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The Western Architect

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IN HOTEL ANGELUS, LOS ANGELES, CALIFORNIA, JOHN PARKINSON, ARCHITECT.

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ROBERT CRAIK McLEAN, EDITOR.

PUBLISHER'S ANNOUNCEMENT.

The intention of the publishers of the WESTERN ARCHITECT which was announced last month, to change the name of its publication to THE ARCHITECT, has been abandoned for the present owing to lack of time to complete the necessary arrangements with the postoffice department, and other legal matters connected with the change of name.

The present number will show in some degree the intention of the publishers to present in variety and excellence of design those examples of architectural art most worthy of reproduction and valuable to both architect and student.

A SELECTION IN FIREPROOFING.

IN the designing of the new building for the United Engineers' Club of New York, which will be a \$1,500,000 structure, thirteen stories high, with a frontage of 100 feet, overlooking Bryant Park and the New York Library, it was seen that the club would become a storehouse of most valuable scientific records and materials, and that if these were to be adequately protected from fire it would be necessary to construct a building that, above all else, would not burn. The architects made an exhaustive investigation into the merits of terra cotta and concrete fireproofing, and finally fixed upon hollow tile construction as being the best.

The building, accordingly, will be of standard hollow terra cotta construction, the floors of segmental arches, and the girders, columns, and structural iron covered with porous terra cotta.

The idea which led to the erection of this clubhouse was to bring together the various engineering societies of the United States, where they would have a common ground for annual meetings and conventions, scientific lectures and demonstrations, and to provide quarters for the national societies of mechanical, electrical, and mining engineers, as well as for such associate societies as might require headquarters in New York. While each is to maintain its individual character, all are to unite to advance the engineering arts and sciences.

The building itself will contain a large auditorium, capable of seating 1,000 persons. Provision has been made for assembly rooms and lecture halls suitable for ordinary meetings and demonstrations. Space has also been provided for receptions and conversations.

The crowning feature will be the free public library on the top floor. Heretofore, owing to the headquarters of the various societies being scattered, there had been a great deal of duplication in their libraries. Under the new arrangements all the libraries will be brought together. This concentration will give the Engineers' club the finest and most complete library of this kind in the country.

CEMENT PRODUCTS CONVENTION.

The second annual convention of the Northwest Cement Products Association was held in Minneapolis, Minnesota, on January 17, 18 and 19 and was attended by all the principal manufacturers of that section. The proceedings were conducted by president, O. U. Miracle, of Minneapolis, who enjoyed the earnest support and co-operation of the membership of the Association.

At the opening of the convention the Mayor of the City, Mr. D. P. Jones, delivered an address of welcome and his remarks were followed by a paper by Hon. Lee Stover, of Watertown, South Dakota, whose pertinent remarks and counsel were a feature of the convention a year ago. An interesting paper which related many of the sins of omission and commission of the cement block makers, was read by Mr. Henry Longcope, of Philadelphia, who explained why very stringent rules had been made by that city's building department in regard to cement blocks entirely through the almost criminal manner in which some had manipulated and sought to cheapen the process. The speaker warned his audience that there would be more to follow unless a decided change were made in the methods of some manufacturers. Mr. Longcope gave an interesting account of concrete pile driving, illustrated by stereopticon pictures.

The president's address was listened to with marked attention and he, too, warned the members against defective work in the making of blocks. He also called attention to the fact that the form of blocks must meet the architect's requirements, as the designer would not design for the machine. "Some of Our Troubles and How They Come About" read by Mr. Arthur N. Pierson, of New York, was much in the same direction, in fact the general trend of the papers seemed to be in the nature of admonition in regard to careless work and sought to impress on the members the extreme care with which concrete must be handled to bring proper results, and that any rule of thumb policy was disastrous.

John E. Moore, of Chicago, told of the rational interpretation of cement tests, which gave valuable data in regard to this initial and vital point in the manufacture of all cement. Among other papers read, Mr. R. G. Coutts, of Grinnell, Ia., presented "Concrete," and Mr. A. P. Melton, of Minneapolis, "The Concrete Block Industry as Indicated by Past Experiences." Mr. C. A. P. Turner, gave an interesting talk, admirably illustrated by lantern slides, on "Reinforced Concrete," and D. N. Harper, of Detroit, Mich. spoke on "The Future of the Concrete Indus-

try." A digression from the line of structural uses for concrete was found in Mr. L. L. Bingham's practical paper giving valuable information in regard to "Cement Tile for Farm Drainage." The Minneapolis building inspector, Mr. J. G. Houghton, spoke of the municipal side of the industry in "Concrete Blocks" and J. C. McClenahan, of New York, gave some facts, historical and modern, regarding "Manufactured Stone."

One evening of the convention the delegates were entertained at a "smoker" by the Minneapolis Builders' and Traders' Exchange and one evening was devoted to a vaudeville entertainment supplied by local talent in the Auditorium Assembly Hall, at which the "wives and sweethearts" as the chairman expressed it, of the delegates were highly entertained by some exceptionally good talent.

The Northwest Cement Products Association has every reason to be congratulated upon a generally successful and valuable convention.

CAST STONE.

Since the foundation and basement walls on the river side of the wholesale building of J. V. Farwell & Co., in Chicago, was constructed of artificial stone twenty-five years ago, there



BANK OF MONTREAL AT HAVANA, CUBA
MADE OF STEVENS' CAST STONE

has been no special endeavor to manufacture this material except by the Stevens Cast Stone Company, whose works are established at Harvey, Illinois. Mr. Stevens, the inventor of the process, commenced to manufacture artificial stone over thirty years ago, or ever since what has been known as the Freer stone was in vogue, and at the last convention at Minneapolis sought to give the cement men valuable information re-

garding this process, which is not only open to those who wish to know but is freely given to them by the inventor. Mr. Stevens promises an article upon the history of artificial stone making in this country which should collect in encyclopedic form the different processes used and their general use throughout the country. A great deal of this material has been used in the Canadian cities of Toronto and Montreal with general success and its use is rapidly coming into vogue through the adaptability of the Stevens method for turning out architectural forms from the design of the architect.

NEW YORK CENTRAL LINES CREATE GENERAL ADVERTISING DEPARTMENT.

The creation of a personal advertising department for the New York Central lines, in charge of the veteran railroad advertiser, George H. Daniels, marks an era in the history of railroad advertising in America.

The New York Central lines is the first great system to create an advertising department which covers all the railways in their system. The far-reaching consequences of such a movement cannot be appreciated at first sight, but this action on the part of the management of these lines emphasizes the value of advertising generally and forces the conclusion of a strong belief in the efficacy of railroad advertising in particular.

Some idea of the importance of this new department can be had when it is understood that it will control the general advertising in America and in foreign countries of the New York Central, Boston & Albany, Lake Shore & Michigan Southern, Michigan Central, Cleveland, Cincinnati, Chicago & St. Louis, Rutland and Lake Erie & Western railways and their leased lines, having their western terminals at Chicago, St. Louis and Cincinnati and their eastern terminals at New York, Boston and Montreal, and embracing more than twelve thousand miles of the best equipped railways in the world.

Mr. Daniels has for many years been a firm believer in newspaper and magazine advertising, and, therefore, the organization of the general advertising department of the New York Central lines marks a distinct era in the exploitation of the modern railway by means of magazines and newspapers.

NORTH DAKOTA BRICK.

Architect George Hancock, of Fargo, writes interestingly to the Dickinson Press on the brick industry, as follows:

"The buildings erected during the year 1905, with brick made in North Dakota are a revelation to the old residents of the state, and also a matter of the greatest surprise to the established brick manufacturers of the middle west.

Fargo, Grand Forks, Minot and Mandan are turning out a vast quantity of common brick of a very high grade, suitable for all kinds of general work, and the time is not far distant when it will be necessary to establish brickyards every fifty or sixty miles along the lines of the Northern Pacific, Great Northern and Soo railways within the state in order to keep up with the rapidly growing demands for substantial fire-proof material.

In the line of pressed brick, the state of North Dakota is making rapid strides in perfecting high-grade goods. The yards at Dickinson, Hebron and Walhalla, have all been overcrowded with orders and the outlook for 1906 is most promising.

At the present rate of development and improvement in the quality of the product of these yards, it will be but a short time before North Dakota will be a heavy shipper of all kinds and shades of the highest quality of pressed brick, equal in all respects to the famous St. Louis material.

Some of the buildings faced with North Dakota pressed brick are the new federal building and the Masonic temple at Grand Forks, the public library at Grafton and the new school at Bismarck, the reform school at Mandan, the Barnes & Nelson building at Glenullin, the new high school at Jamestown, the Catholic

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church and a number of business blocks at Dickinson and numerous other buildings at Fargo, Devils Lake, Minot and other points.

Only a few years ago the whole of this material would have come from outside the state, whereas now these local yards are shipping brick over a wide territory, extending from Winnipeg to Iowa and as far west as Butte and Helena, with bright prospects of increasing trade for the future.

In addition to a great variety of building brick, all kinds of fire-brick, fire-clay, locomotive fire-box linings, boiler settings, fire arches and tiles are also being manufactured.

North Dakota has not only an inexhaustible supply of high-grade brick and pottery clays, but also an abundance of cheap and available fuel with which to burn them, and in the near future will be counted among the greatest of the brick and tile producing states of the west.

NEW AND PRACTICAL PLUMBING SPECIALTIES,

H. H. Fowler, the assistant manager of the National Brass and Metal Company, of Minneapolis, has been exhibiting to architects a line of plumbing specialties that have made a marked impression because of their simplicity and practical utility. Among them is a cutoff that is instantly operative below the bath tub or basin, and a self-closing push button basin cock of simple construction that has several mechanical advantages. At a test of these valuable attachments recently in the new Rector buildings, in Chicago the architect, Jarvis Hunt, and Mr. Shattuck of the Art Institute Architectural school were present, and these specialties were commended and adopted for the Rector building. They are made under the O'Brien patents by the Brigham Motter Valve Company, of Chicago. They mark a distinct advance in the line of plumbing specialties.

PRIZES FOR DECORATIVE PLASTER.

It is a frequent practice nowadays for manufacturers to offer prizes for various competitions in design and color work of different kinds, in order to obtain suggestions and different view points from students in art and design schools, which can be made use of in various ways by the manufacturers.

Recently for instance, the Alabastine Company of Grand Rapids, Michigan, manufacturers of the sanitary wall coating, offered \$250.00 in prizes for the best designs in color for interior wall decorating.

The competition proved to be interesting and helpful to the students, who find that time in off hours devoted to work of this sort is well worth while for the practice it affords, even if all do not succeed in winning one of the numerous prizes offered.

School directors are inclined to encourage the prize competition idea, because it interests and stimulates the students.

NOTES OF INTEREST TO ARCHITECTS.

K. & R. TANNER, civil engineers and contractors, St. Paul, have changed the firm name to Tanner Bros. and have opened offices at 608 Manhattan building.

A catalogue showing the different ropes and attachments made by the A. Leschen & Sons Rope Company, is received, and includes prices for all kinds of pure manila rope of all descriptions from hawsers and cables to hay rope.

THE Board of Directors of the Carnegie Foundation announces that the term of seven months determined in article 2 of the program of the Peace Palace Competition has been prolonged to eight months. According to this the plans must be in the possession of the board before April 15th, 1906.

"CATCH the beautiful spirit of antiquity and infuse it with novelty and variety" is the title quotation that distinguishes alike an artistically gotten up and printed brochure issued by John S. Bradstreet & Co., of Minneapolis, and the interior

furnishings and decorations of which this house makes a specialty in design and execution. The pamphlet gives in half tone a number of views of the Bradstreet "workshop," and a general description of the artistic handicraft and oriental designs and ornaments specialized by this firm.

AN error which should be corrected was made in the November issue in speaking of the K. M. C. Vacuum system (Morgan Patent) of the Kellog-Mackay-Cameron Company in calling it "a vacuum system for hot water heating" as the system has nothing to do with hot water heating, being altogether a vacuum steam heating system.

"MODERN SANITATION," published by the Standard Sanitary Mfg. Co., for January, has an important article upon "Fire Insurance" by George W. Ryan, and a number of other attractively illustrated articles, which, with an exceedingly artistic and appropriate cover page is creditable to the publishing department of the Standard Company.

AMONG notable western buildings for which the Celadon Roofing Tile Company has just closed contracts are the new cathedral, at Seattle, Washington, upon which Messrs Heins & LaFarge, the architects, will use the French A pattern of roofing tile, and the Simon Guggenheim Hall at the Colorado State School of Mines, in Golden, for which the architect, Mr. James Murdock, of Denver, will use the Imperial Spanish roofing tile.

A. BODELSON, of Minneapolis, has retired from Voightmann & Co., Chicago, and has formed an alliance with Stremel Bros., of Minneapolis, to engage in the manufacture of fireproof windows. The new company is called the Stremel Bros. Manufacturing Co., and has erected a new factory for the production of fireproof windows exclusively.

FROST-PROOF Linofelt, made by the Union Fibre Company of Winona, Minnesota, is put up in rolls of 100 lineal feet, 18 inches in width, containing 133 1-3 square feet—will cover that amount of wall surface—and regular stock is suitable for rafters and studding, 16 inches from center to center. It weighs one-quarter of a pound to the square foot and is sold for 1 2-3 cents per square foot, taking 3rd class rate of freight in less than carloads.

COMMENCING February 15th and continuing until April 7th, the Minneapolis & St. Louis R. R. will have on sale reduced rate one way tickets to California, Oregon, Washington British Columbia, Utah, Montana and Idaho. These rates are \$15.00 below regular fare. Two tourist cars are run every week to San Francisco and Los Angeles—on Wednesdays via Kansas City and popular Santa Fe System; on Thursdays via Omaha, Denver and the famous "Scenic Route" through Colorado. Particulars regarding these rates can be obtained from A. B. Cutts, the General Passenger and Ticket Agent at Minneapolis, Minnesota.

THE first thought that comes to the mind of the man, familiar with Cortright metal shingles, is that of their great durability, and as the time goes on, and the roofs covered with these goods, during the first years of the firms business, are in apparently as good condition as when put on, with every indication that they will continue to do service indefinitely, one feels that this claim of durability cannot be too strongly impressed upon those who have roofing to buy and look to future, as well as present, economy. Mr. Shepley's experience dates from the first year in business, and fully confirms his own statement that a Cortright roof with proper care, will last as long as the building upon which it is placed.

THE Plymouth Gypsum Company of Fort Dodge, Iowa, has about completed extensive additions to their capacity by the installation of another large kettle which will give the mill an added capacity of 100 tons per day or a total capacity of 400 tons of finished product per day. The increasing capacity gives the mill, and Fort Dodge as well, the distinction of having the only four-kettle mill in operation in the United States, but gives Fort Dodge the further distinction of having the largest gypsum

mill in the United States. The installation of the big kettle has been made with a view of being in a position to handle the increasing business of the company and to better handle the rush incident to spring building next year. Taking advantage of the beautiful weather with which Iowa has been favored the past month, the work has been accomplished at a time when it could be well done and not interfere with the regular work of the plant.

A HANDBOOK on sheet metals in building construction for architects, owners, engineers and builders, entitled "Roofing Rules" is issued by Merchant-Evans & Co., the tin plate manufacturers of Philadelphia. The work is intended to present to owners and other users of roofing materials, in a plain and simple form, the various points about metals in building construction, with the hope that it may prove valuable in making a selection of such materials. It is also "good gospel" for the architect in that it classifies the different roof covering materials, gives analytical description of the process of manufacture of both good and bad tin, methods of application to roofs, measurements for guttering and spouting, and many other practical hints in the direction of reliable, safe and fire-preventing roofing.

SINCE the consolidation of the Imperial Clay Company of Ohio with the Celadon Roofing Tile Company, the latter company has increased its capacity nearly four times and now has a larger number of kilns exclusively devoted to the manufacture of roofing tile than any other company in the country. The management of the Celadon Roofing Tile Company declares as its policy that it will maintain the same superior quality of material for which this company has achieved a reputation. They are now making a high grade Spanish pattern known as their Imperial Spanish and a 6 in. by 13½ in. Flat shingle tile known as their Imperial shingle. Among recent contracts of importance

closed by the Celadon Roofing Tile Company are a residence for Mr. Whittemore at Waterbury, Conn., of which Messrs. McKim, Meade & White are the architects upon which the Imperial Spanish will be used; the Simon Guggenheim Hall at the Colorado State School of Mines in Golden, Mr. James Murdock of Denver Architect, for Imperial Spanish, and the new cathedral in Seattle, Washington upon which Messrs. Heins & LaFarge, the architects will use the French A pattern of tile.

AN ingenious and effective device has been designed by the H. B. Wiggin's Sons Company to enable them to answer the many and increasing calls made upon them for color schemes and decorative suggestions. This device is a card, 11x5½ inches in size, in which is shown a section of the side wall and ceiling of a room. The woodwork of the room is faithfully represented in form and color by embossed three-color printing, and the cards are in a series showing all the principal woods used in trimming rooms. The wall section of the card is made into a panel by running the colored embossing up both sides and across the cornice line. The embossing for the ceiling section is simply in white. In preparing the card for sending out in response to an inquiry for a color scheme, the actual wall coverings recommended are inserted in the card, and the embossing is so arranged that a wall may be divided in any required way,—full wall; dado and filling; filling and frieze; two-thirds treatment, etc., with chair-rail, plate-rail or picture moulding shown in correct form and color. This combination of woodwork and wall covering insures perfect harmony between them. By the use of these cards, an inquirer can be shown a color scheme for one or more rooms, arranged by competent authority, and illustrated by the actual goods suggested for use. Decorators will find it to their interest to write to the H. B. Wiggin's Sons Co., Bloomfield, N. J., in regard to this device.

Cooperative Progress.

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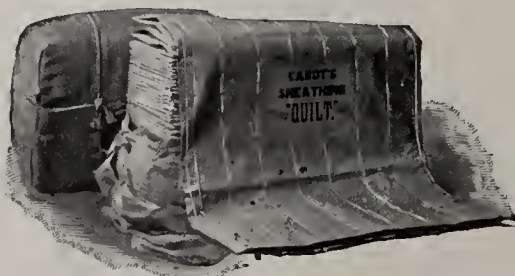
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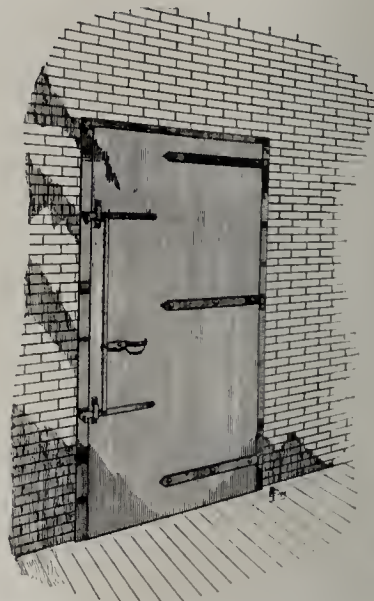
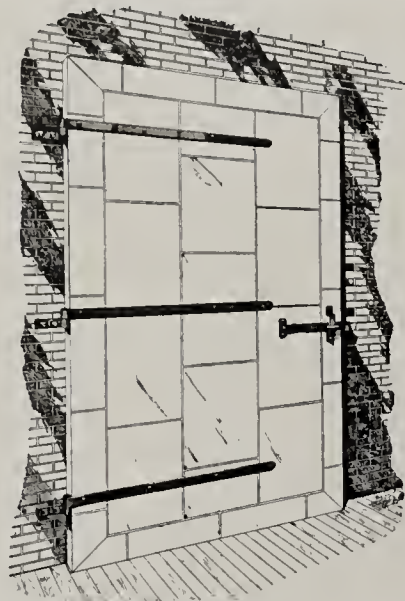
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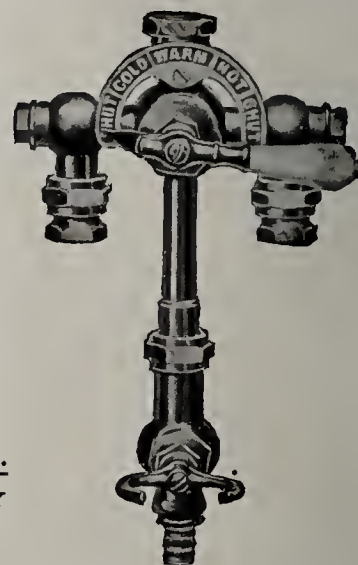
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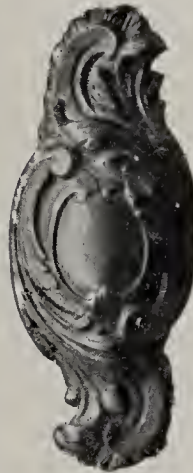
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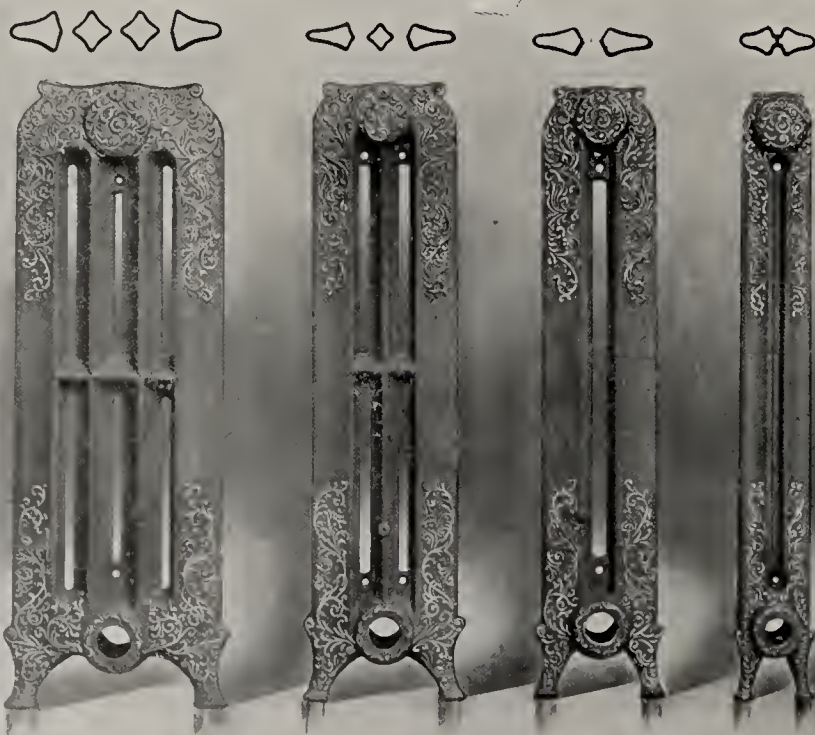
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ARCHITECTURAL LEAGUE OF AMERICA

(ORGANIZED 1899.)

Architectural League of New York.	St. Louis Architectural Club
T Square Club, Philadelphia.	Washington Architectural Club.
Cleveland Architectural Club.	Architect's Club, U. of Ill.
Toronto Architectural Club.	Toledo Architectural Club.
Pittsburg Architectural Club.	National Sculpture Society.
Cincinnati Chapter A. I. A.	National Society of Mural Painters.
Brooklyn Chapter A. I. A.	Milwaukee Architect's Club.
Chicago Architectural Club.	San Francisco Architectural Club.
Twin City Architect's Club.	
Detroit Architectural Club.	

EXECUTIVE COMMITTEE, 84 Adams St., Chicago.

N. Max Dunning, President.	J. L. Hamilton, Secretary.
Richard E. Schmidt, Vice-President.	Alfred H. Granger.
Herman Von Holst, Treasurer.	Elmer Jensen.
	Howard Shaw.

NEXT CONVENTION AT NEW YORK, N. Y., JAN. 31, 1906.

Program of Architectural League Convention.

The program for the Sixth Annual Convention of the Architectural League of America, which was announced last month to meet in New York, January 31st to February 2nd, is exceedingly comprehensive, and shows that the activities of the organization reach out from architectural design to all of the connecting arts, and its committees are concerned with all the educational and civic improvement movements of the day. Its recognition of the architectural phase of sculpture is indicated in the program of the first day, in which after the business session, which will occupy the morning, lunch will be tendered to the delegates by the American Sculpture Society and the afternoon devoted to a tour of inspection of notable pieces of sculpture.

The second day of the convention will be likewise devoted largely to a kindred art, in which the business session of the morning, the American Society of Mural Painters will entertain the delegates at luncheon, and that society will continue to act as hosts during the afternoon. In the evening the arts of sculpture and mural painting in their relation to architecture will be treated from an historical standpoint by Professor A. D. F. Hamlin, of Columbia College, School of Architecture.

As guests of the largest of the affiliated bodies of the League, the Architectural League of New York, the delegates after a day devoted to the closing business of the convention, will be entertained at a banquet, which, while it terminates the meetings, opens the annual exhibition of the League. For this function a list of notable speakers have been secured by the local committee, which will form a climax for what should be the most important and enjoyable convention yet held by the Architectural League.

During convention, discussions will take place on reports of the Educational Committee, and those on Publicity and Promotion, Current Club Work, Civic Improvement, Co-operation with A. I. A. Reports will also be presented and discussed on the

Architectural League of America scholarships in the American Architectural schools; on the Foreign Traveling Scholarships of the League and what is intended to accomplish by it; and on the League's Architectural Annual, showing the progress that has been made. Suggestions will be made and discussed for increasing still farther the sphere of usefulness of the A. I. A. and broadening its work. As many prominent American architects and educators will be present, the discussion will be highly interesting and instructive.

Like the work of the American Institute of Architects, that of the League has for its mission the advancement of architecture as an art, and while the former has much to do with the elevation and correction of its practice along ethical lines among its votaries, the latter is vitally interested in the maintenance of correct methods and a national progress toward pure design. Both together they form a united force to which can be credited the phenomenal advancement that has marked the past twenty years in all the different aspects of architectural practice, among the most important of which is its general recognition among the people.

**The Fire
in the
West Hotel
Minneapolis.**

Like the loss of life in the Iroquois theater disaster, that which took the lives of eleven people in the recent fire in the West Hotel, in Minneapolis, was due rather to smoke than actual fire, of which there was an exceedingly small quantity compared with the damage done. The hotel, built in 1884, designed by L. S. Buffington, was, at the time of its completion, the most expensive hotel building in the West, costing upward of a million dollars. It was well planned in that the stairways were broad and separated from the elevators. The construction is slow burning rather than fireproof as we understand the term, but for the time the building was erected has good fire-resisting qualities. The walls of the halls, running through the center of the hotel, which surrounds a central court, are of eight-inch brick, the partition between rooms are constructed of three-inch hollow tile; the joists are wood 2x10. On the ceiling-side a half-inch tile with soffits which clamp on to an iron band, held to the joist by three-inch screws which have a one-inch long washer to keep the band that distance from the joist. There is no filling between joists, but the floors are of two layers of inch boards with an inch of concrete between. The fire undoubtedly started at the base of and under the elevators of which there were two running in the same brick-enclosed shaft and run up the shaft to the top. Here the shaft was roofed over, and

there being no other outlet, the flames and gas from the oil and wood of the elevators, burst through into the halls of the sixth and seventh stories. Seeking further vent, the flames found an outlet through the transoms, which were over each door and kept open for ventilation. Near the elevators the wood casings of these were entirely burned away and the top portion of the doors, several people being smothered in their sleep. The brick arches over these transoms kept the fire from getting a foothold between floors and prevented the possible destruction of the building. To sum up, it is our opinion after a minute inspection that if the space of two feet under the elevators had been clean, this fire would not have started. Once started, a soft solder hinged skylight at the top of the shaft would have carried the flames out without entering the halls. In the panic which followed, (and which will always occur when a fire however small, gives people an excuse for becoming frightened), had there been adequate fire escapes a large proportion of loss of life would have been avoided.

**Fire Escapes a
Feature of
Exterior
Design.**

For the past twenty-five years the fire escape manufacturing industry has flourished with greater or lesser volume, depending on the disastrous fires that urged city authorities into spasmodic activity from time to time. But seldom has the fire escape problem reached beyond the point of "what is the cheapest method for complying with the fire escape ordinance." In this hotel there was one fire escape, and this of so slight construction that the bare feet of those who descended it were badly cut by the rounds of square half-inch iron. Instead of these precarious ladders the fire escapes should be adequate, and placed at the ends of halls or at other natural points. They should be in the form of spacious balconies connected by stairs, and there is no reason why (as in the Hotel Angelus illustrated in this number), they should not become part of the exterior design, and add to, rather than detract from, the harmony of the facade. If it was understood that all hotels, department stores, and other buildings where large numbers of people congregate, required ample fire escapes, as much when fireproofed by the latest methods as when of the flimsiest construction, and that the danger was as great from smoke and gases and the inevitable panic as from fire, and our city ordinances not only required but enforced their erection, and if all shafts of whatever character, and especially elevator shafts, were equipped with automatic skylights, loss of life in the fires of this character would be reduced to a

minimum. The West Hotel fire should be a valuable lesson, as it demonstrates these facts. It also shows the imperative necessity for a different system of ventilation for sleeping rooms in hotels, and the abolition of transoms, or if necessary for any other purpose they should be fitted with wire glass and permanently closed.

**The Lesson
of the
Charing Cross
Accident**

The lesson to be learned by the fall of the Charing Cross railway station, in London, England, which occurred early in December, seems to be: "Keep exposed iron work painted and regularly inspected." Civilization pays for its improvements, and in no other convenience is retribution so sure as in the structures the bearing members of which are of steel. The engineers of tunnels which are ramifying underground London deny that any settlements can occur from this disturbance of the soil, but there must be a deflection of underground streams and general drying out of the soil, that must affect the heavy structures built upon it in some degree. Protection, inspection, and early repair is the only safeguard we have against either the erosion of steel or the settlement of buildings from other than natural causes, and in these days, when the workman works for his pay envelope, and the employer for his percentage of profit, and each ignore the higher law of moral responsibility in all work of hands or brain, watchfulness by those to whom the reputation of their art is more than financial benefit is the only safeguard the people have against the destruction of life by what are too often termed accidents, when on the plain face of the facts is read the words "criminal carelessness."

**The Genius for
Adulteration
Among
Painters.**

Legislation like that lately secured (or procured) in North Dakota, said to be in the interest of certain paint manufacturers, can only provoke a fight, and the prompt action by nearly a hundred makers of prepared paints in initiating the fight in the United States Circuit Court at Fargo is to be commended. This journal some months ago commented on the chances for crossing a trail of scandal in this new kind of activity by the "lead trust," and it is to be hoped that the plaintiffs in this case may be able to get the "lid pried up" far enough to give the public a glimpse of how its interests are looked after under the guise of "pure" goods legislation. In this North Dakota case, certain "professors" in the state's employ are said to have been wonderfully active in the interest of the corroding trust. It is conceivable, but hardly be-

lievable, that a "professor" may be so ignorant of the paint trade as not to know that multitudes of thrifty farmers and others buy prepared paints and apply them themselves at odd slack times, thus saving the wages and escaping the fraudulent concoctions of painters. That they can in this way only get goods that have not been tampered with and that carry the reputation of the makers with them; that no responsible makers of prepared paints would chance their reputations on mixtures with a "pure white lead" base; and that if such a base were desirable, neither the lead trust nor any corroding plant outside of the trust furnish it. Again, "professors" may be found advising legislators, while themselves ignorant that every fraud of a painter is crying "pure lead and oil" in order that he may get a chance to use his skill in compounding such simples as alkaline waters, "deodorized" oils of Standard Oil parentage, "minerals," etc. It is hoped that the legal inquiry now begun will not assume such ignorance, and develop the fact that standard paints are not impure or adulterated in a practical sense.

**Professional
Requirements in
Competition
Program.**

It seems difficult for the public to understand that the rules of the profession in regard to competitions are more largely for the benefit of that public than for the profession. If a design is submitted and not judged by architects of wide attainments, but by a committee of laymen, a clever drawing may be adopted that has little practical value in execution. On the other hand when the designs are so judged and the author's name is known there is not sufficient chance for fair treatment to encourage men of ability and a fair amount of practice to spend time and money on drawings, that, as in a recent competition in Indiana, may not be even looked at though presented by one of the leading architects in the state. The New Jersey Chapter of the American Institute of Architects recently voiced the stand taken by the profession in the following statement regarding a local competition:

The chapter believes that the Board of Education would secure better results by refraining from opening the competition to architects throughout the United States. The constitution of all architectural societies declares specifically that it is "unprofessional to furnish designs for any competition for private or public work, unless a competent professional adviser is employed to draw up the conditions and to assist in the award." Thus it will be seen that, if the Board of Education decides upon an open competition, most of the best practitioners residing in this and other cities could not enter without sacrificing recognized principles of good practice, as embodied in the code of ethics of the various societies.

This stand taken by the New Jersey architects is most commendable.

THE AMERICAN ACADEMY IN ROME.

BY FRANK D. MILLET.



THE FOUNDERS of the American Academy in Rome which was established in 1894 as the American School of Architecture in Rome, and had been closely associated in the work of the construction of the Chicago Exposition, recognized the necessity of a higher quality of education among architects, sculptors and painters, and resolved to unite to establish and support a school which would provide a post-graduate course, so to speak, for the students who had already acquired a satisfactory degree of technical skill, and who had reached that stage of mental development which fitted them for the study of the masterpieces of ancient art.

Rome was selected because it is not only the most important repository of monuments of antique art and of Italian renaissance, but is the centre from which it is easy to study the remains of art in Italy, Sicily, Greece and Egypt.

The founders of the Academy, most of whom had been trained in Paris, naturally turned to the French Government School in Rome, in the Villa Medici, as a model on which to establish the American school. The French school since its establishment in 1666, has been of incalculable service in the advancement of French art. In its roll of honor are found scores of the most eminent names in the annals of modern French art; Duc, Ginain, Labrouste, Daumet, Duban and Vaudremer among the architects; of David, Houdon, Falguiere, Mercie and Rude among the sculptors; of Boucher, Fragonard, David, Ingres, Flandrin, Baudry, Poussin, Gerome, Besnard, Dagnan-Bouveret, and Regnault among the painters; of Massenet, Gounod, Meyerbeer, Berlioz, Bizet, Adam, Hal-

evy Saint-Saens and Thomas among the musicians. Among the artists who were directors in the past century are Horace Vernet, Ingres, Schnetz, Robert-Fleury, Hebert and Guillaume.

Victor Baltard, in an article on the Villa Medici in Rome, epitomized the opinions of the founders of the American school when he said that the originators of the French school in Rome "knew that it was preferable to procure for the young French artists the means of following directly and conscientiously in their studies the reflections of works whose prominent qualities were nobleness and grandeur, in a country where art and nature are in accord. The solution of this problem had for its object to find out and replace the conditions of the beautiful in art."

The trustees of the American Academy in Rome adopted, at the

start, the fixed principle that the beneficiaries of the School should be directed in their studies, and their work kept under constant supervision. In this respect it will differ essentially from the French School as now conducted.

Up to the present time the American Academy in Rome has been supported by the

voluntary contributions of its founders, with the assistance of a few friends, and its chief work has been the administration of various scholarships, among them the Rotch traveling scholarship, Boston; the Columbia traveling scholarship, New York; the University of Pennsylvania traveling scholarship; the two scholarships for sculptors established by the request of William H. Rhinehart of Baltimore, and the Mural Painters' scholarship, established by Jacob H. Lazarus under the charge of the Metropolitan Museum of Art, New York.

Without an endowment fund, and without a settled home in Rome, the Academy has hitherto been unable to establish its own competitions and



Villa Mirafiori, Side View.

carry out the intentions of its founders to the full extent. Its work has been carried on naturally and conscientiously, and at the same time, effectively. It made its first public appearance in a notable way in Rome on January 11th, 1904, when an exhibition was held under the charge of Mr. H. Siddons Mowbray, the Director at that time, which exhibition was opened in the presence of the King and Queen of Italy, the diplomatic corps, the members of the Government and of the Academic bodies, and was visited by thousands of the general public. The exhibition, which comprised the work of three architects, two painters and one sculptor, was received with conspicuous favor by all the visitors and by the press, and it is safe to say that it gave the Academy a national character in Europe, where it is now regarded as a tangible proof of the advanced position of this country in the arts of civilization.

In November, 1904, through the munificence and public spirit of Mr. Henry Walters, one of the Trustees, the Academy was enabled to secure a permanent home in Rome in the Villa Mirafiori, one of the beautiful residences of the Via Nomentana near the Porta Pia. A few days later an endowment fund of a million dollars was started and it was announced at the dinner of the American Institute of Architects, held in Washington on January 11, 1905, one year after the exhibition in the Academy in Rome, that Mr.

J. Pierpont Morgan, and Mr. Henry Walters, had each subscribed \$100,000 toward the endowment fund of one million dollars. Other subscriptions followed in rapid succession.

A bill to incorporate the American Academy in Rome was introduced in the United States senate by Senator Wetmore, and in the House of Representatives by Mr. McCleary, passed both houses by unanimous consent, was signed by President Roosevelt, and became law on March 3rd, 1905. The following list of incorporators will be found to

comprise many of the leading architects, painters and sculptors of the country; presidents of the great universities and technical schools, and a large number of men intimately interested in education and the fine arts:

Edwin A. Abbey, Samuel A. B. Abbott, Charles Francis Adams, Edwin A. Alderman, Charles T. Barney, Edwin J. Berwind, William A. Boring, Robert S. Brookings, Nicholas Murray Butler, John L. Cadwalder, Edward H. Coates, William E. Dodge, William F. Draper, Charles W. Eliot, Theodore N. Ely, Henry C. Frick, Lyman J. Gage, Richard Watson Gilder, Cass Gilbert, Daniel Coit Gilman, Elmer Elsworth Garnsey, Arthur T. Hadley, Charles C. Harrison, Thomas Hastings, William H. Herriman, Henry L. Higginson, Charles L. Hutchinson, William M. Kendall, John La Farge, Charles Lanier, Frederick Layton, Austin W. Lord, George B. McClellan, Clarence H. Mackay, Charles F. McKim, William C. McMillan, Frederic MacMonnies, William Rutnerford Mead, Frank D. Millet, S. Weir Mitchell, Charles Moore,

Edwin D. Morgan, J. Pierpont Morgan, H. Siddons Mowbray, Frederick Law Olmstead, Francis L. Patton, Robert Swain Peabody, Henry Kirke Porter, George B. Post, Henry S. Pritchett, Frederick W. Rhineland, James D. Richardson, Edward Robinson, Elihu Root, F. Augustus Schermerhorn, J. G. Schurman, Carl Schurz, James

Speyer, James Stillman, Waldo Story, Augustus Saint Gaudens, H. A. C. Taylor, S. Breck Parkman Trowbridge, William K. Vanderbilt, Henry Walters, John Q. A. Ward, Henry White, Stanford White, S. D. Warren and Egerton L. Winthrop.

The Board of Trustees elected at its first meeting the following officers: Charles F. McKim, President; Theodore N. Ely, Vice President; Frank D. Millet, Secretary, and Charles T. Barney, Treasurer, and the necessary working com-



Villa Mirafiori, Front View.

mites. The organization is now perfected and the establishment of competitions will shortly be arranged. It is expected that the first students of the Academy proper will be sent abroad in the autumn of 1906. There will be four departments in the Academy, Architecture, Sculpture, Painting and Music, for each of which a student will be selected by competition. The great extent of the country and the number of art schools will, doubtless, make it imperative to conduct a first gen-



Grounds of Villa Mirafiori.

eral competition, and then a final one among the successful students in the first. The beneficiaries will live in the Villa Mirafiori on practically the same terms as the French students occupy the Villa Medici, and will be required to pass a certain portion of the year in residence, this period varying according to the profession, the student in music, of course, being expected to spend less time at Rome than those of other branches. The beneficiaries will be required to travel part of the year and specimens of their work will be submitted to the Trustees at stated intervals.

The scholarships in the French school amount to \$720 per annum, of which about \$250 is retained for their table board at the Villa. Besides this scholarship there is a special indemnity for traveling expenses. It is proposed to make the scholarships of the American Academy sufficiently large to en-

able the beneficiaries to be relieved of any financial cares during the term of their studies and travel.

The question is sometimes raised as to the necessity of so large an endowment fund as one million dollars. The cost of maintenance of the French school in the Villa Medici is about \$26,000 a year. Taking this sum as the lowest limit of expense of maintaining the American academy, with the addition of salaries of special professors, who are necessary to the effective working of the institution, the income of one million dollars will be found, if anything, too small for the purpose.

The subscribers to the endowment fund at the present date are the following gentlemen, who have each subscribed \$100,000, J. Pierpont Morgan, Henry Walters, Willaim K. Vanderbilt, James Stillman, Henry C. Frick.

Harvard University has subscribed \$100,000 through Mr. Henry L. Higginson; the University of Chicago has subscribed \$100,000, through John D. Rockefeller, and foundations in the names of the Universities of Columbia, Yale and California have been started and are well on toward completion.

It is proposed also to raise a certain amount outside of the endowment fund, to provide the academy with a library and the other necessary accompaniments to its work.

I cannot do better than to quote from the answer of Mr. E. H. Blashfield, who has been connected with the project from the beginning, written by him in reply to questions concerning the purpose of the Academy.

"We who have wished for a school of Rome have had some doubters to oppose (they are all with us now), some new Naamans who said: 'Why go to Rome, are not Abana and Pharpar rivers of Damascus?' But we have persisted, and bid our students to cross even the Seine and go to the Tiber. For the art which it is theirs to study is not the art of now or then, but of all time, it is that art in its essence which is the religion of the true artist. It is as old as the hills, older than some of the stars, for a new constellation has arisen in the Heavens since the stones of the great pyramid were laid. It reaches from the flint-scratched prehistoric stone to the etching plate of Whistler, from the canoe side of the aboriginal savage to the palette of Claude Monet, and it is potential to instruct from beginning to end. It is one magnificent heritage which we may not deny.

Our local schools are as good as any in the world; in them a man may acquire a perfect technique. But a technique is only a box of tools, and unless the practitioner has personality at the bot-

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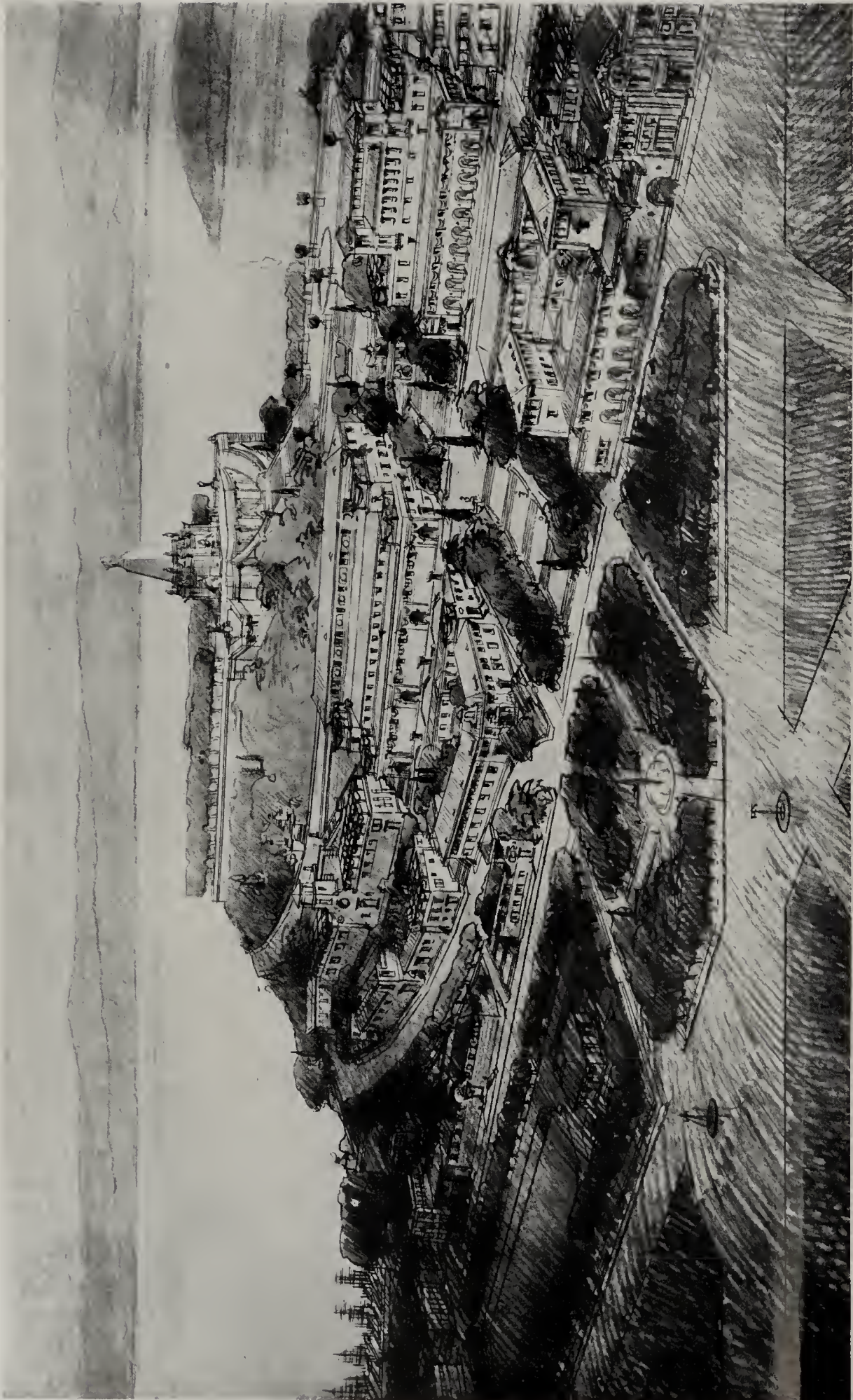


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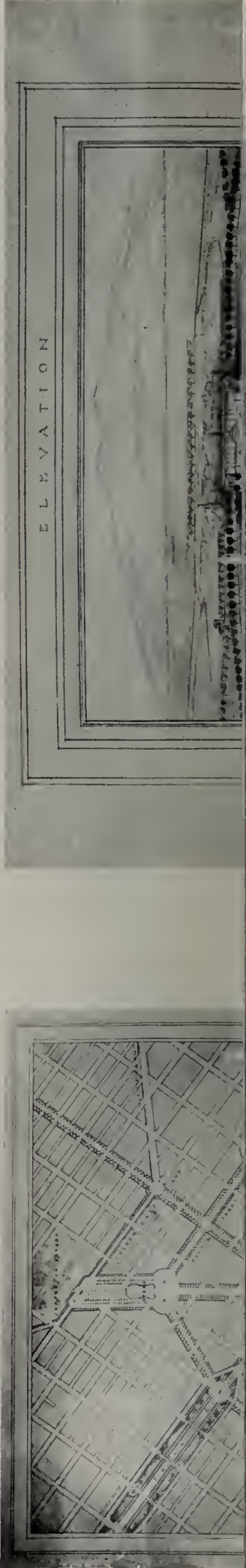
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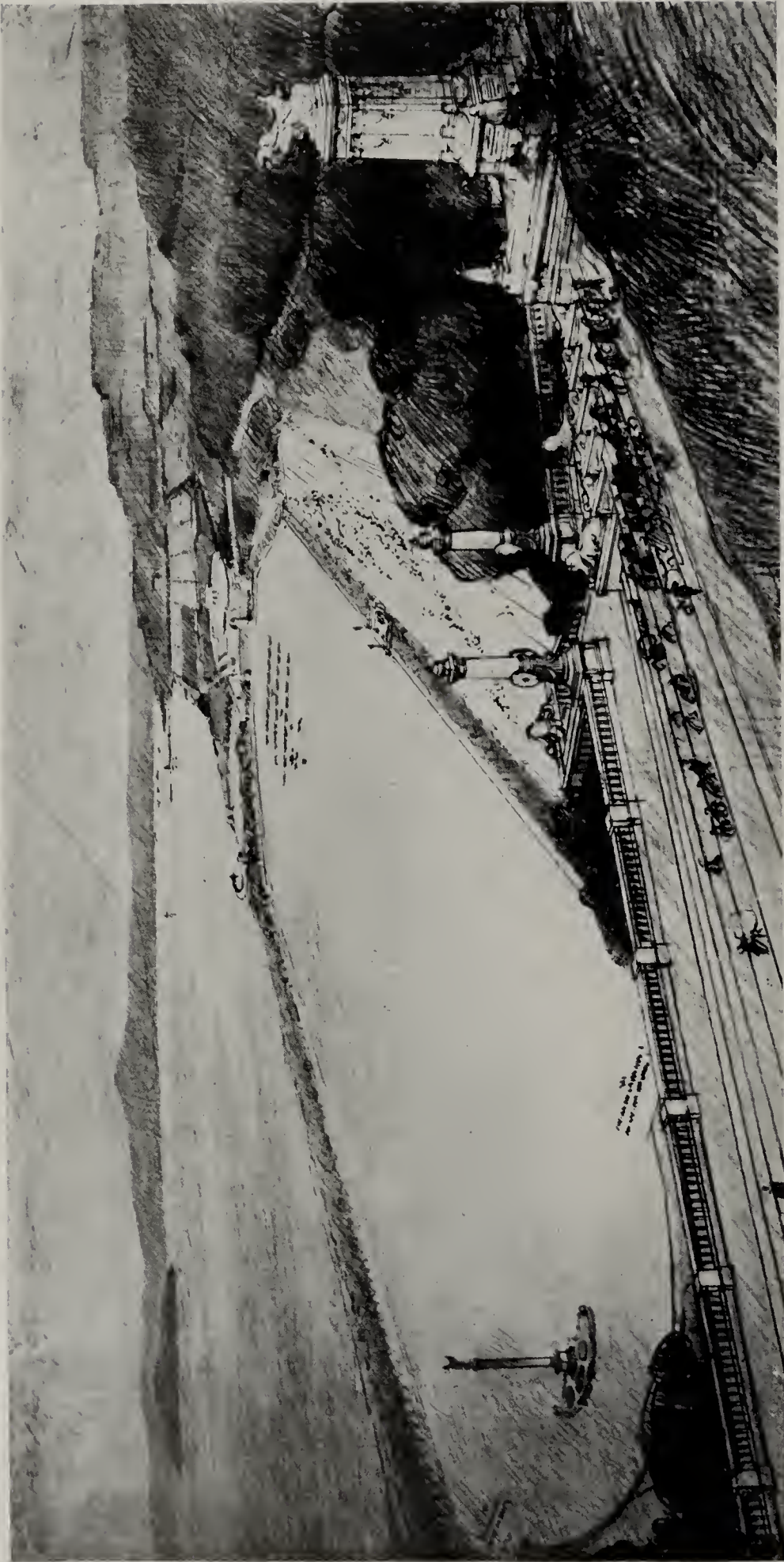


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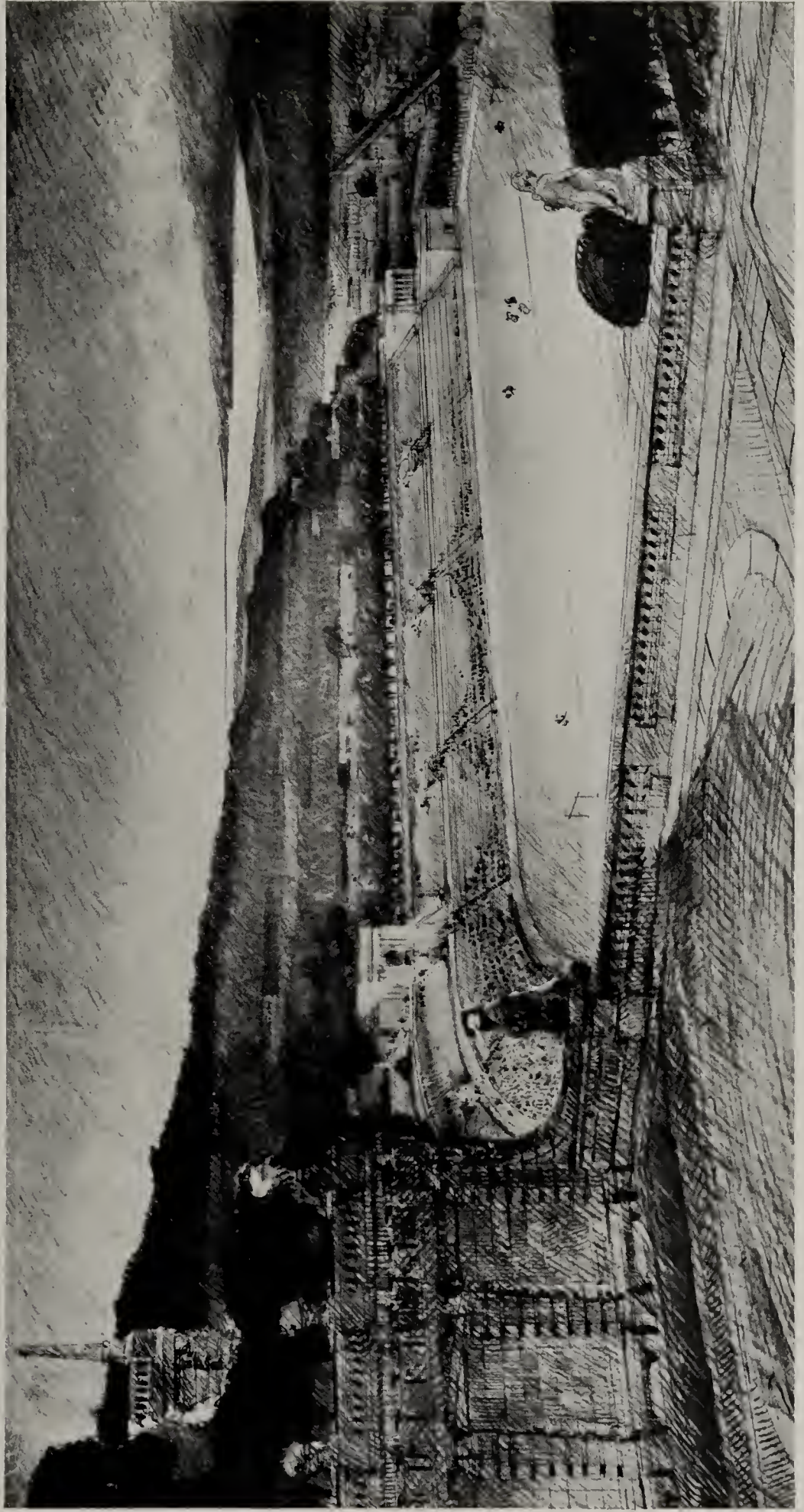
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SON, ARCHITECT

DINING ROOM, WITH BANQUET TABLE ARRANGEMENT

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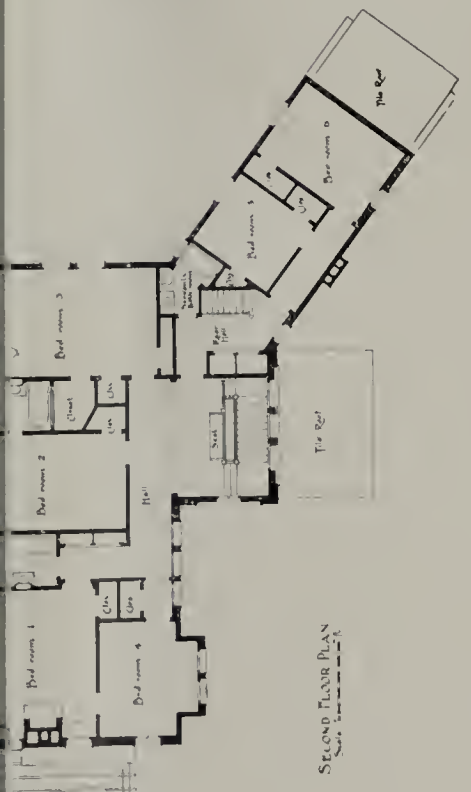
VIEW FROM TWIN PEAKS



THE AMPITHEATER

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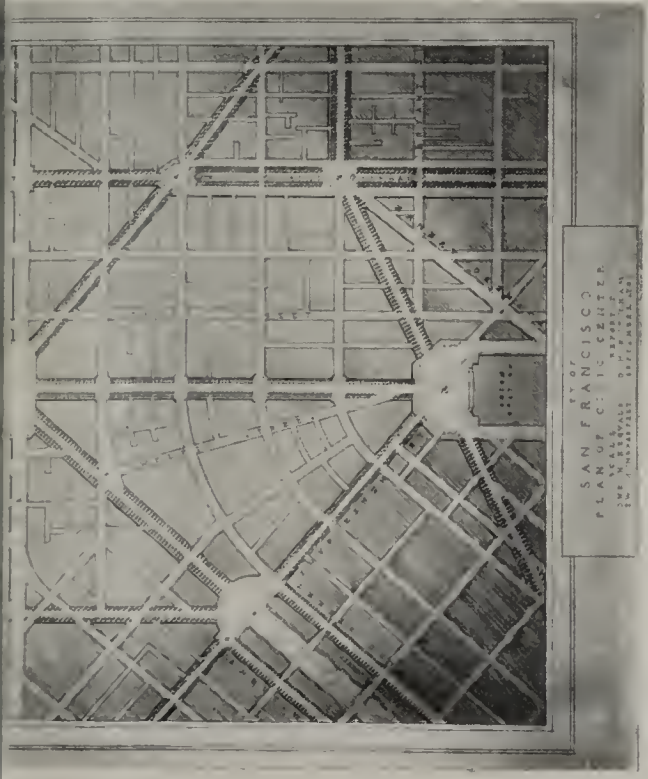


E. M. BLASHFIELD
ARTIST
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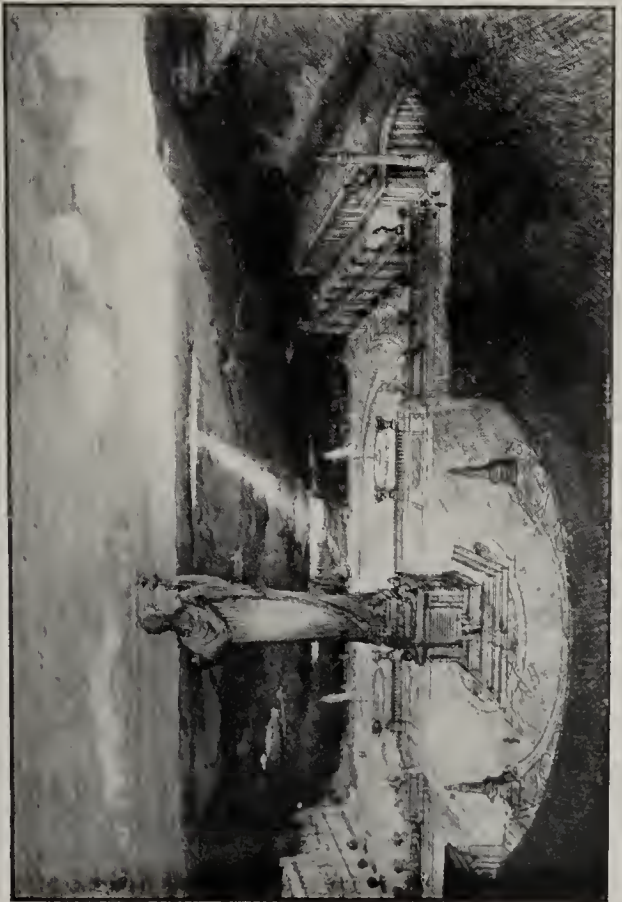
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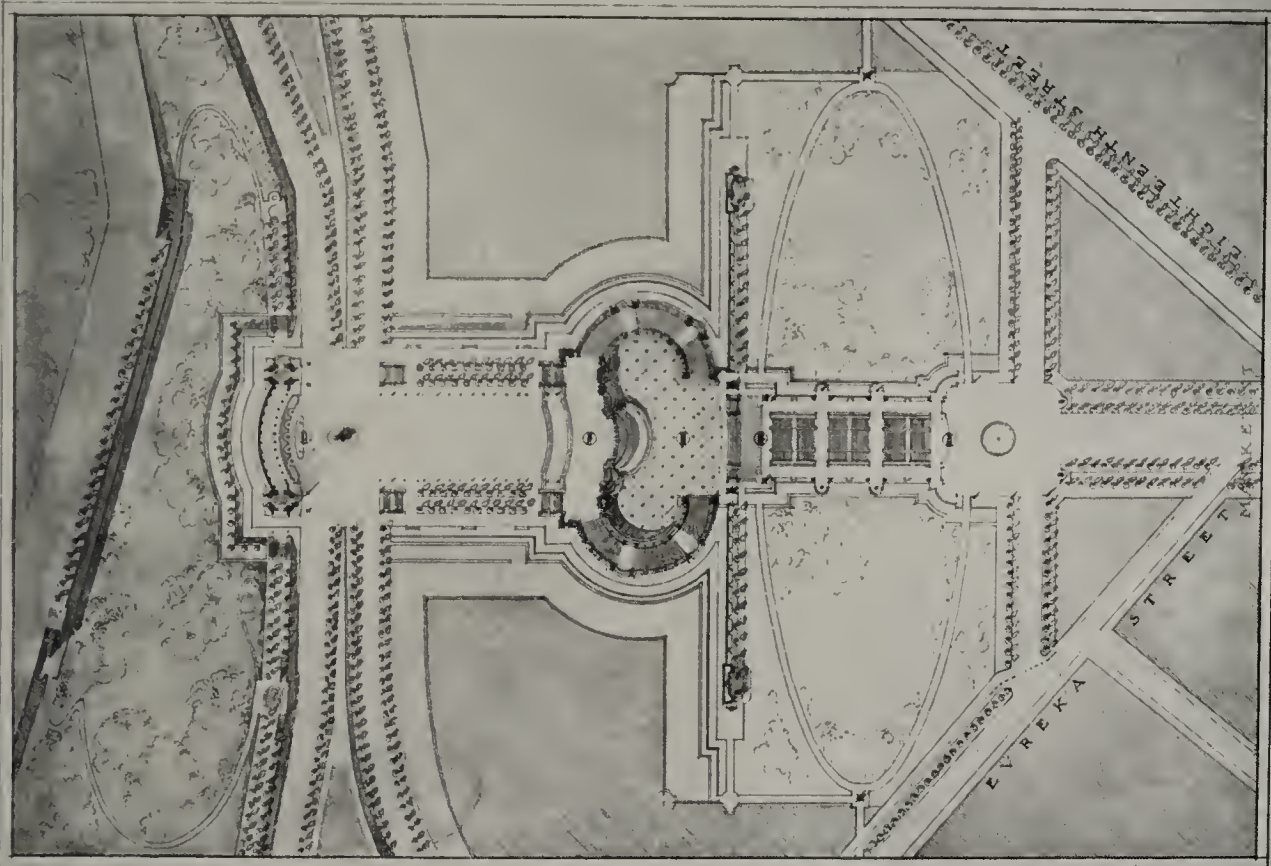
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MARKET STREET TERMINATION
SHOWING APPROACH TO TWIN PEAKS
SCALE
ONE INCH EQUALS
ONE HUNDRED FEET
REPORT OF
D. H. BURNHAM
SEPT. 1905

PLANS FOR THE IMPROVEMENT OF SAN FRANCISCO, CALIFORNIA

BY DANIEL HUDSON BURNHAM, ARCHITECT, CHICAGO, ILLINOIS

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tom of his box and can use it like a new Pandora, he can say nothing to us worth hearing; he may have mastered the whole theory of music, but unless he have personality, we will not listen to him. And the personality of the individual is a part of the personality of his race; the personality of the race in turn has been at once schoolmaster and pupil, the creator and the creation of his historical sequence, the legatee of the world. The man cannot shake himself free of his inheritance. Therefore, he should study the best of it; go to the fountain head, and come downward with the stream."

Paul Gsell, in *Le Monde Moderne* for February, 1902, says:

"The Grand Prix de Rome is the dream of nearly all French artists, painters, sculptors, architects, engravers and musicians who have not yet reached the age of 30. Happy are they who after the competition can carry off this much-coveted prize. They go to pass the greater part of four years beneath the enchanted sky of Italy, during which time they are pensioned by the government, and, living in the midst of the masterpieces of the



Binando Church Manila, P. I.

past, they enrich their imaginations with ideal visions which last them the rest of their days."

THE DEVELOPMENT OF MANILA.*

By DANIEL H. BURNHAM, ARCHITECT.



T MANILA, in the time of Spanish dominion, was an old walled city, situated on the shores of Manila Bay at the mouth of the Pasig River. There was no plan by which the city was built and as a result, the place was ill-suited for the abode of white men. The plans for the development of the city should make it,



Church made entirely of steel from Germany.

not only healthful but beautiful as well.

The chief needs and difficulties were the laying out of streets outside the old city to guide the growth that is sure to come, the placing and arrangement of the Government Buildings, the disposal of the old walls and the moat, the treatment of the canals through the city, the opening of the river

banks to the people, the development of the Luneta, the building of larger and more numerous docks, and the arrangement of a park system. All of these have received study and attention.

The wall which surrounded the city is to be left standing. It comes in very nicely for decorative purposes. Its only disadvantage was the moat outside, which, standing full or half-full of water was a breeding-place for all sorts of germs and multitudinous diseases. The moat is to be partly filled and turned into sunken gardens, which, together with the decorated walls (with all sorts of trees, shrubbery, etc.) will make a beauty-spot in the city.

The canals of Manila, which are said to suggest those of Venice, differ from them in that they are used principally as alley ways, generally touching at the back doors of the houses and being found very convenient for the delivery of merchandise, etc. These will be left as they are.

The river banks will be opened to the public. The old city houses have their back yards running down to the water's edge, thus cutting the public off from them. Now they are to be lined on both

*Abstract of paper read before the thirty-ninth annual convention to American Institute of Architects, at Washington, D. C., January 10, 1906, presented by Mr. Burnham's representative, R. P. Anderson.

sides by a driveway. It will be appreciated how this will add to the beauty of the city.

The increased docks, interfering with the view of the bay which was the principal attraction of the Luneta, necessitates filling in a portion of the Bay and bringing the Luneta out to its former relative position. It is also planned to make a driveway along the shore of the Bay from the Lune-

as playgrounds for the children and as breathing spaces for their elders. Manila will have numerous parks sprinkled among its streets. Recognizing the American spirit in the Filipino which makes him a good ball player, and desiring to help him along, a large ball park is placed in the old city itself, and several others are scattered in the new.

The club idea is to be developed too, and that part



Gate Entering Walled City of Manila.



Spanish Fountain at head of Calle Alix.

ta to Cavite, which will be unbroken in extent except by the house of the Governor-General and the pavilion of the Country Club.

Just outside the sunken gardens and on a curved line eccentric with them, extending from the shore of the Bay to the bank of the Pasig River, will be the government buildings. These will therefore be grouped together in a manner that will be very convenient. They will have at their Bay end the Governor-General's mansion and at the other will be the Postoffice, on the river. All in between these two will be the Halls of Justice, etc. Camp Wallace will remain much as it is,—a large park.

Radiating from the old city as a center, will be avenues, after the manner of the avenues of Washington. These avenues will divide the new city into sections and will be the main arteries by which one can pass quickly from one part of the city to another without deviating to a great extent from an almost straight line. Between these avenues will be streets at right angles to each other, all the streets in one sector being perpendicular or parallel to all the other streets in that sector. But the streets in one sector are not either perpendicular nor parallel to those in another. In fact, the avenues will be diagonals of the sectors. In this way traffic will be easily taken care of and passage from one part to another will be facilitated.

Keeping up with the spirit of improvement manifesting itself in the development of the park idea

of the city adjacent to Camp Wallace and the Governor-General's mansion, (near which, by the way, will be the mansion of the Commander of the Department of the Philippines) will be given up to clubs and the social life of the city. As mentioned before the Country Club will be in this part of the city and will have a pavilion on the shore of the Bay for the convenience of its members.



Old Spanish Residence, Manila, P. I.

This plan of Mr. Burnham's, which was illustrated with the stereopticon, has seemingly overcome in a very satisfactory manner, most of the difficulties which presented themselves and seemed to meet with approval of the audience assembled to hear the lecture. It was generally regretted that departure for Europe of the author of these comprehensive plans prevented his presence at the convention.

THIRTY-NINTH CONVENTION OF THE AMERICAN INSTITUTE OF ARCH- ITECTS.



THE thirty-ninth convention of the American Institute of Architects met at Washington, D. C. on January 8th, 9th, 10th and 11th. The convention was opened by President William S. Eames, of St. Louis, who introduced, Mr. Henry B. F. McFarland, president of the Board of District Commissioners, who welcomed the visiting delegates to the Capital city, though in his remarks the speaker recognized that he was welcoming the Institute home, as the National headquarters is there located.

The first discussion of importance was the report of the committee on competitions, Glenn Brown, chairman, which was listened to by a large attendance.

While the discussion was of a serious nature, the spirit of fun was rampant. Mr. Carrere told of a certain competition of which he was the successful competitor, spite of having for opponents such illustrious men as Geo. B. Post, Mr. Cook, Messrs. McKim, Mead & White and others. Mr. Carrere characterized this competition as the most successful he had ever taken part in. All the competitors, said he, having foregathered at a certain appointed rendezvous, proceeded to a well-known hotel in New York where they sat down to a cold bottle and a hot bird. After the feast the name of each "competitor" was written on a piece of paper, the slips put in a hat and a name drawn out. The gentleman whose name was drawn won the competition and paid for the luncheon. The "choice" fell upon Mr. Carrere. But, even in this competition, the winner lost, for the building was never built. At another of these "competitions" ten certain men were assembled together for the purpose of deciding which. They also took the election method but were surprised at the result—the unanimous vote for the single dark horse. Each one voted for the man who had no chance, and the man who had no chance won the competition. Mr. Mundie caused considerable laughter by his reference to the decision of the Cook County Court House Commission, which, said he, was a cold storage egg that had to be scrambled.

But, while a spirit of fun pervaded the session, the serious side of the subject was given full consideration and ideas were advanced which should be of use in raising the standard of competitions and insuring their proper conduct and successful outcome.

The general opinion was that when competitions fail it is because of certain very definite conditions, which can easily be recognized and avoided.

Architects were warned to avoid entering competitions in the terms of which incongruity, inconsistency occurred. For instance, the terms of a competition may call for a building of a certain character, specifying materials, decorations, etc., and then limiting the price in such a way as to make them impossible.

Some invitations to competitors only require plans and make no agreement to employ the successful architect as supervisor of the building.

Elaborate drawings are often called for where sketches would suit the purpose quite as well. Elaborate drawings mean a large outlay in labor and money, often without compensation.

Rates of compensation are sometimes far below the stand-

ard of five per cent. The cost of competitions was shown to be enormous and examples given to prove the truth. In one instance the cost of the plans submitted by all the competitors was greater than the actual cost of the building itself.

The report of the Committee on Competitions called attention to the oft-made statement in contracts that the successful competitor would receive the commission, subject to the approval of (in government work) Congress, or some such body. This was referred to by the Committee as one of the faulty clauses in an agreement, but Mr. George B. Post disagreed with them, saying that architects must be satisfied with the promise of the trustees of institutions, etc. But the Committee seemed to have some reason on its side, citing the Municipal Hospital of Washington to prove their case.

The Committee on Competitions strongly condemned the practice of calling in a consulting architect to prepare drawings with which to win the prize for the office, such a proceeding not being in sympathy with the spirit of competitions and being deleterious to both architect and client since the plans shown do not represent the work of the office proper.

The foregoing faulty clauses in agreements were brought out by several of the speakers and dilated upon. Mr. Robert D. Andrews, the principal speaker of the session read a very able paper which he said, did not argue for nor against competitions but how architects should conduct themselves with regard to them. He brought out a plan by which architects might avoid all the faulty clauses previously spoken of, and which, if followed, could not result in other than successful competitions. His treatment of the matter was, in fact, idealistic. Taking A. B. C. D. and E. as architects, he showed how the question should be dealt with. These five architects having been notified that they had been selected to compete with on another for a building, they should reply to the owner by note, the gist of which should be, "I will confer with the others." The five should then meet in consultation to determine the cost of the building, the terms under which they would compete, compensation, etc., etc., and to draw up a form of contract, covering all points. Where the number of architects chosen was larger, it would be wise to have a committee selected to confer with the owner to determine just what kind of a building he desired, the amount he would spend, etc. The architects, said Mr. Andrews, have a perfect right to object to any of the terms of an agreement. He advocated having all contracts drawn up by a lawyer, architects in general being too loose on these points. The Institute agreed with Mr. Andrews that five per cent, was a just compensation for the architects successful in competitions, and that the unsuccessful ones should also be paid for their drawings, one thousand dollars being given as a fair allowance.

It was Mr. Andrews opinion that when an owner approaches the architects who are to compete individually the whole affair loses dignity and the architects often lose their self-respect.

Mr. Andrews called attention to the obligations architects are under to the world at large.

Mr. Cass Gilbert and Mr. Geo. B. Post disagreed with Mr. Andrews (and the applause they received showed they were not without supporters in their views) when they said the owner did the architect a favor by inviting him to enter a competition. These two speakers dealt with competitions as existing evils to be met and handled with gloves

It was their opinion that competition was part of life; from the time the young man goes to the architectural school he has competition thrust upon him, he engages in competition because it is necessary to do so if he would accomplish anything, and also because it is bred in the bone. Competition is the life of trade. Mr. Gilbert declared that the importance of a work depended upon the community, hence the amount of money involved cuts but little figure. It was his opinion that a competition is "a cinch for the owner, but hell for the architect." As Mr. Gilbert put it, "Sherman said 'was is hell' and competition is war." He cited a competition to which he was invited by the director of the Carnegie Technical Institute at Pittsburg. Seven or eight men were selected from among forty-one and the director told Mr. Gilbert that he was amazed that forty-one men in such a profession would submit designs in such a scramble.

It remained for Mr. Mundie, of Chicago, to submit a cure for the disease. This took the form of a contract to be used by members of the American Institute of Architects in place of the form already drawn up, which had been found to be too ambiguous and not suitable. The code he read had been hastily prepared and was not adopted by the Institute, in spite of Mr. Mundie's plea that something be done quickly and not two years hence when no one would know what it was all about.

The code was, briefly, as follows:

The competition shall be limited to a certain number of architects.

Each architect participating in a competition shall be compensated for his work.

The successful architect shall be employed to design and superintend the construction of the building.

The jury shall consist of not less than three members of the American Institute of Architects and must be agreed upon by the competitors, whose identity will not be concealed.

Designs must be signed.

In case of a second competition, the first having proved unsuccessful, only those who competed in the first competition shall compete in the second.

No architect will compete with another architect who has broken the rules of fair play.

To this last clause Mr. Post objected, saying that the Institute is not a court for the expulsion of delinquents, but that facts, names and conditions should be published.

Mr. Carrere declared it to be his experience that competitions are unprofitable and that a direct selection of an architect was much preferable. Speaking of new talent being brought out by competitions, Mr. Carrere said he had no sympathy with the statement. He was roundly applauded when he stated that experience was necessary and that talent would force itself to the front irresistably but only after development or in the process. He gave it as his opinion that competitions are binding in their influence in that they do not permit free treatment of a problem. In support of this he showed how the Monumental Order has been forced to the front because modern building demands height and the best examples of the highest other forms of architecture are not over two stories. In this way an architect is almost forced to put his ideas in monumental form. Mr. Carrere declared that, if left to himself, he would endeavor to treat these buildings after another fashion. Closing his remarks he said that the best examples would not win many competitions, instancing the University Club, which, while he admired it very much, he did not think would win a prize.

Mr. J. M. Donaldson, being called upon for his views,

spoke briefly for the "square deal," endorsing the methods advocated by Mr. Andrews.

At the close of the discussion the tellers announced the ballot for officers for the ensuing year as follows:

President, Frank Miles Day, of Philadelphia.

First Vice-president, Cass Gilbert of New York.

Second Vice-president, William Brvee Mundie, of Chicago.

Secretary and treasurer, Glenn Brown, of Washington.

Auditors, James G. Hill and Robert Stead, of Washington.

Directors for three years, Alfred Stone of Providence, Irving K. Pond, of Chicago, Ralph Adams Cram of Boston, and Merritt J. Reid, of San Francisco.

Three papers, following the report of the committee of municipal improvement, Frank Miles Day, chairman, were read: That on the artistic development of Paris, France, was presented, in the absence of that gentleman, by Edgar V. Seeler, of Philadelphia. A paper on the improvement of the Schuylkill river banks, describing the intricate engineering as well as artistic problem involved was read by C. C. Zantinger; and Electus D. Litchfield read a well considered account of the municipal improvements in the Borough of Brooklyn, New York city. All these papers were illustrated by lantern slides, those of the Schuylkill river being particularly interesting.

President elect Day occupied the chair at the closing session of the convention during which a large amount of work was done.

A motion by Alfred Stone, that each member of the Institute be assessed \$21.00 to clear the debt upon the headquarters of the Institute, the Octagon House was referred to the Board of Directors.

W. B. Ittner, of St. Louis, chairman of the committee on education made an exhaustive report which stated that there were sixteen colleges engaged in architectural education and recommended that the Institute, take action in regard to the matter of providing fellowships in the different technical schools, from the ranks of which the future architects would perforce be largely recruited.

The uniform contract was discussed, and Frank Miles Day addressed the convention upon the better writing of specifications, urging the appointment of a social committee of five members to consider their improvement along the lines suggested, which was adopted by the convention.

The report of the committee on competitions was also referred to a special committee. The recommendation of the educational committee in relation to free scholarships was referred to the Board of Directors. D. K. Boyd, of Philadelphia, introduced a motion favoring a committee for the preservation of places of historic interest which will be appointed by the Board of Directors. Benj. S. Hubbell, of Cleveland, presented a plan for nominations with a view to preventing self perpetuation in office and giving the convention a free chance, which recommended that at least three names be placed in nomination for each office and at least five names for the three places on the Board of Directors.

The convention was marked with a satisfactory attendance and the transaction of a large amount of business. The committee of arrangements, consisting of W. S. Eames, Frank D. Millet, William A. Boring, Leon E. Dessez and Glenn Brown provided among other entertaining features, a visit to Fort Myer in Virginia where a cavalry drill was witnessed by the guests, which feature closed the thirty-ninth convention of the Institute.

THE ARCHITECTURAL LEAGUE HARVARD SCHOLARSHIPS.



PRESENTING an announcement of the Harvard Scholarships in Architecture, N. Max Duning, the president of the Architectural League of America, has the following explanation to offer regarding the form of entrance and the general educational benefits to be derived from the scholarships:

"The fact should not be lost sight of that an opportunity to attend Harvard University means far more than the mere architectural training a man will receive. He will enjoy an atmosphere of culture and will have opportunities of attending lectures on many subjects apart from those included in the curriculum of Architecture; he will have the use of the splendid libraries and will be thrown among those influences which make for a greater culture and a more intelligent appreciation of the relation of his future work to wider interests.

"The regular entrance examinations, upon the result of which this scholarship for 'Regular Standing' will be awarded, will take place in June and September in most of the large cities of the United States.

"Any member desiring to compete for this scholarship should forward his name as a League Member, to Professor H. Langford Warren, Department of Architecture, Harvard University, and also write to Mr. Jas. Lee Love, Secretary of the Lawrence Scientific School, Cambridge, Mass., who will forward him a catalogue and all necessary information pertaining to the requirements for admission and examination.

"You will realize the importance of placing this information before your members immediately, in order to secure the best results, as a good many of the young men who would be anxious to avail themselves of this opportunity will require some preparation before they will be ready to take the entrance examinations in June or September.

"A young man winning this scholarship for regular standing may at the discretion of the Architectural Department of Harvard University, at the end of his first year, be awarded one of the Special Scholarships which would give him free tuition during the second year. At that time he will be competent to enter any of the numerous regular scholarships provided by Harvard University.

"You will see that this scholarship may be the means of a man of the right caliber securing his entire tuition and a degree without expense other than that of living and the usual contingent expenses.

"It has been deemed wise by the Executive Board of the Architectural League of America to postpone the competition for the two Special Harvard Scholarships until about March 15th, 1906, as it is believed better results will be secured at that time than at an earlier date. They will be awarded upon the results of a competition conducted in a manner similar to the one previously given, and the recipients will not have to take an entrance examination nor will they be eligible for a degree.

"The Executive Board of the Architectural League of America is particularly desirous of making these Scholarships a success in order that by so doing the governing board of Harvard University may be shown that their generosity has been extended in a worthy cause."

AS OTHERS SEE US.



VERY flattering to me is the invitation of the WESTERN ARCHITECT to present my humble views of the architecture of the great country it has been my distinguished pleasure to recently visit again after an absence dating from your great World's Fair at Chicago, to me the crowning architectural achievement of the century. Ah, I cannot think of that splendid exhibition of majestic architecture, the Chicago World's Fair, without going into rhapsodies. It indeed was a magnificent display, an apotheosis of our Art. No country or time has ever witnessed such a group of magnificent buildings, in such unison, accord, and such perfect scale and harmony. It was splendid. Your exposition at St. Louis was on a larger scale, but, in my humble opinion the buildings were not so masterly handled as those at Chicago. It was not such an epitome of beauty although it probably more deeply impressed the layman. And I suppose that expositions should be made agreeable to the masses.

It is somewhat difficult to just exactly express one's self in a review of American architecture. There is so very much to praise and, perhaps, a great deal to deplore. Then again, there does not seem to be any national school or any unison of opinion. There is so much more individuality, so much independent personality and utter disregard of anything that the neighbors or confreres have done that each building must perforce have a separate judgment. No general classification or trial of the whole can possibly be made. Then, also, most of your architecture, that is, the commercial phase of it, the great giants of buildings in your large cities, is so unlike anything we do or have seen that we are simply stupefied, awestruck, and can give but little expression of the opinion except wonderment at your Babel-like understandings. In New York one walks through streets that are veritable chasms. In some streets the tops of buildings are not really visible. Intervening cornices and bay-windows simply carry the eye in vertical perspective that simply mixes, up there, somewhere, with the sky! Much that is done in New York is good in detail. There are some masterly things. Then again, there are many cases where the architects had most magnificent opportunities and abundant money but failed to respond. The public buildings are not attractive. One court building I saw, a new one, and very costly, that made me think of a banquet hall, some festival chamber. No dignity or the necessary gravity one would expect to be the atmosphere of the building where the laws of the nation are administered.

I visited the new Custom House. It has much of the French flavor in its design but I think its architect made a mistake in not giving the building some special characterization or prominent feature. It stands in such a position as to demand, almost, some feature of prominence, a tower or something that gave it other prominence among its tall neighbors than the mere detail of its parts. The lot it occupies, in shape, in position, gave a man a splendid opportunity for what might be called "a fine flight."

There seems to be no general accord, as I say, in the scheme of design there except that so many buildings have the top stories expressed in a classic feature of columns, as one of your architects reminded me, "a sort of Greek temple on top of a chimney!"

The elaboration of interior in some of those great buildings gives one an intimation, a hint, of the vast wealth

represented by the interests domiciled in those buildings, but often makes one sad to think how inartistically misapplied is money in the hands of a man too busy or too little an artist to do the work justice. That is even more conspicuous in some of the palatial residences I have visited in New York, where men seem to have entrusted millions to architects who, it may be said, merely hung up that money on the walls without producing anything really satisfactory with the vast funds at their disposal. Much of the domestic architecture there breathes of the "nouveaux riches" at every turn. It is aggressive, is that architecture, flamboyant, some of it outre, all conspicuous, and I must be permitted to say, a great deal of it in very bad taste.

Here and there I have seen the very decided influence of our school of "nouveau art." In some places it is indeed better done than with us, for it is, I think, dominated by a German influence, and while it is a hard thing for a Frenchman to do, I concede that the German "nouveau art" is more sensible than our own. In furniture particularly, they have taken the utilitarian view and adapted things to their best use, and then ornamented them with ornaments that lend themselves to that use although not sanctioned by any precedents or former schools of design. With us our new art frequently forgets the use of the thing it ornaments. It ornaments first and if the thing is convenient that way, so much the better. But it does much that cannot be classified any other way than as you Americans call "crazy." Our last Exposition, I deplore, had much of that new art that one must call worse than crazy. Nevertheless, the movement, the tendency, is a good one and I think particularly suited to your American wants. You used to do everything in Byzantine or Romanesque a few years ago—and you will grant me that it is a good thing much of it is now being torn down!—then you got into a classic mood that is still lingering with you. But I think that with the problems you have to confront, particularly in your tall buildings this new art gives you opportunity that none of the old schools present or permit. It would seem to me that as these tall buildings are in great part engineering feats, frames of steel, it would be more truthful to merely cover and decorate those mammoth structures than to attempt to give them the expression of classic buildings where most of the great columns and piers of granite and marble do no carrying but, in fact, have to be tied to the steel, supported by it, an untruthful architecture.

Not being an engineer, I do not care to say much about the construction of your buildings. If they stand up it must be satisfactory. But I really cannot see how very good work can possibly be done with the expedition that is made in some of those buildings. There is not time for plastering to dry or mortar to set before those buildings are occupied. This would seem to apply particularly to those that are constructed with "beton arme." We have carried that system to very high perfection in France, but this work is done by skilled men, carefully, and given abundant time to set. In New York I have seen them throw in concrete that it is a wonder to me would sustain itself, let alone any other weight. I have examined the amalgamation and am oppressed to find that much that goes into the concrete is *ashes!* I should think that for your purposes, with your varying climate and for the expedition that seems to be the great desideratum, the forms of brick more generally used in Chicago, for instance, would be best suited.

One thing I have to admire particularly in New York

is its comparative cleanliness, but that seems to have inspired its architects to use the light colored granites and tones mostly. The predominant color is gray, a monotone that, while very clean, does not give much interest to the buildings. It is strange that, as a rule, your architects seem afraid of color. What splendid effects could be obtained in some of those tall buildings where it is so necessary to have large surfaces, without break or other interesting features, if the architects would use diaperings or such flat ornamentation in enamels, beautiful colors! You have fine, enameled bricks and terra cotta that cannot be excelled in the world, why do you not use more of them and give them interesting vivid colorings?

Chicago, on the other hand, is almost gloomy because of its monotonous red. The gray buildings there are not pretty to see because of the streets and dirt. Oh, Chicago is so dirty. So fine a city, so much wealth, such vast commerce, such splendid spirit in the way of grand improvements and yet such dirty streets! It is incomprehensible to me why that should be so.

Its buildings, as a rule, are not so ornate as in New York. They seem built more for use than for mere display. Its homes are less gaudy than those of New York but impress me as being more like homes than mere indications of superlative wealth.

That Lake Shore Street, whereon are now so many fine buildings, hotels and great houses of commerce and clubs, is one that should be very carefully handled. I know of nothing just like it in the world, where there is one side of a street with buildings facing what may be easily made a grand park and then the water. It is impressive and each building located there should receive the greatest consideration and careful designing. It ought to be a street of beautiful monuments, with here and there in that grand park a public building, a library and structures of that nature as has already been constructed the Art Gallery. Chicago seems deficient in parks, that is, little ones dispersed here and there in the streets, as in Washington, but she has an opportunity to do something fine on that Lake Front.

One thing that is not architectural but that contributes nevertheless to the embellishment of the buildings is the dressing of the store windows. I think it has become an art in Chicago. Nowhere else, in my own country, in New York, or anywhere, have I seen such really artistic displays in the windows, particularly in some of the big dry-goods houses. It is most worthy of note.

Chicago's institutions of learning are very fine. Some of the newer buildings of the Chicago University are really unexcelled architecturally anywhere. Some of the older ones, in that English style, do not impress me so favorably, they are evidently not handled by the same artistic hand.

FRANCOIS XAVIER DE JOILETTE.

There are signs that the era of skyscrapers before long will begin in London. At present there is a fatal bar to its introduction. The county council building act which prohibits such structures says that no building may be erected in London of a greater height than eighty feet, with two extra stories in the roof, making the limit roughly about 100 feet. Advocates of steel frame buildings hold that this is a restriction which was well enough in the days of masonry, but absurd in the days of steel. Once introduced in London, says an exchange, the movement in favor of the lofty, steel, frame buildings will go like wildfire.

CIVIC IMPROVEMENTS AT TORONTO.

The principal work of the annual convention of the Ontario Association of Architects just closed was the presentation to the city of Toronto of a general plan for civic improvement. It not only outlined the plan but it secured the attention and interest of leading citizens, and in effect, formed a civic federation that under architectural guidance will work along practical lines. The work was projected by the Guild of Civic Art, an association which has done much the past year to bring the project into concrete form, and there now seems to be a general disposition to utilize the many natural advantages of the city and bring them into a harmony of beauty and utility. In this movement towards the remodeling of cities to meet present and future needs, it is gratifying to find that Toronto has found that her natural beauties cannot only be enhanced but her commercial greatness augmented by a thorough study of possibilities and needs, and forming new improvements on those lines.

PUBLICATIONS.

IMPRESSIONS OF JAPANESE ARCHITECTURE AND THE ALLIED ARTS. By Ralph Adams Cram Crane, F. A. I. A., Baker & Taylor, Publishers, New York. 60 Illustrations. Price \$2.00.

Among the numerous volumes that have been written upon Japanese art, of which architecture is but a framework or a repository, this highly interesting, and at the same time peculiarly instructive book of Mr. Cram's will stand as a classic in its class. It is not only instructive to the technical mind, but the lay reader finds it thoroughly within his understanding, making a strong appeal to his artistic appreciation.

It is in what he is pleased to call the "Genius of Japanese Art" that Mr. Cram shows his closest sympathy, and reveals an understanding of its causes, and also speculates with an apparent intuition upon its derivation.

The book is composed of a series of ten papers giving the author's "impressions of the aesthetic voicing of Japanese civilization," and in these Mr. Crane shows by sequence the relation in which all forms of Japanese art stands towards the daily life and thought of the Japanese people. It is not a book of reference, though it may be turned to in the search for purity of Japanese style, nor is it a history, though it traces logically the art growth as it is told by Japanese art, but it is more than these a treatise that opens up the door of insight, showing the spirit that governs their art, as far as a western mind can interpret it, and which has formed their architectural style.

In his chapter upon domestic architecture by inference he preaches the gospel of simplicity, and gives to the architect of domestic creations a rule that is infallible as it is plain, and by which no design can be restless and no interior crude in detail.

In adding this latest work on Japanese art to those already placed before the occidental architect, Mr. Cram has successfully presented a new point of view, and given to it a clearer and plainer description and translation.

THE GARDENS OF ITALY, By Charles Latham, with descriptions by Evelyn March Phillips. 2 vols., 10¼x15¼ inches. 303 pp. in all, containing about 300 large illustrations. London. Country Life, Ltd., 1905. Imported by Charles Scribner's Sons. Price, \$18.00 net.

A more beautiful collection of views throughout the old villa and palazzo gardens of Italy it would be hard to imagine. The two large volumes are marvels of splendid

photography, faultless plate-work and artistic printing. Besides many charming views of such well-known gardens as those of the Villa Albani, the Vatican, the Quirinal, the Villas Medici at Rome and Florence, d'Este, Borghese, the Villas of Frascati, the Boboli of Florence, Garzoni and Farnese, there are many others seldom illustrated at all, and surely never so well as here, Miss Phillips' descriptions are very entertaining in themselves, strongly flavored with bits of romance and intrigue, the very life, of old Italy.

THE ARCHITECTS' DIRECTORY AND SPECIFICATION INDEX, Published annually. Seventh edition. New York; William T. Comstock. One 8vo. vol.; red cloth, stamped in white. Price \$2 net.

This directory, just issued, contains a complete list of the architects of the United States and Canada, classified by states and towns, indicates those who are members of the American Institute of Architects; also contains the names of the officers and locations of the different architectural associations in the United States. It has been prepared with the greatest care to secure accuracy both in names and locations, together with a brief specification index of prominent dealers and manufacturers of building materials and appliances. It also gives a complete list of the landscape and naval architects of the United States and Canada, indicating who are members of the American Society of Landscape Architects, also the Society of Naval Architects and Engineers, to which has been added a list of the building departments of the leading cities, with the names of the principal officers.

This is the seventh annual edition of this work and contains a "Specification Index" which will be found convenient to architects, builders and owners as a compilation of the various lines of trades supplying building materials and appliances. The presentation in such compact form and under their special headings of the names and addresses of manufacturers and dealers makes a convenient reference to those wishing to secure circulars or catalogues and quotation of prices on such goods.

The whole work is brought out in good shape and bound in red cloth, with white lettering, making it quite unique and attractive in appearance.

ILLUSTRATIONS.

The movement for the embellishment of cities in the United States is of comparatively recent growth. Its first definite expression may perhaps be located in the grouping of buildings at the Columbia Exposition.

Following the impetus there given to the movement, which long before had been inaugurated by architects and advocated in many practical ways by Frederick Law Olmsted, the landscape architect, the beautifying of the Capital city of Washington was taken up, and the original design of the city planned by Washington was revived. Cleveland, St. Louis, Chicago, St. Paul and many other cities through architectural, art and civic societies were brought into harmony with the movement, and studies for the betterment of existing surroundings and for future remodeling were drawn and adopted. While the movement is not in itself wholly architectural, it is so largely concerned with architecture that it falls to the profession to not only aid but guide in the direction of the establishing lines for future development.

Daniel H. Burnham has perhaps been the strongest

factor in this movement though his work has had the strong co-operation of other leading minds in the profession.

In 1892 Mr. Burnham was director of works at the Columbian Exposition and it was probably then that he became impressed with the possibility as well as practicability of reconstructing cities on artistic lines. In 1901, he was selected to head the Improvement Commission, authorized by an Act of Congress, to prepare a scheme for the future grouping of Government buildings and the park adornment of Washington, in which he was aided by Augustus St. Gaudens, the sculptor, Frederick Law Olmsted, the landscape designer, and Charles F. McKim, the architect.

About three years ago, when Cleveland proposed to adorn itself with a Civic Center, Mr. Burnham was placed on the commission created for that purpose, with Messrs, A. W. Brunner and J. M. Carrere; and already considerable progress is being made towards carrying out the result of their collaboration.

Mr. Burnham next directed his civic studies to Chicago, his home city, and made complete sketches for the improvement of its water-front, also for a grand boulevard to connect Grant Park and Jackson; and in connection with Olmsted & Co. designed twelve small parks with their attendant buildings and playgrounds. But his most recent completed work in his scheme made at the instance of the Secretary of War, for the creation of a summer capital of the Philippines, to be called Baguio.

Before Mr. Burnham was called to the Orient, however, the "Association for the Improvement and Adornment of San Francisco" accepted the offer of his services to direct and execute a plan upon which to base all future municipal betterments; and at his suggestion a studio was built on the slope of Twin Peaks at an elevation of about seven hundred feet above sea-level, commanding the most magnificent vistas of the city, the ocean, the bay with its islands, and the mountains and hills of the adjacent counties. From this point of vantage he is directing his great work, sketches for which embellish this number.

Mr. Burnham's plan in the first place is studied with a view to the relations and future civic growth of the various districts and "centers" of activity, and will contain (1) a Civic Center, with its various elements; (2) a system of boulevards and avenues to facilitate the circulation of traffic throughout the city and avert future congestion; (3) a series of parks, including those already in existence, connected by planted avenues, and involving the creation of new parks; (4) treatment of the Presidio in its relations to the city, including drives leading to concourses from which the finest views may be enjoyed by the people; (5) the establishment of recreation and dock harbors; (6) a large amphitheatre commanded by natural hillsides; (7) the reclamation of Chinatown; and (8) ferry and railroad terminals.

There is an artistic simplicity about the dining room of the Cottrill residence at Milwaukee, by Alex. C. Eschweiler that is most attractive. All the ornament seems structural, and the fire-place is most charming in its design and location.

A hotel which has attracted considerable attention from visitors to the Pacific Coast is the Angelus, at Los Angeles, California, designed by John Parkinson, architect. A notable feature of the exterior design is the fire escape balconies, which are differently treated than those of most hotels in that they are evidently designed both as to form and location, and thus add to the general attractiveness of

the exterior rather than, as is usual, detracted from it and creating the impression that they are not only an after thought, but erected under protest against a wise but inconvenient fire ordinance in strong contrast with the West thought, but erected under protest against a wise but incon-

The banquet hall of this hotel is given prominence in illustration both for its massive simplicity and because it pictures a plan of table decoration that has its place in design.

In the design by Charles F. Whittlesly, architect, in his residence for W. S. Bartlett, of Los Angeles, the architect has struck a note that joins Italian romance with the work of the mission builders of the coast, and produced a residence in rough cast with the tile roof that seems to be made not only for the climate, but for the location. Design and surrounding trees are in thorough accord.

In illustrating these California subjects the interior should not be forgotten, for it is often in these that the chief charm of the design lies. Though all residences, because of their location, cannot have the flower bedecked environment shown in the plate illustrating the residence of Carlton Sprague, at Pasadena, the two interior views in the residence of Mrs. Marie A. Wilcox, at Los Angeles, by T. S. Roehrig, architect, illustrate the possibilities for interior embellishments in its best sense.

It is not often that a photograph of such exceptional clearness of detail can be obtained of a fourteen story office building, as that by which we present the Missouri Pacific Building, at St. Louis, W. Albert Swasey, architect. It represents one of the best of several office buildings of exceptional merit lately designed and completed by various architects in that city.

In presenting Mr. Blashfield's latest mural painting, "Westward" executed for the State Capitol of Iowa, from a photograph, by the Inslee & Deck Company, of New York, the possibilities for historical mural decoration is shown in its best form. The painting is forty by fourteen feet and its value to the state in an educational sense, like those in the Capitol of Minnesota, by this and other artists which were shown in our October number, is far beyond the financial outlay involved.

A country residence of a unique and harmonious design is presented in the illustrations of exterior, view in hall, and first and second story plans of the residence of Mr. Frank Hibbard, at Lake Forest, Ill., by George L. Harvey, architect, of Chicago.

An attractive arrangement of flowers and turf bordering a parkway is shown in the illustration of the residence of Carlton Sprague, of Pasadena, California. While the possibilities for floriculture are greater in that locality than in some other districts, the idea can be carried out with hydrodendron, laurel or other flowering shrubs. The color and brightness of the foreground, lending a charm to the residences beyond.

St. Luke's Hospital at Spokane is a good type of hospital for an average city, when, as in this instance, it is located on a rise of ground with ample space surrounding it for lawn and shrubbery.

The court house at Spokane is exceptionally refined in detail, notwithstanding a seemingly too ornate exterior for a public building. Its location also enhances the general effect, as it stands comparatively isolated and the surrounding trees furnish appropriate setting.



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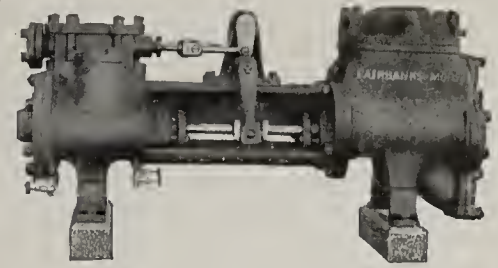
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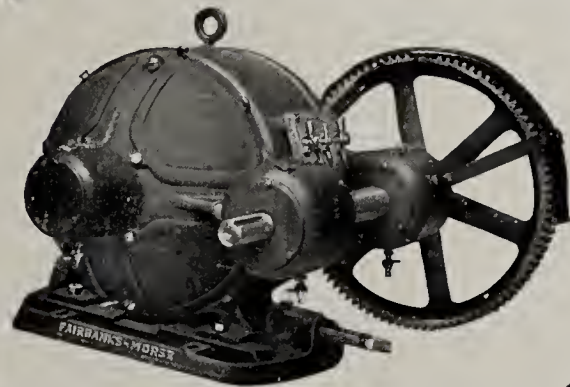
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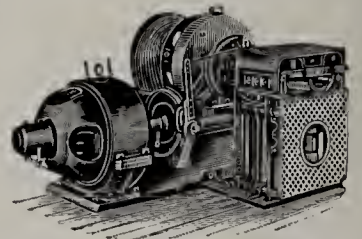
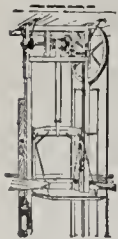
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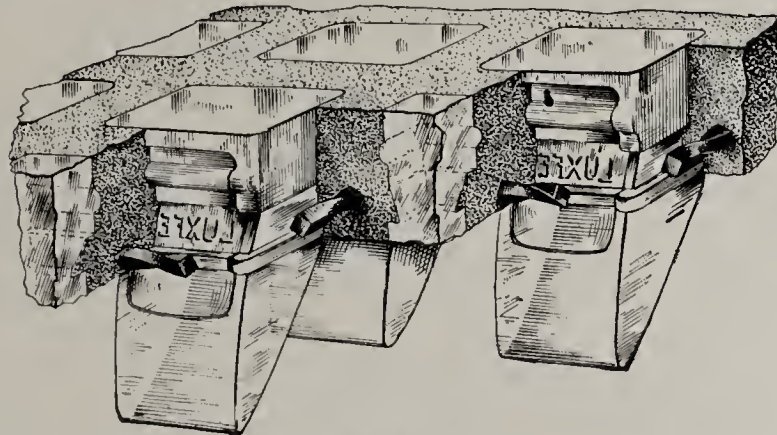
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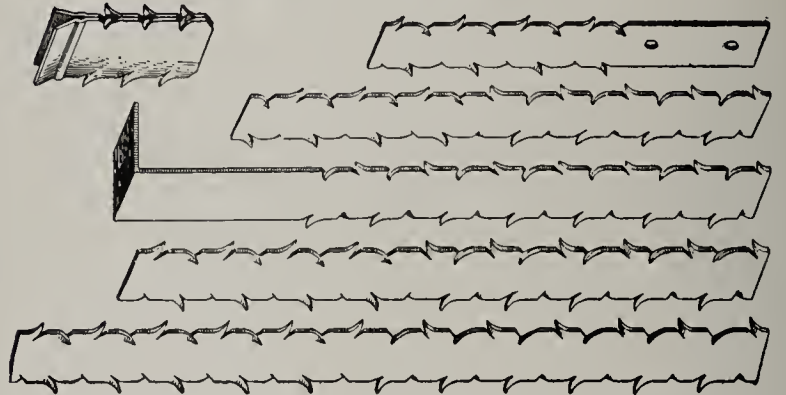
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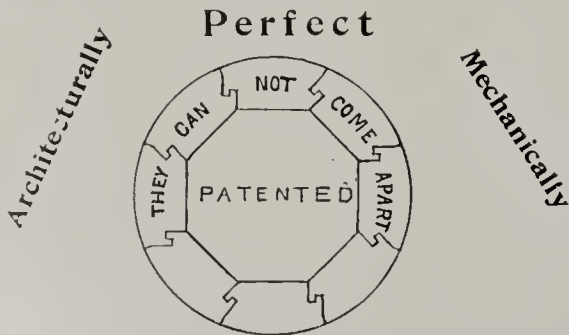
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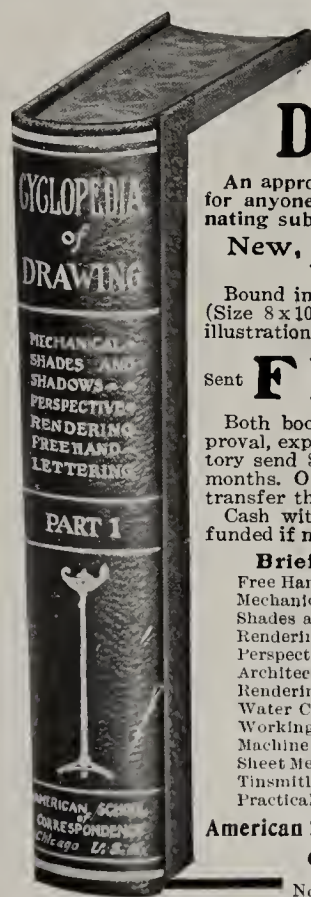
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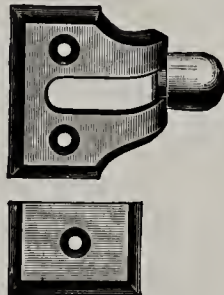


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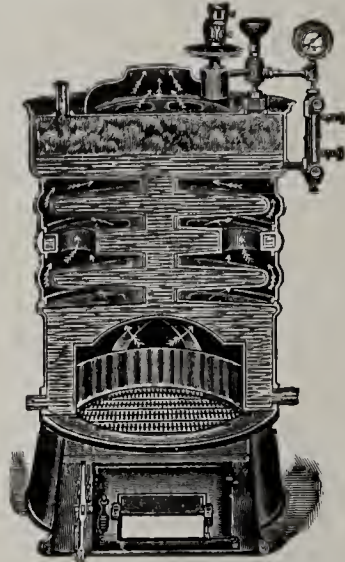
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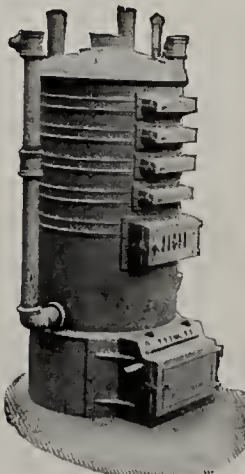
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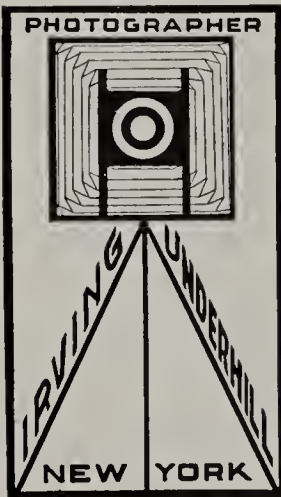
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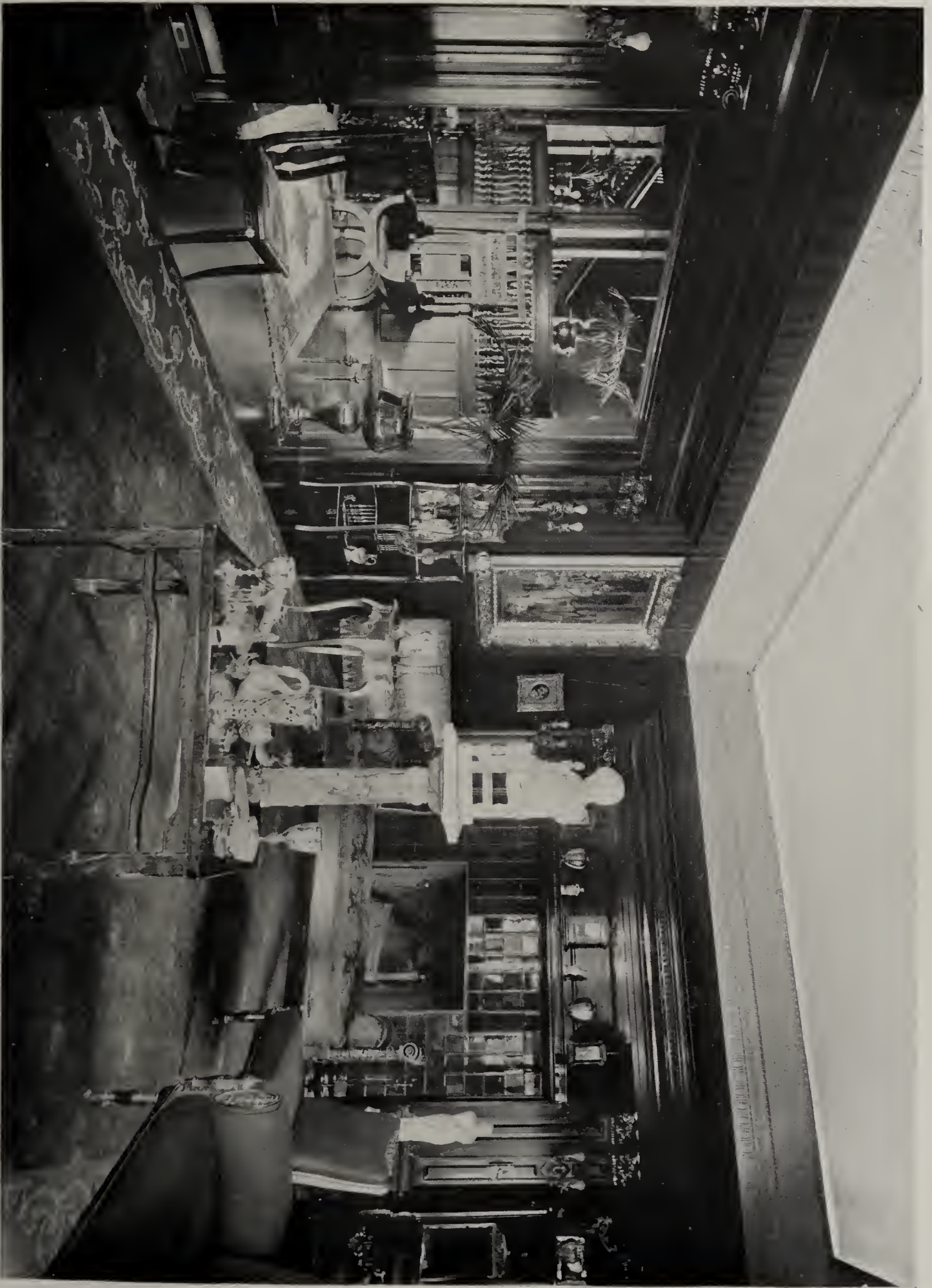


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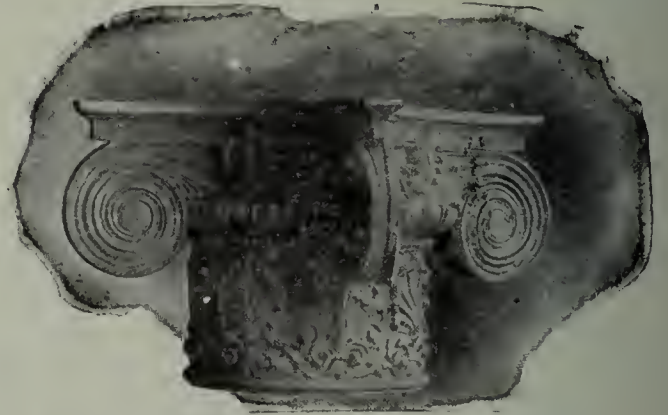
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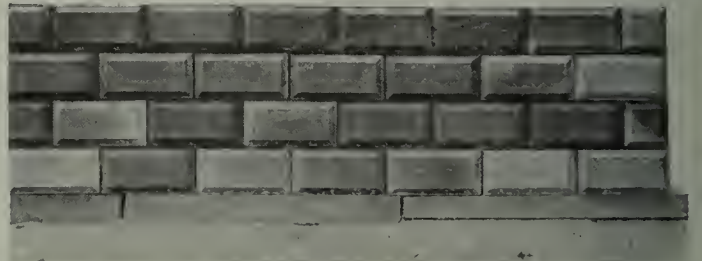
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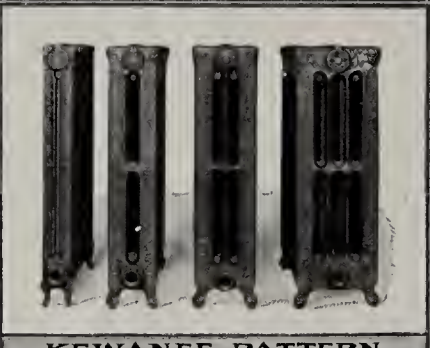
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ROBERT CRAIK McLEAN, EDITOR.

BUILDING OPERATIONS FOR JANUARY.

Official reports from over fifty representative cities throughout the country, compiled by the American Contractor, show that building operations are being carried on to a decidedly greater extent than is usual at this season of the year. That the unusually open weather which has thus far prevailed has had something to do with this unprecedented activity, must be admitted; might indeed go far towards explaining the highly gratifying conditions at present prevailing, were it not for the circumstance that the recent general average of gains over the corresponding months of the preceding year have been for a long time substantially maintained. The logical conclusion is that the present construction movement rests upon a very substantial foundation and is almost certain to be carried forward, during the present year at least.

Of the entire list of cities tabulated, only nine show a decrease, as compared with January, 1905, and but one of these is in the first class. On the other hand, seventeen cities show an increase of more than 100 per cent. These cities, and the percentage of the gains, are: Atlanta, 109; Cleveland, 537; Chattanooga, 284; Detroit, 263; Duluth, 113; Hartford, 924; Minneapolis, 164; Nashville, 119; Omaha, 349; Paterson, 141; Pittsburgh, 264; St. Paul, 117; Syracuse, 230; Topeka, 307; Toledo, 147; Wilmington, Del., 158; Worcester, 216. New York shows a gain of 44 per cent; Chicago, 51; Philadelphia, 73; St. Louis, 74 and Kansas City, 97. As plans for spring operations are now being drawn, it seems almost certain that this splendid record will be maintained during the remainder of the winter.

A MOUNTAIN OF PURE CLAY.

In the history of brick-making in the United States the element of deleterious matter in the clay has always been a large factor in the complete production, and many well organized plants and persistent effort have failed because organic or other foreign matter made the brick deteriorate, discolor, or show structural weakness after it was made and placed in the wall. This has been particularly true of pressed brick and in the search for proper clays some manufacturers have mined to a considerable depth to procure a pure material.

In our last issue a general sketch of the brick possibilities of North Dakota was given, which in some degree indicated the growth of the industry in that state. The most remarkable deposit of pure clay, however is found at Hebron in that state, and the works there in consequence stand alone among the brick plants of the United States, in that, instead of a deposit, the clay bank forms a ridge, of seemingly volcanic origin, and is composed of clay that bears upwards of forty per cent of aluminum and a sufficient quantity of silica to make it adaptable to the finest and most geometrical pressed brick, beside enamelled and fire brick, or utensils for retort purposes.

The works at Hebron stand at the foot of an incline. At the top is the clay bank over one hundred feet in height, part of which is shown in the photograph. Between the clay bank and the



Part of clay bank at Hebron, N. D.

works is a coal mine producing a fine grade of soft coal, and both these products are carried to the works by gravity, a combination of material and fuel with a minimum cost of transportation that is ideal. But the special advantage, particularly to the people of the Northwest, is the purity of the product and its comparatively low cost, so that pressed brick fronts and enamelled brick wainscoting and light-shafts can be calculated upon in estimates of buildings in remote towns and cities, where heretofore the original cost and the transportation made both prohibitive. The increasing cost of lumber and the growing desire of the people to build permanent structures have turned the attention of architects to the possibilities of brick construction, and it is fortunate that from the inexhaustible clay banks of the Hebron company, the demands for a first-class pressed brick can be supplied for many years.

The product of the Hebron yards and that of one or two others of which note will be made in the future, will be distributed by the Northwestern Brick Supply Company, of Minneapolis, under the management of Mr. Chas. S. Englebrecht. The long experience of Mr. Englebrecht in the brick business and the high estimation in which both his genial personality and his talents are held by architects throughout the country, assure the profession that the difficulties of securing perfect brick are past, and orders for brick of whatever form or color called for in their designs, will be met by this company with intelligence and promptness.

THE TURNBULL UNIVERSAL WINDOW.

CONVENIENCE in cleaning windows has exercised the ingenuity of experts for many years, and the many difficulties in the way of producing a method at once simple and practical seem



to have been overcome in the latest invention, known as the Turnbull Universal Window. While it is air, water, and dust proof and can be made of sheet steel as well as of wood, the facility with which the glass can be cleaned from the inside of the room gives it that added merit that is not approached by any other on the market. The window sashes slide up and down in the frame beside opening and closing on hinges like a door, and in fact, the Turnbull Universal Window is cheap, durable and in every way practical. The accompanying cut exhibits the top sash lowered and the bottom opened for cleaning showing that both the

sliding and opening action can be used simultaneously. It is manufactured by Turnbull & Company, of Chicago.

GROWTH IN TRAVEL TO CUBAN POINTS.

A CONFERENCE of railroad and steamship men, recently held in Chicago, with reference to increasing commerce between the United States and Cuba, has brought the attention of the public again to the importance of Cuba as a factor in the future commercial interests of this country. The dispatch from Chicago says:

"The conference is entirely with reference to Cuban trade. Coming as it does so soon after the inauguration of new Havana Limited service between Chicago and Havana by the Chicago & Alton, Mobile & Ohio, and Munson Steamship Line, the conference is regarded as important to future trade between the two countries."

In respect to the passenger business, the Alton road has arranged to care for the public with their special weekly train to Havana. The Alton's service is by way of the Mobile & Ohio from St. Louis to Mobile, and from there by water to Havana. This special train passes south-bound every Friday and lands passengers in Havana at sunrise Monday.

STYLE IN DECORATION.

"WHAT style shall we adopt?" Style! Says a practical decorator, what have we to do with this, if by it is meant the method adopted in each of the well defined periods dating backward to the time of the early Egyptians.

When a painter begins a portrait he does not consider whether he will use the background favored by Lely, Kneller, Reynolds or Whistler; he selects the one best suited to the subject in hand. The sooner we get away from the "classic styles" the sooner will we arrive at a rational and artistic method of decoration. You will not succeed in this by diligently cribbing from old text books of design. Rely on your own instinct and experience, and remember that you are dealing with 20th century houses and people, and not such as existed hundreds of

years ago. A suggestion for the hall. Make it cosy! it is near the street, has less supplied heat than other parts of the house; it is first to welcome the visitor, a warm feeling here is therefore a desideratum. Divide the walls into panels up to the level of the door heads by 4 inch straps, stained pea-cock green, surmounted by a broader strap with a narrow shelf on top. Fill in the panels with Fab-Ri-Ko-Na, No. 311, a rose color, delightful when placed in contrast with this green, and with a deep, white frieze, unadorned, or enriched with a simple stencil placed directly above each panel. If the hall be long and sufficiently wide an easy and effective method of improvement is to erect a simple, wooden screen at a convenient point, by using upright and cross square posts, leaving the center opening sufficiently wide for all purposes. A green carpet with touches of rose color; the furniture stained green, or dark oak; with metal fittings of antique copper, complete the scheme. The panelling terminating with the limits of the hall, admits of the staircase being treated either in similar, or in different sympathetic colors.

PHILADELPHIA CAPITOL BRONZE DOORS.

THE "Peoples Portal," the massive bronze doors, designed by Architect Joseph M. Huston, of Philadelphia, for the main entrance to the state capitol, of Pennsylvania, were hung recently by a force of men from the Henry Bonnard Bronze Company, of New York, by which they were cast. These doors are similar in design to those at the entrances to the north and south wings, except that they are most elaborate and about twice the size. They cost \$60,000 and are regarded by Mr. Huston as among the finest pieces of bronze work in this country. The rooms and corridors of the capitol are nearly finished and the ornamental work is now being set. The grand stairway in the corridor at the main entrance has been set, but none of the railing is in place. The contract between George E. Payne & Co., of Philadelphia, and the capitol commission called for the building to be completed by January 1, 1906, when the life of the commission expired, but it was apparent the building would not be finished by that time. Some of the departments may occupy their new quarters in one month if they want to move in, but the heads prefer to wait now until spring. Then the decorations will be complete and the building will practically be finished throughout and ready to furnish.

CONCRETE PILING AT NEW ORLEANS.

THE new building of the Gulf Bag Company at Notre Dame and Commerce streets at New Orleans is attracting interest on the part of local architects and builders, as it marks a new departure in the use of construction material for the foundation of large buildings. Instead of using wooden piles for the foundation, the Gulf Bag Company is introducing what is known as concrete piles, the first attempt of the kind ever made in New Orleans. The experiment will be watched with interest, in view of the large number of skyscrapers to be erected in the near future, and the importance of securing a stable foundation at the least cost of time, money and labor.

Concrete piling is by no means a new thing in the United States, but is new in New Orleans. The United States government, after rigid tests, adopted it for the foundation of the Naval Academy at Annapolis.

There are two methods of using this piling, one known as the jetting method; the other as the pile core method. The pile core method is the one in use at the Gulf Bag Company's plant.

Its features are a collapsible steel pile core, conical in shape, incased in a thin, tight-fitting metal shell. The core and shell are driven into the ground by means of a pile-driver (preferably fitted with a steam hammer). The core is so constructed that when the desired depth has been reached it is collapsed and loses contact with the shell, so that it can be easily with-

drawn leaving the shell or casing in the ground to act as a mold or form for the concrete and to prevent the admixture of extraneous matter. When the core is withdrawn the shell or casing is filled with carefully mixed Portland cement concrete, which is thoroughly tamped during the filling process.

The rapidity with which this work may be done is one of its attractive features. Under favorable conditions fifteen twenty-foot, concrete piles have been put in within two and one-half hours, and in moderately hard driving, requiring from 400 to 500 blows of a No. 2 Vulcan steam hammer, thirty-seven twenty-foot piles have been put in in one day with a single driver.

While the cost per foot is greater than in a wooden pile, it is claimed that this is more than offset by the smaller number of concrete piles necessary to carry a given load, one concrete pile being computed to equal in carrying capacity three wooden piles of the same length. Another point in favor of concrete is the great saving experienced in excavation and masonry.

NOTES OF INTEREST TO ARCHITECTS.

THE demand for copies which exhausted the September edition of the "Cortright Metal Advocate," which contained the popular article "Keep the Final Cost in Sight," can now be supplied by the Cortright Company.

"A SHORT Study In Smoke" is a tract issued by those "smoke missionaries," the American Artificial Stone Co., of New Britain, Connecticut, who make all kinds of chimney caps that aid ventilation. On the principle that a cent of prevention is worth a dollar of cure they preach the gospel of clean chimneys and the prevention of dampness in them, the source of nine-tenths of chimney degeneracy.

HARRY N. FOWLER, who for the past nine years has been well and favorably known to the plumbing trade of the Twin Cities and the Northwest, has been elected president of the Fowler Brass Works, of Chicago, which manufactures high grade plumbers' brass goods, including all of the O'Brien specialties. In his new and larger field his activities will bring him into still further acquaintance with architects and plumbers and increase the already large number of those to whom his advice and knowledge on the subject of plumbing specialties has become valuable.

THE Morrean Gas Fixture Manufacturing Company of Cleveland, has issued an illustrated catalogue showing a small portion of their latest designs in the line of artistic gas, combination and electric light fixtures. While the illustrations are half-tone and do not show the beautiful, iridescent effects of some of these exquisite samples, or the delicate tracery of the metal work or beaded fringes on some of the designs, it is rare that so varied an assortment of totally correct and appropriate designs in lighting fixtures are presented to the consumer as these shown by this celebrated Cleveland house. The photographic work, which in this class of subject is difficult to a degree, is most commendable and should be credited with much of the excellence of the pamphlet.

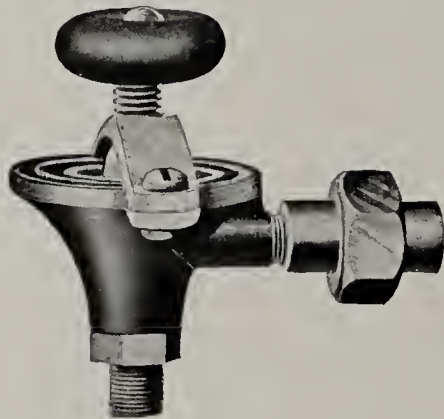
It is always interesting to architects in letting their heating, plumbing, lighting and fixture contracts to obtain the services of those who have an artistic conception of fixture designing as well as a scientific knowledge of heating and plumbing, so that their requirements can be carried out in harmony with their interior designs. This is one of the features that have given a large proportion of the heating as well as the gas and electrical lighting trade of the Northwest to M. J. O'Neil, of Minneapolis. In that city the superior work of this firm is seen in the residence of E. L. Carpenter, in which both the heating and plumbing was placed by this firm. In that of J. B. Hudson, a scientific design and economically constructed heating plant was recently placed. In the 43 room apartment building of George Harrison, all the plumbing was placed by this firm. In thus making a specialty of taking care of the heating, plumb-

ing and lighting of a building, the firm of M. J. O'Neil have lightened the labors of the architect in concentrating the interior fittings in one contract.

A STRONG competitor with tin, according to the manufacturers, is found in Wright's Flexible Roofing, both in price and lasting qualities. However this may be, this flexible roofing stands alone on its merits as a secure, permanent and corrosion-resisting material, with the advantages that it can be applied by any workman of sufficient intelligence to do it properly. It is made in four thicknesses, which makes it serviceable for a large variety of roofs, and is put up in rolls, each containing enough to cover two squares allowing for a two inch lap. The caps, rails and cement for its application are neatly packed with each roll. It is not only a permanent roofing material for general use but is a damp-proof lining for farm buildings, subways, tunnels, etc., and being impervious to alkali fumes is a favorite roofing for factory plants.

"ARTISTIC Metal Ceilings" is the title of the elaborately illustrated catalogue issued by the Milwaukee Corrugating Company. Until one examines the many designs, which are reproduced in half-tone it is hard to realize the extent to which this industry has been developed and the many and varied forms which metal takes in the covering of ceilings and the production of panels and wainscoting. It is permanent and fire-preventing, aside from its fitness for correct ceiling design. The photography shown in this work is most commendable, for the photographer finds no more difficult subject than these semi-flat surfaces and it is hoped that the publishers realized that fact and the perfectness of the photographer's work when he rendered his bill, for they have obtained exceptional service. The pamphlet thus shows the practice of this concern and argues that one who would give such attention to the detail of illustration would be satisfied with nothing short of perfection in the executed work.

THE K-M-C Manuel Retarder, (*Morgan Patents*) is a new device in connection with K. M. C. vacuum system of heating, and is used on the return end of the radiator which permits a free flow of air from the pipes and radiators to the



air line, but offers a resistance to the passage of steam or water. It is used instead of the so-called vacuum air valves and is far more practical and successful. It has no stuffing box or packing and its operation is due to the movement of a disc of Helmut metal. A slight movement of the wheel opens and closes the retarder. It is

also self-cleaning and is used on radiators which are provided with valves; thus, by closing the retarder and the valve, the radiator can be completely isolated from the rest of the system.

THE November number of "For California," published by The California Promotion Committee, is devoted to the forest and lumbering industry of the State of California, and is one of the best numbers issued by the Committee. United States Forester, Gifford Pinchot, than whom there is no greater authority on the timber interests of the country, contributes an article on the objects of forest reserves, and shows the great good that is done to the State by the United States government by means of the National Forest Reserves. Following in the same line is an article by E. T. Allen, State Forester, who talks of the combination of interests of private owners and the State. Clarence E. Edwards has an article on the "Pine Industry of the State" and George O. Brehm tells of the use of eucalyptus as a hardwood. The pioneer lumberman, E. C.

Williams, gives an interesting article on redwood and J. F. Nash tells of scientific lumbering in contradistinction to the old style of cutting forests.

A BROCHURE on "Natural Ventilation," elaborately illustrated and of general typographical excellence, is issued by the National Ventilating Company, of New York. It takes up the subject practically and shows why ventilation is the basis of health and also that none but tried and standard systems should be installed. It develops the theme from the insidious effects of impure air through to the financial value of well-ventilated plants where the oxygen breathed by employes has much to do with the quantity and quality of work performed, and continuing gives an exposition of the evils of artificial ventilation and of the theory and practice of natural ventilation as practiced by the National Company in all classes of business structures and residences. It is a work that every architect should have at hand for reference, and contains matter not generally accessible on the general subject of ventilation.

The Ludowici Roofing Tile Company and the Celadon ing corporation will be known as the Ludowici-Celadon Company, officers for which will be announced in the near future. This consolidation brings into one company the two largest roofing tile manufacturers in the country—leaders in their product and for many years fierce rivals. The united strength of the two organizations unquestionably exceeds the resources of all the other roofing tile concerns in the United States combined. It makes a formidable aggregation of assets, plants and salesmen, with immeasurable facilities for the production of clay roofing tiles and equal facilities for marketing its ware. The maintenance of four large factories—at Chicago Heights, Ill., New Lexington, O., Ludowici, Ga., and Alfred, N. Y., will prove of vast importance in the rapid distribution of material, and at the same time enable the Ludowici-Celadon Company to meet architects' and engineers' specifications with any quantity of roofing tiles, of any shape, in any color, at any time.

G. A. YOKAM has succeeded Mr. James McAlear, representing the Automatic Heating Co., "The Paul System" in the Northwest, with offices at 530 Endicott building, St. Paul. Mr. Yokam is calling on and getting acquainted with the architects of the Twin Cities as fast as time will permit. The Automatic Heating Co. have an excellent engineering department and make the heating plans for some of the largest contracts in the country. The Paul System is now installed in many of the large office buildings in the Northwest, also in the Iowa, North Dakota and Minnesota State Capitol buildings, as well as many of the finest residences and there is a good word for the Paul System wherever it is used. Mr. McAlear has taken over the Chicago office where he has charge of the entire west. Mr. Yokam has been with the W. H. Mullins Co., of Salem, Ohio, representing the architectural and statuary department of entire North America for the past five years. He has been a resident of Minneapolis for some time and promises to be a good addition to "The Paul System" corps of representatives.

At the studio of Herman Atkins MacNeil, at College Point, L. I., the finishing touches are being applied to the model group that is to decorate a statue of the late president, William McKinley, which when completed, will be placed in a prominent place in front of the state capitol at Columbus, O. The model of the statue was shipped some time ago to be cast in bronze. The figure is nine feet, five inches high, and will be placed on a pedestal twelve feet high. Close to the figure of the martyred president will be two groups representing "Prosperity" and "Peace." The monument and groups will cover 100 feet of ground and will excel any monument in the state in cost and in its artistic character. The \$50,000 was contributed principally by the citizens of Columbus, O. The most imposing of the groups is symbolic of the work of McKinley as pro-

ductor of American labor in championing a protective tariff. This is designated "Labor." The other groups will represent achievements that were notable in the life of McKinley. The artist has been over two years on the work.

POSSIBILITIES OF WASHINGTON FIR.

WHILE to the lumberman of the East, the quality as well as the quantity of Washington fir has long been known, and its use spreading, not only in America but throughout the world, its development into the finer uses of lumber, that of interior finish, has but recently been experimented with, and the results are so generally marvelous, that architects are wont to claim "Missouri" citizenship, when they are told of the wonderful beauty of the finished wood, and the variety of shades and effects that can be procured through the skilled manipulation of the finisher. At Minneapolis, the great lumber center of the United States, the request for demonstration of these possibilities by the architects of the Twin Cities became so great that recently Mr. C. M. Stafford, the well-known lumberman, proposed to his associates in Washington, the Pacific Coast Lumber Manufacturers' Association, that a permanent exhibit of the finishing possibilities of the fir, red cedar and spruce of that locality be established in Minneapolis. It was shown to these Washington lumbermen, that while their activities had placed the lumber in the world's market, as lumber, the consumer, which is in reality, the architect, as the designer for, and adviser of, his client, the public, was still using all kinds of hardwoods and pines and staining them, to reach effects which could be procured in much richer form and with a minimum of labor and less cost than most woods, from these Washington woods. His argument was, that while some individual architects had investigated and found this to be true, the mass of the profession was still in doubt. Some had inspected small samples but none had ever made a practical study of it, and the general ignorance of the profession concerning this lumber is shown by the absurdity of such questions as; "If fir is used for flooring, do the splinters break off?" "Does fir rot much more easily than yellow pine and will it stand moisture?" "Is fir more shaly than eastern hemlock?" "Can fir be used as a finish lumber?" "Is fir as strong as Norway pine?" "Can they get enough fir finish out of the logs to supply the demand if we introduce it?" "It is understood to be knotty like Wisconsin tamarack." "How many carloads would it be necessary to order to obtain enough of one particular grade to finish a house?" etc., etc. Co-operating with other sales' representatives of coast lumber such as Charles Van Pelt, J. P. Lansing, Harrison Foster, A. W. King, D. H. McMullen, James G. Wallace, F. W. Shepard, W. I. Carpenter, W. W. Vawter and others. The coast people appointed a committee, consisting of C. F. White, I. H. Bloedel and Fred Jackson, who produced a fund to carry on the work, and a local committee consisting of C. M. Stafford, J. P. Lansing and J. G. Wallace who at once set to work to arrange a permanent exhibit.

The work of preparing this exhibit appears to have been largely in the hands of Mr. Stafford, and if so, too much credit cannot be given him, for he has accomplished that which at once places Washington fir among the finishing woods of the world, not as with some woods, like walnut and birch to be supplanted by others as soon as the fad or style has changed, but as a generally accepted material for all kinds of finish in residences and other palaces when wood is used as a beautifying construction.

With the endorsement and cordial backing of the coast lumbermen premises on the first floor of the Lumber Exchange building at Minneapolis the best location possible for such an exhibit were permanently leased. A leading interior finishing concern, that of W. A. French, of St. Paul, was engaged to design and fit up the interior, the firm's designer, Mr. Webber, used his best skill in the design and manipulation of the woods to

be exhibited, and the result is shown in Mr. Brush's excellent photograph, which was taken under the greatest photographic difficulties and could not be produced at all except by such an artist in flash-light photography and he entering into the beautiful, homelike and yet wholly practical and adequate work with enthusiasm to picture as well as a camera can, the as well as artistic interior produced by these exquisitely finished samples of Washington fir, spruce and red cedar.

The possibilities for this lumber are so clearly shown in this exhibit that the campaign of education should go on. A like exhibit should be established in Chicago and New York, and while it will be difficult to get men with equal knowledge of, and enthusiasm for, the uses of these coast products, and who will give so much of their time to bringing it before arch-

to his clients remain uniformed by failing to inspect this Minneapolis exhibit. A trip from Chicago or St. Louis or other cities for this purpose, preparatory to designing a residence upon which any considerable amount will be expended being almost a positive necessity.

The exhibition rooms are ready of access to everyone at all interested in the ornamental and structural uses of lumber. The exhibit is a masterpiece of the wood worker's craft and is a sufficient proof that fir, red cedar and spruce lumber are adapted to a most handsome finish. These lumbers in their plainer uses for siding, flooring, sheathing, roofing, joists, shingles and the many other forms of this class into which they are manufactured are shown. The exhibit comprehends every possible use to which lumber can be put and clearly



VIEW OF EXHIBITION ROOMS

itects, the comparatively small cost involved would be so insignificant as to be unworthy of mention compared with the results that would accrue. Architects do not know that they can obtain flooring, for instance, of equal grade with the best yellow pine eleven dollars cheaper, or ceiling four dollars cheaper, and when the fact of fir being entirely free from knots and blemishes, made by sap and other faults too often a detriment to the best yellow pine, becomes known, the demand for these woods will increase manifold. In fact where now the trade in the East is of the nature of samples, it will become definitely and permanently strong.

A description of the many finishes and forms of design of which this wood is susceptible is not attempted, because no description can be adequate, but no architect can in justice

demonstrates that these woods are in the market to meet every requirement of every branch of the lumber trade. An inspection of this exhibit carries the conviction that this association of manufacturers produce material for the heaviest and the lightest construction and that in the form of finish the most beautiful effects can be easily and economically obtained. The room thus fitted up is at all hours open for the inspection of the public. It affords a convenient meeting place for transient lumbermen in the city. A public stenographer and other appointments calculated to meet the passing wants of the traveler away from his office are at the command of visitors. It is one of the show places of the city and worthy of much study on the part of the lumberman, the architect, the contractor and the prospective home builder. There are no special hours for visitors,

no rules or regulations for callers to observe, but the doors are open wide and everybody is invited to make free use of the conveniences there afforded.

The entrance doors of fir with large panels of beveled plate glass is the first suggestion of the quiet beauty which pervades the entire work. They open into a reception room wainscoated and ceiled with stained fir. The finish is suggestive of soft seal. The ceiling beams and column effects are quaint and lend dignity to the picture. The panels are a startling revelation of the beautiful and varied effects which are obtained from the slash grain sawed fir. The figure is quite unlike that obtained in any other wood and therefore has an individuality of its own. When one considers the many centuries of age in the ordinary fir tree it is impossible to keep back the feeling that the observer is not entering a chamber of an ancient palace built by some unknown people who have long since passed into oblivion, leaving this as a quiet testimonial of their high conception of art. The wall panels above the wainscoat are painted and decorated in colors which harmonize and blend with the mellow radiance of the wood. Easy chairs, a sumptuous settee, a massive table and oriental rugs are the appropriate furnishings of this apartment.

Adjoining the reception room to the right is the conventional den or cosy corner which forms an important feature in every home today. Here red cedar is used for the finish ma-

terial. The grain is delicate and imparts to the room a restful atmosphere. The fire-place and mantel is of course the important appointment. It is of plain design, simple yet effective. The ceiling of red cedar and the wainscoating of the same lumber carry out in color and design the effect produced in the reception room. In this cosy corner are found comfortable chairs upholstered in tapestry. Rugs are placed before the hearth and complete the snug picture. This room is available and always at the disposal of those who may desire a secluded place to talk business. Directly opposite this cosy corner and to the left as you enter the reception room is a nook finished in spruce. This space is furnished with a library table, a desk and chairs and the usual appointments of an office. Passing on the visitor enters the space given over to the commercial exhibit of fir, red cedar and spruce lumber. This is finished in fir. Here are shown the different patterns and grades in which Washington lumber is manufactured and placed on the market. The samples are of sufficient number in each variety to give a correct idea of just what kind of stock is furnished upon order from the mills which produce it. They also show the exact condition and appearance of the stock when shipped in the car or purchased in the retail yard. There is a harmony of design throughout the entire work and every turn has a new surprise in its showing of what can be done with this Washington fir, spruce and red cedar.

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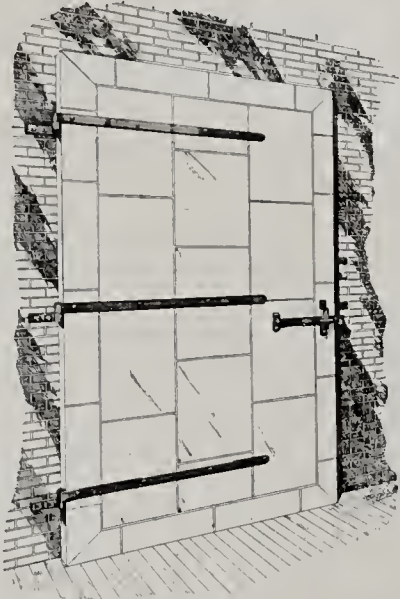
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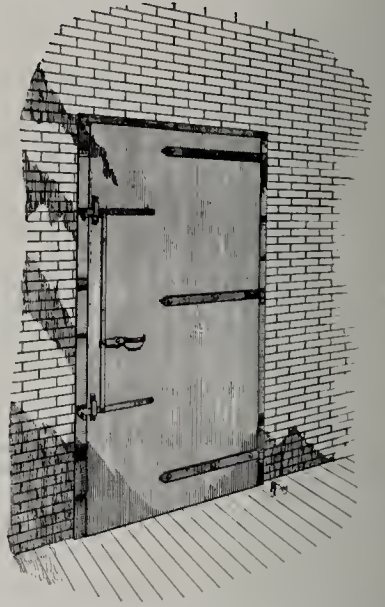


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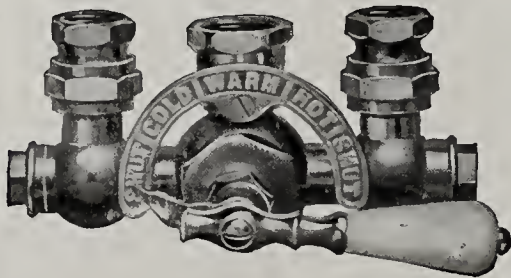
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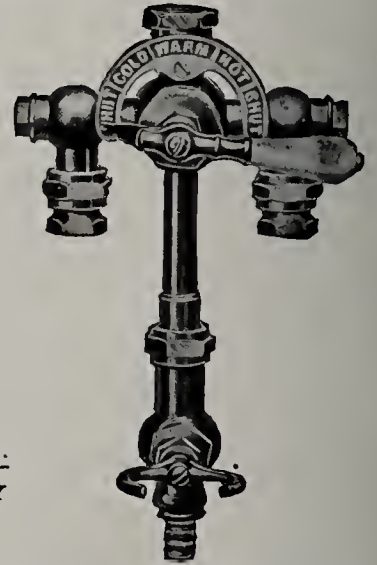
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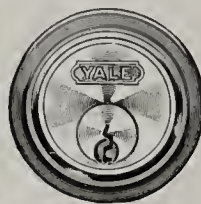
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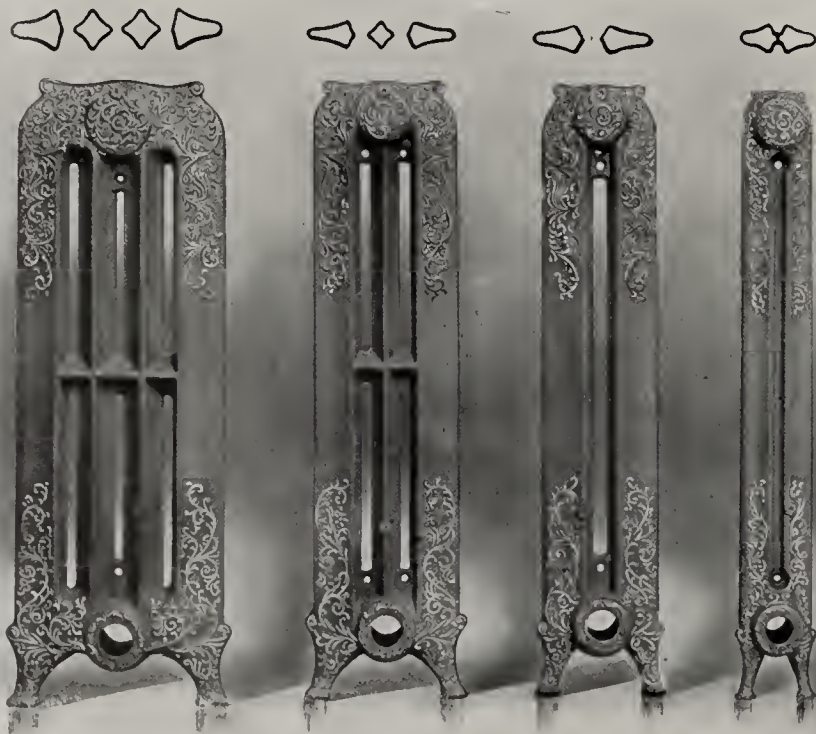
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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

ARCHITECTURAL LEAGUE OF AMERICA

(ORGANIZED 1899.)

