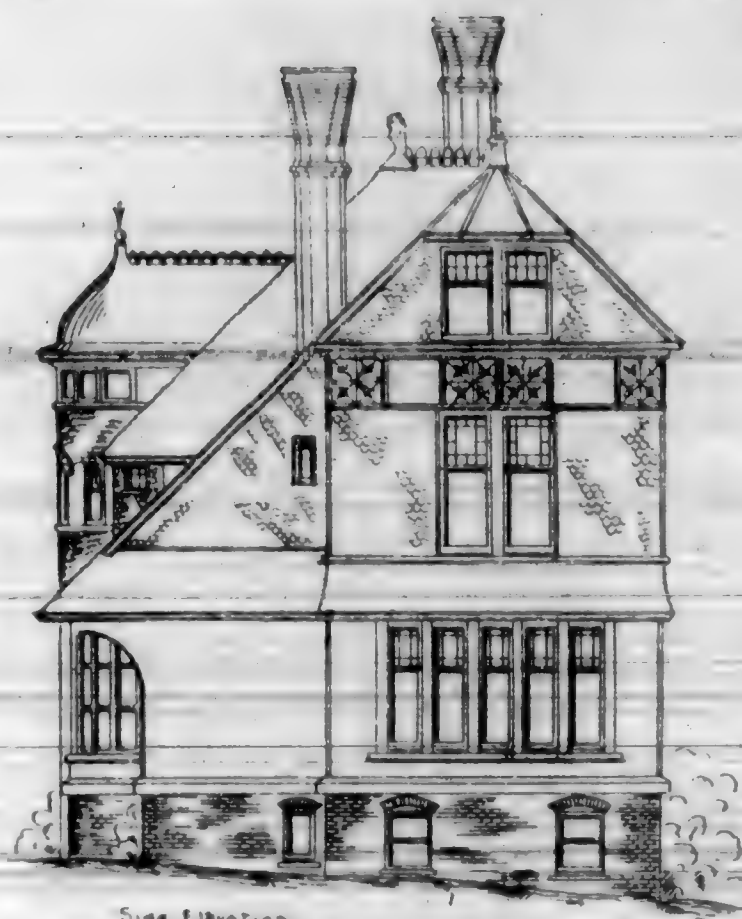




SIDE ELEVATION. "SANTA ROSA."

FLOORS

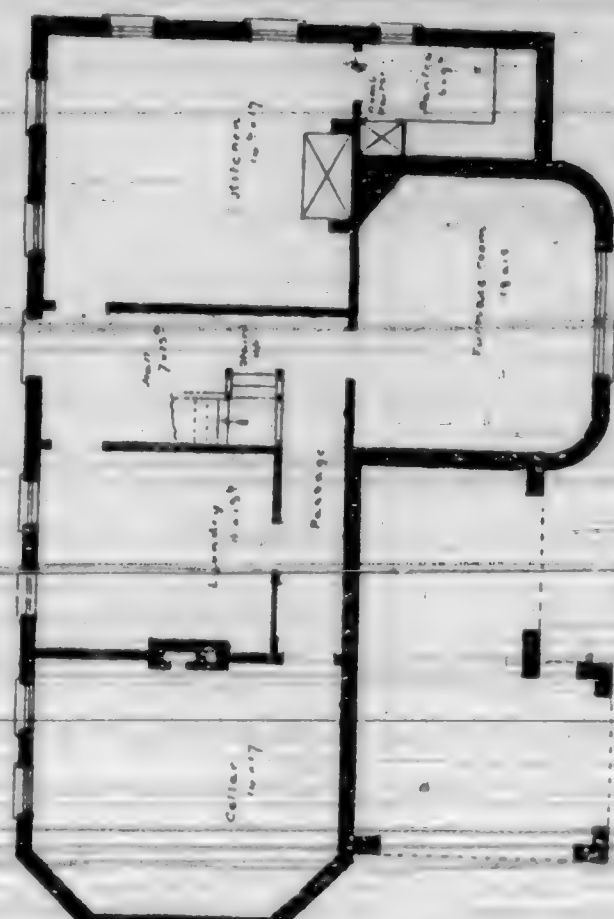
Will be laid of first quality T. & G. Oregon pine, 1x4 inches; to be stacked on premises at same time as rustic; joints to be smoothed off after nailing; one blind nail and one through nail in each course at each nailing; nails to be well set; no floors to be laid until roof is on.

SASH, ETC.

To be made of best clear sapless, dry sugar pine with acorn mold sash bar and weather-lipped meeting rails; to be hung with best Silver Lake braided cord and iron weights; sash 1 1/2 inches thick. Single sash in basement to be hung with butts, and to have necessary fixtures to securely lock same.

DOORS, ETC.

All doors, unless otherwise provided for, to be made of clear, dry sugar pine, free from sap; raised panels and raised mouldings on each side, and must be made in strict accordance with the drawings.



BASEMENT PLAN. "SANTA ROSA."

STEP LADDER.

Of Oregon Pine, neatly made, dressed, and painted to be placed where directed—to be used for access to roof.

FRONT STEPS.

To be substantially and neatly built; risers of inch red-wood; treads of 1 1/2 inch Oregon Pine, to have a pitch of not less than 1/2 inch, to carry off water.

ANGLE BEADS.

Of white pine for all fire-places and chimney corners and all other corners similarly exposed.

FACE CASINGS.

To be 6 inches wide, rosewood, 1 1/2 inches thick; plinths and corner blocks as per details.

BASE.

In all rooms and halls; 10 inches wide, with 2 1/2 inch moulding on top of same. Follow details.

NOTICE.

No inside finish to be put on until the plastering is entirely completed.

All interior wood work to be finished up perfectly clean to be hand smoothed and sand-papered, and at completion, to be properly cleaned, and all stains and finger marks removed or such work as may require finishing in a natural manner.

WASH BASINS.

Will be enclosed underneath with inch I and G redwood, no piece over 2 1/2 inches wide; to have a neat panel door, hung and trimmed with fastenings etc., to correspond to other hardware.

WAINSCOTING.

Dining room and library to be wainscoted to a height of 3 feet; panelled as per details; kitchen to be wainscoted to a height of 3 ft. all around, T. and G. beaded redwood; capped with nosing and scotia. Butler's pantry same as kitchen, Bath room same 5 ft. high. All wainscoting 3 1/2 inches wide.

Sink in Butler's pantry to be neatly enclosed, properly capped, fluted drain board. Door underneath, well hung and to have proper fastenings.

CLOSETS.

All closets to be fitted up with shelves and hooks complete as directed by the architect.

STAIRS, ETC.

To be built as shown by the plans, in the most substantial manner, to be properly supported and rough bracketed. Risers of Red wood, 1 1/2 inch Oregon Pine treads, tongued and grooved together and both housed into wall string. Treads to have nosings, with fillet and cave under; the finish work of stairs to be put up after the plastering is thoroughly finished and dry; wall strings 1 1/2 inch, top edge moulded to correspond to base. Front string and landing facias to be finished with Oregon Pine and Red wood, worded and moulded as per drawings.

Newels to be of Black Walnut—thoroughly seasoned—and to be of pattern as per details. Hand rail of walnut, closely bolted at the joints, add to all ports, newells etc.; Newells 8x8 inches. Rear stairs as shown, with hand rail hung to wall.

All doors to be hung with loose joint butts of sufficient size to clear the architraves. To be of enameled iron or bronze as owners may select.

Every window—where necessary—to be hung with Ives' Patent Sash Lock. All doors to have same make door bolts.

All necessary hardware to be selected by the architect; to be paid for by the contractor as part of his contract.

BRICK WORK.

Use good, hard burned brick throughout, which are to be well wet before being laid. Best Santa Cruz lime and clean sharp sand to be used in making mortar. All brick walls to be made perfectly level and straight to the proper and exact height and to a true line from one end to the other.

Piers to be built as per drawings. Turn trimmer arches for the support of all hearths at the time chimneys are to be built.

Underpin all sills with suitable mortar after the walls are up.

HEIGHT OF STORIES.

Basement	8 feet 0 inches
First Story	12 " 0 "
Second "	as per plans.

SIZE OF TIMBERS ETC.

Wall Caps	2 inches x 8 inches	Redwood
Main Sills and Trimmers	6 " x 6 "	Pine.
Plates	2 " x 4 "	"
Underpinning	4 " x 4 "	Redwood
Corner Posts	4 " x 6 "	"
Joists—basement floors	2 " x 6 "	"
Joists—first inches	2 inches x 10 inches	Pine
"—second "	2 " x 12 "	"
Ceiling Joists	2 " x 6 "	"
Rafters	2 " x 6 "	"
Studs	2 " x 4 "	"
" (corners, door and windows)	doubled	"
Bridging	2 " x 4 "	"
Studs and joists	16 inches between centres	"
Rafters	32 " "	"

Main sills and trimmers to be halved together; the main sills to run across the building as well as lengthwise.

The entire frame to be thoroughly braced and strongly nailed. Joists around stairs, fire places, chimneys, etc., to be doubled and framed together in the best manner. Both tiers of joists to have two rows of herring bone bridging well nailed. All partitions to be well braced. Double headers to all doors and windows. All corners to be studed or furred solid before lathing.

ROOF.

To have gutters arranged to carry off the water as per directions of the architect. Roof sheathing 1x6 Oregon pine, well nailed into each rafter. Use best sawed red-wood shingles laid 4 inches to weather. FANCY SHINGLES—Where and as shown.

RUSTIC.

Enclose the outside with 1/2x8 inches red-wood and rustic. Same to be hauled to the ground when building is commenced, and properly stacked; laps to be painted before rustic is put on; very butt joint to be painted, and behind each place a strip of 3x11 inches.

MANTLES.

To be of wood, L. & E. Emmanuel's best make, in accordance with the details. To cost \$100 each.

BATH ROOM.

To be wainscoted all around to a height of 5 feet. The tub to be neatly capped with walnut and the front to be panelled. Water closet is to have seat and flap, hinged, all the work to be put together with screws. Wash basins to have door underneath. Shelves and hooks to be placed where directed.

WASH TUBS.

To be placed in laundry. They are to be made of sugar pine, 2 inch thick for bottom, side and ends, and 1 1/2 inches thick for division 3 divisions, each one having a separate lid hung with brass hinges. To be put together with white lead. Hot and cold water in each division.

LATHING.

Lath to be put on 1/2 of an inch apart; joints broken every 12 inches, and each lath to have 4 nails; no lath to be put on vertically to finish out to corners and angles; no lath must run through angles and behind studding from one room to another. Carpenter is to personally attend to all the angles and corners and see they are solid before lath are put on.

PLASTERING.

All walls, partitions ceilings, throughout the building to be plastered with one coat of brown mortar, and one coat of hard finish. Brown mortar to be made of pure, unslacked lime, and clean, sharp sand free from loam. A bountiful supply of best cattle hair to be used and thoroughly mixed in; to be made at least 8 days before being used. Brown coat to be floated and true.

CENTRES.

Owner to select all centres and brackets. \$40 will be allowed to cover the cost of those selected; which amount is to be included in Contractors Contract.

PAINTING ETC.

All materials to be the best of their respective kinds. All wood work to be puttied where necessary after priming coat is on. The exterior to have 3 coats of best lead and linseed oil in colors, selected by the owner.

All doors to be painted 3 coats and grained in imitation of black walnut.

Roof to be painted 2 coats Prince's Metallic.

All tin work and leaders same as roof.

Stair Rail, balusters and newells to be filled with Wheeler's Wood Filler and to be finished with 2 coats of shellac and rubbed down with pumice and oil to an even surface.

All wood work must be perfectly clean before filling; care must be taken that the nail holes and other defects, are filled with putty, colored to match the finish of woods where used. Before the second coat is applied on finish work inside, the primed work is to be thoroughly sand papered.

All grained work to be finished with a heavy coat of best varnish.

GAS FITTING.

Gas pipes are to be run in every room as marked on plans. They are to be placed in accordance with the rules and regulations of the Gas Company. The certificate from the Gas Inspector is to be furnished the owner.

PLUMBING.

Water pipes to be 3/4 inch, nothing less about the building. To be of galvanized iron. All fittings to be of same material. 4 hose cocks to be placed on outside of building where directed by owner.

TANKS to be of 80 gallon capacity, copper made, to have a cover, secured with clasps and staples; 8 inch copper ball, 3/4 inch cock; 1 1/2 inch standing overflow and plug, and all necessary pipes and connections.

BOILER to be of copper—50 gallon capacity—on an iron stand; sediment cock and all necessary connections.

SINKS to be of galvanized steel; 2 inch waste pipe with Garland Trap under sink; 3 1/2 inch brass strainer; hot and cold water supply, with 3/4 inch compression cocks. Sinks to be lined up at back of same with zinc, nailed with brass nails.

Two slop hoppers to be placed where directed.

Wash trays to have Garland trap underneath.

Wash Basin—16 inch diameter; 1 1/2 inch waste and overflow;

marble top and backs, molded on edge, 1 1/2 inches thick. All the furniture for hot and cold water to be nickel plated.

BATH Tub to be copper lined; 1 1/2 inch waste and overflow, Garland trap; hot and cold water fixtures complete, nickel fixtures.

SACK'S WATER-CLOSET.

To be put in complete according to instructions accompanying each closet.

SAFES.

Of sheet lead under sink, bat-tub, wash-basins, water-closets, etc., turned up two inches and well tacked to wood-work all around. To have each 1/4 inch waste pipes discharging outside. Same under tank.

WASTE PIPES.

The soil pipe to connect direct with sewer. This pipe is to extend up and through the roof. All other wastes are to connect with an open hopper. All wastes to wash basins etc. are to extend up and through the roof. All pipes are to be properly fastened to the walls of ceilings. All joints to be wiped.

TINNING.

All valleys to be tinned, same running up not less than 10 inches under shingles. Tin work in valleys to be rosin soldered.

Put up where marked on detail plan the necessary number of galvanized iron conductors with all necessary curves, bends, etc. to convey the water from the roof to the open hoppers. Conductors to be firmly secured to building with galvanized iron fastenings. Screens over openings in gutters.

Size of conductors, 2 1/2 inches.

Window caps, scuttle etc., to be tinned.

Proper flashings in chimneys.

Where tin work of roof comes against the building, the tin must run up at least 6 inches behind the rustic. All tin flashings to have two coats of paint on under side before being used; also to be painted on top on such portions as wood work or roof covering will lap on; this painting to be done by tinner with metallic roof paint.

SPEAKING TUBES.

One from each pantry off dining room connecting with kitchen. One from upper hall connecting with kitchen.

ELECTRIC BELLS.

One from front door to connect with annunciator in kitchen; one in dining room, main hall on each floor, parlor and two large bed rooms on second floor. Annunciator in kitchen properly secured to wall.

"No adequate idea can be conveyed of the impressions received by a 'tenderfoot' in the center of a forest where such gigantic trees stand in solid phalanx" says a tourist who recently examined some of the redwood trees of northern California. "I was impressed with a sense of fear, loneliness and littleness. Three trees, selected at random in different parts of the forest, measured respectively 80, 76 and 74 feet in circumference, 6 feet above roots, and the first branches to be at least 150 feet above ground, to which point there is no apparent diminution in size. A comparison of those standing with others of equal size and height that had been felled proved to be more than 350 feet to the topmost leaf. To see an isolated tree of such proportions is an interesting spectacle, but to be in a narrow path where they are in such proximity to each other as to momentarily change one's course is a novel experience, yet a strangely pleasurable one."

Filling Contracts.

Fill your contract. If you make a contract, fill it if it "takes a leg." If you get caught in a trap, bleed if it need be, but don't squeal. Bought wit comes high sometimes, but most men must have it. If you sell what you have not got and don't know where to get it, hustle until you find it. The man you sold to sold to another man, and he has got to have it; there's no let up with him, he has got to have what he bought; and if he don't get it from the man who sold it to him, there will be a squeezing of the lemon until the oil runs out of the rind. If you are fool enough to make a foolish contract, stand by it like a man, it will save you from doing such a foolish thing in your future transaction. The laws of business demand that each man shall do just as he agrees.—Chicago Lumber Trade Journal.

The task of Uncovering the Sphinx.

The last occasion on which the great Sphinx was cleared down to the level on which the paws rest was in honor of the opening of the Suez Canal, in 1864. The over-shifting sands had, however, reburied it almost to the throat when Professor Maspero during his last year of office at Boulak, began again the work of disinterment. This work has now been going on somewhat intermittently for more than twelve months, and is at the present time in active progress under the direction of Professor Maspero's successor M. Grebaut, and is, according to the London *Times* conducted in the following manner: A tramway has been laid down from the Sphinx to the edge of the pyramid plateau, passing close under the west face of the granite building popularly, though incorrectly, called the Temple of Sphinx. Under the tramway light trucks convey the sand to the point of which their contents are discharged, the trucks being loaded by Arabs of both sexes and all ages, who carry the sand upon their heads in large flat baskets, ascending and descending all day long from the excavations below to the tramway above, and vice versa. The means look curiously inadequate, but the results are astonishing. Already the entire forepart of the great stone monster is laid bare, and already the huge chest, the paws, the space between the paws, the altar in front of them, and the platform upon which they rest, are once more open to the light of day. Nor is this all. Between the Sphinx and the edge of the pyramid plateau a vast space has also been cleared, thus bringing to view a fine flight of steps, some forty feet in width. These steps, which are described by Pliny, were uncovered by Caviglia in 1817, but have been entirely lost to sight for nearly seventy years. A second flight of steps and the remains of two Roman buildings were also found by Caviglia, and will again be brought to light if M. Grebaut continues to work in this direction.

THE RIGHT OF THE SPHINX.

That is to say the direction of the granite temple, to the southward—a further excavation is in progress, the result of which will probably confirm the surmises of those who believe the Sphinx to stand in a huge artificial amphitheatre hewn out of the solid rock. This gigantic work would, of course, be contemporaneous with the Sphinx itself, which Mariette attributed to the mythic ages before the advent of Mena, the first King of the first dynasty, and which Maspero considers to be, if not actually prehistoric, at all events the oldest monument in Egypt.

From the level of the area below the great flight of steps (which lead down and not up to the Sphinx) one now measures the whole height of the huge human-headed monster, whose battered countenance stands out against the cloudless sky one hundred feet above. The space between the paws is thirty-five feet long and ten feet wide. This space was anciently converted into a small sanctuary lined with votive tablets, only one of which—the famous stela of Thothmes IV—yet remains in sight. This stela records how the king, when upon one of his hunting expeditions, lay down to rest at mid-day in the shadow of the Sphinx. He there fell asleep and dreamed a dream in which the venerable image conjured him to clear away the sand in which it was nearly buried. Then the Prince awoke and "made silence in his heart," and vowed to do that which the god had commanded.

THE PAWS OF THE SPHINX.

As they now appear, are a restoration of Roman date, being cased in comparatively small slabs, and to some extent hollow underneath. The breast of the Sphinx has likewise been faced with slabs, apparently in Roman times, and these slabs have again been repaired by cutting away the weathered surface and inserting a fresh facing. Like the legs of the Colossi of the plain and those of the great statue of Abou Simbel, the paws of the Sphinx are covered with the Greek scrawls of early travelers; but these graffiti are mostly of a late period, and so slightly scratched that few are legible. Such as they are, however, Professor Maspero has, it is understood, devoted himself to the ungrateful and difficult task of translating them.

M. Grebaut's elevations are not limited to the clearing of the Sphinx only. Various interesting tombs have lately been discovered in the vicinity of the great Pyramid, and to the westward the face of the Libyan cliff has been reached, where it forms the natural boundary of the Pyramid plateau. Some good early rock-cut tombs, with built-for-courts, have been found in the face of this cliff in two of which the walled-up recesses or secret chambers, called "serdab," which were constructed for the safe-keeping of funerary portrait statues, are yet intact with their contents.

No two men do work exactly alike; every good workman has ideas of his own, and when he attempts to follow out ideas given by the foreman or some one else, he is pretty sure to make a "botch" of it. General principles are the same, but the details should invariably be left to the workman himself, otherwise he not only loses confidence in himself, but becomes a mere machine which requires constant watching.

STEEL SQUARE AND ITS USES.

We have just received a large number of the above named book. A copy will be sent to any address upon receipt of ONE DOLLAR. It contains a full treatise on the Carpenter's Steel Square and the numerous uses to which it may be applied.

Fireproof Building Material.

The *Real Estate Record* says that fire ruins show that porous terra cotta bricks and blocks best resist fire, water and frost. Next to these in the order of fire resisting qualities come concretes and burned clay work. In the best work done the iron work is encased in porous terra cotta, tile, or brick work in roof, floor and tile construction. The hollow tiles are faced with vitreous tile slate, or any good weatherproof coating, or with a single thickness of brick. Iron and steel framework incased in fireproof materials gives the best possible results. There is a growing preference for light porous walls of hollow material protecting and iron or wooden framework. Massive and heavy walls of brick or stone will do for architecture, but they are not as much of a mechanical necessity as they were regarded a few years ago.

ESTABLISHED MARCH 17 1868

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The McClelland Anti-Siphon Trap Vent.

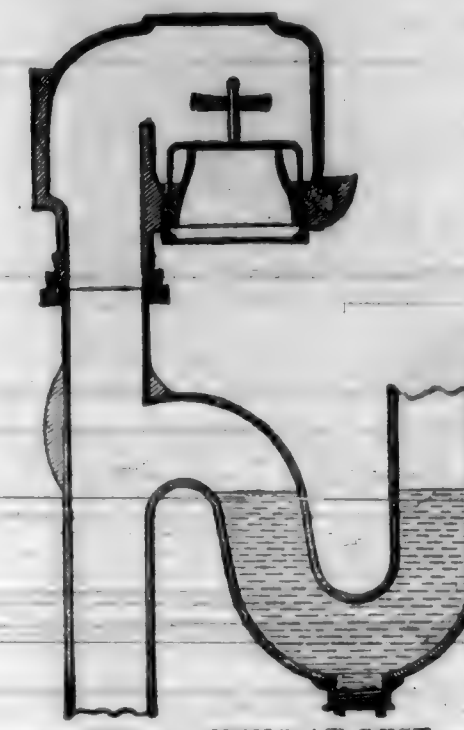


FIG. 1.—VENT AT REST.

This cup is very light, so that it is lifted out of the mercury and suspended by the inflowing air whenever a partial vacuum occurs in the pipe, as shown in figure 2; but drops back into the mercury the instant the demand for air ceases. The deep seal thus formed, by the mercury around the edge of the cup, furnishes absolute security any outflow of sewer air.

Practical experience has demonstrated that each trap must be so vented as to receive on its sewer side an instant supply of air sufficient to meet every demand, without disturbing its seal.

