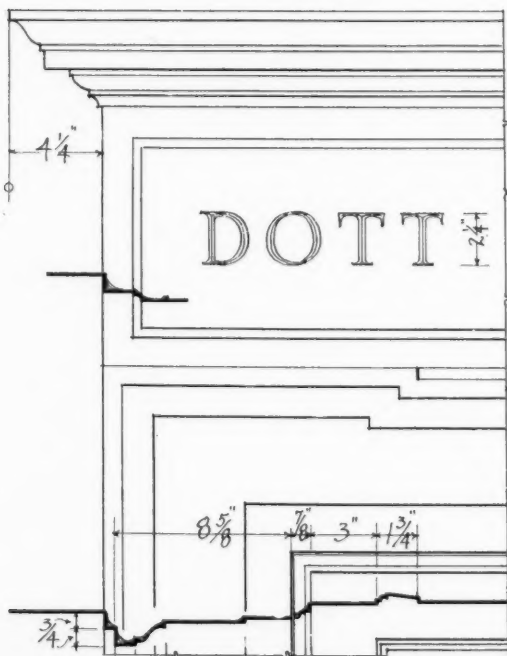
ELEVATION



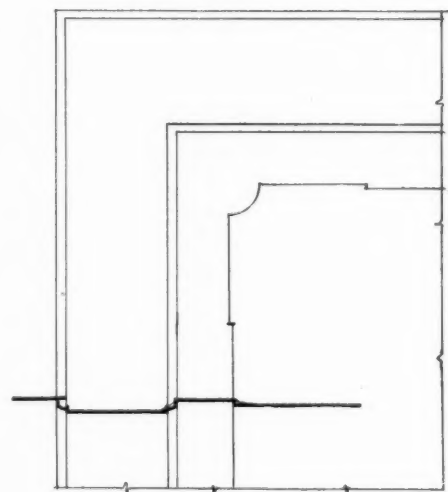
ELEVATION

MATERIAL - ITALIAN WALNUT

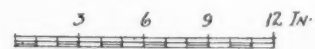
SCALE FOR ELEVATIONS

