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VOLUME CVIII

AUGUST 25, 1915

NUMBER 2070



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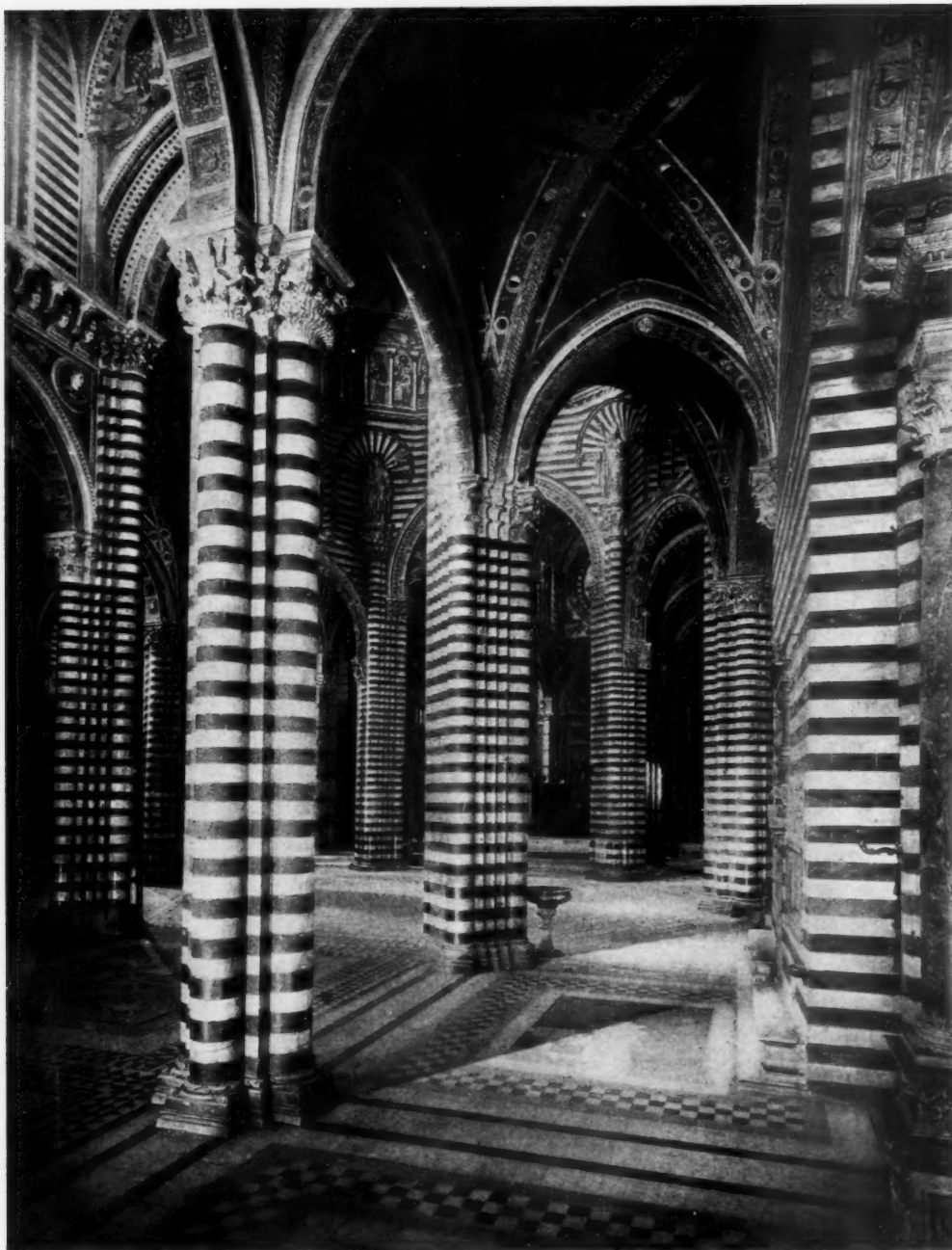
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INTERIOR, THE CATHEDRAL, SIENA, ITALY
(Earlier half of XIII Century)

THE AMERICAN ARCHITECT

VOL. CVIII

WEDNESDAY, AUGUST 25, 1915

NUMBER 2070

BUILDING REGULATION

By SIDNEY J. WILLIAMS, *Wisconsin State Building Inspector*

I. DISCRETIONARY POWER AND BOARDS OF APPEAL

THE American people now demand governmental activity and governmental control in many fields which a previous generation left to private initiative and individual judgment. This tendency cannot be dismissed as an ephemeral political fad; even when too rapid progress brings reaction, the most hardened conservative does not dare to suggest a return to the old order of *laissez-faire*. This continual expansion of the powers and duties of government is a necessary result of the increasing complexity of our social and industrial system, which makes the life, liberty and happiness of the individual increasingly dependent on the acts of his fellows.

The growing interest in building regulation, on the part of law-makers and the public, is in line with this general tendency and especially with the recent wave of popular enthusiasm in this country for the conservation of human life and natural resources.

The efficient and honest architect or engineer is, more than anyone else, strongly in sympathy with good building regulation and even more strongly opposed to bad building regulation—these terms referring to the manner of administration, as well as to the contents, of the building law or ordinance. He favors a good building code and good men to enforce it, because as a public-spirited citizen he is keenly aware of the public need of such protection, and also because this would partly eliminate the unfair competition of ignorant or unscrupulous designers. On the other hand, many an architect knows from experience that an inefficient building code, or a code ignorantly or corruptly ad-

ministered, may furnish little or no protection to the public and may hamper his design and increase his costs in a very alarming and vexatious manner. We may therefore expect that the Institute and its Chapters, as well as individual architects, will not only continue to take an active part in drafting and revising building codes but will also use every possible means to secure the appointment and reappointment of good building officials and the absolute divorcement of the building department from partisan politics. It may seem too much to expect that the head of the building department, as well as his subordinates, shall be put under civil service rules, yet this has recently been done in the progressive city of Minneapolis.

Our present purpose, however, is to discuss two particular phases of building regulation which are now receiving considerable attention: first, the vesting of discretionary power in building officials and boards of appeal; second, the place, purpose and scope of state building codes.

Discretionary power may be classified as follows:

(1) Interpreting the building code (which is usually intended to be explicit); deciding whether any given building or set of plans complies with the code; determining the per cent. of damage to any building. Such power, in greater or less degree, must necessarily lie with the building official, whose decision may or may not be subject to appeal.

(2) Recognizing new materials or methods of construction, as equivalent to those required by the code.

(3) Determining the various safeguards necessary for special types of buildings not covered by the code.

(4) Permitting variations from the let-

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ter of the code, in cases where strict compliance seems impracticable and unnecessary to the public safety.

The last three functions may be performed by the building inspector, or by a board of examiners or board of appeal, or by the inspector with right of appeal to the board.

Merely to state these functions is practically to prove the necessity for granting discretionary power to the building department or to some auxiliary board. If the building-code is to assist and not retard progress, to be a means of public safety and not an end in itself, then obviously it must recognize new materials and methods, and must be sufficiently elastic to meet unusual conditions, even to the extent of permitting a technical violation of the code. Direct action by the city council or state legislature is generally far too slow, in the case of new materials, and not sufficiently disinterested in the case of special rulings.

How have our cities and states met this situation?

There are many cities which give absolutely no discretionary power to the building department, on the very mistaken assumption that a building ordinance can be made so explicit as to cover every possible contingency. In these cities there can be but one result: the head of the department or (worse yet), his subordinates, exercise in practice the authority which the law denies them. If the chief has a backbone, he does this openly, and stands ready to convince critics that he has acted honestly and reasonably, if not legally. If he is weak, or corrupt, the illegal favors are dealt out sub-rosa.

Other cities vest varying amounts of discretionary power in various officials and boards. Many ordinances provide for special boards of arbitration, usually having three members to review the building inspector's decisions as to the percentage of damage by fire. The Chicago ordinance provides for such a temporary board to review questions of damage, of the security of buildings, "and in all other cases where discretionary powers are given to the Commissioner of Buildings." The commissioner of buildings may also appoint a special board of examiners, composed of from three to five architects, engineers and builders, to test new materials and methods of fireproofing. The proposed Illinois state code authorizes the State Building commis-

sioner to decide as to the fitness of any "special device, material or type of construction not specifically approved by this Act," but any person may appeal to a Board of Arbitration of three members, appointed by the commissioner and the appellant in the usual manner. Such boards of arbitration are always open to the objection that two of the three members are apt to be prejudiced. Moreover, inconsistent rulings may result where a different board is appointed for each question that arises.

Cleveland has a Board of Appeal consisting of the mayor, the city solicitor and the city engineer, which may order the Inspector of Buildings to issue a permit if it finds that his refusal to do so was "unauthorized." Similarly the proposed Ohio state code provided for a board of appeal consisting of the chief factory inspector, fire marshal and secretary of the board of health, to approve new materials and devices and to order the issuance of permits; but the personnel of the board was later changed to three members, appointed by the governor for three years, who must "have recognized ability to perform the duties hereinafter prescribed, and no such person shall be an officer having the enforcement of this act in charge."

For thirty years New York City has taken an advanced stand in the matter of discretionary power. The present charter empowers the superintendent of buildings in each borough, with the approval of the borough president, to "vary or modify" any provision of the code, "where there are practical difficulties in the way of carrying out the strict letter of the law, so that the spirit of the law shall be observed and public safety secured and substantial justice done." This is a degree of discretionary power not found in any of the codes heretofore mentioned. There is also a board of examiners to whom appeal may be taken if the superintendent rejects "the mode, manner of construction or materials proposed—or when it is claimed that the rules and regulations—do not apply or that an equally good and more desirable form of construction can be employed in any specific case." This board is composed of the chief of the fire department, one member appointed by the New York chapter of the A. I. A., one by the New York Board of Fire Underwriters, two by the Mechanics' and Traders' Exchange, one by the Society

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of Architectural Iron Manufacturers and one by the Real Estate Owners and Builders' Association. Five affirmative votes (out of a membership of seven) are required for granting a petition. The board has in some cases assumed the right to permit departures from the building code, which a strict reading of the charter would seem to give to the superintendent only. At any rate it seems reasonable, if not legal, for the board to have appellate jurisdiction over questions of justifiable variation from the code as well as over the approval of materials and devices. If the law were made explicit in this regard, and if the personnel of the board were slightly changed, the New York law might well be copied by other cities.

Boston has a very similar arrangement, though with interesting differences of detail. The Board of Appeal consists of "five members appointed by the mayor in the following manner: one member from two candidates, one to be nominated by the Real Estate Exchange and Auction Board and one by the Massachusetts Real Estate Exchange; one member from two candidates, one to be nominated by the Boston Society of Architects and one by the Boston Society of Civil Engineers; one member from two candidates, one to be nominated by the Master Builders' Association and one by the Contractors' and Builders' Association; one member from two candidates to be nominated by the Building Trades Council of the Boston Central Labor Union, and one member selected by the mayor." Appointments are for five years. This board may review the action of the building commissioner in refusing a permit or issuing an order, and may also "vary the provisions of this act in specific cases which appear to them not to have been contemplated by this act though covered by it, or in cases where manifest injustice is done, provided that the decision of the board in such a case shall be unanimous and shall not conflict with the spirit of any provision of this act." Also, "methods of construction or maintenance equivalent to those required by the provisions of this act may be allowed with the written consent of the Commissioner and the Board of Appeal." Note also that "any requirement necessary for the strength or stability of any proposed structure or for the safety of the occupants thereof, not specifically cov-

ered by this act, shall be determined by the Commissioner, subject to appeal." The proposed Massachusetts state code contains provisions, evidently worked out with great care, for local Boards of Appeal empowered to "vary the provisions of the act in specific causes" (as in Boston) and a state board of experts appointed by the Commissioner at his discretion, "to consider the use of materials, methods, or equivalents not contemplated by this act."

The New York labor law of 1913 gave to the State Industrial Board greater discretionary power in the regulation of factory buildings than is given by any city code known to the writer. For example, the law requires fireproof stair enclosures in existing factory buildings over four stories high; the Industrial Board not only promulgated detailed rules for the construction of such enclosures, but also adopted a rule requiring similar enclosures in buildings of more than two stories, and this action was upheld by the supreme court, although the order in question was later withdrawn by the board. It is difficult to draw any conclusions as to the merits of this law, which has hardly had a fair trial.

The Wisconsin state building code is unique in that the entire code is a set of administrative orders issued by the Industrial commission. Omitting, for the present, a general inquiry into this method of formulating and adopting a building code, we may note at least this one advantage, that the Industrial commission has the same power as the New York and Boston boards of appeal, to suspend or modify the provisions of the code in specific cases, as well as to recognize new materials and methods.