Architectural League of New York.	St. Louis Architectural Club
T Square Club, Philadelphia.	Washington Architectural Club.
Cleveland Architectural Club.	Architect's Club, U. of Ill.
Toronto Architectural Club.	Toledo Architectural Club.
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Chicago Municipal Art League Competition

The Municipal Art League of Chicago is offering prizes of \$100, \$75, and \$50, for designs of practicable one-light electric lamp posts for streets or parks, the competition to close February 27th. As the designs will be marked with a cipher and the maker's name in a separate envelope, this should be an interesting competition. The jury of awards includes Dwight Heald Perkins, Louis J. Millet and Julia Bracken, the sculptor. While it seems somewhat trivial for an art society of the importance of this Municipal Art League to deal with so slight a matter as lamp posts, it indicates a method of taking one thing at a time and doing it thoroughly that is not only commendable but brings results, and seems to be the only correct way to regulate matters of civic art.

Chicago's Complicated Civic Problem

No city in the United States has the complicated civic problem confronting it that is presented to the city of Chicago. Her enormous growth has been so rapid that no one stops to consider what the next fifty years will mean in the city's growth history, or, if it is considered, the immediate necessity takes up both the money and energy available at any one time. As the matter stands today, with a prospect which is almost a surety of a population of seven millions of people in the next twenty-five years, the sewage system is based on that of a city of fifty thousand; commerce, in the size as well as number of vessels, has long outgrown the river; the population already makes stationary bridges an imperative necessity; the transportation requirements have gone beyond the power of surface or elevated roads, and a system of subways is the only solution, while trunk lines with inadequate terminals and no adequate connection, and the rapidly increasing interurban lines, all crowd into one urgent call for amelioration. The worst phase of the entire situation is that there is not one citizen or body of citizens wise enough or unselfish enough to take

the entire situation as one problem, and work it out for the benefit of the people of the future without regard to the private interests of the individual, and establish a plan that is broad enough to cover all the pressing requirements, and practical enough to win the public from the municipal ownership fallacy, and obtain its support to a plan of reconstruction and advancement along approved scientific lines. Chicago will be the greatest city in the world from a standpoint of public convenience and civic grandeur, or she will be a "Chinatown" of clashing interests and confusion. There is no middle course for that city, and her present condition should be a warning to every other city that expects any considerable growth in population.

Reason
for
Apartment House
Increase

The increased building of apartment houses is one of the notable changes noticed in the architectural outlook.

While they preponderate in the large cities they also spring up in the most exclusive suburbs and are now occupied by those whose wealth heretofore has permitted palatial residences with broad surroundings, lawns and gardens, until the designing of apartment buildings of the more expensive type is the most conspicuous feature in architectural activities in most cities. There may be several reasons for this, but the principal one is probably the tendency, particularly in our northern climate, to desert the city during the hot months and the desire for warm and more or less compact surroundings in the winter season. While we of the new world are often charged with aping the customs of the old, it is perhaps because the old world has solved the problems that confronts the newer civilization, and the conditions are forced on us as in the past it has been found suitable with them.

Three Epochs
in
Architectural
Competition

Competition, which like some other disagreeable things, has been with us always, and probably always will be a part of architectural practice, has at three different times, received a qualified approval by the profession. The first is lost in the legendary dawn of the American Institute of Architects, when a committee was appointed to consider whether it were proper or decorous to discuss the subject of competitions in a regular meeting of the Institute. It is understood that the committee reported that it was. The second epoch was marked some twenty years ago by the report of Mr. Burn-

ham as chairman of the committee on competitions of the Western Association of Architects, preliminary to the announcement of that code which has been the basis of competition codes ever since, in which that gentleman summed up the entire matter in saying "competitions are a necessary evil and must be recognized." At the last convention of the Institute, Mr. Gilbert showed that this attitude toward competitions had not changed, when he paraphrased the remark of a celebrated general who epitomized war, and applied it to competitions. The entire trouble with competitions is that there are always members of the profession who look at architectural practice as a trade rather than a profession, and allow tradesmen to induce them to compete on a trade basis. And the singular fact is that the more professional the architect is the greater are his trade results, both in competitions and in all other lines of practice.

Proper
Consideration
of Site
With Design

In preparation for the erection of a public library building for the city of Brooklyn, recently the mayor showed an enlightenment that is rare as it should be common, to public officials. Instead of turning the matter over to a library board, who in turn buys the lot it can obtain cheapest or is owned by some favored real estate man, the question of site was first carefully considered. Professor A. D. F. Hamlin, of the Columbia University School of Architecture, having been called in, made certain recommendations. Then the firm of Carrere & Hastings was asked to report on the matter in detail. This they have done and their conclusions generally are that when any considerable building is considered, these concluding lines of the report should apply:

"In conclusion we beg respectfully to suggest that the designing of the library and the corresponding building on the opposite side of the entrance of the park on the one hand, and the remodeling of the plaza on the other, should not be treated, as has so often been done, as two separate and distinct problems, but rather as one single problem to be solved by the architect who is to design the buildings in collaboration with the landscape artist."

The inseparable relation which exists between the building and the surroundings is not sufficiently understood by the public or strongly enough urged by the profession, but even such a movement as this in Brooklyn is but a stepping stone to the more beneficial and permanent one of placing the growth of public utilities under the supervision of an art commission, not alone in the larger cities but in the towns throughout the country.

SOME ARCHITECTURAL SINS.

BY F. W. FITZPATRICK.



PROLIFIC field of endeavor for those who are striving for Cities Beautiful would be that of getting people to maintain their buildings as the latter were originally intended to be by their designers. There is a good movement on foot in many cities looking to the stopping of the craze for defacing walls and fences, sidewalks, trees and rocks with lurid advertisements. Go a step farther and try and get the people to shut down somewhat on the hideous signs that we see plastered all over our business structures, and Chicago is one of the worst sinners in the list.

Some slight consistence should be aimed at in the care particularly of public buildings. How often do we see a sometimes attractive building that had been provided a generation or two ago with rather handsome gas-lamps at the entrances, etc., now disfigured with the most primitive and makeshift appendages for electric light? Take, for instance, in Washington, this city where so much has been done and is being done for Art. There is the good old Treasury Building, as handsome a structure as was ever built. Some attempt has been made even to keep it nice. Secretary Shaw has had it cleaned by a new process and it looks as if the stone had but left the quarry, yet, at the four corners of the building, are stuck out bent rods, possibly broom-handles, from which are suspended four arc-light's by ropes that sway with every breeze. Why, a contractor would not rig up a more temporary or ugly affair for lighting a building if he had to rush it and work nights. By the way, those four lamps were placed there during the Spanish War, when some of the officials had extra guards put on and precautions taken to prevent a raid on the Treasury by, presumably, Spanish emissaries or sympathizers!

Go around any city and you will see the same sort of thing. Beautiful pedestals left beside entrances upon which it was intended that groups of statuary or great bronze lamps should stand, whose places are now taken by billboards, menu signs, barber poles, or other monstrosities. They ought to make a more strenuous effort to get their clients to complete the buildings in all their parts and accessories in the first instance or to take what money is available and do the best with that, leaving nothing to be done later on, which generally means never. Much can be done with a little determination.

There seems to be a rather poor outlook for the proper sanitation and the care of the health of the employes while work is being carried on at the Isthmus since the government does not seem to be able to cope with the difficulties attending the building of a college for the pick of its flock, as far as sanitation goes. The breaking out of diphtheria at Annapolis and in epidemic form is one of the worst slaps government experts have had in quite a while. The

buildings there are mostly new, exceedingly fine architecturally, and one should imagine that their sanitation ought to be perfect. They say that the fever may have been caused by so much excavating having been done for the buildings, and the hot weather. But surely those are conditions that can be successfully contended with in so limited an area. The territory is under the exclusive control of that military branch, the very highest military medical skill must be in charge of sanitation there and if the results are the best that service can obtain what may we expect at Panama with worse conditions, thousands of employes, and the great majority of them of a not very high order of intelligence?

But the same thing obtains all about us. We see fine buildings, costly buildings, important ones, going up all around us, some of them costing millions, yet their sanitation, their lighting, their minutae, and details are done in a slipshod, yes, an ignorant manner, and to the detriment of the health and well-being of their occupants. So even with the structures, how many beautiful, substantial granite exteriors clothe a skeleton that is rusting, rotting away, and, improperly protected, offering not the slightest resistance to even fatal damage by the most incipient blaze?

I often think of that in scanning the illustrations, particularly of residences, in architectural journals. One sees picture after picture of most artistic exteriors; but look at the plans. The stairs always open, with draughty, dirt-accumulating, fire-inviting wells. If you have an opportunity, go into those houses and you will see furnaces and ranges and fire-places so arranged as to invite fire. You will see that the joists and partitions are of wood and that not the slightest attempt has been made to cut off air spaces between joists and partitions and every effort, seemingly, has made to assure that in case of the slightest flame in basement or kitchen, it would be sure to be carried by induced drafts, to every corner of the house and up into the roof. One is apt to lose all patience with the average practitioner when he sees how the average house, and in fact, the average of all buildings, is built. How really little intelligent care, thought, or ability is brought to bear in the carrying out of the important details of general construction! Why, there are even yet architects enjoying a good practise who imagine that wood joists with iron girders and cast iron columns constitute a very acceptable form of fireproof construction! But what are you going to do about it except to keep hammering away "in press and pulpit" with "damnable reiterations" of fireproof lessons.

Chicago masons, contractors and the architects have joined forces in an effort to secure more rigid building departments, to place the blame for accidents on structures on the contractor and architect, and this move will, in one city at least, place it where it usually belongs, with the ineffecient, or dishonest building inspectors who either deliberately neglect their duties or work in the interest of the selfish owner.



THE ARCHITECTURAL LEAGUE OF AMERICA CONVENTION.

MEMORY NOTES BY A DELEGATE.*



THE seventh annual convention of the Architectural League of America, which was held in New York on January 31st and February 1st and 2d and was brought to a close by the annual dinner of the Architectural League of New York and the simultaneous opening of its twenty-first Annual Exhibition, was not only in point of attendance, but also in the interest manifested in the business transacted, the greatest of all that has been held so far. It was gratifying to observe the activity shown by the twenty subordinate clubs which were each represented by their one or more delegates who had all traveled long distances, and were in many instances making business sacrifices to be able to be present and lend assistance in so auspicious a task as the League has set out to perform in the advancement of its members in their life work.

The delegation was purely a national one, and represented at most every large city from the Atlantic to the Pacific coasts, with one representative from Canada, and was most royally entertained during their sojourn in New York by the three local organization members of the League, the Architectural League of New York; the Society of Sculptors and the Society of Mural Decorators. When the convention finally came to a close, everyone present joined in words of appreciation for the work performed by the board of directors as well as the chairmen of the various committees for the past year, and all were loud in their praise for the superb hospitality shown them by our eastern brothers whom superb cordiality and untiring attention to all the needs of their guests made this a memorable week in the recollection of all the delegates.

The first session of the convention was promptly called to order by President N. Max Dunning, of Chicago, who relinquished the chair to Mr. Dan Everett Waid, of New York as the unanimous choice for chairman of the conven-

tion, which duty was performed in this gentleman's customary manner of perfection throughout the entire convention, Mr. Albert E. Skeel of Cleveland acting as recording secretary for the convention. President Richard Howland Hunt, of the Architectural League of New York, then welcomed the visitors in a well formed and broad minded address in which he cautioned them of the omniscient requirements and vicissitudes of the profession in modern times and of the meager ability of individuals to accomplish its perfection.

Roll call of delegates was next in order and resulted in showing an attendance of one or more from each of the clubs, the department of architecture of the University of Illinois being represented by its entire senior class of eighteen under the genial leadership of Prof. Newton A. Wells; while the youngest club in the League had sent a delegation clear across the continent from San Francisco.

Messrs. Ernest J. Russell, of St. Louis and Julius Horder of New York, were then elected auditors to examine and report on the treasurer's accounts.

The reading of a communication from Richard E. Schmidt, of Chicago, vice-president of the League, was followed by several others from members unable to attend.

The annual report of Executive Board was read by President Dunning, and bore evidence of the healthy state of the League and to the rapid strides of advance which it has made under its retiring board of officers.

The report showed that during the year arrangements for free scholarships in the architectural department of Harvard University had been perfected and the League is now to receive three annually, to be bestowed upon its members; two to go to the best designs submitted in an annual competition for same, and the third to be awarded to the member passing the highest entrance examination. Two

*The Western Architect was the only Architectural Journal represented at the convention.

scholarships were awarded last year to Messrs. Frank Dillard and Eugene Plietscs, both of the St. Louis Architectural Club, and though the competition brought forth some good work, yet it was hardly as generally entered into as might be expected when the large membership of the League and the real great value of a scholarship in one of our best universities is taken account of. Let us hope that the future may bring forth a larger representation in these competitions, and as they are meant to benefit the younger element among us, we should seek to encourage and awaken an interest in them. No undue amount of elaboration of drawings or perfection in draftsmanship are required, and the man who is employed during the day and has only his spare time left to devote to this competition need not feel discouraged, as it is the conception of a clear idea in the solution of the problem that will count.

Our hope of the travelling scholarship will surely be realized in the near future, as the fund is nearly raised and satisfactory arrangements have been made for the continued publication of the Annual or Year Book, free of all expense to us, by the sale of which it is the intention that the scholarship may be maintained in the future. The programme for the first competition will soon be out and it is to be hoped that similar scholarships in painting and sculpture may be soon be added.

The Architectural Annual, the official publication of the league, containing a number of illustrations of the best work shown at the various club exhibitions, together with transcript of the papers read before the league will soon be out and should, on account of its intrinsic value to every architect and draftsman, find a ready market all over the country.

The report further recommends the acceptance of an invitation from the International Congress of Architects to send delegates to its convention which is to be held in London during the coming summer.

The treasurer's report was then read by the auditors and showed a substantial increase in funds and that after paying all obligations there was still a goodly balance left in the bank. The auditors' report was moved accepted and they discharged.

Under a special order of business an ammendment to the constitution was presented by J. P. Hynes, of Toronto, to the effect that non-professional clubs, such as the student organizations at our numerous universities, should be allowed a reduction in amount of their annual dues to the League. Inasmuch as the object of the League is primarily the advancement of architectural education, and as student bodies can be materially benefited by membership in the League, it was deemed that this inducement should be made them, and after urgent recommendations by Messrs. Llewellyn, Wells, Molitor and Kelsey, the ammendment was carried without a dissenting vote.

Promptly at 12 o'clock business was dispensed with and social functions reigned supreme. On this day we were the guests of the National Sculpture Society and the

event was a noteworthy one, inasmuch as it was an Exhibition, not of drawings but of the best recent work by prominent men in the three professions. Automobile conveyances were provided and our entire party, consisting of upwards of 100 delegates, were shown through the city's principal streets on a tour "down town." The Carnegie Music Hall, New York Yacht Club, Harvard Club, Bar Association, new City Library, Tiffany's and Gorham's new stores, the Knickerbocker Trust Co., were each visited in turn, and then arriving at Madison Square a lengthy stop was made to visit the new Appellate Court building and study its beautiful interior decorations and mural paintings, which were all gems of their kind. Here also a visit was paid to Dr. Parkhurst's new church which is now nearing completion, and a good opinion of its beautiful interior could be formed.

Again entering our carriages we were taken further on our journey, past the city's tallest skyscrapers, which now surround and overtop the venerable, old structures, such as Grace Church and old St. Paul's and Trinity, which with their sombre looking graveyards form a strange contrast to the noisy tumult all around them. Passing through old City Hall Park we next took a run through the city's great financial center, Nassau, Broad and Wall streets, where the comely old edifices of the United States Treasury is prettily contrasted by the more modern and monumentally stately Stock Exchange, then past the handsome Blair building on to what might rightly be called the city's most beautiful monumental structure, the new United States Custom House. Though still incomplete and without its sculptural adornments, it is nevertheless sufficiently finished to bear witness to its future splendor, in its beautiful proportion of mass and detail.

Arriving at Battery Park we were taken by ferry to St. Georges, where dinner was served at the Hotel Costellon. Here D. Everett Waid acted as toastmaster and toasts were responded to by Karl Bitter, Julius Harder, N. Max Dunning and others. President Cromwell, of the Borough of Richmond, welcomed us to Staten Island and gave some interesting statements about his work, of which he is justly proud.

Returning by ferry to Manhattan we were once more conducted through the ever busily thronged streets to our quarters in up-town hotels.

At the opening of the convention, reports of standing committees were read and approved as follows:

Committee on Education, by Newton A. Wells, chairman. This was a very comprehensive report, embracing the results of investigation into the curriculum of our leading colleges as well as the average of opinion of a number of the country's foremost practitioners on what value should be given different branches of study in a tabulation of "points." A table of "points" for each of the six largest architectural schools of the country, and also of the average of professional opinion added made this a very interesting report and one of inestimable value to all educators, as well

as to profession. The report was further augmented by a number of letters expressing personal opinions on the present methods of architectural instruction. The Committee on Publicity and Promotion, John Molito, chairman, next presented a very clear and concise report and deserving of further study, showing the relation of the League and its work to that of other organizations, together with some recommendations which were accepted with due enthusiasm.

The Committee on Current Club work, Charles D. Schneider, chairman, made a lengthy and very carefully prepared report, setting forth the more interesting of the many recent innovations in club work, all tending to keep up the interest in and promulgate the benefits of individual club meetings and full of good suggestions and summary findings that should be helpful to every club.

The Committee on Co-operation with A. I. A., E. J. Russell, chairman, made a satisfactory report on the work done during the past year in bringing about the recognition of our societies by the schools and profession throughout the country, and that it was greatly through this co-operation that the above mentioned scholarships were made possible.

The Committee on Civic Improvements, Frederick S. Lamb, chairman, set forth at length the many inquiries received by it from corporate towns and cities as well as from individuals in regard to suggestions as to how to improve present conditions, and also spoke of the good work done in arousing public enthusiasm in this commendable work.

Reports of special committees embraced the reports of delegates on their individual clubs and the work done by them during the past year followed. All of these clubs were shown to be in a healthy condition of activity, all having educational features of some kind, classes, ateliers and some of them maintaining their own travelling scholarships. Some have annual competitions for medals and other honors, some maintaining a scholarship in the French school. All of them keep up the periodical lecture and social nights and many new and novel features were reported.

After the conclusion of the morning's business, we were taken in charge by the Society of Mural Painters, who dined us at a nearby hotel, after which we were again invited to our seats in the autos and taken on a tour through the aristocratic residence sections of the city. Stopping first at the Mendelssohn Glee Club to view the handsome mural decorations in its auditorium, we next went into the church of the Paulist Fathers, an old building which has just been redecorated by La Farge and others, and which contains some very fine specimens of stained glass from the studios of La Farge, Tiffany and others. We next visited Grace Church and the Judson Memorial, and then passing through Washington Square, we entered Fifth Avenue. The first stop was made at the Church of Ascension, which contains some of the finest of modern leaded glass paintings, and also a beautiful painting of the Ascension by J. A. La Farge, and an elaborately carved altar and reredos, as

well as pulpit, all by noted artists. From here the procession of autos proceeded up Fifth Avenue to the new buildings of Tiffany's and Gorham's, both of which were visited and the many beauties of these two modern structures were fully enjoyed by us all. The tour then continued up Fifth Avenue through rows of palatial residences of millionaires, some of which were visited and proved to contain very interesting interiors. At the residence of Mr. Louis C. Tiffany, we were given all the liberties of the house and had the pleasure of seeing the famous den and studio, and met the artist himself. Refreshments were here served and all present informally moved a most hearty vote of thanks to our host. Next on the list was a visit to the building of the Board of Education where a most beautiful tapestry by C. Y. Turner was on exhibition. Our trip then took us on through Central Park and past the Lee monument and the R. M. Hunt Memorial, to the stupendous richly decorated club house of the University Club, one of those charming masterpieces of McKim, Mead & White's which was admired story by story, in which proved to be an hour well spent in point of architectural education. Then followed a visit to New York's most beautiful hotel, the famous St. Regis, which, though very lavish and extravagant in decoration, yet possesses that charm of taste and refinement which reflects credit to its designers, as well as upon the various artists whose exceptional talent has helped to make this hotel as world famous as it justly deserves being. After leaving here several other leading hosteleries were visited, and we were in all well repaid by seeing the many works of art in wall hangings and mural decorations of which these houses can boast.

The third day business session being an important one, occupied all day and a number of topics of keen interest to the League came up for discussion. The matter of creating the salaried position of permanent Corresponding Secretary as well as that of holding an annual exhibition in connection with the meeting of the League being the two foremost.

Next followed the election of president and when nominations were made, a rising vote was called for and everybody arose, save one man. It took the combining effort of four of us to lift this gentleman to his feet and amidst the din of applause, cheers and hurrahs, Mr. Ernest J. Russell, of St. Louis, was proclaimed as hero of the day. A speech was now in order and was called for by the impatient gathering, but the gentleman refused to gratify them, and aside from a very good story which he told later in the day, he has thus far maintained a stern silence.

Standing Committees were then appointed as follows:

President of League, E. J. Russell, Chemical Bldg., St. Louis.

Chairman Current Club Work, J. P. Hynes, Toronto

Chairman Education Committee, Newton A. Wells, Urbana.

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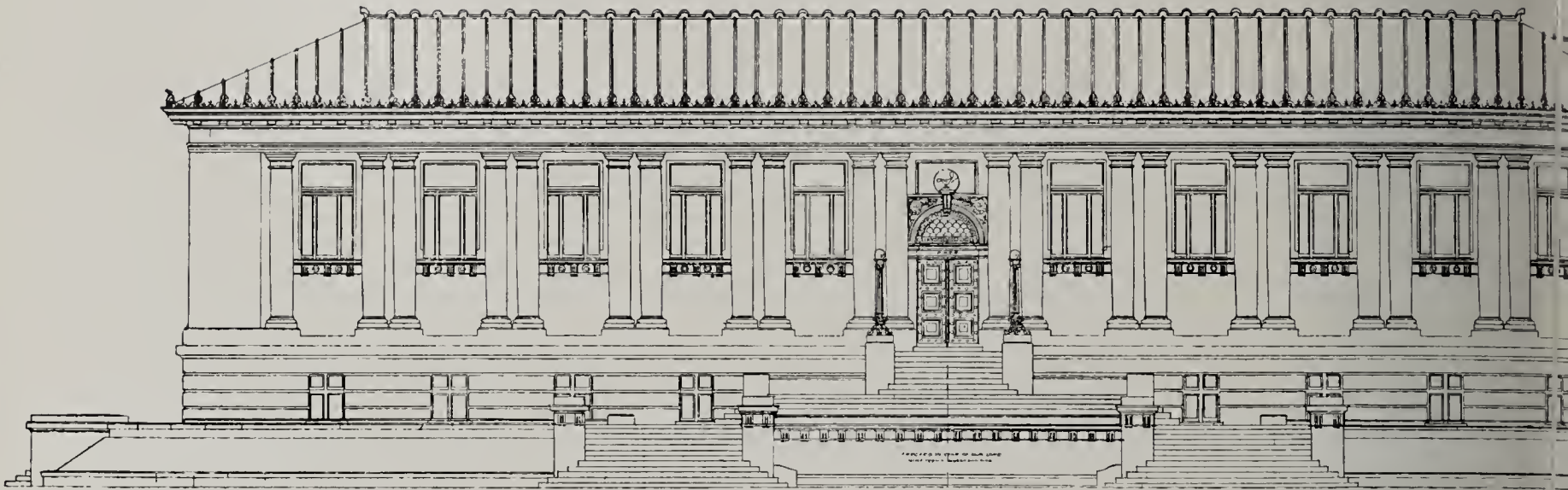
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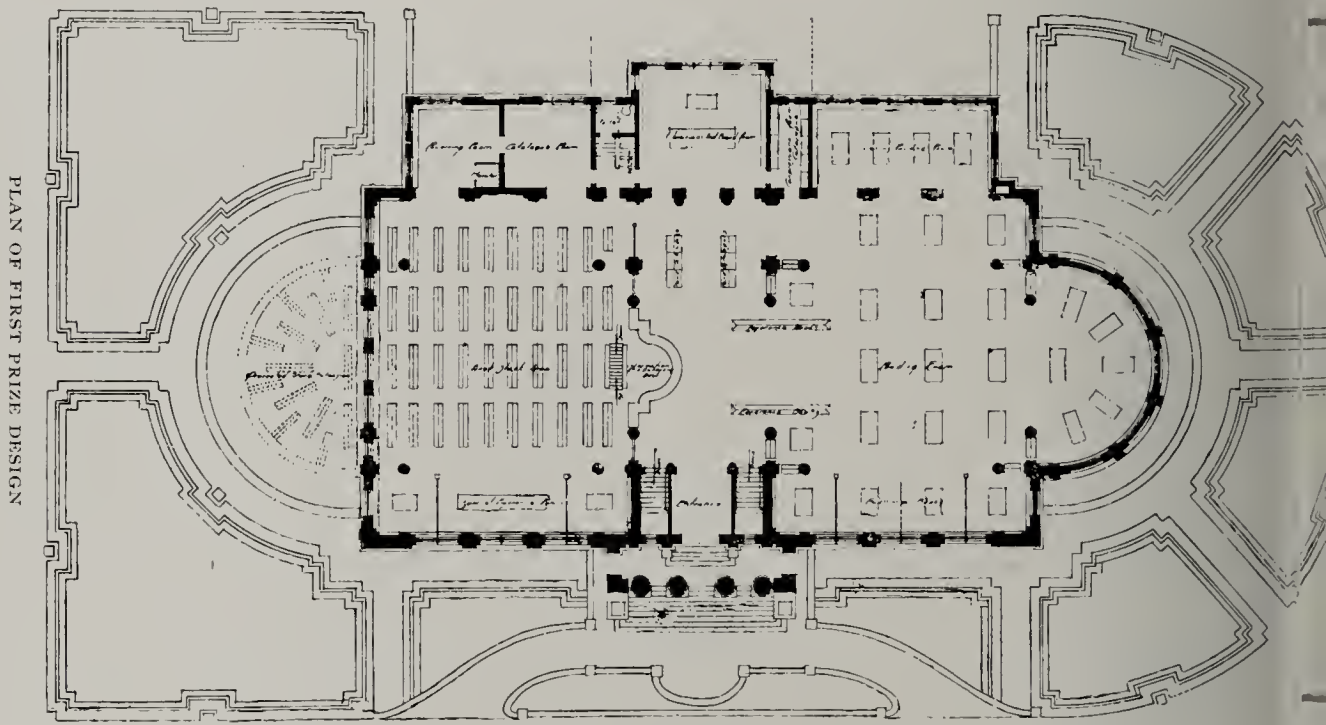


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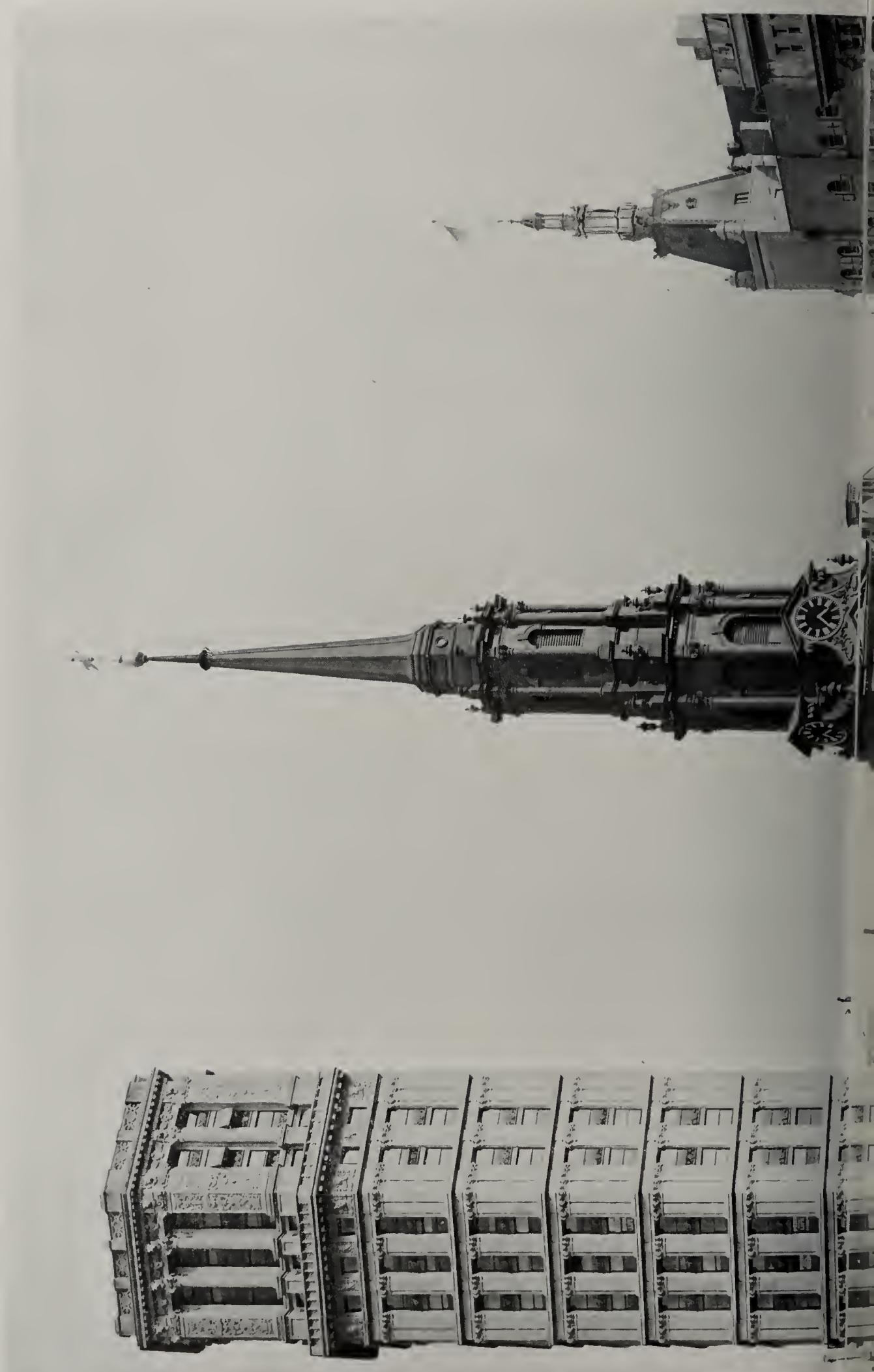


PLAN OF FIRST PRIZE DESIGN



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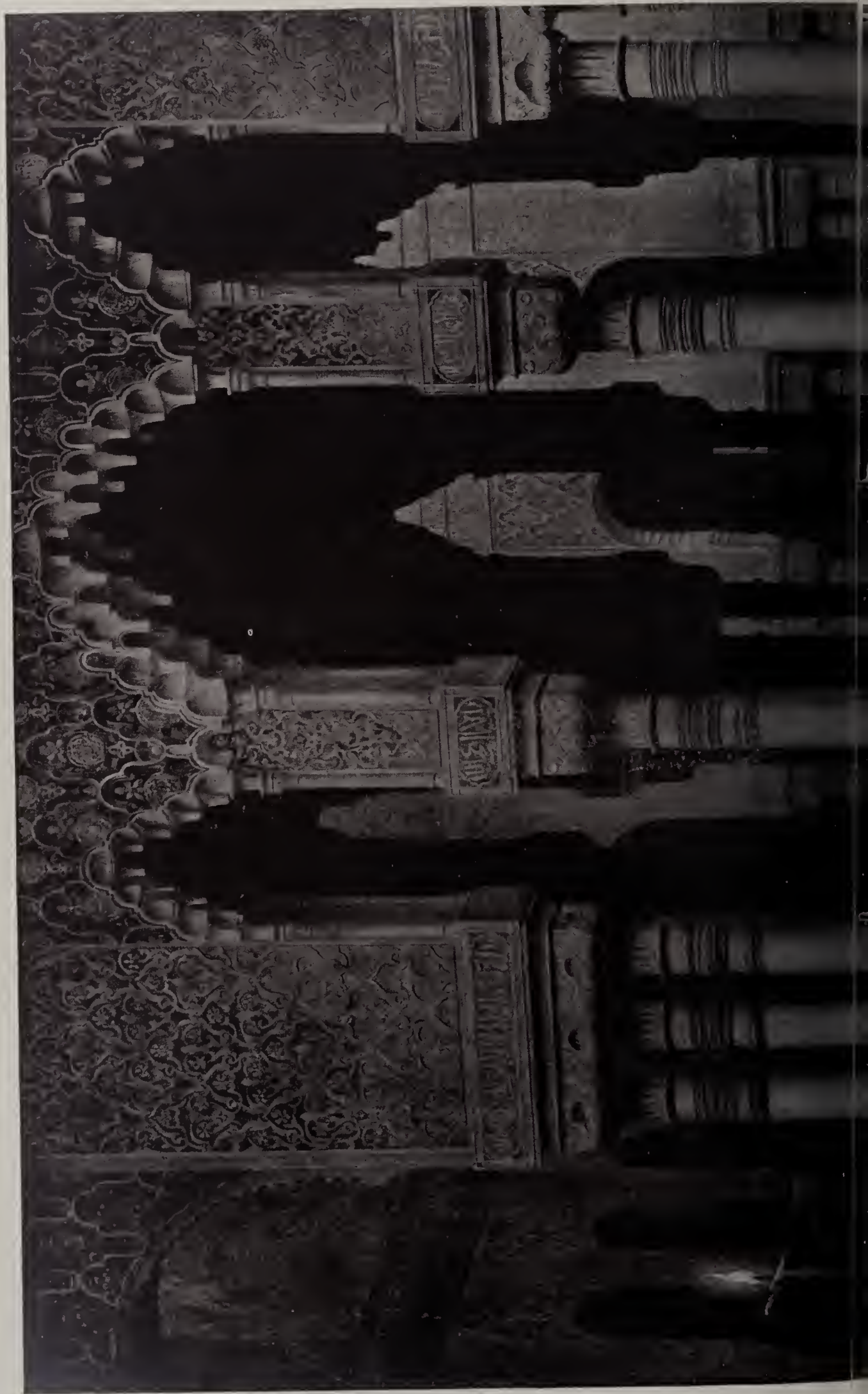




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THE WESTERN ARCHITECT
FEBRUARY
1906

THE GRIEF OF THE PASHA
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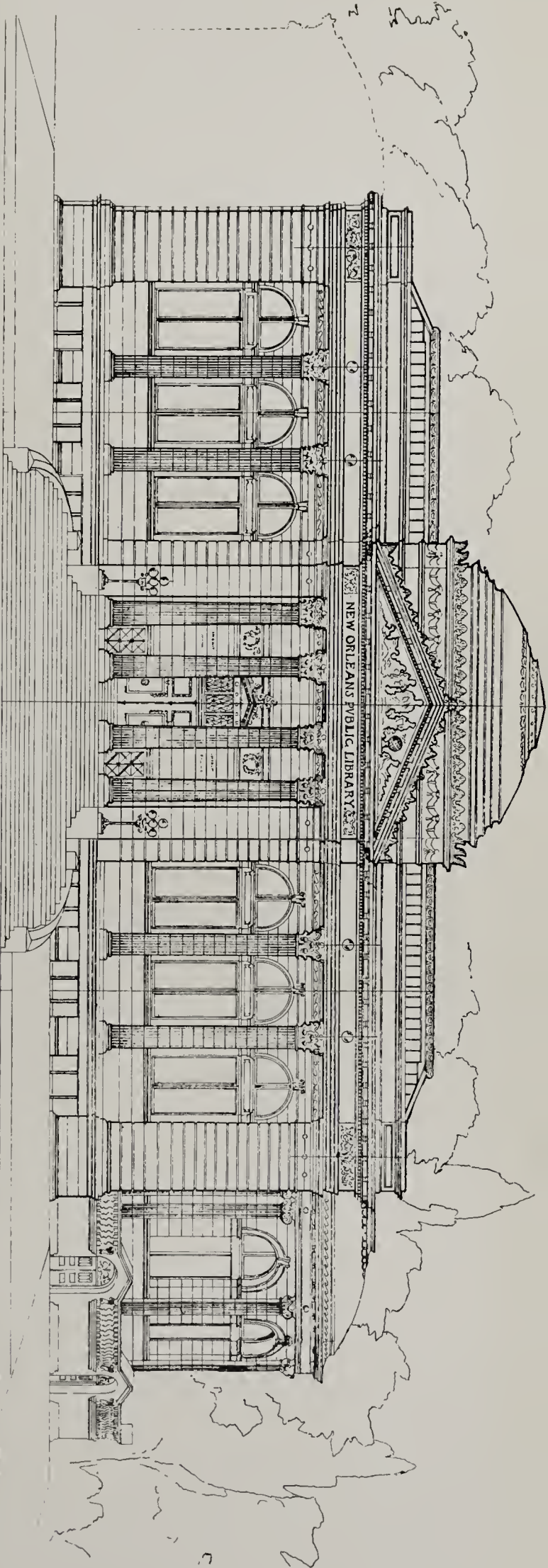
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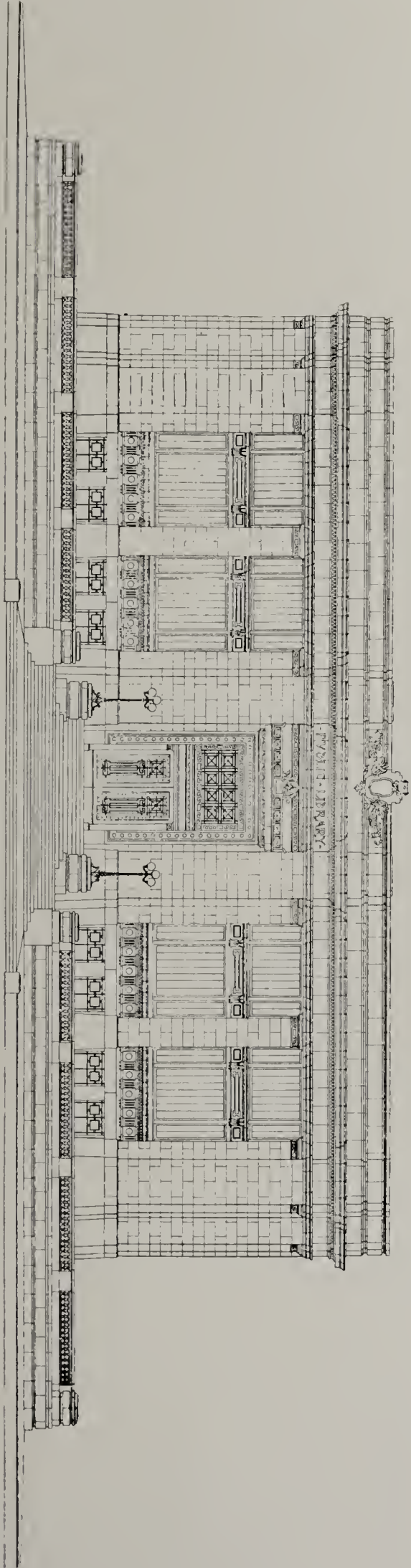
"THE HEART OF NEW YORK."

THE WESTERN ARCHITECT
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FIRST PRIZE—DIBOLL & OWEN, ARCHITECTS



SECOND PRIZE—FAVROT & LIVAUDAIS, ARCHITECTS

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ASSEMBLY HALL, OF WOMAN'S BUILDING, UNIVERSITY OF MINNESOTA, AT MINNEAPOLIS
ERNEST KENNEDY, ARCHITECT

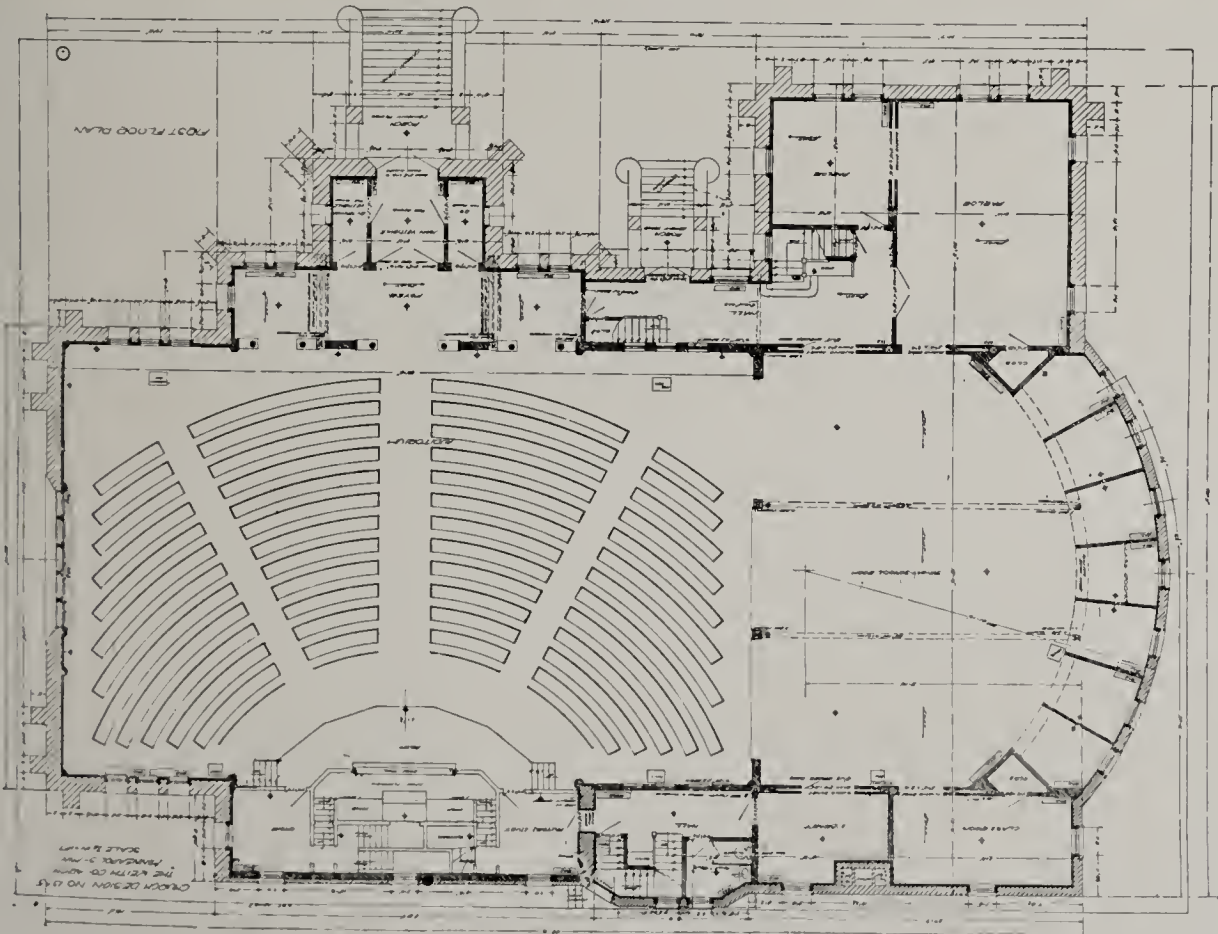
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INTERIOR OF TRINITY BAPTIST CHURCH, MINNEAPOLIS, MINNESOTA
THE KEITH COMPANY, ARCHITECTS

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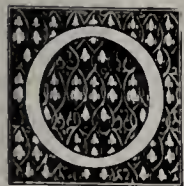
The invitation of the Washington Architectural Club to hold the next convention in their city was accepted by a unanimous vote, and after passing a most hearty vote of thanks to our hosts who had given us so cordial a welcome and spared no effort in showing us every possible hospitality during our stay in New York, and listening to several informal speeches by prominent members urging more interest and activity in League work, the meeting was finally adjourned amidst the most sincere feelings of friendship and good will.

The annual banquet of the Architectural League of New York was held in the rooms of the Fine Arts Building on the evening of Friday, Feb. 2nd, and marked the opening of the League's 23rd annual exhibition. Covers were laid for 400 guests and enthusiasm and good fellowship ran high. President Richard Howland Hunt presented the gold and silver medals which were won in the League's annual competition. President Hunt, acting as toastmaster, introduced the speakers of the evening. Mr. Geo. B. Post delivered the address of welcome and was followed by Frank Miles Day, Karl Bitter, John A. LaFarge, E. H. Blashfield, W. B. Ittner, F. Hopkinson Smith President-elect Ernest J. Russell and many other prominent and noteworthy members of the League.

After dinner everyone joined in an informal view of the exhibition and thus brought to a close the greatest of conventions yet held by the Architectural League of America.

THE TWENTY-FIRST ANNUAL EXHIBITION OF THE ARCHITECTURAL LEAGUE OF NEW YORK.

A REVIEW BY HUGO ARNOLD.



ON Saturday, Feb. 3rd, composed of 700 drawings, paintings and sculpture, mostly by the foremost eastern masters, the 21st annual exhibition of the Architectural League of New York was formally opened in the galleries of the American Fine Arts Society. The exhibit was a very large and representative one and filled the galleries full to the last square of wall space, and even advantage had to be taken of the generous walls of the entrance halls and the second story assembly room. It contains not only architectural drawings and photographs, but also to an exceptional degree, decorative designs, sketches for, and full size

portions of, mural decorations and wall hangings, and of sculpture represented both in cast and by numerous photographs. All of the exhibits were studiously arranged by the hanging committee to make an ensemble alike pleasing to the layman and of untiring interest to the professional and the student.

The numerous projects of the atelier classes in competition for scholarships and medals are gathered together and occupy two rooms by themselves. The work shown is very commendable and equal at least to contemporary work of any of our university classes. The medal competition for this year was a design for a chapel on the shores of Newfoundland and brought out a number of original designs, all being well suited to so picturesque a site. The gold medal design, by Mr. Geo. A. Licht seems to be particularly appropriate to a rugged and stormy locality as this would be. The plan shows a rather unique interior for this kind of a structure. Mr. Colister Morton Craig, of York, Pa., was awarded the silver medal in same competition.

Entering the Vanderbilt gallery we find its walls given over almost exclusively to the painter and artist decorators, who here greet us with a most beautiful array of canvasses and study sketches for mural paintings. Mr. R. T. Willis has a large composition in oils for the Armory of the Brooklyn Naval Academy, picturing the escape of the Constitution from a British fleet. Mr. C. Y. Turner has a number of study sketches for his charming painting commemorative of the opening of the Erie Canal. Mr. Sewell exhibits a large lunette entitled "Twilight of the Gods," and Mr. Lichtenouer has one entitled "Library Decoration," which is mentioned in the catalogue as unfinished. A big madonna and child, Mr. John La Farge, painted in very solid sculptural style, is also prominent. Mr. Ernest Weingaud has a composition in charcoal for a stained glass window entitled "Poetry." There is also a clever decoration figure by Mr. Benson called, "Pomona." Mr. Everett Shin has a frame of photographs of mural, and a few bright sketch compositions in a somewhat 18th century French style, showing attractive array of colors well handled. Mr. John La Farge has a frame of photographs of his well known Minnesota Capitol decorations. Mr. Kenyon Cox is represented by a large lunette entitled "Agriculture," a part of a series of decorations for the Iowa State Capitol, which shows the artist in one of his best works. Mr. Frederick Clay Barker has a portion of frieze for a music room, an interesting conventionalized design resembling a page from an old illuminated book. Mr. Elliott Daingerfield shows a series of studies for decorations in the Church of St. Mary the Virgin. There are also representative works by Mr. Frank D. Millet, whose sketch of the "Treaty of the Traverse Des Sioux," from the Minnesota Capitol is well known, Mr. Ballin, Mr. Bancroft and others are also represented.

Next comes the middle gallery where works of architecture are shown by drawings, paintings and models. Here

a series of drawings of the McKinley Memorial by Harold Van Buren McGonigle, which is altogether a good piece of design, were it not for an unnecessarily large approach of stairs which rather competes with the central composition. The monument is pictured in a most excellent perspective rendering by Mr. Birch Long, which is full of life and color. On another wall are several drawings in plan and perspective of the buildings for the George Washington University, at Washington, D. C., from the office of George B. Post & Son. The plan shows the several buildings beautifully grouped around a central quadrangle and though apparently symmetrical, they have been cleverly adapted to the shape of an irregular piece of ground which they are to occupy. The exterior is a good modern American adaption of Roman classic, in one instance reminding one of the Pantheon. There also are several drawings in line of Messrs. Cope and Stewardson's dormitories for Washington University at St. Louis, designed in a pleasing adaption of English domestic gothic which, in charming contrast to the more severe handling of the larger buildings, gives evidence of the rambling elasticity of this transitional style. On another wall are two photographs of Messrs. Lord & Hewlett's masterly St. Jude's Church, a dignified structure in brick and stone, which by its very simplicity and well proportioned detail possesses a charm that cannot fail to make a lasting impression.

In the west gallery are shown by photographs two princely yet discreetly elegant residences for Mr. Stow and Dr. Jacobs, from the office of John Russell Pope, which, by the beautiful arrangement of gardens and surroundings as well as their charming architectural details, give evidence of the unusual amount of thoughtful study that must have been bestowed upon them by their designer. Here also are a number of sketches for magazine illustrations of picturesque corners and byways of some of the older sections of our metropolitan cities. The execution is clever and full of life and they suggest an inspiration from similar work by Joe Penell.

Mr. Charles W. Leavitt, a landscape architect, here illustrates by a plan of grounds as well as by a finely colored perspective, a scheme for the rearrangement and extension of the University of Georgia at Athens, due to the generosity of several wealthy alumni, who have bought a great tract of land and supplied money for new buildings. A hill in this tract will be covered with buildings resembling the Acropolis at old Athens. In this room is shown a collection of photos of Mr. Grosvenor Atterbury's Phillips house, a model tenement scheme which is alike interesting for its many novel features of plan, as well as for the ingenuity with which the simpler materials are combined into a dignified and characteristic structure, bringing out to the fullest extent the best qualities of the material employed. Mr. C. I. Berg's "Royal Gardens" a hotel at Bermuda, contains elements suggested by the

old mission buildings of California and designed at once picturesque and with a simple breadth.

There are also a number of imaginative sketches for country estates rendered in a lavish profusion of color by some French debutant, who would make the uninitiated think that "beaux-arts" and "bizarre" were synonymous.

Turning now to the east gallery we find it given over almost entirely to the lighter and more picturesque subjects, in the vein of the Swiss chalet or the nondescript cottage, piquant with its cleverly pitched roofs and dormers, and its hospitable porches and verandas. Among many engaging compositions we would especially mention are Mr. C. P. H. Gilbert's "Sketch for Country House on Long Island," Miss K. C. Budd's "Bungalow," Messrs. Coulter & Westhoff's "Mountain Lodge" and Messrs. Davis, McGrath & Shepard's "Adirondack Lodge." Mr. John H. Phillips' Country Golf Club is a picturesque version of colonial, with rambling roofs and reposeful and inviting verandas so appropriate to this kind of building.

There are a number of designs for the Yalu memorial buildings in this room, all in English collegiate gothic with a slight tinge of individuality in some of them. Passing on without further comment we finally enter the large north gallery, where we find an array of the exhibition's most important subjects in all three of the sister arts. There in the center of the north wall hangs Mr. Blashfield's design for part of the vault in the apse of St. Saviour's church, Philadelphia. Faces, halos, wings and draperies of saints and angels are modeled up in low relief like the figures in pictures by Gentile da Fabriano and other early Italian, or the ikons in Modern Russia, with gilding liberally disposed this sculpturesque handling gives great carrying power.

Sculpture, both statuary and bas-relief, is unusually abundant and of good quality. Mr. Louis Lanne has a fountain sketched in clay, with animated figures of sea lions sporting with children and barking at a threatening adult. "In minor strain" is a nude in very low relief by M. Paul Macquet. Mr. N. A. MacNeil exhibits his "Peace Group" for the McKinley Memorial at Columbus, and Mr. Henry Linder a number of charming figures, busts and heads of angels. Mr. E. A. Deming sends a little "Bear and Turtle" and a part frieze, "The Moor's Courtship." Mr. Karl Bitter has his panel to commemorate Mrs. Rebecca Foster, "The Tombs Angel," and a design in competition for the Steuben Monument. Mr. C. J. Van Horn has a rollicking "Boy and Dolphin" design for a fountain, an old idea in a fresh combination. Mr. George Borgium shows a clay study for St. Clement for the Protestant Cathedral, and Miss Evelyn Longman a large memorial for a tomb with an angel laying a hand on the head of a sorrowing woman. In this room also are hung the more important architectural projects of this exhibition. Messrs. Warren and Wetmore and Reed and Stem, have a series of four perspectives of the new

Grand Central Station, beautifully rendered in unique coloring by Birch Long. The design is a severe classic, modelled after French precedent, yet on the whole sufficiently American in character to add a tribute to the quality of our coming American work, and were it not for an over-profusion of stereotyped French detail, might count as the best thing on exhibition. Messrs. Carrere and Hastings have sent several large frames of the state office building for the House of Representatives at Washington. The building is here shown in plan and elevation and by several perspectives in a style of rendering modelled after that of Mr. Long, though to my mind, lacking in his strength of technique. Mr. Cass Gilbert has three large rendered competition drawings of his design for the Wisconsin State House, which shows great wisdom in planning and a charming logical solution of the design of this scholarly building. Several photographs of his well known Minnesota State Capitol are also shown, likewise some drawings of the Madison High School. Messrs. Howells & Stokes are exhibiting a perspective of their masterly design for the Title Guaranty & Trust Company Building of New York, and also a very scholarly rendering of the front of the New York Stock Exchange in Baltimore, and Messrs. Baldwin and Pennington show an elevation of a new bank in the same city in which simplicity and elegance are happily combined. Mr. Donn Barber's scholarly National Park Bank, which proves more interesting the oftener one sees it, is here profusely illustrated by interior and exterior photographs. Messrs. Pell and Corbett have sent a handsomely rendered perspective drawing of a high office building for an Indiana fraternal order, which should be regarded as a clever solution of a problem in design made difficult on account of the irregular shape of the lot. Messrs. Reed and Stem show a competition design for a New York commercial building, which shows good feeling, though a slight tendency to lean toward the French cannot be disguised. The rendering is charmingly soft and still full of life. McKim, Mead and White are represented by their new Tiffany building and Gorham building. These last two structures are indeed the finest business buildings ever produced in this country. Both in the Venetian palace designed for Tiffany, and the more freely composed building designed for Gorham, the architects have relied for their effects upon pure composition, noble propositions, and ornamentation so strictly subordinated to the mass that it scarcely seems ornamentation at all, but rather the natural expression of the bones of construction. On the Tiffany building there is no carving beyond that in the capitals of the columns, the balustrade marking the second plan in the scheme and the superb cornices. The cornice again is made to fill a great, round hole in the Gorham building and there is beneath it comparatively little carving. That little is exquisitely beautiful. The sculpture and the conventional ornament near it over the arches are intrinsically fine, and they are precisely what the occasion demands.

These beautiful buildings, so distinguished in style and each so consummately well adapted to its purpose, are really worthy of study by all architects.

Throughout the exhibition we are aware of a high average of taste and of value of harmony and proportion, of mass and detail, in the least pretensions country houses as well as in the more imposing public buildings, which is a gratifying feature in all of the architectural exhibitions of to-day. In direct contrast to what they were a decade ago, there is nothing erratic or freakish in this work, no vain striving after eccentric individuality, but quite on the contrary everything is consistently dignified to the point of severity. Details are refined in themselves and are harmoniously adjusted in compositions which aim at balancing of masses and features.

A kind of Roman renaissance has commended itself to most designers, and they vary it to comply with their individual liking according to whether they have gone to Italy alone or also to the French National schools for their training, but the main point noticeable is that of a fine restraint in the development of their work.

Noticeable also is the departure from overdone applied ornament. American caricatures of "Beaux Arts" teachings as they have rightfully been called. The desire to "out startle" the Frenchmen has yielded to the more sane habits of our strongest men who make good taste their guide.

All of the designs exhibited have been studied with a certain air of individuality, and all have life in them, but what is most pleasing is the broadly monumental character. Great wall spaces are reposefully handled and broken for constructive, and not for purely ornamental reasons. Mostly classic in spirit, they show something of the majestic character of monumental architecture when from the masters hands. In refreshing contrast to the skyscraping eccentricities that too often have filled our galleries in the past with an atmosphere of artistic desolation, they reassure us that such work as this is what will be the making of American architecture in the future, and that the American architect of to-day has only to be given normal conditions to make his merit abundantly clear.

TWIN CITY ARCHITECTURAL CLUB.

The annual meeting of the Twin City Architectural Club was held at the rooms of the Builders and Traders Exchange on January 29. A majority of the membership was present. The reports of the officers was followed by the election of officers for the ensuing year as follows: President, Cecil Bayliss Chapman; first vice president, H. T. Downs; second vice president, Hugo Arnold; secretary, A. R. Van Dyck; treasurer, J. A. Stone; directors, H. H. Eads and George A. Blewett.

As delegates to the convention of the Architectural League of America, Hugo Arnold and E. H. Hewett were appointed.

ILLUSTRATIONS.

The mantel designed by George L. Harvey, of Chicago, for a Winnetka residence speaks for itself. It is not only graceful in design but unique in plan, and is in line with a large proportion of Mr. Harvey's work.

The effect of plaster cast combined with a semi-flat, tile roof, only suggestive, in the faintest degree, of the mission work in California, is well adapted to the design of the Zora flats, at Toledo, by Bernard Becker.

In "The Heart of New York," buried among buildings, the highest in the world, this little church with its graveyard holds its place, defying encroachment. It is illustrated in compliment to the hosts of the delegates to the Architectural League of America's convention.

Apartment buildings are increasing rapidly in every city, and even encroaching on the suburbs which have heretofore been occupied by single residences. One that could hardly be offensive to the street prospect in any residence neighborhood is that shown, designed by John McKecknie, at Kansas City, Missouri.

One could wish that the residence of Robert Strahan, at Spokane, Wash., could have been set back further from the boulevard, with the pine trees forming an open grove, but the brick and half timber and pointed gables meet the lines of the tall, green trees in good proportion, and this adds to its homelike seclusion.

The clock makers of Germany, Switzerland or England of three hundred years ago, have left many relics of their skill in mechanical ingenuity, and these valuable works were often set in frames which displayed the best of the wood carver's art. Such a clock is owned by Mr. W. H. Taylor, of Scranton, Pa., and is shown because of its exquisite carving.

The water-color sketches illustrating the Woman's building for the University of Minnesota, show a well designed project for a simple building for the purpose, which is a general gathering place or club house for the lady students of that great university. The design is by Ernest Kennedy, of Minneapolis, and the sketches were made by C. T. McElroy.

An appropriate combination of stone and redwood shingles is shown in the photograph of the Trinity Baptist church, at Minneapolis, by the Keith Company. The design (which resembles a water color) has a quiet dignity that is added to in the completed building. The plan and view of the interior, which is illustrated, shows a practical and commodious arrangement, and together with the design is extremely creditable to the architects.

When an architect designs for himself it is rare that he produces as good a result as in many of those he has made for his clients, but the residence of Alfred Hoyt Granger, of Chicago, located at the picturesque town of Lake Forest, is an ideal country home, and with its red

brick walls, surrounded by flowers and foliage, shows what an artistic temperament may do with grass, trees and flowers as a setting for a harmoniously designed residence.

A business premises and an office building, typical of the best work in these lines recently completed in St. Louis, are illustrated. The former, premises of the Carleton Dry Goods Company, is from the office of that trio of young, energetic and talented artists, Mauran, Russell and Garden, to whom St. Louis owes much for the beauty of their works. They exhibit a strength as well as a knowledge of harmony and proportion in this design, which speaks of an enthusiasm controlled, and a knowledge gained through careful study of the street front problem in cities.

Honest competitions are so comparatively rare that it is a pleasure to refer to that illustrated in this number, which has just closed in New Orleans, for a public library. The competitive programme required that the drawings be made in pencil and four premiated designs were selected by a competent committee. Diboll and Owen were the successful architects, Emile Weil, Rathbone E. DuBuys and Favrot and Livudais were premiated. In this competition "consolation prizes" as they might be called, were given to these latter architects in the shape of commissions to design branch libraries.

An assortment of residences, each of which has lines of beauty and show the relation of the structure to its surroundings to a greater or lesser extent, are illustrated. The house for John Crooksbank, at Hannibal, Mo., by Barnett, Haynes & Barnett, of St. Louis, shows an effectively arranged terrace. The Quimby residence, at Spokane, Wash., by Hyslop & White is a delightful composition of rough stone. The country house of W. W. Wimer, of Des Moines, by Liebke, Nourse & Rasmussen, is a most comfortable looking colonial, and that of Charles Sweeney, of Spokane, by Cutter & Malmgren, of stone and half timber, is appropriately set upon the side of the hill, suggestive of being built from the outcropping material.

The office building for the Bank of Commerce, by Isaac Taylor, is a notable addition to the office buildings of St. Louis. Though the name of the designer, which is written on the photograph, was not noticed until the plate was made, he is in every way deserving of the credit for his work. Mr. Enders is another of the younger element among America's best architectural designers, and has grown steadily in ability and quality of execution since he left Chicago some ten years ago to take a position with Isaac Taylor, and many structures in St. Louis, show not only his sins of omission and commission, but how carefully he has studied his art, and advanced in designing ability and also without a "Beaux Arts" or "Teck" training to give him impetus.

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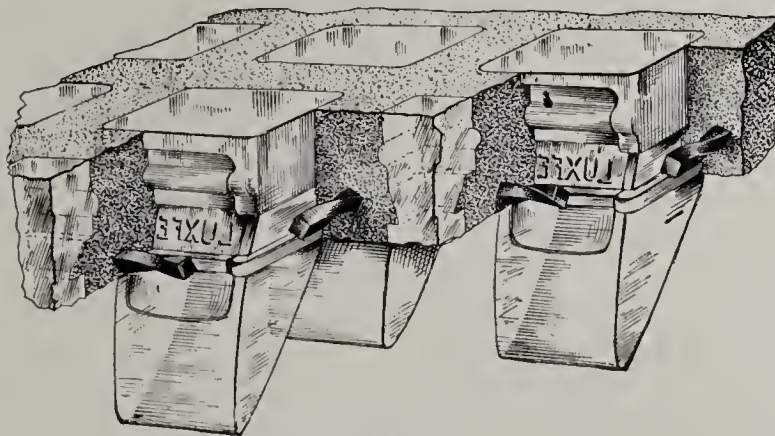
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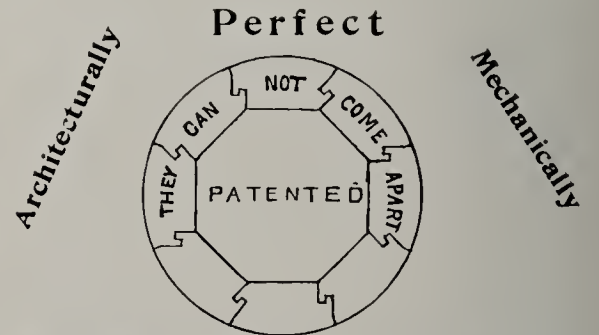
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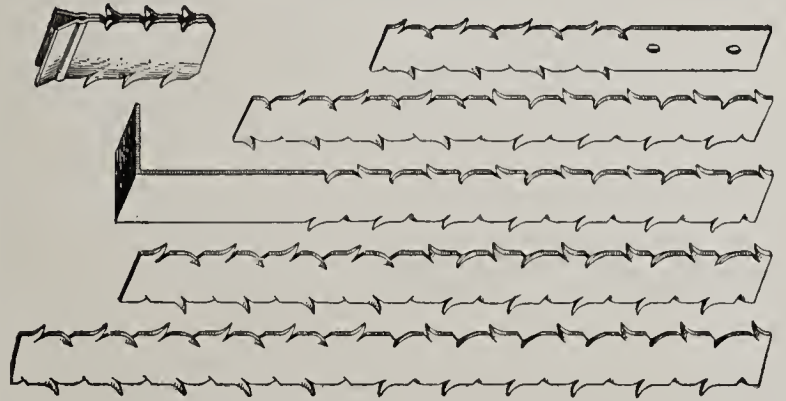
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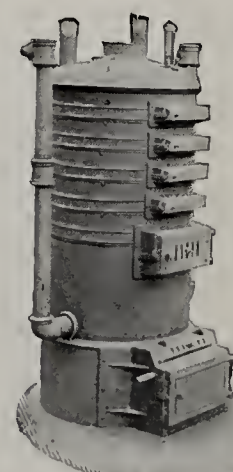

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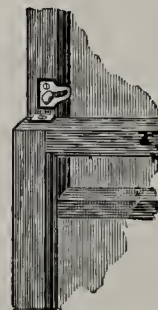
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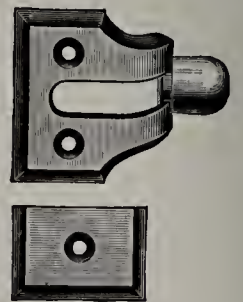


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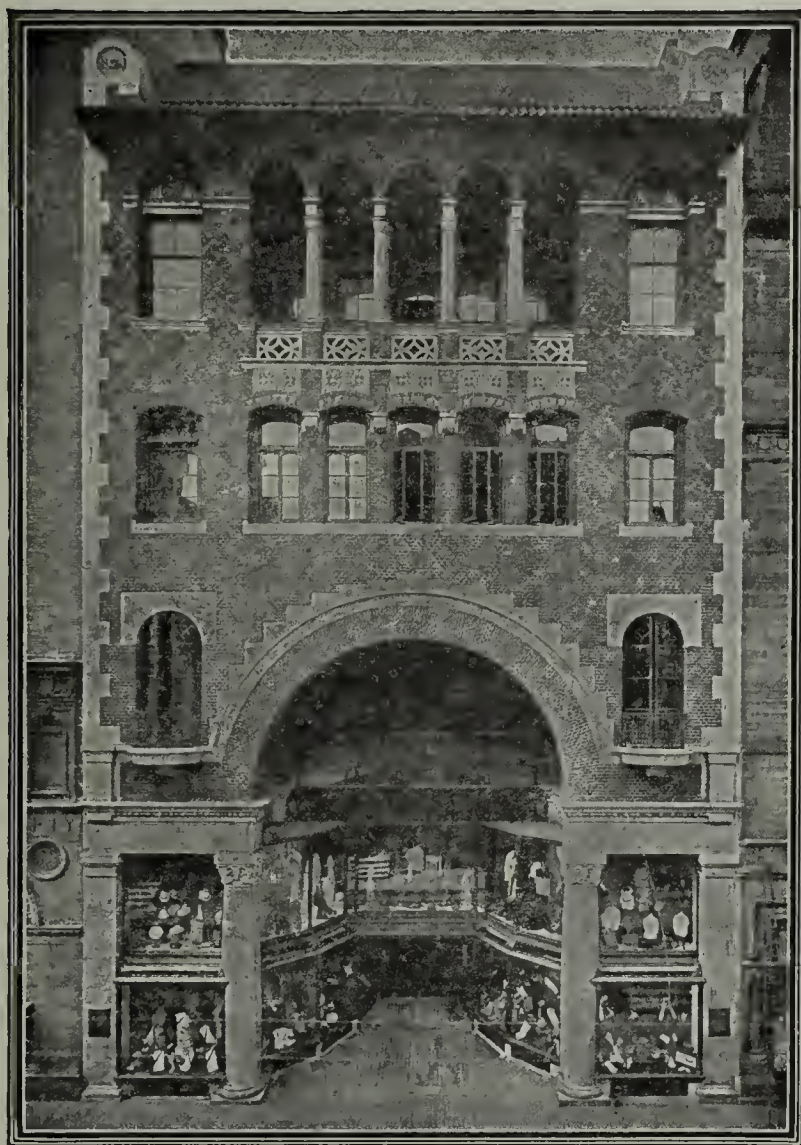
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PAVILION

DESIGN AND PLAN FOR BIG ISLAND AT LAKE MINNETONKA, MINNESOTA, KEITH AND GILLETTE, ASSOCIATE ARCHITECTS.

RESIDENCE

OF J. B. HOWE, SEATTLE, WASHINGTON, J. E. BLACKWELL, ARCHITECT.

STORE PREMISES

OF PETERS SHOE COMPANY, ST. LOUIS, MISSOURI, ISAAC TAYLOR, ARCHITECT.

RESIDENCE

THE MOORE, AT LOS ANGELES, CALIFORNIA, HUNT AND EAGER, ARCHITECTS.

BANK INTERIOR

FOR MERCANTILE TRUST COMPANY ST. LOUIS, MISSOURI, ISAAC TAYLOR, ARCHITECT.

BANK INTERIOR

FOR MISSISSIPPI VALLEY TRUST COMPANY, ST. LOUIS, MISSOURI, EAMES AND YOUNG, ARCHITECTS.

RESIDENCE

OF A. S. VERMILLION, LOS ANGELES, CALIFORNIA, HUNT AND EAGER, ARCHITECTS.

INTERIOR

DINING ROOM IN RESIDENCE OF A. S. VERMILLION, LOS ANGELES, CALIFORNIA, HUNT AND EAGER, ARCHITECTS.

DOORWAY

INTERIOR

MAIN HALL IN LYMAN RESIDENCE AT CLEVELAND, OHIO, F. S. BARNUM, ARCHITECT.

RESIDENCE

GENERAL OTIS, LOS ANGELES, CALIFORNIA, (TWO VIEWS) JOHN P. KREMPEL, ARCHITECT.

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ROBERT CRAIK McLEAN, EDITOR.

BUILDING OPERATIONS FOR FEBRUARY.

Although the building season of 1906 has not yet opened, there is decided activity in building circles, with everything indicating a prosperous year. Official reports from nearly sixty leading cities of the country, compiled by The American Contractor, show that the steady gain over last year that has been chronicled from month to month was fully sustained during February.

Of the fifty-nine cities from which official reports are presented, only sixteen show a loss as compared with February of last year. The loss in Baltimore is 49 per cent, due to the circumstance that the city is now practically rebuilt or arranged for. The only other cities of importance that show a loss are San Francisco, Cincinnati and Pittsburg, two per cent in the first instance, seventeen per cent in the second and ten in the last. The gain in New York is 55 per cent, which becomes very remarkable when we remember the unprecedented building activity that has prevailed there during the past two or three years. In other leading cities the percentage of gain is as follows: Buffalo, 94; Chicago, 29; Cleveland, 215; Columbus, 167; Jersey City, 402; Kansas City, 18; Louisville, 574; New Orleans, 196; Omaha, 290; Philadelphia, 124; Toledo, 100; Topeka, 242; Trenton, 290; Washington, 23. From every standpoint the outlook is most promising.

THE FARWELL, OZMUN, KIRK & CO. WAREHOUSE.

Probably the most important and substantial warehouse yet constructed in the Northwest is that recently completed for the Farwell, Ozmun, Kirk & Company at St. Paul, Minnesota, designed by Louis Lockwood, architect, of St. Paul, its design and construction features marking a distinct advance upon warehouse construction in general. The contractor was George J. Grant. The problem of the architect in this building was one of considerable difficulty through the nature and shape of the site, a hill having to be removed and leveled, and the irregular shape, necessitating special calculations and measurements. The walls of the first three stories are of buff Kettle River sandstone and above this a veneer of Purington vitrified paving brick is set with a backing of Chaska brick. The well-known rich color of the Kettle River stone harmonizes well with the rough surface and variegated reds of the paving brick, the combination giving an appearance of strength and solidity to the building that is very satisfactory. It took 246,000 of the Purington brick and 4,000,000 of the Chaska to complete the structure. The brick was furnished by the firm of Greiner & Corning, of St. Paul.

This building, which shows how rapidly the Northwest is coming to the front in fireproof construction, has nine floors.



MIDDLE SECTION AT THIRD FLOOR

and is one hundred and twenty feet high, covers about an acre, being irregular in shape with no sides parallel. It is two hundred and sixty feet long on the north side and one hundred and fifty feet facing the east on Jackson street. The south side, which is facing the Mississippi River, has a wagon entrance at the east and into a driveway thirty-two feet clear width and running the full width of the building; also an entrance into the building for freight cars with a double track extending two hundred feet along the south side.

Being built on the side of a bluff the excavating and building of retaining walls took about three months' work before the reinforced concrete work of which the interior wall and column footings, columns, beams, floor and roof are built could be started; 35,000 cubic yards of clay and gravel being hauled away.

The building was originally designed for slow-burning construction but when the owners learned that it could be made fireproof at an additional cost of about 7½ per cent above the slow burning construction, and after investigating the best fireproof forms of construction they adopted the Kahn system.

The special feature which will appeal to architects and engineers is the interior construction of this warehouse. It may be called reinforced concrete, but as that term has become common to every form of construction in which concrete is used to any extent, good and bad, it must be noted in this instance that the



MIDDLETON, PHOTOGRAPHER, ST. PAUL

THE FARWELL, OZMUN, KIRK & COMPANY WAREHOUSE, ST. PAUL, MINNESOTA
LOTTIS LOCKWOOD, ARCHITECT

system is the well known Kahn bar concrete reinforcement, of the Trussed Concrete Steel Company of Detroit, Michigan.

The first three floors are designed to carry a live load of five hundred pounds per square foot, the fourth, fifth, sixth and seventh floors three hundred and fifty pounds, the eighth floor two hundred



PUTTING IN PLACE 38 TON GIRDER

and fifty pounds and the ninth floor two hundred pounds per square foot.

The interior wall footings were originally designed of plain concrete but were changed to reinforced concrete when it was found that three feet of excavating, amounting to five thousand cubic yards could be saved. The averaged column footings were eleven feet six inches square with a depth of only four feet, two inches below the finished first floor level. In order to keep the size of the columns a minimum, "I" beams were used for reinforcing the first and second story columns, channels with batten plates were used in third, fourth, fifth, sixth and seventh stories and Kahn Trussed Bars in the eighth and ninth stories. The concrete columns start on the first floor twenty inches square and reduce two inches every two stories until the roof is reached.

Of the one hundred and forty-three columns, one hundred and forty-one start at the ground on reinforced concrete footings. Work was begun putting in the column footings April 1st, 1905. On June 1st, 1905, work was started on the columns and floor of the west section and from then to the time the roof was completed, November 27th, 1905, the work was carried on at the rate of an acre and a half of floor, including columns and beams, per month. The work was greatly facilitated by the use of iron beam clamps, which saved both time and labor in the building and removing of the wooden forms. These beam clamps held the beam boxed securely together, supported the joists for the floors and at the same time supported the whole false work without the use of nails. In the alley near the center of the north side of the building the grade is about six feet above the level of the third floor. This grade was taken advantage of for the handling of crushed stone and sand to be used in manufacturing the concrete. A dump was constructed with chutes running to the first floor through which the materials were carried to the mixers, which were located on the first floor. The cement was shipped into the building in the cars over the switches which were laid as soon as the centering in that portion of the building was removed.

One hoist was located in a stair well at the west division wall

and supplied with power from a twenty horse power motor. The other hoist was located in an elevator shaft at the east division wall and run with a twelve horse power motor. A Smith concrete mixer was set at each joist to dump into a chute which carried the concrete into the boot of the hoist. The crushed stone and sand was measured in wheelbarrows and dumped directly into the mixers from platform. The cement was emptied from the sacks into the mixers. Special four-foot wheelbarrows were made for handling the concrete and such a system was organized that a maximum of one hundred and fifty-five cubic yards of concrete was placed in a ten-hour day.

A small sawmill was set up on the first floor and run with a motor to cut the lumber ready to be put into place for the concrete forms. This reduced the hand sawing to a minimum. Columns and beam boxes were all framed ready to set into place as soon as the floor below was completed. Four inch by four inch posts were used for supports in conjunction with the beam clamps so no diagonal braces were required. Typical floor panels are thirteen by sixteen feet and the floors are framed as shown by the accompanying photographs. The span over the driveway is 32 feet and over tracks sixteen feet. In almost all the beams and girders three Kahn bars were used, lapping through columns and over beams, being reinforced with inverted 5 foot Kahn bars running through all the columns from girder to girder and beam to beam.

The floor slabs, designed to carry five hundred pounds per square foot, are six inches thick, the other floor slabs, and the roof with a span not exceeding thirteen feet, are four and one-half inches thick. The roof slab with spans greater than thirteen feet is six inches thick and reinforced with bars sixteen inches, centers running across the panels in both directions. All panels of the roof are provided with temperature bars.

The floor slabs are reinforced with one-half inch Kahn bars placed nine inch centers in lengths to reach over two beams, alternate bars breaking joints so that the entire floors is one monolithic slab.

The floors designed for five hundred pounds per square foot were tested at the age of thirty days, one entire panel being loaded to five hundred pounds per square foot, and allowed to stand four days without a particle of deflection. At the age of ninety days the center half of a panel next to one of the walls was



3RD FLOOR, TAKEN FROM ARMY BUILDING

loaded to seven hundred and seventy pounds per square foot, and allowed to stand four days with no deflection. Then seven hundred and thirty pounds per square foot were added, making

one thousand five hundred pounds per square foot, with one sixty-fourth inch deflection. This load was allowed to remain four days longer with no further deflection.

Thirty thousand barrels of Marquette cement, furnished direct from the works at La Salle, Illinois, by the Chicago office of the company, fifteen thousand cubic yards of crushed stone and eight thousand cubic yards of sand were used laid continuous in construction in thirteen by sixteen foot slabs which are from four and one-half to six and one-half inch thick cement briquettes which in the test for crushing strength averaged as follows: Twenty-four hours old, two hundred and eighty-nine pounds. Seven days, six hundred and thirty pounds, and twenty-eight days, seven hundred and fifty-seven pounds per square inch.

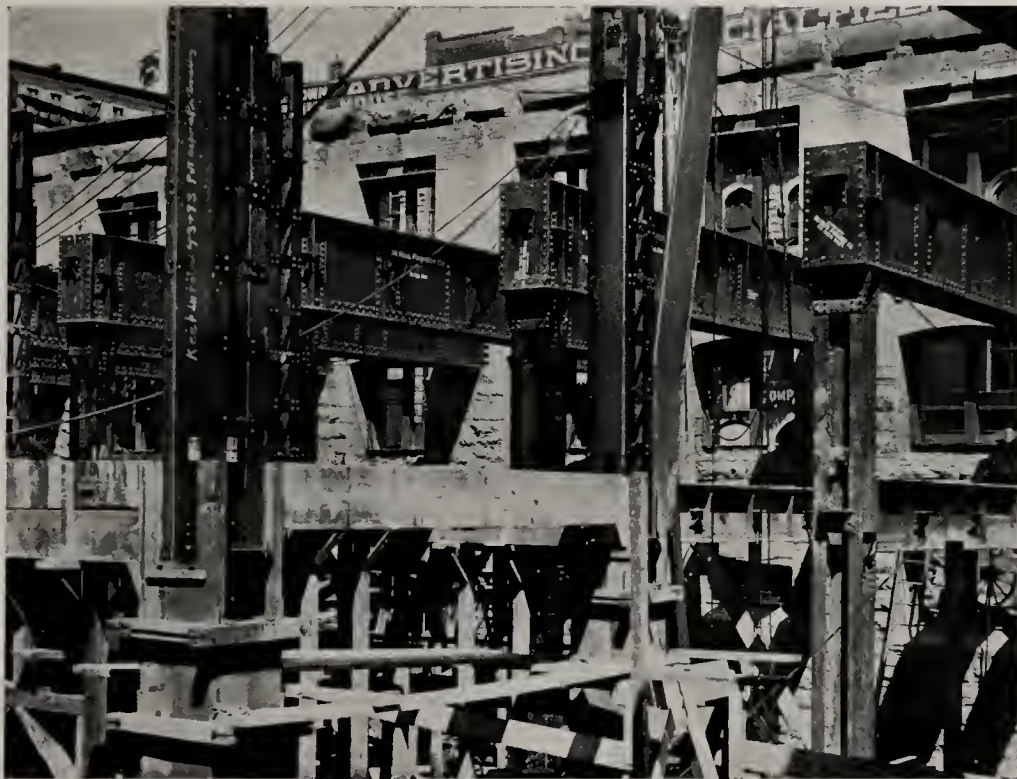
The structural steel, over one thousand tons of which was used in this construction was furnished by the St. Paul Foundry Company. This company is the largest maker of structural steel in the Northwest, yet many are not aware that this company make and erect structural steel and have a large equipment for that purpose in connection with their plant. The demand for their structural steel is growing rapidly and besides the considerable work on this building they have now in hand many large orders for similar structural and bridge work.

The lower three floors are finished in finish coat of cement and the remainder have maple floors and finish. The floors consume two hundred and forty thousand feet of three-inch factory and eighteen thousand feet of No. 1 ideal maple flooring and furnished to the architects satisfactorily by John C. Hill Lumber Company, of St. Paul.

In providing for the reception and discharge of freight an excellent problem in engineering was executed. The railway tracks, of which there are two, enter the building on a sixteen degree curve accommodating the unloading of ten cars at once, and necessitating a very large opening. This is spanned by a box girder of extraordinary size, the span being forty-two feet

in the clear, weighing thirty-eight tons, and supporting about eight hundred tons. This was supplied by the St. Paul Foundry company and demonstrates the capacity of these works for executing any form of structural iron demanded by engineers. Another similar feature is thirty-two foot driveway the entire width of the building which is also spanned by heavy trusses, giving a clear space for the passage of wagons in shipping.

The equipment of the structure is in every way complete both for convenience, and fire preventing and protection. The eleva-



VIEW OF GIRDERS OVER DRIVEWAY

tor equipment has been designed to take care of the varied requirements of the business. There are four large high speed freight elevators with 8x10 platforms; one rapid high speed powered elevator with 6x8 platform, one passenger elevator running from top to bottom and another from fourth to fifth floors. There is also an electric dummy elevator that is operated by push buttons on each floor, for city business entirely. These elevators are all electric and were all designed for their purpose by the Lee & Hoff Manufacturing Company, St. Paul, and put in by them. They have given perfect satisfaction from the date of installation. They are all enclosed in brick shafts. The stairways which are separate from the elevators are enclosed in brick, the treads being of concrete. The doors closing the railway and driveway entrances, the later being seventeen by twenty-three feet in size, are of the Kinneer steel rolling pattern, manufactured by the Kinneer Manufacturing Company of Columbus, Ohio. Though the extreme size and location of these doors make them extremely difficult to handle, their construction is such that they close the opening perfectly and are easily operated. Double fireproof doors supplied by the Variety Manufacturing Co., of Chicago, are installed at all openings in firewalls, of which there are two separating the building and are supplied with fusible links connected with weights for automatic closing.

The complete system of ventilation, a feature nowhere so necessary or so hard to control



TEST MADE 2ND FLOOR

as in a large warehouse of this character, was designed and installed by the B. F. Sturtevant company of Boston.

The toilet arrangements which were installed by M. J. O'Neil, of St. Paul not only include the apparatus, but Terazzo floors and other sanitary appointments pertaining to first-class toilet rooms are very complete and satisfactory.

The steam for the heating system is supplied by the Northern Manufacturing Company, though the boilers of the plant used



SHOWING WEST SECTION OF 3RD FLOOR COMPLETE

for other purposes are attached to the heating apparatus and there is sufficient room for an increase of boiler capacity arranged for, so that the owners could supply their own steam heat if it became necessary.

While the building is as near fireproof as material and its scientific application can make it for the protection of its contents, an elaborate sprinkler system has been installed throughout. The floors are constructed on an incline with automatic scuppers in the walls to carry off water when the sprinklers are in operation.



FINISHED SECTION OF 5TH FLOOR

The water for this and other purposes is supplied by an artesian well three hundred and seventy feet deep below the foundations and the water is pumped to tanks on the top of the building. In this connection it should be recorded that this well reaches a strata of potsdam sand, fine and egg shaped in its particles, and it is supposed the water comes from Lake Superior. In the line of fire prevention the window frames are of metal on two sides of the structure and these windows are filled with wire glass as a protection against adjacent fires. Two fire-

escapes are also installed at convenient points. The structure is covered with a five-ply gravel roof.

As a complete exposition of the possibilities for structural strength and fireproof qualities this warehouse meets every expectation and requirement. It is remarkable that the drying out was rapid and thorough and its construction and occupancy in so short a period is in every way favorable to this form of construction.

The offices, which are on the fourth floor, are probably the most complete and spacious possessed by any firm in the Northwest. They are approached by a broad stairway from the Jackson street side of the building, which is on the most elevated side and above twenty-five feet from the street. The staircase is lined with a fine quality of Tennessee marble and the stairs are of the same material, furnished by the Drake Marble and Tile Company, and finished in oak trimming, the walls being appropriately frescoed. Vaults 28 by 16 feet are provided in the offices, the doors of which were made and installed by the Diebold Safe Company. The entire building is equipped by a complete system of pneumatic tubes which distribute orders and correspondence to every department. This is operated by 7½ horse power, which exhausts from the roof. The system was put in by the Lamson Con. Store Service Company, of Chicago, and has thus far given perfect satisfaction. A telephone exchange and other adjuncts of a complete business system facilitates the work of the office force.

FOREST TREES IN SOUTHWEST KANSAS.

The translation of prairie lands into forests, the production of timber for profit, is one of the industries successfully prosecuted at Hutchinson, Kansas. This vicinity affords ideal conditions for the growth of forest trees, with its rich, loamy, porous soil, and the remarkable sub-irrigation of both soil and subsoil. Mr. L. W. Yaggy, of Chicago, to discover and avail himself of these conditions for financial investment. After extended search afforded by the Arkansas River and Crow Creek. It remained for through the state of the Middle West, Mr. Yaggy selected a tract five miles northwest of Hutchinson as being best adapted to the commercial growing of forest trees. Over one million hardy catalpa trees about twelve years old, now stand on this tract, and their splendid growth is a conclusive demonstration of the suitability of Reno County bottom lands for a forest station. The United States Bureau of Forestry regards this plantation as one of the most remarkably successful examples of practical forestry in the United States, and estimates that in view of the ever-decreasing supply of timber, the profits on this investment will be much greater than if the land had been devoted to ordinary agricultural purposes. The "Kansas Farmer" says, "this is probably the most valuable 500-acre tract of land in the state today." The success attained in this experiment has led Mr. Yaggy to plant an orchard of ninety thousand fruit trees which are now coming into bearing.

NOTES OF INTEREST TO ARCHITECTS.

On the first and third Tuesdays of each month the Minneapolis & St. Louis Railroad will sell round trip excursion tickets to points in Minnesota, the Dakotas, Manitoba, Saskatchewan and the Canadian Northwest; also to points in the South, Southeast, West and Southwest; the rate being one fare plus two dollars. Liberal limits and stop-over privileges are allowed on these tickets. For rates and further particulars call on or address A. B. Cutts, General Passenger and Ticket Agent, Minneapolis, Minnesota.

On account of the Imperial Council Ancient Arabia Order, Nobles of the Mystie Shrine Convention, the Minneapolis & St. Louis Railroad will sell tickets from April 25 to May 5, limited to July 31, for return passage, at rate of one fare for the round

trip. This rate will apply going via any direct route, and returning via any other direct route, but stop-over privileges will be granted on application. For further particulars call on agents or address A. B. Cutts, General Passenger and Ticket Agent, Minneapolis, Minnesota.

The stone quarry firms at Kasota, Minn., will proceed to develop the vein of marble underlying the deposits of stone which have been worked for years. The formation is peculiar and the marble is the second vein beneath the well-known Kasota stone. The intervening vein is difficult to work through and this has deferred the development of the marble. The marble is said to resemble Tennessee marble, but to be of more attractive coloring, and is capable of taking a very high polish. Both companies working at Kasota will install machinery for polishing and for sawing the stone. Lathes will also be added for turning columns and other work. The marble deposit covers a tract of 250 to 300 acres. The present working force of 400 men in the quarries will be considerably augmented.

Harold Johnson and R. F. Jackson, both of whom are long and favorably known to the architects of the Twin Cities and the Northwest as representatives of the manufacturers of standard building materials, have combined interests and become associated in the handling of building material specialties, with offices in the Lumber Exchange building at Minneapolis. These specialties include architectural terra cotta, hollow tile fireproofing, rolling partitions, rolling steel shutters, high grade face brick, expanded metal lath, metal reinforcing, roofing slate, (all colors) roofing

tile in all colors, structural slate, Tiffany enameled brick, composition capitals, decorative relief work, metal dados and ornamental glazed faience. Long experience has given these gentlemen an exceptional insight into the value and standard character of materials, and their representation is at once a guarantee of the quality of the product and equitable character of the figures presented.

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In this building the entire interior construction is of concrete, re-inforced by the Kahn Trussed Bar—including such structural members as column footings, wall footings, columns, girders, beams and floor slabs.

We will be glad to send to any Engineer, Architect or Builder pictures showing some of the details in the construction of this building. The drawings for the engineering part of the work were made in our Engineering Department—a service that we cheerfully offer any of our customers.



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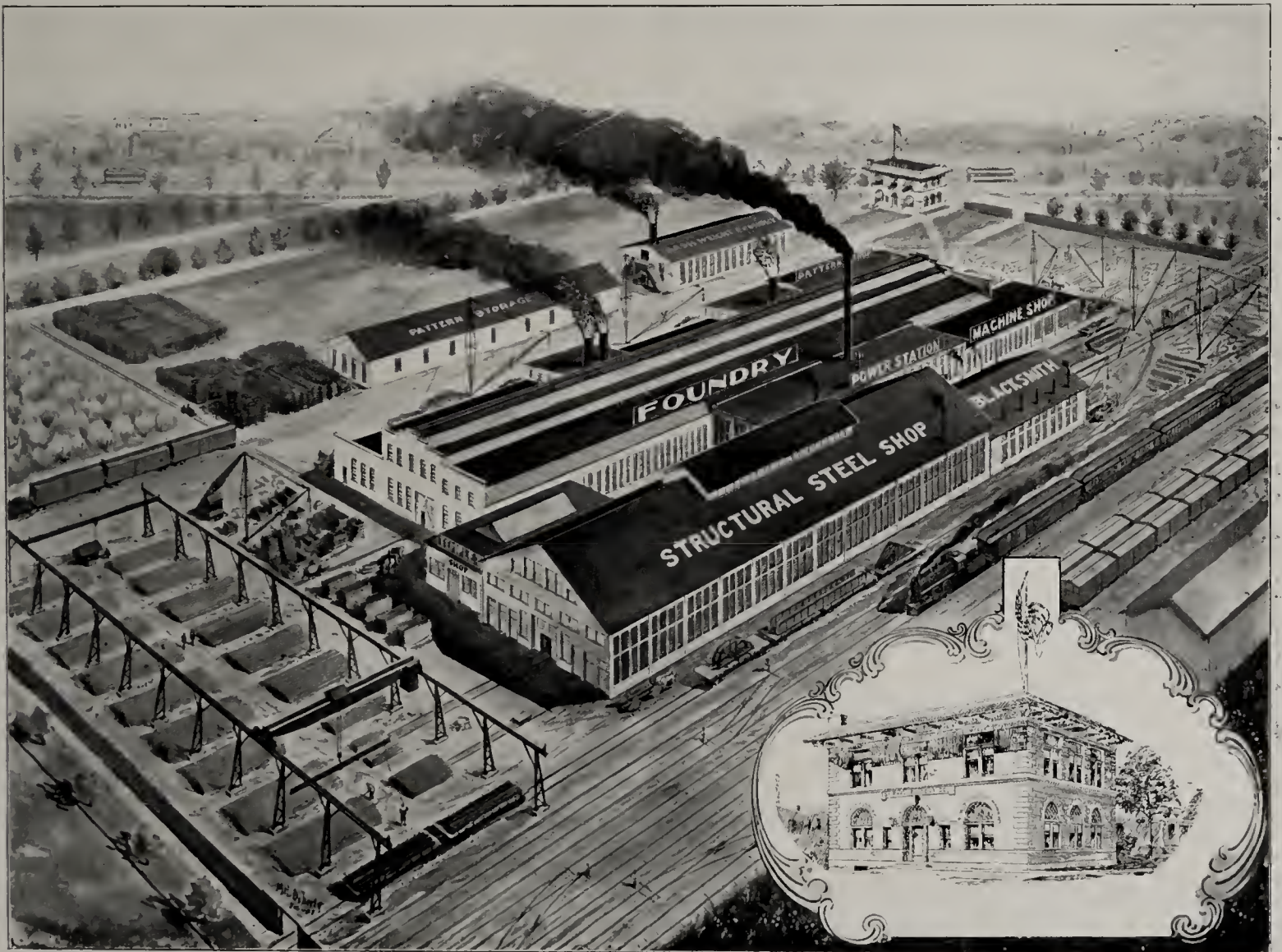
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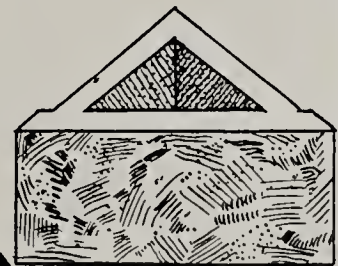
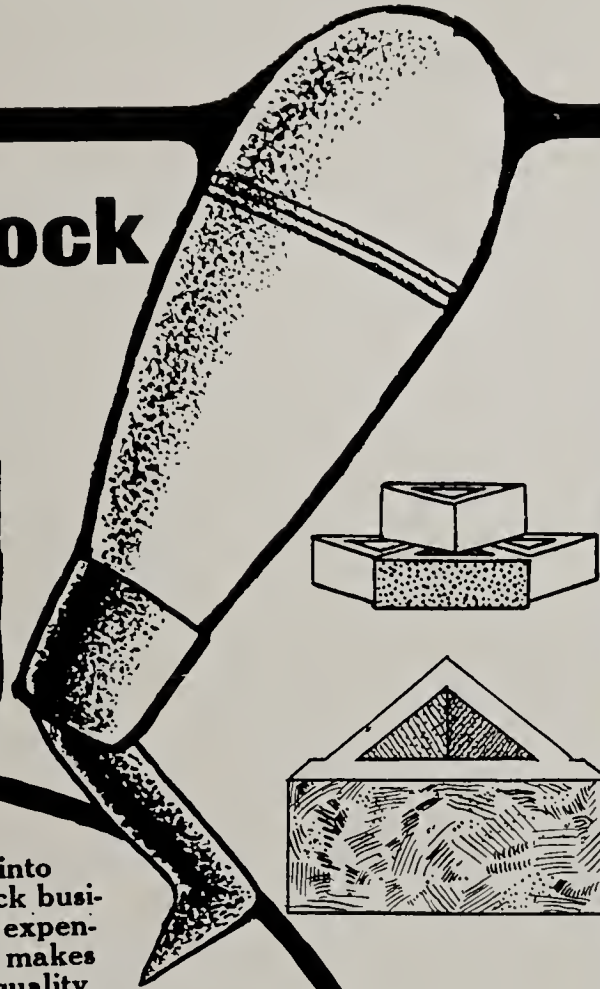
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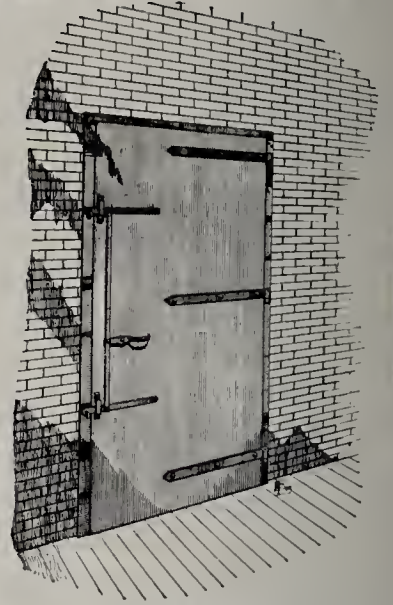
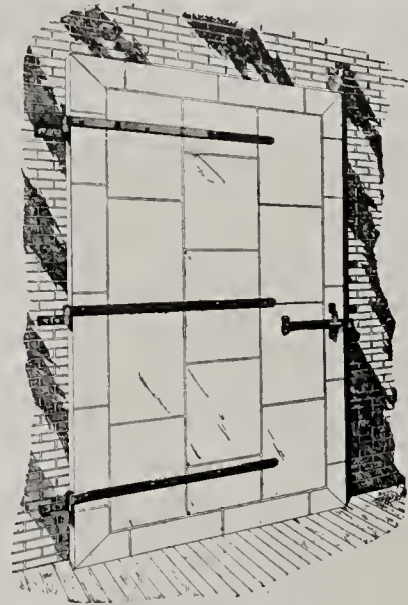
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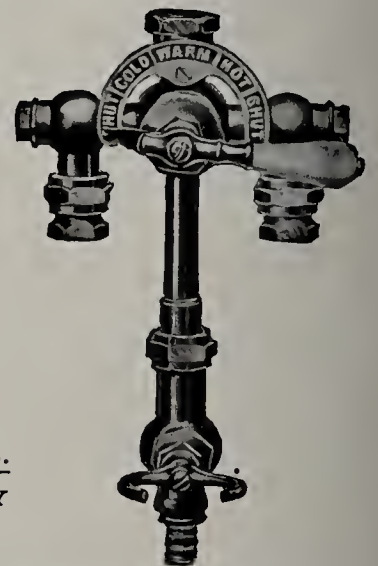
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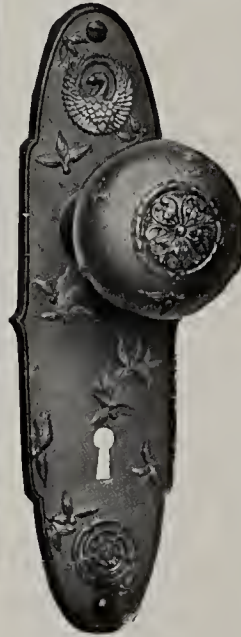
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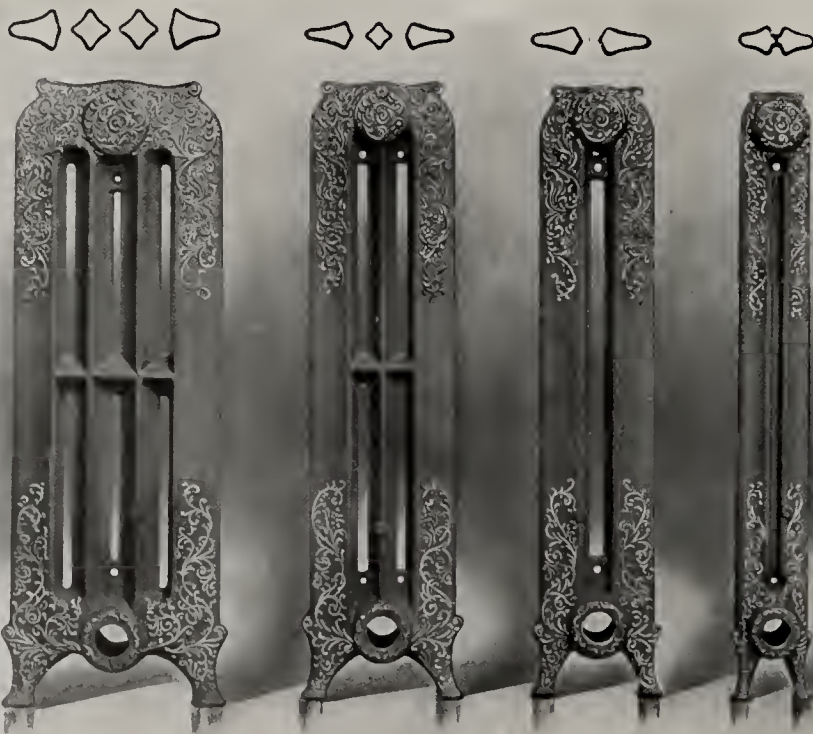
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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

Electrical Encroachment on Private Rights

Municipal authorities are slowly waking to the fact that in their care for the public weal they have powers of regulation in regard to corporate use of public streets, where heretofore any interference has been deemed an infringement of vested rights. The use of electricity for power and lighting, which is, in almost every case, transmitted by wire or cable from a central station, the immense growth of telephone and telegraph service, all requiring wires for operation, has at last become as much of an encroachment upon the rights of the public as to be deemed a public nuisance in the eyes of those who own property on any of the main arteries used in transmission. This is probably true in as great a degree in Minneapolis as in any other city. Her growth has been so rapid and phenomenal that these features, at first looked upon as a natural inconvenience, have become a general nuisance. If this condition were inevitable it would be borne with more or less patience, but it is easily remedied, for there is no wire in use in our public streets that not only cannot be placed underground, but with beneficial results in its operation. The best street car service in the country is in the city of Washington, where the overhead trolley, in the business district at least, is unknown. Other cities have succeeded in getting the service wires underground in some degree, but where they have failed it has not been because the necessity was denied, but because corporate interests too largely controlled municipal action. We assume that this is not the case in Minneapolis, and the time has come for drastic measures if persuasion will not answer. In one portion of the city as many as ten immense poles carrying upwards of two hundred telegraph and telephone wires, besides cables and electric wires concentrate on one corner in front of several of the most expensive suburban residences, to the utter destruction of these from a monetary standpoint, as well as unsightliness to their present occupants. No city should be able to give so unlimited a franchise as to make their utilities a pub-

lic nuisance and a private loss, and it is hoped that the city authorities will end the controversy by demanding that not only the wires in down town streets but those in the residence districts be placed underground, and at once.

**The
Special Permit
Evil
in Chicago**

The new building commissioner, of Chicago, seems to be trying to meet the requirements of his office in an honest and efficient manner, but he has at the beginning of his service run against the pernicious "legislative courtesy" of the council which passes a prohibitive order of the commissioner over the head of the building department by ordinance. When a former commissioner, Joseph Downey, held that office the same influence annulled his best efforts, though he was the best commissioner Chicago ever had, his honesty, knowledge of building, and energy, making him an ideal commissioner. But notwithstanding this fact, there were, if anything, more violations of the city's building ordinances during his term of office than had ever been known in the city's history, a fact which led to his resignation. An opinion just received from the corporation counsel, by Mr. Bartyen, is to the effect that such permits issued by the council are illegal, and accordingly he proposes to enforce the law.

**A Ruling
Against
Paint
Manufacturers**

Ninety-seven manufacturers and other paint dealers asked the United States circuit court for an order restraining the State of North Dakota from enforcing what is known as the North Dakota paint law, claiming that it was in violation of the Constitution, in that it provides for taking property without due process of law and denies equal protection, the law only applying to the manufacturers and dealers in mixed paints. The cause was tried on February 23 and the state law was supported in the decision. The slightest investigation should have convinced the court that the law as it stands had been secured by interests inimical to public policy, and that some recognition of the endeavors of the makers of standard paints to not only compound, but distribute, honest paints should be made, as against thus supporting and perpetuating a "pure lead citizen with suggestions. This writer seems unaware of and oil" fallacy which, if correct in its inception, has every chance of adulteration before it is applied. When the matter of paint and varnish has come to such a pass that the architect must purchase his own material and apply it himself, if he wishes to be certain that his "works will live after him," the courts certainly should not aid the dishonest purveyor to the detriment of the people's interests.

**Correct Method
for Procuring
Competitive
Plans**

In strong contrast with the action lately noted in regard to the procuring of plans for a capitol for the State of South Dakota, is that of the school board of Dallas, Texas, in which report says "it was definitely decided that the competition must be such that the plans would stand and be compared strictly on their merits, and all marks or names which would reveal their authorship would be absent. In this way no matter how high a prestige an individual firm may have over one not so well known, its drawings would have no possible greater consideration. In short, not till the plan approved has been formally accepted, will even the board know what firm submitted it." And that is about all there is to it. On such a basis, and on that alone, should architects of standing enter plans in any competition, or any board ask for competitive drawings from architects.

**Activities
of the
Cincinnati
Chapter**

The Cincinnati chapter of the American Institute of Architects is doing more along practical lines to regulate and promote local improvements than any other chapter on the list. This is not said in disparagement of those chapters which are active yet working under adverse conditions, and there are several, such as that at New Orleans, that deserve all praise. But in Cincinnati the chapter leads in every movement looking to municipal improvement, from the problem of sewage in the surrounding hill suburbs, or the widening of some congested city corner, to the measuring of the colonial relics of past construction and design. There is no reason why the local chapter should not be the center for these activities, not alone in council and advice on all structural and artistic betterments, but be the active force that will promote the abolition of inadequate or unsightly civic surroundings and their renewal along practical or artistic lines. In contrast with these activities of the Cincinnati Chapter, comes a notice issued by the officers of the New York chapter, stating that the usual monthly meeting would be omitted "as there is not sufficient business to warrant it being held." A somewhat general familiarity with the chapters of the institute throughout the United States leads us to state that it is probable that the New York chapter is unique in its lack of "business," for while all do not seek for associate activity with the earnestness displayed by the Cincinnati chapter, each is in its way a center of architectural influence in its locality.

LANDSCAPE GARDENING IN ITS RELATION TO ARCHITECTURE.*



GARDENING and Building are sister arts, but in their progress toward the perfectness of the fine arts, Building is ever in the lead. "Men learn to build stately sooner than to garden finely, as if gardening were the greater perfection." wrote Bacon centuries ago; and so true is this to-day that

most persons are wholly ignorant of the possibilities of artistic work with earth and grass and foliage.

Even our professors of artistic building seem slow to perceive the full stature and dignity of the sister art. I have heard a famous architect speak of gardening as the "handmaid" of fine building and another great man has quoted to me with approval the saying of the French that "fine gardening is the sauce of architecture"—a saying which would be insulting if it did not so plainly reveal the speaker's ignorance and prejudice.

If we would perceive with clearness the real sisterhood of the arts in question, it is only necessary to take one's stand at a certain point of view,—a point which some men find hard to reach because a journey back toward childhood is involved. We must forget for a time our narrow, technical knowledge and our acquired ideas concerning art and architecture. We must try to look upon the world with the eyes of youth. If we can do this, what a glorious prospect reveals itself. A world of scenery of indescribable variety, interest and beauty; oceans, mountains, hills, valleys, and running waters transfigured daily by the glory of the rising and the setting sun. In the midst of this wonderland stands man, and we are more astonished at him than at all the rest.



We find him in primitive ages apparently unconscious of the beauty around him, living precariously upon wild nature and causing little or no change in the appearance of the wilderness about him. When at last he is forced to increase his food supply, he takes some wild thing like

maize, and plants it in the glades of the forest and stores the crop in granaries set up on stakes. When he desires to shelter himself, he contrives frail tents, like the Bedouins or the Indians, or he walls the mouths of canyon caves, or he builds earth-pueblos, hardly to be distinguished from the arid soil on which they stand. When he is awed by death and the forces of nature, he sets up Druid stones and raises long serpent mounds, and builds the pyramids. As he comes to cultivate the earth,



he works marked changes in scenery. He fills the woods and marks off fields and draw lines of road across the country. He builds farmsteads of as many types as there are different climates and different social circumstances. He quarrels with his neighbors and builds towns. He prospers and builds palaces. He glows with faith and builds cathedrals. Fields, orchards, roads, bridges, farmsteads, villages, towns, palaces, temples, all play their part in the new scenery—the humanized scenery—of the earth; and Mother Nature, adopting as her own all these works of her wonderful child, makes with them landscapes vastly richer in meaning and pathos than any she can show us in her primeval wilderness.

Here we reach the point of view of which I spoke. Standing here, we perceive that of all man's works upon the surface of the earth—his useful fields, his orchards, his lanes and cottages, his avenues and palaces, his temples of the gods,—none can be separated from the natural and historical conditions which gave birth to them and surround them. None can be cut out and then adjudged to be either beautiful or ugly. We cannot separate them if we could. The humble cottages of the English lanes, the towered village of the Italian hills and the red farmsteads of Sweden, are all beautiful; each in its own place, under its own sky, set in its own landscape. And the same is true of even the loftiest works of architecture, such as the Pyramids, the Parthenon and the Abbey.

*A paper read before the Boston Society of Architects, by Charles Eliot, Oct. 2, 1891. Reprinted from his biography written by his father, the president of Harvard, through the courtesy of Warren H Manning, Landscape Designer.

None of these noble or charming buildings are beautiful in and of themselves alone, although the world and the architects have sometimes seemed to think so. On the contrary, the truth is that these works of men are of necessity but parts of the landscape; and they are beautiful just as the works of pure nature are beautiful, according as they express their origin, their growth and their purpose and as they help or harm the expression of the particular landscape of which they are a part.

If this is true, much of importance follows. We, of this modern world, with our inevitable self-consciousness and our world wide view, can no longer build and garden according to traditional and inherited types as did our fathers. We discover new and strange types in foreign lands and we want to try them in our own land. Thus, men have built Greek temples in the moist English park-lands and have made pleasure grounds in the Chinese style. We make a series of similar experiments and then at last, we see our folly and we turn with a new eagerness to discover—if we can, the essential, the vital, the permanent elements in the scenes which delight us. What is it, we ask which moves us when we call to mind the churchyard and church of Lincolnshire, the park and mansion of Devon, or the green and the elms and the simple buildings of our own Hadley or Deerfield? I think there can be but one answer. The beauty of such scenes,—for each remembrance is the remembrance of a scene and not of a building only—lies in their unity and harmony of expression.

Such beauty will hardly grow of itself for us in this New World and in this modern day. If we want it, we shall have to work for it through that arduous process called designing. At the beginning we must try to picture



to ourselves the end, and now our constant aim must be to make all that we do contribute to the effect of the whole, and the whole which we aim to produce can nevermore be a building only.

The site, the scene, the landscape and the building must

be studied as one design and composition. No other course is open to those who have once seen what we have seen. There is no other way of winning the beauty we desire.

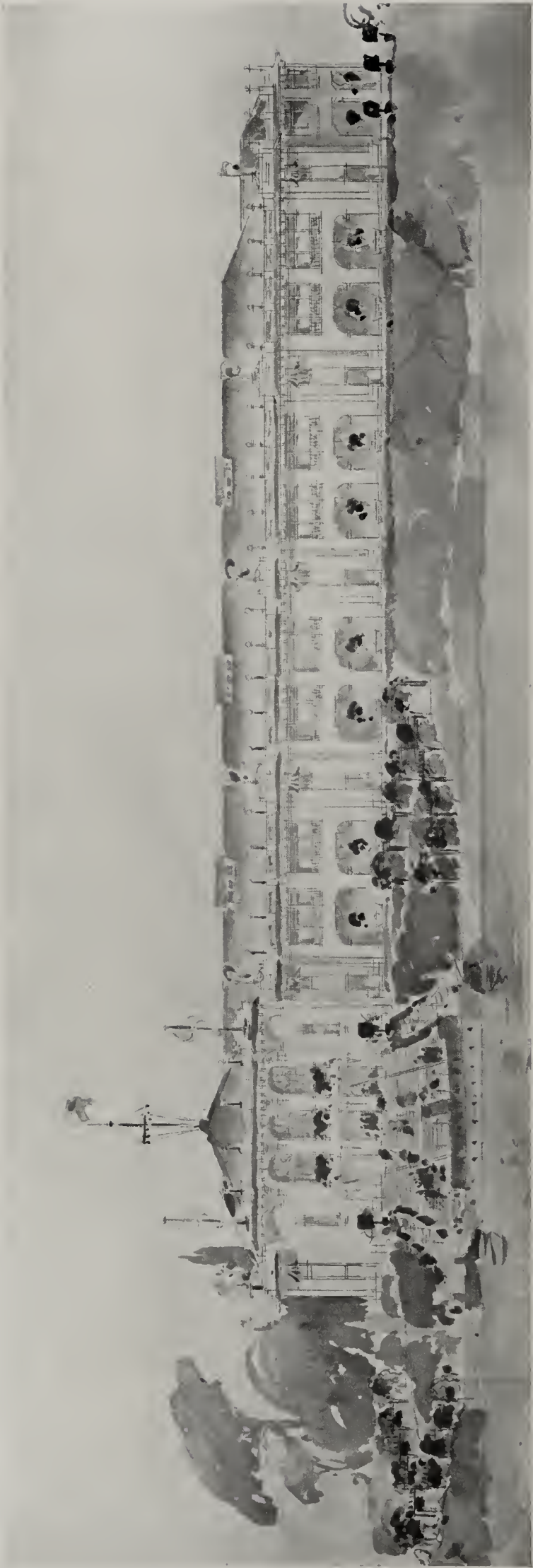
Here again we stand where we cannot avoid seeing behind the fair figures of Gardening and Building, a



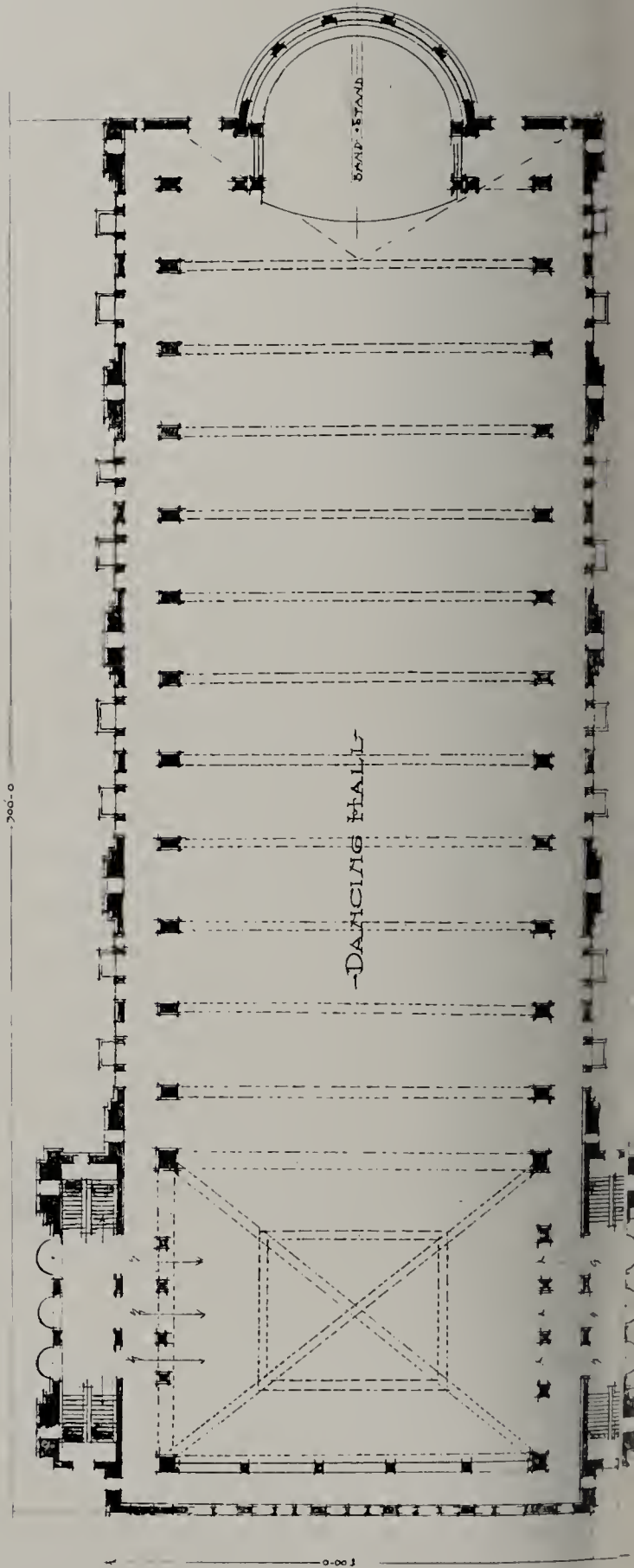
third figure of still nobler aspect,—the seldom-recognized mother of all that is best in the sisters,—the art which, for want of a better name, is sometimes called Landscape Architecture. If it be true that the art which arranges for use and beauty that part of a scene or landscape which is not a building is fully as important as the art which devises the building itself,—if it be true that Gardening, which works with gravel, soil, grass, herbs and trees is the sister of Building which works with stones, bricks, and wood—then it follows that the art which conceives the product of Gardening and Building as a unified scene or landscape is an art which is of even greater moment than either of the assisting sisters. Evidently Landscape Architecture must rightly conceive the whole before Gardening and Building can rightly conceive or design their respective parts. The mother art must lay out the main lines before the sister arts can work to the best advantage.

Does it not behoove artist builders to think of these things oftener? Should they not be ever ready to assist the slow progress of the artist gradeners, and in company with the latter should they not strive always for that perfect unity of general effect which is that flower of Landscape Architecture? And for our encouragement let it be understood that whoever designs the arrangements of the buildings, ways and green things of a farmstead, a country seat, a village, a college, a world's fair or any other scene of human activity, in such a way that beauty shall in the end spring forth from the happy marriage of the natural and the needful, is a successful landscape architect, whether he calls himself by that long name or not.

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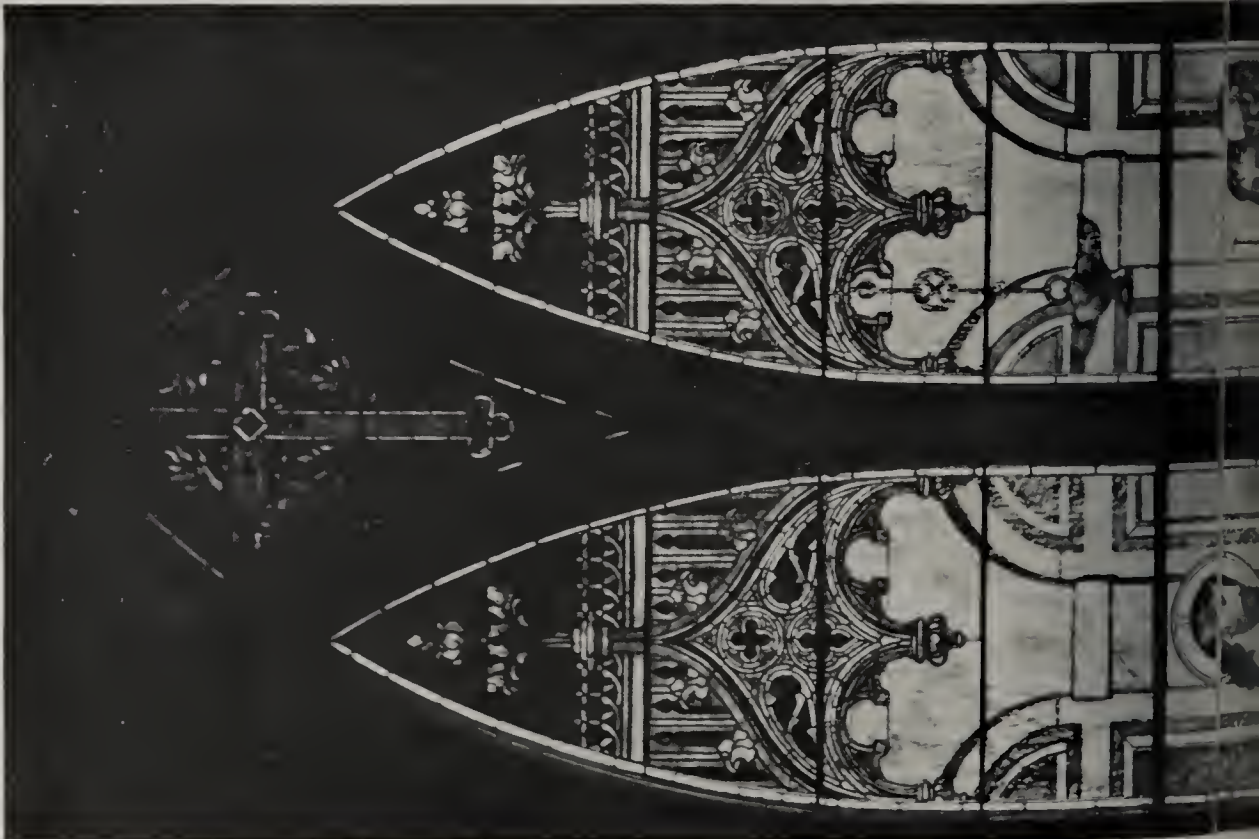
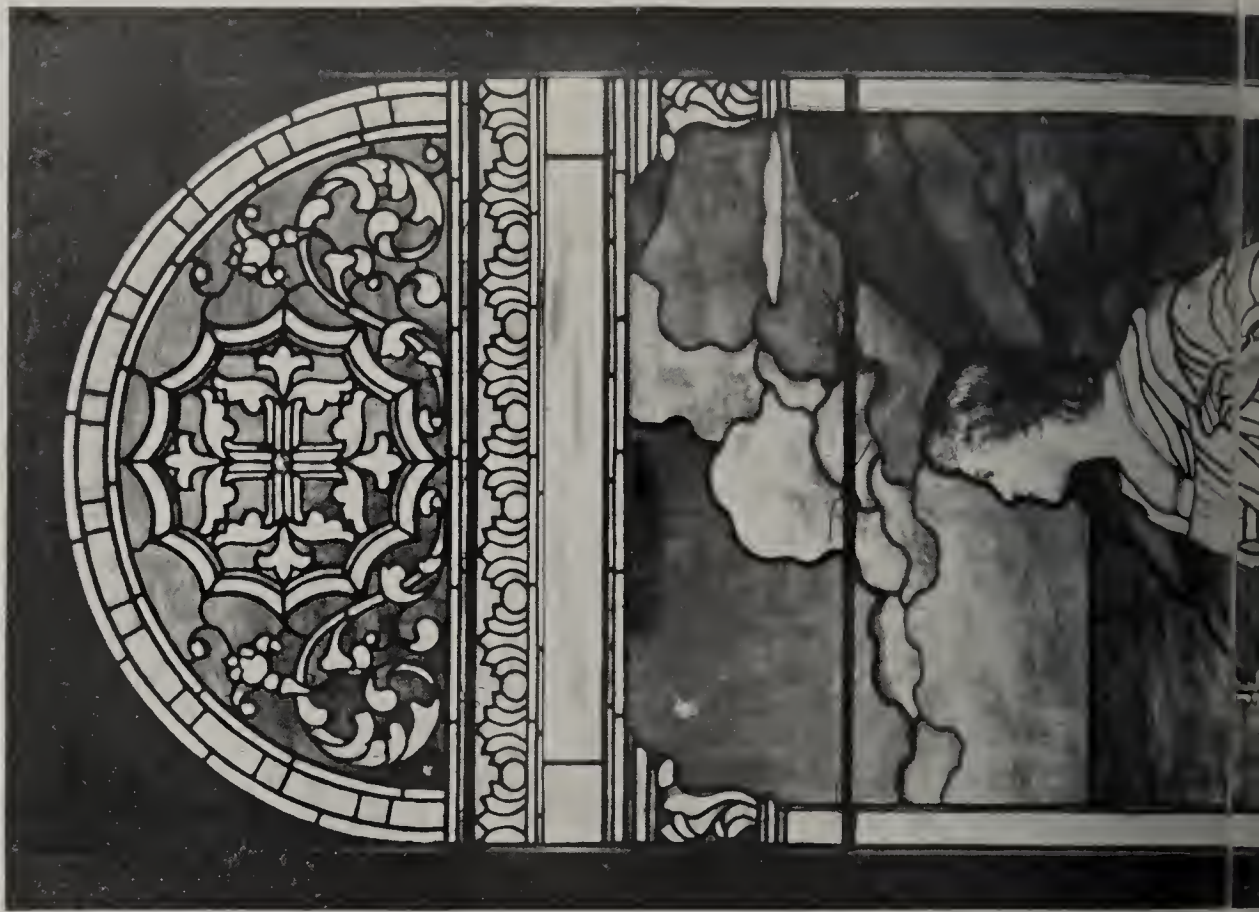
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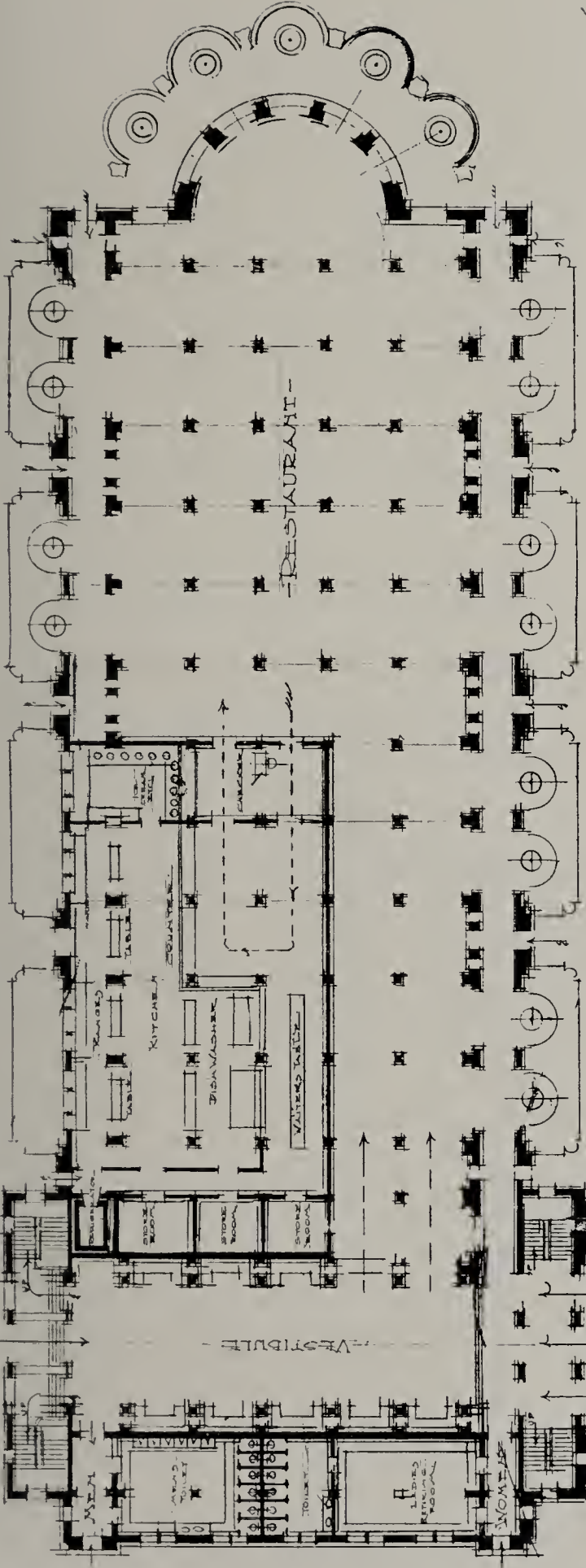
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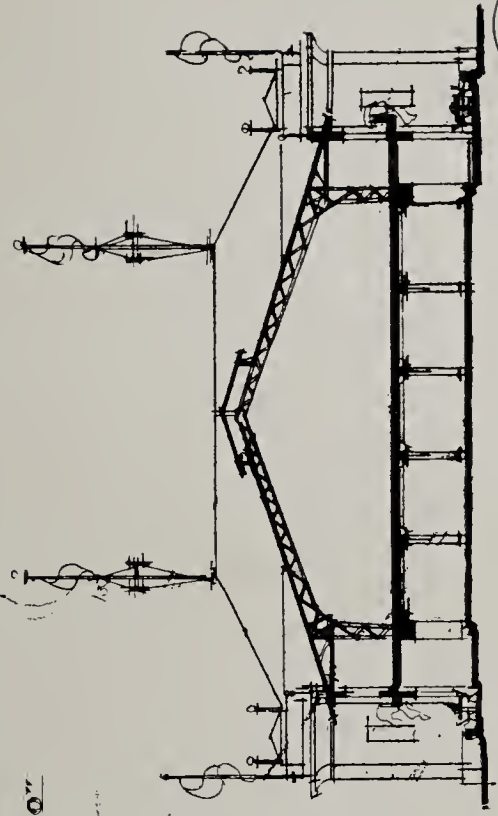
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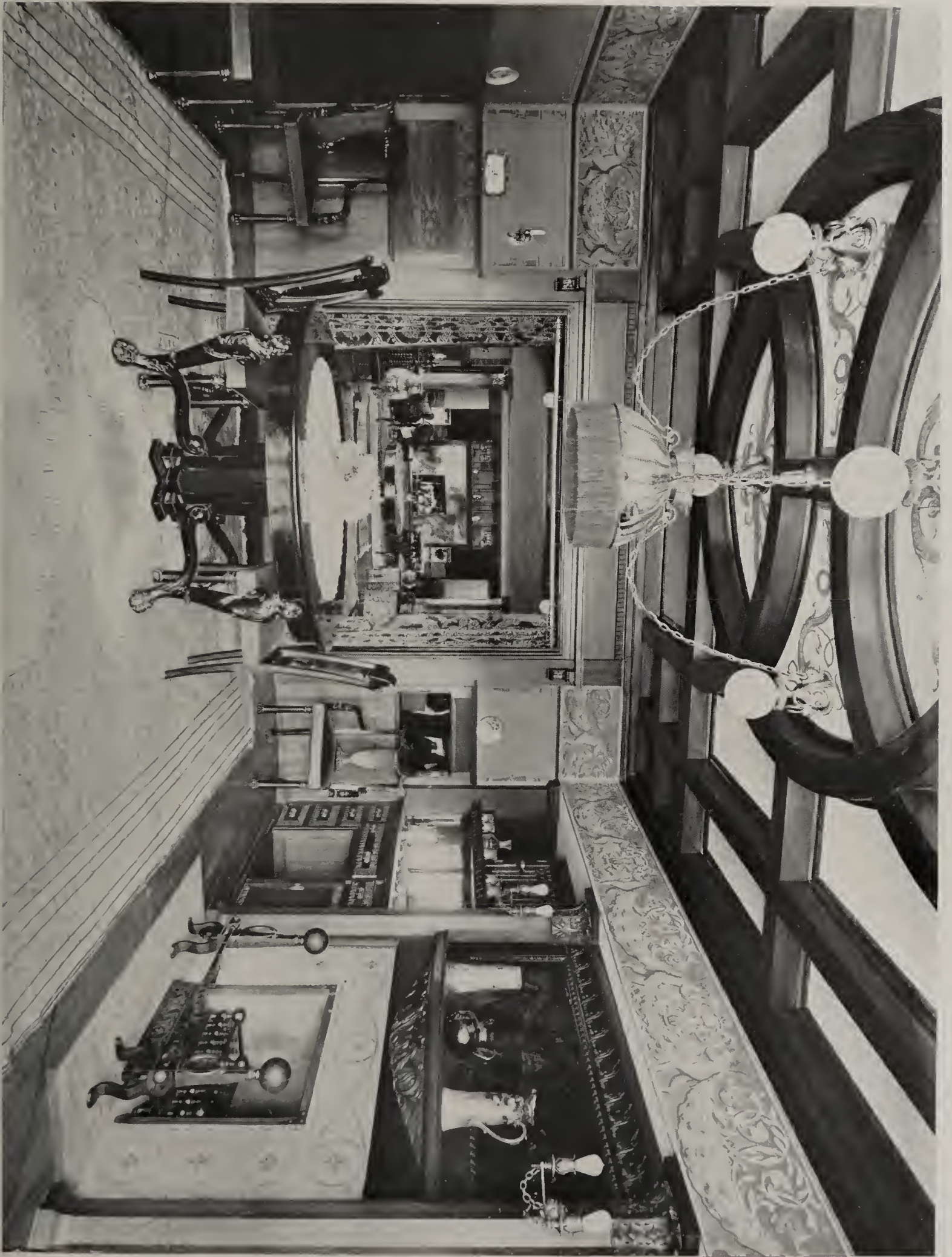


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HOW TO BECOME AN ARCHITECT.

BY JOHN W. CARRERE AND ALLEN B. POND.*



THE advantages offered to a young man in my judgment, in the field of architecture greatly outweigh any possible disadvantages. The work is intensely interesting and full of variety and opportunity. It affords ample scope for specialization according to temperament, ranging from the purely practical to the highly artistic. The work is educational and broadening in the extreme and is intimately related to all of the other arts, and with these the architect is bound to be brought into contact. The architect's relations, whether with his client or with those who are working for him, as well as with the artists and the public generally, can always be made pleasant and sympathetic. He is sure of a competency, of social position, and an opportunity to earn fame, besides finding happiness in his work and being enabled to contribute to the happiness of those with whom he comes in contact professionally.

The only disadvantages, so far as I know, consist in the fact that an architect cannot make a fortune by the practice of his profession, and that he frequently fails to command the appreciation and encouragement which his work deserves, and which is given more frequently in other professions.

The greatest hardship with which an architect has to contend is due to the fact that the very nature of his work combining as it does the practical with the artistic, prevents the average man from distinguishing between real merit and mediocrity. This is true to an extent hardly possible in any other profession, so that the architect's recognition as an artist comes mostly from other architects and artists, and seldom from the public. But even this disadvantage is a stimulus to the architect never to halt in his efforts to do his best. It maintains his enthusiasm and therefore keeps him young and active.

ALLEN B. POND.

It is to be assumed that the young man who is planning to become an architect has some natural qualifications, and intends to achieve success, by honorable means and without the sacrifice of his self-respect.

The advantages offered by this profession are not to be despised. Its product is concrete and visible, and it directly reaches with its impress a large number of persons beyond the circles of the immediate client, and by the wide circulation of photographs and sketches, indirectly reaches a vastly greater number. In this respect architecture affords a wider field than that offered for instance, by the professions of law, medicine and teaching, or by most lines of commercial enterprise.

In common with the arts of sculpture, painting, and music, its product has a relative individual permanence enjoyed by few industrial and by no commercial pursuits.

Its product is far less ephemerous than the work of the actor, or the musical virtuoso, or the ordinary litterateur, is not so easily thrust aside and forgotten as the work of the musical composer, and not so easily obliterated as the work of the sculptor or painter.

The work offers scope for an exceptionally high degree of creative and imaginative faculty, ranking herein with the higher forms of literature and music, excelling sculpture and painting, and wholly surpassing the range of any scientific, technical, industrial, or commercial pursuit.

It imposes the necessity of solving puzzling mechanical problems, of devising ingenious expedients, and of coping with emergencies.

It presents in an exceptional degree a field for the exercise of knowledge of human nature, of tact, of wisdom, and of foresight.

It involves close contact with a wide range of activities and brings one into close and often intimate relations with individuals of exceedingly varied occupations, positions, and points of view.

It offers the opportunity to aid signally in making an environment that shall contribute to the health, comfort, charm and distinction of human life.

To one who appreciates its scope and opportunities and who measurably meets its demand, it yields a deep satisfaction and a keen sense of useful achievements quite independent of financial return.

To the few it brings a considerable financial return.

It has some disadvantages: The status of the profession is not well established in the United States. The work of the architect is to develop creatively and critically, the plan and design, to perfect the drawings and specifications, and faithfully supervise the construction of a desired building. The degree of technical skill, the breadth of accurate information, the painstaking foresight, the intelligent coordination, the amount of sheer labor required for the work in the case of buildings adapted to the complex requirements of modern life are wholly beyond the conception of the building public.

The compensation for work of ordinary size, such as must make up the bulk of the output of the average practitioner, is wholly inadequate, if the work be intelligently and thoroughly done. The conscientious, hard working architect, endowed with a fair degree of talent, usually gets from his profession an income less than the earnings of a small contractor. At the minimum rates, established by the American Institute of Architects, few architects to-day acquire a competency for old age. Yet the public regards these absurdly low rates as exorbitantly high.

Not only is the remuneration inadequate to the skill required and the actual labor expended, but it is totally inadequate to the responsibility placed on the architect—to what may be called the moral risk involved; for, in a sense an architect should be morally if not legally, a

*Letters written to Nathaniel C. Fowler Jr., of Boston, and included in a newspaper article on "The Architect."

and while the company is cutting more than twice as much guarantor of the technical quality of his work. And such a guarantee is absurd, when the man on whom rests the responsibility for both plan and execution gets a bare pittance for his pains.

The public, having only a vague comprehension of the skill and training required to cope with technical difficulties, and being unable to judge intelligently of artistic quality, makes scant distinction between the work of the able, conscientious architect and that of the bungler and fakir. Necessarily family connections, social position, friendship, and the like, play a considerable part in securing business for a professional man. It frequently results from the confusion in the public mind, noted above, that the selection of an architect quite lacking in professional merit is made merely because he is an acquaintance, or is a good fellow, or is in one's set or has "a pull." From this fact also it follows that an undue premium is placed on such adventitious qualities as "personal magnetism," and ability "to hustle," at the expense of the man who either cannot or will not "work" people and who depends for recognition solely on professional merit. It therefore not infrequently happens that a first-class man has a reputation among his confreres wholly out of proportion to the extent of his practice, and that he may in fact have an absurdly small income.

This lack of status and of adequate public comprehension leads people to demand of architects, without remuneration, sketches that largely solve the plan problem and determine the main lines of the design; and similarly to expect architects to compete without pay save to the one who chances to please. If the self-respecting architect accedes to the demand for an unpaid, catch-as-catch-can competition, not judged by experts, he is handicapped by being placed in competition with those who make catchy meretricious designs, or who willfully deceive as to probable cost, and who thereby seem to offer more for the money.

An evil which runs parallel with this is the inclination of this same class of architects to "cut under" in the matter of compensation, and the unpaid competition results in its capture by the man who will charge the least for his plans, or has the most influence with the committee.

The complexity of modern life as echoed in modern buildings is so great that the work of the conscientious architect is arduous and wearing in the extreme, if he faithfully tries to be and to continue reasonably well posted on the technical processes that enter into the buildings he is called upon to erect. His leisure will be proportioned to his neglect of things he ought to know and to do— an unfortunate situation for a conscientious man, but inherent in the situation of the smaller architect whose compensation does not permit the employment of specialized departmental heads.

REDWOOD, CALIFORNIA'S UNIQUE LUMBER.*

BY E. J. WILLIAMS.



VERY unique in the lumber industry of the world stands California. She alone of all the timber producing lands sends forth to the marts of the world the redwood. This newest of all lumbers comes from the oldest of all trees. It comes from a tree of a forgotten, former era in the world's history. Standing alone of its kind, no living representative is to be found anywhere outside the borders of this State, where 't has survived the cataclysms which destroyed all its fellows in the vast tracts of Norway, Sweden, Spitzbergen, on the European continent, and Alaska, Wyoming and Colorado on this. In those countries are to be found the fossils of the cretaceous period which show that at some former age the sequoia had its being elsewhere than on the Pacific Slope of California.

True there is a tree in Japan which claims kinship to the sequoia, but the relationship, if any exists, is so distant that it would not be recognized by the lordly trees of the Golden State who rear their heads in the cloud, and send their roots into the soils of past centuries.

In a belt 300 miles long, survive the forests through whose isles once roamed the prehistoric mammoth, the cave bear, and the three-toed horse. What stories could these trees reveal to the delver into the past were but the power of speech given, or better were it to say, could the language of their whispering tops be understood. Who can tell what has passed since the day when this giant of the forest started from the ground a bright green shoot? Nations have changed, dynasties have risen and fallen, human history and earth's geography have been as the rolling waves of the sea, beside the lives of these mysterious relics of the past.

Here dwells mystery. But the iconoclastic hand of man has torn the veil and commerce is driving back the shade into the region whence it came, and sending to the busy haunts of man those patriarchs of the tree world with their traditions of the beginning of time.

Thirty-seven mills, cutting 375,000,000 feet annually, are eating their way into the heart of the great redwood forests of California, and the question is frequently asked: How long will it last? A bit of history may be the best answer to that question.

One big lumbering company, twenty-five years ago, thought it had all its timber cut, and began to look around for other tracts. That was a quarter of a century ago,

*Reprinted from "For California" issued by the California Promotion Committee to bring the superior excellencies and great possibilities of the Pacific coast woods before eastern architects. See article on Washington Fir in February number.

lumber today as it was then the tract is not yet exhausted. Indeed conservative men have gone so far as to say that the redwood forests of California, at the present rate of cutting, will last fully 250 years. It is estimated that there is an average of 50,000 feet of lumber to the acre of redwood forest, but it must be remembered that some of these big trees contain even more than that amount. One tree alone had 66,500 feet cut from it.

One of the old stories told around lumbering camps regarding the size of these big redwoods is that of a chopper who selected a tree and began work on one side of it. After he had been cutting for a week, he chanced to stroll around to the other side and there found a man who had been cutting for eight days on the same tree.

The real "big trees" of California are the *Sequoia Gigantea*, but they do not furnish the true redwood lumber. The *gigantea* wood is brittle and is not near so suitable for lumber as the *Sequoia Sempervirens*, from which the redwood lumber is cut. But the *sempervirens* is no infant in size, as some there are fully fifty feet in circumference, with tops towering 300 feet above the ground. When it is remembered that the bark on a good sized redwood is twelve inches thick, some idea can be had as to the dimensions of the tree proper.