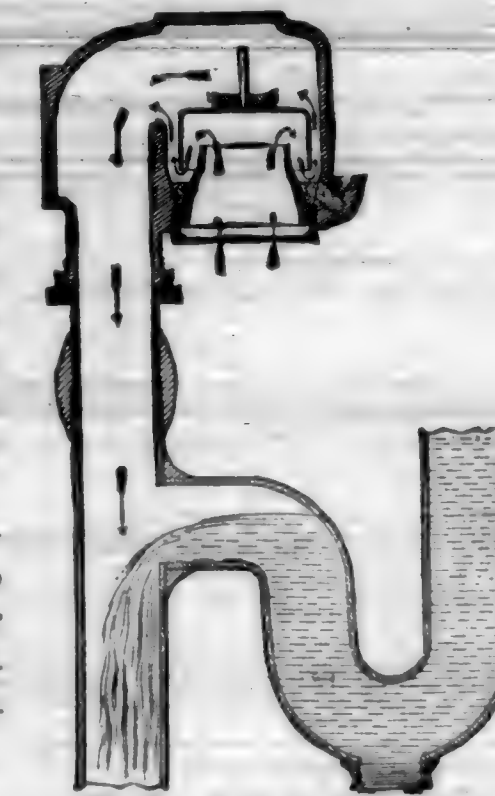


FIG. 2.—VENT ADMITTING AIR.

ITS ADVANTAGES ARE:

That it affords absolute security against siphonage, in all proper situations; while the same security is not furnished by any other means.

That it simplifies the drainage system by discarding long lines of vent pipes, reduces the amount of material and the number of joints to a minimum, and correspondingly reduces the danger of leaks.

That since the vent is in plain view, it can be inspected with convenience and certainty; vent pipes, on the contrary, are usually concealed in the walls and cannot be readily inspected.

That it combines the greatest simplicity, and is easily applied either in new work or repairs; while vent pipes are complex, costly and unreliable, and their introduction is especially annoying and destructive to finished walls.

The Vent should be connected with the crown of the trap, by a short piece of pipe, extending upward to a convenient fastening place as nearly level with the top of the fixture as possible. It is sometimes found convenient to carry the Vent above the fixture, and this is recommended to be done when practicable. It should be put up level and securely fastened.

Manufactured by the DuBois Manufacturing Co., 245 Ninth Avenue, New York City.

Architects Interviewed.

"Interviewing" is all well enough in its way, when truthfully reported, but it is all wrong when the "interviewer" gives to the public, statements of his own concoction, accredited to the "interviewed" who has not been seen at all, and who in fact has said nothing.

An illustration in this connection is found in the reporters interview of several architects and others published in the *Examiner* of July 6th, in regard to the concrete foundation of the Larkin street wing, of the New City Hall, which among others named as "interviewed," James E. Wolfe, architect. This was a decided error on the part of the "interviewer," as Mr. Wolfe was not seen, and did not make any statement whatever upon the question in issue.

Self Lubricating or Norris Anti-friction Pulley.



Any of the Norris Pulleys made Self Lubricating or Norris Anti-friction when so ordered.

We particularly desire to call the attention of Architects and Builders to the illustration of the Norris Anti-friction or Self Lubricating Pulley. With this Pulley, Messrs. Norris & Co. have overcome a great difficulty hitherto existing with Sash Pulleys. It is well known when two metals are working together without any lubricant that they become dry and commence to wear. Especially so is this the case with Sash Pulleys; as it is almost impossible to reach them with oil, they soon rattle and become so noisy, that it is disagreeable and unpleasant to raise the windows.

Many attempts have been made to overcome this, some by having pins to revolve around the main pin or axle of the pulley, and various other ways; but none of them give satisfaction, as in a very few years they make more than those having the simple pin or axle.

By examining the illustration, you will see that Norris & Co. have overcome all noise and wear by keeping the Pin or Axle always Lubricated.

All Pulleys near on top of the pin as all the weight is downward. Norris & Co. use a very large size Steel or Gun Metal Pin and on top of pin where the wheel bears on it, they cut a chamber and in that chamber they place a lubricating substance which does not run out or evaporate, thus making it impossible for the wheel or pin ever to wear away or have any friction.

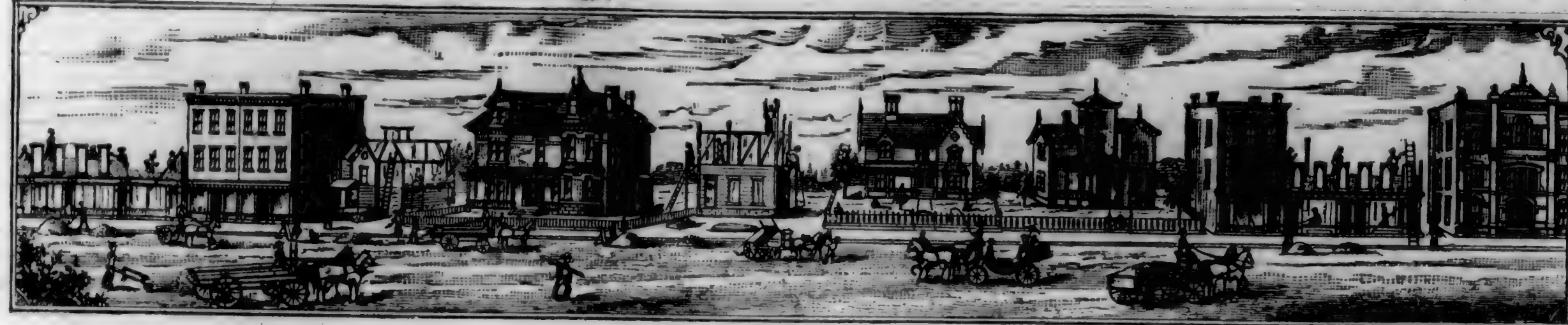
Where there is no wear or friction, you have NO RATTLE OR NOISE. Norris & Co. guarantee all their Self Lubricating Pulleys to be perfectly noiseless; they will on application send samples to any Architects, Builders, or Mill Men FREE OF CHARGE.

We have been in Messrs. Norris & Co's warehouse and know they make the largest assortment of Pulleys of any house in the World.

They make over 1600 different qualities, varying in price from 20 cents to \$36.00 per dozen. For further particulars, address C. Sidney Norris and Co., Baltimore, Md.

Steel Square and its Uses.

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CITY BUILDING NEWS.

Army, near Dolores, three one-story frame. Owner and builder, J. C. Weir; cost, \$6,000.

Bush, cor Montgomery, alterations; cost, \$2,500.

Bush and Sansome, six-story stone and brick bank. Owner, First National Bank; architect, Wright and Saunders; contractor, F. E. Knowles & Co.; cost, \$47,680; signed July 11, 1888; filed July 30, 1888; limit Feb. 11, 1889.

Payments to be made at the rate of 75 per cent as work progresses on the 1st of each month; balance usual 35 days.

Bush and Sansome, iron contract. Owner, First National Bank; architects, Wright & Saunders; contractors, Bigelow & Little; cost, \$10,133; signed, July 11, 1888; filed July 27, 1888; limit, Nov. 1, 1888.

Payments.—Full payments to be made for steel beams and iron girders, when in; 75 per cent as rest of work progresses on 1st of each month; balance, 35 days.

Bluxome bet. 4th and 5th. Alterations. Owner, Mrs. M. F. S. Searles; architects, Schultz and Meeker; contractor, Thos. Day; cost, \$1,086; limit, Aug. 15, 1888; signed, July 7, 1888; filed, July 13, 1888; sureties, B. Joost and W. Thyarks; amt. of bond \$350.

1st payment \$841 when completed. Balance usual 35 days \$275.

Buchanan bet. Turk and Eddy. Alterations. Owner, Thos. Robinett; architect, G. V. Capeletti; contractor, G. B. Ferrari; cost, \$1,250; limit, 40; signed, June 21, 1888; filed July 3, 1888; sureties Blyth & Trotter; amount of bond \$1,250.

1st payment when frame is up, \$300; 2d when completed, \$300; 3d, usual 35; days, \$650.

Bank nr. Lincoln. Cottage; owner, Lizzie Keller; contractor, B. Piarrar; cost, \$800; signed, July 12, 1888; filed, July 23d, 1888.

1st payment, when shingled, \$400; 2d, when brown coated, doors, etc., in, \$200; 3d, 200 in \$10 monthly installments with 8 per cent. interest.

Bush and Sansome. Carpenter work. Owner, 1st National Bank; architect, Wright and Sanders; contractor, I. H. Day; limit, May 29, 1889; 75 per cent. to be paid on 1st of each month as work progresses. Balance 35 days; filed, Aug. 4, signed, July 25.

Clay and Laguna. 2-story residence. Owner, Jno. A. Hooper; contractor, Burbee & Judson; architect, J. C. Mathews & Son; cost \$18,280; limit, 155 days; signed, June 25, 1888; filed, July 9, 1888.

Payments, 75 per cent. as work progresses; balance usual 35 days.

Chiff House. 6 stores and tenements. Owner A. Sutor; architect Wm. F. Smith; contractor S. H. Kent; cost \$11,000; Security F. P. Latson; limit 90 days; signed July 11, filed July 13.

Payments, four payments of \$2,000 each, balance 35 days.

Clay and Buchanan. 2-story dwelling; owner, Mrs. E. B. Hopkins; architects, J. C. Matthews & Son; contractors, Knight & Littlefield; cost, \$15,995; limit, 6 months; signed July 2, 1888; filed July 21, 1888.

1st payment, 75 per cent. as work progresses; 2d, balance usual 35 days.

Clay and Jones. 3 frame buildings. Owner, Magdalen & Co.; architects, Macy & Jordan; contractors, Bateman Bros.; cost, \$14,850; limit, 90 days; signed, July 17, 1888; filed, July 20, 1888; sureties, Moore & Hansen; amount of bond, \$8,000.

1st payment, when roofed, \$2,500; 2d, when floors are laid, \$2,000; 3d, when brown coated, \$2,500; 4th, when white coated, and fronts finished \$2,000; 5th, when ready to paint; 6th, balance, usual 35 days, \$3,850.

Clay bet. Scott and Devisadero. 2 residences. Owner, Geo. C. Brooke; architect, J. M. Curtis; contractor, A. H. Plummer; cost, \$4215; limit, Oct. 1st, 1888; signed July 5, 1888; filed July 11, 1888; sureties, F. Kalfleisch, Blyth and Trotter.

1st payment when ready to plaster \$1053.75; 2d payment when painted \$1053.75; 3d payment when completed \$1053.75; 4th usual 35 days \$1053.75.

Ellis bet. Polk and Van Ness. 3 story frame. Owner, Wm. John; architects, John & Zimmermann; contractor, F. W. Kern; cost \$7050; limit, Oct. 15, 1888; signed, July 7, 1888; filed, July 12, 1888; sureties, B. Joost and O. W. Nordwell; amount of bond \$7000.

1st payment when frame is up \$1000; 2d payment when partitions are set \$1500; 3d, when outside is done \$1000; 4th inside ready to paint \$1800; 5th 35 days or releases given, \$1750.

Fell and Webster. 2-story frame; owner, G. Trautner; architect, H. Geilfus; contractor, J. F. Logan; cost, \$2,669; limit, Oct. 15 1888; signed, July 18, 1888; filed, July 20, 1888.

1st payment when frame is up, \$550; 2d, when floors are laid; 3d, when rough coated, \$550; 4th, when hard finish and inside finish on, \$550; 5th, when completed, \$589; 6th, usual 35 days, \$919.

Ford bet. Sanchez and Noe. Alterations. Owner P. Hurue; architect, Hurue & Everett; contractor, F. Buckley; cost \$1,825; signed, July 9, 1888; filed, July 10, 1888.

1st payment additions completed \$912.50; 2d repairs completed \$456.25. Balance usual 35 days \$456.25.

Franklin and Ellis, plumbing. Owner, Academy of Sacred Heart; architect, C. J. I. Devlin; contractors, Sweeney & Kearns; cost, \$4,645.

1st payment, when sewers are set and heating pipes to first floor, \$750; 2d, when all pipes are in, \$1,500; 3d, when completed, \$1,230; 4th and balance, 35 days, \$1,165; limit, Oct. 15; signed June 22, 1888; filed June 22; sureties, Hurlbut & Rossland; amount of bond, \$4,000.

Fair Oaks, near 22d, two-story frame and additions in rear. Owner, Lawton; cost, \$5,000.

Fifth, near Bluxome, additional story to frame building; cost \$900.

Fifth, nr Brannan, two-story frame; cost, \$2,200.

Fremont between Market and Mission. Carpenter work to brick building, owners, Huntington, Hopkins & Co; architect Wright & Sanders; contractor C. C. Terwill; cost \$25,000; time 6 months; signed June 30; filed Aug. 1.

Payments, 75 per cent. as work progresses on 1st of each month; balance 35 days.

Fourth, between Bryant and Harrison. 3 story frame. Owner Cutter & Casar; architect M. J. Welsh; contractor, Taubman & Armstrong; cost \$8,645; limit for carpenter work 90 days; signed July 3d, '88; filed July 9th, '88; sureties Geo. W. Watson and R. L. Taylor; amount of bond \$8,645.

1st payment when frame is up \$1,729; 2d, when brown coat of mortar is on \$1,729; 3d, when exterior is completed \$1,729; 4th, when building is entirely completed \$1,729; 5th, usual 35 days \$1,729.

25 and 627 Front street. 1 story brick and basement. Owner C. Harris; architect P. J. O'Connor; contractor C. B. L. Jones; cost \$2,675; limit Aug. 10, '88; signed June 23, '88; filed July 18, '88.

1st payment when west wall is underpinned and first floor joist on \$1,200; 2d, payment when completed and all claims paid \$1,475.

Filbert, bet Mason and Taylor, additional story and improvements; contractor, Battiste; cost, \$2,500.

Green, nr Dupont, repairs; cost \$500.

Green, bet Kearny and Dupont, repairs; cost, \$500.

Geary and Mason, three-story frame. Owner, M. Meyerhoff; architects, Schmidt & Son; contractor, M. C. Lynch; cost, \$7,822; signed, July 24, 1888; filed July 25, 1888; limit, 83 days; sureties, P. Swift and Jno. Lewis.

1st payment, when frame is up, \$1,427; 2d payment, when outside finish is on; \$1,465; 3d payment, when hard finished, \$1,465; 4th payment, when completed, \$1,465; 5th payment, balance, usual 35 days, \$2,000.

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Green nr Laguna, 2 story frame. Owner, W. J. Smith; architect, John & Zimmermann; contractor, Schultz & Kreeker; cost \$3,555; limit Oct. 15, '88; signed July 14, '88; filed July 17, '88; sureties C. W. Gercke & F. C. Jensen; amount of bond \$3,500.

1st payment when building is framed \$700; 2d payment when floors are laid \$500; 3d, rough mortared and outside finish on \$700; 4th, inside ready to paint \$755; 5th, when all bills are paid or 35 days \$900.

Golden Gate Ave. and Steiner. Grading. Owner, J. W. Riordan; architect, C. J. J. Devlin; contractor, McHugh & Kenny; cost \$5,559; signed, July 20, 1888; filed, July 23, 1888; limit, Dec. 18, 1888; sureties, Degan P. and Jas. Mahaley; amt. of bond, \$5,000.

Payments, 75 per cent. as work progresses, on the first of month; balance, 35 days, as usual.

782 Geary. Alterations; owner, S. Wood; contractor, Wm. Little; cost, \$1,950; signed, July 7, 1888; filed, July 19, 1888.

Payments, 75 per cent. as work progresses; balance usual 25 days; no payment less than \$400.

Geary and Devisadero addition; owner, D. Hartnett; architect, F. J. Welsh; contractors, Baldeman Bros.; cost, \$2,750; signed July 23, 1888; filed July 30, 1888; limit 60 days.

1st payment, when framed, \$687; 2d, brown coated, \$687; 3d, when completed, \$687; 4th, usual 35 days, \$689.

Hayes, cor Laguna, additional story; owner, Little; contractor, A. Newbert; cost, \$5,000.

Hayes, nr Lott, two additional stories; owner, C. L. Ayers; architect, M. J. Welsh; cost, \$3,500.

Hayes, cor Baker, 1½-story stable; cost, \$1,800.

Hayes, nr Octavia, additional story; cost, \$2,500.

Lombard, bet Stockton and Dupont, 1-story frame; owner, Bellet; contractor, McCracken; cost, \$3,000.

Lombard and Kearney. 2-story frame; owner, Jno. McGrath; architect, Jno. T. Kidd; contractor, Wm. Commary; cost \$2,452; limit, 70 days; signed, July 20, 1888; filed, July 21, 1888; surety, F. P. Latson.

1st payment, when framed, and flooring on hand, \$500; 2d, when partitions are set, \$600; 3rd, brown coated and front up, \$300; 4th, when completed, \$439; 5th, \$600 35 days.

Mission and 12th, additional story. Owner, Jas. Palmer; architect, Chas. Havens; contractor, D. Chisholm; cost, \$6,020; signed July 28, 1888; filed July 30, 1888; limit 30 days; sureties, Frank P. Latson and J. McKinnon.

1st payment, when partitions are set, \$1,000; 2d payment, when outside finish is on, \$1,000; 3d payment, standing finish is on, \$1,250; 4th payment, completed, \$1,250; 5th payment, usual 35 days, \$1,520.

Market and Ecker. Alterations; owner D. N. & E. Water; architect, Schultz & Meeker; contractor, Mahoney Bros; cost \$43,000.

1st payment 75 per cent. as work progresses on, first of month from Sept. 1st; balance usual 35 days.

Mission and 12th, plumbing; owner, Jas. Palmer; architect, Chas. I. Havens; contractors, Fritz & Kean; cost, \$1,000; signed July 28, 1888; filed July 28, 1888.

1st payment, when rough pipes are in, \$500; 2d payment, when completed, \$500.

Masonic Cemetery. Moseleum. Owner, E. J. Baldwin; architect Pissis & Moore; contractor A. McClellan; cost, \$6,976; limit 1 year; signed July 17, '88; filed July 18, '88.

1st payment 75 per cent. Feb. 1st, '89 or upon completion; balance usual 35 days.

Mission, No. 548; improvements; cost, \$800.

Mission, near 1st, repairs; cost, \$2,500.

Montgomery Av., cor Broadway, 1-story brick; cost, \$1,000.

Natoma and 7th, three-story frame. Owner, Daniel Sullivan; architect, A. J. Barnett; contractor, Brennan Bros.; cost, \$5,194; signed July 16, 1888; filed July 28, 1888; surety, Frank P. Latson; amount of bond \$2,500.

1st payment, when roof is on, \$1,200; 2d payment, when brown coated, \$800; 3d payment, white coated, \$600; 4th payment, when completed, \$1,294; 5th payment, usual 35 days, \$1,300.

New City Hall, contract let for fifteen cast iron columns and two tiers rolled iron joists. Contractors, Risdon Iron Works; cost, \$50,000.

Nebraska bet Sonoma and Yolo. 2 story frame. Owner, J. Kenry; architect, M. J. Welsh; contractor, H. I. Bray; cost, \$4,500; sureties J. F. Kennedy, P. Donahue; limit, 80 days; signed July 12; filed, Aug. 1.

Payments, framed \$900; brown mortar on \$900; outside finish on \$900; completed \$900; balance \$900—35 days.

Oak and Cole, one-story frame. Owner, Jno. F. Schroeder; contractor, R. Sinnott; cost, \$2,480; signed July 19; filed July 24, 1888; limit, Oct. 1; sureties, R. Warren and B. Joost; amount of bond, \$2,000.

1st payment, when building is shingled, \$612; 2d, when brown coated and drop frames set, \$612; 3d, completed, \$612; 4th, balance, 35 days, \$614.

Pierce and Oak, two-story frame. Owner and builder, A. H. Bailey; cost, \$4,500.

Page, nr Pierce, two two-story frame. Owner and builder, H. Keenan; cost, \$6,500.

Post and Lyon, 3 frame buildings; owner J. H. Seeba; architect Wm. Mosser; contractor, R. P. Sanchez; cost \$2,350; limit 105 days; signed, July 18, '88; filed July 19, '88; surety, F. P. Latson; amount of bond, \$8,000.

1st payment 75 per cent. as work progresses, and balance, 35 days.

Ridley and Elgin Park, three-story frame. Owner, C. F. Scheele; architect, W. Winterhatter; contractor, A. McElroy; cost, \$6,445; signed, July 18, 1888; filed July 24, 1888; limit, 80 days; sureties, F. Joost & W. Shyarks; amount of bond, \$4,000.

1st payment, when building is roofed, \$1,250; 2d payment, when building is brown coated, \$1,250; 3d payment when hard finished, \$1,250; 4th payment, when building is completed, \$1,250; 5th payment, balance, usual 35 days, \$1,445.

Ridley bet Scott and Devisadero. Double tenement. Owner Jos. Alex; architect H. I. Bestor; contractor G. A. Nagle; cost \$2,970; securities Lewis & Swift, \$1,500; limit 65 days; filed July 16, signed 14th. Payments, when framed \$500; brown mortar on \$600; plastering finished and outside work done \$520; balance \$750, 35 days.

Shotwell, nr Twenty-Fourth, -story cottage. Owner, P. Donahue. Architects Townsend & Wynken; contractors, Thompson & Moore; cost, \$2,800, limit, Oct. 1, 1888; signed, July 10, 1888; filed, July 13, 1888; surety, E. Joost; amount of bond, \$2,000.

1st payment when roof is stripped, \$700; 2d, when brown-coated and outside finish is on \$700; 3d when hard finished and sash hung \$700; 4th payment usual 35 days \$700.

Sutter bet Franklin and Gough. Alterations. Owner, M. Haller; architect Schmidt & Shea; contractor, James Irwin; cost, \$2,540; limit, 70 days; signed, July 10, 1888, filed July 13, 1888; O. J. Preston and J. J. McKinnon, sureties.

1st payment partitions set \$600; 2d payment \$600 when brown-coated and outside finish on; 3d payment when completed \$700; 4th usual 35 days \$640.

Shotwell No. 506 Alterations. Owner, Kate Conville; architect, M. J. Welsh; contractors, Donovan & Williams; cost, \$1,650; securities J. J. Green, H. M. Wrede, \$1,625; limit, 50 days; filed Aug. 1, signed July 28.

Payments, framed \$400; brown mortar on \$400; completed \$400; balance 450—35 days.