A consideration of these and other building laws, and of the results obtained under them, points strongly to the conclusion that any building code is sadly lacking in elasticity if it does not contain some provision for discretionary power, not only to interpret the code and recognize new materials and methods, but also to suspend or modify the provisions of the code in specific cases. The recognition of new materials and methods needs no argument in New York at least, where architects agree that the exercise of this power by the Board of Examiners has saved a situation which would otherwise have been intolerable, in view of the failure

of all efforts up to the beginning of the present year to secure a revision of the building code. As for variations from the code in specific cases, the alternative of discretion or no discretion is generally an alternative of lawfulness or lawlessness. It is not in human nature to spend money to satisfy a demand of the law which is clearly unreasonable, and it is not in human nature for the building department to enforce such compliance. If the necessary exception cannot be made legally, it will be made illegally and often corruptly.

Discretionary power along these lines should be vested in the building commissioner or inspector, subject to review by a board of experts. Such appeal should be open, on the one hand, to any owner or manufacturer whose petition has been refused, and, on the other hand, to anyone who considers that the inspector has been too lenient or has abused his authority. This would mean that all minor and one-sided questions would be decided by the inspector, without taking the time of the board of appeal, which would pass on important cases only.

This board of appeal may well be composed of members appointed by professional organizations of recognized standing, rather than by the mayor. The fire chief or city engineer may be a member ex-officio, but other city officials could contribute little to such a board. A permanent board is obviously more efficient than a succession of special boards whose decisions may or may not be consistent.

If provisions of this nature are necessary in a city building code, they are much more necessary in a state code which cannot be amended between biennial sessions of the legislature and which is certain to meet with a great variety of cases demanding special treatment.

II. STATE BUILDING CODES

THE state building code movement first saw the light (so far as is known to the present writer) in Ohio after the fatal Collinwood school fire in 1908. In 1911 the general assembly of Ohio passed four parts of a building code, covering schools, theaters and assembly halls. In Wisconsin a code covering all buildings except private residences went into effect in October, 1914. This year the remaining

parts of the Ohio code, and complete codes drafted by special commissions in Massachusetts, Illinois and Pennsylvania were presented to their respective state legislatures. In several other states the subject has been agitated more or less.

The main arguments advanced for the adoption of state building codes are as follows: First, most small municipalities (including cities of less than 40,000 or 50,000 people) have no adequate building ordinances or inspection; the reason for this is not only indifference but also the very considerable expense of drafting and publishing a building code. A uniform state code would protect the inhabitants of these cities and villages at small expense, and would also cover the schools, churches and other institutions not located in any municipality. Second, a state code would benefit both designers and owners by removing the irrational and confusing differences often found in the ordinances of different cities.

On the other hand, it is asserted that the conditions in these cities are so various as to preclude the successful operation of a uniform state code, and that the latter is an unwarranted infringement of the principle of home rule.

The validity of these arguments depends largely on what sort of a state code is proposed:

- (1) Is the purpose of the state code to protect life and health only, or also to protect property loss by fire and especially by conflagration?
- (2) Is the code to be general or detailed, and what is meant by these terms?
- (3) Are there to be different regulations for cities of different size?
- (4) Are cities to be permitted to establish additional or more stringent requirements?
- (5) Is the code to be enforced by state or local officials?

(1) *Purpose of a State Building Code.* It is generally agreed to be an important function of the state to protect the lives and health of its citizens. Criminal laws are passed by the state, though generally enforced by the counties and cities. Every state has health laws and a state board of health. Nearly every state has some sort of a fire escape law. The popular demand for state regulation of schoolhouse construction

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in Ohio, and factory construction in New York, arose from the loss of life in the Collinwood and Asch Building fires, respectively. Many states other than those mentioned above have special laws on schools, theatres, hotels and tenements, where the public safety is particularly involved. There will be little dissent to the proposition that if the proper design and construction of buildings is necessary to the safety of their occupants (and no one will now venture to say that an unsafe building can be made safe by the application of outside fire escapes), then it is the duty of the state to provide such protection.

When we come to the protection of property the case is not quite so clear. Many persons who will not admit the right of a man to operate a fire-trap theater or an unsanitary tenement, or the right of the city to permit him to do so, will maintain that the city has a right, if it chooses, to permit frame construction, pay high insurance rates, and run chances of a conflagration. The writer does not wish to overstrain this distinction, but only to point out that public opinion will more readily support a state code which is based mainly on the protection of life and health. Of course, any rational code seeks to protect life by means which will also protect property—by fire prevention and control, for example, rather than by fire escapes.

(2) "*General*" or "*Detailed*." The authors of the Ohio code state frankly their opinion that a state code must be detailed in its provisions, because that is the only sort of a code that is worth anything, and because it is the little things that count. Other code writers have generally described their purpose to draft a "broad," "fundamental" code but have not always agreed on the application of these terms. The consulting expert of the Pennsylvania commission addressed to the writer an inquiry something like this: "Your Wisconsin code claims to be general and fundamental, yet I find in it detailed specifications for fire escapes. Is it not a fact that we all start out to write a general code, but find ourselves forced to incorporate a great deal of detail?" The answer was that a certain amount of detail is necessary in order to give meaning to the general requirements; but that all detail which is not absolutely necessary, and which will not be of real service, should be rigidly excluded. For example, in Wisconsin a very flimsy lot

of fire escapes had been erected under the old law. The state sadly needed a specification sufficiently rigid and detailed to eliminate this bad practice. On the other hand, it did not seem necessary to cover such details as the stiffening of plate girders and the constants for bending moments in continuous beams, not because these are not important, but because in this state the buildings in which such questions would arise are usually designed by experienced and responsible persons who do not need such regulations.

The question of what details may and what may not be omitted will be answered differently in different states, depending on the actual evils which the code must combat. The point is, that everything which can possibly be omitted should be omitted, because each additional detail simply makes the code that much more cumbersome and obnoxious to the designer and to the local official who tries to enforce it. The average small town official thinks of a building ordinance as something that can be printed on the back of a street permit, and to explain to him the advantage of a code of even a hundred pages is a slow educational task.

This question also depends greatly on the amount of discretionary power enjoyed by the building department. At this point, a reference to the scheme of regulation with which the writer is most familiar, will perhaps be pardoned.

The Wisconsin building code is a set of orders issued by the state Industrial Commission under authority of a statute which provides that all "places of employment and public buildings" (including all except one and two family residences) shall be "safe" (safety includes health and welfare) and which makes it the duty of the Industrial Commission "to ascertain, fix and order such reasonable standards, rules or regulations for the construction, repair and maintenance of places of employment and public buildings as shall render them safe."

The power exercised by the commission under this law has alarmed some critics (outside of the state). It is true that the law does not accord with the common American assumption that all public officials are rogues and must be bound hand and foot to limit their roguery. It is true that when a tenement house law has been forced through an unwilling legislature by sheer weight of pub-

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lie opinion, its sponsors are glad to go home with the comfortable feeling that the matter has been hung up beyond the reach of politicians for at least two years. But with our present tendency to entrust more to, and demand more of, our governments, there is—there must be—a tendency to be more particular as to the class of men to whom we entrust these powers. If the members of a state commission, charged with the regulation of buildings, are honest, fairly intelligent, and acquainted with the work in hand, they surely can accomplish better results if given a large measure of discretionary power to fit their regulations to the complex and changing conditions which constantly develop.

The writer is not prepared to offer the Wisconsin plan as a model for all states under all conditions. He does wish to urge that the problem of the state building code is greatly simplified if a considerable amount of discretion is allowed the administrative officers—larger even than has been recommended for a city code. If this is done, the code can be made much more general and brief, because (a) the department can issue supplementary regulations on such subjects and at such time as is necessary; and (b) the code need not attempt to cover every possible contingency which may arise, but such may be dealt with by special rulings. A specific and inflexible statute, on the other hand, is open to these objections: (a) the mass of detail arouses antagonism, especially in those communities which are not used to regulation; (b) no amendment is possible until the next session of the legislature, and then only with difficulty; (c) special conditions, complicated by popular distrust, will arise where strict enforcement is quite impracticable and where sub-rosa violation weakens the whole law.

(3) *Different Requirements for Cities of Different Size.* From the standpoint of safety to life, a building of given size and occupancy requires the same safeguards, wherever located. In fact, a frame theater is safer for its occupants in the heart of a city than on the outskirts of a village, because the fire department protection is more efficient. From this standpoint, therefore, the state code should make no distinction between different communities.

The conflagration hazard is quite differ-

ent. Here the type of construction which should be required for any building depends mostly on the congestion of buildings in that district, and very little, ordinarily, on the occupancy of the building itself. There should therefore be special requirements for all buildings in congested districts; but the writer believes that such requirements should preferably be enacted by the city.

(4) *Additional or more Stringent Requirements by Cities.* The foregoing paragraph indicates one subject in which cities should make additional requirements. The Ohio and Wisconsin codes, and the proposed Illinois code, authorize cities to adopt "further and additional" regulations on any subject. It is not stated whether under this clause a city could, for example, decrease the allowable unit stress on steel. The proposed Massachusetts code permits such additional requirements by cities, except on the following subjects: Definitions, classifications, loads, stresses, and other structural details; restriction of areas; enclosure of stairs and elevators; exits; roofs and roof structures; fire doors and windows; sprinklers, standpipes, etc.; elevators; theaters and halls; temporary structures; fire prevention and inflammable material. This restriction is certainly a good one. There is no reason for cities to adopt conflicting ordinances on unit stresses and specifications for building materials. On the other hand, cities should surely be encouraged to adopt higher standards than the minimum, on such subjects as light and air spaces, height limits, billboards, etc., etc.

(5) *Enforcement by State or Local Officials.* The parts of the Ohio code now in force are enforced as follows: All parts "relating to fire prevention," by the "state fire marshal or fire chief of municipalities"; all provisions "for the construction, arrangement and erection of all public buildings or parts thereof, including the sanitary condition of the same, in relation to heating and ventilating," by the chief inspector of factories "or" city building inspector where such exists; plumbing, by state board of health "or" local building inspector or health department. The proposed complete code is apparently to be enforced principally by the Industrial commission "or" local building inspector. The final responsibility

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for enforcement in cities does not seem to be definitely fixed.

The proposed Illinois code states that whenever a municipality adopts a "comprehensive building code" enforced by a full-time commissioner, the latter shall issue permits and the code "shall be enforced by him instead of by the state building commissioner." (Query: Why ask cities to adopt a "comprehensive" building code which will largely duplicate the state code?) However, the state commissioner, subject to a board of arbitration, is to "interpret" the code. There would seem to be a possible conflict of authority under these two sections.

The Wisconsin statute makes it the duty of local officials "to enforce, in their respective departments, all lawful orders of the Industrial commission." The commission has strongly encouraged the appointment of local building inspectors, or the appointment of the fire chief as building inspector ex-officio. Where this is done, the enforcement of the state code is left to this official, subject to appeal. In other cases, enforcement is by the commission's deputies with such assistance as can be obtained. The fire chief is usually glad to report violations if the state department will take responsibility for issuing orders.

The proposed Massachusetts act provides that any city may appoint a building commissioner, who "shall be the representative of the state building department in his locality." He may have the free advice of the state department. In communities which fail to establish a local department, the work is to be done by the state and the cost charged to the municipality. This seems a very fair and reasonable arrangement.

It is surely better to have the building code enforced by local officers, and the state department should exercise great patience in the gradual education of those who are han-

dicapped by inexperience. On the other hand, the state should have the right to review the acts of local inspectors, both to protect architects against arbitrary decisions and to protect the public against lax or half-hearted enforcement.

If the foregoing discussion comes anywhere near the mark, there is a decided need for state building codes of the right sort, and such codes are no more impracticable or subversive of home rule than the criminal or health laws. A code of the right sort is conceived to be a code which (1) is based primarily on the protection of human life, health, and welfare, with only the simplest and most indisputable requirements for the protection of adjoining property, the latter being strengthened and amplified by local ordinances; (2) is as brief and general as possible, to be supplemented or modified, when and where necessary, by detailed regulations or special rulings of the state building commissioner, subject to review by an expert board; (3) is uniform for all cities, leaving the conflagration hazards of the larger cities to be dealt with by them; (4) contains invariable standards, in line with the best current practice, on such engineering and other subjects as can be standardized, and in other fields (such as light and air requirements) contains minimum standards which may be raised by local communities; (5) is enforced by local officials as far as possible, with general control by the state.

This conception of a state building code is essentially educational rather than regulatory, and the code must be administered in the same spirit, the efforts of the department being devoted not only to the specific enforcement of the code, but quite as much to the education of individual owners and communities to the advantages of proper building construction.