These redwoods grow from Santa Cruz on the south to the Oregon line on the north, and as a rule are scattered in forests or groves, dotting the hills and mountain slopes with patches of vivid green against the prevailing brown. The greatest quantity is to be found in the northern counties of Sonoma, Mendocino, Humboldt and Del Norte, and it is here that the vast lumbering interests of the State lie, so far as the redwood is concerned.

Redwood, being a new lumber, has not yet won its way among builders of other States and other lands, but it is fast being recognized as one of the most stable of all timbers. Where it comes in contact with the ground, or with the weather there is no other lumber that can equal it for lasting quality. It may be said that the red cedar and the cypress are almost as good. Redwood, is practically indestructible in the ground, or exposed to the air. In the forest of Northern California lies to-day a huge redwood trunk which some ancient tornado sent crashing to the ground. On the fallen trunk is growing a spruce tree, thirty inches in diameter, and fully one hundred years old. This tree has grown on top of the fallen trunk, its roots dividing and extending down on each side of the prostrate giant, holding it in a living embrace. This fallen redwood tree is six feet in diameter, and notwithstanding the fact that it has lain for more than a century its wood is as sound as any of the recently felled trees.

This fact is sufficient evidence of the lasting quality. But there are other qualities which make this lumber as especially suitable for building purpose, not alone in California, but in all parts of the world and especially in the tropics, where the depredations of certain insects make

house building something to be dreaded. The white ant, that terror of the tropical countries, and especially of the Philippine Islands, does not touch the redwood, and this fact has brought about quite a trade between California and the insular provinces for the purpose of making cabinets and boxes for the keeping of records.

What makes redwood especially suitable for building purposes, and for shingles is the fact that it is practically incombustible. To those who have used redwood for kindling this may sound as drawing the long bow, but as there is no pitch in redwood, it will not carry fire when there is the slightest moisture in it. For casing work for doors, for windows, and for all places where unchangeableness is a necessity redwood is the best of all lumber. When it is once seasoned it neither shrinks nor swells. It can be wet for weeks without the calipers showing the slightest change in dimension. This feature makes it especially adaptable for pattern work, as it neither warps nor shrinks and the iron moulder will always find his casting exactly of the proper size.

Its resistance to weather and the action of the elements makes it especially suitable for railroad ties, and thousands of acres of the timber are being cut for this purpose.

The bulk of the lumber cut is distributed on the Pacific Coast, but other countries are beginning to understand the value of the material, and already Germany and England are sending in large orders for it. Australia, the Sandwich Islands, and other parts of Europe are calling for it, and as it comes into general use it will vie with all other lumber in the market. So far the price has kept low, the average for this valuable product of California being \$22 a thousand.

CHICAGO ARCHITECTURAL CLUB EXHIBITION.



THE Nineteenth Annual Exhibition of the Chicago Architectural Club will be held in the galleries of the Art Institute at Chicago on March 29th to April 18th inclusive, and will include works of architecture and the allied arts. Exhibits will be received up to March 9th and discharged April 20th.

As the oldest of the architectural clubs, and as its exhibitions have been representative of the architectural art of the United States for the past twenty years, it has always been fortunate in receiving the thorough co-operation of those in the profession whose desire for its advancement more than offsets the trouble entailed in preparing and forwarding designs. As this will be the only exhibition this year in the west, like that of the New York Architectural League now being held in the east, every member of the profession east or west should aim to be represented by his best work in this exhibition.

Exhibits will be collected at Philadelphia, Boston and New York and exhibitors notifying the committee will be advised as to what date and by whom their exhibits will be collected. Exhibitors at other points will send their exhibits to the agents of the club at these points and the club will bear the expense, though the expense attending shipment of other exhibits will be borne by the exhibitor.

The value of these exhibitions is two fold, in that it brings the best in architectural design before the public and, more important, it gives the profession an opportunity that is obtained so perfectly in no other way of examining the work of their confreres.

While the convention of the Architectural League of America brought many of the profession to New York and the opening of the League Exhibition gave an opportunity for this, architects in other cities should not only make it a point to visit Chicago and this exhibition, but to as large an extent as possible take the designing members of the office force with them, so that the expense and trouble undertaken by the club will find its full recompense in the exhibition fulfilling its object, which is to educate and elevate as well as promote an enthusiasm for architectural art.

ARCHITECTURAL ASSOCIATIONS.

PITTSBURGH CHAPTER A. I. A.

A competition has been announced by the Pittsburgh Chapter of the American Institute of Architects, in which \$300 in cash prizes will be awarded for the best designs submitted under the head of "domestic architecture."

The prize is to be called "The Traveling Scholarship in Architecture of the Pittsburgh Chapter of the American Institute of Architects."

The scholarship is made possible by the efforts of the chapter and the generosity of a local patron of art. The committee of the local chapter in charge of the scholarship competition is composed of Architects C. M. Bartberger, F. A. Russel, C. A. MacClure, C. T. Ingham, E. B. Lee, and George Orth the president of the chapter.

THE SOCIETY OF BEAUX ARTS ARCHITECTS.

Circulars of information giving in detail the rules governing the educational movement of the Society of Beaux Arts Architects are too extended for reproduction but are sent to those who are interested by the secretary of the society. The principal prize in the competitions established by the society is called the Paris prize and gives the winner, by authorization of the French government the privilege of following the lectures and taking part in the competitions of the first-class in the Ecole des Beaux Arts and two hundred and fifty dollars quarterly during his stay abroad, which is two years and one-half.

The Pupin prizes of fifty and twenty-five dollars are given for the best designs for ornamental treatment of some scientific appliance, and the Warren prizes of fifty and twenty-five dollars for the most successful solution of a

problem in planning. The system upon which these competitions are conducted are interesting and effective, both in the chances given to win valuable prizes and in the educational benefit derived from the competitions by every draftsman who takes part in them.

WASHINGTON ARCHITECTURAL CLUB.

The Christmas celebration of the Washington Architectural club, resembled in its gaily, bright satire and humorous performance, those early days of the Chicago club, when Enders, "Billy" Gibb, the Williamsons, and a dozen or more, who have since left ideal sketches for the practical office grind, made merry at the club celebrations. In fact the doings of this occasion reads like an antiquated program of that famous club in its salad days.

There was an overture and after this had been concluded there was something doing all the evening. Those who appeared on the program were Michael Dolan, who elicited much appreciation for his singing of "The Star Spangled Shamrock." Mr. Jinx was well received in his presentation of "The Soldier's Toast." The vagaries of a drunkard's life was the motif of a clever bit by Mr. Lincoln. Mr. Wolfsteiner looked after 'cello selections in good style. Prof. Ruhlmann as a prestigitator performed tricks with playing cards, and a quintet, consisting of Messrs. Brooks, McAllister, Potter, Stone and Welsh, evidenced both discrimination and zeal in their number. There was a hodge-podge of "musical bric-a-brac" by William V. Price, and one of the most enjoyable features of the evening was an illustrated lecture on the foibles and vanities of a number of the prominent members of the Club. Floyd Featherstone happily entertained with banjo selections, while the vocal efforts of Charles Bartlett were



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much appreciated. Wm. Claybough gave a refreshing interpretation of songs.

During the evening Mr. Kort Berle, late of the supervising architect's office of the Treasury Department, but now connected with the firm of Barber & Ross, was presented with a handsome loving cup. The token was an expression of esteem from the employes of the architect's office to Mr. Berle, and was presented to him in a felicitous speech by Capt. F. B. Wheaton, architect of the War Department, who was until recently also connected with the office from which the gift was sent. Mr. Berle, who seemed taken unawares, responded with much feeling.

On the invitation of the delegates of the club to the convention of the Architectural League of America, the next convention of the League will be held at Washington in May 1907.

OBITUARY.

FREDERICK TALMAGE TOWNE.

When, full of years, with a record of works through which humanity has advanced and society has been elevated, the end comes to a man's life work, the sorrow of the living is assuaged by his works that still exist and speak. But when one who has, through a peculiar and paramount adaptability, reached a place where the future stretches out in fields of practical usefulness, is taken away, then the loss seems irreparable. Such an one was Frederick Talmage Towne, of Stamford, Connecticut.

It was not so much that this young man who died on February 4th, was the natural successor to one who has done as much for his time as any in the history of our mechanical activities; who has made, not two, but many blades of grass grow where one grew before, but that he, in himself, destined to carry along the work of others, not so much adding to as perpetuating the standard of perfection reached, was at the age of thirty-four years cut off from further usefulness.

This is the significance of the death of Mr. Towne, the general superintendent of the Yale & Towne Works, at Stamford, Connecticut.

Mr. Towne was born in Stamford, March 5, 1872, and after preparatory courses in Stamford schools and St. Mark's School, Southboro, Mass., entered the Massachusetts Institute of Technology. After leaving college he entered the works in Stamford and regularly worked his way up through the various departments, studying the business and methods of management, with the sole purpose of qualifying himself intelligently to make a specialty of a business then highly specialized. The course in mechanical engineering he had chosen with special reference to this particular work. The business of manufacturing logically divides itself into two grand divisions, mechanical and commercial, or distribution of the product. Mr. Towne chose the technical part through

taste and inclination, specializing to fit himself for it. At the time he had fairly qualified himself for serious work in the Yale & Towne works his father, Henry R. Towne, was still living in Stamford, and he became his father's assistant. Later, when his father transferred his residence from Stamford to New York, in order more effectively to direct the affairs of the company from its general offices, which were also transferred at about the same time to New York, he became first the assistant general superintendent and finally the general superintendent in charge of the entire management of the company's plant and responsible therefor directly to the president, a position he has held and ably filled during the past six or seven years.

In the management of these works in which the highest mechanical and technical skill is required in every department, and where each workman is in specific knowledge the peer of those who direct them, this young man was a recognized leader, by right of knowledge and sympathy with every employe. He possessed good judgment, skill, perfect self control and, above all, a sense of justice that was recognized and trusted by all who were under him. He had a high sense of his responsibility, not only in an official but personal appreciation of his duty to other men, which was unquestionably a factor in making him so active in numerous outside matters, as well as those pertaining to his vocation.

Mr. Towne was one of the earliest officers and a member of the administrative council of the National Founders' Association, first its vice-president and then president in 1902-3, always manifesting a deep interest and taking an active part in the affairs of that useful organization. He was keenly interested in all local affairs in Stamford and recently served as a member of the Board of Appropriation, the chief local governing body.

He was a vestryman in St. John's Church. With some others he was a promoter and worker in night schools for boys and had been leader and chief organizer of all welfare work in the Yale & Towne plant, in the sense of cultivating a warm interest in the health, comfort and pleasure of the large body of employes, including the organization of night classes, in which there are about 50 students, who met in a room provided by the company and under the charge of competent instructors. There are also other courses of instruction for young men entering the service of the company and desiring to qualify either for mechanical or commercial positions in the business, these courses taking four years to complete. It was while addressing the assembled workmen, that he was stricken, literally dying in harness. Almost his last words were intended to convey to employes that it was the company's desire, as it was his personally, for closer sympathy and mutual interest between employers and employes and the good will of all personally under him. It was a grand and fitting close to a useful and noble life.

ILLUSTRATIONS.

Colonial details that are chaste and suggestive of the best features of that style are shown in the hall design by F. S. Barnum, of Cleveland, and the doorway illustrated.

Among the better class of commercial buildings recently erected in St. Louis, the Peters Shoe Company's building by Isaac Taylor is distinctive as a type of this class of composition.

Two bank interiors, one by Isaac Taylor, for the Mercantile Trust Company, and one by Eames and Young for the Mississippi Trust Company, both in St. Louis, illustrate two solutions of the same problem in the designing of bank interiors, both for practical utility and business convenience and in the architectural effect obtained in plan and detail.

The trollying of Lake Minnetonka from Minneapolis, has led to the establishing on the largest of the lake islands, an amusement park that will vie in size and variety of pleasures presented, with any similar park in the country. The drawings presented by Keith & Gillette, associate architects, of Minneapolis, are preliminary, but as the improvement is now under way to be completed in time for the opening of the summer season, they are fairly correct.

Three residences in plaster cast, illustrating three distinct types of design executed in this material are shown. Two views of the residence of General Otis, W. F. Krempell, architect, and that of Mrs. Moore, (both of Los Angeles,) Hunt & Eager, architects, and that at Seattle for J. B. Howe, J. E. Blackwell, architect, all show a peculiar refinement in composition that is full of good taste and restraint.

The luxurious semitropical surroundings of the residence for A. S. Vermillion at Los Angeles, Hunt & Eager, architects, form an appropriate setting for the residence, the effect being added to by the broad lawn between the house and boulevard. The dining room interior with its rich timber work design and decorations and proportionately designed fireplace, is not too elaborate to be homelike and attractive.

The two windows by the artist Joseph Lauber, of New York, which are presented in this issue are placed in prominent New York churches. That entitled "Christ's Admonition to Thomas," in the Church of Ascension, is made entirely of American opalescent glass, all gradations of color selected from varicolored glass and closely leaded. The problem of color-harmony was made more difficult by the brick wall of an adjoining house obstructing the light. The only portion where pigment was used was in the leads and panels. In the window entitled "Hope" in the Lafayette Avenue Presbyterian Church, the same conditions apply as in the other window. The coloring of this singularly beautiful conception is rich and deep, the solitary star of hope appearing in a storm-swept sky.

SENATOR COPPER'S HOUSE.

BY WALLACE IRWIN, IN COLLIER'S WEEKLY.

Senator Copper, of Tonapah Ditch,
Made a clean billion in minin' and sich,
Hiked for Noo York, where his money he blew
Buildin' a palace on Fift' Avenoo.
"How," sez the Senator, "can I look proudest?
Build me a house that'll holler the loudest—
None o' yer slab-sided, plain mausoleums—
Give me the treasures of art and museums;
Build it new-fangled, scalloped and angled,
Fine, like a weddin' cake garnished with pills;
Gents, do your dooty—trot out yer beauty,
Give me my money's worth—I'll pay the bills."

Forty-eight architects came to consult,
Drawin' up plans for a splendid result;
If the old Senator wanted to pay,
They'd give 'im art with a capital A,
Every style, from the Greeks to the Hindoos,
Dago front porches and Siamese windows,
Japanese cupolas fightin' with Russian,
Walls Senegambian, Turkish and Prussian;
Pillars, Ionic, eaves, Babylonian,
Doors cut in scallops, resemblin' a shell:
Roof wuz Egyptian, gables Caniptian,
Whole grand effect, when completed, wuz—hell!

When them there architects finished in style,
Forty-nine sculptors waltzed into the pile,
Swingin' their chisels in circles and lines,
Carvin' the stonework in fancy designs;
Some favored animals—tigers and snakes;
Some favored cookery—doughnuts and cakes,
Till the whole mansion wuz crusted with orn'ments,
Cellar to garret with hamman adornments—
Lettuce and onions, cupids and bunions,
Fowls o' the air and the fish o' the deep,
Mermaids and dragons, horses and wagons—
Isn't no wonder the neighbors can't sleep!

Senator Copper, with pard'nable pride,
Showed the grand house where he planned to abide,
Full of emotion, he scarcely could speak;
"Can't find its like in Noo York—it's uneeek!
See the variety, size and alignment,
Showin' the owner has wealth and refinement,
Showin' he's one o' the tonier classes—
Who can help seein' my house when he passes?
Windows that stare at you, statoos that swear at you,
Steeple and weather-vanes pointin' aloof;
Nothing can beat it—just to complete it
Guess I'll stick gold-leaf all over the roof.

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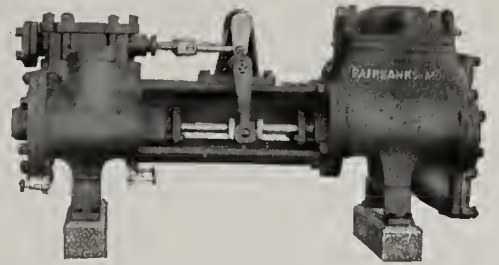
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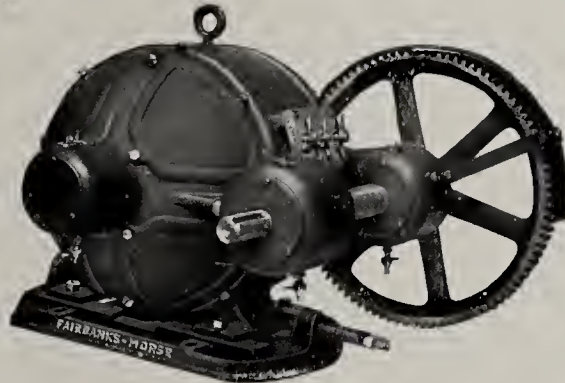
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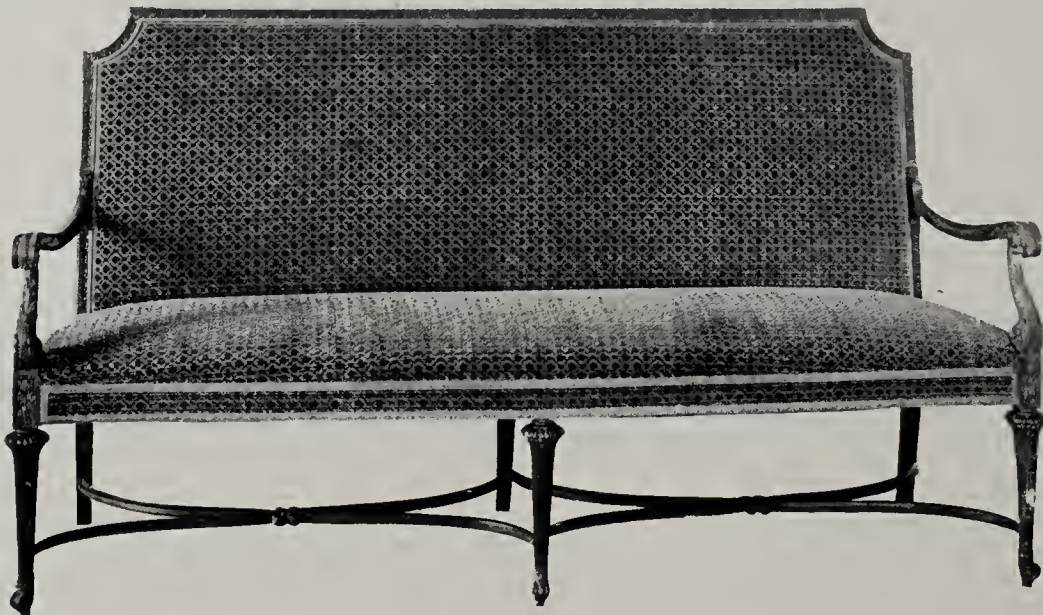
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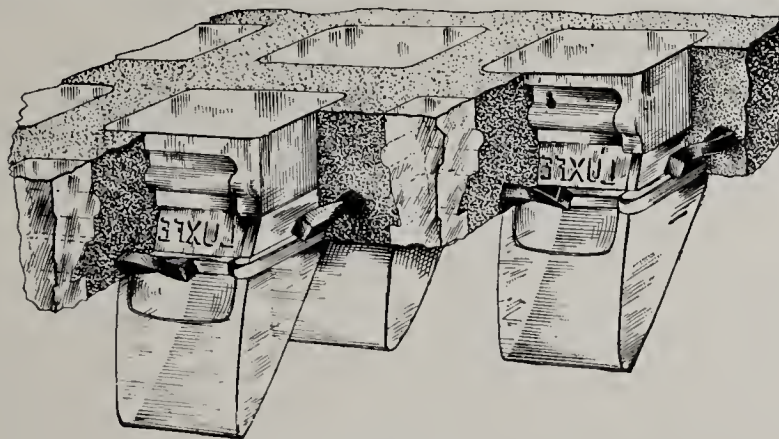
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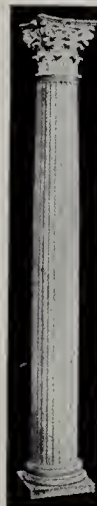
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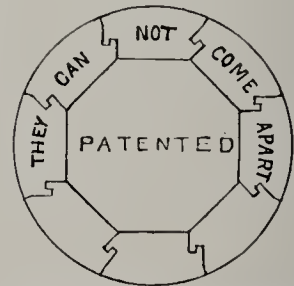
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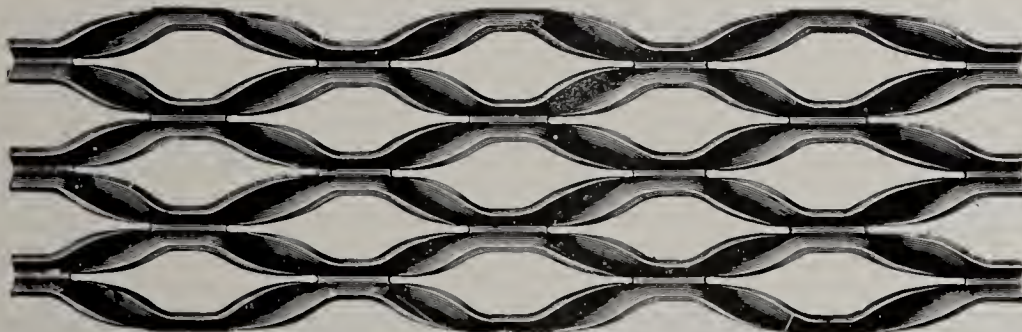
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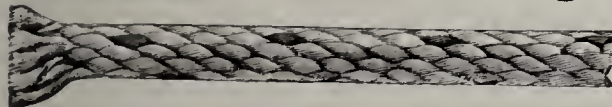


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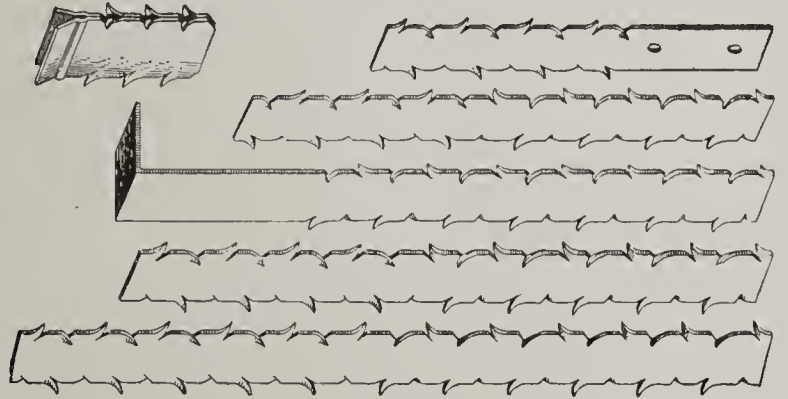
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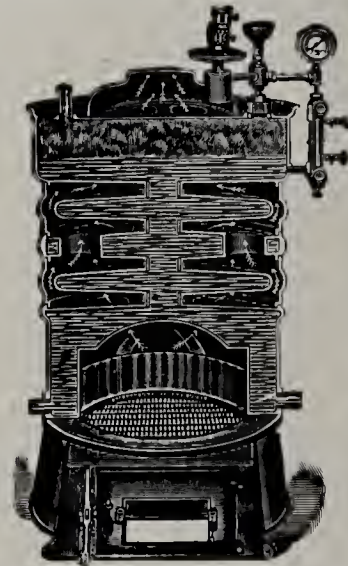
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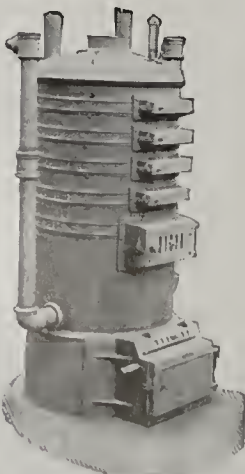
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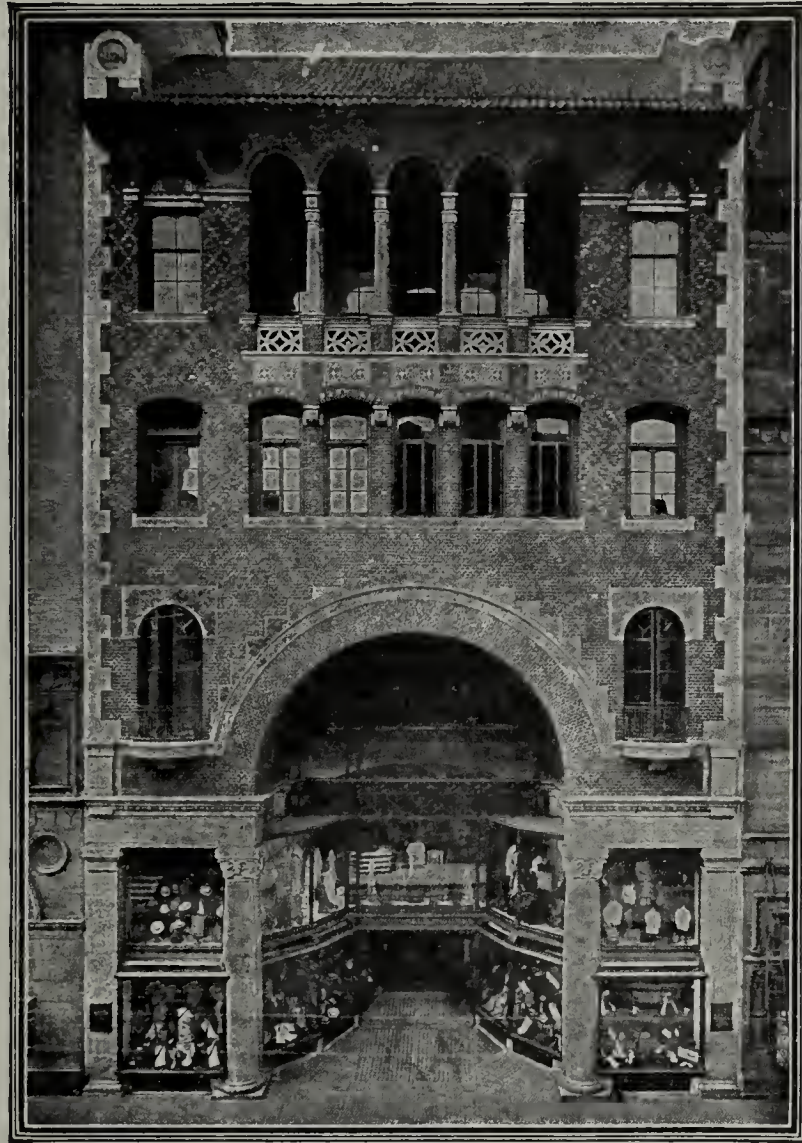
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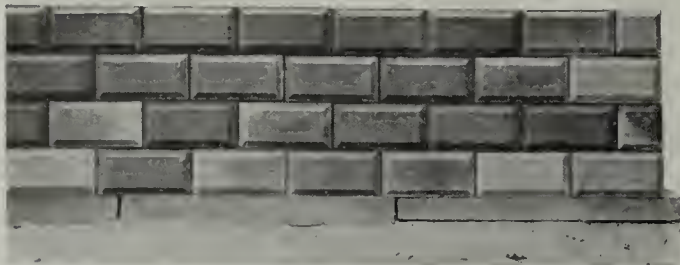
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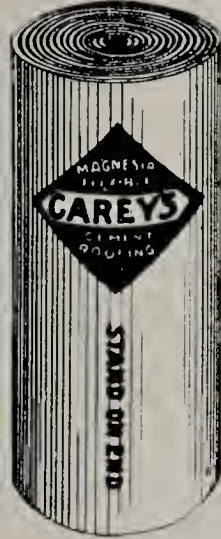
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NUMBER 4.

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ROBERT CRAIK McLEAN, EDITOR.

BUILDING OPERATIONS FOR MARCH.

At what may be regarded as the opening of the building season, the outlook is decidedly promising. Official reports received and formulated by the American Contractor from more than forty of the leading cities of the country, show a general and quite decided gain as compared with the corresponding month, March, of 1905. The following figures show the percentage of gain in cities where the increase is most marked: Cleveland, 43; Chattanooga, 49; Duluth, 668; Louisville, 54; Los Angeles, 84; Mobile, 46; St. Paul, 35; San Francisco, 23; Scranton, 50; Syracuse, 40; Salt Lake City, 31; Trenton, 252; Toledo, 22. The losses reported are somewhat in excess of last month. The following statement shows the percentage in leading cities: Cincinnati, 45; Columbus, 49; Hartford, 32; Kansas City, 70; Milwaukee, 23; Minneapolis, 42; Nashville, 73; Philadelphia, 19; St. Louis, 55; Washington, 49. New York, with \$22,928,906, only fairly holds its own, the gain being 2 per cent. At this time last year the building movement was decidedly strong and to have fairly maintained its momentum is an excellent showing. It is deeply significant that New York makes a slight gain over March, 1905, in spite of the enormous amount of construction work that has been in progress there during the past year. Baltimore shows a loss of only 4 per cent, although the work of rebuilding was at its height a year ago. Conditions are favorable for a prosperous year in construction lines.

THE ARCHITECT AND REINFORCED CONCRETE.

BY LOUIS F. BRAYTON.

"What is the position of the architect today?" This question has been asked by nearly everyone in the profession. Is the architect to be the agent of the contractor, is he to be crowded out of business by those who "design and build," or is he going to maintain his old time prestige, and stand firmly for his rights as to the character of construction which is to go into the building under his management? These questions must be settled once and for all, if the architect is to retain his self-respect and the confidence of his clients.

At the present time there are comparatively few architects who undertake to show upon their own plans the methods which must be followed in the construction of the reinforced concrete portions of the building under consideration. It is explained that the good methods are all patented and it would be wrong to show any one system. This is true only to the extent that no contractor should be given a preference by the specifying of his system. "There are just as good fish in the sea as have ever been caught," and the architect should assert his independence by showing upon his plans what he knows to be a good form of construction, and free from patent royalties.

This may mean considerable study to some, but to those who prove themselves capable it will mean a restoration of prestige, not now enjoyed by many.

Competition, where cost is to be the deciding point, and design the battle ground, is, to say the least, "penny wise and pound foolish," if not actually amounting to criminal negligence.

Where designers are to be awarded a contract for producing a design costing less money than any other, it is needless to say, that one will probably be adopted in which the insufficiency of material is the principal source of economy. Numerous examples of failures, often resulting in death, have proven the "penny wise pound foolish" principle in this method of procedure.

Architects should keep before their minds the fact that they are held professionally and criminally responsible for designs under their supervision and that no amount of bonding of a contractor, will excuse them from not knowing that a design is incorrect.

The only safe, professional, and self-respecting method to follow, is for the architect to educate himself to a position where he can design as he would in structural steel, and permit of no tampering with his designs in the interests of economy, in anyway which would decrease the stability of the structure or jeopardize his professional standing.

LUXFER BANQUET AND CONVENTION.

Representatives of the American Luxfer Prism Company, from sixteen different cities, met in Chicago on February 15th to 17th and discussed the progress of Scientific Lighting, and enjoyed an opportunity of getting together on plans for the coming year. The convention was a lively one, and showed plainly the enthusiasm that the sales force has generated over the matter of conducting daylight into dark places. In addition to the work that was carried on, special arrangements were made in order that all in attendance should have a pleasant time. The first afternoon session was held in the Green Room of the Auditorium Annex. Following this was a banquet in the main Banquet Hall in the evening.

Shop talk was barred, and everybody worked as hard having a good time as they had in the afternoon puzzling out and studying the various ramifications of the systems they sell.

The banquet was the first of a series of annual affairs that the officials of the company have planned for their men, and it is the firm belief of all concerned that it is the best and most profitable three days that can be spent, giving all the selling force a chance to become more closely acquainted with the vast methods of presenting the various products to the public.

The two days remaining for the convention were given over to demonstrations at the office and factory. Several new devices

under consideration were shown, and explanations made of the workings of the system in all places and under all circumstances. The managers were given an opportunity to see how prisons are made, and were permitted to see the workmen in the act of manufacturing the system from the very first start until it was finished product.

The following members of the Luxfer staff were present in addition to Mr. Wright, the president, and Mr. White, the secretary:— W. D. Bradley, G. F. Fairbrass, G. A. Kintz, A. B. Mathews, S. A. Sage and H. V. Knautz, all of the head office at Chicago.

A. P. O'Brien of New York, L. W. Marsh of Boston, H. O. Enigk of Philadelphia, A. T. Holzbog of Millwaukee, R. A. Wood of Baltimore, A. W. Gee of Cleveland, J. E. Dwan of St. Louis, E. C. Hoyer of Cincinnati, K. F. Lott of St. Paul, L. S. Chapin of Rochester, N. Y., C. E. Haakinson of Sioux City, Chas. Dregge of Grand Rapids, H. E. Hamilton of Indianapolis, W. N. O'Neil of Vancouver, British Columbia, E. P. Wilkins of Kansas City, and H. F. Ingerson of San Francisco.

At the subsequent conventions a program will be followed, and reports of progress will be made since the last "getting together." So that every employe will have complete knowledge and a personal interest in what is now recognized as a scientific method of daylighting buildings.

KNO-BURN STEEL LATH.

There is no architect or builder who has not been confronted with the question of defects in plastered surfaces, more especially where lath have been used as a foundation for such work. Cracks and other imperfections show even where the best of materials have been used in the mortar compound. There are few architects who do not understand the fact that this is due to the tensile weakness of the mortar or plaster used for such work. Like cement of any kind, it becomes sufficiently hard to be all that could be desired in compressive strength, but lacking tenacity, (the most essential feature required to make perfect work) some provision is necessary to reinforce the mass into proper cohesion.

In the various methods that have been employed, too much dependence has been placed on the adhesive properties of the materials, clinch, etc., to obtain satisfactory results. It is not enough to provide for the perfect adhesion and retention of the material which is to be applied, if we would obtain anything like perfection in plastered work. The more important elements of cohesive force must be recognized and a sufficient tensile strength secured by reinforcing the mass into a solid slab. To accomplish this the strand must be so shaped as to retain the mortar sufficiently to completely fill the mesh and obtain a body on the back of the lath quite equal to the face of the work, so that the reinforcing metal is thoroughly embedded in the mortar.

This cannot be done by the use of wire because the weight of the mortar exceeds its tensile strength and accordingly the fill or clinch is sheared off by the wire and drops away from it, leaving a slab only which is insufficient to resist the tensile stresses. In fact any method which fails to recognize the importance of cohesive force throughout the entire mass composing the walls and ceilings is little if any improvement on wood lath where all depends on the adhesive and tensile strength of the mortar.

Perforated metal cannot reinforce the mass because the solid back prevents the inner coating necessary to imbed the metal and to equalize the compressive and tensile stresses.

The meshes in Expanded Metal Lath are made by shearing the metal at right angles with the plate, thus producing a flat strand which will retain the mortar and completely fill the mesh and so thoroughly embed the metal that it is not only protected from the impingement of flame but the mass is reinforced into a solid slab that defies the changes of temperature. Moreover, the slab thus formed is one solid piece and could be removed from its position like a slab of stone or marble. The tensile strength of the mortar and the reinforcement making it monolithic.

CEMENT BLOCKS AND BRICK.

The rapid growth of cement in building operation has not been without its dangers that come with all reforms or new methods, and these dangers are indeed grave as must be all defects in building operations. Unless architects and builders take a firm stand in this matter the cement industries will have a severe setback.

I have a great deal of experience, and I have paid dearly for it, and so have learned some things and learned them well. A good cement block or brick must have certain definite qualities, and among them are these:

1. It must be non-crushable under every possible working strain one may put upon it.
2. It must not absorb moisture or water under the usual working conditions.
3. It must have a good face and also a solid body and back.
4. If colored, the coloring must be uniform on the face, and all the blocks in one lot must look exactly alike, just as nature colors all stone in one spot—alike.
5. The cost of manufacture must be such as to give the maker a profit.

My long experience in making and testing cement product with many kinds of machines, has convinced me that many blocks do not possess even one of the above essential qualities. Cement crystalizes and becomes hard as stone under certain conditions, and when the conditions are met there is never any failure, and every block turned out will last forever and will not absorb moisture. Experience has shown that a uniform block possessing such qualities cannot be made by any man with a hoe, or a machine no better than a hoe. I have a machine that uses what is known as the "medium process," and by long and exhaustive tests it has demonstrated its ability to do the work, and I challenge any man to put the product of his machine against the product of mine in a competition before the architects of the city. The tests shall be for uniformity and beauty of color, resistance to crushing, low degree of absorbibility, and smoothness of face.

Architects who will take the pains to apply these tests cannot be deceived, and so there is no chance for trickery. All shall be aboveboard, and the results will determine who is entitled to the patronage of architects and their clients. My machines make the handsomest facing brick on the market and also the best block. The molds are copper lined, and the stripping is done by a gliding movement of the mold which makes and preserves a smooth face, while all other machines pull off the mold, and the suction cannot fail, in many cases, to destroy the face and often curve the brick or block.

Brick and blocks made by my medium process machines give perfect satisfaction, stand all possible tests, and make a handsome profit for the manufacturer.

My hollow block machine costs \$200; its product is 1,000 blocks per day. My hand-power mixer costs only \$150 and it mixes sand and gravel at the rate of 12 yards per hour. My hand-power brick machine costs only \$35, and has a capacity of 3,000 bricks a day.

Now, I ask if anybody knows how to make money faster than these machines will make it for him. The demand for their products is unlimited, and when architects once understand the excellence and superiority of the work of my machines they will have nothing inferior.

I also have a chemical formula that is indispensable in making brick by the damp process with heavy power machines. It crystalizes and preserves the cement until water can be applied, fastens the color, and adds 25 per cent to the strength of the brick.

I invite the most searching investigation of my claims; and I guarantee in the most positive manner all that I assert. My proof of it all is easy, and so the time has come to call a halt on the imperfect and slovenly ways of making cement blocks and brick.

All are invited to call at my office, and be convinced that what I say is true. (See advertisement.)

NELS ERICKSON, Minneapolis, Minn.

KEY TO THE STEEL SQUARE.

A key to the steel square has been invented by Architect A. W. Woods, of Lincoln, Neb., and described in a copyright pamphlet which is now in the second edition. Mr. Woods, who is an author of note on subjects pertaining to framing in all its different phases, has sought to simplify and condense the subject of framing, and therefore the use of the steel square, so that a handy reference and formula may be placed in the hands of the constructing fraternity which may be quickly and intelligently applied in determining the cuts bevels that enter into the construction of the most complicated roofs. The chart is made of celluloid with a revolving disc that gives the different angles that apply to given bevels. It is illustrated with diagrams showing thirty-seven separate problems in bevel cuts. This is the most scientific, accurate and simple guide we have yet seen for the use of the steel square.

THE WINNER BLOCK MACHINE.

The reorganization of the Winner Block Machine Company for the manufacture of brick and block machines, concrete mixers, sewerpipe moulds and other cement products establishes on a firm basis a concern that will have much to do with the cement product advancement of the country, particularly in the North-



west. In a profusely illustrated pamphlet the Winner machine is presented in all its different points of excellence, twelve distinct features being summarized in regard to its varied capabilities.

First—It will make a tile brick with holes through, part through, or with none.

Second—A saving of one-seventh the material, in allowing the holes to go within a half inch of the top and still make a brick of the same strength as one made solid.

Third—The material saved will pay the wages of the operator.

Fourth—A saving of one-seventh in weight in shipping, handling and hauling.

Fifth—The only pressed brick made that will take suction in the wall as soon as laid, thus making them the brick-mason's friend.

Sixth—It makes all brick on its natural bed, thereby producing no cracked or checked brick.

Seventh—It makes two perfect ends and sides, polished face on each. If a corner is knocked off one side the other side is still perfect.

Eighth—The saving in material enables brick to be made 3 and 1 as cheap as other machines can make 4 and 1.

Ninth—It saves time in curing, as the holes retain the water, making a perfect crystallization, and allow brick to be placed on the market in much less time than solid brick.

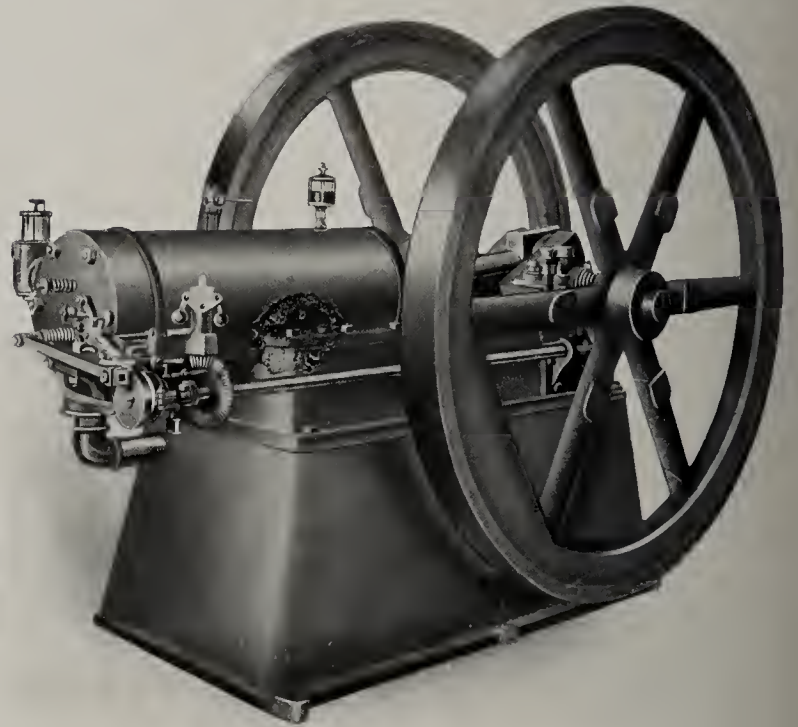
Tenth—It is eight or ten different machines combined in one, and will make any size on the market, from 1 to 3 inches thick, and any length up to 12 inches.

Eleventh—It is adjustable in all respects, makes changes from one size brick to another without changing or replacing any parts. Has no cogs, springs or gears.

It is speedy as is possible for a hand tamp to be made. Is constructed of the very best iron and polished steel. Finished it looks as well as a piece of furniture in the home. It is a machine combining simplicity, durability and perfectness, and sold as low as any good machine. Capacity 3,000 to 5,000 brick per day.

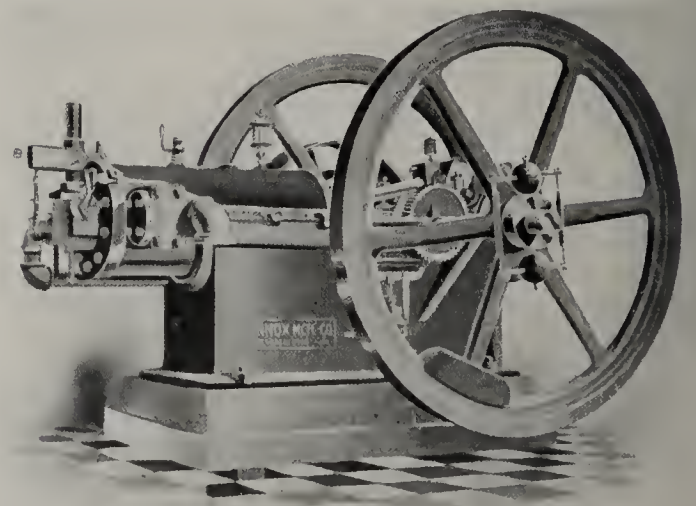
NOTES OF INTEREST TO ARCHITECTS.

GASOLINE engines are becoming more generally used as the familiarity with their operation and general adaptability becomes the maximum of power is required from the sawmill to the motor boat or auto. Among these the Imperial gasoline engines made by the Valentine Bros. Manufacturing Co., of Minneapolis, Minnesota, take a leading position. They are simple in construc-



tion, reliable in continued use and economical in operation. If these three vital points are carefully considered, and they should be when purchasing an engine, then the design, proportions, and mechanical simplicity of the Imperial will attract and convince, so that the evident small expense for repairs will be a large factor in determining the value of the engine. In an elaborately gotten up catalogue each part is shown and explained and the different uses to which this power can be applied give it a ready sale throughout the western states and Canada.

A GAS engine which receives, as it deserves general recognition for its practical utility, is made by the Lennox Machine Co. of



Marshalltown, Ia. It is applied to all power purposes, manufactured in stationary, portable and pumping forms, and each is es-

pecially designed to meet these several requirements. The standard horizontal or stationary engines are made from four to thirty horse power, the portable in four, six, eight, ten, thirteen and sixteen horse power sizes, and the horizontal and vertical pumping engines for small towns and mines, added to the many uses in which the Lennox engines can be used. In the literature of the gas and gasoline engine there is none more interesting, or that gives a better idea of the varied uses of these powerful and economical machines, than the pamphlet issued by the Lennox Machine Company to all who are interested.

The Spectrum is a little brochure, elegantly composed and printed on buff tinted paper in brown ink which, commencing with the February number, will be issued monthly by the Sherwin-Williams company. The frontispiece is an etching of the Woman's Hospital, New York, City, Allen & Collins architects, and among other illustrations is that of the Town Club, with several interior views of Cleveland, by J. Milton Dyer, architect. A poem, from "Rhymes of the Craft" which will probably be a feature of the brochure as this is marked number one, entitled "The Architect Man" is interesting and worth quoting.

Like all of the paint and varnish made by these largest makers of pigments in the world, the literature of this house is gotten up with every attention to detail and artistic harmony, and this monthly visitor will give many an architect a moment of real recreation while enjoying its contents, and perhaps he will remember it with gratitude when writing his specifications, which is the business end of the proposition.

In the competition of catalogues among the cement block manufacturers that of the National Building Block Machinery company is awarded the palm because of its typographical excellence both in the photographic reproductions of the varied

forms of blocks produced by the concern and the cut work and printing. According to these cuts the variety of forms seems endless and shows a disposition to meet the design of the architect with the same freedom as the material from the quarry or the brickyard does in conventional or special design. There is no text matter, the cuts being left to speak for themselves, which is in this case a fully adequate exposition of the capabilities of the machines turned out by this company. Architects should send for this catalogue as it makes a decided advance in the making of concrete building material.

DRAFTSMEN WANTED AT SEATTLE.

Editor Western Architect,

Dear Sir:

I wish to thank you for the very courteous effort you are making on our behalf in trying to find draughtsmen for us. I believe without exaggeration that at least ten men could find immediate employment here if they are competent and could command good salaries. The general class of draughtsmen we get out here is far below the average.

Thanking you again for your efforts in our behalf, I am,

Yours very truly,

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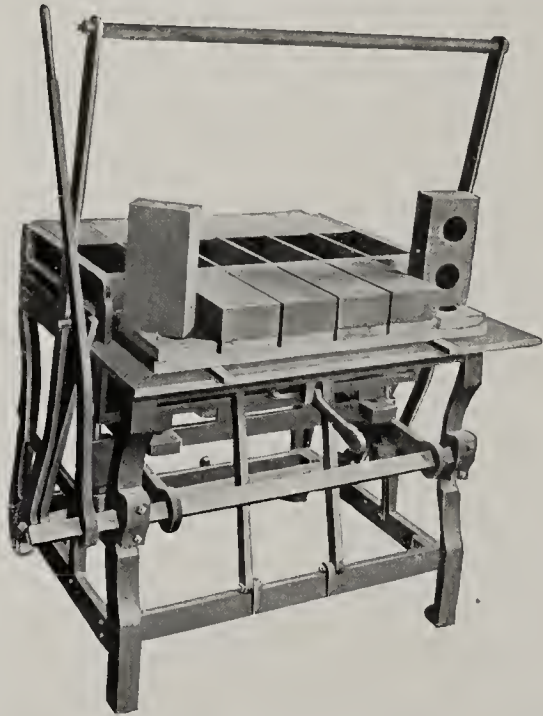
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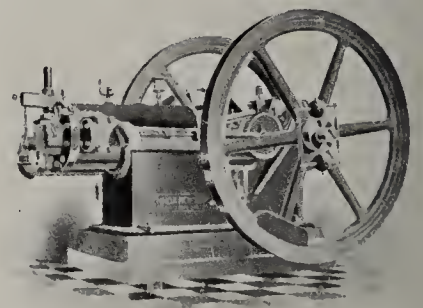
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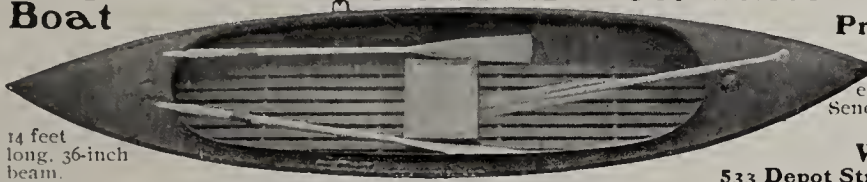
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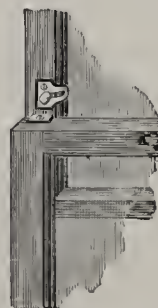
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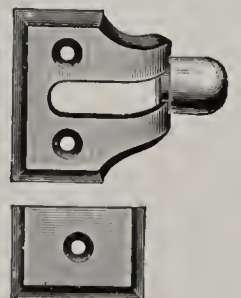
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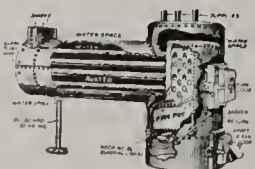
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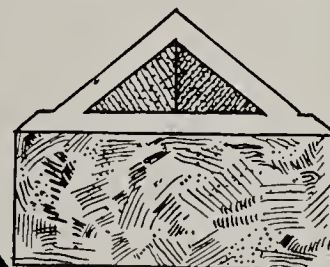
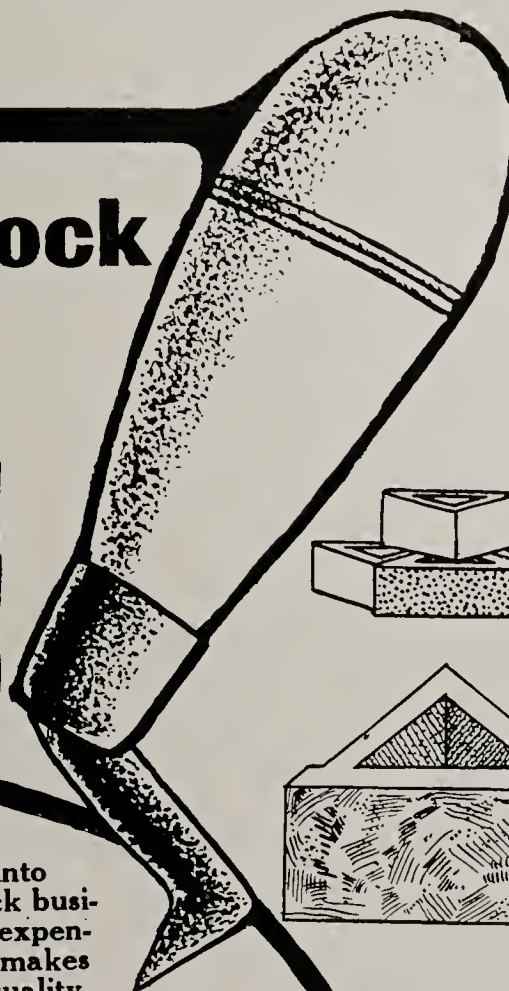
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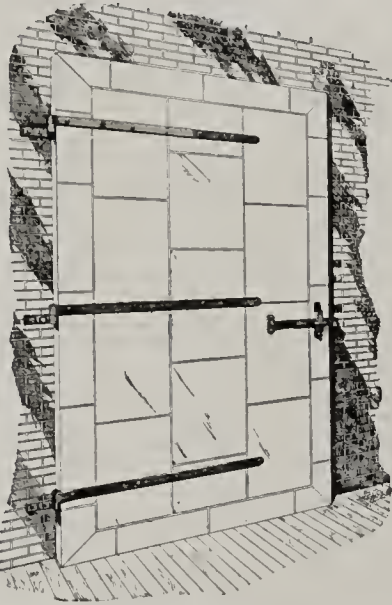
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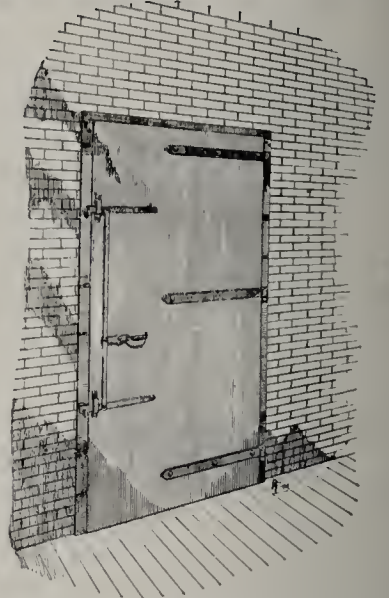
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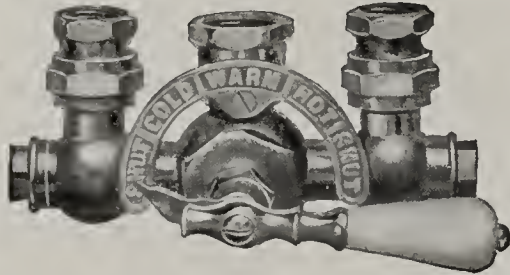
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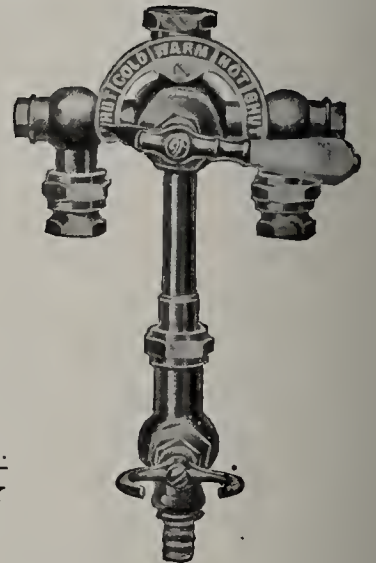
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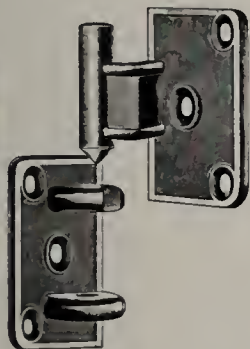
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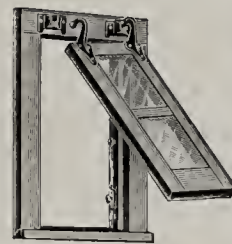


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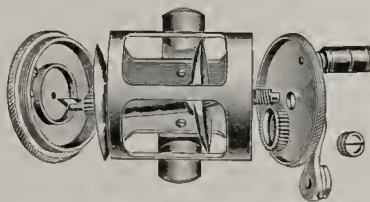
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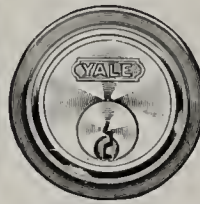
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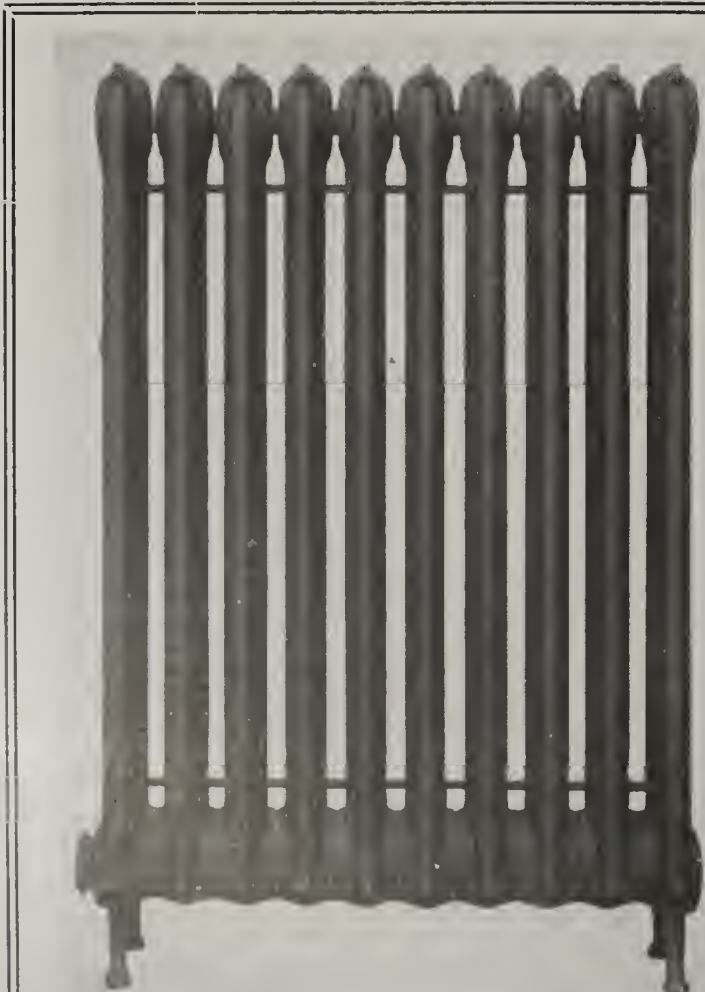
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The Advantages and Dangers of Concrete

There is undoubtedly a growing tendency towards the use of concrete in reinforced form for every variety of structure. The fireproof quality of the material, its strength, both bearing and tensile, and its apparent cheapness, all lead to the consideration of its use by owners, and favored by some architects, the number of which is steadily growing. We have taken the position, and as yet have found no adequate reason for changing our belief, that the sane, modern and practical method which is involved in the combination of steel and hollow tile should still be adhered to in fireproof structures, especially those of any considerable height. We are printing in this issue a paper by one of the best known architects on the Pacific Coast, upon concrete construction, a paper that if anything bears out our contention. For it is not because theoretically concrete is not all that is claimed for it, but that the chances of failure through ignorance or carelessness are so many and the advantages over steel and hollow tile so few. If the work is designed and its entire erection supervised personally by engineers having special experience in this particular field, if the concrete is made of high grade Portland cement and the properly proportioned ingredients properly mixed and tamped, and not in cold weather, and the steel members sufficiently embedded, then a thoroughly fireproof and stable structure may result. But if anyone of these main points is missed by the smallest factor, the entire work is not only a failure but a menace to its occupants. The time may be coming when this will be understood and the desirability of concrete structures may lead to their erection under safe conditions, but at present, when hollow tile and steel construction has no extraordinary requirements beyond proper plan and capable superintendence, the wise will only venture on a concrete building when it can be erected under the conditions named, and then with no advantages over the steel and hollow tile construction that has made the tall office buildings of the United States the wonder of the world.

**A Sea Level
Canal
at
Panama**

The arguments in regard to the form of canal to be constructed at Panama seems to be all in, and whatever the result, the country has become well informed in regard to the merits and difficulties, as well as the approximate cost estimated, for both a sea level and a lock canal. There is no doubt that the easiest, quickest and least expensive would be the lock form, but the clear, concise and convincing argument of Mr. Wallace in favor of a tide level ditch, inclines one to believe with the minority on the commission that a grave mistake will be made if the other form is constructed. It is true that such a proceeding would be against all precedent in this country. The log house was built and razed to make way for that of stone, the railway lines and bridges have all been rebuilt, each time in a more permanent form, and both cities and public works have wasted many times the ultimate cost in the rebuilding of temporary structures that should have had a permanent construction in the first place. This is the work of international importance undertaken by the United States. There is no speculation in regard to the tonnage that would use the canal, there is little in regard to its feasibility and approximate cost. There is no lack of funds, for a people that will invest two hundred million of dollars will invest three. The permanency of the sea level form is unquestioned. The only point in favor of a lock canal is its cheapness in money and time. We can invest the required money, for the returns are sure and the three or four years additional required in its construction is trivial compared with the permanency of the canal when completed. Mr. Wallace is a safe and capable advisor and his advice should be followed in each particular, for it is in the direction of ultimate permanent results and not that of mere expediency. It is time the precedent of makeshift and temporary construction was broken by the work at Panama being the best that this country can produce, not for this generation to be pulled down and made over by the next, but to stand as a monument of twentieth century engineering skill and financial ability.

**Perseverance
in Competing
for Traveling
Scholarships**

In the announcement of the tenth competition for the John Stewardson Memorial Scholarship in architecture, which closes on May 24th, the successful draftsman leaving for Europe not later than September 1st, it is interesting to note the educational value to as well as

the success attending those who compete. The prizes in fact seems on a good average of instances to have been won by those who had received mentions in former competitions including the four of the University of Pennsylvania which preceded the Stewardson. For instance, Percy Ash who won the third annual competition had first mention in the first and second; William Charles Hays who won the sixth competition, stood second mention twice and third once, in the first second and third competitions. Herman Louis Duhring who won the fifth, stood first mention in the third; Arthur Howell Brockie was first mention in the sixth, and won the seventh; Alfred Morton Githens who won the eighth, was third mention in the sixth; John Molitor was third mention in the sixth and ninth, and won the tenth; Walter W. Judell who won the eleventh, stood first mention in the tenth. In fact in twelve competitions there are but four; Albert Keley, who won the fourth, Ira Wilson Hoover who won the ninth, Christian George Spoel, who won the twelfth, and Carl Eugene Howell the successful man in the competition of last year, who had not received mention in former competitions.

**Average
Reporter's
Ignorance of
Architecture**

It is not to be supposed that members of one craft will be conversant with the technical terms used by another, but an exception is expected in the case of newspapers. While other crafts and the public may not be expected to know that a "story" is not always a newspaper lie, or a "stick" used to beat the "devil" round the stump, it is expected that any one capable of writing for newspaper publication should know that architects do not "put in competitive bids," but they sometimes, (when they are foolish or time hangs heavy on the draftsmen's hands) make competitive plans. Though the Denver News is the cause of this criticism of the public press, showing the crass ignorance that many local reporters exhibit when they describe anything more advanced in technical knowledge than a dogfight, still it is too common and stultifies the editor or the man who holds down the reading desk who passes it. If the Denver Board of Public Works saw fit to appoint an architect to design its Auditorium they did better than to ask the local architects to submit competitive plans and then award the designing of the building without regard to the competitive merits of the drawings, but architects would not have submitted "competitive bids" any more than they would have agreed to make the foundation excavation.

THE RELATION OF DECORATIVE PAINTING AND SCULPTURE TO ARCHITECTURE.

BY A. D. F. HAMLIN, Professor of Architecture, Columbia University.



THE representation of nature is an instinct deeply planted in the human race. It asserts itself in the fetish idols and symbols of the savage, and in the rag doll of the civilized infant. It lies at the root of all painting and sculpture, and of a great part of all decorative design. In modern systems, drawing from the human figure is specified as a fundamental element in the training not only of the painter and illustrator but of the architect, and decorative designer, as well.

The imitation and reproduction of natural forms is a universal and irrepressible instinct, stunted often by the pressure of an artificial civilization, but never entirely extinguished even under the most sophisticated culture. Pictures are the delight of young and old, of rich and poor, of "Jew and Gentile, Barbarian, Scythian, bond and free." "The appeal of sculpture is less nearly universal; statues and reliefs have a less compelling fascination than paintings; but to the child the Noah's ark and the army of brave dead soldiers are only less real than real life, and it is certain that in at least one great wing of the Christian church the aid of sculpture is willingly invoked to stimulate the imagination of the devout worshipper. These are trite observations; but the excuse for making them is the wide prevalence of the idea that the fine arts, and particularly the arts of representation, are the products of exceptional endowments and specially advanced culture, when in reality they spring from endowments which are inherent in humanity, and which advanced culture is quite as likely to stifle as to develop.

A second and universal and irrepressible instinct in humanity is the instinct for decoration. There is no savage race that does not adorn its weapons and utensils, and even the human body itself, with pictures or patterns intended really for ornament, even when ostensibly applied for reasons founded in fetish or totem superstitions. The picturing instinct and the decorative instinct go together and merge into each other, and indeed appear often inseparable. The majority of conventional savage patterns are believed by experts like Haddon and Taylor to have originated in representations of living objects. The picture per se,—the easel picture and the illustration—are products of an advanced civilization and of comparatively modern times. They furnish an additional outlet for the activity of the picturing faculty, it is true, but divert it from the field of decoration. Here again it is our modern western civilization which has stifled the innate instinct for decoration, and it is to the Indian, the ignorant peasant in the hills of Daghestan and the unsophisticated Japanese that we turn

for inspiration and instruction in pattern-design and the use of color. Yet it is doubtless true that the decorative instinct is more generally among us than that for picturing. We have more designers of ornament, in all the various fields of art and industry, than we have makers of pictures or statues. But the two faculties have been driven apart, instead of being brought and kept in constant co-operation for the good of both.

Of the third universal human instinct, that of building, it is needless for me to speak. Springing out of human necessities it thrives under all forms of highly developed culture, and is the one natural and universal artistic endowment which modern civilization has fostered and advanced.

As the mathematician combines several equations to reach the final resultant value of x , let us combine the three propositions thus far developed. We have this as the result: That we Americans of the twentieth century build marvelously and decorate after a fashion, but leave the representative arts to a small number of painters, illustrators and sculptors, and having divorced the representative arts as far as possible from all departments of real life, we employ special artists to make pictures to hang on our walls and statues to set up in our parks or to store in rows in our museums.

This is an unnatural state of things. These three universal instincts—the representative, the decorative and the constructive—should work together and be together cultivated and developed whenever and wherever our civilized activities provide the opportunity. And it stands to reason that the opportunities should be more in number, and far greater and richer under a highly developed civilization, abounding in wealth and knowledge and in all the splendid fruits of science, philosophy and commerce, than under conditions which seem to us archaic and primitive. Yet we are far behind the ages which we look down upon as antique and mediaeval in nearly everything that relates to the sisterhood of the arts. We have driven the arts apart into special fields, each her own, instead of bringing them together, and we have been particularly cruel to the arts of representation, having deprived them of what was formerly their strongest inspiration, by divorcing them almost from architecture and partly from decoration. Whereas, formerly they delighted in serving the arts of decoration and construction we have confined them to the function of expressing individual sentiments; we have exalted them into an end in themselves, but we have thereby denied them that exercise in the science of architecture and decoration which in former times was a mighty source of vitality and strength to them. So today the painter paints his pictures, apart; the sculptor moulds his statues, apart; the architect builds, apart. The painter's canvas exists for itself alone, and hangs in miscellaneous company on our walls. The statue or bust commemorates a man or an event, standing often neglected on its lonely pedestal. And the walls and col-

umns, the sprandels and niches of our great civic buildings and educational monuments stand bare, lifeless, coldly correct, destitute of what should be, and might well be, their crowning glory of sculpture, while within we try by marble and gilding and panels to make up for the want of the living colors and warmth of mural pictures and painted ceilings. The city fathers of this imperially splendid metropolis have appropriated for decorating the new Hall of Records internally with the semi-barbaric splendor of colored marble a sum that would have more than sufficed to cover all its more important walls and ceilings with picture decorations by the greatest masters of the art.

The origin of the decorative applications of painting and sculpture to architecture is an interesting question for the anthropologist, the philosopher, and the history of primitive art; but it can hardly occupy any great part of our time on this occasion. In general it may be said to have sprung in the first instance from primitive fetishism or animalism. The savage does not distinguish between the real and the apparent, the animate and the inanimate, and ascribes to his own pictures and carvings the actual life and qualities of the things represented. Out of this magical, animistic habit of thought grew Egyptian decorative symbolism, to which there still clung the idea of magical import, at least in the popular mind. In Greek art this symbolism became a conscious and deliberate allegorizing, though it still appealed powerfully to the imagination of the beholder, and no doubt was still invested with mysterious power in the minds of the ignorant. In Roman art the symbolism was wholly artificial and sophisticated; but in the middle ages it became again mystical and magical in its significance. Since the Renaissance we have followed the Roman habit. Our symbolism and allegorism are conscious and deliberate; we use them as we do tropes and metaphors in poetry, quite without regard to our actual and literal belief in the legends and myths we call up to the aid of our expression.

Now in all past ages this use of allegory, symbolism, and even magic, has been one of most vitalizing influences in decoration and in the enrichment of architectural design. It is interesting to compare with our modern American poverty of pictorial and sculptural decoration the masterpieces of the great epochs of architecture. In all those great periods the past in which architecture has risen to the supremest heights of achievement, the arts of plastic expression have kept company with it, joining hands to embellish and to glorify the work of the builder. In the earliest days the walls of the royal temple bore upon their broad surfaces the carved and painted representations of royal victories and of ancestral deities and acts of worship, while upon the massive columns of the hypostyle halls the artists of Egypt depicted Isis and Osiris, Horus and Anubis, with bands of hieroglyphics, and royal cartouches. All of these served not *so* to remind the beholder of the

sacred mysteries of his religion and to place the temple under the protection of the unseen powers; it also served to impart beauty, mystery and splendor to the vast and dim interiors, and furnished a standard of scale to apply to the huge bulk of the columns,—an architectural service of the more importance because of the very simplicity of their forms. The Romans, whom we are accustomed to think of as lacking in artistic discrimination, and on the other hand as supremely gifted with the structural instinct and the passion for purely architectural splendor, lavished upon their buildings the richest adornments of sculpture, and developed a system of interior decoration by painting and plaster-relief so full of originality and charm that the Renaissance drew from it some of its most delightful decorative inspirations. The naked ruins of the Forum give little conception of the wealth of statues that once ennobled it; and restored models of its structures are but feeble hints of their former glory; but the shattered walls of Pompeian houses, and fragments in the museums of Naples and Rome preserve to us something of the glow of color that once enlivened the walls of villas and suburban dwellings, and does not our own Metropolitan Museum cherish as a highly valued treasure, a few bits of the painted walls of a second rate country house from the provincial slopes of Vesuvius?

But Rome in comparison with Greece was a parvenue in the higher arts. In the Greek nature there was blended a creative imagination, a power of execution and a purity and justness of taste, which united in the production of buildings in which plastic art reached its highest level of achievement. The sculptor was second only to the architect, and hardly second to him. One hardly knows whether the architecture frames the sculpture, or the sculpture decorates the architecture. Stripped of its gods and goddesses the Parthenon is glorious still; but glorious as a ruin; it is dead, compared with what it must have been when in marble in its pediments Iris announced the birth of Athena, and Athena strove with Poseidon for the supremacy over Athens; while on her outer frieze of metopes the Centaurs fought with the Lapiths and on its inner frieze the long procession under the eyes of the seated divinities, bore the sacred peplas and with pomp and feasting carried it to the waiting priests of Athena. How must religion and patriotism have stirred in the heart at the sight of these superb, all but living figures, and how lofty was the mission of art in this supreme union of sculpture and building.

(TO BE CONTINUED.)

The annual meeting of the Minnesota Chapter of the American Institute of Architects was held March 21. The following officers were elected, President, J. Walter Stevens, St. Paul; Secretary and Treasurer, Harry W. Jones, Minneapolis; Directors, T. C. Holyoke, St. Paul, L. A. Lamoreaux, Minneapolis, W. C. Whitney, Minneapolis.

REINFORCED CONCRETE CONSTRUCTION.*

BY CHARLES F. WHITTLESEY, Architect.



THE builders of Ancient Greece used iron ties in the cornice blocks of their temples, to anchor them into the walls. The early Roman builders used iron ties to secure the stone facing on both sides of their walls, through the body of the wall,

which was often of concrete. This may be said to be the earliest conception of metal reinforcement in masonry. Though generally used to this extent in all European countries the middle ages, there was no advancement in its application to building construction until about the middle of the last century. Monier, a French gardener, was the first to develop the idea and put it to practical application by using wire reinforcement in the manufacture of concrete flower pots, in the sixties, for the purpose of reducing their weight and bulk.

Ten years before this, however, the idea was discussed by French engineers and a small concrete row boat was built in France, reinforced with metal rods and this boat is said to be in use to-day and in good preservation, though more than fifty years old.

Its first application to engineering work was in the construction of water pipe lines and sewers about forty years ago, and these, some of which have sustained the pressure of a seventy-five foot head of water for many years, are in perfect condition to-day, and recent examinations and tests on them show that the iron rods used for the reinforcement have not corroded to the slightest extent.

From this the use of metal reinforcement in concrete developed rapidly to a wide range of usefulness in all kinds of engineering works, first in bridges and then in buildings. Today its rapid development is more remarkable and is fully absorbing to the engineering fraternity and the general public as was the introduction of the steel skeleton to building operations in the past quarter of a century.

Today there are completed buildings in the United States and Europe of the greatest magnitude, of reinforced concrete, including factories, flouring mills, foundries and machine shops with heavy traveling cranes running on concrete beams; warehouses, smokestacks, apartment houses, hotels, office buildings, at least one of which is sixteen stories high, department stores, theaters, museums, banks with fireproof vaults, churches with immense domes, railroad stations and marvels of architectural beauty and aerial grace in bridges, some of which have clear spans of more than one hundred and sixty feet, as light and graceful in appearance as similar structures in steel. Many of the important ones are now more than twelve years old. It would seem therefore, that the experimental stage has been safely passed and its economy proven and firmly established. This method of construction is not a fad; it has come to stay

The principal reasons for this are:

First—Its remarkable fireproof qualities, (tested so severely and with such complete satisfaction to all but the steel and tile interests in the Baltimore conflagration.)

Second—Its economy of cost.

Third—Its possibilities of rapid construction.

Fourth—Its durability.

A few words on each of these points before we proceed with the subject of construction.

Experiments made by constructors and numerous municipalities, both in Europe and America, to demonstrate the fireproof qualities of reinforced concrete have brought into prominence the very important fact that concrete and steel expand and contract in extreme changes of temperature to practically the same extent in both substances. This fact is of fundamental importance, for no other system of fireproof construction such as steel combined with clay tile has this advantage. A structure of reinforced concrete will withstand a temperature of 2,500 degrees Fahrenheit for many hours or even days without serious damage. Lime kilns in Europe built of reinforced concrete, without firebrick or other inside lining, have endured for several years a temperature of 2,200 to 2,500 Fahrenheit. An exhibition fire test was made in Belgium in 1899, on a building 15x20 feet, two stories high, built entirely of reinforced concrete, with doors and windows of metal and wire glass. The upper floor was loaded with inflammable goods, to 300 pounds per square foot, being one and one-half times the working load for which it was calculated, which produced a slight deflection. Wood and coal were piled in the lower story, saturated with petroleum, and ignited. It was allowed to burn one hour, producing a temperature of 1,300 Fahrenheit. The walls, which were four and three-quarter inches thick, were red-hot on the inside, while the hand could be held against the outside without discomfort. The temperature in the second story was raised only four degrees, which would not damage the most perishable merchandise. The upper floor deflected more than one-half inch, but after the fire was extinguished, it recovered completely.

To prove that the floor had not suffered deterioration in the fire, it was again tested 21 days later, with the same load, which produced exactly the same deflection as the first load. The load was then increased to 400 pounds per square foot, or twice the load for which it was designed, which produced a deflection of only one-eighth inch. The lower story was completely filled (and the upper story partly) with fuel, and the roof was loaded with 200 pounds per foot. The fuel was lighted and burned fiercely for two and one-half hours. The wire glass in windows and doors was melted. The thin walls expanded outward slightly, but showed only fine fissures, with no broken cracks through which hot air could escape.

*Paper read before the Southern California Society Engineers and Architects, at Los Angeles, California, January 6, 1906.

The palm could easily endure contact with the outside surface. The maximum deflection of the second floor was three-quarters inch. After two and one-half hours firing, a stream of cold water was turned onto the inside of walls and ceiling, before the fire was extinguished. An examination on the following day showed no injury to the general structure. There was no permanent deflection of floors and the fissures in walls were completely closed. Pyrometer tests during the fire showed 2,200 Fahrenheit.

As before stated, the expansion and contraction of steel and concrete are practically identical, and therefore in high temperature the adhesion between the two materials is not destroyed and the latent forces of the structural members are not set up in opposition to their working forces, or in other words, the steel and concrete are not subjected to additional stress when superheated. The question so often asked why is tile, burned under great heat, not a fireproof material? The reason is that tile and all clay products expand under extreme heat more than twice as much as steel, therefore partitions and floor arches of hollow tile in a conflagration, expand more than the steel frame and tie rods that sustain and confine them will admit of, and consequently the tile buckles, burst and flies off. One side of a tile partition or floor arch becomes heated while the other side is comparatively cool (for these tile are excellent non-conductors) and expands and bursts off. The same is true of beam and column coverings. In a building subjected to fire, which has been erected of concrete composed of Portland cement, silicate sand and crushed granite, one would naturally suppose that there would be disintegration of the granite, such as occurs in a solid granite column under the action of fire. Such, however, is not the case. The reports of the Fire Underwriters tests show that a temperature of 1,000 or 1,500 Fahrenheit dehydrates the surface of such concrete to a slight depth, which makes of this outer surface a splendid non-conductor, through which great heat penetrates slowly and being absorbed by the mass of concrete behind the surface, the dehydrating process proceeds very slowly and in one of the concrete buildings in the fiercest part of the Baltimore fire, the dehydration penetrated only one-quarter inch, leaving the structural members practically unimpaired. This building, by the way, was inclosed by brick walls which were totally destroyed, leaving the concrete floor slabs suspended, and supported by the concrete interior columns. Part of the brick from the crumbling walls fell upon the floor slabs with no effect except to break off the edges.

The author has himself made numerous tests on concrete blocks, by repeatedly heating to redness and plunging in water, which confirms the above assertion, though similar tests have been made in this city, in which the blocks are said to have completely disintegrated. I am satisfied in my own mind, that the samples were first saturated in muriatic acid, which caused the disintegration.

(TO BE CONTINUED)

A RESIDENCE ON LAKE MINNETONKA.

BY EDWARD A. BROMLEY.



ABOUT half an hour's ride by rail from the city of Minneapolis, Minnesota, in a southwesterly direction is Lake Minnetonka, one of the most beautiful bodies of water in the west, twelve miles long, six miles wide at one point and charmingly framed by 150 miles of shore.

It might fitly be called "many lakes" inasmuch as the tourist who travels it by boat finds around each headland and at the opening of every bay another lake more beautiful if possible than the one he has just come over. The largest open vista comprehends six miles of clear water, broken to right and left by heavily timbered islands.

The Sioux Indians who named it Minnetonka, (Big Water) were loath to depart from its shores even after they had bartered away all their lands in its vicinity and for miles around. When the first white settlers came in the early 50's they found them still camping there, shooting deer in the forests, wild fowl in the marshes, spearing fish in the lake and gathering berries in the near-by thickets. The deer are gone but wild fowl still frequent the upper lake and fish swarm in its crystal depths.

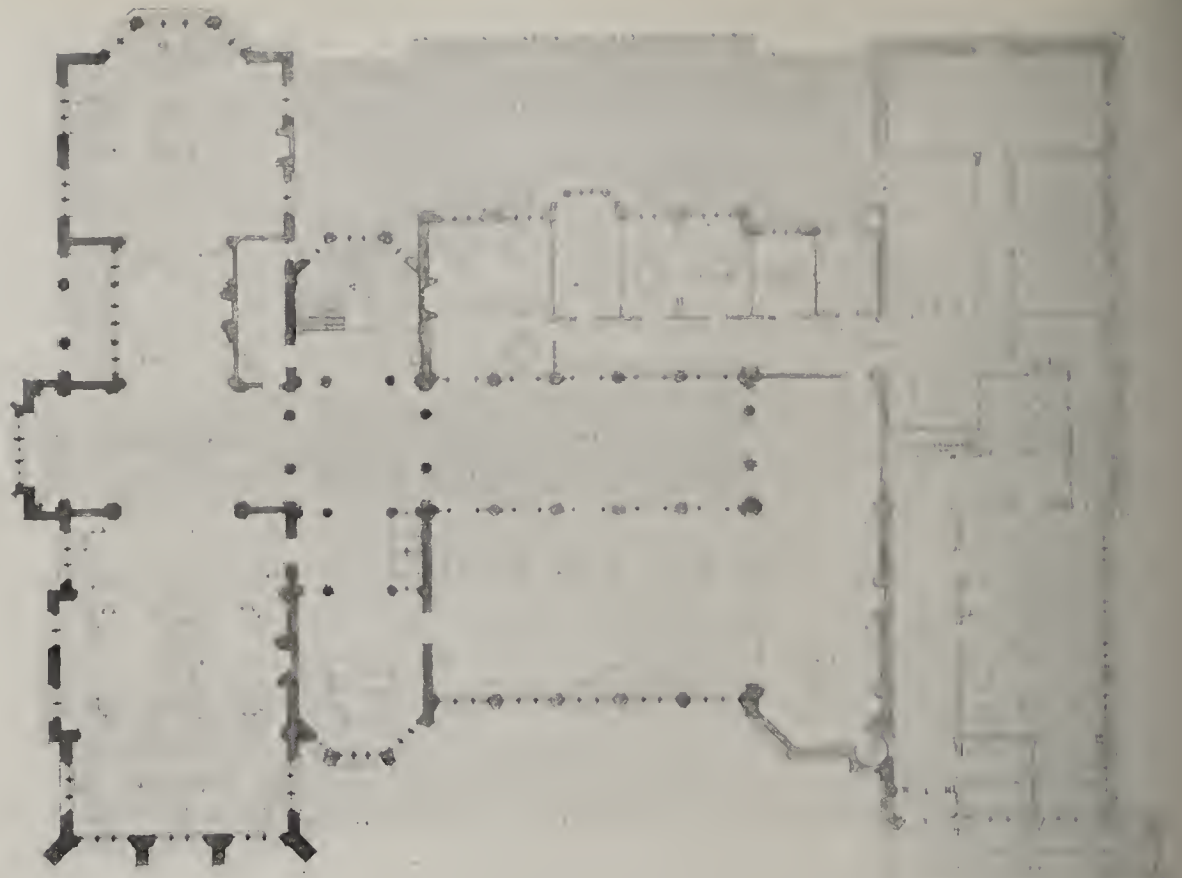
Its value as a summer resort was recognized even before the railroad touched one corner of it at Wayzata and now hundreds of cottages, many of them as costly as city homes, dot its shores.

One of the most beautiful places is "Old Orchard," the summer home of John F. Wilcox and family of Minneapolis, comprising eighty-five acres on the upper lake only a short distance from the narrows which connect the two largest bodies of water, an estuary through which in the season, there is a continual procession of steamers, launches and sailing craft en route to the fishing grounds, the hotels and the islands.

Old Orchard, the title given the property by Mr. Wilcox when he purchased it in 1897, had its origin in the presence on the property of one of the oldest and finest orchards in the state. There, while it was the Experimental Farm of the State University for a number of years subsequently to 1878, Peter Gideon the propagator of the "Wealthy" apple brought that splendid fruit to perfection and the wide spreading trees today bear evidence of his care and thrift.

The cottage built by Mr. Wilcox soon after he acquired the property, and enlarged and beautified since that time, from designs by Bertrand and Chamberlain of Minneapolis, occupies a commanding position on an elevated plateau near the edge of the lake. From the tower at the rear the islands plainly visible in upper and lower lake are Crane, Goose, Big, Phelps, Gales and Shady and from the same point can be seen the villages of Excelsior, and Minnetonka Beach and the cottages at Linwood, Spring Park and Cottagewood. The place was natural-

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FIRST FLOOR PLAN

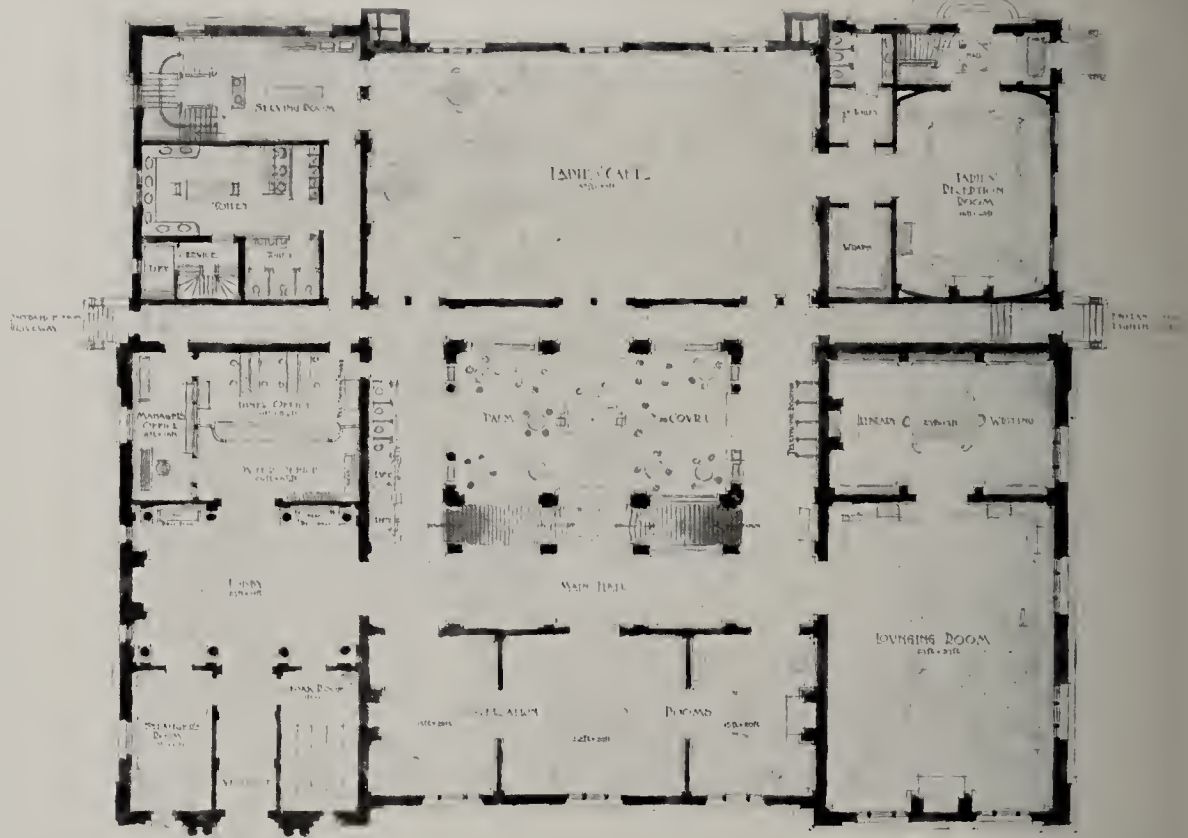


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RESIDENCE OF JOHN PRKINSON
JOHN PARKER

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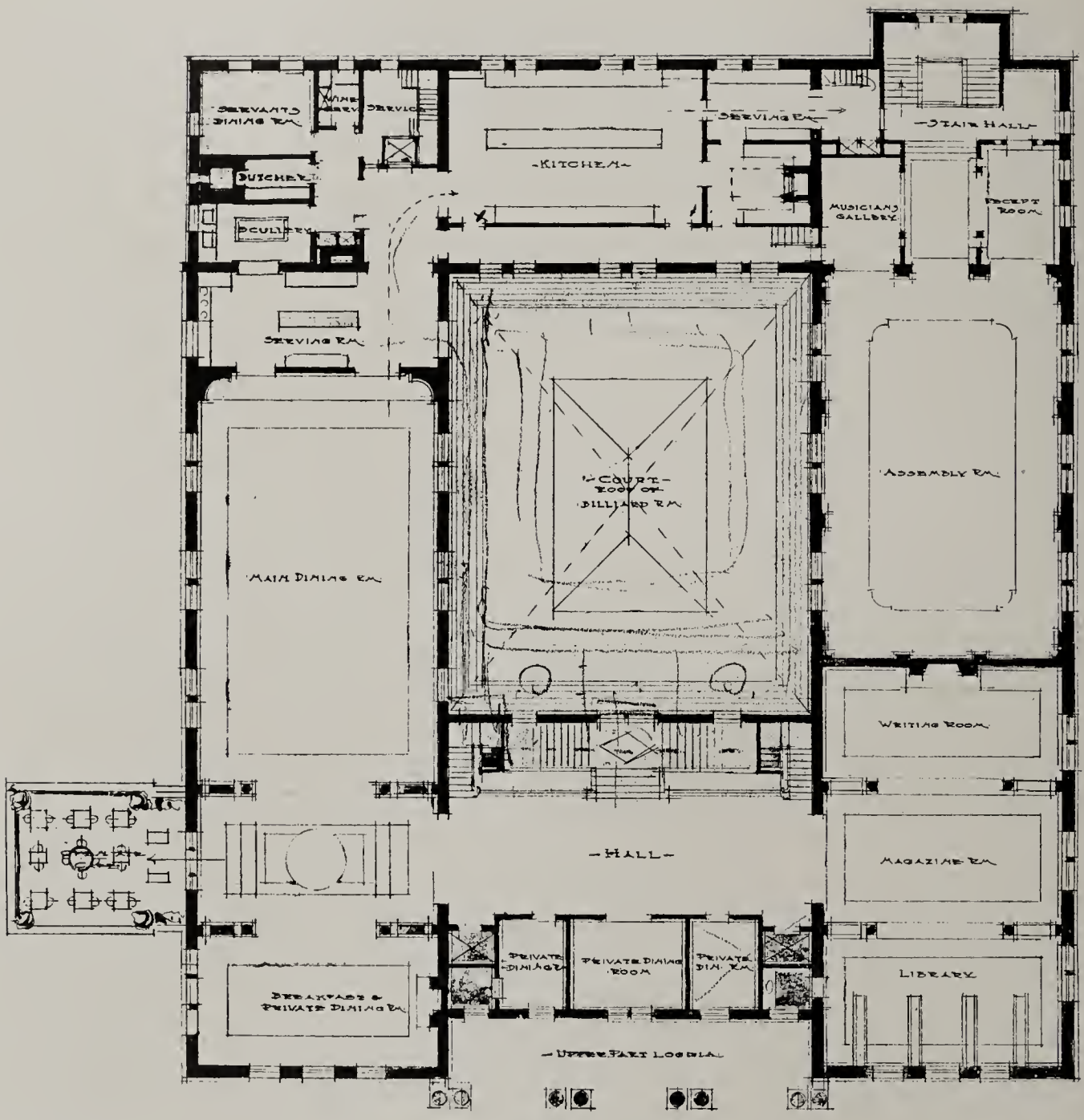
FIRST FLOOR PLAN



COMPETITIVE DESIGN FOR MINERALS

EDWIN H. HEWITT

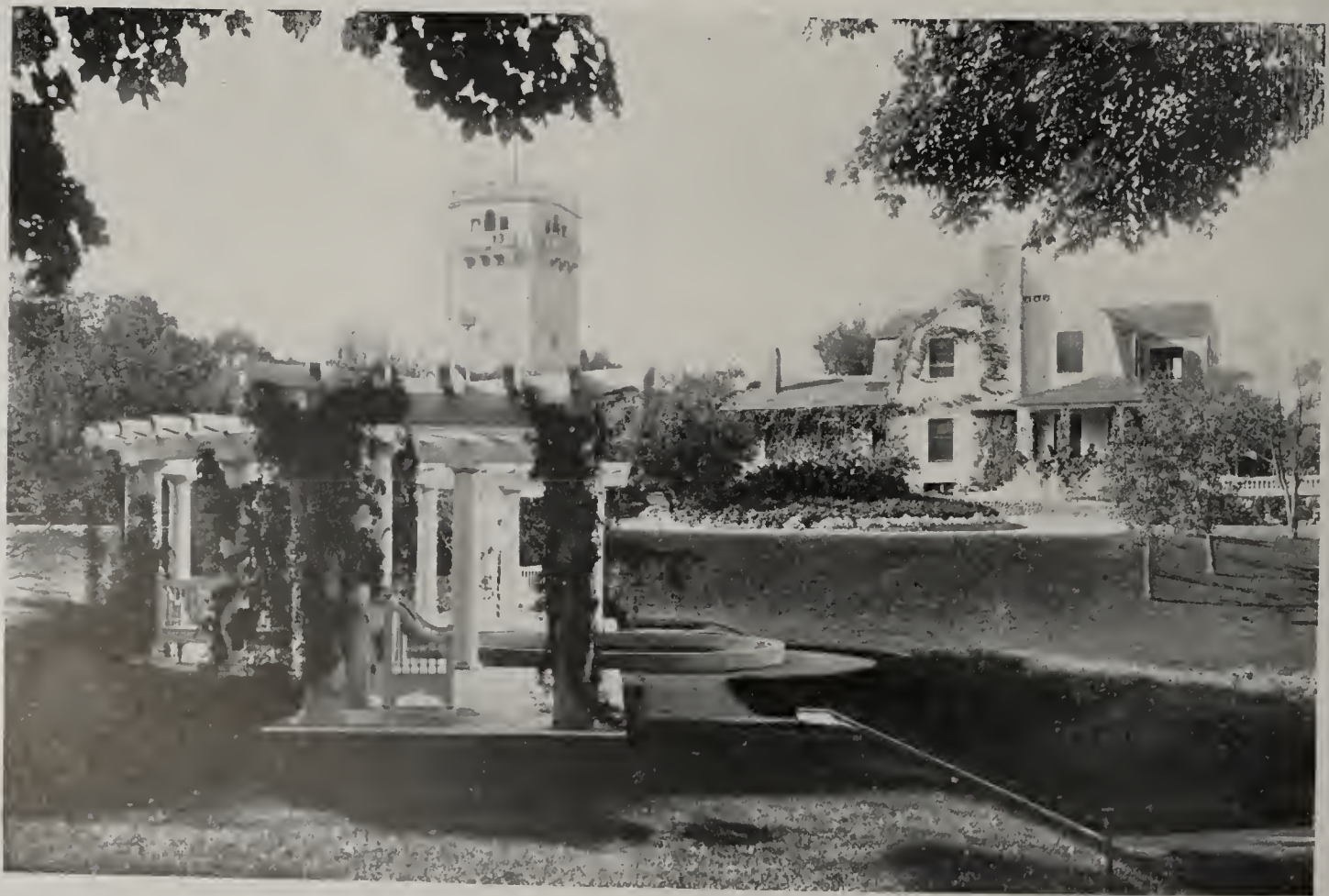
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SECOND AVENUE ELEVATION
SCALE 1/8" = 1 FT

COMPETITIVE DESIGN FOR THE
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GLENWOOD INN, RIVERSIDE, CALIFORNIA.
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BANQUET TENDERED THE ARCHITECTURAL LEAVY
HELD IN THE CLUB ROOMS IN THE P

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PAINTINGS IN THE DEWITT CLINTON HIGH SCHOOL, NEW YORK,
COMMEMORATING THE OPENING OF THE ERIE CANAL.

BY C. Y. TURNER.



HALL CHAIR FOR MR. JOHN J. H. FIELD, ST. PAUL, MINNESOTA.
DESIGNED AND MADE BY WILLIAM YUNGBAUER, ST. PAUL, MINNESOTA.



HALL CABINET FOR A. F. PILLSBURY, MINNEAPOLIS, MINNESOTA.
DESIGNED AND MADE BY WILLIAM YUNGBAUER, ST. PAUL, MINNESOTA.

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ERICA BY THE ARCHITECTURAL LEAGUE OF NEW YORK,
BUILDING, NEW YORK, FEBRUARY 2, 1906.

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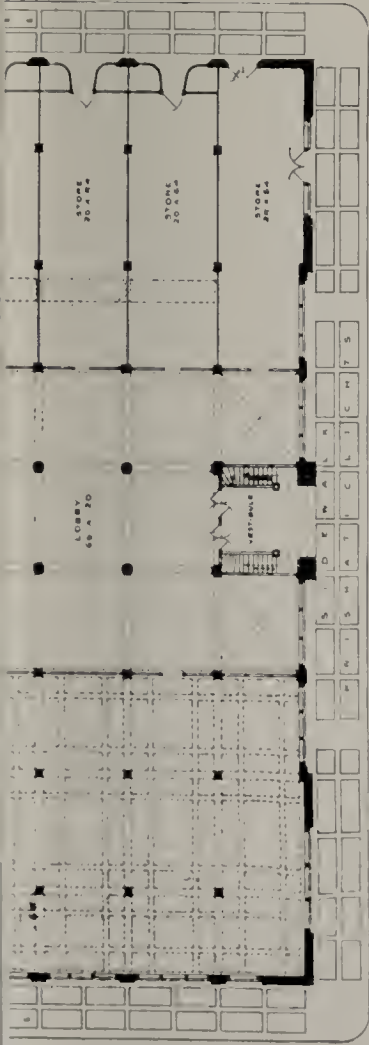
SCIENCE

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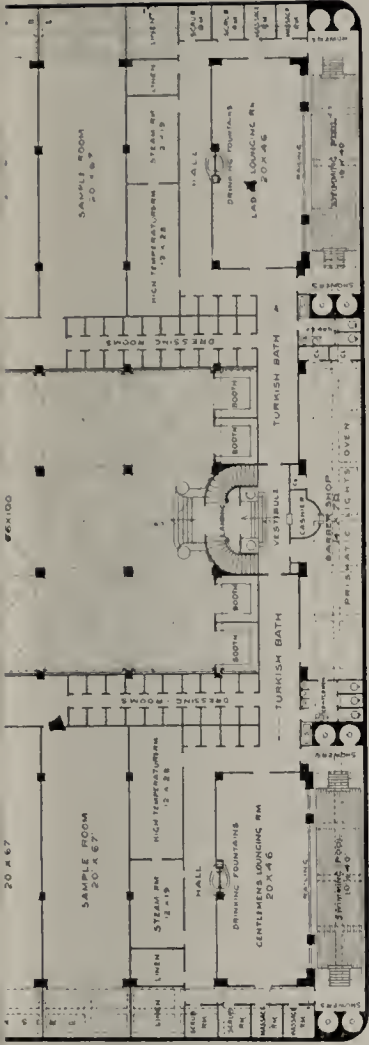
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FIRST FLOOR PLAN



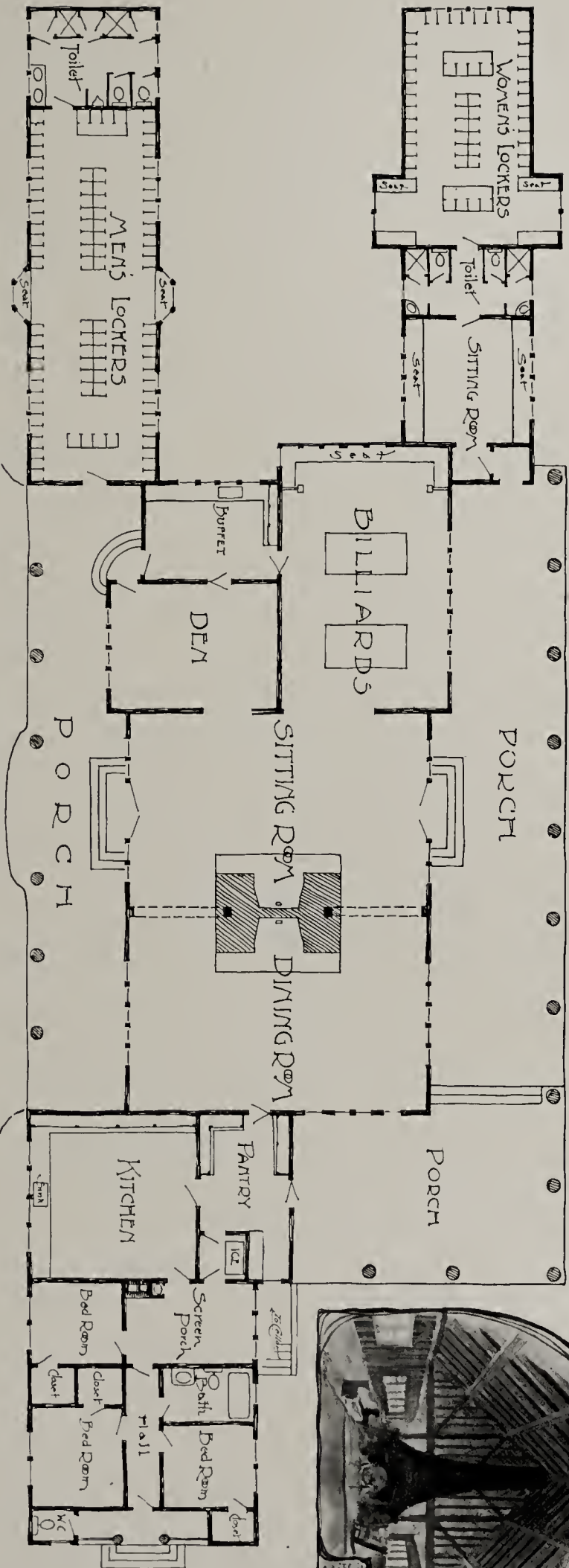
BASEMENT PLAN



SKETCH DESIGN AND PLANS OF U. S. GRANT HOTEL, SAN DIEGO, CALIFORNIA.

HARRISON ALBRIGHT, ARCHITECT. LOS ANGELES.

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Carriage Porch

SAN GABRIEL VALLEY COUNTRY CLUB
 HUDSON & MURGEL ARCHITECTS
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 Los Angeles California

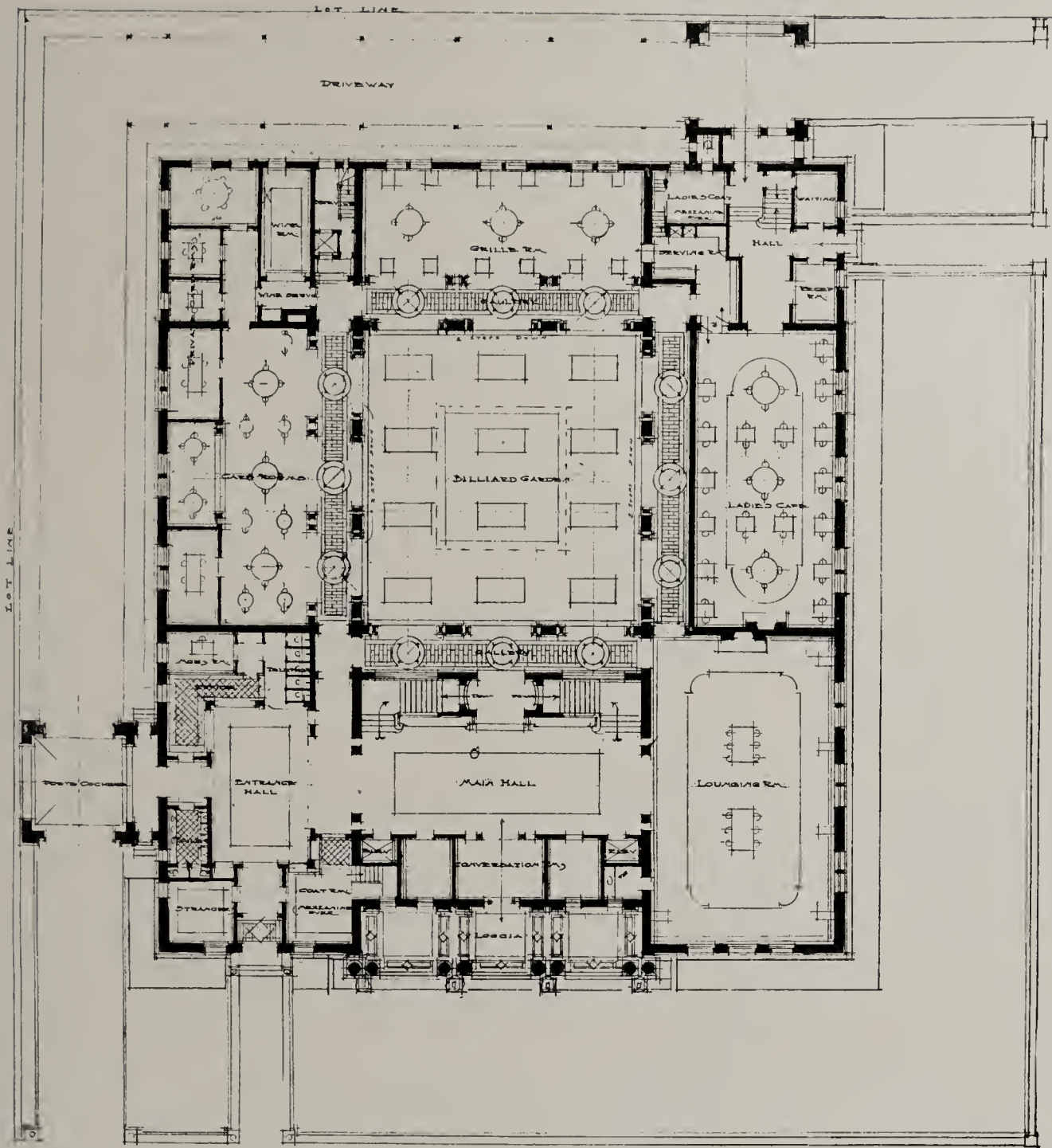


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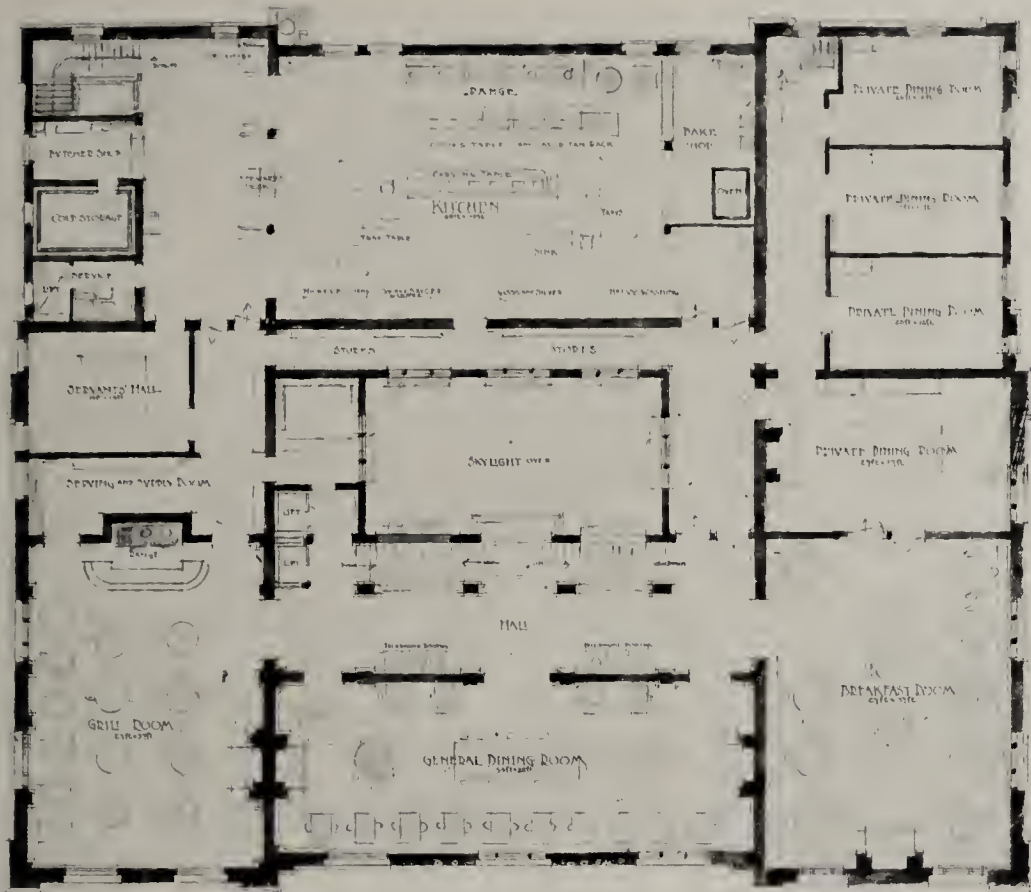
EIGHTH STREET



• EIGHTH STREET ELEVATION •
SCALE 1/4" = 1 FT

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SECOND FLOOR PLAN



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SECOND FLOOR PLAN



A PROPOSED BUILDING FOR THE
MINNEAPOLIS CLUB

CLUB, MINNEAPOLIS, MINNESOTA.
AND SWARTWOUT, NEW YORK, ASSOCIATE ARCHITECTS.

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ly attractive and is now doubly so. Fine groves of maples and oaks are in evidence, there are splendid pastures and roomy barns for the herd of thoroughbred cattle, a garage for the automobiles, flower beds scattered about with apparent prodigality, a swift launch at the dock and a railway station five minutes' walk from the house.

On every hand is evidence of the work of a skilful landscape architect and the presence of a careful gardener. The tower crowned with electric lights is a beacon to mariners by night and a picturesque object by day. It was originally constructed of boulders obtained in clearing away a reef that was a menace to navigation.

Near the gates that open in the highway is a handsome lodge, half hidden in the trees and approached by a driveway bordered with flowers. The estate as a whole is one of the most diversified along the lake shore, stretches of timber, of pasture, lawn and orchard merging into each other. The lake shore rises in some places perpendicularly to a height of 50 to 60 feet and then slopes off into long stretches of sandy beach which echo in the summer to the music of lapping waves beneath overhanging trees. Once in a while the whistle of a passing locomotive or steamer, mellowed by distance comes across the water and awakens the feathered songsters in the apple trees, but does not disturb the humans who have shut the gates on the busy world and for the time forgotten it.

TWIN CITY ARCHITECTURAL CLUB.

The regular monthly meeting of the Twin City Architectural Club was held at Minneapolis, March 31st. The attendance was the largest of the year, and the enthusiasm was of a character to prophesy a satisfactory activity in club work during the year.

The monthly competition of a "boat house for an estate on a small lake" was well represented, several drawings being of superior excellence. The prizes were awarded by a popular vote of the club. The first prize was given to the drawings by Howard Johnson, of St. Paul; second to J. J. Sheldon, of St. Paul; and third to Silas Jacobson, of Minneapolis.

Among the number of projects for the benefit of the advanced was a summer water color class, over twenty members signifying their intention of joining. It was announced that in addition to Mr. Hewitt's atelier in Minneapolis that Mr. Masqueray, who will be located in St. Paul for some time in connection with the designing of two cathedrals, had promised to establish one in St. Paul under his personal direction. This gives to the younger members of the club an educational advantage second to none in the country, and it is not overstating the fact to say that no atelier in Paris would probably be as valuable in its training as this under Mr. Masqueray.

The next monthly competition of the club, to close April 27th, is on the architectural treatment of a stated

bridge spanning railroad tracks, the engineer of the road furnishing blue prints of the bridge structure.

The competition for the Harvard scholarship of the Architectural League of America will be held on April 22nd in charge of Mr. George A. Blewett.

THE DEWITT CLINTON SCHOOL PAINTINGS.

BY CHARLES Y. TURNER.



WHEN one considers the impressionable character of the child mind it seems hardly necessary to point out the great good which may be done in schools by wall decoration. We need only remember the impression produced upon our own minds as children when the illustrated geography or history was placed in our hands. Nothing could more



Inslor & Deck Co. Photo

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DETAIL OF DEWITT CLINTON SCHOOL PAINTING
BY C. Y. TURNER.

clearly fix in the child's mind, and there to remain, the difficulties and hardships of the Father of our Country and his band of patriots, than the picture by Luitze, "Washington

crossing the Delaware," or that other "Winter at Valley Forge," the "Boston Tea Party," where the citizen-Indians are seen busily engaged in tossing the tea into the bay, each makes an impression more lasting than many pages of text.

How easily may the child understand the rotundity of the earth, the separation of land from sea, mountains, rivers, valleys, springs, mining, farming; indeed everything which may be shown by the graphic arts. Indeed, it may be that in this way it is more firmly fixed in the mind than by any other method.

Mural paintings are, therefore, but larger illustrations, and too much stress cannot be put upon their value as educators. We need only the wisdom to select and skill to portray events of importance, deeds of valor, great works accomplished, and place them where the child may see them and we may be sure the impression will be lasting.

That we should have delayed so long in undertaking this method of instruction is surprising. It is true, however, that the work in each instance must be well selected, and masterly in execution.

The mural paintings in the DeWitt Clinton high school in New York is the first instance where the New York Board of Education has adopted mural paintings as a means of beautifying a school building with the education of the pupil in view, and it will probably be adopted as a regular feature of school education.

The DeWitt Clinton school is named after that Clinton whose active labors established the New York school system and exercised so large an influence upon the general public school system of the country. The opening of the Erie Canal Celebration was selected for illustration because Clinton is known as the father of that great work, and because of the canal's influence in making the Empire State what it is.

At the opening or dedication in June a pamphlet will be distributed to the public with an extended description of the work and the causes and influences that brought the canal into being, together with an account of the paintings, which to be exact, are 15 feet six inches long by 12 feet 11 inches high. They will be located at either side of the stage in the Auditorium, which is nearly one hundred feet square, about fifteen feet from the floor, at the same level as the gallery and where they can be seen from all parts of the room.

Mural paintings have long been used in the schools abroad, and it may be the fear of blundering that has kept our people from undertaking this form of education sooner, for while prints and maps may be removed if unpopular, the mural painting is more permanent, and wise selection and skillful rendering is imperative. The latter the artist painters will have to be responsible for, as well as much of the work of selection. It is my belief that no form of education or instruction compares with practical illustration, pictorial or otherwise.

THE RATIONAL INTERPRETATION OF CEMENT TESTS.

JOHN E. MOORE, M. Am. Sec. C. E.



AT THE present time, the specifications for cement most generally used are those which were submitted in 1904 by the Joint Committee, embracing representatives from the American Society of Civil Engineers, American Society for Testing Materials, American Institute of Architects, Engineering Department of the United States Army, Association of Portland Cement Manufacturers, and American Railway Engineering and Maintenance of Way Association. These specifications have been adopted (at least temporarily) by the societies named, and by many others, and may be considered standard. They represent the results of the wide experience and careful thought of many of our foremost engineers, and taken as a whole are undoubtedly the most thorough and complete now in use. Not only have the architect and engineer co-operated in this work, but also the manufacturer, and it would seem safe to assume that the use of these specifications should secure for the consumer a first-class material without being unfair to the manufacturer. This work is being continued and we may hope for yet further improvement.

There are other specifications most of which are not so complete in their requirements, sometimes calling for only two or three of the different tests. The difference in the specifications is of course largely due to variance of opinion of the authors as to what the tests are necessary to establish, according to each one's views, whether a cement is of good quality and suitable for the purpose for which it is intended. I have personally tested cement under at least fifty different sets of specifications, the requirements of each differing in some detail from all the others.

SETTING TESTS.

When a quantity of cement is mixed with enough water for plasticity, thoroughly troweled and made into a pat, after a time a change takes place, due to the beginning of the cement to set. What is known as the initial set is said to occur when a needle 1-12-inch in diameter and weighted to one-quarter pound, fails to make an impression when applied in a vertical position without pressure. The final set is determined by means of a needle one-twenty-fourth of an inch in diameter and weighted to one pound. It may be stated that after the initial set has taken place the mortar is no longer plastic but crumbly, and cannot be worked into a plastic condition again except by the addition of more water. The purpose of these tests is to determine whether or not, when mixed into mortar or concrete, the cement is liable to set before the material is in its place in the work. Sand retards the set

quite materially, as does also, to a certain extent, cold water and cold weather. It would not be considered safe to use a cement which shows an initial set of say thirty minutes in work where an hour or more might elapse between the time of mixing and tamping into place. To disturb or break down the set undoubtedly affects the ultimate strength. On the other hand, when the mixture is to be put into place inside of a few minutes, it is often desirable to use a quick setting cement. This is especially true when it is to be placed under water.

It is not the purpose of this paper to go into a dissertation on mortar and concrete, but nevertheless, in order to draw rational conclusions from the results of tests it is advantageous to be conversant with the practical end of the subject. The tester is frequently able to pass a cement which does not comply with the requirements as to setting, if he knows how it is mixed, how soon it is to be placed in the work after mixing, etc.

TEST FOR FINENESS.

As suggested by the name, this test is made to determine the fineness of grinding of the cement. It is well known that the comparatively coarse particles in a cement are not hydraulic in their properties, although in chemical composition they may be identical with the finest portion. It may therefore, be readily seen that the less coarse material present the richer the cement in hydraulic properties. The finer it is ground the more sand carrying capacity it has. In other words, a finely ground product will show higher results in strength, when mixed with sand, than the same material if coarse, when tested under similar conditions. This fact is taken advantage of by manufacturers who at the present time grind their clinker much finer than a few years ago. The Natural Cements appear to show this more strikingly than the Portlands. Ten years ago the greater majority of Natural Cements were ground so that not more than 60 per cent or 70 per cent would pass a 100-mesh sieve, but now nearly all of them will show approximately 90 per cent through the same sieve. In Portlands the fineness is usually determined on 100 and 200 mesh. Personally, I consider the latter the more valuable test, for it is in this very fine material that the real strength lies. A demonstration of this fact was made recently by sifting a sample of cement through a 100-mesh and then through a 200-mesh sieve. The residue remaining on the 100-mesh was made into a pat, as was that which passed through the 100-mesh and remained on the 200-mesh. The former showed no hydraulic properties whatever and the latter did not set up as hard as either the unsifted cement or the very fine portions which passed both sieves.

Failure to comply with requirements as to fineness should not be sufficient cause for rejection unless there is at the same time a falling off in the strength when tested with sand.

TESTS FOR SOUNDNESS.

These are made to ascertain whether cement is liable to soften, crack, swell or distort in any way, thus endangering the strength of the work in which it is used. Pats about 1-2-inch thick in the center, four inches in diameter and sloping to thin edges, are made of neat cement mixed with enough water for plasticity, and after standing for twenty-four hours, or at least until after they are set hard, being kept in the meantime in a moist atmosphere, they are subjected to one or more of the following tests:

AIR—COLD WATER—BOILING.

The air test is made by keeping the pat under normal conditions, exposed to air and observing same from time to time. The cold water test is made by placing the pat in water of ordinary temperature for twenty-eight days or more and examining at intervals. The boiling test is made by either placing the pat in steam over boiling water for three or four hours and afterwards lowering into the water and the boiling continued for about the same length of time, or by placing the pat in cold water in the boiler and gradually raising the temperature to the boiling point which is maintained for some hours. When subjected to any of these tests the pat should show no signs of change, except to become harder and stronger.

Of these three tests for soundness, the boiling test is the most valuable when results are needed in a short time. In from twenty to thirty hours after the sample is received the tester may determine whether there is any unsoundness in the cement. It is claimed, and more or less justly, by some engineers, that failure on the boiling should not be sufficient cause in itself for rejection, and that not only unsound but often perfectly good cement will fail. There will be some further reference to this further on in the paper.

When there is time to wait, say twenty-eight days or more, before finally passing on a lot of cement, the cold water test is unquestionably the most reliable and fair for determining constancy of volume. Few, if any, will question the justice of condemning cement if after three or four weeks in water the pat shows swelling, warping or other distortion. Unfortunately, however, cases where the user is able to wait for so long a time for results are rare, and while most specifications include twenty-eight day tests, as a rule the cement is in the work long before that time has elapsed.

TENSILE STRENGTH.

In most laboratories the tensile strength is determined on cement both neat and mixed with sand, and for periods of time of from twenty-four hours to seven and twenty-eight days or longer. The "Standard Specifications" mentioned before, give the following requirements:

NEAT CEMENT.

24-hrs. in moist air, at least 150-200 pounds per square inch.

7-days. (1 day in moist air, 6 days in water,) at 450-500 pounds per square inch.

28-days, (1 day in moist air, 27 days in water,) at least 550-650 pounds per square inch.

ONE PART CEMENT TO THREE PARTS SAND.

7 days, (1 day in moist air, 6 days in water,) at least 150-200 pounds per square inch.

28 days, (1 day in moist air, 27 days in water,) at least 200-300 per square inch.

While concrete or mortar is seldom subjected to a high tensile strain, the strength under tension gives a line on the resistance to crushing. Different observers have stated that the latter is from eight to twelve times the former, and while there seems to have been no exact relation established, many tests of each kind have demonstrated that the ratio usually lies between these figures. At any rate the factor of safety used in calculating loads is so large that we can safely say that concrete is never called upon to stand anywhere near the strain that it is able to resist. Therefore, in assuming that for any given tensile strength we may rely upon a certain resistance to crushing, it does not seem that any risk is incurred. The principal reason that the crushing test is not more generally made is that it is not nearly as practical. Machines for tensile tests are comparatively inexpensive and take up little room, while the opposite may be said of those used for crushing. There is one machine, however, which was exhibited in the model laboratory in the Cement Pavilion at the St. Louis Exposition, that will crush up to 4-inch cubes and has a capacity of 40,000 pounds. This machine is quite considerably used and gives satisfactory results.

Some specifications require much higher results in short periods than those given above, sometimes demanding from 600-700 pounds on the 7-day neat test. It is perhaps a question whether cements which show a higher result in a short time are at all superior to those of lower strength, but in any case one thing may be said: With some brands the normal strength in a short time seems to be higher than with others, and it would be cause for suspicion to obtain with the former results as low as say 400-450 pounds; in seven days, while with the latter, which exhaustive tests have shown to be perfectly safe and sound, these comparatively low results would be normal. The ultimate strength would likely be very much the same in either case.

SPECIFIC GRAVITY.

This test is not as a rule made, although it is a valuable one when adulteration or underburning is suspected. There should always be further tests made before condemning a cement on this test, for while it has been found that in most cases the specific gravity of a pure Portland lies between 3.10 and 3.25, yet the writer's experience has shown that it is possible for it to differ somewhat from these figures without showing adulteration or improper burning.

CHEMICAL ANALYSIS.

Outside of the Cement Mills complete chemical analysis is seldom made except for some specific purpose. There are one or two determinations, however, that are usually called for, these being sulphuric anhydride and magnesia. The former shows how much calcium sulphate or plaster is present by calculation from the amount found by the analysis, and if the amount exceeds about 1 3-4 per cent it would be considered excessive. In the case of magnesia there is much difference of opinion as to what amount is allowable. The Standard Specifications permit up to 4 per cent, but while not attempting to discuss it here, I believe that a good sound cement can be made containing considerably more magnesia than is at present allowed.

Of the tests described, the following are generally made: Setting, Fineness, Boiling and Tensile Strength (both neat and with sand). Possibly there are some, but I know of no laboratories where the specific gravity is determined and chemical analyses are made regularly. These latter tests should be made, however, from time to time, especially when a cement with which the tester is not familiar is submitted to him.

It oftentimes happens that the consumer asks for a quick setting cement when what really he desires is a quick hardening cement. These terms should not be confused. As a matter of fact, a cement which sets slowly will as a rule develop greater strength in a short period than a quick setting one.

Too much stress cannot be laid on the necessity for knowing the character of not only the sand but the water used. One case is recalled where the cement used had passed requirements, and naturally it was desired to know what was the use of having it tested and accepted if the work was to subsequently fail. The whole cause of the trouble, which was the failure of the concrete to set, was found to have been the water, (not that used in mixing,) but that in which the concrete in the bottom of the walls lay. This water had soaked through a large pile of ashes and clinkers from the boiler room of a manufacturing plant in the vicinity and was much contaminated with sulphuric acid. Concrete from the same cement which did not come in contact with this water was sound and hard.

The Chicago Architectural Club opened its nineteenth annual exhibition in the south galleries of the art institute on March 29, with the usual reception to members of the Art Institute and guests of the club.

The exhibition is a decided advance over the showing of some former years, and is representative of the methods and ideas which have revolutionized architecture to meet modern conditions.

The traveling scholarship prize of \$500 was awarded to Herbert H. Green for drawings of a Gothic church, yacht club and a recreation pier. This prize will enable Mr. Green to spend six months in Europe.

THE INTERNATIONAL CONGRESS OF ARCHITECTS.

BY WILLIAM LE BARON JENNEY, Architect.
Member of Permanent Committee on Congresses.



AS IS well known among most architects, especially those who are members of the American Institute of Architects, there has existed in Europe for the past twenty years a society known as the International Congress of Architects, who hold a congress in some European city each third year.

An association known as The Permanent Committee of said International Congress was organized to serve as a bond during the intervals between the meetings of the said congress.

The writer's personal connection with said International Congress was at Brussels in 1897, when was held the Fourth Congress, and where was designated the most of the present life members of the said Permanent Committee.

This committee is divided into sections by nations. The American section numbers only 5 members: Allen, T. Richmond, of Boston; Eames, William, of St. Louis; Brown, Glenn, of Washington; Jenney, W. L.B., of Chicago; and Totten, George O., of Washington.

The foregoing are all life members. It has since been increased but not by life members as far as the writer knows.

It is the duty of said Permanent Committee to prepare and organize these congresses, which are designed to elevate the professional relations of the architect and to defend their intellectual and social rights.

To communicate to the various governments the opinions of the International Congresses and to use their best efforts to secure consideration and effective action on the points advocated by the congresses.

The headquarters of the committee shall be at Paris.

The number of the members of the committee may be increased to 75 for all nations. The committee shall meet at least once a year and may be called by the President.

The Vice President may be called to act as President.

The Permanent Committee is directed to present to the various governments the decisions of the congress.

The minutes of the meetings of the committee shall be kept in the French language.

The deliberations of the committee shall be in the French language.

The Seventh International Congress will be held in London at the headquarters of the Royal Institute of British Architects July 16 to 21, 1906.

The papers and communications may be in English, French or German.

At a very recent meeting of the Permanent Committee held in Paris, December 12, 1905, W. L.B. Jenney,

of Chicago, was elected Vice President and George Totten, Secretary, for the American section.

During the present interval previous to the congress, the Permanent Committee is occupied in perfecting the arrangements with the Kingdom of Holland for the appointment of a commission and a jury to arrange a competition international and the selection of a design and the erection of a "Palace of Peace" at the Hague, for which Mr. Carnegie has donated a very considerable, and, it is thought, a sufficient sum.

At the meeting of December 12, 1905, in Paris, although nothing definite was decided, the discussion was on these general outlines—That the competition should be international among the architects of all countries, and that there should be created a commission to elaborate a programme.

It is suggested that each of the twenty-seven states who adhere to the principles of the conference at The Hague, should designate two architects who alone will take part in the competition. They will be the champions of their respective countries. The composition of the jury called to judge of the competition is not suggested, nor how the two architects will be selected, other than a reference was made to a former and very satisfactory competition where all the architects were invited to furnish a design in accordance with an elementary programme at a small scale, and from these the jury will select ten who will furnish more complete designs at a large scale in accord with a future programme. These ten architects to be compensated sufficient to cover all expenses for the two competitions. The names of these ten to be published in alphabetical order only. These matters will doubtless be definitely settled at the approaching London Congress of July, 1906.

ARCHITECTURAL ASSOCIATIONS.

WASHINGTON STATE CHAPTER A. I. A.

The Washington state chapter of the American Institute of architects held its regular monthly meeting in Tacoma March 20. All the leading architects of Seattle and Tacoma were present and sat down to an excellent dinner at 6 p. m. During the meal operatic selections were given by an orchestra. Afterwards Vice President Bullard took the chair and an interesting discussion took place on the ventilation of public and other buildings. Other subjects brought up were the consideration of a code of ethics for the profession and the scale of charges. It was resolved to amend the schedule of the chapter to conform to that of the American Institute of Architects.

A course of papers on subjects of interest to the profession has been arranged for future meetings.

It is five years since the chapter met in Tacoma before and, owing to the success of this meeting, it was decided to hold further meetings in Tacoma as well as in Seattle.

ILLUSTRATIONS.

☐ The plans of the San Gabriel Valley Country Club, by Hudson & Munsel, architects of Los Angeles, show a simple but in no way conventional design and plan of a country club house, with the maximum of convenience and at a comparatively low cost.

☐ The sketch design and plan of the U. S. Grant Hotel, at San Diego, Cal., which Ulysses S. Grant, Jr., is the proprietor and Harrison Albright of Los Angeles is the architect, is worth studying. It is of course planned for a tropical country, where semi-outdoor life is general, and leisure the avocation of the inhabitants.

☐ A charming quadrangle scheme is introduced in the design for the Glenwood Inn at Riverside, Cal., by its architect, Arthur B. Benton, of Los Angeles. While one can only imagine the vines covering the rustic pergola that lines the two fronts of the hotel, the design suggests sunshine everywhere, and the mountain background gives it a setting that reminds one of the Montezuma Hotel at Las Vegas.

☐ The competition for the club house of the Minneapolis Club of Minneapolis involves a somewhat difficult problem as the lot is approximately square. Three architectural firms were invited to compete and the designs, those of William Channing Whitney, of Minneapolis associated with Gordon, Tracy and Swartwout of New York; Keith Gillette and Keith associated, of Minneapolis; and Edwin H. Hewitt, of Minneapolis are shown. It might be mentioned that, through the peculiarity of the competition program, probably neither of these three designs were accepted, the work being carried out by another architect, but the plans are equally valuable in showing the three solutions to the problem by three capable designers.

☐ The Polytechnic High School at Los Angeles shown with photographs taken from two directions and by the plans of three floors, by Franklin P. Burnham, consists of a handsome group of buildings, covering a ground space 220x440 feet between Grand avenue and Flower street, running through from Washington to Twentieth. The main building is four stories high, Assembly Hall two stories, Science Hall two stories, and the shops are one story the height of two. The entrance to the main building is on Washington street by a handsome stone stairway and through massive Ionic columns on the north front. The entrance to Assembly Hall is on a level with the ground on the east front, and that to Science Hall is on Twentieth street. Connection between Assembly Hall and the main building by means of a wide corridor which runs entirely through from Washington street to Twentieth. The shops connect on both the east and west with this wide corridor, and the entire group is thus under roof. The buildings are all of common brick, plastered with cement mortar of a cream white color, and the interior is practically fireproof. There are some unique features which contribute the perfection of detail

such as five foot tunnel connecting with power house for wires, heating and ventilating, etc., a roof garden covering the entire main building, the Warren Webster system of heating, a splendidly arranged and equipped gymnasium, the entire ground floor equipped for and devoted to domestic science and an assembly hall seating 1,600. The cost of the school buildings exclusive of the ground is \$156,000.

☐ John Perkinson, the architect, has designed for himself at Los Angeles a residence that appeals to those who are not so fortunate as to live where one can build on a hill and have all out of doors for neighbors. But even where similar conditions and surroundings obtain it is not often that these are taken advantage of to the extent and with the artistic results which Mr. Parkinson has evidently succeeded in securing in the designing of his home. It remained for this artist to refuse to place his garage on a direct line with his back door, and to cut a straight stairway from boulevard to the door in front, which by the way seems ridiculous, but is too often seen in residences built in imposing locations, where a disposition to follow the natural contour of the elevation and design with some regard for the surroundings, would produce such interesting results as this shown of Mr. Parkinson's admirably planned and located residence.

☐ Kenyon Cox the artist has designed eight lunettes for the Iowa State Capitol, which in strength and dignity of composition are not excelled by any similar work. Four of these are shown in this issue, the remaining four to be printed in the next, the last of the octet being still unfinished. The pictures are designed for spaces which place them in pairs, each pair separated from the next by an open archway. The figures of each pair face each other and back the open arches, making a rhythm of garlanded curves running through the arches. "Hunting" and "Herding," showing the first two stages of civilization, and "Science" and "Art" the last two, and these four are shown, and will be followed by "Agriculture" and "Manufactures," "Commerce" and "Education." In "Hunting," the primitive man, clad in skins, living by the chase is depicted. A half wild dog, his earliest friend is by his side. In "Herding," the first move towards civilization and the subduing of the wilderness, the pasture age of civilization, is shown, presenting the young herdsman with his pan-pipes. Iowa being a great hog-raising state the artist has given him swine as well as cattle to guard. "Science," or rather the intellectual life, shows a man seated in thought, on the parapet of a building, at night. At his side is a terrestrial globe. On the parapet the lamp of truth burns brightly. In "Art" the final stage, a half-nude female figure, with a face in which strength and innocence are mingled, holds up a mirror which reflects the light of the sky. The four great arts, Architecture, Sculpture, Painting and Music are shown in the accessories to this superb conception of art.

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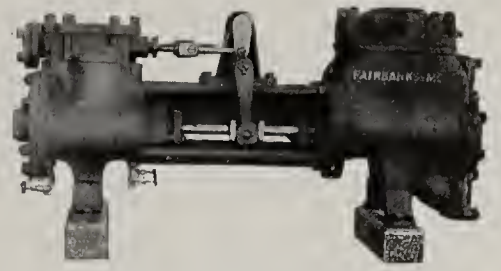
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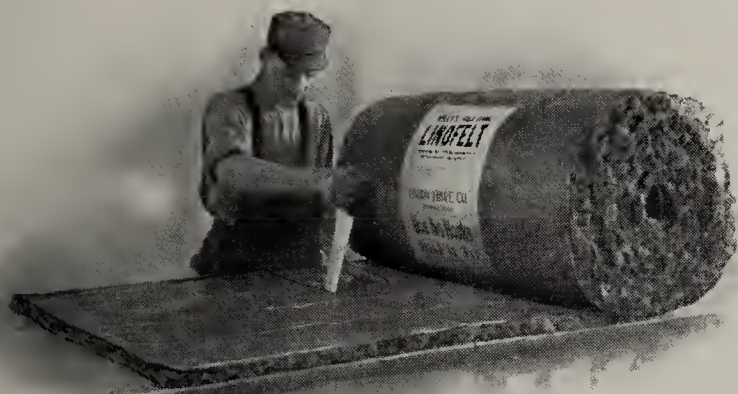
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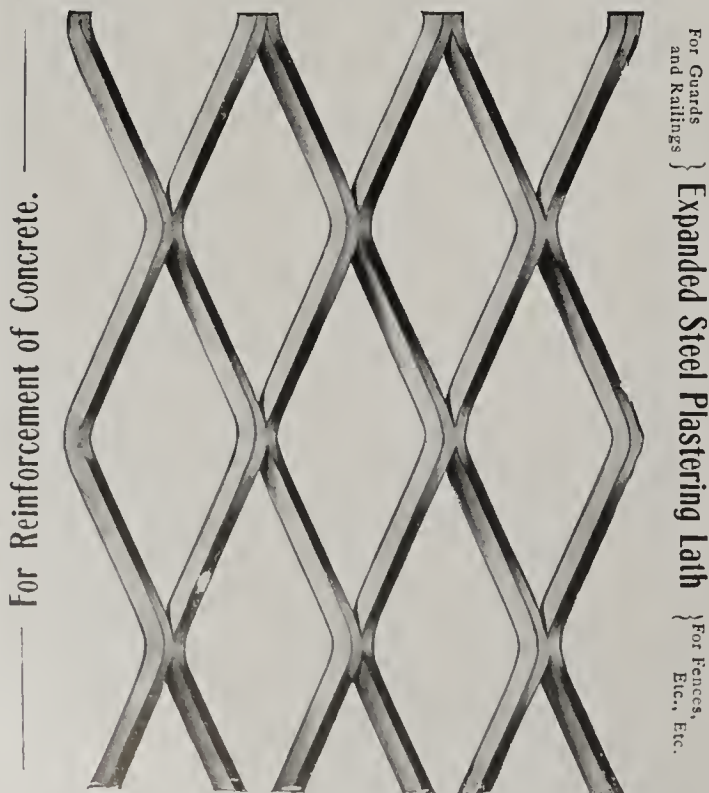
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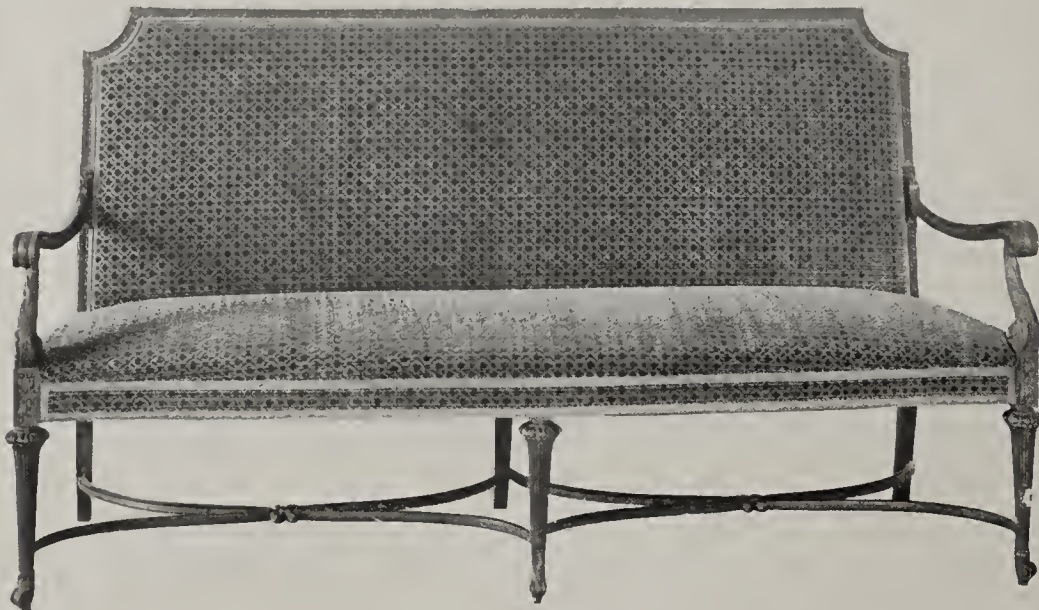
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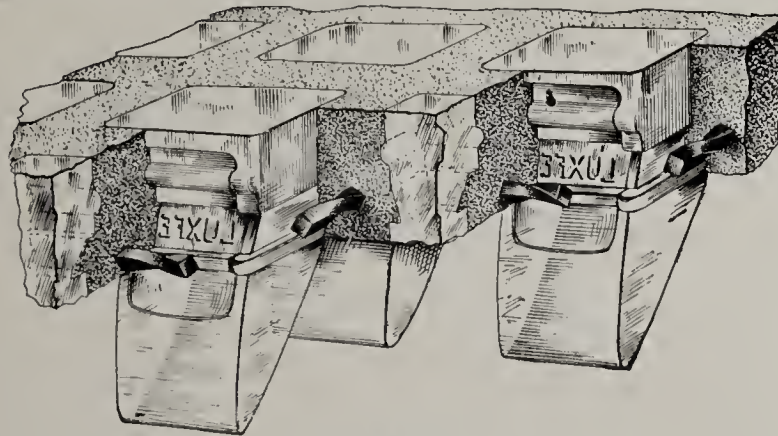
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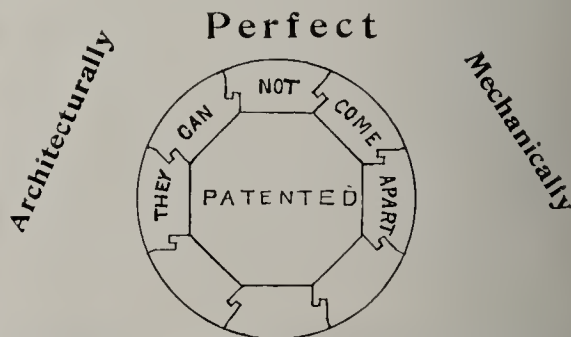
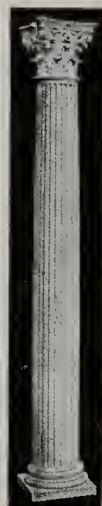
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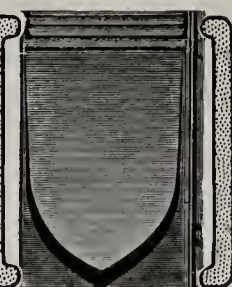
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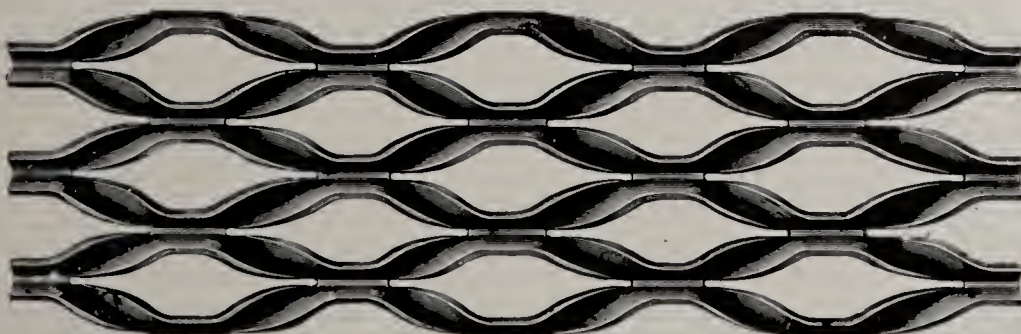
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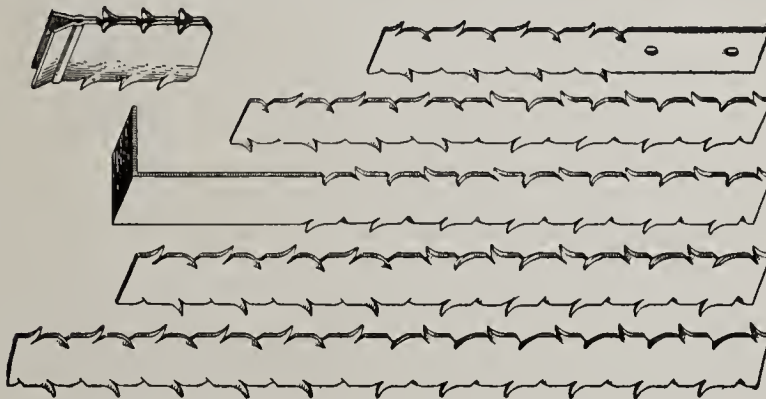
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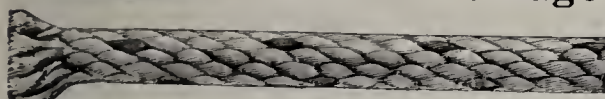
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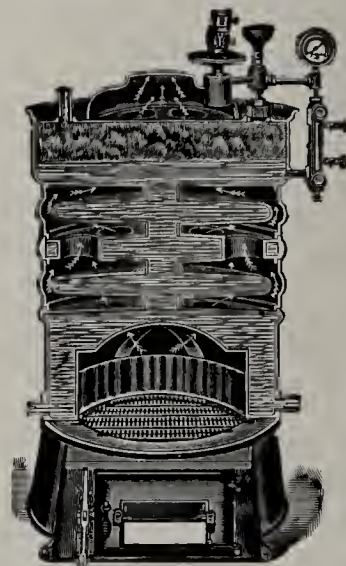
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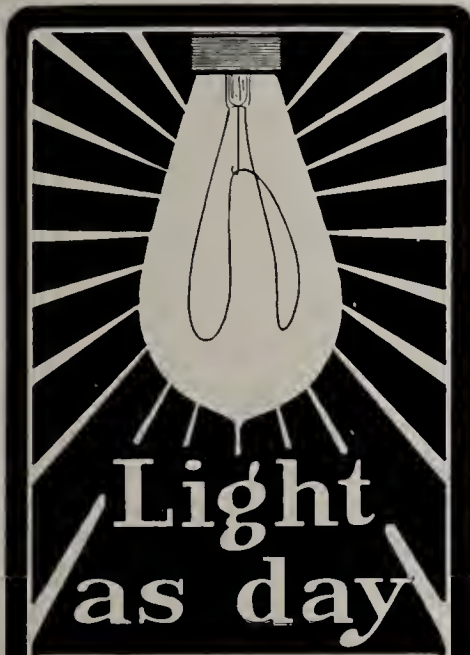
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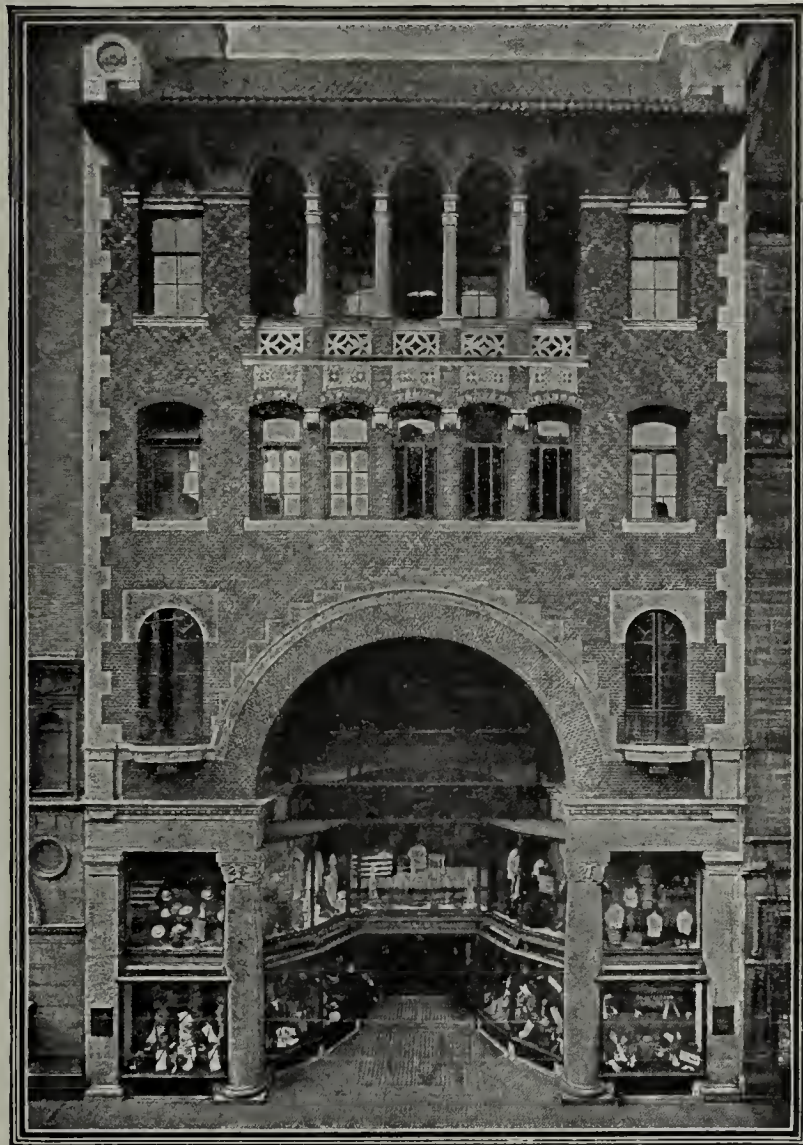
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FOR THE SOUTHERN RAILWAY AT ATLANTA, GEORGIA, THORNTON MAYRE, ARCHITECT.