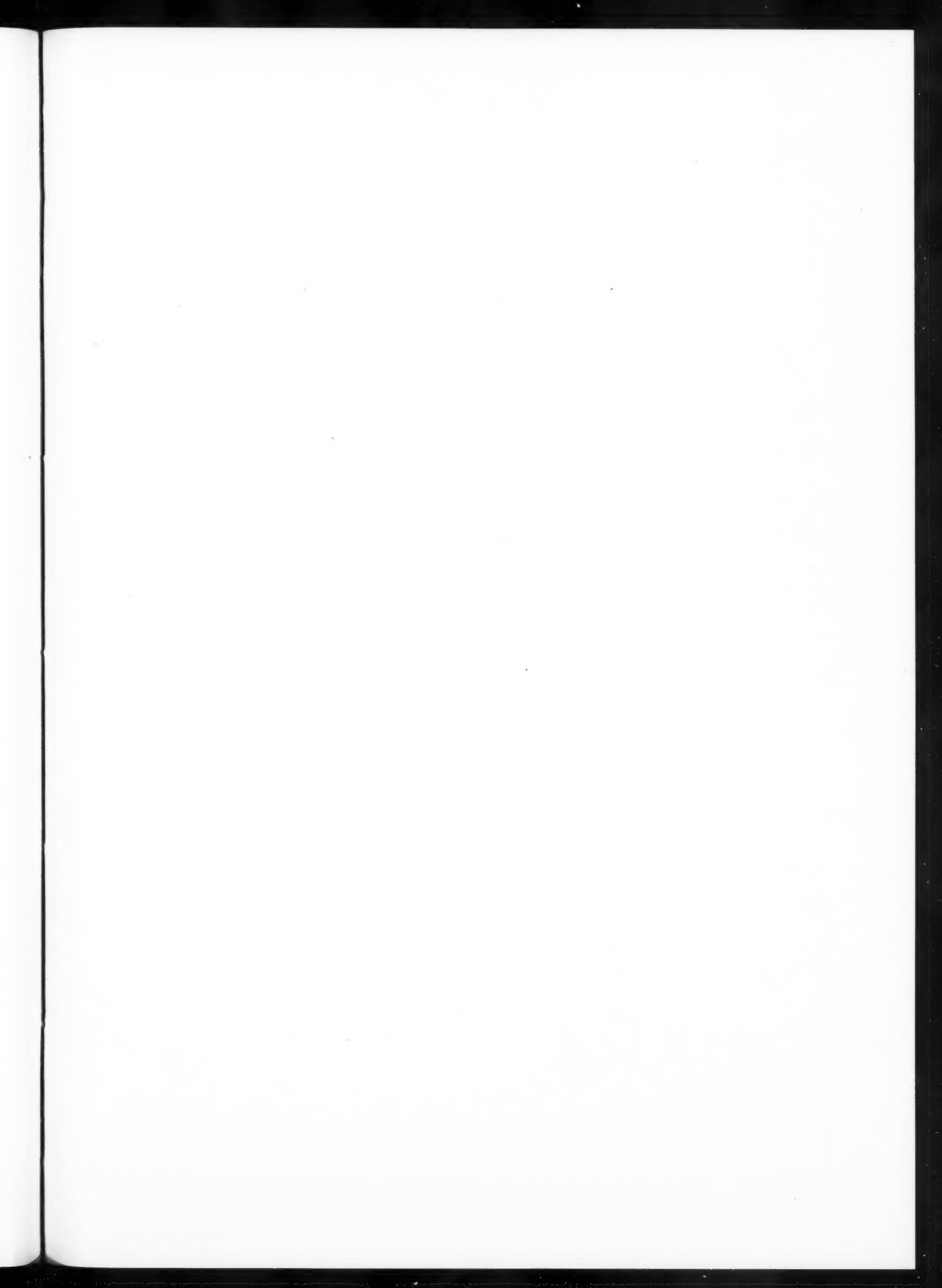


INTERIOR DOORS, S. PIETRO INCORONATO, VERONA

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

SCALE FOR DETAILS

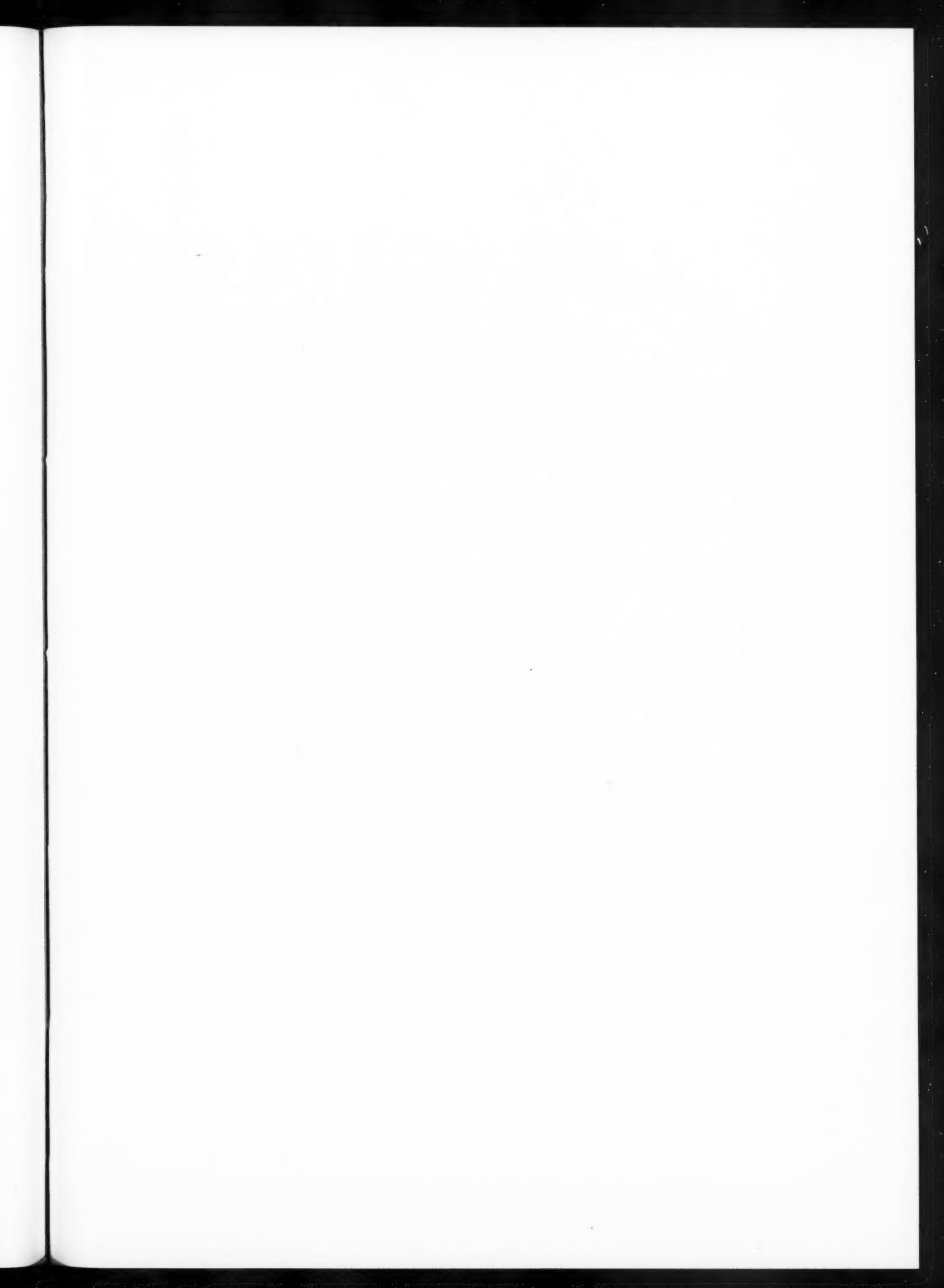