NORTHERN ITALIAN DETAILS

NO. 38 — BALCONIES, PALAZZO
COMMUNALE, CREMONA AND
IN VENICE

CREMONA is generally neglected both by the studios and by the public, lying apart as it does on the banks of the Po, remote from the main lines of communication. And yet it shares with Piacenza the honor of having one of the most beautiful and picturesque Gothic town halls of Lombardy, a building not only worthy of study because of its delicate proportions and interesting brick detail, but full of an appealing charm to the untechnical traveler.

The Palazzo Comunale, now the Municipio, built in 1206-45 and lately restored, is constructed in the Lombard-Gothic style; its interior, however, was decorated in Renaissance days and contains a fine staircase of the intra-mural type that conducts one to a splendid suite of apartments. The balustrade which surrounds the stair well is made the subject of this week's plates. It is discreet and refined, of delicate and studied proportion and its details were thought worthy of presentation. It may interest the amateur photographer to know that the accompanying photograph was taken at seven-thirty P. M. with an exposure of thirty minutes.

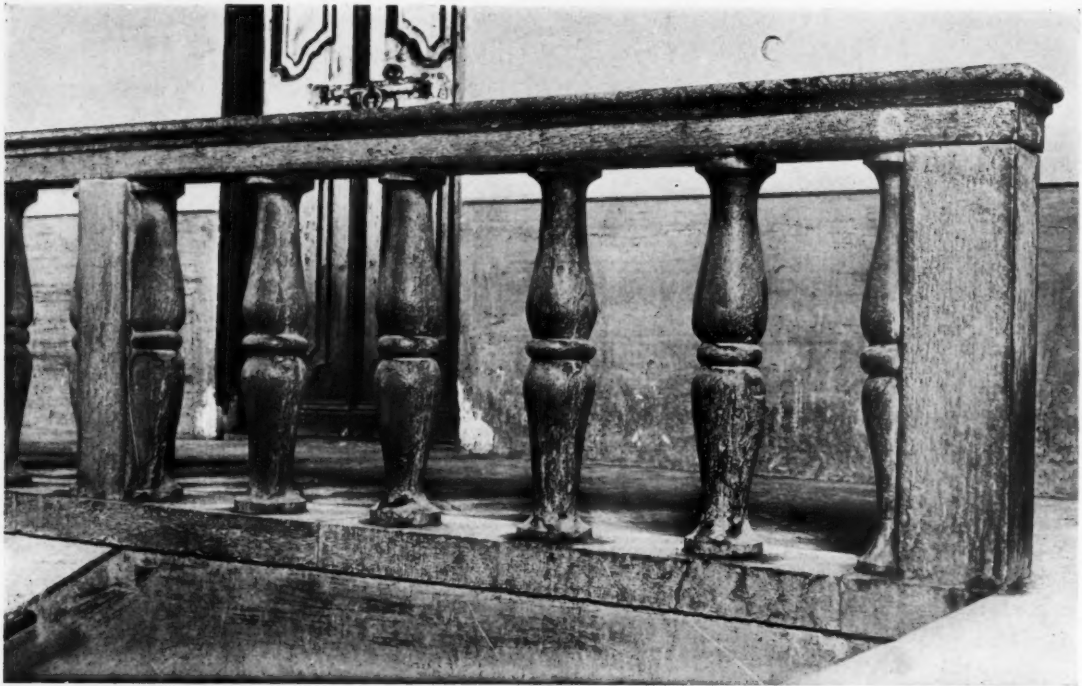
The balcony taken from Venice is typical of the careless and uncanonical style of the Venetian architects, who devoted considerably more attention to the pictorial element than to the hard and fast rules of good architectural detail.

A Reform in Federal Building
Construction

IN an order issued by Secretary McAdoo on June 29 to the Supervising Architect of the Treasury Department a reform is inaugurated. Heretofore the amount spent in building a postoffice or custom house has depended much more upon the energy and political strength of the Congressman from the district in which the

building was to be located than upon the needs of the Government. The result has been the erection of costly and elaborate stone buildings in country villages, while localities where improved facilities were greatly needed received inadequate buildings or none at all. It is said that many postoffice buildings have been erected at a cost of \$50,000 to \$150,000 in towns where the total postal receipts would not pay the cost of maintaining the building after completion. Under the order recently issued postoffice buildings are divided into four classes — A, B, C and D. Class A buildings may be erected in places where annual postal receipts are over \$800,000. Such buildings are to have marble or granite facings and to be fireproofed throughout, and when the locations for the buildings justify it they are to have elaborate architectural decorations. Class B buildings may be erected in cities having postal receipts of from \$60,000 to \$800,000; they are likewise to be fireproofed throughout, but to have limestone or sandstone facing and less expensive interior finish and decoration. Class C buildings are to be erected in towns having postal receipts of from \$15,000 to \$60,000 and are to be of brick with stone or terracotta trimmings. The floors are to be fireproof, but the roof not necessarily so. Finish and decoration are to be more inexpensive than for Class B buildings. Class D buildings are designed for towns having less than \$15,000 annual postal receipts. Such buildings need have only the first floor fireproofed, and should be structures which business men would consider a reasonable investment. Plans of buildings hitherto constructed are to be used in designing if they are consistent with the foregoing requirements. Standard specifications and standard details are to be prepared to economize in architectural and engineering work in connection with such buildings. The policy outlined has already been followed by the Treasury Department in the purchase of postoffice sites. Of 303 sites for Federal buildings authorized March 4, 1913, only 136 have so far been acquired, and the department has limited its purchases to towns where it is believed construction of a federal building is justified.

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CREMONA

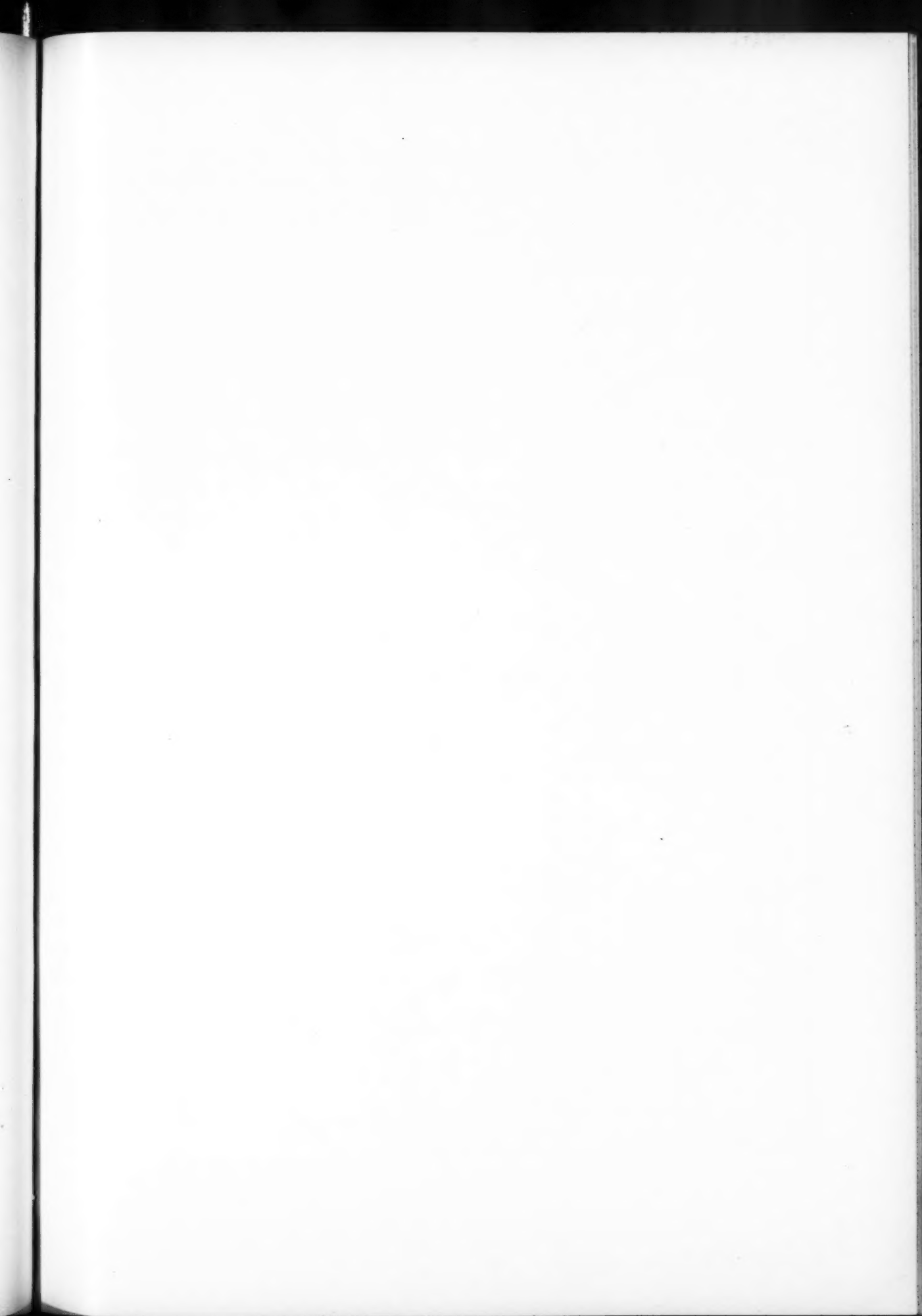


VENICE

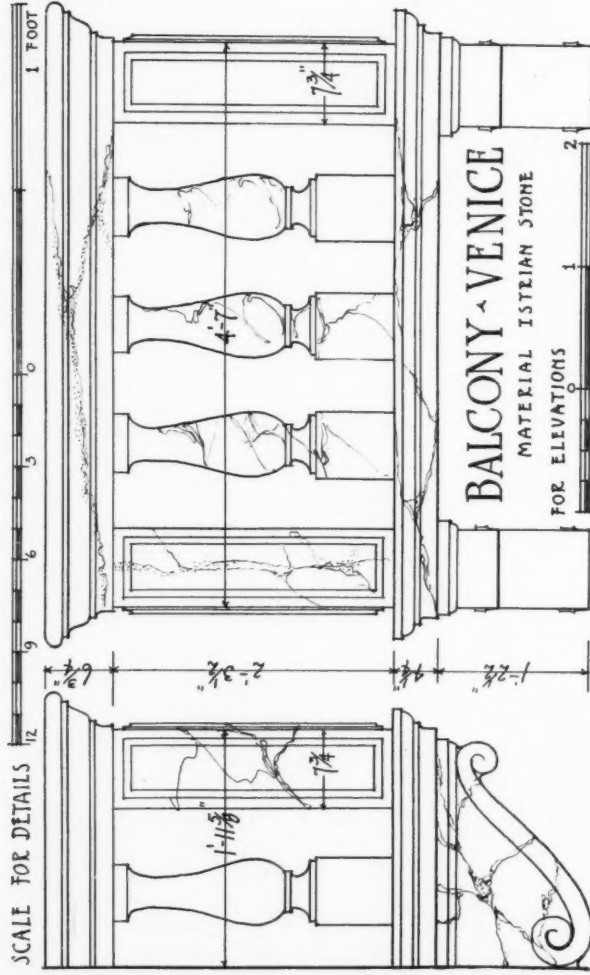
PHOTOGRAPHS AND DRAWINGS
BY W. G. THOMAS AND J. T. FALLON

BALCONIES:
CREMONA AND VENICE

ARCHITECTURAL DETAILS
OF NORTHERN ITALY—PLATE NO. 81

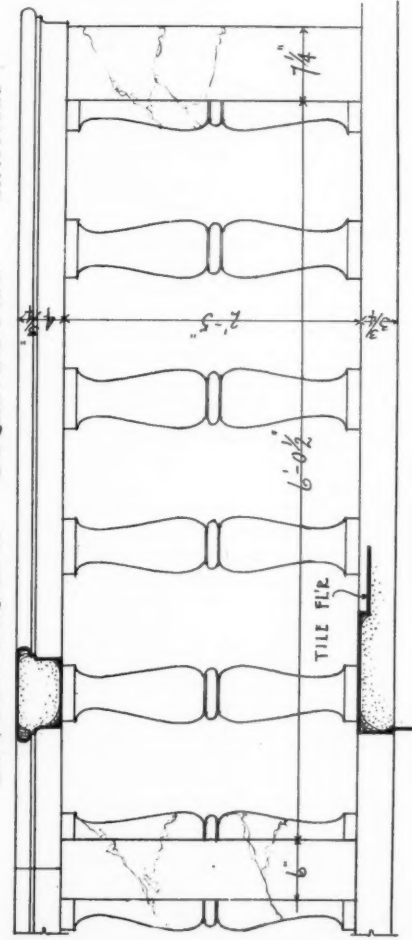


SCALE FOR DETAILS



BALUSTRADE - CREMONA

MATERIAL LIMESTONE



BALCONIES: CREMONA AND VENICE



HOUSES AT LAWRENCE PARK, BRONXVILLE, NEW YORK

MESSRS. BATES & HOW, ARCHITECTS

Fireproof up to second story, frame above. Roofs, red slate; foundations, stone. Exterior walls, hollow tile to second story, frame above. Floor arches, reinforced concrete. Interior woodwork painted white. Steam heat. Electric light. There is a large hall on the second floor, and also one at upper level which leads to main entrance. From entrance hall stairs lead down to a two-story music room, 15 feet high.