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ROBERT CRAIK McLEAN, EDITOR.

IDEAL MAPLE FLOORING.

WHEN a building material comes into general use, whether by the pushing business methods of the producer or because of its adaptability to conditions, its investigation is worth the time and attention of those who have not become fully informed in regard to its utility.

This has happened to the what is known as the Ideal maple flooring produced by the I. Stephenson Co. of Michigan. It was in search of such information that a representative called upon Mr. J. C. Hill of the J. C. Hill Lumber Company, of St. Paul, which is the distributor of Ideal flooring throughout the west. The answer to "where do you get the material for Ideal flooring?" was met with a large map showing a vast tract running northwest through several counties from Escanaba and Gladstone, on the west shore of Lake Michigan and traversed by a railroad belonging to the company, and connecting with and forming a through line from lake Superior points. There is nothing so impressive as a map and the vast resources of this company in maple wood was shown by colored squares lining both sides of this railroad.

Next to the map the visitor was impressed with the portrait of the president of the company and founder of the industry. It showed a face full of the characteristics which made the lumber industry what it has been. Calm, shrewd intelligence, determination, and humor marked the face of Mr. I. Stephenson, and one thought of the "Blazed Trail" and the conflict of the lumberman against the speculator of that weird story of Michigan lumbering. One could readily see how natural it was for this man to understand the forest and its preservation as well as its destruction, and that in the hands of such a man lumbering would

not only flourish but remain a lasting heritage to future generations.

When Mr. Hill was asked why Ideal maple flooring was better than any other he simply produced samples and showed that it was in no one point but handling from tree to laid floor that its excellence lies. The selection of trees and scientific cutting gave a select quality of lumber without selection. The high class machinery with which it was planed and grooved give it a uniformity of thickness that is as near perfect as is possible, and the groove so shaped that no pinching occurs in its laying. It is impossible to make a floor that will lay so smooth that no planing down is needed, but with ideal, especially the two inch size, it is hard to see how the seemingly perfect joining can be improved after it is laid.

And that is why in the Farwell, Ozmun Kirk & Company building at St. Paul, 260,000 feet of Ideal flooring was used, and millions of feet consumed in the floors of other buildings. Mr. Hill has met the architects in every city in the west in introducing Ideal flooring, and has always found that they were glad to know so "Ideal" a flooring could be secured for their clients.

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Sends a message good as "whusky"
Every where.

It's the Right Road!
The Right Road!
The Right Road!*

No other call for him,
And he gives it with a vim
When he stands in porter trim
On the Right Road.

He points you to the track
That goes everywhere and back,
With the cars that are the best
on any train;
As you buy your ticket through
He will tell you what to do;
Just listen to his call and the
refrain.

It's the Right Road! It's.

When you see him in the front
And hear him do his stunt,
You will never have to hunt
For the Right Road.
For to ride, or sleep, or dine,
It's the only standard line;
And if you're a friend of mine
Take the Right Road.

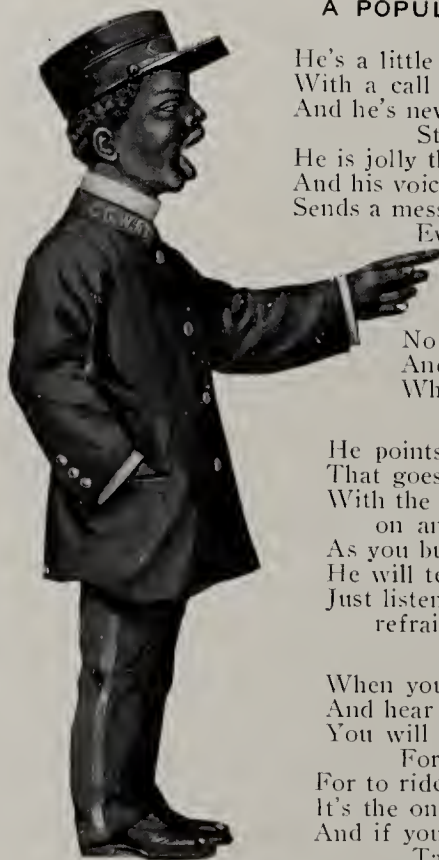
The Right Road! the Right Road! the Right Road!
No other call for Jim,
And he gives it with a vim,
When you take the train with him
On the Right Road.

*The Chicago Great Western Railway, known also as the "Maple Leaf Route," and "The Right Road," between Chicago, St Paul, Minneapolis, Kansas City and Omaha.

WASHINGTON FIR EXHIBITION AT MINNEAPOLIS.

It is interesting to visit the exhibition room of the Washington fir companies in the Lumber Exchange in Minneapolis and spend half an hour observing the number and variety of visitors that call to see the fir, cedar, and spruce from the state of Washington exhibited there. The exhibition rooms which are entirely finished in these woods were designed by W. A. French & Co., of St. Paul, and are in themselves a beautiful example of interior design and finish, while the wood shows its adaptability.

The sides of the sample room are lined with cases in which every variety of finish that could be called for in any interior, hang in finished slabs of the material. It shows its susceptibility



to polish or to a walnut finish. Color, grain, and texture is found in variety, while its freedom from cracks and warping, is proven by these samples that have been exposed for the past six months to the steam heat of the building. It is an instructive lesson, and the architect or his lady client who calls there is certain to go away with a firm belief in the excellence of Washington fir for interiors. For while the samples show the practical features of the wood, the artistic interior designed by The French Company displays its richness when the architect's design is completed in the finished wood.

AN EASTER SOUVENIR.

To anyone traveling the overland route of the Northern Pacific on last Easter Sunday, the hour in the dining car will long be remembered. While the luxurious cars and the exceptional scenery on this line always impresses the trip on the memory as one of its "white days," the dining car service stands out as a time when the world seemed a good place to live in and that particular spot its valley of contentment. On Easter the table decorations and the exceptional menu left little to be desired. As a token, or souvenir, the traveler was sure to carry away the menu card which he found awaiting his attention. This is a most artistic piece of composition. An easter lily decorated its chaste, white title page.

Within a poem "My Easter Dream" prefaced the menu, the whole printed in blue with the title lines in silver the booklet tied together with silk ribbon. Enclosed in this attractive accessory to a sumptuous dinner was an artistically mounted photograph of one of the many notable scenes on the route; Golden Gate, the east entrance to Yellowstone Park. The passenger department of the Northern Pacific is to be congratulated upon the production of so elegant a souvenir.

COLD STORAGE.

IN the study of the principles of heat and cold in their effect on meats and vegetables the quantity of humidity has been overlooked to a great extent in the construction of cold storage plants and cooling rooms. While the former both in extreme heat and extreme cold must be provided for it is the dryness of the atmosphere that is the preservative agent. The Indian knows this and strings his deer meat cut into strips on the bushes around his tepee after a successful hunt, and the meat is cured, though a hot sun may be shining. The Northy Manufacturing Company, of Waterloo, Iowa, claim to have the only dry atmospheric cooling system made, and as far as the principle is concerned their plan is different. It places the ice, not at the top of the cooler but at a proper distance between so that a proper and effective circulation of air is obtained at a minimum expenditure of ice.

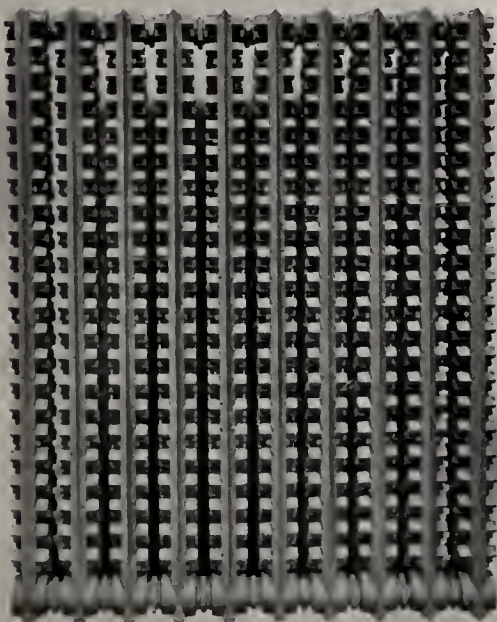
OF INTEREST TO ARCHITECTS.

THE writer of the article in the last issue on "Rational Interpretation of Cement Tests," John E. Moore, is an engineer with the consulting and testing firm of Robt. W. Hunt & Co., of Chicago.

A TRIM for buildings which is designed to illimitate carpentry by way of a fireproof substitute for wood has been invented and put upon the market by W. D. Mann, of Chicago, with offices in Grand Central Station. There are no rail services or bolts used in its application, its composition being thin metal and concrete and it can be applied to any form of opening in walls or partitions in connection with other fireproofing. It should not only meet a want but fill it.

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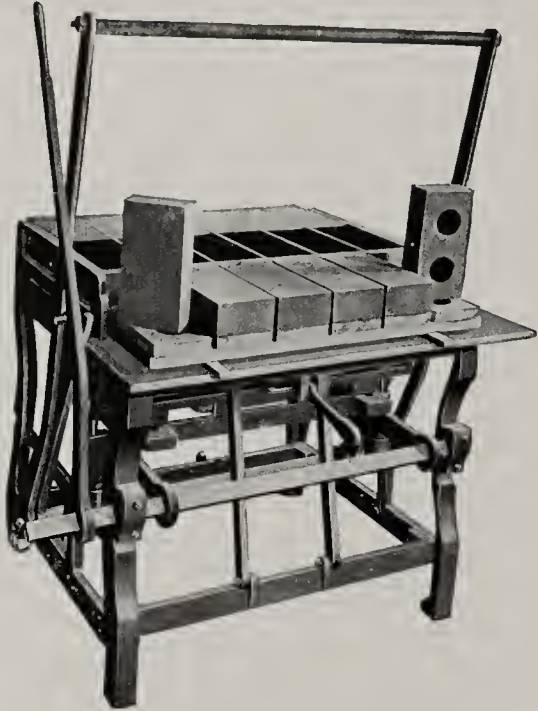
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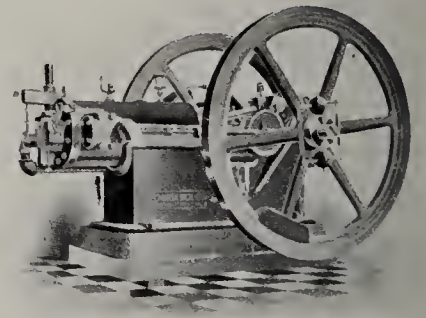
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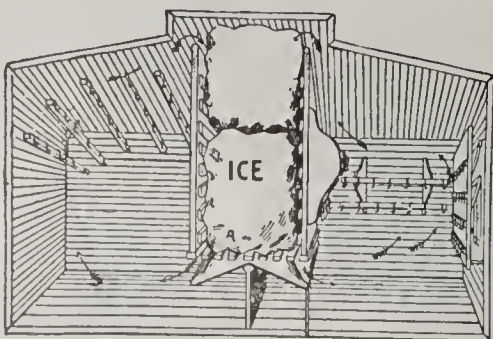
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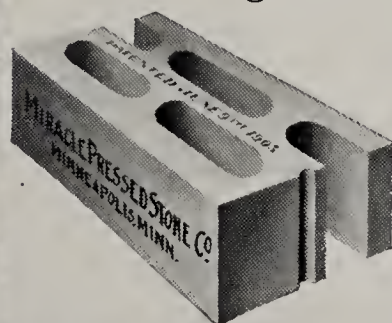
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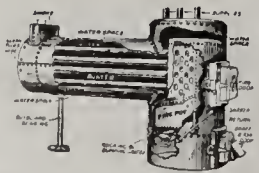
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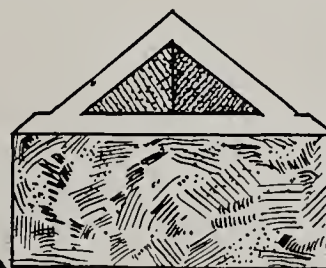
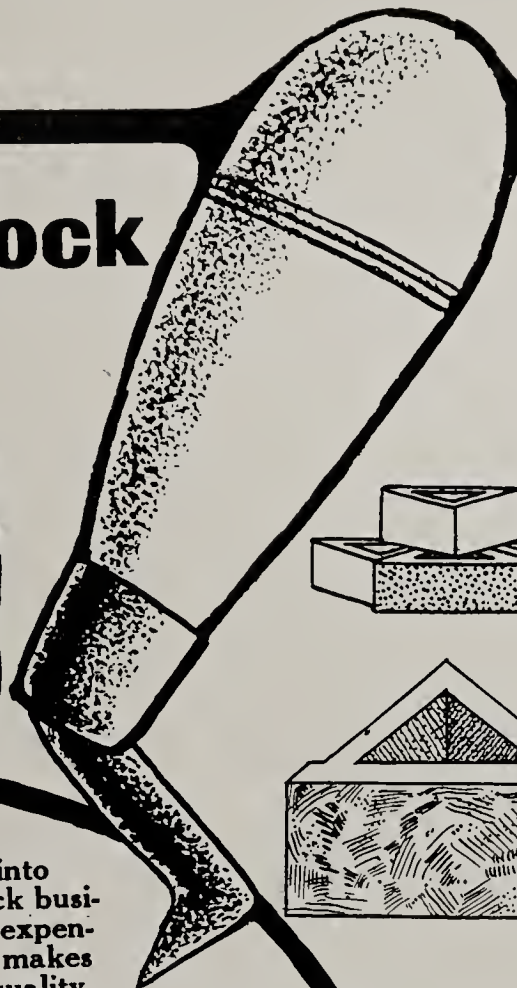
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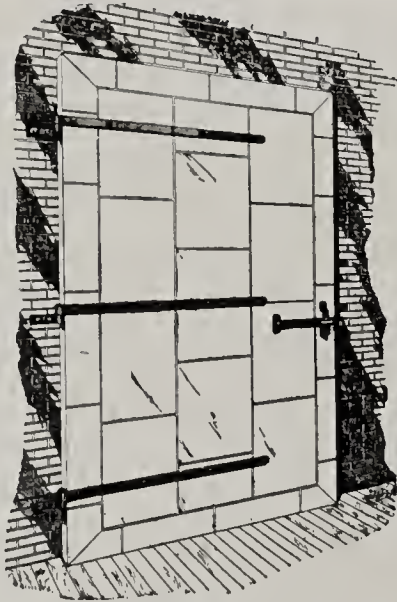
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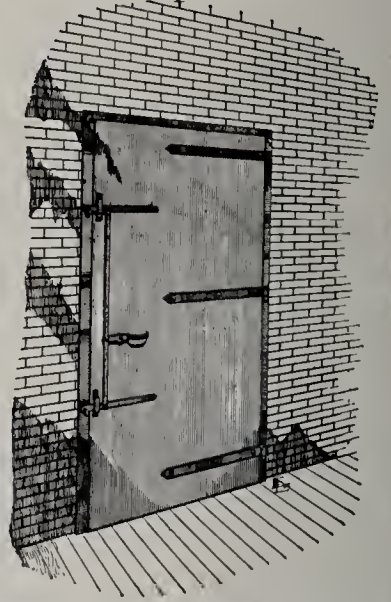
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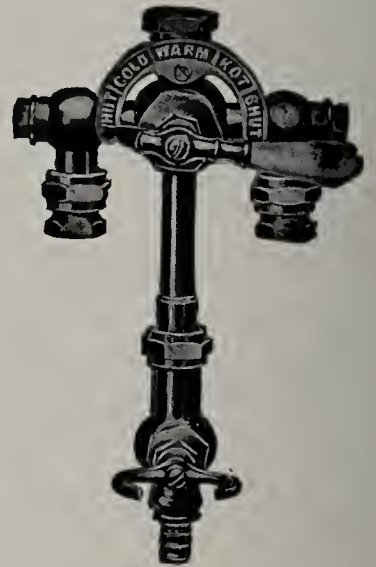
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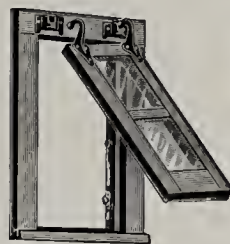
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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

Destruction of San Francisco by Earthquake and Fire

On April 18th, 1906, at 5 o'clock in the morning, at San Francisco, California, an earthquake shock wrecked many buildings, innumerable fires at once breaking out, caused in most cases by broken gas-pipes and electric wires. The water mains being broken the organized fire-fighting forces of the city were powerless, and changing winds carried the flames in every direction. In spite of indefatigable work by the army and navy and municipal authorities, who used the entire stock of dynamite and powder available in razing buildings, the course of the fire was not stayed for three days, when a fortunate change of wind ended the conflagration. In this time ten square miles of closely built territory was consumed. About ninety per cent of the structures in the city were of wood, and though in a great measure California red wood, which is non-resinous, was used in their construction the flames swept everything in their path and consumed that which the earthquake had not injured.

Steel Frame vs. Concrete Construction at San Francisco

There is liable to be considerable struggle between the advocates of skeleton frame and hollow tile and those who believe in the advantages of reinforced concrete, in the rebuilding of San Francisco. While the elasticity of the steel as it has been tested by the earthquake will probably strongly argue for that form of construction, there is a cohesiveness about the reinforced concrete as now designed by expert engineers that will find considerable favor with both architects and the public. It is probable however for buildings of over six stories that steel will be used, and the several forms of concrete will be best adapted to the flats, warehouses and residences that call for a cheaper and at the same time fireproof and stable construction. It is too early to more than surmise the direction which the rebuilding of San Francisco will take, or the materials that will be employed in the larger

structures, but it is probable that some plan for combining a steel frame to give it elasticity, and reinforced concrete instead of tile to give it homogeneity, will be devised and adopted.

**A Rigid Fire
Limit Recom-
mended at
San Francisco**

It is not too soon to warn the people of San Francisco against undue haste in their rebuilding. Shelter and business premises must be provided as rapidly as possible, but no permits should be allowed without a time limit for any structure other than that planned upon approved fireproofed lines. While in the purely residence district it may not be feasible to prohibit wooden structures, a liberal fire district should be at once laid out and the requirements rigidly enforced. In the residence districts, the inflammable nature of the wooden structures may be offset by wide streets and parkways broken up by public buildings and hotels that should be constructed of noncombustible materials.

**The Burnham
Plan For
Beautifying
San Francisco**

What is known as the "Burnham Plan" for civic improvements in San Francisco should and will now probably be carried out on the general lines laid down by Mr. Burnham and his assistant, Mr. Bennett, in the report submitted to the San Francisco Improvement and Adornment Committee last fall. These plans were fully published in the *Western Architect* in the number for January last from photographs from the original drawings. It is probable that these reproductions are now doubly valuable as the photographic plates were destroyed in the San Francisco fire.

**A Hope For
San Francisco
Club
Exhibition**

The San Francisco Architectural Club, on the day previous to the earthquake mailed its exhibition circular. As this exhibition is appointed for September next it is not impossible that it will be held. The city will commence reconstruction at once with a demand for draftsmen that will be unprecedented, and though a postponement of the date may be necessary, it can be made one of the most valuable and instructive ever held. Not only can it show the plans of new structures in the city, but by collecting liberally in the east will also exhibit design, and suggest to the people the possibility for artistic composition. In the rush of business it may be that the committees in charge can not find time for the laborious work of collecting and installing, and a suitable

exhibition place may not be available for a year or more, but every effort should be made by the energetic members of the club to carry out, though under extraordinary difficulties, the plans made with such confidence in the future just before the terrible disaster wrecked their city.

**W. L. B. Jenney's
Deductions From
the San Fran-
cisco Disaster**

From the meager reports available at this writing from San Francisco, it is probable that comparatively little damage was sustained from the earthquake, though this in itself is the most serious destruction of buildings from this cause that has ever occurred in this country. It is with the earthquake that the greatest interest lies from an architectural standpoint. In an interesting article published in this issue, architect W. L. B. Jenney gives his deductions in regard to the value of the steel frame or skeleton construction in its resistance to the effect of earthquakes.

**John W. Root's
Scheme to
Resist
Earthquakes**

It was certainly an unauthorized person who stated to the *New York Herald* that Theodore Starrett designed the Chronicle building in San Francisco, which was built some fifteen years ago, a statement which was widely copied throughout the country. The building, as every architect knows, was designed by Burnham & Root. Long before that date and for some time afterward John Meigs Ewen was engineer for the firm, and Theodore Starrett, as well as J. Dinwiddie and others were draftsmen under him. John W. Root in designing the building sought to provide for possible earthquake shocks, and for this purpose placed continuous flat iron bands in the brick walls at each story. These were five inches wide by one quarter of an inch thick and were fastened at the ends acting as one continuous ring and were embedded in the brick masonry. The object was, as he explained to the writer while making the drawings, to prevent the building from breaking up laterally and it seems to have been reasonably effective. The steel drawings were made under Mr. Ewen's direction and the draftsman named worked on these drawings.

**Illogical
Discussion of
the License
Question**

Probably through the fact that a bill to license architects is now before the New York legislature, the oldest architectural journal in the country has taken up the discussion of license or no license for architectural practitioners, and so far has presented very little

real argument in its opposition to such license laws. In a recent issue it shows how conservatively the architects in England have discussed the proposition, and with apparent logic recommends the same procedure here. We know that the licensing of architects is more or less abhorrent to the architect who does not wish to be classed with the tin peddler, but that is not argument. The real foundation lies in the practical manner in which buildings are designed and built in this country, not how they should be or might be. The matter has been discussed by the profession for twenty years. A few states have passed the required measures. The New York legislative bodies passed an act without a dissenting vote, which was defeated by Governor Flower, and not through the opposition of the profession, but on the representation of one architect and one contractor and one engineer. In Ohio alone has it been opposed by architects of standing, the representation of the Cincinnati chapter preventing its passage three years ago. A license law has had a long trial in Illinois and neither profession or public seem to wish for its abolition. It is necessary because of the very latitude which the practice of architecture allows, and until the American Institute of architects enrolls a large majority of the practitioners in the country, or the public refuses to employ any but architectural school graduates, or some other standard, regulating and prohibitive is established the most feasible plan is that of a state law requiring examinations and permits to practice. And it is but begging the question to suggest that the spectacle of Messrs. McKim, Post, Carrere, or Burnham asking for a license to practice is humorous.

**The Usual
Cry for Compe-
tition
at Buffalo**

The attack on architect Mitzger, of Buffalo, by The Courier of that city because he "is not paid a lump sum but receives five per cent upon his public work" may be good politics, but it is most ill-advised from a municipal standpoint. An architect who asks five per cent and gets it, is usually a good and also an honest architect, and the city that employs him instead of being robbed, saves money. The Supervisor, Mr. Buck, who seems by the press reports to be behind this agitation is "bucking" against not only good sense but "playing to the gallery" as a public benefactor, when the bare facts are enough to convince the unbiased observer that the whole matter is politics and cheap at that.

THE STEEL SKELETON IS EARTHQUAKE PROOF.

BY W. LB. JENNEY, ARCHITECT.



THE Steel Skeleton was invented by the writer for the Home Insurance Building of Chicago in 1883. The requirements of the owners were a tall office building with the maximum number of small offices above the bank floor, all well lighted. This reduced the piers between the windows too much for safety if of masonry alone, and suggested steel columns within the masonry piers. To avoid any ill effect from the contraction and expansion of these tall columns (150 feet or more) the writer decided to make each story independent by carrying them, story by story, on the columns. The lintels over all openings and the steel girders carrying floor beams extended through, to and between columns, across the building on each story.

As the writer anticipated, no ill effect resulted from the contraction and expansion, it being divided among the several stories. This shell was fire-proofed by masonry. The floors were of terra cotta arches. The beams were all thoroughly fire-proofed with terra cotta. All the steel was thoroughly riveted together securely with hot rivets. Every opportunity was taken to brace the building, so that the writer pronounced the building fire-proof, cyclone proof and earthquake-proof, which in all cases has proved true where this form of steel and hollow tile construction was properly executed. Of these three it is the least difficult to protect against fire unless the building is filled with highly inflammable or explosive materials or is located during a fire in the midst of a conflagration that might be likened to a fiery furnace that nothing could withstand. The terra cotta must be of fire-clay well secured by the form of the terra cotta itself locking it together, or as in the case of the columns, it can be tied on by strong wires pressed close to the terra cotta and imbedded in an asbestos plastering over the fire-proofing, thus protecting the wires. It is well known that a thread tied closely around a lead bullet and the bullet suspended over a lamp, that the lead will melt before the string will burn off.

This fact gives the opportunity of thoroughly securing the terra cotta fire-proofing. It is desirable to mix two parts asbestos, one part portland cement with three of lime plaster, for plastering over the wires.

As against the cyclone and the earthquake every beam should be well riveted with wings at the points of assemblage using all the rivets necessary to give a co-efficient of safety of ten as against four in the steel. Every opportunity of bracing the building should be used, the floor arches should be laid in portland cement. The carpenter should lay dove-tailed strips across each floor, sixteen inches from centers, one and three-quarter inches thick with a width of three inches on top and the dove-tail added below.

Between these strips is spread a concrete of portland cement, 1 part sand, 3 gravel, 4, all troweled hard and dressed off at the top of the floor strips, or better, one eighth of an inch below, that the concrete may not interfere with the laying of the floor. It is doubtless desirable to build into the brick work a band of hoopiron $\frac{1}{4}$ of an inch thick by four or five inches wide entirely around the building, say two or three in each story as Mr. John W. Root did in the Chronicle building, which assisted in making the structure a monolith, and holding securely the brick to the steel and resisting the shock of an earthquake. For the foundations care must be taken to avoid the movement that might leave the building out of plumb. The writer would recommend sinking beneath each basement column a well of a diameter sufficient to give a proper bearing on the strata below, and of a diameter of say two feet or less to the surface. Then in this well place a steel column sufficient to give a co-efficient of safety of 6 to 8 and bolt this column into a steel stool in a thorough manner. Fill the well with a concrete, 1 of Portland, 3 of sand and gravel and 4 of broken stone, dump into the well, ramming well the last 20 feet. The well should have a depth of not less than 30 feet into a firm strata that the building may be thoroughly held by the earth, to avoid any of the injuries seen even in a slight degree in the buildings at San Francisco where as well as at Baltimore not sufficient attention was given to the fire-proofing, particularly in securing it against the impact of the shock of the water from the fire engines which often removed it from the steel.

I have before me the report, published in the Los Angeles Times, of Mr. Leonard, a well known and highly respected contractor from Los Angeles, who went to San Francisco immediately on receipt of the first news of the earthquakes and remained there several days, making a close examination of the nature and extent of the damages by the earthquake and by the fire. The following is a brief summary of his report:

"Buildings of antiquated construction, of brick and frame, either crumbled under the earthquake or succumbed to the flames and were totally destroyed. Up-to-date fire-proof buildings of accepted materials and construction stood both the test of earthquake and fire, and, comparatively speaking, without exception were little damaged save in decorations and finishings.

"The cost of restoring these buildings will be greatly below the popular estimate of the damage.

"The earthquake and fire have demonstrated to the satisfaction of architects and builders generally that the modern steel skeleton and concrete construction is both earthquake and fire proof. A lesson for San Francisco to take to heart is to see that the business district is restored only by the steel skeleton thoroughly fire-proofed in the best manner with an individual protection from standpipes and a water tank on the roof well secured against any accident, to be used if water fails."

All of Mr. Leonard's investigations confirmed him in his

opinions of the absolute safety of the modern steel skeleton construction.

The most approved type of fire-proof on account particularly of the bracing to the building is the steel skeleton with floors of terra cotta arches. It seems to be the opinion of Mr. Leonard that reinforced concrete of the most scientific construction would serve and fill the conditions equally well except that the supply of materials and labor in San Francisco would favor the steel skeleton. And also reinforced concrete has not been tested.

All the big modern buildings were found but little damaged and capable of being restored immediately and at comparatively small cost. Mr. Leonard examined first the Call building. It is perfectly sound and safe. The damage was caused by flames soaring up through the elevator shaft and communicating their heat to the adjoining offices where the furniture and the trim was burned, and estimates that the building can be restored within two months for a consideration of \$75,000.

The Monadnock Building, the dynamiting of which magnificent structure that Mr. Leonard helped to build, he denounces the most absurd and ridiculous feature of the whole fire. The building resisted well even dynamite. The floors are still in perfect condition. In construction it is of the same type as the H. W. Hellman building in Los Angeles, which will withstand all earthquakes and fires. He estimates that the Monadnock can be restored for \$50,000.

The Merchants Exchange Building was little damaged other than in its interior finish but it is a huge building and to restore it completely would cost \$125,000.

The Hayward Building, fourteen stories high is a magnificent example of the fine way in which these buildings stood the test. In many of its offices not even the furniture was injured, although it was directly in the path of the fire. It can be restored for about \$25,000.

In the Union Trust Company, not even the paint on the walls was injured, the safes, vaults and the structure are all right. The damage will not exceed \$80,000.

The Crocker Building is in fine condition. Although it stands on Market street, right across from the Palace Hotel, and in the very pathway of the flames, among some of the upper offices not even the furniture is damaged. The damage will range about \$75,000.

So well did the Market Street Bank building stand the fury of the flames, that it could be opened today with little more than the restoration of the glass and the frames of the windows.

The great Kohl Building is another magnificent evidence of the endurance of these structures. He would say that the damage to this building would not exceed \$10,000.

The Ferry Building reported sinking and going to pieces etc., is in fine condition, with the exception of the tower and that is not seriously damaged and this does not affect the building itself.

All about this building the street was heaved to a height of two and a half feet. But where the ponderous weight of the building stood, there was not the slightest trace of any disturbance. Where the lighter weight of the building came as in the area walls, the earth had lifted about a foot and a half. This goes to show that for earthquakes it is not possible to build the superstructure of the building too heavy.

The City Hall in its ruins is a fit type of the bad construction. Although its tower is of steel, the construction is not homogeneous. The connection between the steel and the brick was not monolithic, when the shake came the brick went one way and the steel another, and the building, with nothing to support it, came down. Still it is by no means a total loss, and ought to be restored for \$750,000.

The Nevada National Bank Building, one of the old type, was entirely destroyed, although the vaults are all right. So also was the Palace Hotel, the Occidental, the Examiner Building and all such types of the old-style construction. They either went to pieces under the shake, or were ruined by the flames.

With the possible exception of the Call Building which apparently ignited from within, probably none of the other fire-proof buildings would have been injured save for having been surrounded on all sides by flimsy fire-traps.

Mr Leonard states that he wishes to be understood in giving the above figures as making an estimate merely from what examinations he could of the buildings, but he feels assured that they are in the main correct, and ought to demonstrate to the public that the loss to the fire-proof buildings is comparatively very light.

As nearly as he could ascertain all of the steel buildings he examined in San Francisco are firm and solid. If any of them are out of plumb, which would require a close examination to determine, it would not be a serious problem to restore them. But even so that would be by no means necessary. Note the case of the tower of Pisa, for centuries out of plumb. On the other hand at Oakland he noticed a big twelve story building which was thrown out of plumb more than twelve inches. It is all solid however and probably should occasion little alarm.

(CONCLUDED NEXT MONTH.)

The A. L. A. Executive Committee appointed by President Earnest J. Russell, of St. Louis, for the year, is composed of the President, Frederick M. Mann; Vice-President, William B. Iltner; Corresponding Secretary, Earnest Helfensteller, Jr.; Recording Secretary, John C. Stephens; Treasurers, Samuel L. Sherer and Jesse N. Watson. The members of the Executive Board all reside in St. Louis. The next convention will be held at Washington D. C., next year probably in May.

REINFORCED CONCRETE CONSTRUCTION.

(Continued.)

BY CHARLES E. WHITTLESEY, ARCHITECT.



THE definition of an engineer is, one who utilizes the resources of Nature with the least employment of human labor to produce results. Since the beginning of man's work, skilled labor has been growing more costly, because the laborer has learned to demand more of the luxury and comforts of life. The experience of all older countries is, that as population increases in density, common labor becomes cheaper in proportion to skilled labor.

Reinforced concrete construction employs a greater proportion of unskilled labor than any other system.

Brick and stone masonry first came into use when labor was very cheap. To-day, brick and stone masons command the highest wages in the building trades. Ground space has become so valuable in our congested business centers that it is necessary to build to great heights to make the floor surface bring an income in proportion to the value of the ground area. This in brick construction means not only great expense for walls but great sacrifice of the most valuable part of the renting space on the ground floor, to accommodate their thickness. This condition forced the engineer to adopt the steel skeleton construction notwithstanding its grave inherent faults. Carrying a given load in tension, with steel, costs about one-sixth as much as it would to do the same work with concrete. But to carry in compression would cost about twice as much to do it with steel as it would to do it with concrete. The net result applied to practical building operations has demonstrated in all parts of the world, a lower cost for reinforced concrete construction compared with any other method of fireproof building. The cost of a steel skeleton erected is about \$80.00 per ton. The cost of the steel in reinforced concrete in place is \$45.00 per ton, and the tonnage of the latter is only fifteen to twenty per cent of the former. In the New England States it has been demonstrated many times that for factory construction, reinforced concrete costs not to exceed seven per cent more than a low burning mill construction and under favorable conditions in the Middle Atlantic states the cost is about the same for each kind. Recently in Chicago, bids taken on a factory building showed a lower cost for reinforced concrete than for brick and wood.

For buildings in Los Angeles it is too early to make accurate comparisons for general work, but calculating from my own experience in letting contracts on the Haywood Hotel, an eight-story reinforced concrete building, corner of Sixth and Spring Streets, on which bids were taken for steel and tile construction, on exactly the same basis as those taken for the reinforced concrete construction, and calculating also from the results of our bids taken

on the Auditorium, the difference in cost of the structural parts of the work, not including the finishing, is conservatively from 25 to 33 per cent in favor of the concrete.

In the item of plastering, which is not included in the above, there is a difference in favor of the concrete, of 25 to 50 per cent, depending on the nature of the building. In a loft building, for use as salesrooms, where few partitions are necessary, the plastering can be omitted entirely, for the concrete is sufficiently smooth to make a presentable appearance by tinting directly on the concrete walls and under side of floor slabs, which form the ceilings.

There is no more expense or difficulty in the installation of plumbing and heating pipes and electric conduits, or in the erection of marble, ornamental plaster and wood finish than there is in other kinds of fireproof building, provided that proper foresight and consequent preparation is made in the advance stages of the work. This latter point, however, is one in which past experience serves the designer valuably. The external facing of the building may be in brick, terra cotta, cement stone, or any other material which the owner may fancy, at the same cost that this part would equal in any other kind of building, or the ornamental features may be cast in the concrete at the time the walls are built, and thus make a good architectural appearance, combined with great durability, at much less cost than any other treatment, thus making an honest facade infinitely more satisfactory than the absurd combination of expensive pressed brick and terra cotta, topped off with a heavy cornice of perishable galvanized iron made in imitation of stone, so common in our land.

I am satisfied from my own experience in this kind of construction, that for factory and warehouse purposes, reinforced concrete fireproof construction in Los Angeles is not at present more than 8 per cent greater than Class C Construction, having brick walls and wooden floors. For hotels and office buildings, the concrete construction, absolutely fireproof, is at least 15 per cent less expensive than the same building would be if constructed of steel and tile, and not more than 15 per cent greater than Class C Construction, which as facts taken in consideration with its great rigidity and durability, is certain to make it very popular and elevate the general standard of our city buildings, besides reducing greatly the cost of insurance.

We have excellent sand and crushed rock here, and within five years we will have Portland cement of the highest quality selling in this market for less than one-half of its present price.

In making comparisons of cost, the fact should not be lost sight of that tile floor arches and steel column fireproofing require erecting forms the same as for concrete.

Rapidity of construction, especially in a business building of any magnitude, means dollars saved to the owner, for speedy completion brings quick returns on the

capital invested in the ground and building.

The casual observer of buildings under construction, would probably conclude that steel buildings can be erected more rapidly than concrete structure. This is true only in the actual erection of the frame. He has perhaps failed to notice that in the case of the steel building, the work has been suspended a long time after the foundations are in, before the steel work is begun, and that in the case of the concrete building the structure rises as soon as the excavation is completed, without any cessation of the work.

The difference is this. For the steel building, after the preliminary sketches are approved by the owner, several weeks or months are required to produce careful working drawings and framing plans, with all dimensions of every member in exact figures, before the steel can be ordered. After these are prepared, it requires from five to seven months to get delivery of the steel in Los Angeles, or in any other city at present. When the steel is delivered, the skeleton frame goes up rapidly; and the public is impressed with its rapid climb skyward, not taking into consideration that the fireproofing of the columns and girders and the tile floor arches must all be placed, the ceilings lathed and plumbing pipes and wire conduits installed before it is in fair comparison with reinforced concrete. On the other hand, when the owner has approved the preliminary sketches for a concrete building, the steel rods forming the sinews of the structure can be ordered at once, without waiting for the completion of working drawings, and can be delivered in Los Angeles from Pueblo or the Pittsburg mills in five weeks after the order is placed. It goes directly to the building from the cars, requiring no shop work, and is all placed in position by common labor. As the structure rises, it is complete, ready for plastering, with all plumbing and heating pipes and electric conduits in place.

Each concrete floor slab forms a good roof so that the finishing of the lower stories may be completed, and possibly occupied, while the structural part of the upper stories is being erected.

In the argument for durability, reinforced concrete is in a class by itself. As far as the elements are concerned, it is practically indestructible. It is by far the most rigid and freest from vibration of any construction known. The steel sinews forming the reinforcement, give to the concrete sufficient elasticity to withstand admirably the strains produced by earthquakes, and with the ample bracket connections between columns and floor beams, which this method supplies, it would require a greater shock than California has experienced since the coming of the Padres, to produce in it any sign of failure. Even though it were strained to the extent of producing cracks, the strength of the structure would be but little impaired, because of the reinforcing metal.

(CONCLUDED NEXT MONTH.)

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Photo by Graham Photo Company, Los Angeles, California.



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BANK OF VENICE AND KINNEY & CO. OFFICES.



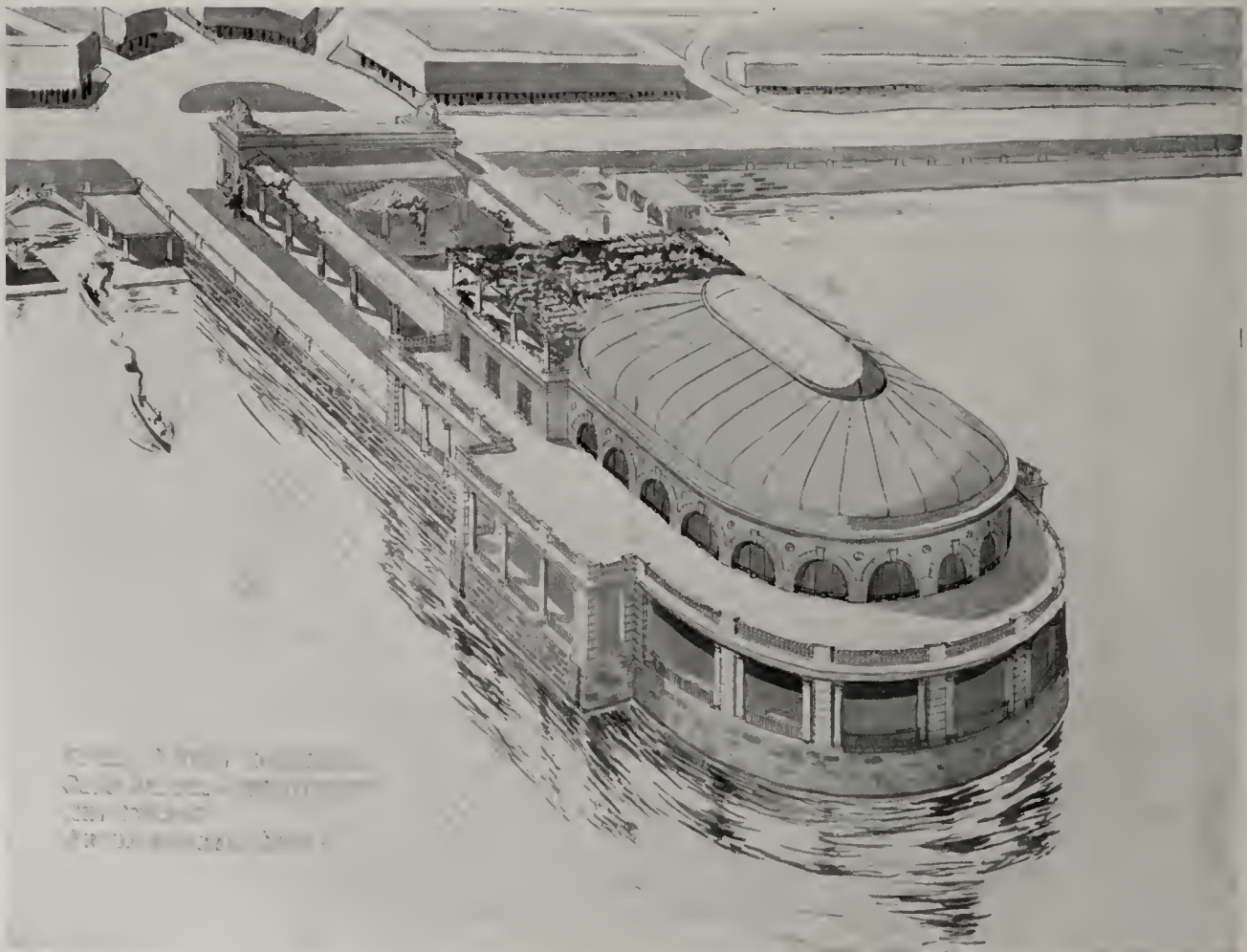
INTERIOR OF AUDITORIUM—VENETIAN GARDENS.

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A RECREATION PIER FOR A PUBLIC PARK. DESIGN BY JOSEPH W. WILSON. THIRD PLACE.



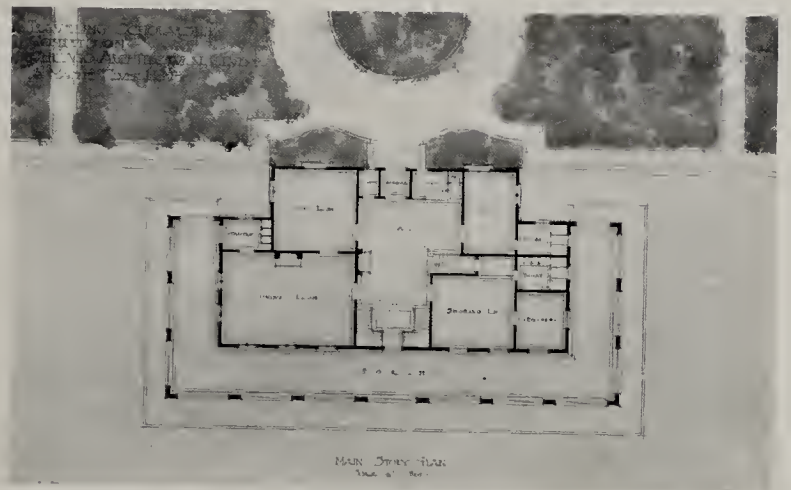
A RECREATION PIER FOR A PUBLIC PARK. SUCCESSFUL DESIGN BY HERBERT H. GREEN.



A RECREATION PIER FOR A PUBLIC PARK. DESIGN BY WALTER PARKER. SECOND PLACE.



PARK ELEVATION.



PLAN.



WATER ELEVATION.

A YACHT CLUBHOUSE FOR GRANT PARK. SUCCESSFUL DESIGN BY HERBERT H. GREEN.

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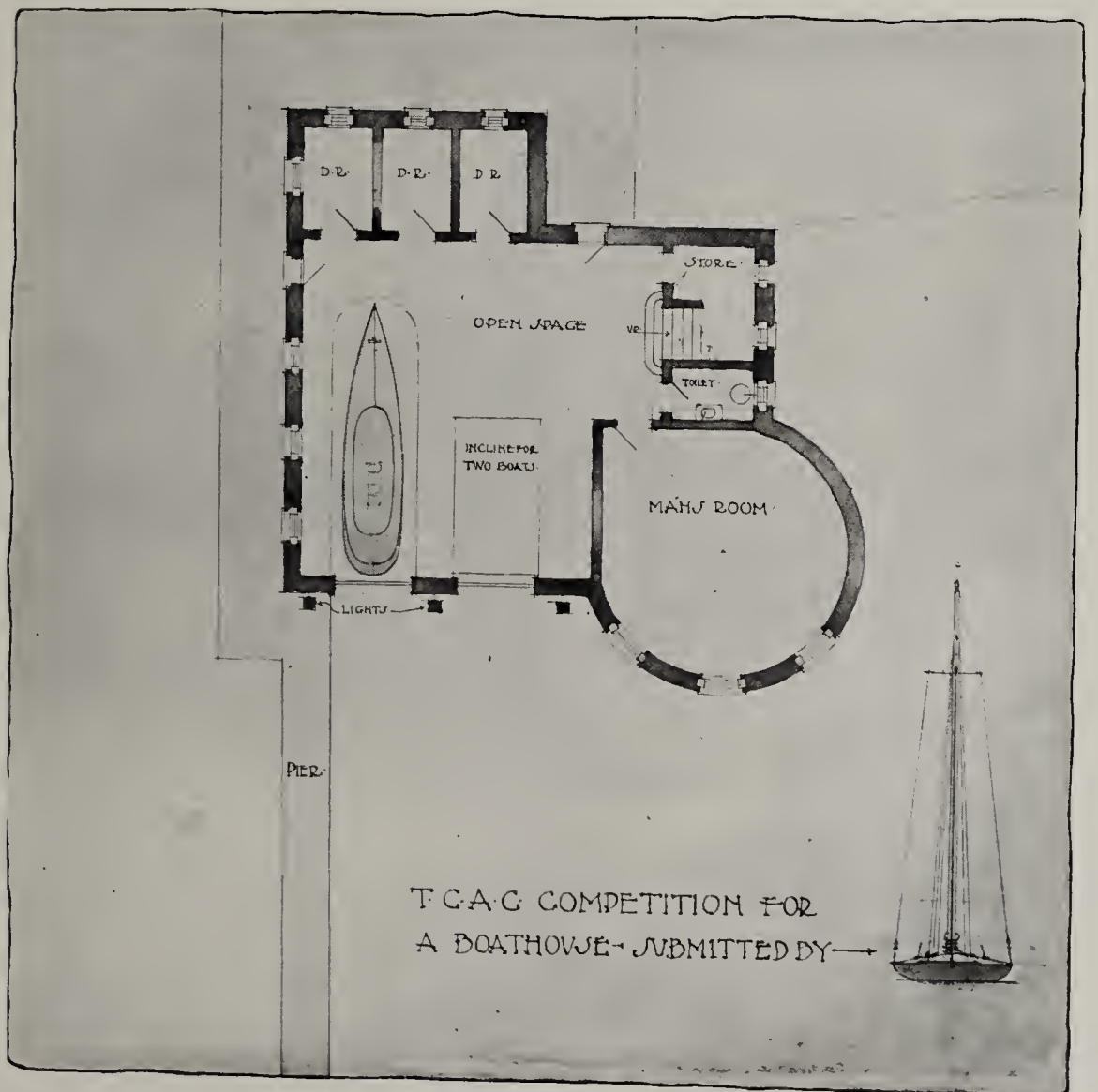
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VIEW OF WINDWARD AVENUE.



ST. MARKS HOTEL.

*Accompanying article on "Venice"
by W. L. B. Jenne, Architect.*

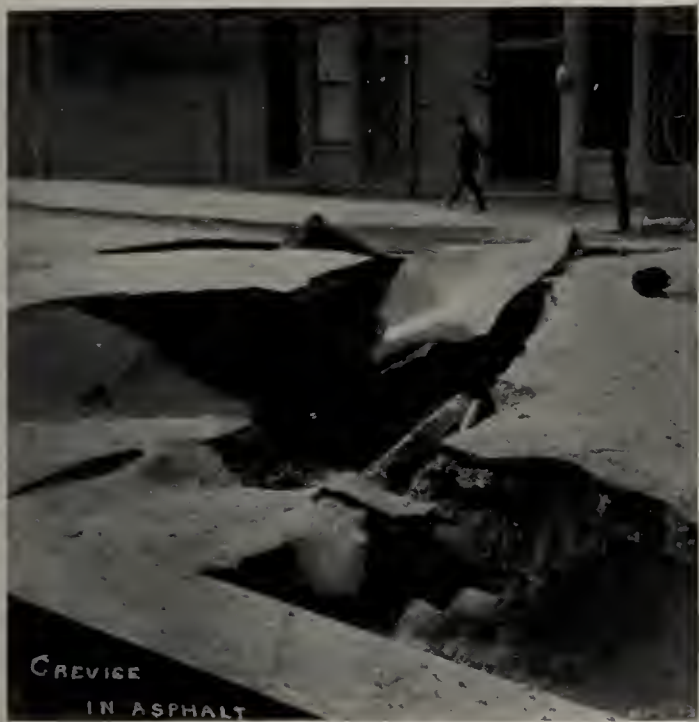
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TAKEN DIRECTLY AFTER THE EARTHQUAKE AND FIRE OF APRIL 18, 1906.

THE WESTERN ARCHITECT TO ILLUSTRATE ARTICLE ON STEEL SKELETON CONSTRUCTION BY WILLIAM LE BARON JENNEY, ARCHITECT.



CREVICE
IN ASPHALT



AN ORIGINAL STRAIGHT STREET



Copyrighted by Graham I. A. 1906

PANORAMIC VIEW OF THE BUSINESS PORTION OF SAN FRANCISCO
THE VIEW INCLUDES THE SECTION REACHING FROM CALIFORNIA STREET ON THE LEFT TO JONES STREET ON THE RIGHT. PHOTOGRAPH BY GRAHAM I. A. 1906

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LIVING ROOM IN RESIDENCE OF C. P. WILLIAMS, PASADENA, CALIFORNIA.
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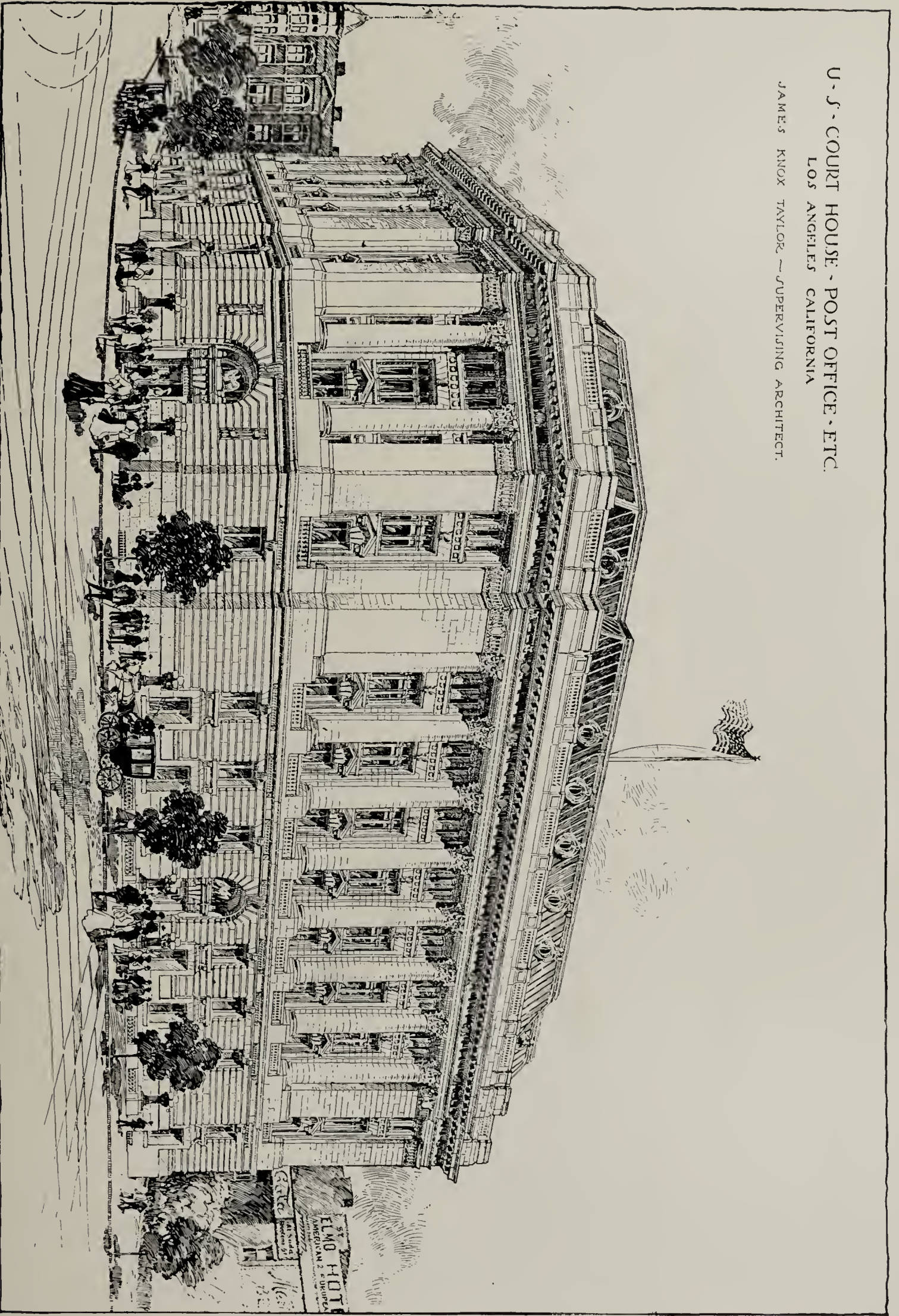


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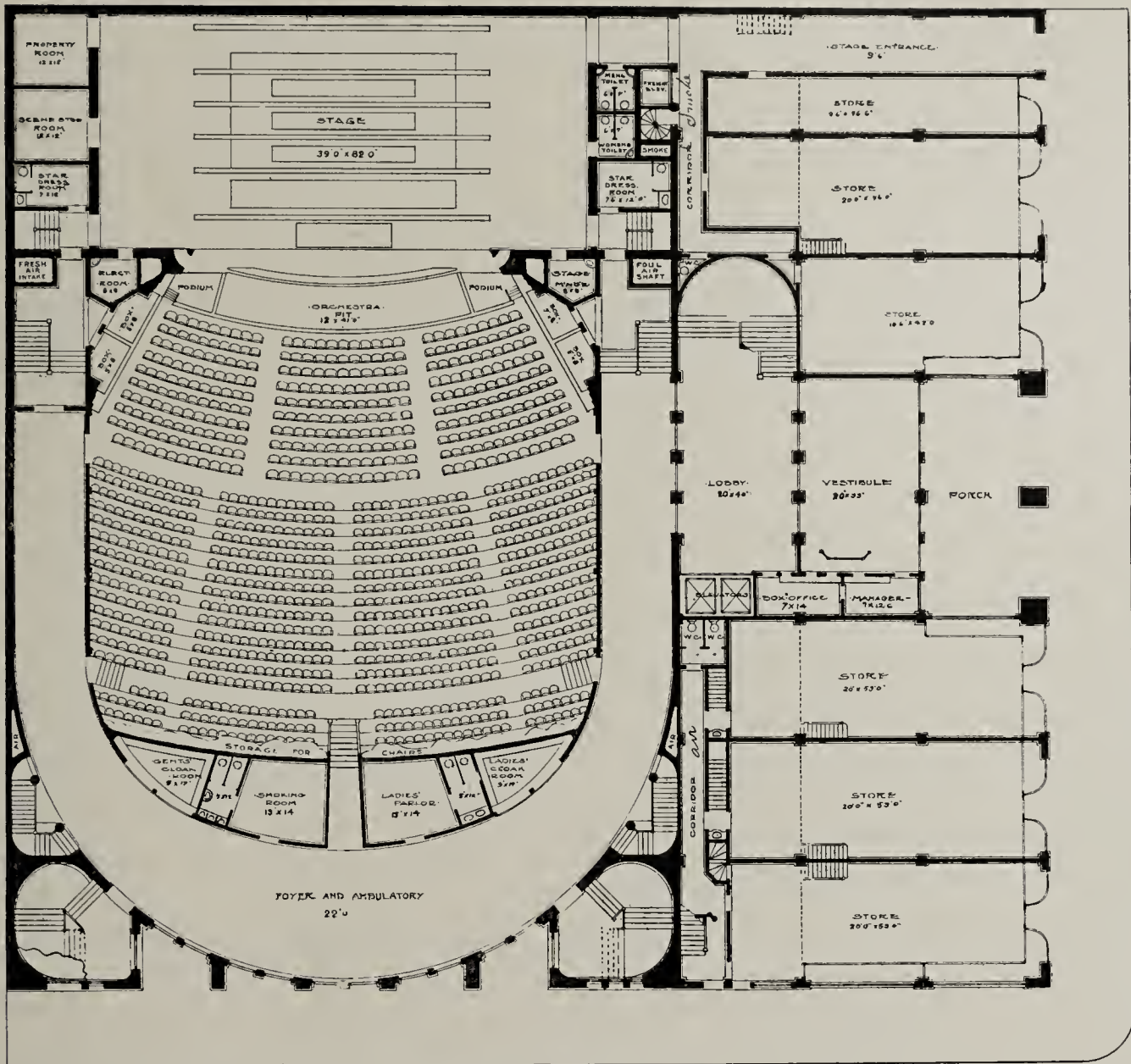
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TERMINAL FOR THE SOUTHERN RAILWAY, AT ATLANTA, GEORGIA.
THORNTON MAYRE, ARCHITECT.

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PLAN OF AUDITORIUM.



VIEW OF CONSTRUCTION OF AUDITORIUM.

PLEASURE RESORTS AND BEACHES AROUND LOS ANGELES.

BY W. L. B. JENNEY.

Part I—Venice.



AROUND Los Angeles which is located in close proximity to the shores of the Pacific Ocean, for some 20 miles or more along these shores, are dotted here and there what are called Beaches.

They are pleasure resorts and sites for summer cottages, for the climate along these ocean banks in summer is delightful. No storms, never hot, and each afternoon brings its sea breeze, which commencing usually as early as 10 a. m. and continuing until sunset, is usually



SHIP HOTEL.

mild and gentle, rarely so strong as to be disagreeable. These beaches are being constantly improved and multiplied until soon there will not be a favorable spot left for another.

One of the last and the finest of all is the so-called Venice of America, where every endeavor is being made to make it the most enjoyable locality for a summer cottage or for spending a holiday. At the same time there is a strong endeavor to make the place worthy of its name by



THE AUDITORIUM.

its general layout along canals, spanned by bridges much like those of old Venice, and again by the suggestion of its architecture. Although there is no servile copying, still there is a Venetian feeling pleasantly suggesting the original. Marsh and Russell were the Architects.

Better than in old Venice there are walks and drives; and instead of the one horse, which is kept in Old Venice in the Botanical Garden on exhibition, as we keep wild animals, there is a very fine livery stable, equipped with all desirable vehicles, and good horses, and in addition, automobiles; and there are tally-ho and automobile trips to Los Angeles at frequent intervals which adds another source of enjoyment to a cup already full.

Arrangements have been made for the raising of vegetables and berries in the immediate neighborhood and also fresh butter, eggs and cream brought in daily for the early breakfast, of the Venetians.



THE COLONADE.

A breakwater has created a safe and commodious harbor so that the Venetian, can keep his gasoline pleasure-launch and run-about, by which he can be carried through the canals making social visits or go to the amusements, etc., as the whim seizes him, as they do with their gondolas in old Venice.

We ask about the breakwater and are met with the enormous figures: 600 feet long, and 70,000 tons of rock were used in its construction. It has formed a harbor where a huge ocean liner with its living freight of over 1,000



SURF BATH HOUSE.

persons can find secure protection in the worst storm that ever visited the coast.

"How did you come to Venice?" "By a 15-mile ride on the railroad or by automobile, or in the tally-ho, or by one of the pretty little passenger boats that ply between Venice and all the other popular beaches along the Los Angeles coast?" In my case you will soon be ready for a lunch, or as the hour may indicate, for a dinner.

The founders of Venice were well aware that one of the essentials to the enjoyment of such a resort is a superior restaurant pleasantly situated where a meal can be enjoyed. To this end they built a restaurant ship, 180 feet long, modeled after the galleon, in which that famous navigator Cabrillo sailed when he discovered California in 1542,



BATHING PALACE.

some 50 years after the discovery of America. One can easily imagine what a delightful meal one can take in the beautiful dining room on board of this vessel where the temperature is always cool and the view over the Pacific is lovely. The sea birds soar aloft, sweep down or skim the surface of the water. Occasionally a fish leaps and splashes or a whole school of them is seen skipping on the surface, while a beautiful launch filled with a gay party of young folks scoots by. In the distance one sees the big steamer making for the harbor of San Pedro, or southward to San Diego.

As the meal draws to a close and one eats his fruit,

HOTEL WINDWARD.
Marsh and Russell, Architects.

lights his cigar and sips his coffee, and then if it is evening, one discusses what to do after dinner, as in Paris—and there are enough pleasures to choose from—the theatre—the auditorium—the band concert and numerous Midway performances on the amusement pier. Ere long we may expect to enter our launch or gondola and hang around in the vicinity of a concert launch and listen to good singing as at old Venice, where it is one of the most popular means of passing the evening.

For those who wish hotel accommodations there are two—the Saint Mark's and the great six-story fireproof house—the Hotel Venice. These hotels are as complete



ART AND CONSERVATORY OF MUSIC.

and as modern as they can be made. A large number of rooms have a special bath supplied with hot and cold water, both salt and fresh, for many persons enjoy the luxury of a hot sea bath in their private bathrooms.

ILLUSTRATIONS.

¶As a demonstration of the practical results of the theories of Mr. Chas. E. Whittlesey included in his article on reinforced concrete construction, the design and plan of the Auditorium designed by him for Los Angeles and a photograph of the work under execution is shown. It is the most considerable construction of this character yet attempted on the Pacific Coast. The Auditorium has been under construction for about six months, and will be completed July 1st of this year. The structure is of reinforced concrete from foundation to roof inclusive, and is probably, in some respects the most remarkable building ever erected of this material. The building measures 165 feet on Fifth street and 175 feet on Olive. The portion on Fifth street, 165x65 feet, facing the part, is to be used for an office building for physicians and dentists above the third story. The central section will be nine stories high. The main entrance to the Auditorium is 42 feet wide and leads through the office building to the Auditorium, with a large lobby, ticket offices, elevators, etc. The remainder of the first story of the office building is divided into six stores. In the basement is a cafe and banquet hall with seats for nearly 800, with commodious kitchen accommodations, below, which in the sub-basement, is an engine and machine room of generous proportions, in which will be installed a complete lighting capacity of 1,000. The second and third stories also contain the quarters for the Temple Baptist Church, consisting of social rooms, parlors, Sunday-school

and primary schoolrooms, library, pastors' study, committee and trustees' room and a creche or nursery, where infants can be cared for while their parents attend church. Under the steep roofs of the office building there are large rooms with high ceilings, for art studios, photographers and lodge halls. The main auditorium, covers with its stage an area of 165x110 feet, and is the largest theatre west of Chicago. Its normal seating capacity is 3,500, with provisions for seating 5,000 for special conventions, etc.

¶ The drawings, from the office of James Knox Taylor, Supervising Architect of the U. S., of the new buildings at Fresno and Los Angeles, California, exhibit that growing tendency toward an eclecticism in design, which has been its lacking quality ever since the days of Thornto and Latrobe. It is not too late to remember or too soon to forget the reign of the politically appointed architect and his works, or to note that the entire scene has changed. The government work of the present classes with and reflects the best instead of the worst of American public architecture, and while not entirely free from official restrictions it will not be condemned by the next generation for devastation wrought by the fire which followed in its path and completed the devastation.

¶ The panoramic view and photographs which illustrate William LeBaron Jenney's article on skeleton steel in its relation to earthquakes and his deductions as demonstrated by the disaster to San Francisco, show to some degree the effect of the earthquake, but to a greater extent the devastation wrought by the fire which followed in its path.

¶ The most comprehensive panoramic view of the business section secured by Mr. Jenney to accompany his article, was taken by our photographer Mr. Graham, of Los Angeles. It shows the effect of both the earthquake and fire upon the steel buildings and substantiates Mr. Jenney's assertions in regard to the earthquake-resisting qualities of the steel frame when properly designed. Not even the palm trees which stand on either side of the entrance to the Mint were withered by the flames that devoured everything around it. The new postoffice building also was virtually undamaged by fire. The earthquake shock did some damage to the different entrances to the building. The walls are uninjured. Every window pane, of course, is gone, as they are in almost every building in town, but the government will be able to resume postal business immediately. The Fairmont hotel, while seriously damaged in the interior, is left intact as to the wall. The estimate of 250,000 tons of structural steel is considered conservative for the new buildings.

¶ Among the new railway stations that have lately taken the place of those which were evidently built "before the war" in the south, and which adds in a marked degree to the dignity of the surroundings, is that illustrated of the Atlanta, Georgia, terminal station of the Southern railway, Thornton Mayre, architect. It faces a plaza of considerable width and is distinguished by two towers

that in harmonious proportion to the design rise at each corner of the facade.

¶ In giving considerable space in this number to club competitions, it is not altogether to show draftsmen the work of the competitors for traveling scholarships, or to awaken them to a realizing sense of the benefits to be derived from club membership or the training of the ateliers, but that architects may note the increasing educational advantages that are growing out of the architectural clubs and the work of the Beaux Arts architects in the establishment of ateliers. In one case it is the work of the draftsmen themselves, and the other springs from the loyalty of Beaux Arts graduates to their school in a degree, but largely from the desire of the individual to advance architectural knowledge and training along the most advanced lines, and produce a better class of draftsmen for themselves and the profession at large to draw from, and thus advance architectural design to a higher plain of art. The profession in general can signify their approval and aid in this work of both clubs and individuals by subscribing liberally for architectural journals, and thus keeping the best work of the country constantly before their draftsman for their emulation and instruction in design.

¶ The superior excellence of the drawings for "A boat house for an estate" both in design and plan shown in the monthly competition of the Twin City Architectural Club, gives an adequate conception of the talent which lies in its membership and which such competitions bring out. Trivial as the problem may be in itself, the winners of these friendly tests of skill among draftsmen are those who in after life when in regular practice are known among the designers in the profession. The competition was described last month.

¶ That some record may be made of the lighter phases of architecture in a line where the rule has been to construct both cheaply and ugly, the first of a series of photographs of coast resorts about Los Angeles, is given in this number. The text by Mr. W. L. B. Jenney is interesting and will be read by his host of friends in the profession with a feeling of envy for his ability to retire on his laurels, and enjoy his well earned leisure among such picturesque surroundings.

¶ It is hardly through intention that the illustrations in present number are largely devoted to Pacific Coast Architecture. It is, however, certain that that region is most prolific of good design in residence work of which the residences by Hunt and Eager for H. C. Beville and F. Wilson, and by Train and Williams for C. P. Williams are creditable examples, while the Hill School by James Allen McLeod, and the residence of C. W. Turner by J. Walter Stevens of St. Paul show the more severe lines on which the work of that more northern latitude are drawn.

¶ The pen-and-ink sketch of the new government building at Los Angeles shows the latest work of the Supervising Architect's office under James Knox Taylor.

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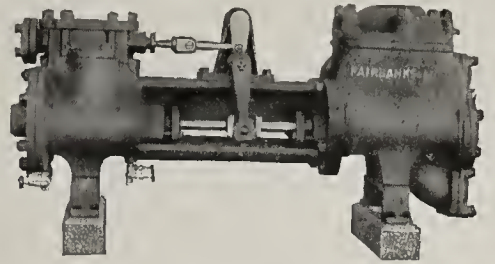
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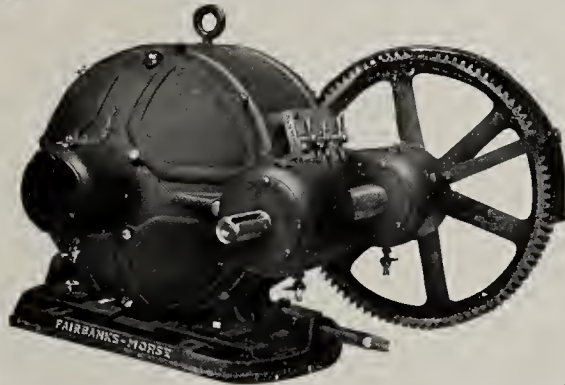
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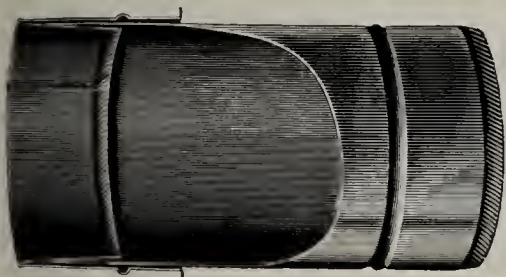
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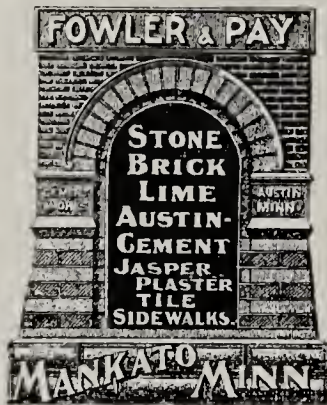
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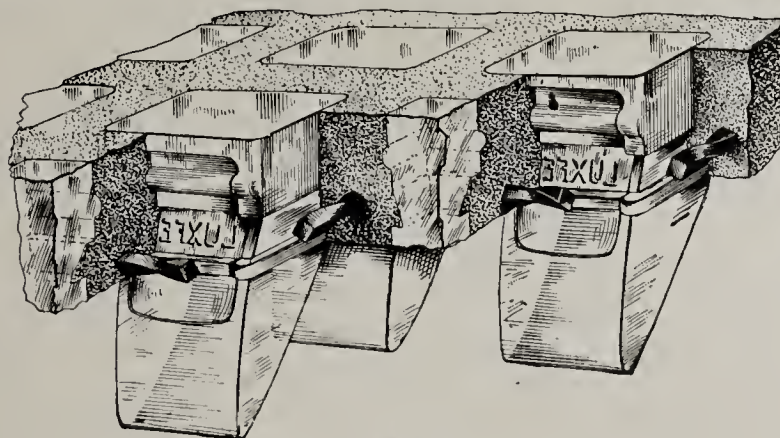
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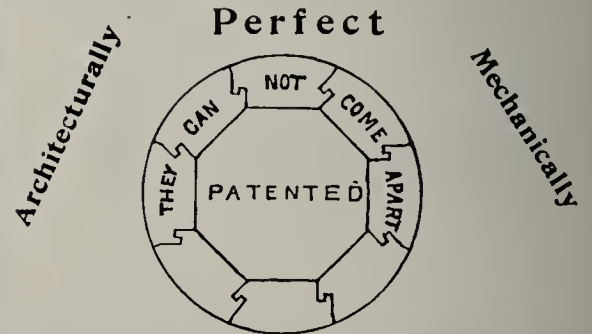
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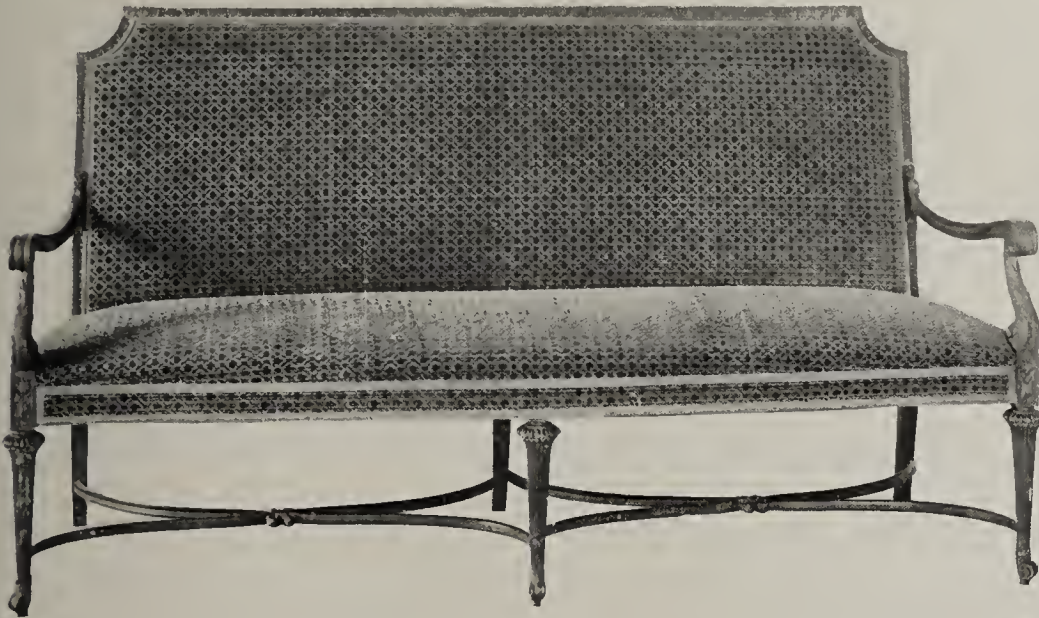
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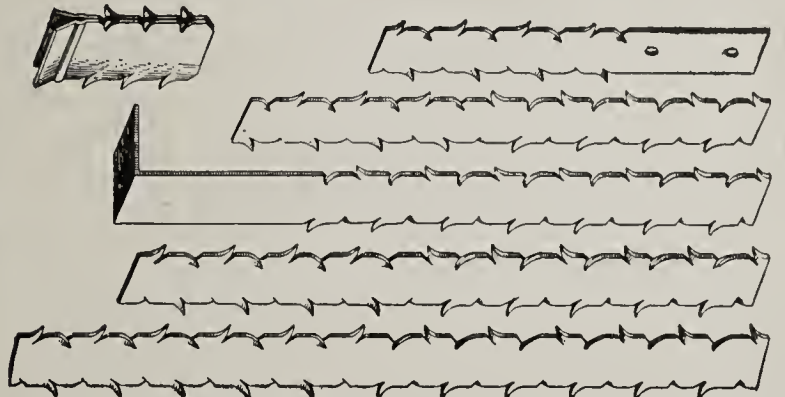
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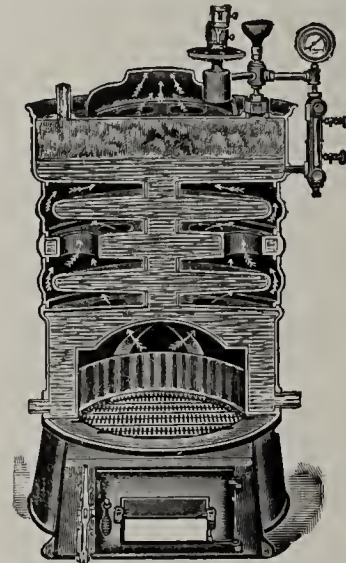
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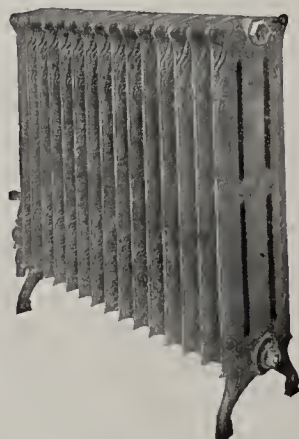
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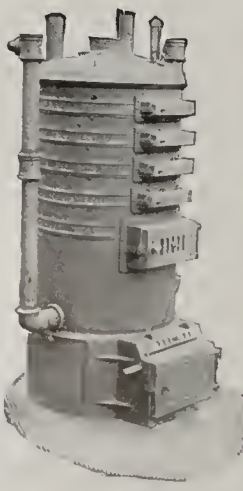
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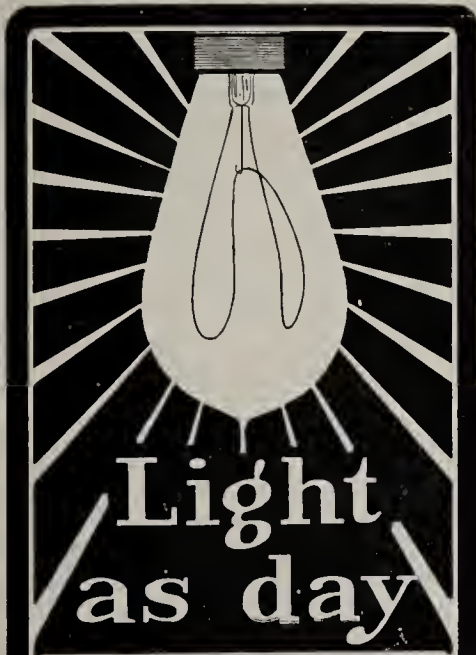
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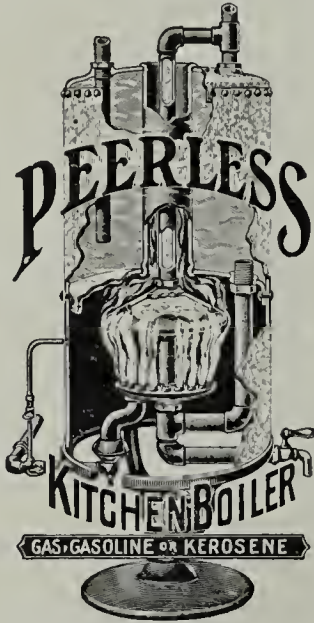
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The
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Architect

June 1906

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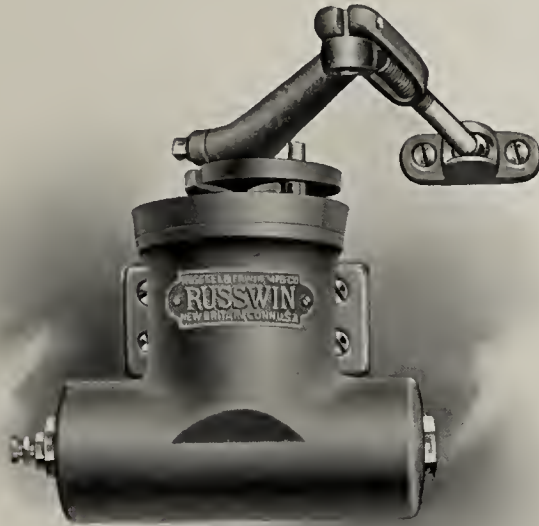
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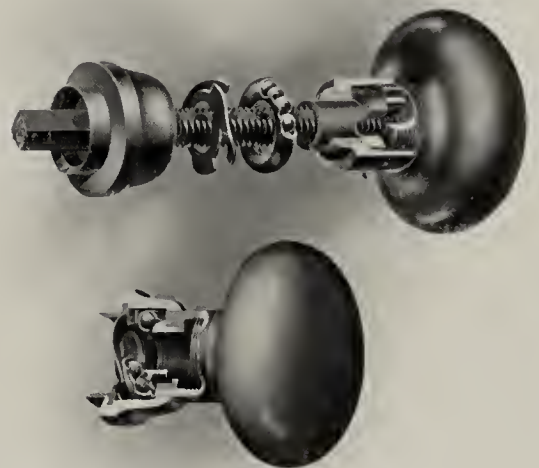
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The Western Architect

VOLUME IX.

NUMBER 6.

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ROBERT CRAIK McLEAN, EDITOR.

A POINTER TO ADVERTISERS.

The publishers of the WESTERN ARCHITECT would call the attention of advertisers to the general appearance of the present number. It represents the highest typographical excellence that can be obtained, and shows in its advertising pages the estimation in which it is held by the manufacturers of and dealers in building materials throughout the country.

Its phenomenal advertising patronage gives, in an adequate degree, an expression of the favor in which the journal is held by the architects who are its subscribers. Its subscription is particularly strong in the middle and western states, where the building industry has reached the highest mark ever attained. This is particularly true of St. Louis, Kansas City and Texas, as well as the Pacific coast from Los Angeles to Vancouver (Seattle increasing in building permits over three hundred per cent since the San Francisco disaster). Over three-fourths of the architects in these cities and on the coast are subscribers to the WESTERN ARCHITECT.

This extraordinary demand for building material (that of San Francisco alone being estimated at \$100,000,000), will to a great extent go to those who bring their products to the notice of architects through this architectural journal. It is a time when an advertising campaign cannot fail to bring large results. Advertisers already in the WESTERN ARCHITECT will do well to increase their space and show new and attractive features of their products every month. Those who are not represented are neglecting the golden opportunity for substantial increase in business by not placing their wares before the architects of the western country at once.

BUILDING OPERATIONS FOR MAY

Reports from some fifty of the leading cities of the country received by the American Contractor, Chicago, tabulated and compared with those of the corresponding month of last year, show that the building operations of May, 1906, fully justified the predictions we made in our last report. Two-thirds of the cities show an increase over the operations of 1905. In Greater New York the gain is small, only 1 per cent, but this is a remarkable showing when the enormous, record-breaking business of last year, with which the comparison is made, is taken into account. Chicago breaks all its records with \$6,494,220, a gain of 60 per cent over May, 1905. The percentage of gain in other leading cities is as follows: Atlanta, 34; Bridgeport, 167; Buffalo, 60; Cleveland, 17; Duluth, 110; Harrisburg, 112; Louisville, 50; Nashville, 130; Newark, 26; New Orleans, 48; Omaha, 75; Philadelphia, 11; Portland, 307; St. Louis, 14; St. Paul, 49; Seattle, 30; Syracuse, 34; Toledo, 93; Tacoma, 111; Wilkesbarre, 271. The following figures show the losses reported in leading cities: Cincinnati, 44; Denver, 26; Indianapolis, 35; Kansas City, 17; Milwaukee, 23; Minneapolis, 25; Mobile, 67; New Haven, 34. Some of the cities showing a loss have enjoyed a building boom for some years past and diminished building was almost a matter of necessity. Taken altogether, the report is of a most satisfactory and encouraging character and leaves no reason to doubt but what the building operations of the season now fairly under way will break all records. This seems all the more remarkable when it is understood that both wages and building materials are now ruling very high.

"Building operations in Chicago are greater in volume and value than ever before in the history of the city. In the downtown district many large, handsome office buildings have been erected, and, with the increased growth of population, are filling up rapidly. Many buildings are being erected in State street and other streets in the downtown district for retail business. The wholesale district is building up rapidly, as the demand for more space is great by firms whose business is increasing. There will be a marked change in the northeast portion of the downtown district within the next few years. The contemplated move of Montgomery Ward & Co. and Sprague, Warner & Co. to the north side of the river, and also the contemplated move of several other large grocery houses, will open up Michigan avenue on the south side as a retail business street; especially if the street-car tracks are removed. The departure of these large jobbing houses from the south side to the river means an increased demand for dock property and the effect of that demand is already seen in the advanced prices."

VACATION TOURS

For the summer season of 1906 the railroads have undoubtedly arranged lower round-trip excursion rates to the various summer resorts than in any previous year. The Minneapolis & St. Louis announces a few of their rates, as shown below, from Minneapolis:

Denver, Colorado Springs and Pueblo, \$27.40; Salt Lake City and Ogden, \$40.40; San Francisco, Los Angeles and San Diego, \$71.50; Portland, Tacoma, Seattle and other Puget Sound points, \$60.00; Spokane, \$55.00; Helena and Butte, \$50.00. Tickets on sale daily, limited to October 31st for return. Liberal stop-over privileges and variable routes.

To Denver, Colorado Springs and Pueblo (account Annual Meeting of Elks), \$25.00. Tickets on sale July 10 to 15, inclusive. Limit for return, August 20. Tickets will be good going via one route, returning another west of Missouri river.

To San Francisco and Los Angeles (National Education Association Rates), \$61.90. Dates of sale, June 25 to July 7. Final return limit September 15th. Tickets good going via any direct line, returning via any other and will be made good

one way via Portland on payment of a slight additional charge.

Homeseekers' rates are made exceptionally low to points in the south, southwest, west, north and northwest.

For which full particulars can be obtained by calling on agents of the company or addressing A. B. Cutts, G. P. & T. A., at Minneapolis, Minn.

LIKE DAVY CROCKETT.

THAT story about Davy Crockett and the coon is ancient history and relates to the wooded hillsides of the eastern states. There is a Davy Crockett calling for your subscription to the Forest and Prairie Homemaker, and you might as well come down, and thus aid him in his efforts to spread the good news of the incomparable richness of the northwest in its products of field and forest. It could not have a better champion than W. R. Calloway, the Davy Crockett of the northwestern land, and incidentally the general passenger agent of the "Soo Line", who sends a train of prospective home builders every day in the year into this great inheritance. Send him fifty cents for a year's subscription and if its contents are not rhyme to you, it may be gospel to your neighbor.

ALGONQUIN NATIONAL PARK.

To the resident of states east of the Rocky Mountains, there is one incomparable camping-out country. It lies north of Lake Ontario and east of Georgian Bay. A canoe and a tent is all the outfit that is required to make a summer holiday perfect. It will have all the spice of adventure that can now be gathered in our modern recreation fields, and no matter what variety you are in pursuit of you will find it there. Kipling praised it in his great recreation poem, "The feet of the young men", and he had hunted and fished and sailed all over the world.

Do you know the blackened timber?
Do you know the racing stream,
With the raw right angled log jam at the end
With a stretch of sun-warmed shingle,
Where a man may bask and dream,
To the click of shod canoe poles round the bend?
It is there that I am going,
With my rod and reel and traces,
To a silent smoky Indian that I know,
To our bed of new-pulled hemlock
And the starlight on our faces,
For the red gods call us out and we must go."

There is almost every known game fish in the endless strings of lakes; balsamic trees clothe its rocky hills and islands, and no day is long or hour wearisome, so full of pleasant surprises are its vast silences. It is useless to try to tell the story, but for the way to go ask any agent of the Grand Trunk railway and get the charts of America's recreation grounds.

WHAT GOOD ADVERTISING WILL DO.

ONE of the best testimonials as to the value of judicious advertising in the trade or class publications comes from the Cortright Metal Roofing Co., of Philadelphia, Manufacturers of the Cortright Metal Slates and Victoria Shingles. For some years this firm had been carrying a 2-inch card and doing a fairly prosperous business, owing to the merit of their goods.

Last year they decided to branch out and become the leading house of their line. Their equipment was largely increased with the latest and most improved machinery, and they then turned to greater publicity through advertising work. Their first step was to instruct their agents, the Viennot Advertising Agency of Philadelphia, to contract for generous space in all the leading publications of their field, filling the space with attractive designs and well-worded cards, talking directly to the men they wished to reach.

Just what measure of success they have reached is evidenced by the leading editorial in the May issue of their house organ, the Cortright Metal Shingle Advocate, as follows:

"During the past months we have shown through the Advocate illustrations of many imposing structures, big country residences, immense churches, schools and other public buildings covered with Cortright Metal Shingles. A few years ago, architects specified nothing but copper, stone, slate or earthen tiles for such work. Now they find the Cortright Metal Shingles have all the decorative effect of these materials combined with protective qualities not found in any of those, along with admirable lightness and adaptability to any form or condition of building." If you have goods to sell, it will pay you to use large space, select your mediums carefully and not forget the WESTERN ARCHITECT.

OF INTEREST TO ARCHITECTS.

IRVING D. PORTER, architect, of Washington, D. C., wishes to announce that he has opened offices at 1421 F. Street N. W., and will be pleased to receive samples of building materials and catalogues.

THE Variety Mfg. Co., of Chicago, through their local representative, W. M. McGillicuddy, at Minneapolis, have closed a contract with the Booth Packing Co., at St. Paul, to install their Cross horizontal folding doors for their shipping platforms. The same firm will furnish their Cross folding doors for the Great Northern Railway's new freight houses at Grand Forks and Seattle.

EVIDENCE by the yard, or, rather, "a yard of evidence", is sent to those interested in hot-water heating by the Great Western Heating Co., of Des Moines, Iowa. The furnace is so constructed that soot does not lodge and the location of the water pipes both inside and outside of the fire, gives the greater amount of heating surface; its economy of fuel, together with its simplicity and compactness in construction, being its special characteristics.

THE Manufacturers' Advertising Bureau, of which Benjamin R. Western is president, have removed the New York office to 237 Broadway.

IN the March number of Modern Sanitation, issued by the Standard Sanitary Manufacturing Company, an interesting illustrated article on "Winter Bathing in California", by Bertha H. Smith, how the big bath tub of the ocean is used by those who visit the coast as freely and with a greater pleasure, if possible, as the same persons plunge into the white porcelain baths made by the Standard Company.

THE D. G. Cutler Co., of Duluth, carry large stocks of standard Portland cements, fire brick, hard wall plaster, and salt of all kinds at their warehouses at Duluth and Minneapolis. This firm is also distributing agents for the Western Portland Cement Co., at Yankton, S. D., the Lehigh Portland Cement Co., of Mitchell, Ind., and also the Lehigh Portland Cement Co., of Pennsylvania, for the territory of Minnesota, North Dakota, Montana and part of Wisconsin, and the Northwest Territories. They also burn the genuine Kelley Island Lime at Duluth, and have one of the most modern and up-to-date plants for this purpose in the United States, including a battery of nine continuous kilns of large calibre, two cooper chops, stave mill, and heading mill, docks, etc. The stone is brought from Kelley Island in Lake Erie to Duluth, where it is burned as the trade requires, so that they always ship nothing but strictly fresh lime, in new, tight, strong barrels. For several years past the D. G. Cutler Co. have maintained an office in Minneapolis, which is in the Lumber Exchange, in charge of Mr. J. J. Kehoe. Headquarters are at Duluth.

THE makers of cement brick have evidently adopted a paraphrase from the saying "All whiskey is good, only some whiskey is better than other whiskey". It is certainly true that some of those making cement brick produce a thoroughly reliable article and it is noted that those produced by the machines made by the Gould Construction Company, of Davenport, Iowa, have peculiar claims to solidity and appearance, owing to the standard character of their machine. It produces not only plain brick, but, by the change of plunger-plates, can produce fancy bricks of any desired size or shape. A pamphlet issued by the makers of these machines gives interesting data on the subject.

WILLIAM T. COMSTOCK, the veteran architectural book publisher, has recently purchased the remaining editions of "Bricklaying", by Owen B. Maginnis, price \$1.50, and "How to Frame a House", or "House and Roof Framing", by the same author, price \$1.00. These books are standard in their line.

As an introduction to its new home in its six-story general office building on Second Avenue and Fourth Street, Minneapolis, the Minneapolis, St. Paul and Sault Ste. Marie Railway, the "Soo Line", issues a steel-engraved folder with an admirably etched plate illustration of the building, together with a list of the officers, departments and department heads of the road, most of which are located in this general office building, which is like the road it represents,—substantial, permanent and adequate for the present and future needs of the company.

"A REMARKABLE fact", says the Oakland Industrial News, "in connection with one of the more recent methods of construction—that of using hollow artificial building blocks—is that the largest buildings of the character in Alameda County was absolutely uninjured by the earthquake. We refer to the four-story paper box factory of Wempe Bros., at Fifth and Adeline Streets. This structure has probably the largest percentage of window openings of any building of its class in the state, being designed especially with a view to affording ample light to all parts of the building. There is a church on Waller Street, San Francisco, near Golden Park, built of building blocks, which also stood without apparent damage".

In discussing the value of automatic fire alarms, Mr. Geo. C. Boldt, of New York City, a gentleman whose opinion is held to be of undisputed authority, says: "The great value and merit of automatic fire alarms can scarcely be properly estimated. The generally accepted value placed upon it is that it prevents large losses of life and property through its prompt disclosures of the whereabouts of a dangerous heat". Mr. George W. Swett, of the Hotel Walton, Philadelphia, gives a similar endorsement. In this connection the Excelsior Electric Fire Protection Company, of Philadelphia, are installing what is claimed by them to be an absolutely accurate automatic alarm, by which they warrant a thorough immunity through prevention. Their treatise on their automatic apparatus is interesting and graphically illustrates the necessity for electric fire alarms in all classes of buildings.

An interesting history of the search for the process by which the ancients made the bricks which have resisted disintegration through thousands of years is contained in the artistic pamphlet issued by the Iowa Granite Brick Co., of Clinton, Iowa. Whether the exact ingredients and process have been discovered or not, the sand lime brick made by this company seem to stand all the tests that brick can be subjected to, from stability in structure to resistance of chemicals. It is strong and durable, for the factory or smoke stack, impervious to chemicals for sewers, and is pleasing in the walls of a residence, giving grace and softness to the lines of the design. Made properly, sand lime brick is a standard material.

IN a circular letter, that in neatness and effectiveness is in line with everything that emanates from the United States Radiator Company, of Dunkirk, N. Y., that concern notifies the trade that Messrs. E. F. Fisher and William M. Scudder have been appointed Chicago representatives of the United States Radiator Co., in charge of the branch offices at 40 Dearborn Street, Chicago.

A STOVEPIPE thimble seems an inconsequent article in the construction of a house, but it makes as much for safety as a blanket insurance. The Logan Manufacturing Company, of Ottumwa, Ia., manufactures Logan's stove pipe thimbles, which are said to prevent fires and produce a perfect draft. When these thimbles are in use it is impossible to push the stove pipe too far into the flue, the stove pipe is prevented from coming out of the flue, prevents smoking of paper around the flue, prevents soot from blowing over the room, makes an air-tight joint and has other good qualities to recommend them, as is evidenced by the fact that 200,000 have been sold since May, 1902.

ANOTHER book from the "Ideal" press is being circulated to the concrete trade. By the Ideal press is meant the printing shop of the Ideal Concrete Machinery Co., of South Bend, Ind. There emanates every month from this South Bend concern many interesting pieces of printed matter in the shape of practical instructions to prospective block makers, and literature of a general nature on the concrete industry. The missionary work being done by this concern is of inestimable value to the trade. Those behind the Ideal business are far sighted enough to see that while they may not get direct returns from this missionary work, commensurate with the cost to them, ultimate good is sure to be realized. Under the title of "Straws which show the way the wind blows", a list of sales made by this concern is being sent out each month, that of April showing 260 shipments going into thirty-five states, besides the export shipments made to Scotland and New Zealand.

THE Keasbey & Mattison Co., of Minneapolis, are furnishing architects throughout the northwest with samples of a new roofing material made of asbestos, which is called Asbestos "Century" Shingles or "Eternite" Roofing Slates. This shingle is a composition of asbestos and Hydraulic or Portland cement, and is made up in various sizes and shapes, and is laid on a roof in practically the same way as common slate. No doubt it will be a great boon to architects and builders, as this shingle is very strong, neither breaking nor chipping, as in the case of slate, at the same time being very elastic. They are made up in various colors and exposure to the weather in any climate does not change their color. They are fire-proof and everlasting, and do not crack or exfoliate when exposed to fire, as natural slates do. Freezing and thawing does not have any deteriorating effect upon the shingle. A number of architects have specified these shingles and already the number of buildings that are being roofed with this material goes to show that the demand for "Century" Shingles will be enormous.

A NEW magazine, which is unique among publications and should fill the "long felt want" shelf of modern industry, is called the Selling Magazine. Its purpose is to do for the sales and demand-promoting departments of machinery, tool, equipment and supply houses precisely what the best of trade and technical papers are doing for the manufacturing interests of such concerns, to the end that the former may be reduced to something like the scientific, economical basis of the latter. It will deal largely in facts and figures—costs and results—presenting each month in a most attractive, informative way, the crystallized experiences of those who have been successful in marketing machinery and accessories. It is published by the Selling Magazine Company, in the Postal Telegraph Building, New York.

"MODERN SANITATION" for May contains interesting hygienic matter relating to the daily bath. On the title page is a picture of an Egyptian lady, reputed to be 1700 years old, being served with a bath. The bath is the same, but the fixture is different from those produced by the Standard Company of today, and the latter has always a green and gold label, which is not observable on the apparatus used by the Egyptian lady.

THE Builder's Hardware Company, of Minneapolis, when it succeeded to the stock and interest of H. S. Cleveland & Co. two years ago, immediately sought to obtain a line of builders' hardware that in extent and variety as well as in artistic design would rival that of any other house in the West. The choice, after thorough examination, was made for the builders' hardware manufactured by the well-known Russell & Erwin Manufacturing Company, and since that time have been representatives of that company in Minneapolis. The hardware produced by the Russell & Erwin works is standard throughout the United States and in placing the specialties of that firm in the hands of builders in the Northwest the Builder's Hardware Company have found that they acted wisely, while they have added to the architect's ability to carry out designs in substantial and artistic forms of hardware. The Builder's Hardware Company include a number of household specialties in their stock, such as the Herrick Refrigerator, a perfect dry cold-air circulation refrigerator that took first prize at the St. Louis Exposition; New Era paints, made by the Acme White Lead and Color Works, of Detroit, for which standard product they have the exclusive local sale, and Garland stoves and ranges, which are perhaps the leaders in the making of these articles in the United States. In thus securing the best in each department of the hardware trade the Builder's Hardware Company have rapidly established the permanent trade and confidence of their patrons.

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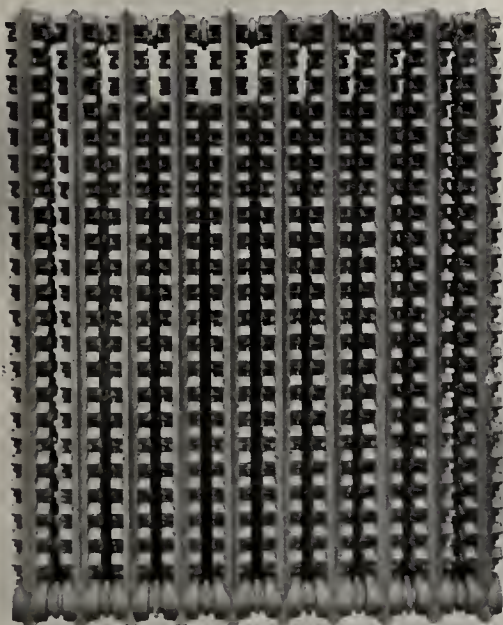
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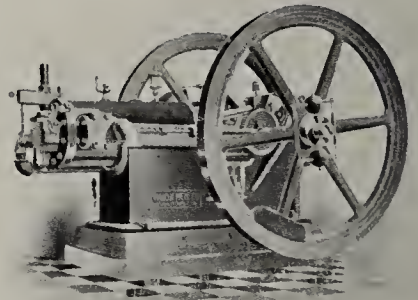
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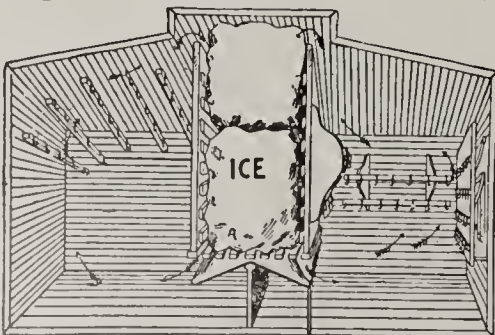
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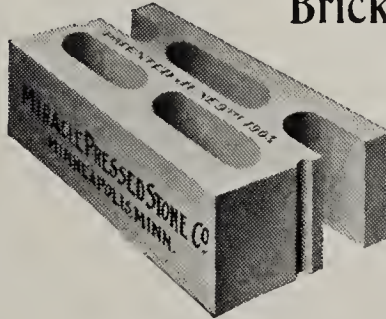
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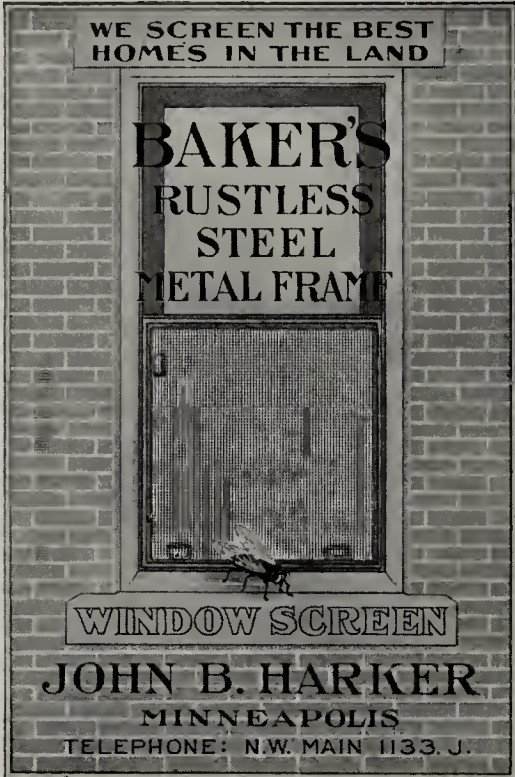


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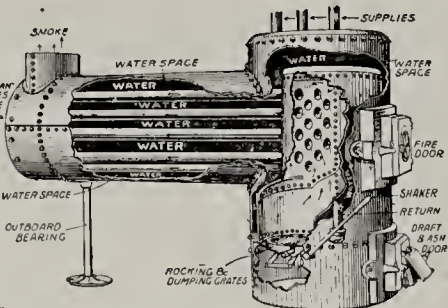

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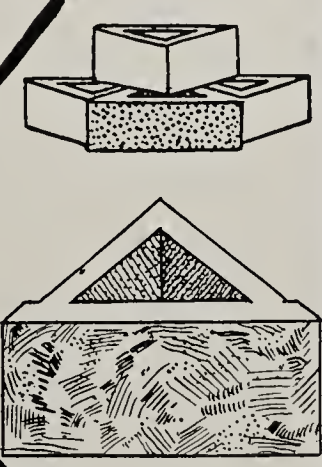
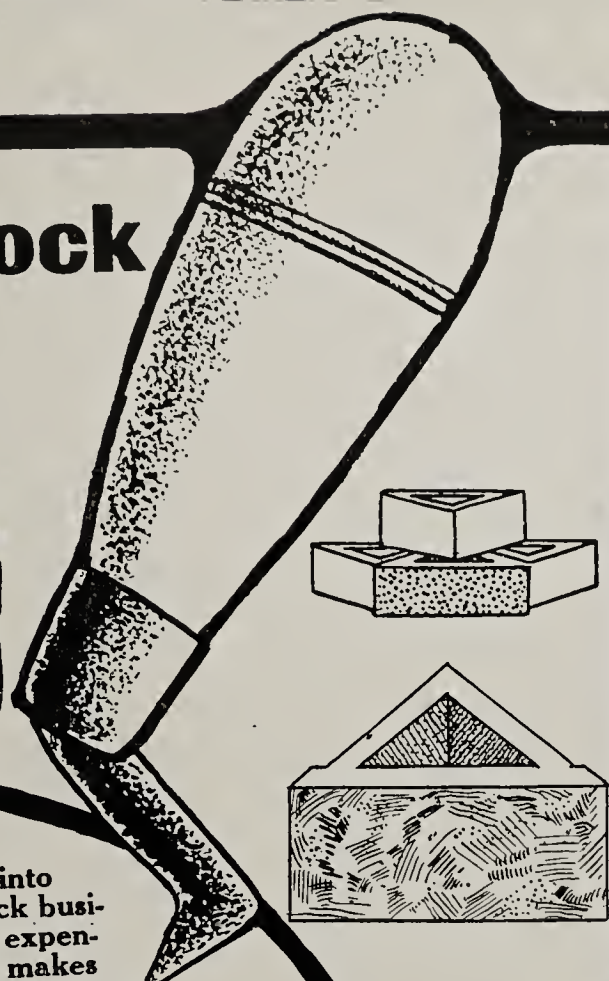
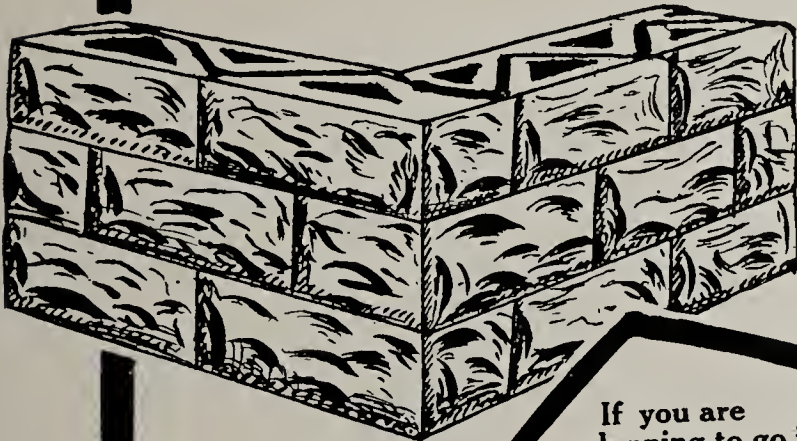
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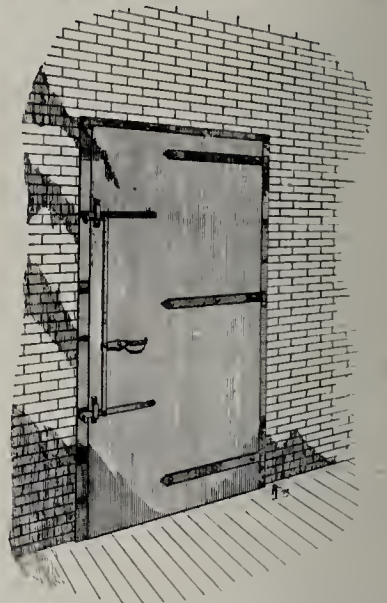
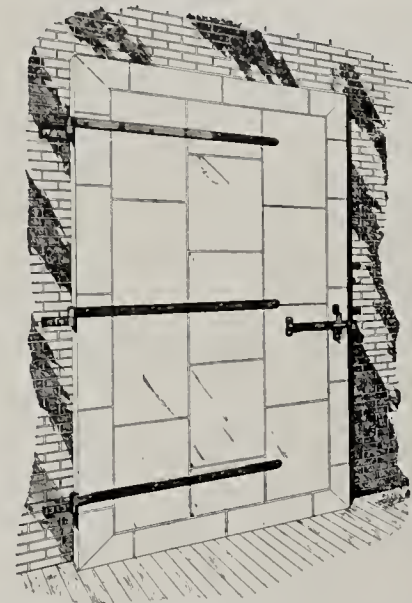
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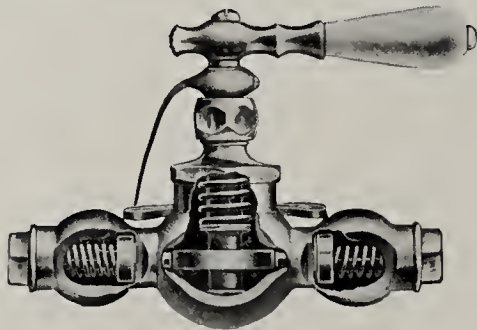
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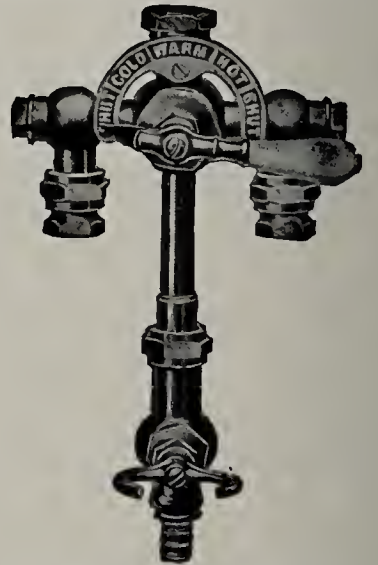


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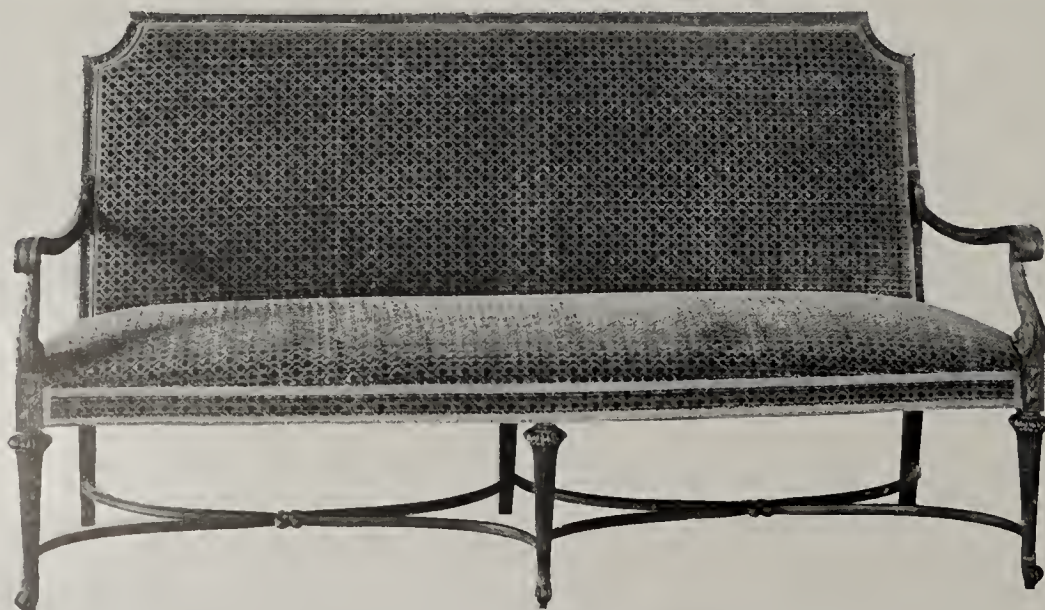
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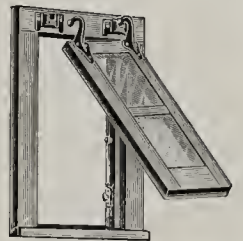


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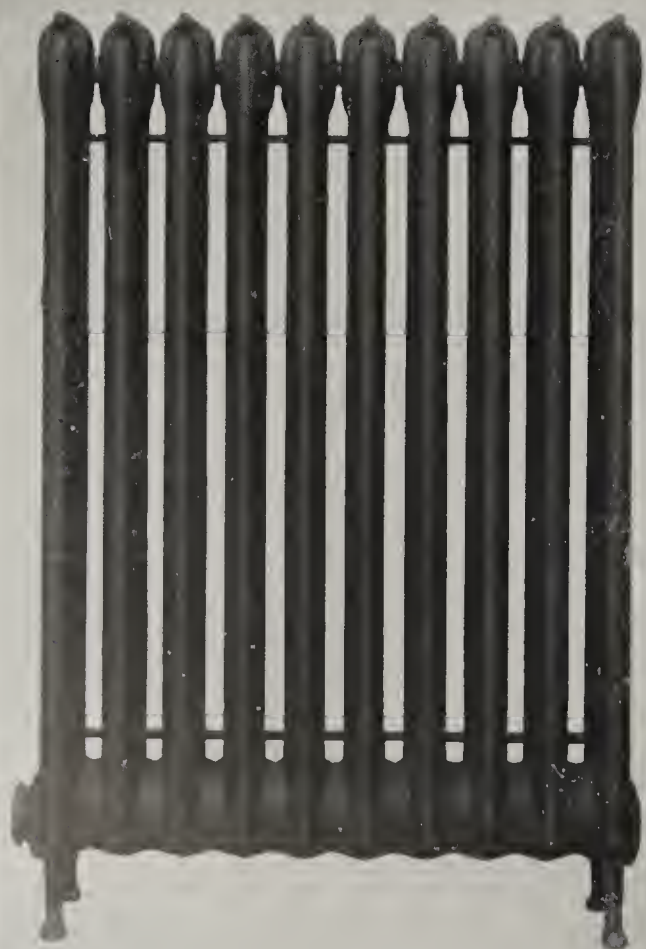
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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

Our Important Exposition of the San Francisco Disaster

Now that the "returns are all in" we think it but proper to call attention to the fact that the enterprise of the Western Architect was such as to gather more complete as well as correct data regarding the San Francisco disaster than any of its contemporaries. W. LeBaron Jenney, the father of steel construction, was engaged to describe, in a general way, the effect of the earthquake upon the steel structures. C. F. Whittlesey, one of the best authorities in the country on reinforced concrete construction, contributes his views and experiences with that material, and Mr. Graham has shown, as far as a photograph can, the exact condition of the buildings in the business district, his work involving not only great risk but a knowledge of his art in the highest degree, his panorama being the best of those produced by the large number of photographers who attempted to depict the results of the terrible disaster, forming a lasting record of its effects upon the structures of the ill-fated city. In fact, with the complete illustration of the "Burnham Plans" in our January issue and this record of the disaster, the profession is in possession of a thoroughly comprehensive view of the destruction and rebuilding of the city of San Francisco.

The Subway Question in Chicago

If Chicago must continue to restrict its business activities to the South side it cannot do better than follow the advice of so capable an engineer as John Meigs Ewen, who advises the construction of sub-basements for lines of business which this would not only give added space to, but facilitate. Of course such occupation of spaces under buildings to any considerable extent would lead logically to the placing of subways under the principal streets, a feature which the city cannot long avoid unless the short-sighted policy, not to use a stronger term, which continues to use the river instead of docks in the lake

for marine traffic, so destroys the volume of business as to make them unnecessary. The marine prestige Chicago so long enjoyed has already gone in a degree, and is rapidly diminishing, and other attributes to her greatness will follow if some strong and practical policy of municipal reconstruction is not soon evolved to meet the changing conditions. With conflicting interests delaying the proper readjustment of her marine and railway transportation, and her condensed business on the south side and consequent inadequate street facilities, the opportunity for becoming the greatest city on the continent is becoming less each year. This, however, is not a probability. The conditions will be met, but, like the removal of the tunnels, only where forced by circumstances, and then at a largely increased cost and in a less convenient manner.

**The Remarkable
Educational
Advantages
of Draftsmen**

As radical as is the change in form and material in structures and the elimination of engineering and specialized work in offices that is becoming general in practice, is the growth of educational advantages for the draftsman. The latter feature is almost phenomenal. Where ten or twelve years ago the "Teck" Columbia, Cornell and the University of Illinois represented the architectural schools and the Roche traveling scholarship was about the only competition for draftsmen, at this date almost every college in the country has a well-established architectural course, and the scholarships, both those that support the traveler in Europe and the student in the home universities, are alike numerous, until in the latter it is difficult to see how the draftsman will find time for his vocation if he is imbued with a desire to win a scholarship, and gives the required time to the rendition of competition problems.

**The
Beginning
of Art
Education**

As the hydraulic elevator may be said to have made the skyscraper possible, so the development of process reproduction has had much to do with the advancement of the art of drawing and illumination. It is owing to this ease of reproduction that most magazines affect polychromatic covers and illustrations and the demand has developed a myriad of artists, the mass of whom are more proficient than the few of former years. It is this rather than natural development, we take it, that has produced so many artists of undoubted genius in these lines. What

effect, if any, this development has had upon the more serious art of painting we do not know, and perhaps it is too soon to judge, but as the painter of hunting scenes on stage coach doors or the tavern sign board has developed the budding genius in the past, so, perhaps, the cartoon, the book cover or the illustrated poster may aid in the progress of some genius and be his first steppingstone to the highest pinnacle of an artist's fame.

**Chicago's
Lack of
Strength
and Purpose**

The struggle that municipal Chicago seems to be making to preserve the ruins of her city hall is rather ludicrous to those who from a distance can see nothing but folly in its perpetuation. It never was a practical and adequate building, and in the light of modern construction and convenience it is about as useful as the crypts and passages under Paris would be for the boulevards in that gay city. The utilities generally seem to have fallen in the hands of little men who bolster up a ruin instead of doing the one sensible thing—razing it and building in the center of population, two miles west of the present site. They have discussed for years the removal of a few tunnels under the river that became useless years ago, when a stick of dynamite or two would solve the problem. In fact, the present and certain growth of the city demands giants in control, while pigmies fiddle and fuss about a few odds and ends of things that are but bricks in the wall of her future prosperity. What Chicago needs is a plan—practical, comprehensive and harmonious—and men to carry it out with energetic self-denying persistency, passing on the construction to the next generation where necessary, with only those changes in detail that seem necessary for the perfection of the whole.

**The New
Pennsylvania
Station
in New York**

While the new station for the Pennsylvania Railway lines in New York will be one of the largest in the world, covering two city blocks, the unique feature of its entrance under the river and below the city to the center of Manhattan Island is a matter for comment. The frontage of the structure, of 430 by 780 feet, forming a perfect parallelogram, its exterior and interior beauty, in the hands of McKim, Mead & White, will give to the city a building as monumental in its character as its location is convenient to the public.

THE STEEL SKELETON EARTHQUAKE-PROOF

(Concluded)

BY W. L. B. JENNEY, ARCHITECT



A PARTY of architects, members of the Los Angeles Chapter, A. I. A., extended me a kind invitation to go with them to San Francisco about May 10. I met one architect and one contractor who had just returned from there. Knowing that I was not capable of excessive fatigue, I interviewed these gentlemen, and to my question: Was the trip very fatiguing? they both replied: Yes, much so, tramping among the ruins, up and down, dirt and ashes, nothing to eat but a bit of lunch which we had taken in our pockets from a poor breakfast and nothing to drink but a little whiskey and water from our pocket-flasks, and at night when we were used up we crossed the bay to Oakland and then rode thirty miles to a bed. Do not go. I can tell you all you can see and save you that dreadful fatigue. I doubt much if you can stand it. Sit down and let me go over our visit; then you ask questions.

I was in San Francisco with Mr. Leonard, the contractor, who reported to *The Times*. I agree with all he said except the estimates, to which I make no objections except in the time at our disposition and the facilities of getting over the building site would not have been possible to have done better than to guess in some detail and then sum them up for a total. Mr.



GOthic CHAPEL AT STANFORD UNIVERSITY,
COMPLETELY DESTROYED

Leonard is a contractor of much experience and built many of these buildings and others like them; so nothing more accurate can be given after another visit by our proposed party on the 10th, should we go

there, than to make other guesses, which there is no reason to believe would be any more accurate than the ones Mr. Leonard gave. He has the advantage of us all by his knowledge of the buildings and their



THE FERRY HOUSE, UNINJURED EXCEPT SLIGHT
CRACKS IN TOWER

cost. Let me give you a few points. There were two destructive elements, the earthquake and the fire. The earthquake shock was about 5:30 A. M., at the time breakfast was being prepared, generally, for the workingmen. The shock overturned gasoline cook-stoves, broke gas pipes and set fire to the buildings. One might think that a quake of 40 to 50 seconds, the duration of the most severe, was trifling, but just take out your watch and count that number of seconds while imagining the house trembling and the walls about falling and see how long it seems. In general it is true that, singular as it may seem to those not familiar with buildings, the brick buildings not fire-proofed, not of steel skeleton construction, all perished, while some frame buildings escaped. This is easily understood. The shaking of the walls shook out the joists and girders that simply rested on the walls and away went floors and columns into the basement. The steel-skeleton, all riveted securely together, story by story, and properly fire-proofed, all stood well, and for the construction will cost but little to repair, the loss being principally interior finish, plastering, trim, doors, etc., which, when the woodwork was covered with metal, was greatly reduced.

At a recent meeting of the Los Angeles Chapter of the A. I. A., at which some twenty were present, the talk generally was of the destruction of San Francisco. Those who had already been to San Francisco told their experience. It seems most remarkable that all brick buildings should perish and that so many old habitations built of redwood should remain so little injured. All agreed that redwood did not inflame or

burn readily, but scorched and smouldered and was easily extinguished, and many instances were sighted of small fires put out with but little injury, as the fire did not spread. So that one architect proposed to organize a company to manufacture fireproof brick of redwood sawdust, for, as he said, every brick building perished, which is easily explained; not that the brick burned, for they are in the ruins requiring only to be cleaned to use again, but the quake shook the joist beams and girders from the walls into the basement, where they were quickly consumed with every bit of wood-work in the building. The old habitations were built of redwood, not igniting readily, but scorched a little as the fire passed by.

At Stanford, where it is agreed the shock was the most severe, the museum, built some seventeen years ago by Ransome, who I think was the father of re-inforced concrete in this country, was constructed with the twisted rods in the concrete, that at that date might have been called re-inforced concrete. This building stood well, while the two wings of recent date were destroyed, as were the beautiful chapel and gymnasium.

There seems to be sufficient data to pronounce the reinforced concrete, if built on scientific principles, as well as the steel skeleton property built and fire-proofed both, not only fire-proof but earthquake-proof and cyclone-proof; in fact, the best that can be built today, from every point of view.

In Baltimore and in small fires elsewhere the lower web of the arch has been flaked off, usually supposed to have been done by the shock of the water from the fire engines when very hot; but in San Francisco there was no water, so it was doubtless due to the quake. There is no weakness of this kind with the re-enforced concrete, which, as usually constructed is inferior as a brace, but this can be obviated by a little ingenuity in the form of construction, which will make the re-enforced concrete preferable.

There was with many a theory that the steel skeleton would prove too rigid, or lacking in elasticity, to resist the quake, but this has not proven so at all. The more rigid and the heavier the less the injury. The buildings resisted best that were on rock foundations, and are in better condition than those on sand or made ground.

The City Hall was a great sufferer by the earthquake. The brick walls were shaken down and also the iron columns.

That there had not been one or more complete examples of re-enforced concrete buildings, is to be regretted. There is reason to believe that they would have stood well. The Globe Mills had heavy steel I beams, not protected by any fire-proofing. There were no outside shutters to either doors or windows,

so that the intense external heat set on fire the inflammable materials within the building. The heavy steel beams were twisted by the heat and pulled from the supports and let down the second floor. The walls and the lower floor of re-enforced concrete are perfect. It is evident that had the steel been fire-proofed, little or no damage would have been done by the fire. There was no damage by the quake.

A habitation of re-enforced concrete at Stanford University, where the quake was hardest, was absolutely uninjured. So that there is reason to use the re-enforced concrete, which, if designed on scientific principles, will doubtless stand the test of earthquake and of fire.

A contractor, Mr. Richards, who spent several days in his investigations at San Francisco, in reply to the question: What lessons should we learn from this fire? stated:

First: A carefully prepared Building Ordinance based on the facts should be passed and enforced and kept free from the influence of any class of material men;

Second: Frame buildings, and all fire-traps should be prohibited. The inspection of all cellars, back yards and alleys should be frequent and rigid;

Third: All steel and iron must be properly fire-proofed with proper material;

Concrete blocks had best be discarded as a building material;

Fourth: Heavy projecting cornices or ornaments should not be permitted;

Fifth: All brick and stone facings should be securely fastened to the walls;

Sixth: Tall fire-proof buildings on solid, substantial foundations, are a protection to surrounding property;

Seventh: A well-devised automatic shutter would be highly desirable;

Eighth: Wood floors should not be used and all trim doors and other woodwork should be covered with metal;

Ninth: More care should be given to the shearing strains in every form;

Tenth: In every city at least every sixth street each way should be very broad, to afford a chance to fight a fire—say 150 feet wide.

Out of the San Francisco disaster comes one beneficial result: the total destruction of Chinatown. Not a stick nor a stone remains, even to show where Chinatown existed. Hundreds of its miserable inhabitants have doubtless perished in the living grave in which for years they burrowed. We are assured that it will not be rebuilt. The Chinese who remain will be housed elsewhere. The city authorities will take care that the evil conditions of another Chinatown are not

created. The one just destroyed was gradually converted into bee-hive-like structures full of winding passages, underground rooms and dark holes, where human beings lived and died without seeing the light of day. Here were the opium-smoking dens, to which tourists were shown. Here some of the most miserably poor dragged out a wretched existence. Whatever Chinese remain in San Francisco should be compelled to live above-ground.

Possibly some Chinese official may find this another assault of the American Government, but even this should be borne.

REINFORCED CONCRETE CONSTRUCTION.

(Continued)

BY CHARLES F. WHITTLESLEY, ARCHITECT



THE inherent faults, almost impossible to overcome in the steel-skeleton construction, are corrosion and crystallization due to vibration. The former may be retarded by painting, but to overcome this objection and remedy the faults of tile, concrete has lately come into vogue as a reproofing for metal columns and beams. It is extremely difficult, however, to get a complete contact with the metal in all parts, and the result is that it is seldom well executed.

When steel first came into general use for structural work, there were many engineers who earnestly and honestly contended that it was not suitable for the purpose, because of these inherent faults.

These questions have not yet been satisfactorily settled, and some of the most eminent engineers in the world today predict dire calamities for our high steel structures at no distant date, and the life of these buildings is not now considered as long as formerly supposed. The life of a steel railroad bridge is hardly long enough to warrant its cost, and carries a high expense for maintenance. The life of the most fibrous railroad car axle is seven years, after which it is dangerously crystallized. The same effect from the same cause has already been discovered in the lower story columns of the earliest steel sky-scrapers, and it has been necessary to replace them with new ones at great expense. The designers of these buildings realize that their factor of safety has proven to be very close to the danger line. Recently, one of the tall steel buildings in Chicago has been condemned as unsafe, structurally.

On the other hand, in reinforced concrete constructions the metal, being in the form of simple rods, is easily and completely imbedded in the concrete, and concrete has been proven to be a perfect protection from corrosion for steel, even when submerged for years in water. In fact, a rusted rod imbedded in

concrete, becomes free from rust in a few months, the oxide of iron combining chemically with the cement and forming a true ferro-concrete coating on the metal, which provides a perfect armor.

Scrap iron, taken from the concrete core of the walls of the Coliseum in Rome in recent years, was found free from rust. Mention has already been made of the inspection of metal imbedded in concrete water pipes and sewers for fifty years, without signs of corrosion. Even where slight cracks occur in a beam, from overloading, the carbonic acid gas in the air cannot reach the metal, because it is chemically absorbed by the concrete, for which it has a natural affiliation.

The metal in this construction being in small members, imbedded in comparatively large bodies of concrete, is entirely free from vibration, and consequently from crystallization. The concrete absorbs the vibration and, being crystalline in its nature, is not affected.

This construction is particularly adapted to factory buildings, because of its rigidity and freedom from vibration so fatal to the life of line shafting and machinery. Concerning the durability of plain concrete, without regard to its reinforcement, every one knows that it was the most imperishable building material of the ancients, though made only of hydraulic lime, which will not compare with our modern Portland cements for strength. When a child, I was taught that the Pyramids of Egypt were among the seven wonders, because of the immense size of the stones of which they were built, with no quarry within hundreds of miles; and the engineering problem was considered a marvel. It is now known that they are made of concrete; and were, undoubtedly, cast in the position they now occupy. Vitruvius, the ancient historian of Architecture and Engineering, wrote, before the time of Christ, of the immense value of concrete as a building material, and describes the works which were built of it centuries before his time. The dome of the Pantheon in Rome, 145 feet in diameter, was built more than twenty centuries ago, of concrete, and stands today in good condition.

In the house of the Vestals, an upper floor of 20 feet span was built of concrete 14 inches thick, without reinforcement. The ancient Greeks, as well as the Romans, used concrete extensively. Some of the old Roman works in England stand as ruins today, with the concrete core of the walls outlasting the crumbled facing blocks of quarried stone. An ancient castle in Spain still shows the mark of the boards used for forms on the concrete walls. In Mexico, the prehistoric civilization used concrete. There are monuments all over the civilized world to the lasting qualities of concrete. The question may well be asked,

“is it not too lasting?” In Baltimore, they checked the fire by dynamiting the buildings in its path. The only one which caused them trouble in that job was built of reinforced concrete. To make extensive alterations in such a building would be expensive, but to remove it entirely may cost nearly as much as to build it, unless it can be blasted.

The questions are often asked: Is concrete a safe building material for superstructures? Is there more risk attendant on this construction than on others? These are grave questions and should not be answered lightly. No class of construction is fool-proof; and, therefore, rigid building laws, intelligent designing and competent supervision are assumed to be necessary for all kinds of construction for buildings of any importance. Last year several high brick walls collapsed in New York City, through carelessness in building. The same kind of accident has happened in Chicago several times, and in other cities. The fact that brick walls have collapsed would not influence you to condemn the use of brick as bad construction. Brick architecture has been used since before the earliest records of the Egyptians. Each one of you would build a brick wall to any reasonable height without fear of consequences, because you feel that you know how it should be done, and are confident that you are capable of supervising it to a successful result.

Many failures in steel structures have occurred in recent years in bridges and buildings, some of them with very grave fatalities. Some of them have been due to faulty design; others, to bad assembling. These are never offered in evidence as a reason for abandoning steel as a structural material.

The ordinary lug-and-bracket construction for assembling members, in use in most of our steel buildings, would not in many cases bear the scrutiny of an expert; and in actual test, in comparison with the connections in a modern reinforced concrete building, would prove feeble and flimsy. The writer has seen a riveted bracket on a steel column carrying a girder in which one of the rivet heads had popped off. The bracket was struck several blows with a heavy hammer, and out of five rivets, only one head remained. An investigation developed the fact that the rivets were made of old rail steel which was badly crystallized.

It is true that there have been a few failures by partial collapse on reinforced concrete structures. But, considering that work has been attempted in this material by builders having but a very superficial knowledge of the subject, it is a great wonder that more failures have not occurred. The buildings which have been erected of reinforced concrete in Europe and America within the last ten years, represent an aggregate expenditure of more than a hundred million dol-

lars; about eleven million in the United States. The average cost per building is probably under fifty thousand dollars, at which figure the number of buildings would be 2200. There have been not to exceed six collapses of a serious nature, and probably twenty more of slight consequence. This seems to the writer a very good showing, considering all the circumstances.

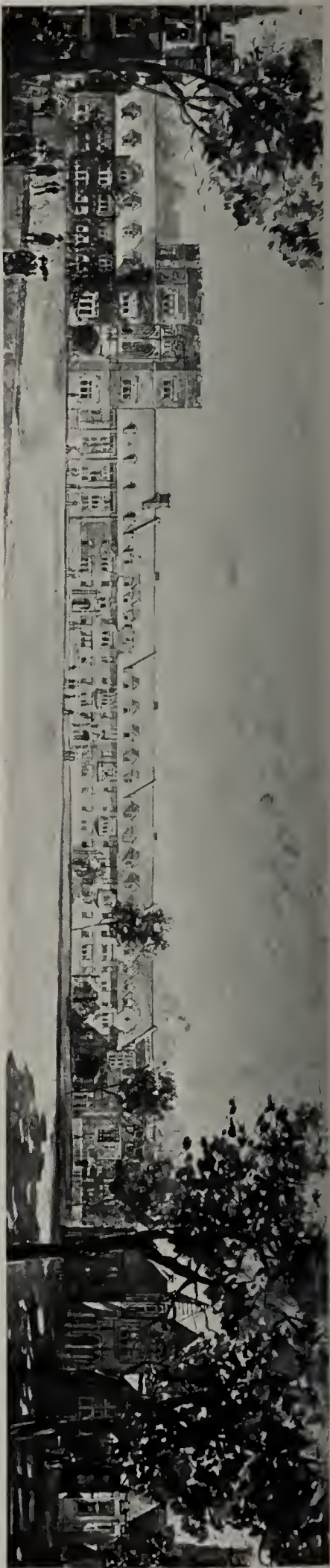
Never in all the records of the past has there been a failure of any reinforced concrete building in which the cause was not traceable to either faulty design, changing the placement of the reinforcing members on the work contrary to the drawings and calculations of the designer, removal of the forms before the concrete had properly set, depositing the concrete in freezing weather, or the use of poor cinders containing a large proportion of ashes in lieu of crushed rock for the concrete.

The author is unable to find any record of failure due to the use of bad cement or the failure in any building of a reinforced concrete column, for any cause.

The failures have always occurred before the building was finished, and the owner always has the assurance that if the building will stand the tests usually imposed before the work is accepted from the contractor, it will continue to improve with age for many months.

We often hear the question, “Suppose you get a bad sack of cement into some vital part of the work. Would it not be fatal?” This seems to be the popular idea of the danger that besets reinforced concrete construction. To those who are familiar with the methods of manufacture and testing in a modern, first-class Portland cement factory, such a probability is very remote. But, granting that the tests at the factory and those made on the work are neglected and that a sack of really worthless cement has gotten into the mixer! The probability is that it will become so assimilated and diffused through the work that our factor of safety would cover the deficiency. The most important element of danger is the disturbance of the concrete mixture after the initial set has taken place, through lack of rigidity in the form supports, causing vibration, or from wheeling barrows over the ends of the rods imbedded in the fresh concrete. This is a point on which workmen are most likely to be careless, and one which needs constant watching. In fact, the really essential things which the construction gang should know, are overlooked by careless workmen, because they are so extremely simple.

After choosing a well-tried brand of cement for your work, and making a few careful tests for initial set, constancy and tensile strength, during the progress of the work, this part of the supervision becomes of



PROPOSED SCHEME FOR DEVELOPMENT OF LAKE FOREST COLLEGE, LAKE FOREST, ILLINOIS
FROST AND GRANGER, ARCHITECTS, CHICAGO



T. HOIST AND GRANISER ARCHTYS

secondary importance and the superintendent's time should be devoted to close scrutiny of the manipulation of the material. Watching the mixing is, of course, important, especially if the contractor or his men are inclined to shave the cement measurement. There is often an inclination to use too little crushed rock and make up the deficiency with sand, which costs less and, to the laborer, seems just as good and easier to work. An excess of sand is as injurious to good concrete as too little cement.

For ideal construction, all beams and floor slabs on one level should be filled at one operation, to avoid joints between the floor slabs and beams. It is more convenient, however, to fill the beams first, and after they have become hard, to lay the floor slab. This is permissible when stirrup irons or U bars are used at frequent intervals in the beams, with the ends standing high enough to come well into the floor slab.

[Concluded next month]

PLEASURE RESORTS AND BEACHES AROUND LOS ANGELES.

BY W. L. B. JENNEY.

PART II—MOUNT LOWE.



MOUNT LOWE is certainly not to be classed among the beaches, but it should be classed among the pleasure and scenic resorts of Los Angeles, for it is the most interesting of them all, and decidedly the

pleasantest and prettiest electric railway ride about Los Angeles is that from Pasadena to the Mountain Foothills, where the mountain railway begins, which latter is really as wonderful as an engineering feat as for the grandeur and extent of the scenery traversed.

Many years ago, during a boom, many companies were organized to build a railway up the slope of this most inaccessible mountain, but the scheme was classed as visionary and did not excite the speculator and they did not materialize until an eastern professor, T. S. C. Lowe, came to Pasadena and made



2 UP RUBIO CANYON TO ECHO MOUNTAIN

many explorations among the mountains of this range and was so pleased with its hidden recesses that he decided to build a railway, electric and cable combined, up one of its rugged slopes, within easy reach of Pasadena. But little confidence was placed in his project until work actually began in earnest. Still, large numbers believed success impossible; but Dr. Lowe was full of energy and determination, and the methods adopted to overcome the numerous obstacles made it an engineering triumph.

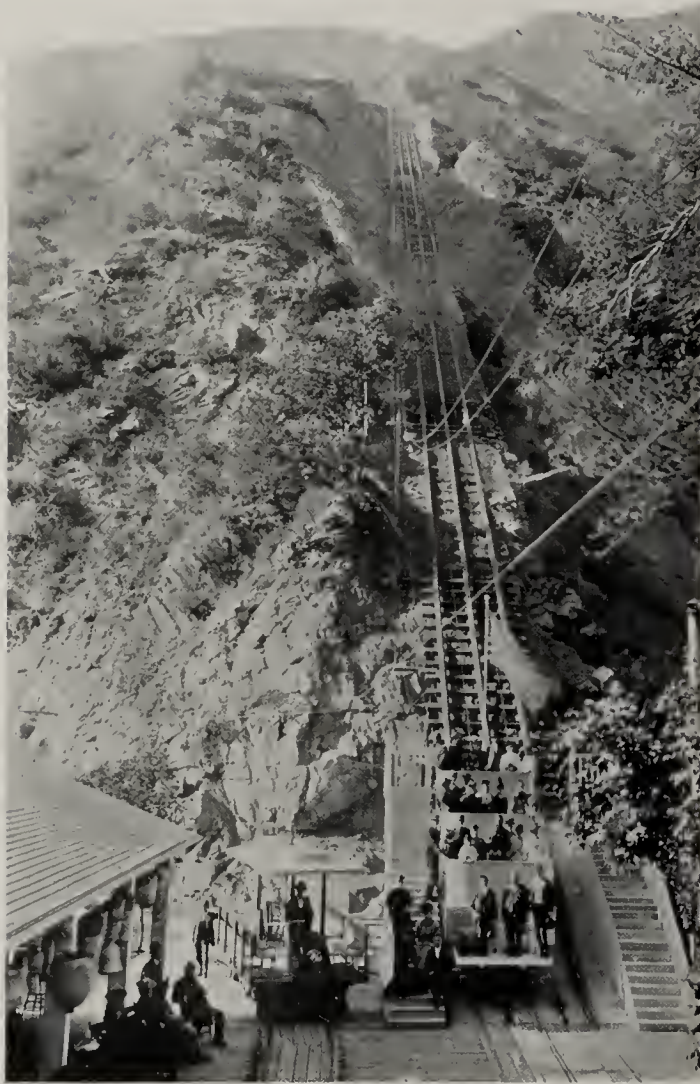
The electric surface line takes the traveler from Los Angeles through Pasadena to Altadena Junction,



3 GRANITE GATE



1 MOUNT LOWE



4 THE GREAT INCLINE

where a change is made, to the electric line of the Mount Lowe Railway (Fig. 2) and enters Rubio Canyon, crossing a high mesa (Fig. 3), an historic spot named by the sailors of the pioneer navigator, Cabrillo, Floral Canyon, on account of the number of bright yellow poppies named by the Spaniards "Copa de Ora," Gold Cups (*Eschscholtzia*), which grew there abundantly and were seen even out at sea.