Second nr. Howard. Residence. Owner, W. J. Bryan; architect, J. J. Clark; contractors, R. O. Chandler; cost, \$6,600; limit, 60 days; signed, July 3, 1888; filed, July 3, 1888; sureties, B. Joost & F. M. Stevens; amount of bond, \$5,000.

1st payment, when frame is up and brick work done, \$1,850; 2d payment when partitions are set, \$1,550; 3rd, when inside is finished, \$1,550; 4th, the usual 35 days, \$1,650.

Stevenson nr. Ridley. Additions. Owner, Martin Doyle; architect, P. Lynch; contractor, P. Lynch; cost, \$2,869.

1st payment, when frame is up, \$800; 2d, when brown coat of mortar is on, \$670; 3d, when hard finished \$681; 4th, 35 days after completion, \$718.35; limit Sept. 14; signed June 26, 1888; filed, July 2, 1888.

Sixth and Jessie. 4-story frame. Owner T. L. Barker; architect, Clinton Day; contractor J. T. Grant; cost \$63,666; limit 8 months; signed June 23, '88; filed July 18, '88.

1st payment when 1st floor joists are in \$5,000; 2d, when masonry of 1st floor is built \$9,000; 3d, when 3d and 4th story joists are set and second and third masonry done \$10,000; 4th payment, when roofed and brown coated \$10,000; 5th, when doors and windows are hung and inside ready to paint \$10,000; 6th payment, balance and 35 days after completion.

Sacramento, nr Webster, (in rear) additional story; cost, \$1,500.

Webster, nr Sutter, additions; cost \$600.

Treat Av., near 23d, 1-story frame. Owner, J. Granville; contractor, F. Nelson; cost, \$1,750.

Twenty-seventh, near Guerrero, 1 story frame; owner, F. Donahue; contractor, M. Loftus; cost, \$1,700.

Third, bet Brannan and Townsend, stable and alterations. Owner, Max Popper; architect, A. J. Barnett; contractor, McCann & Riddell; cost 2,500. Limit, 28 days; signed July 2, 1888; filed, July 2, 1888.

1st payment, when completed, \$1,538 50; 2d and balance, usual 35 days, \$572 50.

133 Twelfth. Alterations. Owner, Catharine Gersing; architect, Geo. E. Voelkel; contractor, F. C. Adams. Cost \$2,390; signed, July 19, 1888; filed, July 23, 1888; limit, 72 days.

1st payment, foundation in studding up, etc., \$200; 2d, brown coated, \$200; 3d, when plastered, \$200; 4th, when ready to paint, \$390; 5th, when accepted, \$800; 6th, when accepted, \$800; 7th, usual 35 days, \$600.

Treat ave nr 25th. Frame building. Owner Jos. Granville; architect F. Nelson; contractor F. Nelson; cost \$1,600; limit Sept 3d; signed July 5, '88; filed July 5th.

1st payment when enclosed \$400; 2d, when brown coated \$400; 3d when completed \$400; 4th usual 35 days \$400.

Third nr Brannan. Excavations. Owner, Kohler and Von Barren; architect, H. Geiffuss; contractor, G. Raisch; Cost \$1,100; limit, Sept. 1st. When complete \$825; balance \$275—35 days.

Union and Leavenworth. Plastering five buildings; owner, G. Rocca; architect, Wm. Mosser; contractor, Alex Mennie; cost \$1,900; signed, July 3, 1888; filed, July 21, 1888.

1st payment, when brown coated, \$700; 2d, when completed, \$700; 3d, according last payment, main contract \$500.

Van Ness Ave. and Jackson. Residence. Owner, F. A. Frank; architect, Clinton Day; contractor, Jas. M. Kelly; cost, \$22,900; limit, Feb. 25, 1889; signed, June 30, 1888; filed, July 9, 1888.

1st payment, when roof is ready to shingle, 4,000; 2d, when brown mortared, \$5,000; 3d, exterior ready to paint; 4th, inside ready to paint, \$4,075; balance, usual 35 days.

Van Ness avenue and McAllister. Additions to 3 buildings; owner, J. Du W. Allen; architect G. E. Voelkel; contractor W. H. Elliot; cost \$10,837; limit 90 days; signed July 19, filed Aug. 1.

Payments, when brick foundations are in \$800; frames up and chimneys built \$1,000 ready to plaster \$1,200; outside finishes done \$1,500; ready for painting \$2,000; completed \$1,752; balance \$2,585, 35 days.

OAKLAND.

Stephen Watts has contracted to build for S. H. Smith a handsome frame cottage on Seventh avenue, to cost \$2,280.

B. Spencer has secured the contract for the building of the new residence for Judge W. F. Henshaw, in East Oakland. The contract price was \$6,247.

W. K. Weilbye is building for Mary Howard a two-story frame house on Brush street near Seventeenth street, to cost \$8,000. It is to be completed by October 25th, and will be paid for in three installments of \$2,650 each.

H. Sackville is building for A. J. E. Furbish a two-story frame cottage, to cost \$3,500.

The frame work for the second story of the Canning block is up and the building will be completed by September 15th.

W. G. Reese has in course of construction a frame cottage for J. Marchi, an Cypress street, near West Twelfth street. The cost will be \$4,363. Pissis & Moore are the architects.

H. E. Hatch is building for M. S. Baker a frame cottage on East Twenty-first street, near Twenty-ninth avenue. The cost will be \$2,200.

McLeod & Herbst are building for M. Noonan a store and barn for \$3,190.

The Hambleton stables, which were destroyed by fire some weeks ago, are being rebuilt.

A. W. Pattiani & Co. are building for E. C. Sessions a cottage on Twenty-fourth avenue, near East Twentieth street, in the Sessions tracts, East Oakland. The contract price was \$1,040. The building is a modern Queen Anne cottage.

W. W. Wilkins is having a residence built in North Oakland. Nelson & Nickerson are the contractors. The cost will be \$2,860.

G. M. Flick has contracted with M. A. Lent to build for the latter a residence on the south side of east Sixteenth street, 100 feet east of Eighth avenue, for \$4,000. It is to be a two-story frame building. Payments are to be made in installments of \$1,000.

Burpee & Judson have contracted with the Seventh avenue Congregational Church to erect a church edifice on the northeast corner of Eighth avenue and East Fifteenth street to cost \$10,180.

ALAMEDA.

A considerable amount of building is in progress in Alameda at present, though work has been quiet during the early part of the spring. This is attributed to the high price of lumber. The prices are now beginning to fall, owing to the decreased demand in the south. The activity of the city in improving its streets and sidewalks, constructing sewers and supplying electric lights has attracted the attention of those who wish quiet homes, and the city will undoubtedly increase its population.

The largest house that is now in the course of construction is that of Mrs. Clara A. Bissell wife of the passenger agent of the Atlantic and Pacific railroad, at the corner of Alameda avenue and Union street. When completed it will be a magnificent residence, and one of the largest and most costly that has been erected in Alameda for several years. The foundation has already been laid. It will be two stories in height, with a large basement and attic, and will contain fifteen rooms. It will be elegantly fitted up and furnished throughout with all modern improvements. Its style of architecture is of a high order. The cost will be \$10,000.

Miss E. Wingate, a music teacher in San Francisco, is building a very handsome cottage on Paru street near Encinal avenue. It will contain six large rooms, and will cost in the neighborhood of \$2,000.

B. S. Hill, who is at present residing at 2916 Santa Clara avenue, is building a two-story dwelling, containing ten rooms, at the corner of Morton street and Encinal avenue. It is being built by day work, and the estimated cost is \$3,000.

G. Laver is building for C. Winter a one-story cottage on Pacific avenue. The cost

will be \$1,230, and the building will be completed by August 1st. A. R. Denke is the architect.

J. J. Denschl is building a frame house on Charles street, near Railroad avenue. The contract price is \$3,250. The architects are F. X. Fisher and V. L. Fortin.

G. A. Flash, an artist of considerable fame, is building on Regent street, south of San Jose. The building is being arranged so as to allow for a large studio and art gallery for the artistic owner.

Mr. Gale's residence at the corner of Central avenue and Regent street, Alameda, is about completed.

Pattiani & Co. have begun for M. E. & E. Schieffelin two frame cottages on Alameda avenue and Lafayette avenue, Alameda. The cost will be about \$1,300 each. They will be very pretty, comfortable little buildings.

RIVERSIDE.

P. Munroe is building a ten-room house on Hall's addition. When completed it will cost about \$4,000.

Work on the new school building is progressing finely. The contractors, Down & Alquire, have a large force of brick masons at work and are pushing the work vigorously. It will require in the construction of the building 1,200,000 bricks.

A. McCrary & Son have just taken a large contract for flume work for Fudickar & Howes, upon which they have already commenced. They are also busy putting in the culverts for the motor road.

IMPROVEMENT CONTEMPLATED IN SANTA ROSA.

The buildings are being removed from the property on the corner of Fourth and A streets, known as the Dr. R. P. Smith residence, and it is the plan of the owners to have a large business block erected upon it. Guy E. Grosse, B. M. Spencer and C. A. Wright purchased the property last fall. There has been a proposition made to erect a two-story wooden building upon the lot, but the owners are desirous of using only brick material. Although nothing definite has been determined, Mr. Spencer says it is the intention to mark the spot by a large business building.

LIVERMORE.

J. Gayetti is building a story-and-a-half side addition to his residence on Junction avenue.

The plans and elevation for Philip Ans-pacher's proposed new cottage, at the corner of L street and College avenue, are completed, and the contract will soon be let.

A NEW CHURCH.

Over \$7,000 have been raised by subscriptions for the building fund of Christ (Episcopal) Church. It is the intention of the vestry to build a church edifice costing in the neighborhood of \$18,000, on their recently acquired lot, corner of Santa Clara avenue and Grand street, Alameda, and it is possible that work will be commenced upon it within sixty days. The vestry have not yet positively decided what they will do with the present church building.

BUILDING OPERATIONS IN SEATTLE.

The Seattle Gas Light Company has let a contract to Otto Ranke for the construction of a new gas house, adjoining the old one, which, when completed, will cost in the neighborhood of \$30,000. The structure will be of the same width as the present house and 140 feet long. It will have a stone foundation, and will be built of brick and cement, and will be two stories high. The foundation has already been laid, and Mr. Ranke expects to begin laying brick on the superstructure next week. He has one kiln of brick ready for use, and another ready to be burned. When this building is completed the gas company will have the necessary facilities for more than doubling its present supply of gas.

"Work is coming in faster than we can get away with it," said Mr. Steinman, the architect, Saturday. I have just opened bids for Mrs. H. A. Atkins' three-story building, to be erected on Columbia street, between Third and Fourth streets. J. Sogmeister was the lowest bidder, and will undoubtedly get the contract. The bids were as follows: J. Sogmeister, \$6,700; W. M. Morse, \$7,308; L. Hartwig, \$7,960; Hamilton & Rickson, \$8,000; F. G. Mitchell, \$8,256; Wilson & Nixon, \$8,256; McEachen & Co., \$8,815.

The building will be of wood, three stories and a basement. The three upper floors will contain 11 rooms each, and the basement will have the dining-room, kitchen, laundry, boiler-room, etc. It will be heated with steam and hot air combined throughout.

"What are you working on?"

"We have just completed the plans for a large double house for Mr. L. Kline, the contractor for which will be let next week. The building will be 40x52 feet in size, two stories high, with an attic. It will be located on the corner of Third and University streets, contain all the modern conveniences, and cost about \$5,500.

TWO DOUBLE RESIDENCES.

The plans have also been furnished for two double houses two be erected on the corner of Fifth and Pike streets by Bailey Gatzert. Each house will contain six rooms and a bath-room. The main building will be 38x48 feet in size.

Here also are the plans for a neat residence to be built by Mr. Harper, of the electric light works, in Kinnear's addition. It will cost \$3,000.

Mr. McDonald, of the firm of Fisher & McDonald, intends soon to build a neat two-story residence on Tenth and Spring streets. It will cost about \$5,000. Here is a letter just received from the board of school directors at Chehalis, announcing the acceptance of my plans for their new school house. The building will cost \$7,500. By the middle of next week we will have a lot more work ready for the contractors to figure on.

Bids were opened Thursday in the office of H. Steinman, for the construction of a brick building for Mr. Himrich of the Bay View brewery, to be used as a brew house, engine house and boiler room adjoining the brewery. The structure is to be of brick, with a stone foundation. Mr. Lohse was awarded the contract for the brick work, and Mr. Redwood for the carpenter work. The building will cost \$8,000.

LIVERMORE.

Bids for the construction of the Chapin block on Second street, directly north of the

Boston block were opened in architect Boone's office on Monday, and the contract was awarded to S. E. Clough on his bid of \$12,500. The block will be of wood, two stories high.

C. C. Wilder has moved into his recently completed cottage, corner of Fourth and H streets.

H. W. Farmer is building a stable on his premises, corner of Chestnut and K streets. Mrs. Hart has completed a very neat addition to her L street cottage and repainted the edifice.

THE BUILDING ROOM IN SAN JOSE.

Contracts Filed for Important Improvements. The following builders' contracts have been filed in the Recorder's office:

L. H. Lewis and Henry Lux for a carriage house and tank with brick foundation in East San Jose, to cost \$3,017.

M. Kenny and Owen Leddy with the Fredericksburg Brewing Company, for a three story brick brew-house, at the corner of the Alameda and Cinnabar street, to cost \$4,500.

Daniel J. Byron and E. McLaughlin for a brick basement at the northwest corner of Seventh and Reed streets, cost \$1,287.

M. D. Green and Henry Lux, for a two story dwelling, brick basement, on the Alum Rock road, cost \$9,800.

M. Kenny and Owen Leddy with the Fredericksburg Brewing Company for brick improvements to the Brewery for \$5,500.

L. H. Lewis with Henry Lux for a carriage and tank house on the Alum Rock road for \$3,017.

M. D. Green with Henry Lux for a two story frame house on Alum Rock road for \$9,800.

D. J. Byron and E. McLaughlin for a brick basement on the corner of Seventh and Reed streets. \$1,287.

E. Barre with R. Summers, for a cottage on Orchard Street for \$1,170.

A three story brick building to cost \$60,000 will, it is rumored, be erected on the Porter property on the northeast corner of Santa Clara and Second streets; the frontage on the former street is 137 1/2 feet.

MISCELLANEOUS BUILDING NOTES.

C. R. Lord is the contractor for the new Paralta Park hotel. The price is \$18,000. It is proposed to build a schoolhouse, to cost about \$15,000, at Golden Gate, otherwise known as Klinknerville. William Kirke is the architect.

J. G. Pierce has the contract for the new building for W. T. Barnett, on Ashby avenue near Shattuck avenue. The contract price is \$1,989. W. W. Goodrich is the architect.

Ingerson & Gore of this city have contracted to build a \$9,000 stable for James Adams on Fifth street, between Bryant and Harrison streets. San Francisco. J. J. and T. D. Newsom are the architects.

R. W. Gorrill of Oakland of the Pacific Bridge Company is preparing to open a quarry and go into the business of macadamizing streets.

M. S. Jordan has returned from Auburn, and will stay in Oakland a little while.

William B. Kreger is building a brick wine cellar on the Rancho del Agua de Caliente (Warm Springs), owned by Josiah Stan-

ford. The cost will be \$15,900. The building is 100x200 feet, and has outbuildings for various processes in making wine.

At Irvington Charles C. Melver, the well known vineyardist, is building a new brick wine cellar 15x100 feet. The improvement is a substantial one.

A. J. Salazar is having plans drawn for a brick wine cellar to hold 100,000 gallons, to be erected on his Mission San Jose rancho.

Ed. G. Hedges is building a fine barn for Dreese Bros., on western Avenue, Petaluma.

J. D. Stephens will erect a nice cottage at Highland Springs for a resort during the heated portion of the year. W. H. Carson is the architect, Messrs. Stephens and Bean draughtsmen.

REDDING.

The Board of Supervisors adopted plans of A. Cook, of Sacramento for a \$40,000 Court House.

Manual of Industrial Drawing	
Carpenters.....	\$2 00
Illustrated Drawing Book.....	1 00
Mathematical Drawing Instruments.....	1 50
Drawing for Carpenters.....	75
Shavings and Saw Dust.....	5 50
Linear Drawing.....	50
Practical Draughting.....	1 00
Drawing for Cabinet Makers.....	1 50
Science of Carpentry.....	5 00
Mechanic's Geometry.....	5 00
Artisan.....	5 00

McCLELLAN

Anti-Siphon Trap Vent.

SAFEST and MOST-ECONOMICAL



Device for Venting Sewer Gas Traps.

Can be attached to any Trap at Less than

Half the Cost of back-air pipes.

Approved by

ARCHITECTS, MASTER PLUMBERS AND HEALTH AUTHORITIES.

Manufactured By the

DU BOIS MAN'G CO.

Manufactures of

The Celebrated Du Bois Lead Trap:

For Sale by all Jobbers in Plumbers' Supplies, of whom Circulars may be obtained

North, Central and South American Exposition.

NEW ORLEANS LOUISIANA: NOVEMBER 10, 1885.
MARCH 31, 1886.

DIPLOMA OF MERIT

IS AWARDED TO

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★ OF SAN JOSE CAL ★

In acknowledgement of meritorious display of **PRESSED BRICK**, in the Collective Exhibit of California.

In acknowledgement of which the Signature of the proper Officials and the seal of the North Central and South American Expositions are hereto attached.

[ATTEST] **CHARLES TURRILL**, Commissioner.

I. M. W. COMICO, President.

B. D. WOOD, Director General.

THOS. WOODWARD, Chairman Committee on Awards

SAN DIEGO, CAL., FEBRUARY 18, 1888.

T. W. PETERSEN & CO.

DEAR SIR:

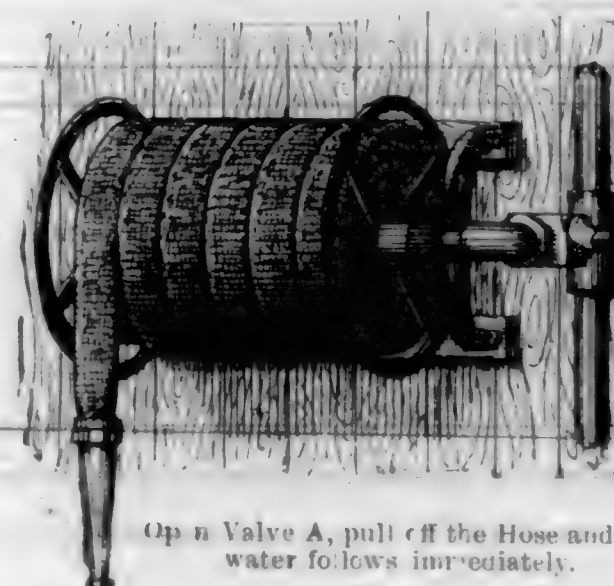
I send you by mail, Diploma awarded you, by the North, Central and South American Exposition, for your display under my charge. Kindly acknowledge receipt in enclosed envelope.

Very Respectfully

CHAS. B. TURRILL.

Commissioner for California; North, Central and South American Exposition, and Manager Southern Pacific Company's Display.

The above diploma was given to the firm mentioned, for the best display of PRESSED BRICK, at an Exhibition that attracted world wide attention. Mr. PETERSEN has made a special study of Kiln burning, so as to have all the bricks of an even color. We have seen car-loads of bricks, delivered in this City, and the uniform color pervading the entire lot was such as to attract more than ordinary attention from those around. Mr. PETERSEN absolutely guarantees that every brick is perfect. If edges or corners are broken, he does not allow them to leave the depot. Any one ordering brick from above firm, can rest at a time they will obtain the very best brick there is made in California. San Francisco address is Townsend St. between 6th and 7th. San Jose, P. O. Box 187.



W. T. Y. SCHENCK

MANUFACTURER OF

SCHENCK'S PATENT

"Paragon" Hose Reel,

And is the Agent for Pacific Coast for the celebrated "Eureka" and "Red Cross" brands of Cotton Fire and Garden Hose, Linen Hose, Rubber Hose, Fire Department Supplies, &c., &c.

FIRE HOSE

For Mills, Factories, Hotels and Public Buildings, and General Inside Fire Protection.

Also "Eureka," "Paragon," and "Red Cross" brands of Cotton Fire and Garden Hose, Linen Hose, Rubber Hose, Fire Department Supplies, &c., &c.

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222 & 224 MARKET ST., SAN FRANCISCO.

List of Members of the Builders' Association of California

330 PINE STREET, ROOMS 11 & 12.

Ackerman, C. H.,	215 Kerny.
Adams, J. G.,	407 Broderick.
Bateman Bros.,	S. W. Post and Scott.
Binet, Jos. L.,	325 Fair Oaks.
Blake, John,	1138 17th.
Brennan Bros.,	618 Eddy.
Brice, John,	2407 Howard.
Buckley, Frank,	1111 Devisadero.
Burpee & Hudson,	836 29th street Oakland.
Barrell, A.,	22 California.
Chisholm, Chris	330 Pine.
Chisholm, Dan,	110 Chattanooga.
Chrichton, P.,	109 Baker, bet Page Oak.
Christy, Chas.,	828 Kirkham Oakland.
Classen, J. C.,	232 Francisco.
Commary, Wm. T.,	804 Hayes.
Courad, H. A.,	625 California.
Chandler, R. O.,	1210 Pierce.
Day, J. G.,	San Diego.
Day, Thos. H.,	1012 Devisadero.
Dryer, Bernard,	4 Collingwood.
Dunshee, C. E.,	417 Ridley.
Ellis, B. F.,	999 Chestnut.
Farrell & Bell,	828 Union.
Fish, J. W.,	836 Valley.
Fitzpatrick, A. G.,	411 Twenty-second.
Fletcher, W. M.,	Los Angeles.
Geary, James,	2324 Sutter.
Gillespie, G. G.,	1503 Devisadero.
Gonyeau, J. B.,	33 Hardy.
Grant, John T.,	22 Turk.
Gray & Stover,	1310 21st.
Greene, E. B.,	34 Hawthorne.
Greene, S. T.,	San Diego.
Griffin, P.,	20 Russ.
Hoffmann, Victor Jr.,	3154 4th.
Hatch, H. E.,	1717 Chaate, Oakland.
Hurlbut, R. P.,	115 California avenue.
Irwin, James,	908 16th.
Ingerson & Gore,	971 Broadway, Oakland.
Jackson, A.,	12 Middle.
Keenan, Hugh,	219 Scott.
Kent, S. H.,	711 Leavenworth.
Kern, F. W.,	118 Fair Oaks.
Kincaid & Thompson,	730 Seventeenth.
Klahn, Aug.,	5 Chenery.
Klatt, F.,	814 Twenty-first.
Klein, Jacob, 24	Lilly avenue.
Kreger, Wm. B.,	801 Guerrero.
Knaus, B.,	536 Fulton.
Lang, Geo. R., E.	14th St. & 14th St., Oakland.
Leonard, Jos. A.,	Alameda.
Langstaff, Wm.,	617 Jessie.
Mahony Bros.,	307 Van Ness.
Maher, J. W.,	105 Precita avenue.
MacDonald, Allen,	1303 Buchanan.
Martin & Maguire,	133 Gough.
McCann, Richard,	217 Waller.
McElroy, A.,	373 Jessie.
McInerney, James,	Hancock and Noe.
McKay, Jas. H.,	124 Main.
Mead, W. H.,	246 Minna.
Meeredy Bros.,	Church, bet 17th and 18th.
Miller, Adam,	23d and Bryant, 516 Kearney.
Moffit, Thos.,	Victoria.
Moore Bros.,	252 Octavia and 1 Russ.
Norton, A.,	1331 Ellis.
Parker, R.,	527 Grove.
Plums, Wm.,	3109 Sacramento.
Quinn, Charles,	133 Oak.
Rebman, J.,	Los Angeles.
Riddell, Thos. C.,	16 Twelfth.
Robertson, John,	San Rafael.
Rohling, Henry,	14 Collingwood.
Steinman, F. V.,	423 Bush.
Simpson, R. F.,	326 Telegraph Av., Oakland.
Smilie, Robt.,	1125 E. Third Av. East Oakland.
Smith, James W.,	1220 Eddy.
Sullivan, Timothy,	20 Laskie.
Terrill, Chas. C.,	617 Seventeenth.
Thompson & Moar,	338 Golden Gate Av.
Waterbury, C. S.,	1322 Scott.
Wharf, Wm. H.,	Green and Laguna.
White, O. E.,	879 Seventeenth.
Wilcox, J. R.,	608 Willow Av.
Williams, F. A.,	545 Natoma.
Willis, A. A.,	30 Diamond.
Worden, S. G.,	1013 Valencia.
Zwierlein & Pavel,	421 Bush.

