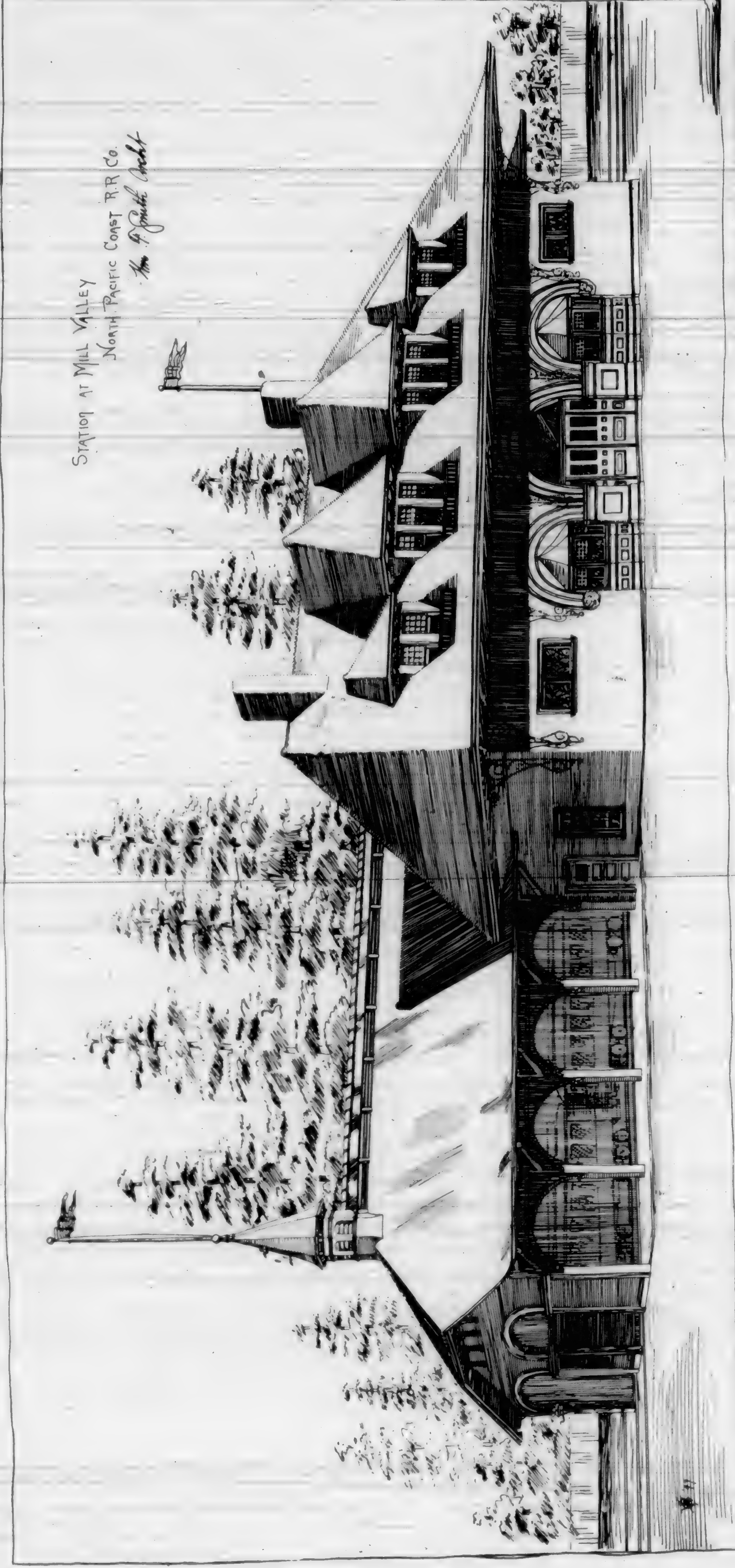




CALIFORNIA ARCHITECT AND BUILDING NEWS
SAN FRANCISCO.

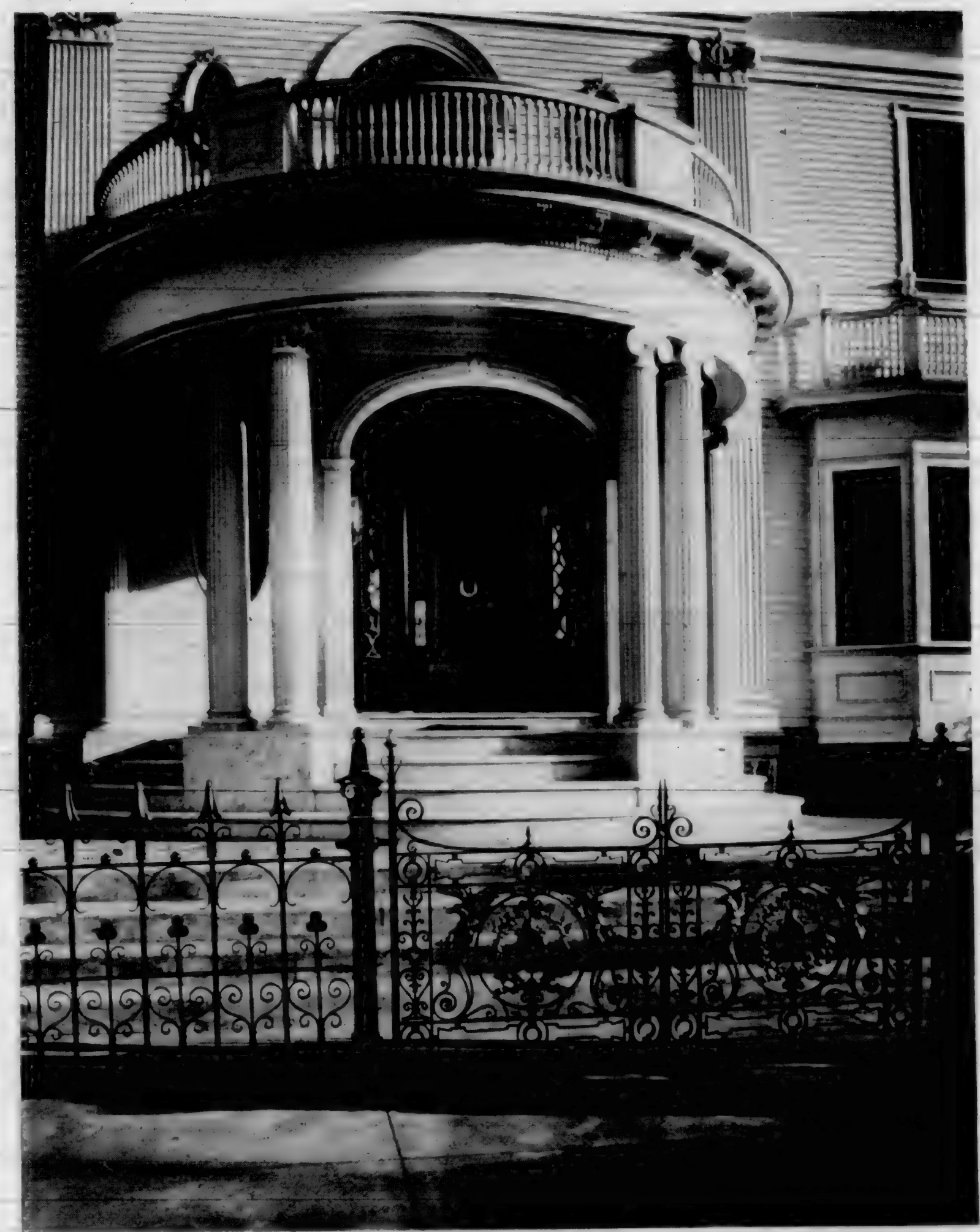
VOL. XVIII No. 12 DECEMBER 1897.



RESIDENCE OF CAPT. THOMAS MEIN, OAKLAND.
Wm. MOOSER & SON, ARCHITECTS.

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hood with carved oak brackets supporting the same; the hardware in this room is of antique silver. Off this room and leading to outside rear entrance is the toilet.

The dining-room is oval shaped with large shallow coved ceiling—this room has five large windows, taking up the entire end of room, the size of room is 20x30 feet, and has high wainscot of flush panels with flush key blocks, the China dresser and glass one on each side of the room are made the same shape as the room, the glass one has mirrors on back and side, with plate glass doors and shelves and silver plated brackets, fastenings, etc., the finish of this room is quartered sawed oak Flemish finish.

The library, including mantles, bookcases, etc., are of Mahogany, the hardware in silver.

Both dining-room and billiard-room floor are finished in quartered sawed tongue and grooved narrow Oak boards highly polished.

Between the dining-room and kitchen is the butler's pantry fitted up with all modern appliances, sinks, etc.

The kitchen is fitted up with one of the large latest improved ranges, with hood, etc., and with large sinks and drainboards, there is also a pantry adjoining fitted up with boxes, shelves, bins, marble pastry boards, safes, etc., etc., all completed. Adjoining this is a servants' dining-room.

The second story consists of one chamber having bath and toilets attached, and four other chambers, besides linen closets, housemaids' closets, baths, toilets, etc., etc.

All bathrooms and toilets have open plumbing and the walls are tiled in ivory color and the floors laid in Parquetry.

In the attic there are four chambers, bath, toilet, etc., also a large room all finished in tongue and grooved boards, polished, including the floor.

The basement is fitted up for room for servant, wine cellar, vegetable room, with sinks and marble drainboards, store-rooms, coal and wood-room, heater-room, laundry, etc.

The stable is provided with all the latest improved appliances, space for three stalls and one box stall, with harness-room, man's room, etc. Finished in tongue and grooved redwood boards in colors—floor is cement and stalls lined with wood.

The house stands almost in the centre of the lot, leaving ample space all around for garden and cement walks.

BUILDERS OF THE COMMONWEALTH

The principal contractors were Messrs. Campbell & Pettus whose mills and wood working establishment is located on Brannan street between 4th and 5th. The house itself is the best evidence that they performed their share of the work as per contract.

In the main portion of the house all the hardware is Art Metal work of The Yale and Town Manufacturing Company of Bonn design and is known to all architects for its correctness of design and unrivaled collection of Ornamentations.

The switches and push buttons were made to match the hardware by the same company and fitted with Harts Patent Switches.

The Dunham, Carrigan Hayden Company supplied all of these goods and that is a sufficient guarantee that they will last as long as the building does—and by the way, that Old Colonial Knocker as shown in our illustration of the main entrance is a work of art in itself.

To most of those who read these pages, Orsi is known, if known at all—as a painter of ability and a designer of original

invention. By reference to the illustrations and the foregoing description of the interior it will be seen that his method of producing Ivory effects and his color work is unusual and interesting. Mr. Orsi has never done a better piece of work and the finished result is wonderfully rich, suave, toned and harmonious, transferring in every detail the conception of the architect—622 Washington street, is the habitat of the only Orsi.

For the plumbing and heating work Henry Williamson, the well known Sutter Street Plumber had the contract. Mr. Williamson fitted the house throughout with the "Lilly" closets, from the works of the John Douglass Company and these closets have well earned the credit mark of "another advance in sanitary science." This company is represented on the Coast by Mr. E. M. Douglass with store and offices at 208 Ellis Street.

The tiling throughout the house together with the mantels shown in our illustrations of the interior, were furnished by Messrs. Mangrum & Otter of 27 New Montgomery street.

The wood mantels throughout are in themselves works of rare merit both in design and finish and reflect much credit on the contractors.

The Lavatory fittings and wash basins complete, except the marble work, as also all of the little nickle plated conveniences in the bath and toilet rooms were of the exclusive design order of which the J. L. Mott Iron Works are the manufacturers and M. S. James Flood Building the Pacific Coast representative.

The Waterproof and insulating properties of the building are much enhanced through the fact that it is lined throughout with the P. & B. Building Paper.

The Paraffine Paint Company of 116 Battery Street are the manufacturers of this well known make of paper.

The Marble work of which our illustration of the main entrance is a good example was done by Joseph Musto & Son whose yards and finishing works are at 710 Battery street.

The well known and always trustworthy house of John G. Iis & Co., of 814 Kearny street, supplied the kitchen and laundry outfit, which included one of their large, latest improved Cooking Ranges.

ONE of our illustrations this month is the new Union Depot being erected at Mill Valley for the use of the North Pacific Coast Railroad and the Mill Valley and Mount Tamalpais Scenic Railway. The former has the principal interest in the new structure. The station proper is twenty-two feet by seventy-two feet within which limits are included waiting rooms, baggage rooms, ticket office and Wells Fargo's office, two toilet rooms etc.

On the second floor there will be apartments for the station agent with all necessary accommodations.

The entire lower story will be finished in polished redwood. At either end of the waiting room will be two very large Roman brick fireplaces. The train shed is to be 50x150 feet covered with a trussed roof in one span, and so arranged that all passengers can change from one train to the other without leaving the shelter of the shed. The train shed is to be planked throughout and the northern end devoted to the office for the Scenic Railway.

Both these railroads traverse a very picturesque region—

the road up Mount Tamalpais winds through canyons and along the southern slope of the mountains and is well protected from the trade winds. The views to be enjoyed on the trip are alone worth a trip to California to see. The surrounding hills and Saucelito in the foreground, the Bay of San Francisco and the city by the Golden Gate in the distance combine to make a shifting panorama that long remains in the memory.

It is by the North Pacific Coast Railway that San Rafael is reached, one of the most charming residence towns in the State, and a favorite resort of the elite of San Francisco. The roads extends from there northerly past summer resorts, camping grounds, farms and villages until at last the Russian river, Duncan's Mills and Cazadero are reached where the majestic redwood trees still stand in closed ranks waiting the woodman's ax. Popular excursions are run during the summer months allowing the sight seer to obtain in a few hours as much enjoyment as can be compressed into a single day, while those who have more time at their disposal and a keen appreciation of the beauties of nature can indulge their taste to the fullest extent, camping, boating, hunting, fishing, swimming and in a hundred other ways enjoy the glow of health resulting from these sturdy outdoor exercises.

THE CONTRACTORS

The principal contract on the Depot was awarded to Thos. O'Connor of San Rafael. Mr. O'Connor is now as he has been for some years past the principal contractor and house builder of Marin County and is one of those earnest and trustworthy workers who always lives up to his contracts and who can at all times be relied upon to carry out the specifications to the letter.

Every reader of this paper knows that *Mullum in Parvo* is the familiar watchword of Mr. Jas. A. Wilson—to whom the brick work was awarded, which fact carries with it that other fact that there's enough said.

The plumbing and lighting work went to Mr. S. M. Burt of Eastland and Mill Valley, and the dwellers of these hill-side health retreats are fortunate in one respect if in no other—viz.: In having a plumber always in their midst—for a plumber, like a doctor is "muchly" needed when wanted.

Van Dorn's Steel Joist Hangers will be used throughout the building and it goes without saying that these "Hangers" have no equal.

POINTS ON PRACTICAL WORK.

WHERE is quite generally a false idea prevailing among mechanics (stone masons and stone cutters) in regard to the proper method in which square dressed rubble, or broken ashlar, should be arranged, says *Stone*, and this mistaken idea seems to have originated from the fact that architects' specifications and instructions in contracts for such class of work usually specify that stones not under five (5) inches or over fifteen (15) in height shall be used. Sometimes other dimensions are given, as for instance not under four (4) or over twelve (12) inches, although it seldom happens that any dimensions as to length are given.

As a matter of fact, no such fixed rule is possible in prac-

tice, and should the mason hold strictly to certain sizes it would simply reduce the work to dimension stone and thereby add unnecessary cost without any additional beauty to the appearance of the work.

To prepare stone most economically for this class of work—square dressed rubble or broken ashlar—it should be cut in the quarry whenever possible, thereby saving freight or hauling on a large amount of refuse or spawls, and sizes should be from say four (4) to eighteen (18) inches in height or whatever the stones will make without too much waste. It is not at all necessary that the stones should be exactly four, eight, twelve or sixteen inches. Larger than eighteen inches, however, in majority of cases should not be used, although even over this size might be utilized without detracting from the appearance of the work, if, as sometimes happens, such sizes could be used in a wall with large surface, and unbroken by openings. By having the stone delivered on the job, cut and ready to go in the wall, the work can be pushed along very rapidly, and the fitter, or even the mason, can quickly arrange the proper breaks in the courses, and easily make the necessary closures from either the cut or the other stone on the ground.

The place of every stone as well as the bond was arranged by the writer, he on the ground measuring and sending the stones to the masons to be placed as directed. Two masons set them in place as fast as they could be set up. This was a departure from the ordinary methods of doing this class of work and gave entire satisfaction to contractors and architects. Where broken ashlar is used and there is a great deal of dead work such as invariably exists in churches and public buildings, stones of larger dimensions can be used and give to the work a much handsomer appearance to have them properly mixed with the smaller stones, necessitating, however, an increase in length of bed joints.

NOTICE TO ARCHITECTS.

Office of State Normal School of San Diego, San Diego, Cal.

December 16, 1897.

TO ALL ARCHITECTS WHOM THIS MAY CONCERN:

The Board of Trustees of the State Normal School of San Diego, California, hereby invite the submission of plans and specifications in detail for a two-story and basement brick building, to be erected upon the "College Campus" site on University Heights, in the City of San Diego, for the use of said Normal School, to cost when completed not to exceed \$100,000.00; provided, however, said plans and specifications must be so prepared, that a portion or section of said building can be properly constructed at once, at a cost not to exceed \$35,000.00, and in such a manner as to permit additions to be made thereto.

The Architect whose plans shall be accepted and adopted, shall receive as a premium therefor the sum of \$500.00; provided the Board of Trustees reserve the right to accept or reject any or all plans submitted, without incurring any liability to any Architect or person for any plan made or submitted.

The plans and specifications must be delivered to said

Board of Trustees, at the Law Offices of W. R. Guy, in San Diego, Cal., on or before the 19th day of January, 1898.

Architects competing are referred to J. L. Dryden, Secretary, at San Diego, for further particulars.

By authority of the Board of Trustees of the State Normal School of San Diego.

J. L. DRYDEN,
Secretary.

W. R. Guy,
President Board of Trustee.

NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 409 California street,
SETH BARSON, Pres. H. A. SCHULTZ, Vice-Pres.
OLIVER EVERETT, Sec. JOHN M. CURTIS, Treas.

SOUTHERN CALIFORNIA CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.

THEO. A. EISEN, Pres. ARTHUR B. BENTON, Vice-Pres.
WILLIAM C. AIKEN, Sec't. AUGUST WACKERBARTH, Treas.

WASHINGTON CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, regular meetings at 8 o'clock P. M., the first Friday of each month, except July and August.

JOS. C. HORNBLOWER, Pres. JAS. G. HILL, Vice-Pres.
E. W. DUNN, JR., Sec. W. J. MARSH, Treas.

ASSOCIATION OF ARCHITECTS OF ARIZONA, meetings held at Phoenix, Arizona.

D. W. MILLARD, Pres. T. H. MADDOX, Vice-Pres.
W. R. NORTON, Sec. and Treas.

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.

E. J. MOLERA, Pres. W. F. C. HASSON, Vice-Pres.
OTTO VON GELDERN, Sec. EDWARD T. SCHILD, Treas.

MASTER PLUMBERS' ASSOCIATION, meets every first and third Friday of each month at the Flood Building.

JAS. E. BRITT, Pres. J. L. E. FIRMAN, Sec.

BUILDERS' EXCHANGE, Directors meet first Friday in each month at Mission and New Montgomery.

S. H. KENT, Pres. JAS. A. WILSON, Sec.

MASONS' AND BUILDERS' ASSOCIATION, meet first Friday evening of each month.

ADAM BECK, Pres. M. V. BRADY, Sec.