5 MAKING A TURN

Rubio Canyon was named after Father Rubio, a late mission priest. It is a deep gash in the granite rocks of the mountains, quite broad at the entrance, narrowing quickly. The road crosses numerous trestles and runs through deep cuts, for one of which it was necessary to lower the workmen in baskets. At length, as the walls drew together so close as to render further progress up the gorge seemingly impossible, a short curve brings the car to the Rubio Pavilion at the foot of the great cable incline (Fig. 4). This pavilion is built over the bed of a mountain stream, extending the full width of the canyon, helping to give to the canyon its wild and wierd reputation.



6 THE ASCENT

The stream winds its way in its headlong race through the canyon for the valley below. A series of plank walks and flights of stairs now make this canyon easy of access to the pedestrian.

At the Rubio Pavilion is the foot of the great incline cable electric road, and the white chariot now painted brown awaits us (see Fig. 3) at foot of incline; its seats are arranged in tiers so that all are seated horizontally, so that the very steep incline offers no inconvenience, and is quite unnoticed. We hear the signal for starting and are off, slowly at first, increasing in speed, little by little, until six miles the hour is reached. A casual examination would immediately convince an engineer of the great excess of strength in



7 FROM ECHO MOUNTAIN HOUSE

the machinery did he not read in the guide book that the large steel cable alone was tested to a strain of 100 tons. The bird's-eye view of the valley and plain below, spread out like a map, is very pleasing. In a seemingly short time we have made the ascent and change to the trolley line of the Echo Mountain R. R., that makes a beautiful run of five miles (Fig. 4), hugging close to the side of the mountain on a ledge cut into the mountain slope (Fig. 5) just wide enough for the car track, though sometimes to obtain even this width, it was necessary to build a viaduct, at others a projection bracketed out to carry the track (Fig. 6). The view is very lovely, often wild and wierd, as one looks up the gorges that we crossed (Fig. 7). At others miles of the valley are seen. At the end of the five-mile run the Alpine Tavern (Fig. 8) is reached, where a good dinner is awaiting us. The water is from the Crystal Springs, cool, clear and bright, so that at dinner one hears on all sides: "What delicious water?" In front of the tavern there is a water pipe in the trunk of a live oak tree, with a faucet through the bark, with a cup and chain that the guests freely used.

After dinner time enough was given for a smoke and a stroll around the top of Echo Mount, when the call



8 ALPINE TERRACE END OF RAILWAY

of "All aboard" came and we descended gently to the Rubio Pavilion, where we were all arranged over the so-called white chariot by a photographer, who took our photos, promising that we should have a copy by mail in two days (Fig. 9). Then we exchanged to the trolley and were shortly in Pasadena, all feeling that we had made a most delightful trip, full of interest, decidedly the finest of any resort about Los Angeles and never to be forgotten.

There was in the party a young, but already celebrated nurse, who some months before was on a car



9 PHOTOGRAPH OF PARTY

when the conductor jammed his hand most painfully. The nurse immediately volunteered and dressed his hand, using for bandages her own handkerchief and two or three others that were volunteered. Now, it so happened that this very conductor was the conductor on the car in which was seated this identical nurse, who was immediately recognized by her former patient, who, feeling very grateful for the kind services she had rendered him, expressed himself very nicely and politely to the interest of the few within hearing, so that he was forced to tell the story, which he did in

a most complimentary and grateful manner, so that one young lady within hearing spoke up rather loudly: "Oh, how I wish I was a nurse; they do so many nice things, for which they receive the kindest of thanks and soon become celebrated."

HARRIMAN AND BURNHAM AID SAN FRANCISCO

In reviewing the immediate and practical response of the whole nation to the call for help sent out from San Francisco, the individual action of two individuals, one an architect and one a railroad man, stands out preeminent.

Mr. Burnham had originally, before his voyage to Manilla, gratuitously contributed suggestions for civic improvement to the city, which involved a great deal of study and labor. He was in Europe when the disaster occurred and within a week after his return from a three months' absence crossed the continent to give additional advice under the changed conditions. What this additional absence of two weeks meant to him in view of his enormous business interests can well be imagined.

While this philanthropic work of Mr. Burnham's will be noted in the years to come, when the new city of San Francisco rises from the ashes of the old, that of E. H. Harriman, president of the Southern Pacific Railway Company, will not be forgotten, though it was of that practical and detailed character that is usually lost sight of as soon as the need for benefit conferred and distress alleviated has been removed.

No sooner had the news of the calamity reached Mr. Harriman at his office in New York City than he hurried West in a special train and telegraphed ahead a personal contribution of \$100,000 to the relief committee and instructions to his subordinates in the great company of which he is the head to move without delay and without charge food supplies from all points of the compass intended for the relief of the homeless. Besides this he ordered that refugees be given free transportation over all the Harriman lines, and this magnanimous act enabled hundreds of unfortunates to leave the stricken city, who otherwise would have been cast upon the then badly overtaxed and overworked Relief Committees. Mr. Harriman has indeed done a service to San Francisco which, no matter how great his personal interests may have been, could hardly be excelled by any individual or corporation. His offer to produce a loan of \$100,000,000 that the people may borrow at small interest enough money to rebuild their burned buildings, was still another expression of good will and generosity that should not be overlooked.

Mr. Harriman is the type of American who believes in doing, and no better example of this could be

had than the record of what he has done for San Francisco in this emergency, in which a lesser man would have sought to selfishly take care of his individual interests before turning his attention to the needs of a stricken people. San Francisco may not carve a monument to commemorate his work, but it will be strange if his name is not long remembered throughout the land for his prompt and effective philanthropy.

THE GEORGIAN BAY COUNTRY.

By ROBERT CRAIK McLEAN



TO him who loves solitude from man, and the close companionship of nature in her most attractive aspects, the Georgian Bay, or that part of it extending along its eastern shore (a myriad-islanded archipelago reaching with its thirty thousand pine-covered rocks from Killarney on the north to Penetanguishene on the south), presents an inexhaustible field for recreative industry. And to him who has not voyaged among these islands, the most picturesque inland water trip of this western continent remains to be enjoyed. Rough and wild and lonesome it is, for as yet the tourist has not left a trail of peeled birch trees, canned goods tins and burnt islands behind him to mark his visitation, but for years the true sportsman has known its waters and forests and it has seemed to him good. And he goes again and again, always finding in its wilderness of waters and islands sport for his rod and gun that is incomparable.

It is true his boat will "pile up" on a hidden shoal now and then, or he will miss his direction by a point and be obliged to camp on some island all night while waiting to be "found" by his Indian guide, but these and other like incidents but add a spice to his holiday pot-pourri. Did you ever catch sixty fish, real black bass at that, in sixty minutes? Well, if you did and did not throw them back you ought to be in the penitentiary; but it can be done there. Do you know any country where in the open season of two weeks for deer hunting an entire party of hunters are more than likely to shoot their allowance of two deer to the gun during the first two or three days and there terminate their hunt? This is the common experience in the deer country in the Muskoka district, east of the Georgian Bay. Partridge are almost too numerous and tame to afford keen shooting, as, until late in the fall, they decline to rise until almost stepped upon.

But it is a land of perfect and complete recreation. A thousand feet above the sea level its pine-laden winds always bring refreshing coolness in summer and the heated rocks keep the atmosphere as dry as that of an Arizona mesa. There are rivers there with

rapids to shoot, lakes and streams where trout abound, and dark cedar forests, ridges of maple and of birch, and over all a sky of blue with the racing clouds and streamers that seem to proclaim a national holiday for the senses and the soul to rest in and grow young again.

This is the Georgian Bay country, that cannot be described, but, like the Elysian fields, is fair beyond words and restful beyond speech.

ASSOCIATIONS.

NEW YORK CHAPTER, A. I. A.

At a meeting of the New York chapter of the American Institute of Architects, June 13th, the committee to whom was referred the matter of obtaining the expression from the architects of the state regarding the proposed legislation in favor of an architects' examination and license law, made the following report, which, in the form of a resolution, was received and unanimously adopted by the chapter:

June 11, 1906.

The committee concerning the registering of architects respectfully reports, and requests the Chapter to adopt the following resolutions:

Whereas, It is the sense of this Chapter that in obtaining the opinion of architects practicing in the state of New York as to the propriety of having a state law for the registering of architects, it would be wise and proper for this chapter to act in conjunction with other chapters in the state; therefore, be it

Resolved, That the secretary of this Chapter be instructed to request each of the other Chapters in the state of New York to appoint a committee of three, to confer and co-operate with a similar committee of this chapter, these several committees to constitute a general committee which shall proceed to ascertain the opinion of the architects in the state as to their desire regarding a law for registering architects, and to report their finding to the several chapters.

Resolved, That no expense be incurred by the committee without first obtaining consent of the chapters.

Resolved, That a copy of this report be sent with the letter to each chapter.

Wainright Parish,
J. W. Yost,
D. Everett Waid,
Committee.

The bill was proposed too late for action by the present assembly and the delay till next session will be used in thoroughly agitating the question among the profession at large, so that its passage or rejection may be the sense of a majority of the architects in the state.

WINNIPEG, MANITOBA, ARCHITECTS

At a meeting of the architects of Winnipeg, Manitoba, and representatives of the profession from other cities held May 25, in Manitoba Hall, a Manitoba Architectural association was organized.

The following officers were elected, to hold office temporarily until the annual meeting in November: President, Frank M. Peters; first vice-president, J. H. G. Russell; second vice-president, C. H. Wheeler; secretary, W. P. Over, and treasurer, Mr. Brisco. The council or directorate will consist of the following members: Mr. Elliot, Mr. Brandon; F. Hooper, J. Chisholm, Jos. Greenfield and J. E. Atchison.

There were about thirty-five architects present at the meeting and all were very enthusiastic over the new organization, which is the first yet made in Western Canada. A constitution was adopted, but the by-laws will be drawn up by the council and submitted at the next meeting.

CHICAGO ARCHITECTURAL CLUB

At a well attended and enthusiastic meeting of the Chicago Architectural Club, which held its twenty-first annual election May 7, the following officers, representing the regular ticket, were elected for the ensuing year: Alfred S. Alschuler, president; H. H. Mahler and Paul V. Hyland, vice presidents; Joseph W. Wilson, secretary; Charles E. Brush, treasurer; Edward J. Poulsen and Vernon S. Watson, members of the Executive committee.

WASHINGTON ARCHITECTURAL CLUB

The Washington, D. C., Architectural Club held its annual meeting on June 2, and after a spirited contest the following officers were elected for the year: W. D. Windom, president; P. C. Adams, vice president; H. S. McAllister, secretary; W. W. Youngs, treasurer; L. A. Simon, F. B. Wheaton and C. L. Harding, directors; W. B. Olmsted and L. J. Weisenborn, auditors. An amendment to the by-laws was adopted.

ST. LOUIS ARCHITECTURAL CLUB

The St. Louis Architectural Club held its last regular meeting of the season in the club rooms in the Dolph building, June 2.

The drawings submitted by the members of the Washington University architectural class for the membership prize decorated the walls, and their relative merits were discussed by the club. The Executive Committee of the club will be the judges in the contest.

Chester Price, who won the traveling scholarship of the National Architectural League, was the entertainer of the evening. The next meeting of the club will be on the first Saturday in October next.

OBITUARY

JAMES ADAMS

The death of a Canadian architect, James Adams, is announced at Kingston, Ontario, at the age of 73 years. He was, for over forty years, an architect for the government, the Kingston Penitentiary being under his charge, the chief buildings being designed by him. He came from Dorchester, N. B., was a Mason, Orangeman and a Forester, a conservative in politics and a Presbyterian.

ILLUSTRATIONS

In devoting a considerable portion of the plate pages in this number to photographs of the San Francisco Post Office and Court House, a fairly comprehensive exhibit of the latest and best work of the supervising architect's office is made. The photographs were taken by the superintendent in charge, Mr. J. W. Roberts, just before the earthquake disaster, and obtained from him by our representative, Mr. Parry. That the building stood the shock and resisted the fire in every particular, except, perhaps, a cracked stone or two over entrances, is a matter of common knowledge. While the exterior is drawn on the severe lines, with small openings in the walls, that seem common to government structures, it was found that this quality was a "saving clause" when the earthquake came. The interior, however, takes on a more rich and generous aspect, even the courtrooms being attractive rather than severe in richness of decorative effect. The whole building shows the results of placing the supervising architect's office under ordinary civil-service rules where merit and ability is the standard for place rather than the favoritism of some congressman, as was too generally the case prior to the appointment of James Knox Taylor, the present supervising architect and the designer of this building, and his predecessor, William Martin Aiken.

The high school at Long Beach, by Henry Starbuck, conventionalizes the Mission style in a charming manner and gives to the high school almost a modernized mission effect expressive of the emancipation of thought from the old and vigorous church-school of the Spaniard.

The lunettes for the Iowa State Capitol, at Des Moines, Iowa, by Kenyon Cox, four of which were presented in the April number and the remaining four in this, represent the industries and arts of the west. These are arranged in pairs and follow a natural sequence. "Hunting" and "Herding" is followed by "Agriculture" and "Manufactures", then "Commerce" and "Education", with "Science" and "Art" forming the concluding illustrations. There is a strength and virility as well as a breadth of drawing in these figures

that is wonderfully expressive of the forces that have contributed to the up-building of the greatest civilization on the globe, that of the western states of America, and art, its crowning feature, could not have a better presentation before the people than these lunettes by Kenyon Cox.

An interesting study of the general arrangement for college buildings is found in the proposed scheme for the Lake Forest College, by Frost and Granger. Lake Forest is located about thirty miles north of Chicago and overlooks Lake Michigan from a wooded, ravine-cut plateau, one hundred feet above the waters of the lake. There are no high pinnacles in the design, as the forest would make them invisible, so that the long, low and pleasing lines of the buildings are most expressive of tranquility and strength. It is doubtful if a better scheme could be devised for the purpose and location, as the drawings show a study of these features in every line.

One interior of the residence of W. S. Bartlett, of Los Angeles, designed by Chas. F. Whittlesey, a rear view of which was published in our January number, is shown in this number. The apparent heaviness of the half-timber work is saved by the breadth of the room and the harmonizing scale of the fireplace and broad mantel. It is one of the best designs yet executed on the coast in that most adaptable style of which Mr. Whittlesey is a past master.

The Burrage residence at Redlands gave to Charles Brigham, the architect, an uncommon problem which is most satisfactorily carried out. To design a residence on the crest of a rise of ground that is treeless and in itself unmarked by any broken or distinctive feature, and do it in a harmonious spirit with the surroundings, indicates a high order of sympathy as well as perception, that this design shows its author to possess in a high degree.

The two photographs from strong water color sketches, a residence by Hunt and Eager, and a church by March and Russell, are shown as much for their excellence of rendering as for the designs presented. While they are executed by different architects, there is a similarity in handling that is pleasing. In connection with this showing of water-color work, the beautiful sketch for a hotel at Santa Cruz, by J. F. Dunn, of San Francisco, must interest all draftsmen who love detail in water color and appreciate distance and architectural effect in water-color sketches.

A sketch of a rural post office by Elmer R. B. Chapman, of Boston, in design and plan, is shown. It is brick and half timber in construction and the pencil rendering in the design shows how expressive a few lines in pencil can be made, and that the pencil or pen drawing is often more charming than water color, especially in reproduction.

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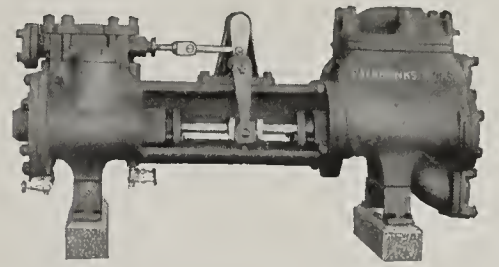
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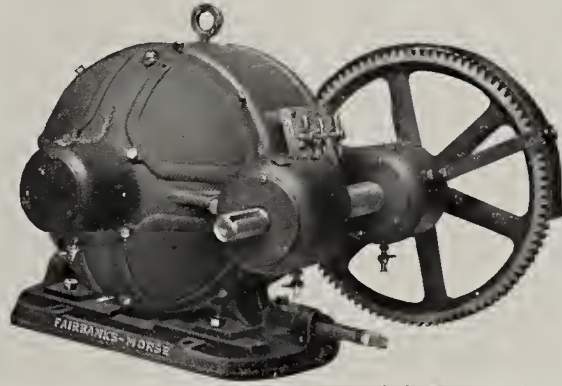
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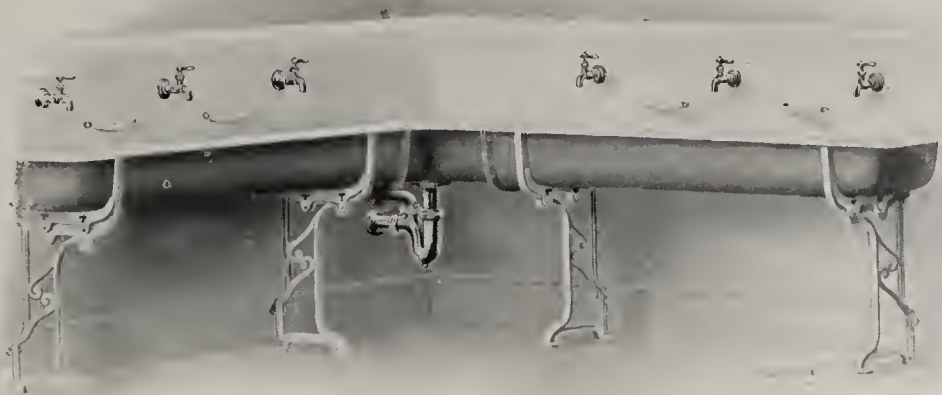


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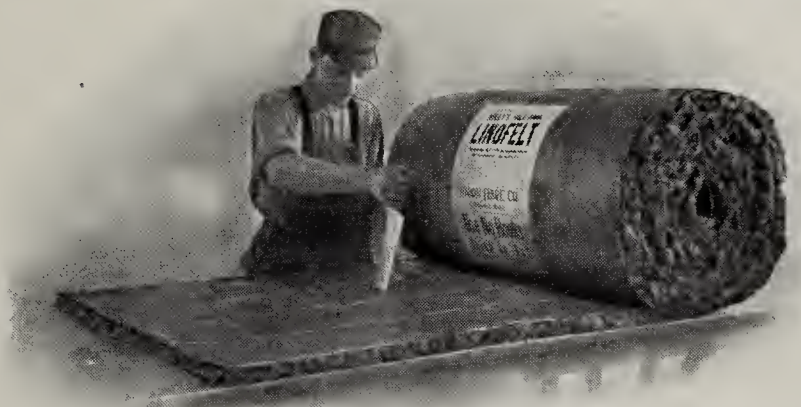
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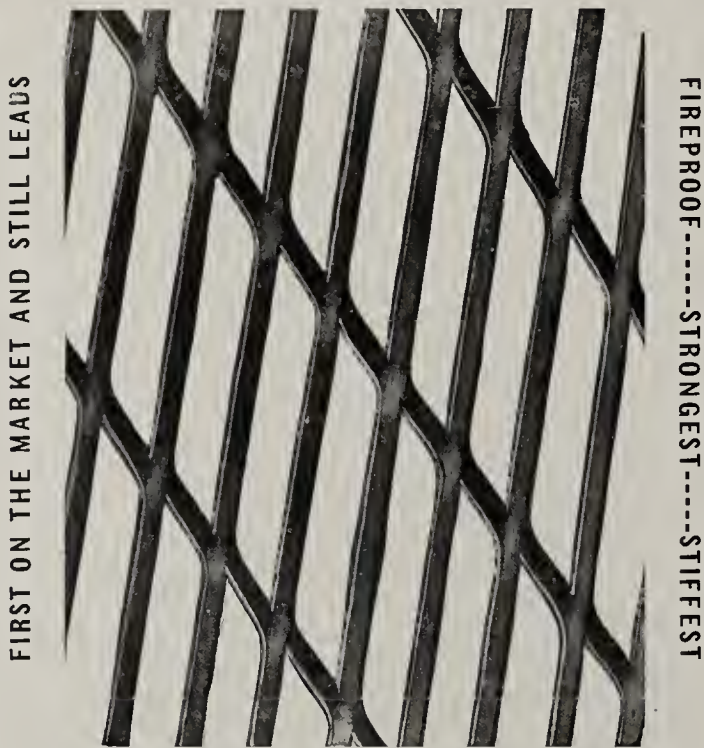
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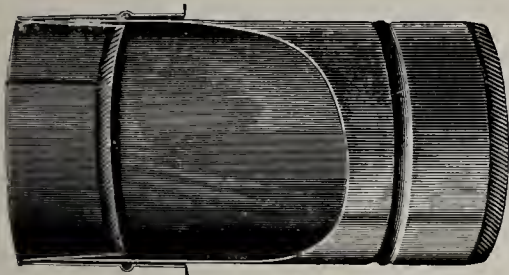
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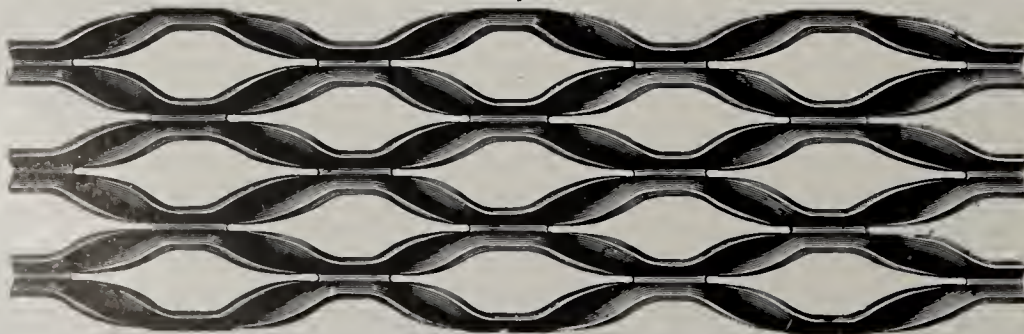


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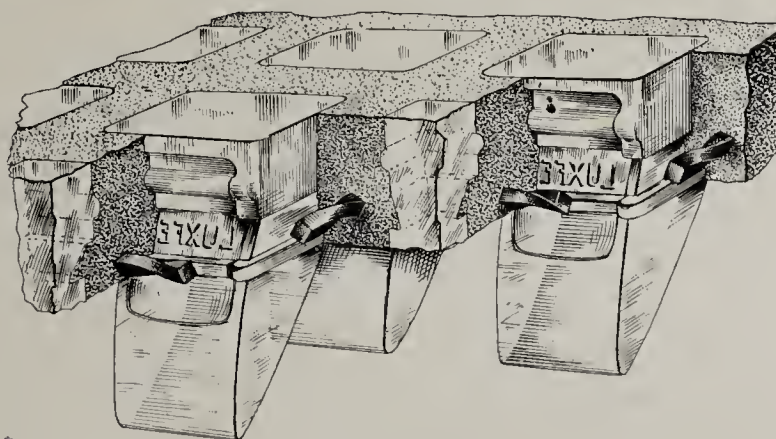
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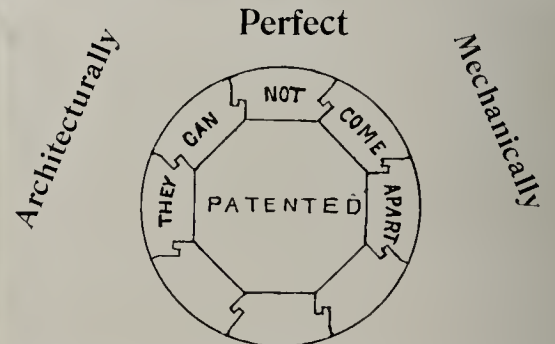
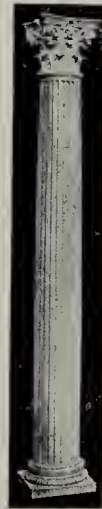
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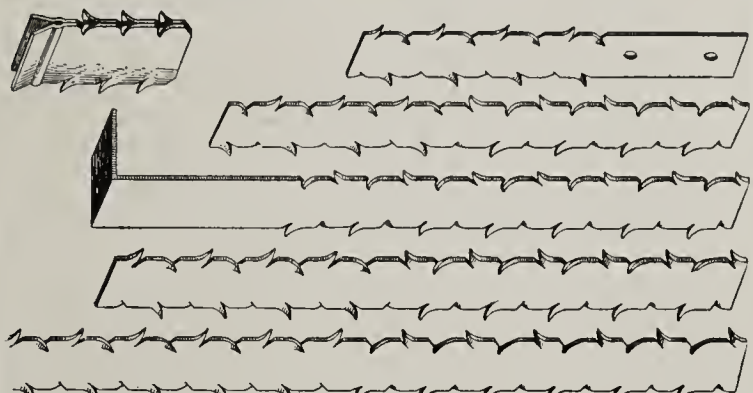
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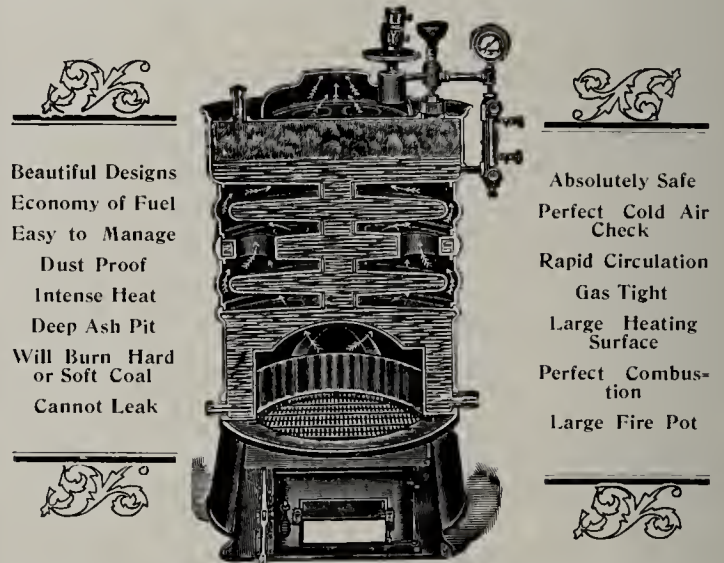
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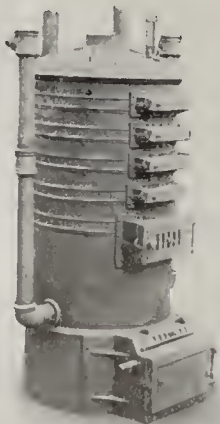
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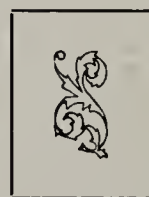
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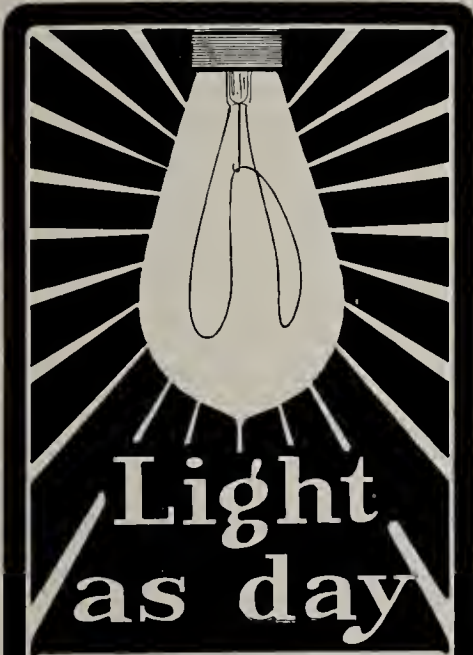
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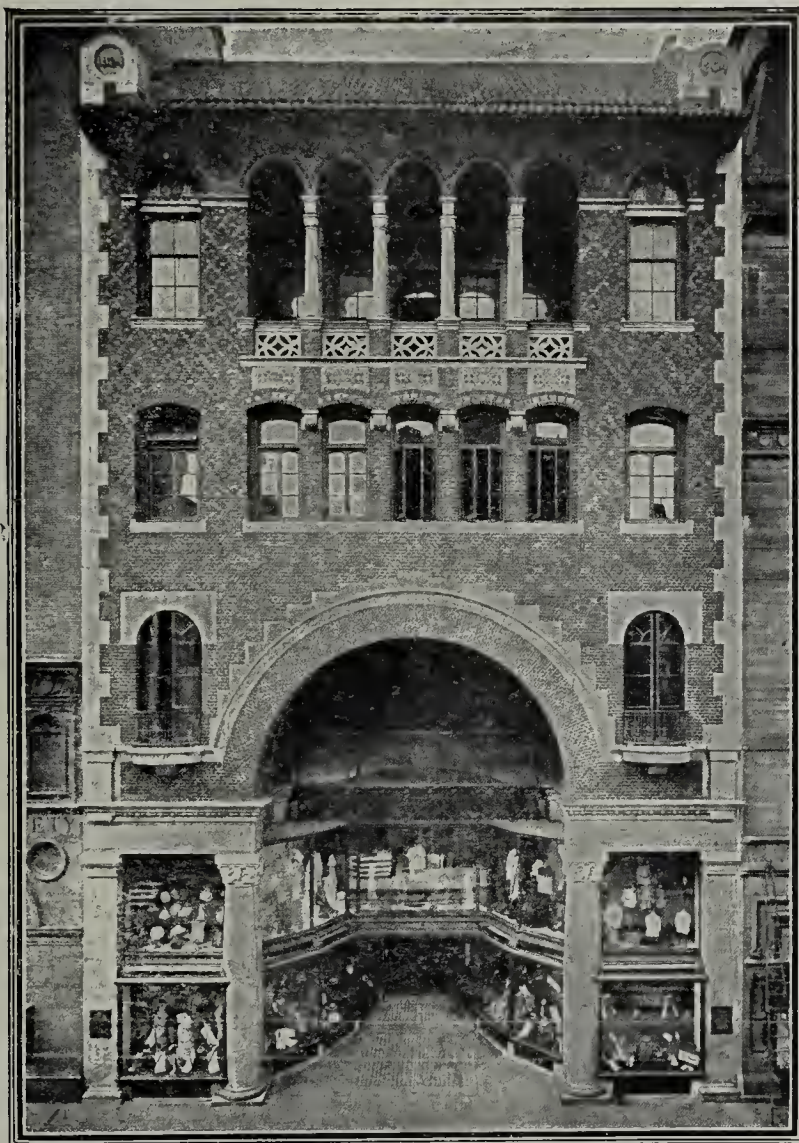
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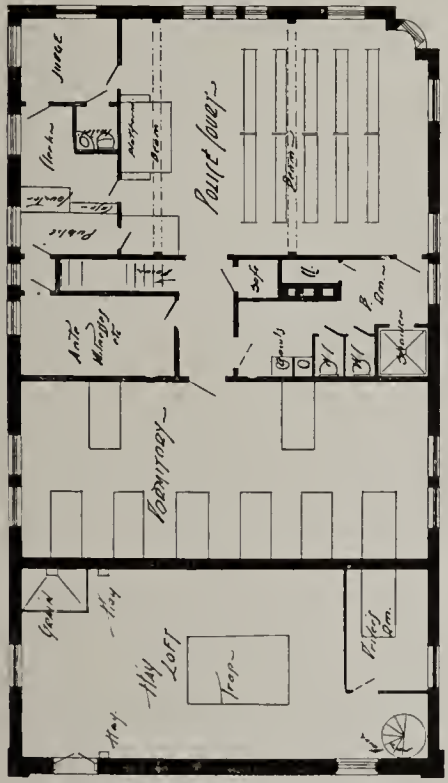


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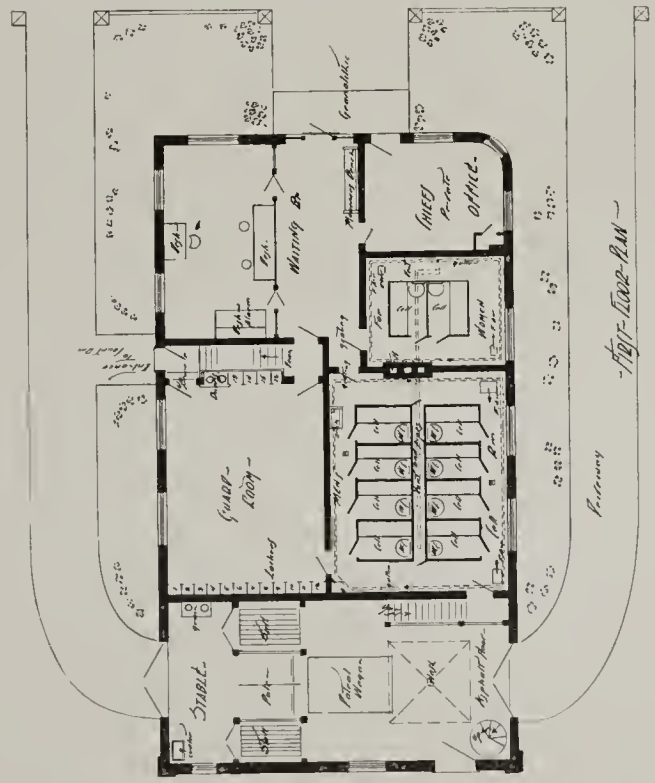


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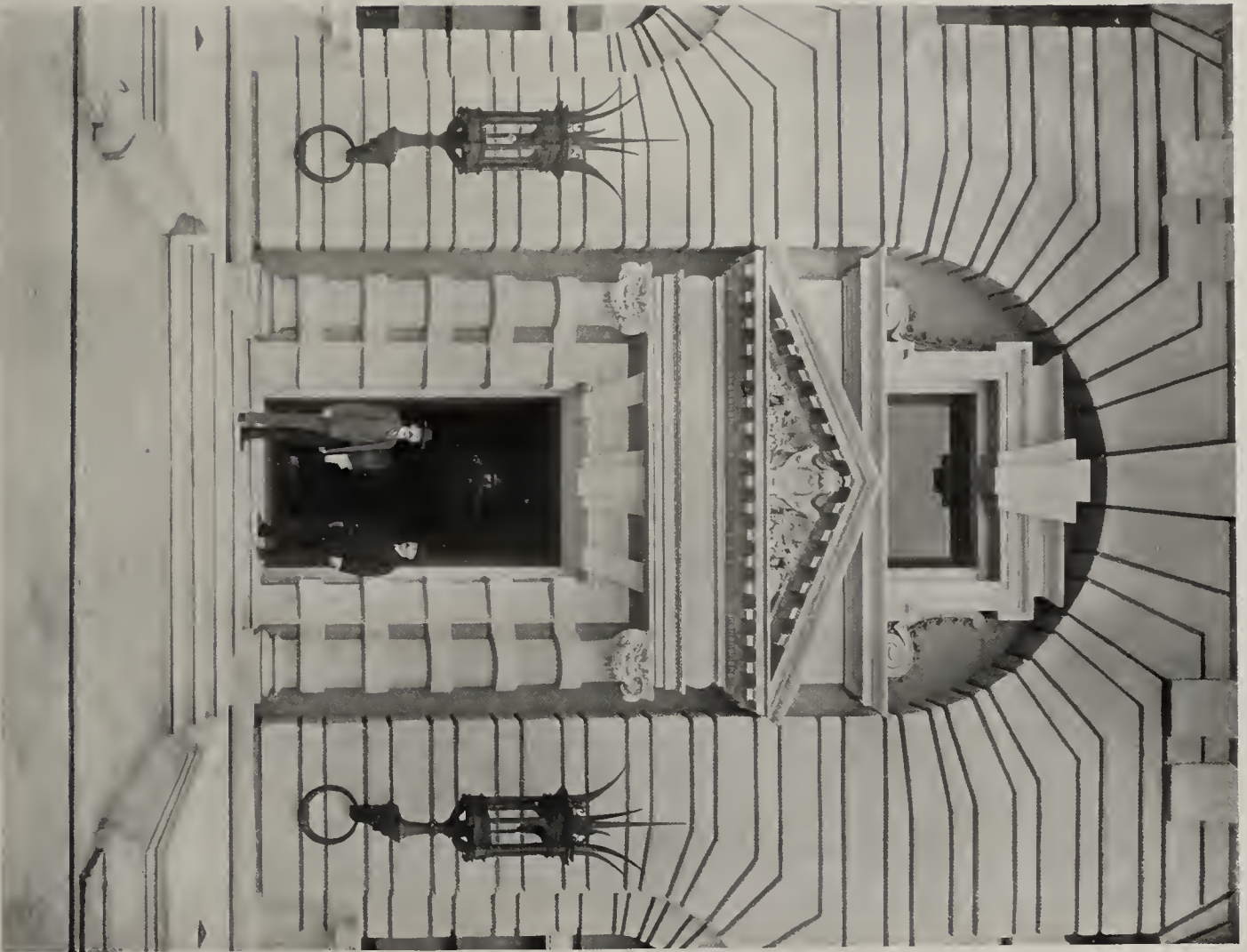
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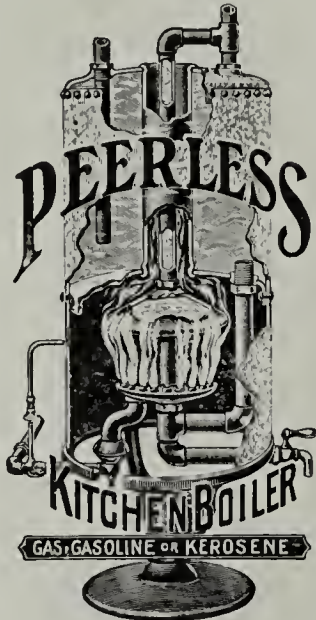
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The
Western
Architect

July 1906

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The Western Architect

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NUMBER 7.

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ROBERT CRAIK McLEAN, EDITOR.

BUILDING OPERATIONS FOR JUNE

The building operations of the country continue of great volume, and, in the aggregate, are increasing over the showing made in 1905, which was a red-letter year in the domain of construction. From the tabulated reports received by the American Contractor, Chicago, the gain over the corresponding month of last year is quite general and pronounced, less than 20 per cent of the leading cities showing a loss. One of the most gratifying and encouraging features of these reports is the widespread gains, which extend to all sections of the country, thus demonstrating the general prosperity that attends building operations. The percentage of gain in leading cities, as compared with June, 1905, are: Atlanta, 146; Baltimore, 23; Bridgeport, 65; Buffalo, 14; Cincinnati, 33; Dallas, 43; Denver, 63; Detroit, 4; Duluth, 198; Evansville, 175; Grand Rapids, 62; Kansas City, 41; Louisville, 85; Los Angeles, 55; Milwaukee, 18; Minneapolis, 19; Memphis, 55; Nashville, 20; New Orleans, 21; Omaha, 33; St. Louis, 85; Syracuse, 72; Topeka, 5; Toledo, 100; Tacoma, 119. The showing made in St. Louis is remarkable, the permits issued during the month amounting to over three million dollars, while those in Los Angeles aggregated \$2,371,620. The percentage of loss in a few of the leading cities is expressed in the following figures: Chicago, 15; Des Moines, 11; Harrisburg, 13; Philadelphia, 23; St. Paul, 39; Salt Lake City, 23; Washington, 17. These losses are trifling when contrasted with the great gains reported from other cities.



HERBERT M. CARPENTER.

DEATH OF A PIONEER.

Herbert M. Carpenter died unexpectedly at his home in Minneapolis on June 18. His death was due to failure of the heart.

Herbert M. Carpenter was born in Providence, R. I., in 1828. There he learned the jewelry manufacturing business and in 1852 married Kate Ladd of that city.

In 1854 he moved to St. Anthony, now the site of the city of Minneapolis. For two years Mr. Carpenter was a clerk in the general store of Tufts, Reynolds & Whittemore. In 1858, with George and Thomas Andrews, as Carpenter, Andrews & Co., he established a general store. In 1859 this was burned, destroying all of Mr. Carpenter's capital. Declining all offers of assistance and compromise, Mr. Carpenter determined to earn and pay every dollar of his liabilities. It took years, but he finally paid every debt, principal and interest.

In 1860 he embarked alone in the general merchandise business, was successful, bought an interest in a paper-mill, an old wooden building at the falls, with Charles Secombe and E. W. Cutter. While in the paper business in Minneapolis Mr. Carpenter became interested in the Atlas Paper Co. of Appleton, Wis.

A fondness for the occupation of his youth led Mr. Carpenter to establish the Minneapolis Jewelry Manufacturing Co., to manufacture and sell jewelry.

Mr. Carpenter's business had always been successful, but finding the jewelry business growing rapidly he disposed of his paper interests. Latterly he has been occupied with the jewelry business and the warehouse business of the Union Railway Storage Co., which he owned, and in the handling of cement, lime, etc., has become known to the building trade of the Twin Cities and throughout the Northwest.

Mr. Carpenter was a heavy owner of real estate. Among his holdings are the Nicollet ball-park property. He was the first president of the St. Anthony National bank, organized about 1870, and for twenty-two years has been a director of the Security bank.

He leaves a wife and an unmarried son, Henry. Two sons, Frank and Edwin, are dead. Mr. Carpenter was still in active business in Minneapolis. He was a member of the Commercial and Minneapolis clubs, and director in the Security Bank of Minnesota. He was an attendant at the Church of the Redeemer.

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Death of Stanford White

When a brilliant star falls from the firmament, the loss is felt by all the lesser lights until some other of equal brilliancy takes its place. In the architectural profession the loss of Stanford White will long be felt, because he, in his exquisite conception of true proportion and harmony of form and color, has left works that will stand the test of the future, no matter how great the advancement and excellence in design that may succeed his brilliant conceptions. Like genius that "creation's dawn gave to the world", he belonged to no time, nor was he confined to set conventions; therefore does society, which does not understand, condemn things that pertained to his social life. But, as a creator of great thoughts in permanent materials, so that his works live after him, he was of our best, and in those works he will be remembered. His was a creative genius of the highest order, and as the work of the firm to which he belonged was individualized, we know that which he created. Besides such structures as the Madison Square Garden, in which his life ended so suddenly at the hand of an assassin, the Fish and Tiffany houses and many of the palatial country houses of the east, his strong feeling for correct form is found, and emphasized in the monument pedestals designed by him, such as that of Lincoln in Chicago, Adams at Washington, Farragut at New York, and the many others throughout the country. He was born in 1853, the son of Richard Grant White, the well-known essayist. He began his architectural career in the office of Gambrell & Richardson, and after a few years spent in travel in Europe, he returned, and at the age of twenty-eight succeeded Mr. W. B. Bigelow as the third partner in the firm of McKim, Mead & White, and for the past twenty-five years has taken a leading part in that noted firm's activities. Like John Root, his preparatory training as a draftsman was short, for these men were born

artists and the development came with their growth rather than their training. Another name is added to the list of America's great architects, and to those of Thornton, Richardson, Root and Atwood, that of Stanford White is added on the milestones that mark the road of our architectural progress.

**An Examination
and License
Bill for
New York**

Architects in the state of New York are, in a systematic and practical manner, seeking to obtain the real sentiment of the profession in the state in regard to the passage of an examination and license law for architects. With this in view the New York chapter of the American Institute of Architects prepared a draft of a bill and having amended and adopted it, appointed a committee to report upon the matter. This report, which was unanimously adopted at the last meeting of the chapter, requests other chapters in the state to appoint committees, and these as a general committee proceed to ascertain the opinion at large, so that at the next session of the legislature a bill may be presented with the full endorsement of the profession. It is assumed that the endorsement of the bill and its passage by the legislature is a foregone conclusion, as the sentiment has long been in favor of such a measure. Some twelve years ago a similar bill was presented, largely by the Western New York chapter, and actively pushed by a committee headed by W. W. Carlin, which was twice unanimously passed by both houses and was once vetoed by the governor, and on the second passage lapsed without his signature. The general sentiment in favor of such a measure, we think, has not changed, and the practical working of a license law in other states adds to the desirability of its passage in the state of New York. The bill is printed in full in this issue.

**Provisions of and
Necessity for
New York
License Law**

The examination and license bill, formulated by the committee of the New York chapter and discussed and approved by its members, is drawn upon lines similar to those existing in similar bills in operation in other states and augmented by the experience of the boards of examiners. It, like its predecessors, still leaves much to be desired in the

way of regulation and restriction, but it is on the whole as strong a bill as could be passed without meeting with obstacles in the line of class legislation and amendments that would, if inserted, largely destroy the vital principle it is desired to establish by such regulation. In Article 13 this point is clearly apparent, but it is our opinion and that of those most versed in the obstacles met with in the passage of such bills in the past, that the largest possible latitude must be left and the greatest elasticity shown in order that some sort of regulation may be obtained. It is like a great many other measures, more for the benefit of the public than for the profession that is presenting it; but the public is not always wise and is always jealous of restriction, so that the architects of the state of New York will do the state some service by endorsing the bill and making their representatives in the legislature conversant not only with its provisions but with its prime object, that is, the safety of the people and their protection against jerry builders and incompetent construction as well as promoting artistic and coherent design.

**The Architect's
Relation
to His
Association**

There seems to be a general inclination or tendency on the part of the newspapers of the country to misunderstand the object of architectural associations, and in speaking of such confound them with trade unions. It is true that the American Institute of Architects has established a schedule of charges which is deemed "usual and proper", but it has nothing in itself that is arbitrary. When architects go into the open market and bid against each other for less or more than the minimum charge, it is considered unprofessional and therefore violates an association rule; but in this way only does the non-observance of the schedule of charges affect members. Architects of standing do not bid, but are retained because of their supposed skill in the line of work sought for, are in effect the agents of the owner, and receive compensation from him only. They compete only upon the strength of their designs, and the charge is practically the same with all architects. All deviations from this general line are more or less unprofessional, whether an architect belongs to an association or not.

SAN FRANCISCO*

BY F. W. FITZPATRICK, ARCHITECT



THE story of San Francisco's appalling disaster has been told and retold most graphically in the daily press and periodicals, the suffering of the people, the heroism of a few fire-fighters, the wise military rule—all those details have been given us artistically and impressively—though no man can fully appreciate the extent, the thoroughness of the destruction, the disorganization of everything, effected by that disaster, who has not visited and spent many days in the stricken city. Building experts and fugelmen for various systems of construction have rushed into print with glowing accounts of how their particular material "saved" the little that was left of the once proud city, their "reports" differing but little from the first excited dispatches in the daily press that stated that thousands of people had been killed and that the big "fireproof" buildings were either toppled over or melted down like wax.

It behooves us, now that the first horror, the excitement, is over, and it becomes a question of repairing the damage done, to dispassionately examine into the behavior of the different materials and modes of construction and learn something from the very forceful lessons such a conflagration must necessarily give us.

In such a study, to be thorough, it behooves us to go back a little while and see how San Francisco was built.

She was subject to earthquake shocks—very subject to them—and had every reason to expect one or many of far greater severity than the average. These little trembles had for effect that brick work set in poor mortar and improperly tied and bonded, little 4-foot chimneys and veneering and such, was frequently thrown down, so that people got into the notion that wood was the only quake-proof material to use in building. And so they used it until the city became a veritable lumber yard, and a new danger was introduced, the fire hazard. Finally, the building laws that always have been and are now a hodge-podge, compelled people within a very limited district to use brick or stone enclosing walls, though the framing, the internals, of far too high buildings could still be of wood. The insurance companies, innocently or foolishly, aided and abetted the growth of this fire hazard by writing insurance at an exceedingly low rate on San Francisco, because of that city's especially fine Fire Department! Less than twenty years ago

the first very tall building was built, using a steel frame. People generally and the building authorities tried to discourage this mode of construction, because of its great danger in case of earthquake—they expected the tall steel frame to topple over at the first shake. There was so much fuss made over the matter that the architects and engineers have done really very fine work in those steel frames; they are braced and trussed and tied so that, though there was vibration and some action in the great quake, not one of them was materially affected, and what people had deemed the greatest risk was virtually the only thing that went through the experience more or less intact. In those big buildings, however, the foundation and the steel framing were generally the only two things



The only thing that went through the experience more or less intact was the steel building

in which extra precautions were taken. The stone work, the brick work, the fire-proofing, everything else about them, was no better done or more firmly tied, and, in fact, not nearly as well so as is common in the East, where quake is a very remote contingency. Nor was anything done, any extra precautions taken, in those big buildings, with one or two exceptions, to prevent the spread of fire in their contents, their finish, floors, etc., to the complete destruction of everything damageable by fire and even great injury to really fireproof details. They were "fireproof", those buildings, only in that the steel work was more or less protected by tile or concrete and the floors themselves

(*Notes after a thorough investigation of the results of the San Francisco disaster, made as Executive Officer for the International Society Building Commissioners, the United States Government, the technical press, etc., etc.)

and the partitions were either tile, concrete or some patent plaster. That one detail constituted a fire-proof building and was expected by some mysterious or occult agencies to impart immunity to however burnable materials that were used in the rest of the structure. And none of that fireproofing, even, was done in accordance with our very best Eastern standards of construction.

Such was the city and its state of unpreparedness when quake and fire, and dynamite in unskilled hands, sought to effect its utter and complete ruin. The surprise is not that the fire was so great but that it stopped where it did and was as lenient with the big buildings as it proved to be. It was an all-searching fire, long continued, insistent, meeting comparatively



The steel frame and the foundation were well done in the big building

little opposition and thorough in its work, though it was not at any time as fierce a flame or developing as high temperatures as the Baltimore fire, that was accompanied with a hurricane wind.

To this absence of high temperatures in the big buildings is largely due the fact that there was as little damage effected as we have to note, rather than to any special care and prevision in their construction. Then, too, as in Baltimore, the fire was freaky. It would lap around and linger about one corner of a building and perhaps lightly pass over the others, where as great damage could have been effected; indeed, what little breeze there was accompanying the

fire and the currents created by it were so erratic that here and there even a wooden building is but partially consumed or perhaps but little affected, while telegraph poles still stand and occasionally a wood or cloth sign still remains intact, while all about it is utterly destroyed or damaged beyond salvation.

In nearly twelve square miles of territory, seven hundred blocks, there are perhaps fifty buildings standing, in more or less damaged condition. The Appraisers' warehouse and the Mint were old-time structures, mostly iron and brick, and were undoubtedly saved by the efforts of the employees, who remained "steadfast at their posts" and used wet blankets, gunny sacks—anything at hand—to extinguish the blazes caused by falling embers or flames lapping through broken windows; similarly, manpower had much to do in saving the Postoffice, though that was of the newer and probably the best construction in the city. Most of the big steel frame buildings had all the damage done to them that could possibly be done, while some remained more intact than others by reason of a little more care in construction or by accidents of fire; but the wooden buildings, save in perhaps two or three instances of marvelous and mysterious escape, left little to tell the tale. A chimney here and there or perhaps a front or a party wall and a few iron beams, twisted into corkscrew shape, and a mass of debris encumbering the street, are all that mark the site of some of the costliest and nearly all the "ordinary" buildings of the proudest city of our country.

To the building expert, the one who knows the real significance of the term "fireproof construction", there was much to observe, lessons illustrated and that sort of thing in San Francisco; but nothing new was developed nor anything brought forth that would tend to change one's ideas of how things ought to be, though to the many architects who look upon the matter of fireproof construction as something unattainable, mysterious, occult, the lesson of that awful fire ought to be particularly impressive, a revelation, an indice of what ought to be done and what ought not, far more potent than has been all of our preaching in these many years.

The steel frame and the foundation were well done in the big building; but high eulogium cannot be given to any other detail. The curtain walls, supported from story to story, were hardly ever properly and completely bonded and seldom tied at all adequately to the steel frame. The result was that the quake cracked many of those walls and shook some out of place; granite and stone and marble were used all too frequently externally, and wherever fire struck them, spalling and irreparable damage ensued. Brickwork was seldom damaged as far as the brick was concerned, but lack of bond and tying and the use of lime

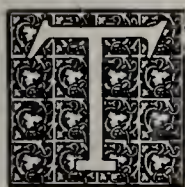
mortar demonstrated that such was not the best practice, though the damage to the brickwork of the tall buildings was remarkably slight, all things considered; terra-cotta, where well made, of equal thickness throughout all exposed parts, and with a sufficiency of web and stoutly tied in place, showed itself by a long distance vastly superior to all else for external decorative features. Where earthquakes are so frequent it seemed like folly to lay a two-inch tile protection around an important steel column, merely clipping with galvanized iron at the corners and making these tiles part and parcel of the partition and set up often in lime mortar.

(Concluded next month)

REINFORCED CONCRETE CONSTRUCTION

(Concluded)

BY CHARLES F. WHITTLESLEY, ARCHITECT



A HOSE beams nearest the mixer are usually filled first. This is to avoid getting dirt into the beam boxes, by constantly wheeling over them, for when the steel has been placed in the boxes it is difficult to clear the bottom of dirt which may drop into them. The method also permits the steel gang to work ahead of the concrete gang without interfering with each other.

It also admits of the floor steel being left out until the beams are all in place. The forms should be rigid and well braced for this method of working, to prevent excessive vibration in the concrete after it is in place and partly set, by wheeling the concrete barrows over it.

There is a general tendency among concrete constructors to use forms built of material too thin and put together in a flimsy manner. Good stiff forms not only make better work, but are not more expensive, because they require less bracing to make them rigid.

The relative merits of the various systems of reinforcing construction and the comparative advantages and disadvantages of mild, medium and high-carbon steel would require many pages to develop, and may be had by those who are desirous of pushing their investigations of the subject, in the works of Marsh, Buel & Hill, Taylor & Thompson, Considere, Christoph and other writers on the subject. A few general remarks here will, therefore, be given only as a synopsis of the subject.

High-carbon steel should be used only by those who have the knowledge and discretion to apply it judiciously. Its economy is not so great as might be supposed, judging by the difference in ultimate strength compared with mild steel. The base price of high-carbon steel is not much greater than mild or medium steel, but the price advances as the sizes reduce, and, in ordinary working, values for high-car-

bon steel will give such small sizes that the net price would be nearly as much as the cost of medium steel to do the same work. Medium steel gives good values for working strength, and is not too brittle for bending and twisting cold, and is not liable to break under a severe shock.

While the majority of the work in Europe has been built with plain, round steel, and with satisfactory results, there are reasons why a twisted square bar is better for many purposes. Twisting the steel unquestionably increases its working strength, furnishes a continuous mechanical bond, and the twisting process throws off the scale from the surface, which allows more perfect adhesion of the cement to the steel. It also furnishes a test of the homogeneity of the steel. Many patented bars are on the market, several of which are good, but none of them offer any advantage over the twisted bar, on which there is no royalty.

Generally speaking, a number of small rods are better in a girder than a few large ones, and plenty of stirrups of small section are very desirable, not only to provide for shear at the end of the beam, but to tie it securely to the floor slab, forming an effective T beam.

To Ransome is due the credit for the introduction of the twisted square bar, and to Hennebique, the introduction of the U bar or stirrup. These are the most important features introduced since the system was first brought into use.

The wide range of difference in results obtained by those who have experimented for the purpose of determining the modulus of elasticity of concrete, has probably influenced conservative engineers more than actual failures of executed work, and has made them reluctant to use it until it has been more firmly established.

New formulas for the strength of reinforced concrete beams are frequently presented to readers of the leading engineering journals, which usually bring forth in the next issue a hot criticism with an offer of some other, considered better. It might be unwise for a mere architect to attempt to discuss formulas in the stronghold of the engineers, and I will leave that part of the question to be settled among yourselves, being content to use that which well-known representatives of your profession have offered, as representing conservative practice, until such time as exhaustive experiments shall establish more accurate data. The most generally accepted formulas are those offered by Prof. W. K. Hatt, A. L. Johnson, C. E., and Edwin Thatcher. These formulas, though based on practically the same theory, differ in treatment. But when the proper substitutions are made for the physical properties of the concrete and metal, they reduce to practically the same form, which is the same as that

for a wooden beam. The only difference being that for wood the constant represents but one variable, the fibre stress in the wood; while in the reinforced concrete beam, the constant depends upon the kind of cement used, the proportion of aggregate to matrix, the method of working, the age of the concrete and the character, position and amount of metal in the reinforcing members. It is, therefore, impossible to fix a constant, or several of them, to fit all cases.

The question of the correct design of column is one that is now exciting wide-spread interest.

The Philadelphia building laws require that the entire load shall be carried on the concrete at 500 lbs. per sq. inch, and that the reinforcement be calculated for flecture only. This is manifestly unfair, as it is evident that the steel will at least carry a load proportional to the co-efficients of elasticity of steel and concrete.

The New York City laws approach more nearly to what appears to be the correct method of design: 350 lbs. per sq. inch is allowed on the concrete and 5000 lbs. on the steel reinforcement. Just why these low values were adopted is not apparent, but 350 lbs. for an average concrete of 1-2-3 or even 1-2-4 mixture, is too low. A better set of values would be 500 lbs. on the concrete and 5000 lbs. on the steel, in which case the stress would be proportional to their co-efficients of elasticity.

But the question of the co-efficient of elasticity of concrete again enters. Is not the co-efficient of elasticity of concrete increased by reinforcement; and, if so, cannot the steel be stressed to a greater extent? Also, does the increase in the co-efficient of elasticity increase with the percentage of reinforcement used, and, if so, what is the safest and most economical percentage?

The Considere column is probably the most desirable form for concrete, for in it the vexed question of ratio does not enter. In this column the main reinforcement is placed horizontally in the form of a spiral near the outer surface of the column. This unquestionably greatly increases the resistance of the concrete. Considere, in many tests, found values as high as 9000 lbs. per sq. inch.

Prof. I. Woolson, of Columbia College, made some similar tests. Three-inch steel cylinders, one-eighth to one-fourth inch metal and 12 inches long, were filled with concrete. When these were 17 days old, they were tested with loads varying from 120,000 to 150,000 lbs., or over 20,000 lbs. to the sq. inch. Even then the failure was not complete, those with the heavier tubes being practically unchanged, while the lighter tubes distorted considerably, but still the point of complete failure was not reached.

In this form of column the action seems to be similar to that of sand in a sand pile. The carrying ca-

capacity of the pile is limited only by the resistance of the enclosing cylinder.

The objection to this form of column is its increased cost.

In any case, a column designed with vertical rods as the main reinforcement, should have horizontal ties between the rods, as this not only increases the compressive resistance of the concrete, but also gives a unity of action not otherwise obtainable. Likewise, in a hooped or Considere column, sufficient vertical rods should be used to resist all the tendency of flecture.

THE RELATION OF DECORATIVE PAINTING AND SCULPTURE TO ARCHITECTURE

(Concluded from Page 40)

BY A. D. F. HAMLIN, PROFESSOR OF ARCHITECTURE,
COLUMBIA UNIVERSITY



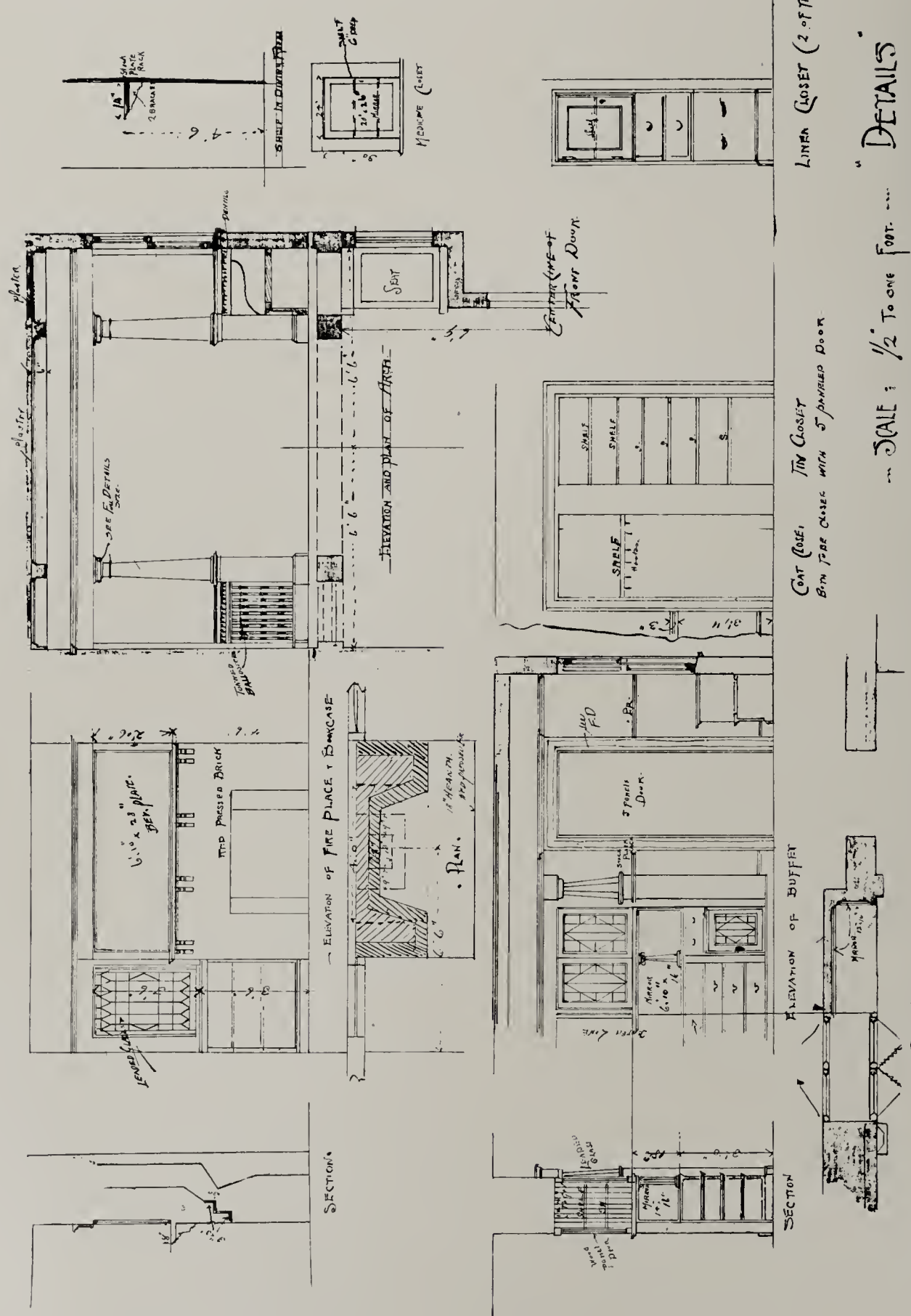
WHEN the Roman empire fell it seemed as though religion, art and learning had been involved in one final cataclysm. Constantinople alone held high the torch of culture, and even in her dependent provinces the arts of pictorial representation were still practiced with a skill which still elicits the enthusiastic admiration of the pilgrims, too few in number, who visit the illuminated streets of Ravenna. And in the west, out of the ruins of the ancient Roman civilization, under the hands of the descendants of the barbarians who had wrecked it, there grew up a new art, more earnest, more progressive, more original and more daring even than that of the Eternal City in which the sculptor's hand—which early Christian prejudices had put in the pillory—wrought more freely and grandly than ever before. A new and passionate fever, an imagination kindled to feverish excitement by mingled faith and superstition, fashioned its dreams into stone for the beautifying of God's sanctuary and the instruction and inspiration of the devout. Portal and tabernacle and choir screen were peopled with the creations of the dreamer's chisel; heaven and hell were made visible to the worshiper, and the flowers of the field and leaves of the forest were petrified into wreaths of stone on mouldings and capitals into crochets and finials into bands and edgings of exquisite beauty. The painter's art alone lagged behind that of the sculptor, but only because the artist in glass had taken his place; the window glowed with color instead of the wall, and told the story of the Fall and Redemption, and pictured our Lord in colors more brilliant than painter or mosaic worker could ever produce.

The intellectual revival of the Renaissance followed the decline of mediæval art. In Italy, where the Western Gothic had never wholly displaced the semi-classic Romanesque, the new era brought with it the

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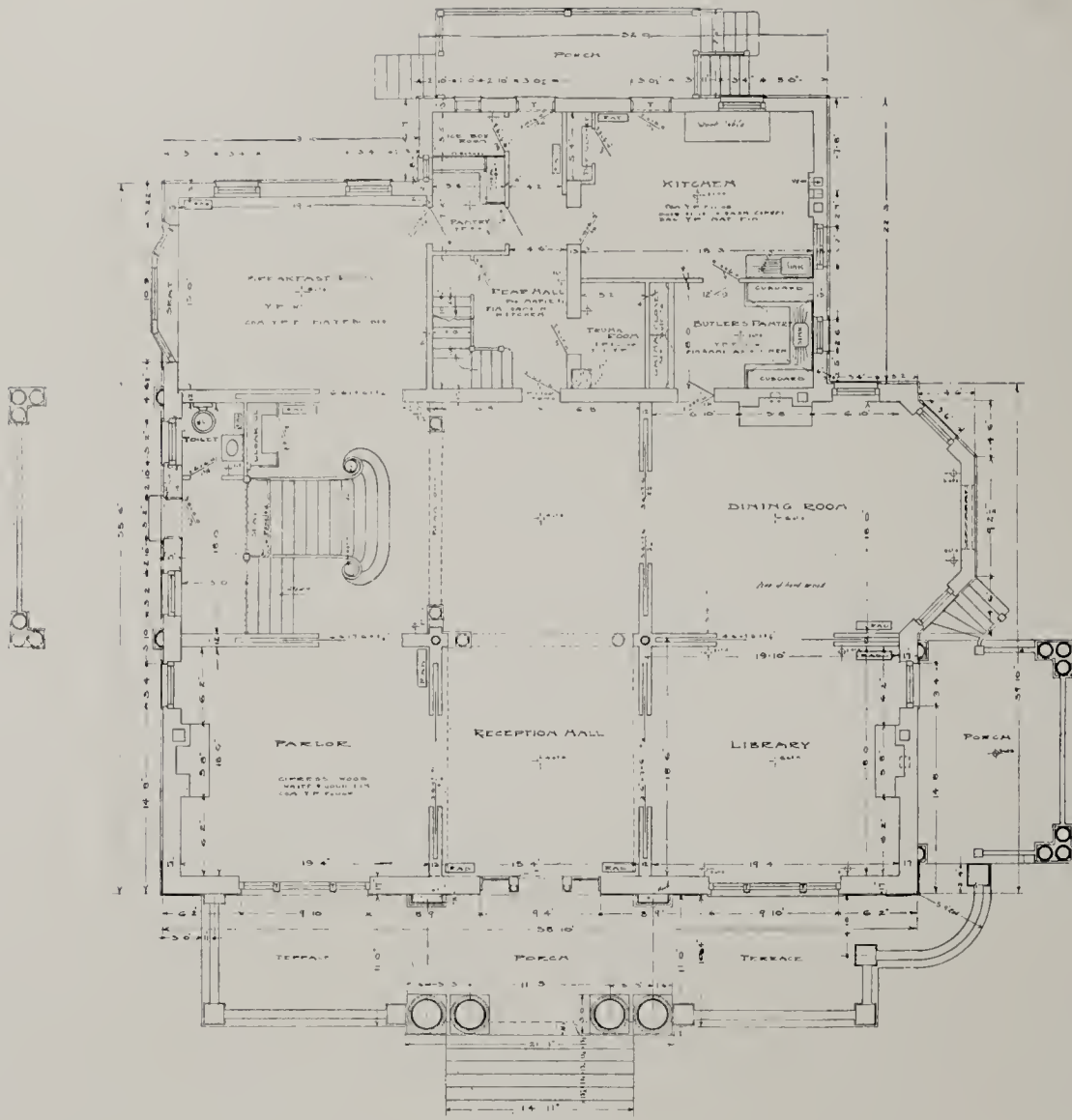
SCALE: 1/2 TO ONE FOOT.

DETAILS

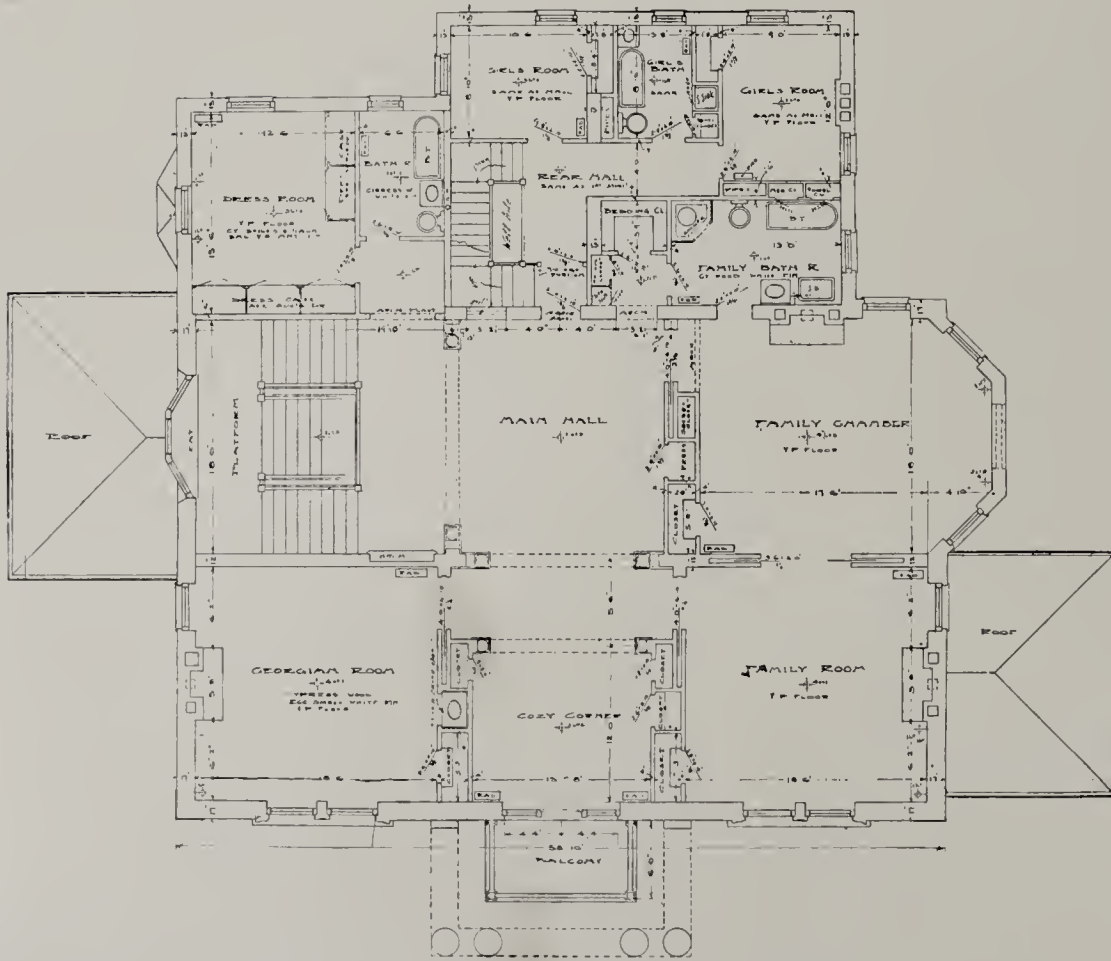
COAT CLOSET WITH 5" PANNELED DOOR

LINEN CLOSET (2 OF THESE)

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FIRST FLOOR PLAN.

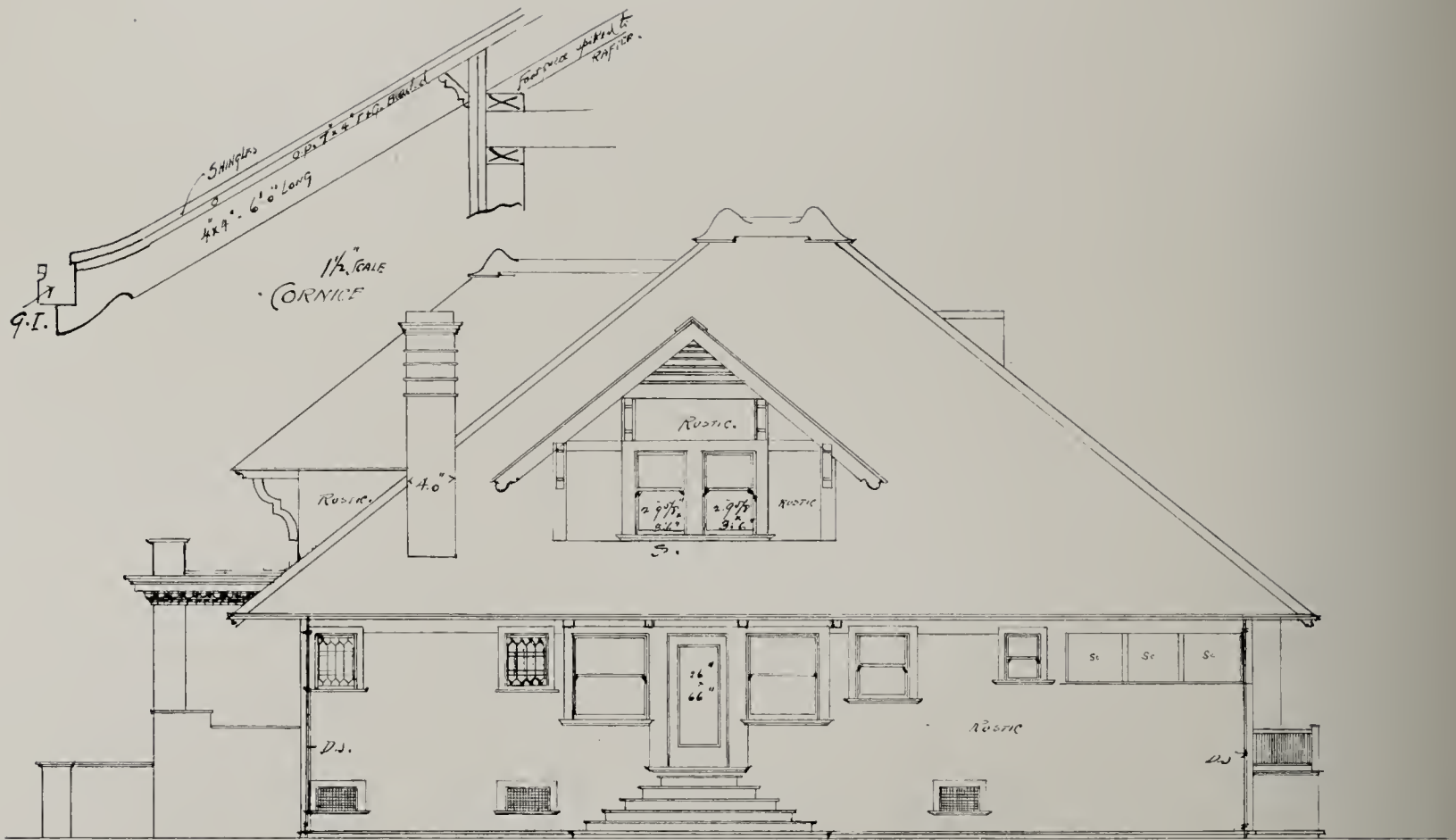


SECOND FLOOR PLAN.

PLANS OF RESIDENCE OF DOCTOR STICKNEY FRENCH, ST. LOUIS, MISSOURI

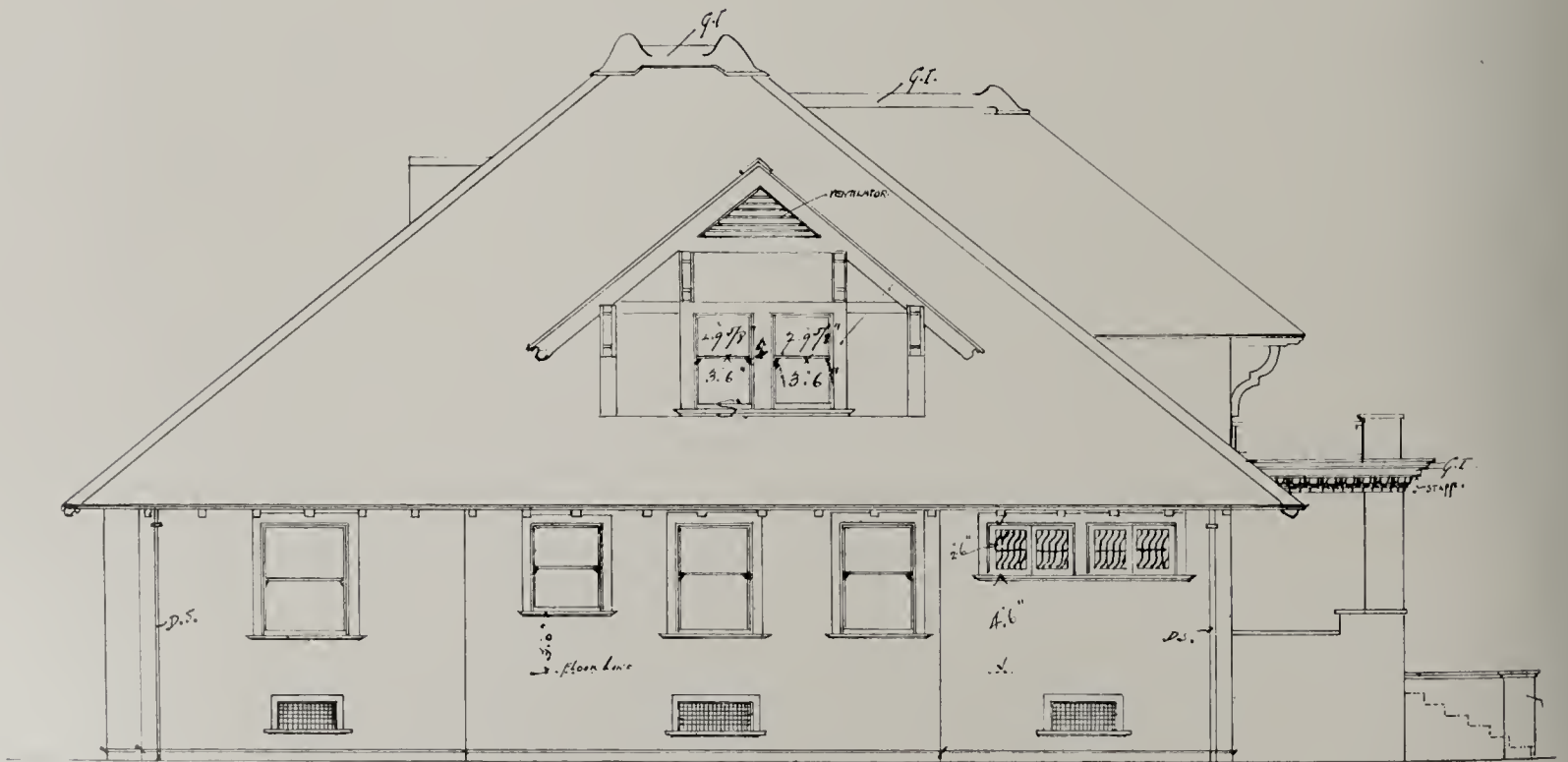
J. B. LEGG ARCHITECT

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SCALE: 1/4" TO ONE FOOT.

— NORTH ELEVATION —



SCALE: 1/4" TO ONE FOOT.

SOUTH ELEVATION.

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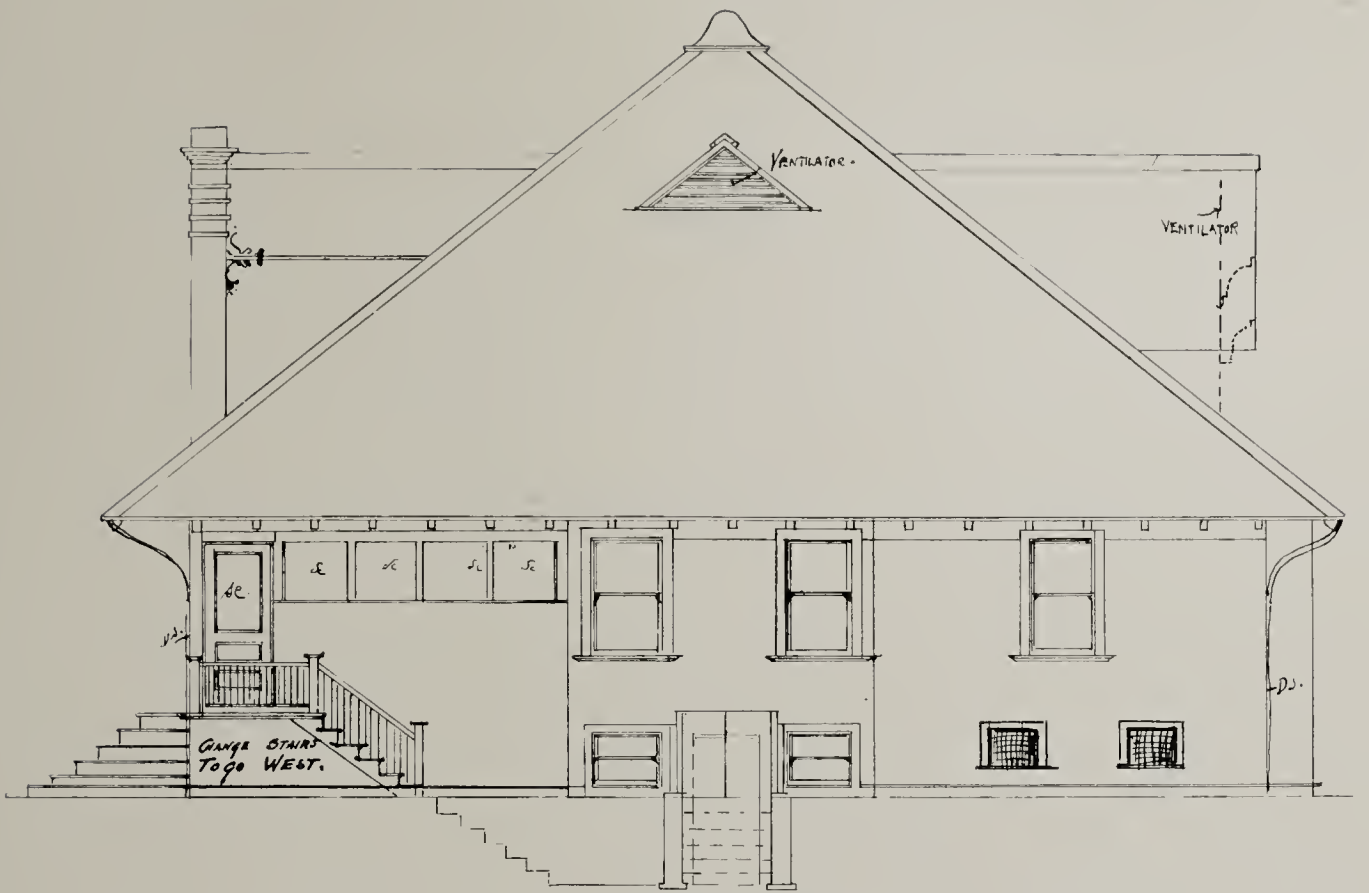


ITALIAN GARDEN OF MRS. J. I.
HUNT &



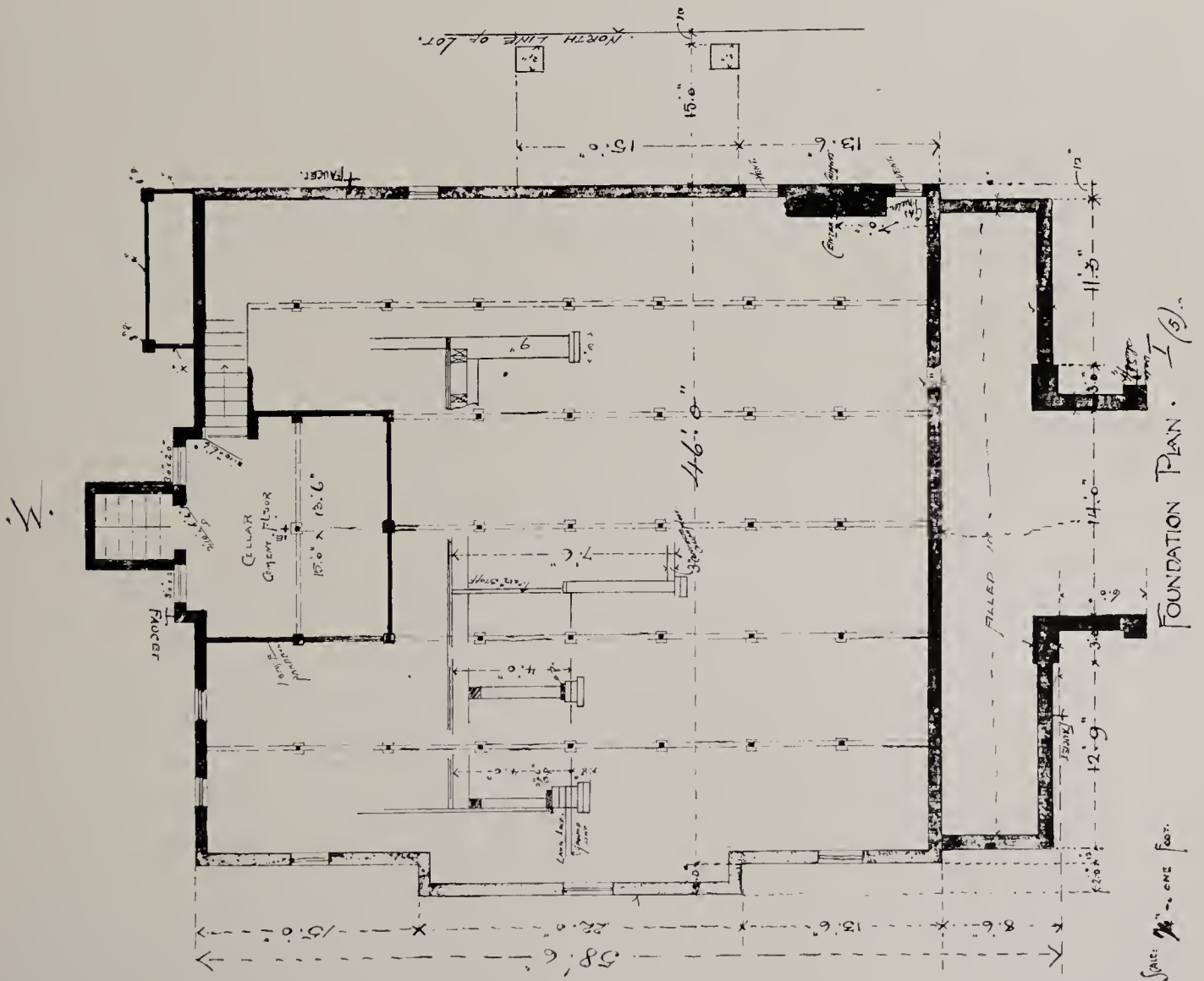
LOS ANGELES, CALIFORNIA
ECTS

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SCALE - 1/4" TO ONE FOOT.

REAR (WEST) ELEVATION



FOUNDATION PLAN - I (5)

SCALE: 1/4" = ONE FOOT.

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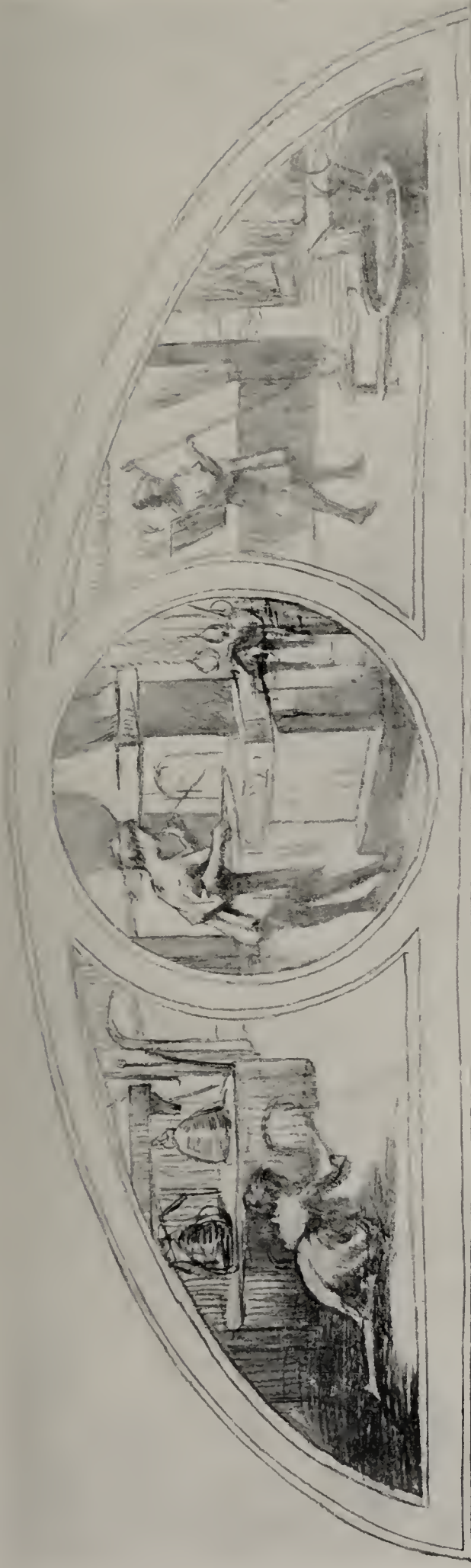
SCOTTISH RITE CATHEDRAL
ST. JOSEPH MO.



SKETCH OF RESIDENCE OF DOCTOR STICKNEY FRENCH, ST. LOUIS, MISSOURI
J. B. LEGG, ARCHITECT

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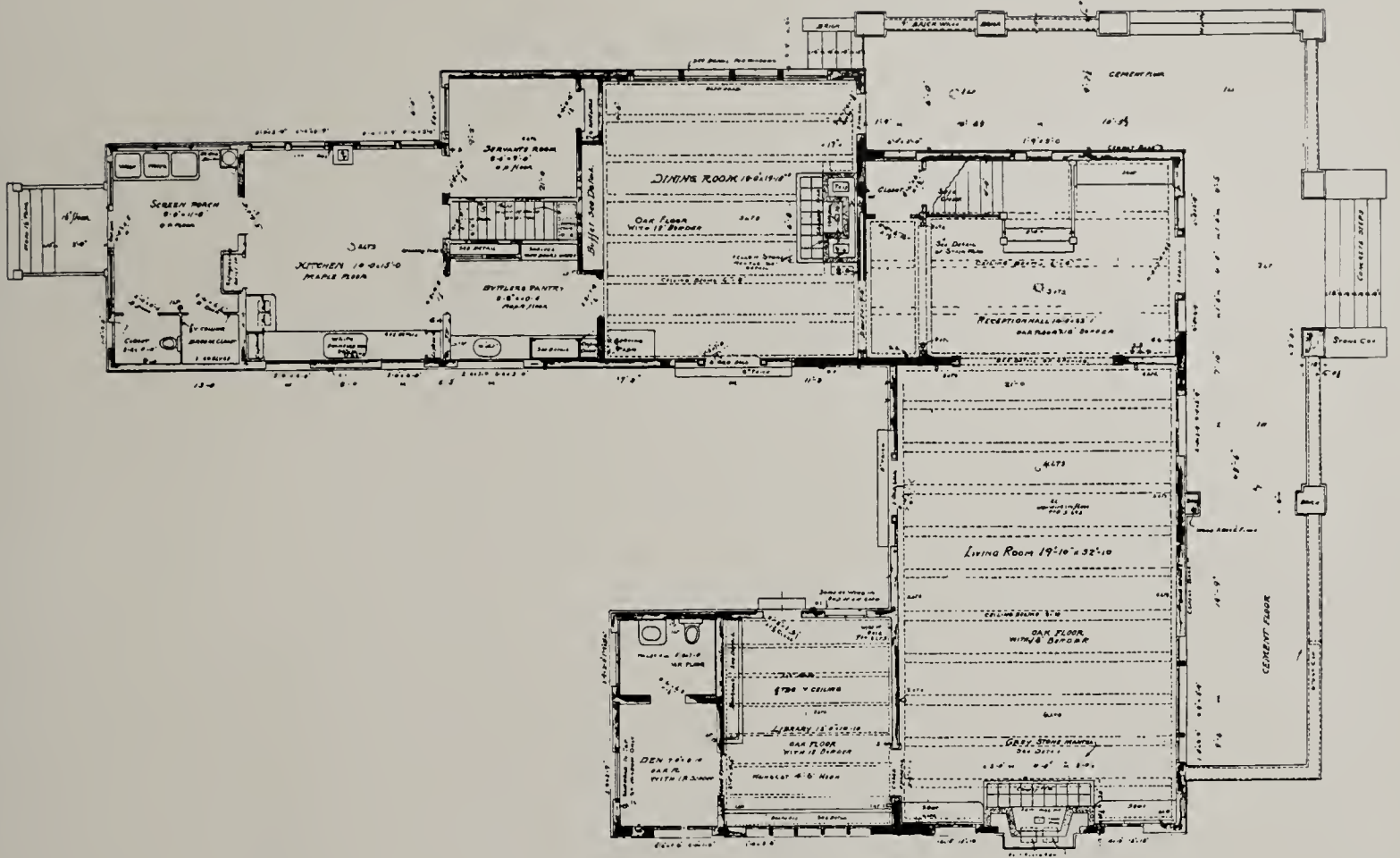
COPYRIGHT BY W. B. VAN INGEN, 1906

CHARCOAL SKETCHES FOR THE MURAL DECORATIONS IN THE UNITED STATES MINT AT PHILADELPHIA

BY W. B. VAN INGEN, NEW YORK

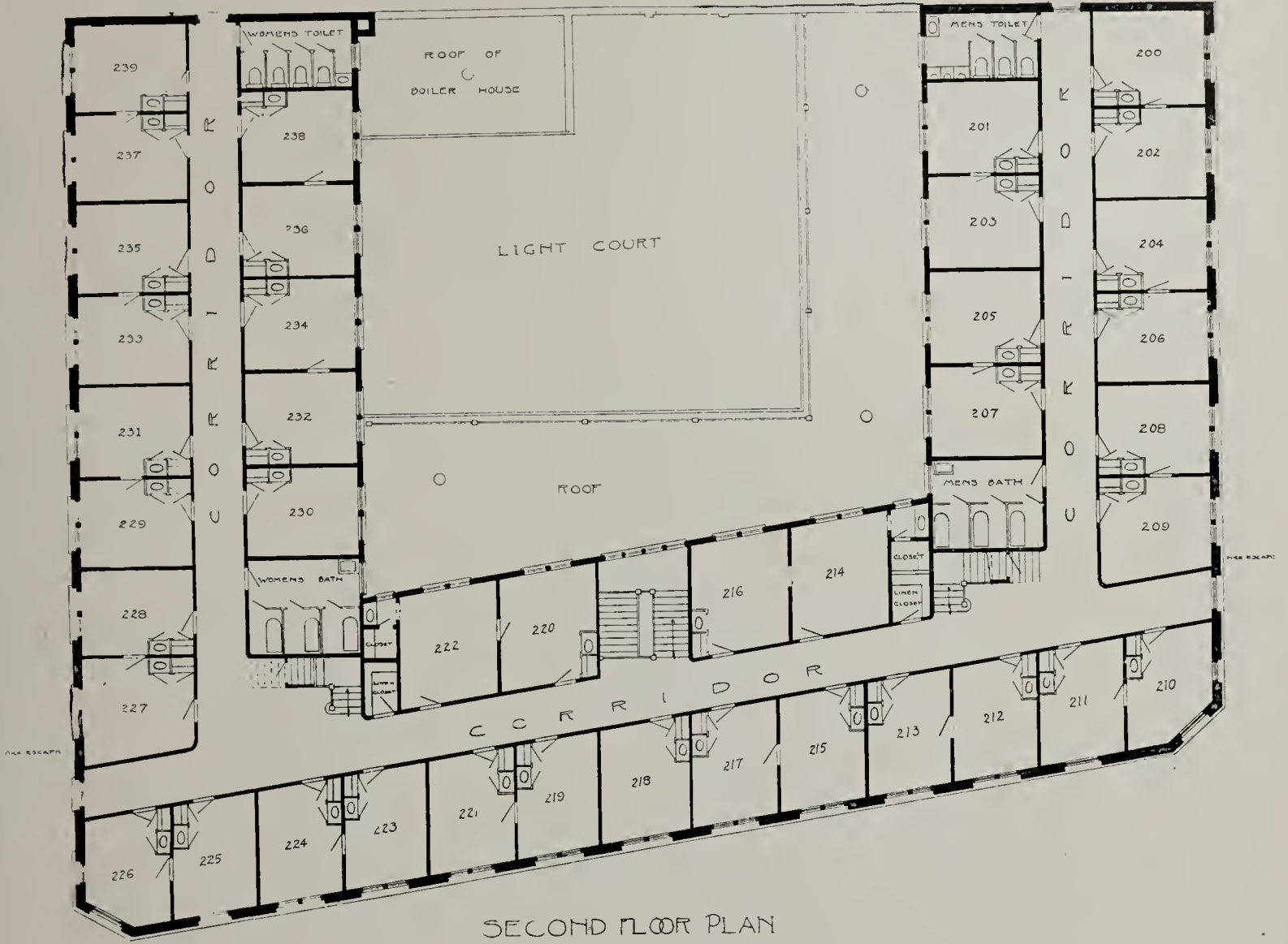
THE WESTERN ARCHITECT
JULY
1906

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RESIDENCE OF H. R. ANGELO, LOS ANGELES, CALIFORNIA
 BROOKS AND FERGUSON, ARCHITECTS

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SECOND FLOOR PLAN



STORES AND APARTMENTS FOR NEWMARK BROS., LOS ANGELES, CALIFORNIA
A. F. ROSENHEIM, ARCHITECT

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SKETCH FOR OFFICE BUILDING FOR NUMBER ONE WALL STREET CORPORATION, NEW YORK
BARNETT, HAYNES AND BARNETT, ARCHITECTS, ST. LOUIS, MISSOURI

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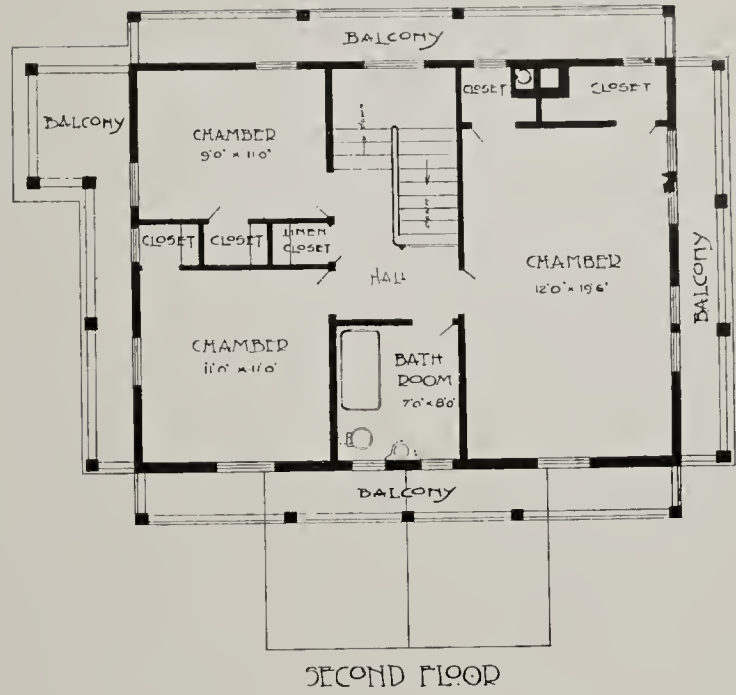
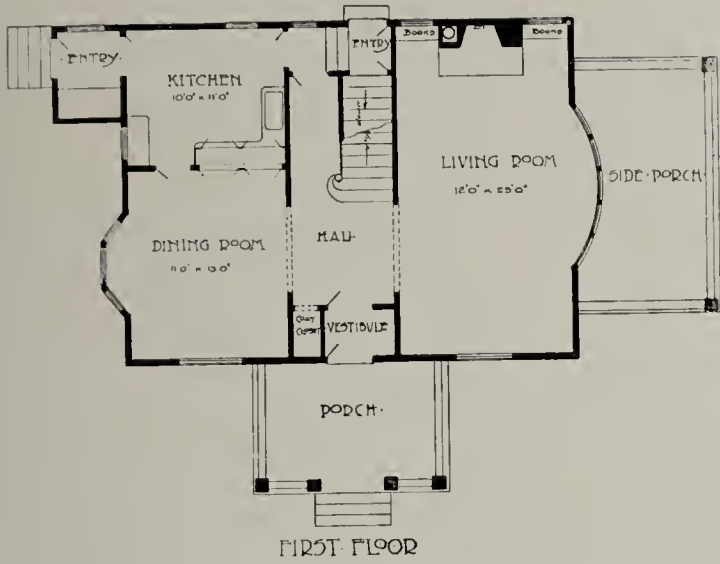


VICTORIA OFFICE BUILDING, ST. LOUIS, MISSOURI

EAMES AND YOUNG, ARCHITECTS.

(REMODELLED FROM ST. NICHOLAS HOTEL BY ADLER AND SULLIVAN)

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RESIDENCE OF FRANK E. COVELL, COTTAGE CITY, MINNEAPOLIS, MINNESOTA
 L. A. LAMOREAUX, ARCHITECT

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PHOTO BY GRAHAM PHOTO CO.

DRAWINGROOM, DOHENY RESIDENCE, LOS ANGELES, CALIFORNIA

HUNT AND ENGER, ARCHITECTS

THE WESTERN ARCHITECT
JULY
1906

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PHOTO BY GRAHAM PHOTO CO.

STAIR HALL, DOHENY RESIDENCE, LOS ANGELES, CALIFORNIA

HUNT AND EAGER, ARCHITECTS

THE WESTERN ARCHITECT
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PHOTO BY GRAHAM PHOTO CO.

LIBRARY, DOHENY RESIDENCE, LOS ANGELES, CALIFORNIA

HUNT AND EAGRE, ARCHITECTS

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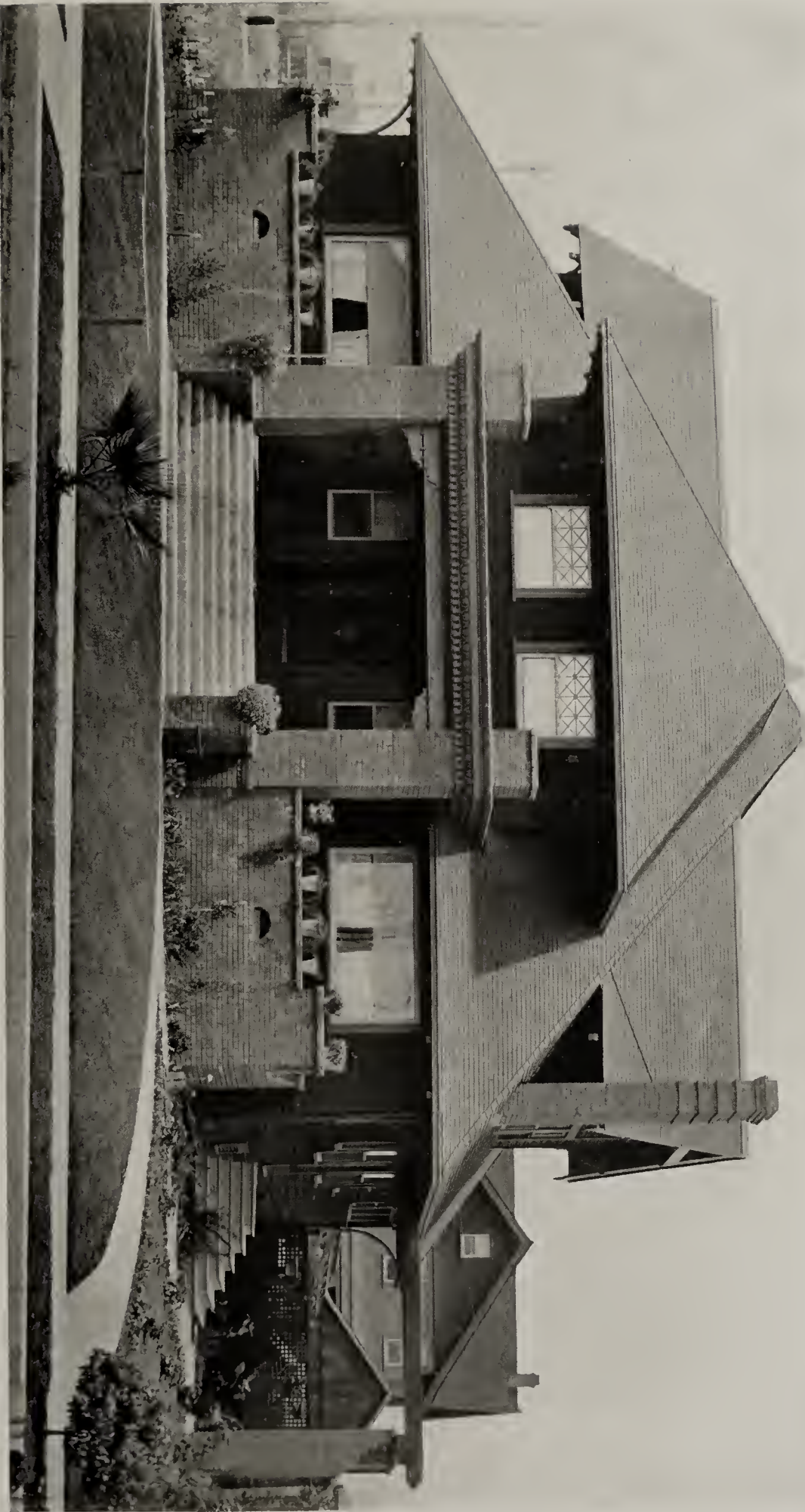


PHOTO BY GRAHAM PHOTO CO.

RESIDENCE OF EDWARD DOHENY, LOS ANGELES, CALIFORNIA
HUNT AND EAGER, ARCHITECTS

THE WESTERN ARCHITECT
JULY
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BUNGALOW FOR HENRY SHULPHIS, LOS ANGELES, CALIFORNIA
Julius W. Krause, Architect

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supremacy of painting, and sculpture to-day a secondary place in the service of architecture. Its latest effort in this service in Italy is seen in the lovely terracotta finish. For three generations the Della Robbia family retained the secret, sweet and tender, too delicate for its task, unfitted to adorn grand exteriors of imposing scale. Decorative sculpture experienced a temporary revival in Italy in the Baroque period, it is true, but with a few exceptions the angels and cherubs, the mourners and virtues of Berini and his successors were acrobatic rather than artistic, and decorative art sank to singular depths of degradation and bad taste in the gaudy interiors of the Jesuit churches of the seventeenth century.

Painting, on the other hand, rose to its highest and noblest flights in the Italian Renaissance. An unceasing tide of pilgrims pay homage to the supreme masters of the art of pictorial decoration and to a host of brilliant followers who have missed the first rank only because of the exalted genius of these masters. Is there a finer room in the world than Raphael's Camera Della Segnatura; a lovelier gallery than his Loggia in the court of San Damaso; a sublimer interior than the chapel which Michel Angelo glorified with his seer-like visions? What would not one give, what would one ever take, in exchange for the stuccoed interior of the Villa Madama, or for the Salo del Collegio of the Ducal Palace at Venice, or for the Library of the Cathedral of Sienna, or for Benozzo Gozzoli's little chapel in the Riccardi palace? Or turning back to the pre-Raphaelites, would Florence for any conceivable sum give up the Braucacci, the Stiozzi and the Spanish chapels, or Assisi her church of Saint Francis, or Padua her Arera chapel?

But surely before a gathering of architects there is no need of arguing for what every one accepts. There is less need to preach to the few architects who have never risen to its realization, the essential importance to architecture of the arts of decorative painting and sculpture, than to impress upon the general public the fact that architecture is almost a lifeless art without these sister arts. When the general public shall awaken to this fact, the sister arts will bloom with a new life, and architecture in America will rise to new heights; not in feet and inches, in which it has already gone beyond the bounds of moderation, but to new heights of artistic excellence, of imagination, of plastic beauty. A work of architecture unadorned may possess high qualities: grandeur, excellent proportions, refined detail, noble masses; but it stops short of the highest excellence; it misses the quality of life, it fails to stir the depths of our æsthetic emotions without the aid of the sister arts; without the life, action, color, vitality that only the sculptor and painter can impart. How soon, after all, the charm of Moorish art loses its impressiveness, and yet how

frantically the Oriental imagination and hand have wrought to avert the deadness of decoration deprived of pictures and images! It becomes wearisome and cloying by its endless repetition; its melody is played, like Arabic music, on but two or three strings.

We have in this country the artist, we have the skill, we have the resources, to produce an architecture of surpassing splendor and beauty in which the sister arts of painting and sculpture shall play the important part which rightly belongs to them. Two things more we need—the will and the inspiration. The will will come as an artistic education progresses. Such works as the Boston Library, the Congressional Library, the Appellate Courts in this city, Blum's masterpieces in Mendelssohn Hall, the paintings in the new State Capitol at St. Paul, and others yet to be produced, will spread the knowledge of and taste for mural decoration and decorative sculpture. But whence shall come inspiration? From religion? Perhaps a new conception of the eternal truths will take hold upon our jaded imaginations and lift our souls into realms of thought and emotion into which humanity has never before entered. Perhaps patriotism will become the inspiring theme of a new and enthusiastic national art, and the lengthening history of the Republic afford new motives for the pencil and the chisel of the artist. Perhaps the growth of altruism, the strengthening of the impulses that bind man to man, the deepening of the emotions of love and service for mankind, will touch new springs of artistic inspiration. It may even be that science, in its explorations of new mysteries, may awaken the poetic enthusiasms of painters and sculptors. Certain it is that so long as we talk in parables, so long as we are forced to express the abstract and unseen in terms of the concrete, and unseen and invisible in terms of the concrete, so long will the allegories of thought and language offer tempting suggestions to the decorative artist. So long as great thoughts live, so long as the memory of great deeds survives, so long as men stand ready to fight for principles and ideas, there will be inspiration for musicians and poets, for painters and carvers, and subjects for the tympanums, the domes and lunettes, the walls and vaults and niches and pediments of our buildings. There is in the American nature an often unsuspected and undeveloped but real substratum of idealism, a capacity for dreaming, a sense of the beautiful and the noble. Let the people once learn to give outward expression, in public decorative art, to these deep undercurrents of their feeling, and our architecture will bloom with new life. The arts of painting and sculpture will again take their rightful place beside the art of the architect, and the public buildings and monuments of the land will become truly adequately expressive of the character and aspirations of the people.

NEW YORK STATE ARCHITECTURAL PRACTICE BILL

AN ACT

To Regulate the Practice of Architecture. The People of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Definitions as used in this Chapter: (1.) University means University of the State of New York. (2.) Regents means board of regents of the University of the State of New York. (3.) Board means board of architectural examiners of the State of New York. (4.) Architectural examiner means a member of the board of architectural examiners of the State of New York. (5.) Architect means one who in a professional capacity designs and supervises the erection of buildings.

Section 2. The board of architectural examiners of the State of New York is hereby created, and shall consist of five persons, who shall be appointed by the regents prior to October first, nineteen hundred and six. The term of two of those so appointed shall expire May 1st, 1908, and the other three May 1st, 1909. The regents shall appoint said five persons nominated as hereinafter provided, but if the nominations are not made the regents may appoint such persons as they see fit. The nominations shall be made as follows: The New York Chapter of the American Institute of Architects may nominate four names; the Brooklyn Chapter of the American Institute of Architects may nominate two names; the Buffalo Chapter of the American Institute of Architects may nominate two names; and the Fine Arts Federation of New York may nominate two names, of persons whom each society desires to be appointed, and said society shall transmit to the regents, prior to September first, nineteen hundred and six, and prior to April first of each year thereafter, or whenever a vacancy shall occur in said board, the names of such nominees, under the seal of the President and Secretary of each society. Four of the five persons so appointed must be architects residing within the State of New York who have been engaged in the practice of their profession for at least ten years. Upon the expiration of the term of each, the Board of Regents shall appoint his successor for the term of two years in like manner. Each member shall hold over after the expiration of his term until his successor shall have been duly appointed and qualified. The members of the board shall serve without compensation for their services, except as hereinafter provided.

Section 3. The members of the Board shall, before entering upon the discharge of their duties, and within thirty days after their appointment, take and subscribe an oath before any officer authorized to administer oaths in the State, for the faithful performance of duty, and file the same with the Secretary of State; they shall annually elect from their number a President, and a Secretary, who shall also be Treasurer, and each of whom shall hold office for one year until their successor shall have been duly elected and qualified; the Secretary and Treasurer shall receive such compensation for his services as may be determined by the Board.

Section 4. The Board may adopt all necessary rules, regulations and by-laws to govern its proceedings, not inconsistent with the laws of this State or of the United States; the Board may adopt a seal, and the Secretary shall have the care and custody thereof, and shall keep a record of all the proceedings of the Board, which shall be open to public examination.

Section 5. Three members of the Board shall constitute a quorum.

Section 6. Special meetings of the Board shall be called by the Secretary upon the request of any two members by giving at least five days' written notice of the meeting to each member. The Board may adopt rules and regulations for the examination and registration of applicants desiring to practice architecture in accordance with the provisions of this Act, and may amend, modify and repeal such regulations from time to time.

Section 7. The Board shall immediately upon the election of its officers, and upon the adoption, repeal or modification of the rules and regulations of architecture, file with the Secretary of State and publish in at least one daily newspaper in which the session laws are designated to be published, the name and postoffice address of each officer, and a copy of such rules and regulations or the amendment repeal or modification thereof.

Section 8. Provision shall be made by the Board for holding examinations at least twice a year of applicants for registration, if there shall be any such applicants. Any person over twenty-one years of age, upon payment of a fee of ten dollars to the Board, shall be entitled to enter any examination to determine his qualifications for such registration.

Section 9. If the examination of any applicant for registration shall be satisfactory to the majority of the Board, and upon the payment of an additional fee of fifteen dollars to the said Board, a certificate shall be issued to the applicant, authorizing him to practice the profession of architecture; any person who shall at the time of the passing of this Act be engaged in the practice of Architecture in this state, and who shall present to the State Board an affidavit to that effect, or a certificate to the same effect from a similarly constituted board of another state, shall be entitled to receive such certificate upon the payment of the said board of a regular fee of fifteen dollars; each person registered shall cause the certificate to be recorded in the Secretary of State's office. The Board may accept in place of such examination the certificate of graduation from any School of Architecture or a certificate of registration as Architect, from an Official Board of another State, or a certificate of membership in the American Institute of Architects. During the month of May in each year, each person registered shall pay to the Board of Architecture a fee of five dollars or forfeit his certificate.

Section 10. Any certificate granted by the said Board, as above provided, may be revoked by the said Board, for gross ignorance, recklessness, incompetency, dishonest practice, or other good and sufficient reason; but before any certificate shall be revoked, the holder shall be entitled to at least twenty days' notice of the charge against him, and

of the time and place of the meeting of the Board, for the hearing and determining of such charge; for such purpose the Board shall have the power of a court of record, sitting in the county in which its meeting shall be held, to issue subpoenas and to compel the attendance and testimony of witnesses, and to be heard in person, or by council, in open public trial; the members of the Board shall have power to administer oaths and conduct such examination of witnesses under oath, and no certificate shall be revoked, except upon the affirmative vote of at least four members of the Board; and any such revocation of certificate shall be certified in writing by the said Board, under the hand of its President, or acting President, and attested by the Secretary, with official seal of said Board affixed thereto, and such revocation certificate shall be filed in the office of the Secretary of State, who shall be paid the usual fee for filing similar documents in his office.

Section 11. A copy of any certificate granted by the said Board, or any revocation of the same, as by this Act provided, certified by the Secretary of State, where the original certificate or revocation thereof is required to be filed by the provisions of this Act, to be a true copy of the original filed in his office under the hand and seal of the said Secretary of State, shall be competent and plenary evidence to prove the facts contained in the said certificate to the same extent as if the original document had been produced and proved in any court of civil or criminal jurisdiction whatsoever; any person whose certificate shall be refused or revoked by said State Board shall have the right to appeal by certiorari to the Supreme Court for a review of such action, and the Supreme Court is hereby authorized and empowered to review and correct the action of said State Board and the State Board shall forthwith carry out the judgment of the Supreme Court on such review.

Section 12. If any person shall pursue the practice of Architecture in this State, or shall engage in this State in the business of preparing plans, specifications and preliminary data for the erection or alterations of buildings, or shall advise or put out any sign, card, or drawing, designating himself as an architect, without certificate therefor, in accordance with the provisions of this Act, he shall be guilty of a misdemeanor, and upon conviction shall be fined not less than fifty dollars and not more than five hundred dollars for each offense, or imprisonment for a period of not more than one year, or both.

Section 13. But nothing herein contained shall be construed to prohibit students or employes of registered architects from acting upon the authority of such registered architects or to prohibit any person in this state from acting as designer of any building that is to be constructed by himself or his employes, or to prevent any person from employing another person to prepare plans and specifications for the erection of any building with the full knowledge upon the part of said owner that said person is not a registered architect according to the provisions of this Act.

Section 14. The expense of said Board, and of the officers thereof, and of the examinations held by said Board, and of any other matter in connection with the provisions of this Act, shall be paid from the fees above provided for, and not otherwise; in no case shall any of such expense be paid by the State of New York or be a charge against the said state.

Section 15. An itemized account of all receipts and expenditures of the said Board shall be kept by its secretary, and a detailed report thereof each year, ending with the thirteenth day of September, duly verified by the affidavit of the said secretary, shall be filed with the secretary of state within sixty days thereafter; the said secretary of state to be paid such fees therefor as are now paid for filing similar papers in his office.

Section 16. The members of the Board shall be entitled to reimbursement for actual cost of transportation, plus not to exceed five dollars per day for hotel expenses for each member incurred in pursuance of their duty. The secretary and treasurer of the board shall receive such annual compensation as shall be provided by the board, by resolution adopted by it at a regular meeting; no member of the board shall be held personally responsible for any portion of the secretary and treasurer's salary, should the fees for examination and registration received by said board be insufficient to meet the same.

Section 17. Any surplus of funds remaining in the treasury over and above the sum of ten thousand dollars, after the payment of the expenses of the board and the salary of the secretary and treasurer, as herein provided for, shall be paid annually to the treasurer of the state of New York, and shall only be paid out upon the warrant and authority of the comptroller of the state.

Section 18. This Act shall take effect immediately.



WATER COLOR SKETCH FOR A HOTEL AND SURROUNDINGS NEAR SANTA CRUZ CAL., BY J. F. DUNN, ARCHITECT SAN FRANCISCO

ILLUSTRATIONS

In presenting some of the preliminary charcoal sketches from which the decorations of the United States Mint at Philadelphia grew, not only the general plan upon which they are arranged, but the motive is shown. The idea of children engaged in the making of money was suggested to W. B. Van Ingen, the artist, by a fresco found about 1896 in the house of Vebii, at Pompeii—probably the only picture extant illustrating early coinage, showing a number of cupids engaged in the various processes of the work. Starting with this novel suggestion, the artist used two little girl friends as models, and treated the subject in a rather playful manner, as one could readily see that in the building where the pictures were to be placed there was no advantage in showing the actual work on the walls. The novelty of this treatment resulted in a remarkable set of pictures that were afterward executed in glass mosaic in the Tiffany shops.

The details regarding the bungalow of Henry Shulthis, by Julius W. Krause, architect, at Los Angeles, may be interesting, though a comparison of figures in cities widely separated are seldom of value because of the difference in cost of material, labor, etc. The interior finish is Oregon pine entire, upon which Cabot creosote stain is used. The floors are of hard wood, beam ceilings. Four rooms are arranged for in second story with staircase in the rear hall. The cost was \$4,000.

The arrangement of the Doctor French residence, by J. B. Legg, of St. Louis, shows a commodious and still compact solution of the problem. The chief merit in the exterior is its harmony of proportion, the details of the facade requiring a photograph to show them properly.

The Italian garden of Mrs. T. P. Hooker, of Los Angeles, exhibits a refinement in formal garden work that is as delightful as it is rare. The photographs show the garden as seen from the house, which is in front, on the extreme left and behind one looking down the garden towards the ordinary frame house, which is on the adjacent property. What should be a sundial is temporarily a low shaft, on which rises a Florentine lion in faience. The mass of roses which rise on the left—the brick wall with the seats—the dense background of bamboo—the sundial—the walks and lawn are particularly Italian and very effective and the general effect very artistic.

A fine bit of adaptation from the Swiss is found in the illustration of the residence of F. E. Covell, of Minneapolis, by L. A. Lamoreaux, architect. The most interesting feature of the plan is the long living room occupying the east end of the house, with large fireplace at the north end and an elliptical window on the side. The mill work on a house of this design is a considerable item in its expense; but when, as in this

case, the design is good, and the colors used in staining are appropriate, the completed effect is well worth the expenditure.

In the line drawing of the Scottish Rite Cathedral at St. Joseph, Mo., by E. J. Eckel, architect, the dignity of the order is suggested in the severity of line in which the facade is drawn.

The Victoria building represents all that is left of the old St. Nicholas hotel at St. Louis, which was designed by Adler & Sullivan some fifteen years ago. Eames & Young were commissioned to change the hotel building into an office building, which was accomplished by dropping the main floor about six feet, to the sidewalk level, for shop purposes, and adding two additional stories on the top. The walls between the bottom of the bay windows to the string course over same were untouched.

The residence and grounds of Edward Doheny, at Los Angeles, is one of the "show places" even in that region of magnificent architectural and gardening effects. The interiors are given to show the richness in carving and beam work, to which the modern turns when he wishes to express manorial comfort and his command of wealth as well.

Similar residences (and they seem to line the many magnificent drives around Los Angeles) to that of Mr. Angelo, by Brooks and Ferguson, which is illustrated with plan, have been seen in these pages. But there is a certain refinement in the Spanish or rather Italian adaptation that is very interesting. The plan shows a house of considerable proportion and convenience.

A plain block of stores and apartments for a suburb is shown in those illustrated, by A. F. Rosenheim, of Los Angeles. They show how the "block of stores" can be made an ornament to the locality in the hands of an architect who uses his material in some relation to the purpose for which the building is intended. It is not as elevating as a cathedral or as lucrative as a skyscraper, but marks the architect who can be safely trusted with even greater problems.

The tower-like sketch for an office building, by Barnett, Haynes & Barnett, St. Louis, at Number One Wall street, for the Number One Wall Street Corporation, New York, will be eighteen stories, absolutely fire-proof and of skeleton-steel construction. On account of the height of the building, great care was taken in the study of the wind bracing of the structure. The plan has been most ingeniously designed to utilize every inch of space in this valuable piece of property—probably the most valuable piece of real estate in the world. In the construction of the building all internal columns of the building were omitted, which leaves each floor entirely free of obstructions of any kind. The interior finish of the building will be steel and bronze throughout, including all doors and windows.

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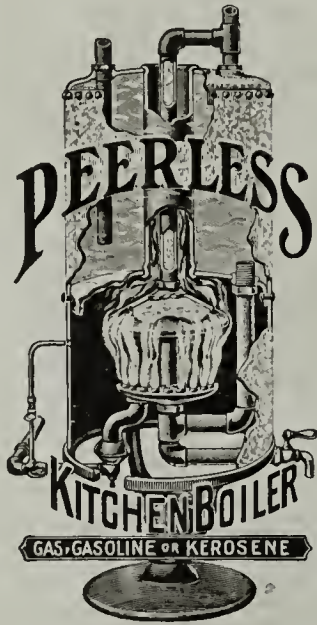
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The
Western
Architect

August 1906

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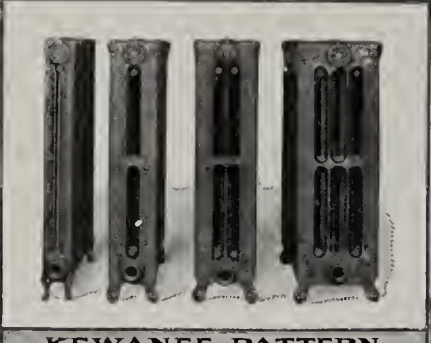
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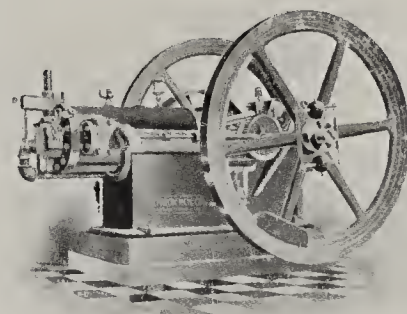
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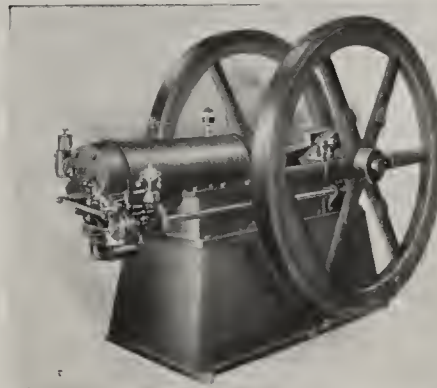
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The Western Architect

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NUMBER 8

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Illustrations

ACCEPTED DESIGN FOR THE NEW WISCONSIN STATE CAPITOL BUILDING
AT MADISON, WIS., BY GEO. B. POST & SONS, ARCHITECTS, NEW YORK. EXTERIOR, SECTIONAL VIEW
AND GROUND FLOOR PLAN AND PLAN OF PARK.

UNITED STATES LEGATION

AT PEKING, CHINA, SID H. NEALY, ARCHITECT. INCLUDING VIEWS OF RESIDENCE OF FIRST AND
SECOND CHINESE SECRETARIES, OFFICE BUILDING AND VIEWS OF NATIVE WORKMEN.

RESIDENCE

OF W. D. HOPIUS, AT SEATTLE, WASHINGTON, A. W. SPALDING, ARCHITECT. EXTERIOR, FIRST AND
SECOND FLOOR PLANS, RECEPTION ROOM, ORIENTAL STATE HALL AND DEN ARE SHOWN.

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ROBERT CRAIK McLEAN, EDITOR.

AN IMMENSE POWER PLANT AT SEATTLE

MR. CARL G. METZLER, of New York, Traffic Manager for Frank B. Gilbreth, has left for the East, having turned over to the Northern Pacific R. R. several cars of steel to be used for reinforcement in the new power house for the Seattle Electric Company at Georgetown, Washington.

The new plant will cost in the vicinity of \$300,000 and will furnish power for electric service between San Francisco and Seattle. Work was begun in April and will doubtless be completed ready for machinery on or about September 1st. The plant being constructed of reinforced concrete, it is expected it will withstand any earthquake shock to which it may be subject in the future.

Mr. Metzler has been following the cars of material from Pittsburg through to St. Paul, but the Northern Pacific system of tracing the cars is so perfect that Mr. Metzler considers that it will not be necessary to go through with the cars to Seattle.

The company of which Mr. Gilbreth is the head specializes on speed work and has under way at the present time a large hardware storage building for the Simmons Hardware Company, at Sioux City, six large contracts resulting from the San Francisco earthquake and large contracts in North Carolina, Maine, New York City, Louisiana and other points.

A large staff of trained engineers, foremen, superintendents and mechanics, were rushed to San Francisco by Mr. Gilbreth as soon as news of the earthquake reached New York, and owing to the fact that Mr. Gilbreth's organization works under written system he is enabled to concentrate specially trained men in a remarkably short time, each one being familiar with his particular duty and also the duties of all the other employes.

American engineers lead the world in speed work. San Francisco will be quickly rebuilt, owing to the fact that they will have at their disposal trained men of all kinds.

Mr. Gilbreth does no work on the lump-sum contract basis, all his work being taken on either a percentage or cost-plus-a-fixed-sum basis. The latter-mentioned basis has met with universal satisfaction and is rather novel, owing to the fact that the owner can get his buildings constructed for actual cash cost plus a fixed profit to contractor, which is dependent upon the size of the undertaking. By adopting this contract the owner has absolute control of his work and knows exactly what all his materials will cost before they are purchased and can take all his cash discount.

Mr. Gilbreth has recently completed, at Sprague's Falls, Maine, a pulp mill and complete paper-making plant, involving the construction of a dam 2,000 feet long, power plant and tailrace, together with a complete town for the operatives, costing about \$1,000,000.

THE GEORGIAN BAY VACATION

THE Friday night train on the "Soo" road from the Twin Cities carries many citizens of Minnesota and other states, whose journey for pleasure is just beginning when they reach that admirable road's destination. For the "Germanic", the queen passenger boat of the Northern Navigation Company's line, takes them on board for a seven-day trip around the most picturesque route that this or any other country affords on inland waters. After stopping at Mackinac Island this steamer threads the north channel of the Georgian Bay and with an itinerary that takes in all the small ports in passing, it leaves the north shore to enter the archipelago of pine-covered islands that skirts the entire east shore. Rocks, pine trees and water, green and deep, the life of the people, fishermen with their nets, Indians with their bark work and berries, and some of the largest lumber mills in the country, all form interest-sights for the eye to rest on. If one is looking for a vacation of perfect rest, this is the ideal manner in which to spend it. And as to the cost it is much less than staying at any good hotel in one's home city. The "City of Midland" and the "Majestic", both magnificent steamers, also sail from the Soo on Fridays and Sundays.

A MINNESOTA PARADISE

Pe-e-shog-may-gwa-ock is the title of a pamphlet gotten out by a railroad to attract travel. But, as is the case with most railroad literature nowadays, it is more, much more than that. It is the railroads, largely, that are publishing and preserving the legends and geography of the western country, and in these pamphlets they record existing and past conditions so that when the trail is obliterated by advancing civilization, those who care for the past may travel the road, in imagination at least, that once was the highway for the deer and the Indian.

A little book, one of the handsomest in illustration and typography that has been gotten out in this line, comes with the compliments of Mr. Curtis L. Moser, from the offices of General Manager W. H. Grinnell, of the Minnesota and International Railway, at St. Paul, Minnesota. Its mission is to tell of the beautiful north Minnesota country to all who love nature and delight in virgin woodland and emerald lakes.

It has the Indian legends of the Objibwas and goes into the etymology of Indian names as far as they can be written, though it is difficult to phonetically arrange the sounds in the Indian tongue so that the written and spoken language will correspond. Beside the Indian legends of old Ah-ni-o-gwan-abe—"the bird that smooths its feathers", there is an accurate and attractive description of the typography of the country, its lakes, rivers and woods and the game and fish that infest each particular section. To read it is to hear the red gods call and call loud.



GENERAL VIEW — NORTHWESTERN FIRE PROOFING CO., FRIDLEY PARK, MINNEAPOLIS

THE INDESTRUCTIBILITY OF HOLLOW TILE

THE non-conducting quality of hollow tile is always demonstrated in the great fires, where everything but the tile-protected steel in the buildings is destroyed, but the first realizing sense of how completely the material, together with the hollow space, cuts off heat, came many years ago while examining kilns made of this material. It is not only non-conducting, but resists the action of heat to a remarkable extent. The illustrations show a kiln which has been in use constantly for twelve years by the Northwestern Fireproof-

steel construction is not more than eight or ten per cent additional to a brick and wood structure, but on the contrary thinks "hollow tile and steel is expensive" and lets it go at that, and builds an extravagant (because constantly deteriorating) structure that more than balances the difference in the first five years in insurance and repairs.

It is the architect who not only knows, but who has designed and constructed fireproof buildings that obtains the commissions for them, and it is too often that, and not superior talent, that places the construction of fireproofed buildings in the hands of the few who are called our "leading architects".



TEARING DOWN "OLD FAITHFUL"—BURNT FOR TWELVE YEARS



OPPOSITE VIEW—"OLD FAITHFUL"

ing Company of Minneapolis, during which time the material for fireproofing a large proportion of the fireproof buildings in the Northwest was burned within its hollow tile walls. The arch was built of 8-inch hollow tile, in a clear space of twenty feet, and was practically intact when torn down.

When one realizes that it takes twelve years of constant fire with sufficient intensity to burn clay to even commence deterioration, in the kiln made of the same material, the fireproof qualities of hollow tile can be realized. But it is undoubtedly the fact that the economic value of hollow-tile fireproofing is little understood by the mass of architects in the Northwest.

While in Chicago and more eastern cities, steel and hollow tile are deemed as much a necessity in a permanent structure as the brick in the wall, all sorts of makeshifts are resorted to in some instances to "fireproof" buildings in the newer sections that make them more dangerous, if anything, than if built entirely of wood. This is largely the fault of "get-rich-quick"-spirited owners, but the architect is in a degree to blame. He should when possible visit some of the best plants in the country and inspect its material and resources. When not in a town where such a plant is located, he should make a special trip to some standard plant, to familiarize himself with what can be done in the way of fireproofing. Often he does not know that the first cost of a hollow tile and

OF INTEREST TO ARCHITECTS

THE Ideal Concrete Machinery Co., of South Bend, Ind., has started to manufacture their famous Ideal Block Machines in Canada, the factory and office being situated at 124 York St., London, Ontario. So many inquiries were pouring in from the Canadian provinces that the company found it an absolute necessity to start the manufacture of them and has opened an office, which is in charge of Mr. F. M. Leach. Machines have already been produced, and shipments of Canadian orders are being made.

THE NORTHWESTERN LINE is issuing a fashion note in the shape of an artistically-gotten-up brochure, entitled "My Lady's Train", that is very interesting and appropriate. The train described is not an adjunct to the latest Parisian style of gown, but is just as elegant, clean, artistic and true to the latest style in trains, though it is a railway train wherein "my lady" finds the height of luxury and happiness. No lady traveling on this train has to do anything but look sweet and feel content with all the world. There are none better, so when the dance or the trip is done she can feel a satisfaction born of the pleasure of retrospect, which is enhanced by her remembering the "perfect train".

EDWIN H. HEWITT, architect, of Minneapolis, is conducting an atelier under the plan adopted by the Society of Beaux Arts Architects, in New York City, for guidance of classes all over the country. A common subject is submitted to them all at the same time, and the drawings are submitted to competent judges for a decision. First and second mentions are awarded, and these count for credits, which go forward, permitting the taking up of advanced work.

KRUSE & DEWENTER, of Indianapolis, who commenced making heating apparatus on scientific lines in 1866, have since that date made incessant efforts to bring their apparatus up to the highest point of perfection, introducing every available and practical improvement into their system of heating and ventilating. Their pamphlet descriptive of the steel warm air furnaces made by them, is not only interesting but contains much of value upon the use of furnaces in residences, large and small.

MRS. HARRY PAYNE WHITNEY, who has shown her practical interest in sculpture by modeling part of the decorations for the new Hotel Belmont, is now at work on a scheme that promises to result to great advantages to the sculptors, says the New York Sun. She is using her influence and interest to form an annual exhibition of statuary, which shall be modeled on the plan of the American. Sculptors exhibit their work every spring; and if she succeeds, it will be the first time that they have had their own exhibition.

THE Y. M. C. A. of Cleveland is conducting a commendable evening school for the benefit of the youth who wish to learn trades. In this connection they have engaged the services of an instructor well known to the draftsmen in the United States, the genial and talented Herbert B. Briggs. His department lies with the architectural division of the school and concerns plan reading and estimating, and is open to superintendents, contractors, foremen and others in the building

trades. This is certainly a new feature in night schools and under Mr. Briggs' direction should be of general benefit to the public beside the direct benefit to those who take advantage of his teaching. A class in architectural design and rendering under the direction of Arthur M. Hannon works on the competition project plan, and for a nominal sum the rudiments of an architectural education can be secured by those who are engaged during the day.

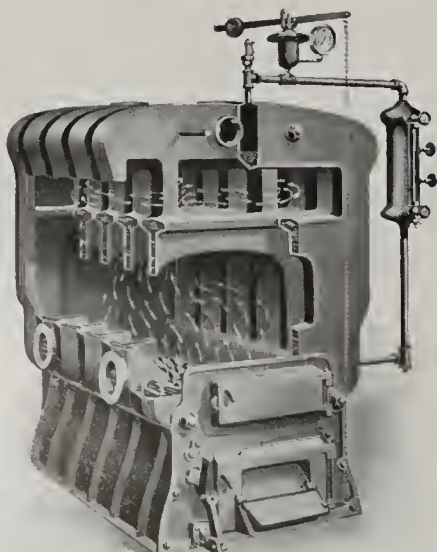
THE United States department of agriculture, in a brochure on "Recent practice in the erection of lightning conductors", gives the latest scientific data on a subject which made Franklin famous, and has, since his time, been the means of making infamous the lightning-rod man of commerce, ranking the selling of lightning rods with the green goods and gold brick industry. But there is, and always has been, a scientific basis for the lightning-rod theory, and Mr. Alfred J. Henry, the compiler of the government data, presents the results of tests and the manner of construction, his plan being probably the nearest to a correct method that can be obtained.

EVERY extensive conflagration emphasizes the fact that no building is completely fireproofed that has not metal-covered doors, windows and trim. John W. Rapp, of New York, is the pioneer in producing fireproof metal-covered doors, window shutters and interior trim, and his illustrated catalogue is an interesting exposition of the many attractive forms in which his metal-covered products can be produced.

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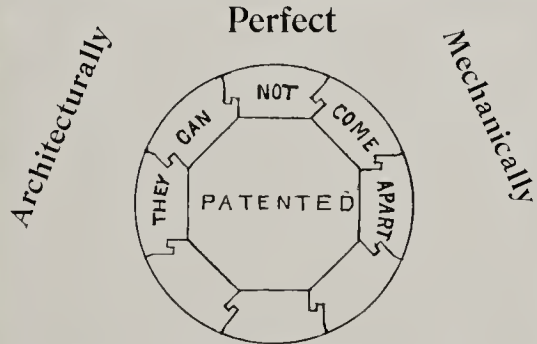
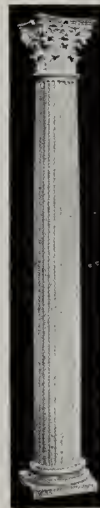
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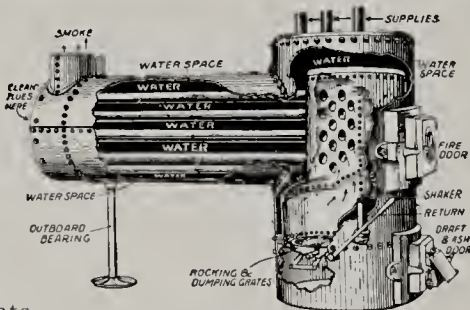
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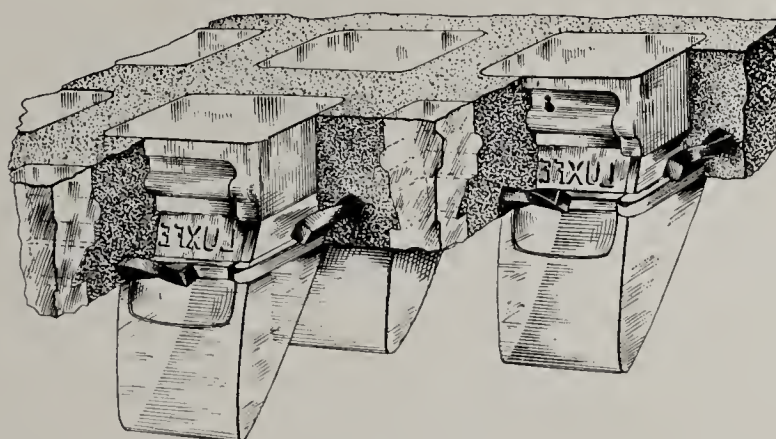
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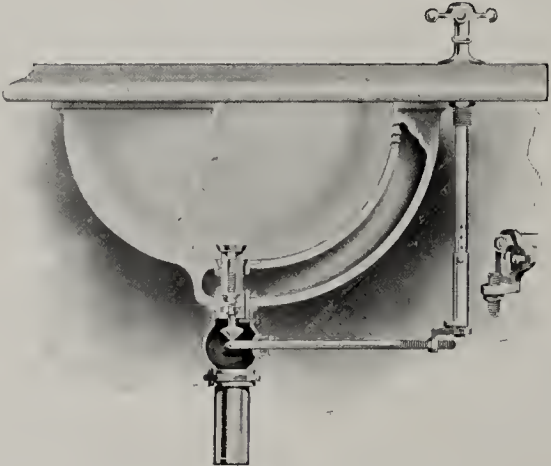
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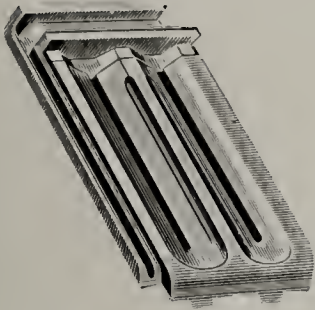
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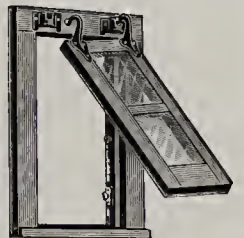
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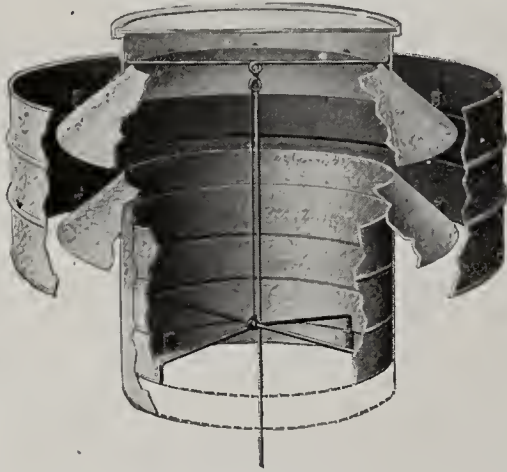


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Disturbance Threatened to Greenwich Time

The people of Greenwich, which is a suburb of London, England, would have never been known to the outside world were it not for the establishment of the observatory there and its longitude being adopted as the point from which the world's time is measured and the focal point for all terrestrial calculations. The multiplying of modern necessities and their supply, which we are want to the advance of civilization, has so far affected the people living in this suburb that, forgetful of the content with which their fathers used the rush light and the tallow dip and viewed walking or the stagecoach with tranquility, they now demand science's latest improvement to light and locomotion, an electric power plant to supply that force to the village. The London county council, with a view to votes, is ready to give them this, and in fact has already planned an immense plant for its production. This is as it should be and in line with the action of other municipal bodies and private enterprise throughout the civilized world. But in this case, for the comfort of the comparative few, it is threatening disaster throughout the world, because it would unsettle the entire astronomical plant at the observatory. It is practically impossible to change the location of the observatory, but it would seem a trivial thing in comparison to establish this needed plant miles away and conduct the power by cable, and thus give the selfish and provincial denizens of this locally unimportant suburb its wished-for power and light without disturbing the entire time-system of the world. While the matter should be dealt with in a summary manner by the British house of lords, it equally concerns Washington, Vienna, Paris, St. Petersburg and other capitals in the interest of the civilized peoples of the world. It should need no consultation of astronomers. The fact that such a disturbance of Greenwich time is threatened should

be sufficient to promote immediate and prohibitive action on the part of the English government to whom the world looks for a continued stability in its time regulation. This will probably be done, for the aldermanic vote has not the terror for a peer of England that it has for a United States senator.