Practical Geometry..... 1 00
Cottage and Farm House.....
Woodward..... 1 50

THE CALIFORNIA ARCHITECT AND BUILDING NEWS

VOLUME IX

ENTERED AT POST-OFFICE, SAN FRANCISCO, AS SECOND-CLASS MAIL MATTER. ESTABLISHED JANUARY, 1879.

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OUR ADVERTISING RATES.

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Back Cover, Outside, Each Insertion	do. 2.00
Page Preceding Reading Matter	do. 1.75
Page Following Reading Matter	do. 1.50
Inside Pages	do. 1.00
Full Page Inside	One Insertion 40.00
Each Subsequent Insertion according to Agreement.	

A Square is One Inch In Depth By Width of Single Column.

Advertisements alone inserted that refer to materials used in the construction and furnishing of houses, and to matters and trades belonging to the building interest.

No Others Received.

SAN FRANCISCO, SEPT. 15, 1888.

FOUR EXTRA PAGES!

WE have been compelled to add **FOUR EXTRA PAGES**. It has been evident to any one reading this Journal, that for some time past its columns have been overcrowded. Last issue "ads" were refused, as our arrangements had not been perfected to increase the number of pages, and we would not draw on our reading matter for room. In a measure we have relieved the pressure and with this number we present a Journal that will compare favorably with any printed in the United States.

BUILDING NEWS.

There is no other Journal in this city, that compares with this in the reliability of its Building News.

SUBSCRIBE NOW!

TERMS: Two Dollars per Annum.

The Price of Lumber Question.

DURING the current year, the price of lumber in California has been a prominent issue as between owners contemplating building improvements, and the manufacturers of building materials. Our worthy contemporary, *Wood and Iron*, speaking from the lumberman's stand point, in very kindly terms, says in a late issue, that this journal "still continues off in its views of the price of lumber," etc. We do not think so, and until convinced of error, we shall remain off.

We admit the argument, "that the price of lumber in a building, cuts but a small figure in its total cost." This fact we have times without number, urged when discussing the question personally with owners. There is more apparent than real objection upon this point, as a building requiring 50,000 feet of lumber and costing ten or fifty thousand dollars is increased in total cost but fifty dollars with a rise of one dollar per thousand feet, and no more than two hundred and fifty dollars, with five dollars per 1,000 added to what our lumbermen consider a too low price.

But the difficulty is, that consumers are not convinced that the higher rates prevailing until recently, were a commercial equity or necessity. Owners generally understand that lumber has been sold at rates far below those attained by the increased schedule of prices, and they do not trouble themselves to learn the reason why. Those who have in times past bought at twelve, thirteen and fourteen dollars per 1,000, are thereby led to the conclusion that the very intelligent class of men who handle and produce the great building commodity—lumber, are the parties to know just what lumber is worth in the market; and it being a staple, which should be as steady as a clock dial, owners understand abatements however low, when fixed by those controlling the interest, as the true indication of value. They do not look for, nor care anything about the causes of depressed markets, nor whether such depression is the result of dealers slaughtering each other, waging a war of competition among themselves or otherwise. The consumer does not ask why it is so, but accepts the advantages of low prices as a fact possible, and unwillingly submits to a rise, when neither flood, famine, nor any recognized sufficient or feasible event has transpired to make it reasonably clear that advance is legitimate. And to make this view of the case stronger, it must not be overlooked, that when three or four years ago, lumber was sold for ten dollars per thousand less than the figures reached by the high price schedule of recent date, a very large number of buildings were erected, and the demand fully equal, and sometimes in excess of supply, not because lumber was cheap, but from the fact that so many considered it wise policy to build, from a remunerative, paying point of view. There was a steady demand for more buildings of almost any class, and as many would have been erected those years, had the lumber market not been broken all to pieces by the deliberate acts of the lumber interest men in waging a war of business extermination among themselves. Had fair, steady, reasonable prices prevailed, consumers would have been satisfied and accepted the condition as a proper thing. But when those in interest found that the producers of their own will and caprice drove home the steel gad of unwise competition, and toppled prices down to the verge of business ruin—and which did bring financial ruin to some—they accepted the advantage thus offered, and recent clamor about high prices resulted more from the course pursued by the manufacturers than any other.

It is always easier to maintain fair values than to regain and stimulate them after demoralization. And it is right here where the growl comes in. The lumbermen having provided and dished out, at former times and often, rich repasts in cheap lumber, owners have accepted the hospitalities set before them, and naturally feel sore when the door is either by degrees and quietly closed or slammed in their faces, and their fears aggravated by an extra charge for admission.

There was no "flagrant error" in our statement, that the decline in building was attributable to the cost of lumber. We should not have so stated, had we not been fully convinced that it was true. People often "cut off their noses to spite their faces," even in a building sense, but many will submit to almost any amount of loss, rather than consent to what they deem an

over-exaction. It is certainly not extra-wise in owners to allow well located real estate to lie unimproved year after year, because one or two per cent of total cost stands in the way. It seems to us "penny wise and pound foolish" for an owner to in cur months or years of loss in rentals and income, simply because to improve may cost an extra sum less than the amount of taxes which must be paid each year on the unimproved property. But still this is the disposition of many, and even wealthy men been heard to say, "I will not improve at present rates of building materials, but wait for another break in prices"—not because the intrinsic value thereof may not be equal to the price demanded, but because there have been breaks, and breaks being possible at any time, they prefer to wait for them, as generous dispensations from the hands of those who have, and alone can inaugurate them. The force of argument comes in this line of thought, and if material producers would make their bullwarks firm against these irregularities, the public would in time accept the conditions as inevitable, and pay fair prices right along. "Supply and demand regulates," is all very well as a theory, but singular as it may appear, it is none the less true, that the price of lumber has at times been raised at periods when a decline in demand was unmistakably evident, and but little work preparing in architects' offices. Demand present, or prospective, in such cases has been anything else but justifying, and if the rule applied always, the natural tendency of prices would be downward and not accumulative.

The "stoppage of mills," "using up forests, etc." are all questions of serious import, but the true cause of outcry is found in the statements contained in this article.

The New City Hall Tower.

THIS important feature of San Francisco—"New City Hall," is and has for months or longer time, been a bone of contention among those directly—officially—concerned in determining its height, style, proportions—and naturally if not necessarily—involving every specialty connected with its design and construction, from foundation to the final upon its loftiest apex.

The main question in issue, and in reference to which there are diversities of views and opinions, both in the Board of Commissioners, and the mind of the generous public who will be required in due time to furnish the necessary funds, is that of altitude; whether the mythical God—Mercury—with his outstretched wand surmounting the uppermost height of the construction, shall be permitted to stand upon a base 400 feet or more above the heads of the living masses below, or be limited to a standing point 250 feet more or less above the base of the construction.

Beyond such individual consultation and advice, as each may have sought, the gentlemen constituting the City Hall Commission, have—until recently handled the questions arising within their official circle—yet neither claiming any special qualifications as scientific, architectural or mechanical experts, to render judgment, or decide the, in fact, most momentous, material and important issues and involvements, essential or contingent, attaching to the construction of the tower that is to be; the consummation of which must and will stand for generations if not for centuries, as a monument to the good and wise, or the mistaken judgment of the men into whose hands as a committee, and upon whom must rest for all times, the responsibility of fixing the height, approving the style and authorizing its construction.

It would be ungenerous to surmise that either of the honorable gentlemen, composing the Commission, have been or are influenced or controlled in their action, by any other motive than the public welfare. While his Honor Mayor Pond, Auditor Strother and Attorney Flournoy may each—as is his personal right and privilege—have preferences as to the parties who shall perform the various required services, especially in the all important matter of preparing the plans and determining principles and qualities of beauty, height, practical construction, and the many features and delineations which are never fully understood until practically executed, it would be terrible indeed, if true, if such individual preferences were allowed for one moment to intervene in a matter so gigantic as the erection of a tower to stand for all time as the city's most conspicuous monument.

An evidence that the Commissioners are both willing and anxious to arrive at the wisest and best conclusion, is exemplified by the fact that they have so far waived their official rights and prerogatives, and the exercise of arbitrary determination of all

questions under their control, by inviting the leading civil engineers of the city, and S. F. Chapter of Architects, of the A. I. A., to examine and express judgment as to the various features of the new tower, from a professional, scientific and practical standpoint—all of which, however, is beyond question a very great annoyance to Mr. Laver, the City Hall architect, whose responsibilities unhampered by any extraneous interruption are great, and much more so when fettered by checks and interferences, which prevent the free exercise of his best judgment. Whether the report of the Committee of Architects will remove existing difficulties, remains to be seen.

AN IMPORTANT MEETING.

San Francisco Chapter American Institute of Architects.

THE regular monthly meeting of the Chapter was held in the rooms of the Art Association on September 7th, G. H. Sanders, President, in the chair.

The following members were present: G. H. Sanders, John Wright, J. J. Clark, J. E. Wolfe, W. J. Cuthbertson, O. Everett, H. T. Bestor, J. Gash, J. D. Cebrian, B. E. Henriksen, J. M. Curtis, W. P. Moore, A. Pissis and G. H. Wolfe. Several students were also in attendance.

Edward Kollofrath was unanimously elected a member as FELLOW.

Propositions for membership were received from Wm. Patton, G. W. Percy and John Newson. Referred to Committees.

It being the annual meeting, the election of officers next took place for the ensuing term. The result was as follows:

President, (re-elected) G. H. Sanders.

Vice President, (re-elected) W. P. Moore.

Treasurer, J. M. Curtis.

Secretary, (sixth term) G. H. Wolfe.

TRUSTEES.

A. Laver,

A. Pissis,

J. E. Wolfe.

J. Wright,

B. E. Henriksen.

Secretary presented plans of New City Hall Tower to the Chapter. A general discussion ensued in which every member present took part. The prevailing opinion was that the matter was placed before the Chapter by those in authority, viz, the Board of New City Hall Commissioners, and therefore should be taken hold of in a scientific manner. That in order to do so, certain data and drawings should be in possession of the Chapter. This could best be done by a committee. A motion was made that a committee of five be appointed to take charge of the whole subject matter. After considerable debate, the motion was carried, and the President appointed the following FELLOWS as such committee: Albert Pissis, James E. Wolfe, B. E. Henriksen, W. J. Cuthbertson, John Wright.

Meeting adjourned subject to the call of the President.

The Redwood Belt.

THE redwood is limited to a strip of country averaging twenty miles in width, extending from the bay of Monterey to the Klamath river, a distance of 350 miles. Redwood lumber is in great demand, and already vast forests of these stately trees have been swept away. The redwood, however, does not grow in poor soil, and in many places where the trees have been cut, young redwood forests are again springing up. Those who imagine that there is any immediate danger of the redwood becoming extinct are certainly drawing upon the very remote future for ills. The tree is of comparative slow growth, but half a century will give to the young growth quite the appearance of a native forest.

TWENTY-THIRD INDUSTRIAL EXPOSITION OF THE MECHANICS' INSTITUTE.

THE Twenty-third Exhibition of the Mechanics' Institute is over, and we may safely say in its general arrangements and the studious efforts made by the Directors to please the public generally, a grand success has been scored for the Institute.

We can simply call attention to those articles directly connected with the building interests. First and foremost in the consideration of architects are the subjects of

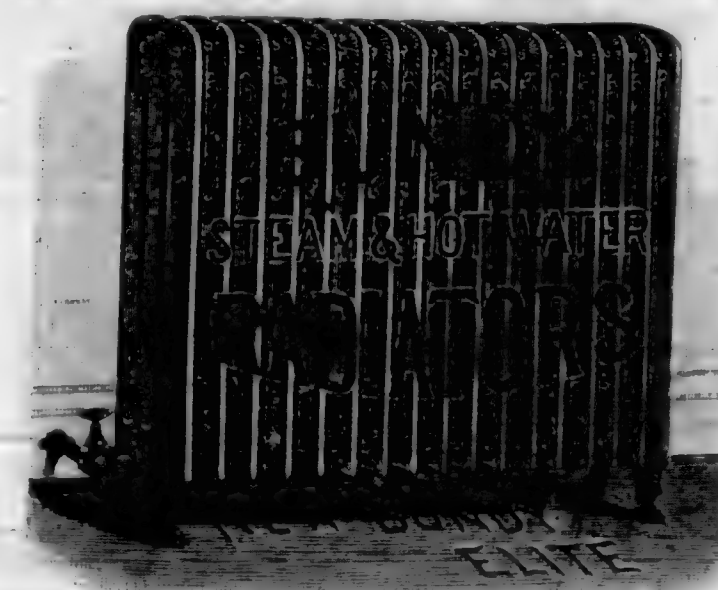
HEATING AND VENTILATION

Scientific men have given much of their time to the consideration of these subjects. The progress made during the past year has been wonderful, and deserves more than a passing notice.

HEATING

A glance at the back numbers of this journal will show to any one the vast improvement made in HEATING APPARATUS for buildings. For years the HARVEY RADIATOR was illustrated in these columns. Hundreds of houses were supplied with them. They were good *then*, they are good *now*; and Mr. Harvey's countenance o'erspreads with a smile when he says, "they are not so pretty as those now in use, but the heat gets there all the same." The system now used by Mr. Harvey is far superior to that of a few years ago.

Mr. Harvey has recently assumed the agency of the celebrated



This method of artificial heating is recognized as being far superior to grates or hot air furnaces from every point of view. A uniform and spring-like temperature can be maintained throughout the house with but slight attention.

In the exhibit will be found Harvey hot water radiators and boilers, and Bundy's direct steam or hot-water radiators, Bundy's Triumph, for steam or hot water, the Bundy Elite, for hot water or steam, and the Bundy corner direct, column direct, circular direct, angle indirect, horizontal indirect, and Climax indirect radiators. Also, the Bundy hot-closet, dining room radiator, the latter a most useful and highly ornamental contrivance for disseminating warmth throughout the dining room, while at the same time affording a very convenient mode of securing an equal degree of heat for meats, vegetables and other food which may be placed within it. The collection of radiators on exhibition illustrates that decorative art in dwellings is not confined to the adornment of walls, floors, ceilings, or wood work, but is carried into the more utilitarian adjuncts of a wisely ordered household. These radiators are of ornamental design and beautifully decorated in blue and gold, blue and silver, bronze, or bronze and silver, antique bronze, silver embossed, and can be thus decorated to suit the taste of the purchaser. Thus the heating appliances of a room can be made to harmonize in color and design with its wainscottings, panelings and other decorations, and become part and parcel of artistic ensemble. A splendid Bundy Vertical Tube Direct Radiator Screen in highly ornamental antique brass (the first yet imported to this coast) occupies a conspicuous place in the center of Mr. Harvey's exhibit, and it is a thing of beauty. These screens, or covers, are made to fit any style or size of radiators. Mr. Harvey is a thoroughly scientific artisan, and a very close yet comprehensive study of the laws of heat and ventilation, united with a practical experience in constructive work, extending over many years, renders him the best qualified man in our midst for the intelligent direction of this most important sanitary work. He offers hundreds of references from those who have had his valuable services on this coast. Mr. Bundy publishes references to well-known people in every State and Territory east of the Rocky Mountains.

By a happy co-incidence, the exhibit of

ABRAHAMSON'S VENTILATORS

is almost directly over that of the Harvey & Bundy Heaters, showing that these two subjects are inseparably connected. Mr. Abrahamson devotes all his time and attention to his perfect ventilators, and he is fully prepared to explain his system satisfactorily to any one.

The advantages of a perfect system of ventilation, which at the same time obviates a draught, are too palpable to admit of any adverse opinion. Peter Abrahamson has mastered a difficult problem in this direction through a patented invention that meets every requirement and commands the approval of numerous prominent citizens, among whom are Professor J. W. Anderson, Superintendent Public Schools; Peter A. Smith, Superintendent California Sugar Refinery; Harvey Platt, Superintendent Pioneer Woolen Mills; Alfred W. Perry, M. D., Charles F. Crocker, California cor. Jones; Palace Hotel; Mr. Reed, Berkeley; Dr. Gonzales, Fresno, and many others. By this ingenious system a constant circulation of air is secured, which, admitting pure air from out of doors, also expels the heated and poisoned atmosphere from the rooms where it is used. We give Mr. Smith's testimonial, as follows:

Peter Abrahamson, Esq.—DEAR SIR: The ventilators you put in my bedroom work to perfection; they keep the air fresh and cool. I would not be without them for double the cost. I can recommend them as the best and most perfect I have ever seen. Any information will be cheerfully given by calling at 504 Ninth street, San Francisco. Respectfully yours,

PETER A. SMITH,
Supt. Cal. Sugar Refinery.

In addition to the above, by consulting the advertising pages of this Journal you will find a long list of those who have adopted Mr. Abrahamson's system. Many of the Architects heartily endorse his views and the general adoption of the Ventilators is but a question of a short time.

FINE ART IN STAINED GLASS.

One of the most attractive displays at the Mechanics' Fair is the exhibition of stained glass from the Pacific Glass Cutting Works of John Mallon, 19 Fremont street. The exhibit is fitted up as a room-interior, one wall of which is covered by an immense plate-mirror and the other three by numerous examples of glass windows and panels through which the light enters the apartments, showing in all their detail the brilliancy and fineness of the coloring and delicacy of the workmanship. The two kinds of glass work—the open mosaic and the painting in oil—are represented by many examples. A memorial window designed for the Presbyterian Church of San Diego is an especially handsome production, and a beautiful window of Moresque pattern composed of 2,500 pieces of brilliantly colored glass, as well as a Longfellow window with a finely painted head of the poet as a center piece, deserve all the admiration that can be bestowed upon them. Fine screens in mosaic abound, which reflect the scintillating light in all the colors of the rainbow. The exhibit is a credit to the industrial interests of the State, and the establishment it represents has almost a monopoly of the home market in its line.

REDWOOD VENEERS

Of all the elegant booths at the Fair few make a more superb appearance than that of Hurlbut Bros., the leading veneer dealers. The redwood veneer work which is used in the ornamentation of their quarters is by far the finest ever seen on the coast. All who see it express the greatest admiration, and it is generally conceded to be as handsome wood as earth can produce.

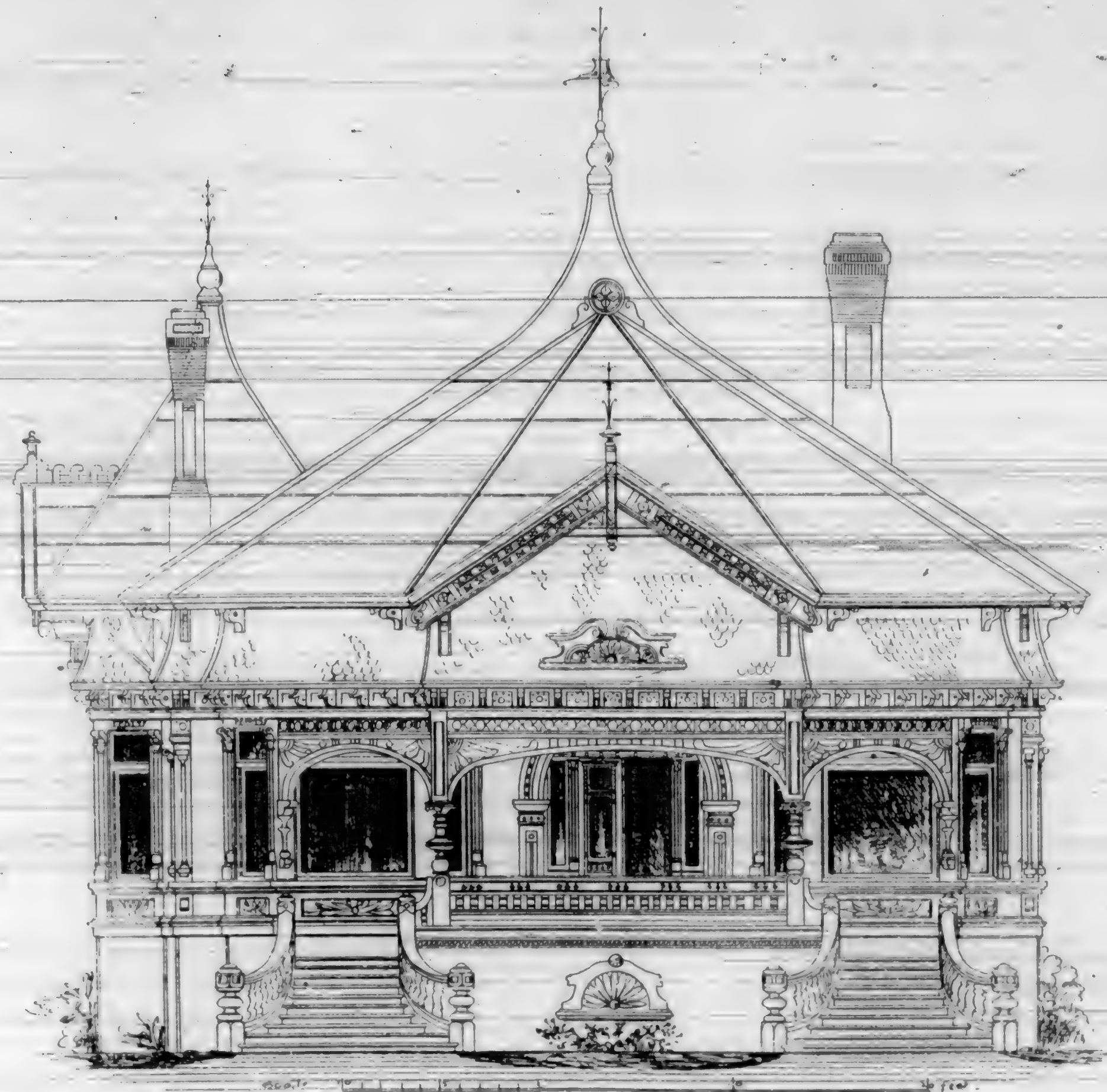
"ELASTICA"

Keefe & Fraser have on exhibition what is perhaps the finest display of California redwood ever seen anywhere. It is hard to imagine anything more beautiful in the way of wood than are many of the specimens of curly and buhl wood of California's great staple. The specimens are beautifully finished with "elastica"—a new preparation intended to supersede varnishes for such purposes—and colored with stains which are the exclusive property of this firm.