ARCHITECTURAL DETAILS
OF NORTHERN ITALY—PLATE NO. 57

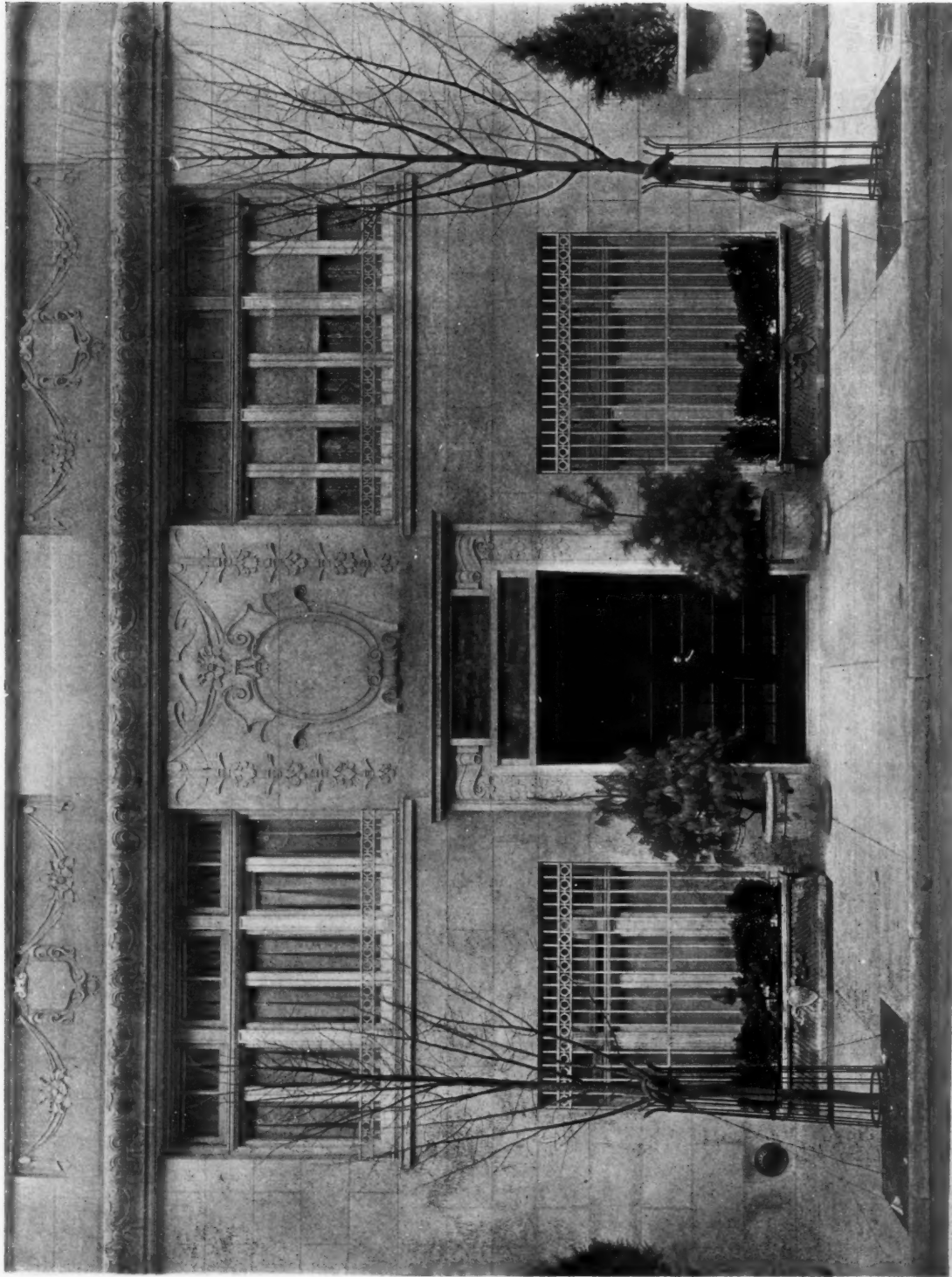




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MESSRS. WALLIS & GOODWILLIE, ARCHITECTS