**Contract
for Plan
Sustained
Brooklyn**

The fact that a contract made by a municipal officer is binding upon his successor in office was established by the settlement in full, without suit, on the advice of the corporation counsel, of a suit to recover value of competition plans in the borough of Brooklyn, Washington Hull, the successful architect in the Brooklyn municipal building competition. A contract was made with Mr. Hull by the borough president for the completion of the building. Shortly afterward a new president was elected and one of his first acts was to "discharge" Mr. Hull and employ McKim, Mead and White to prepare new plans. Papers in a suit for 15,000 were served upon the comptroller and sent to the corporation counsel, who prepared an opinion that Mr. Hull was clearly entitled to the full amount of his claim as his plans were accepted after competition and that the contract made by the former borough president was binding upon the city.

**Private
Sanitary
Work
in Cities**

That "they do things better in France" is trite it is not without in regard to the sanitary conditions in most American cities. While in Europe the excessive congestion of population makes all sanitary measures more imperative than here where the larger tax is collected for sanitary purposes and the least service is rendered to the people. Chicago women theoretically took brooms and swept the north side recently and made it thoroughly clean for the first time in years. Minneapolis, which is said to be one of the most beautiful and healthful cities in the country, is a mass of tin cans and garbage when the snow melts in the spring, much of which has to be removed, if at all, at the expense of individuals. Here again the women have, with the aid of an enterprising newspaper, "cleaned the city" by organizing the children into scavenger squads, who, under the leadership of the sometime dramatic editor of the newspaper, who has a turn for sanitary science, did phenomenal work, collecting over twenty thousand bushels of refuse. The Tribune and the women may or may not have

saved the city from an epidemic, but neither should have been obliged to do that which is the first duty of the municipal authorities, who are too inclined to "play to the gallery" by "putting on the lid" on Sunday saloons and gambling, which only affects drunkards and gamblers, and overlooking the physical cleanliness of the city, which concerns the health of all the people.

**Improved
Government
Buildings
in the U. S.**

Because Kansas City has a postoffice building that the "Journal" of that city admits was designed fifteen years ago, that newspaper editorially roasts the government methods of design and construction and says that its architecture is fifty years behind the times. If the writer had looked beyond his own city and examined the San Francisco postoffice or that at Los Angeles, or a number of those being now erected further east, he would find that the "Mosque-like" appearance was disappearing from the exteriors and that in plan the full convenience of the building was obtained. The government building has always been, like other branches of the government service, much what the newspapers voicing the sentiments of the people has made it. The results in modern buildings was obtained in spite of rather than by the help of the newspapers. Where is the newspaper that used its influence to obtain the passage of the Tarsney act or ever recommended any but a political system in the appointment of a supervising architect? and where is one that would not have condemned the government as parsimonious had any but a monumental design been made, involving as large an expenditure as possible, for the postoffice they and the congressmen had worked so many years to secure? The improvement in the design and plan of government buildings is the direct result of constant labor on the part of the architectural press and architectural associations and, as in private work, any dishonesty in design, plan or contract is the result of newspapers refusing to back their efforts in the direction of good government architecture.

Giving others advice with our own object in view is as dishonest as spending another's money, or stealing another's happiness.

One of the most difficult obstacles to overcome in business and social intercourse is the man who is ignorant of his ignorance.

SAN FRANCISCO

BY F. W. FITZPATRICK, ARCHITECT

(Concluded)

THE partitions were in many cases of but three-inch tile set either on top of the wooden floor or on top of the concrete filling and wood strips, and were bisected in every direction with wooden lintels, wooden jambs, sills, etc., so that it is really a wonder that anything was left to them. The floors were of side construction, particularly thin tile and of little depth, and all this tile work was of dense tile, the quality of the material, the mode of burning it, the pattern and way of applying it not at all up to the standard of our best Eastern work. Yet this was all the architects demanded, it was what the market seemed to exact, and all that the manufacturers produced. Their competitors, the two concrete systems most in vogue in San Francisco, were held up to about the same standard only, so that in most cases columns were fireproofed with a wrapping of expanded metal or wire lath, plastered over with a little cement or in a majority of cases the ordinary wall finish; partitions were generally of wire lath and plaster, the floors of as thin slabs and as weak a concrete as would pass muster, though, as luck would have it, most of these floors were in turn protected with a suspended metal and plaster ceiling. The surprise is, as I have said before, that fire did not do greater damage to the structural parts and is accentuated four-fold when we realize that in many of these buildings the elevators are already in operation, people back in their offices and decorators at work on the walls. If all the work had been absolutely well done, what an illustration of adequate structural fireproofing could have been given! As for other than the mere fireproofing of the structural parts, not one of those buildings was fireproof in design, save in one or two of the details. Not one of the tall ones had their elevator shafts and stairs enclosed so as to confine fire to any one story; only one had metallic doors and trim; all had wooden floors in their offices; not one had wired glass or other protection to its windows, and fire was communicated to the interiors of buildings through their windows in ninety-nine cases out of one hundred.

One building there was that, though of wooden frame and finish, enclosed in brick walls, in which they had been wise enough to install wired glass and metal sash at all the windows, the fire attack was altogether from without (for the faithful employees successfully battled with the little blazes on roof or in wood work adjacent to window or door), and the efficacy of the wired glass is proved by the fact that

men were at work at their usual places on what they had left the day before, the day after the fire. Yet, in another building nearby, of exactly the same slow-burning construction, but unprotected with wired glass windows, the destruction was absolutely complete and just forty minutes slow.

In all this devastation there is enough left, particularly in and about the big steel-frame buildings, to fully demonstrate the efficacy of all we have clamored for in times past. No one building was absolutely perfect, nor was any one building absolutely saved from damage (albeit the *New Chronicle* and the *Kohl* suffered certainly less than 5 per cent. of their cost), yet so many details, found separately, did their work so well that it must be perfectly patent to the most obtuse that if those details were assembled in any one structure that structure must necessarily be fireproof and undamageable in all its parts. The question is, appalling as that lesson was, is even it forceful enough to get our architects out of the ruts that they cling to so tenaciously, principally the wooden rut?

For any city the standard of perfection remains the same, though for San Francisco extraordinary pains should be taken to tie and to bond everything superlatively well against the very present possibility of the recurrence of as severe a quake. My ideal of a perfect building, a fireproof building, in the fullest sense of the term, is one whose foundations are sound, and if in yielding ground, supported to bottom on reinforced concrete piles; my foundation piers and walls would be of concrete, externally lined with steno-lith against moisture; my steel frame would be rigidly braced and tied, and, whether painted or not, well coated with cement and encased in every void with brick or tile or concrete and the whole protected with hollow tile fireproofing, laid in cement mortar, bonded and tied to the column and with not less than 20 inches of material between any possible fire and the metal members; my structural floors would be of narrow span, deep end-construction fireproofing tile between steel beams, or, if concrete is particularly desired, then a sufficient depth of that material, protected on the under side with fireproofing tile, the top surface of marble or cement or some plastic body, not wood. My partitions would be of hollow tile; my outer walls would be of concrete or brick, faced on both sides with brick, well laid and bonded; my external decorations would be of terra-cotta of ample thickness and properly made; no granite or stonework or marble would I have where fire could assail it; my stairs and elevators would be enclosed absolutely, cutting off every story by itself, and my units of floor space would be as small as possible, so as to restrict fire to the contents in a much curtailed area; my window and door trim and doors and finish and my office furniture would be of metal, nor would there be

any wood lintels or door jambs in the partitions; my windows would be glazed with wired glass in metal or asbestos frames; and also where the exposure is great I would have doubled thickness of wired glass; and last, but not least, in assembling these parts, I would endeavor to use intelligence in design.

Each one of these details, even the last, has been fully tested and found not wanting in the San Francisco and other fires. The thing is to get them all together and the resultant building will be one that indeed merits the term "absolutely fireproof", a building that in first cost will but little exceed the price of the flimsiest construction and that in ultimate cost is infinitely less than the latter and which will prove its own insurance, the greatest safeguard to the individual and the community, the principal step taken towards the much-desired goal, the City Unburnable.

HOLLOW TERRA COTTA FOR COUNTRY BUILDINGS

BY GEORGE E. WALSH



THE whole question of adapting burnt clay products to house construction in the country is one of cost, durability, strength and beauty. The cost has been so materially reduced in recent years by the introduction of labor-saving machinery that it is almost on a par with wooden construction. In special localities fireproof clay tile houses have been built at the same estimated cost demanded for wooden frame structures. There is no question about the greater durability of the terra cotta house nor any doubt about its fireproof advantages. The strength of floors and arches without the use of iron beams and girders has likewise been satisfactorily solved in the last few years. The tests given have been made to meet requirements of city laws, which are much more stringent than those in the country districts.

The questions of cost and artistic effects have always been potent in deciding the general nature of house construction. Formerly the cost of fireproof construction was so much in excess of wooden frame construction that it had little chance to compete with it, but this difficulty has been largely removed in recent years by the reduction in the cost of fireproof bricks, hollow terra cotta building blocks, concrete building blocks and other structural materials. Lumber has advanced in price in almost direct proportion to the cheapening of fireproof materials. This fact has driven many to consider the value of the new construction materials.

Architects who formerly found it easier to work in wood have demonstrated their ability to design country homes of great beauty and artistic effects with fireproof materials. It is no longer considered

impossible to produce a country home of brick, stone and terra cotta in perfect harmony with rural surroundings, and types of this class of houses are multiplying in all parts of the country. The remarkable popularity of hollow concrete building blocks is typical of the new movement. Thousands of country houses are being constructed of concrete blocks, with only such use of wood as deemed necessary to give a perfect finish to the interior and exterior.

The use of hollow terra cotta building blocks is older in our cities than concrete blocks, and most of the large hotels, apartment houses, skyscrapers and public buildings are composed of this material. With iron skeleton frame work to carry the load up to almost any height desired, the work of protecting it inside and outside with porous hollow terra cotta blocks has been simple and effective. A fire originating inside or outside of such a building has little chance of warping the metal or spreading from one room to another.

The adaptation of this form of construction to isolated country homes marks a comparatively new departure. While recognizing the value of fireproof clay for building purposes, architects and builders have met with the obstacle that a good deal of iron frame work is needed to give the buildings strength and rigidity. This so materially added to the cost of the country buildings that few cared to undertake the work. Not until a type of houses could be designed which could be built without the iron skeleton work was it possible for burnt clay tiles, bricks and blocks to become popular.

The development and improvement of building materials in this particular have largely removed this objection. It is possible to use terra cotta materials and hollow burnt clay blocks so that country homes can be put up at little more cost than for a wooden structure, and without the use of iron frame work. A number of structures of this type are springing up in many parts of the country and a study of some of their features is particularly valuable. Walls, partitions, roofs and ceilings are constructed of terra cotta blocks, so that the houses are not only fireproof but well protected from vibration, vermin and excessive changes in temperature. They are more durable than almost any other class of structures erected, and, like the skyscrapers of our cities, they promise to last for centuries without any great deterioration. They possess certain other advantages, such as proof against the action of weather, and thus need no painting and periodic repairs, and are much cheaper to insure against fire.

One of the most recent illustrations of the modern buildings in which fireproof materials are used without iron skeleton work for supporting floors and roofs, is the new Madison Avenue Presbyterian Church,

New York. The walls of this structure are of brick and hollow terra cotta blocks, and the roof consists of a great dome over 50 feet in diameter, which springs from the walls without metal support of any kind. The arched dome is built up of fireproof clay tiles averaging 6x12 inches, laid in courses of cement, and designed so that the keystone of the arch carries the whole load. There is not a particle of metal used for sustaining this great dome, and yet it is so perfectly fireproof that no interior fire could damage the roof or affect it in any way.

was called Yang-Na, with a population of about 300 Indians, so called, aborigines, though not resembling the North American Indians. The neighboring villages were San Gabriel, Pasadena, Calmenga and Clearwater. The Indian weapons for warfare, which they seldom indulged in, and for the chase, were bows and arrows, which, according to the Spaniards, they excelled in the use of. The Indian men looked upon themselves as hunters and warriors.

Shortly after the discovery of America, and when Columbus' theory that the earth was a globe was



REDONDO HOTEL AND SURROUNDINGS

PLEASURE RESORTS AND BEACHES AROUND LOS ANGELES

BY WILLIAM LEBARON JENNEY
PART III—REDONDO



ALTHOUGH a beach resort, is a city of considerable importance, covering an area of forty-four square miles, with an average elevation of 270 feet, and a population of 205,000.

In 1888 two practical sea-faring millionaires, Capt. J. C. Ainsworth and R. F. Thompson, fixed upon Redondo as the best harbor on the Coast for Los Angeles merchants. It now has twelve banks and five public schools. There are five systems of electric-car service operating and projected, and there are some five systems of steam railways entering the city.

Redondo is but a short run from Los Angeles, the chief city of Southern California and the commercial metropolis of the southwestern corner of the United States. It is already well known thruout the world. Its history is varied: when first known it

proven, the leading nations of Europe were out on the ocean to discover and take possession of strange lands. To avoid all disputes of claimants, the Pope divided the world by a great circle drawn 100 leagues west of the Azores and decreed that all the world west of this great circle should belong to Spain, and all east to go to Portugal. Cortez landed in Vera Cruz in 1510 and soon established a government extending north to the Rio Grande. In 1524 he describes California, in a report to the King of Spain, as an island of great wealth, inhabited solely by women, the origin of which is traced to a popular work of fiction published in Spain about 1510, where use is made of the name California, which the author locates to the right of India.

In the year that Cortez returned to Spain, 1540, the Viceroy Mendoza sent two vessels to the head of the Gulf of California, which penetrated some distance up the Colorado river.

In September, 1540, Cabrilla entered the Bay of San Diego and then sailed north to San Pedro, where he landed for water. He undoubtedly climbed the hills

back of San Pedro bay, from which he probably saw the site of Los Angeles. This was 350 years ago. In 1768 the Jesuits were expelled from the Missions of Mexico, including upper and lower California.

This work was confided to Capt. Gaspar de Portala, a good-hearted, popular man.

Portola reported to Galena that the Missions were fairly well stocked with cattle and provisions, but as for treasure it was impossible that the Missions could have accumulated any considerable amount. The oldest of the establishments founded by the Franciscans in California was the Mission of San Diego, dedicated July, 1709. About October 8, 1771, a serious conflict took place between Indians and soldiers, owing to the maltreatment of the native women by the soldiers. About this time Fages came up from San Diego with soldiers and a pack train, on his way

the last few years due largely to the increased facilities of transportation, the number of electric railways has been multiplied, the lines and the cars have been improved in every respect. Hotels and bath houses have been built, and every facility and convenience have been offered for the comfort of travelers.

At Redonda the afternoon cool breezes of summer make it a delightful resort, never hot. In the winter the refreshing rains and the warm days cover the hills with a delightful green. The distant mountains are capped with snow, giving a pleasing and interesting effect.

Still further to the south is the harbor of Los Angeles, San Pedro Bay, where the government has spent a large sum in building a great breakwater, giving to San Pedro a fine and safe harbor, and creating a commercial town of great benefit to Los Angeles,



SEINE FISHING AT REDONDO BEACH

north to assist in founding Missions. He remained some months at San Gabriel, near Los Angeles, and not far from Redondo.

Redondo was not settled until about 1886, but for the previous ten years it had been a popular resort for encampments, picnics and in fact as a pleasure resort. The surf bathing is excellent and can be enjoyed almost every day in the year. Golf is even played within sound of the surf.

The first historical knowledge we have of any beach resorts is that at a battle fought on a ranch near San Pedro, where some twenty were killed, taken to San Pedro and buried on the rocky island at the entrance to the inner harbor, which from that date was known as Dead Man's Island.

The popularity of the beaches and their use as pleasant and cool resorts has greatly increased during

making for the city an excellent seaport, where the visitor will see the ships of many nations and a fleet of lumber boats from the south. While San Pedro is adding much to the business of Los Angeles at present, it is not a pleasure resort, except it is a point of embarkment for the beautiful island of Catalina, lying off the coast, about two and a half hours' trip on the fine steamers of the Banning line.

It is estimated that at least 250 architects and draughtsmen have responded to an appeal for their services in rebuilding San Francisco. Most of them are disgusted at their inability to exercise their talents, for one reason, if no other, that there is a superfluity of both architects and draughtsmen in the city at present.

SOUTHERN CALIFORNIA CHAPTER A. I. A.
OUTING

BY W. L. B. JENNEY



THE Southern California Chapter holds a monthly meeting on the second Tuesday of the month, but a year ago it was decided to change the July meeting to an outing on the Saturday following the second Tuesday. Saturday was a half-holiday by custom, therefore the afternoon could be devoted to an outing without a loss of business. A number of guests were invited. A private car was provided on the Pacific Electric Railway, and at 1:30 Saturday, Feb. 14, left the city from the station near the Angelus Hotel. There were some twenty-two in all. We first passed through the beautiful residence town of Hollywood, which is Southwest of the city on the road to Ocean Park via the Soldiers' Home. The run through Hollywood is particularly pleasing. The road on both sides is bordered with very pretty residences with large grounds, usually an acre or more. The houses are all well designed and the gardens very pretty, with an occasional orchard, either citrus or deciduous. We passed through the Soldiers' Home, which differs from most others in this, that beside the usual large buildings there are many cottages with inclosed grounds, for officers and for inmates who have families. From the Soldiers' Home we soon reached Ocean Park, which is a beach resort, with a large roller-skating rink and a very fine, large restaurant with a dance hall annexed down on the pier, where our party arranged for a banquet on our return from a run to the beaches. From here we visited Venice and Playa del Rey, which is practically a continuation of the canals of Venice. For the safety of women and children there is a small still-water lagoon for boating and bathing. There is also the usual surf beach, where there was an opportunity for a surf bath, which many of the party indulged in, though one was disappointed in being informed at the bath-house that they had no bathing suits large enough for his fine, robust figure.

At Playa del Rey there is a high sand bluff on which there are a few cottages, and directly against the slope of the bluff there is an inclined elevated railway to take passengers up to the level of the cottages. We noticed particularly three cottages built directly against the sand bluff at the foot of the slope, near ocean level. The architects all noticed and remarked on these three cottages that they were in a hazardous situation, in danger of being buried by a sand slide, which actually took place while we were gone to Redondo, and on our return on our way to dinner at Ocean Park, we found one of the cottages a wreck and

another pushed from its foundation and both most inconveniently filled with sand.

At Ocean Park, which is no park at all, but a beach resort, we found a restaurant prepared for our reception by the dining table being laid out on the balcony of the restaurant, overlooking the ocean, from which there was a pleasing, cool breeze. The main floor of the restaurant below our balcony, from which we could look down, was filled with diners, young ladies and gentlemen, who evidently intended to join the dancers after their dinner.

The Architects' dinner on the balcony was in fact a banquet. The eatables were very good, indeed, with plenty of California wine and good champagne.

The party was decidedly jolly and told many reminiscences of the old days in 1884, when the Western Association of Architects was formed, by the now editor of the *Western Architect*, with which the American Institute afterwards united. Reminiscences of the sixties, just after the Civil War, were indulged in, of much historical interest. It would seem that in '61, at the breaking out of the war, all the architects in practice in the country, both North and South, finding that their business had left them, entered the army, and in '65, after the "peace of Appomatox", they all resumed their practice. Many returned to the A. I. A., so that there were a very large number of old soldiers in all the architectural societies and chapters, and the architectural conventions and army reunions were very much alike. One at Nashville was particularly cited, where Colonel Thurston presided at the banquet and where were present General Kirby Smith and General Cheatam, of the late Confederate Army, and Colonel Smith, who had served in the Confederate Cavalry and not very long after this reunion entered the United States Volunteers, and later went to the Phillipines, and at the battle of Manilla he died at the head of his regiment just as they were going into action—the only architect I have known who died on the field of battle. "Honor to his memory."

After that convention at Nashville, as we were leaving the room, Mr. R. C. McLean, editor of the *Western Architect*, was heard to remark: "This meeting was quite as much an army reunion as an Architectural Convention", and so they were for the last years of the sixties.

This summer outing of the Chapter indulged in no business other than having a good time under ideal conditions and cementing professional friendships in a way that is impossible in the more formal gatherings of the regular meetings.

OBITUARY

JOHN BAILY MCELFRICK

In the death of J. B. McElfrick there has passed one of the last representatives of the days when the "courthouse" and the "theatre" architect held the unique position of the specialist. It was in the latter specialty that Mr. McElfrick has been known for the last three decades and has to his credit the construction and design of more theatres than any of his contemporaries, though Oscar Cobb and L. M. Wood might contest the assertion. It has been unfortunate, perhaps, that the designing of our theatres, except in rare instances, and at a comparatively recent date, has been in the hands of men who were in no sense artists themselves, but had to depend on such talent as they could hire among the draftsmen of the country. The result has been to a great extent disastrous from an art standpoint, but these representatives of terpsichorean architecture knew how to influence the theatrical managers and as practice increased they met, in plan and convenience, the problems of seating, exit and acoustics with more or less skill. It was so with Mr. McElfrick, who went from St. Louis and established his headquarters in New York, and from there his work was projected throughout the country. His local work, however, comprised the majority of the theatres built in New York City during the last ten years and those at St. Louis, Philadelphia, Louisville and other cities. They show a steady improvement in refinement of design and interior arrangement, and while none of them are architectural models, they all give to the public the benefit of his years of practical experience. Mr. McElfrick was born near Harrisburgh, Pennsylvania, and was seventy-seven years of age.

CHARLES ALBERT LOPEZ

Charles Albert Lopez, the sculptor, died at New York city on May 18 at a hospital where he underwent an operation. The physicians said that death was due to heart disease. Mr. Lopez only recently arrived in this country from Paris, where he had completed the working models for the McKinley memorial to be erected in Fairmount Park, Philadelphia. He was born at Matamoras, Mexico, in October, 1869, and came to this city when a youth. At the St. Louis world's fair the works of Mr. Lopez won the gold medal and his groups exhibited at the Charleston and Pan-American expositions received recognition. Mr. Lopez was married in 1898 to Miss Marion Kean, of this city, who survives him. She is abroad. Mr. Lopez was a member of the council of the New York Sculptors' society, an associate of the National Academy of Design, the Society of American Artists, the Architectural league, and of the National Art club.

PUBLICATIONS

THE SKETCH BOOK

A magazine devoted to the fine arts, published at Chicago--is a most artistic as well as live and progressive journal of the present work of the sculptors and painters of the day. The May issue contains an article in memory of Paul Noquet, the sculptor, by Leon Debe, illustrated by a member of the sculptor's works and sketches. James William Pattison, the painter, author and critic, is dealt with most kindly by a brother artist, Walter Marshall Clute. It is pleasant to read this intimate sketch of this true artist, who is also a teacher who knows how to impart knowledge and develop genius in a rare and masterly manner. Mr. Patterson's characteristics are seen in his paintings to such an extent that those who know and love him can feel the quiet force and mysticism of his character in his misty marines or evening-enveloped landscapes. His best pictures have the illusiveness of a water foreground and are real as a dream and as imaginative as Fairyland. His "Dawn", "Aristocrat" and "A Calm Night" are full of this elusive feeling. Quiet, but with strength and power, so like the man, the artist. Illustrated articles by: J. Nilsen Laurvic, L. C. McAuley and M. E. Cook, complete the number, which reflects in a forcible degree the high artistic plane which Chicago has reached in art matters after forty years of struggle by the heroic artists of the past, who laid the foundations and laid them well.

BUILDING CONSTRUCTION AND SUPERINTENDENCE. By F. E. Kidder, C. E., Ph. D., Architect, Author of "The Architects' and Builders' Pocket-Book." Part III: Trussed Roofs and Roof Trusses. 306 illustrations. Section I. New York: William T. Comstock. One large 8vo. vol.; pp. 298. Price, \$3.00.

This work is the last of the series of "Building Construction and Superintendence" from the hand of Mr. Kidder and the closing work of his life. It is a work that he had been engaged on for years. Few men in the profession have had the large experience he has had in practical work of this character. His knowledge of general construction was well known to architects and builders through his published works, and the articles from his pen appearing at frequent intervals in architectural, building and engineering journals. His experience, ability and practical good judgment had caused him for some years past to be called frequently in consultation by his professional brethren in intricate and difficult structural problems.

It was with this ripe experience and perfect knowledge, both of the subject treated and of the needs of architects and builders, that he entered upon the preparation of this, which he intended to be his most elaborate and complete work, and had not death interfered he would have carried to completion the whole work, the first section of which is presented in this volume.

A review of its pages shows a careful and conscientious discussion of the subject, and that in clear language, uncomplicated by mathematical formulas that are suited only to the engineer. Simplicity and thoroughness, clear description and full explanation are the characteristics of the treatise. This section carries the subject far enough to meet the needs of most architects and builders, although the second and last section is fully laid out and will later be completed and published.

A feature that will be appreciated by the many friends of Mr. Kidder is his portrait and the brief sketch of his life, which is the first article in the book.

STUDY THE ORDERS, compiled from the instruction papers in the Architectural course of the American School of Correspondence, Chicago, Illinois. Alfred E. Zapf, editor; Authors, Frank Choteau Brown, Architect; Frank A. Bourne, Architect; Herman Van Holst, Architect. Advisor, J. R. Coolidge, Jr., Architect. Copyright United States and entered at Stationer's Hall, London.

As a compilation of instructive text and drawings the work is a contribution of real value to the literature on the subject and has a number of unique features. It has been compiled under the direction of able men,—men of training and culture, who are thoroughly qualified to prepare such matter for architectural study.

In preparing this work it was evidently the intention to combine into one treatise matter which heretofore has been scattered throughout a large number of very expensive books, and the authors and editors have spent over three years in a careful study of the literature on the subject, examining an immense number of books and making an exhaustive research among the rare books to be found only in the great libraries. In this way a work has been produced that is more comprehensive and suitable to practical needs than any reasonable-priced work that has yet been published.

One unique feature of the compilation is the further illustration of the text and plates with photographs of the best examples of ancient architecture, embodying the matter to which the plates and text refer, thus giving the reader an opportunity to see an example of the order that he is studying as embodied in some of the best examples of ancient architecture, giving the young draftsman a clearer idea of perspective, scale, etc. Incidentally he will absorb a great deal of architectural history.

The Bibliography, which gives full information in regard to the authors, publishers, etc., is an important feature, giving, as it does, a resume of the best literature on the subject. This Bibliography was prepared by men of exceptional qualifications for the task and it is starred to indicate the relative importance of the books.

The plates are fifty-eight in number, 11 inches by 15 inches in size, printed on heavy plate paper in a very artistic and serviceable portfolio, in loose form for

convenience in desk work. They serve also as beautiful examples of draftsmanship. The books are bound in half red morocco leather, on a superior quality of paper, and are fully indexed. The price is \$12.00 in installments or \$11.00 cash, and will be sent for examination without a payment, by prepaid express, on five days' approval, with the privilege of returning, if not satisfactory in every way, at the expense of the publishers.

FIRE SAFEGUARDS FOR A CITY

Many suggestions for safeguarding a city from fire are contained in a report made to the National Board of Fire Underwriters by George W. Booth and a corps of engineers, on conditions in Detroit, Mich., which city has been comparatively free from conflagrations during recent years. It is recommended that all over-head wires, except trolley wires, be placed under ground in the closely built sections; that a Building Department be created to relieve the Fire Marshal of the duties usually performed by the Superintendent of Builders, and that he be made subordinate to the Chief of the Fire Department; that the fire-escape ordinances be rigidly enforced; that a complete code of regulations governing the manufacture, sale, storage and transportation of all explosives and inflammable substances be adopted; that automatic sprinkler equipment be required in all buildings which, by reason of their size, construction or occupancy, might act as conflagration breeders.

ILLUSTRATIONS

A considerable amount of illustration space in this issue is devoted to the interesting construction problem met with by an architect who was sent to China to design and superintend the erection of buildings for the United States government, Mr. Sid H. Nealy, who was sent from the supervising architect's office after the Boxer rebellion to design and erect a legation building for the United States at Peking. His design was not made under the direction of the supervising architect's office, but he was detailed from it for duty under the department of state and the designing was done at Peking after studying the needs and conditions there. The original appropriation was \$100,000, subsequently raised to \$150,000. The buildings are made of native grey brick and granite and laid in native cement mortar. Interior finish, hot-water heating apparatus, plumbing, etc., taken from America. The entire work was done by Chinese, personally superintended by the architect. Between four hundred and five hundred stone cutters alone were employed cutting stone during one summer and the following winter. As many as seven hundred men, including bricklayers, stonecutters, carpenters and coolies, were employed on the general

work at one time. None of them had ever done foreign work before. Other delays were occasioned, the Russia-Japanese war delaying the work about a year, several cargoes of stuff for legation buildings being held up by Japanese or Russians and much time lost in this way. The buildings consist of minister's residence (main building), Chancery or office building, residence of First, Second and Chinese secretaries, Sedan Chair House, stables, ice-making plant, artesian well, 295 feet deep, etc. By the latter, the only pure water in Pekin was obtained. Congress subsequently appropriated (upon recommendation of the architect) \$30,000 for furnishing the buildings. The New Legation was occupied in November, 1905, the total time in actual construction being two years and four months. Under direction of the War Department the architect also constructed for defense of the Legation a fort on top of the Tartar city wall, the only defense the Americans have. These are the first Legation buildings ever built by the United States Government. All other Legations and Embassies are rented buildings. It is expected that other Legations will be built and that eventually Uncle Sam will have under his own roof all his ambassadors and ministers.

The rapid spread of the Society of Beaux Arts Architects' course of study by means of Ateliers in the cities of the United States is phenomenal in a way, but not so remarkable when one considers the advantages it gives the draftsman, who otherwise would never be trained to any appreciable extent for his work. The success of the Atelier system has two factors in its adoption among the architects who are graduates of the Beaux Arts: their enthusiasm for their schools, and the more selfish one of wishing for a higher grade of draftsmen generally. Three class B order problems of finished sketches, rendered en loge in the Hewitt Atelier, Minneapolis, are given to show the excellent work produced by this Atelier and the general trend of subjects given in this stage of the school competition for places.

The remarkable work of Will H. Low in the "ball room" of the Waldorf-Astoria hotel in New York, which contains as a whole over fifty life-size figures and covers one thousand and ninety-two feet of canvas, should receive more than passing mention. These paintings, twenty in number, are composed of six lunettes and fourteen oval panels. As the ball room is also used for concerts and dramatic entertainments, the artist used as his motive scenes representing the dance, the drama and music of these twenty-two lunettes and three of the oval panels are illustrated. "The music of the Woods" is illustrated by "echo" in mid-air luring on two mortals in her wake. "The Music of the Sea" shows three nymphs upon

the rocks listening to the music of the waves, one of them playing an accompaniment on a conch shell. As the visitors to the hotel are from all over the world, the artist took for the fourteen oval panels typical figures of different nations, each with the musical instrument associated with the country. Of these "Scotland" and "Ireland" are shown. "America", a figure draped in the national flag, represents vocal music.

The exterior, interiors and plans of the W. D. Hofius residence, at Seattle, by Walter Spalding, architect, gives a fair sample of the quality of work which is being executed in that city. There is a certain novelty and lightness in the interior design, well carried out, and every line seems self-contained and harmonious.

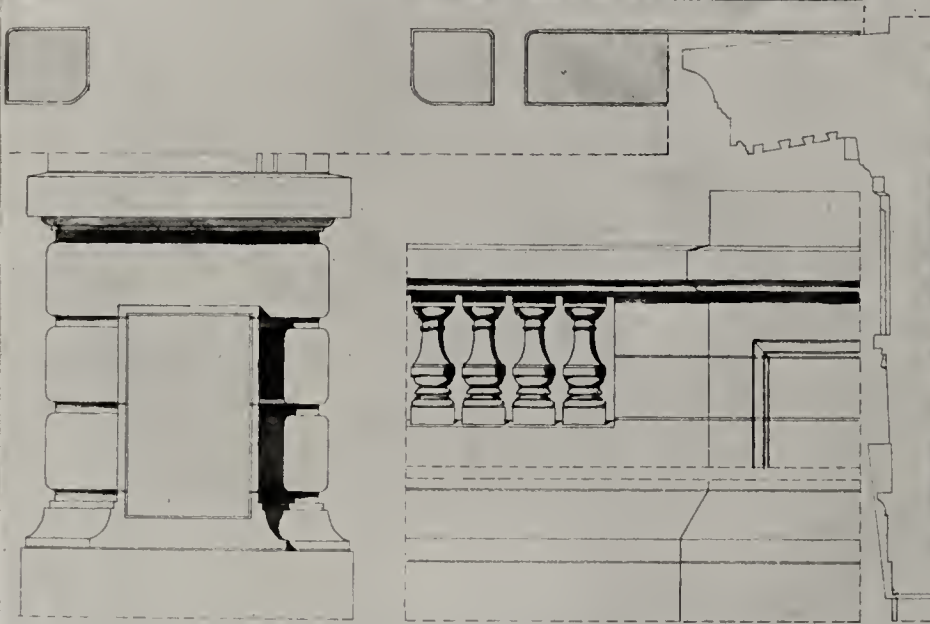
The accepted design in the competition for a state capitol building for the State of Wisconsin, as illustrated this month, is by George B. Post & Sons, of New York. Five architectural firms were accepted for this competition: Geo. B. Post & Sons, of New York; Ferry & Clas and H. C. Koch & Son, of Milwaukee; Shepley, Rutan & Coolidge and Peabody & Stearns, of Boston. This is the second competition held, the first, two years ago, being awarded to Cass Gilbert; but a legal contest resulted in the competition programme being declared without proper warrant from the legislature and was abandoned.

As will be seen from our illustrations, the building will consist of a four-story granite structure, surmounted by a large and graceful dome. The form will be that of a St. Andrew's cross, with all the wings of equal length and area, and it will be set diagonally on the square, with wings pointing to the points of the compass and to the diagonal streets terminating at the corners of the park. The building will have an extreme length from north to south and from east to west of 420 feet. The width of the wings will be 120 feet.

The features of the design are the entrances, there being an entrance to the building on the ground floor at the end of each wing, with continuous and uninterrupted vista entirely through the building at the inner angles of the cross. These enter on the principal floor through curved porticoes surmounted by half domes. They land directly in the rotunda, from which four grand staircases ascend to the second floor.

The rotunda, reaching from the ground floor to the top of the dome, will be 84 feet in diameter and 176 feet high. Its walls and openings will be embellished with columns of marble and granite. The exterior diameter of the dome is 102 feet and the height from ground to top of statue on top is 286 feet.

UNIVERSITY OF MANNING



THE ENTRANCE TO A PARK.

THE SCALE AT WHICH THE DRAWINGS
 ARE RENDERED IS,
 ELEVATION, ONE EIGHT INCH TO THE FOOT.
 PLAN AND SECTION, ONE SIXTEENTH INCH.
 DETAILS, THREE FOURTHS INCH.

*Louis O. Kirk
 Atelier Hewitt.
 7/11/06.*

HEWITT ATELIER (MINNEAPOLIS) DRAWINGS IN SOCIETY OF BEAUX ARTS ARCHITECTS' COMPETITION

LOUIS O. KIRK, DEL

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FIRST AND SECOND SECRETARIES' RESIDENCES FROM THE MINISTER'S TERRACE



THE INNER, OR COMPOUND, SIDE OF GATEWAY TO LEGATION



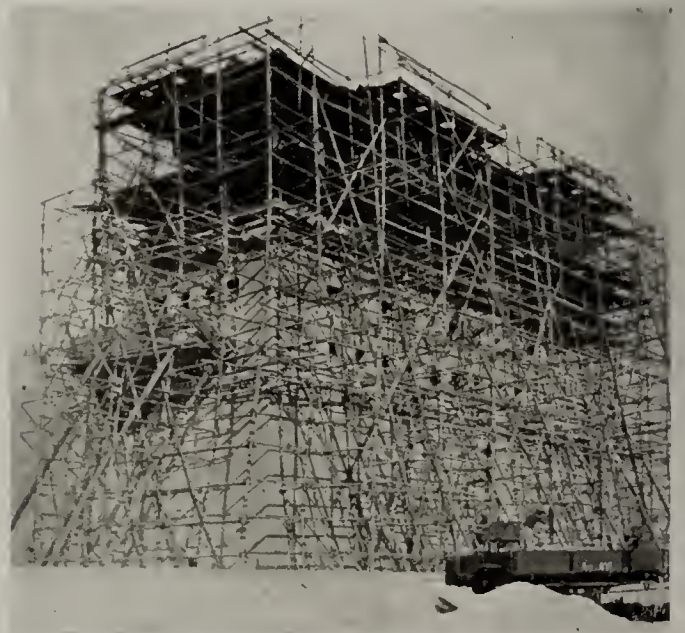
RESIDENCE OF CHINESE SECRETARY



MAIN ENTRANCE MINISTER'S RESIDENCE



CHANCERY, OR OFFICE BUILDING



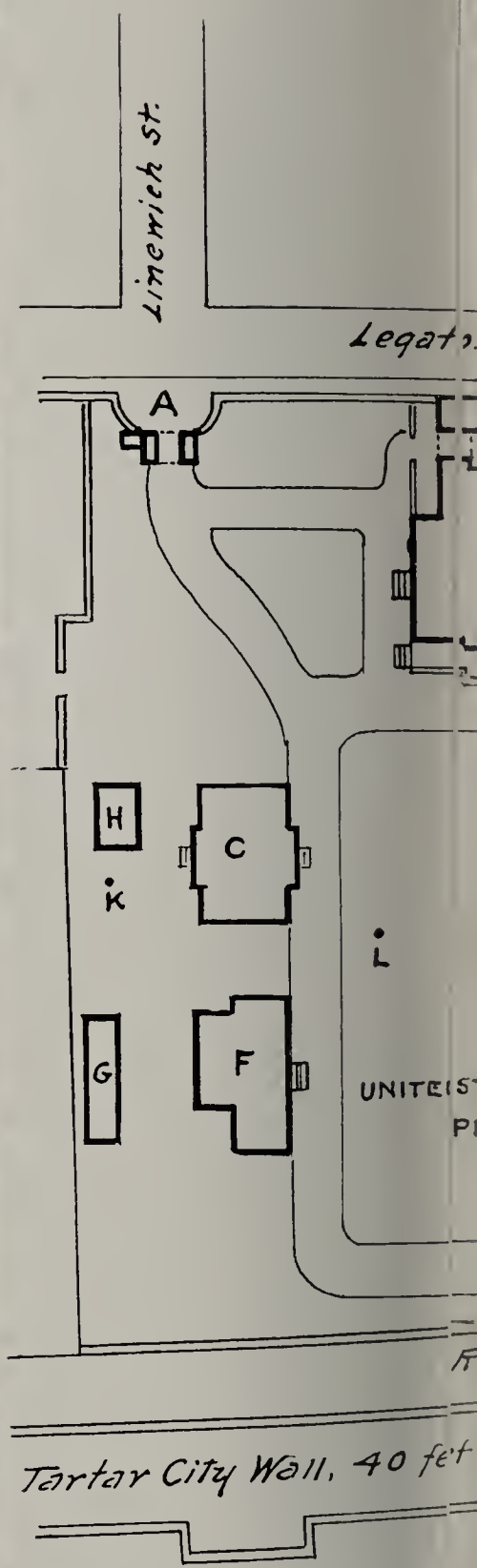
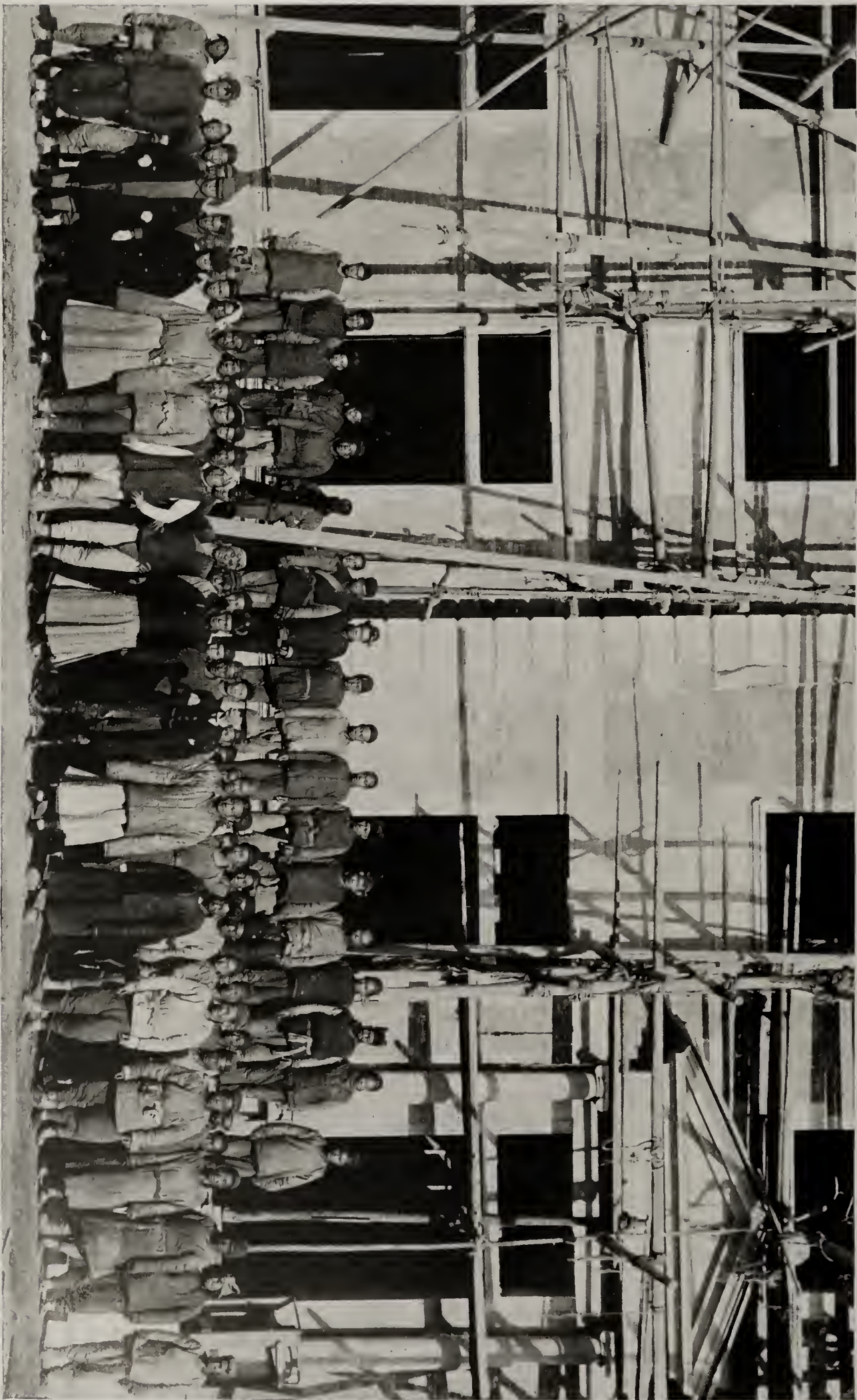
A SPECIMEN OF CHINESE SCAFFOLDING. REBUILDING THE TOWER OF CHIEN-MEN (FRONT GATE)

DETAILS OF THE CONSTRUCTION OF THE

FROM PHOTOGRAPHS BY SIDNEY

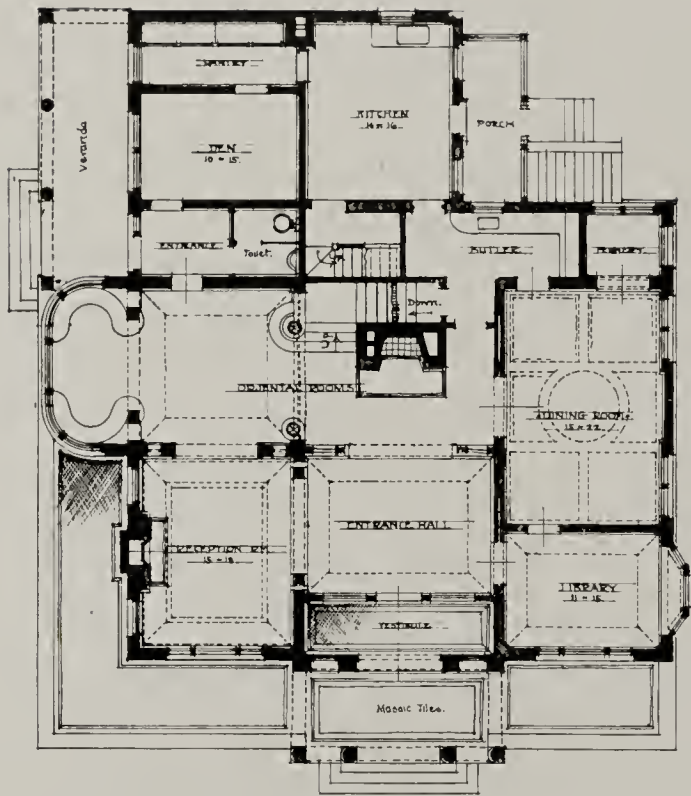
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THE ARCHITECT AND HIS WORKMEN

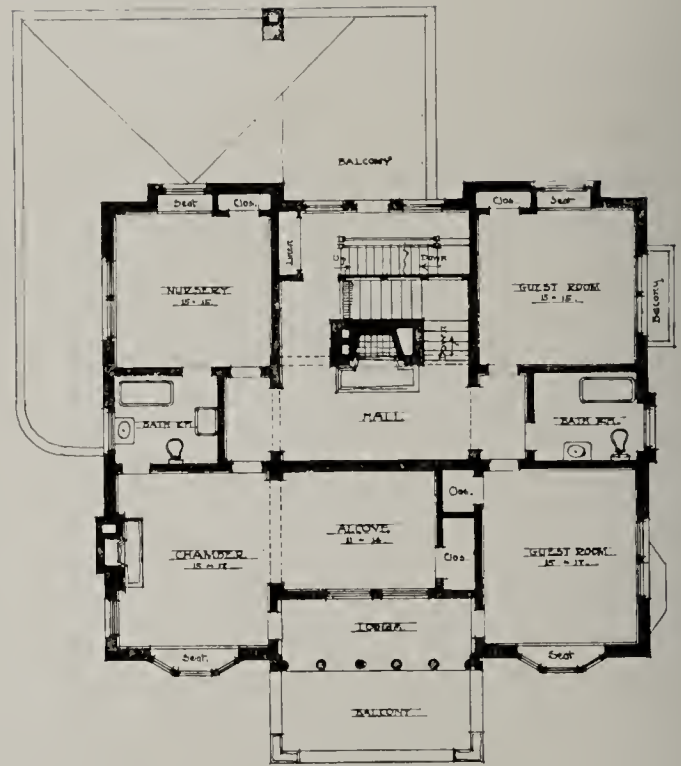


- U. S. LEGATION
- A—GATE HOUSE, N. T.
 - B—MINISTER'S RESIDENCE
 - C—CHANCERY, OR OFFICE
 - D—RESIDENCE OF IRON
 - E—RESIDENCE OF EC
 - F—RESIDENCE OF HI
 - G—SERVANTS' QUARTERS
 - H—SEDAN-CHAIR HOUSE
 - K—ARTESIAN WELL, 2
 - L—WELLS DUG FOR USE

L Y
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FIRST FLOOR PLAN



SECOND FLOOR PLAN



RESIDENCE OF W. D. HOFIUS, SEATTLE WASHINGTON
A. W. SPALDING ARCHITECT

L
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RECEPTION ROOM. RESIDENCE OF W. D. HOPIUS. SEATTLE. WASHINGTON.

A. W. SPALDING, ARCHITECT

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SCOTLAND

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IRELAND

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PAINTINGS IN WALDORF-ASTORIA HOTEL BALL ROOM, NEW YORK

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THE VOICE OF THE SEA
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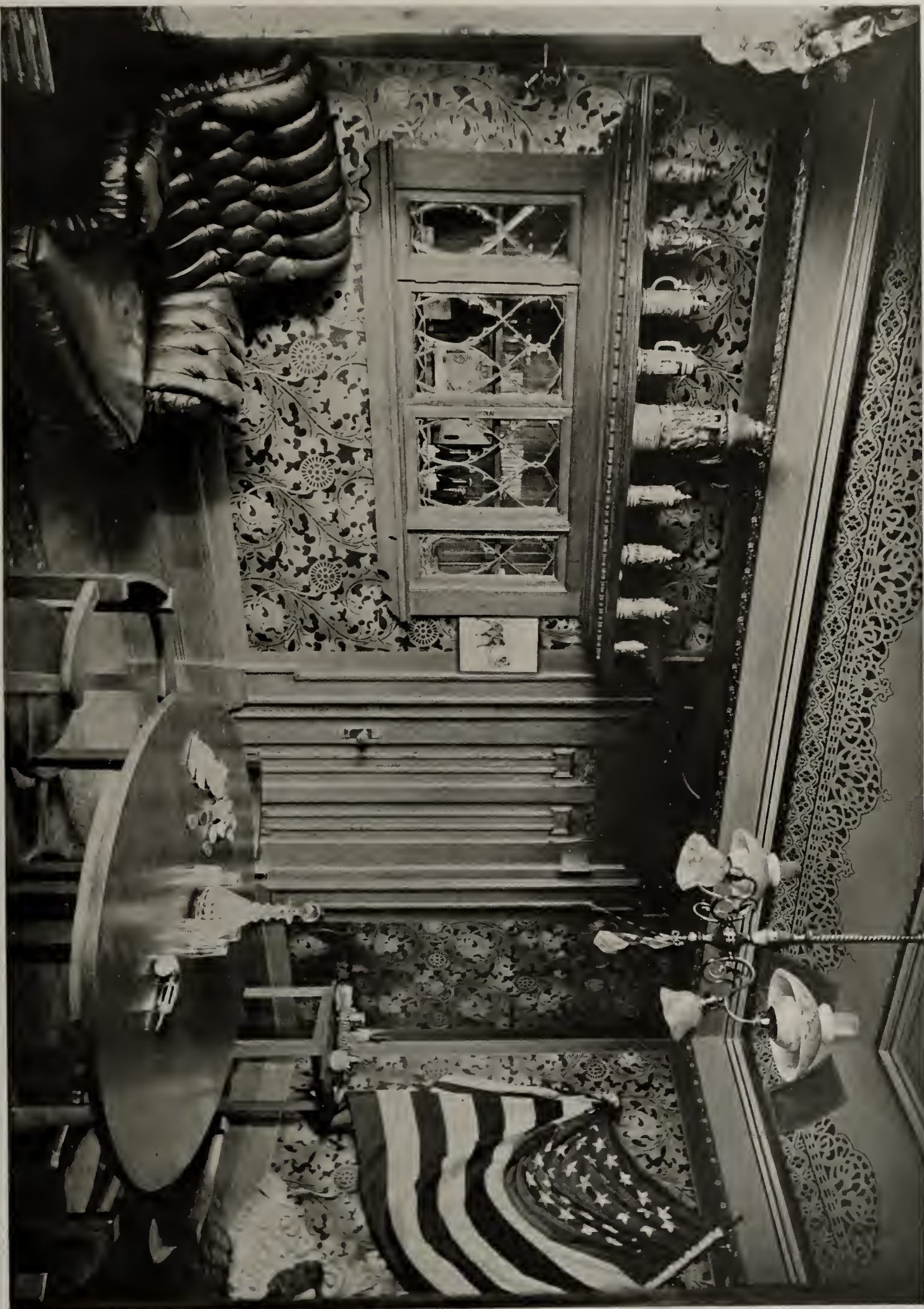
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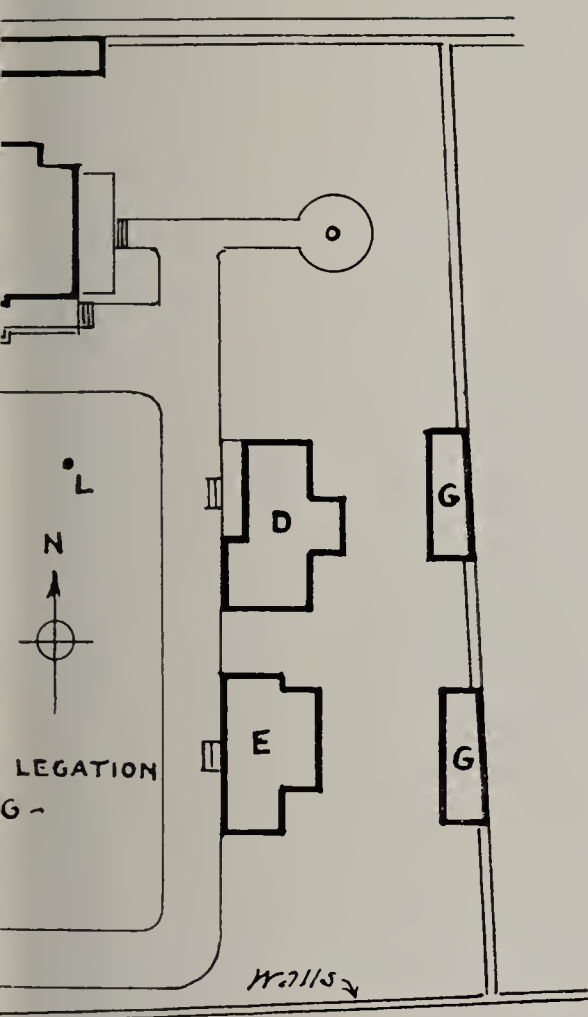
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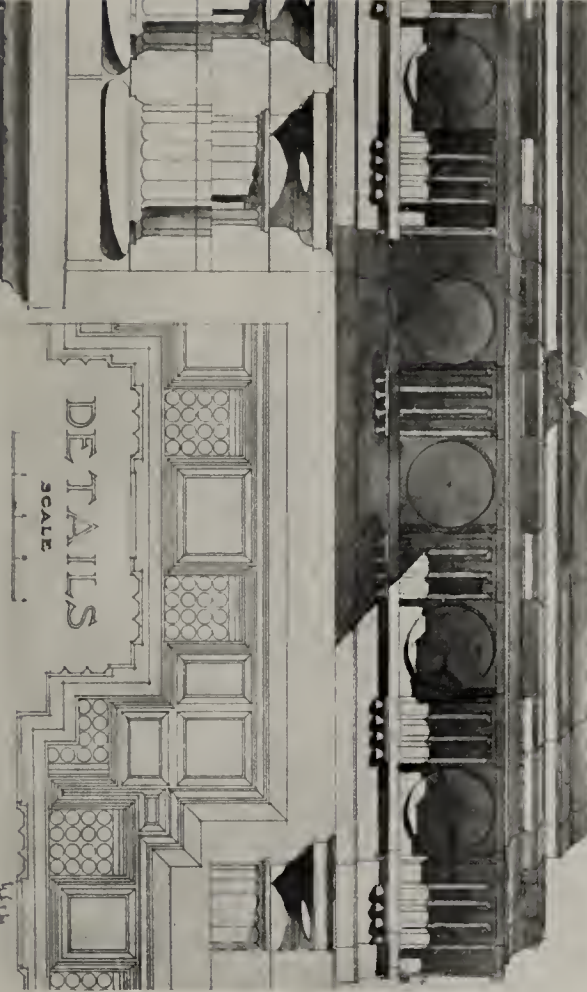


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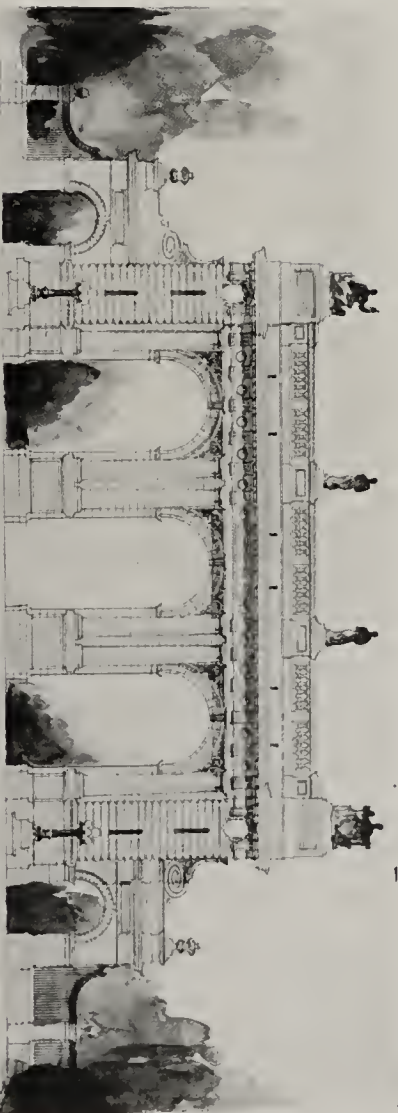
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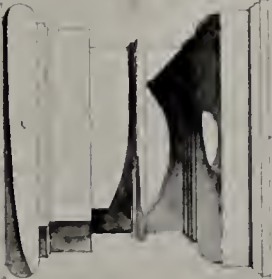
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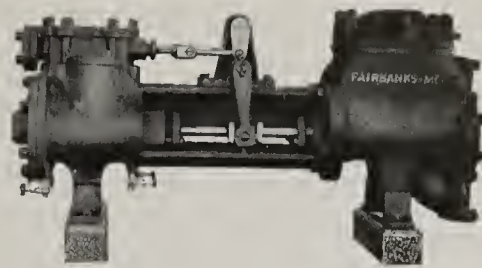
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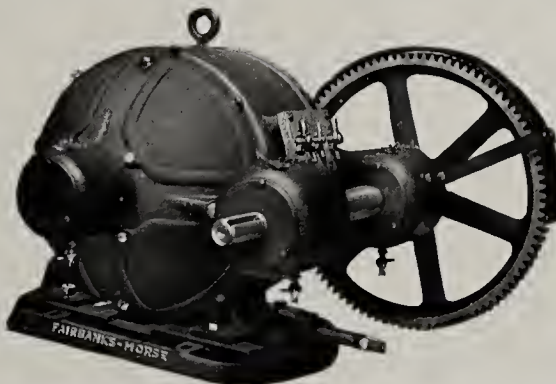
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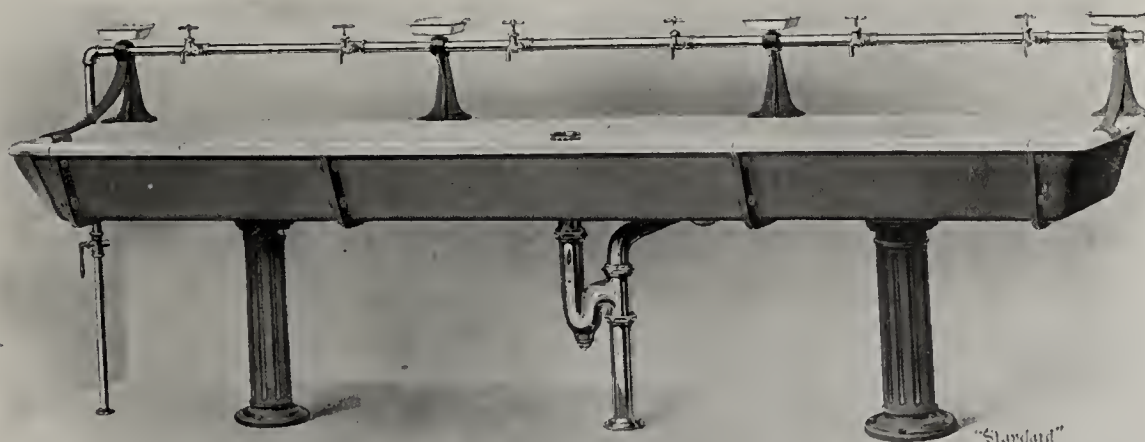
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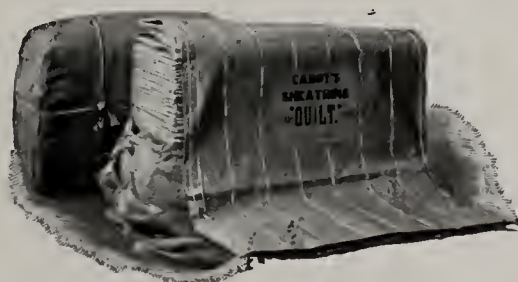
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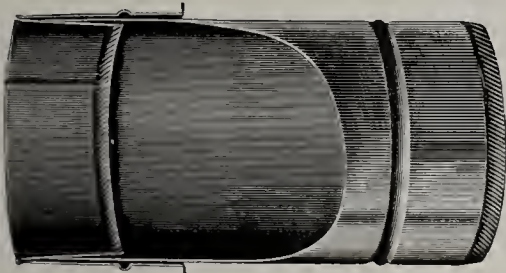
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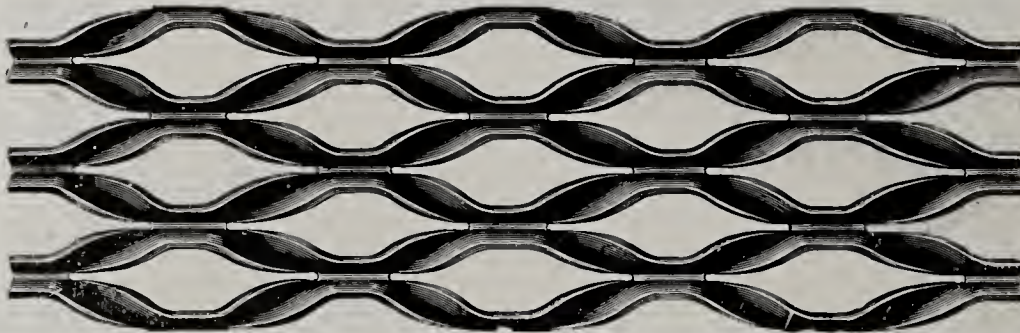
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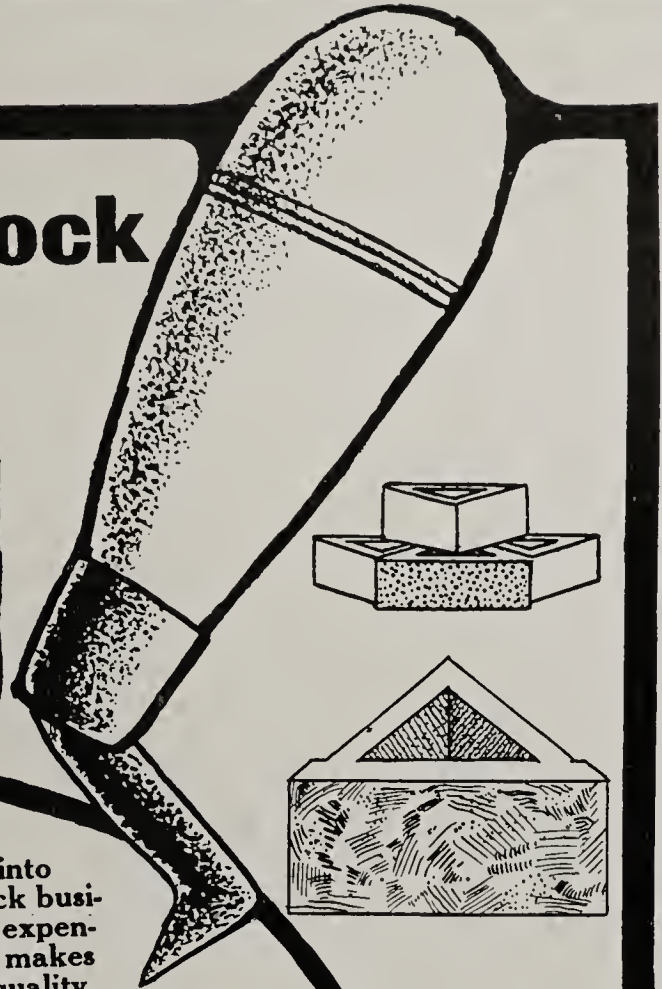
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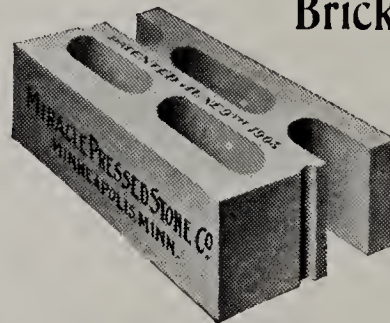
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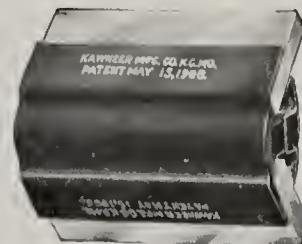
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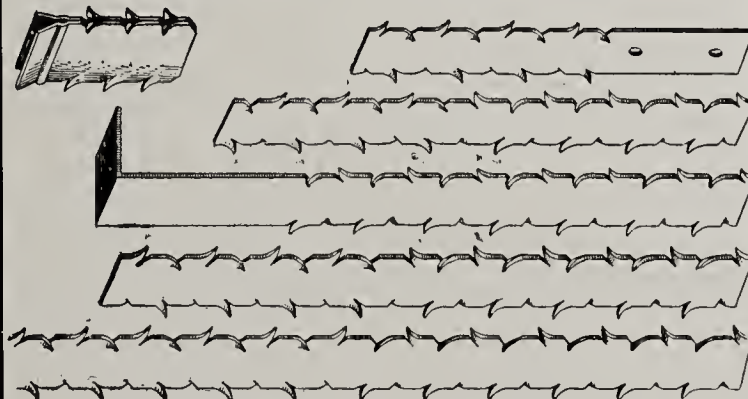
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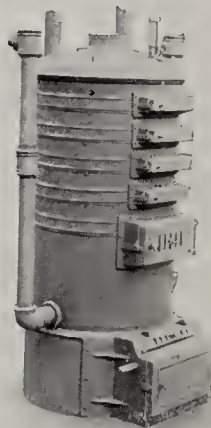
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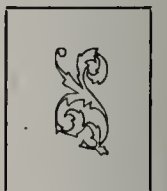
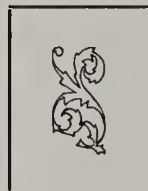
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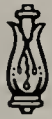
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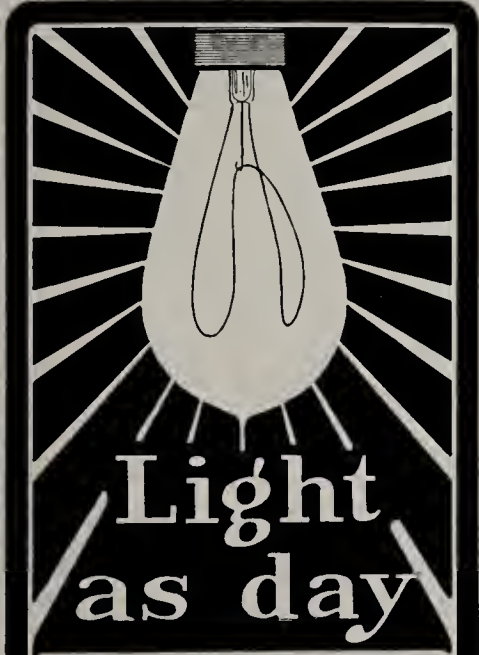
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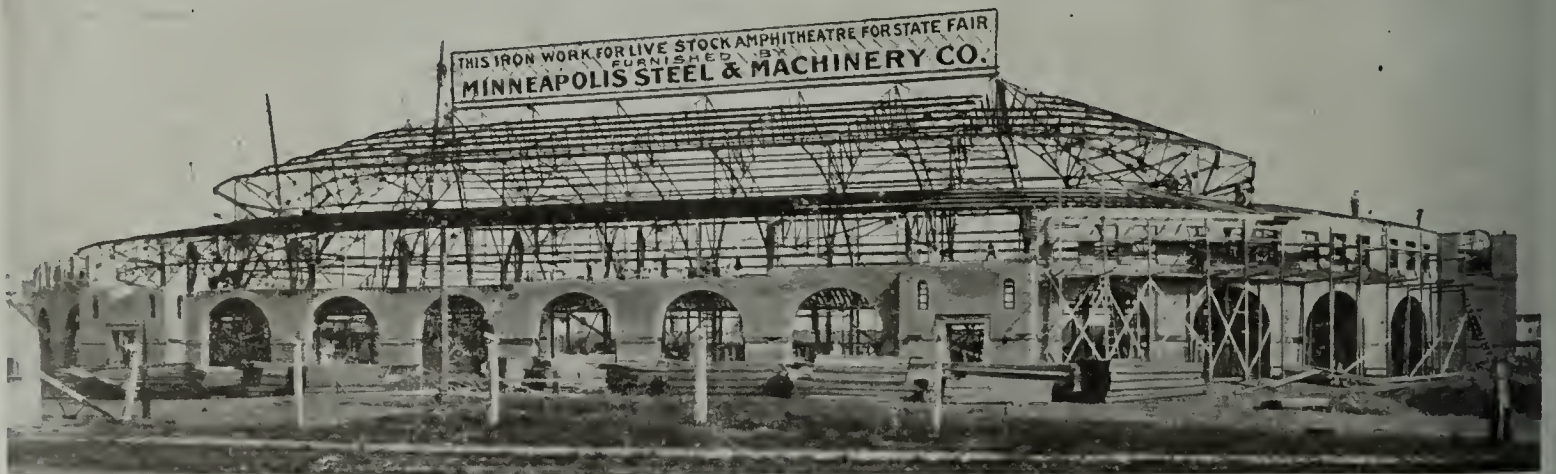
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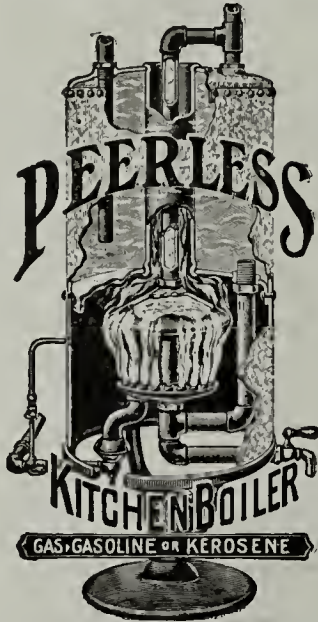
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A PERFECT KITCHEN CABINET

When the happiness of the average man is summed up the equation that makes for beatitude is not found in his library or anywhere else in the front of the house, but in the kitchen where the cook presides and ministers to his wants. Therefore the kitchen cabinet was devised and at once filled a long-

felt want, or rather the idea did, for the first kitchen cabinets were just good enough to make the cook long for something better. It is well known that the atmosphere of the kitchen reaches even through the double doors of the butler's pantry, and even a capable cook can spoil a good dinner when her surroundings are annoying. Therefore the kitchen atmosphere was not entirely salubrious until the



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"Burt", in many cases, makes any other form of skylight unnecessary. The valuable feature here seems to be the form of damper used, as a flat damper always shuts out the light when it is closed, losing the skylight feature just when it is most needed. In the "Burt" this is avoided and the skylight is unobstructed whether the ventilator is closed or not, and it is the only ventilator having this important feature, which is fully protected by patents. In an interesting photograph, the latest and most improved ventilator, the "Burt", is shown. The photograph is from one of two 48-inch ventilators, made for the Raritan Copper Works at Amboy, New Jersey. It certainly gives a striking conception of the stability of these ventilators, holding, as it does, eleven men, aggregating 1,762 pounds in weight. The Burt ventilators are made of extra heavy iron, strongly braced, and while not cheap in price is the cheapest in the market from a point of efficient and lasting quality, especially when the skylight feature is considered.

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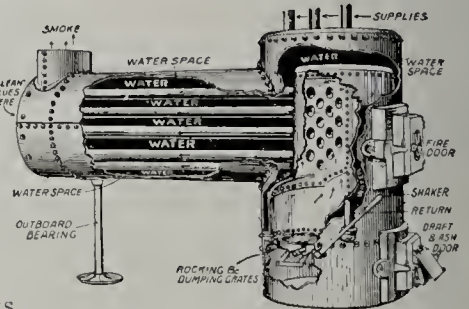
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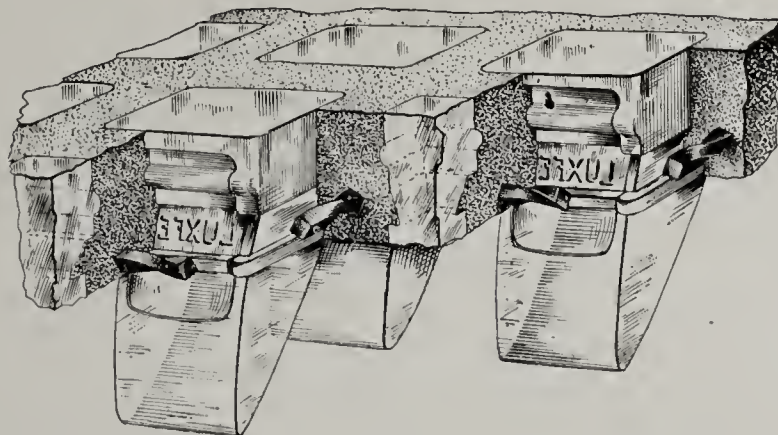
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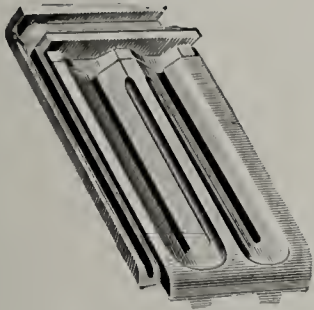
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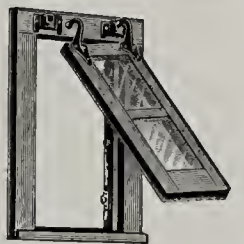
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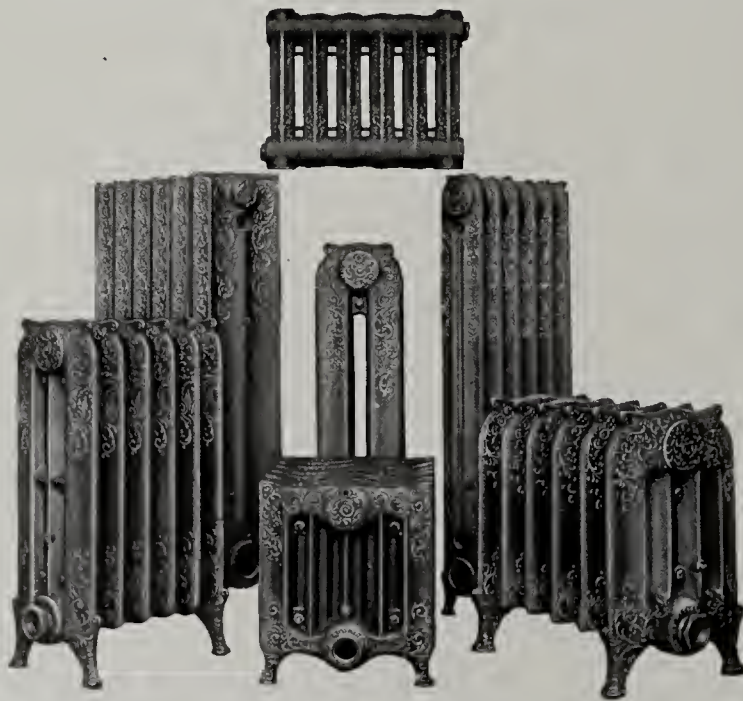
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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

A Misinterpretation of the Postal Law Regarding Inserts

While the approaching investigation of the propriety of raising the postal rate on second-class matter is of considerable importance to us, there is another matter that should occupy some attention by the House and Senate Committee, which meets at New York October 1st, and that is the interpretation by the postal authorities of the law regarding inserts. We received a letter from the third assistant post-master-General, dated April 10, 1905, regarding the matter, which specified certain "so-called supplements which are manifestly illegal", such as "calendars, sheet-music, patterns, blocks of post-cards, cut-out animal pictures, animal masks, cut-out dolls, soldiers and naval vessels, special detached advertisements, cardboard spectacles, etc". These were prohibited after September 1st, 1905. In July we took the matter up with an official from Washington and were told that if the inserted illustrations in architectural journals were described in the text and thus became an integral part of the journal they would not come within the provisions of this law. In August, 1906, we received pre-emptory notice from Washington to bind in our illustrations or pay third-class rate postage, which is prohibitory. It does not seem necessary to call the committee's attention to the fact that the law was not intended to apply to those inserts that are an integral part of an architectural journal, and only inserted for convenience in filing, or the asinine trend of mind that would confound the educational and art features of the inserts found in architectural journals with such as those specified, but it would seem proper for the committee to ask Congress by bill or otherwise to point out this misinterpretation of a good law and order that architectural journal inserts be no longer molested. If this committee really intends to carry out the work for which it was appointed and revise rules governing second-class

matter, information on the subject can be obtained from the "American Architect" and "Architecture" of New York, and the "Architectural Review" and the "Brickbuilder" of Boston, as well as from the Western Architect.

**Creditable
Aggressiveness
of
Brooklyn Chapter**

The Brooklyn Chapter of the American Institute of Architects should be called the "Fighting Fifth" because, while it is not in any way quarrelsome, it is aggressive and believes that a chapter organization is established for the advancement of professional ethics and the protection of its members and the public in architectural affairs. Therefore it finds work to do and it does it with energy, and, usually, with wisdom. It has taken up the fight against the evasion of the Brooklyn sanitary law, which prohibits dark rooms by demanding certain windows and well-holes in tenements. An architect with more ingenuity than care for the public good "invented" what is known as the "railroad tenement", by which movable furnishings can take the place of partitions and doors. This is, of course, a clear evasion of the spirit of the law which aims to prevent dark and close rooms from being constructed; and the chapter should win in its contention in support of the building ordinance because it is right.

**Professor
Laird
as Competition
Expert**

As a successor to Professor William Roach Ware, of Columbia University, who for two decades was engaged in the work of adjudicating competitions, Professor Warren P. Laird, of the University of Pennsylvania, has already adjudicated a number of important competitions, and is becoming the recognized expert at the command of the profession in this particular. It is probable that neither the profession nor the public have ever realized at what personal sacrifice either Professor Ware or Professor Laird has pursued this line of work. But it should not be forgotten. The extreme difficulty of obtaining an expert who is not a practicing architect and still has that practical training that is required in the arduous task of determining the different points of excellence in sets of drawings, not only involving a thorough knowledge of architecture, but a detailed conception of purpose, makes the self-sacrifice of these men of especial value to the profession and the public.

**The United States
will build
Two Hundred
Postoffices**

The supervising architects' office, headed by James Knox Taylor, is busy inspecting the proposed sites for the upwards of two hundred new postoffice buildings, involving the expenditure of some \$20,000,000, authorized by the last congress. While a majority of these are small, each should be a creditable and representative design, and it seems to us that, as time is a desideratum, a generous proportion should be designed under the Tarnsey act. The supervising architect's office can now be trusted to produce designs equal to three of the best class of architects, but no office can do its best work when it is rushed, and sufficient study cannot be allowed to each. It is fitting also that local architects as well as local contractors should receive the benefit of the government's expenditure in given localities, and it is hoped that a large number of the new buildings will be designed by the architects of the country.

**A Full-Sized
Model of
a Large
Capital**

A full size model of the capitals for the columns designed for the new courthouse to be erected in Chicago, was placed on top of a hotel by the architects, Holabird and Roche, recently, so that the scale could be accurately observed. This is the first time we remember of an architect placing a full scale model of detail at the distance and angle it was to occupy in the completed building.

**A Snap
for the
Junior
Draftsmen**

The "cubs" in the architects' offices of Buffalo are in a fair way to enter competitions and obtain spending money outside of their salaries, if the programme of the County Committee is carried out. That astute body proposes to obtain designs for county buildings by competition, pay an expert \$100 for his work and award the three highest \$100, \$75, and \$50, respectively, the drawings then to become the property of the county "for any use the board may see fit to make". The farmers in North Dakota might be excused for having so small a conception of the value of an architect's services and knowledge of the quality of work such an arrangement would bring, but it is hard to imagine how such crass ignorance can be found in Buffalo.

HOLLOW TERRA COTTA FOR COUNTRY BUILDINGS

BY GEORGE E. WALSH

(Concluded)



THE modern terra cotta or clay tiles are burnt in kilns to a temperature of from 2000 to 2500 degrees F., and as a result of this form of manufacture it is impossible for them to be affected by the hottest fire that is likely to rage in a building, even when fed by highly inflammable material. Up to this high temperature the tiles or blocks do not warp, crack or sag. Consequently, when used as floors, roofs, partitions or ceilings they restrain the spread of an interior fire.

The question of strength is the next important consideration for a builder or architect. In building the new domes and arches of fireproof tiles the cohesive strength or resistance to shearing of two hard tiles cemented together with good Portland cement is equal to 124 pounds to the square inch. The tiles are made as hard as the cement, and when made into the form of an arch the two become a homogeneous whole. But the arches are built up of several courses, so that resistance of over 2000 pounds to the square inch is obtained.

But the modern fireproof tile arch is not of so much value to the builder of the country house as the flat arches, made of hollow terra cotta tiles reinforced with steel wires imbedded in the materials. The wire reinforcements carry the load and the floor or ceiling of tiles is laid on top of it. The basis of the flooring is formed of large steel wires, transversely interwoven with still larger wires placed 4 inches apart. Over and through these wires the cement is placed and the tiles set longitudinally until a complete monolith or homogeneous floor is formed. The wire truss reinforcement is cut according to measurements and shipped in reels, so that a builder or contractor can easily put it in position. Every part of the metal is protected, by cement mortar or fireproof clay tiles, from any exposure to fire. The result is a perfect floor or ceiling is formed without the use of steel framework, which in case of fire would resist high temperatures as much as a floor of a modern fireproof skyscraper in our cities.

The relative strength of such floor spans is greater than ever required for ordinary houses, and the span can extend to 25 and more feet by increasing the tile and reinforcement. In tests with live loads, a span of 16 feet between girders has carried 733 pounds to the square foot, or a total of 187,680 pounds on the whole floor. By dispensing with steel beams a great saving is obtained. This method of building has been

adopted in many city structures, notably the Chicago postoffice, where heavy loads must be carried. The metal is so imbedded in the cement mortar that it is impossible for it to rust and deteriorate, and its life is as long or longer than the building materials which it supports.

With the flooring or ceiling once formed, the finish can be made in wood, tile or mosaic work or gravel, with suitable roofing material. Wooden beams can be laid on tops of the tiles and wooden floors nailed to them in the old way, or plastic materials which give a firm, hard, fireproof floor can be employed. The ceiling can be finished in the ordinary way or with stamped metal ceilings. Even should the latter be warped and melted by a hot interior fire it would not affect the strength of the floor, for the latter is built independent of it, and with every part of the metal inclosed in cement at least 1 inch thick.

The walls of such a building are composed of 8, 10 or 12-inch hollow tile blocks. The metal reinforcements are imbedded in the outside brick walls, so that almost any requirement of a house can be met. Where mills, factories or storage houses use this system of floors, iron columns are employed for attaching the reinforcements, but an ordinary country house demands no such strength in its floors. The walls of the house are built of any desirable bricks, plain or faced, and one course of plain hollow terra cotta blocks inside of the walls for fire-resisting purposes. This course of hollow blocks meets with and is joined to the blocks of the floors and partitions. In this way each room becomes a fireproof box, in which any interior fire could be confined. The hollow tiles for interior of walls are made with rough faces for wall furring, so that the ordinary plaster can be used.

Ordinary terra cotta partitions can be laid by the bricklayer, but the best Portland cement must be used, so that when it hardens it will be as firm and fire-resisting as the tiles or blocks. The porous terra cotta blocks are manufactured for interior use, so that nails can be driven in them. By means of this the interior rim of wood can be nailed to the walls or base. The interior of the porous blocks is furred for receiving plaster or left smooth for paint and whitewash or enamel. Enameled and tinted fireproof clay tiles, for interior decoration, have been employed in the main ceilings of the first floors of the new Tiffany and Gorham buildings in New York, and their effect is very striking. They illustrate a new departure in this use of tiles. The colors and glazing are burnt into the tiles after designs made by the architects, and no amount of dirt, grease or smoke can injure them. An annual washing is all that will be required to keep them in a perfectly fresh and sanitary condition. Similarly, in country homes such tiles can be exposed for artistic as well as useful effects.



COVER DESIGN TO MENU OF BANQUET OF THE INTERNATIONAL CONGRESS OF ARCHITECTS, HELD AT LONDON, ENGLAND, JULY 21, 1906. DRAWN BY ALMA TADEA

ABSTRACTS OF PAPERS READ BEFORE THE SEVENTH INTERNATIONAL CONGRESS OF ARCHITECTS, HELD AT LONDON, 16-21 JULY, 1906

BY WILLIAM LE BARON JENNEY, F. A. I. A.; MEMBER EX-OFFICIO



THE Seventh International Congress of Architects was held in London, sixteenth to twenty-first of July, 1906. The reunion was held under the auspices of King Edward and was pronounced a brilliant success. The attendance was large from the English-speaking nations. France was represented by M. M. Minot and Daumet, members of the institute of France, delegated by the under Secretary of State for the Fine Arts, and by our old friend, M. Poupine, corresponding member A. I. A., delegated by the Minister of Commerce of France. We are just in receipt of the details of the proceedings, the discussions and the numerous well arranged excursions to places of international interest, and the speeches and the toasts at the farewell banquet closing the congress. The Inauguration took place in the midst of enthusiastic applause, and that evening a brilliant reception was held in the gallery of the Royal Academy, where were exhibited the works of living painters. The next morning a magnificent soiree was given at the mansion house, the Palace of the Lord Mayor, the ladies of members of Congress contributing to the brilliancy of the assembly. The Congress visited the works under construction in the vicinity of London under the guidance of the President R. I. B. A. and its able Secretary, W. J. Locke, and then visited Windsor Castle with its treasures of paintings and Gobelin tapestry, which were of the greatest interest. Other excursions were made to the Universities of Oxford and Cambridge. The last day of Congress, 21st of July, was held at the hall R. I. B. A., where urgent appeals were made by the delegates of American, Italian, Austrian and German Architects, that the approaching Congress should be held in their respective countries. It was finally decided that the Congress be held in May, 1908, at Vienna, Austria, on an anniversary of the coronation of Emperor Francis Joseph, and that several of the meetings of said Congress should be held at Budapest. The last reunion of the Congress was held under the auspices of the Prince of Wales. Nothing could have been a greater surprise than the rendering by a brilliant quartette of "God Save the King" by the Westminster choir, the English present at the banquet joining in the chorus.

The final toast by M. Dumet, member of the Institute, president of the permanent committee of the

International Congress of Architects, repeated the sentiments presented by all the speeches in many languages of thanks to the organizers of the Congress and of the friendships of these reunions, which latter is the most valuable of all, the benefits derived therefrom creating friendships that will last for a lifetime and of which every member will be proud.

- Of the five hundred who sat at the banquet those from the United States which I note in the banquet plat are George B. Post, Frank Miles Day, W. S. Eames, F. R. Allen, Cass Gilbert, G. O. Totten, Jr., E. A. Kent, F. D. Millet, Albert Kelsey, Professor Thomas Nolan, C. H. Rutlan, C. Howard Walker.

THE EXECUTION OF GOVERNMENT AND MUNICIPAL WORK BY SALARIED OFFICIALS

BY OTTO WAGNER,

Imperial and Royal Superintendent of Works; Professor of the Imperial and Royal Academy of Plastic Arts. On behalf of the Society of Austrian Architects.

It will be convenient to give first a clear definition of the word "architect" and also some explanation of the process of development of the architect, because all the differences of opinion are more or less rooted in the wrongful acceptance of these conceptions.

With regard to the way in which the architect is developed, it must be taken into consideration that artistic capacities, such as manual proficiency, imagination, taste, individuality, and a certain gift for invention, are faculties which the architect must possess in his quality as an artist, but which cannot be learnt. On the other hand, there are a general culture and a technical and constructive knowledge, which the architect must also possess, but which can be acquired by study.

The amount of scientific knowledge to be acquired by the architect has reached such vast proportions that it has to be divided into parts, consequently into branches of knowledge. For this reason alone it is not possible for the young man who wants to become an architect to acquire full knowledge of all these special branches, since the time at his disposal, and the intellectual receptivity of the individual, are limited.

The architect, during the whole of his professional activity, will cultivate first of all the region of art, which nowadays even in literature has become of a very wide range. But as at the same time he is expected to have full knowledge of all technical innovations, his technical and scientific education should extend so far that he will be able to understand the essence of the sciences and their progress, and that this understanding will enable him in his practical work to put the results of human progress at the service of art.

His technical knowledge must, moreover, enable him to choose the proper methods of construction and the

most convenient materials to be employed. Nay, more, his knowledge, aided by his inborn inventiveness, must enable him to combine new forms of construction, or to vary existing ones so that they shall answer fully the purposes for which they are required. From this it follows that the practical work and experience which the architect gains in the course of his career must be based upon a sufficiently wide knowledge.

Only after having acquired a complete technical education can the question be decided whether the aspirant to the profession of an architect possesses those inborn qualities from which may be anticipated success in following this career.

There is, therefore, a sharply marked limit in the course of education of the architect. This limit, as already said, lies naturally between the acquired complete technical education and the entering into an academy of plastic art.

It is the duty of the academy, or rather of the professors teaching in such an institution, to examine and to decide whether or not the student possesses the inborn faculties enumerated above.

It cannot be too strongly recommended to such professors to use the utmost severity in this examination, because the result of it will have a great influence upon the general artistic standard of the profession, and because it is only by this method that that class of pseudo-architects who in our days intrude on the profession, to the discredit of art as well as artists, can be made to disappear from the scene.

We take the liberty to advise those civilized States, the schools of which make it possible to every student who has gone through the technical studies to choose the profession of an architect, even if he has absolutely no artistic aptitude for it, to discontinue this practice.

We wish particularly to point out that for architects there can be only one school—viz.: an academy of the plastic art; an academy for this reason, that art cannot be taught, and consequently cannot be admitted as a scientific subject in any course of studies, and because artistic education only consists in this, that the master shows to the art pupil the right way to perfection, and encourages him by his own activity to enter on this path.

It is, therefore, absolutely wrong for technical high schools and schools for artistic trades to admit in their plan of studies the tuition of architecture, because, owing to the students not being tested as to their aptitude for the profession, an absolutely inferior standard of architecture is created.

From what has been said so far it follows that the architect is an artist with a scientific education.

By the studies of technical matters successfully gone through by the pupil, and with the academical apprenticeship, the requirements of the architect are not yet, however, exhausted. The student is still lacking practical activity, and the experience which results from it.

If the apprenticeship of the architect is an exceedingly long one, it will certainly be very considerably extended by the period he is acquiring practical knowledge in an architect's office.

In this section of the apprenticeship of an architect (his apprenticeship really ends only with his death), he stands once more at the parting of the ways in the

progress of his education: that is to say, which way do his capabilities lie? Circumstances, etc., lead him to the point either to accept the struggle for existence or to enter into the safe haven of a salaried position. Here his artistic capacity plays the main part, because the greater it is, the more easily will he be able to refuse the enticing bonds of a fixed position, unless it be a professorship.

The curriculum of education of the architect so far sketched is the normal one, but we would remark at once at this stage that it is certainly not the only one, and that there will be sufficiently numerous cases in which the inborn capacities of the architect, in other words, his talents, are so great that a lack of scientific education is hardly of any importance.

This fact, as well as that other, that there is no limit of talent either in more or in less—further, in fact, which it is impossible to dispute, that the first architects in the world in a great many cases are not agreed on the question as to what constitutes an architect, give the certain proof that the title of Architect cannot be protected by letters patent, and that a judgment of artistic qualities is possible only by the artists themselves, consequently by the grouping of the artists among themselves.

In the latter circumstance we find also the proof that municipal and State administrations are not even in a position to make the proper choice of an artist to fill an office.

Still another important factor comes into consideration for making such a choice. The architect appointed to an office will, while occupying it, certainly not play the leading part. His individuality, his taste, etc., must therefore subordinate themselves to the same qualities in his superior, or even of more than one superior. The works carried out under the supervision of the office would therefore not show the capacities, the taste and individuality of the creating artist, but certainly the less valuable ones of his superiors, and as such superiors in most cases are laymen in questions of art, and often even in technical matters, it will be hardly necessary to give any more reasons why from such a combination no good can come.

It must also be mentioned that the artistic gifts of an artist oppressed by the yoke of office can never undergo the absolutely necessary development. These considerations prove sufficiently that a municipal or a State administration is never in a position to obtain the services of first-class artists as salaried officials.

But municipal and State administrations have certainly the sacred duty of cultivating the fine arts, which means with regard to architecture that the buildings erected by them should exercise the effect of models. But buildings of such a description can only be expected from great artists, and not from officials of an inferior artistic capacity.

For the same reasons the competence of the officials must only extend to the practical, technical, and economical, but never to the artistic control of buildings in the course of construction. If, finally, it is taken into consideration that, by the awakening which took place in the region of art, a lively controversy raged everywhere, and that even to this day public opinion has hardly returned to calmness, and therefore is not in a position to judge with unbiased artistic feeling works of art, such a large number of reasons has been put for-

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W.C. Weston
Architect

BROWN-MARX OFFICE BUILDING, BIRMINGHAM ALABAMA
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THE WESTERN ARCHITECT
SEPTEMBER
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“TRENTON”
LUNETTE IN THE NEW JERSEY STATE CAPITOL AT TRENTON
By W. B. VAN INGEN, NEW YORK

PHOTOGRAPH BY WURTS BROTHERS, NEW YORK

THE WESTERN ARCHITECT
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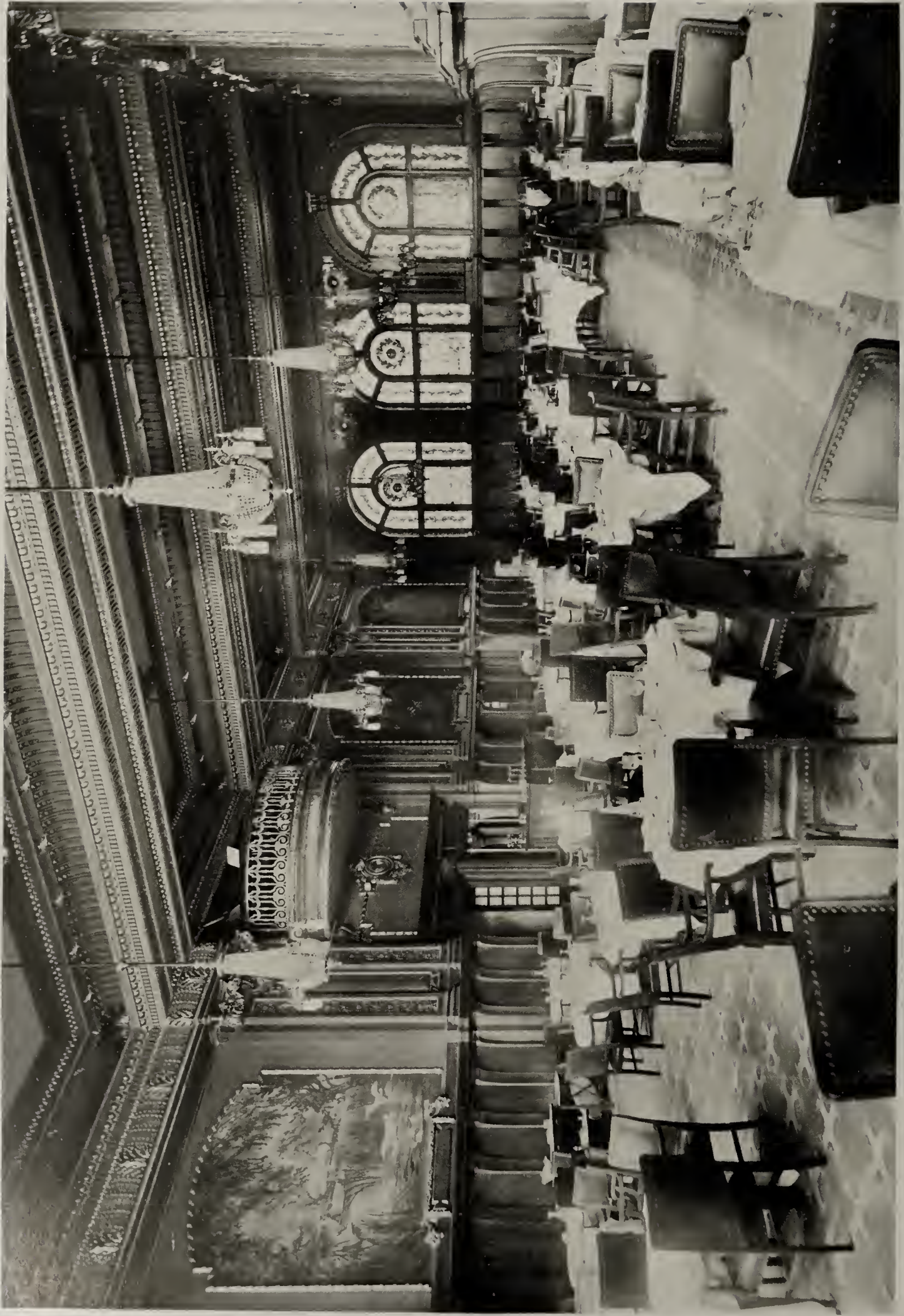
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LIVING ROOM, RESIDENCE OF S. E. SEXTON, KANSAS CITY, MISSOURI

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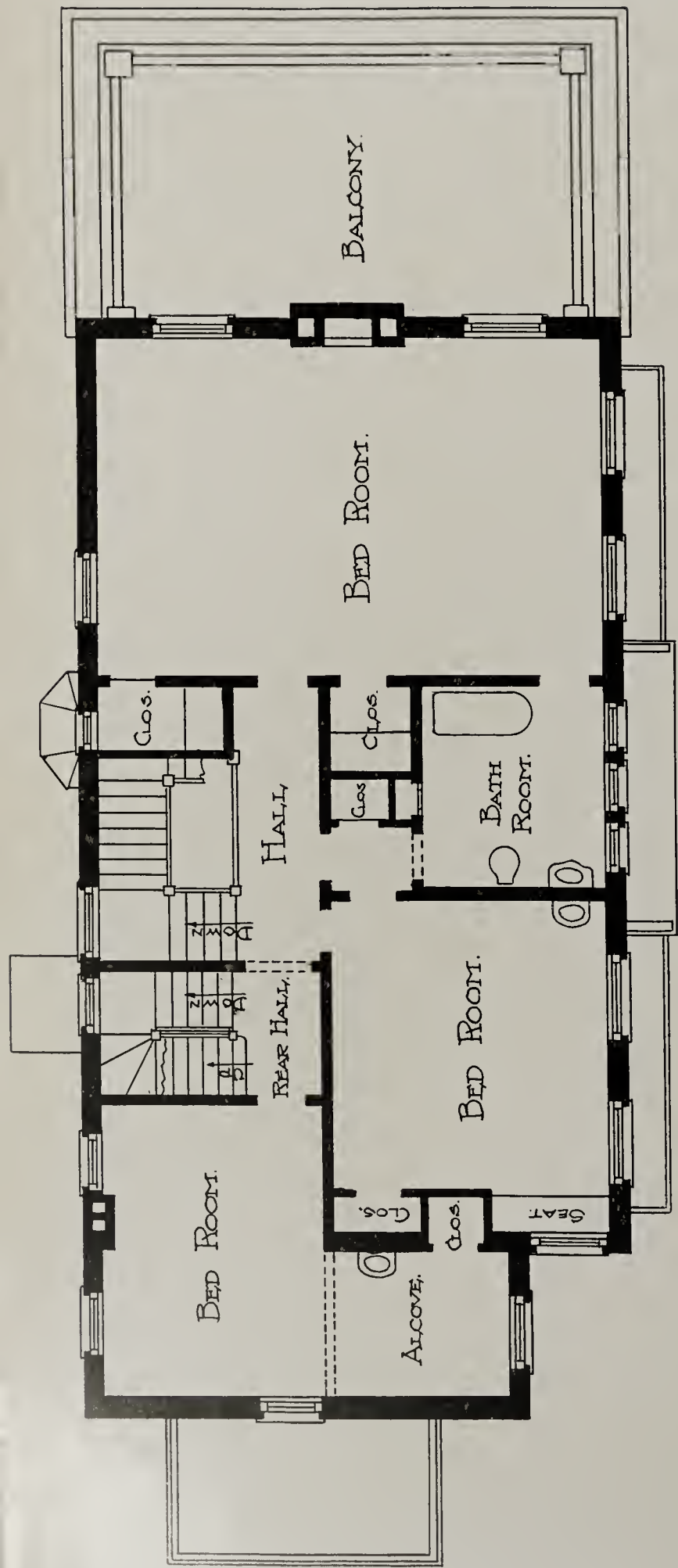
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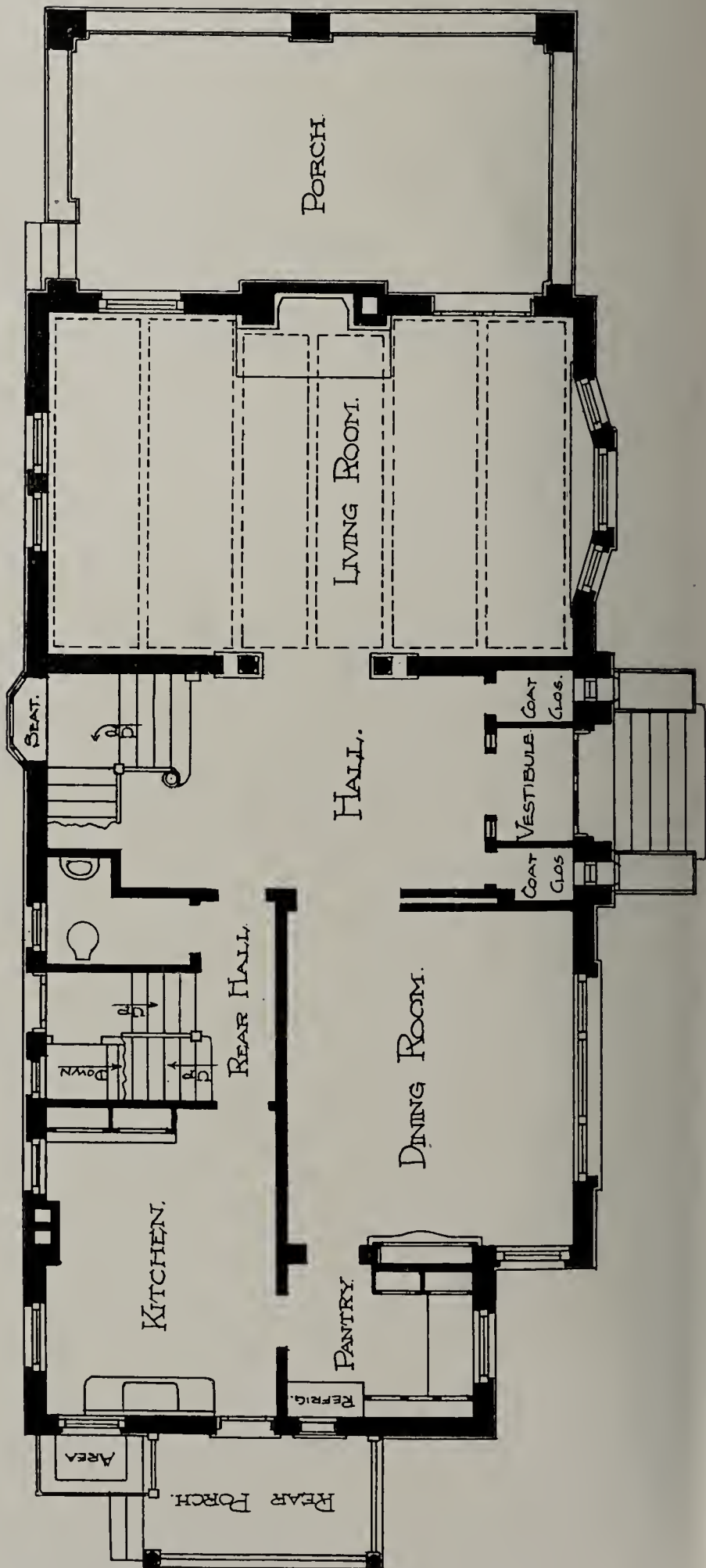
DINING ROOM. ALEXANDRIA HOTEL, LOS ANGELES, CALIFORNIA

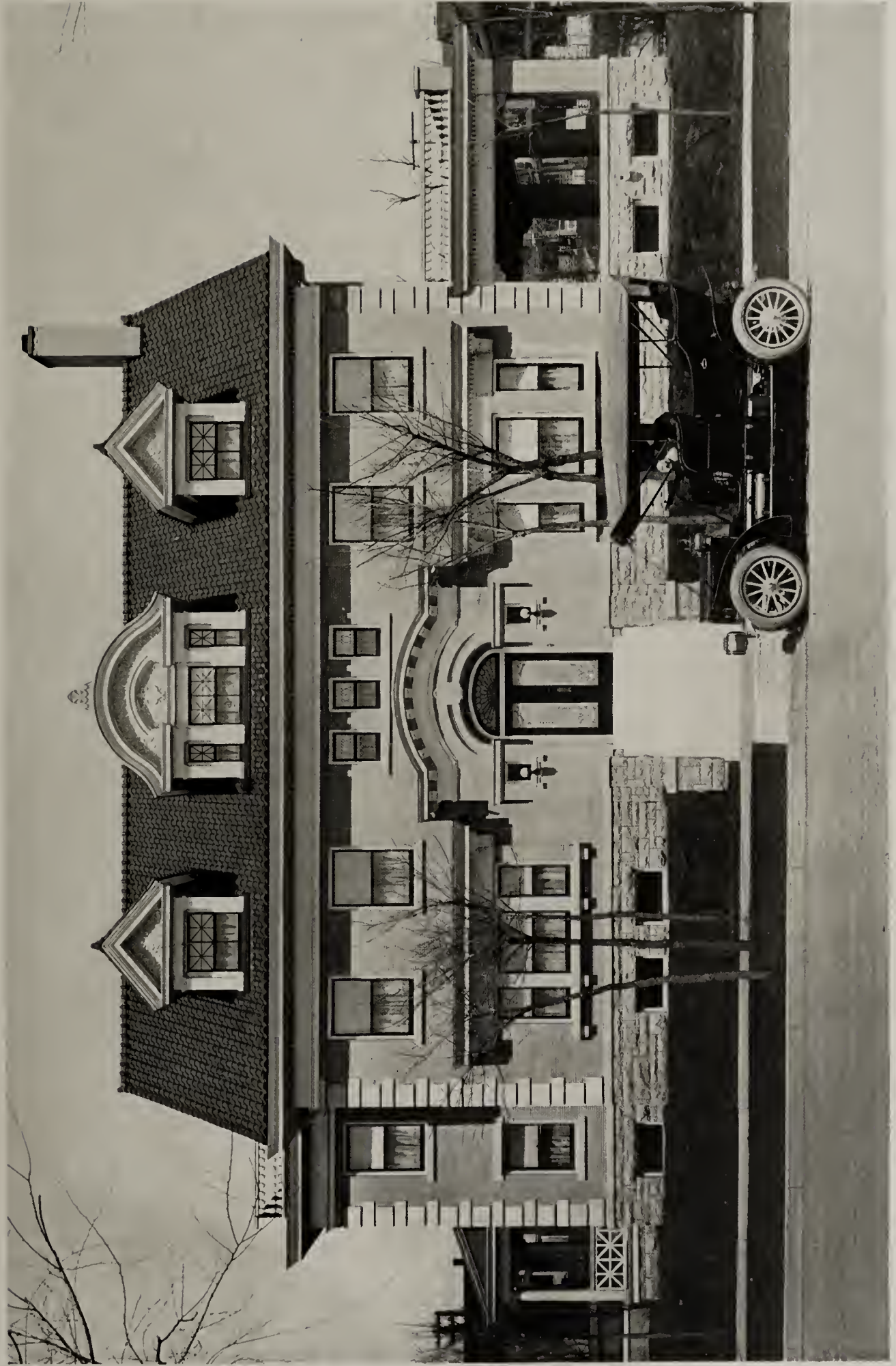
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HALL, RESIDENCE OF S. E. SEXTON, KANSAS CITY, MISSOURI

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THE WESTERN ARCHITECT
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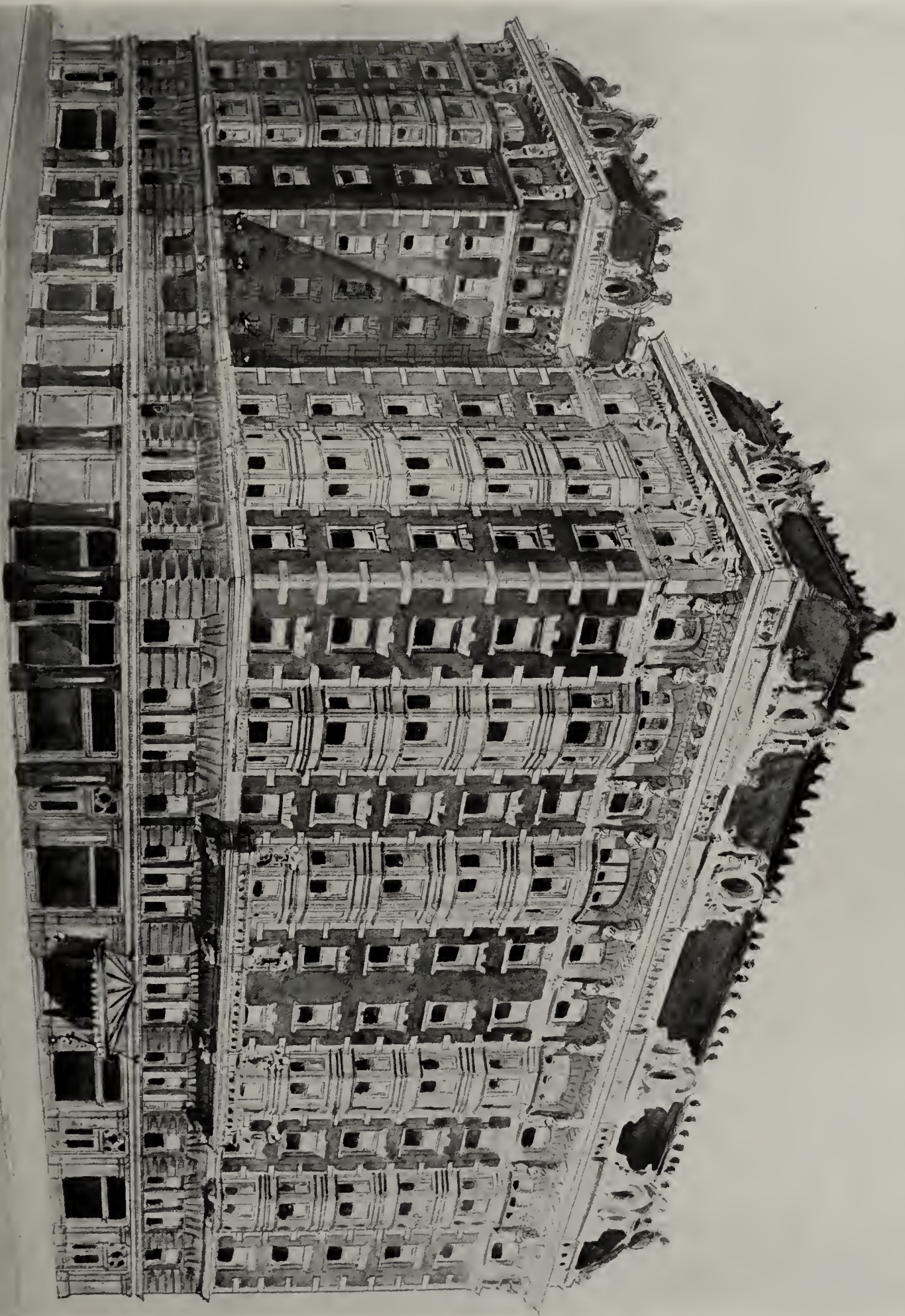
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ward that the correct answer to Question 1 becomes easy; it can only be this:

Important municipal and Government buildings can only be constructed by eminent artists, and not by salaried officials.

The considerations alleged up to now will facilitate considerably other questions before the Congress.

THE EDUCATION OF THE PUBLIC IN ARCHITECTURE.

BY JOHN BELCHER, A. R. A.,

President R. I. B. A., President Seventh International Congress of Architects, London, 1906.

The first step, as so often is the case, will be for the public to unlearn much that has been wrongly learnt. The superstitions of antiquity and the "styles" must be exploded. It must be made plain that neither a smattering of archæology nor a superficial study of styles affords a sound basis for a critical judgment in matters of present-day architecture, which must be presented to the eyes and ears of men as a living art, founded upon past achievements, it is true, but instinct with a power and vitality of its own.

Neither is architecture merely a matter of a beautiful exterior; the importance of the "plan" of a building and of sound principles of construction must be pressed home. In other words, architecture is a science as well as an art, a blending of the two in such a way that the practical knowledge of the builder or engineer is interpenetrated by the artistic spirit, and made without prejudice or loss to subserve its ideals.

Instruction of a positive order will range itself under the three heads of Principles, Qualities, and Factors.

The principles of architecture are two, Truth and Beauty.

Truth requires that a building, both in its entirety and in its several parts, should never seem to be other than it really is.

This excludes all pretence of antiquity where no such claim exists.

It requires that a church should look like a church, a town-hall like a town-hall, and a private residence like a private residence.

An external shell of plaster over brick must not present the appearance of blocks of stone, nor a steel structure cased on terra cotta suggest solid masonry.

Good architecture never deceives the eye even for a moment. There must be no false suggestion as to the purpose or construction of the building, nor any hiding under one external feature that which is usually expressed by another.

The principle of truth, however, finds its widest scope in the true use of materials.

Every material has essential characteristics of its own, and therefore a proper place and purpose in building. There is a time and a use for stone and for each kind of stone, for wood, and for each kind of wood, and so on.

To defy, neglect, or misuse the natural qualities of materials is not good architecture. These natural qualities will be roughly indicated under the head of Factors.

Beauty is the second great architectural principle. Its elements do not admit of popular exposition, but the

public may be trained to recognize its presence by the appeal that it makes to their imagination and emotions. The fact that beauty can be felt, but not (ordinarily) analyzed, is of importance in the education of the public, as tending to withdraw their attention from mechanical rules to the spirit that animates and pervades, like a living thing, the highest architecture.

An appreciation of beauty of form is less common than susceptibility to color effects, and needs training and development.

The qualities that distinguish good work from bad may be classed as follows:

STRENGTH.—It is not sufficient that a building be, in fact, strong and secure; it must look so; it must satisfy the eye.

The engineer may by exact mathematical calculation know that the conditions of security are amply fulfilled, but the architect has to see to it that the work presents an appearance of strength and solidity. The larger and heavier parts must be below; every arch must have sufficient abutment or even a tie-rod as well; solids when placed over voids must be strongly supported, and so on.

Methods of support and resistance must be clear and well defined.

Granite in the upper story of a half-timbered house may, as a matter of fact, be quite safe, but it seems to threaten danger; placed below, it satisfies the eye with its impression of solidity.

VITALITY.—Evidence of life and growth, most plainly illustrated in Gothic work, where the perpendicular lines rising heavenward and clothed (as it were) with luxuriant ornament suggest the life of a tree or plant.

It is vitality that gives fresh combinations and effects from the same primary elements.

RESTRAINT.—The limitation of means to an end, the suppression of all unnecessary parts or details.

Whatever be the nature of the building, there should be purpose, definite purpose, in every feature or ornament.

This may be illustrated under the head of Proportional Divisions (see Factors); but the general principle is one which will be readily grasped by the intelligent layman, to whom it will often suggest a line for thought and inquiry.

REFINEMENT is impossible without restraint, but it includes also purity of form and perfection of material.

Everything must not only be the best of its kind, but so suited to its purpose that Nature will seem to have expressly designed it for that use and place.

The fitness of certain materials and forms for defined purposes and effects is subject-matter for an important chapter in the education of the public.

REPOSE.—Every really good work is clothed, as it were, in an atmosphere of repose. There is sense of power, but it is latent power; there is evidence of vitality, but it is restrained vitality.

Effects too pronounced hurt the eye; ornament too profuse wearies both the eye and the emotions. There must be no "loud" or vulgar elements.

GRACE.—A dignified seriousness of purpose should be observed in the appearance of all public buildings, but an expression of the graceful courtesies of life should not be lacking. In domestic buildings the element of grace takes a more prominent place, and assumes a

higher and more refined form, corresponding to the tender sentiments of home life.

The public interest ought to be readily roused in this direction, and a demand created for a better class of small suburban residence.

BREADTH—The treatment of the subject as a whole in a simple, grand manner, the proper massing of the several parts, the subordination of detail to the larger forms of the composition and to the bringing of the whole design into unity.

An attempt may be made by illustration and comparison to explain this somewhat technical term, that the public generally may be led to understand and appreciate this quality of breadth which is so conspicuous in every great architectural work.

SCALE—The right relation of the several parts to one another and to the whole in point of size.

It will be pointed out that there are different scales in architecture as in music, and that the varying effects upon the mind and heart are as powerful and distinct in the one case as in the other.

Also that the scale should be appropriate to the character and purpose of the building. A building of a monumental character or of great public importance should be designed and built on a large scale, and each part and every moulding should be of a proportionate size.

FACTORS—In dealing with factors—the means which the architect has to his hand, as it were, for the attainment of his ends—it will be necessary to emphasize the fact that most, if not all, of these factors have their origin in utility, and answer some practical need in the construction or preservation of the building.

To forget this primary purpose and use them as means of artistic embellishment is to sacrifice use and convenience to artistic ideals, and is not true architecture.

The public are quick to recognize the importance of this in respect of window and door openings, floor divisions, chimneys, etc., but are apt to think of columns, pilasters, sills, hood-mouldings, cornices, and perhaps even buttresses, as decorative rather than useful, and to suppose that the architect has a free hand in the disposition of them. Education in this matter will include instruction in the primary use of purpose of the common architectural forms, and will give an insight into the difficulty of making these forms serve the ends of use and beauty at one and the same time.

Such an insight—like propounding a problem—will go far to quicken interest.

The subject may be dealt with under the four heads of Proportion, Light and Shade, Solids and Voids, Balance and Symmetry.

PROPORTION—Certain proportions are pleasing to the eye, and effects of proportion are obtained by the relative size of different parts.

The various ways in which the constructional parts and features of a building may be utilized to obtain proportional divisions, both horizontal and perpendicular, might be described in detail.

LIGHT AND SHADE—The advantage that may be taken of effects of light and shade might also be pointed out.

SOLIDS AND VOIDS—The importance of a right adjustment of solids and voids, both in respect of size and position, would come next.

How easily a false scale may be set up, and a building made to look insignificant, by broad sheets of plate glass in the windows!

BALANCE AND SYMMETRY—These give a very distinctive character to a building, and aid in setting forth its special purpose. There is or can be rhythm in architecture, as in verse.

MATERIAL—The right use of the various kinds of material furnishes an interesting and useful subject for public instruction.

The general principle having been laid down that every kind of material has its special characteristics, and should be treated accordingly—in other words that its very best should be got out of it—a brief account of the natural qualities of the chief building materials (stone, wood, metal, brick, plaster, etc.) would follow.

The following leading thoughts are appended by way of illustration:

When stone and brick are used in conjunction the former should be accorded the most honorable parts—e.g.: quoins, architraves to doors and windows, sills, cornices, etc.

Granite, even if it could be carved for mouldings, should be used rather for strength and solidity than for ornamental features.

When the beauty of marble or wood is in its figure or color, it is best exhibited in the form of slabs or panels; if moulded, the forms should be large.

Stone is granular, wood fibrous; each has its appropriate forms and mouldings, suggested by the natural qualities of the material.

Wrought metal admits of the finer and more delicate forms, metal cast in moulds naturally assuming a more bulbous shape. Both kinds have their appropriate place and effective use.

Well-known examples of wrought-iron and cast-iron gates and railings afford interesting illustrations.

The foregoing summary indicates the main lines along which the education of the public in matters architectural should be developed.

Whether in public lectures, or in articles published in book-form, illustrations should be abundant.

There are signs of a wave of public interest in architecture which, "taken at the flood", may become permanent and lead to great results.

A STATUTORY QUALIFICATION FOR ARCHITECTS.

BY J. S. ARCHIBALD, ARCHITECT, MONTREAL.

The subject is a delicate one for the profession to discuss, as motives can be so misrepresented; but for want of advocates outside the profession, all the necessary agitation must come from within. The charge has been made that it is only another species of "trades unionism", but on consideration it will be found that the principles underlying the formation of "trades unions" are wholly different from those which actuate us. The former is purely a movement to regulate the compensation and earning powers of the individual, whilst the latter is a movement to raise the standard of professional practice and to safeguard public interests.

Generally speaking, there are two sides to architecture, viz.: the æsthetic and the utilitarian. As regards

the latter, especially in its constructional aspect, there can be no difference of opinion as to the necessity for the most careful examination before being permitted to design and erect buildings. The object of an architect's labor is to prepare, generally speaking, for habitation by humanity. Human life has always been looked upon as valuable beyond price and compensation. It is recognized in the practice of medicine and law; why should it not be recognized in the practice of architecture, where requirements are demanded combining science, chemistry and law?

We are hedged about by legislative enactments which at their root must have emanated from the conviction that the practice of architecture was a responsible one, calling for particular training and study. Architects are compelled to erect buildings under the direct superintendence and dictates of the law. The only inference to draw is that the practice of the profession is of such a nature that the individual cannot throw off all responsibility the moment the contract is complete. The logical sequence would also be that the law would make provision that all who enter into the practice of the profession would be found fully competent to carry out the spirit and dictates of such enactments.

It is obvious that such competence can only be established by a series of examinations. This is not always the most satisfactory method, but for want of a better we needs must adopt it. Such examinations must be all-embracing and wielded by powers beyond the faintest tinge of suspicion, and removed in the public eye from all question of self-interest.

With respect to the æsthetic side of the professional practice, the standard of qualification is more difficult to set; but there is a basis which no one should be permitted to evade. We are all influenced to a greater or less extent by our environment. If in such an environment beauty is absent and ugliness predominant, depravity and a low moral condition will usually be found amongst the people. On the other hand, beauty is usually accompanied by refinement, a higher state of civilization, and, as a rule, a higher moral condition amongst the people. It is therefore incumbent upon our legislators to recognize such influences. Such influences have been recognized from time immemorial. Plato has discussed the question fully in his *Republic*, and even in those days he argued that state superintendence should be extended over sculpture and building "so that they may be prohibited from exhibiting all forms of vice, intemperance, and meanness".

A sense or perception of the beautiful is to be found within the soul of every human being. It should be our pleasure to encourage it at all times, to influence our community with its leaven of goodness, and it should be the duty of the State to recognize such influences and to grant a statutory qualification to prevent influences other than that of the good to be over her people.

The Province of Quebec Association of Architects is the pioneer (on the western side of the Atlantic at any rate) of statutory qualification for architects. This law was founded in 1898 as an amendment to the charter of incorporation. It was granted, as it was deemed expedient for the better protection of public interests and in order to enable the public to distinguish between qualified and unqualified architects and to insure a

standard of efficiency in the persons practicing the profession and for the advancement of the art of architecture. This law reads: "No person can take or make use of the name or title 'architect' unless he is recognized under this Act and as a member of the Association". The machinery is provided for the carrying out of a system of examinations and for the enforcing of the law.

THE OWNERSHIP OF ARCHITECTS' DRAWINGS

BY H. HEATHCOTE STATHAM.

The question is distinct from that of architectural copyright in designs, with which it must not be confounded. It turns on the question whether the drawings and specifications made by the architect in order to carry out a building are to be retained in his custody or to be handed over to his client. In France and Germany no legal question is raised on the subject—the architect retains the drawings as a matter of law. In England the custom has been almost universal in the same sense. But in the case of *Ebdy v. M'Gowan* (1870), the Court ruled that, the building not having been carried out, the drawings must be handed over to the client on his paying for the time expended on them. In the case of *Gibbon v. Pease* (1904), the Court, to the surprise of architects, ruled that the precedent of *Ebdy v. M'Gowan* covered all cases, whether the building had been carried out or not, and that the client had a right to demand all the drawings, the Court refusing to hear any evidence on the side of the architect, whose drawings and specifications can, therefore, in England, be legally claimed by the client, although he already has what he really paid for—viz.: the building itself. It is pointed out that an architect is not paid for making drawings, but for producing a building, the drawings being only his necessary instructions to the workmen; under some circumstances he might even dispense with drawings altogether. To require him to hand over to the client drawings and specifications, which represent the result of his professional experience over many years, for the client to use as he pleases, is a manifest injustice to the architect. Moreover, the custom in the profession of handing over the drawings to the client when the building has been planned, but not carried out, is a mistake on the part of the profession; as in such a case an unscrupulous client has only to say that he has changed his mind in order to get possession of the drawings and use them as he pleases, with no further compensation to the architect. The wording of Clause I of the Institute Scale of Charges is most unfortunate, as it appears to state (though not so intended) that the architect's commission is for producing drawings of a building. The wording of this clause should be amended. The author moves the following resolution:

"That, in the opinion of this meeting, the Royal Institute of British Architects, having revised the wording of its paper on the Professional Practice as to the Charges of Architects in the sense indicated above, should as early as possible take steps to get a Bill introduced into Parliament for securing the adoption of their scale of charges, so amended, as part of the law of the land."

ILLUSTRATIONS

Two of the striking historical lunettes in the New Jersey State Capitol at Trenton, by W. B. Van Ingen, of New York, are shown, one representing "Trenton" and one the heroine of Trenton, "Molly Pitcher".

The reproduction from water-color drawing of the Brown-Marx Building, at Birmingham, Alabama, by William C. Weston, Architect, is a well studied and conservative expression of the high office building problem on a narrow lot. It is just completed, eight months after the foundations were started.

In the residence of S. E. Sexton, at Kansas City, by Charles A. Smith, is found the colonial plan which grew out of natural conditions, brought down to modern uses. The interior as well as the exterior also partakes of this transition, and is a well studied and logical design constructed with appropriate material.

The illustrations of the First National Bank of Kansas City, by Wilder & Wright, show one of the best bank interiors yet executed in the West. The lighting is perfect without the somewhat glaring effect of a glass ceiling and in plan the general arrangement of the departments is practical and convenient.

The high school at Leavenworth, Kansas, W. P. Feth, Architect, represents a class of brick buildings in which the material as well as the design gives a substantial aspect to the dwelling. As the successor of the "little red schoolhouse" the red brick high school in the hands of a capable designer speaks for the educational advancement of the country.

A study of the residence by A. L. Dorr, of Minneapolis, exhibits a well-proportioned design that is delightfully carried out in its material. The perfect finish given to the different forms of wood used almost reconciles one to its use, though the lack of brick and stone structures are a growing menace to our suburban surroundings, not only in Minneapolis but in most of the cities of the United States. Canada builds in brick, though lumber is there more plentiful than here.

While the exterior of the Alexandria Hotel, at Los Angeles, by John Parkinson, is very plain, of pressed brick, and soft gray sandstone trimmings, matching the brick very closely, the vestibule illustrated is particularly beautiful. It is wainscoted some ten feet high with Italian marble panels, with twelve-inch black marble base. This is capped by a cornice fourteen inches wide, profusely ornamented. Above is a green frieze some six feet wide, ornamented with heraldic shields. Above this is a balcony extending around three sides of the vestibule. The columns are a fine example of scoglio, imitating well a light Numidian marble, equal to the best Italian workmanship, with Ionic renaissance caps picked out in gold leaf. At either side of the entrance are small

reception rooms separated from the hall by partitions of ornamental woodwork and plate glass. The ceiling is Italian renaissance in design, lacking only the large paintings by great masters usually seen in the palaces of Italy. The floor is of white tile, the tesserae of about three-quarters of an inch cubes that look like white porcelain. Upon this floor is spread fine large rugs that give a rich color to the general effect, which is particularly elegant. The dining room of the Alexandria Hotel is finished in oak, with panels of woven tapestry. There are stained glass windows at either end of the room. The electric-light fixtures are of cut glass. The furniture of the room is of dark oak and stamped leather. The room is rich and handsome and very harmonious; nothing flimsy or gaudy but generally very satisfactory and in excellent taste. The grill room is the pendant of the dining room. It is also trimmed in oak with a rich panel ceiling. The furniture is also of oak; the backs of the chairs are of leather stamped in Navajo designs. The charm of the room is the lighting, which is by powerful electric lights backed by reflectors, throwing the light on ornamental glass panels in the ceiling. The sides of the room are wainscoted from floor to ceiling. Back of this wainscoting is a space concealing the reflectors of powerful electric lights lighting a box-like space, the back of which is a very prettily-painted landscape. The front of this light box are panelled doors, which on opening throws the light into the room and exhibits the picture, producing a very pleasing and novel effect. The entire room is very satisfactorily lighted, without a single light being visible.

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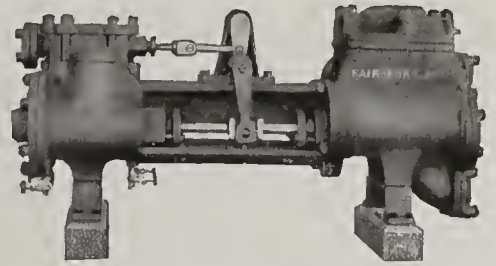
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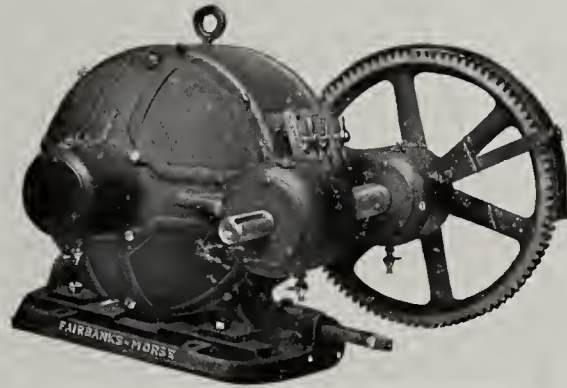
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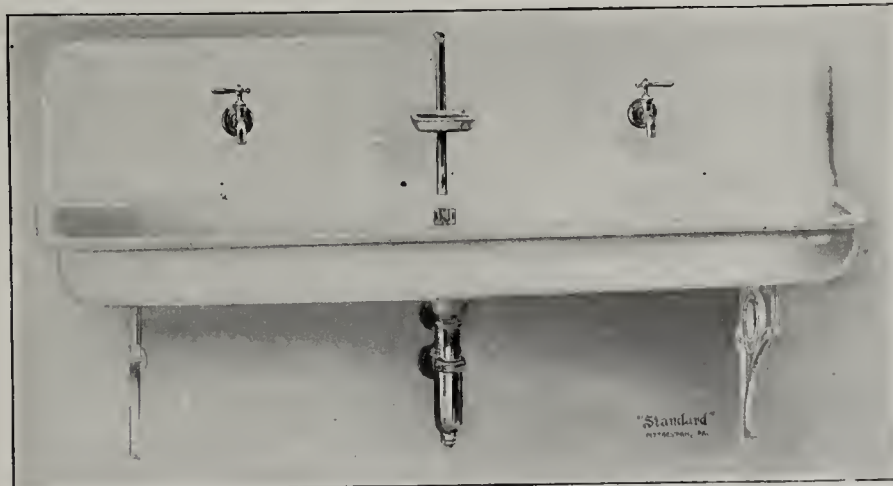
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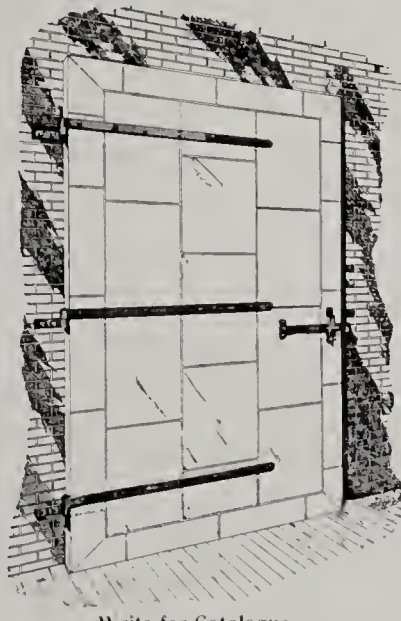
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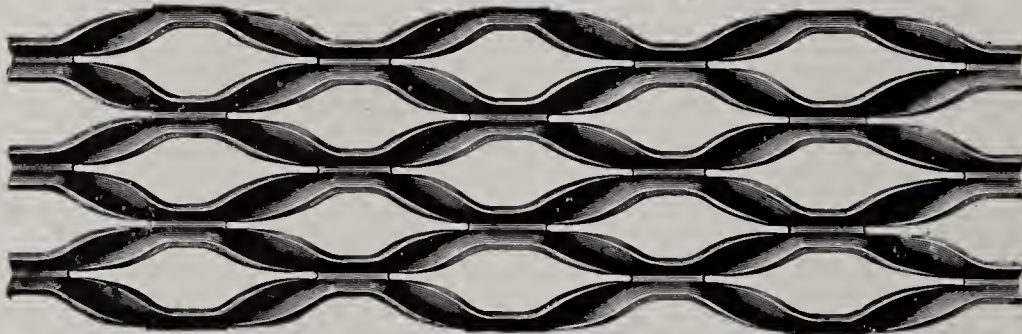
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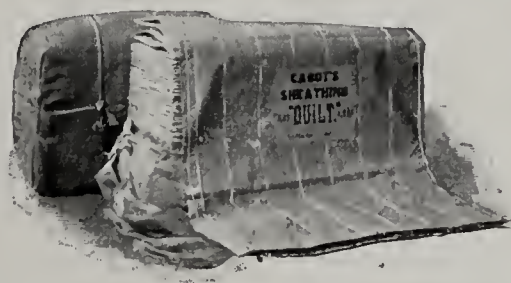
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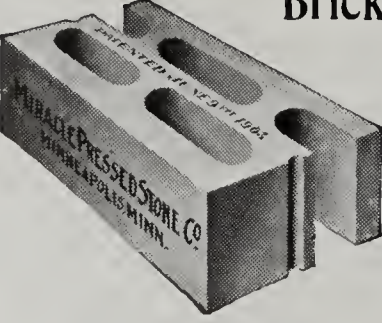
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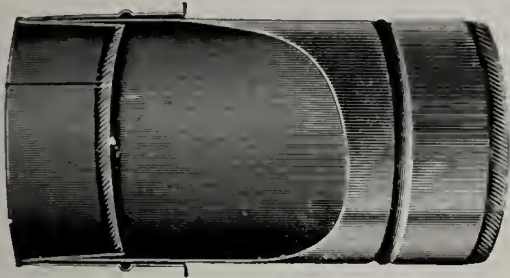
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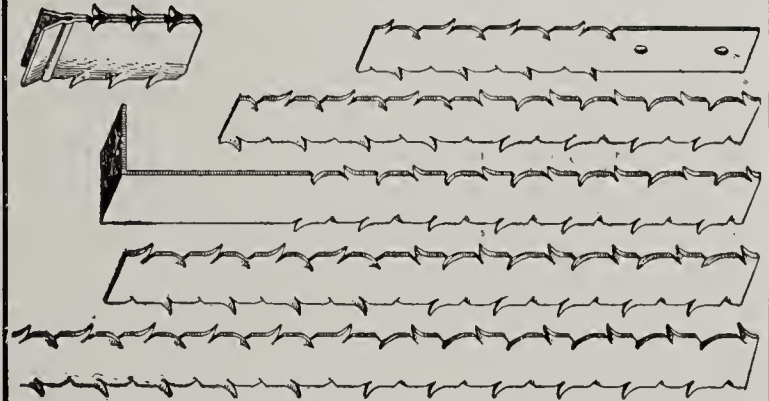
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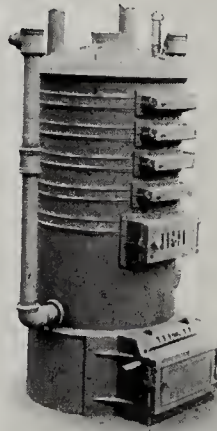
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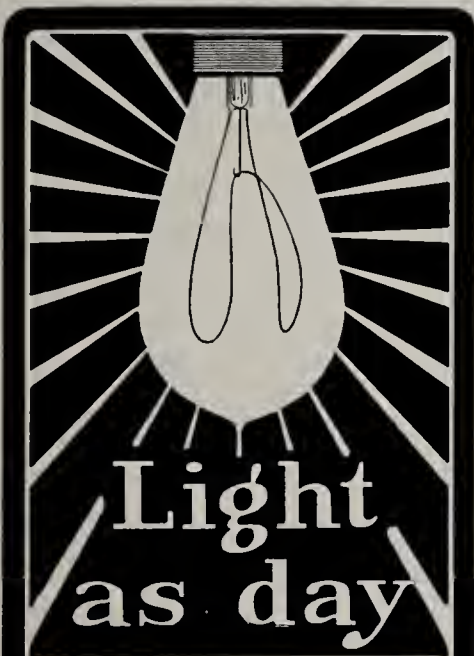
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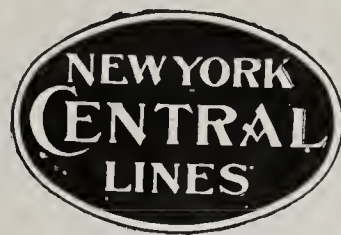
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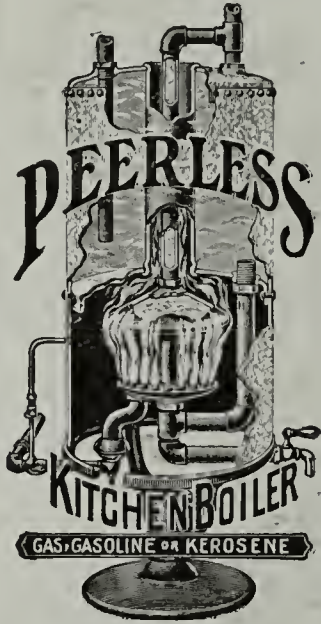
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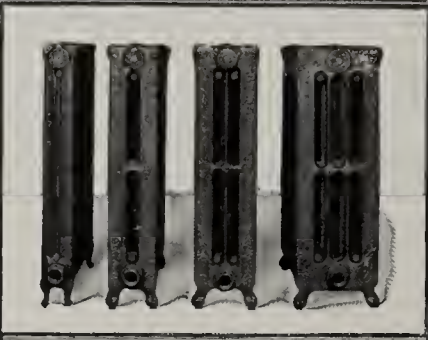
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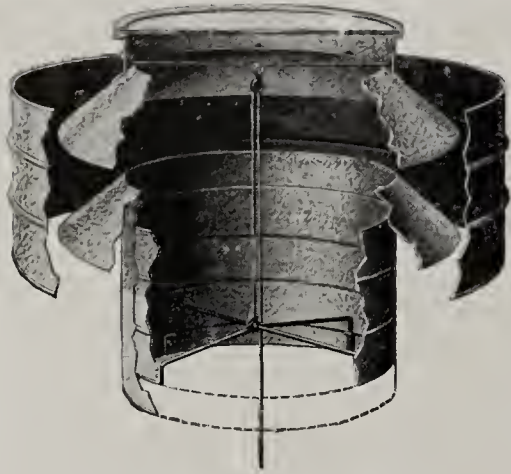
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NUMBER 10

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BUILDING OPERATIONS FOR SEPTEMBER

From official building reports received by The American Contractor from various cities, less than usual in number by reason of Labor Day intervening, it appears that prosperity continues in the building trades. While some cities show a falling off, the loss is overbalanced fully two to one by gains. When it is remembered that August, 1905, with which month the present reports are contrasted, was a month of decided activity, largely breaking previous records, the present showing is exceedingly favorable. The following figures show the percentage of gains over August, 1905: Atlanta, 57; Bridgeport, 176; Cincinnati, 7; Denver, 65; Evansville, 261; Los Angeles, 4; Milwaukee, 16; Memphis, 18; New Haven, 18; Newark, 46; Omaha, 11; Philadelphia, 19; Portland, Ore., 94; St. Louis, 20; Seattle, 68; South Bend, 256; Syracuse, 93; Toledo, 280; Tacoma, 82; Washington, 14; Worcester, 5; Wilkesbarre, 122. Twelve of the cities reporting show a loss. The figures for all the boroughs of New York are not at hand, but the loss in Manhattan is 40 per cent; Chicago, 15. In New York and Chicago the situation must be ascribed to the immense number of permits taken out last year, the enormous number of contracts placed during the earlier months of the present year and the circumstance that the construction of apartment houses is almost at a standstill, there being really an overconstruction of that class of buildings. Taken altogether the reports show a healthful and satisfactory condition.