FINE LUMBER, HARRIS & JONES

Starting in a small way, this firm has gradually advanced to the front rank. Their display of lumber is very fine. One board is shown without a check or crack. It is 12 feet long, 44 inches wide and 4 inches thick. They also have beautiful examples of Oregon pine and maple, red and white cedar, spruce, sugar pines, etc. Bryant street, corner Oak Grove avenue is their office.

(Continued on Page 117.)



"SONOMA"—A BEAUTIFUL COUNTRY HOME—COST \$5,500.

The plans illustrating a country home in Sonoma County, Cal., were kindly furnished to us by Mr. Sam'l Newsom. Sizes of the rooms are plainly marked. The various apartments are roomy and every modern convenience has been introduced. As shown, the building can be erected at present price of materials, for the sum named.

PLASTER.

FEW people have any idea what a valuable material plaster of Paris is, and how it enters into the things of every day life about us, from the hard finish on the wall to the lamp collar which is fastened with it.

It is found in raw state in almost every land, and is made of gypsum rock, (a sulphate of lime.) It is quarried, calcined, ground to various degrees of fineness and then recalcined or boiled in huge caldrons, and is then fit for use. The best is made mostly in New York, from rock quarried in Nova Scotia, and is the kind used by dentists for all sorts of fine castings. We get another grade from Michigan, sometimes called by the trade blue plaster, on account of a blue cast in it. This kind is used mostly for hard finishing of walls. Another grade, coarser plaster, comes from Iowa, which has been used extensively for what is called "stucco plastering," in which a mortar is made of one part of plaster to two of sand and enough glue size to keep it from settling too quick. It makes one of the hardest kind of walls, but can be attempted only by the most skilled mechanic.

Plaster in setting can be retarded or accelerated by the use of various ingredients. Glue size is best for retarding, as it makes it materially harder after it is dry. Sugar, molasses and cream of tartar can be used for the same purpose. Cream of tartar is dangerous to use, as a little too much will kill the plaster from setting entirely. Two of the best things to use in making plaster set thick are common salt or alum. Plaster that has been kept a long time and has gathered moisture, or that has been set in a damp place, will also set quick. This can be remedied by remov-

ing all lumps that may have formed, and heating it on a stove in some metal vessel. When heated it will appear to boil like a liquid. Ground, uncalcined plaster is used extensively to improve what are called sour lands. Plaster in setting heats slightly, which causes it to expand. An eminent authority claims that this expansion will cause it to fill the crevices of a mold. But this is a mistake, as the expansion does not take place until it is quite hard.

MORTAR made in the following manner will stand if used in almost all sorts of weather: One bushel of unslaked lime, three bushels of sharp sand; mix 1 lb. of alum with one pint linseed oil, and thoroughly mix this with the mortar when making it, and use hot. The alum will counteract the action of frost on the mortar.

For seventy yards of surface provide 1,000 pieces of lath, and eleven pounds of lath nails.

For 100 square feet of roof, 1,000 shingles, laid four inches to the weather, and five pounds of shingle-nails, will be necessary.

In estimating amounts of siding and flooring, allow one-fifth more than the surfaces to be covered for the lap in siding and the matching in the flooring.

Experiments with cypress and walnut woods, and also with cypress and cedar, show that they will rot each other while joined together; but on separating them the rot will cease, and both woods then remain perfectly sound for a long time.

An Evidence of Prosperity.

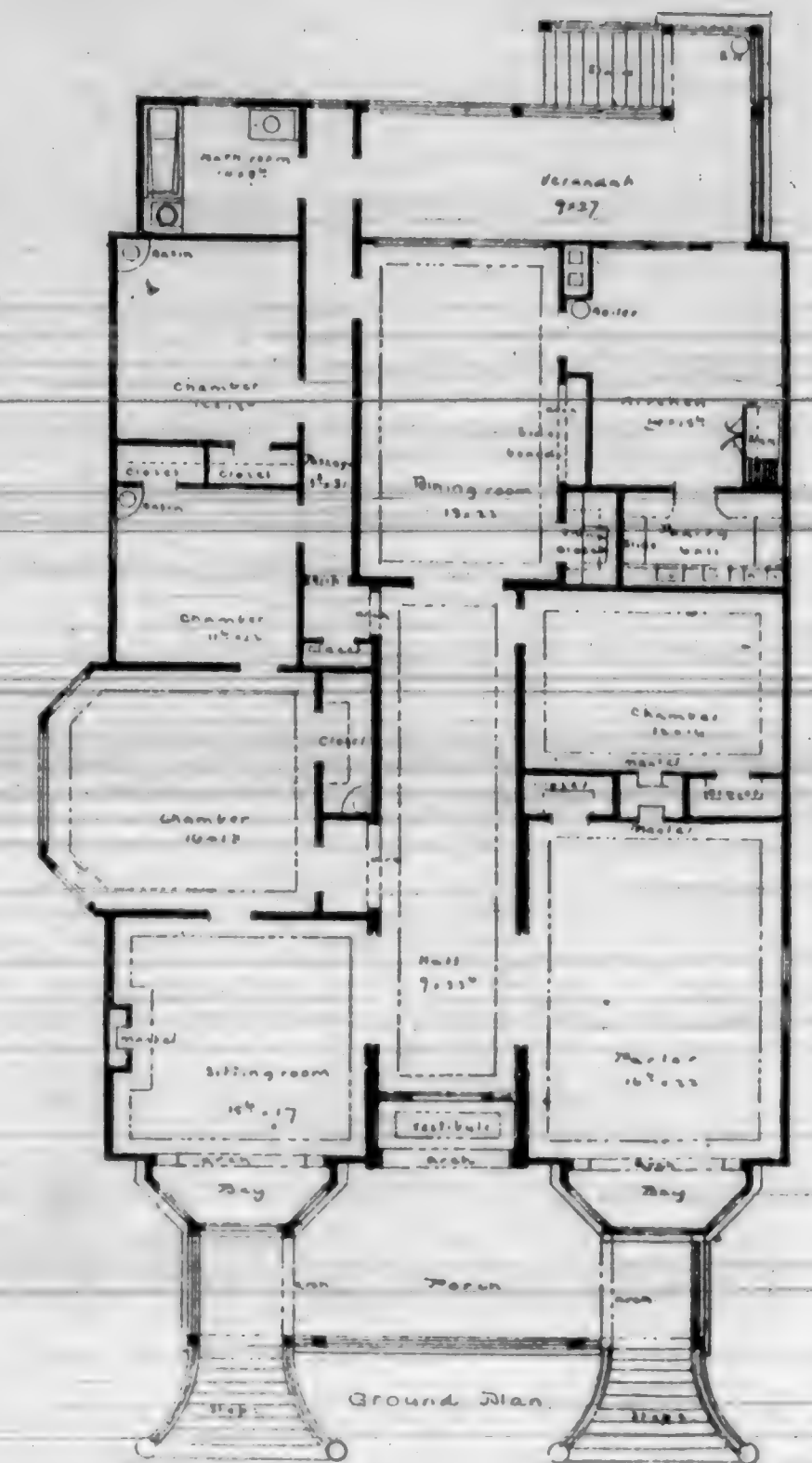
NO journal this side of the Rocky Mountains has ever published as complete an edition of news connected with the building interests as the one we present to our readers this month.

Our illustrations are produced by a new process, and are remarkable for their fine, clean appearance. We are prepared to furnish cuts of the same quality of work to those who may desire the same.

Our building news department will, in a short time, be greatly enlarged. We intend to be more thorough than all the other journals combined.

Subscribe now for 1889.

Remaining numbers of this year free to all new subscribers for 1889.



"SONOMA"—FLOOR PLAN.

NOW IS
THE TIME TO SUBSCRIBE
FOR 1889.

WE will send the remaining numbers of this year free to all new subscribers for 1889.

WE PROMISE
NEW AND BEAUTIFUL ARCHITECTURAL DESIGNS.

With our new process, we are enabled to produce cuts far ahead of anything heretofore presented.

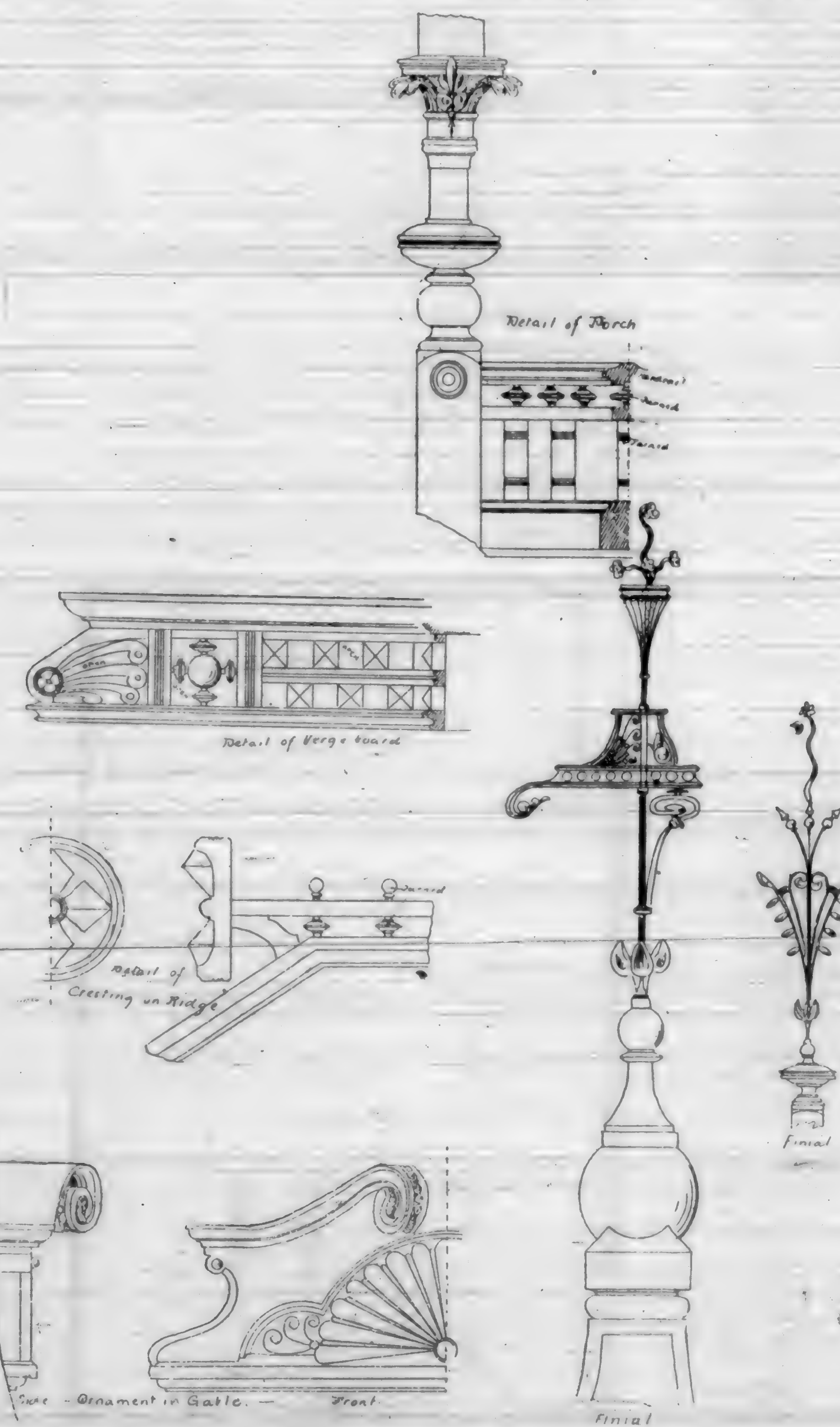
COMPLETE BUILDING REPORTS.

Our corps of building correspondents will be doubled next year. We have also had the city districted and a competent party to take charge of each district. Our city news will, therefore, be perfect.

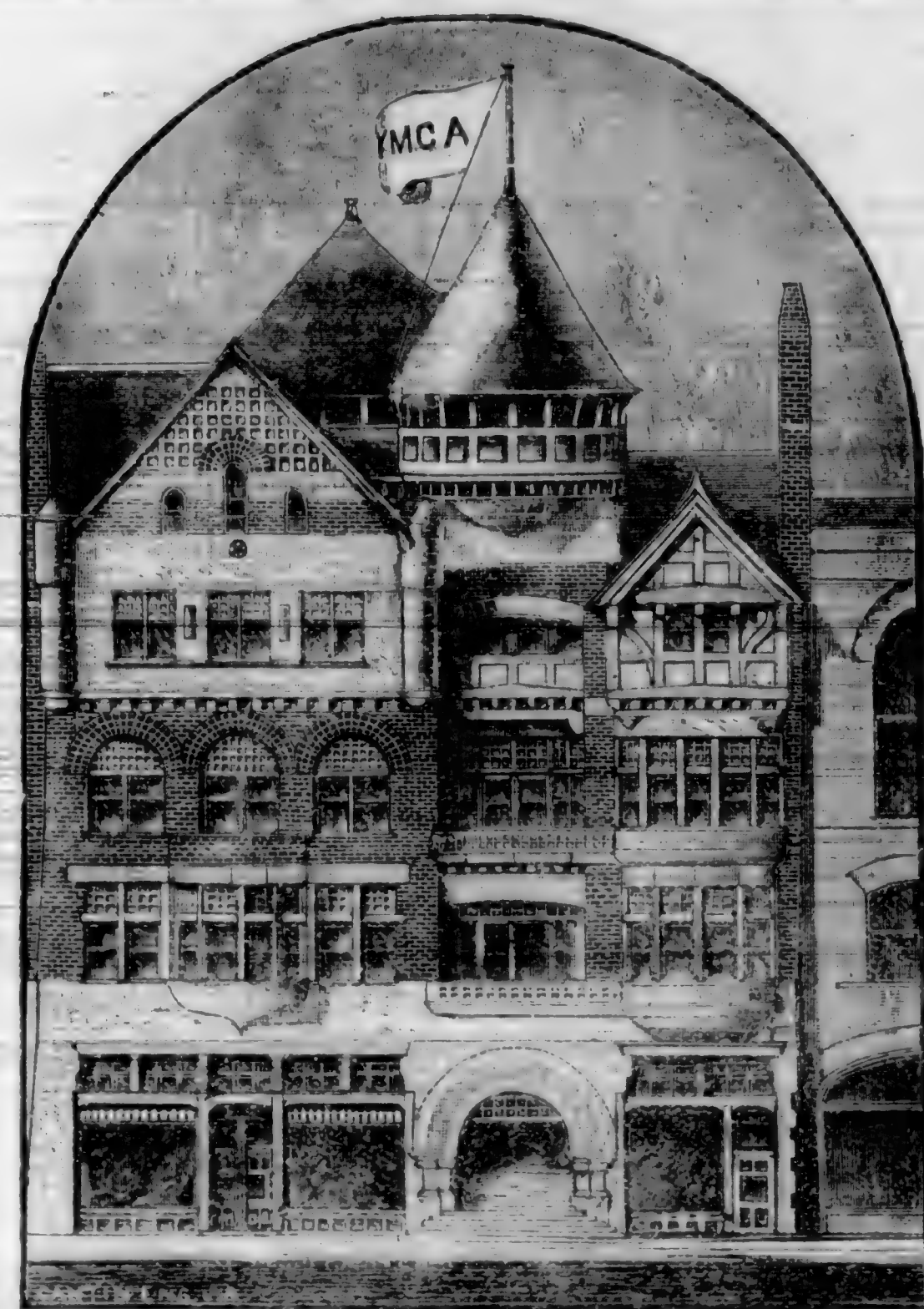
ARCHITECTS

Have promised, with the new year, to send us each month an article, and, where necessary, illustrations for same.

Subscribe now for 1889.



"SONOMA"—GENERAL DETAILS.



YOUNG MEN'S CHRISTIAN ASSOCIATION BUILDING, LOS ANGELES, CALIFORNIA.

We give our readers in this issue views of the new Association building now in course of erection at Los Angeles, Cal. The following description of it is sent to us. The site for this important addition to the fine edifices of the "City of Angels" is on the west side of Fort street, between Second and Third streets. The lot is 70 feet front by 110 feet deep. The building will cover the whole width of the lot and extend back to within five feet of the rear boundary, thus reserving an alleyway and light for the basement. The plans show a building four stories in height above the basement, with an attic story. The front portion of the first story is occupied by three stores (two 24x65 feet and one 18x65) and the main entrance to the Association rooms, the latter being 11 feet between the piles of the arch opening into a vestibule 13 feet wide. The rear part of this story is taken up by the upper part of a gymnasium. Having ascended the main staircase, which is eight feet wide, one finds himself in what is really a part of the reception hall, but if desired, can be shut off from the latter and made to serve as a vestibule to the auditorium. To the left is an arcade of three semicircular arches, filled in with bronze scroll work, and supported by graceful columns with sculptured capitals and bases. Beyond this arcade is the reception hall proper, 23x22 feet, situated in the center of the building and having the other rooms arranged around it. Directly opposite the visitor as he enters is the Secretary's office, so placed that the Secretary or his assistant can command a full view of the entrance, and at the same time overlook the reading room and library.

The members' parlor, 18x36 feet, reading room, 22x30, and library, 18x30, occupy the front of the building on this floor. A curtained arch divides the reception hall from the reading room, which is the middle one of these three, separated from the library on the one side by a scroll-work screen and leading into the parlor through an anteroom on the other side. The anteroom can be thrown into either the reading room or the parlor by means of sliding doors. It also opens out into a balcony over the main entrance, where members can enjoy the open air. The parlor is provided with an oriel bay window of stone, having a slight projection over the sidewalk, thus giving larger window surface, as well as adding to the size of the room. Another bay

window extends in front of the library and reading room, and forms a connecting lobby between the two rooms. The library will be fitted up with alcoves for books, an open pressed-brick fireplace, and everything made convenient and comfortable for the studious.

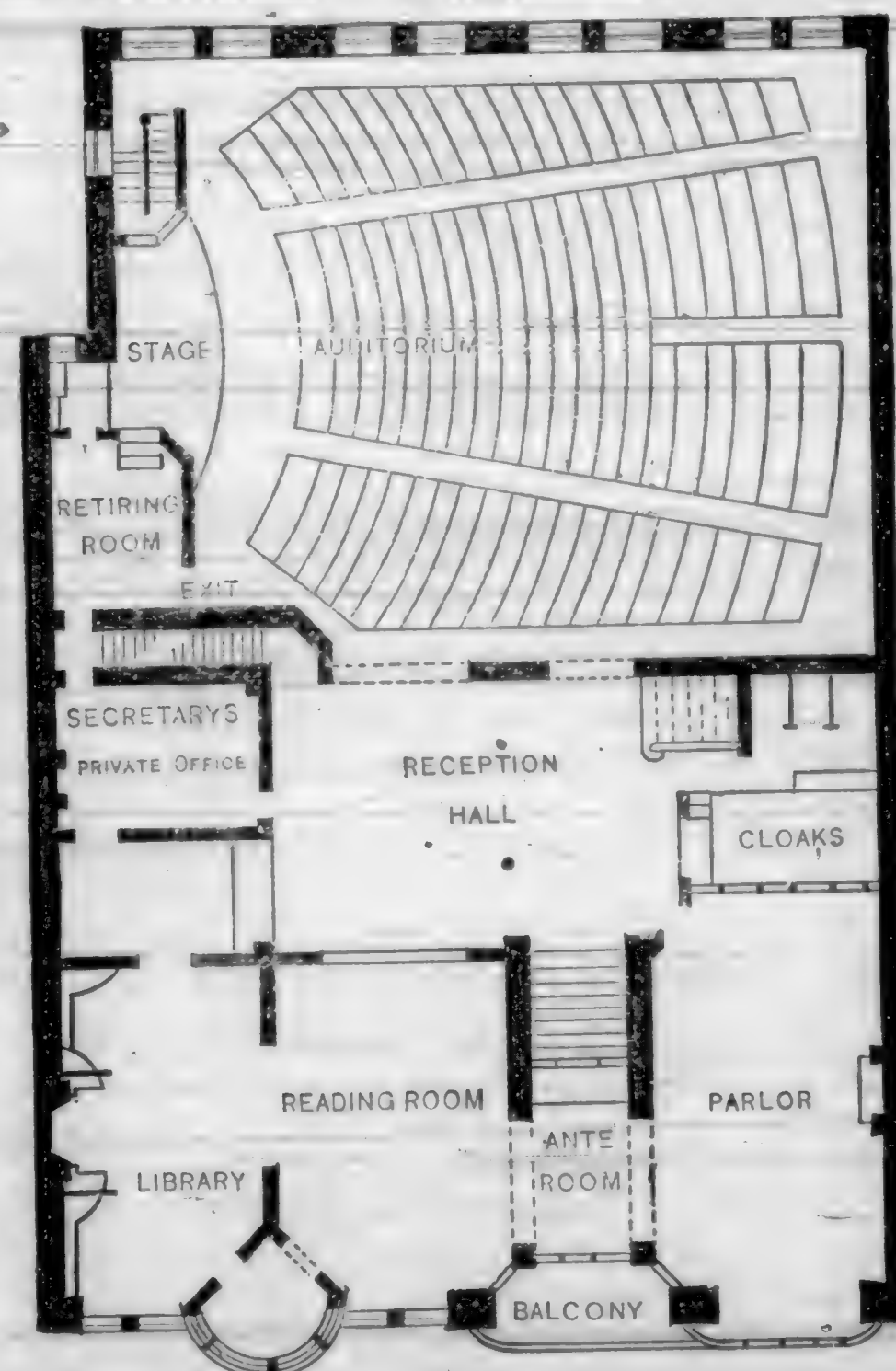
The auditorium, 64x49 feet, occupies the rear of the building, is directly over the gymnasium, and like the latter is two stories in height. It is calculated to seat 525 persons on the lower floor and 250 in the gallery. To the right of the entrance hall or vestibule are the cloak room and toilet room. The members' parlor may also be entered from this side. Next to the Secretary's office is the stairway leading down to the gymnasium. On the third floor are placed the recreation room, 34x28; the boys' room, 16x30; and a class room, 18x32; these rooms being divided one from the other by sliding doors. Another class room is provided in the rear of the one above mentioned, and the two rooms can be thrown together by opening the sliding doors. There is an open court or well on this floor which lights the center of the building and the reception hall which is beneath. The rear of this floor is occupied by the gallery of auditorium, a kitchen, 16x14; toilet rooms, staircases, etc.