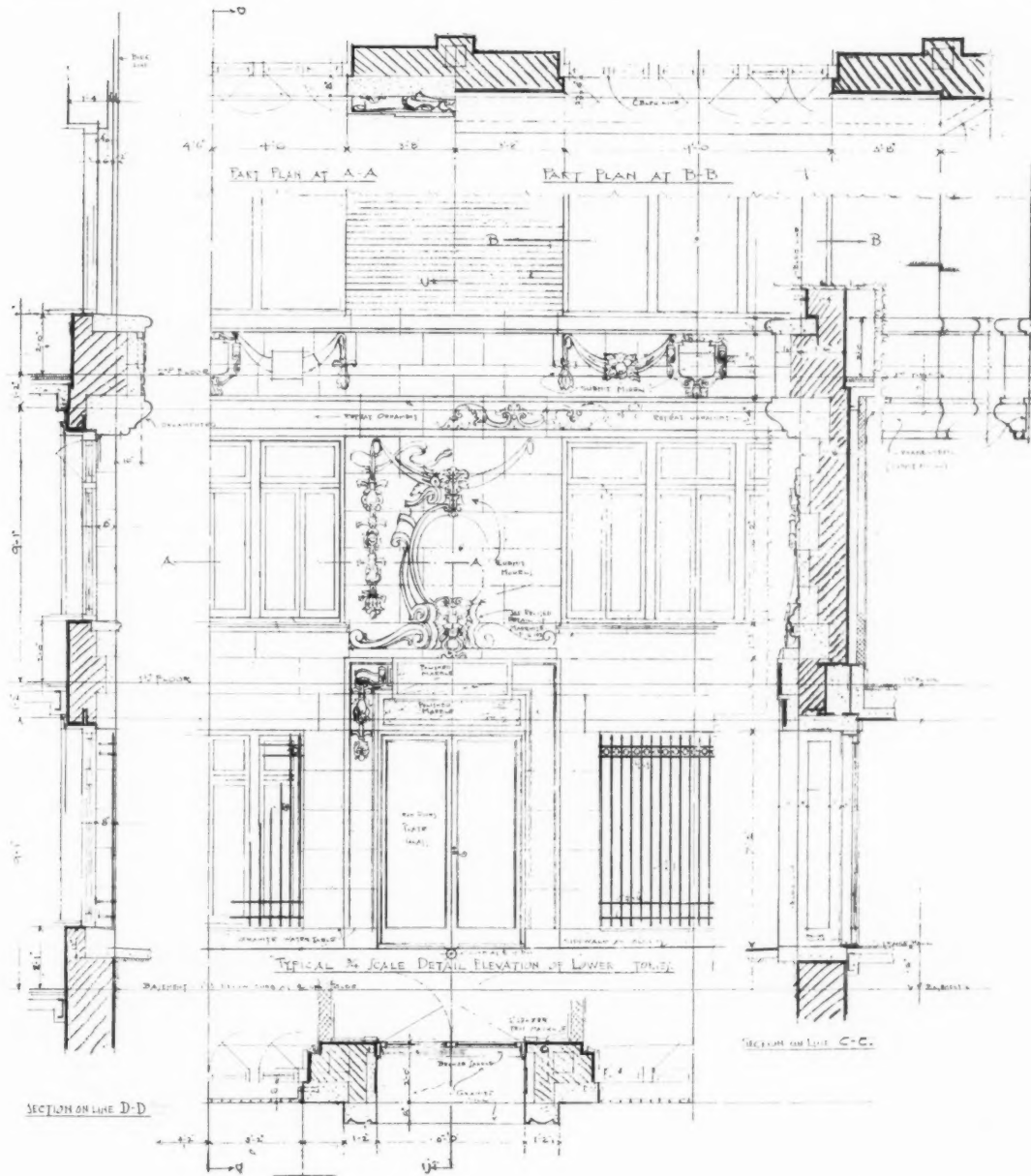




DETAIL OF LOWER STORIES

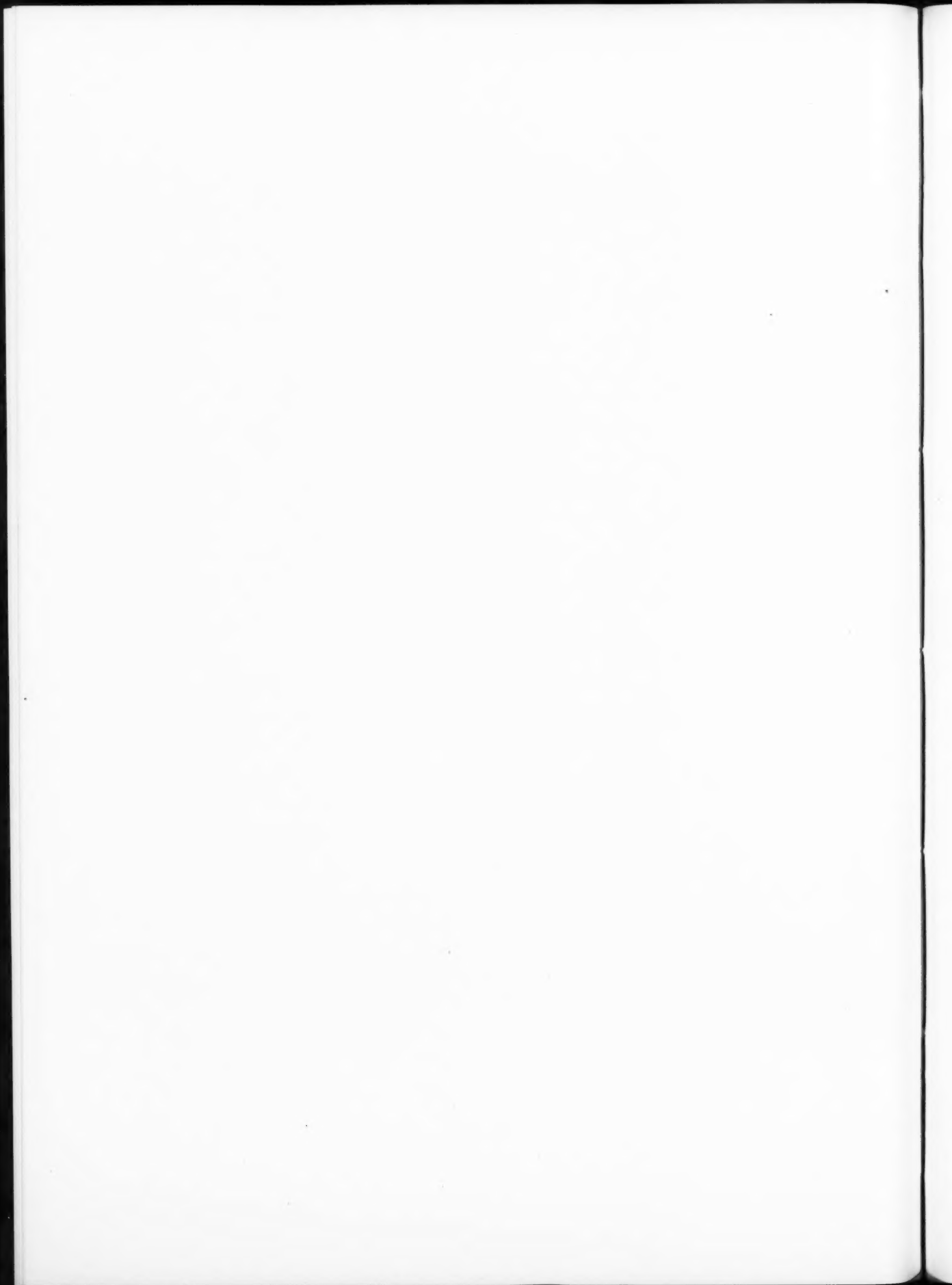