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SOME VALUABLE CATALOGS

THE catalog of the Northwestern Terra Cotta Company of Chicago should find a place in every architect's office in the country. It not only illustrates the cream of the best office buildings designed west of New York, but residences that owe, next to the design itself, all a structure can owe to its material. It also contains samples of ornaments designed in many cases by the artists of the firm, and details of cornice balustrade, column and other detail construction that is of the greatest practical value in designing in this material. The Northwestern Terra Cotta Company needs no introduction to the architects of the United States. For thirty years their work has found its place in the ornamentation of brick structures, and as the skeleton frame construction developed, the entire structure in many cases has been panelled with their terra cotta. As the demands for this material increased, the artistic work was augmented. Constant association with architects and their designs first, and then a large corps of skilled designers in their own employ, latterly placed this firm at the head of the architectural terra cotta producers, until their material is not only available, but they have shown that it is

comparatively the best and most artistic covering for the steel frame. There has been an individuality in this up-building that need not be spoken of, but is known to the profession, and there are none in the ranks of artists or contractors who have done more for the advancement of design than those who have, in producing artistic and permanent terra cotta, not only kept pace with all demands, but have led and introduced new methods, and have been the moving spirits in the Northwestern Terra Cotta Works.

AMONG the catalogs that come to the reviewing table there has been seldom one which has approached in typographical excellence that issued in behalf of "Medusa" Portland Cement by the Sandusky Portland Cement Company. An artistically designed and printed cover envelopes profuse illustrations of all sorts of work upon which Medusa cement has been used in whole or in part. The story of Medusa is singularly appropriate for a cement of superior excellence, as it was the Gorgon head which produced the first artificial stone by turning the enemies of Perseus into adamant images. The Sandusky Cement Company was the first maker of Portland Cement in that locality, though makers in an adjacent country called their cement "Sandusky", necessitating this company to select a brand name, so that "Medusa" stands for the reliable and universally-used Sandusky cement. The company are building a large plant for the manufacture of cement at Dixon, Illinois, in order to supply more readily their immense and increasing Western trade, to which the Chicago office alone has contributed orders for some 300,000 barrels since January last.

IN a brochure, rather than a catalog, entitled, "A System of Engines", artistically bound in cloth, an ornament to any library or table, the Harrisburg Foundry and Machinery Company, of Harrisburgh, Pa., in type and illustration, describe the virtues of the Fleming Engine, which is rapidly becoming the recognized power for producing electric light and power in large buildings. Costing as it does some fifty per cent more than any other make, it has the phenomenal experience of being adopted and installed in a half dozen or more of the latest completed buildings of the first class, in Chicago. This of itself is a stupendous recommendation for any engine when it is considered how close is the competition and how accurate the knowledge of architects and engineers in regard to the practical qualities of each make. The engine-room in the Great Northern Hotel, where a space formerly occupied by a servant's dining room has been given up to the installation of two of these engines, is a delight to any engineer. The new Brevoort, the Auditorium Annex, the immense New Boston Store, that rivals Marshall Field's in extent, the Heyworth and Fort Dearborn Buildings, 18-story structures, all have been equipped within the past six months with this engine, which will revolutionize the manufacture of electricity-producing and controlling engines. Its design makes for efficiency and perfect operation, and its construction is upon such practical and economical lines that its tests have established a record which excels any results heretofore obtained by any other form of steam engine or turbine of which there is authentic record.

It is refreshing in these days of hit-or-miss wood-turning to review the catalog of mouldings and spindles issued by the old wood-turning firm of Geo. Mertz' Sons, of Port Chester, N. Y. These makers of mouldings have been known to the architects of the country for a quarter of a century. In the lighter ornament of the home, the mouldings and spindles not only harmonize with the design but resist the effect of heat and cold in the interior, and the assaults of dry and wet weather in the exterior, because they are made of the best seasoned woods, that are selected with the greatest care by the manufacturers. This Mertz' Sons have always done, and besides, perhaps having the largest collection of patterns in the world, they enjoy a well-grounded reputation for perfectly artistic and substantial work.

THE James Leffel Company, Springfield, Ohio, have issued a very handsome and complete new 52-page catalog, illustrating and describing their line of Steam Engines and Boilers. The details of construction are plainly shown and fully explained, and the catalogue is one that should be in the hands of architects and prospective purchasers of work in the Steam Power line.

OF INTEREST TO ARCHITECTS

WATERPROOF engineering is wholly a modern profession. Its field is the designing of structures to properly receive waterproofing. In the broader sense its mission is the safety and preservation of structures and the conservation of public health. Waterproofing is, itself, practically a modern art. Only in recent years has there been an earnest effort to place it on a scientific basis and deduce any system of practice. Old-school methods are unfitted for present-day construction as the bridges of twenty years ago are unfitted for modern locomotives. Many methods are used by which it is sought to eliminate the absorptive character of concrete and resist water or confine it, but has remained for the manufacturers of "Medusa" Cement to produce and patent a compound which effectually and completely waterproofs cement, and at a cost of less than twenty cents a barrel, in that, when thoroughly mixed with cement, it makes it perfectly impervious to water. The making of railway tanks, subway tunnels, etc., that are waterproof, is as easy as to construct without this feature in the cement. When it is realized what this means in practical construction as well as to the cement-block industry and all other works in which cement is used, the value of this compound is apparent. The compound produced by the Sandusky Cement Company does not affect the color, strength, setting or hardening qualities of the cement and prevents any discoloration from rain. In blocks, its quality does not add to the expense, as when the compound is used no furring is required as it is impossible for the water to penetrate the cement, or white effervescence to come out, and this in a mixture of one to five, containing one per cent of waterproof compound. The cost is kept down to the actual cost of materials and manufacture, as the makers of "Medusa" Cement wish, by its use, to increase the use of cement rather than to make a profit from the sale of the waterproofing compound.

UP at the "Soo", where the extremes of temperature meet, and they have all kinds of weather and all the time, a roof should find a fuller practical test than anywhere in this country. In going over the new power house and administration building for the U. S. engineering corps at the Sault Ste. Marie the other day, the roof made by the Keasby & Mattison Co., of Ambler, Pa., was inspected. It is covered with the Asbestos "Century" shingles made by that concern, and the contractor, the Saginaw Sheet Metal Works, to test them thoroughly, say that they "heated the asbestos Century Shingles red hot and then plunged them into cold water, after which they were 'treated' with muriatic and other acids". This test and the fact that the government has placed them upon one of its most exposed structures in the country, is of themselves sufficient to establish the Keasby & Mattison Company's product among the best roof coverings known. The Minneapolis office of the company distributes "Century" shingles and "Eternit" roofing slate to the local territory.

IN Mr. Fitzpatrick's article in this issue on "The National Ash Heap", it will be noted that that gentleman, who is not only an architect of extensive observation and practice and wide attainments, but is Secretary of the International Society of Building Commissioners and Inspectors, calls special attention to the necessity of separation in fireproofed buildings and that they are not free from destruction as far as their interiors are concerned, unless the different parts are separated by fireproof doors. It was not the fireproof character

of the Mint and the Postoffice at San Francisco that saved them from the surrounding fire, but the fireproof doors and shutters that protected all openings. In the Haywood building in that city, which is a fireproof structure, the fire entered the windows in front and burned them out, but the adjacent rooms were separated by Richardson's fireproof doors, made by the Fireproof Door Company, of Minneapolis, which prevented the fire from spreading to the connecting rooms, the furniture in which being effectually preserved. These doors make each room a separate building and, again referring to the Fitzpatrick article, takes the place of the six separate buildings, which he uses as an illustration of this point of the necessity for fireproof separations. Even though these doors add something to the initial expense, the only way the permanency of the structure can be assured is to build it absolutely fireproof, and in no other particular is this necessary as in the item of fireproof doors. Those of the Richardson make fill every requirement of finish in appearance and effectiveness under the most severe tests from interior and exterior fires.

ALBERT OLIVER, the New York manager of the fire-proofing department of the Clinton Wire Cloth Company, of Clinton, Mass., has moved from 150 Nassau St. to more commodious quarters in the Metropolitan Life Building, the center of New York's building interests. It is largely due to Mr. Oliver's ability, backed by the excellence of the products which he is handling, that Clinton Electrically Welded Fabric and Clinton Wire Lath have become two of the best known and most widely used building materials among the leading architects, engineers, builders and contractors.

THE Bellevue-Stratford Hotel, of Philadelphia, is one of the largest and most important in the country. As an innovation in the matter of entertaining its guests, it was suggested that the roof be flooded and turned into a rink, in order that they might enjoy ice skating. The suggestion at first seemed

a joke, and an invitation to thousands of dollars' worth of damage through leaks. Upon investigation, however, the management found the building carried a Barrett Specification Roof of Coal Tar Pitch and Felt. This they were assured was a guarantee that it would prove absolutely watertight. That the Barrett Specification Roof stood the test perfectly is proof of its absolute reliability and waterproof qualities.

THE Mutual Life Insurance Company has just awarded to Mr. Frank B. Gilbreth the contract to tear down and rebuild the six upper floors of their nine-story building at Sansome and California Streets, San Francisco. Owing to the condition in which the structure was left by the earthquake and fire it will be impossible to estimate the cost of the operation until the work has advanced sufficiently to allow the making of an accurate report as to the extent of the damage.

THE Syenite Granite Company, of St. Louis, Mo., is looking for a superintendent for their quarries at Graniteville, Mo. He must be thoroughly up to date, with good practice knowledge of plans, diagrams and machinery, compressed air tools, competent to estimate work, and to generally manage an up-to-date granite plant. Applications with references and other details should be sent at once to the St. Louis office of the Company.

THE Union Fibre Company, of Winona, Minn., manufacturers of Lith and Linofelt Sheathing, report that their reinforced cement fire-proofed building is nearing completion, and they expect to begin operations in their new plant the first of November.

THERE is, according to F. W. Fitzpatrick, but one absolutely fireproof building in the country—the Board of Underwriter's Laboratory in Chicago, that cannot be damaged over 2 per cent even in the fiercest conflagration. Yet it cost but 12 per cent. more to build than the ordinary flimsy structure.

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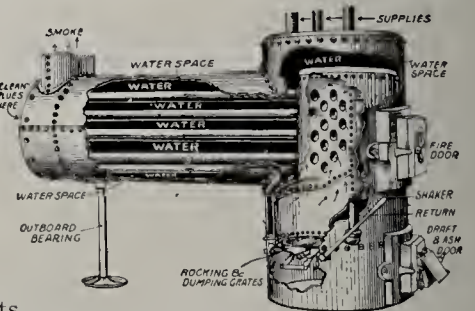
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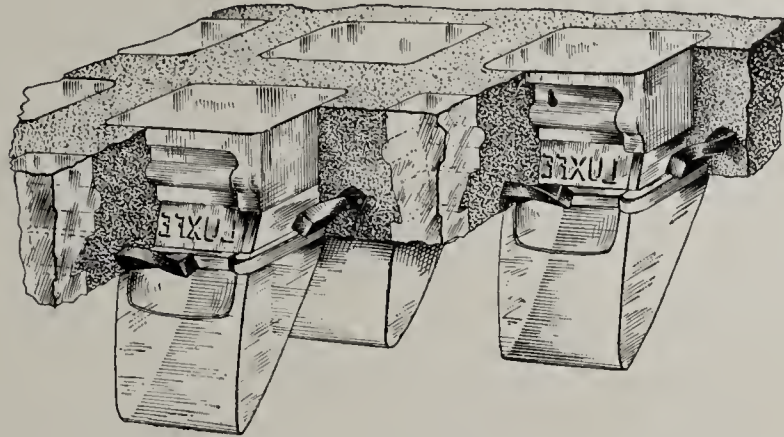
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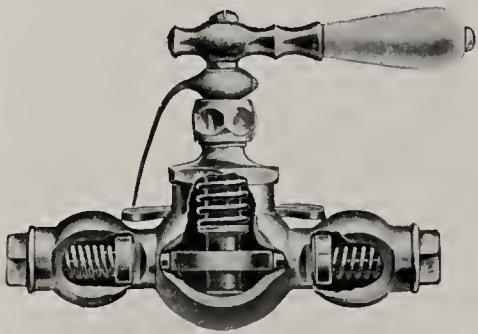
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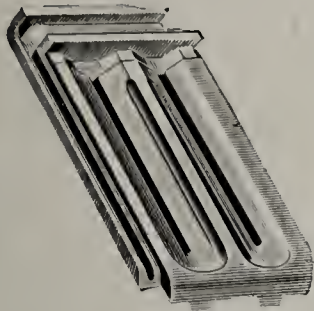
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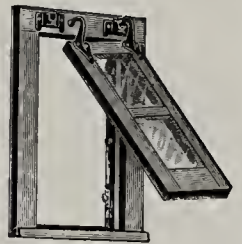
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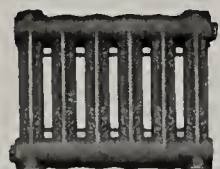
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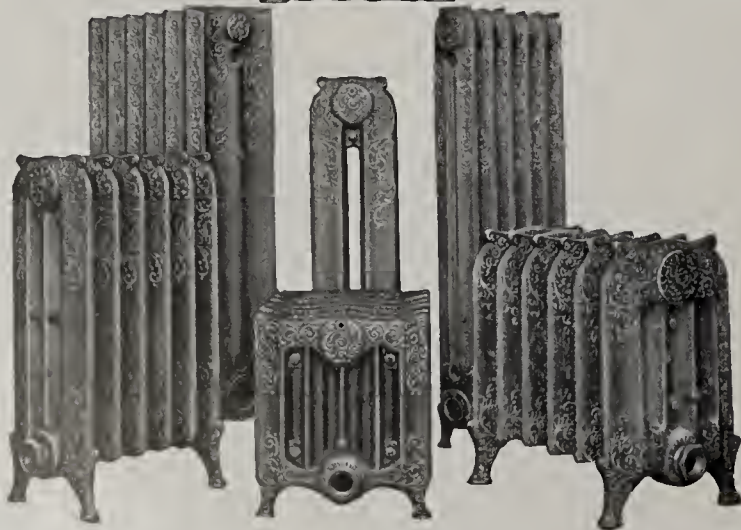
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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

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(ORGANIZED 1899)

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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

New York State Educational Building Competition

It seems that the competition for the State Educational Building at Albany, which closes November 30th, will be carried out as planned.

The architects at large are invited, under *nom de plume*, to send in drawings to the Secretary of the Board of Trustees for this three-million-and-a-half building. These designs will be inspected and the ten best in the opinion of the committee will be selected, and the designers each receive Five Hundred Dollars. They will also be invited to enter a second competition and submit a second set of designs. Of these the first, second and third best will be chosen by the same committee. The winner will receive the commission and five per cent for his prize, the second will get Two Thousand, and the third One Thousand Dollars. The adjudicative committee consists of the Governor, Lieutenant Governor, Speaker of the Assembly, Commissioner of Education, Regent and the State Architect. Those who believe these gentlemen can give an intelligent verdict and will make an honest and unbiased selection in the absence of an expert adviser of national reputation will probably submit drawings.

Failure to Appreciate High Service of Architects

Why the governor of New York asked Architects Carrere of New York and Cary of Buffalo to select a site for the State Library Building, and after these gentlemen had given their opinion, rejected it without apparent compunction, is only to be explained upon the ground that the public official is usually a man of narrow views, controlled by expediency. The architects gave (they could not sell) their valuable time and thought to the problem, of which the mere location of the structure was but a detail in the general plan for the future of the Capitol city. The governor could see only the

structure itself and the money saved in purchasing the ground. It is our greatest good fortune that there is still such public spirit found in the architectural profession and the greatest misfortune that public officials, either at San Francisco or at Albany, throw away the great gifts so freely presented the people of the future by the Carreres and Burnhams of the profession through an ignorant and short-sighted policy that only entertains the present.

**The Selection
of a
School Architect
for Newark**

The Newark, New Jersey, Board of Education is discussing the proposition of establishing an architects' department. There is considerable sentiment in favor of distributing the work to avoid sameness in design. If the Board can secure the services of a really capable architect there is no reason to fear a monotony in his work. It cannot pay him what his services are worth, but there are young, ambitious men who would work for the good of the public and their profession as much as for the attached salary. Eight to ten thousand dollars a year would warrant such a man in giving up a practice worth twice as much. Then if he was protected, and politics were kept out, Newark would not only have school buildings which would be educational in themselves, but lend distinction to the city, and at probably a less cost than they could be procured by competition or by selection among the profession generally. The latter is by far the best plan in the abstract, but we are speaking of things as they are and not as they should be.

**Edison
will Experiment
with
Concrete Houses**

That the inventive genius of Thomas A. Edison has produced so many of those methods by which electrical force and its accessories have been applied, gives his name a certain weight when connected with any new project. But he certainly knows little about practical construction when he essays to build molds in which to run cement to form working-men's houses, and that at an enormously reduced cost, though this reduction is governed by the number of replacas. His plan contemplates initial molds "into which the cement is pumped in a few hours". "Even the plumbing and gas piping will be molded in the original cast". It is needless to point out the many reasons why a cohesive and substantial

cement structure "of eight or ten rooms" cannot be made in this way, and why if it could it could not be prepared, "even the carpets laid and the house occupied in three or four days". Fortunately Mr. Edison proposes to try it on his own property and account first. The outcome will be interesting.

**Divers
Repair
Cathedral
Foundations**

A new use for divers was found recently in England by Architect T. G. Jackson, R. A., in repairing the foundations of Winchester Cathedral, the east wall and buttresses having sunk into the marl and peat which underlie the beech-tree trunks which were used by the 12th century builders for a base. The water rose and flooded the excavation and as pumping threatened to suck out the loose silt, divers were sent down to complete the work, the engineer, Frances Fox, going down in a diving suit to examine the conditions. The foundations were completed in fourteen feet of water, the divers placing sacks of cement upon the gravel bed after removing the remaining peat.

**Presents
to Contractors Not
Safe in
Canada**

They have a summary way of dealing with offenders in Canada. Three architects in the employ of the City of Toronto who were charged with obtaining money or receiving "presents" from contractors, were suspended by the mayor and the crown attorney notified and supplied with the evidence so that they could be proceeded against criminally. It is not advantageous, perhaps, to have this sort of dirty linen laundered in public, but it cleans the linen and causes other wearers who have not sufficient professional pride or personal honesty to control their actions, to avoid dirtying it in this too tempting and accessible mudhole.

**Death
of a Pioneer
New England
Architect**

The senior New England architect, Mr. George Waterman Cady, died at Providence, Rhode Island, where he was born, on August 19th, at the age of 81. He was a direct descendant of Nicholas Cady, who settled in Watertown, Mass., in 1645. He practiced architecture in Providence for nearly half a century, held many offices of public trust and was at the time of his death a Fellow of the American Institute of Architects.

THE NATIONAL ASH HEAP

BY F. W. FITZPATRICK.



HE statistics of building, one of the nation's greatest industries, the one in which there is most waste and yet the one that very directly interests most people, are not sufficiently studied by those who build.

Our cities are growing tremendously in extent, yet the great bulk of building, that is, the costlier buildings, is done upon already occupied sites that have to be cleared voluntarily, or that have been cleared by fire quite against the will of the owners. As far as 1905 goes, scarce one-twentieth of the building was done upon outlying or new districts of cities, while but one-seventh went upon unoccupied lots in cities. \$528,000,000 worth of new building was done, but that figure does not represent a clean addition to our supply of buildings, though it does represent that net additional investment. Buildings torn down to make way for new and buildings burned down, represented a value of \$186,000,000. As construction has progressed this year, we are fully justified in believing that \$750,000,000 will be invested in new buildings, so that by the end of the year it can be estimated that we (since we have become a nation) have put \$12,000,000,000 in building. Fire has wiped out nearly \$3,000,000,000 of that investment, and another \$3,000,000,000 worth of buildings have been torn down because of old age or juvenile senility—we have built so badly, so persistently, that it is small wonder that so much is quickly replaced with new, though not always, alas, better building.

All the railways of the country represent a capitalization, including water and all, of a trifle over \$13,000,000,000, so that the capitalization represented by our buildings is really greater than our supposedly greatest national enterprise; for while many things can happen to a building, its cost declared to a building department is never exaggerated. Indeed, as that information is generally used for taxation purposes, we are safe in throwing in a few millions extra to represent the real value of our building investment.

While it may be said that all our people are interested in buildings, in that they live and spend a certain part of their time therein and their lives are therefore more or less jeopardized by reason of the imperfect construction of those buildings or their inflammability, yet many, particularly the farmers, live in such comparative isolation or in buildings from which escape is so easy that the danger is not particularly great. But full 58,000,000 of our people occupy buildings at some time or other during the

day in which there is not so remote a danger to life and limb, and the minimum number of 36,000 are daily exposed to imminent peril by reason of actual fires or panics from fire-scares in buildings, and, on the average, nine lives are regularly sacrificed by fire every day in the year.

Three hundred and fifty thousand men are directly engaged in building operations. 1,800,000 more are employed in iron works, quarries, manufacturing plants, etc., part of whose products goes into building operations. Our buildings for the year just passed cost us \$210,000,000 in wages and \$400,000,000 in materials, leaving \$90,000,000 in profits, interest and incidentals. \$4,000,000,000 of our money is invested in quarries, manufacturing and other plants whose products entirely or in great part go into building. In New York City alone last year \$147,000,000 worth of buildings were erected, and it is estimated that she will put up an equal amount this year. She spends at the rate of 12 cents a day per inhabitant, while the country over we are investing at about $2\frac{2}{3}$ cents apiece. Incidentally, fire is wiping out about 4-7c of property value per inhabitant per day. And that fire loss is gradually creeping up. The \$175,000,000 it has cost us in 1905 is not as much as we lost in 1904, but, nevertheless, it is \$20,000,000 more than we burned up in 1903, and at the normal ratio of increase we have been carrying on for several years it is reasonable to estimate that fire will cost us \$200,000,000 for 1906, and that, provided there be no repetition of the awful Baltimore experience or that at San Francisco—something that no man can bank on.

When I say that the fire loss represented \$175,000,000 not counting San Francisco, it is well to qualify the statement by adding that that simply represents what actually went up in smoke, the flat cost of our "National Ash Heap". There are incidental expenses that deserve some attention. For instance, the wages paid to our Fire Departments, the maintenance of high-pressure water services, and other fire equipment, our premiums on insurance, the loss of business that ensues, etc., total up tremendously, though, of course, many of the items are not available and purely conjectural. Just the wages of fire departments in twenty-five cities amount to \$25,000,000 a year, while water and apparatus in those same cities total up another hundred million and the cost of insurance and loss of business can certainly be placed at nearly \$500,000,000. True, some of that comes back to the individual sufferer in the way of insurance, but remember, too, that for every dollar reimbursed that sufferer the community pays in three dollars as premium to the insurance companies. In New York State alone there are \$28,000,000,000 of fire policies

in force; but then her people have to hand over \$35,000,000 to the companies in premiums. In New York City the value of real property is placed at \$5,400,000,000, while personal property is figured at \$3,400,000,000. Think of what percentage of those colossal sums is in direct jeopardy from fire!

The whole question of fire is a most momentous one. People pay scant attention to it and devote their time and energy to the discussion of railway rates regulation, and such, by comparison, absolutely trivial matters, while that of fire is deemed a more or less academic affair that serves for discussion by a few experts whose findings and conclusions make blessedly little difference, whichever way. People are not yet fully awake to the significance of what is at stake and what fire really means to them personally and to the country at large—one of the fiercest wastes of a most wasteful and improvident people.

New York averages 8,700 fires a year, Chicago 4,100. Our average is three theatres, three public halls, twelve churches, ten schools, two hospitals, two asylums, two colleges, six apartment houses, three department stores, two jails, twenty-six hotels, one hundred and forty flats and nearly sixteen hundred homes burned up every week in the year. We indulged in 45,000 fires last year, some of them wiping out many buildings. We are born gamblers, are we Americans, and seem to placidly take our chances on fire, believing, probably, that those chances are somewhat remote. As a matter of fact, however, the country over, each family has just one chance in sixty of being burned out some time during the year; not what can be called a very "long shot" after all.

Our fire losses may, with perfect justice, be attributed almost wholly to circumstances that we could control, though we have neglected things so long that that control is no longer an easy matter to secure, nor can it now be absolute. False ideas of economy in construction and other such follies are blamable for nine-tenths of our poor building, our tinder-box methods. Some twenty years ago we began to use "slow-burning" and "fireproof" construction, more or less imperfectly, but nevertheless a step in advance. In 1880, \$5,000,000 covered the actual cost of every building in the country that even laid claim to being fireproof. It has been an up-hill struggle to get people to accept reasonable modes of construction as against the way their pioneer fathers used to build, and to secure adequate municipal regulations to actually compel them to do half-way decent work. The fight is not over, by a long way, but the shrewder business men, at least, see the advantages of building investment rather than mere building speculation, and they build properly. Example is contagious, and we may be hopeful.

\$750,000,000 is a powerful lot of money to put into building in one year, and though that estimate would seem high, it may fall far short of the mark—if our labor unions don't get in the way. Building never was quite so expensive; but people have tired of stock gambling and they have grown a trifle suspicious of some of the big financing organizations and other heretofore popular means of using investment, and have seemed to be impressed with the fact that real estate and buildings constitute more tangible securities than they have played with in times gone by, so that really vast sums are being and will be diverted from what may be termed their usual normal channels into construction, and the building craze is spreading.

It certainly behooves us, all those interested in good building, the real progress of the nation, all the pro bono publicos, so to speak, to redouble our efforts in behalf of sound construction and by preachment, example and precept, give ample demonstration to all who have eyes and can see that it is the wisest economy, personal interest and the civic duty of every man to build of non-inflammable, or, better still, absolutely fireproof construction. To fully comply with that requirement, a building must be not only of fireproof material as far as the structure is concerned, but its finish, its details, must be as non-combustible as possible and its design, plan and arrangement so intelligently devised and correct that a fire starting in any part of the building will be confined to that starting point, thus saving not only the building but the major portion of the contents.

Just the one detail of inclosing stairway and elevator-wells, isolating them, or, rather, story from story, would spell safety to thousands of lives and millions of property. Think of it! Seventy per cent. of the loss by fire in big buildings is directly attributable to the open stairs and elevator shafts, while eighty per cent. of the loss of life in buildings ensues from that same cause. Is it not worth while separating or closing off elevators and stairs? And then the unprotected windows. Fully forty-three and one-half per cent. of all our fire loss is directly traceable to communication of fire by unprotected windows on narrow streets, alleys and abutting property. A few fire-shutters, a little wired glass or an ounce of other prevention would have been worth the millions of pounds we spend in the not always effectual water-cure.

To sum up, let me quote you a few words from a high authority on fireproof construction. His "shoulds" are tersely put, concise, and well worth reading by all who intend to invest in construction. And, by the way, even our architects, who supposedly know all this and much more, may be bene-

fitted by not only reading what he has to say but by thoroughly assimilating it and learning it by heart.

“Instances are so numerous of destructive fires in supposedly fireproof buildings that many persons have absorbed the idea that there is no such thing as a building that will not burn.

This error is entirely due to a confusion of the use of terms and the misstatement of facts. not fireproof.

A building that is of non-combustible material is not fireproof.

A building that is of fireproof materials, but not of fireproof design, is not fireproof.

A building that is not of fireproof construction and design, except in part, is not fireproof.

A building that is strictly, thoroughly fireproof, filled with combustible contents, may have a destructive fire in it but the building itself will not be wrecked or destroyed.

Experience has demonstrated again and again that if a building is of strictly fireproof materials—is correctly designed—only a small proportion of the contents can be destroyed by fire.

The first great principle of fireproof construction is isolation.

Suppose you wanted to erect a six-story fireproof building, but instead, having plenty of land upon which to spread out, you put up six one-story buildings, each separated from the other with thoroughly fireproof walls and partitions.

Fill your six buildings with combustible contents, start a fire in one and let it burn itself out. Your five other buildings will not be endangered, harmed or damaged. The contents of the building fired will be destroyed, but the building itself stands intact and with slight repairs is again ready for occupancy.

Now, assemble your six buildings on one site in six stories—your floors are fireproof as well as your partitions—a fire is started in the contents of one floor—the principle of isolation protects the contents of the other five floors just as it does in the six separate buildings.

Now, assume that when you had your six one-story buildings put up you had left combustible doors opening from one building into the other.

Is it not evident that the fire would have swept from one to the other and destroyed the contents of all six, no matter how fireproof the structures themselves were?

Suppose in your six-story building you leave openings of combustible material—combustible doors in partitions of the same floor, combustible open elevator shafts, machinery shafts, air vents, etc. Will not the result be the same as in the six single buildings, communicating through combustible entrances?

This illustrates the importance of the designing of a fireproof building.

The city of Philadelphia put up a half-million-dollar high school building which was of thoroughly fireproof construction clear to the roof.

This splendid structure was then covered with a highly combustible roof, and to cap the absurdity, a tower was run up above the roof, and this tower was built entirely of wood.

In the spring of 1905 a fire started in the tower, destroying it and the roof, damaging in part the two upper floors of the building and causing incalculable loss in the destruction of scientific records and a heavy money loss in valuable astronomical instruments.

And the people of the city, from the mayor down, were asking, How could a disastrous fire occur in a fireproof building?

Lincoln said: “This nation cannot exist half slave and half free”. A building will not exist that is half fireproof and half combustible construction.

A truly fireproof building is one that is of thoroughly fireproof construction, non-combustible finish and of correct design, so that a fire starting in any part of the building will be confined to the starting point, thus saving not only the building but the major portion of the contents.

The correctness of this kind of construction is being constantly proven by the fires that start in fireproof buildings, and being confined to small area, are easily extinguished and cause such slight damage that they create no attention. The world never hears of them.

The wide and shallow wardrobe type of closet, with a pair of folding doors and raised floors, affords more and better hanging space than the old-fashioned deep square type with a single door. Its economy of space has been repeatedly demonstrated in the planning of small houses where every foot of space must be utilized. In this type of closet, says Robert C. Spencer, all the space within is available for shelving and hanging. Garments which are not often worn may be hung on hooks along the back, while those in more common use may be hung crosswise on hangers hooked over a stiff rod of wood or metal extending from end to end of the closet. With the two doors thrown open, every garment is at once exposed to view for selection, and the contents of the closet may be quickly and thoroughly aired. The only serious objection to shallow wardrobe closet is, it adds to the number of doors in a room. The doors, however, if well designed and of fine material, may be beautiful in themselves, and where means permit, the entire bedroom may be wainscoted in harmony with the panelings of the doors.



We run along a fine avenue of pleasing habitations, each with its garden and street borders of palms and other trees

PLEASURE RESORTS AND BEACHES AROUND LOS ANGELES

BY WILLIAM LEBARON JENNEY

PART IV.—SANTA MONICA



WE are now nearing the end of April and the weather this morning was so fine that I took a surface electric car for Santa Monica, one of the oldest of the beach resorts of Los Angeles. I remember it some twenty years ago, when we reached it on horse-back and amused ourselves chasing coots on the sand beach along the water's edge. Now we reach it over a fine electric road, in a handsome car. We run along a fine avenue of pleasing habitations, each with its garden and street borders of palms and other trees. The gardens are planted with trees, lawn and flowers and over the houses enormous masses of climbing roses, mostly white or nearly so, each covering some thirty or forty square feet of the house, often more, and usually a specially fine one covering the hood over the front door. And then again, if there is a front fence it was covered with the La Marque, Gold of Ophir, Cherokee, Mareschal Niel, etc., all in the fullest bloom.

Our car passed Venice and Ocean Park and then

entered Santa Monica. Here I found plenty of seats along the beach, under the shade of large trees.

Looking out on the ocean to the right was the landing pier and beyond a long range of high hills completely sheltering the pier from that side.

A few hundred yards back from the water's line and parallel thereto are the beach avenues. One shows the ocean under the trees on the left. Another shows a broad street with car-tracks with a walk on either side. The one on the left of this is beautifully shaded with fine palms. The third is another view of the avenue, bordered with a walk shaded with palms.

There are some avenues perpendicular to the beach extending inland, bordered with the usual



—a broad street with car tracks, a walk on either side

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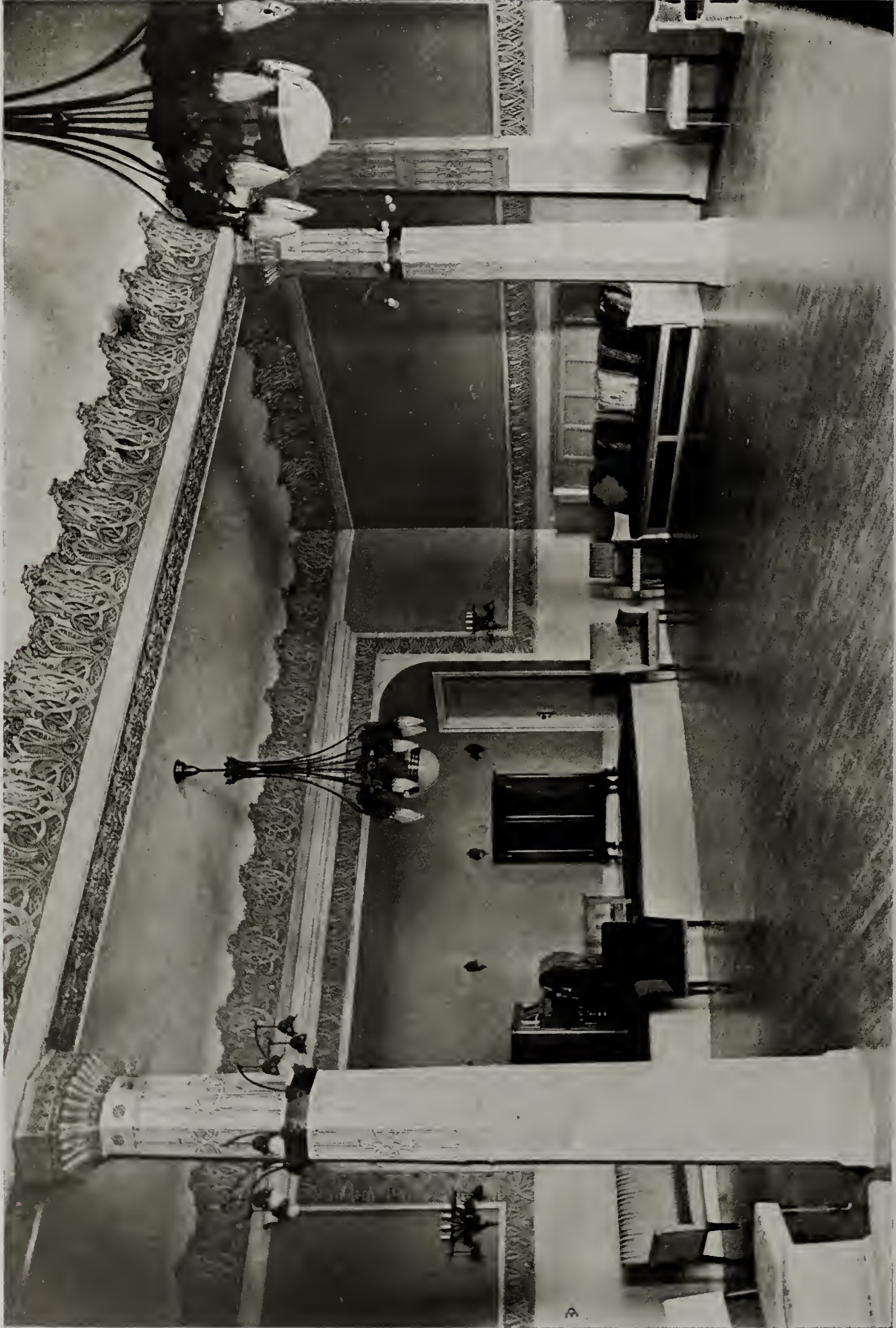
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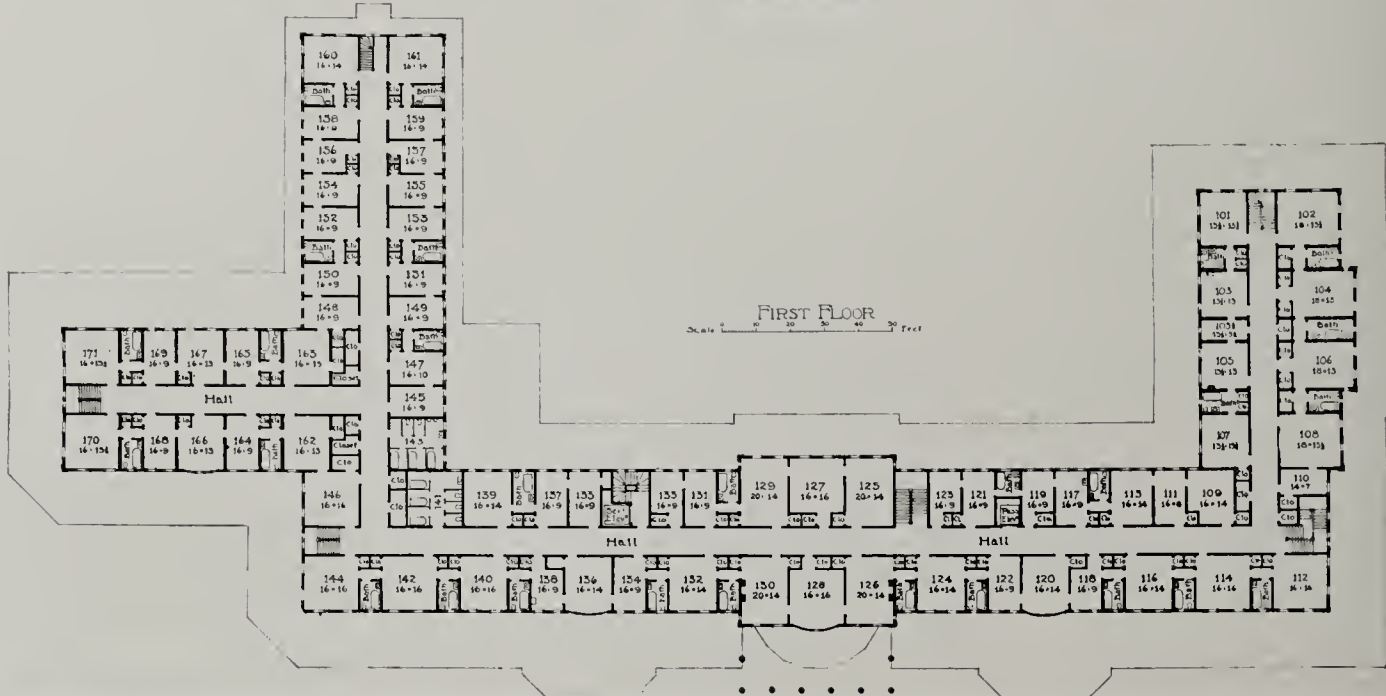
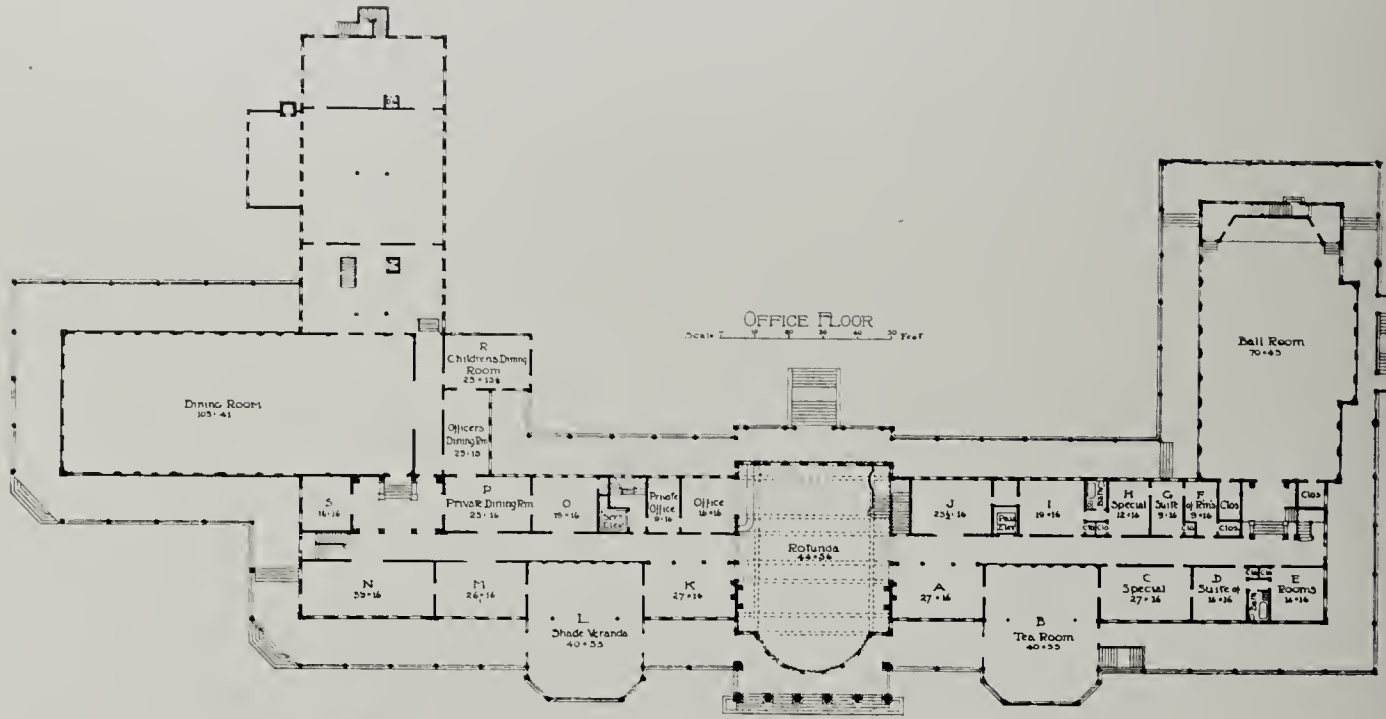


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BIRDSEYE VIEW SHOWING COMPLETED SCHEME OF WASHINGTON UNIVERSITY BUILDINGS, ST. LOUIS, MISSOURI

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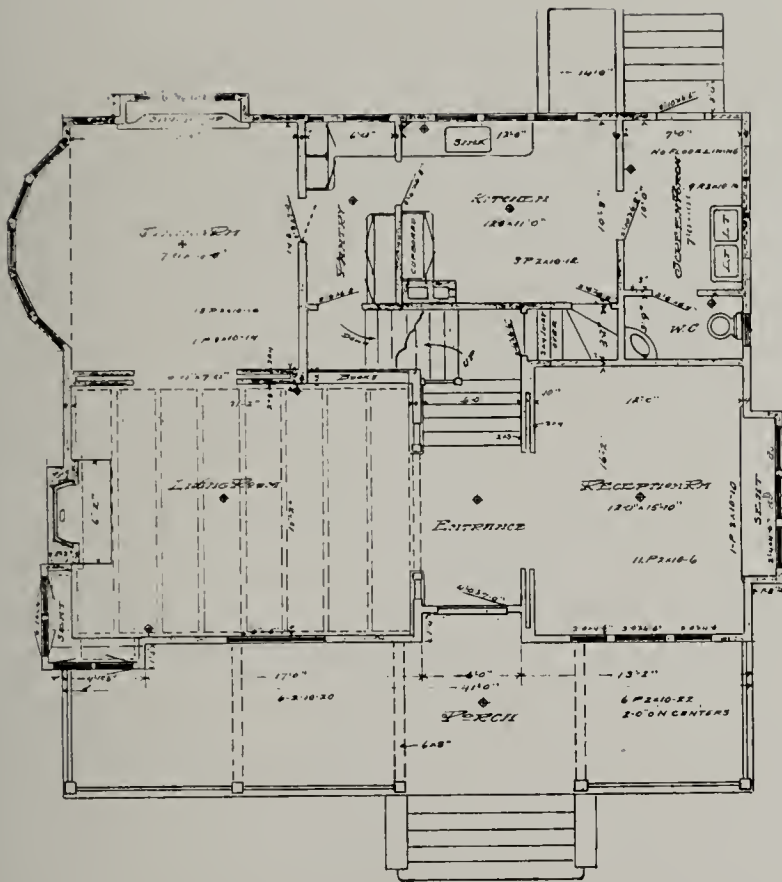


SUN ROOM RESIDENCE OF F. S. STIMSON, SEATTLE WASHINGTON

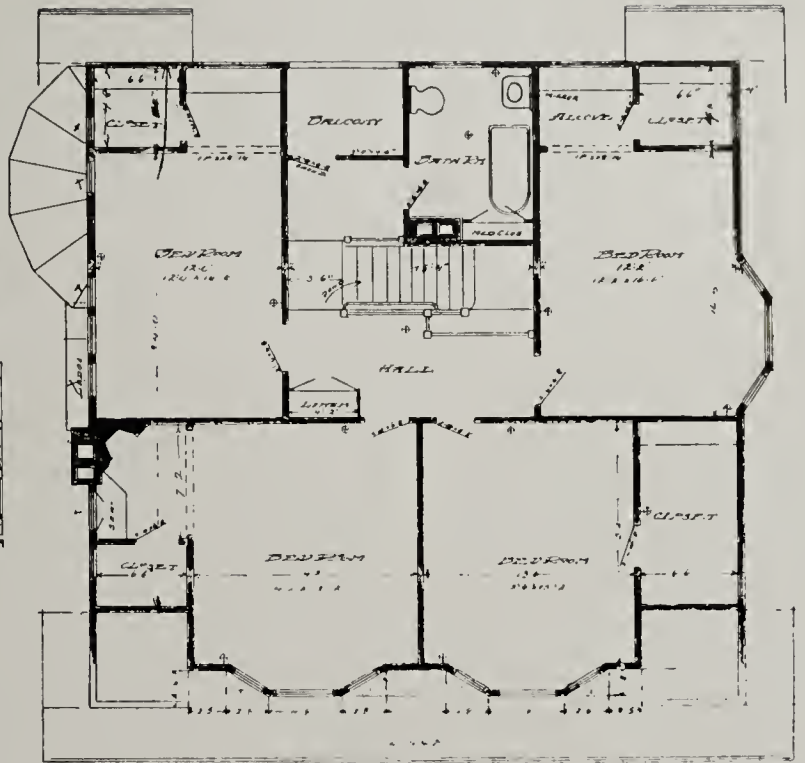
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FIRST FLOOR PLAN



SECOND FLOOR PLAN



RESIDENCE (B) FOR O. P. DENNIS, LOS ANGELES, CALIFORNIA

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—over the houses enormous masses of climbing roses ***** and usually a specially fine one covering the hood

cottages and trees. On inquiring I learned that there was a route back to Los Angeles via Hollywood that was quite attractive. The car coming up at that moment I went on board and was soon rushing along a fine avenue, bordered on both sides with numerous cottages and trees, each cottage, as usual, having its lawn and garden and often a considerable orchard. Some of these orchards on the left extended back to the foot-hills, for the high ground, if not too high, offers the advantage of no frost. We passed many clusters of houses back from the track on the hillside that were nearly small villages, clustered among the orange trees and palms. — Hollywood, which extends along the track for some miles, is really very pretty, with many park-



—shows the ocean under the trees to the left

like effects, occasionally the remarkable Norfolk Island pine, with its horizontal whorls of branches at regular intervals, towering above bunches of live oak and pepper trees.

Then we passed the Winona Tract, with its orchards of oranges, figs and olives extending back to the foothills. We entered the city, passed the old mission of Los Angeles, with its plaza on the opposite side of the street, and changed cars for our present boarding house at Pasadena.

THE DANGER OF SEWER GAS*

BY WYNDHAM MARTYN



HERE is one thing above all others for which the modern sanitarian should be truly thankful, which is that the plumber of to-day is being trained in a scientific manner to carry out his very important work. The old-time plumber was a scourge. His victims numbered more than those of a great campaign. He was the friend of disease and the ally of all epidemics, and his misdeeds arose, not from any desire on his part to behave other than as a good citizen, but from a colossal ignorance of elementary hygienic laws. "Cut of sight out of mind" seems to have been the motto of the old-time architect, builder and plumber where the disposal of sewage was concerned.

A very eminent authority has written: "If we look for the cause of the large mortality from zymotic diseases in our own cities, we find it principally in sewer-gas poisoning. Other causes operate to swell the total, but to bad plumbing we may attribute the prevalence of pythogenic pneumonia, peritonitis, inflammatory rheumatism, typhoid and malarial fevers, croup, diphtheria and many kindred diseases which are almost chronic in our cities".

Another writer on allied subjects states: "There is reason to believe that in great cities, sewer air, or gas, is the cause of more physical suffering than any other one thing".

There are conflicting opinions as to the exact nature of the sewer gas, but none as to its ill effects. There is usually in the lay mind the impression that the gas is a distinct odorless element, which is trebly dangerous because the nose can give no warning to the brain that one is living in its zone of influence.

It is possible that such a gas as this may exist, but hardly probable, since from its very nature—the result of decaying animal and vegetable matter—the gas must possess a peculiarly offensive odor, which happily aids in its detection.

When sewer gas escapes from the main pipes into the house, it is to a certain extent diluted with at-

mospheric air, but when it arises from the faulty closet it mixes undiluted into the air of the house. That this is no vague theory may be proved by an examination of the health statistics of large cities directly after the installation of water closets.

In 1872, the Medical Officer of Health of Edinburgh, in writing to an American confrere, stated that double the number of deaths occurred in the first year of their introduction than the deaths in the previous year from typhoid and scarlet fever. This was also true to a certain extent of Philadelphia and Glasgow, and proves without a doubt that a water closet, unless constructed on the most scientific principles, can become a source of great danger.

A very curious instance of sewer-gas poisoning being attributed to supernatural influences occurred in an old Tudor mansion in the west of England some years ago. The kitchens and servants' sleeping quarters were situated in a portion of the building which had previously been used as a monastery, while the family lived in a more modern portion. For a great number of years it had been noticed that all the servants of the family seemed under a curse, and no matter how healthy when they took service with the owners, they succumbed to what was called, for want of a better phrase, "low fever". A local antiquarian unearthed some old record which proved that the monastery had been disbanded in the reign of Henry VIII and the abbot slain in the very part where the unfortunate servants slept. Straightway

it was thought that the dead abbot had vowed vengeance and had taken toll of the servants. It became necessary finally to bring servants from distant cities to which no rumors had penetrated. But they, like their fellows, soon grew frightened, ill, and left the neighborhood. Certain mouldy unpleasant odors were noticed at times, but they were attributed to the decaying bones of certain dead monks which were in an ancient burying ground near the house.

At last the property was sold. The new owner had strong ideas as to sanitation and had the ground in the neighborhood of the kitchens opened up. The great leaden pipe which should have conveyed the household sewage to a distant pit was found to have been gnawed through by some long dead rat, and a huge cellar, the existence of which was not known, was found to be nearly full of filth.

An architect was called in, modern plumbers put to work, and the curse, sewer gas, was duly exorcised.

There can be no doubt but that many houses have been falsely laid under similar bans, which needed only modern methods to dispel.

It is not only essential to have the most modern drainage system in one's own house, but is as necessary to insist on laws being passed which compel less progressive people to fall into line and prevent, by hygienic measures, recurrence of epidemics which are encouraged by careless plumbing.

*From Modern Sanitation.

Abstracts of Papers Read Before the Seventh International Congress of Architects, Held at London, 16-21 July, 1906

(Continued from September Number)

THE PLANNING OF THE RESIDENTIAL DISTRICTS OF TOWNS

BY RAYMOND UNWIN

While towns in England are growing as rapidly as those of other countries, we have not studied the question of town development, as many of the other countries have. In Germany, for example, there is a large literature and at least one good periodical devoted to the subject. German municipalities have extensive powers and are in the habit of making plans to regulate the development of their towns. The English haphazard system of allowing towns to grow has only to be compared with this to be condemned. It is necessary for our municipalities to secure additional powers; probably the best way would be to begin by forming committees in each town to watch over and criticize town development from the æsthetic point of view, and these committees should work for the appointment by each municipality of a professional expert whose special duty it should be to examine and criticize all development from the point of view of its effect on the appearance of the town.

It is important for us to study what is being done in other countries, but we must not necessarily accept the conclusions they have arrived at as indicating the best methods for our own development. This is eminently work for architects, who alone have received the necessary practical and artistic training.

It is the regulation of the vast growth of residential districts around our towns which is most required in this country. Valuable suggestions may be obtained quite as much from old English villages and towns as well as from the ancient Continental towns which the school of Camillo Sitte have taken so much as their model.

Both alike suggest the great importance of defining and limiting suburban areas. Old towns were often defined by their walls with beautiful effect. We need to replace with some more comely girdle the ragged edges and rubbish heaps which surround our modern suburbs; belts of park land, meadow, wood or orchard, often of quite narrow width, might be used with good effect.

In suburban areas the larger buildings will be few, but should be grouped so as to produce some enhanced

effect and some definite center for the life, as well as for the plan, of the suburb or district. The judicious use of planting may help to link together buildings in centers where there may not be enough fine buildings to make an adequately large enclosed place. The growing desire for greater space and more openness of outlook is an important and difficult element in our problem.

Before attempting to lay out a new area the site must be very carefully studied, a contour plan must be made, and a survey of trees and many other features of interest. Even well-grown hedgerows may sometimes be helpful; anything that will break the naked newness of a suburban area should be preserved. The plans should be thought out on the ground and committed to paper afterwards. It is impossible to study too thoroughly a site and its conditions; the proper directions for the main roads, the various centers, factory areas, etc., should all be settled on the site. A symmetry which will look nice on the drawings is of no value; but definiteness of figure in the main framework formed by the chief roads of a town or district is certainly valuable to enable people easily to find out their way about. The whole of the plan should be based on definite reasons rather than abstract rules, and one cannot be too willing to consider suggestions from the site. Rules cannot be laid down in favor of straight or curved roads; each form has its beauty and use; the mere aimless meandering road will be quite as monotonous as the straight road. The contour of the ground or existing features having curved lines springing from natural causes may suggest very beautiful curved roads, but straight roads opening up a beautiful view, or affording fine avenue effects, may be equally satisfactory. Each road should be given some distinctive character, which may be enhanced by planting it with a special kind of tree. Greater variety than at present should be allowed in the width of the roads, in their construction and decoration, according to the purposes they will serve; by-laws need revising in this respect. Great care is needed in decorating roads with trees or gardening; everything must be kept very simple and broad in effect. The dignity of many fine streets and parks in Continental towns has been destroyed by the introduction of wriggling lines of beds of variegated foliage, and such like.

The best direction for roads to take for residential purposes depends so entirely on the designing of the houses that no rule can be laid down. Roads running east and west may give a south aspect for all the houses provided only that the superstition that a house must have a tidy front to the road and an untidy back away from it can be exploded, and houses for the south side of the road be designed with their living-rooms facing from the road and their so-called backs made tidy and presentable to face the road. The advantage of roads running north and south, or thereabouts, is that both sides of the houses get an equal amount of sunshine. An important improvement required in suburban districts is the better grouping and arrangement of the houses. Endless repetition of detached or semi-detached buildings becomes quite as monotonous as the endless rows of houses. Valuable suggestions may be obtained from our old village greens, cathedral closes, and college quadrangles. Even the throwing together of a few front gardens may help matters, but where smaller houses can be built in groups, and the groups be designed as a whole, and where such groups of houses can be arranged on two or three sides of an

open garden or green, or even where they can be set back from the road at varying distances, not only may variety and beauty be given to the road, but greater openness of outlook may be provided for the houses, and very often some small distant view may be given.

Variety of effect in the streets is very desirable, but it must never be forgotten that mere variety is not in itself necessarily pleasant, in fact is seldom really satisfactory unless it is variety within some enclosing unity. For the town-planner it is most necessary that he should understand wherein consists what we call natural beauty, and while he should seek every opportunity that the site may afford of pleasant natural beauty and the interest and picturesqueness of happy accident, he must never forget that he cannot design happy accident or natural beauty.

THE RELATION OF MODERN ARCHITECTURE TO CRAFTSMANSHIP

BY W. R. LETHABY

The practice of modern architectural design is based on custom. In some countries there seems to be a more general agreement than in others, and in the former there is a nearer approach to the existence of style. Beyond this, what are the possibilities by which modern architecture may enter on a course of development, and how can we attain to reality in building?

The styles of the past were shaped by a growing mastery of craftsmanship, and only this will produce art akin to the old, an art which is discovered rather than willed. The architect's store of forms is for the most part degraded memories of the discoveries made by ancient craftsmen. Whence is new energy in modern architecture to be derived? In part it may come from the investigations of science, but even so it will require a resourceful craftsmanship to deal with the new material.

At present the architectural profession is isolated from workmanship, and is thus imprisoned within a small sphere of ideas. Architects have aimed at bringing back the *appearance* of masterly craftsmanship, but this outward appearance has no vitalizing force.

A closer contact with labor may mean at least three things. We need, first, to be in closer touch with the executants of our buildings, and to be anxious to learn from them what they think is good work. In the second place, it may mean the acceptance by the scientifically-trained directing architect of more help from independent workmen of a high order, painters, sculptors, metal-workers, modelers, and the like, while giving up the commonplace of office-designed ornament. And, thirdly, it may mean the practical training of architects themselves. This idea is liable to two misconceptions; as if it were proposed that the architect engaged on important work should make his own mortar, or as if the claim might be satisfied by receiving lessons in enameling or wood-carving. The crafts essential to an architect, of course, are masonry and carpentry, while they remain the principal factors in construction, and, so understood, craftsmanship should form the basis of architectural education. The student should cut stone, frame up wood, and handle bricks. Often, of course, he could not afford much time for this, but even a month's practice with materials and tools would be better than nothing.

A short course should form a part of the education of all students, but some would probably become much

more interested in this side of things, and could follow it out further. Thus we might train architects of varying capacities for various requirements. It is the mistake of all systems to form men of one pattern. However desirable it may be to train some men to the highest degree of academical skill, these are best fitted to deal with the complicated problems of practice in a big city, while the humbler works of the country require equal devotion, but of a different kind. A basis of craftsmanship in architectural education should open out channels for diversities of gifts which may correspond with the diversities of requirement.

TO WHAT EXTENT AND IN WHAT SENSE SHOULD THE ARCHITECT HAVE CONTROL OVER OTHER ARTISTS OR CRAFTSMEN IN THE COMPLETION OF A NATIONAL OR PUBLIC BUILDING?

BY SIR WILLIAM RICHMOND, K. C. B. A., R. A.

A simple question is asked upon a very complicated subject. Complicated because we live in times when artists come much more rarely into touch than formerly. Cities are bigger, life is less simple, distractions of various kinds are ever hindering any artistic intercourse. Above all the State does not take much account of Art. Education is in all hands, superficially. Hundreds of clever young fellows are taught the rudiments. How few of these gain permanent employment, or even make a living! Yet, notwithstanding, the Institute is always broadening its ground; the Royal Academy seeks to be more comprehensive. The Art Workers' Guild has accomplished much, and the "Arts and Crafts" have succeeded in gaining the interest of a section of the public. Against the cold attitude of the Government towards Art may be set a growingly democratic bearing of artists to artists. Architecture, sculpture and painting are getting only too slowly more closely into touch, and the professor of each separate art is gaining knowledge from the specialist. And yet there are great difficulties. The great mother of Art, Architecture, is still shy of her children. For this there must be a reason. May it not be that though increased liberation from "Styles" finds a less pedantic outlook, still a really modern expression in architecture has not entirely overcome them? The rapidly increasing necessities of modern life, the most innumerable and new problems which the architect has to solve, render him an experimentalist. And exactly, though less forcibly, an analogous uncertainty surrounds the inspiration of the sculptor and painter.

Modern costume does not lend itself to sculptural or pictorial art as monumental art, and only monumental design can find fellowship with architecture; so that we are more or less in a dilemma, all of us. It would seem a commonplace to say that a classic building should be embellished with classic stories told either in the round in relief or by painting of the same character, and the same applies to Gothic buildings. And yet being done, the average even instructed citizen is left cold. He is aware of a certain anachronism; and though he may admire, his admiration is without sympathy, and if he does not state it, there is lurking in his mind some such sentence as this: "Is there nothing good enough, picturesque enough, grand enough in modern life to create a style?" This leads one to the conclusion that architecture must make the move; sculpture and painting will follow. The divorce of the

three arts has been destructive to the highest art, which contains them all three. It is impossible to deny that the Royal Academy is per se an academy of painting; it has fallen to be so. The architectural room there enlists but little of the public attention. Why? The average public is neither interested in nor does it know anything about that noble art which is beyond its power of comprehension, because it appeals to the more abstract of our senses, beauty of line and of proportion. Architecture is an art which appeals last, not first, to the average individual. Painting appeals first, first as portraiture, second as anecdote; that painting which is the highest, which is abstract, and hence in allegiance with architecture, appeals scarcely at all. The same may be said of sculpture, though in a less degree than of painting. Regard for the abstract beauty of form is very rare in England; thus architecture, sculpture, and the higher forms of decorative painting have no market; they are not, either of them, as it were, dealers' wares; their value is intrinsic, not fluctuating, and it cannot be grouped in the sale room; therefore, neither architecture, sculpture, nor decorative painting is within the market. So much the better. Doubtless a combination of serious architects, sculptors, and painters would be quite invaluable, a society, say, comprising a small number of each section of the arts, perhaps six architects, six sculptors, and six painters.

The Institute is the very body to create this new departure from specialism and all its narrowing effects.

In my opinion no amount of "Papers", either for discussion at a Congress or for stimulating a pleasant chat at one of the evenings at the Institute, will ever lead further than that evening's passing instruction and pleasant pastime. There are many men capable of writing able articles, convincing also for the time being, but which very soon are found in that limbo called forgetfulness. We must get practically into touch; there must be no priority. Our several professions are full of difficulties, which would be appreciated as soon as we could get to work together. The architect can learn much from the painter and sculptor, and vice versa. It is "touch" that is needed, not "shyness," and real "touch" can only occur when practice follows precept in the initial stages of great work. It is of little use for an architect to tell the sculptor or the painter, "Here I want a statue, there a relief, here a wall painting", etc. At the very initial the three should work together. There is nothing harder than the experience of an artist who is called to decorate a building with painting or sculpture which is in a sense complete without either. Surely the structure must be designed to receive. A niche is nothing without its statue, a sentry box is a silly thing without its sentry, just as a framed panel seems to ask for what it is framing, for something precious—marble, mosaic, or color. Incomplete is the monument to the Duke of Wellington in St. Paul's; it looks like a pedestal without a reason; it fails because it has no culmination.

My main contention is that, with a view to closer touch between the architect, sculptor and painter, a committee, such as I have indicated, might be appointed by the Institute. That committee might in time become an advisory body of the Government and the London County Council, which both need assistance, not only in common sense but good taste also, in all that applies to Art.

ASSOCIATIONS

ILLINOIS CHAPTER A. I. A.

The annual meeting of the Illinois Chapter of the American Institute of Architects was held at Chicago September 10th. The following officers were elected for the ensuing year:

Arthur F. Woltersdorf, President; George C. Nimmons, First Vice-President; Dwight Heald Perkins, Second Vice-President; Peter B. Wight, Secretary; William A. Otis, Treasurer.

A large amount of business was transacted. D. H. Burnham was added to the committee on Chicago Charter Convention. Mr. Burnham addressed the chapter on the subject and offered some valuable suggestions regarding the future of the city.

Considerable discussion was had upon the Competition Code being formulated by the Competition Committee of the American Institute of Architects and the following resolution was passed and forwarded to the committee:

RESOLVED, That it is the opinion of the Illinois Chapter, A. I. A., (1) That competitions are undesirable and unnecessary; (2) That in the interests of both clients and architects, whenever possible, an architect shall be employed without resort to competition; (3) That all rules for conduct of competitions heretofore recommended or adopted by the American Institutes of Architects or its chapters should be repealed; (4) That no rules attempting to regulate the same shall be adopted hereafter; (5) but, That the institute shall exert its influence for the discouragement of competitions, under all circumstances.

This chapter, however, is of the opinion that the schedule and contract prepared by the institute's committee on competitions is the best that has yet been devised for limited competitions; but that as the only kind of competitions that the institute cannot control or discourage by its negative action are competitions for public buildings, that may be provided by the law, the Institute should use its influence to have the same conducted according to some modification of the committee's plan to be made by its board of directors, whenever there is an opportunity to do so.

The Secretary's report showed a rapid increase in membership and a general revival of old-time interest and spirit among the members.

IOWA CHAPTER A. I. A.

The Iowa Chapter of the American Institute of Architects met recently at Davenport. A committee was appointed to work for legislation providing for state registration. Officers elected were as follows: President, F. J. Heer, Dubuque; Vice-President, E. P. Schoentgen, Council Bluffs; Secretary, E. H. Taylor, Cedar Rapids; Executive Committee, George E. Hallett, Des Moines, and Seth J. Temple, Davenport. The chapter will hold its next annual meeting in Council Bluffs.

ST. LOUIS CHAPTER A. I. A.

The St. Louis Chapter of the American Institute of Architects held its annual meeting on September 26th. A banquet was held at which a bill recently introduced in the city council, giving merchants the right to use the entire sidewalk for business purposes, and for hanging larger and lower signs, etc., was discussed. It was condemned by resolution on the ground of public policy and its destruction of what architectural beauty the city street fronts might possess.

The officers elected were: E. J. Russell, President; Fred Mann, Vice-president; E. C. Klipstein, Secretary, and Fred W. Widmann, Treasurer. These, together with Ernest Helfensteller, complete the Board of Directors. About twenty members were present.

SOUTHERN CALIFORNIA CHAPTER A. I. A.

At the Annual Meeting of the Southern California Chapter of the American Institute of Architects, held September 11th, an interesting session was held. Edmund J. Birk, a popular architect, was elected by acclamation. Recollections of the August outing of the chapter supplying data, the insufficiency of safety co-efficient in the construction of bathing suits and the President's problem of placing a sixty-foot front business premises on a fifty-foot lot, and other matters of a serious character were discussed.

ILLUSTRATIONS

Among the large number of large structures in course of erection in Chicago's down-town district, the Commercial National Bank Building, illustrated in this number, is distinctive in design and practical in plan. While the office building plan fitted to modern steel skeleton construction is more or less conventionalized, the firm of D. H. Burnham & Co., the architects of this office building, have been exceptionally successful in so planning the entrances, corridors and offices, that the greater amount of convenience and at the same time valuable saving in rentable floor space is obtained.

The Griswold, a summer hotel designed by Robert W. Gibson, of New York, located on Eastern Point, at New London, Conn., is shown from a water color that does not do justice to the dignified appearance of the executed work. The plans show an exceptionally good layout for the office floor of such an hotel and the other floors are typical of the first floor, excepting the space given to the reception rooms, which is given to chambers.

The Washington University buildings, at St. Louis, by Cope and Stewardson, of Philadelphia, have been

under construction for a number of years, and the designs of most of the separate buildings have been published in this and other journals. A birdseye view with the several buildings that compose this, the most artistic group of University buildings between New York and the Coast, is given to illustrate the completed scheme.

Two cottages by Dennis and Farwell, of Los Angeles, are illustrated, one in exterior and completed interiors and the other in exterior and plan. The cottage problem should receive as careful study as that of the larger residence, and these cottages have evolved with exceptional success, both in design and plan.

An interior omitted from the August number, when the interiors of the Hofius residence at Seattle, by A. W. Spalding, were published, completes a set of exceptional interiors.

The residence of F. S. Stimson, at Seattle, Washington, designed by Bebb and Mendel, is illustrated by an exterior view and five interiors. The residence overlooks Puget Sound, and the Sunroom, which takes the place of a porch, opens upon this magnificent bay of the Pacific Ocean, and is considered the most attractive part of the house. It was in reality in the nature of an afterthought, having been originally intended as a porch, but when partially completed was rearranged and enclosed, making a most inviting morning room or after-dinner room, with a magnificent view. The architects and the decorators were here confronted with a problem, having massive rough gray granite walls on two sides of the room, with windows occupying the entire space on the other sides, but has worked it out effectively, by the use of rough or adzed ceiling beams, and half beams for cornices, staining the entire ceiling and beam work a dull green and using a good deal of green against the gray granite. The panels above the windows were done in a rough stippled plaster with ground granite thrown into it while it was fresh, thus introducing the granite effect on the other side. The windows are curtained with rough, gray, semi-transparent cloth with a simple applique ornament of red and green. The color scheme of the room throughout is red and green against the gray background. The furniture is all willow, stained green, with green and red cushions.

The main hall is large and square and has been treated in Elizabethan style, with handsome carved woodwork and full paneled wainscot with beam ceiling. At the front of the hall is a broad, low landing as an approach to the handsome staircase. Above the landing is a balcony overlooking the hall and forming a very attractive feature.

The reception room, the entrance to which is near

the front door, is delicately treated in Italian renaissance with carved pilasters and woodwork of Circassian walnut. The walls are hung with soft corn-colored damask and the furniture, which was designed for the room, is exquisite in detail.

The billiard room has been handled in a novel and original manner. The woodwork here is all of Washington fir, with broad, beautiful figure and finished in a dull brownish green tone. The marked Indian treatment of this room was suggested in order to make a home for a fine collection of Indian baskets and curios. It was done in Indian colorings, red, green and blue, slightly modified in tone on a background of plain linen of neutral tone. The billiard light is made from four Indian baskets with reflectors inside, suspended from metal arrows, which are fastened in a cast bronze centerpiece representing a broken bough.

The Georgian drawing room opens into the dining room and has two double doors opening to the sun room. The woodwork of this room is finished in rich old ivory. The walls are hung in green damask and the hangings are of green velvet, richly embroidered. A good deal of dull gold has been used as a complimentary color with excellent effect. The floor is covered with a magnificent rug of Scotch weave and the furniture, all of which was designed for the room, gives evidences of excellent taste.

The ball room, which is in the basement, is approached through a handsome hall and staircase. This room is sixteen feet high and opens by means of double doors on either side of the large fire place into the back lawn. There is a large retiring room opening off of it and a small stage at the opposite end. The treatment of the room suggests the style of Louis H. Sullivan, with whom Mr. Bebb was associated for a number of years. The relief ornament has been delicately colored and the walls are done in soft green tones in a shade forming an agreeable background for evening gowns of all colors.

The family bedroom, which is directly over the drawing room, affords a beautiful view of the city and of the sound. The woodwork is ivory enamel and the wall treatment is of the school of William Morris, the Morris-Myrtle paper having been used on the walls. The hangings are of heavy linen handsomely appliqued, while the bedspreads are done in rich Morris embroidery and the furniture covered in Morris print.

The effect of the entire house is that of a decidedly artistic and livable home, free from the stiffness and formality of many of the Eastern houses. The arrangement of the rooms is in itself inviting and the color schemes blend from one into another in a most delightful manner.

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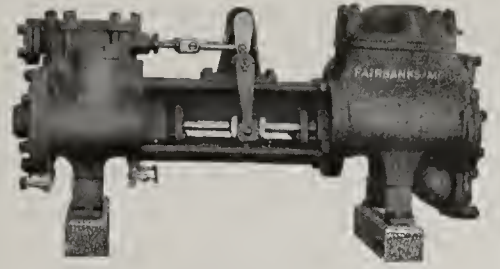
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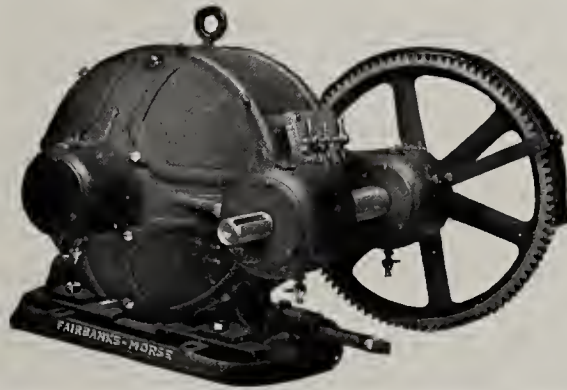
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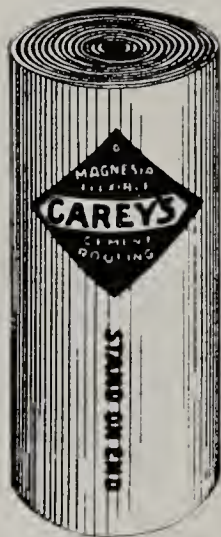
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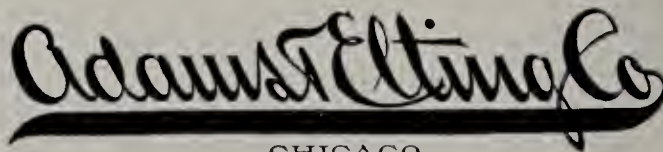
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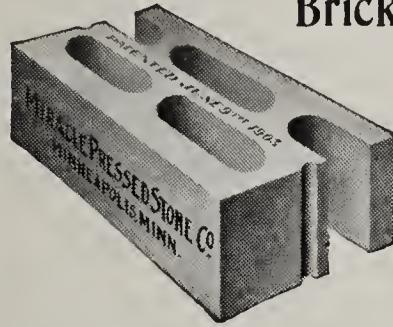
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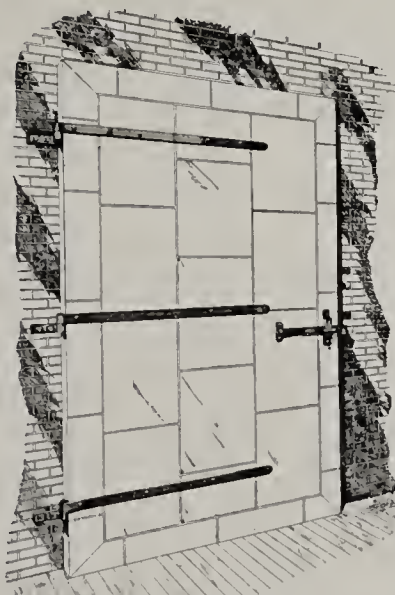
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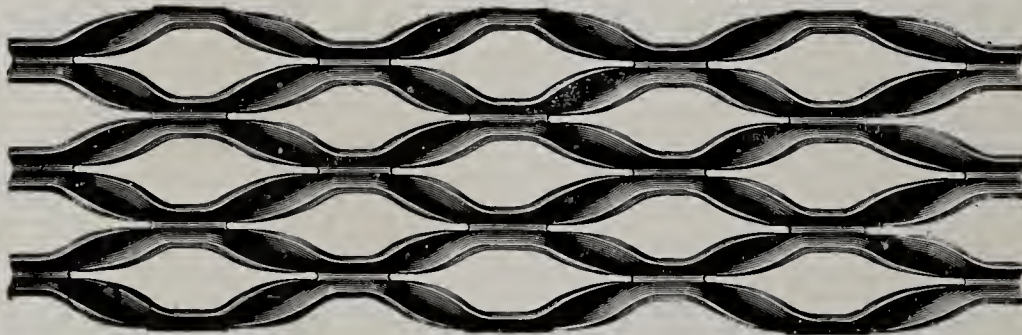
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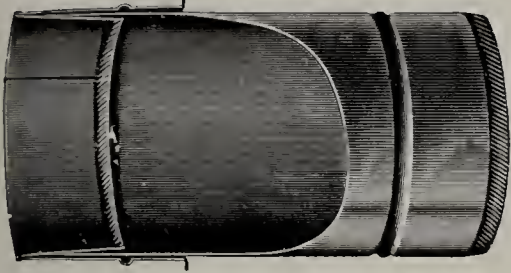
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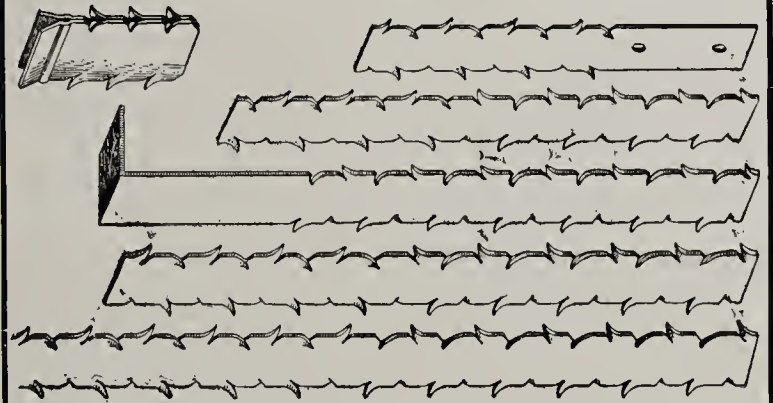
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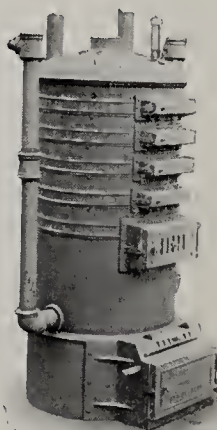
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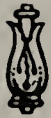
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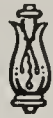
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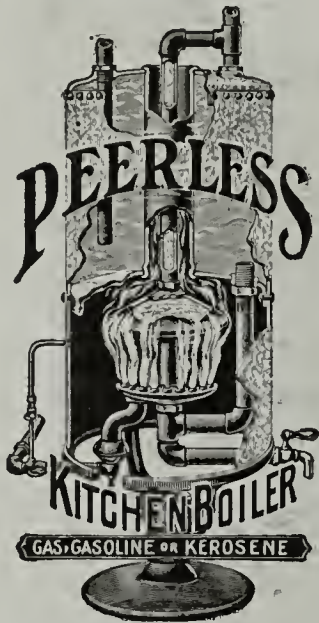
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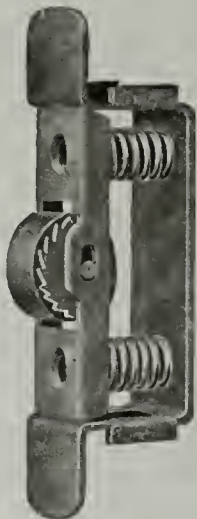
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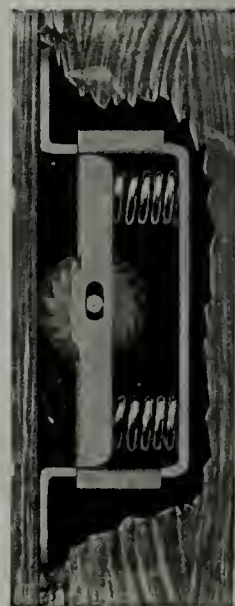
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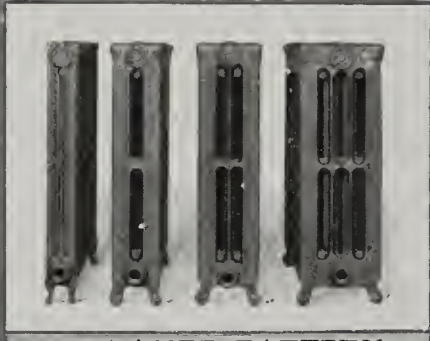
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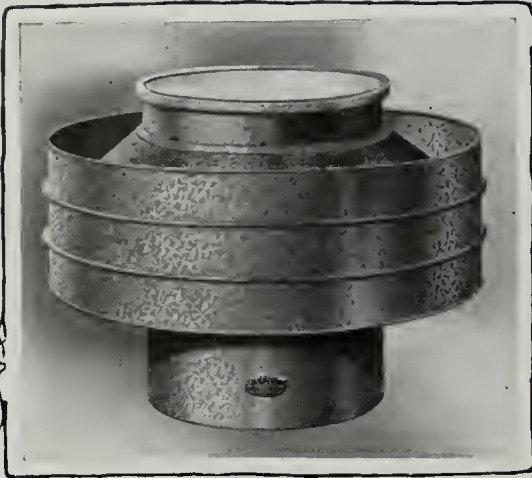
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VOLUME IX

NUMBER 11

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NOTE—The article on "Hollow Terra Cotta for Country Buildings" by Geo. E. Walsh, published in August and September, was written for and should have been credited to CARPENTRY AND BUILDING.

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ROBERT CRAIK McLEAN, EDITOR.

BUILDING OPERATIONS FOR OCTOBER.

Building operations in the principal cities for October show a gain over the corresponding month a year ago. According to official reports to Construction News, permits were taken out in thirty-eight of the leading cities during October for 12,546 buildings, involving a total cost of \$42,074,817, against 11,380 buildings at an estimated cost of \$40,682,970 for the same period a year ago, an increase of 1,166 buildings and \$1,391,847, or 3 per cent.

The most conspicuous features of the situation are the heavy decrease in New York City and the remarkable activity in the Pacific coast cities. The prosperous cities of the middle states continue to make a very satisfactory showing.

The coast cities are making a remarkable showing, the condition being abundantly illustrated by the figures for Seattle, where during the month just closed permits were taken out for 832 buildings, involving a total cost of \$1,929,879, against 686 buildings involving an aggregate cost of \$373,544 for the corresponding month a year ago, an increase of 419 per cent. Tacoma shows an increase of 170 per cent, Portland 124, and Los Angeles 38. Of the thirty-eight cities there were gains in twenty-three and losses in fifteen. Chicago, which for a month or two prior to October showed a falling off because of the tremendous activity a year ago, is again on the right side, the increase being 6 per cent. The most notable increases other than those referred to include Philadelphia 119, Toledo 93, Salt Lake City 78, St. Louis 78, Atlanta 74, Milwaukee 49, Lincoln 48, Detroit 65, Mobile 69, Twin Cities 23, Washington 36, Wilkesbarre 32

STRUCTURAL STEEL.

The architects of the Northwest and even the Pacific Coast should know more about the facilities of the Minneapolis Steel Machinery Company for supplying structural steel for buildings. Time was when the mills at Pittsburg that produced the steel beams "manufactured" also, and the architect and engineer sent his plans to them. Now there are many concerns in the country that buy the raw material and keep a stock of all sizes and kinds to be manufactured on demand.

The greatest of these in the West is the Minneapolis Steel Machinery Company, its architectural and structural iron department having supplied the steel work for office buildings and hotels, not only throughout the west and the coast, but have several buildings at Honolulu to their credit in supplying structural steel.

The immense engine business of this firm and the fame of their Twin City Corliss, the strength, simplicity, economy and reliability of which has made it known as the most practical and mechanically constructed of this type of engine, as well as the popularity of the Munzel Gas Engine made by this concern, have led to an impression that the manufacture of these was their chief industry. But adding to the department wholly devoted to architectural structural work the railway- and highway-bridge department, steel water towers, trucks and stand pipes, steel grain elevators and storage-tank department, all involve the manufacture of an immense quantity of steel, while the elevator and power-transmitting machinery output covers the entire list of shafting, sheaves and other accessories used in transmission of power.

The necessity for the distribution of the assembling of structural steel, both for buildings and bridges, to plants throughout the country, is apparent. As the use of steel increases throughout the west, the almost inevitable necessity for the architect or engineer to visit the shops at least once in the course of the getting out of the steel, made the establishment of such works as those of the Minneapolis Steel Machinery Company a necessity. Here the drawings are received and the members completed, and the work with absolute accuracy produced with no delay such as formerly interfered with the work on almost every large building in its course of erection, the time in transportation being a valuable desideratum.

OF INTEREST TO ARCHITECTS.

MR. EDWARD M. HAGER, for six years Manager of the Cement Department of the Illinois Steel Co., has been appointed President of the Universal Portland Cement Co., a new subsidiary company of the United States Steel Corporation. The new company has taken over the plants and business of the Cement Department of the Illinois Steel Co., and will continue the manufacture of Universal Portland cement. The officers of the company are in the Rookery Building, Chicago.

THE Automatic Sash Holder Company, 277 Broadway, New York, has just placed on the market an automatic sash holder that is designed to automatically hold in any position required both upper and lower window sash, without using sash cord, weights or pulleys. The idea grew out of the necessities of portable house construction, where large window frames with weight pockets were impossible and superfluous material was discarded, the above company being practically identical with the Ducker Company, at same address, which manufactures portable houses of all kinds. The principle of this holder has been thoroughly tried out for several years in portable house construction, and now greatly improved in every detail to satisfy more exacting conditions, is offered for permanent structures. The body of the holder requires only an easily-made mortise in the stile of sash, about $3\frac{1}{4} \times \frac{7}{8} \times 1\frac{5}{16}$ inches, all of which can be done with a $\frac{7}{8}$ -inch auger bit and chisel, mortises for new

work being machine-mortised at the mill. When in position the wheel runs up and down on the jamb of window frame and the holder is absolutely out of sight. For the average window a holder on each side of each sash up to 20 pounds will answer every purpose, they being especially suitable for residences in town or country, apartment houses, factories, cottages or any of the innumerable structures requiring windows.

THERE has been a great bound upward in the demand for Cortright Metal Shingles. During the present year the Cortright Metal Roofing Company has increased the daily output of its factory 25 per cent., and yet has been unable to fill orders as promptly as it could wish or as their old customers were accustomed to. There has been a steady increase of sales every year of the twenty the concern has been in business, but the high-water mark of the present year is a testimony of Cortright worthiness.

WHEN a radiator is made in a material and manner that will occupy one-half the floor space of those made of cast iron, with less than one-fourth its weight, affording a large reduction in freight and installation, produces heat much quicker with half the volume of water or steam, that can be plated if desired, and will not burst with freezing, it would seem that the perfection of radiators for steam or hot water had been reached. All these desirable qualities are obtained for the Kinnear Pressed Radiators, and the catalogue just issued by the Kinnear Pressed Radiator Company illustrates the different forms made, from the radiator for the home, including a mantel radiator, to those made for hospitals and large buildings, where a perfect system of supplying equitable and permanent heat is necessary. E. F. Schlecht is manager of the Minneapolis branch.

THE heaviest individual order for concrete machines in the world was negotiated recently by the Ideal Concrete Machinery Company, of South Bend, Ind., with a large eastern concern, which deals extensively in concrete machine and construction supplies, the order amounting to the sum of \$250,000. The figures tend to show the wonderful sentiment that is developing throughout the country in favor of concrete as a building material. The Ideal Concrete Machinery Company has made rapid strides since its location in South Bend about two years ago. The company is doing an extensive business in foreign countries. The United States government has constructed the Provincial building at Zamboango, P. I., of "Ideal" blocks, and the engineer reports very favorably on the appearance as well as the stability of the structure. Other big contracts have been received for that machine for export shipment.

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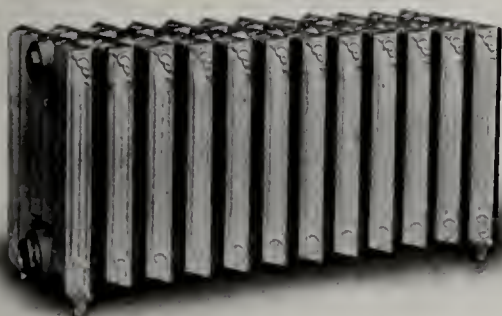
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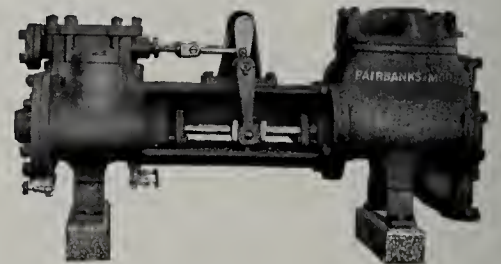
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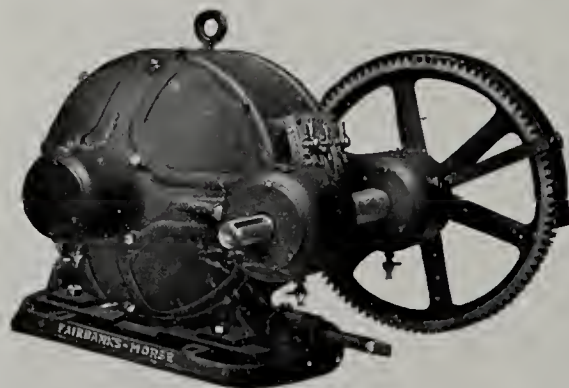
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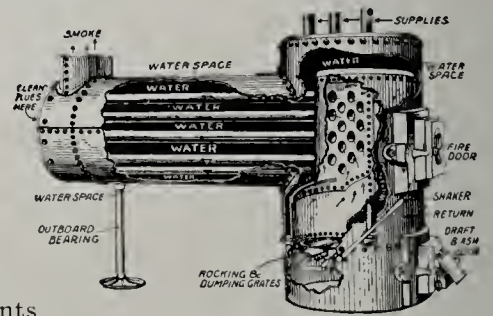
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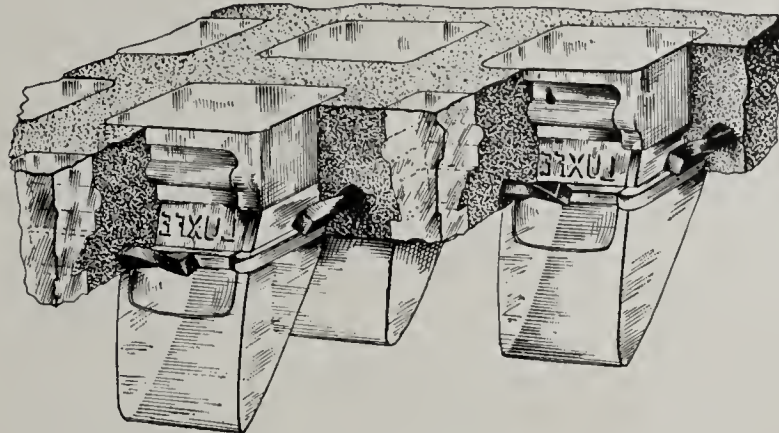
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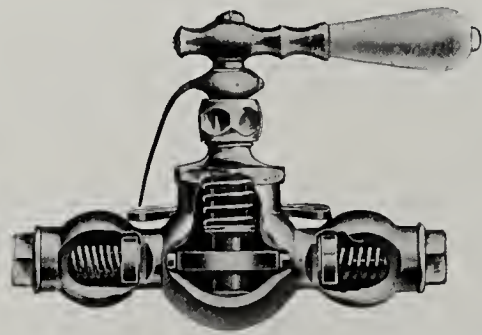
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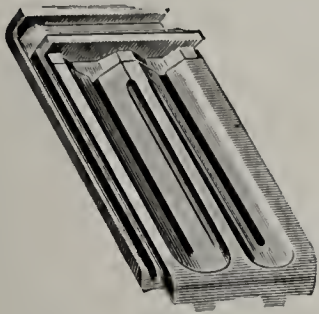
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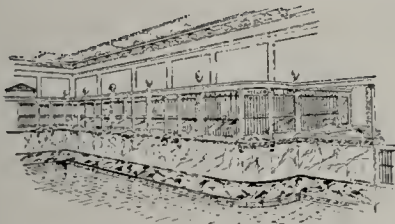
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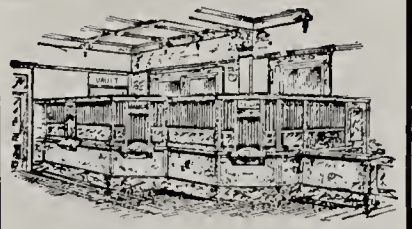
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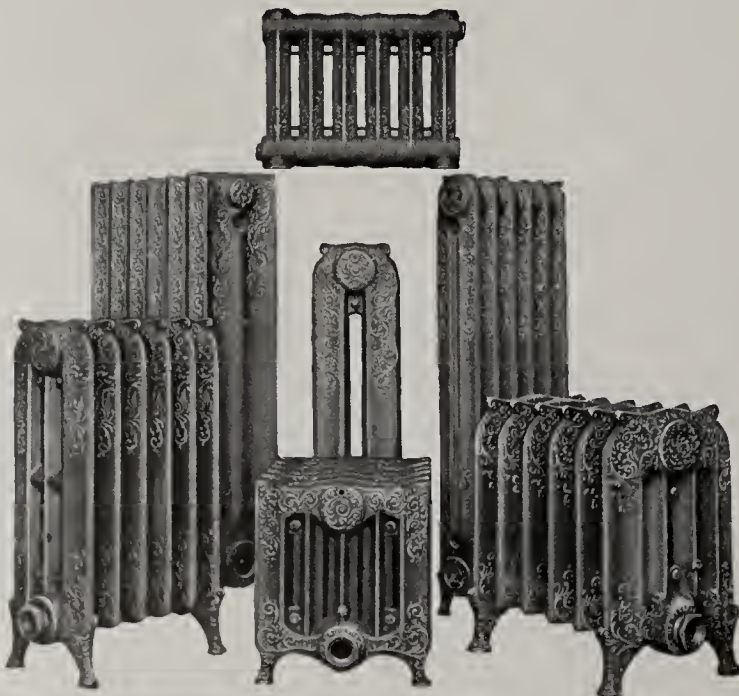
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Complications Due to an Inadequate Competition

The charges of grafting in the erection of the capitol for the state of Pennsylvania are further complicated by a suit entered by Henry Ives Cobb for an \$800,000 commission. Mr. Cobb "won" the second competition and designed and erected what is known as the Legislative Hall at a cost of \$550,000. This was in its inception but a part of a general plan for a complete building to be erected in the future. It will be easy for Mr. Cobb to prove his contention by showing, if he can, the completed plans or copies of them, with the executed work of Mr. Huston, his successor. The latter gentleman asserts that he not only designed the building but the furniture as well. It is probable that this cry of "graft" is similar to that invariably raised on the completion of public buildings, other than those built for the government by the supervising architect of the Treasury. No matter how we may deplore the manner in which Mr. Huston was appointed to the work in an ethical sense (a question upon which there is a wide latitude for difference of opinion, inasmuch as the profession has no ethics outside of those established by the by-laws of the American Institute of Architects), Mr. Huston has placed his best conception and skill at the command of the people of the state, and has spared no endeavor to give them an artistic as well as a practical building. The best artists and sculptors of the country have been engaged in its decorations, and the best materials are there in evidence of the architect's work. That the cost exceeds the expectations of the people is compensated for by this, and whatever an investigation of the account may bring forth, it will be found that the architect has used his best endeavors to produce a building that will be a credit to so great a state, and has succeeded. The trouble, whether magnified or not, all arises from the fact

that an honest board of commissions did not secure an adequate appropriation in the first place; then through a properly organized competition program secured a design which would fill all requirements, with a definite design and cost established before work was begun. When these conditions are not fulfilled in each particular, the people can be certain that all sorts of trouble will result even if in the end an adequate building is secured.

**Waterways,
the Solution
of Rate
Problem**

The recent convention of the Upper Mississippi Improvement Association, which met to urge the development of the upper Mississippi as a navigable stream as far as Minneapolis, is significant in several directions. On one side is the necessity for waterways to afford cheap transportation the entire length of the river and its tributaries, the entrance to the city of Minneapolis, the logical manufacturing center of the Northwest, and the gateway to the most prolific farming country on the globe, being the key to that development. It means more than the mere carrying of freight by water; for to canal and river transportation and not to congressional action in the way of rate bills must the country look for the solution of the railroad tariff problem. This the railroad people know, and those who would urge the development of the rivers and the digging of canals must meet the opposition of every freight line in the country. Not because their interests would be permanently injured, but because those who govern our greatest industrial interests only care for the selfish gathering of present benefits, and leaves posterity to solve its own problems, and retrograde or progress as best it can with the conditions that obtain at the time. This is, in fact, the most pronounced feature of American commercial progress today. The builders of a residence or a business block builds of wood because he thinks it is cheaper today, caring naught that it is most expensive tomorrow, takes no thought how the design harmonizes with the surroundings or the trend of trade in the future. The city builds a subway or a city hall where the congestion or the population is now centered, without regard to how it may affect the necessities or changed conditions of the next fifty or hundred years. The great commercial in-

terests that govern the country in general, from the obliteration of the forests without supplying young trees that the coming generations may not suffer, to the neglect of the natural avenues of commerce, the waterways, all show a supreme indifference to the necessities of tomorrow, so long as the benefits of today are secured. It is this spirit, and not the lack of money or of engineering talent for its accomplishment, that will make the task undertaken by those who met in convention in Minneapolis, and those who join them in their work, a gigantic one. Their purpose is deserving of all encouragement, not passive, but an active interest and indorsement. It will, it is true, make that city great, commercially, but only as a terminal to the hundred routes that will proportionately benefit the people of other cities and states to the southward on the route to the gulf. It concerns not only Minneapolis, whose citizens have inaugurated the movement, but the entire Mississippi Valley, and even the people of Ohio and Missouri river countries should join hands in a general and a national movement to secure the establishment of a waterway programme, upon which, it is not too much to say, the entire commercial eminence of the future rests.

**Suit to Establish
Legal Status of
Competition
Programme**

The legal status of the "notice to architects" sent out by building committees, inviting the profession to enter drawings in competition, will shortly be established, in a degree at least, by the suit of Rankin, Kellogg and Crane, architects of Philadelphia. This firm was one of the competitors selected by the Board of Education of Philadelphia when it was decided to secure a design and plans for the new Manuel Training and Commercial High School. The competition was held and the board rejected all plans and returned them, subsequently appointing another architect. The complaining firm seek to recover the amount of fees that would have been accorded to the architect winning the competition, and also an equal sum which the firm estimates as the value of the opportunity to compete. In setting aside the competition it is claimed that the Board of Education violated the agreement that was supposed to have been made by the competition circular.

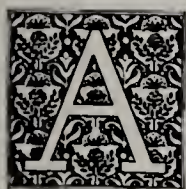


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THE WESTERN SPIRIT*

BY GEORGE W. MAHER, ARCHITECT



A SUBJECT that is with us in our everyday affairs, that is a part of our endeavors, influencing our daily actions for weal or for woe, would, in my mind, be one worthy of discussion by us as architects and intelligent citizens.

We co-workers in the building of the West should be influenced, even dominated, by a spirit of action that shall produce results bespeaking of our day and generation, and to the extent that we permit ourselves to be so dominated by this spirit of progress, to that extent are we real and worthy of our calling. In the realm of architecture I would say that to solve our problems satisfactorily, it behooves us to dip deep into the currents of life around about us, feel the pulse of the times and then actually execute the ideals of the present hour, and if we do this work truthfully, intelligently, our efforts must be enduring.

Unfortunately, at the present time, this point of view is not accepted, and he who does conceive a clear and concise position on advance matters, especially in the realm of art, is oftentimes considered impractical and visionary, a dreamer, as it were, who sees strange things, whose ideas are for naught when it comes to the actual execution of works. My purpose is to correct this prevalent opinion so far as it lies within my power.

I do not consider myself far from the truth when I make the assertion that at the present time this country is most conservative, or rather falsely conservative, in art and architecture, even more so than

any other country. We find, for instance, that in Europe such seats of power as Vienna, Berlin, Paris and London are making great advancement and progress in the arts of a new order. This architecture has made wonderful strides in these old centers, although hindered at every step by precedent and tradition. The strong technical schools in these centers have also placed every possible obstacle in the path of this progress, but to no avail. The artist's spirit has prevailed, and as a result we find emanating from abroad a freshness and vigor in art matters that is truly inspiring. True, in some of these efforts the pendulum has swung too far; but in my judgment this is not a permanent fault, but is in the end conducive of great good.

When we look for an equal amount of enthusiasm and progress from the American standpoint we are prone to disappointment, especially in the Eastern portion of this country, where, due to age, culture and wealth, one would expect an art development expressive of a new country, we find just the opposite evidences in all that we see. The reactionary spirit in architecture that prevails there today is truly lamentable; the desire to copy everything of note that has appeared from the four distant corners of the earth is all too prevalent. Each succeeding work of any importance flatly contradicts any estimation that is to be made of the art of the East as a progressive one; the excellence of material and workmanship is only to be commended. The design is non-expressive. Even the criticism that is produced in magazine and periodical by our Eastern architectural contemporaries is as dead as the buildings they criticise.

All seem steeped in precedent—the architect, the building, the publication, and the critic. It would seem to me, from all these evidences of a peculiar

*A plea for a progressive art meeting Western conditions, read before the Chicago Architectural Club, March, 1906. Revised by the author for publication in THE WESTERN ARCHITECT.

conservatism, that little or no hope of an expressive art can evolve from our Eastern cities, and if there is to be an art that is to indicate the trend of our national life, it must spring from the central portion of this country, or where traditional Europe has not yet laid upon us its heavy hand. I am speaking to you as a Western man, in love with his environment, his profession, and with some knowledge of the people and possibilities here in our midst and at hand. Again, I am speaking to a club that has in the past produced men who have had kindred thoughts and who have spoken to you in the same strain, and who have stamped their individuality not only upon their own community, but are reaching out for virgin fields beyond their immediate surrounding. I hope to add further encouragement in this great task, which is also yours to perform, and implore you to look to it that your high ideals are not laid low and that you mistake not the call of the West. It is for you to undertake and achieve, as well as to have ideals.

Conservatism is a term that should be well understood, for today you must choose between a true and a false conservatism. It is of false conservatism, or a hindrance to a rational progress, that I am most concerned. Let it be well understood that progress or a freedom from precedent does not mean a lack of knowledge of the past, for no architectural training is worth while unless rooted in a profound knowledge of that which has gone before. No one should expect to design on progressive lines who is deficient in architectural training and history. Thebes, Athens and Rome offer fruitful examples of enduring work and represent to us a heroic past. On the other hand, the merely familiarizing one's self with the form and style of architecture found in these grand ruins of antiquity is not sufficient as a training for our art. The student should reach beyond this mere detail and study well into the life preceding these buildings and that which ultimately forced these permanent evidences of their civilization into being. It would seem that the spirit which pervades these buildings is more worthy of emulation than that which is materialistic or mere brick and stone.

The spirit of this architecture of the past can ever be used advantageously and is as inspiring today as of old. The letter of this architecture is past and gone and cannot be rationally resurrected. The Parthenon, for instance, expresses an achievement of an art-loving, worship-loving race, but for a modern city to make a replica of this building on its thoroughfares and dedicate it to commerce or a kindred purpose seems an example of ignorance or vandalism not expressive of our times. The great

truths that lie back of the Parthenon will ever be worthy of analysis. This is immutable law and can ever be transmitted into the new. If this ethical truth was comprehended by the modern-day artist, results of an enduring nature would follow successively, as did the Ionic style follow the Doric, or as did the Corinthian the Ionic. Suppose the underlying law of all progress had been appreciated, would not certain groups of university buildings be less expressive of mediæval castles or copies of a degenerate Gothic, and stand rather as monuments of enlightenment to our civilization? The spirit of the mediæval castle or the Gothic forms could appear in tower, battlement, or buttress, but the letter of the old embodied in these features should not be repeated.

Again, if this underlying law of all progress were assimilated, we would have fewer ancient relics on all sides inspired originally by a deep religious sentiment but now void and worthless for the purpose of their construction. I would say to you again that if we strive for the spirit of these great buildings of the past and incorporate this sentiment in our endeavors, how great would be our advancement! On the other hand, do not our present methods seem weak and bespeak ill of the mentality of our present day? True it is that our country has been so engrossed in the working out of complex problems that it has had little time to consider those of which I am speaking. It has had little time to mold its characteristics into stone. The time has arrived when our ideals should and can be expressed, and if there is, as I contend, a hindrance of any kind, a false conservatism, then we should be made aware of such hindrance and guard well against it.

I now wish to call your attention to comparisons of the old and new, or the practicability of the architecture representing the new, against that which represents this so-called conservative art to assist us in forming our judgment of the merits of each. No better idea of this situation can be found than here in Chicago, where the spirit of the west seems more potent than elsewhere. In the business center we find a conglomerate mass of huge structures, most of them expressing nothing worthy of the purpose intended, not even commercialism; for, after all, commercialism is no mean motive if expressed aright. There are, however, evidences of a marked dissimilarity in architectural thought in the buildings erected. Some of these buildings are on original lines and their duplicate cannot be found anywhere.

Such buildings are highly commendable and would attract attention due to the original thought on them, and the daring of the execution. In every

instance the architects of the original buildings have considered the practical situation first and the artistic afterward. This is as it should be, for a true art must follow necessity—it must always be useful. The buildings that follow precedent in many notable cases are quite unsuccessful. The wild chase to successfully combine the artistic and the practical is all too evident. Columns out of proportion to the scale of the facade, pilasters stretched and elongated, detail and ornament where it has no use and cannot be seen, or if seen representing garlands of a flora belonging to the tropics. Look at any one of these buildings and ask yourselves if certain of these architectural effects are a necessity either in the direction of utility or art. Ask yourself is it possible to follow precedent and design these tall structures aright.

Perhaps it is in the suburbs where the home building is more in evidence that a stronger comparison can be made between the old and the new. It is in the home that the heart of the nation is most responsive and therefore naturally subject to the most advancement. It is here that the architect receives his highest inspiration and finds the greatest motive power for beautification. If we place side by side the efforts of the so-called conservative architect with that of the modern for the decision of the public, I know the judgment would be pronouncedly in favor of the new. This is a foregone conclusion, since any art that is truly expressive must appeal to the living and to the ideals of the present. This living sentiment in the design, which vibrates through every detail and proportion of it, can be termed "home", and the occupant can love his home, since it is a part of himself, because it is inspired by him, and is therefore related to his own individuality.

The creation of a conservative art, on the other hand, follows exactly the opposite view. If he proposes, for instance, to work in a style that was evolved during the Italian Renaissance, then only the archæologist can thoroughly enjoy such a product, since the ordinary man is not living the life of an Italian gentleman during the sixteenth century. It does not take much grasp of mind to understand the meaning of this comparison. Suppose we follow this same theory of application into further fields of endeavor. In the designing of our government buildings, hundreds of expensive state buildings have been erected all over this broad land. So far as I am able to ascertain, almost all of them have proven failures.

It seems that these buildings are absolutely out of touch, not only with the practical situation, but also with the spirit of rational design. The officials who

are compelled to work in these antiquated domed, templed, column-supported edifices, complain not only of their unattractiveness, lack of proportion, etc., but rave at the dogma that compels such expensive edifices to be erected so impracticably under the dictum of style and precedent. If a spirit of modernism could find its way into our government buildings, and men imbued with the right spirit, expressive of ideals, be found to design them, what an evolution it would be to the people at large and what rationalism! True, there are few men as yet able to carry this theory into actual practice, but the day is past and gone when it can be said that there are no such men equal to this task.

Our church architecture bespeaks of a false conservatism. Instead of the architect designing buildings that should respond to the people who attend services of worship, educated in our enlightened age, free from mysticism and mediævalism, we find buildings erected with the gloom of the past enshrouding them, with deceits of all kinds pasted against them, bringing forcibly to the mind the letter of the past and not the spirit. If the architect would only see his opportunity to express in church building the present-day theme, he might tend to hasten a form of structure where nobility, where toleration and truth were the motive powers. I might mention in this connection that almost all of the great edifices of the past were erected for the purpose of worship. The temple of the Egyptian, Greek and Roman, the beautiful cathedral of the Goth, all attest to the deep religious sentiment of these people; but the specific form of these past religions is dead and gone, never to be resurrected. Then why continue to erect buildings of a nature obsolete? Is not this a false conservatism that repeats the letter and not the spirit of the past?

It would seem that a great opportunity awaits our generation in the beautifying of our capital, Washington, where the ideals of a nation might be expressed, making it beautiful as well as responsive to the American citizen. This scheme should be so broad and comprehensive that it would take the skill of our most original and brilliant thinkers, so that when completed, the effects produced would be as akin to the sentiment of our nation as is the Trafalgar Square to England or the Place de la Concorde to France or the San Marco to Venice. It certainly should not be said of Washington that any landscape effects there produced were taken from piazzas or public squares of Europe. It must not be said by posterity that our present-day artists were unequal to the task of evolving a national scheme of landscape work breathing of democracy.

[Concluded next month]

RECENT EXCAVATIONS IN THE ROMAN FORUM

BY THOMAS E. TALLMADGE, ARCHITECT *



THE Forum Romanum, or the Roman Forum, offers to the spectator a very different appearance than it presented ten years ago. The pick and shovel of the excavator have been very busy and excavations are going on all the time, each one evidenced by a little tent and windlass, for all the world like the appearance of a subway construction in one of our own busy cities.



FORUM—BASILICA JULIA IN FOREGROUND, COLUMNS OF CASTOR AND POLLUX, ARCH OF TITUS IN DISTANCE

This work is being carried on by Prof. Giacomo Boni, an architect and a brilliant archæologist. He has had charge of this work for the municipality since 1898 and has supplanted Lanciani, the Government architect, in this work and in the estimation of the public.

The main configuration of the Forum is familiar to most architects. Its long axis runs in an east and west direction, starting at the west with the Tabularium on the Capitoline Hill and terminating on the east with the Coliseum. Standing at the Tabularium, looking down the length of the Forum, we will notice on our right the following buildings in succession: Temple of Vespasian, the Temple of Saturn, the Basilica Julia, the Temple of Castor and Pollux, the House of the Vestal Virgins, back of which is the Palatine hill with the ruins of the palaces of the Caesars and the Arch of Titus, and further on, near the Coliseum, the Arch of Constantine.

Starting again at the Tabularium, the buildings on the North side of the Forum are in succession: the Temples of Concord, the Arch of Septimus Severus, the Temple of Antonius and Faustina, the Temple

*Chicago Architectural Club Traveling Scholarship, 1904, and Assistant Professor of Architecture, Armour Institute of Technology.

of Romulus, the Basilica of Constantine and then the Coliseum again.

Through the center of the Forum, which we must remember is a kind of a valley, are scattered the re-



FORUM, LOOKING EAST—TEMPLE OF SATURN IN FOREGROUND, COLOSEUM IN DISTANCE

mains of a vast number of monuments and temples, chief among which are the Column of Phocæus, the Temple of Julius Caesar, from the steps of which Anthony pronounced his famous funeral oration over the murdered dictator; the remains of the great Temple of Venus and Rome, now a Renaissance church, and the Rostra of several of the Emperors. So much for the general arrangement of the Forum as we have known it for the last 100 years.

To this list Boni has added his wonderful discoveries. The largest work, but not the most interesting, has been the tearing down of the modern buildings which covered the remains of the great Basilica Aemelia, which stood between the Arch of Septimus Severus and the Temple of Antonius and Faustina on the North side of the Forum. This Basilica was destroyed by fire and the remains of its beautiful Numidian marble columns is piled up in a



FORUM, LOOKING WEST ALONG THE LAERA VIA—BASILICA JULIA ON LEFT, ARCH OF SEPTIMUS ON RIGHT

huge heap. The tessellated pavement is in good condition and shows in many places melted piles of coins, dropped by the money changers in their hurried flight from the burning building.

Very near the Aemelian Basilica is the Lapis Niger,

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SKETCH FOR A. J. JUNG, ESQ.
HUDSON & MURPHY ARCHITECTS P.C.

W. H. M. 11



GOVERNMENT PALACE



GOVERNMENT PALACE INTERIOR

MEXICAN ARCHITECTURE, GUANAJUATO, MEXICO

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HARRY W. JONES, ARCHITECT

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VIEW FROM SOUTHWEST



SIDE VIEW



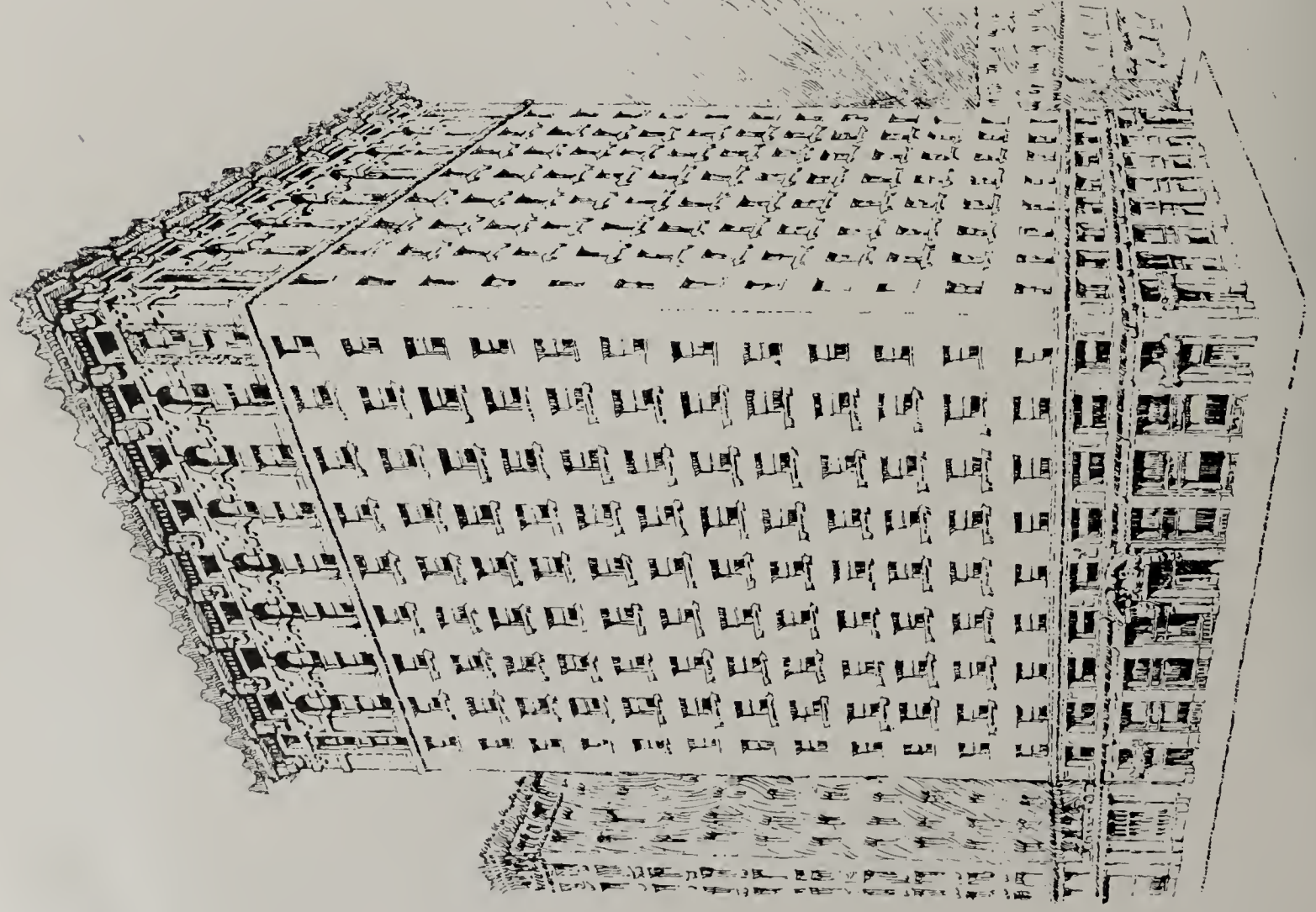
SARCOPHAGUS

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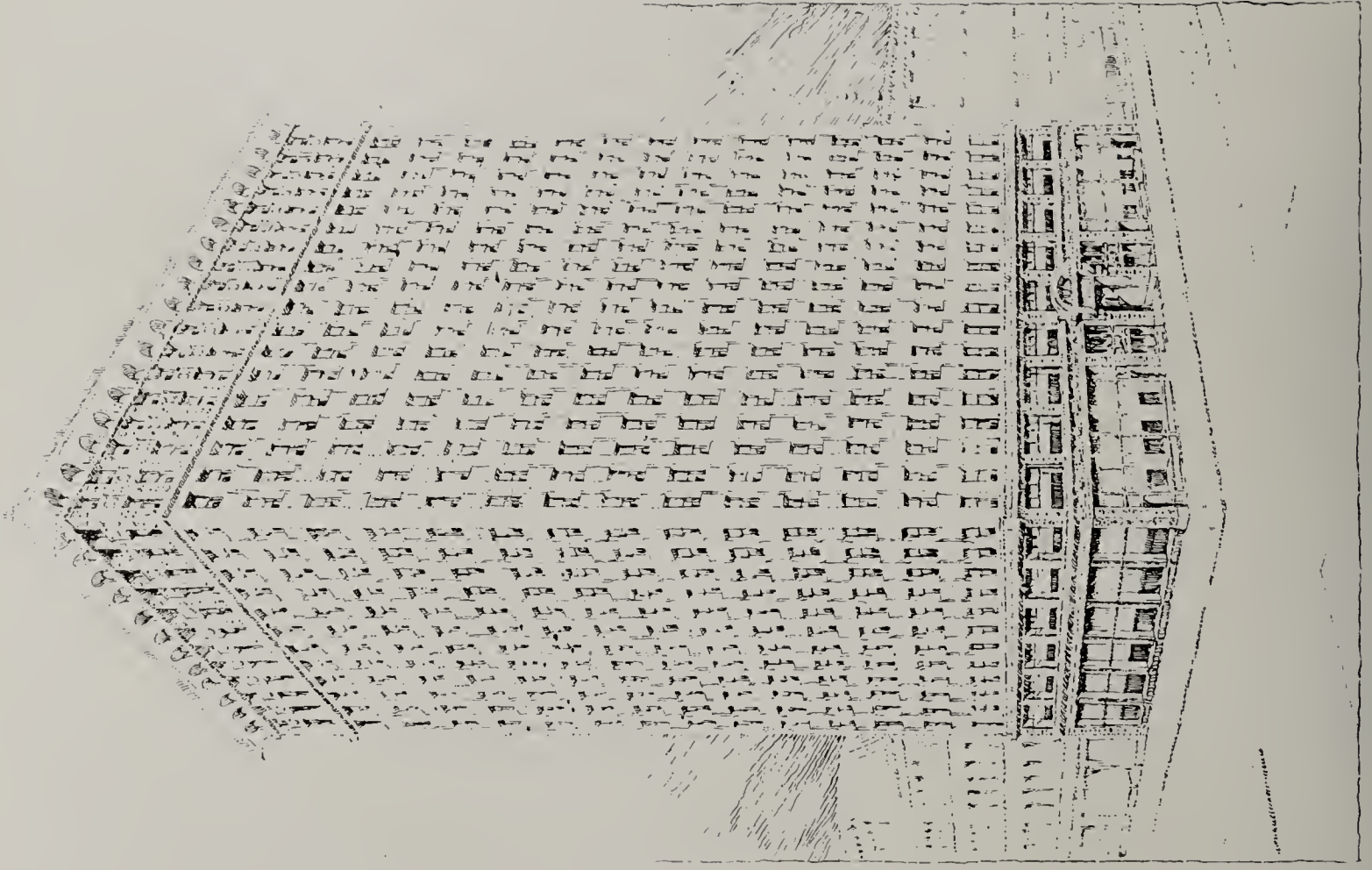
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SKETCH FOR LIGGITT BUILDING, ST. LOUIS, MISSOURI



SKETCH OF AGUSTA BUILDING, ST. LOUIS, MISSOURI

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GRAHAM PHOTO CO. PHOTO

RESIDENCE FOR LOUIS SCHIRM, LOS ANGELES, CALIFORNIA

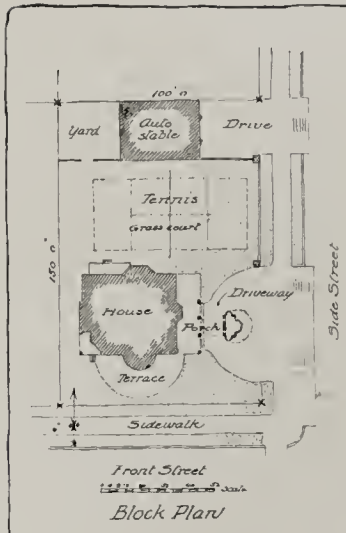
FERNAND PARMENTIER, ARCHITECT

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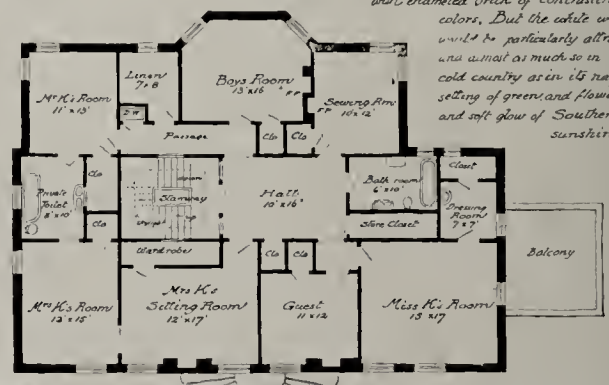
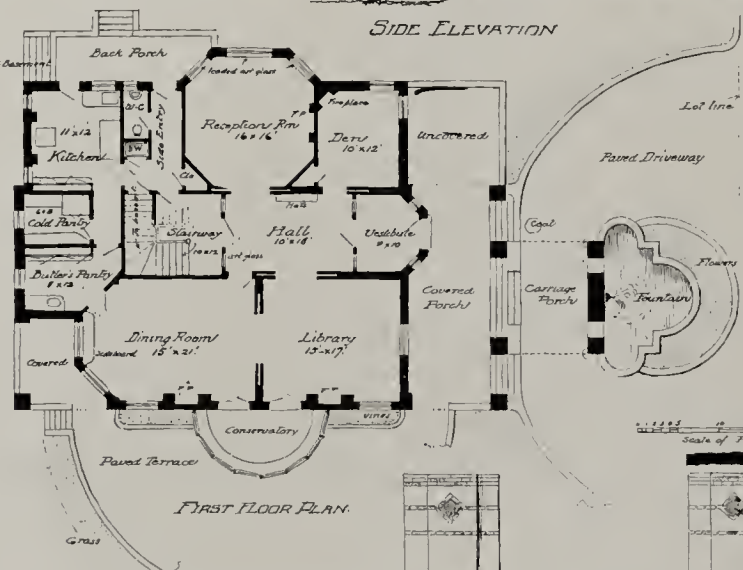
° AUDITORIUM BUILDING.
ST. JOSEPH MO. ARCHT. E. J. ECKEL.

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Legend:

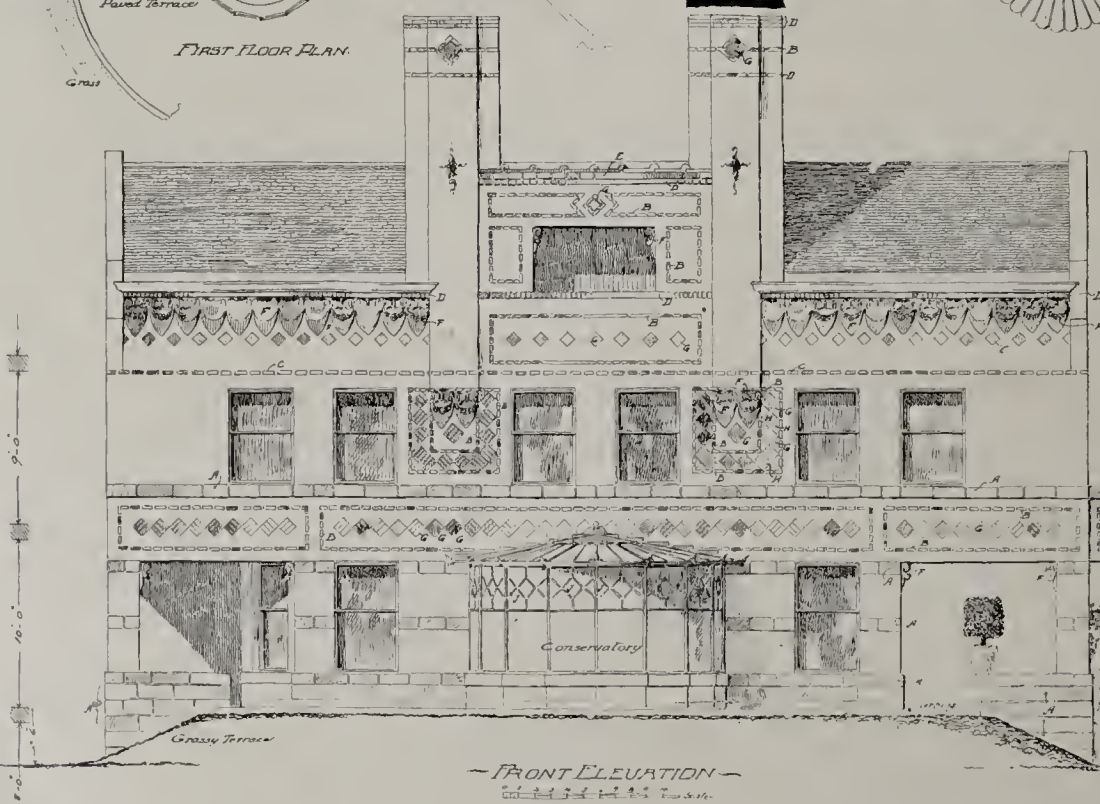
The basement wall, to first story sill, the bond courses of first story and the second story sill course all marked *A* to be chocolate semi-glazed building blocks. The body of the building to be stucco finish on 6" partition tile. Before the stucco is quite set while marble dust is to be blown all over the surface. The decorations are chromatic and without relief. Panel courses *B B* are of buff enamelled brick or tile, set with 1/8" wide stucco joints. String courses *C* similarly set and of chocolate, enamelled brick, or tile. Sills and cornice moulds *D* of same colored brick set close jointed and on edge. Shields *E* roughly moulded also of chocolate enamel (terra cotta) and used for cornice, corbels under chimneys and at porch piers ornament in gables etc. Diamond ornament *G* in panels etc. of green enamelled tile, or made up of brick. Same pattern *H* of buff enamel. The roof gutter to be of metal or asbestos, painted chocolate color same as mold *D*. The roof to be of deep red asbestos shingle. The iron work of conservatory lamps and anchors to be painted a loco green and the diamond panels to be of cathedral or green apaisent in key of course *G*. The flat roof portions to be compositions. The dusted stucco finish to be carried around back and side with enamelled courses as indicated by side elevation. Cr. the face of walls might be made of common red or yellow brick, laid in wide joints of white mortar and trimmed, as is here shown, with enamelled brick of contrasting colors. But the white wall would be particularly attractive, and a most as much so in a cold country as in its natural setting of green and flowers and soft glow of Southern sunshine.



\$10,000
FIREPROOF HOUSE
BY
F. W. FITZPATRICK



4200, 14th STREET ROAD
- WASHINGTON - D.C.

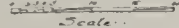


Decorated tiles should be chosen and framed about porch doors and in situations that are particularly at gable ends. On the whole arrangement they will be very effective.

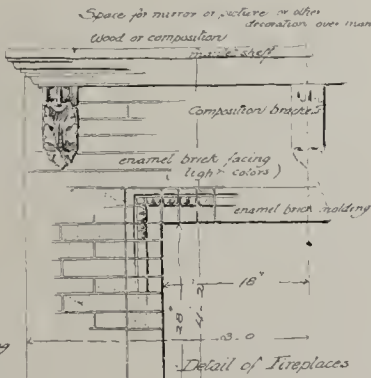
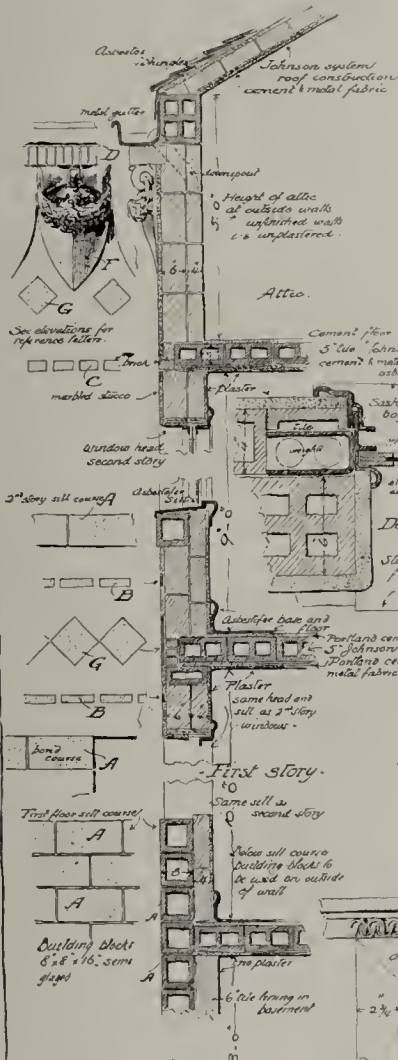


BASEMENT PLAN.

The partitions and walls of both Basement and attic will be unadorned the tile, part will be struck and left bare. The ceilings will also be unadorned and the plain smooth Portland cement finish will be used. The doors will be single trackless asbestos. All these rooms may be used as storeroom or whole washed in brick or at slight additional cost they may be plastered and finished in the ordinary acceptance of the term.



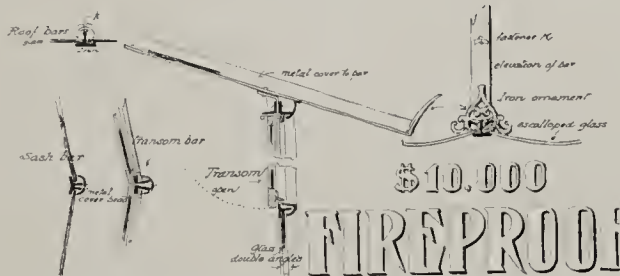
ATTIC PLAN.



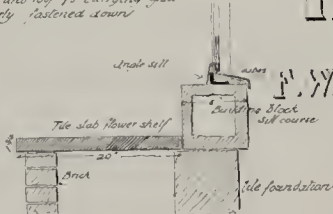
Detail of Fireplaces

Detail of Windows

(Asbestos is a German patent product, asbestos fibre and Portland cement - used in sheets as ordinary lumber, but of great strength and fireproof. The forms here shown, window frames etc., are a new use for this splendid material and form part of a new system of exterior and interior finish devised for fireproof buildings and patented by Architect.



Details of conservatory - Simply angle bars for sash, glass held in place with metal cover beads, and roof Ti carrying glass similarly fastened down.



Stair Detail

Door Details



Utile and plain door - Asbestos being unadorned and unadornable and of nearly as great strength as steel and being made in great sheets doors may be had of one piece or there may be applied raised plastic moldings and ornaments veneers or any form of decoration desired: the fireproof qualities are in the material itself.

\$10,000 FIREPROOF HOUSE

BY F. W. FITZPATRICK

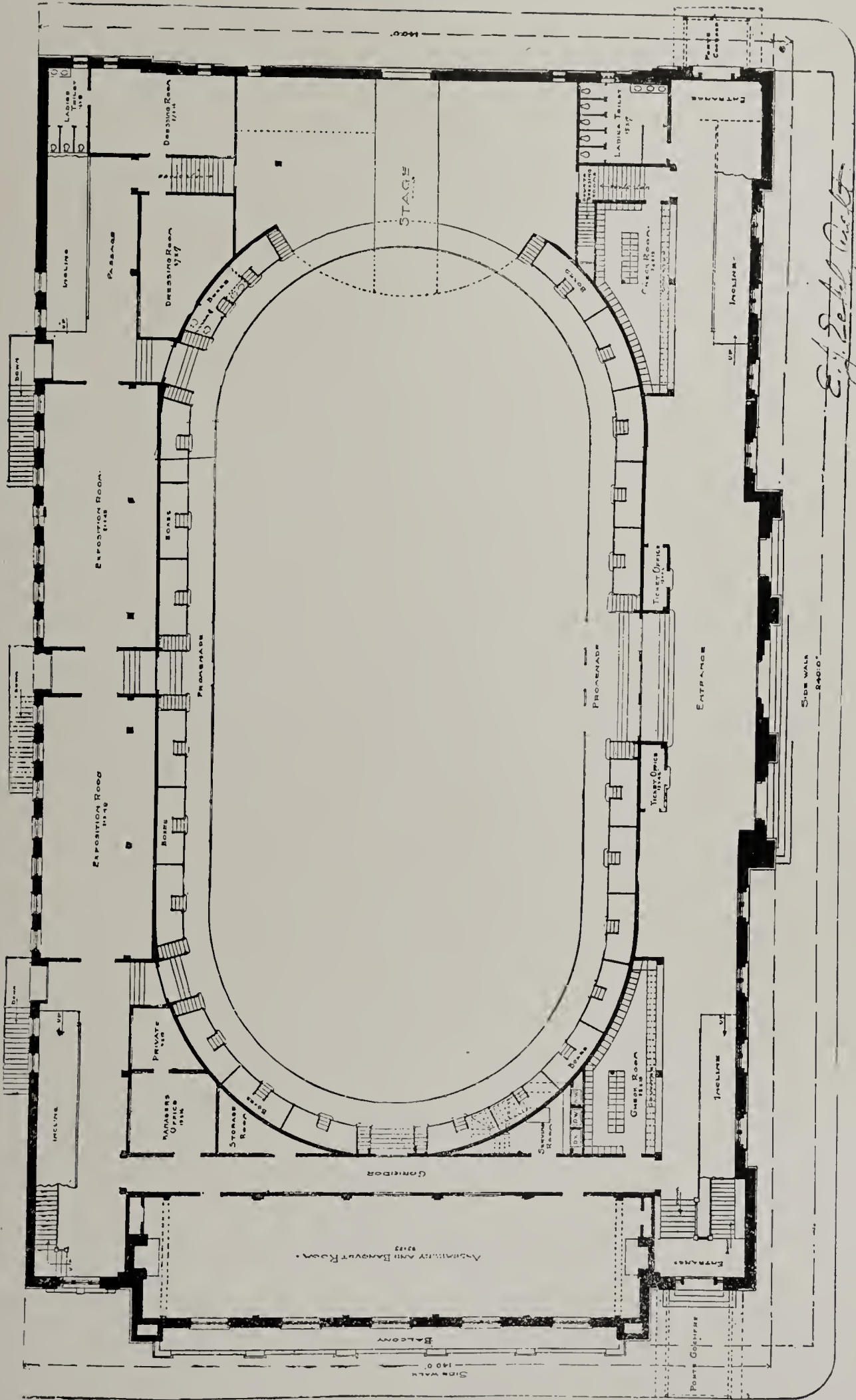
Legend;

The reason the house is seemingly so large and so well-appointed for the sum appropriated is to be found in the extreme simplicity of form and construction, and the eschewing of ornament and expensive finish and special work on both exterior and interior, work that adds absolutely nothing to comfort and offers detracts from the artistic effects as well. The building is simple in all its parts, straightforward in construction, without plaster cornices and elaborate finish inside and jaw jaw, finicky ornels days etc. etc. outside. The plan and arrangement lend themselves to beautiful mural painting, tapestries, capes and furnishing.

The house is ABSOLUTELY FIREPROOF

Not one bit of wood or combustible material will enter into its construction or finish. The materials used are fireproof hollow tile and building blocks, brick, stucco, cement plaster, asbestos glass and metal. Not only fireproof but non-damagable by fire, external or internal. Even in a great conflagration the house could not be damaged over 5 or 6%. It would be economy to carry one's own insurance and only to that amount. The scheme of stair, enclosed and with soft closing doors, not only is a great economy of space and money (the one stair serving all purposes) but gives privacy to sleeping rooms, cuts off dust and dirt from one story to the other, prevents draughts, one cold in winter and absolutely cuts off possibility of fire spreading up in the furnishing from one story to the other. The unusual breadth of the house gives many of the rooms on the southern exposure and gives an important appearance. Its appearance, size, broad, terrace, fountain etc. would indicate to the average observer an expenditure of at least \$30,000. The terrace is formed by the earth excavated from the foundation and its coping and finish cost but little more if any than the hauling away of the dirt where the fountain is an \$100 luxury, and so with the other features, they are usually found only in very expensive forms and never upon \$10,000 houses.