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Journal of the WESTERN SOCIETY OF ENGINEERS for October, 1897. The leading article in this journal on "Motocycles" read September 8, 1897, for the purpose of developing a discussion on Motocycles, in the furtherance of a more general interest and wider dissemination of information on the subject, which would be conducive to the earlier utility of this mode of transportation for commercial uses, and pleasure as well, the Electrical Committee of the Western Society of Engineers, consisting of Messrs. H. M. Brinckerhoff, L. L. Summers and Bion J. Arnold, formulated a circular outlining the following general divisions of the subject for consideration:

1. Preference as to driving power with reason as to selection.
2. Economy.
3. Control.
4. Convenience.
5. Design and construction.
6. Safety and reliability.
7. Field of application.
8. Limiting conditions.

The answers to this circular are given containing much information on this subject.

THE STRENGTH OF MATERIALS. A text book for Manual Training Schools, by Mansfield Merriman, Professor of Civil Engineering in Lehigh University, first edition. Published in New York by John Wiley & Sons; London: Chapman & Hall, 1897. Professor Merriman is the author of several works that have served as text books in many schools and colleges among others A Treatise on Hydraulics, A Handbook for Surveyors, Higher Mathematics, etc. Professor Merriman appears to have a very happy faculty of making his meaning understood with few words; an example of this may be seen in the first chapter under the head of "Elastic and Ultimate Strength."

This book cannot fail to recommend itself to Engineers and Architects but also prove of great value to students in those branches.

LIPPINCOTT'S Monthly Magazine for December, 1897, has for a complete novel "Poor Chola" by Julia P. Dabney. This novel is somewhat out of the common track and describes localities not much known to the general reader, but nevertheless will be considered interesting by many readers. Among other articles of interest "Gold Mining in North America" by George Ethelbert Walsh, reflects the interest now taken by the world in gold mining; if this rage continues, the silver question settles itself by becoming more scarce than gold. To the question "Who are the Greeks?" the reply might be made that it matters not.

THE ARCHITECTS DIRECTORY for 1897-98, published by William T. Comstock, New York; price one dollar. It is always a welcome volume containing as it does a list of the Architects in the United States and Canada, classified by States and towns with the architectural associa-

tions to which they belong indicated against each name. Prepared with the greatest care to secure accuracy both in names and location.

It has also a classified Index of prominent dealers and manufacturers of building materials and appliances. Architects should be thankful to Mr. Comstock for this carefully prepared annual edition now in its fourth year, while to dealers in building materials it is a perfect God send.

THE UNIVERSAL CARPENTER AND JOINER; and Wood Workers Assistant, by Fred. T. Hodgson, published by the Industrial Publication Company, 10 Thomas street, New York. In five parts, the first part with 250 illustrations, Royal 8 vo. bound in stiff cover \$1.00.

Mr. Hodgson was formerly a contributor to this journal and well known as the author of "The Steel Square and its Uses," as well as various other volumes on "Practical Carpentry," "Stairbuilding Made Easy," etc.

The aim of the Author is to make the above work the most complete treatise on Carpentry and Joinery published to date, and the publishers have no hesitation in saying that the success which Mr. Hodgson has achieved during the past twenty years in furnishing the mechanics of this country with thoroughly reliable and easily understood textbooks, is a sure guarantee of the excellence of his present effort.

It will be issued in Five Parts, each Part consisting of over 100 large royal octavo pages, printed on fine paper, and strongly bound in stiff paper covers; and as it is the intention of the publishers to place this important work within the reach of every industrious mechanic and apprentice in the land, they have placed the price at \$1.00 per Part. Many works in the market, containing no more matter than a single Part, and not so well illustrated, are now selling for from \$5.00 to \$10.00 each.

charge, says that "a building consecrated to the teachings of the eternal truth should of itself be true," and as good brick is one of the most durable things in nature or art, he will let it bear witness to its own strength and beauty. The main entrance will be through six pairs of doors into three large vestibules leading directly into the nave and side aisles. The nave will be entirely free from columns. The side aisles will extend all around the church and behind the high altar. The height of the nave will be seventy-five feet; width, forty feet between the columns which divide it from the side aisles. The body of the church expands as the front is approached. They have some buildings of this style in Europe, but nothing of the kind has ever been attempted in this country, and it will be watched with a great deal of interest by those interested in the construction of large buildings.

In consequence of its being so novel, no brick suitable could be found in the market, and the builder had to have made to order the various shapes required. There will be no less than five hundred of these different kinds of bricks and moldings. Terra cotta will be used extensively, both inside and out, from the finials on the spires downward. White terra cotta figures of religious subjects will decorate the interior. The altars, communion rail, front of organ loft and pulpit will all be of terra cotta.

About 2,500,000 brick will be required in its construction, of which about 500,000 will be of fancy moldings. The prevailing color of the brick will be of light buff, with warmer colors for trimmings, running into dark brown. The body of the walls will be of light buff and yellow. The ribs of the arches and groins will be of molded bricks, the keystones of terra cotta. Not a foot of wood nor a yard of plaster will be used in the whole building. The brick casements will have grooves into which the glass will be set and fixed with putty. The great amount of brick used in the construction of this remarkable building will be furnished by the Webster Fire Brick Co., of South Webster, O.

A REMARKABLE CHURCH.

TO BE BUILT EXCLUSIVELY OF BRICK AND TERRA COTTA.

THERE IS NOW in the course of construction in Chicago one of the handsomest and most substantial churches in this country, and when completed it will be a remarkable edifice. According to the Portsmouth (O.) *Sentinel*, it will be entirely of brick masonry. Even the window frames in which the glass will be set will be of brick. From floor to roof outside and inside, walls and ceilings, casements and stairways, the visible and the invisible—will be vitrified clay, depending on itself for support and decoration. The style of architecture is Romanesque and Gothic, after the style of the twelfth and thirteenth centuries. The total length will be 210 feet; width, 110 feet, with two towers thirty-two feet square at the bottom and 245 feet high from the sidewalk. The body of the church proper inside will be sixty-eight feet wide. In the erection of this church there will be no plaster, no stucco, no imitation marble, nor snams of any kind. Rev. Geo. D. Heldman, who is in

INFLUENCE OF LIGHT ON EDGE TOOLS.

IT IS not generally known that the light of the sun and the moon exercise a deleterious effect on edge tools. Knives, drills, scythes and sickles assume a blue color if they are exposed for some time to the light and heat of the sun; the sharp edge disappears, and the tool is rendered absolutely useless until it is retempered. Purchasers should, therefore be on their guard against buying tools from retail dealers and peddlers, which for show purposes have probably been exposed for days together to the glare of the sun. The un-serviceableness of tools acquired under these conditions is generally wrongly attributed to bad material or to inferior workmanship. A similar prejudicial effect has been exercised by moonlight. An ordinary crosscut saw is asserted to have been put out of shape in a single night by exposure to the moon.

WANTED—TRUSTWORTHY AND ACTIVE GENTLEMEN or ladies to travel for responsible, established house. Monthly \$65.00 and expenses. Position steady. Reference. Enclosed self-addressed stamped envelope.

The Dominion Company, Dept. V., Chicago.

BUSINESS MOSAICS.

The Pacific Coast representative of the J. L. Mott Iron Works Mr. M. S. James, can be found at his office 27 Flood Building. His show rooms are well worth a visit, the inspection of his stock of sanitary specialities will well repay the trouble.

The constant aim of this company appears to be the production of something new that at the same time is a little better than what has been produced. By reference to their advertisement in this journal a good idea of the various baths, lavatories, etc., can be obtained.

Messrs. N. & G. Taylor Co., Philadelphia, have lately furnished the largest Ventilator we have ever heard of. It has a total diameter of eighteen feet over all, the diameter of the neck being ten feet. It is on the Midland Beach Casino at Midland Beach, Staten Island. It is the "Pancoast" make which appears to be giving such great satisfaction throughout the United States. This same make of Ventilation was also used on the new Astoria Hotel, New York City.

Samples of "The Pancoast Ventilator" may be seen at the office of Mr. Charles J. Waterhouse, who represents Messrs. N. & G. Taylor Co. on the Pacific Coast, at No. 35 New Montgomery street, San Francisco.

The Pacific Loan Association sends us their 13th Annual Report for the year ending Dec. 1, 1897. The totals make up a very flattering showing and are as follows:

Receipts—\$131,625.27. Disbursements—\$131,625.27. Assets—\$313,142.36. Of this \$261,462.56 is in mortgage loans. Liabilities, including a reserve fund of \$7,839.75. \$313,142.36.

The securities in the hands of the Treasurer and the books of the association were examined and verified by the auditing committee, Messrs. I. S. Ackerman and E. Messenger and found correct.

Mr. Emil Gunzburger the obliging Secretary of this and seven other Building and Loan Associations can be found by Builders and Architects—on the lookout for a loan—at 214 Pine street.

P. H. Jackson & Co., 228-230 First street and 7-9 Tehama street are the places to go if you want first class work in the way of fire and burglar proof arched and flat skylights, or patent water proof sidewalk doors and basement ventilators.

Mr. Jackson's long experience in this class of work makes him a first class authority for what is best in his line of business. The faithful manner in which his contracts are executed make it a pleasure to do business with the firm.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

OWNER ENTITLED TO EXPENSE OF CHANGING PLANS.—A lot owner who after notice that part of his lot was to be condemned, changed the plan of a building which he was erecting, so as to omit that portion of the lot to be condemned, is entitled to compensation for the expense so occasioned.

In re-Trustees Brooklyn Bridge, Sup. Ct. N. Y., 45 N. Y. Supp. Rep. 484.

MANUFACTURER BOUND BY STATEMENT OF AGENTS.—Statements of the agents of the seller of a range that owing to the peculiar construction of the range the pipes did not need to be insulated, are admissible as part of the transaction, in a suit to recover for the

destruction of the house by fire originating from such lack of insulation.

Wrought-Iron Range Co. v. Graham, U. S. Cir. Ct. App., 80 Federal Rep. 474.

OWNER NOT LIABLE TO GARNISHMENT.—Where a building contract does not prevent the filing of valid liens against the building, though the owner have funds in hand, he is not liable to garnishment, but may retain such funds, and apply them to the discharge of mechanic's lien filed against the building.

Schotts v. Bell, 18 Pa. C. C. Sep. 427.

ARCHITECT HAS NO LIEN FOR PLANS IN MASSACHUSETTS.—An architect is not entitled to a lien for drawing plans and specifications for a building, under the laws of Massachusetts (Pub. St. c. 191, sec. 1) which gives a lien to any person to whom a debt is

due for "labor performed or furnished and actually used in the erection of a building."

Michell v. Pankard, Sup. Jud. Ct. Mass., 47 Northeastern Rep. 113.

WHEN CONTRACTOR TAKES PRECEDENCE.—Where one advanced money to the owner of a building, and took a mortgage on same, while a contractor was erecting it, he is affected with notice of the contractor's lien, and the latter is not lost by reason of the contractor taking the notes of the owner secured by mortgage on the building.

F. & M. Nat'l Bank v. Taylor, Supreme Ct. Tex., 40 Southwestern, Rep. 966.

LIABILITY OF OWNER MAKING CHANGES TO TENANTS.—A tenant of the third and fourth floors of a building, whose water supply is cut off, furniture injured by dust and lime, ingress and egress interfered with, causing damage, by the landlords' repairing the second floor, may recover from the landlord for breach of covenant of quiet enjoyment, irrespective of his negligence.

McDowell v. Hyman, Supreme Court Cal, 48 Pacific Rep. 984.

WHEN WIFE IS NOT LIABLE FOR IMPROVEMENTS OF HUSBAND.—Where a husband agrees with his wife to erect improvements on her land, and to pay for the same, one selling lumber to the husband on his credit, and without intent to charge the wife for same, cannot enforce an equitable lien against the land.

Poe v. Ekert, Supreme Ct. Iowa, 71 Northwestern Rep. 579.

CITY BUILDING NEWS.

Alvarado near Hoffman. Cottage; owner, I. E. Laws; builder, J. Hegman; cost \$1500.

Broderick near Grove. Two-story frame; owner, Mrs. Rosalia Altmayer; architect, J. E. Kraft; contractor, R. Currie; signed, Nov. 28; filed, Nov. 30; cost \$4000.

Buchanan and Lily Ave. Two-story frame; owner, Ida M. Cummins; architect, Wm. T. Cummins; contractor, John Foster; signed, Nov. 18; filed, Nov. 27; cost \$6734.

Buchanan and Lily Ave. Plumbing, etc.; owner, Ida M. Cummins; architect, W. T. Cummins; contractors, Berarik & Spinks; signed, Nov. 26; filed, Dec. 2; cost \$1218.

Buena Vista Ave. Two-story frame; owner, T. L. Henderson; architect, W. H. Little; contractor, T. T. Pottinger; signed, Nov. 18; filed, Nov. 19; cost \$335.

Capp near Adair. Cottage; owner, U. A. Hancock; architects, Havens & Toepke; contractor, C. A. Holm; signed, Nov. 13; filed, Nov. 16; cost \$1500.

Eddy and Mason. Painting, etc., for six-story brick; owner, Fabrizio Nigro; architects, Mooser & Son; contractor, G. Orsi; signed, Oct. 30; filed, Nov. 17; cost \$3250.

Fourth Ave. and Clement. Two-story frame; owner, Charles Hitchcock; contractor, J. Lund; signed, Nov. 15; filed, Dec. 1; cost \$4630.

Franklin near Ellis. Two-story frame; owner, J. A. Bergerot; architect, J. Godart; contractor, Donald Currie; signed, Dec. 13; filed, Dec. 13; cost \$7650.

Fremont street. Concrete work for brick building; owners, McIntosh & Wolpman; architect, E. Kollofrath; contractors, Camp & Carrillon; signed, Nov. 24; filed, Nov. 28; cost \$1516. Carpenter work, etc.; contractor, Charles Schurt; signed, Nov. 24; filed, Nov. 27; cost \$2430. Brick work, etc.; contractor, F. Wagner; signed, Nov. 28; filed, Nov. 27; cost \$2340.

Harrison and 9th. Two-story frame; owner, Estate of James Phelan; architect, A. C. Lutgens; contractor, A. H. Wilhelm; signed, Nov. 18; filed, Nov. 19; cost \$3490.

Hayes near Fillmore. Two-story frame; owner, Isaac Ellaser; contractor, E. C. Bletch; signed, Nov. 30; filed, Dec. 1; cost \$2310.

Hoffman Ave. near Alvarado. Cottage; owner, J. S. Coats; builder, J. Heyman; cost \$1750.

Hoffman Ave. near Alvarado. Cottage; owner, J. C. Coats; builder, J. Heyman; cost \$1500.

Larkin and Post. Additions and alterations; owner, Fanny Morris; architect, A. J. Barnett; contractor, G. W. Duffie; signed, Nov. 22; filed, Nov. 23; cost not given.

Laguna and Olive Ave. Six flats; owner, L. Kutner; architect, W. J. Cuthbertson; contractor, Kinread Bros.; signed, Nov. 16; filed, Nov. 12; cost \$3310. Plumbing work; contractor, Ickelheimer Bros.; signed, Nov. 12; filed, Nov. 12; cost \$1447.

McAllister and Lyon. Three-story frame; owner, P. J. Rowan; architects, Shea & Shea; contractors, Demartini & Pagano; signed, Nov. 19; filed, Nov. 23; cost \$4243.

Mission and Second. Steel work for six-story brick and granite building; owners, Wells, Fargo & Co.; architects, Percy & Hamilton; contractor, E. F. Jones; signed, Nov. 18; filed, Nov. 19; cost \$3900.

Mission and Second. Brick and terra cotta work for six-story brick; owners, Wells, Fargo & Co.; architects, Percy & Hamilton; contractors, Richardson & Gale; signed, Dec. 8; filed, Dec. 9; cost \$54,860.

O'Farrell near Webster. Two-story frame; owners, Mary E. & J. C. Konrad; architect, W. H. Armitage; contractor, R. J. Pavert; filed, Nov. 30; cost \$2739.

Pacific Ave. near Van Ness. Three-story frame; owner, Frank H. Woods; contractors, Howkins & Lindsay; signed, Dec. 8; filed, Dec. 11; cost \$3500.

Page near Masonic Ave. Two-story frame; owner, John H. Crow; contractor, Wm. Helbing; signed, Nov. 29; filed, Dec. 7; cost \$5145.

Puiski near Jefferson. Cottage; owner, T. J. Sullivan; builder, J. Hegman; cost \$1400.

Sixteenth and Hoffman. Carpentry mill work, etc., for two-story brick; owners, W. H. and Joseph Hyman; architects, Percy & Hamilton; contractors, Anderson & Greig; signed, Dec. 7; filed, Dec. 10; cost \$10,875. Excavations, brick and terra cotta work; contractors, Peacock & Butcher; signed, Dec. 8; filed, Dec. 10; cost \$380. Plumbing, etc.; contractor, H. Williamson; signed, Dec. 9; filed, Dec. 10; cost \$1839.

Turk near Mason. Sidewalk illuminated tile work, etc.; owner, G. G. Burnett; architect, J. E. Wolfe; contractor, H. Hausteim; cost \$40.25.

Twelfth Ave. No. 1728. Alterations, etc.; owners, Mary and Annie Hagerty and Lizzie Coyle; contractor, Wm. Gilmore; signed, Nov. 23; filed, Nov. 30; cost \$115.

Van Ness and Olive Ave. Painting, etc.; owner, J. Frowenfeld; architects, Salfeld & Kohlberg; contractor, J. E. Ritzer; signed, Nov. 15; filed, Nov. 23; cost \$1200.

Washington near Montgomery. Alterations and additions; owner, Achille Paladina; architects, Mooser & Son; contractor, L. Cereghino; signed, Dec. 10; filed, Dec. 11; cost \$4500.

TITLE THE CALIFORNIA ARCHITECT AND
BUILDING NEWS

FORMERLY THE CALIFORNIA ARCHITECT AND
AUTHOR BUILDING REVIEW
FORMERLY THE QUARTERLY ARCHITECTURAL
REVIEW

VOLUME XIX

DATE 1898

PUBLISHER WORLD MICROFILMS PUBLICATIONS in association with THE
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Vol. XIX, No. 1. JANUARY, 1898.