On the fourth floor are ten rooms, to be rented for lodgings for young men; these average 12x14 feet and are all outside rooms. Apartments for janitor are also on this floor.

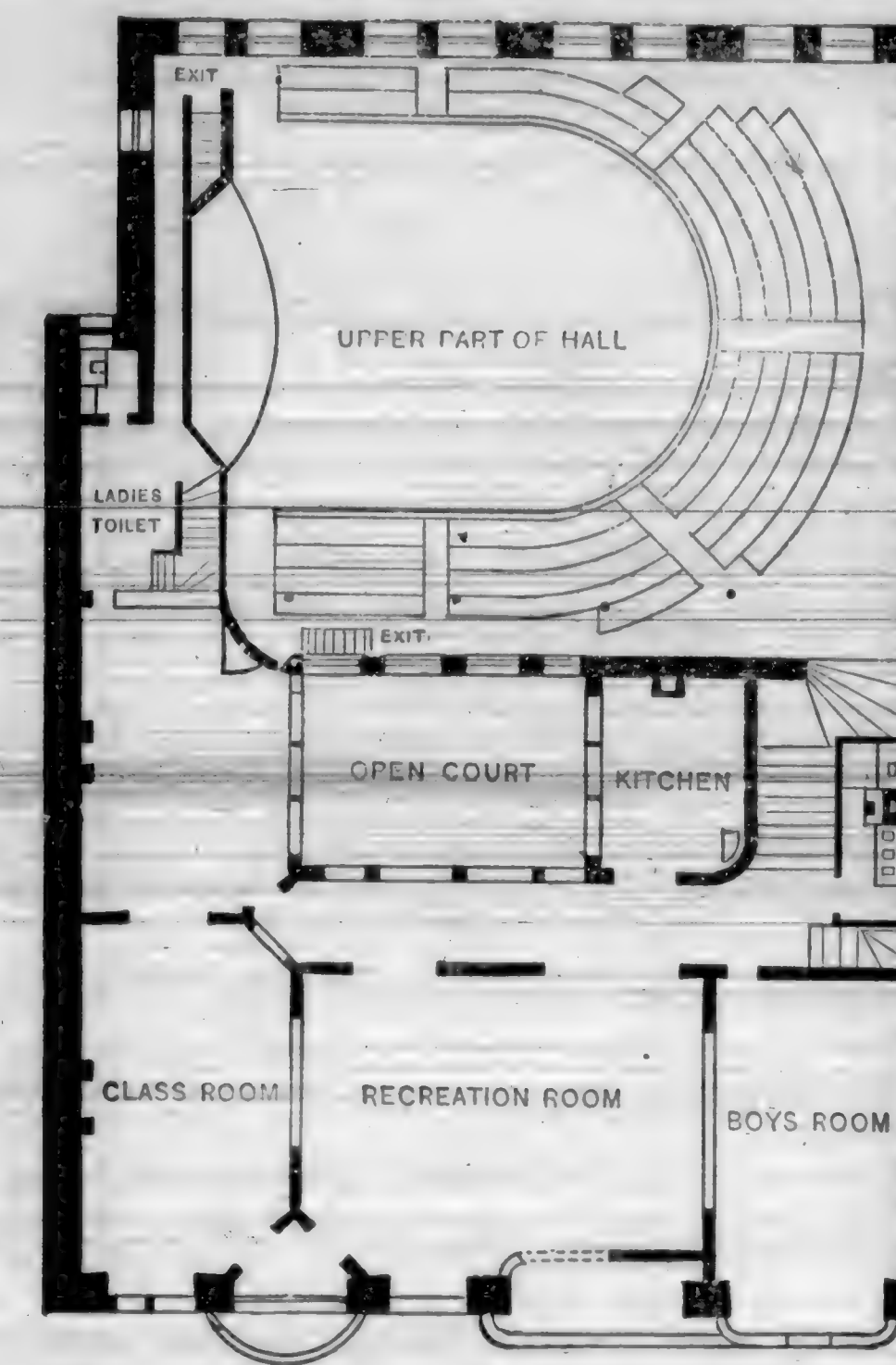
We now turn to the basement, to many the most attractive part of the building—containing the gymnasium and baths. The former occupies the rear of the building and is directly under the large auditorium. A room is set apart at one end for the instructor.

A running track, six feet six inches wide extends around the walls, at about ten feet above the gymnasium floor. Above the running track is a gallery for the convenience of visitors wishing to view the gymnastic exercises. Dividing the gymnasium from the bath rooms are the member's lockers, about 600 in all, with wash bowls and toilet conveniences adjoining. The remainder of the basement is taken up by the swimming bath, 14x44 feet, with diving platform, etc.; eleven sponge baths, five tub baths, shower and needle bath room, two bowling alleys 70 feet long, and the engine and boiler room.

The general style of the building is American Romanesque, although the mullioned and oriel windows and some other features belong, strictly speaking, to the English Gothic style of the fifteenth century, they are made to harmonize with the more severe and impressive style of the three or four centuries earlier. The principal entrance is well-defined and inviting.



Remaining Numbers of this year given free to all new subscribers for 1889.



and may be said to be typical of the characteristic strength of the Association in all parts of the world. The balconies over the entrance open from the principal rooms of the building, and over these balconies is a circular open tower from which a fine view of the city may be obtained. The front of the building will be faced with pressed brick and brown stone trimmings, with terra cotta panels. The first story will be entirely of brown-stone, in pitch-faced broken ashlar work. The entrance will be closed at night time by a porticulis of wrought iron or bronze. The building, when finished, will cost probably \$55,000.

"SANITAS" PLUMBING APPLIANCES.

THE superiority of the Sanitas system and appliances is now so widely recognized that the word "Sanitas" has become synonymous with sanitary safety. It suggests scientific and solid construction, and simplicity of form and action, and the use of the Sanitas goods assures these qualities. The fact that their principles of construction are everywhere being imitated by other manufacturers, as far as the Sanitas patents will allow, indicates the reputation they have among the trade.

The extraordinary success which the Sanitas appliances have met with, has, as above indicated, led to a number of imitations and infringements. We are informed that in several instances, even where the Sanitas goods have been called for in specifications for building, portions of the goods furnished under the contract have been such imitations and infringements. We would therefore call the attention of architects, builders and others interested, that every article manufactured by us bears in a conspicuous place, the word SANITAS.

THE "SANITAS" TRAP

(1.) It is sometimes asserted that the seal of the Sanitas trap can never be broken under any conditions. This is erroneous. Its seal can be pumped out by a force-pump, or by a laboratory pumping apparatus, especially devised to destroy the seals of traps by siphonage. But the seal of the unvented Sanitas trap never can be and never has been destroyed by siphonage in good plumbing work. Furthermore, the unvented Sanitas trap will stand a severer test of siphoning action than will the vented S-trap. This has been demonstrated over and over again, and the demonstration can be repeated at any time to the satisfaction of any who are interested, provided care be taken to vent the S-trap in a manner which is practical in plumbing, using a vent-pipe the size, length, and average number of bends found in ordinary practice. The seal of the Sanitas trap will be lowered by severe siphoning action, but it cannot be broken.

(2.) Again, it is sometimes asserted that the Sanitas trap can not be clogged. This is also erroneous. The trap can be clogged by matches or kitchen refuse, if improperly used, just as can any ordinary waste-pipe; but when properly set and used, the Sanitas trap will never become clogged to the point of losing its effectiveness. If improperly used, as when under kitchen sinks the cook takes out the sink strainer and sweeps into the trap bones and refuse never intended for the waste-pipe, the Sanitas trap will be fouled; but it then has the great advantage over all others of providing the easiest and safest means of removing this refuse matter, and that with the aid of an ordinary screw-driver. When used under sinks, the trap should be placed close to the sink outlet, and the sink strainer should never be removed. The grease will then pass through the trap in a liquid state, and be caught in the suitable grease receptacle beyond.

(3.) It is often thought that where special trap vent-pipes are called for, the Sanitas trap is not needed. The Sanitas trap is so constructed that its seal cannot be injured by evaporation produced by trap venting. Therefore, where trap vent-pipes are called for, the use of the Sanitas trap is particularly necessary. In virtue of the peculiar construction of the Sanitas trap, its outlet-pipe forms its own vent-pipe, which is infinitely better than a special vent-pipe, inasmuch as it is always kept open by the scouring action of its own discharges. But even if it should ever become closed by grease, no harm could come in this case, since the same closure would not only shut off sewer gas and siphonage, but also at once announce itself and be removed.

(4.) Finally, the seal of this trap can never be destroyed by back pressure, in properly arranged plumbing. For with the main soil-pipe vented as it should be, no back pressure can be generated strong enough to do mischief, where ordinary care and intelligence are used in originally laying out the work.

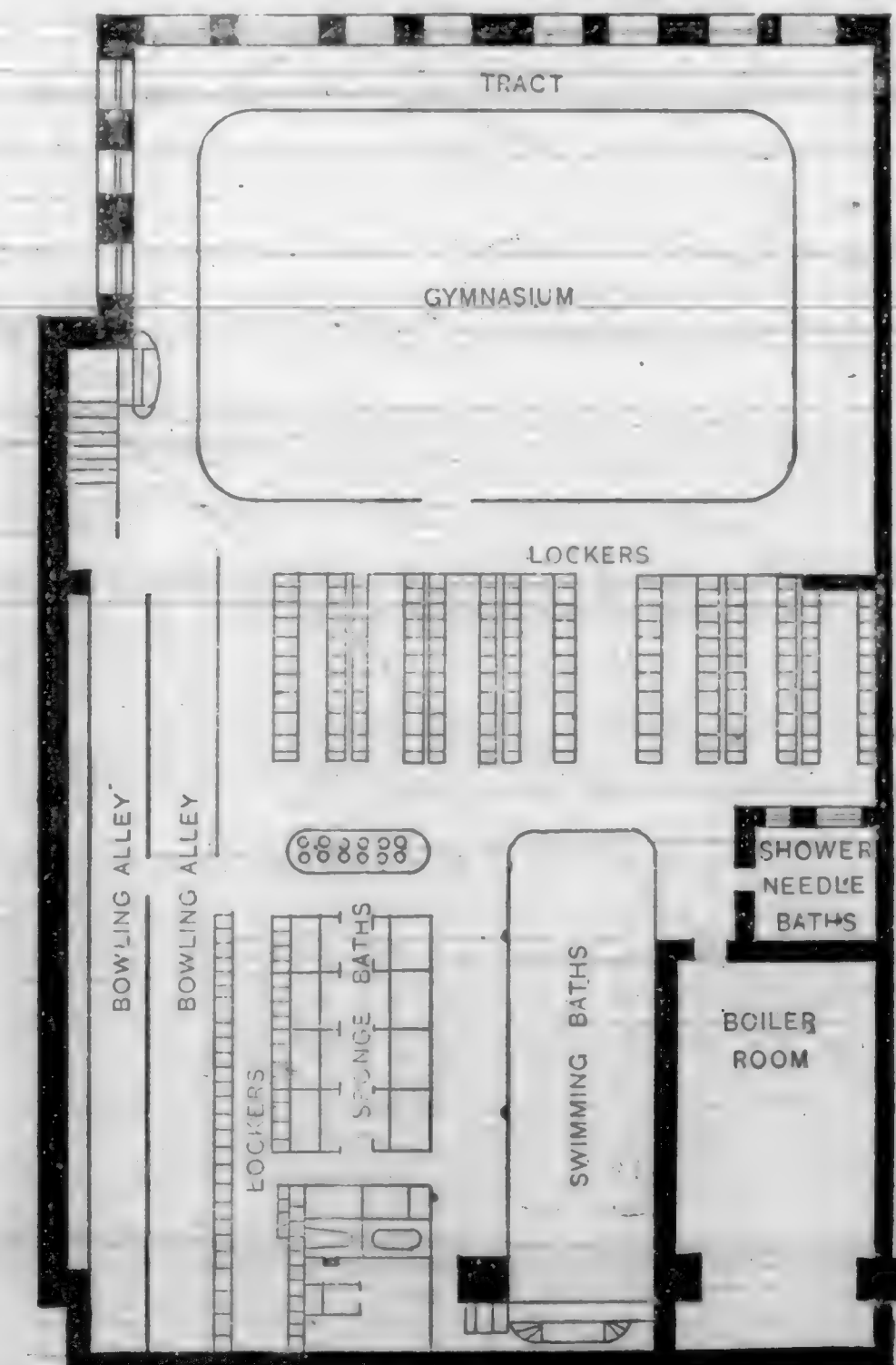
Besides the trap, the Sanitas Manufacturing Company have a full line of bath tubs, pantry sinks, water-closets, etc., etc. The latter will be more fully described in next issue.

WILLIAM E. HOYT, C. E., S. B.

Chief Engineer of the Buffalo, Rochester & Pittsburg Railroad, formerly Chief Engineer of the Massachusetts State Board of Health, in his lecture on "Household Sanitation," delivered before the Academy of Sciences, at Rochester, N. Y., in January, 1886, writes: "I know of nothing to compare with the Sanitas appliances in convenience, efficiency and safety. They should be regarded in the same light as valuable discoveries in medical science."

These various appliances are kept in full stock in this city by the agents,

ARNOLD & Co., 40 California Street, San Francisco, Cal.



(Continued from page 112.)

A GRAND REDWOOD PLANK

Perfectly free from knots or checks, there stands against the side of the Pavilion a redwood plank, 13 feet long, 50½ inches wide and 3 inches thick. Where in the world can this be beaten?

CALIFORNIA SLATE

The slate quarry in El Dorado Co. can furnish slate equal to any in the world. The color is a rich blue-black. The grain is very fine and the surface is unusually smooth. The samples in the Fair prove conclusively that those wanting a perfect fire-proof material need not go out of the State to procure the same. J. O. Hanscom is Secretary of the Company, and the office is at 10 California street.

RANSOME'S PATENT CONCRETE MIXER

E. L. Ransome, of 402 Montgomery street, presents one of his celebrated Patent Concrete Mixers. In a late issue of the *Scientific American*, attention was called to their superiority. By their aid any one can prepare material ready for instant use. Mr. Ransome has these machines for sale. He also makes a specialty of renting the same, so that those who only want them for certain work can return the "Mixer" when they have finished the job.

CALIFORNIA WIRE WORKS

The grand display presented by the California Wire Works entitles them to a gold medal. In fact it should be a diamond medal, if truly intrinsic merit was considered. They have a machine in active operation making barbed wire fencing. We have noticed people stand for hours watching the same. Then their French or wire nail machine. How it seems to eat up the coils of wire. The latter is placed in such a position that the machine is fed continuously, and the nails drop in a perfect shower in a large box underneath. It will hardly do for one to pick them up, at least for some little time, as they are hot when they leave the machine. Then, the grand display of wire rope for rigging; the mammoth hawsers for large vessels; the steel wire rope for our cable systems; beautifully designed summer houses, and even down to fine bird cages; wire screenings of every size, from that strong enough for a jail to that in general use for kitchen windows. In fact, everything in the shape of wire ornaments, and for every purpose for which wire can be utilized, this Company presents in its various exhibits the practical results of many years of study and improvements. The office of the Company is at 329 Market.

MANTELS, MIRRORS, AND BRIC-A-BRAC

S. & G. Gump have one of the most exquisite displays in the Fair. The designs in mantels are very artistic. A feature of their display is the beautiful varieties shown in tiles and hearths. Their parlor ornaments attract much attention from their unique styles.

FINE CARPETS

Next to the building of the house comes the furnishing thereof, and the goodly housewife turns her first attention to the carpets. No other place this side of the Rocky mountains can show the assortment of goods exhibited by Sloane & Co. Ravishingly exquisite designs may be seen of the Chehabas and Royal Fereghan (both Persian), Gobelin and Victorian Moquettes, Scotch Axminsters, Afghan, and in fact every kind of patterns to suit the most aristocratic tastes. Besides the car-

pets, Messrs. Sloane & Co., keep a full assortment of window hangings and adornments. This grand establishment may be found on Market street, near 3d, Nos. 641 to 647.

"MATHUSHEK'S PIANOS."

Geo. F. Wells presents a grand display of "Mathushek" pianos. Of the thousands who stand daily at his booth, but few are there who would not at once award the palm to the "Mathushek." Mr. Wells feels proud in the fact that the last prize ever given at the Mechanics' Fair for an eastern made piano was won by the "Mathushek." One peculiarity of the firm making these grand instruments is, that they never advertise. So that any one reading a notice of these pianos can say that it was to the excellence of the tone and finish that such praise was called forth. Some of the Piano Companies spend thousands of dollars yearly in advertising. This must be charged *pro rata* to each piano. With the "Mathushek" the buyer gets this discount. Mr. Wells can be found at 1360 Market street.

LARGE STICK OF TIMBER

Suspended overhead is the largest stick of timber ever sawn at a mill. It is 151 feet long, 20 inches square and contains 5033½ feet of lumber. But few knots can be seen in its entire length.

WILL & FINCK'S CUTLERY, ETC.

This firm's display proves that skill and energy will surmount all difficulties. Starting many years ago, in a very small way, they have gradually advanced, until to-day, there is not a house this side of the Rocky mountains can compete with them. Their display of home-made cutlery is superb. One of the specialties of this firm is their electric bell system. Many of our largest hotels and other buildings have been furnished with their electric bells and electric lightings. The annunciators furnished by this house are a model of neatness and availability. Their place of business is 818 Market street, in the Phelan building.

Mr. J. B. Kershaw, who represented Messrs. N. and G. Taylor Co., tin plates, metals and tinnery supplies, Philadelphia, from 1879 to 1886 as traveling salesman through the west and northwest, will again fill the same position with this old and reliable house, on and after August 1st. This notice will be acceptable to the trade west of the Mississippi, extending out to the coast, with whom Mr. Kershaw has hosts of friends.

Messrs. N. and G. Taylor Co. are the sole importers of the genuine and guaranteed brand of OLD STYLE Roofing Tin, and the return of Mr. Kershaw to this live and energetic house is not without considerable significance, and it is fair to presume that he finds it more profitable to sell the guaranteed, and what may be called the "original brands" of this house, rather than push the sale of any imitations that may be handled by other parties.

Messrs. N. and G. Taylor Co. carry a full line of all their guaranteed brands in not only their Chicago and New Orleans warehouses in addition to the stocks carried by jobbers who handle their goods, but have also placed their goods in the hands of Messrs. W. W. Montague & Co., of San Francisco; Harper & Reynolds Co., of Los Angeles, and we are now advised, have just established an agency with Messrs. Peters & Miller, galvanized iron cornice and tin plate workers, of Tacoma, Washington Territory. They sell an immense quantity of their guaranteed brands all along the line of the Central and Northern Pacific, in fact, from a circular just issued by this house, we notice in the list nearly all the prominent jobbers and tin plate houses of the United States, which seems to us not only flattering to the brand they represent the sale of, but also creditable to this old and reliable house of Taylor & Co., who established their business as far back as 1810, in the old city of Philadelphia.

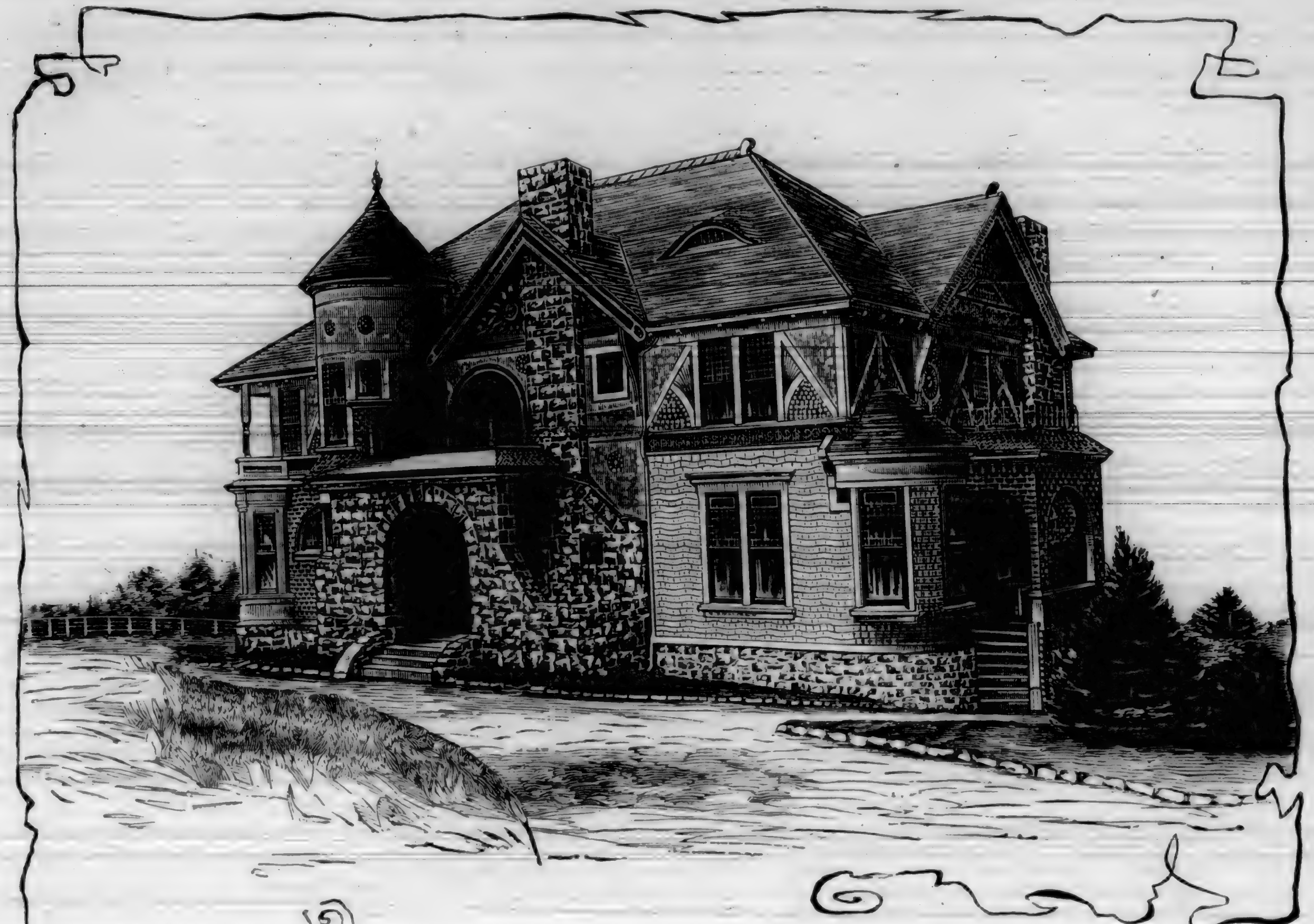
ESTABLISHED MARCH 17, 1868

W. J. HENNEY & CO.

DIRECT IMPORTERS OF RELIABLE AND STYLISH FURNITURE & CARPETS. MANUFACTURERS OF ART DRAPERIES, FINE BEDDING, ETC.