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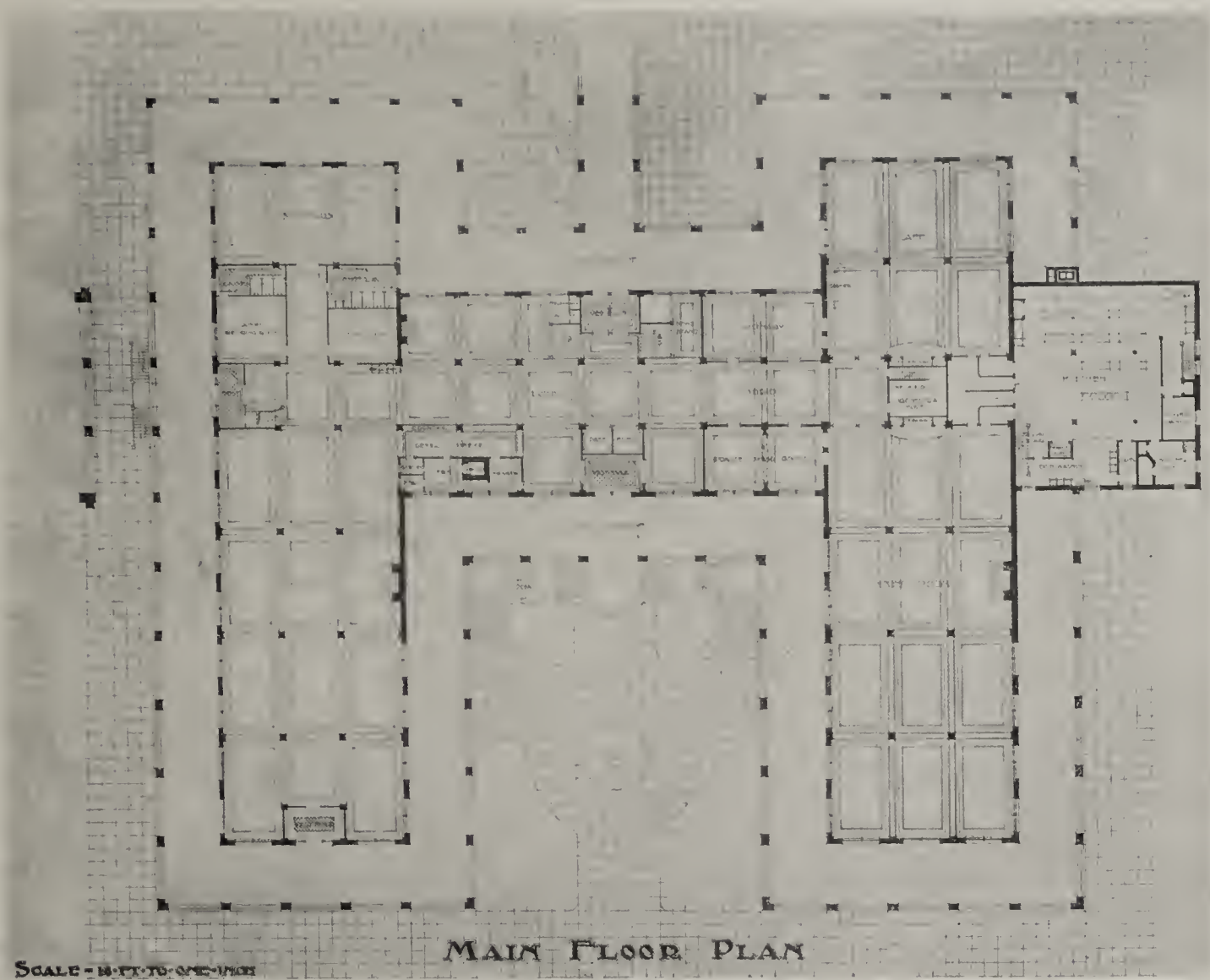


E. J. Leitch, Architect

FIRST FLOOR PLAN
Scale 1/8" = 1'-0"

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HOTEL BIXBY, LONG BEACH, CALIFORNIA

AUSTIN AND BROWN, ARCHITECTS

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ELEVATION

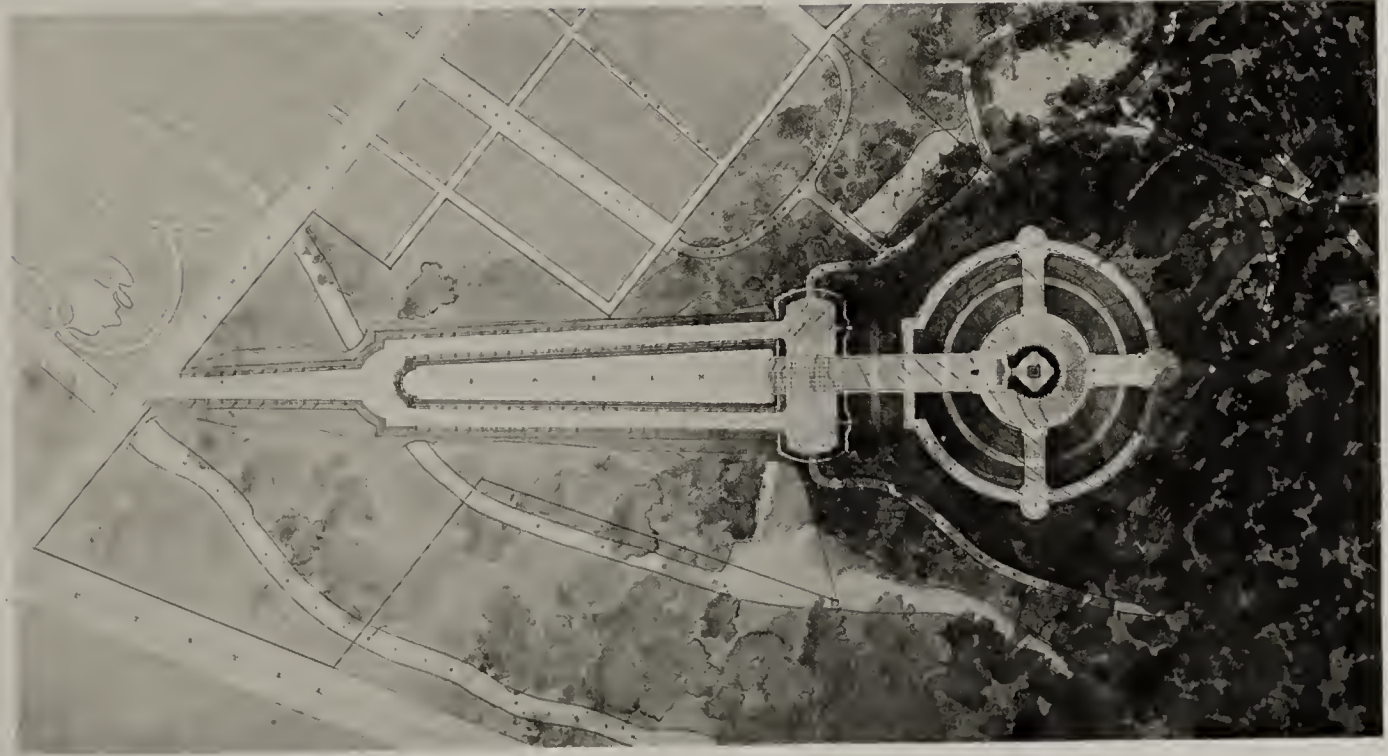


LONGITUDINAL SECTIONS

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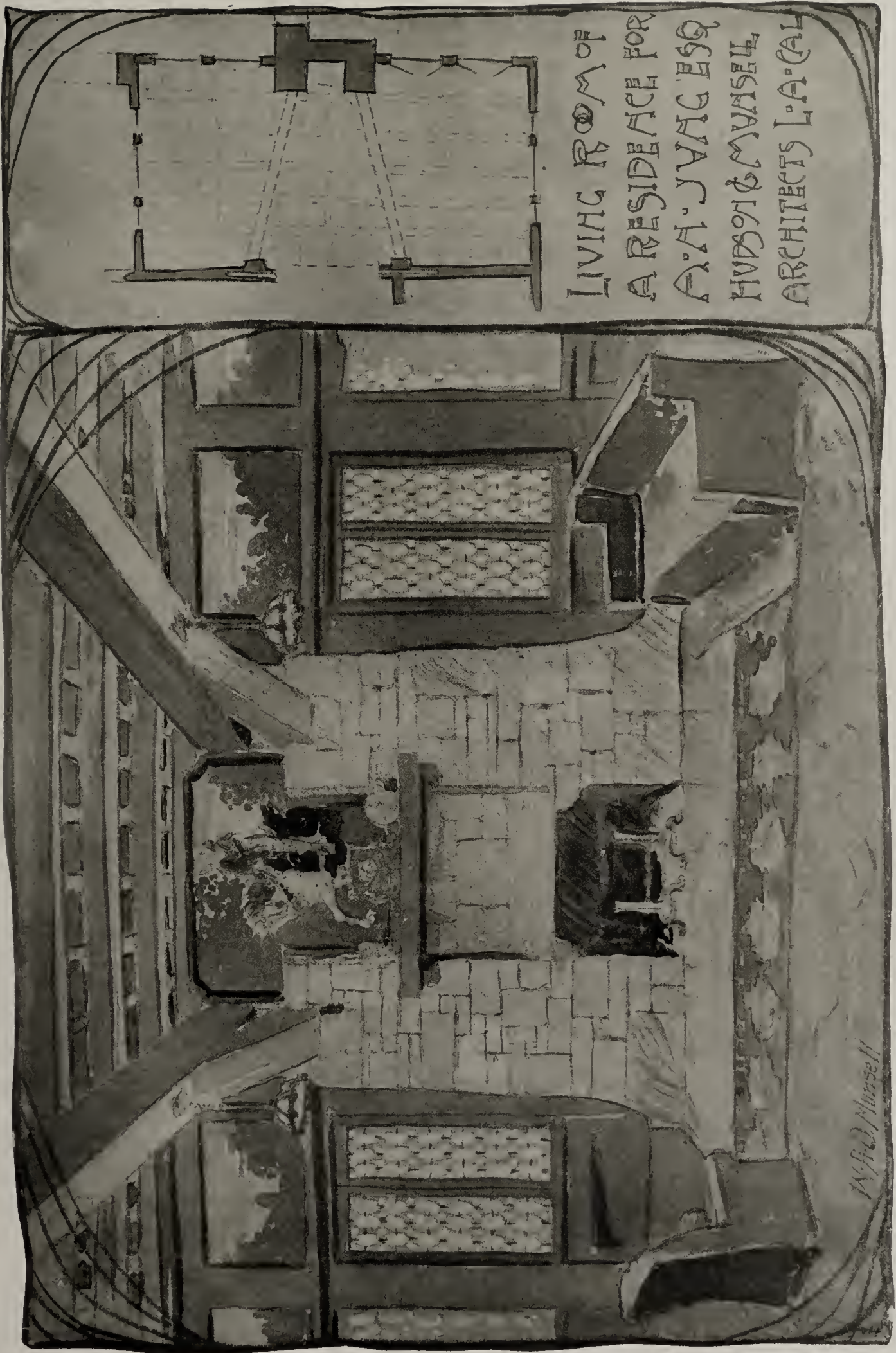
CATHEDRAL



HOTEL PATIO

MEXICAN ARCHITECTURE. GUANAJUATO, MEXICO

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LIVING ROOM OF
A RESIDENCE FOR
A. H. J. VAN C. ESQ.
HUBBARD & MURSELL
ARCHITECTS L. A. CAL.

W. F. C. / Murzell

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the discovery of which is perhaps Boni's most brilliant achievement. The Lapis Niger, or Black Stone, is often mentioned in early Roman literature. It was deemed unlucky probably because it marked some place particularly sacred to the very early Romans. Boni, from a description in Martial, started to excavate for the Lapis Niger in front of the Curia and was rewarded by its discovery. It is a pavement about ten feet square, composed of black slabs of Numidian marble. Wonderful as the discovery was, Boni did not stop here, but desiring to discover why this spot was deemed so sacred and perhaps having an inkling of the reason, carefully shored up the Lapis Niger and began to excavate beneath it.

Here he made the astounding discovery of two rectangular basements of Tufa of Etruscan design and near them two truncated cones, each with a pre-historic inscription, reading from the top to

in hollows in the rock and containing the ashes of the pre-historic Roman chiefs.

On the other side of the Forum has been excavated a building very much later in date but extremely



FOUNTAIN OF JUTURNA

interesting from the fact of its excellent preservation. This is the church of the Santa Maria Antiqua. It probably is the reconstructed Library of Caligula, whose palace towers above it on the Palatine. It is undoubtedly the earliest Christian church in Rome, dating from the Fourth century. It has some beautiful frescoes in the pure Byzantine style of Justinian. Its construction is of great interest to the architect, as its walls are built of priceless fragments from the then fast disintegrating Pagan temples of the Forum. Stuck in the wall, as a piece of rubble, I saw a beautiful marble torso of a Hermes, undoubtedly of Greek handiwork, and also two blocks of pure amethyst, each about two feet long and of the height and breadth of an ordinary step.

There always has been a tradition that Nero, in his Golden House, which stood where the Coliseum now stands, had a flight of steps of pure amethyst; but this has naturally been regarded as a pretty



FORUM LOOKING EAST

bottom, which has to date baffled the most learned in their efforts to translate it, although the characters are very distinct.

The world has hailed this discovery as the veritable Tomb of Romulus, the founder of Rome. Boni, I believe, has not absolutely claimed this, although he has claimed that the basements held the Etruscan Lions which Varro states guarded the Tomb of Romulus.

Anyone must be woefully lacking in imagination if he is not thrilled in peering under the Lapis Niger at these curious monuments and realizing that he is gazing on a thing so ancient and so holy that Caesar himself never rested his eyes upon it, and the existence of which wise Augustus may have regarded as a myth.

Less dramatic, but not less wonderful, perhaps, are the excavations in the rock which Boni has laid bare near the Temple of Romulus. Here, at a depth of about twenty-five feet below the ancient pavement, Boni has discovered cinerary urns laid



FORUM, LOOKING WEST

broad yarn until the discovery of these fragments, which certainly seem to verify the story, extravagant as it seems.

We will not take the space to recount the extremely technical work which has been done in locat-

ing, for example, the different Rostra, and in identifying the many thousands of fragments which have heretofore been nameless.

The discovery of the Fountain of Juturna, however, certainly should be mentioned in any account of the work of Boni and his confreres. After the



SUPPOSED TOMB OF ROMULUS

battle of Lake Regillus, Macauley, in his "Lays of Ancient Rome", recounts how Castor and Pollux, the sons of Leda and Jupiter, after leading the Roman forces miraculously to victory, brought the news to Rome and stopped to water their horses next the Temple of Vesta, at the Juturnian spring. The Romans afterward raised a temple to these heroes, now known as the Temple of Castor and Pollux, two beautiful columns of which still survive.

"On rode they to the Forum, while laurel boughs and flowers,
From house tops and from windows, fell on their crests
in showers.
When they drew nigh to Vesta, they vaulted down
again
And washed their horses in the well that springs by
Vesta's fane.
And straight again they mounted and rode to Vesta's
door;
Then like a blast away they passed, and no man saw
them more."

In excavations near the Temple of Castor and Pollux Boni has discovered the Juturnian spring, or the Fons Juturna, as the ancients called it. This is very beautiful in architecture, of white marble, and in excellent preservation. In the bottom of the spring was found a beautiful altar, with bas-reliefs of Castor and Pollux, and Leda and Jupiter, their parents; also a life-size statue of Esculapius, indicating the health-giving properties of the spring, a white marble bust of Jupiter and a splendid head of a horse in pentelic marble, the work of a Greek artist fifth century B. C. It must have belonged to a group representing Castor and Pollux with their horses.

Near the spring was the office of the Water Works,

the Statio Aquarium for the administration of the water supply of imperial Rome.

Work is still going on and the public will undoubtedly be informed of new discoveries no less remarkable. It must not be thought from this article that the work of the excavators is of a theatrical nature or a play to the Roman public, for all of the work is of a strictly scientific and constructive nature; in fact, the fragments of the beautiful Temple of Vesta have been collected from all over Rome and the Temple is now in the course of reconstruction.

All honor, therefore, to these men who have, with a genius born of wonderful learning and intuition, discovered secrets forgotten for 2,000 years.

The work they have done and are doing should not be a bit more interesting and valuable to the Italians than to the people of Europe or America, for the ruins of antiquity are for all times and all nations.



SCULPTURE DETAIL, NOTRE DAME, PARIS



THE AUDITORIUM AND BATH HOUSE ON THE RIGHT MAKE CONSIDERABLE PRETENSION ARCHITECTURALLY

RESORTS AND BEACHES AROUND LOS ANGELES

BY W. L. B. JENNEY

PART V. LONG BEACH



THE next morning the weather was a continuation of the day before, so I decided to make my long-deferred visit to Long Beach. The route, although not over forty-five miles long, is not particularly pleasing, the country flat or slightly rolling, mostly ranches planted with barley, the houses scattered at some distances from the track, with few trees, so that the country is not as pleasing as usual.

We soon entered the town of Long Beach. The car stops directly by the side of the Salt Lake station, which is large and open and filled with seats, with a fine view of the ocean and the harbor of San Pedro, with Catalina Island in the distance, which at the moment was interesting because of the rumor of the night before that the island was sinking, as the destruction of San Francisco had just taken place and there had been some slight shocks at Los Angeles; so the very slight shock felt at Catalina was magnified into a rumor of the settling of the island. It was pleasant to learn that it was without foundation.

Opposite the Salt Lake R. R. station is the great landing pier with its sun parlor and dance hall in the

center. At the right of the pier is the bath house and on the left is the Auditorium. The bath-house on the right, under the bank, makes considerable pretension architecturally.

As an educational center Long Beach is the home of the Southern California Chautauqua Association, which is the occasion of the gathering every summer of some of the most celebrated educational leaders in the country. There are no factories of any sort to mar the quiet secluded beauty, and here you can rest and recuperate the worn-out mind and body, yet at the same time have all the luxuries and pleasures characteristic of a watering place. The purity of the atmosphere, the solid agricultural back country, with its delightful drives and other advantages, such as fine open-sea bathing, yachting and fishing, and other marine sports, makes it a place of unrivaled excellence.

It is evident that Long Beach is in its infancy and is but just coming into notice. There is a new electric railroad from Los Angeles to the beach. The fishing and yachting are excellent, the lower deck of the long pier being well adapted for fishing, which is good here. The railroad extends to San Pedro and there are passenger boats running back and forth to San Pedro, a very pleasant trip for a very inconsiderable price, so that the beach is easily reached and is taken in on the so-called beach excursions from Los Angeles twice a day.



THE LOWER DECK OF THE LONG PIER IS WELL ADAPTED FOR FISHING

ASSOCIATIONS

MANITOBA ASSOCIATION OF ARCHITECTS

The regular monthly meeting of the Manitoba Association of Architects was held at Winnipeg on Friday, Oct. 19, at which Mr. C. A. P. Turner, of Minneapolis, read to the members an excellent paper on "Reinforced Concrete Construction". Mr. Turner gave illustrations by lantern slides of the various methods now used, showing the development of the work from the earliest to the latest systems, the last of which dispenses with beams of all descriptions, his name for this construction being the "Mushroom System".

It is the intention of the Association to hold similar lectures at each of the monthly meetings, and if each is as interesting as this last, the success of the meetings for the future is assured.

CHICAGO ARCHITECTURAL CLUB

The Colonial Fireplace Company has offered as a prize for a club competition fifty dollars, divided in twenty-five-, fifteen- and twelve-dollar prizes, for the best three designs of mantels in brick, tile, terracotta and metal. Brick is to be the predominating material used. Each competitor may submit two designs, drawn to a scale of one and one-half inches to the foot, in elevation and plan, and drawings may be in either wash or pen-and-ink, and are to become the property of the donor of the prize.

The jury of award is to be composed of Mr. Thomas Tallmage, Elmer Jensen and Harry Jenkins, and drawings must be delivered to H. H. Mahler at the club rooms, on or before 4:00 p. m., November 10, 1906, and must be signed with a *nom de plume*.

This being the first of the series of competition arranged for this winter, it is hoped that it will be well patronized by all the club members.

LOS ANGELES ARCHITECTURAL CLUB

At Los Angeles, on September 12, an Architectural Club was organized with Henry F. Withey as President. The new club has good quarters, well located. The entertainment committee has arranged for the year papers on various subjects, from the oldest and best architects in the city, commencing the season on October 30. W. L. B. Jenney gave a paper on "A Modern Steel Construction". Mr. Jenny commenced by defining a steel skeleton of which he was the inventor. He then gave a brief account of the manufacture of steel, the rolling of the different forms and the several kinds of columns made from these forms. Mr. Jenny then dwelt with some earnestness on the extreme necessity of thoroughly fireproofing all the steel in the building with a thoroughly first-class material, such as porous terracotta, showing as illustration examples from San

Francisco of columns which were fireproof, it was thought, by encircling them with expanded metal, plastered with a coarse Portland cement mortar, i. e., a fine concrete. These columns were badly buckled, one of them until it resembled a letter s, showing that it was remarkable that this column did not give away entirely. In another instance several pipes were run close to columns, which were distorted by the heat bursting their fireproofing and falling in a tangled mass to the floor below.

These papers will be followed by others during the season: "Spanish Renaissance", by A. B. Benton; "The History of Architecture", by Fritts Mackay; "Re-enforced Concrete Construction", by Harrison Allbrig. Other evenings will be devoted to social matters, such as smoker, dinner, theatrical entertainment, business meetings, etc.

PHILADELPHIA CHAPTER A. I. A.

At the annual meeting of the Philadelphia Chapter, American Institute of Architects, held Nov. 7 at the rooms of the T-Square Club, the following officers were elected to serve for the ensuing year: President, James B. Jamieson; first vice president, David Knickerbacker Boyd; second vice president, John Molitor; treasurer, William C. Prichett, and secretary, Arnold H. Moses.

OBITUARY

EDMUND R. WILLSON

Among the names prominent in the profession for the past twenty-five years, none has been more familiar in the East than that of Edmund R. Willson, of the firm of Stone, Carpenter & Willson, of Providence, R. I., who died in that city on September 9th. His loss to the firm with which he has so long been associated is far beyond that of a valuable member, for in this close association has grown a comradeship, the severance of which means much more than a business loss, and the severing of partners.

Mr. Willson was born at Salem, Mass., April 21, 1856, and was the son of Rev. E. B. Willson, D. D. He was graduated from Harvard in the class of 1875, from that university going to Massachusetts Institute of Technology and thence to Ecole de Beaux Arts, Paris, to complete his study of fine architecture. Upon his return to this city he was with Stone & Carpenter for one year, when he became a member of the firm, the name of which was changed to that of Stone, Carpenter & Willson. This congenial business relationship extended over a quarter of a century. He was very well read in his profession, was a splendid draughtsman and extremely prolific in designs. Among the buildings of note in Provi-

dence and elsewhere, which were planned by him and are looked upon as his individual creations, are the Providence Public Library, Pembroke Hall, the Women's Gymnasium (now in process of construction), the Lyman Gymnasium, the Lauderdale and Francis buildings, the Pendleton Museum, on Benefit street, the residences of Gen. Sackett, Robert W. Taft, Charles Morris Smith, Jr., and C. D. Owen, the Roger Williams Chapel, and the tower and boat house on Senator Aldrich's country estate at Warwick. Mr. Willson was a member of the Hope Club, the Agawam Hunt of the Rhode Island Chapter and also a Fellow of the American Institute of Architects.

PUBLICATIONS

THE MODERN HOME. A book of British Domestic Architecture for moderate incomes. A companion volume to "The British Homes of To-day". Text by W. H. Bidlake, Halsey Ricardo and John Cash. Edited by Shaw Sparrow. Hodder & Stoughton, 20 Paternoster Row, London. American publishers, Armstrong & Co., New York. The remaining copies of the English edition are in the hands of G. Broes Van Dort & Co., Chicago.

As a successor of "The British Home of To-day", this volume continues the scheme of illustrating the design of the best type of contemporaneous British Domestic Architecture and Decorations, with cottages of many designs, and all selected by men of eminence in the professions. The cottages are placed in contrast with small houses and homes of larger size, and thus the illustrations range from simple cottages to country houses that are appropriate for the professional and business man of the day. As the design in black and white is often complex to the layman, the volume is largely printed in colors so that he, as well as the professional, may be benefitted by its contents. The volume thus shows some twenty-five colored sheets, and sixty drawings and photographs in black and white, and the colored sheets are experimental in a degree, as it is the first time that such reproductive work has been published in this way.

In the text the book is divided in four chapters, "The Home From the Outside", "The Interior and Its Furniture", "Some Domestic Essentials" and "Sanitation". Each of these chapters are profusely illustrated in design and plan. The book should be in the hands of all architects who make a specialty of cottage and residence design.

The notable feature in the October number of *Country Life in America*, which is incomparably the best of America's out-door magazines, is the reproduction of twenty-three representative country houses, selected by a committee of competent architects, Wilson Eyre, Charles Barton Keen, John M. Carrere, and Guy Lowell. These houses, designed

by many different architects, are geographically diversified and range in cost from \$3,500 to \$50,000. There is no better way to educate people than this superbly conceived and executed effort of the editors of the magazine and architects who aided them in the selection.

ILLUSTRATIONS

The house by F. W. Fitzpatrick, illustrated in this number, is absolutely fireproof. Not a bit of wood or combustible material will enter into its construction or finish. The materials used are fire-proof hollow tile and building blocks, brick, stucco, cement, plaster, asbestos, glass and metal—not only fireproof but nondamageable by fire, external or internal. Even in a great conflagration the house could not be damaged over five or six per cent. It would be economy to carry one's own insurance, and only to that amount. The scheme of stair, enclosed and with self-closing doors, not only is a great economy of space and money (the one stair serving all purposes), but gives privacy to sleeping rooms, cuts off dust and dirt from one story to the other, prevents draughts and colds in winter and absolutely cuts off possibility of fire spreading up in the furnishing from one story to the other.

The basement wall to first-story sill, the bond courses of first story and the second-story-sill course, all marked "A", to be chocolate, semi-glazed building blocks. The body of the building to be stucco finish on six-inch partition tile. Before the stucco is quite set, white marble dust is to be blown all over the surface. The decorations are chromatic and without relief. Panel courses "B", "B", "B" are of buff enameled brick or tile, set with one and one-half-inch wide stucco joints. String courses "C" similarly set and of chocolate-enameled brick or tile. Sills and cornice moulds "D" of same colored brick, set close jointed and on edge. Shields "F" roughly moulded, also of chocolate enamel (terra-cotta) and used for cornice corbels under chimneys and at porch piers, ornament in gable, etc. Diamond ornament "G" in panels, etc., of green enameled tile, or made up of brick. Same pattern "H" of buff enamel. The roof gutter to be of metal or "Abestofer", painted chocolate color, same as mould "D". The roof to be of deep red asbestos shingles. The iron work of conservatory, lamps and anchors to be painted a "tecco" green and the diamond panes to be of "cathedral" or green opalescent in key of course "G". The flat-roof portion to be "composition". The dusted-stucco finish to be carried around back and side, with enameled courses, as indicated by side elevation; or, the face of walls might be made

of common red or yellow brick, laid in wide joints of white mortar and trimmed, as is here shown, with enameled brick of contrasting color. But the white wall would be particularly attractive, and almost as much so in a cold country as in its natural setting of green and flowers of soft glamour of Southern sunshine. The reason the house is so large and seemingly so well appointed for the sum appropriated, is to be found in the extreme simplicity of form and construction and the eschewing of ornament and expensive finish and special work on both exterior and interior—work that adds absolutely nothing to comfort and often detracts from the artistic effects as well. The building is simple in all its parts, straightforward in construction, without plaster cornices and elaborate finish inside, and gew-gaws, finicky oriels, bays, etc., outside. The plan and arrangement lend themselves to beautiful mural paintings, hangings, tapestries and furnishings. The unusual breadth of the house places many of the rooms on the southern exposure and gives an important appearance. Its apparent size, broad terrace, fountain, etc., would indicate to the average observer an expenditure of at least \$30,000. The terrace is formed by the earth excavated from the foundation, and its coping and finish cost but little more, if any, than the hauling away of the dirt, while the foundation is an \$100 luxury, and so with the other features that are usually found only in very expensive forms and never upon \$10,000 houses.

The consideration of prime importance in designing the McKinley National Memorial, by H. Van Buren Magonigle, of New York, which is illustrated in detail, was the choice of the type and character of the mausoleum. Bearing in mind the simplicity of President McKinley's life and character, after passing in review the many forms that the memorial might assume, the architect chose that one which seemed most appropriate, simple and dignified—a circular domical wall architecture, of great sobriety of outline and detail, rejecting an exterior columnar treatment, not only as being too rich in motif, but as confusing the mass unduly when seen from a distance. The interior, on the contrary, seems to demand a columnar treatment, for a readier comprehension of its scale. It is lighted entirely from above, the opening being so proportioned to the space to be lighted that a certain solemnity of effect would be attained. A double sarcophagus has also been planned. With respect to the plan, a circular form is the one which adapts itself most naturally to the contours of the hill. In the form which develops itself most strongly in the general plan, suggesting a cross and a sword, a certain symbolism

may be traced which would seem to be peculiarly appropriate in a memorial to one who was a martyr and a President in time of war. The plaza is without any treatment other than a parapet wall and the disposition of the trees. The architectural elements of the design are white granite for the exterior of the mausoleum and a granite of a warmer tone for the steps and balustrades; for the interior of the mausoleum, light gray Knoxville marble, with a honed surface. The sarcophagus would be of black polished granite. It is proposed to construct the rough walls throughout of concrete, reinforced with steel as necessary, and faced with the materials above suggested. This would be the most durable and economical form of construction, and, given the amount of the appropriation, would give greater latitude in accessory treatment.

The illustration from a wash drawing of the Hotel Bixby, at Long Beach, California, by Architects Austin and Brown, of Los Angeles, will, when completed, be one of the most attractive erected in the states. Besides the general equipment, commodious billiard rooms and bowling alleys also will be provided and will be features to which special attention will be given. The lighting plant, which will be a part of the equipment of the house, will be one that will combine several new and attractive features. The estimates as to costs include those for the hotel building proper at \$200,000, and do not comprise those that will be incurred in the furnishings, the cement walks and court, gardens and foundations that will be a part of the improvements. The latter will involve an expenditure of about \$200,000 additional. Our correspondent, Mr. Jenney, reports, as we go to press, the collapse of this structure, killing and injuring a number of workmen. The construction is reinforced concrete, the foundation on concrete caissons fifty feet deep. One of the directors stated that the accident was due to the workmen taking away supports on the top floor before the concrete had set, and this, and the three other floors collapsed, caved in in succession, followed an hour afterwards by the collapse of the entire west wing. The rebuilding will commence at once.

It is unfortunate that such sketches as those of the Jung residence, by Mr. Munsell, of the architectural firm of Hudson & Munsell, of Los Angeles, cannot be reproduced in colors as they are drawn. The artistic combination of paper, color and design is such as to make this most desirable as an object lesson for designers. Those who have seen the originals of Wilson Eyre's sketches will appreciate this, those of Mr. Munsell having the same artistic quality, and ranking with them in execution.



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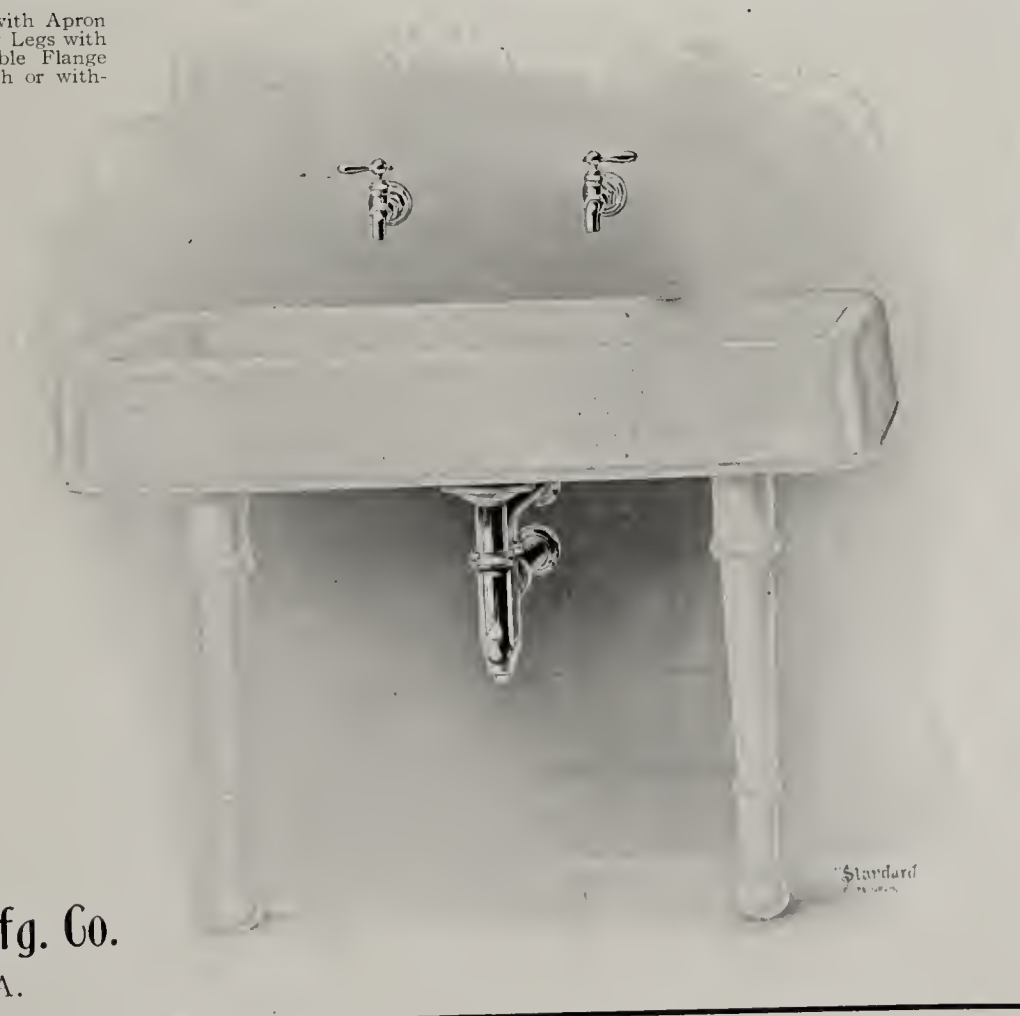
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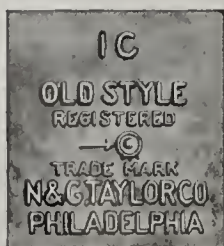
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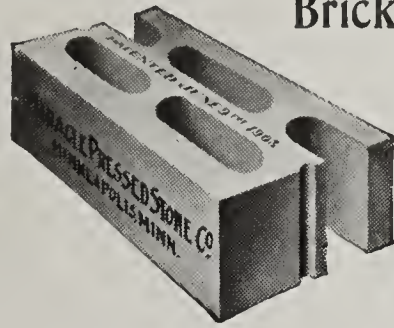
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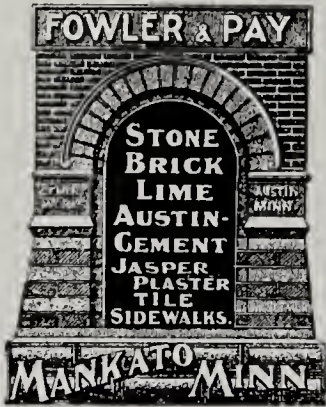
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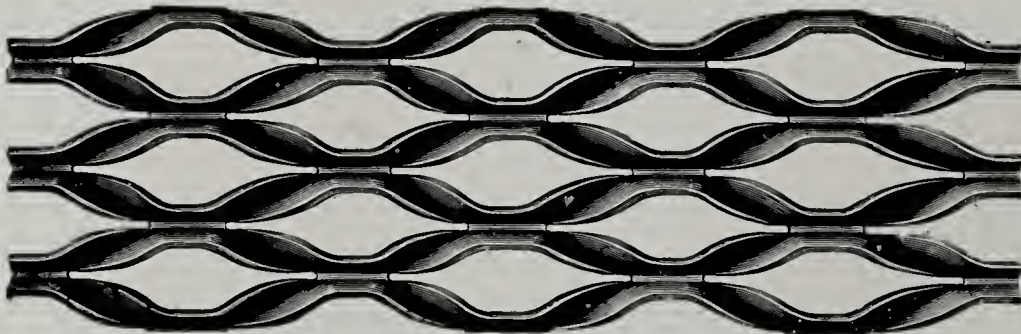
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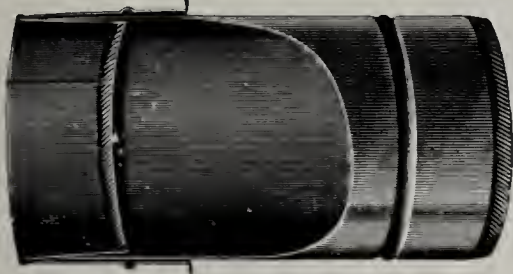
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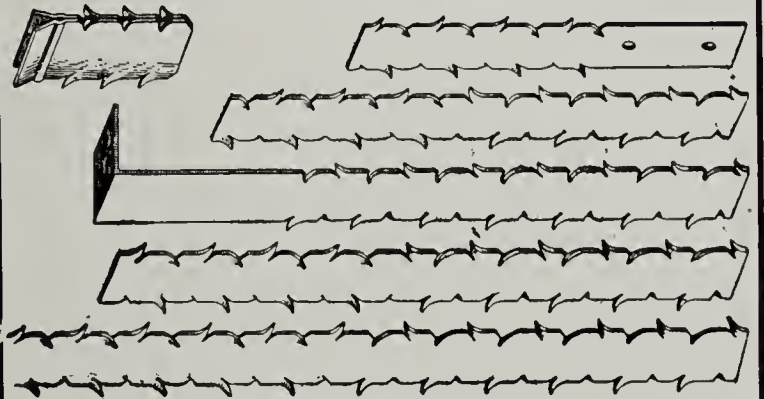
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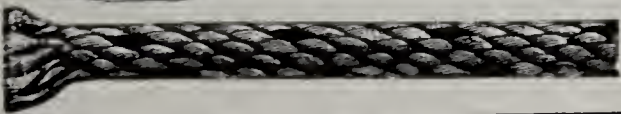
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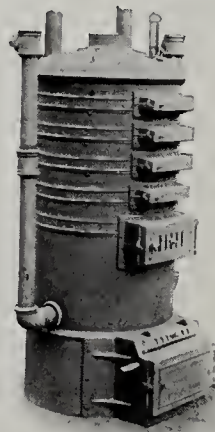
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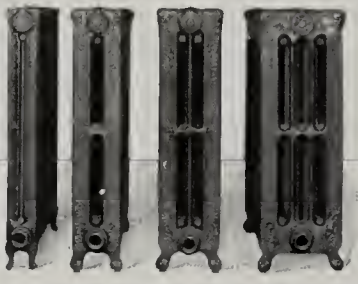
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NUMBER 12

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BUILDING OPERATIONS FOR NOVEMBER

Official reports from the building departments of some fifty leading cities, received by the American Contractor, show a continuation of the building activity that has long prevailed, though the falling off is a little more pronounced than it was last month, amounting in the aggregate to 17 per cent but building still continues decidedly active. The operations last year were so enormous, breaking all records that the pace could not be expected to be maintained. The reports show a condition of healthful activity and indicate that prosperity in the building line is to continue. As compared with the corresponding month of last year, the percentage of gains in the leading cities is as follows: Atlanta, 13; Cleveland, 18; Dallas, 14; Duluth, 14; Harrisburg, 92; Hartford, 14; Manchester, 110; Milwaukee, 8; Minneapolis, 25; Newark, 21; Patterson, 31; Pueblo, 56; Rochester, 27; Seattle, 65; Syracuse, 23; Winnipeg, 50. The percentage of the chief reported losses are as follows: Buffalo, 18; Chicago, 9; Cincinnati, 33; Denver, 56; Detroit, 15; Kansas City, 35; Louisville, 70; Nashville, 38; New York, 31; Omaha, 12; Pittsburg, 10; Spokane, 25; Topeka, 48; Toledo, 8; Tacoma, 25. From this comparison it appears that the gains and losses, practically, even so far as the numbers of cities is concerned, are widely distributed, thus showing that the changes are due to local conditions, such as the supply of buildings and the cost of construction.

THIRD CONVENTION OF CEMENT PRODUCERS

The third annual convention of the Northwest Cement Producers will be held at St. Paul, January 16, 17 and 18. This, in point of education in the using of cement, particularly in a structural sense, is one of the most valuable meetings of the year. The first convention was a school in which one of the oldest materials came as a new factor into the building field and the immense amount of facts that were unknown even to the teachers was one of the notable features of the first convention. Since that time experience has done much and at the coming convention it is expected that a fund of experience will be gathered and distributed that will have a marked effect upon future construction. For that reason architects should contribute drawings to the exhibition that is planned, contractors should be ready to present their experience and observation, and all interested in the development of concrete as a building material should feel that such a convention can do more for the future safety of the concrete structure and the increased adoption of its several fields of use than any other method of collecting and spreading information can. The officers of the Association are C. A. P. Turner, of Minneapolis, President; Martin T. Roeche, of St. Paul, Secretary; Vice Presidents, O. U. Meracle, A. H. Laughlin, E. W. Dow, John Wunder and Lee Stover.

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In the new process of coloring the dye is forced by pneumatic means through the whole trunk of the newly felled tree, so that the dye takes the place of the sap. The trunks are subsequently sawed up into planks or veneers. Not only is the beautiful structure of birchwood preserved by this process but it is even greatly enhanced.

In consequence of this, dyed birchwood has become exceedingly popular and has, of late, been very much used in Europe for cabinet making. For artists and furniture makers who are trying to produce something new and original, these new and elegant colors open up new fields hardly dreamed of before.

This new wood is now very frequently used as a substitute for brown, dark, so-called precious woods, which are generally expensive; and for the equipment of rooms, shops, steamers and railway carriages and also for furniture making, especially for fancy furniture, a marked preference has lately been given to the new wood over mahogany, walnut, etc. It is hardly necessary to mention to experts that the comparatively small breadth of birchwood is in reality not of very great importance, because the solid wood is generally used for the narrow parts of a piece of furniture only, as for instance the legs of a chair, pillars, etc., while the larger surfaces are coated with a veneer. The quality of the material of which the veneer is made can be precisely determined, because, when the veneer band is being cut into leaves, all bad parts and knots in the wood are removed as far as possible. Besides this there is another great advantage when shipping to foreign countries and this advantage is that high freights or high customs duties are of comparatively small importance if charged by the square meter. There are six different colors up to the present, all of which are proof against the effects of light. These are: pink, yellow, green, blue, light brown, light mahogany and gray.

Architects in America and Canada should send for samples and use the material for the interior finish of the first residence they design where a particularly artistic effect in harmonious color and material is required.

HARDWOOD FLOORS

The finishing touches to a well built house rests with the floors and a house built in these modern times, without hardwood floors, seems to be neglected.

The question with an Architect as to what is best to use for floors, is a very difficult one, for he has the cost to consider, the effects and the tastes of the owner.

When oak was plentiful and cheaper there was little choice, as a quarter-sawed oak floor could not be excelled, and cannot be today; but its scarcity has made it cost two or three times as much as other woods.

The great demand, in the last few years, for the less desirable woods, such as maple, beech, birch, yellow pine, etc., stimulated the art of manufacturing a good article. Special machinery was made and the greatest care brought forward that skillful mechanics could muster to turn out a faultless article.

The architects, in looking the field over for suitable floors, found the high standard in workmanship that had been displayed on oak transferred or adopted on maple, beech and birch. They were pleased and welcomed it, as it was filling a deserved opening at a much less cost than oak.

Anyone familiar with the flooring business knows the immense amount of care necessary to deliver a perfect article, and the large investment it requires in fine, strong machinery to do the work properly, so that the matching and laying qualities are satisfactory and a good floor is possible and permanent. Such work is being done only by a few large manufacturers, and the one who has sprung into the first ranks the quickest is the I. Stephenson Co., of Wells, Michigan, who manufacture the "Ideal" maple, beech and birch flooring.

The "Ideal" has only been on the market a few years, yet it has been and is used all over these United States by the most prominent and largest architects, and in every case where it has been used it has been all it was represented to be—a first-class article, and we gladly invite our readers, those who are not personally familiar with it from actual experience, to look into the merits of it.

Its success can also be attributed in a large degree to the efforts in its behalf by Mr. John C. Hill, of St. Paul, of the John C. Hill Lumber Company, who has brought it before the architects throughout the United States and whose standing in the lumber world is an absolute guarantee of thorough honesty and substantial quality in any lumber he may represent.

FIREPROOF SANDSTONE

An unbroken deposit of sandstone, a mile long and eight hundred feet thick, of a quality that is available for the heaviest building purposes and that is practically fireproof, has been opened up at Banning, Minnesota. A mammoth quarrying plant has been installed here in a gorge of the Kettle River, in Pine County.

The Kettle River sandstone's beautiful light salmon color brought it to the attention of builders in Minnesota, who found, on testing it, that it would stand a carrying pressure of 14,268 pounds per square inch. In a laboratory test, a cube two inches square endured a pressure of 57,072 pounds. Tests of engineers of the Great Northern Railway, proving that the stone required a lesser thickness than granite, so challenged belief that a second series of trials were made, with the same result.

Analysis of the stone showed that it contains 98.02 per cent of silica, with just enough alumina and oxide of iron to make it substantially a crystalline rock, and to preserve its color under all weather conditions. The stone is remarkably solid and compact, the usual voids between the larger particles of silica and rock being filled with smaller particles of silica by the geological process of re-deposition.

It is claimed that Kettle River sandstone stands frost and other trying weather conditions better than marble and better even than granite. There is no sulphide of iron present in it,

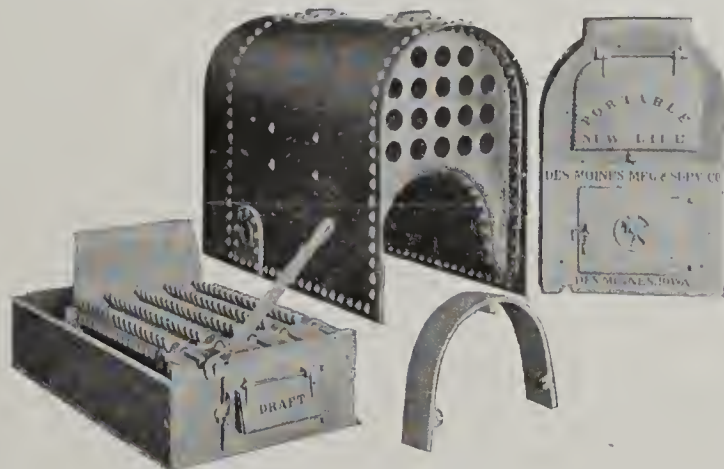
which oxidizes, causing the reddish or yellow streaking that often makes sandstone so unattractive after exposure to the weather.

The fire-resisting qualities in the stone from Kettle River were strikingly illustrated when the town of Hinckley, Minnesota, was destroyed by a forest fire. The heat and draft was so intense that heavy pieces of steel were carried for miles, yet bridge abutments of Kettle River stone were in no way affected, except for the vitrifying of the surface. Under a fire test by Professor I. H. Woolson, of Columbia University, the stone withstood 1,500 degrees without change.

The Minneapolis offices of the Kettle River Quarries Company have just removed into its commodious quarters in the new Security Bank Building.

A SMALL PLANT HEATING BOILER

A boiler especially designed to meet all demands for a durable and efficient portable heating apparatus, which can be installed at a nominal price, is found in the "New Life" heating boiler, designed for use in moderate-sized residences, greenhouses, etc. It is made upon the scientific principles



DETAIL CONSTRUCTION OF NEW LIFE BOILER

which have made the New Life brick-set boilers popular, but requires no brickwork. It has the advantage of being strongly built as well as being easily installed, giving a neat, compact appearance and adaptable to a limited space. It is made of steel and manufactured by the Des Moines Manufacturing and Supply Company, of Des Moines, Iowa.

A HIGH PLANE IN ROOFING INDUSTRY

The sale of roofing plate is to be revolutionized by the substitution of the coating of the several brands stamped on each sheet for the trade mark which has heretofore been relied on as an evidence of quality.

In accordance with this the American Sheet and Tin Plate Company officially announces that it has decided, on all of its brands of roofing plate, to stamp each sheet with the amount of coating it carries per box of 20x28, and not only this, but every waster plate is to be stamped "waster". This will in a large measure prevent the possibility of misrepresentation in second, third or fourth hands and insure to the one calling for such a plate a square deal. That the company which has taken the initiative in this innovation runs some risk of a loss of business during the period when architects, builders and roofers are being made familiar with such a frank statement of quality must appear evident to all who give more than superficial attention to the far-reaching action. The move strikes at the very heart of the industry. It concedes to the tin roofer more than he has asked; it crushes the malpractice of years in one fell stroke, and with firm grasp uplifts the business to a plane of dignity and honor. As such it enforces co-operation, it demands the support of all manufacturers, of all roofers, of all architects, of all builders. This new stamping of the plates will give important information not only to the tin roofer, but to the architect, the builder and the final owner of any building covered with tin.

BAR-LOCK "3-POINT" PRISMS AND "ARCH" PLAIN LIGHTS

A condition which was for years a serious drawback to the use of pavement vaults—that of insufficient natural light—has been overcome by the introduction into the building world of Bar-Lock galvanized wrought steel construction and "3-Point" Prisms, made by the American Bar-Lock Co., Philadelphia, Pa. The principle of this new form of pavement illumination is the use of scientific adjustment of clear annealed prisms so as to obtain the greatest degree of refracted rays, deflected in such a way as to secure a maximum of light. Bar-Lock and "3-Point" Prisms have several qualities which demonstrate their superiority over the old forms of pavement illumination.

The Bar-Lock, being constructed of galvanized wrought steel, will resist rust and is much stronger than cast-iron frames. In its assembling it consists of narrow steel bars set on edge, with transverse channel bars at right angles and clamped in place. This allows a 77 per cent, of glass area against 25 to 35 per cent. given by the old styles. The channel bars permit of an effectual binding of the cement around and under the bearing of each "3-Point" Prism or "Arch" plain glass lens, when the latter is used; allow a deeper body or rib of cement between each glass and render the installation perfectly water-tight.

Wherever Bar-Lock and "3-Point" Prisms are used for vault or basement illumination, the result has been satisfactory in an eminent degree. This Bar-Lock construction with either "3-Point" Prisms or "Arch" plain glass, makes an ideal illuminating feature for store floors, and is already installed in numerous large establishments in the cities throughout the country. With "3-Point" Prisms at least 100 per cent. added light is secured. Another characteristic of Bar-Lock construction is that it is easily assembled and installed, and may be done by any cement worker.

The American Bar-Lock Company, 26th street and Pennsylvania avenue, Philadelphia, sole owners of the Bar-Lock products and patents, will be pleased to furnish any desired information, together with catalogues, upon application. This company has reliable representatives in all the large cities and the name of its nearest representative will be sent upon inquiry.

IMPORTANT CHANGE IN AN OLD BRAND

An important change has just been made by the old tin-plate house of N. & G. Taylor Company, of Philadelphia, in the name of their leading brand of roofing tin. Hereafter,



Fac-simile of the Trade-Mark stamped on each sheet of the "TARGET-AND-ARROW Old Style" tin. Registered in U. S. Patent Office.

instead of "Taylor Old Style," the brand will be known as the "Target and Arrow Old Style," the old-time name of the brand, used many years ago. The change is actually a return to the old-time designation for the tin, as the plates have always been distinguished by the registered trade-mark of the Target and Arrow stamped on the sheets, to protect the buyer from substitution. The trade-mark for

the brand remains the same. The roofing-tin on which this stamp appears is exactly the same old-time durable quality that this house has been selling for more than sixty years. It represents the same lasting kind of tin plate as that furnished by this firm, which is still found in good condition on roofs in the older cities of this country after fifty and sixty years' wear.

THE YOUTH'S COMPANION FOR 1907

The Youth's Companion announces, among the attractions of its 52 issues in 1907, two hundred practical papers, serviceable to young people who have their way to make in the world, helpful in their insistence on worthy ideals

in every relation of life, useful in the home—particularly the regular series, "Till the Doctor Comes". Two hundred and fifty capital stories—humorous stories, character stories, stories of life on the farm, in the great cities, on the sea, in the wilderness. Among them incidents in American history, illustrative of life and times in America from the first colonial planting to the close of the Civil War. One thousand short notes giving concisely, clearly and accurately the important news of the times in public affairs, and in the fields of science and industry. Three hundred contributors, giving assurance that every need and every taste among Companion readers will be satisfied. Two thousand one-minute stories, anecdotes, bits of humor—sketches which take not more than a minute to read, etc.

A full Announcement of the new volume will be sent with sample copies of the paper to any address on request. On receipt of \$1.75, the yearly subscription price, the publishers send to the new subscriber The Companion's Four-Leaf Hanging Calendar for 1907, lithographed in twelve colors and gold, and subscription certificate for the fifty-two issues of the year's volume.

A NORTHERN PACIFIC PUBLICATION

Eastward through the Storied Northwest, by Olin D. Wheeler. An eastern trip from California over the Northern Pacific route, via Portland, Puget Sound, Yellowstone Park, Minneapolis and St. Paul, via the Shasta, Northern Pacific route. Published by A. M. Cleland, General Passenger Agent of the Northern Pacific Railway, at St. Paul, Minnesota. Sent on receipt of request and address.

This is one of those pamphlet descriptions that are year by year teaching in detail that which the school geography gives to the student in general. For this reason they are valuable in an educational sense aside from their main purpose of attracting attention to a given route. Written by authors who can describe, photographed by artists and reproduced in the best typography that is at the command of the publishers, they are distributed among the people and eagerly read by those who wish a closer acquaintance with the scenes and places that have been impressed on their imagination from childhood. This booklet of Mr. Wheeler's is full of information, reads like fiction and is as accurate as personal knowledge can make it, and spreads out the Western Wonderland of our continent in a vivid, convincing and enjoyable story of people and places from the Mississippi River to the Pacific Ocean.

HOLIDAY RATES TO CUBA

The Minneapolis and St. Louis R. R. will make a holiday rate of one fare for the round trip to Havana, Cuba, on December 18, 19 and 20; return limit January 9. Passengers will be taken via New Orleans in connection with the Southern Pacific Company's steamers. The trip will be a delightful one and, with the cheap rates offered for the holiday season, is particularly desirable at this time. For information as to rates, etc., address A. B. Cutts, G. P. and T. A., Minneapolis, Minn.

OF INTEREST TO ARCHITECTS

THE rapid rebuilding of the plant of the Union Fibre Company, of Winona, Minnesota, which was destroyed by fire last May, is striking evidence of the popularity of their sheathing materials, Lith and Linofelt. The factory has been rebuilt on strictly modern, fire proof lines in concrete construction, and installed with the latest improved machinery for getting out their product. Linofelt is made from flax straw, which is purchased from farmers throughout the Northwest, and is developing an important use for a by-product. The flax is put through a degumming process which makes it a perfect non-conductor of heat and cold. It is thus becoming popular with architects for back plastering. It is also extensively used for insulation in cold storage plants.

ice boxes and refrigerator cars. At their plant at Yorktown, Indiana, Lith, a mineral wool product, is made into boards and is in this shape a practical deafener for floors as well as for insulation purposes when Linofelt will not so readily apply.

THE Minneapolis offices of the Otis Elevator Company have been removed to the New Security Bank Building. It might be opportune to remind architects and owners that this company are not only interested in the installation of passenger and freight elevators but is prepared to take charge of all repair work, and have a department established for this purpose, with mechanics of the highest skill, who are thoroughly conversant with the work, whether it be an hydraulic, electric, steam, belt or hand-power elevator. The warehouse carries a complete stock of repair parts for the Otis, Hale, Crane and Standard types and all sizes of valve cups and hoisting cables, which can be furnished promptly upon application.

A SYSTEM of Bulletins is published in a shape convenient for filing by Fairbanks, Morse and Co., of Chicago, giving general information as well as detailed measurements of their several power machines. For instance, bulletin 30 gives general information in regard to their electric light and power plants and the necessary gas and gasoline engines. Bulletin 20 describes and illustrates different types of motors, Bulletin 38, engine type generators, and Bulletin 22 direct current dynamos. All are essential in the planning for space and most economical operation of the structure's power and light facilities, and architects should have a set of these bulletins on file for ready reference.

THE successful building business in Minneapolis the past year, and particularly during the month of November, when the aggregate of operations was twenty-five per cent greater than the same month last year, has made a remarkable increase in the diamond business, White and McNaught, of 407

Nicollet Avenue, report. Diamonds are supposed to equal government bonds as an investment, and when bought of so reliable a firm as White and McNaught are better, as their liberal discounts, together with the perfect guarantee of their value, gives the purchaser of diamonds a security with a prospective as well as a collateral value that is considerable. This investment of profits, by contractors especially, is noticed in the sale of watches, but this is probably because of the necessity for keeping accurate time in these days of high per hour wages.

THE Minneapolis General Electric Company has recently detailed one of the most experienced solicitors to co-operate with architects and builders to the end that good wiring and scientific illumination may be secured. It is a fact, recognized by illuminating experts, that too frequently the architect designs a beautiful house and the furnisher exercises his highest skill to adorn it and yet the illumination which is to bring out its beauty will be left to the last and then put in with very little thought or skill. The attention of the architects is too fully taken up to make a thorough study of illumination and it is for the purpose of being of service in this respect that the Electric Company offers, without cost, the services of their expert engineer in preparing specifications and the giving of general suggestions that will be of help in supplementing the work of the architect. This co-operation between the local electric company and the architect should always be intimate, in the interest of safe and effective lighting.

MR. C. H. NEWMAN, of the United States Gypsum Company, who has been located at Superior, Wisconsin, and had charge of the Company's interests in that section, has been transferred to the Minneapolis office, Mr. T. W. Farrington, who has occupied that position, taking charge of the Western sales of the company, with headquarters at Fort Dodge, Iowa.

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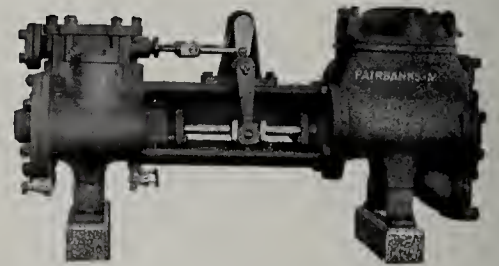
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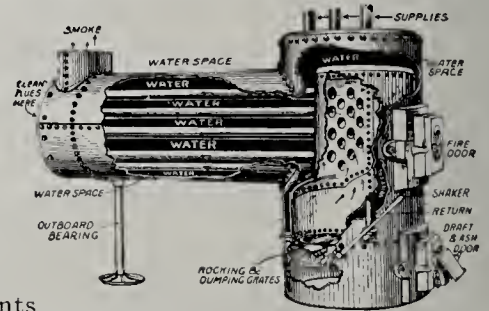
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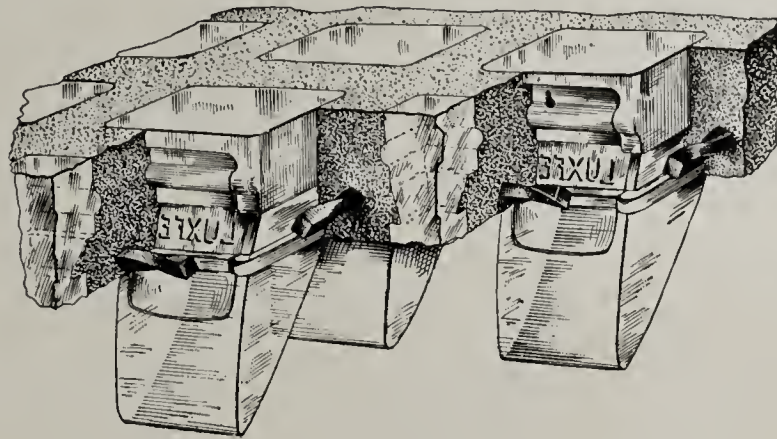
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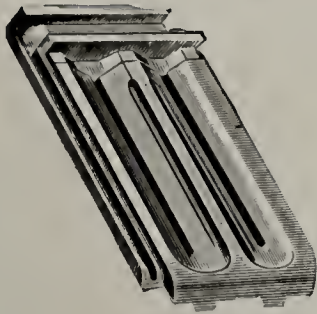
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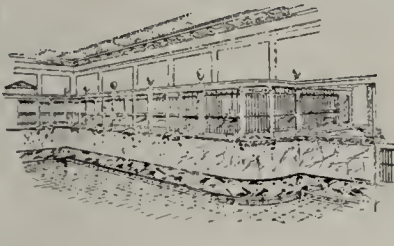
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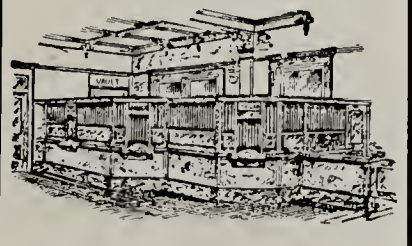
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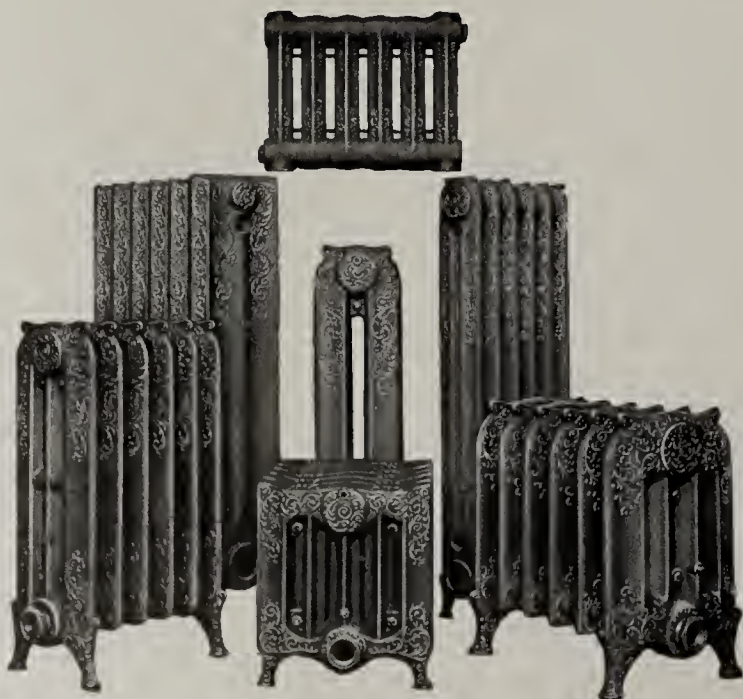
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NEXT CONVENTION AT WASHINGTON, D. C., 1907.

Meeting of the National Association of Builders

For the first time in several years the National Association of Builders held a meeting of its principal members on September 19th, at Atlantic City. It was attended by those who have, for nineteen years, supported and maintained those principles which the National Association adopted at its first convention and which have since become the foundation of what is known as the open-shop principle among the employers of to-day. These were reaffirmed under the following declaration:

ATLANTIC CITY, September, 19, 1906.

The National Association of Builders reaffirms the "open shop" principles declared nineteen years ago, and calls upon builders everywhere to sustain them as the only sound basis for the employment of workmen. It also reaffirms its declarations in support of trade schools and the freedom of American youth from restrictions of trades unions in the learning of trades.

It again advises builders to insist upon the use of the Uniform Contract in their engagements to construct buildings, inasmuch as it affords effective protection against losses caused by obstructive action set up by trades unions, and also provides for the maintenance of the rights of all parties concerned in building contracts.

In view of the fact that a movement is on foot to create a National Association of Builders' Exchanges, which aims to control employers in the building trades by copying the methods of Trades Unions, this National Association condemns such propositions and declares that any and all attempts to establish mandatory bodies, either among employers or among workmen, are fundamentally wrong, and lead inevitably to oppression. Employers generally are urged to avoid such complications.

That for almost two decades this association has stood for all that is beneficial and proper in the employment of men in the building trades, and steadily resisted every encroachment on their rights by trades unions that were conducted on lines inimical to their best interests, and have carried throughout a strong and clear principle of fair dealing between contractors and material dealers, evidences the vitality and force of this organization; and its resumption of active work in thus assembling for conference is one of the important events of the year's activities.

**Semi-Centennial
of American
Institute
of Architects**

Fifty years of usefulness is long in the life of an individual but short in the development of an art. When the American Institute of Architects meet at Washington, on Jan. 7, 8 and 9 next, to celebrate its semi-centennial, but one, Leopold Eidlitz, of the twelve architects who met in New York in the office of Richard Upjohn, February 23rd, 1857, may answer to the roll; yet the results of their foundation work, and the conservative progress of those who followed in the Institute's activities, is felt throughout the country in every place where architectural advancement has a voice in the development of art and science. This year not only members of the profession will be present, but the National architectural societies of the world, as well as those representative in painting and sculpture, are invited to send delegates to this celebration of fifty years of Architectural advancement.

**Annual
Convention of
Ontario
Architects**

Contrary to custom, the Ontario Association of Architects will hold its next meeting at Ottawa. This will occur on January 15 and 16 next and promises to be a success, both in attendance and in the advancement of professional interests. The architects of Canada generally have had one of the most busy years known to the profession, and not alone on account of the work done, but on the advanced character that has appeared in their creations. They have, to a greater extent than their American confreres, refused to be influenced by the cheapness of lumber and have looked to the brick kilns and the stone quarries for materials for their structures. They are thus giving Canadian cities and suburban towns a substantial appearance that is a minus quantity in most of those in the United States. This convention should be prolific in the distribution of professional knowledge and in that strong factor which makes for a true and sustained code of professional ethics, the close acquaintanceship of architects generally. In fact, this is the most valuable feature of any convention and is the strongest reason for such gatherings. It is probable that the work of the convention will run in lines continuous with that so well begun a year ago in the discussion of civic art under the leadership of Mr. Horace Mc Farland and Mr. H.

Rutgers Marshall. The subject was so successfully presented before the 1906 convention and awakened such general interest that it should be a distinct feature in the proceedings of the coming meeting.

**Quarter Centennial
of Columbia
Architectural
School**

The quarter centennial of the School of Architecture of Columbia University, which was celebrated November 17th, calls to mind the rapid growth of architectural schools in the past twenty-five years. When this school was first organized, under Professor William Roach Ware, as a department of the School of Mines of Columbia University, there was small opportunity for students to become educated in the art outside of the offices of practitioners. Under the superb management as well as talent of Professor Ware the rise of this school from small and often unappreciated beginnings has been phenomenal and its impress upon the architecture of the country definite and valuable. While to the "Teck" and the "Beaux Arts", in Paris, architectural practice will give its meed of praise, the graduates of Columbia have given to the country some of its best architectural creations.

**Alaska-
Yukon-
Pacific
Exposition**

The success of the late exposition at Portland, Oregon, has probably been one of the factors that has suggested the propriety of holding a fair at Seattle. The primary object will be to show the resources of Alaska, Yukon and the Pacific Northwest, which has now advanced to so large a degree in commercial wealth as to urge that its activities be brought definitely before the people of the country at large. This Northwest country, of which Seattle is the nucleus, has been gradually attracting attention in the commercial world; but no more definite or convincing proof of its enterprise can be shown than the fact of having in one day raised more than half a million of dollars in support of the Yukon-Alaska-Pacific Exposition, which is to be held in Seattle in 1909. This is certainly phenomenal for a city of 200,000 inhabitants. John C. Olmsted (the son of the late Frederick Law Olmsted, who laid out the grounds of the Columbian Exposition and for three decades was the leading Landscape Architect of the United States) has been engaged to design the landscape features.



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THE WESTERN SPIRIT*

BY GEORGE W. MAHER, ARCHITECT

Concluded from November



SO much praise cannot be given the promoters and designers of our late vast expositions, erected by the public to the glory of progress and achievement. In the realm of enterprise these expositions were immensely grand and beneficial, surpassing anything the world has thus far produced. The interior of these buildings, although of a temporary character, indicated great engineering ability. From the architectural point of view, however, as applied to the exterior, these buildings, taking a broad point of view, were not altogether successful. I qualify this statement by saying they were inexpressive of the purpose intended. They were in many instances noble examples of the architectural art. The glory of the past was most illustriously shown in column, cornice and statuary. A grandeur was there that will ever live in the memory of the beholder.

Howbeit, the successful expositions of the future will not follow these examples. Buildings that are designed to house exhibits of a nation must be typical of the purpose intended; so that from viewing the exterior, one is reminded instantly of the true intent and purpose of the edifice, and like the beautiful Transportation building at our late Chicago exposition, will express the meaning of its creation. Is this not the educational intent of our expositions, to show our progress in architecture as well as in our manufacture or our commerce? Are not buildings that are expressive of a living truth more noble

than those resurrected from the hoary past? Should we not in our endeavors appeal to the mind rather than to the senses?

What means the Doric, the Ionic, or the Corinthian intrinsically except that they indicate a devotion to high ideals on the part of those who originated them? The detail of the classic school, the acanthus leaf, the egg and dart, etc., are as Greek to the ordinary man, the unknowable. He admires them unintelligently—his sentiments do not reach out toward his form of expression. Must it be said that the nature which surrounds us is unworthy of art expression? That the men and women we meet must admire the Greek leafage and flora and not the flower of our fields? Does nature around us ape that of the Greek or Goth? Is not our landscape beautiful, grand beyond expression?

You may force for a period certain minds of a nation into a false appreciation of foreign beauty, but there is little reason to hope from a philosophical point of view that this appreciation will be permanent. The reactionary spirit will ever assert itself, as it has time and again, showing conclusively that a people will always reach out for an expression all its own. There courses in the veins of the average American citizen a northern sentiment, a northern blood. His ancestry came from a far different climate than that of Egypt or of Greece. Now, back of all achievement is life and this is what will be expressed in the end. It has been said that our modern civilization is two-thirds Greek in sentiment. I hardly think this is a fair statement, for aside from race conditions, which I have already mentioned, our point of view in every instance differs materially from the Greek.

Our main glory is to foster the individual. This eventually emerges into a strong nationality, but

*A plea for a progressive art meeting Western conditions, read before the Chicago Architectural Club, March, 1906. Revised by the author for publication in THE WESTERN ARCHITECT.

the individual is pre-eminent. As I understand it, the Greek democracy was of the aristocracy, the Greek enslaved. His workmen were not all free-men. With us the individual is permitted to work out his destiny in fear and trembling, unassisted, but free. The Greek's task was given him and he was supposed to work it out methodically, or machine-like. The Greek's evolution, unlike ours, was influenced mightily by war or conquest or leadership. The battle of Marathon, for instance, had much to do with Greek progress, both in art and life. The dominating influence of a great leader like Pericles stimulated progress so long as he lived, so long as he dictated. The modern mind would not live in the plane of the Greek. It would seem too limited, too technical, too mechanical, too devoid of color, every day like the preceding one at a given task, true, attaining to certain perfection, but at the expense of the individual. The range of Greek life did not fill the being, and after fruition it passed away.

Our democracy exalts the individual, and, if I understand the spirit of the West, it proposes that the individual shall express his ideals and will encourage him so to do, irrespective of any dictum, irrespective of any fault or failure on his part so long as it is an honest effort. I repeat that here in the West the tide of any false conservatism will be turned; that here will originate a new school of architecture which will grow stronger each succeeding generation, until all the life assimilated in this new country will find full expression in marble and stone. Already the men who are fostering this new architecture and this new movement are gaining recruits and a broader range in their influence is being felt daily. It can no longer be said that the architect who follows the new does so at the peril of losing patronage. The young architect in our city who will grow in favor is he who embraces this new art. Recognition comes to him alike from the people, from the press and in publication. If an exhibition was held in these rooms to-night of the work done by these young men, and placed against the work executed by the so-called conservative men, you would find that most interest and enthusiasm would be centered in the work favoring the most progress. We do not stop to consider how virile is this new art and to what extent it is attracting attention, not only in our own country, but in Europe. Viewing the situation from abroad, they understand full well that a new expression of art must come from this country, an expression born of a democracy where the effort is not hindered to any extent by precedent

or tradition. Here ought to be unfettered opportunity for an expression of the new. Further, you will find that the opinion abroad is pronounced that this new art will evolve and gather headway in the central West, and even at the present time they are publishing such examples of this art from the West.

Much could be said in this connection explaining theories of design that would be of interest to the student. Some are working on the motive and rhythm theme, understanding that nature and music are phases of inspiration to be formed into the concrete and with the real living motive that of surrounding life, the production of great works of art should be forthcoming. It is no longer necessary for any school or student to rely only on precedent for the teaching of architecture, since all around us is motive power, nature, music, life. It is unfortunate that there is no text book as yet compiled that would give the technical schools foundation for the instruction of this new theory; however, certain buildings are already in evidence and more of them will soon be erected and eventually will come the professor and the book.

I will close by stating that wherever in the history of the past we have found great achievement in whatsoever line of endeavor, there it is that men lived who heeded well the spirit of their times and who drank deeply from the inspiration of the life which surrounded them and who did not in any manner strive to conceal that life, humble and ordinary though it may have been, but whose strong conviction was to live honestly and truthfully, painting as it were a living portrait, giving full expression to what they saw. Ever will men of this type be benefactors to the world, and if you men here tonight heed this truth, go to your task and express to your best ability the spirit and life which surround you. Rest assured that no greater boon is yours to perform and that there is no greater compensation due man than that which comes from the execution of a strong and righteous conviction.



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RESORTS AND BEACHES AROUND
LOS ANGELES

PART VI—SANTA CATALINA ISLAND

BY WILLIAM LE BARON JENNEY



Leaping Tuna

ON a beautiful day in June, 1905, with a small party, I went on board a fine, large steamboat at San Pedro, the seaport of Los Angeles. All days during the summer are beautiful and the Pacific was as smooth as its name would imply. At 10 a. m. the boat threw off its lines and steamed out into the harbor and around the big breakwater over towards Long Beach, which is rapidly coming into favor, particularly for its bathing facilities.

Leaving Long Beach we steamed across the straits, thirty miles, to Avalon, the one village of Catalina, with the sugar loaf on the right, or north, as one enters the bay. When there has been a windstorm, which is rare, the surf rolls in prettily on the beach. Usually, however, the water is as shown in the picture, looking south from the sugar loaf. The bay in front of Avalon is usually perfectly smooth and dotted over with lines of row boats, to the south of the sugar loaf. Occasionally there is a beautiful effect of moonlight, in the evening, from the hotel veranda, as one walks from the pier to the Hotel Metropole, which is in front, a little to the right, where we all sought accommodations for our short stay on the island, and a very good hotel we found it.

The next morning, after a fine breakfast of eggs, fish and bacon, fresh rolls and berries, we started out to explore the island. First we took a trip in a small glass-bottom boat. In the bottom is fitted water-tight a deep box with a plate glass bottom. The glass is below the agitation of the waves, so that the view is perfect for a considerable distance, giving a clear view of everything for more than thirty feet

below the boat—a depth sufficient to show a garden of beautiful kelp, with fishes of many kinds swimming in and out, some large gold fish and the flower-like sea anemones and sea urchins and many other marine annuals and plants. These small boats go but slowly and stop whenever desired, so that the view is more satisfactory than in the larger steamboats or gasoline launches, which latter, however, give their passengers views of the many sights near the shore. The Arch Rock, the Bathers, Descayo, or the Banning habitation, "Pebbly Beach", where subdivisions and habitations with doors transform it and create another



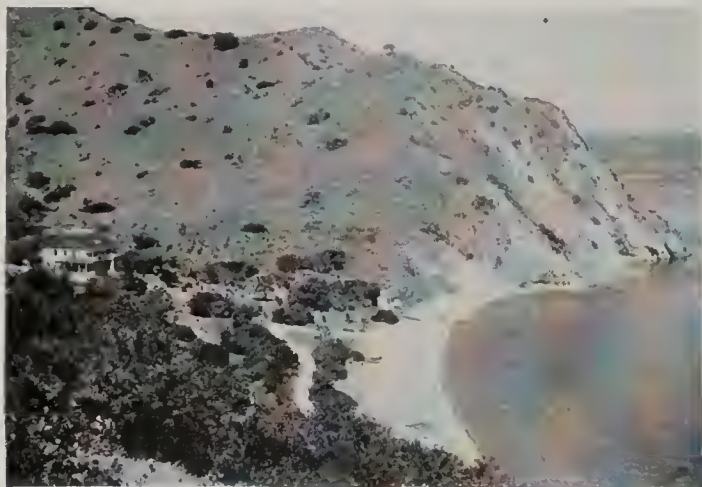
AVALON, LOOKING SOUTH FROM SUGAR LOAF

village—Seal Rocks, where it is a sight to see the seal slide off into the water, play about a little and climb up to slide off again. Gulls are flying about in great numbers—they are very tame as they are never molested. We saw many places that we decided we would visit more closely when on the drive over the new stage road, The Club House, the Moonstone Beach, etc.

We passed many fishing boats and saw a few fish taken into the boat, mostly "yellow tails", of which there are great numbers around the Island. We reached Avalon in time to take a bath before din-



AVALON, SANTA CATALINA ISLAND, CALIFORNIA



BIRDSEYE VIEW OF "DESCANSO"

ner. The young folks of our party—the two graduates from Vassar and the two Yale men—went into the bay, but our chaperon preferred a hot salt-water bath, to be taken in the bath house.

At dinner, which was excellent, with a bottle of very good white California wine, we talked over our days spent sight-seeing, and what we should do to-morrow. We all agreed to take the stage drive over the new road, from which all the dangers of the old road had been removed, though we were unable to learn that anyone had ever been injured on the road, only that some places were actually frightful should an accident happen—all would certainly be killed—but none ever did happen.

The evening we passed listening to a very good orchestra concert from seats under the trees, just off the principal street. The next morning at breakfast the hotel proprietor came to us, stating: "The tuna are here; you will want a launch to see the fishing, even if you do not fish yourselves. Shall I engage a boat for you? They will soon all be taken." We consented at once and asked him to please do so.

As soon as we had finished breakfast, "Jack" and I lighted our cigars and were conducted with the three ladies to the boat, a gasoline launch that would accom-

modate eight comfortably, and were off to the fishing grounds. It was evident that we were fortunate in having a boat, for every boat at Avalon was in use and all rushing for the fishing ground, which we soon reached and the excitement began. We saw the fish breaking and a fisherman working to hook one, which was soon accomplished, and he commenced to play him, letting him run, then reeling in, until, after some time, he succeeded in landing him with a net into the boat.

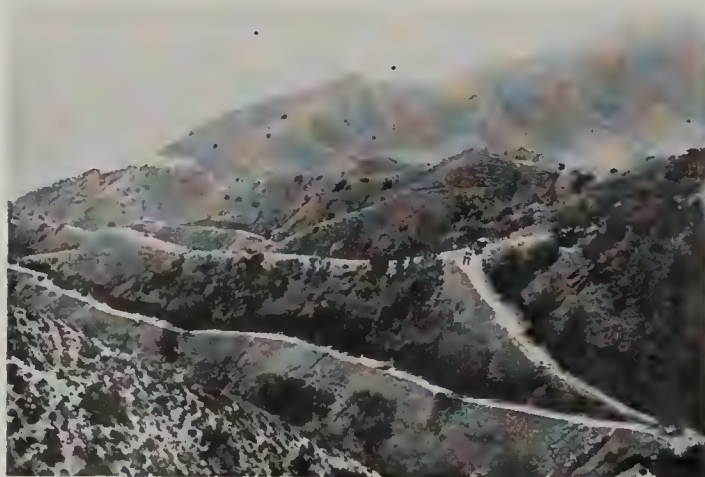
As we had seen a fish caught, we went back to Avalon and took our seats on the stage, which we had engaged before leaving, and started on the most picturesque and enjoyable stage coach ride any of us had ever taken. We saw the fishermen catching tuna quite distinctly. We had our field glasses and several times stopped to see the sport. On our arrival at the Club House we stopped for refreshment. We were served with an excellent lunch. Mr. Banning had



DESCANSO CANYON

kindly put me up at the club and had given me a card as we were starting. We visited the Descanso Canyon near his house. While there we saw the so-called tree elycium; it is an enormous bush, said to belong to the banyan family. All the branches touching the ground take root. We made another stop at Eagle's Nest, where we found some excellent port, and milk for the ladies, lighted a fresh cigar, and crossed the island to see a very pretty waterfall. We reached Avalon, took a bath, and then to dinner and to the concert in the evening. This was our last day at Catalina.

To those who play golf the island boasts links the most picturesque in the country, while for the hunter, on the southeastern portion of the island is the hunting preserve, the home of the Catalina Island wild goat, which affords fine sport, enticing the sportsman from peak to peak, and down into deep canyons, through a beautiful and picturesque country.



STAGE ROAD FROM SUMMIT

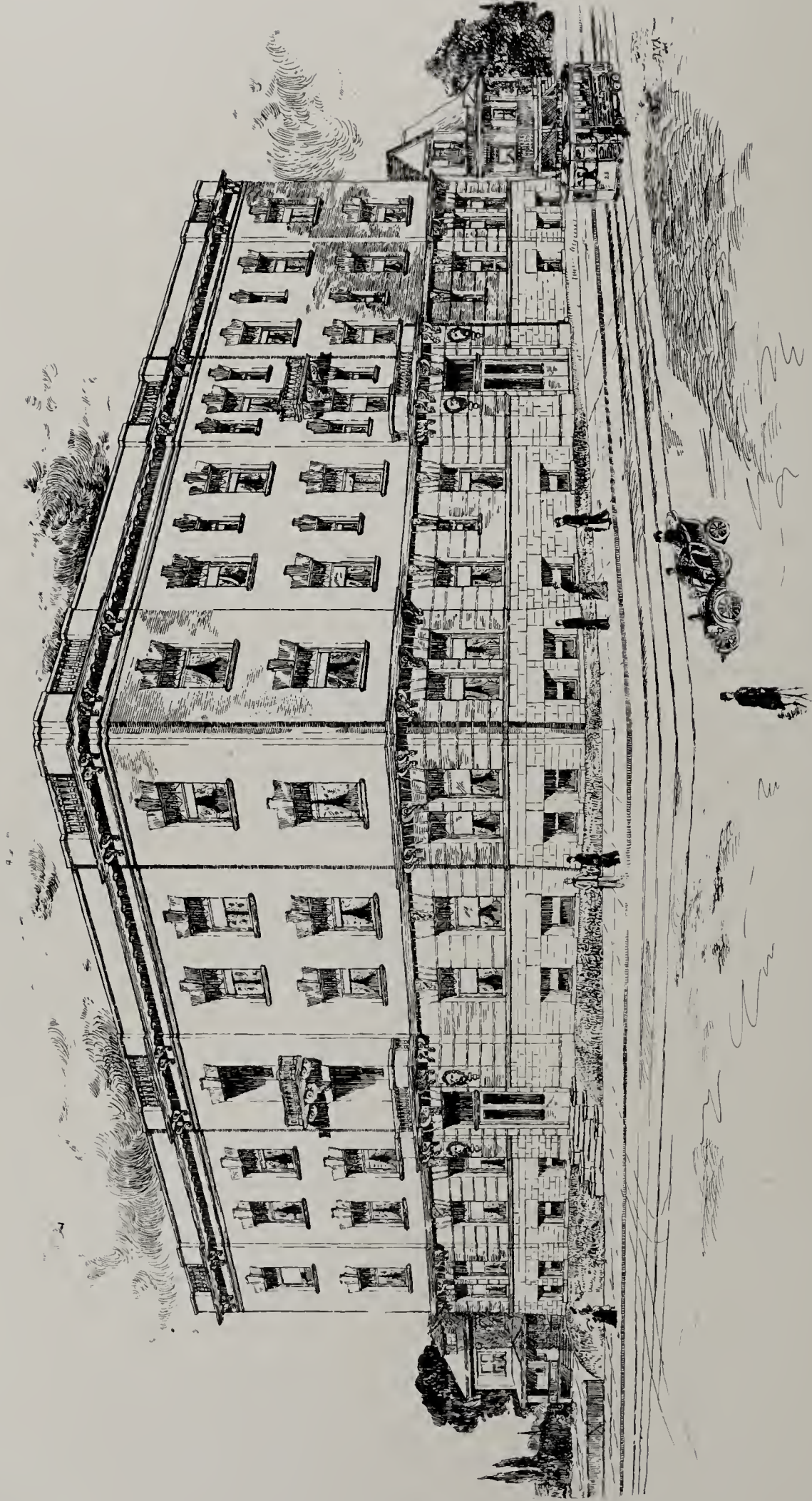
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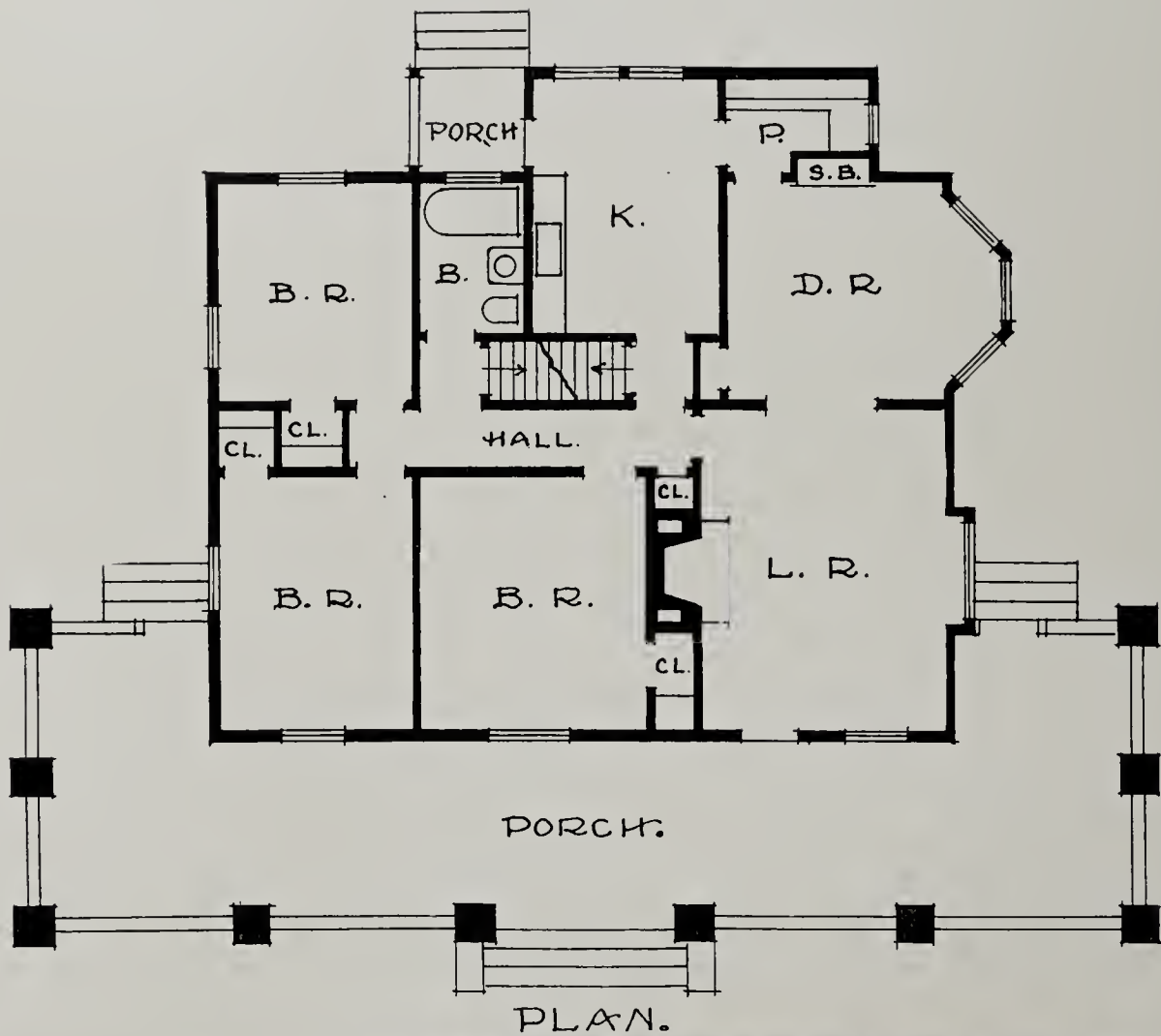
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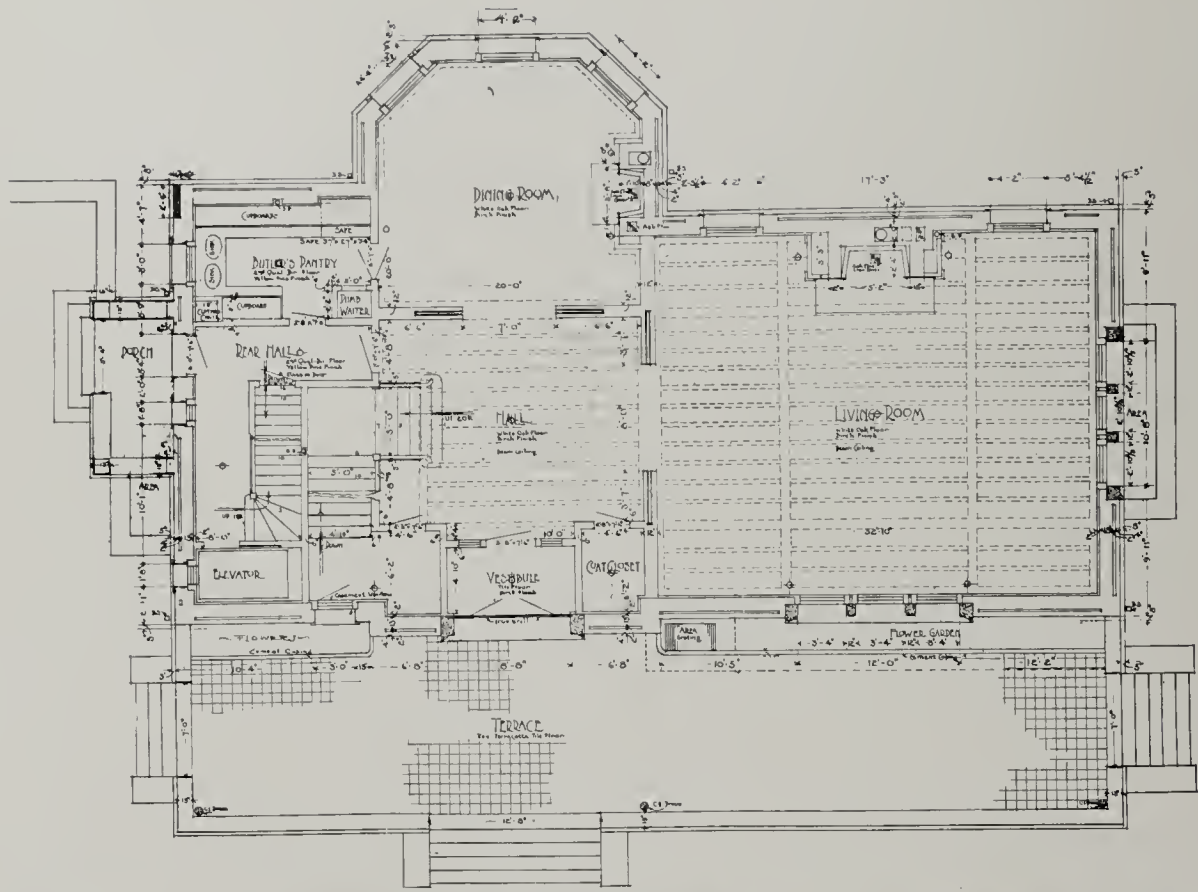
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TROMBONE CHOIR OF THE UNITAS FRATRUM

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A BROTHER OF THE EPHRATA

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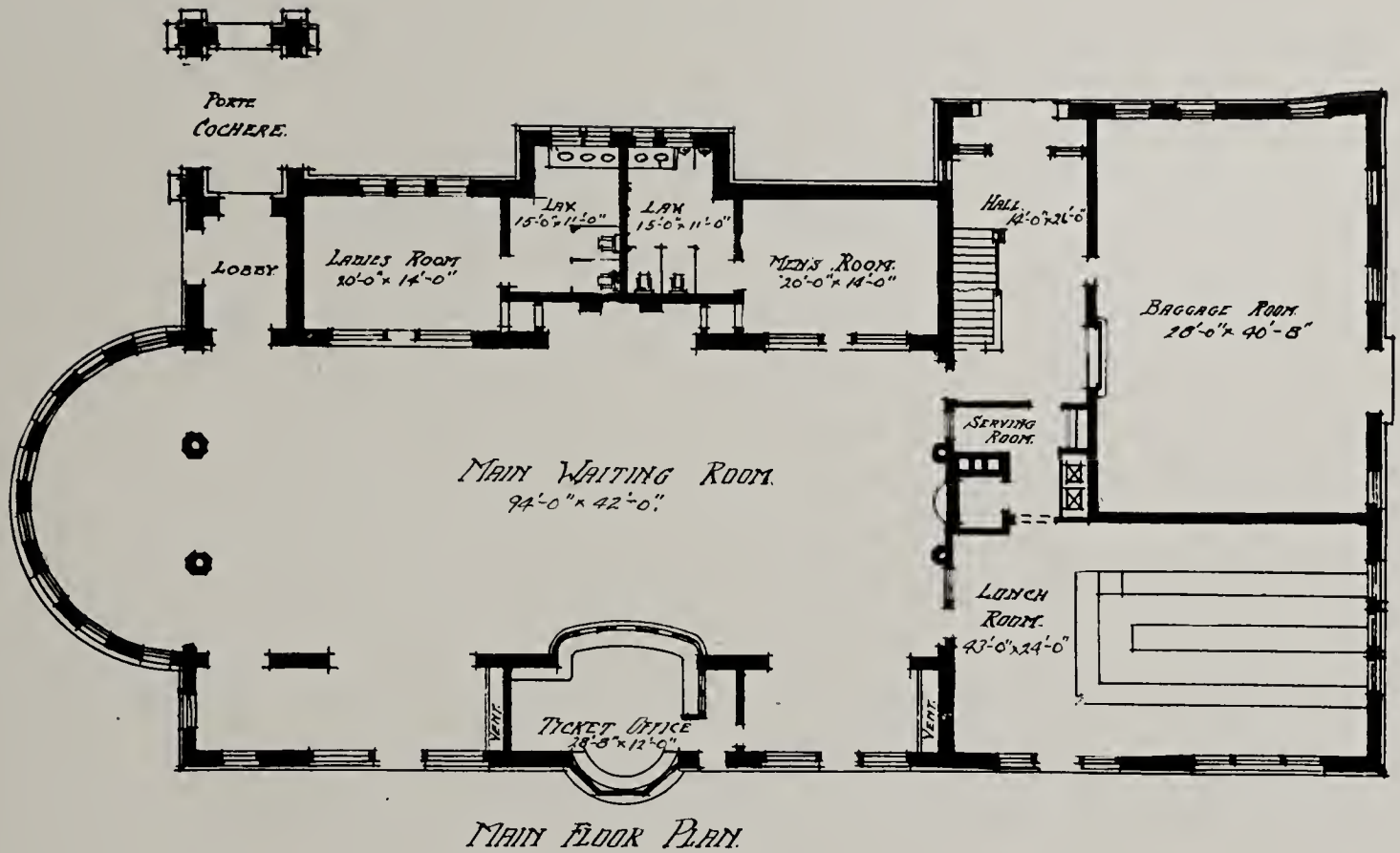
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STATION FOR THE GRAND TRUNK RAILWAY SYSTEM, AT BATTLE CREEK, MICHIGAN
 SPIER AND ROHNS, ARCHITECTS, DETROIT, MICHIGAN

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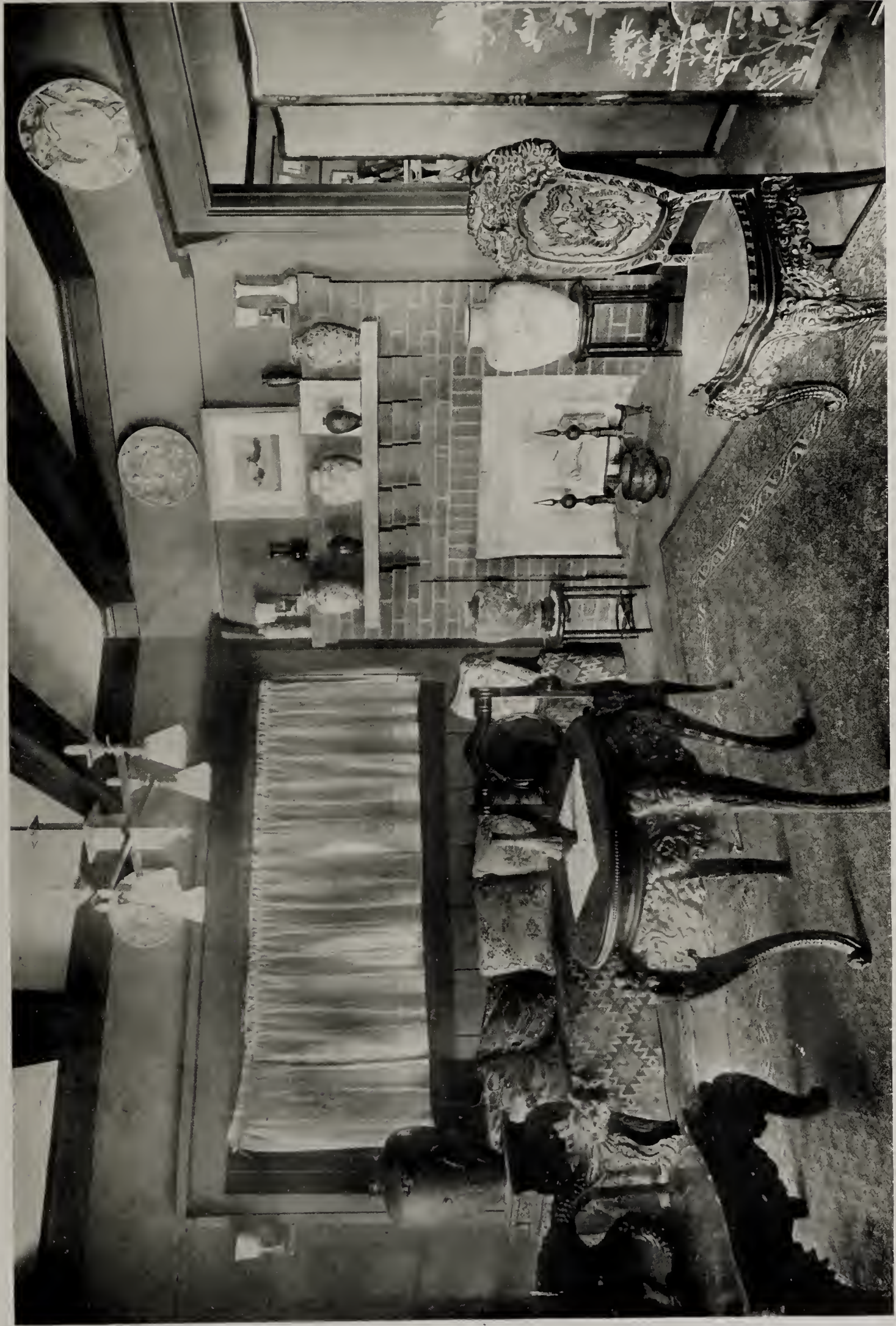


GENERAL WAITING ROOM



DETAIL OF FIREPLACE IN GENERAL WAITING ROOM

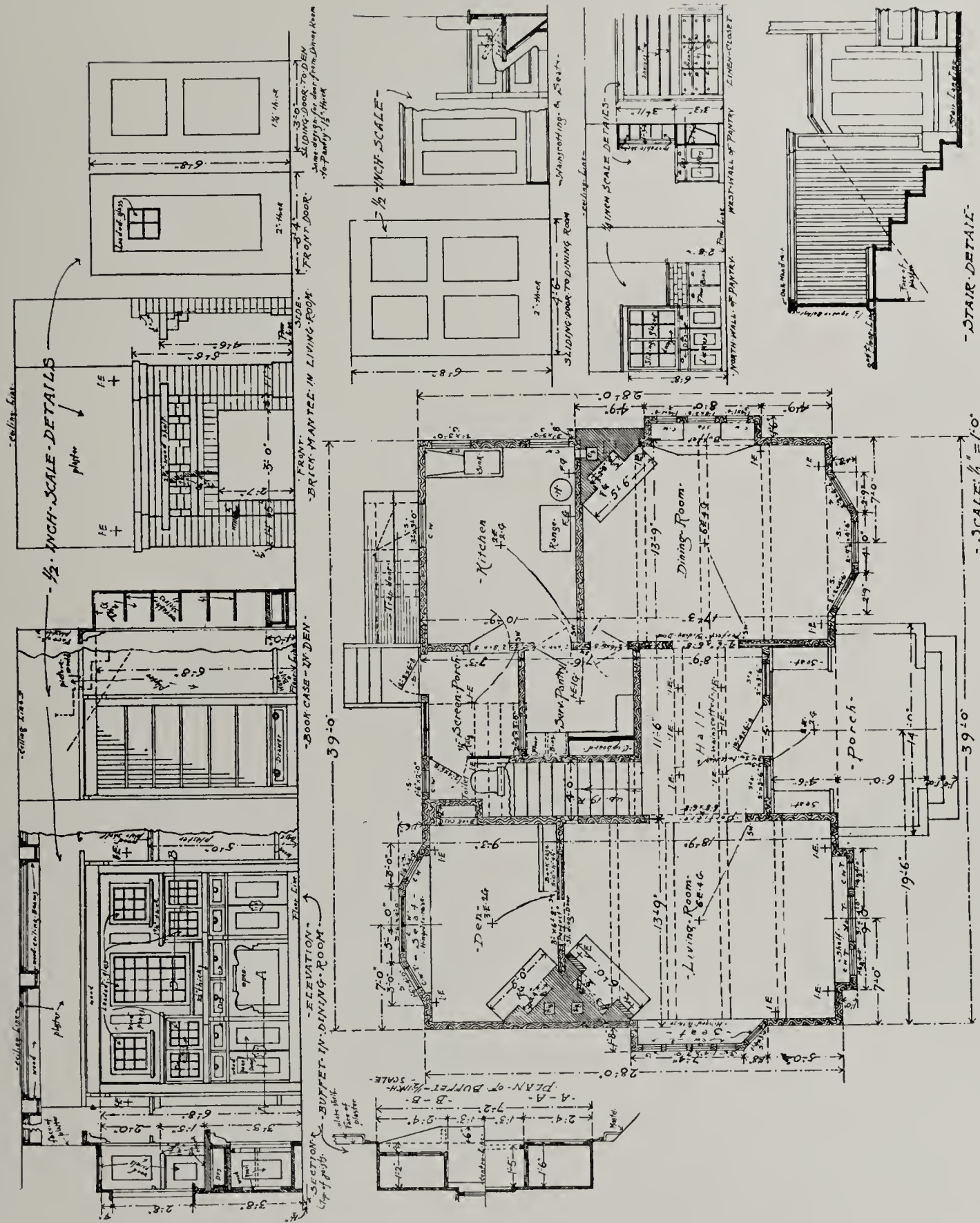
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LIVING ROOM IN BUNGALOW OF MR. GEORGE STEWART, LOS ANGELES, CALIFORNIA

FERNAND PARMENTIER, ARCHITECT

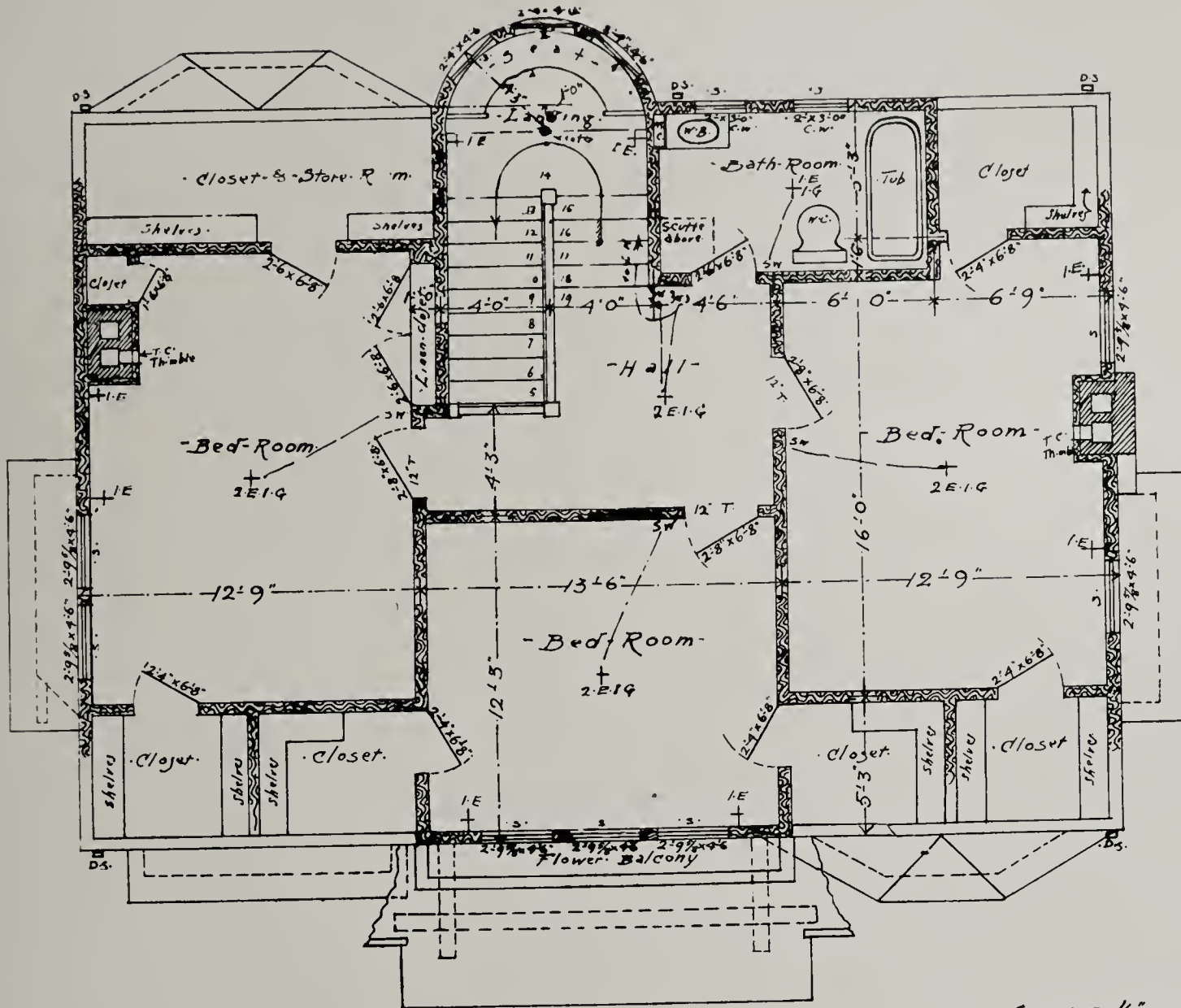
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PLAN AND DETAILS OF BUNGALOW OF MR. GEORGE STEWART, LOS ANGELES, CALIFORNIA

FERNAND PARMENTIER, ARCHITECT

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SCALE: $\frac{1}{4}'' = 1'-0''$

SECOND FLOOR PLAN



BUNGALOW OF MR. GEORGE STEWART, LOS ANGELES, CALIFORNIA
 FERNAND PARMENTIER, ARCHITECT

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FIRST FLOOR PLAN

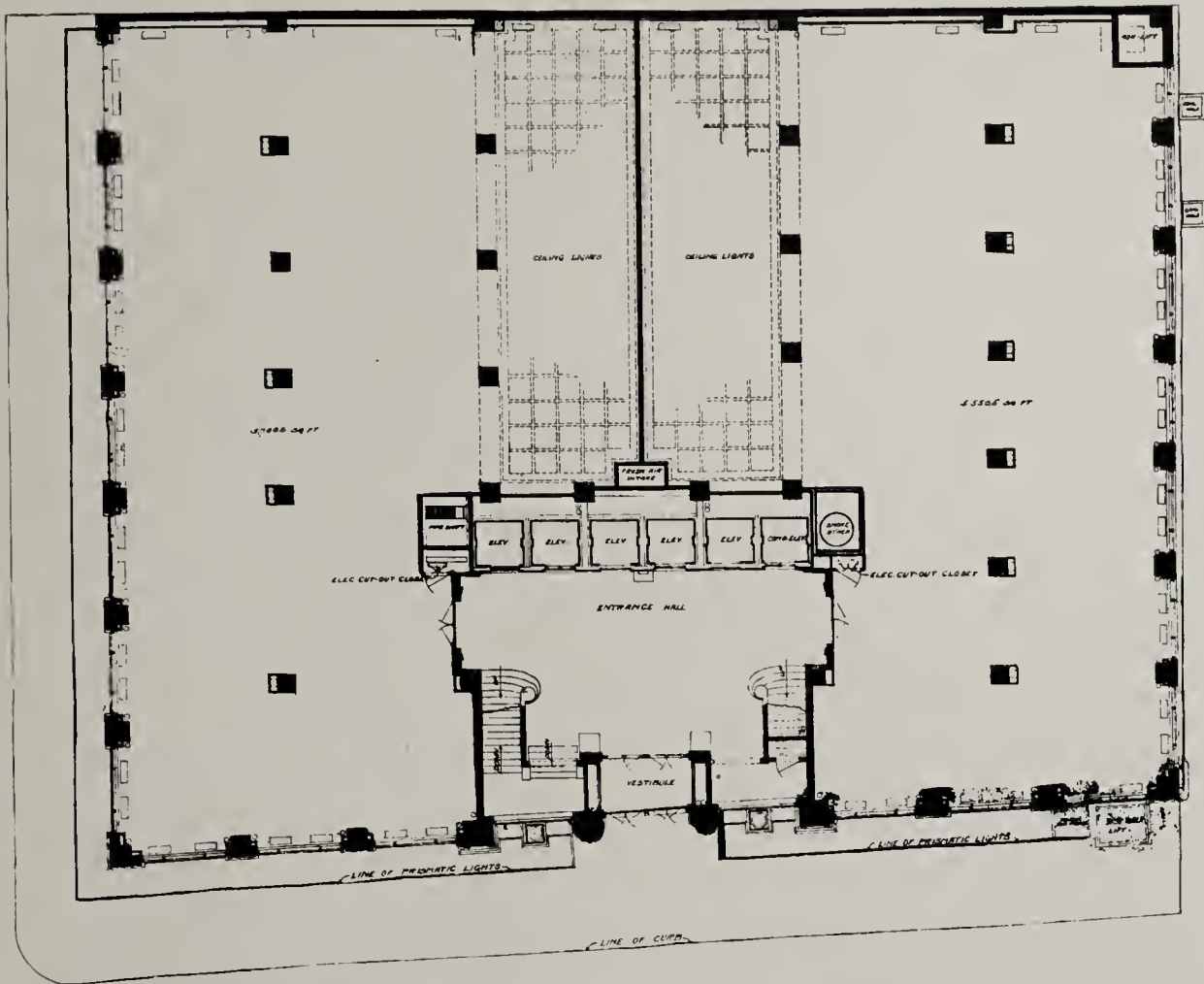


SECOND FLOOR PLAN

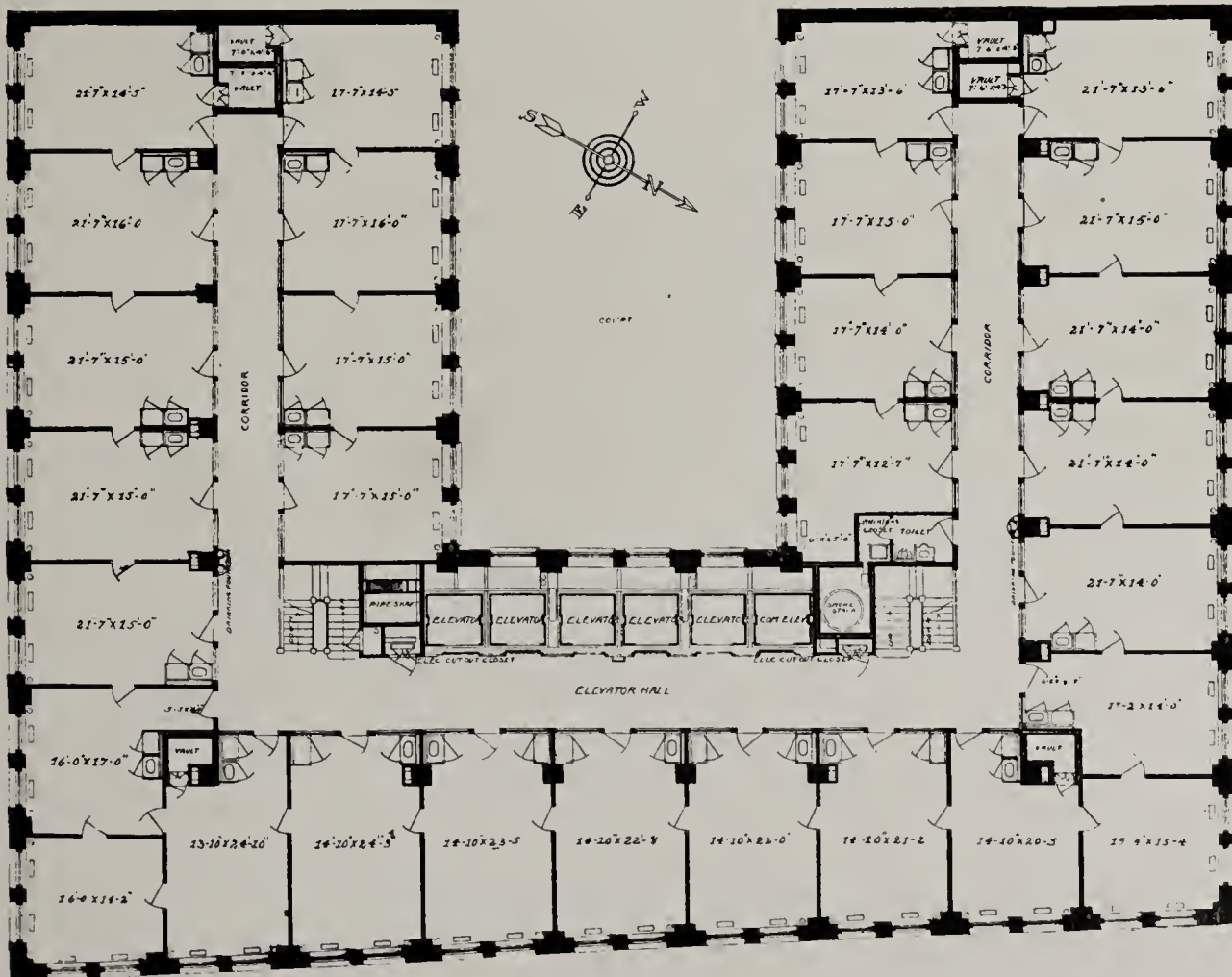
PLANS OF APARTMENT HOUSE FOR MRS. MAUD L. KEMP, SPOKANE, WASHINGTON.

ALFRED JONES, ARCHITECT

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FIRST FLOOR PLAN



TYPICAL FLOOR PLAN

PLANS OF FORD OFFICE BUILDING, DETROIT, MICHIGAN
 D. H. BURNHAM AND CO., ARCHITECTS, CHICAGO

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The sewage problem of the town of Avalon, the only one on the island, is solved simply and effectively. The town is so situated on rising ground that all drainage flows quickly to the ocean. There is a main across the bay, situated some distance from the shore, into which all sewage is collected. The main is sloped to the eastward, or in the direction of the



"DESCANSO", RESIDENCE OF HANDCOCK BANNING

current and prevailing winds, and the sewage is thus taken care of without inconvenience.

The next day, after breakfast, we left by the boat for San Pedro and then by train for Los Angeles. We all declared that we had spent the time most enjoyably. We found time to make a tour of the beaches by the observation car from in front of our hotel, "The Angelus". In a fine special car we made the entire trip, mostly along the edge of the Pacific, stopping at each of the beaches in turn, lunching at Venice, reaching our hotel in time for dinner, and then to the theatre, for there was a very good light opera that evening.

FIRE RESISTANCE IN CONCRETE



IN seeking to secure data in regard to the fire-resisting qualities of concrete used structurally, the British Fire Prevention Committee have published results of some experiments along this line on floors of channel houses and concrete reinforced with light steel joists.

The tests were made on two forms of Concrete floors, one in which the aggregate was ordinary gravel, or what is there known as Thames ballast concrete, and one floor of clinker and coke-breeze concrete.

The construction of the floors in both tests were practically identical, the only difference being the composition of the concrete. Both floors were designed to carry a load, including the weight of the floor,

of 392 pounds per square foot. The steel work rolled steel, broad flanged beams each $10\frac{1}{4} \times 10\frac{1}{4}$ ins. 4×17 ft., weighing 61 lbs. per linear foot, placed transversely across the hut. These beams divided the hut into three bays, 7 ft. between centres, which were subdivided longitudinally by small $4 \times 1\frac{3}{4}$ -ins. steel joists, weighing 5 lbs. per linear foot, placed 2 ft. 4 ins. between centers. These joists were not connected to the steel beams, but simply rested on bricks placed on the flanges of the beams. The ends of each steel beam were connected longitudinally to the adjoining beam by $\frac{3}{4}$ -in. wrought iron rods, but this provision was considered unnecessary and of little advantage by the designers. Expanded metal, $1\frac{1}{2}$ -ins. mesh, $\frac{1}{8}$ -in. $\times 16$ gauge bare strands, was placed under the lower flange of each steel beam and turned up over the lower flange about $2\frac{1}{4}$ ins.

The Thames ballast concrete was composed of 2 parts washed sand, 4 parts unscreened washed gravel and $1\frac{1}{4}$ parts Portland cement. In the floor of clinker and coke-breeze concrete, the concrete encasing the small steel joists and forming the body of the floor consisted of 3 parts furnace clinker broken to pass through a $\frac{3}{4}$ -in. ring, 2 parts of sand and 1 part Portland cement, while the concrete casing to the four steel beams was composed of 5 parts coke breeze, broken to pass through a $\frac{3}{8}$ -in. ring, and 1 part Portland cement. The Thames ballast concrete was allowed 70 days (summer) for drying while the clinker and coke-breeze concrete was allowed 65 days (winter.)

The ceilings of the floors tested were 8 ft. 1 in. above the pavements of the chambers, the required loads on them being obtained by placing bricks on the wooden flooring, which was nailed to wooden strips placed in sinkings in top of the concrete. The fuel used was gas admitted through four 5ft. \times 3-in. mixing chambers of fire-brick, and the temperatures were obtained by Roberts-Austin pyrometers placed at various points in the hut.

The results of the tests were as follows:

The floor of Thames ballast was heated for four hours, the highest temperature in the hut, at the end of that time, being 1,680 degrees F., the lowest 1,600 degrees F. Water was then applied 4 min. 20 sec. at about 65 lbs. pressure. In 22 minutes after the commencement of the test the soffit of the concrete floor began to split off in patches, and continued to do so at intervals during the test, while in 75 min. the whole concrete casing of the lower flange of one of the beams fell, a second one falling in 100 min. The steel beams began to deflect in 20 min. and continued to do so, the more rapidly after the concrete casing fell, until a maximum deflection of 7 3-10 ins. was recorded. In 215 minutes the concrete between

the joists of the north bay began to fall, and the wooden flooring became ignited, while the lower flange of the beams, where the concrete casing had fallen, were heated red hot when the heat was shut off at the conclusion of the test. On applying the water more of the soffit fell, and eventually nearly all the concrete remaining between the cross joists of the north bay fell, the wooden floor becoming ignited.

Four days after the test the following observations were made: The wooden floor was burned away between seven of the small joists and the concrete had fallen, while all of the remaining flooring was discolored on the underside, although showing no signs of fire on top. The permanent deflection of the steel beams was $4\frac{7}{8}$ ins., none of the joists being dislodged, bent or twisted. The fallen concrete and the under surface of the concrete left in position was disintegrated.

The floor of clinker and coke-breeze concrete was heated for four hours, the highest temperature in the hut on the turning off the heat at the conclusion of the test being 1,890 degrees F., the lowest 1,850 de-

grees F. Water was applied by two $\frac{1}{2}$ -in. nozzles at about 60 pounds pressure, for 5 min. Small pieces of concrete began to split off the soffit in 25 min. after the commencement of the test, other small pieces falling in 31 and 45 min. In 50 min. the soffit of the concrete showed no change, but as the heat increased it gradually became incandescent and remained so until the end of the test. On applying the water some of the concrete on the edges of the beams was detached and the soffit of the floor was eroded. The maximum deflection of the floor was 0.35 in.

Three days after the test the following observations were made:

The top surface of all the floor boards was intact and showed no signs of fire, although some of the boards were discolored on the under side, and one strip, where it had laid across a crack, was charred, but neither fire nor water had passed through the floor. Fine cracks had developed in the top surface of the concrete, but the general conditions of the concrete on the under side of the floor was good, although the quality had deteriorated and was some-



TOWER, PROPOSED SCHEME FOR LAKE FOREST COLLEGE
FROST AND GRANGER, ARCHITECTS



PARIS. — *Eglise Notre-Dame. Clément*

DETAILS OF SCULPTURE,
NOTRE DAME, PARIS

what friable. There was no permanent deflection of the floor.

A comparison of these two tests clearly demonstrates the superiority of clinker and coke-breeze concrete over Thames ballast concrete, and the unreliability of the latter as a fire-resisting material at high temperature. The tests also show that, when broad-flanged beams are used, the cross joints do not need to be connected to these beams if the concrete is carefully placed; but this construction exposes a wider flange to the fire, which must be carefully protected.

THE BIXBY HOTEL COLLAPSE

BY C. A. P. TURNER, C. E.



THE failure of the Bixby Hotel, at Long Beach, Cal., on Nov. 9th, in which several men were killed and injured, raises the question as to the reliability of reinforced concrete structures, in the mind of the layman, particularly in view of the verdict of the jury, which is reported as follows:

"We, the jury, find the men came to their death November 9th, 1906, by being crushed by partial collapse of Hotel Bixby, under construction at Long Beach. We find from evidence given that such collapse was occasioned by prematurely removing part of the timbers supporting the fifth floor, and proceeding with construction of the roof before cement beneath was properly cured. We find no person criminally liable for such fatality".

As a matter of fact, there is never a failure of an engineering structure which, if intelligently examined, will not reveal reason of its collapse, either in faulty design or faulty workmanship, regardless of the question whether the structure is of concrete, steel, or timber, and the Bixby Hotel is, in our judgment, no exception to the rule. There are throughout the country numerous buildings in reinforced concrete which have been tested with the most severe loads at an earlier period than that at which these forms are reported to have been removed from this construction, and without any injury to the work.

In the "Engineering News" of November 29th, there appear some excellent illustrations, from photographs, of this failure. In these the portion of the work which collapsed is plainly seen in the ragged, sheared ends of the beams and fragmentary portions of the columns which remained upright. Another view illustrates the same point—the fracture of the beam right at the point of support. Another shows clearly the failure of

the girder by shearing, and one the reinforcement of the main girder. In this it is noted that the long bars in the bottom of the beam, if placed exactly symmetrical to the center of the span, only project three inches into the column, at each end, and that, if they were not placed symmetrically with the center, as could be expected of ordinary workmen, within two or three inches, it is quite likely that in places the end of the bar may have been even outside of the skin of the column. Examining the beam for shear at the point of the support, there seems to be absolutely no effective reinforcement whatever, and the entire end shear of the beam must have been carried by the concrete. Even were the concrete six months old, the working stress on it would be, figuring the weight of the top story concrete and the centering and the weight of the floor itself, three times what is usually considered a safe shearing value on concrete that is thoroughly cured, to say nothing about concrete that is three weeks old.

Another point which should be observed in this design is that there is absolutely no tie over the support; in other words, no provision whatever is made for wind load or lateral forces or flexure, due to concentrated loads.

The section of the columns, as given in the "Engineering News", is as follows: Basement to first floor, 21x21 ins.; four ½-in. round steel rods. Height, top of floor to top of floor, 11 ft. First to second floor, round, tapering, 26 ins. dia. to 22 ins.; six ¼-in. round steel rods. Height, top of floor to top of floor, 19 ft. Second to third floor, cols. 19 and 21, 16x16 ins., four ½-in. round steel rods. Height, top to top of floors, all floors, third floor to roof, 9 ft. 6 in. Third to fourth floor, 10x10 ins., four ½-inch round steel rods. Fourth to fifth floor, 8x8 ins., four ½-in. round steel rods. Fifth to roof, 8x8 ins., four ½-in. round steel rods. Capacity figured on first floor to 150 lbs. plus dead load; all other floors, 60 lbs. per sq. ft., plus dead load.

The "Architect and Engineer of California" gives quite a discussion of this failure by Mr. John B. Leonard, C. E., from which report, and the proportions of the concrete which is said were used, it would seem that the mixture was such that, with a satisfactory design, there should have been no difficulty with the work. Mr. Leonard criticises the connection of the beams to the columns as lacking in stiffness for lateral forces, but does not go into the question of shear, which we have called attention to in this article. He states that there was an insignificant amount of lateral hooping, and, as noted, the vertical reinforcement of the columns was insignificant in the extreme. His general conclusion was that only the opponent of reinforced concrete

construction would dignify the columns of the Bixby Hotel by classifying them as examples of this type of construction. It is true that they contain some metal, but the amount is so deficient and the placing so careless and inefficient that they can never develop the strength that columns of such dimensions should possess, and will have, when properly reinforced.

Notwithstanding the defective reinforcement of the columns, this feature of the design would probably never have occasioned collapse had it not been for the faulty detail which we have pointed out in the beam construction.

ASSOCIATIONS

SOUTHERN CALIFORNIA CHAPTER A. I. A.

The Annual Meeting of the Southern California Chapter of the American Institute of Architects was held at Alamitos Bay, California, at the invitation of Messrs. A. M. and A. C. Parsons, Saturday afternoon, October 13, 1906. A special car conveyed the Chapter, which was then entertained by Mr. A. M. Parsons, who had several steam launches in readiness to take the party around the different lagoons for a tour of inspection of the newly-laid-out town of Naples, the party returning to the Boat Club House at Alamitos Bay, where the meeting of the Chapter was called to order by President A. F. Rosenheim, the following members answering for the roll call: A. B. Benton, C. H. Brown, F. G. Brown, J. Lee Burton, P. W. Ehlers, John C. Hillman, Myron Hunt, Sumner P. Hunt, Frank D. Hudson, J. W. Krause, Jno. P. Krempel, Octavius Morgan, S. T. Norton, Fernand Parmentier, J. N. Preston, Thos. Preston, Burges Reeve, F. K. Roehrig, A. F. Rosenheim, R. F. Train, August Wackerbarth, R. E. Williams, G. H. Wyman, Timothy Walsh and W. L. B. Jenney. The following gentlemen were present as guests of the Chapter: Messrs. C. Leonardt, Harry Iles, J. J. Backus, B. Morris and Mr. A. M. Parsons.

After the reading of the minutes of the previous meeting and his report by the secretary, the report of the Board of Directors was presented by Mr. Octavius Morgan. The report showed a detailed account of the acquisition of property by the Chapter to build thereon a Chapter House. The reading of the report was followed by a general discussion of the same by the Chapter members present, after which Mr. J. N. Preston moved, seconded by Mr. A. B. Benton, to accept the report as read and to adopt all its suggestions and place the same on file. Mr. Morgan suggests as an amendment to that motion that the original committee on Chapter-House property be retained to solicit further subscriptions to clear the remaining indebtedness on the lot, and

to attend to all the details of incorporation, etc., which was carried.

The President's address then followed, which was received with considerable applause and duly ordered spread upon the minutes.

Nominations and election of officers being in order, nominations for the president for the ensuing year were now called for. Mr. John P. Krempel then spoke in eulogistic terms of the retiring president, Mr. A. F. Rosenheim, pointing out the many valuable services he had rendered to the Chapter during the two terms that he had served. He then nominated Mr. Myron Hunt as president. Mr. C. H. Brown was also nominated. Twenty-two ballots were cast, Mr. Hunt receiving twelve and Mr. Brown ten votes, at which the President announced Mr. Myron Hunt as his successor for the ensuing year.

The remaining officers elected are as follows: Vice-President, C. H. Brown; Secretary, Fernand Parmentier; Treasurer, August Wackerbarth; Board of Directors, A. F. Rosenheim, Octavius Morgan and J. Lee Burton.

A banquet was served at the Inlet Inn, which concluded the annual meeting of the Southern California Chapter.

PUBLICATIONS

TRIAL BY FIRE AT SAN FRANCISCO. The evidence of the camera. Published by the National Fire Proofing Company. Illustrated by sixty half-tone plates.

Probably no stronger indictment against makeshift methods of fire-proofing that does not fire-proof has ever been made, and it is devoutly hoped will ever again be possible, than this volume, illustrating the effect of the San Francisco fire on large business structures. The series of photographs is complete and tells the story in a definite, forcible manner that needs no explanation by text matter other than the name of the building and the materials of which it was composed.

As the close observer could not in all cases tell how far the damage by shock alone extended, the evidence of the fire damage stands out boldly and certain. It goes into the parsimony of the owner who refused to adopt the modern, sane, practical and abundantly tried-and-proved methods for covering the steel skeleton of a building (usually against the earnest objection and warning of the architect), and reads an indictment against him, which was made effective by judge and jury—Fire, and his punishment in the San Francisco disaster was complete. It arraigns the architect who, to a greater or lesser extent, was to blame, and he also receives his meed of punishment in proving him incapable or weak. It also proves to the building public the folly of cheap or halfway measures in dealing with the most

destructive element known to our national economy.

Architects should study this "testimony of the fire" carefully and thoroughly. They should keep this volume of indictment at hand for instant reference and argument whenever the subject of fireproofing comes before them and the client urges obsolete or "just as good" methods. Trust companies and capitalists should, even more than the architect, give it careful review in the interest of the fortunes they represent. Beyond all this is the humanity side, that makes for the safety of those who inhabit these structures after they are completed. While this volume is published by a fireproofing company, interested in a special system, and to its enterprise is due the gathering and production of this mass of incontrovertible evidence, they cannot be charged with partiality, for "the camera cannot lie". The evidence was there to be photographed and "he who runs may read".

The volume includes photographs of the interiors of twenty-six of the largest office buildings and hotels of San Francisco, with over sixty large photographs, is printed in excellent taste, and in the absence of text matter leaves all argument to the photographs, which tell the story completely.

PRINCIPLES AND PRACTICE OF PLUMBING. The latest work on Plumbing and Sanitation published by the Standard Manufacturing Company, Pittsburgh, Pa. Price, \$3.00.

"Principles and Practice of Plumbing" is a most complete treatise on the subject it is designed to cover. It is compiled from "Modern Sanitation", in which chapters of the work have been appearing continuously since the issue of February, 1905.

Favorable comment has not been confined to any one branch of the trade nor to any single country. Each trade or profession allied with plumbing and sanitation, and each country in which "Modern Sanitation" is circulated has come forward with praise of such a quality as to authorize publishing "Principles and Practice of Plumbing" in book form and make it a standard text-book on the subject of plumbing and sanitation.

The chapters already published are a fair index of the complete article, but do not by any means comprise the entire series. Fully half the book remains unpublished—an amount that would take over two years to publish in serial form—therefore, owing to the great need for a standard work on plumbing, and the urgent demand for its immediate publication, the editors of "Modern Sanitation" have decided to discontinue publishing "Principles and Practice of Plumbing" in serial form at an early date. The book when published will contain about 300 pages.

The scientific knowledge the article imparts and the data it contains make it apparent that Mr.

Cosgrove has made a deep and thorough study of the subject and has spent much time in research. The illustrations, of which there are many, are all original drawings, made under the author's personal supervision.

BUILDING DETAILS, Part 1. Ten drawings from the Architect's working drawings, and verified as executed. Drawn and published by Frank M. Snyder, Architect, 2754 Broadway, New York. Price, \$1.50.

These details are drawn three inches to the foot and the diagrams are half inch to the foot and are printed on a good quality of paper. They are intended to give the profession exact data of executed work when designing similar work, and though seldom, if ever, the same detail can be used for a place other than that for which it was designed, the drawings are valuable in the working out of similar problems. The details given are from the work of McKim, Mead and White, Boring and Tilton, Ackerman and Ross, Albert Randolph Ross and H. Van Buren Magonigle, and the details represent some of the best examples of the work of these architects.

THE PROCESS OF CONCRETING, reprinted from "Concrete Plain and Reinforced", by Taylor and Thompson, published by the Universal Cement Company, Chicago.

Commencing with an elementary outline of the process of concreting, calling attention to the wide diversity of cost, according to how employed, the volume gives carefully prepared notes on where concrete can be best applied and in what proportions for proper strength. The selection of dry materials and their proper measurement is described and illustrated, tools and apparatus are mentioned, and the construction of forms form valuable chapters. The mixing and laying, with approximate cost, also occupies a proper proportion of the text, and an exhaustive system of tables, giving quantities and volume of concrete, complete a condensed and practical memoranda that should be closely studied by all users of cement.



SCULPTURE DETAILS, NOTRE DAME, PARIS

ILLUSTRATIONS

A pleasing pen-and-ink sketch of the Kemp apartment house, at Spokane, Washington, by Alfred Jones, is shown with two floor plans. It illustrates the conservative quality of work that is being executed in the West, and also that the art of pen-and-ink perspective drawing is not entirely lost.

The bungalows illustrated in design, plan and interior, at such widely separated points as Minneapolis and Los Angeles, the former by Downs and Eads and the latter by Fernand Parmentier, are also widely different in their construction, but each is in its way a graceful example of this favorite style of cottage design and construction.

The Ford building, under process of construction in Detroit, designed by D. H. Burnham & Co., of Chicago, for Mr. Edward Ford, of the Ford Plate Glass Company, will be executed in white enamel terra cotta, the court walls in white enameled brick. It will be eighteen stories in height, the highest structure yet erected in that city.

The Brooks residence, by Edwin H. Hewitt, of Minneapolis, should be photographed in summer, when the foliage of the trees and shrubs that are accessories to the design could lend their aid in completing the picture. The careful study given to this residence, both in exterior and in plan, is apparent, and makes it particularly interesting in design.

The railway station recently completed at Battle Creek, Michigan, for the Grand Trunk Railway System, by Spier and Rohns, Architects of Detroit, Michigan, is modified mission in style, constructed in Maine granite, and paving blocks laid in Flemish bond, the roof of semi-glazed red Spanish tile. The plan shows a simple and practical manner of distribution that is adaptable to any railway that is on a through double track route such as this. The six interior illustrations are interesting as a study of interior decoration and finish for depots, and as a whole this station is one of the most attractive and therefore practical of its class.

For the south corridor of the New Capital of Pennsylvania, at Harrisburg, which connects with the senate caucus rooms and departments of the State Government, W. B. Van Ingen, of New York, has designed a series of six mural paintings illustrating the social and religious elements in Pennsylvania, the groups commemorating the various religious sects that immigrated to Pennsylvania in the early days. The Pedatorium, or feet-washing ceremony, practiced by the Mennonites, recalls that singular body of devotees; a Roscicrucian Monk, an order of monks who lived in caves and daily expected the millennium; the devoted work of the Moravians, a sister of that order preaching to the Indians; the

trombone choir of the *Unitas Fratrum*, or "United Brethren", playing their instruments in the belfry of their church at Bethlehem, Pennsylvania, on Easter Sunday; a brother of Ephrata community transcribing the Declaration of Independence for the Congress of the United States; the "Friends", commonly known as Quakers, in meeting—all are clothed with quaintness and mystery and historical remembrance. The state was settled by many men of many minds, all seeking religious liberty, and allowing it to others. Many of their picturesque customs, such as the Pedalavium, the trombone choir, and the Quaker meeting, are still to be seen, and all have been studied by the artist with respect for their faith and desire to correctly depict their lives upon the canvas.

OBITUARY

THOMAS BEATTY ANNAN

A name that has been known and loved by the profession in St. Louis is that of Thomas Beatty Annan, whose death occurred in that city on November 12th, at the age of sixty-seven.

Mr. Annan was born in St. Louis and it was directly after the Civil War, during which he was chief clerk in the St. Louis sub-treasury, that he entered the office of Thomas P. Barrett and learned the profession of which he has, till the time of his death, been an honorable practitioner.

Mr. Annan became a Fellow of the American Institute of Architects in 1885 (but was not the first president of the Western Association of Architects, as the newspaper reports have stated, Charles E. Illsley, of St. Louis, having filled that office), but he was the first president of the Missouri State Association, which was organized under that association. He filled the office of president of the St. Louis Chapter, A. I. A., several times and was always a prominent figure in local architectural affairs.

This is here spoken of, not alone for record but as an indication of his lifelong belief in the dignity of his profession, its claim upon him for his best efforts in its advancement, and an evidence of the esteem in which he was held by his fellow practitioners.

His architectural work, which stands to represent his conception of his art, such as the Merchants' Exchange, Cook Avenue Methodist Church, St. Louis Provident, and the Methodist Orphans' Home and other large structures, was not brilliant in point of design, but, like his character, was an honest expression of architectural form and substantial construction; and as one of the "old guard" his passing is another one of the changes that the new century is bringing to rapidly obliterate the work of the old, though it was just such lives as his that has prepared the foundation for its advancement.

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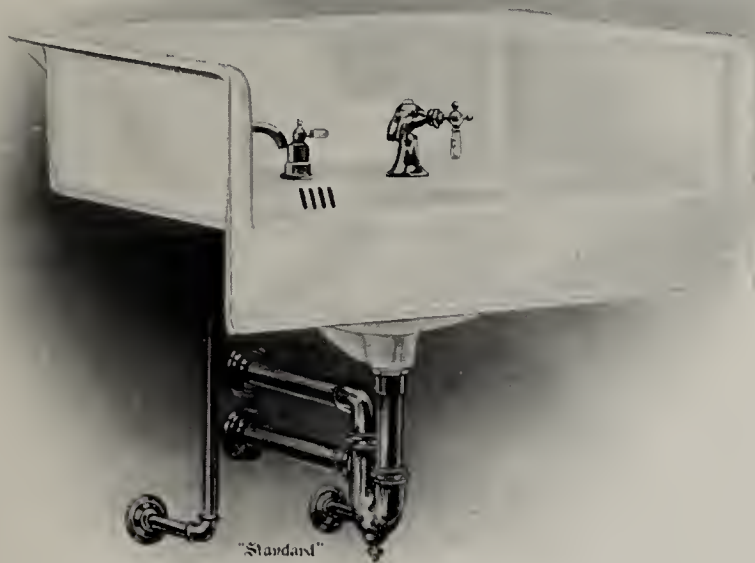
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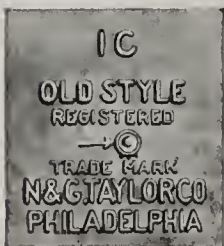
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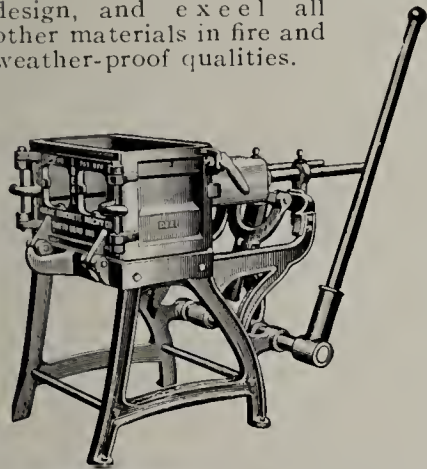
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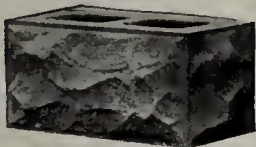


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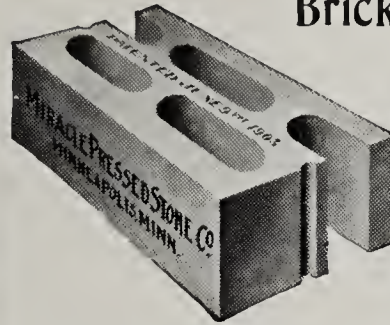
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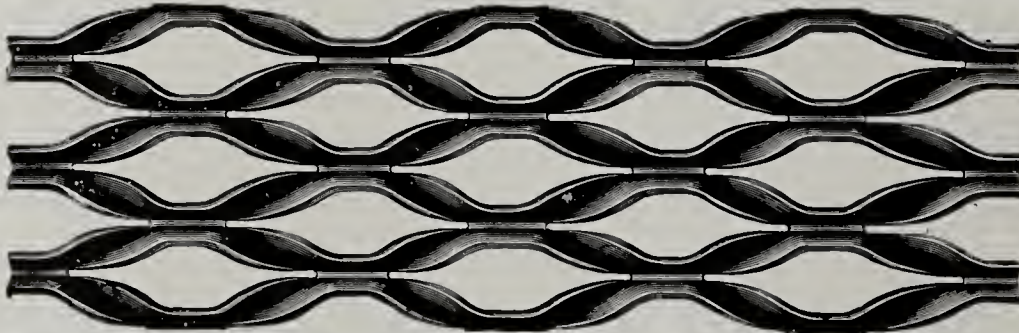




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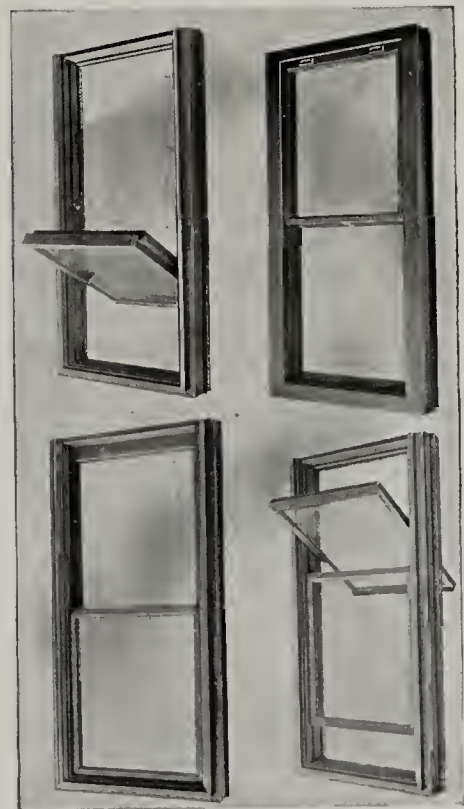
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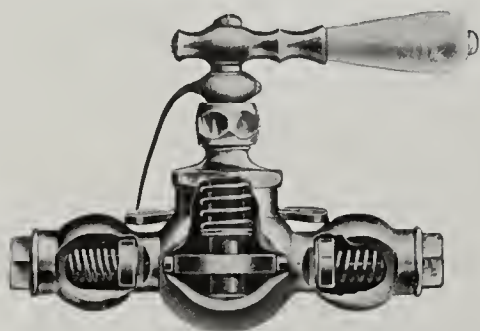
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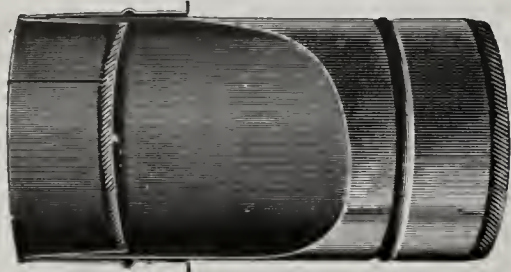
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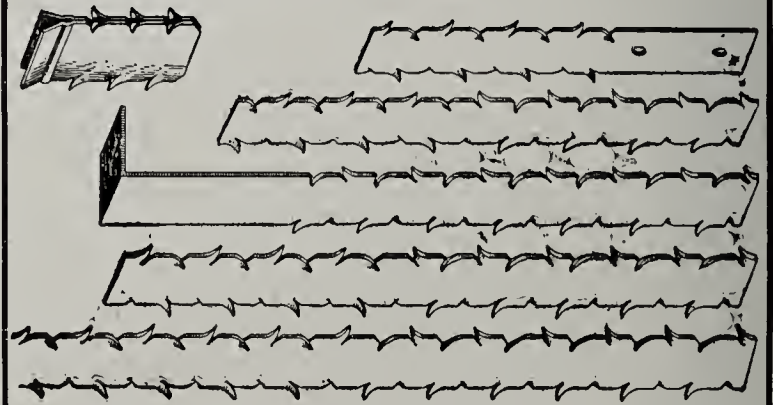
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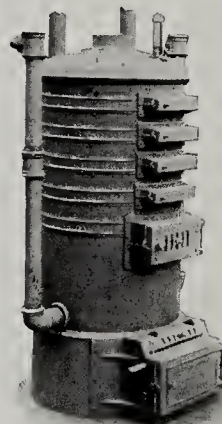
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