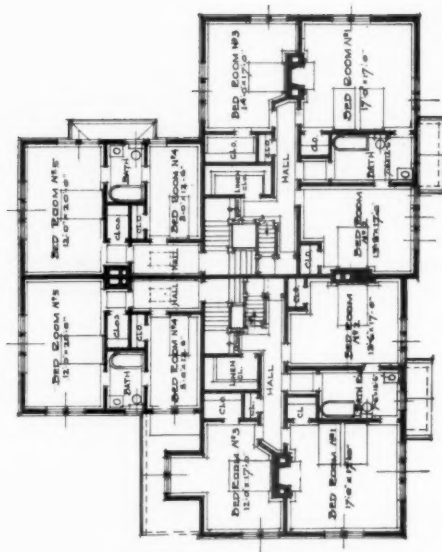
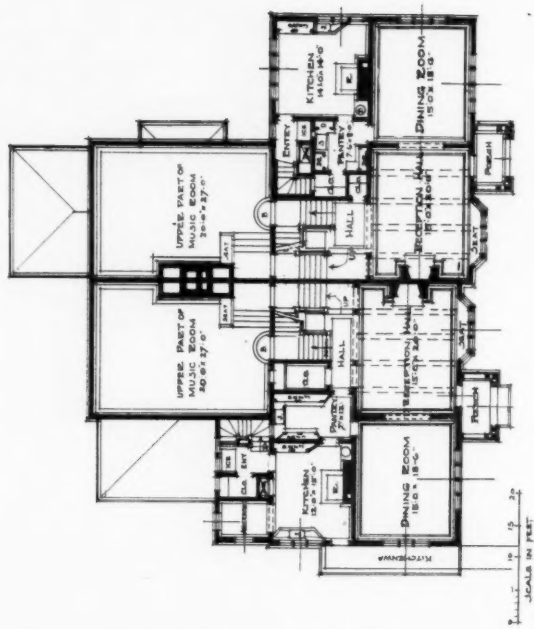
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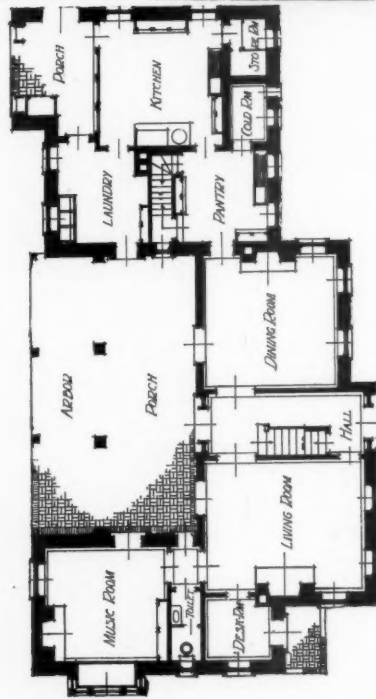
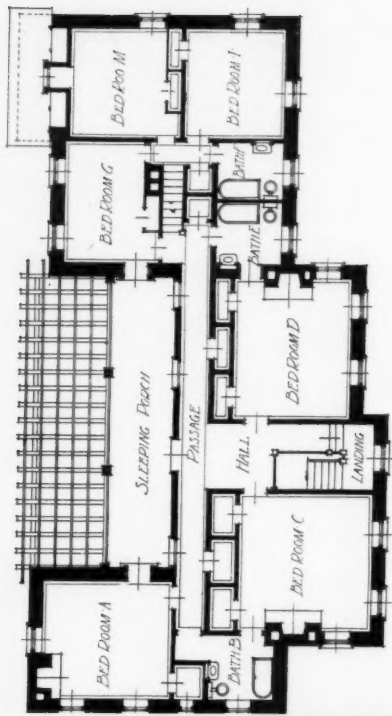
DETAIL OF FRONT

HOUSES AT LAWRENCE PARK, BRONXVILLE, NEW YORK

MESSERS. BATES & HOWE, ARCHITECTS



PLANS



HOUSE OF W. T. HARRIS, ESQ., VILLA NOVA, PA.
MESSRS. DUHRING, OKIE & ZIEGLER, ARCHITECTS

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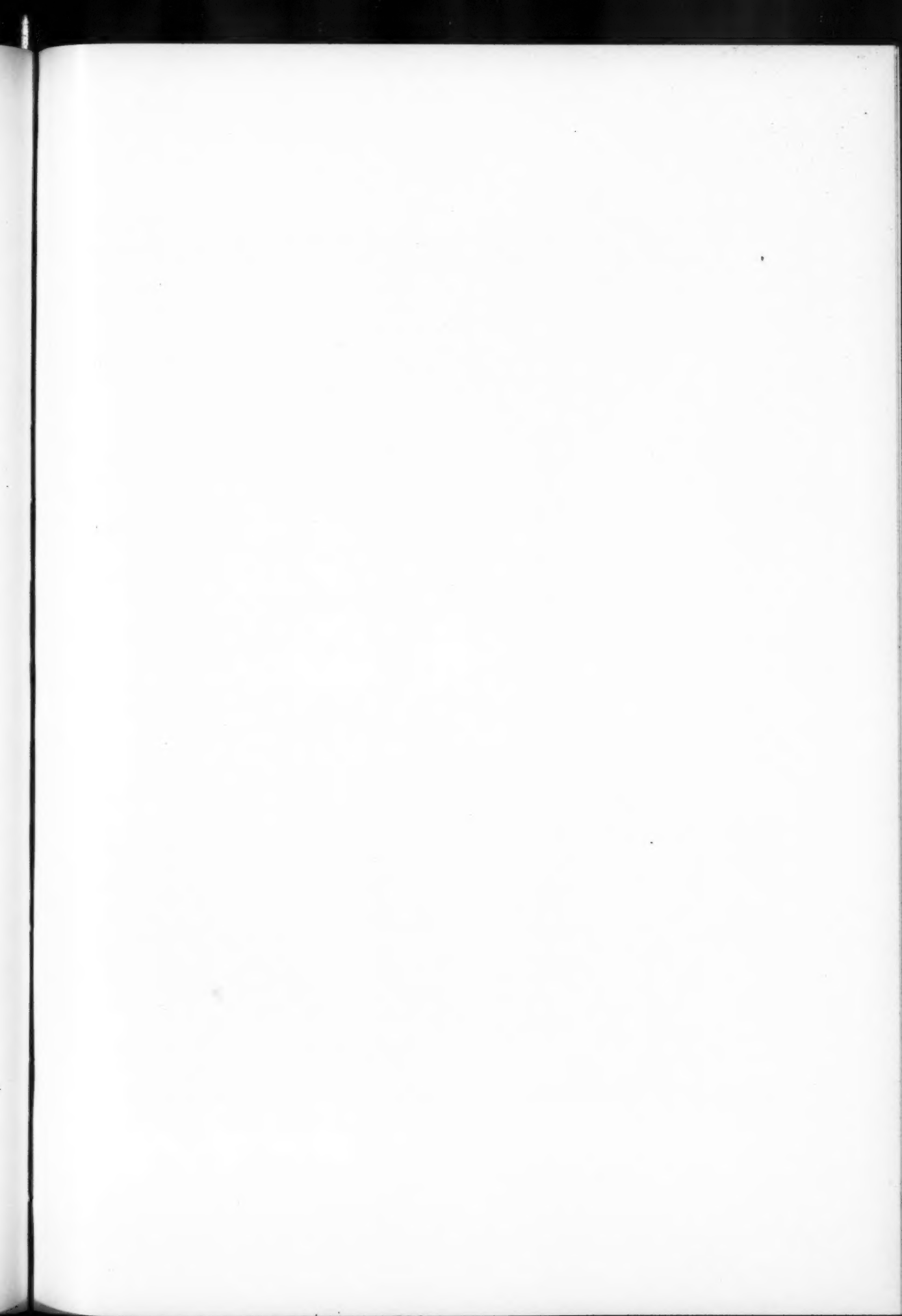
VOL. CVIII, NO. 2070

AUGUST 25, 1915



LIVING PORCH

HOUSE OF W. T. HARRIS, ESQ., VILLA NOVA, P.A.
MESSRS. DUHRING, OKTE & ZIEGLER, ARCHITECTS



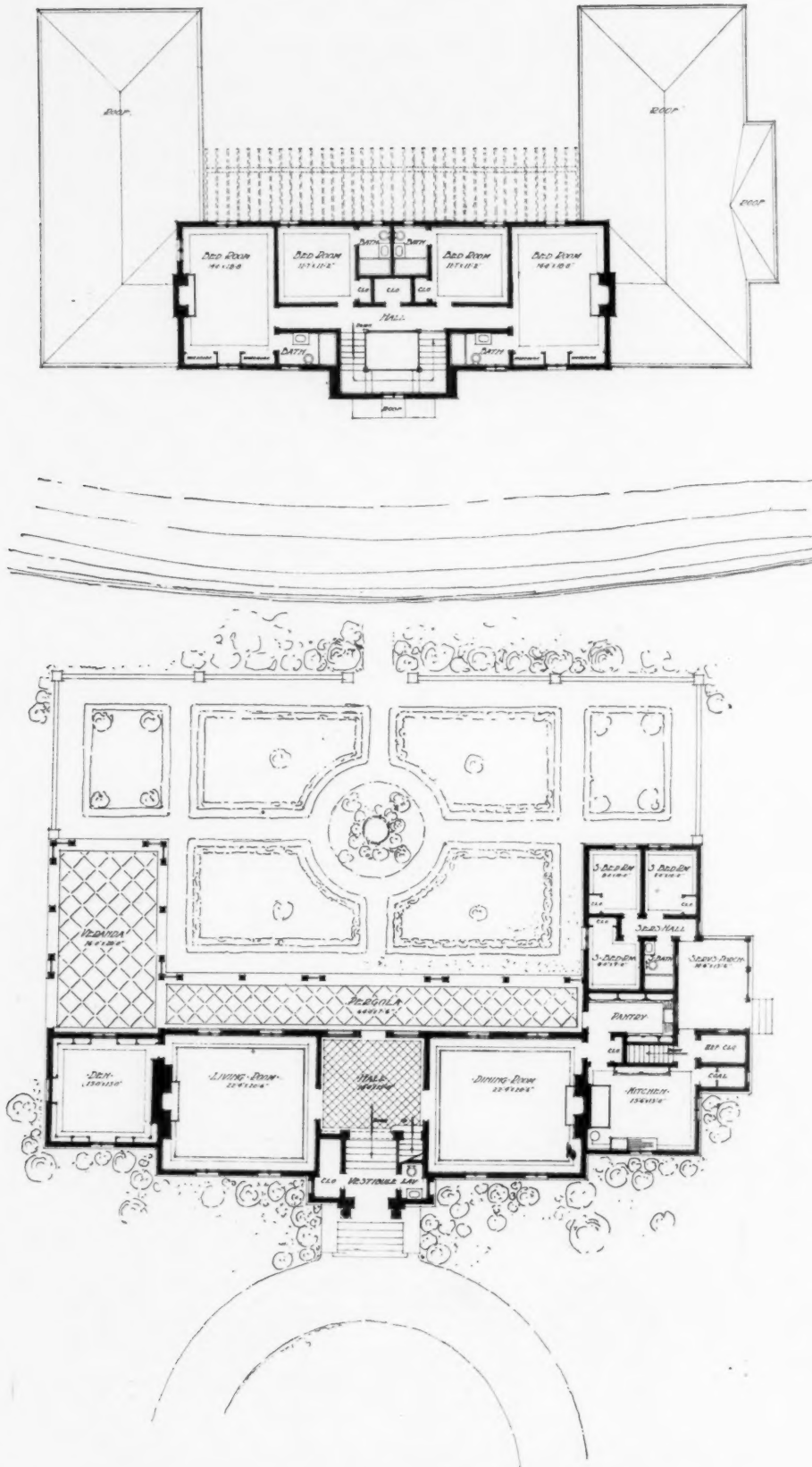


HOUSE OF PITTS DUFFIELD, ESQ., STONY BROOK, L. I., N. Y.