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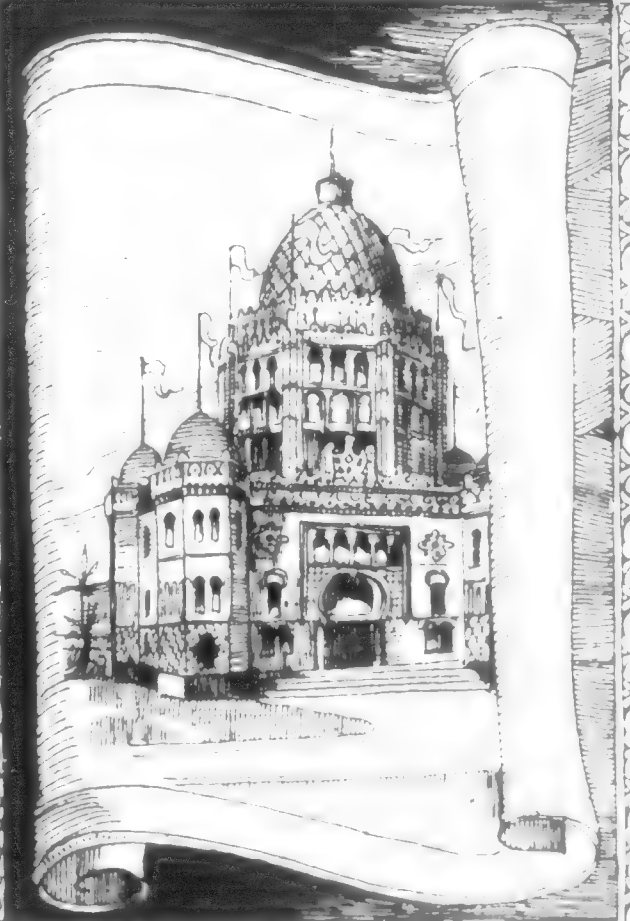
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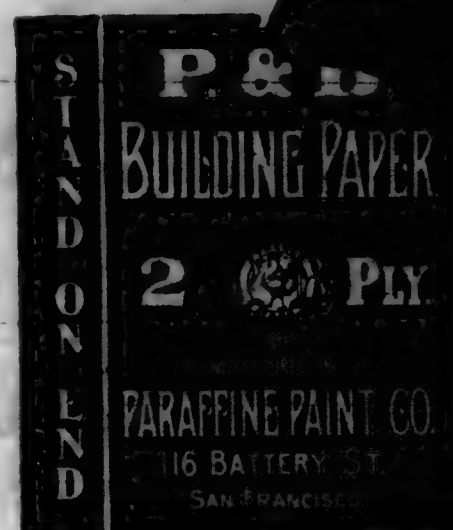
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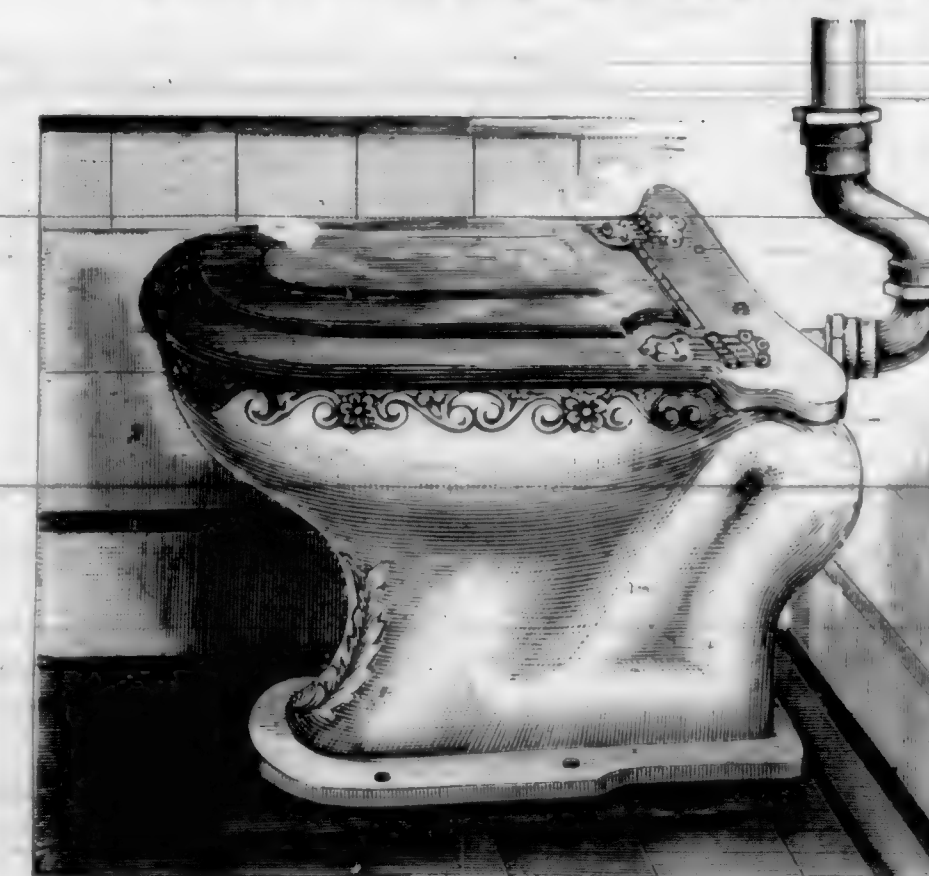
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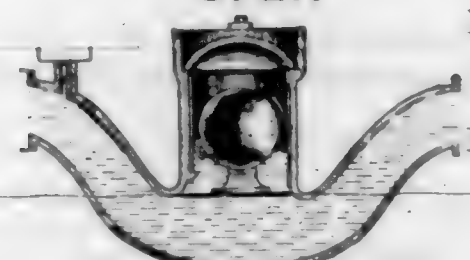
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VOLUME XIX.

JANUARY 20th, 1898.

NUMBER 1.

A MONTHLY JOURNAL DEVOTED TO THE ARCHITECTURAL INTERESTS OF THE PACIFIC COAST.



E PRINT in another column a paper that was read by Osborn Howes, Secretary Boston Building Fire Underwriters, before the Detroit Convention of Building Commissioners and Inspectors.

In his paper Mr. Howes points out very clearly that it is within the power of the Insurance Companies when these act collectively through a Board of Fire Underwriters, to enforce the building laws and the same course of procedure on the part of the Insurance Companies would come very near enforcing a rigid observance of the Fire order. It would, in fact, prove a strong factor in doing away with the "pull supervisorial" which is now the great stumbling block of the Fire Warden who is inclined to enforce a strict observance of the Fire order on the property owners anxious to increase his rentals regardless of the rights of others. There would be but little incentive then to "revamp" old wooden rookeries because of the serious disadvantage he would be under when tempting to lease his property.

The remedy for this growing evil, as given in Mr. Howes' paper may have suggested itself to some of the local underwriters, if so it has been the proverbial light under the bushel, in so far as official publicity is concerned, but whether it has or not, the fact remains that the local board is not now acting collectively on these lines and it is to be assumed that internal dissensions have heretofore prevented concurrent action.

Yet the remedy is there, let the Underwriters make it generally known that the board would impose a penal charge of double rates upon buildings put up in palpable and serious defiance of the building laws or of the fire order, and we believe that after the risk assumed became generally known very few "improvers" or "revampers" would care to subject their property to it. Make the "revampers" see that there was "nothing in it" then with all hope of repeal gone the necessity for political pressure disappears and the "revamper" becomes a law abiding citizen with a very wholesome respect for the regulations of the Fire Order as well as for the building laws of the City.



IN THIS issue considerable space is given to an article on the wiring of buildings for electric lighting and it is our intention to print during the coming year a series of articles on this subject, an up-to-date knowledge of which, is daily becoming more and more important to every architect, and we do not doubt that many things now unknown to our ubiquitous man about town will see the light for the first time in some of these papers.

Architects realize that they must sooner or later, and the sooner the better, take up this subject seriously as a regular line of study and give to it a very considerable share of their attention, for this question of the efficient wiring of buildings can be no longer left entirely, as heretofore in many offices, to the contracting dealer in electrical supplies, who gives little or no attention himself to the mechanical execution of the work.

The Underwriters National Electric Association publish from time to time many useful suggestions for architects, also the results of recent tests, and these laboratory reports on all devices, after being carefully digested, and printed in these columns should prove very interesting reading to every reader of this Journal.



THE CHARTER makers are once more at their labors—and an appropriate time comes for suggestions. As most interesting to our readers we shall take under advisement for a short period the position of a Board of Public Works in a Charter for a City such as San Francisco. So far, a Board of Public Works has not appeared as an unmitigated success wherever it has had existence. When appointed by the Mayor as a few years ago was the case in our neighboring city of Oakland, it was so little a success that the citizens of that burgh abolished it in that form. Now it consists of the Mayor, City Surveyor and City Attorney, but it doesn't give satisfaction even in that form and the citizens are talking about getting up another new charter.

The Board of Public Works which carried out some quite large projects in London is now a think of the past and we hear of no desires on the part of the citizens to return to its government, but they seem content to have the Works Department carried on by a committee of the Council, the only complaint appearing to come from Contractors, who have been superseded by the system of day labor in vogue under the present regime.

So that looking at it from the standpoint of experience nothing much can be said in its favor. Looking at it from the standpoint of reason can more be said? Does any successful private corporation trust its engineering and architectural works to a Board of Engineers or Architects. No! they have their chief engineer or their architect and he is the man who is responsible for the work in his department—the man who receives the orders from the Board of Directors and carries them out without the aid of any middle Board.

Now why in the name of common sense cannot a corporation of the size of San Francisco—whose works and buildings do not compare with some of the private trusts and corporations do the same thing! Why is this bugbear, this Board of Public Works, allowed to rear its head in all our Charters.

It cannot be for its use, for all the executive powers it has can be far more advantageously used by one man than by several, and its legislative powers can far more appropriately be done by a well chosen Committee of the City Council, who are elected by the people for the express purpose of Legislating.

Can it be for its beauty or example? Let the present like Boards now in existence tell us—the Police, Fire or Park Commissioners. Then what is it proposed for? Its only *raison d'être*, until we receive further enlightenment, seems to be to find places for *political friends* and to *eat taxes*.

Although we have confined our remarks to a Board of Public Works as being more germane to the objects of our journal and as the Board dealing with the most important matters still the same strictures apply to all permanent Municipal Boards and Commissions.

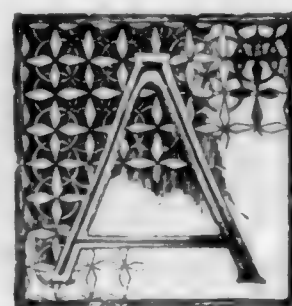
Experienced men like the Chiefs of the Fire and Police Departments surely must be able to carry on the business of their departments better without the aid of amateurs than with.

The Departments of Education and Health again require no more Boards to carry on their business than the Record Department represented by the Recorder and County Clerk, or the Legal Department represented by the City Attorney and Sheriff—or the Judicial Department or the Financial Department with its heads the Treasurer, Tax Collector and Assessor. All these departments manage to wriggle along without Boards, why not the Works, Fire, Health, Police, Parks and Education.

As a mitigation of the absurdity of the position, it has been recently proposed to make some of the members of the Board of Public Works experts, engineers; but this is simply to make confusion more confounded. It is proverbial the disagreements of professionals—doctors disagree, Judges of the Supreme Courts are divided with diametrically opposed opinions. Architects are not always in accord, and Engineers are in the same boat; Actors render characters in quite different manners, etc., so that the result of having boards of Experts is simply to delay and emasculate the work in hand.

There is one more matter which the Charter Makers no doubt will incorporate into their document, i. e., the compulsory referring to the people before conclusion of all matters involving rights or large sums of money—e. g., such matters as franchises for garbage cremation, the acquisition or sale of public parks or real estate of any kind—or the erection of any building—outside of the ordinary business of the departments.

This is very necessary and good and would prevent temptation to deal in jobs.



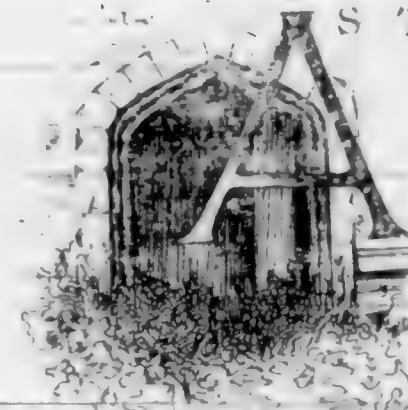
AN ORDINANCE to establish the office of Electrical Inspector, printed in another column, is right in line with what should be done, a move in the right direction and there is no equitable reason why its passage should be delayed.

In this ordinance the Superintendent of the Fire Alarm and Police Telegraph of the City is made the Electrical Inspector and this one feature is, as a matter of fact, the only debatable question connected with it. The present superintendent, Mr. Hewitt, is unquestionably the right man in

the right place and while it is true that to pass this ordinance means the making of the office purely a political one, this is an appointment that should be placed, simply as a matter of good business policy as far removed from all political combinations as it is possible to place it, in order that the Inspector may be at all times free to do his whole duty without fear or favor. But the Era of Bellamy is not yet and the difference between what we will get and what we want after Supervisory action will be somewhat wider than Market street.

Looking at the question from all sides, and weighing well the probable effect and results to be obtained by what could be said or done, the political pressure is sure to outweigh all other interests and the chances for getting trustworthy, intelligent inspection would be fully fifty percent better if the appointment be placed in the office of the superintendent of the Fire Alarm and Police Telegraph, over what could be expected to come out of the usual run of "shad political" a spawn about as free to act independently or to conserve the interests of the community at large as the man in the moon would be.

WHO IS TO BLAME—AND HOW GREAT IS THE RISK?



AS THE ELECTRICAL industry advances, with its progress arises also certain risks, that should be guarded against, and which cannot be overlooked, without damage to life and property, it is a well known fact that fires are becoming more numerous every day through Electric wiring. If we know the source, it behooves us to ascertain the causes, which are numerous, and when we speak of bad wiring it covers the field, and still leaves us as much in the dark as before, and what the readers of this paper should know is what composes bad wiring, and how to avoid it!

We will point out the principal causes, first willful neglect to comply with the underwriters rules in regard to insulators, and also the use of smaller size wire than that allowed for the same amount of current, poorly insulated wire and excessively heavy currents, inexperienced help, such as boys and men who know nothing of the business, and who are employed to save expense or add more profit—now who is at fault? This state of affairs exists! The blame may be placed in one quarter or another.

Take for example and for the purpose of illustration the case of a large new residence that is supplied with current from the Piedmont Street Railway system, being connected from the feeder at the corner of Santa Clara and Oakland avenues, Oakland, and carried down to the aforementioned residence about a block below. From all appearances the wire used to conduct the current from the feeder to the building is of the cheapest grade.

If the inside wiring is of the same class of workmanship as that of the outside, few if any of the rules and requirements of the National Electric Code—were observed—and the risk to property and even to life becomes five times greater than would be the case if taken from the regular incandescent circuit. Any person can see that a current hav-

ing 600 volts electric motor force, would be six times greater for the same insulation than 100 volts E. M. F. would be, for of course, it can be readily understood that where a residence is supplied direct from a railway circuit of 600 volts as in the Oakland case specified above, the risk of fires, even with the best of devices and highest insulation of wires is a sufficiently hazardous one, but how much greater this risk becomes where cheap or unskilled labor is employed and low grade insulation. Take again as an illustration the handsome and very costly Chronicle Building and most of our readers will recollect that when the Electric Contractor lighted up the building for the purpose of testing the effectiveness of his work, it was discovered that the insulation used had become worthless by the absorption of moisture from contact with the concrete, into which they were embedded, and the wire used was totally incapable of carrying the amount of current supplied, which was easily apparent as the building was smoking from the lower to the upper stories.

Here, surely, is an example worth pondering over and these sort of things must have their effect on Architects, then why not take up this subject and give to it the attention that is most certainly its due. Fire Underwriters can be generally depended upon to look out for their own interests, although, in a fit of rigid economy the board decided, some time ago to get along without an Electric Inspector, and in consequence the Electrical Contractors have had things pretty much their own way. But the mission of these papers is to stir up the Architects that they may become in their individual capacity, thoroughly versed in the skill of "how to wire" a building, in accordance with the rules and requirements of the "National Electric Code".

TEST OF METAL LATHING.

ON WEDNESDAY, January 26, an interesting test was made at Wells Fargo & Co.'s new building, designed to show the relative merits of different kinds of metal lath on wooden studs as a protection from fire—and incidentally to test a variety of cements, concrete and metal partitions.

Under the direction of G. W. Percy, of Percy & Hamilton, Architects, a furnace had been built of brick, 4'0" wide, 8'0" long and 2'6" high above the grate bars with 1'0" space under the grate bars with air inlets all around.

In the sides of this furnace were inserted six panels 12"x20" of various types of metal partitions while the top of furnace was 3" thick of cinder concrete made in the proportions of one part Alsen's Portland cement, two parts sand and three parts of fine cinders, for one half of the top expanded metal was imbedded in the concrete, and the other half had 1/4" twisted iron rods placed 3" apart. Over the centre of the furnace was a chimney 3'0"x3'0" and 8'00" high, built with 2"x4" O. P. studs with 2"x4" plate and sill, and width 2"x4" bridging all around near the centre of height. In the centre of each of the four sides the studs were placed 16" on centres as is usual in frame buildings the corners were formed with two 2"x4" studs.

Each of the four sides were covered with a different kind of lath by the men representing them.

At the bottom the metal laths extended back, about 4"

on the under side of the concrete and nailed to it while at the top it covered the top of plate.

The plastering was applied by a disinterested plasterer in the usual manner of good three coat work of ordinary lime mortar. While some of the metal panels, were plastered outside and inside with lime mortars, some with Alsens cement plaster and some with Kings' Windsor cement.

It was intended to test four different kinds of metal lath in the chimney but the representative of one kind became dissatisfied and wished to prevent the test being made and strongly objected to its being considered a test of his lath, therefore, no further mention will be made of that one.

The three varieties that may be considered to be fairly tested were: Roebing's Stiffened Wire, The Bostwick Steel Lath and the Expand Metal Lath.

The lower end of the chimney was further protected with Turnbull & Cullerton Steel Lathing nailed over the three coats of mortar and extending about 8" up on the studs and 6" under the concrete. This was plastered on two sides of the chimney with Royal cement plaster, on one side with Anti-Coloric boiler covering and on the other with Alpine cement plastering. The whole had been fairly well dried, when at 9:30 A. M., a small fire was started with dry kindling and a light fire was kept up until 10 o'clock when a hot fire was made with dry Manzanita cord wood fed in from both ends of the furnace. From this time on a hot roaring fire was maintained with the flames at times extending two or three feet above the top of the chimney.

At 10:30 A. M. the brick furnace was cracked on both sides near the centre also the concrete top on each side of the chimney and over the crack in brick work. The cement top which had been loaded with 275 lbs. to the square foot, now showed some deflection while hot steam was being driven from the green lumber forming the chimney.

At 10:45 A. M. the studs were scorched in places on each side and it appeared evident if the lumber was dry it would take fire.

The first fire on the frame occurred at 10:47 and at the cross bridging on the Roebing side. Fresh mortar was applied on the outside to stop the fire and about five minutes later or at 10:52 fire started on the side lathed with the Bostwick Lath which was also extinguished with mortar at 10:58 fire started on the Expanded Metal side and was likewise extinguished.

In no case had the plastering fallen from the laths and the hot fire was maintained for 45 minutes longer, when the frame being practically burnt out, water was turned on from a garden hose, the fire extinguished and the chimney pulled down. The plastering freed itself completely from the laths in the fall.

The protecting coat of Royal cement at the bottom of the chimney was in a fair state of preservation.

The cement top which had deflected about 1/4" with the heat and load, recovered itself to within 1-16" of a level line when the load was removed and the concrete cooled with water.

The concrete was practically uninjured by the heat and was broken with several blows from a sledge hammer. All the panels on the sides of the furnace retained a large portion of the plastering on the inside while the outside showed no signs of injury.

This test was witnessed by several prominent Architects, a representative of the Underwriters and one of the Fire Wardens—and while it may not have satisfied any one as to the superiority of one kind of lathing over another it did show conclusively that any one of these metal laths if properly put on and properly plastered will withstand an intense heat for a long time.

FIRE-PROOF CONCRETE FLOOR CONSTRUCTION—THE TEST AT WELLS FARGO & CO.'S NEW BUILDING.

ELSEWHERE is printed the report of a test of metal lathing made at the Wells Fargo & Co.'s new building, under the direction of Mr. G. W. Percy of Percy & Hamilton the Architects of the building. That report covers the part taken in the test by the different kinds of metal lath represented, while it is the purpose of this report to deal with the part taken in the test by the two systems of concrete fire-proof floor construction, as witnessed by the representative of this Journal on the ground.

The top of the furnace was three inches thick, made in the proportions of one part Alsens Portland Cement, two of sand and three fine cinders—for one-half of the top 2 1/2 gauge expanded metal was embedded in the concrete and for the other half twisted steel rods placed three inches apart were embedded in concrete. The theory on which both of these constructions are based being that concrete having a great compressive strength but very small tensile strength, it should be used exclusively in compression. To obtain the requisite tensile strength, square steel rods, twisted cold—Ransome System—are embedded in the concrete, while the other system in the test get their tensile strength by embedding in the concrete expanded metal—a home production.

Advocates of the steel rod system make two broad claims—1st—That these rods are firmly held in place by the concrete, and that the square surface twisted, forms a hollow which ties the concrete in the direction perpendicular to the rods, and the twist ties in the direction of the rod. 2d—That experiment has taught that narrow ribs of concrete are ample to resist all the strain in the vicinity of the twisted rods.

The advocates of the expanded metal system claim, 1st—that expanded metal embedded in concrete forms a monolithic mass 2d—that with much less weight of metal the construction is positive in strength 3d—that great tensile strength is acquired by placing the expanded metal on the under side of the slab, slightly embedded in the concrete.