18, 20 & 22 ELLIS STREET, NEAR MARKET & STOCKTON, SAN FRANCISCO, CALIFORNIA.

Rural Homes, Wheeler.	1 50
Old Homes Made New.	50
The Suburban Cottage.	1 50
Homes for the People.	2 00
Leffel's House Plans.	2 00
Water Closets.	1 00
Sewer Gas.	1 25
Steam Engine Catechism.	1 00
Builder's Guide.	2 00
Cozy Homes.	25
How to Paint.	1 00
Cutting Tools.	1 50
Universal Assistant.	2 50
Rural Architecture.	1 50
Wonders of Art.	1 25
Grimshaw on Saws.	4 00
Dwellings, Reed.	3 00
Plumbing, Appliances.	1 50



Copyrighted by G. H. WOLFE.

SAN FRANCISCO.

The above beautiful design was prepared especially for this Journal, and is peculiarly appropriate for a suburban home.

STANDARD UNIFORM CONTRACT.

Some time ago, special committees from the American Institute of Architects, the Western Association of Architects, and the National Association of Builders, were appointed to draw up a form of contract for general use, all over the United States.

The object sought to be obtained by the Committee was to prepare a Form of Contract which could be received and adopted generally by architects and builders as a Standard Form, and in which the several provisions necessary to constitute an equitable agreement, as between the owner and the builder, would be incorporated. The Joint Committee were empowered by their respective Associations to prepare and adopt such a Form of Contract, and this work, as embodied in the accompanying printed copy, may be said to be the authorized Standard Form of said Association.

A copy of the "Contract" has been forwarded to this office. We present it in full. AS THE "CONTRACT" HAS BEEN COPYRIGHTED, copies can only be obtained through the "Inland Publishing Co." Chicago, Ill. If desired, forward your application to the Company, and your name and address will be printed in the proper places.

We can furnish them complete, with your names, etc., added for \$2 00 per hundred or \$10 per thousand.

THIS AGREEMENT, made the day of in the year one thousand, ... hundred and, ... by and between,

..... part of the first part (hereinafter designated the Contractor) and,

..... part of the second part (hereinafter designated the Owner);

WITNESSETH that the Contractor, being the said part of the first part, in consideration of the covenants and agreements herein contained, on the part of the Owner, being the said part of the second part, do covenant, promise and agree with the said Owner, in manner following, that is to say:

1st. The Contractor shall and will well and sufficiently perform and finish, under the direction, and to the satisfaction of Architect (acting as Agent of said Owner), all the work included in the,

agreeably to the drawings and specifications made by the said Architect, and signed by the parties hereto, (copies of which have been delivered to the Contractor), and to the dimensions and explanations thereon, therein and herein contained, accord-

ing to the true intent and meaning of said drawings and specifications, and of these presents, including all labor and materials incident thereto, and shall provide all scaffolding, implements and cartage necessary for the due performance of the said work.

2d. Should it appear that the work hereby intended to be done, or any of the matters relative thereto, and are not sufficiently detailed or explained on the said drawings, or in the said specifications, the Contractor shall apply to the Architect for such further drawings or explanations as may be necessary, and shall conform to the same as part of this contract, so far as they may be consistent with the original drawings, and in event of any doubt or question arising respecting the true meaning of the drawings or specifications, reference shall be made to the Architect, whose decision thereon, being just and impartial, shall be final and conclusive. It is mutually understood and agreed that all drawings, plans and specifications are and remain the property of the Architect.

3d. Should any alterations be required in the work shown or described by the drawings or specifications, a fair and reasonable valuation of the work added or omitted, shall be made by the Architect, and the sum herein agreed to be paid for the work according to the original specification, shall be increased or diminished as the case may be. In case such valuation is not agreed to, the Contractor shall proceed with the alteration, upon the written order of the Architect, and the valuation of the work added, or omitted shall be referred to (3) three Arbitrators, (no one of whom shall be personally connected with the work to which these presents refer), to be appointed as follows: one by each of the parties to this contract, and the third by the two thus chosen; the decision of any two of whom shall be final and binding, and each of the parties hereto shall pay one-half of the expense of such reference.

4th. The Contractor shall, within twenty-four hours after receiving written notice from the Architect, to that effect, proceed to remove from the grounds or building, all materials condemned by, whether worked or unworked, or take down all portions of the work which the Architect shall condemn as unsound or improper, or as in any way failing to conform to the drawings and specifications, and to the conditions of this contract. The Contractor shall cover, protect and exercise due diligence to secure the work from injury, and all damage happening to the same by neglect, shall be made good by.

5th. The Contractor shall permit the Architect, and all persons appointed by the Architect, to visit and inspect the said work or any part thereof, at all times and places during the progress of the same, and shall provide sufficient, safe and proper facilities for such inspection.

6th. The Contractor shall and will proceed with the said work, and every part and detail thereof, in a prompt and diligent manner, and shall and will wholly finish the said work according to the said drawings and specifications, and this contract, on or before the day of in the year one thousand hundred and (provided that possession of the premises be given the Contractor, and lines and levels of the building furnished him, on or before the day of in the year one thousand hundred and), and in default thereof the Contractor shall pay to the Owner dollars for every day thereafter that the said work shall remain unfinished, as and for liquidated damages.

7th. Should the Contractor be obstructed or delay in the prosecution or completion of the work by the neglect, delay or default of any other contractor; or by any alteration which may be required in the said work; or by any damage which may happen thereto by fire, or by the unusual action of the elements, or otherwise; or by the abandonment of the work by the employees through no default of the Contractor, then there shall be an allowance of additional time beyond the date set for the completion of the said work; but no such allowance shall be made unless a claim is presented in writing at the time of such obstruction or delay. The Architect shall award and certify the amount of additional time to be allowed; in which case the Contractor shall be released from the payment of the stipulated damages for the additional time so certified and no more. The Contractor may appeal from such award to arbitrators constituted as provided in Article 3d of this contract.

8th. The Contractor shall not let, assign or transfer this contract, or any interest therein, without the written consent of the Architect.

9th. The Contractor shall make no claim for additional work unless the same shall be done in pursuance of an order from the Architect, and notice of all claims shall be made to the Architect in writing within ten days of the beginning of such work.

10th. The Owner agree to provide all labor and materials not included in this contract in such manner as not to delay the material progress of the work, and, in the event of failure so to do thereby causing loss to the Contractor, agree that will reimburse the Contractor for such loss; and the Contractor agree that if shall delay the material progress of the work so as to cause any damage for which the Owner shall become liable (as above stated), then shall make good to the Owner any such damage over and above any damage for general delay herein otherwise provided; the amount of such loss or damage, in either case, to be fixed and determined by the Architect, or by arbitration, as provided in Article 3d.

11th. The Owner shall effect insurance on said work, in his own name and in the name of the Contractor, against loss or damage by fire, in such sums as may from time to time be agreed upon with the Contractor, the policies being made to cover work incorporated in the building, and materials for the same in or about the premises, and made payable to the parties hereto as their interest may appear.

12th. Should the Contractor at any time refuse or neglect to supply a sufficiency of properly skilled workmen, or of materials of the proper quality, or fail in any respect to prosecute the work with promptness and diligence, or fail in the performance of any of the agreements on part herein contained, such refusal, neglect or failure being certified by the Architect, the Owner shall be at liberty, after three days written notice to the Contractor, to provide any such labor or materials, and to deduct the cost thereof from any money then due or thereafter to become due to the Contractor under this contract; and if the Architect shall certify that such refusal, neglect or failure is sufficient ground for such action, the Owner shall also be at liberty to terminate the employment of the Contractor for the said work and to enter upon the premises and take possession of all materials thereon; and to employ any other person or persons to finish the work, and to provide the materials therefor; and in case of such discontinuance of the employment of the Contractor he shall not be entitled to receive any further payment under this contract until the said work shall be wholly finished, at which time, if the unpaid balance of the amount to be paid under this contract shall exceed the expense incurred by the Owner in finishing the work, such excess shall be paid by the Owner to the Contractor, but if such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner. The expense incurred by the Owner as herein provided, either for furnishing materials or for finishing the work and any damage incurred through such default, shall be audited and certified by the Architect whose certificate thereof shall be conclusive upon the parties.

13th. And it is hereby mutually agreed between the parties hereto, that the sum to be paid by the Owner to the Contractor for said work and materials shall be subject to additions or deductions on account of alterations as herein before provided, and that such sum shall be paid in current funds by the Owner to the Contractor in installments, as follows:

It being understood that the final payment shall be made within days after this contract is completely finished; provided, that in each of the said cases the Architect shall certify in writing that all the work upon the performance of which the payment is to become due has been done to satisfaction; and provided further, that before each payment, if required, the Contractor shall give the Architect good and sufficient evidence that the premises are free from all liens and claims chargeable to the said Contractor; and further, that if at any time there shall be any lien or claim for which, if established, the Owner or the said premises might be made liable, and which would be chargeable to the said Contractor, the Owner shall have the right to retain out of any payment then due or thereafter to become due, an amount sufficient to completely indemnify against such lien or claim, until the



VARIOUS DESIGNS FOR BUSINESS BUILDINGS.

same shall be effectually satisfied, discharged or cancelled. And should there prove to be any such claim after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging any lien on said premises, made obligatory in consequence of the former's default.

14th. It is further mutually agreed between the parties hereto, that no certificate given or payment made under this contract, except the final certificate or final payment, shall be conclusive evidence of the performance of this contract, either wholly, or in part, against any claim of the Owner, and no payment shall be construed to be an acceptance of any defective work.

15th. And the said Owner hereby promise and agree with the said Contractor to employ, and hereby employ to provide the materials and to do the said work according to the terms and conditions herein contained and referred to, for the price aforesaid, and hereby contract to pay the same, at the same time, in the manner, and upon the conditions above set forth.

16th. And the said parties for themselves, their heirs, executors, administrators and assigns, do hereby agree to the full performance of the covenants herein contained.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals, the day and year first above written.

In presence of

Great Chances for Three Inventors.

I have often taken occasion to remark that the world is awaiting the appearance of three great inventors, greater than any who have gone before; and to whom it will accord honors and emoluments far exceeding all ever yet received by any of their predecessors. The first is he who will show us how, by the combustion of fuel, directly to produce the electric current; the second is the man who will teach us to reproduce the beautiful light of the glowing-worm and the fire-fly—a light without heat, the production of which means the utilization of energy without that still more serious waste than the thermo-dynamic loss now met with in the attempt to produce light; while the third is the inventor who is to give us the first practically successful air ship. The first two of these problems are set for the electric engineer, and we may be pardoned excess of faith, should it prove to be such, when, contemplating the enormous gain to humanity which must come of such inventions, we look confidently for the genius who is to multiply the wealth of the world to an extent beside which even the boon conferred by the creators of the steam engine and telegraph will not appear overshadowing. When this inventor comes forward, and most probably not till then, it is very likely that we shall see steam superseded by a rival.—Prof. R. H. Thurston.

Galvanized Iron for Water Pipes, Tanks, etc.

I had the notion of using galvanized iron pipes, coated inside and out, for the service pipes of my house, but on asking advice on the subject, I have been informed that the material is declared to be unhealthful, and that its uses is forbidden in many places. I happened to notice, also, the accompanying note on the subject, in one of the scientific papers, which is to the same effect (clipping enclosed). Will you please give me the benefit of your opinion?—M. W., Cumberland, Md.

Answer. The clipping enclosed read as follows: "We do not consider galvanized iron to be a safe material for water pipes. Zinc is a metal which is readily attacked and dissolved by certain waters, forming unwholesome and poisonous salts." Replying to the above, we do not share in the opinion conveyed in the quoted item. We have never met with any well-authenticated case of hurtful influence exerted by zinc or galvanized iron when used as the contact surface for service pipes or tanks for water for household use. There is but one salt of zinc that may be said to possess actively poisonous qualities—namely, the chloride; and the likelihood of this salt being formed under any circumstances at least in quantity sufficient to dangerously affect the water is almost infinitely small. The action of portable water on a surface of zinc will be to form an exceedingly thin coating of oxide, and ultimately of carbonate of zinc over the entire surface. And as this salt is very insoluble, it will effectually protect the underlying metal from the further chemical change for an indefinite period. The Massachusetts State Board of Health, some years ago, investigated the subject, and made a report affirming the comparative harmlessness of zinc or galvanized iron for the purpose herein named. An instructive confirmation of this judgment is given by the example of the city of Hartford, Conn. In 1855, at the recommendation of the Water Commissioners of that city, service pipes of iron, galvanized inside and outside, were adopted there, and have been in use ever since. They are used also, to a considerable extent in Philadelphia, and other cities. So far as we are aware, in none of these places has the slightest bad effect been traced to the practice. Such evidence ought to outweigh any amount of condemnation based simply on hypothesis. In writing some time since, in this journal, on system, we took occasion to comment on the immunity, from any specific disease, of the men who work at the galvanizing pots, that could be traceable to the absorption of the metal. The use of sal-ammoniac as a flux to clear the surface of the melted zinc in the pot, causes clouds of the chloride to be carried into the air. Yet the men work at these pots day after day, sometimes when ventilation is bad (as on a damp day), enveloped in clouds of it so as to appear like shadowy figures at a short distance away, without noticeably affecting their general health. It is safe to assert, we believe, that a galvanizer handling iron about a galvanizing pot, takes into his system through the mouth and nostrils, whence it finds its way into the stomach and lungs, more zinc in the course of a single day's work than he would be likely to get from his galvanized water service pipes in a month. In the face of such a fact as this, the denunciation of zinc for water-storage tanks and conduits, out of fear of the consequences of the homeopathic doses of this metal that would be dissolved, is, in our judgment, a bugaboo.—Mfr. and Builder.

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CITY BUILDING NEWS.

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ing News, except the*

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Ash Ave., between Buchanan and Laguna, residence. Owner Peter Flynn; architect Henry Geiffus; contractor Jas. Finn; cost \$2,045; signed Aug. 16th, '88; filed Aug. 18th; limit Oct. 20th.

1st payment when roof is on \$500; 2d, when partition and outside work done \$500; 3d, when completed \$530; 4th usual 35 days \$515.

Ashbury and Waller, frame building. Owner, Julia Gascon; architect, Wm. Mosser; contractor, J. J. Plumm; cost, \$2,900; signed, Aug. 15, 1888; filed Aug. 16, 1888; sureties, F. Joost and C. S. Holmes; limit, 10 days.

Payments, seventy-five per cent as work progresses; balance 35 days.

Army Ave., near San Jose avenue, additions to two buildings. Cost, \$800.

Broderick, between Sutter and Bush, one-story frame. Owner, S. Leszynski; architect, W. H. Armitage; cost, \$3,000.

Bush between Fillmore and Webster, two-story and basement frame. Owner Rosalie Morris; architect John & Zimmerman; contractor F. W. Kern; cost \$4,215; signed Aug. 15th, '88; filed Aug. 17th, '88; sureties O. W. Nordwell and F. Joost; limit Dec. 1st, '88.

1st payment when framed \$800; 2d, when partitions are up \$800; 3d, rough mortared and outside finish on \$800; 4th when the inside is ready to paint \$750; 5th and last usual 35 days, \$1,062.

Buchanan, near O'Farrell, additions. Owner, W. Plums; cost, \$1,500.

Bryant ave between 24th and 25th, two-story frame. Owner, Patrick Angler; architect and builder, Geo. Houston; cost, \$3,000.

Clinton Park, near Dolores, two-story frame. Owner and builder, J. McBean; cost, \$4,500.

Capp, near Twenty-fifth, one-story frame. Owner and builder, Lewis; cost, \$3,000.

Clayton between Page and Oak, one-story cottage. Owner, Miss Marie J. Casten; architect, Jas. E. Wolfe; contractor, J. W. Sims; cost, \$1,975; signed, August 30th, filed, September 1st; limit, Nov. 10th; surety, D. Jordan; amount of bond, \$1,000.

1st payment, roof sheathing on, \$300; 2d, floored, \$300; 3d, brown coated, \$450; 4th, completed, \$431; balance, usual 35 days.

Clay between Central ave and Walnut street, two-story frame. Owner, J. W. Kelly; contractor, S. M. Hills; cost, \$2,700.

Clay, near Walnut, two-story frame. Owner, W. J. Kelly; architect and builder, S. M. Hills; cost, \$2,500; signed Aug. 30, 1888; filed Aug. 31, 1888.

1st payment, when enclosed, \$600; 2d, when brown coated, \$600; 3d, when completed, \$600; 4th, usual 35 days, \$700.

Clay and Mason, residence. Owner C. Wreden; architect H. Geiffus; contractor F. W. Kern; cost \$3,080; signed Aug. 14th; filed Aug. 18th, '88; limit Nov. 15th, '88.

1st payment when roofed \$600; 2d, brown coated \$600; 3d, hard finished \$600; 4th when completed \$510; 5th and balance usual 35 days \$770.

Columbia and 24th, improvements. Owner Louis Kahn; architect H. Geiffus; contractor J. W. Sims; cost \$1,625; signed Aug. 16th, '88; filed Aug. 18th, '88; limit Oct. 15th, '88.

1st payment when brickwork and plank-ing is done \$600; 2d when completed \$600; 3d, usual 35 days, \$425.

Diamond, near Eighteenth, two-story and basement. Owner, N. Straub; architect, John Zimmerman; contractor, J. Klein; cost, \$3,300; signed, Aug. 25, 1888; filed, Aug. 28, 1888; surety, C. S. Holmes; limit, Nov. 1st, 1888.

1st payment, when frame is up, \$825; 2d, when partitions are set, \$825; 3d, ready to paint, \$425; 4th, when completed, \$400; 5th, usual 35 days, \$825.

Diamond, near 18th, two-story and base-ment. Owner, N. Straub; architects, John & Zimmerman; contractor, J. Klein; cost, \$3,300; signed Aug. 25, 1888;

1003 Devisadero, alterations. Owner Anna Callingham; architect Schmidt & Shea; contractor Thos. Elam; cost \$1,325; signed Aug. 16th, '88; filed Aug. 17th, '88.

1st payment when building is enclosed on roof \$490; 2d, when completed \$500; 3d and last usual 35 days \$335.

Emma, near Ridley, two-story frame. Owner, J. T. Meyers; contractors, Martin & Maguire; cost, \$2,800.

Eddy and Buchanan, two-story frame. Owner, Elizabeth Burns; architect, B. Henrick, sen; contractor, A. G. Fitzpatrick; cost, \$4,262; signed Aug. 14th; filed Aug. 16th; sureties, Jas. Pendergast; limit, 70 days; amount of bond, \$4,300.

1st payment, when roof is on, \$800; 2d, when brown coated and outside finish on, \$800; 3d, white coated and sashes hung, \$800; 4th, when varnished and trimmed, \$800; 5th and balance, 35 days, \$1,062.

Emma near Ridley, two-story frame. Owner Jno. F. Meyers; contractor Martin & Maguire; cost \$2,550; signed Aug. 6th, '88 filed Aug. 17th, '88; sureties, J. W. Wes-son; limit 90 days.

1st payment when framed \$500; 2d, when brown coated and pipes in \$500; 3d, plumb-ing done and doors hung \$500; 4th, white coated and prime coat of paint \$500; 5th, when completed \$500.

Eighteenth and Noe, two-story frame. Owner, McQueen; contractors, McCready Bros.; cost \$5,000.

Eighteenth, near Collingwood, one-story frame. Owner, Graham; builders, Mc-Cann & Schetzer; cost, \$2,000.

Eighteenth, near Collingwood, additions; cost, \$1,200.

Fell bet Webster and Franklin, two-story frame. Owner, Wm. Olsen; architect, H. D. Mitchell; contractor, R. Sinnott; cost, \$2,950; filed, September 5th; limit, Nov. 12th.

Payments—frame up, \$900; brown mortar on, \$800; white mortar on, \$700; balance, \$550, 35 days.

Fell between Webster and Franklin, build-ing, W. Olsen; architect, H. D. Mitchell; contractor, R. R. Fraxler; cost, \$2,620; signed, August 27th; filed, August, 28th; limit, Nov. 5th, surety, C. A. Malm.

Payments; 1st, when frame is up, \$600; 2d, when brown coated, \$700; 3d, when building is primed, \$700; 4th, usual 35 days, \$620.

Fell, between Webster and Fillmore, two-story frame. Owner, Catherine Rubling; archi-tect, John & Zimmerman; contractor, Adam Miller; cost, \$6,020; signed Aug. 16th; filed Aug. 30th; limit, Nov. 15th; sureties, Chas. Lackeman and H. Wil-liamson.

1st payment, when framed, \$1,000; 2d, when partitions are set, \$1,000; 3d, outside finish on, \$1,500; 4th, when inside is ready to paint, \$1,000; 5th, usual 35 days, or when bills are all paid, \$1,520.