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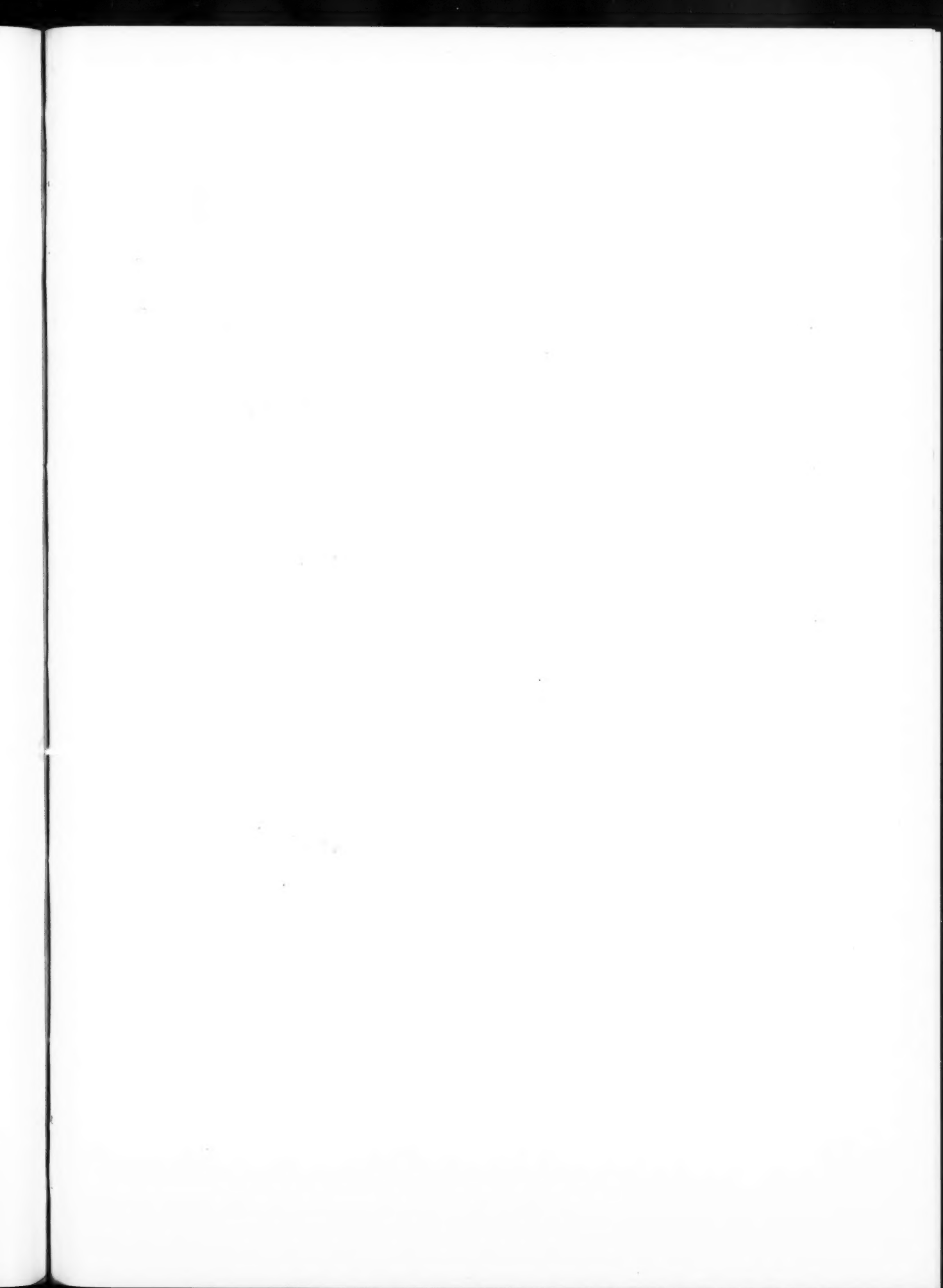