After the chimney had burned out and had been torn down, the fire was put out, and top of the furnace was deluged with water then began the destruction of the top of the furnace, a heavy sledge being used for the purpose.

The slab containing the twisted steel rods was broken through as soon as the sledge struck the space between the rods. On the other slab it required many severe blows with the sledge to destroy the monolithic mass that had been formed by the expanded metal system—fully sustaining the claim of great tensile strength, for the advocates of the expanded metal fire-proof concrete floor construction.

THE ENFORCEMENT OF BUILDING LAWS.*

THE MANNER in which building laws can best be enforced is a problem which all municipalities must face which have regulations of this kind. Public interest requires that where a well-considered and tolerably rigid building law has been enacted, its requirements should be strictly complied with, but as such a course ordinarily involves a larger expense to individual citizens than would be incurred by ignoring or evading the building law, it is not at all strange that public spirit proves altogether inadequate to the work of enforcement, and that penalties are needed to

* Read by Osborne Howes, Secretary Boston Building Fire Underwriters, before the Detroit Convention of Building Commissioners and Inspectors.

compel the self seeking citizen to do what he should do out of regard for his fellow man.

It is always doubtful whether a building law in its requirements should go far in advance of the general sentiments of the people. If public opinion does not in the sustain it, not only will there be numerous infractions, but it will be found difficult to adequately punish those who committed these. For this reason one of the best methods, not only of enforcing a building law but of procuring good building laws, is the endeavor to properly educate the people on all matters relating to good construction.

Another potent factor—a factor which might be made, under proper regulation, even more potent than it is in the enforcement of the law—is the power of the insurance companies, when these act collectively through a board of fire underwriters. It is for the selfish interest of the fire insurance companies that the buildings in a city should be put up in a safe, fire-resisting manner. The fire insurance companies realize that they are likely to gain more by reducing fire losses where there is good construction than the community is likely to gain through the reduction in rates. Both changes will come about, but the profit to the underwriters is the first of these two results secured, and it is ordinarily the larger of the two. For this reason intelligent fire underwriters in all of our American cities can be counted upon to aid the public authorities in the enforcement of such building laws as are believed to be salutary and satisfactory from a fire point of view. Naturally the fire insurance men have very little to say about plumbing and ventilation, and hence are no more likely to interest themselves in these matters than the marine insurance companies would be likely to interest themselves in the matter of the thickness of the walls or the height of the buildings in a city.

While it may not be at all times easy to bring about concurrent action, I am strongly of the opinion that if the building inspectors of any of our large American cities made an appeal to the local board of underwriters the latter would agree to adopt and enforce a system of penal charges in those cases where there was defective construction, a method which would go a long way toward restraining builders and owners of buildings from indulging in these evasions. In these modern days practically all buildings and their contents are insured, and in all business buildings the question of the rate of insurance becomes a matter of no small importance in the competition in trade which is all the time taking place. Thus, for example, the owner of a building the contents of which, in consequence of defective construction, rates twice or three times as high as the rate on the contents of another building, is placed at a serious disadvantage in attempting to lease his property. Hardly a day passes that I am not appealed to by some would-be tenant to find out what his rate will be if he takes the lease of a certain building. The owners of these buildings also realize the merit it is to them of having structures which rate low, and ordinarily are willing to go to quite a little expense for the purpose of attaining this desired end.

Now if it were generally known that the board of underwriters of a city would impose a penal charge of double rates upon buildings put up in palpable and serious defiance of the building law, I am inclined to believe that after the risk assumed became generally known very few builders would care to subject their property to it. A penalty of this kind would in most instances be levied without hope of repeal, because the political pressure which might be brought in play at a city hall would have little or no effect in influenc-

ing the action of the members of a board of underwriters. The latter would realize that the defect in question was one which had been indulged in at their expense, and that the only way to prevent the constant repetition of a similar fault was to impose a penalty upon the fault-doer which he or she would not forget. I believe, as I said above, that if the building inspectors asked in this way the co-operation of the fire underwriters, they would receive the needed aid. The details of this co-operation would consist in an agreement that where buildings were reported by the inspector to be put up in defiance of what he believed to be the building law, the underwriters would agree on their part to materially increase their rates of premium upon the building thus reported and its contents. It would not be impossible to go beyond this and have an arrangement made by which the companies, in the main, would agree not to insure the building at all; but possibly this might be a system of penalization which would be so severe as in the end to defeat itself. It would, however, be possible to make the advance in rates I have referred to, and in order to emphasize the fact in the printed list of rates it would also be possible to have it noted that the rate was increased because the building in question was put up in defiance of the building laws which the State had adopted for the protection of its people.



The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

THE CATHOLIC Church of St. Paul, which is now being built at the corner of Hayne Avenue and 22d Place, Chicago, will when completed, be one of the most remarkable edifices in the country, and Chicago will take the first step in a style that is altogether opposed to the one she invented, the steel skeleton building filled in with terra cotta. The church of St. Paul will be entirely of brick masonry, even the window frames in which the glass is set will be of brick. From floor to roof, outside and inside, walls and ceilings, casements and stairways, the seen and the unseen, will be honest vitrified clay, depending upon itself alone for its support and its decoration.

The style of architecture adopted is late Romanesque and Gothic of the 12th to the 13th Centuries. The total length of the church, including the sacristy, will be 209 feet. The width over all will be 108 feet, and the two towers each 32 feet square at the bottom, will be 245 feet in height above the sidewalk. The body of the church will be 68 feet wide.

Our illustrations are from drawings and a model. The architect Henry J. Schlacks of Chicago is a young

man of thirty years of age, who has made church building a specialty having traveled extensively in the old world. No doubt the building of St. Paul's church will put him in the front rank.

There will be no plaster in this church, no stucco, no imitation marble, nor shams of any kind, for the Rev. Geo. D. Heldman, who is in charge, considers that a building consecrated to the teaching of the eternal truth should itself be true and, as a good brick is one of the most durable things in nature or art, he will let it bear witness to its own strength and beauty.

The main entrance to the church will be through six pairs of doors into three large vaulted vestibules, leading directly into the nave and side aisles. The nave will be entirely free from columns, as there will be no pews in the side aisles, these being used as aisles only, extending all around the church and back of the high altar.

The height of the nave will be seventy-five feet, its width will be forty feet between the columns which divide it from the side aisles. The body of the church expands as we approach the front and has the bulk of the seating capacity in the transept, so that the majority of the congregation is brought within close proximity to the sanctuary.

This style of building is not anything new in Europe, for there are very old churches there and even Cathedrals, entirely of brick, with vaulted brick roofs, brick groins and ribs, and all the decorative effects are obtained with burned clay in the form of brick or terra cotta. Some of these buildings are very beautiful, and all are in admirable preservation, but as we before stated, nothing of the kind has ever been done in the United States, and the architectural and building world will watch the work with greatest interest, but in consequence of its being so novel here, no bricks that were suitable could be found in the market. Accordingly the builder has had to order the various shapes required. There will be no less than 208 different kinds of these Gothic bricks and mouldings, and they will be specially made by the Webster Fire Brick Company of South Webster, Ohio. The roofing tile, at the moment of writing, has not been selected, though it will be probably before this leaves the press. The terra cotta is being specially made by the North Western Terra Cotta Co., Chicago. This material will be extensively used, both inside and out, from the finials on the spires downward. White terra cotta figures of religious subjects, instead of the usual sculptures, will decorate the interior. The altars, communion rail, front of organ loft and pulpit will all be of terra cotta.

About 2,500,000 brick will be used, of which 500,000 are fancy bricks, mouldings, etc.

Window washes and water drips will be of bricks and mouldings of special design. It is stipulated that all face bricks and mouldings shall be vitrified, so that they will be non-absorbent and consequently self-cleaning. Any kind of brick that is absorbent was objected to because experience teaches us that the soot and smoke of a great coal consuming city, is not only irremovably fixed on the face of an absorbent brick, but carried into its pores. A glazed or enameled brick was distrusted because of the uncertainty of the connection between the surface and the body, with consequent risk of crazing and scaling. A vitrified brick or tile is justly felt to be absolutely reliable.

The prevailing color of the brick work will be a light buff, with warmer colors for trims running into dark brown. The body of the walls will be light buff and yellow. The color scheme will be the same in the interior but the exterior

will be somewhat lighter. The whole ceiling will be of brick and tile vaulting. This vaulting tile will be of different sizes as required, such as 4"x12", 6"x12", etc., and 1" thick. The ribs of the arches and groins will be of moulded bricks, the keystones of terra cotta. In short, the whole construction will be purely ornamental brick masonry.

The brick casements will have grooves into which the glass will be set and fixed with putty. The grooves are deep, so that the piece of glass being slipped in on one side goes in far enough to enter the opposite groove, thus the glass is held securely, back and front, by the brick, the putty prevents any side movements.

This brick construction would not have been possible in some parts of the City of Chicago. It can be carried on this spot because the foundations go down to the solid rock, which lies at a depth of less than 20 feet from the sidewalk.

AN ELECTRICAL INSPECTOR WANTED.

TO establish the office of electrical inspector for the City and County of San Francisco, and to regulate and define the duties of such office, and to establish rules and regulations concerning electrical appliances.

AN ORDINANCE:

The Board of Supervisors of the City and County of San Francisco, Do Hereby Ordain as Follows:

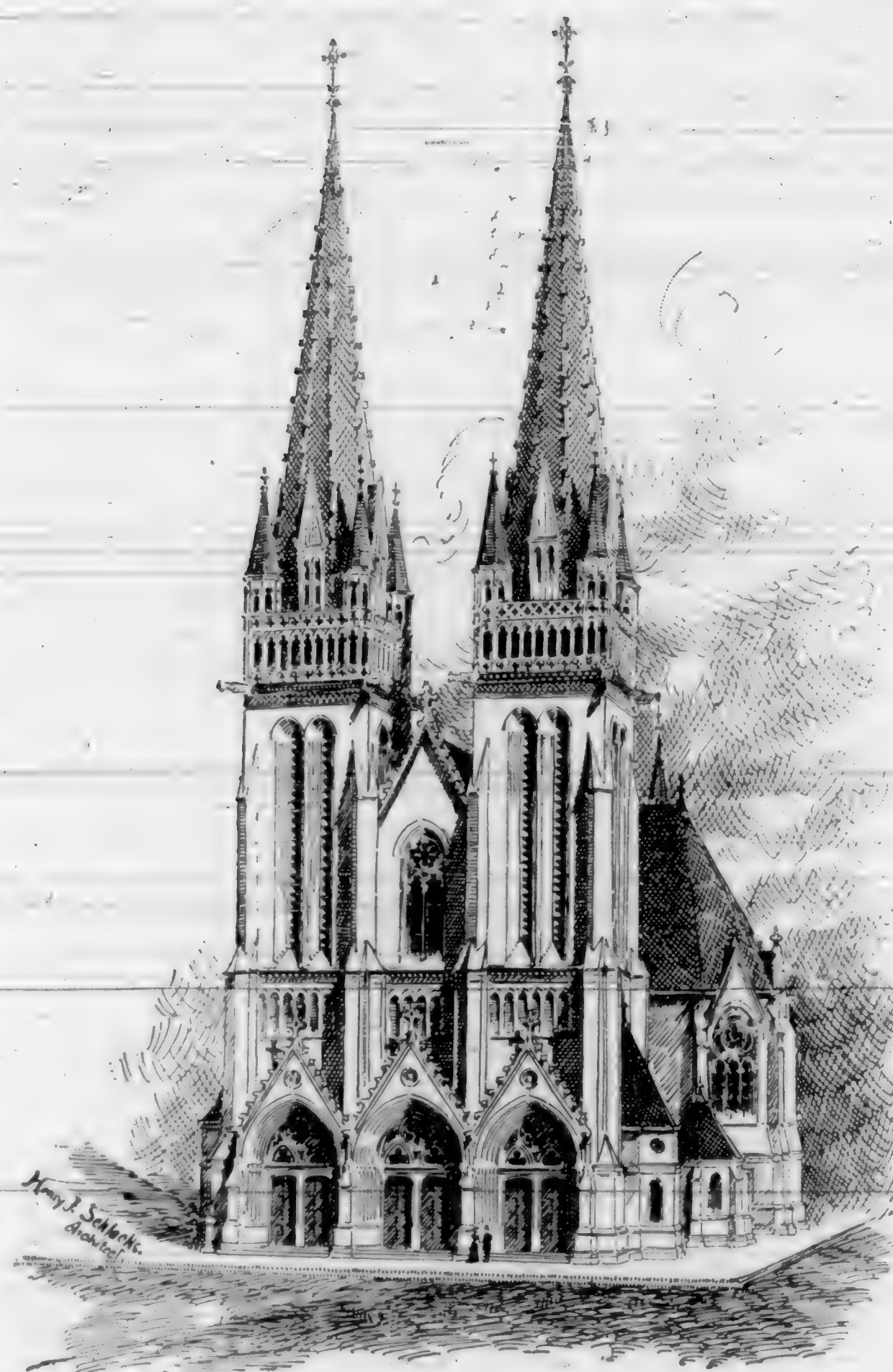
SECTION 1.—The Superintendent of the Fire Alarm and Police Telegraph of the City and County of San Francisco, is hereby made the electrical inspector in and for said City and County.

SEC. 2.—The electrical inspector for the City and County of San Francisco, is hereby authorized, empowered and directed to regulate and determine the placing of electric light, heat or power wires in and on buildings in said City and County so as to prevent fires, accidents or injury to persons and property, and to cause all electrical appliances to be so placed, constructed, and guarded, as not to cause fires or accidents or endanger life or property; and whenever in the judgment of said electrical inspector any electrical appliance shall be defective by reason of improper or insufficient insulation or for any other cause, the said electrical inspector shall at once cause the immediate removal of such defect.

SEC. 3.—The said electrical inspector, or other competent persons delegated by him, shall have the right at any time to enter any building, manhole or subway, in the discharge of his official duties, or for the purpose of making any tests of electrical apparatus or appliances therein contained. And for that purpose he shall be given prompt access to all buildings, public and private, and to all manholes and subways, on application to the company or individual owning or in charge or control of the same.

SEC. 4.—The said electrical inspector or competent person, delegated by him shall have the power to cause the removal of all wires or the turning off of all currents, where the currents interfere with the work of the Fire Department.

SEC. 5.—No alteration or change shall be made in the wiring of any building, nor shall any building be wired for the placing of electric lights, motors or heating devices, without first securing from the said electrical inspector or competent person delegated by him, a permit therefor, nor shall

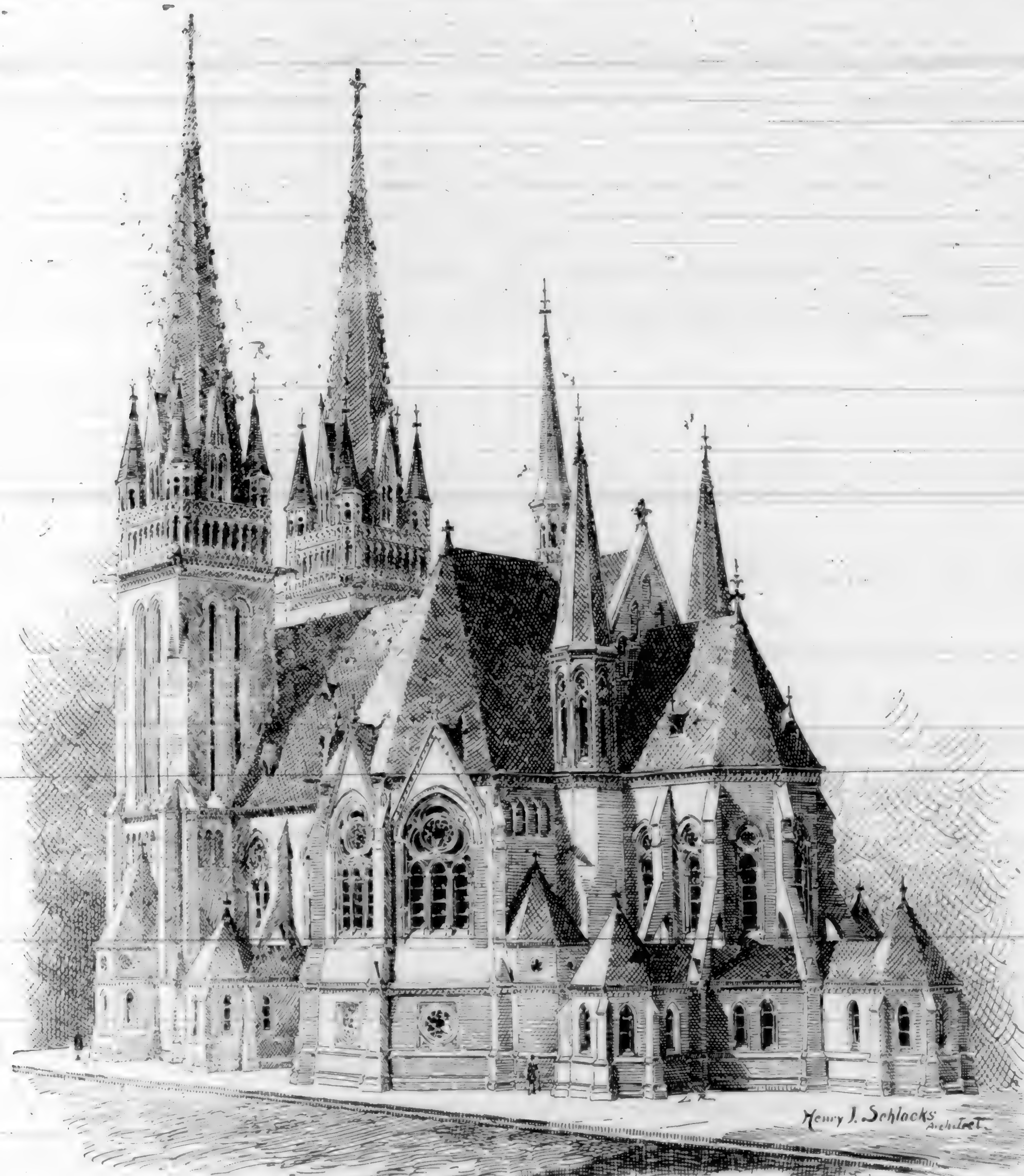


THE CATHOLIC CHURCH OF ST. PAUL, CHICAGO

FRONT ELEVATION

CALIFORNIA ARCHITECT AND BUILDING NEWS:
SAN FRANCISCO.

VOL. XIX No. 1. JANUARY, 1898.