MESSRS. MANN & MACNEILLE, ARCHITECTS

A non-fireproof house of frame and shingle construction, with shingle roof and concrete foundation. Heated by hot air system and lighted by electricity.

A non-fireproof house of frame and shingle construction, with shingle roof and concrete foundation. Heated by hot air system and lighted by electricity.



HOUSE OF PITTS DUFFIELD, ESQ., STONY BROOK, L. I., N. Y.

MESSRS. MANN & MACNEILLE, ARCHITECTS

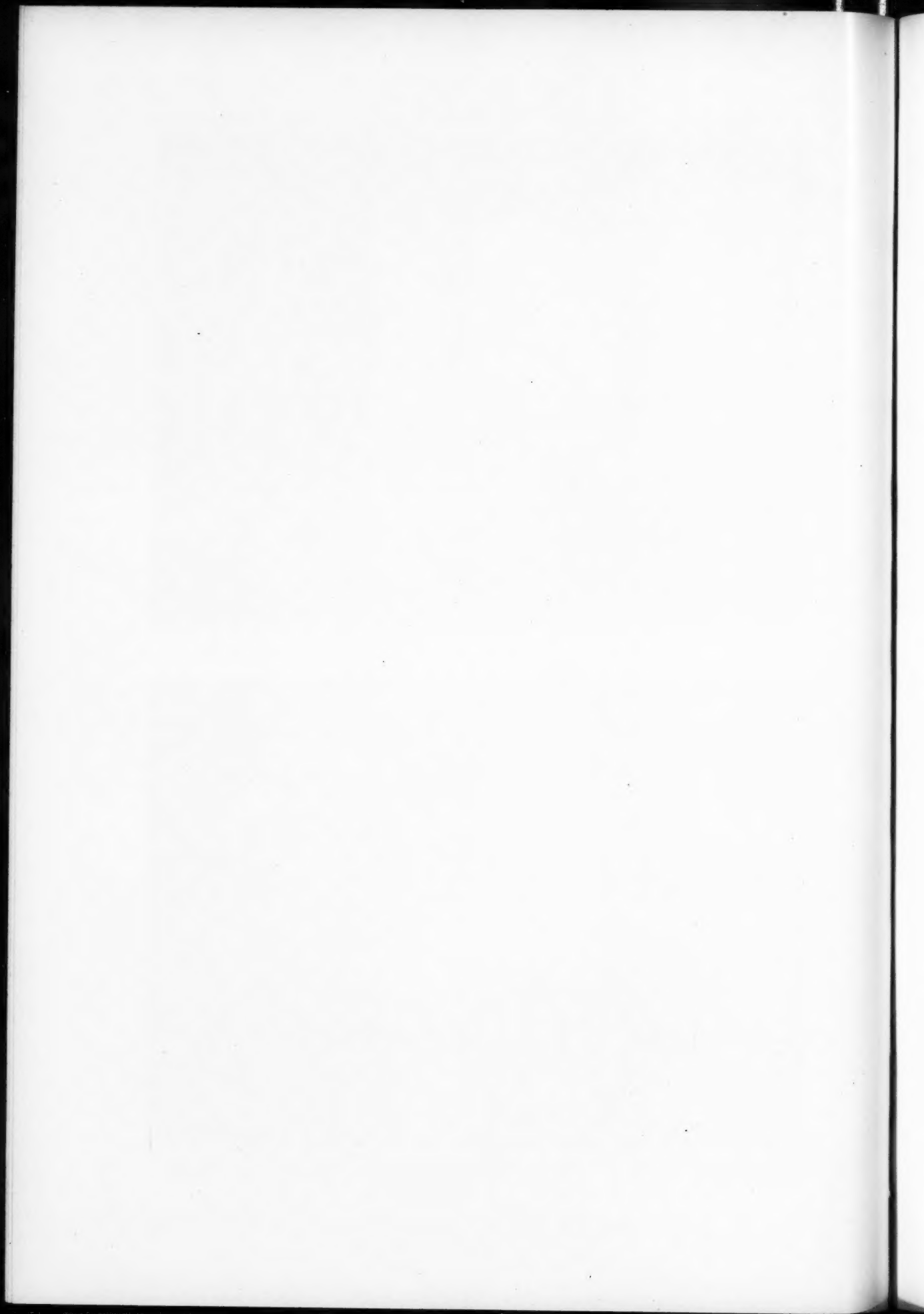


VIEW FROM LIVING ROOM ACROSS HALL TO DINING ROOM



DINING ROOM

HOUSE OF PITTS DUFFIELD, ESQ., STONY BROOK, L. I., N. Y.
MESSRS. MANN & MACNEILLE, ARCHITECTS





VERANDA



HALL

HOUSE OF PITTS DUFFIELD, ESQ., STONY BROOK, L. I., N. Y.

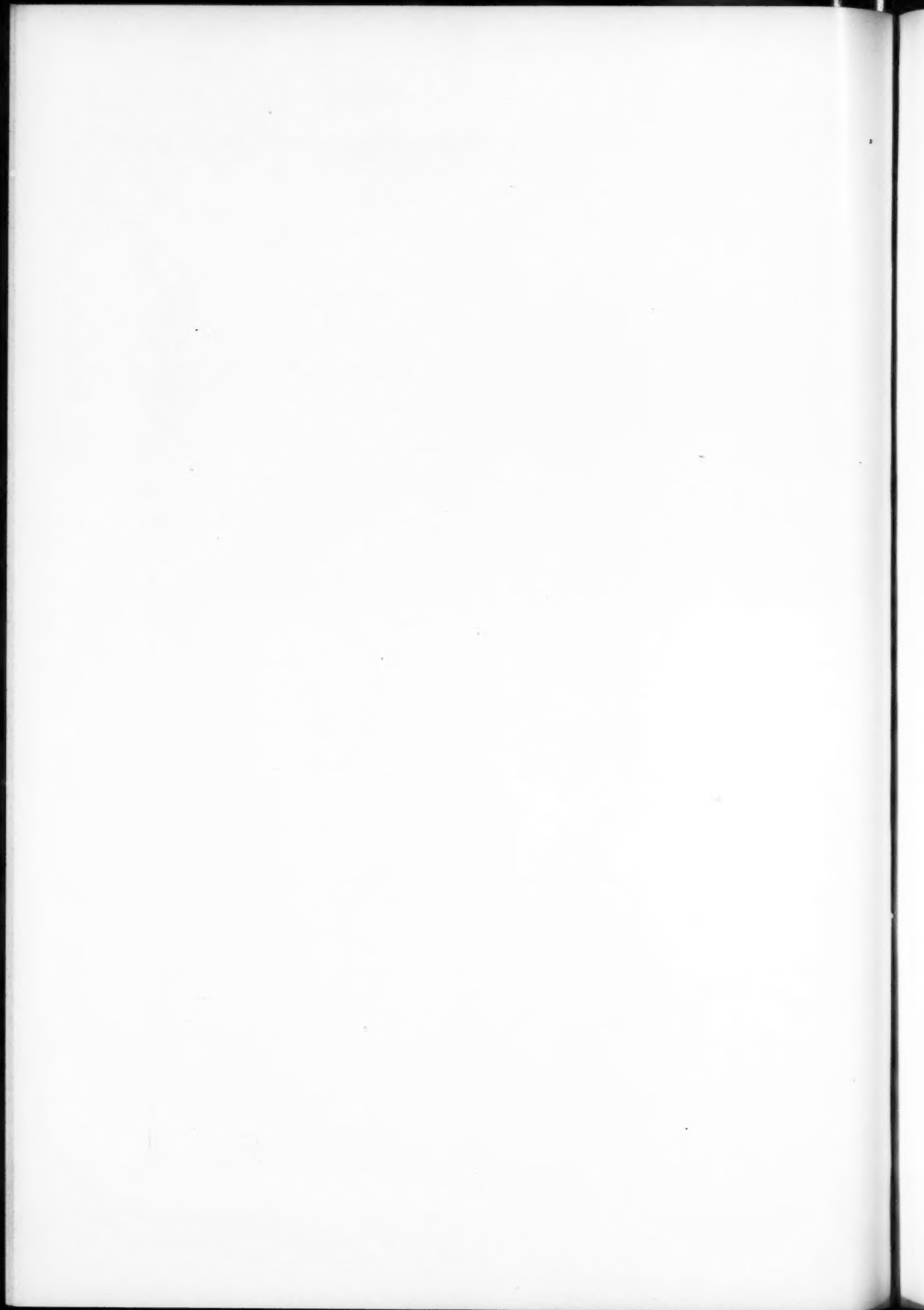
MESSRS. MANN & MACNEILLE, ARCHITECTS

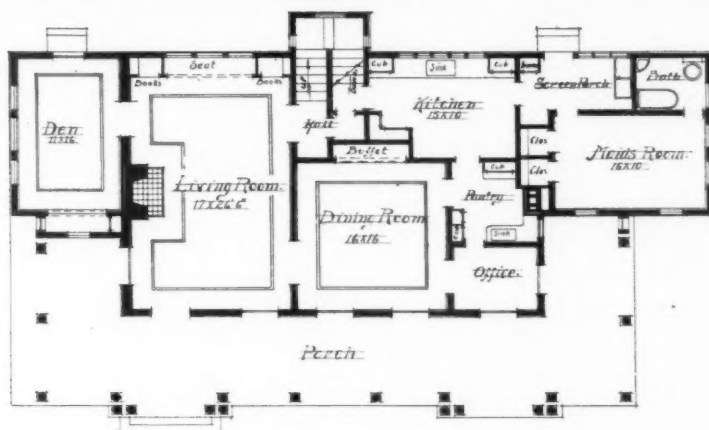
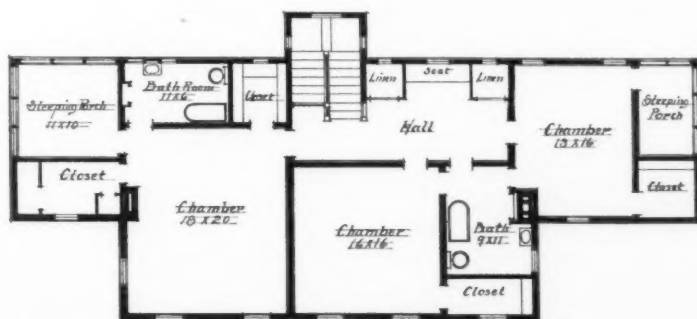


HOUSE OF JOHN McWILLIAMS, JR., ESQ., PASADENA, CAL.

MR. REGINALD D. JOHNSON, ARCHITECT

Foundation concrete, exterior walls frame, metal lath and plaster. Shingles cedar. Interior finish, white cedar, enameled. Oak floors throughout. Gas furnace, electric light.