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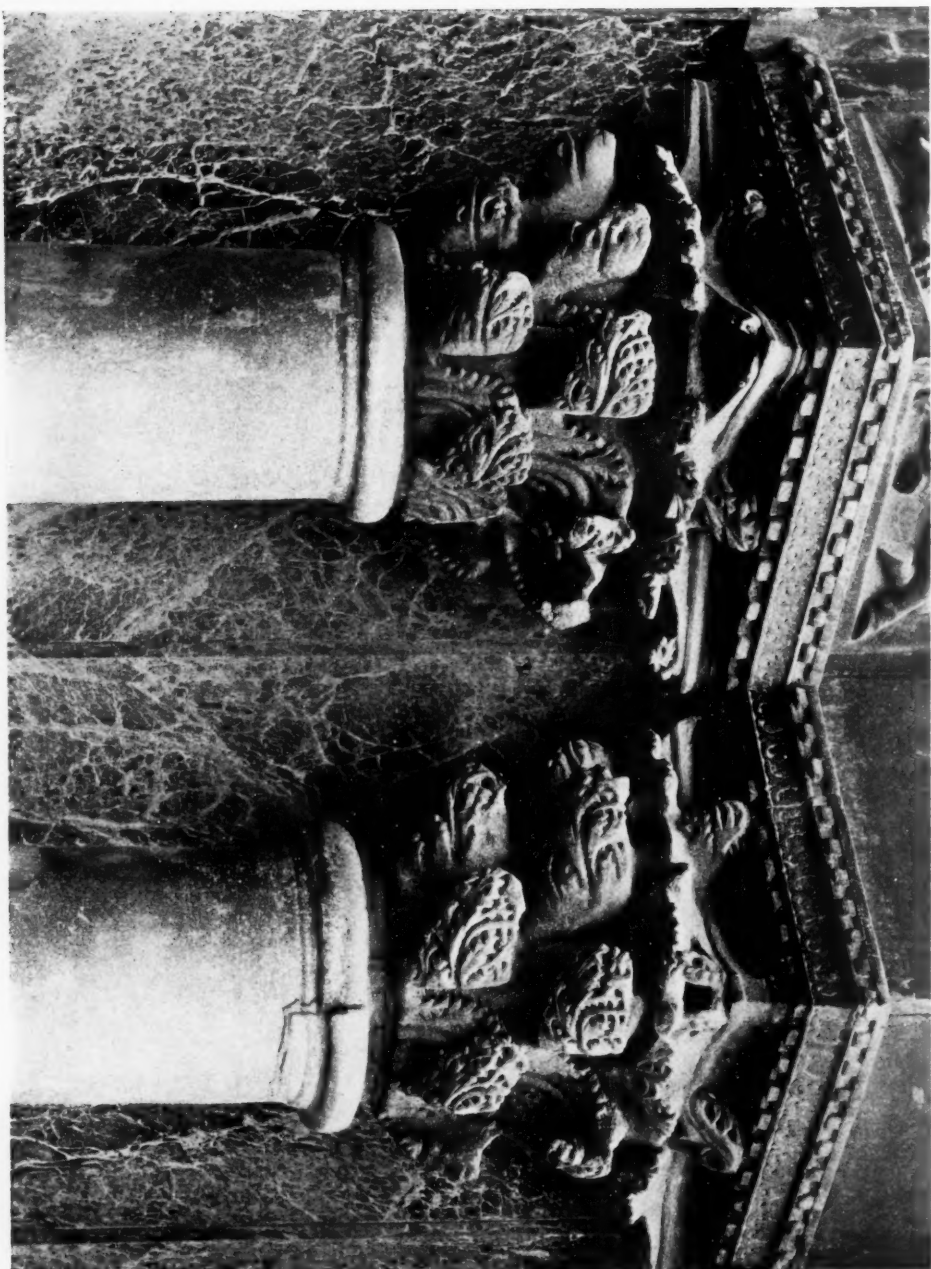


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CAPITALS OF MAIN DOOR
CHURCH OF ST. MARK, VENICE