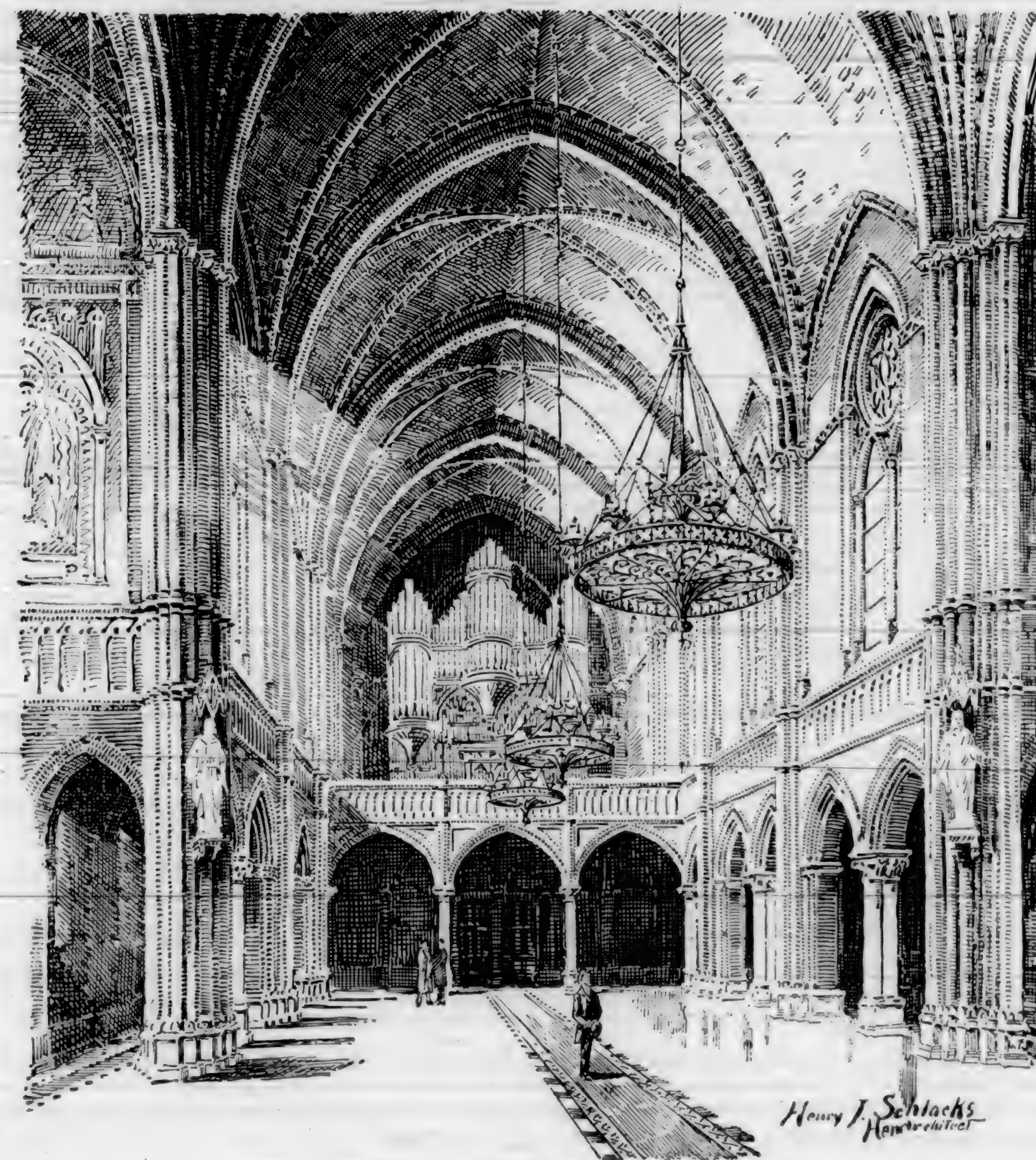


THE CATHOLIC CHURCH OF ST. PAUL—SIDE ELEVATION

COR. HAYNE AVE. AND TWENTY-SECOND PLACE, CHICAGO, ILL.

CALIFORNIA ARCHITECT AND BUILDING NEWS.
SAN FRANCISCO.

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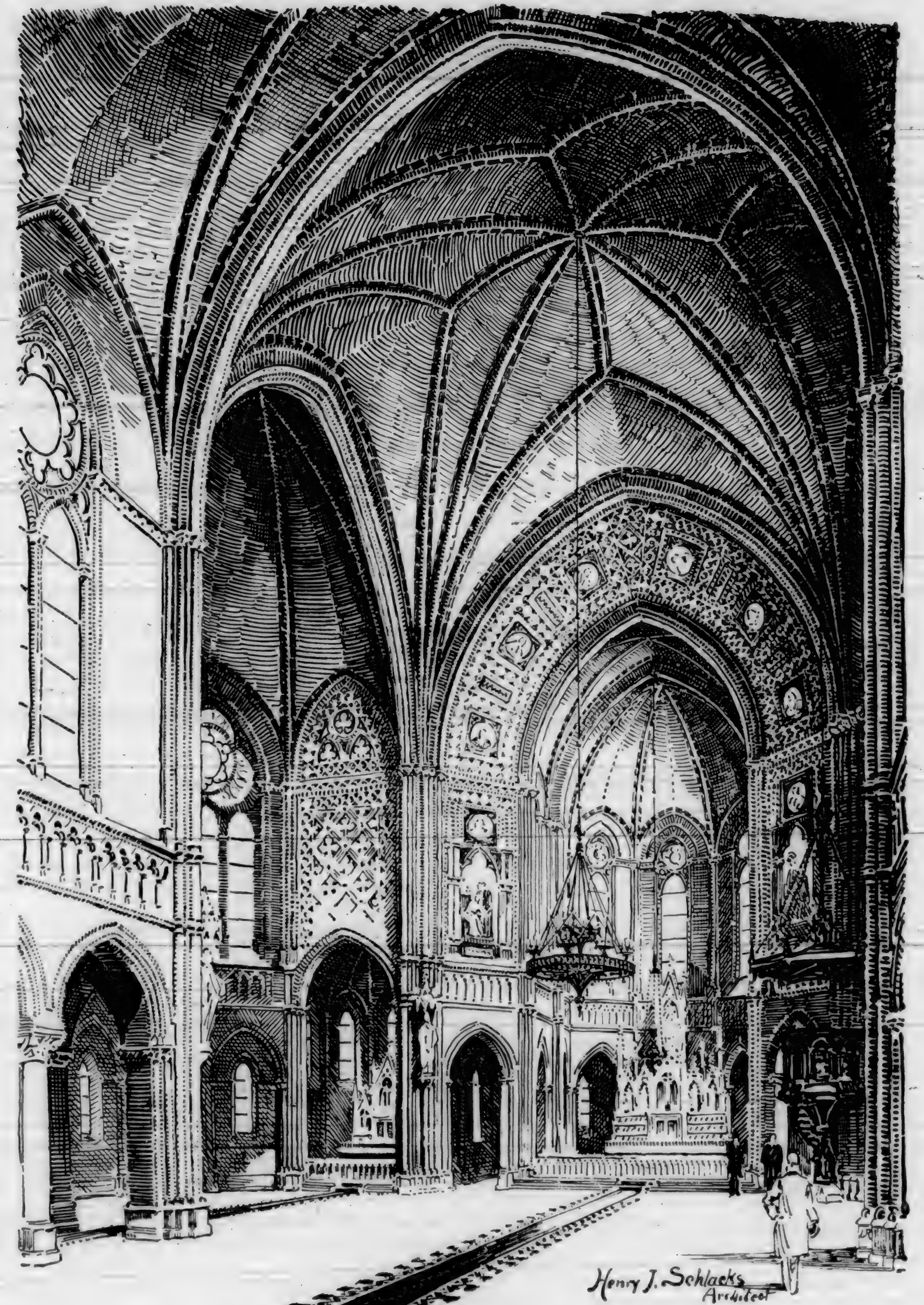


THE CATHOLIC CHURCH OF ST. PAUL, CHICAGO

LOOKING FROM THE ALTAR

CALIFORNIA ARCHITECT AND BUILDING NEWS.
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THE CATHOLIC CHURCH OF ST. PAUL, CHICAGO
LOOKING TOWARD THE ALTAR

any change be made in any electric plant after inspection without notifying the said electrical inspector or person delegated by him and securing a permit therefor.

Upon the completion of the wiring of any building, it shall be the duty of the company, firm or individual doing the same, to notify the said electrical inspector or competent person delegated by him, who shall at once inspect the same, and if approved by him, shall issue a certificate of satisfactory inspection which shall contain the date of such inspection and an outline of the result of such examination; but no such certificate shall be issued unless the electric light, power or heating installation and all apparatus, wires, etc., connected with it, shall be in strict conformity with the rules and regulations hereinafter set forth; nor shall current be turned on such installation until said certificate be issued.

SEC. 6.—Said electrical inspector shall keep a record of all permits given and inspections made.

SEC. 7.—Any person, firm or company who shall violate any of the provisions of this ordinance, or fail, neglect or refuse to comply with the rules and provisions of this ordinance, or who shall fail, neglect or refuse to comply with any order or request of said electrical inspector or competent person delegated by him in pursuance of and by the authority of any of the provisions of this ordinance or rules therein contained, shall be deemed guilty of a misdemeanor, and upon conviction thereby, shall be fined not more than one hundred (100) dollars or to be imprisoned not more than (90) days.

SEC. 8.—All electrical construction, all material and appliances used in connection with electrical work, and the operation of all electrical apparatus, shall be in conformity with the rules and regulations set in what is known as the "National Code of Rules for wiring Buildings for Electric Light, Heat or Power", as the same are now established, and the said rules and regulations, together with any amendments and changes made therein from time to time, are hereby adopted and approved.

SEC. 9.—This ordinance shall take effect and be in force from and after its passage.

CONVENTION OF SANITARY SCIENTISTS.

TO BE HELD IN NEW YORK EARLY NEXT SPRING.

AN INTERNATIONAL Health Exposition will be held at the Grand Central Palace, New York City, for five weeks, beginning April 25th next, under auspices and with a breadth of scope which are a guarantee of conscientious and intelligent effort, and which cannot fail to awaken a wide-spread popular interest.

A number of food shows have taken place in this and other cities, besides collections of building materials, notably in New York, Brooklyn and Chicago, while there is a permanent Hygienic Museum in Washington. But no attempt has heretofore been made to gather together under one roof the wonderful variety of objects which illustrate the immensely wide and important field of sanitary science and the marvelous progress which has been made in that direction of recent years.

The time is ripe for such an undertaking. An extraor-

inary revival of interest in sanitary matters has lately been shown, partly because of recent epidemics at New Orleans, and at other places, and also as a result of the late municipal reform movements, which have led to an active discussion of street cleaning methods, public baths and play grounds, water supply and other sanitary problems.

There will be a display covering more than three acres of floor space, of practical apparatus and appliances of all kinds, taking in everything from Mr. Atkinson's Aladdin Stove to a huge garbage crematory in actual operation.

There will be all the modern systems of house-heating, ventilation, plumbing, etc., comparative exhibits of new and primitive hospital arrangements, systems of sewerage for cities and villages, a model school room and the other kind, model tenement houses, health food, etc.

The exhibits, however, are not all there is of the exposition. There will be provided by the management a course of popular lectures for every day, discussions by various societies, representatives of Boards of Health, etc., and the whole affair in its full development will be in reality an Educational Congress.

No exhibits will be accepted which have not been approved of by specialists in their respective departments.

Offices of the Exposition are now open at the Grand Central Palace.

One of the most interesting features will be the Department of Electricity, showing its applications not only to health and sanitary matters, but, as an aid in household economics.

Mr. Luther Stirling, Consulting Electrical Engineer of The World's Fair, Atlanta, Nashville and Omaha Expositions, has been retained in a similar capacity for the International Health Exposition.

This is the first public exhibit which Tesla has ever made in New York, and his accomplishments are always of world-wide interest.

Mr. Charles F. Wingate, the Sanitary Engineer is the Supervising Director, and in conversation with a representative says of his part in the exposition:

"The present Exposition is a product of evolution, and a striking instance of taking the tide at the flood. My own connection with it, which came about quite accidentally, is a case of greatness being thrust upon a person.

"The interest in sanitary subjects is confined to no one class of persons. Dr. Stanley Hall, the famous educator, devoted fully half of his recent address on laying the corner stone of a Womans' College, to the subject of health. Special hygienic departments are being added in many periodicals, and health articles fill much of the womans' page in the daily papers. Boards of Trade and Chambers of Commerce are alike concerned in discussing measures for the protection of the public health.

"A splendid opportunity is therefore presented through the International Health Exposition to educate the public along these various lines, and there can be no question as to its permanent usefulness.

"Probably the most attractive feature in the Exhibition will be the arrangement of what may be called Sanitary Living Pictures, to show certain features in a practical way. For example, a tenement house sweat shop will be shown in actual operation, in contrast to a model work shop with all modern improvements; also a police lodging room redolent with damp, and every kind of foulness, side by side with a model lodging house, such as may be seen opposite Bellevue Hospital; also an old County Poor House cell, with a 'mad

woman" chained to the floor, in contrast to a modern insane asylum ward; a model school in contrast to an un-model school, and so on with every department of practical hygienic.

"An exhibition of this kind appeals chiefly to women, who have the interest of the home so largely at heart. When we consider the services which women have performed in the line of sanitation, it might be called distinctly 'Woman's Field.'"

The list of the Advisory Board already appointed, comprises more than ninety specialists in the various lines of sanitary work, among whom may be mentioned:

Dr. Stephen Smith, President Department Public Charities, New York.

Hon. Andrew H. Green.

Albert Shaw, Editor Review of Reviews.

Edward Atkinson.

Alfred T. White, Ex-Commissioner of Public Works, City of Brooklyn.

Samuel Gompers, President American Federation of Labor.

Miss Frances E. Willard, President W. C. T. U.

Dr. H. W. Wiley and B. G. Fernow of the U. S. Dept. of Agriculture.

Mrs. Melville Dewey.

Col. Wm. G. Church, Editor of the Army and Navy Journal.

Dr. H. P. Baker, Secretary Michigan State Board of Health.

Dr. Mary Putnam Jacobi.

Dr. George F. Shady, Editor Medical Record.

THE NEW TIME for December, 1897, a Magazine of Social Progress. Published by Charles H. Kerr & Co., 56 Fifth Ave., Chicago, Ill. Price ten cents.

The circulation of "The New Time Magazine" is claimed already as forty thousand copies and the publishers hope to double it three times more before June, 1898. This claim does not appear unreasonable considering the extremely low rate the publishers have placed upon the journal that contains much of interest to the general public, and appeals strongly to that class that is constantly increasing who have an interest in the welfare of Social Progress.

SEMI-ANNUAL SUMMARY OF BUILDING OPERATIONS.

IN the following tables we present the number and value of buildings erected in San Francisco, during the first year.

FOR FIRST SIX MONTHS.—1897.

1897	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value	No. of Buildings	No. of Contracts	Alterations & Additions Value	No. of Buildings	No. of Contracts	Total Value
Jan'y	12	16	\$ 128,010	22	26	\$ 55,524	3	3	\$ 7,917	37	45	\$ 190,081
Feb'y	6	17	181,128	21	24	71,475	8	8	28,028	35	49	280,631
March	10	18	233,122	41	17	135,019	10	10	17,234	61	75	405,975
April	6	22	151,702	71	75	217,370	25	25	100,780	102	122	472,912
May	13	19	116,956	40	43	147,385	11	11	13,086	64	73	277,427
June	7	9	48,718	45	48	162,750	19	20	49,984	71	77	261,462
Total	51	101	\$ 888,320	243	263	\$ 788,123	76	77	\$ 217,090	373	411	\$ 1,888,488

FOR SECOND SIX MONTHS.—1897.

1897	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value	No. of Buildings	No. of Contracts	Alterations & Additions Value	No. of Buildings	No. of Contracts	Total Value
July	20	33	\$ 229,455	50	72	\$ 165,086	13	14	\$ 36,716	92	118	\$ 431,457
Aug	10	16	108,334	48	70	170,876	10	10	22,223	88	98	301,633
Sept	7	13	80,803	43	46	109,395	14	14	32,433	64	73	228,631
Oct	8	15	109,215	28	29	100,368	14	17	56,169	49	61	316,862
Nov	3	12	97,443	30	32	141,811	12	12	19,844	45	57	268,976
Dec	3	7	110,629	18	20	67,403	14	19	85,673	35	46	263,705
Total	49	97	\$ 795,949	246	269	\$ 732,637	77	85	\$ 253,058	392	451	\$ 1,781,950
Grand Total	103	198	\$ 1,684,275	489	512	\$ 1,520,760	153	162	\$ 470,097	725	862	\$ 4,160,133

To this amount has been added the further estimated sum of \$300,000 where costs have not been given, which would make the grand total for the year, \$4,460,133.

We give the total values and numbers from 1880 that our readers may make a comparison:

1880—	397	engagements, value	\$ 1,734,403
1881—	533	"	3,709,777
1882—	785	"	5,097,575
1883—	803	"	5,201,609
1884—	1,127	"	6,202,807
1885—	1,457	"	7,943,999
1886—	1,148	"	6,401,669
1887—	1,093	"	6,605,054
1888—	891	"	6,244,220
1889—	1,081	"	7,500,000
1890—	1,037	"	7,095,013
1891—	1,162	"	6,946,056
1892—	920	"	5,856,341
1893—	905	"	3,962,532
1894—	947	"	4,529,839
1895—	1,086	"	5,199,235
1896—	880	"	6,223,375
1897—	862	"	4,460,111

LIPPINCOTT'S Magazine for January contains for its complete novel John Olmstead's Nephew by Henry Willard French—a very interesting but improbable story. The article "Irrigation From under Ground" by John E. Bennett has a peculiar interest for the people of this Coast—while an account of "Druggists Ancient and Modern" by Oscar Harzberg will prove interesting reading to all those who have to avail themselves of the druggists' art to regain their health and happiness.

PROGRAMMES FOR THE INTERNATIONAL COMPETITION FOR THE UNIVERSITY BUILDINGS.

ARCHITECTS desirous of entering the Competition for the Phebe Hearst Architectural Plans for the University of California, can obtain Programmes and Maps, by applying to the Chapter of Architects, room No. 17, 408 California Street, or at this office.

NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 408 California street, SETH BABSON, Pres. H. A. SCHULTZ, Vice-Pres. OLIVER EVERETT, Sec. JOHN M. CURTIS, Treas.

SOUTHERN CALIFORNIA CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.

THEO. A. EISEN, Pres. ARTHUR B. BENTON, Vice-Pres. WILLIAM C. AIKEN, Sec't. AUGUST WACKERBARTH, Treas.

BUSINESS MOSAICS.

The results of the past years hardwood lumber business have been so flattering with Mr. Fred L. Pfingst that he has decided to enlarge his field of operations by adding more lines of building materials and more accounts. Mr. Pfingst is now visiting the larger manufacturing centres of the Eastern States for the purpose of securing good lines and expects to be back about the first of March fully equipped to battle for his share of this years' business.

As will be seen by the new advertisement of Charles J. Waterhouse on page x of this journal he has removed his office to 421 Market street. Mr. Waterhouse is the agent for the sale of Mr. Samuel Cabot's various articles so useful to builders of the present day, as Cabot's Creosote Stain, Sheathing and Deafening Quilt, Mortar Stain, Pulps and Brick Preservative. Also agent for the various brands of Roofing Tin as manufactured by the well known firm of N. & G. Taylor Co. of Philadelphia.

The J. L. Mott Iron Work—New York, Boston, Chicago, St. Louis and San Francisco—Established 1828: The Pacific Coast Representative of the above company has, at 27 Flood Building, a splendid show of goods in their line. Any thing in the way of Sanitary Specialties can be seen, from bath room to the kitchen can be furnished with these goods that are always sure to give satisfaction to the purchaser. Parties are especially invited to call at their show rooms as above. Mr. M. S. James will take pleasure in showing these goods and explaining the advantage of their use.

Attention is called to the advertisement of Mr. G. C. Dallamore, 414 Devisadero street, San Francisco, page vii of this Journal. The Titus Improved Patent Sewer Gas Trap Tide and Flushing Gate has the recommendation of members the Board of Health as well as testimonials from practical men who have the Trap in use. First Premium from Mechanics Institute for a number of years.

Mr. Dallamore, a practical plumber and gas and steam fitter, has had years of experience in his line of business and can be relied upon as doing well all work undertaken by him.

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.

E. J. MOLERA, Pres. W. F. C. HASSON, Vice-Pres. OTTO VON GELDERN, Sec. EDWARD T. SCHILD, Treas.

MASTER PLUMBERS' ASSOCIATION, meets every first and third Friday of each month at the Flood Building.

JAS. E. BRITT, Pres. J. L. E. FIRMAN, Sec.

BUILDERS' EXCHANGE, Directors meet first Friday in each month at Mission and New Montgomery.

S. H. KENT, Pres. JAS. A. WILSON, Sec.

MASONS' AND BUILDERS' ASSOCIATION, meet first Friday evening of each month.

ADAM BECK, Pres. M. V. BRADY, Sec.

THE VACAVILLE UNION HIGH SCHOOL.

THE cut here represented of the new Union High School Building now being erected in the town of Vacaville, for the Vacaville Union High School District, from the drawings of Cunningham Bros., Architects of Oakland, which were accepted some months past. As the above firm are specialists in school house architecture, the District is assured of a modern building, with rooms properly proportioned, amply lighted, and well ventilated.