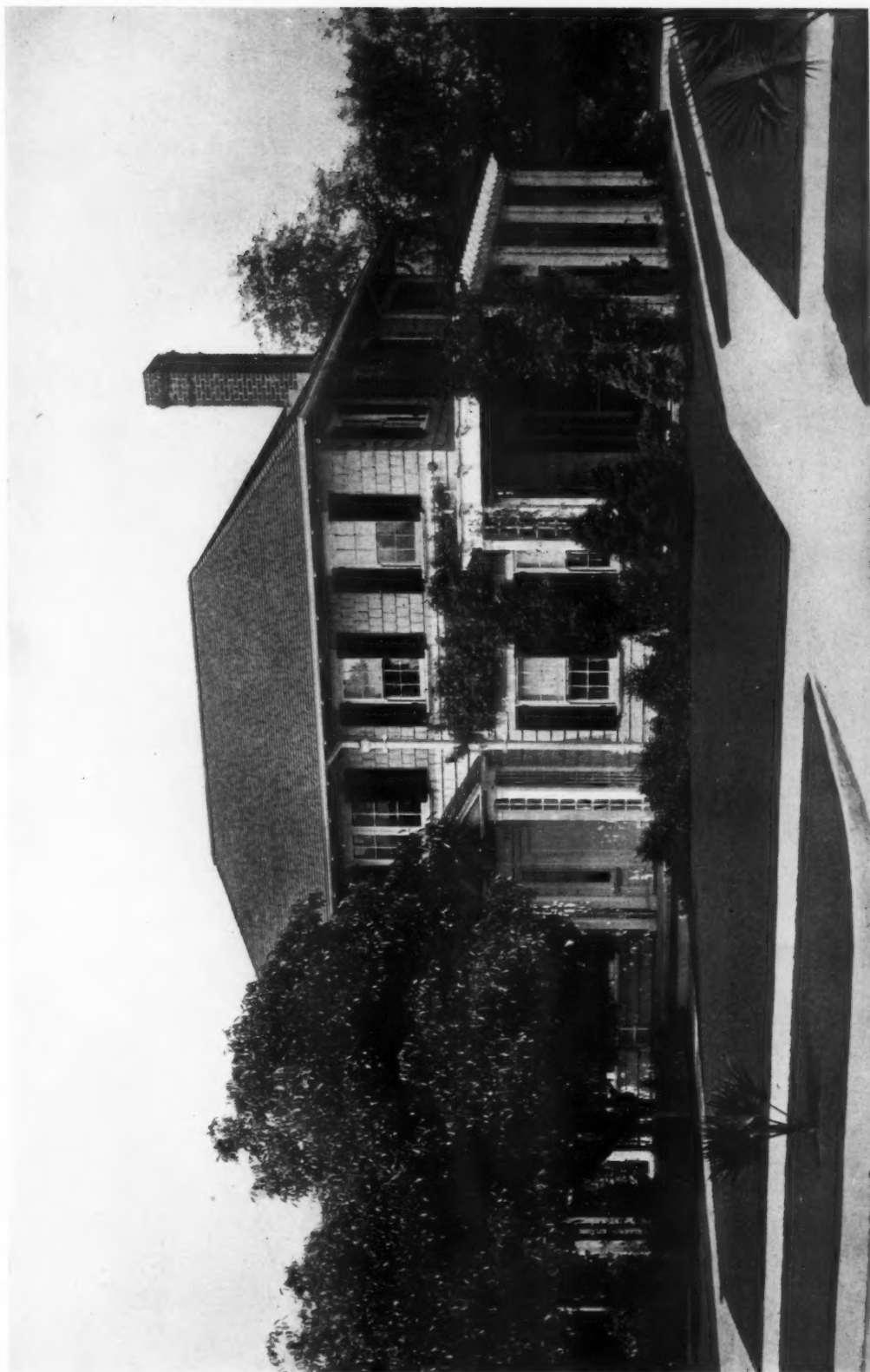


*First Floor Plan.*

HOUSE OF JOHN McWILLIAMS, JR., ESQ., PASADENA, CAL.

MR. REGINALD D. JOHNSON, ARCHITECT

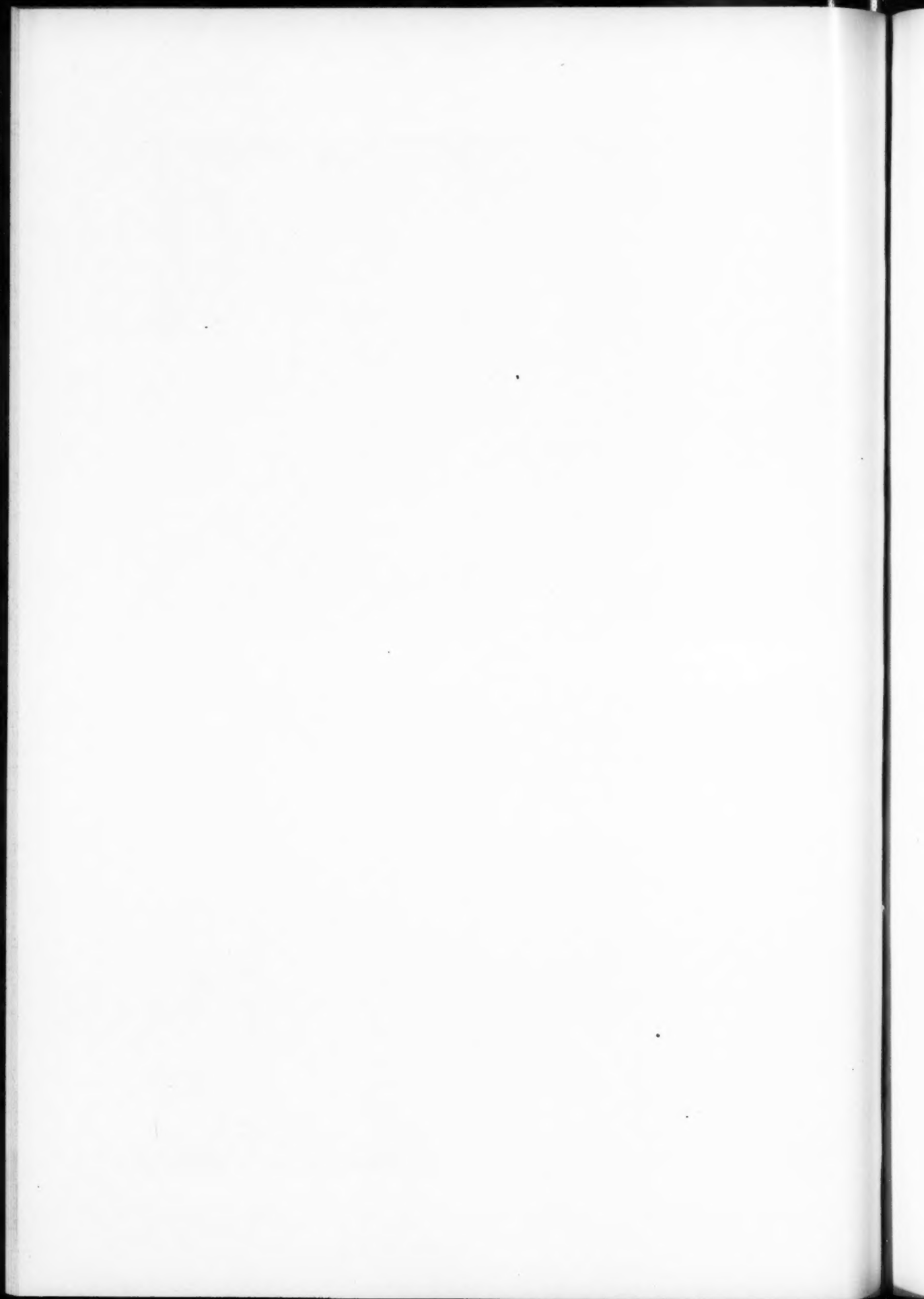




HOUSE OF C. P. McALLASTER, ESQ., PASADENA, CAL.

MR. REGINALD D. JOHNSON, ARCHITECT

Non-fireproof construction. Concrete foundation, cedar shingles on roof, exterior walls frame with metal lath and plaster. Interior finish, white cedar enameled, automatic gas furnace, electric light.

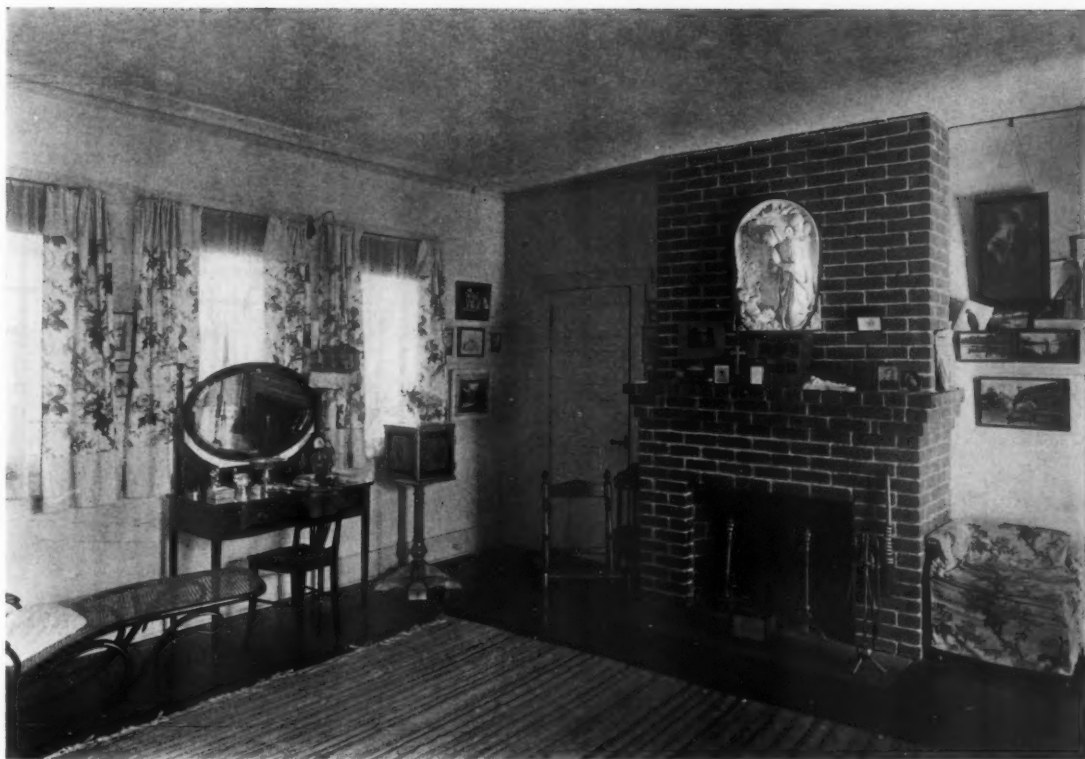




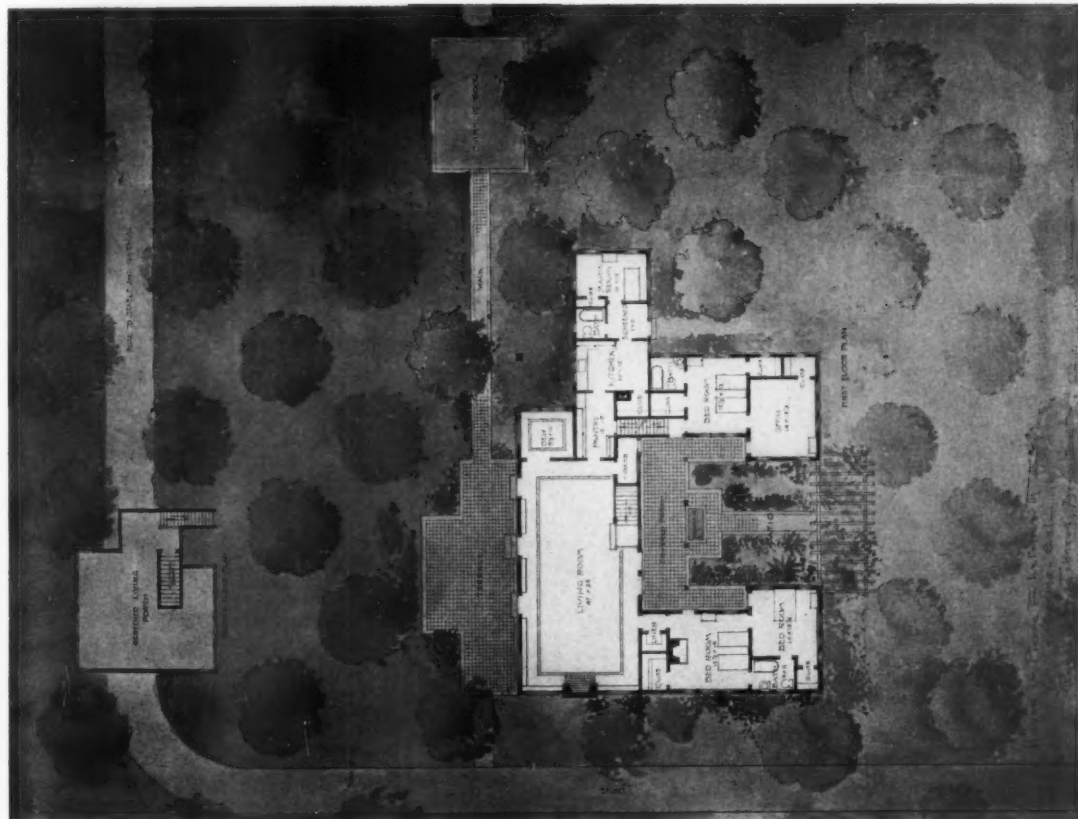
HOUSE OF PIERRE E. LETCHWORTH, ESQ., COVINA, CAL.