The plans contemplate a two-story frame structure of Venetian-Renaissance design. The building will have a frontage of 120 feet, with a maximum depth of sixty-seven feet. There will also be a basement under the entire build-

ing, containing lavatories, heating and ventilating plant, recreation rooms, etc.

The main entrance leads to a large entrance hall, on one side of which opens the principal's office, and on the opposite side, the library. The main corridor, will be ten feet wide in the clear, with three class rooms opening off it on the first floor, two class rooms, chemical and physical laboratories, and a large assembly hall, on the second floor. Teachers' lunch and dressing rooms, lavatories, hat and coat rooms, etc., are also provided. The unilateral system of lighting, is used in class rooms throughout. Special attention has been paid to the heating and ventilating. California yellow pine, will be used throughout for the interior finish.

The building is now enclosed and it will require about fifty days for its final completion.



THE VACAVILLE UNION HIGH SCHOOL. CUNNINGHAM BROS., ARCHITECTS, OAKLAND, CAL.

HEATING, VENTILATING AND CLOSETS.

The Board determined from the start to incorporate the most modern and practical Heating, Ventilating and Sanitary work and appointed a committee of three to personally inspect the workings of the various systems offered.

As a result of this inspection the W. Morgan & Co's. Heating and Ventilating System and also their Ventilated Flushing Water Closet System was adopted complete.

The system is applied in a very systematic manner, occupying but a small portion of the basement, leaving ample play rooms.

A double air warmer or furnace is located at the base of the flues supplying fresh air to the rooms above, these flues drawing their air supply from a brick warm or cold air chamber, which in turn draws its supply from fresh air rooms and windows located on each side of the basement. A powerful ventilating shaft 4x5 feet and 60 feet high draws the foul air out of each room by means of vent flues leading from each room to the base of this main shaft, the amount of exhaust is regulated by a small stack heater placed in the shaft.

By this arrangement each class room has its own independent fresh air supply and foul air exhaust flue, the teacher or occupant of the room having control of the temperature by means of a "heat regulator" which admits either warm or cold air through the same flue.

The practical workings of this system can better be determined by the ten guarantees of the company two of the most important reading as follows

"That each room shall have a continuous fresh air supply—warm or cold—so that if any room should become overheated the temperature can be reduced at the rate of three degrees for ever ten minutes, without opening doors or windows."

"That said apparatus shall secure good ventilation in all rooms, the capacity of the plant being sufficient to supply enough fresh air to each room to renew the entire volume of air in said rooms from four to six times per hour, without harmful draughts as from open doors or windows."

One of the most important features of this system (different from anything else offered) is the peculiarly constructed furnace, which makes it impossible to "over-heat" the air,

the large flange radiating surface insuring an increased volume of air at a decreased temperature.

In the rear basement rooms are found the boys' and girls' closets.

This closet system is most perfect in operation, and a combination of air and water is used, the latter to wash or flush the troughs and the former to draw all foul odors or gases through the closet vault, and expel same into the open air at the top of the building, keeping these lavatories clean and healthy at all times.

From the practical workings of this entire system in the various school buildings inspected by the committee and from the brief description as herein given it will be apparent that The Vacaville Union High School Building will be one of the foremost in its Modern Sanitary Appliances.

THE WORLD'S ARTISTS INVITED TO COMPETE.

PLANS FOR A UNIVERSITY—MUST BE IMPOSING, SERIOUS AND NOBLE—THE TRUSTEES OF MRS. HEARST'S MUNIFICENCE MAKE PUBLIC THE CONDITIONS.

THE TRUSTEES of the Phebe A. Hearst architectural plan of the University of California have issued their invitation to the architects of the world to co-operate in the preparation of a permanent, general plan of the buildings and grounds which are to compose the University of California.

The invitation is in the form of a handsomely printed pamphlet of forty pages, entitled "Programme for an International Competition for the Phebe Hearst Architectural Plan of the University of California." It opens as follows:

The trustees appointed by Mrs. Phebe A. Hearst hereby invite the co-operation of the architects of the world in the preparation of a permanent, general plan of the buildings and grounds which are to compose the University of California, in Berkeley, near San Francisco, Cal.

J. B. Reinstein, James H. Budd, William Carey Jones. Trustees of the Phebe Hearst Architectural Plan of the University of California. Dated at San Francisco, Cal., December 3, 1897.

The competition is to be double, a preliminary and final. The preliminary is open to the world. The final will be limited to those whose work in the preliminary is decided by the jury of award to be of such worth and merit as to entitle them to be considered in the final competition. All plans submitted for the preliminary competition must be deposited with the United States Consul at Antwerp, Belgium, before July 1, 1898.

Rules have been adopted so that the members of the jury of award will not know who is the author of any plan. All plans that the jury do not consider worthy of being retained will be returned to their authors. The plans retained will become the property of the University of California, but the name of a successful author will not be made public without his consent. At least ten plans will be retained, and if only that number the author of each will receive \$1500. If not exceeding fifteen plans are retained \$1200 will be paid to each, and if more than fifteen are retained \$1000 will be paid to each.

Competitors in the final competition who desire to study

the site of the proposed buildings on the ground will be provided with transportation and expenses for the journey from their residences to San Francisco and return. A total sum of at least \$20,000 will be devoted to premiums for the best plans in the final competition, and of this at least \$8000 will be awarded to the plan classed as No. 1. The ultimate execution of the plan is entirely in the hands of the University, and competitors are informed that a contract with any of those receiving an award "will be a desirable consequence of the competition, but in no wise a condition thereof." The preliminary plans retained will be publicly exhibited at the Mark Hopkins Institute of Art.

The jury for the preliminary competition will be international, being composed of these members: Messrs. R. Norman Shaw, 6 Ellerdale Road, Hampstead, London; J. L. Pascal, 8 Boulevard St. Denis, Paris; Paul Wallot, 6 Hahnel-Strasse, Dresden; Walter Cook, 674 Broadway, New York, N. Y.; J. B. Reinstein, 217 Sansome street, San Francisco, Cal. For the final competition four architects will be added to this jury, who will be chosen by its members, aided by lists of names submitted by successful preliminary competitors. Competitors successful in the preliminary competition will have not less than six months after the decision in the preliminary competition within which to send in their plans for the final competition.

Eight thousand copies of this programme have been issued, four thousand copies in the English language, two thousand in the French and two thousand in the German. The programmes, documents, pictorial aids and the material necessary for the competitors have been distributed to the Ministers of Foreign Affairs of the Argentine Republic, Brazil, Chile, China, Japan, the Minister of Public Instruction and Fine Arts in Turkey, the technical societies, respectively, of Spain, Sweden and Roumania, and the leading organizations of architects in Austro-Hungary, Belgium, Canada, Denmark, Germany, Great Britain and Colonies, Holland, Italy, Mexico, Portugal, Russia and Switzerland. In the United States they have been sent to the Secretary of State of every State, to chapters of the American Institute of Architects in Boston, Brooklyn, Buffalo, Chicago, Cincinnati, Cleveland, Denver, Detroit, Indianapolis, Kansas City, Los Angeles, Lynchburg, Va.; New York, Philadelphia, Pittsburgh, Providence, Rochester, San Francisco, Seattle, St. Louis, Washington, and to the Mayors of the other principal cities.

It is stated that the various buildings now standing on the grounds need not be taken into consideration; nor need present paths or roads be considered. The general grouping of requirements includes a library with a capacity for 750,000 volumes, a gymnasium with separate halls and apartment accommodation for men and women students, and separate swimming baths for each, two auditoriums, of which one shall seat 5000 people, dormitories, club-houses for students and faculty, an elaborate military establishment, an infirmary, and all suitable structures and provisions for the fifteen departments thus far contemplated by the University.

While there are no limitations on the materials to be used, it is stated that California abounds in beautiful and durable building stones. The programme closes with a scientific abstract of climatic conditions at the University of California for the past ten years. Requests for further information may be addressed to Trustees Phebe Hearst Architectural Plan, University of California, 217 Sansome street, San Francisco, Cal.

CITY BUILDING NEWS.

- Bush** near Powell. Three-story frame; owner, John G. Fezhl; contractor, I. Casper Zwerlein; signed, Jan. 4; filed, Jan. 8; cost \$5775.
- California** and Montgomery. Alterations and additions; owner, Thomas J. Clunie; architects, Curlett & McCaw; contractor, Wm. Linden; signed, Dec. 18; filed, Dec. 14; cost \$16,800.
- Clara street, No. 141.** Additions and alterations; owner, K. S. Guglielmetti; architects, Oakley & Jordan; contractor, C. A. Holm; signed, Nov. 10; filed, Dec. 27; cost \$1000.
- Clayton near Fell.** Two-story frame; owner, James T. Gaynor; architects, Shea & Shea; contractor, B. Dryer; signed, Dec. 30; filed, Jan. 3.
- Dolores** near 17th. Mill work, etc. for four-story and additions; owner, College of Notre Dame; architect, C. J. L. Devlin; contractor, J. W. Smith; signed, Dec. 17; filed, Dec. 17; cost \$23,988. Concrete, etc.; contractors, Staack & Grussel; signed, Dec. 17; filed, Dec. 17; cost \$2570. Excavations, brick work etc.; contractors, Peacock & Butcher; signed, Dec. 17; filed, Dec. 27; cost \$2284. Plumbing; contractor, W. F. Wilson; signed, Dec. 17; filed, Dec. 17; cost \$1817. Lathing and plastering; contractor, Martin Carrick; cost \$2380. Hot Water Heating; contractors, Holbrook, Merrill & Stetson; cost \$3597. Painting, etc.; contractors, Joe Cahill & Co.; cost \$1745.
- Eddy** near Powell. Brick addition to front of Tivoli Theatre; cost \$1500.
- Eleventh Ave. near Pl. Lobos.** Cottage; owner, Mrs. Carrie C. Ayres; contractor, Z. O. Field; signed, Dec. 20; filed, Dec. 23; cost \$1087.
- Ellis and Pierre.** Two-story frame; owner, Margaret O'Brien; contractor, H. E. Kronnek; signed, Dec. 22; filed, Dec. 22; cost \$4500.
- Fulton and Webster.** Alterations and additions; owner, Henry Schmidt; architect, O. Everett; contractor, Jeremiah T. O'Brien; signed, Jan. 5; filed, Jan. 5; cost \$2814.
- Geary** near Mason. Additions and alterations; owner, Charles Schroth; architect, A. W. Marquis; contractor, John Wireo; signed, Dec. 20; filed, Dec. 22; cost \$2307.
- Jackson** near Larkin. Alterations and additions; owner, Mrs. Margaret Hyland; architects, Mahoney & Ryland; contractor, S. Saywell; signed, Nov. 2; filed, Dec. 16; cost \$2520.
- Jackson street, No. 734.** Steel work for a tank frame; owner, M. Schuppert; architect, A. C. Lutgens; contractor, H. Ralston; signed, Dec. 27; filed, Dec. 27; cost \$1025.
- Kansas** near Saloma. To build; owner, Mary E. Trowbridge; architect, J. T. Kidd; contractors, Blanchard & McKenzie; signed, Dec. 20; filed, Dec. 21; cost \$1168.
- Laguna** near Grove. Alterations and additions; owner, Judah Ross; architect, M. J. Lyon; contractor, P. Maloney; signed, Dec. 28; filed, Dec. 31; cost \$2850.
- Market and Third.** Galvanized iron tile for roof; owner, Phebe A. Hearst; architect, A. C. Schweinfurth; contractor, W. Heidt; signed, Dec. 22; filed, Dec. 22; cost \$1300.
- Market and Third.** Babcock and Wilcox boilers; owner, Phebe A. Hearst; architect, A. C. Schweinfurth; contractors, Babcock & Wilcox Co.; signed, Dec. 31; filed, Jan. 10; cost \$13,144.
- Allister and Franklin.** Two three-story frame buildings; owners, Jos. and Christina Wannermaker; architects, Sadfield & Kohlberg; contractor, Jos. Bader and Jos. Fuchs; signed, Dec. 13; filed, Dec. 14; cost \$12,750. Plumbing; contractor, Henry Hufschmidt; signed, Dec. 13; filed, Dec. 14; cost \$1595.
- McAllister near Fillmore.** Additions; owner, Theresa E. Lee; contractor, C. V. McDonald; signed, Dec. 17; filed, Dec. 18; cost \$1000.
- Montgomery and California.** Additions and alterations; owner, Thomas J. Clunie; architects, Curlett & McCaw; contractors, Duffey Bros; signed, Dec. 17; filed, Dec. 21; cost \$2780.
- O'Farrell** near Jones. Three-story frame; owner, A. McFarlane; architects, Coxhead & Coxhead; contractors, Hannah Bros; signed, Dec. 31; filed, Jan. 4; cost \$4470.
- Post** near Octavia. Alterations and additions; owner, Leonora M. Coleman; architects, Jesson & Holland; contractors, J. J. Jensen & R. Morgan; signed, Dec. 17; filed, Dec. 17; cost \$1857.
- Post** near Laguna. Alterations and additions; owner, Jette Hamburger; contractors, Campbell & Pettus; signed, Jan. 4; filed, Jan. 5; cost \$5620.
- Pierce** near Broadway. Two-story frame; owner, Maud Shirley Gregg; architect, Frank T. Van Trees; contractors, Williams Bros; signed, Jan. 8; filed, Jan. 12; cost \$4420.
- Scott** near Pacific Ave. Two-story frame; owner, W. P. Redington; architect, E. A. Mathews; contractor, Edward Leiter; signed, Jan. 4; filed, Jan. 6; cost \$7343.
- Second and Mission.** Fire proof floors, etc.; owners, Wells Fargo & Co; architect, Percy & Hamilton; contractor, Richard Keating; signed, Dec. 30; filed, Jan. 3; cost \$37,755.
- Sixth Ave. near California.** Six two-story frames; owners, Marcuse & Remmel; days work; cost \$18,000.
- Stevenson and First.** Alterations and additions; owner, L. Schoenberg; architect, Sylvain Schnattacher; contractor, John Flaherty; signed, Dec. 18; cost \$1040.
- Stockton street and Stockton Place.** Alterations and additions; owner, W. F. Wilson; architect, N. Blaisdel; contractor, R. C. Stiller; signed, Jan. 4; filed, Jan. 5; cost \$1220.
- Tenth** near Howard. Two-story frame; owner, Cascade Laundry Incorporation; architect, H. Gelfuss; contractor, F. W. Kern; signed, Dec. 22; filed, Dec. 22; cost \$4500.
- Van Ness** Ave. and Clay. Fence work; owner, Claus Spreckels; architects, Heid Bros; contractor, S. F. Novelty Works; signed, Dec. 20; filed, Dec. 31; cost \$1670.
- Washington** near Buchanan. Two-story frame; owner, Wm. L. Grestie; architect, E. A. Mathews; contractor, A. T. Ruch; cost \$7674.

COUNTRY BUILDING NEWS.

OAKLAND

At the last meeting of the Board of Public Works, of Oakland, the plans of Cunningham Bros., architects of that city, for the proposed new fire station, were accepted.

The building will be a two-story brick structure, 40 feet front with a depth of 76 feet, in the Spanish-Renaissance style. The front will be of buff pressed brick, with red trimmings. The estimated cost is \$7500. Bids are to be called for within a week.

AUBURN

Building operations in Auburn at this season of the year is not very brisk. A. L. Kennison is just completing a large building 50x70 two stories high, covered with "steel brick" siding. The lower story will contain a store, saloon and bottling works and upper story will be a dance hall. Cost about \$3500.

Chas. Barker has just inclosed a neat two-story cottage; cost about \$2000; architect, A. D. Fellows; owner Chas. Barker.

Guy Walsh has ready for plaster a neat one-story cottage.

E. B. Beecher will build a cottage on his ranch near town early this Spring.

S. F. Woodworth of Clipper Gap will build a soap and candle factory at Clipper Gap in the Spring.

Burt & Locher have purchased a lot and will erect a warehouse upon the same this Spring.

TUOLUMNE

The Board of Supervisors of Tuolumne County has accepted the plans of Wm. Mooser & Son of San Francisco, for a new Court House Building. The area of the main structure will be 89x47 1/2 feet, and it will have a wing 30 feet square. The height to the apex of the tower will be 88 feet.

The edifice will be three stories, with the main edifice leading to the second floor. Stone will be used for the lower story, the walls above being in Roman brick. Construction will be commenced in April.

LOS ANGELES

Architect R. B. Young, in addition to the plans he has prepared of the Catholic church and parochial school at Pasadena, is now at work on the drawings of an academy, for the same denomination, which will be built on the school site on the corner of Walnut and Fair Oaks avenues. These buildings will be equal to any that have been erected in Pasadena during the past year.

The Los Angeles' Board of Supervisors have directed the clerk to advertise for bids for the construction of a tunnel through the divide at the head of the Poway grade in Sec. 35, twp. 14 south, range 2 west, in accordance with plans and specifications now on file in the county surveyor's office; the bids to be opened by the board upon February 9, 1898.

DUNHAM, CARRIGAN & HAYDEN CO.

17 and 19 BEALE ST., San Francisco Cal.

We show here an illustration of our AMERICAN SLIDING DOOR HANGER for which we claim unusual advantages, great saving in time and expense, and superior excellence in operation, together with the following features not obtained or claimed in other hangers.

TRACKLESS—We obviate the use of a track above or below, and the special framing necessary where a track is used.

NO WHEELS—There are no wheels to bind by reason of warped or sagging track. The movement is perfectly PARALLEL and insures against binding.

NOISELESS—The operation is noiseless and extremely easy.

DOORS EASILY ADJUSTED—The door can be readily adjusted plumb, raised or lowered by drawing them into the opening which gives easy access to the adjusting screws.

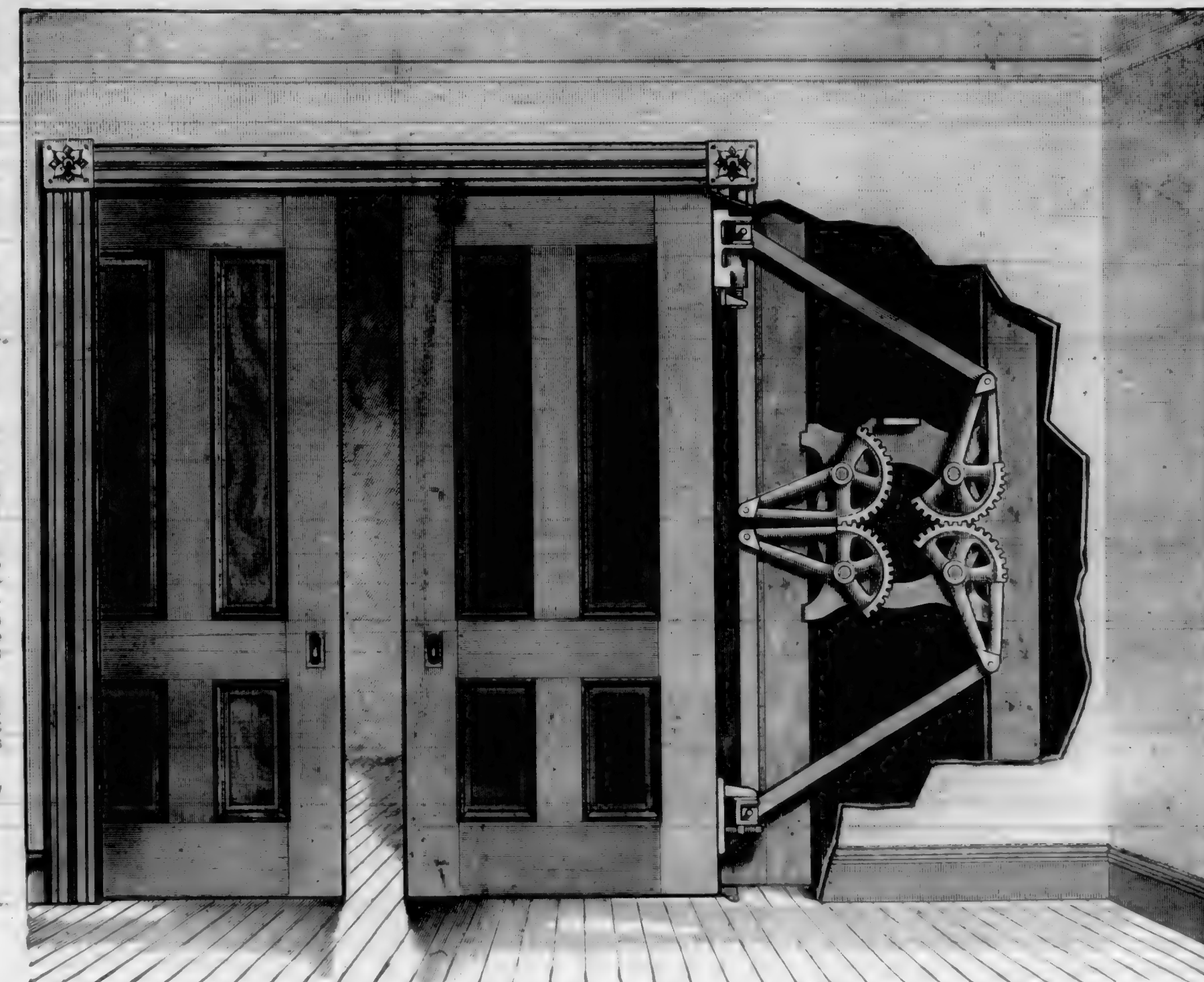
QUICKLY PUT UP—The Hangers can be put up in one-third the time required for overhead hangers.