MR. REGINALD D. JOHNSON, ARCHITECT



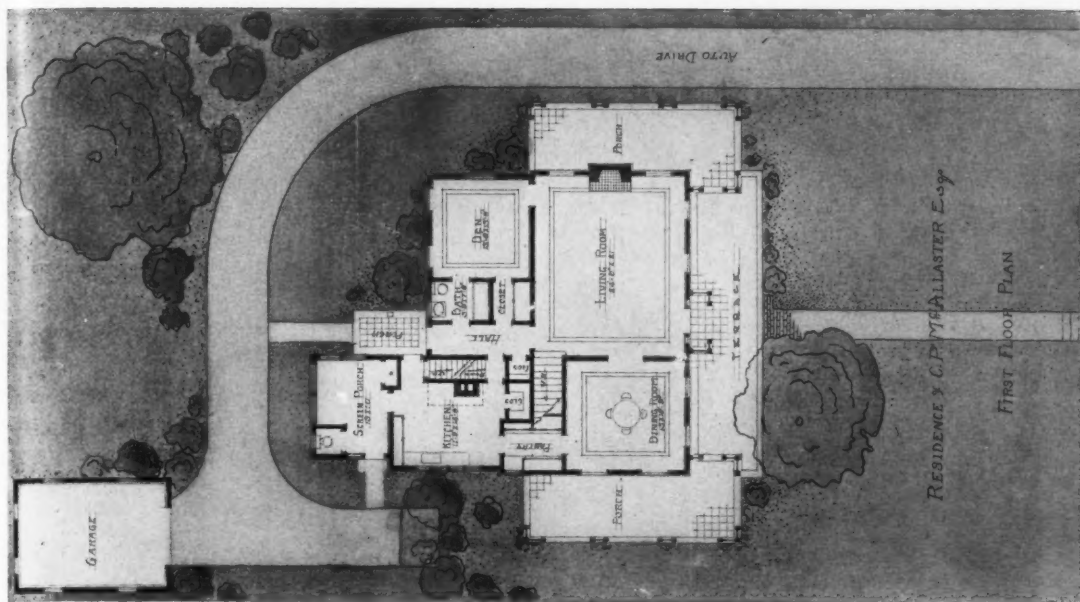


HOUSE OF PIERRE E. LETCHWORTH, ESQ., COVINA, CAL.
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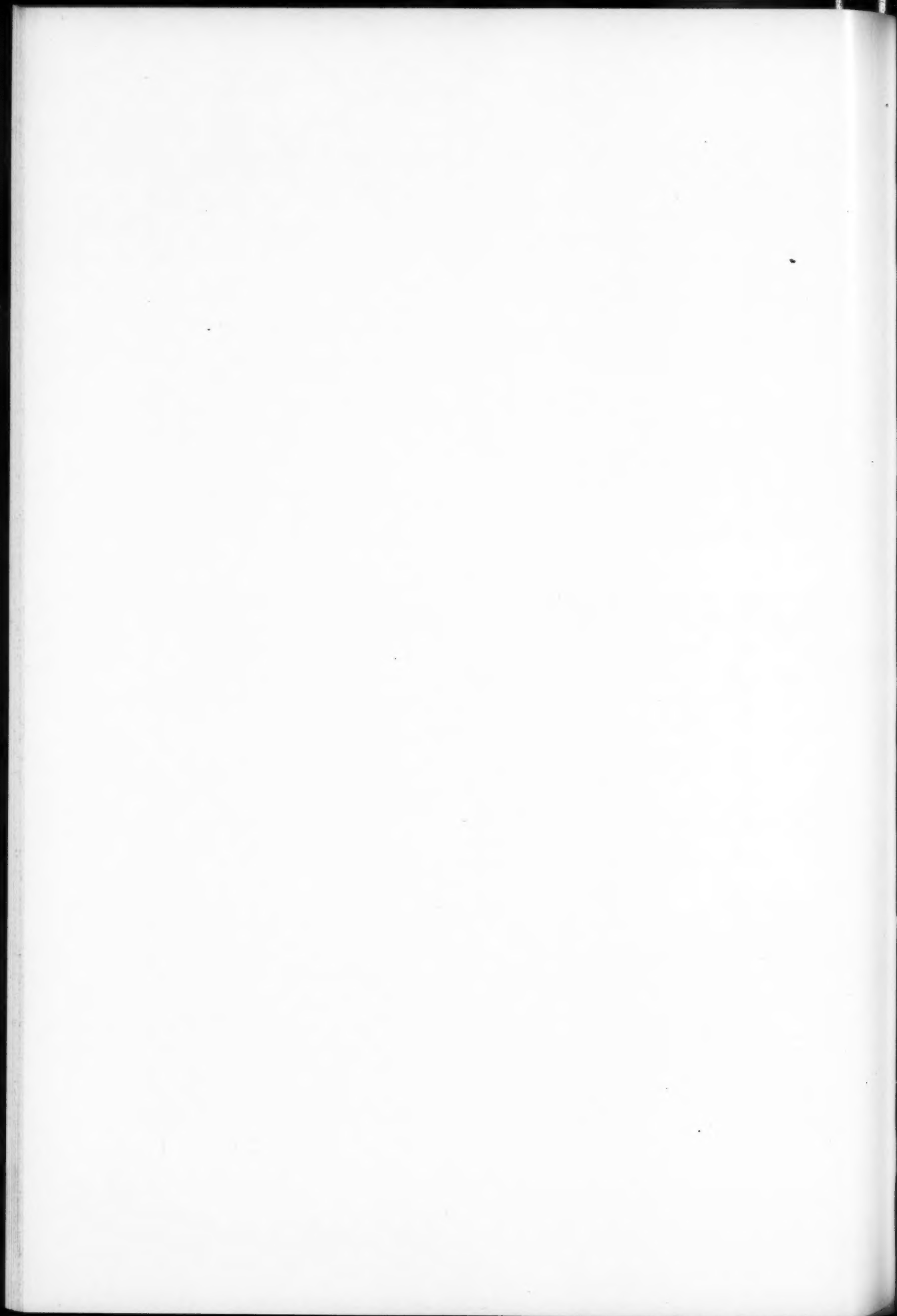


HOUSE OF PIERRE E. LETCHWORTH, ESQ.,
COVINA, CAL.

MR. REGINALD D. JOHNSON, ARCHITECT



HOUSE OF C. P. McALLASTER, ESQ.,
PASADENA, CAL.



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VOL. CVIII AUGUST 25, 1915 No. 2070

THE OPERATION OF THE NEW LAW EX- ACTING A TAX ON THE SHIPMENT OF WORKS OF ART

THE ill-advised new law which requires express companies to exact a tax of \$3 for each \$1,000 of value on works of art and the full value of a shipment to be declared is beginning to have its inevitably harmful effect on art education. A recent instance, which may probably be regarded as typical, is reported from Providence, R. I., where the Rhode Island School of Design has been prevented from exhibiting a group of paintings now in New York by reason of the excessive cost of transportation imposed under this new law. A more effective brake on progress in art education than this recent enactment constitutes it would be difficult to devise, and it is probable that the revenue derived under it will be so small as to be practically negligible. Art in this country has never been endowed with wealth and when art organizations or schools are confronted with the necessity of expending any considerable sums in the furtherance of their plans, they have almost invariably been abandoned for lack of funds. For the same reason the traveling exhibitions that have heretofore been maintained and have unquestionably

exerted a powerful educational influence throughout the country will of necessity be discontinued until the repeal or modification of the law in question. As it stands, it does not accomplish the purpose for which it was presumably enacted, but simply prevents the continuation of an educational work that was of country-wide importance.

THE GROWTH OF THE GARDEN CITY MOVEMENT ONE PROBABLE RESULT OF THE PRESENT EUROPEAN WAR

THE devastation of Belgian towns and the enforced emigration of many Belgian artists and architects to England are two incidents of the present Continental war that are reported to have been eagerly seized upon by English architects as a means of further spreading the propaganda of the garden city. Realizing that there must certainly be considerable rebuilding and incidentally considerable re-planning of the partially or wholly demolished Belgian cities, and that the enforced presence of Belgian architects in England affords a propitious occasion for them to obtain first hand information concerning the so-called garden cities of England, a movement has been started to acquaint these visiting architects with the theories underlying the garden city idea in the hope that they may find application in the eventual rebuilding of Belgium.

England has been particularly fortunate in the building of her numerous model towns and suburbs. The English temperament and climate are naturally inclined to the encouragement of open-air life and to an appreciation of Nature. The old cottages and manor houses of the country afford inspiring examples of picturesque and attractive buildings and gardens, and the traditions of cottage building are strong and forceful. Many if not all of her model villages and suburbs have been originally planned and laid out by interests of a philanthropic nature, under the guidance of competent architects. Profits beyond the reasonable return of five per cent. on the investment have been allowed by the owners to be diverted to the improvement of the common property. Under such favorable conditions it is slight wonder that these English villages have become models of village planning and development and that they have been imitated to

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some extent in both America and Germany.

The garden city movement is fundamentally sociological rather than artistic; it aims rather at the production of better workmen and better citizens than merely the building of attractive villages, but the latter follows as a natural corollary of the former. The Belgian architects will learn from English examples that a complete scheme of planning is the first essential for a model village, that a definite treatment of landscape design should not only be laid out but be kept up by the communal organization and that general conformity in the design of the houses and structures must be guaranteed by an advising authority. They cannot fail to carry back to the task that will await them at the end of the present conflict minds richly stored with ideas.

In America we have not yet fully grasped and applied all the essentials of the garden city idea. There is, however, no lack of enterprise to undertake any desirable reform or improvement and we are certainly not ignorant of the many advantages possessed by the examples to be found in England. On the whole, it would seem as though a small portion of the funds that are yearly being turned into philanthropic channels could be expended to the greatest advantage in promoting the garden city movement in this country.

PHILIP WEBB, DISCIPLE OF WILLIAM MORRIS

IT is now generally recognized that William Morris and his followers brought into the arts and into architecture renewed interest in good craftsmanship. Moreover, it is apparent to even the casual observer that that interest persists to this day and constitutes one of the sanest of modern architectural manifestations.

The recent death of Philip Webb, the distinguished English architect, removes what was probably the last living connection with the original movement. A man of unobtrusive and modest character but fully imbued with a fine instinct for the beautiful, Philip Webb not only left behind him a legacy of good, sincere buildings but, himself a draughtsman of great feeling and ability, he also left material of great value in the form of designs for decorations and textiles.

He represented a type of architect that is today almost extinct. His work was not limited to the draughting board, but his houses were constructed under a degree of personal supervision that is only possible under conditions of great pecuniary sacrifice. In him the architect and the master craftsman were united, and both for the man himself and for the ideals for which he stood, his memory is worthy of perpetuation.

(From Architects and Builders Journal)



GEORGIAN HOUSES ON RICHMOND HILL, LONDON

THE AMERICAN ARCHITECT



HOUSE OF W. T. HARRIS, ESQ., VILLA NOVA, PA.
MESSRS. DUHRING, OKIE AND ZIEGLER, ARCHITECTS

Prima Vera and Its Uses

PRIMA VERA (*Tabebuia donnell-Smithii* Rose) is an important timber tree growing throughout the southern states of Mexico and in parts of Central America. The wood is imported into the United States as Mexican or white mahogany. It is also called jenicero or roble, but its principal trade name is prima vera. Roble is the Spanish for oak in Latin America, and it is so named because prima vera is as durable as oak and is, therefore, often used in place of it. The tree attains a height of sixty to ninety feet and a diameter of upward of four feet. It often has a clear trunk of thirty or forty feet, which is cut usually into logs twelve feet in length.

The wood is moderately hard and heavy, having a specific gravity of .454, or about twenty-eight pounds per cubic foot. The heartwood is light yellow or often almost white, turning somewhat darker upon exposure. When it is first cut it strongly resembles the West Indian satin woods, only it is coarser grained. The wood is not very strong, but tough and moderately fine-grained, seasons well, without checking, works well, splits with difficulty, and is very durable in contact with the soil.

The durability of this wood renders it one of the most favorite woods in Mexico for construction purposes. It is also used locally to some extent for railway ties. Its most important use, however, at the present time, is for furniture and interior finish, for which it is particularly well adapted, not only because of its fine and pleasing grain, but because it takes and retains a beautiful polish when properly filled and finished. It takes mahogany stain as well as any wood now used as a substitute for true mahogany.

While prima vera has no well-defined annual rings of growth like those in the oaks and chestnuts, there are obvious zones or bands of pores in transverse section which separate the growth layers. These pores are somewhat more numerous than in true mahogany, but they are on an average smaller in diameter and are invariably filled with a grayish mass of resinous substances called tyloses by botanists. The pith rays are very numerous, but so narrow that it requires a pocket lens magnifying from four to six diameters to see them. These rays add

no attractive figure to wood when quarter-sawed. The wood possesses a figure, however, that when properly stained makes it difficult sometimes to distinguish from true mahogany. The figure arises from the fact that it presents the fibers obliquely on the surface in alternate longitudinal streaks about one-half inch wide, which gives it a mottled or clouded effect. These streaks give rise to a variety of lights and shades as the observer shifts his place, but is seen to best advantage in quarter-sawed boards. It is on this account that furniture manufacturers can so successfully imitate mahogany by the use of this wood, if properly stained and polished.

Prima vera has been used extensively in this country and in Europe for a great many years in making furniture. In fact, it was shipped into the United States long before the tree was described botanically in 1892. However, more than ordinary interest had attracted itself to the tree long before it was described, because of the commercial importance of the wood it yields. It is held of more value in the United States than in the lumber markets in England. Even in this country, it is not appreciated as much as it deserves, for it is seen too often in the cheaper styles of furniture. Prima vera presents a better appearance under poor finish than do a good many higher-priced woods under the same treatment.

Copyright in Design

IN a recent issue of *The Builder*, of London, an editorial on Copyright in Design contains reference to a condition that not only confronts the editors of architectural publications in England, but is also more or less present in this country. If a client objects to the publication of the floor plans of his house, neither the architect nor the editor can take exception, as the client is of course quite within his rights. The claim by architects that certain plans have original value is answered, somewhat to our own way of thinking, in this editorial, which is, in part, as follows:

We occasionally come across architects who are unwilling to have a plan which they consider especially ingenious or novel published because they think it has a commercial value which they alone wish to be able to

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exploit and use. In the great majority of cases our best architects are willing that their brethren should see the best that they have been able to do, and we think their confidence is justified, in the first case because very few architectural problems are identical, and in the second because the really able man usually improves on his own work, while those who endeavor to adapt it do not, and so the able designer keeps ahead of his competitors, while the advancement of art and knowledge is served by the publication of the best work that is done. We are always sorry when architects take what seems to us to be a narrow view in these matters, which rather savors of the methods of the jealous trader than the exponent of one of the great arts. Be this as it may, it is exceedingly difficult for an architect having a special problem to solve to find anything which exactly fits the case he is dealing with, although he may find much which is generally inspiring and valuable, not because it can be copied, but because it suggests something definitely achieved which proves an incentive and stimulus to effort.

Morts au Champ d'Honneur

"UBIQUE," an always interesting writer in *The Architects' and Builders' Journal*, refers to a condition at present existing in the publication field of the architectural press of Continental Europe. Many publications have entirely ceased, while others like *La Construction Moderne*, are but leaflets in comparison with their normal size.

The prompt rallying to the colors by members of the profession is resulting in grown lists in the French papers, where, under the head of *Morts au Champ d'honneur*, there is set forth the names and ateliers of those who have found death on the field of battle.

In referring to this waste of valuable human lives, Ubique writes as follows:

In the days before the War we had our regular supply of architectural and building journals from the Continent, but all is sadly changed now. The German papers come no more to hand; and as for the French papers, they have all but faded away; yet a flicker of their former selves still persists, *La Construction Moderne* with four pages, and *Le Batiment* very limp as a single sheet. And in the former I have come across an interesting note on what has happened to the students of the Ecole. There is, at the end of a cloister walk at the great school, a monument by Pascal to Henri Regnault and to students killed in the War of 1870-71. Fourteen names are there inscribed, eight of them of architects who died on the field. A brave little band, but how small is the number in comparison with the total today. In this present conflict no fewer than 4,000 past and present students of the Ecole have been mobilized, and many of them have already been killed and wounded. Americans in Paris, with Mr. Whitney Warren at their head, have been doing Samaritan work for those who have gone to the War. Already they have collected 20,000f. for sending parcels to students at the depots, in hospitals, or in prisoners' camps in Germany, and at the same time they are looking after dependents and friends left behind. From one of the hospitals a student writes (if I can make a free translation of his letter): "I have eight wounds in the body, and a serious one in the head. I have undergone three surgical operations. But the doctors say that in three months I shall be about again, and not entirely dotty. So I shall not be entirely useless at the Ecole. I shall still be ready for some more rot." A cheery spirit that, with a tender memory for the freakish humor of the School.

CURRENT NEWS AND COMMENTS

Craigie House in Cambridge

Craigie House in Cambridge, Mass., is one of the best extant examples of Georgian architecture in a neighborhood that abounds with many distinguished types of early New England architecture. In addition to this it possesses historical and literary attractions that, combined with its architecture, make it one of the most interesting extant buildings of our early Colonial period. It was in Craigie House that Washington made his headquarters during the siege of Boston.

Henry W. Longfellow, the poet, made Craigie House his home, and it has remained in the Longfellow family up to the present time.

It is now announced that the will of Mrs. Edith Longfellow Dana, the niece of the poet, has been filed and the fact disclosed that Craigie House is to be preserved to the public.

According to a deed of trust made more than a year ago by the then surviving heirs of the poet, the house was deeded to three trustees "to be held, preserved, maintained and managed for the benefit of the public as a specimen of the best Colonial architecture of the eighteenth century, as a historical monument of the occupation of the house by George Washington during the siege of Boston in the Revolutionary War, and as a memorial to Henry W. Longfellow."

Michigan's New Licensing Law

The Michigan State law regulating the practice of architecture becomes effective August 24. The usual restrictions for the practice of architecture are enacted, and further it is permitted that any builder may draw plans for himself, or for any building that is being erected under his supervision. Architects who have practiced prior to February 5, 1915, who can show satisfactory evidence of character and competency, can obtain license on application.

The Lincoln Highway

While the committee of the American Institute of Architects chosen to act in an advisory capacity with reference to the architectural features of the Lincoln Highway has no power over the design of the buildings to be erected, there can be no doubt, in view of the high standing of the members of this committee, that they will exert a most beneficial influence and conserve the architectural proprieties of the undertaking.

It is stated that this committee is now having made a complete survey of the entire route of the highway as a basis for the consideration of such monuments and other features as may be introduced into the general scheme.

A Great Temple Discovered in Ancient Memphis

The directors of the University of Pennsylvania Museum have announced that Dr. Clarence L. Fisher, Curator of the Egyptian Section of the Museum and the leader of the Eckley B. Coxe, Jr., expedition to Europe, has unearthed a great temple at Memphis, Egypt.

The temple, it is estimated, is of the period of Rameses II., and was erected more than 3,000 years ago. While no definite data can be given out at this time, Egyptologists are inclined to believe that the temple is one that was built by Seti I., and the same one as described in Herodotus.

What Is the Purpose of Architecture?

Announcement is made in the August number of the house organ published by the Architects' Samples Company, Inc., Park Avenue and Fortieth Street, New York, of a prize of \$10.00 offered for the best answer to the question, "What is the Purpose of Architecture?" The conditions governing

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this competition, and any desired information concerning it, will be furnished upon application.

This issue of "What It Is and Where to Find It," the name of the publication referred to, presents many reasons why architects and manufacturers alike are enabled to facilitate the transaction of their business by patronizing the Architects' Samples Company.

There appears to be a great deal of merit in the arguments advanced, and it would

seem to be well worth while for those unfamiliar with the service furnished or the plan upon which the company conducts its business to send for further information.

Personal

A. Garey Lambert and Luther P. Hartsook announce the opening of an office for the practice of architecture under the firm name of Lambert & Hartsook. Their offices will be in the Travelers Building, Richmond, Va.

INDUSTRIAL INFORMATION

Waste Destroyers

The United States Incinerator Co., Inc., with general offices and works at Buffalo, N. Y., have just issued a booklet illustrating and describing what is termed "A Perfect Gas Incinerator." No argument is required to convince people of average intelligence that a system of depositing garbage and waste in cans, pails, etc., is unsanitary. The practice is a menace to health and should be abolished, especially as the means is unquestionably at hand by which refuse may be disposed of in a manner that certainly will remove all danger to health.

The incinerator here described is called the Fly-Rid, and is constructed of cast-iron and steel. It is stated that it is well and substantially built, will not buckle or collapse under successive application of intense heat; does not easily succumb to corrosion by acid or rust, and with ordinary good care will last for years.

A "three-in-one" Bunsen type gas burner is located in the lower portion of the inner drum of this incinerator. In connection with, and just below the burner, is an Agitator Grate, on which the refuse falls. Four perforated conical caps, directly above the burners, prevent the latter from being smothered, and spread the flames so the refuse is simultaneously attacked at several points in its middle portion, and completely enveloped by the flames in its lower portion. Connected with the three lower caps are three heat conductors, through which gas flames are discharged into the space between

the inner drum and outer casing to attack the refuse through the perforations in the drum. All parts are fitted within a solid cast-iron top, base and front. The entire apparatus is insulated.

It is claimed that this device constitutes an odorless garbage consumer of maximum efficiency and economy. Construction of the incinerator is well shown by a series of cuts and diagrams, and data regarding capacity, etc., is given in this booklet, which will be sent upon application.

Water Temperature Control

The necessity for controlling the temperature of water used in manufacturing processes, or for any of the hundred uses to which water is put, is conceded by all, and many are the devices which have been proposed to accomplish this necessary end. Among those now claiming a share of attention is the Leonard Valve, manufactured by Leonard-Rooke Company, Providence, R. I., with a branch office in the Germania Life Building, 50 Union Square, New York City.

This valve, according to a booklet recently received, is an anti-scalding valve of the most positive type. A demonstration which has been photographed and reproduced in this booklet, shows a Leonard valve supplied with hot and cold water. Thermometers attached to the supply pipes show that hot water is passing through the pipe at a temperature of 220 degrees, and cold water at 60 degrees. The valve regulating lever has

been swung to numeral 90, indicating that the user of the valve wishes to have water delivered at that temperature. The thermometer on the outlet pipe registers 90 degrees. It is stated that it will continue to register 90 regardless of any sudden changes in supply pressures or temperatures.

This demonstration seems to indicate that the device does all that could be asked of a regulator of temperatures. It is stated that if for any reason the cold water supply is shut off entirely and suddenly the valve would automatically shut off instantly. If this is done it would seem as though absolute protection against scalding were supplied.

The booklet contains numerous illustrations of the valve and sectional cuts, showing the mechanism employed. It is claimed that all working parts are non-delicate, non-complicated and non-trouble producing. They are made of bronze and brass, are rugged, free-working and do not get out of order or proper adjustment. Any other information desired, or the booklet referred to, will be furnished upon application.

Luna Illuminating Glass

Catalogue No. 2, recently issued by the H. Northwood Company, Wheeling, W. Va., presents illustrations of a variety of reflectors, shades, globes, dishes, urns, etc., manufactured of Luna lighting glass, for direct and indirect illumination.

Luna lighting glass is described as a consistently perfect alabaster glass. Every piece is claimed to be identical with the standard quality, free from specks and streaks. The glass is said to be pure white.

It is stated that Luna glass is made in the correct shapes for diffusing, concentrating and distributing white light. These shapes it appears are determined by test, and the greatest accuracy is maintained in their manufacture. It is also claimed that there is no glare in Luna glass; that an absolutely uniform diffusion of light is secured so that there is no eye strain.

It is also stated that the highest efficiency in lighting systems is secured by the correct diffusion, distribution or concentration of light through Luna glass.

This catalogue, or any information desired, will be sent upon request.

Heating and Sprinkling Buildings

The Combined Heat and Sprinkler Company, 88 Broad street, Boston, Mass., has issued Bulletin No. 1, which is entitled "Cutting Down the Cost of Heating and Sprinkling Buildings." It is stated that the modern building equipment includes, usually, a steam heating system, and a separate automatic sprinkler system. The types of buildings for which this is true, are certainly increasing in number each year, and recently a number of buildings have been equipped with a combined hot water heating and sprinkling system in which the main and distributing pipes of the sprinkler system are used as distributing pipes for the heating system. The saving in cost of installation, due to the double use of the pipes, is said to be about 20 per cent, and the annual saving in operations of the hot water system over steam is further stated to be about 25 per cent of the fuel bill. In addition, it is claimed that the combination is made without reducing the effectiveness of the sprinkler system or complicating the heating system.

The connections of the hot water system with the sprinkler piping are represented as exceedingly simple, and do not, it is stated, require changing of the sprinkler piping in any way. The hot water heater may be located in any convenient place, either in the building to be heated or in an adjoining building. From the hot water heater a hot water supply is run and connected to the foot of the sprinkler riser inside the alarm valve. It is said to be advisable to install a valve at this point so that the hot water supply may be entirely shut off from the sprinklers when necessary. Between the hot water connection to the riser and the sprinkler heads no changes are made, the sprinkler riser, laterals and distributing pipes being installed in the usual way.

Piping diagrams are shown for this combined system in typical installations, and much data is given. It would seem as though the matter is one that would be of interest to architects engaged in the design of loft, factory, warehouse or many other types of buildings where piping might properly be exposed to view.

Further information or the booklet referred to may be had upon request.