SUBSTANTIAL—The parts are made to carry three times the weight of doors of the sizes given.

ONE PACKAGE—We pack the Hangers fully assembled and ready to attach, in one package, including all bolts and screws necessary.

See a full size working model at our store.

WE SELL
The Yale & Towne Mfg Co.
CELEBRATED
YALE LOCKS.



The California Architect, \$3.00 Per Year.

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Los Angeles, Cal.

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Southern Marble Co.
Marble Hill Georgia, Georgia White Serpentine. Fire and Electric Proof

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Joist Hangers. GOETZ PATENT Forged Wrought Iron

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Mortar Stain. PECORA For coloring mortar, cement, and sand finish

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Acts as a stop and prevents window from rattling.

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For brown and white coat

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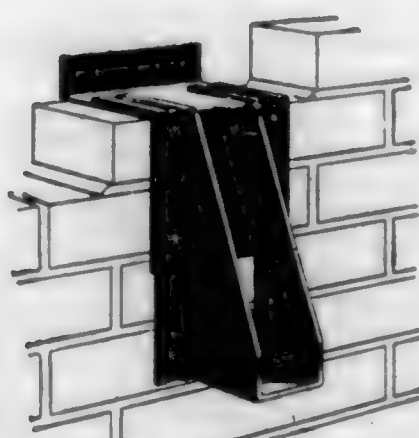
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in lengths to 32 ft., inclusive.....\$14 00	\$12 00
Ordinary sizes to 12x12 in.	
in lengths to 40 ft., inclusive.....14 50	12 00
Ordinary sizes to 12x12 in.	
in lengths to 50 ft., inclusive.....15 00	13 00
Ordinary sizes to 12x12 in.	
in lengths to 60 ft., inclusive.....17 50	13 00
2 in. to 4 in. x 14 in.	
in lengths to 30 ft.....15 00	12 00
2 in. to 4 in. x 14 in.	
in lengths 31 to 40 ft.....15 50	12 00
2 in. to 4 in. x 14 in.	
in lengths 41 to 50 ft.....17 00	13 00
2 in. to 4 in. x 14 in.	
in lengths 51 to 60 ft.....20 00	14 00
2 in. to 4 in. x 16 in.	
in lengths to 30 ft.....15 50	12 50
2 in. to 4 in. x 16 in.	
in lengths 31 to 40 ft.....16 00	13 00
2 in. to 4 in. x 16 in.	
in lengths 41 to 50 ft.....17 50	13 50
2 in. to 4 in. x 16 in.	
in lengths 51 to 60 ft.....20 50	14 00
1x8 in. assorted lengths.....16 00	12 00
1x4 in. assorted lengths.....15 00	12 00
Sizes larger than 12x12 in., as also sizes	
wider than 16 in., subject to	
special rates additional.....	8 00
Refuse, i. e. Firewood.....	
ROUGH UPPERS.	
Rough Select.....\$17 00	
Rough Clears.....22 00	
Furring, 1x2 in. 4 ft. per linear ft.	
WORKED UPPERS.	
Dressed T. & G. Flooring, 1x3 in. \$25 00	\$19 00
Dressed T. & G. Flooring, 1x4 in. 24 00	20 00

Dressed T. & G. Flooring, 1x6 in. 23 00 20 00
 Dressed T. & G. Flooring, 1x4 in. 22 00 18 00
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 Dressed Stepping, S. 1 S.....31 00 21 00

LATH.

1 1/2 in. x 4 ft. long.....\$ 2 00
 1 1/2 in. x 4 ft. long.....2 10

SUNDRIES.

Wool Slats (Rough) 1x1 1/2 in.....\$ 7 50
 Red Slate (Rough) 1x3 in. B. M. 13 00

SPRUCE.

Box Stock, assorted widths.....\$15 00 13 00

ROUGH UPPERS.

Rough Clears.....\$28 00
 Rough Selects.....25 00

REDWOOD.

Lumber to 6x8 and assorted
 Boards, 1x12 and specified

widths.....16 50 13 50
 Timbers, 8x8 and over.....17 00 14 00
 Select, 3x4 and 4x4.....19 00
 All other Select.....21 00
 No. 3 and Refuse.....10 00

KUSTIC.

1x8 and 1x10, asstd., 12 to 20 ft.
 long.....26 00 24 00

1x8 and 1x10, 6 to 11 ft.....19 00
 1x8 and 1x10, all lengths, No. 3.....20 00

SUFFERAGE AND ROUGH—CLEAR.
 1, 1 1/2, 2 in.—4, 5, 6 in. wide,
 12 to 20 ft.....23 50

1, 1 1/2, 2 in.—8 to 16 in. wide,
 12 to 20 ft.....26 00

1, 1 1/2, 2 in. 18 to 24 in. wide,
 12 to 20 ft.....29 00

1, 1 1/2, 2 in.—over 20 ft. long or
 over 24 in. wide, special price
 3, 4, 5 and 6 in.—8 to 16 in. wide,
 12 to 20 ft.....26 00

3, 4, 5 and 6 in.—over 16 in. wide,
 12 to 20 ft.....29 00

SAPPY CLEAR.

Rough or Surfaced or T. & G.,
 1x4, 1x6, 12 to 20 ft.....19 00

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 1x4, 1x6, 6 to 11 ft.....17 00

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 18, 20 ft.....\$23 00

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Plain and Beaded, 1x4, 1x6, 6 to
 11 ft.....19 00

Plain and Beaded, 1x4, 1x6,
 under 6 ft.....16 00

Plain and Beaded, 2x4, 1x6, 12
 to 20.....25 00

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SHORT ROUGH CLEAR.

1x4, 7 to 10 ft.....\$19 00

1x6, 7 to 10 ft.....20 00

1x4 and 1x6, 3 to 6 ft.....15 00

TANK STOCK.

Under 6 feet.....\$17 00

6 to 10 feet.....20 00

POSTS.

Split, 4x5x7.....12c. ea.

PICKETS.

Square end, rough.....\$15 00

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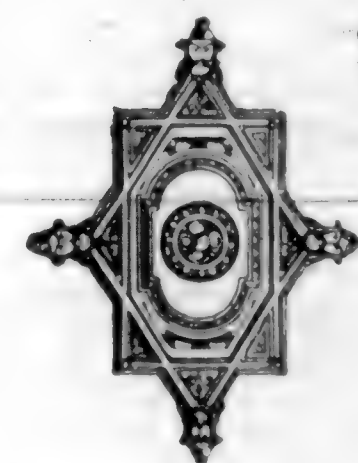
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VOLUME XIX. No. 1.

FEBRUARY, 1898.

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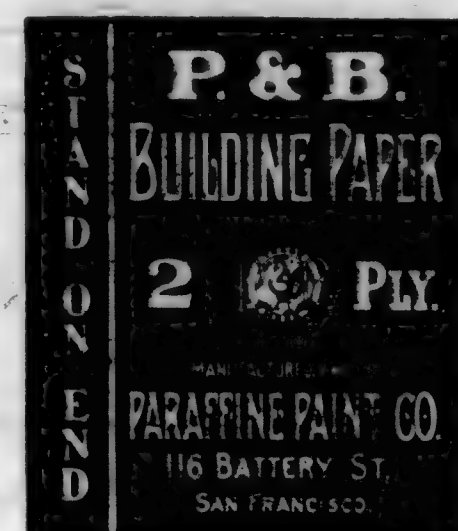
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California street, NE cor. of Larkin. All work for additions and repairs to frame hotel building; owner, Henry Kahn; architects, Oakley & Jordan; contractor, M. J. Savage; cost \$1023.
Clay, south line W of Laguna. All work for two-story attic and basement frame residence; owner, Caroline B. Watson (by attorney); contractor, W. H. Barger; cost \$9600.
Devisadero SW cor. of Sutter. All work, except plumbing, gas-fitting and sewers for two-story frame building; owner, John Murry; cost \$2984.
Devisadero W of Ridley. All work for a two-story frame dwelling; owner, James J. Flynn; architects, Shea & Shea; contractors, Demartini & Pagan; cost \$1995.
Eighth Ave. cor. D street. All work for a frame cottage and 600 feet of fence; owner, Levi Vanuiken; contractor, Geo. M. Saulsbury; cost \$571.
Fell south of Broderick. All work for two-story frame dwelling; owner, Mrs. N. M. Lund; contractor, Wm. Helbing; cost \$4500.
Fremont near Howard. All work for a three-story and basement brick building; owner, M. W. Belshaw; contractor, W. J. Wissinger; cost \$13,306.
Geary street NE cor. of Octavia. All work for additions and alterations to a laboratory; owner, Dr. Jos. C. Hirschfelder; architects, Wright & Sanders; contractor, W. J. Field; cost \$2180.

Watch this Space for Description of
some well known Article that we
must all use.

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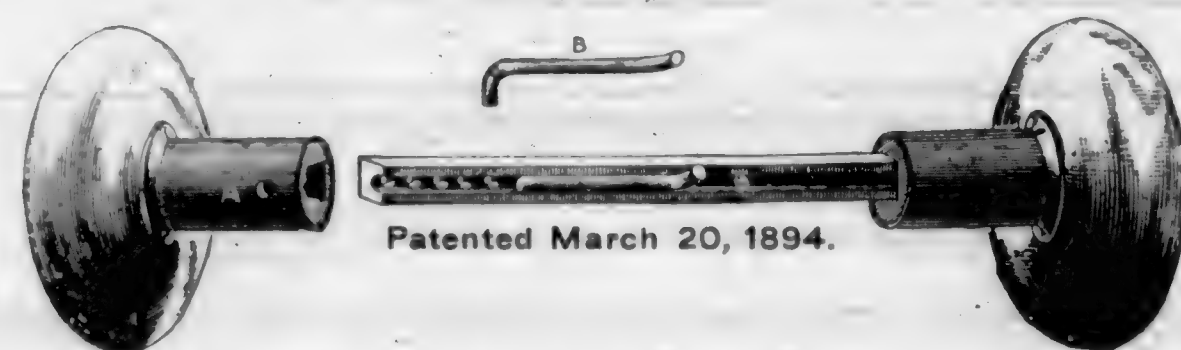
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To remove Knob, insert a small awl into Hole "A" and press Spring down, at same time pull gently on Knob.
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BUILDING NEWS.

Greenwich street, west of Laguna. All work, except mantels, gas fixtures and shades for a one-story attic and basement frame cottage; owner, F. Weissman; architect, Rudolph Hess; contractor, P. C. Rounds; cost \$1695.

Harriett near Folsom. Carpentry, sheet metal and plumbing work for one-story and basement; owner, Julius Radstone; architect, A. J. Barnett; contractor, Frank Boerner; cost \$1494.

Harriett near Folsom. Grading, brick, concrete, iron work, etc., for cellar and smoke house in basement; owner, Julius Radstone; architect, A. J. Barnett; contractor, Rhody Ringrose; cost \$1363.

Howard north of Third. Grading, brick work, granite, stone work, etc.; owner, E. McLaughlin; architect, Chas. Geddes; contractor, H. H. Larsen; cost \$6277.

Jackson north of Walnut. All work for two-story frame; owner, Geo. F. Beveridge; architects, Tharp & Holmes; contractor, Z. O. Field; cost \$8963.

BUILDING NEWS.

Laguna near Washington. Sewers, plumbing, gas fitting, conductors and marble work for frame dwelling; owner, Dr. A. Barkan; architects, Fissis & Moore; contractor, Duffey Bros; cost \$2718.

Market and Third. Painting work, etc., for seven-story brick; owner, Phebe A. Hearst; architect, A. C. Schweinfurth; contractor, J. H. Keefe; cost \$4235.

Powell bet. Eddy and Ellis. Alterations, additions and repairs to the Columbia Theatre, except painting, decorating and electrical work; owners, K. A. Denicke and F. Siebe; architect, E. Kollofrath; contractor, Charles Schutt; cost \$3100.

Sacramento west of Laurel. All work for a two-story and basement frame building, two flats; owner, A. Dahlberg; contractor, A. Dahlberg; cost \$3800.

Sagambre near Capitol. Cottage; owner, A. A. Bracken; cost \$1500.

Second Ave. south of Clement. All work for two-story frame; owner, W. H. Cameron; architect, J. W. Johnson; contractor, Marcuse & Remmel; cost \$2400.

BUILDING NEWS.

Seventh and Eighth streets, bet Irwin and Hubbell. Concrete work for one-story warehouse and a two-story stable; owner, Standard Oil Co; contractor, Gray Bros; cost \$13,000.

Shotwell south of Twenty-fifth. All work for two-story frame, four flats; owner, A. H. Denny; architect, Jepson & Holland; contractor, R. H. Pavert; cost \$6025.

Sixth Ave. west of California. All work for three eight room dwellings; owner, Felix Marcuse; contractors, Marcuse & Remmel; cost \$9000.

Sixteenth and Hoff Ave. Plumbing work, etc., for a row of five-stories and flats; owners, H. W. and Joe Hyman, trustees of Estate of Solomon and Ruth Hyman; architects, Percy & Hamilton; contractor, Leckheimer Bros; cost \$1990.

Surrey near Diamond. All work except plumbing for one-story cottage; owner, Warren J. Ireland; contractor, Geo. M. Salsbury; cost \$661.

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BUILDING NEWS.

Third south-west of Jessie. Excavations, brick, iron and stone work, patent chimneys, concrete, marble and mosaic for three-story brick building, also removing old buildings from lot; owner, O. F. Von Rhein; architect, C. A. Meussdorffer; contractor, Miller & Beck; cost \$10,378.

Tenth Ave. south of H street. All work for two-story and basement frame cottage; owner, John Leppia; architect, W. Koenig; contractor, Wm. Plant; cost \$1800.

Twenty-first east of Folsom. All work except gas and water service, mantels and gas fixtures for a two-story frame building—flats; owner, John Duane; contractor, J. Keneally; cost \$2597.

OAKLAND

Washington cor. of Thirteenth. All work for alterations and additions to brick building; owner, Henry Mathews; architect, Walter J. Mathews; contractor, J. F. Dingwell; cost \$2214.

Hamilton Tract, lot 17, block 34. All work for a frame cottage; owner, May L. De Camp; architect, D. F. Oliver; contractor, L. E. Campbell; cost \$712.

Collins Tract, lot 17. All work for 1½ story frame dwelling; owner, Chas. N. Walter; architect, W. Smith; contractor, E. P. McGowan; cost \$1848.

EAST OAKLAND

Jackson east of Lake Ave. Alterations and additions to frame dwelling; owner, F. J. Lukens; architect, Clinton Day; contractors, Anderson & Greig; cost \$9200.

Redwood Road, at Penniman Place. All work for a two-story frame residence; owner, Walter Morosco; architect, V. A. De Prosser; contractor, P. G. MacIntyre; cost \$10,850.

Enclinal Ave. SE cor. Chestnut. All work for two-story frame building, barn, shed, etc.; owners, John L. and Hannah M. Ansel; contractors, A. P. Pattiani & Co; cost \$4700.

BERKELEY

Blake Tract, lot 17, block B. Removal of 1st Baptist Church from present location to that given, and alterations in connection therewith; owner, Hartland Law; architect, Wm. Knowles; contractors, Kidder & Cooper; cost \$3250.

Pillarworth Tract, lots 14 and 15. All work for a two-story frame dwelling; owner, Oliver Ellsworth; contractor, Frederick Esley; cost \$4875.

BUILDING NEWS.

ALAMEDA

Park street, southeast corner Central Ave. All work for two-story frame church building; owner, First Methodist Episcopal Church; architects, Percy & Hamilton; contractors, Thos. H., Chas. A. and Henry L. Day; cost \$11,477.

Railroad Ave. north of Grand. All work, except brick work, foundations, chimneys and excavating, for two-story frame building; owner, P. N. Anton; contractor, E. Young; cost \$1425.

Seventh street, south of Pacific Ave. All work for a six-room frame cottage; owner, Kate C. Lubben; architect, E. H. Denke; contractor, A. R. Denke, Jr; cost \$1675.

BELVEDERE

All work except plumbing and electrical work for two-story and attic frame hotel building; owner, Annie T. Moore; architect, Oscar Haupt; contractor, McLean Bros; cost \$6920.

DECOTA

R. P. Hurlbut, a well known San Francisco Contractor and builder, secured the contract to erect the Masonic Home at Decota, Alameda County. The amount is \$43,510.

SALINAS

Another story will be added to the hotel building now in progress of erection at the sugar factory. It seems the building proved, even before the frame was enclosed, to be too small for future requirements. Hence the additional story is to contain 27 rooms.

SAN JOSE

Second street cor. William. Two-story frame residence; owner, G. E. Lombard; builder, F. D. Wolfe; cost \$1550.

D. L. Steward and M. Kenney have secured the sub-contract for brick work on the Phelan Theatre Building. Z. O. Field is the principal contractor. The work will cost about \$7500.

SAN DIEGO

For many years San Diego has been renting a building for a City Hall, and paying \$2,000 per annum for same. It is now proposed to erect a new City Hall building at a cost of \$25,000, the same to be placed in the center of the plaza. In size, it will be 80x189. Experimental plans have been prepared by Architect C. A. Logan, showing how the property will look when improved.

BUILDING NEWS.

AUBURN

Bus ness at present quiet. Good rains will help us more than any thing else, though it looks as though building would be more brisk in another month. J. E. Walsh and Anderson Bros. will each build a cottage. Other work at present is mostly repairing.

CONTRA COSTA

George W. McNear is about to build a flour mill at Port Costa.

PALO ALTO

Two-story brick building. Owner, William S. Zeller; contractor, M. P. Madison; cost \$13,885.

SANTA MARIA VALLEY.

A contract has just been let for the new sugar factory at Guadalupe Lake, Santa Maria Valley. The contract is for \$484,780, the plant to be finished by September 1, and to have a capacity for handling 500 tons of beet every twenty-four hours, and to be constructed that it may be easily doubled in working power. Marshcutz & Cantrell of this city are the contractors.

MEXICO

Consul-General Coney has received plans and specifications, calling for bids for a lighthouse-keeper's dwelling at Vera Cruz, Mexico.

LOS ANGELES

The Building Trades Councils of this city have passed resolutions demanding that buildings in course of erection be provided with flooring, temporary or otherwise, for the safety of mechanics working on the building and requesting that the regulations of scaffolding be enforced.

Architect Chas. L. Strange is preparing plans for Meyer Lisner of a two-story building of eight flats, each containing six rooms, to be built on the corner of Ninth and Olive streets.

Architect John Parkinson is preparing plans for the American Building and Mortgage Co., of seven residences, two of which will be built on Ocean View Ave. in Knob Hill tract, and five on the corner of Bush and 18th streets.

Architect B. B. Bixby is preparing plans for Adair Boeck, of a two-story frame residence of eight rooms inside finish of yellow pine, plumbing, electric light and other modern conveniences, to be built at Red lands; estimated cost \$2500.

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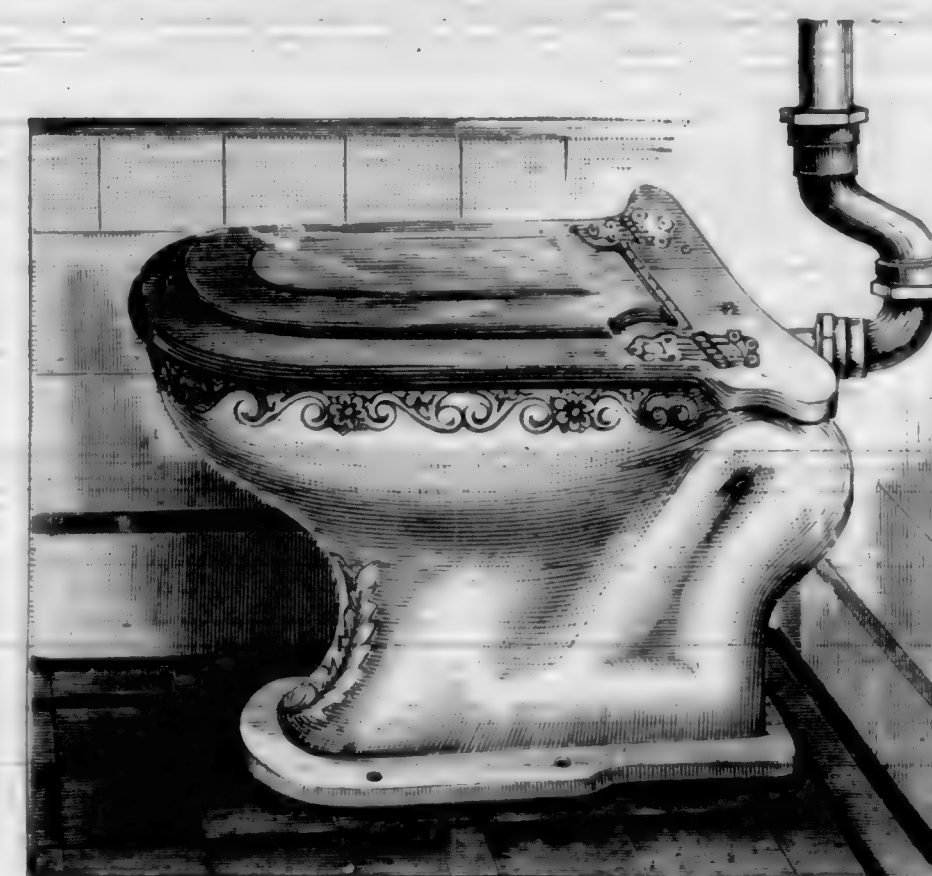
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BUILDING NEWS.

LOS ANGELES

Architect Edward Neisser has let the contract to T. C. Sears for the first of a series of cottages, to be built on the Weylacoft First street tract. The same architect has prepared plans for extensive changes to the front of the building occupied by Fox & Kellerman, on West Third street, near Broadway, that will cost \$1500.

Architect Hugh Todd has prepared plans for the Lan Franco estate, of an additional story, to the Central Block, on Spring street, near the corner of Court. The new addition will be occupied by the Order of Foresters, and will have three main assembly rooms, with the usual ante and property room; it will be constructed to conform to the present structure.

In view of the recommendations made by the grand jury, it is expected that the county jail will, at some future time, be converted into a hall of records, and a jail, with criminal courts and sheriff's quarters will be built on the county property, at the corner of Buena Vista and Temple streets.

At a meeting of the Trustees of the First Methodist Church, held Monday evening, it will resolve to receive competitive drawings for a new church building to be built on the northeast corner of Sixth and Hill streets.

The Edison Electric Company has entered into a contract with the Alcatraz Company for the construction of a complete conduit system throughout the business section of the city. This is in line with the ordinance passed by the council, requiring all electric wires and poles to come down by April 1, 1898. The letting of this contract practically decides that there

BUILDING NEWS.

shall be no "common conduit," but that each company will put in its own system. The expense to the Edison Company of establishing its plant here will exceed \$150,000. Power is to be furnished by the Southern California Power Company, or Redlands Company, as it has been called. They have also purchased the Lichtenberger homestead, on East Fourth street, between Main and Los Angeles streets, where they will erect a power station and other necessary buildings for the transaction of their business.

The new Stimson Building is to be in every respect equal to the Wilcox Block. It will be erected on the northwest corner of Spring and Third streets. Architects Reid Bros., of San Francisco, are due to arrive in this city, and in a few days matters will be settled. George W. Robinson will erect a \$6000 frame building to contain flats, on South Flower St. Architect Thornton Fitzhugh, Byrne Building, prepared the necessary plans.

Ira Smith will erect a modern residence of 12 rooms to be erected on Adams street, near Figueroa. Architects Eisen & Hunt, Stimson Building, prepared the plans.

A four-story brick hotel building, 80x150 feet in size will be erected on Broadway, between 4th and 5th streets. Henry Martz is the owner, Krause & Jenkins are the architects.

Architect John P. Krempel is preparing plans for A. Winstel, of a four-story and basement business building 40x150 feet, to be erected on the east side of Broadway, between Fourth and Fifth streets, adjoining the proposed new building of Henry Martz on the south. The front elevation will be of pressed

brick and terra cotta, plate glass throughout the front. The building is designed for hotel purposes, and will probably be used in connection with the Martz building. The inside finish has not been decided upon. A union elevator will be put in for use in the dual building. The same architect has also prepared plans of a two-story stable and carriage house for the Oxnard Co., to be built at the factory site at Oxnard, Ventura Co. Also a station building for the Pasadena Pacific Co., to be built at Altadena.

Architect A. M. Edelman has prepared plans, for H. Newmark, of a four-story business and office building, 60x150 feet, to be erected on Broadway, opposite the city hall. The front will be of pressed brick with terra cotta trimmings and marble entrance way; inside finish to be of oak; the building will also be supplied with steam heating throughout, and an electric passenger elevator will be installed. The same architect is also preparing plans, for A. Ham-burger & Sons, of a two-story brick business building 40x50 feet, as an addition to their present place of business; it will be built on the east side of New High street, near Franklin street.

ALTADENA

A contract has been let for the erection of a two-story frame dwelling for H. D. West. Consideration, \$8448. This does not include the painting, plumbing or masonry. H. H. & Moore of Los Angeles, architects; D. W. March, contractor; Horatio D. West, owner.

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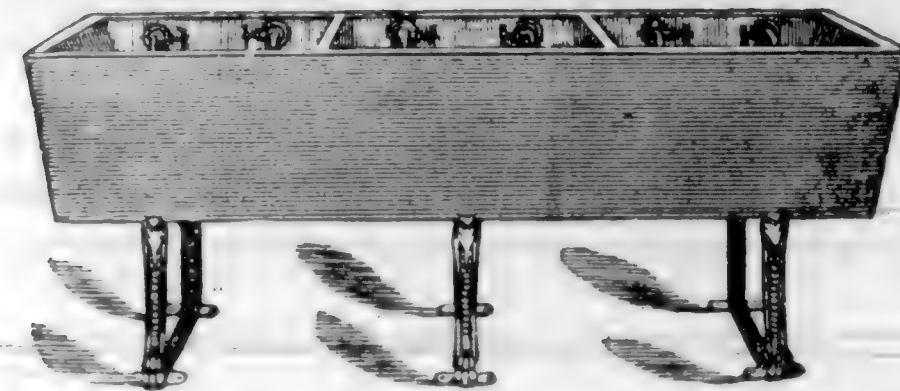
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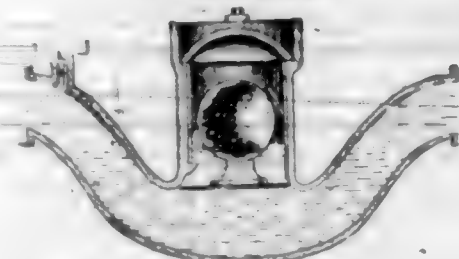
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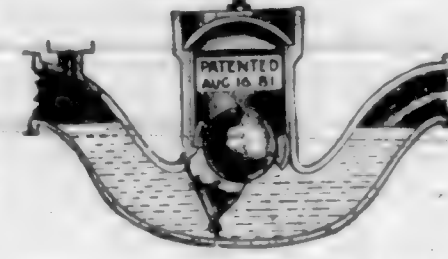
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VOLUME XIX.

FEBRUARY 20th, 1898.

NUMBER 2.

A MONTHLY JOURNAL DEVOTED TO THE ARCHITECTURAL INTERESTS OF THE PACIFIC COAST.



SINCE the publication of the last issue, the California Architectural Publishing Company of San Francisco have leased to E. H. Burrell the right to publish THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

Mr. Burrell has for many years been connected with the fortunes of the paper in a business way, and as one of the Directors of the Publishing Company. He will have charge of the business department while for the literary end of its affairs Tom M. Grant will be responsible. A co-partnership having been formed to do business under the firm name of E. H. Burrell & Co., the financial responsibility falls equally upon the shoulders of the partners to the firm—Messrs. Burrell & Grant, who will continue at the old stand, 408 California street.

As to the policy of the paper in the future, it is a certainty that just a trifle more direction and just a trifle more energy, will be infused into its columns under the new regime, while it is equally as certain that outside issues and isms which have no bearing upon nor any part in a Journal devoted to Art, Architecture, Archaeology, Engineering and Decoration, will be rigidly excluded.

In this connection it will not be out of place to mention some of the objective points, that in season and out of season will receive considerable attention and unyielding support in these columns.

First on the list, because of its far reaching importance, is the passage of a State Law providing for the licensing of architects and regulating the practice of architecture as a profession. Second, the unconditional repeal of the Mechanics Lien Law. Third, compliance on the part of contractors with the rules and regulations as prescribed in the National Electrical Code for the installation of wiring and apparatus for electric light, heat and power, and enforcement thereof by every architect who is a reader of this paper.

The illustrations will be in keeping with the same spirit of liberality and excellence that has characterized them in the past but ever improving by and through the assistance and co-operation of those of our readers who possess the magic touch and willing hand with the pencil.

To place this paper—the only Journal of its kind published on the Pacific Coast—in the front rank of its class in these United States, is the real ambition of its publishers—and to that end and that end only shall all of our efforts and all of our energy be bent.

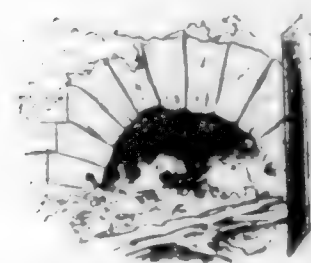
FIRE UNDERWRITERS and the California Insurance Department entertain very different views of the laws of the State, and will settle their differences in the courts. The commissioner's rulings have attracted the attention which it is evident he desired they should, for he has even gone so far as to furnish the daily newspapers with copies of his letters to underwriters before they could be delivered through the mail. This was hardly a dignified course to pursue.

Some of the commissioner's demands are indefensible. They are absurd to the verge of puerility. The sound, respectable companies will not comply with them, and a number of the largest and strongest companies can not. What can be more ridiculous than to require foreign and eastern companies to keep a San Francisco daily record of all transfers of capital stock in Hartford or London? Nothing, excepting perhaps the commissioner's demand that a company with \$50,000,000 surplus should increase its capital stock from \$100,000 to \$200,000 in order to make its contracts as good as companies with \$200,000 capital and only \$50,000 surplus.

Many foreign companies have a good deal of subscribed capital stock not paid up. The commissioner professes to hold that this unpaid proportion give these foreigners an illegal "advantage" over California companies, and he has ordered that the unsubscribed proportion be paid up forthwith. Such an order cannot, of course, be complied with.

If the courts should sustain the commissioner in his extreme position, the effects will be very damaging to business interests. Many insurance companies would be compelled to withdraw from the State, and cancellations of policies would be general. Fire insurance is so intimately related to commerce that if its sustaining contracts are withdrawn business generally must be suspended. Building operations would have to cease. The banks would not lend money. A great deal of property would remain uninsured, and fires would cause bankruptcy. Thousands of men would be thrown out of employment.

The office of insurance commissioner has too much authority, since it is possible to provoke such disaster. A dishonest or cranky official, unrestrained by mandamus proceedings, can drive out the most solvent companies or force them to pay him tribute. The object in the creation of the office was merely to give assurance of solvency and to eject and exclude insolvent companies. It was never contemplated that an insurance commissioner should use the power of the office to annoy and hamper legitimate companies, or to pose in the daily press as a Don Quixote smasher of wind-mill trusts. For the sake of the business interests of the community it is to be hoped that the courts will teach Mr. Clunie his proper place. A bull in a china shop can do a great deal of harm.



AN CONVERSATION on internal affairs of building and loan associations, an authority in this line says that it is a debatable question as to whether it would not have been better for the cause, that premiums for money loaned had never been injected into the laws under which they operate. In the past they did add materially to the gains, but now but little. They have invariably tended to mystify the borrower and lead to more or less con-

fusion and misunderstanding. The simple payment of dues and legal interest, monthly, in fixed installments, is readily understood and the borrower is satisfied. To pay interest on money retained as premium was never popular but was accepted because it was an established custom at the beginning of the successful era of building societies. Conditions have changed and the earning power of money has likewise, and the sooner the building society managers comprehend the fact the better. There was a time, and not very remote, when the circumstances probably did warrant premiums, but not now. The investor in a society receives a larger rate of interest for his money than if placed on deposit in a trust company or savings fund, and it is this that induces him to put by his earnings. Even if the rate of interest for loans was lowered, and the gains lessened, the borrower would be better off, and the investor at the same time, receive a larger rate of interest than paid him elsewhere. If lower interest would bring better loans, and place the associations on a stronger financial basis it would materially increase their popularity.

THE ELECTRICAL WIRING OF BUILDINGS.



THE FLATTERING manner in which the first paper on the above subject has been received by the progressive architects is assuredly a matter of credit alike to the forethought and enterprise of the paper's new management and to those of its readers who are able to see their weakness and seeing it are not only willing but anxious to absorb strength and enlightenment from any source that offers that of which they may be lacking.

There are contractors and contractors in this electrical wiring work, and evidence is accumulating in this office which at the proper time and in an indisputable shape, will be placed in the possession of the S. F. Chapter of the A. I. A. Many of these so-called contractors are fakers pure and simple, but the day is at hand when as a matter of self protection no self respecting Architect will permit one of these worthies to figure upon any work that is to be given out of his office.

In the development era of ten or more years ago, everything connected with electrical matters was in an experimental stage bordering on the chaotic, and these fake contractors flourished and prospered. But the unprecedented proportions that the business has assumed each year, forced the growth of experience into like proportions, with the result that the corps of alert and inventive workers were numbered by the tens of thousands. This has brought the business of the installation of wiring and of the manufacture of apparatus for electric light, heat and power down to an exact science.

Then to whom is an knowledge of this exact science more important than the Architect—surely to no one, for since our last issue the Phelan Building, on Market street has had a close call from annihilation by fire—cause—defective and careless wiring for electric lighting of the top floor of the building. Here then, Architects, have a fine object lesson, furnished to order almost. The wires were run up the elevator shaft, in the mouldings, to the attic, and then up on each side of the iron rods that supported the roof truss, and across the truss to the distributing board for the top floor.

These iron rods were bolted through an iron plate thus

forming a complete circuit between the wires. No signs of bushing could be found on the wire where it crossed the iron rod in the centre of the truss—and it is more than probable that the neglect of the electrical contractor to bush and tape that wire, at that particular spot, was the real cause of the fire in the Phelan Building.

The narrow escape of the Phelan Building has brought to the attention of this Journal as foul and criminal a piece of electric wiring as it is possible to conceive the most depraved and greedy mind of man contriving at.

The Powell street theatre, as at first wired is referred to, and it was not until the interior of the theatre was being remodeled for the Stockwell lessees that the discovery was made—that for all those preceding months, the pretty little theatre had been a virtual deathtrap—unknown to everyone, always excepting that evil minded contractor who perpetrated the fraud and made possible a holocaust in the midst of a trusting community.

This contractor, who is still in the business—used in that theatre rolls of brown paper painted black, where bushings were required—to save the cost of the hard rubber bushings specified. These rolls of brown paper—were all hidden and

points on the subject from which quotations *ad libitum* are made:

"A fair estimate of the cost of construction of a first-class modern fireproof office building, according to a well-known constructive engineer, is in the vicinity of \$3 a square foot of floor space. Thus, a ten-story building, 50 by 100 feet, being 50 by 100 by 10, or 50,000 square feet, can be constructed for \$150,000.

Prior to 1880, before the general introduction of what is now known as the Chicago construction, with elevator and steel skeleton, \$1 per square foot of floor space was a fair estimate. Office buildings then were mostly four and five stories in height, and floor space was not so much subdivided as in modern structures. The principal elements of cost were labor, bricks, cement and framing timber. The price of labor and bricks has remained about the same, that of cement and framing timber has fallen. Iron and steel are, of course, much cheaper to-day, but these materials did not enter very largely into the construction of non-fireproof structures.

"As to rentable floor space, the general reader will no doubt be much surprised to learn that it takes from 30 to 45



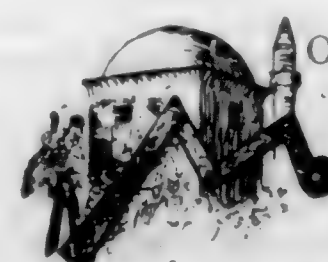
SPANISH HUYCIENDA.

it was also discovered that all the wiring that was hidden was of the very cheapest variety with insulation that was absolutely worthless. It was only wherever the wires were brought through and exposed that they were found to be of standard requirements.

To be Continued.

RENT SPACE IN OFFICE BUILDINGS.

FROM THIRTY-FIVE TO FORTY-FIVE PER CENT OF THE GROUND AREA NEEDED TO SECURE DAYLIGHT.



MOST PEOPLE have but a vague idea of the comparative cost of construction and the comparative amount of rentable space in new and old style office buildings. As to cost, the amount, of course, varies greatly according to the inclination and the means at the disposal of the owners. They may simply be content with putting up a good, serviceable structure, with plain every day finish, or they may be bent upon attaining the height of elegance in finish as in convenience. A writer in the *Chicago Times-Herald* in a clever paper gives some good

per cent of the ground area of the building lot to procure daylight for all parts of the structure. On this point the authority cited says:

"As to rentable floor space, the following percentages of the gross area should be available for office uses: In a corner building, 25 by 100, 70 per cent; in an interior building, 25 by 100, 55 per cent; in a corner building, 50 by 100, 72 per cent; in an interior building, 50 by 100, 64½ per cent; in a corner building, 100 by 100, 62½ per cent; in an interior, 100 by 100, 55 per cent. These percentages, however, are attainable only in buildings planned according to approval principles of engineering and architecture, and have not by any means been reached in all modern structures. I should say that 60 per cent of the gross floor area is a fair estimate for the rentable space in modern buildings, as against 70 per cent in the old. The difference is due partly to the presence of elevator shafts and an increased number of partition walls, but especially, perhaps, to a more perfect compliance with the demands of sanitary science.

"For example, much space is devoted to light courts, proper light not being obtainable in offices beyond say twenty-five feet from the windows. In this, as in other respects, the sanitary condition of the office renter is vastly better to-day than it was seventeen years ago. The consequence has been a tremendous increase in operating expenses, for the landlord is obliged to furnish a thousand and one