Ford, near 17th, two two-story frame. Owner and Builder, I. Sullivan; cost, \$4,000.

Fifth, near Mission, additional story. Cost, \$2,500.

Folsom near 8th, building. Owner, Mrs. E. Hauser; architect, Saffield & Kohlberg; contractor, Kincaid and Thompson; cost, \$4,160; signed Aug. 16, 1888; filed Aug. 29, 1888; limit, 65 days.

1st payment, when building is framed, \$800; 2d, when building is roofed, \$800; 3d, when building is brown coated, \$840; 4th, when completed, \$900; 5th, balance usual 35 days; sureties, F. P. Latson and John F. Kennedy; amount of bond \$4,660.

Fillmore between Golden Gate ave and McAllister street, two-story frame. Owner, E. McEneaney; architect, M. J. Welsh; contractor, T. Sullivan (plumbing and gas excepted) cost, \$3,487; sureties, F. Joost, W. Thyarks; signed, Sept. 4th; filed, Sept. 5th; limit, 79 days.

Payments; frame all up, \$870, brown mortar on, \$870; completed, \$870; balance, \$877, 35 days.

Fillmore between Golden Gate ave and McAllister, two-story frame. Owner, E. McEneaney; architect, T. J. Welsh; contractor, T. Sullivan; cost, \$4,500.

Fifth, near Harrison, two-story frame. Owner, Jno. Loffler; architects, John & Zimmerman; contractor, C. Roeder; cost, \$1,220; signed Aug. 22, 1888; filed Aug. 30, 1888; limit, 30 days.

1st payment, when frame is up, \$400; 2d, when roofed, \$400; 3d payment, 35 days, \$420.

Franklin and Ellis, stair building. Owner Academy of Sacred Heart; architect C. J. I. Devlin; contractor A. Sanborn; cost \$2,100; signed Aug. 9th, '88; filed Aug. 17th, '88.

1st payment when the stringers tread and risers of main stairs are in place \$1,000; 2d when completed \$1,100.

Franklin and Ellis, plastering contract. Owner, Academy of Sacred Heart; architect C. J. I. Devlin; contractor, Martin Garrick; cost \$3,550; signed Aug. 8th, '88; filed Aug. 17th, '88; sureties, Flanagan & Mason; amount of bond \$3,000; limit Sept. 1st, '88.

1st payment, 1st coat of mortar \$900; 2d, hard finish \$850; 3d when completed \$900; 4th, usual 35 days, \$900.

Fulton, No. 426, two-story frame. Owner, Mrs. M. Dowling; architect and builder, G. M. Salisbury; cost, \$3,500.

Fulton, near Lyon, two-story frame. Owner, H. Winter; architect, John & Zimmerman; contractor, F. W. Kern; cost, \$4,170; signed Aug. 22, 1888; filed Aug. 30, 1888; limit, Dec. 1, 1888; sureties, Joost & Nordwell.

1st payment, when framed, \$800; 2d, when brown coated, \$1,000; 3d, inside finish ready to paint, \$1,300; 4th, usual 35 days, \$1,020.

426 Fulton, two-story frame. Owners, Jas. and Mary Dowling; architect, Geo. M. Salisbury; contractor, Geo. M. Salisbury; cost, \$3,135; signed Aug. 23d, 1888; filed Aug. 30, 1888; limit, Nov. 22d, 1888.

1st payment, when rafters are set, \$1,000; 2d, when building is brown coated, \$1,100; 3d, balance, usual 35 days, \$1,035.

Golden Gate ave near Larkin, two-story additions and repairs to building. Owner, Carpenter & Son; architect, W. H. Armitage; cost, \$6,000.

Golden Gate ave near Larkin two-story additions. Owner, M. Shaif and L. Wilbert; architect and builder, J. J. Cummings; cost, \$1,120; signed, August 29th; filed, August 29th; limit, Oct. 1st.

1st payment, \$100 one week; 2d, when building is enclosed, \$20; 3d, when building is completed, \$120; 4th, 90 days from Aug. 29th, \$700.

Golden Gate Ave and Polk, brickwork. Owner, Hugh Keenan; architect, C. J. I. Devlin; contractor, C. Ferris; cost \$4,380; signed Aug. 2d, '88; filed Aug. 18th, '88; limit 4 weeks; sureties R. Llewellyn and J. Williamson; amount of bond \$4,000.

Payments, 75 per cent of work done when wall and piers are ready for 1st story and 1st story walls are ready for 2d story joists and when 2d story walls are ready for roof frames; balance on completion if no liens.

Golden Gate ave corner Polk three-story brick. Owner, Bryan; architect, C. Devlin; mason, C. Ferris; carpenter, H. Keenan; cost, \$25,000.

Guerrero street, additions. Owner, Mrs. H. Kahler; architect, H. Daley; cost, \$1,500.

Guerrero st. No. 11, alterations. Owner, H. S. Kaler; architect, R. H. Daley; contractor, Ivory Wells; cost, \$1,500.

Guerrero, near 26th, additions; cost \$800.

Harrison, near 26th, two-story frame. Owner, Geo. Fuchs; architect, R. H. White; contractor, Rountree Bros.; cost, \$4,157; signed Aug. 29, 1888; filed Aug. 31st, 1888; limit, 90 days; surety, Latson & Kennedy.

1st payment, when roofed, \$900; 2d payment, brown coated, \$800; 3d, primed, \$700; 4th, completed, \$707; balance, usual 35 days.

Harrison near Sixth, two-story frame. Owner, George Fuchs; architect, R. H. White; contractor, Rountree Bros. cost \$4,500.

Hayes between Laguna and Buchanan, two-story frame. Owner, Mrs. M. Tracy; architect, W. Mooser; contractor, J. Bruce; cost, \$4,800.

Hyde between California and Sacramento, two-story frame. Owner, Jas. Ford; architects, Schmidt & Shea; contractors, Linden Bros. cost, \$3,954; signed, Aug. 17; filed Sept. 3d.

Payments; frame up and enclosed, \$740; brown coated, \$740; hard finished, \$740; completed \$744; balance, \$990, 35 days.

Howard near 15th, two-story frame. Owner, Henry Haustien; architect, H. Geilfus; contractors, Schutt & Kreeker; (except plumbing and painting) amount, \$3,950; signed, Sept. 3d; filed, Sept. 3d.

Payments; when frame is up \$590; enclosed and partitions set, \$590; brown mortar finished, \$590; white mortar on, and inside finishes up, \$590; all completed, \$590; balance, \$1,000 usual 35 days.

Howard and 20th, plumbing contract. Owner Nellie G. Barkus; architect J. H. Littlefield; contractor Sweeney & Kearns; cost \$688. signed Aug. 3d, 1888; filed Aug. 9th 1888.

Payments \$344 when rough pipes are in; balance usual 35 days.

Howard near 15th, two-story frame; Owner, H. Hanstein; architect, H. Geilfus; contractor, Schutt & Kreeker; cost, \$4,500.

Howard and 10th, grading. Owner, Omnibus Cable Co; architect, Percy & Hamilton; contractor, C. A. Warren; cost \$4,540; signed Aug. 2d, 1888; filed Aug. 7th, 1888; limit 49 days; sureties Shain & Richardson.

Payments at rate of 75 per cent as work progresses, balance usual 35 days.

Howard and Natoma, contract for well boring. Owner, Omnibus Cable Co; contractor, Wm. Allingham; cost \$5.80 per foot; limit 35 days; signed Aug. 7th; filed Aug. 7th.

Payment at the rate of 75 per cent; balance 35 days after completion.

Howard and 20th, two-story frame building. Owner, Nellie G. Barkus; architect J. H. Littlefield; contractor, Ingesson & Gore; cost \$7,800; signed Aug. 3d, 1888; filed Aug. 9th, 1888; limit Dec. 10, 1888; sureties W. J. Adams and R. L. Taylor. Payments, 75 per cent as work progresses; balance usual 35 days.

Hancock, near 19th, one-story frame. Owner, Dr. Merrill; contractors, Kincaid & Thompson; cost, \$2,500.

Jessie, near Ninth, additions. Cost, \$1,800.

Jones and Clay, painting. Owner, Magdalena Iis; architect, H. C. Macy; contractor, Geo. J. Smith; cost, \$1,595; signed Aug. 6, 1888; filed Aug. 11, 1888. 1st payment, when primed, \$350; 2d, when ready to grain, \$200; 3d, when ready to varnish, \$345; 4th, when completed, \$300; 5th and balance, usual 35 days, \$400.

Jackson and Pierce, carpenter work. Owner Kate A. Van Wyck; architect Wm. F. Jones; contractor Thompson & Moar; cost \$8,250; signed July 8th, '88; filed Aug. 17th, '88; sureties F. Joost; limit 5 months.

Payments 4 installments of \$1,537.50, balance usual 85 days.

Kentucky and Solano, one-story frame. Owner, John Daly; architect and builder, C. E. Dunshee; cost \$1,100; signed Aug. 8th 1888; filed Aug. 9th 1888; limit 50 days.

1st payment \$300 on or before completion; balance \$25 per month at 8 per cent.

Kearney, corner of Commercial, alterations. Owner, Mark Sheldon; cost, \$4,000.

Lyon, near Hayes, one-story frame. Owner, W. B. Webster; architect, A. J. Barnett; contractor, R. P. Sanchez; cost, \$4,000.

Moss between Howard and Folsom, two-story frame. Owner, J. J. Heinz; architect, W. H. Armitage; cost, \$3,000.

Noe, near 17th, one-story frame. Owner, Dr. Blood; contractors, Kincaid & Thompson; cost, \$2,500.

New Montgomery, between Filbert and Greenwich, frame building. Owner, Giovanni Guatelli; architect Wm. Mooser; contractor, Davoni & Idalgero; cost \$13,000; limit 110 days; signed Aug. 7th, 1888; filed Aug. 8th, 1888; sureties J. Cuneo and G. DeLuca.

Payments 75 per cent as work progresses; balance 35 days.

Natoma, bet 6th and 7th, two-story frame. Owner, Thos. McLaughlin; architect, M. J. Welsh; contractor, R. Sinnott; cost, \$3,000; signed July 3d; filed Aug. 14th; limit, 65 days; sureties, Jno. B. Walters and Owen Prunty.

1st payment, when frame is up, \$750; 2d, when brown coated, \$750; 3d, when completed, \$750; 4th, usual 35 days, \$750.

O'Farrell, near Laguna, two-story frame. Owner, Franklin Bros.; cost, \$14,000.

Post between Pierce and Scott, two-story frame. Owner, Mrs. Julia Chadwick; architect, T. J. Welsh; contractor, J. A. Shepard; cost, \$1,837; signed, Sept. 7th, filed, Sept. 11th; limit, 90 days; sureties, J. H. Jones, J. L. Shepard.

Payments; frame up, \$1,200; brown mortar on, \$1,200; completed, \$1,200; balance, \$1,237, 35 days.

Polk near Grove, one-story frame. Owner and builder, J. W. Smith; cost, \$1,000.

Page between Baker and Lyon, two-story frame. Owner, Michael E. Finn; architect and builder, Geo. Houston; filed, Sept. 11th; cost, \$3,696.

Payments; rustic on, \$922; brown mortar on, \$922; white mortar on, \$922; balance, \$936, 35 days.

Pierce, bet Sacramento and Clay, plumbing. Owner, C. J. Wingerter; architects, Schmidt & Shea; contractors, S. Ickleheimer & Bro.; cost, \$1,443; signed, Aug. 14, 1888; filed Aug. 15, 1888.

1st payment, when rough work is in, \$500; 2d payment, when completed, \$580; 3d, usual 35 days, \$363.

Pierce, bet Sacramento and Clay, two-story frame. Owner, C. J. Wingerter; architects, Schmidt & Shea; contractor, Wm. Pluns; cost, \$4,100; signed, Aug. 11, 1888; filed Aug. 15, 1888; sureties, F. and B. Joost; limit, Nov. 4, 1888.

1st payment, when ready to plaster, \$900; 2d, when hard finished, \$900; 3d, when completed, \$900; 4th, usual 35 days, \$1,400.

Pierce, bet Turk and Eddy, residence. Owner, J. Mackonsy; architect, Wm. Mooser; contractor, J. W. Reid; cost, \$4,100; signed Aug. 11, 1888; filed Aug. 13, 1888; limit, 10 weeks and 3 days; sureties, E. Lundstedt and P. Mitchell.

Five payments, at the rate of 75 per cent as work progresses; balance, usual 35 days.

Pine and Octavia, four dwellings. Owner, S. Wenlan; architects, Pissis and Moore; contractor, A. Jackson; cost, \$19,388; signed, Aug. 28, 1888; filed, Aug. 31 1888; limit, 100 days.

1st payment, when framed, \$4,000; 2d, when brown coated, \$3,500; 3d, when hard finished, \$3,500; 4th, when ready to paint, \$3,000; 5th, when completed, \$538; balance usual 35 days, \$4,850.

Pine and Octavia, four dwellings. Owner, S. Wenlan; architects, Pissis & Moore; contractor, A. Jackson; cost, \$19,388; signed Aug. 28, 1888; filed August 31, 1888; limit, 100 days.

1st payment, when framed, \$1,000; 2d, when brown coated, \$3,500; 3d, when hard finished, \$3,500; 4th, when ready to paint, \$3,000; 5th, when completed, \$538; balance, usual 35 days, \$4,850.

Steiner, near Haight, frame building. Owner, A. C. Christensen; architect, Saffield & Kohlberg; contractor, John F. Grant; cost, \$3,667; signed, Aug. 28, 1888; filed, Aug. 29, 1888; limit, surety, Geo. W. Watson and A. D. Moore; amount of bond, \$3,600.

1st payment, when building is brown coated, \$1,375; 2d, when completed, \$1,375; 3d, usual 35 days, \$917.

Sutter, near Gough, additions to school building. Architect, T. J. Welsh; cost, \$4,000.

Second, corner of Market, alterations to a part of Grand Hotel. Hussey, Superintendent, \$10,000; architect, Smith.

Sanchez, bet 15th and 16th, 2 story and basement frame. Owner, Christina and August Goetze; architect, A. Goetze; contractor, Wm. Plans; cost \$4,220; signed July 10th, 1888; filed Aug. 10th, limit 85 days; sureties B. Joost and W. Thyarks.

1st payment when enclosed and roofed \$1,000; 2d, when brown coated \$1,000; 3d, when completed \$1,120; 4th and balance usual 35 days \$1,100.

Stockton and California, three story frame. Owner Janet S. Portues; architect and builder, F. E. Neubauer; cost \$11,260; signed Aug. 15th, '88; filed Aug. 16th, '88; limit 4 months.

Payments 75 per cent as work progresses; balance usual 35 days.

Sumatra and Susquehanna, one-story frame. Owner, B. Sallies; architect W. H. Armitage; cost, \$2,800.

Scott, near Jackson, additions. Cost, \$4000.

Townsend and Clarence Place, three story brick. Owner, Cal. Elec. Light Co.; architects, Percy & Hamilton; cost, \$60,000.

Townsend and Clarence Place, brick work. Owner, Cal. Elec. Light Co.; architects, Percy and Hamilton; contractors, Richardson and Gale; cost, \$15,690; signed, Aug. 22, 1888; filed, Aug. 28, 1888; limit, 75 days.

Payments 75 per cent 1st, Saturday in each month; balance usual 35 days.

Townsend and Clarence Place, wrought iron. Owner, Cal. Elec. Light Co.; architect, Percy Hamilton; contractors, Biglow and Little; cost, \$3,557; signed, Aug. 22, 1888; filed, Aug. 28, 1888; limit, 60 days.

Payments 75 per cent 1st, Saturday each month; balance usual 35 days.

Townsend and Clarence Place, carpenter work. Owner, Cal. Elec. Light Co.; architect, Percy and Hamilton; contractor, Thos. Day; cost, \$11,796; signed, Aug. 22, 1888; filed, Aug. 28, 1888; limit, 45 days.

Payments, 75 per cent 1st Saturday in each month; balance usual 35 days.

Townsend and Clarence Place, Joshua Hendy machine works. Owner, Cal. Elec. Light Co.; cost, \$5,175; signed, Aug. 22 1888; filed, Aug. 28, 1888; limit, 40 days.

Payments 75 per cent 1st, Saturday in each month; balance usual 35 days.

Townsend and Clarence Place, iron roofing. Owner, Cal. Elec. Light Co.; architect, Percy and Hamilton; contractor, Jos. F. Foderer, \$2,900; signed, Aug. 22, 1888; filed, Aug. 28, 1888; limit, 20 days.

Payment, 75 per cent 1st Saturday each month; balance usual 35 days.

Turk near Larkin, two-story frame. Owner, Daley; architect, Welsh; contractor, Davis; cost, \$6,000.

Treat ave, between 24th and 25th, frame building. Owner J. Quinlan; architect, Geo. Houston; contractor Geo. Houston; cost \$2,790; signed Aug. 8th 1888; filed Aug. 9th 1888; limit Nov. 10, 1888.

1st payment when rafters are in place \$690; 2d, when brown coated \$700; 3d, hard finished and inside doors are in place \$700; 4th and last \$700, 35 days as usual.

Twentieth and Howard, two-story frame, painting. Owner, Nellie G. Backus; architect, J. H. Littlefield; contractor, Jos. Larsen; cost, \$460; signed Aug. 3, 1888; filed Aug. 13, 1888; limit, 18 days. 75 per cent as work progresses; balance; usual 32 days.

Twenty-second, bet Harrison and Alabama, residence. Owner, Mrs. D. E. Keeks; architect, M. J. Welsh; contractor, T. Sullivan; cost, \$2,375; signed, Aug. 11, 1888; filed Aug. 13, 1888; sureties, F. Joost and W. Thyarks; limit, 70 days.

1st payment, when building is framed, \$593; 2d, when brown coated, \$593; 3d, when completed, \$593; 4th and last, usual 35 days, \$596.

Twenty-third near Noe, two-story frame. Owner, Mrs. Roberts; architect, W. H. Armitage; cost, \$4,500.

Twenty-seventh and Duncan, alterations. Owner, R. Dhu; architect, M. J. Welsh; contractor, E. Edwards; cost, \$1,875; signed Aug. 13, 1888; filed Aug. 13, limit, 60 days; sureties, J. Lewis and P. Swift.

1st payment, when framed, \$400; 2d, when brown coated, \$400; 3d, when completed, \$400; 4th, usual 35 days, \$675.

Van Ness and Sacramento, two-story frame, basement and attic. Owner, J. H. Neustadter; architect, Smidt and Shea; contractor, S. H. Kent; cost, \$23,950; signed, Aug. 30, 1888; filed, Aug. 31, 1888.

1st, payment, when second-story joists are set \$3,500; 2d, floors laid, \$3,500; 3d, brown coated, \$3,500; 4th, outside finish on, \$3,500; 5th, when completed, \$3,950; balance 35 days \$6,000; limit, seven months.

Van Ness, and Sacramento, plumbing. Owner, J. H. Neustadter; architects, Schmidt & Shea; contractors, Duffy Bros.; cost, \$2,985; signed, Aug. 30, 1888; filed, Aug. 31, 1888; limit, seven months; sureties, Watson & Adams.

1st payment, rough pipes in, \$900; 2d, all vessels except washstands set, \$550; 3d, when completed, \$785; 4th, usual 35 days \$750.

filed Aug. 28, 1888; surety, C. S. Holmes; limit, Nov. 1, 1888.

1st payment, when frame is up, \$825; 2d, when partitions are set, \$825; 3d, when ready to paint, \$425; 4th, when completed, \$400; 5th, usual 35 days, \$825.

Van Ness and Sacramento, painting. Owner, J. H. Neustadter; architects, Schmidt & Shea; contractor, J. J. Donovan; cost \$1,815; signed Aug. 30, 1888; filed Aug. 31st, 1888; limit, 7 months.

1st payment, \$600, 2d coated; 2d, completed, \$750; 3d, 35 days, \$465.

Vallejo, near Webster, dwelling. Owner, D. D. Harris; architects, Pissis & Moore; contractor, C. S. Waterbury; cost, \$5,450; signed, Aug. 20, 1888; filed, Aug. 31, 1888; limit, 80 days; sureties, Latson & Holmes; amount of bond \$2,000.

1st payment, when framed, \$1,200, 2d, brown coated, \$1,000; 3d, hard finished, \$900; 4th, ready to paint, \$900; 5th, completed, \$80; 6th, usual 35 days \$1,370.

Valencia, between 24th and 25th building. Owner, M. K. Meachem; architect, M. J. Welsh; contractor, J. J. Dunn; cost, \$6,550; signed Aug. 9th, 1888; filed Aug. 11th, 1888; limit 75 days; sureties, C. S. Holmes and B. Joost.

1st payment when frame is up \$1,560;

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2d, when brown coated \$1,560; 3rd when completed \$1,560; 4th and last, usual 35 days \$1,570.

Valencia, near Herrman, additions. Cost, \$600.

Valencia, near Sixteenth, additions to brewery. Cost, \$800.

Washington and Waverly Place, three-story and basement, brick. Owner, Woo Tam; architect, J. J. and T. D. Newsom; contractor, Dennis Jordan; cost, \$3,250; signed, Aug. 27, 1888; filed, Aug. 28, 1888; limit, Nov. 25, 1888; surety, R. Llewellyn.

1st payment, when excavated, \$500; 2d, when the first story is up, \$500; 3d, when the roof is on, \$500; 4th, usual 35 days, \$550; \$1,200 is to be paid by monthly installments of \$100 with interest at 8 per cent.

Webster, bet O'Farrell and Geary, two frame buildings. Owner, L. Houser; architect, J. Marquis; contractor, M. J. Gorman; cost, \$10,650; signed Aug. 13, 1888; filed Aug. 13, 1888; sureties, J. Mahoney and Duffy Bros.; limit, 117 days.

1st payment, chimneys up and buildings roofed, \$2,050; 2d, ready to lath, \$2,000; 3d, when 1st coat of mortar is on, 1 coat of paint and sash glazed, \$2,000; 4th, when hard finished, plumbing and all fencing done, \$2,000; 5th, \$2,500, 35 days; 6th, \$100, at 60 days.

Waverly Place near Clay, three-story brick building. Owner, W. Alreuter; architects, Townsend and Wyneken; contractor, J. Pharo; cost, \$8,000.

COUNTRY BUILDING NEWS.

ALAMEDA.

Work has been commenced upon a handsome residence for Charles L. Hermann, on Alameda avenue, between Chestnut and Willow streets. It will be two stories in height, contain eleven rooms, and will be equipped with all modern conveniences. The cost will be about \$4,500. J. A. Leonard, of this city, is the architect.

ANHEIM.

A Goldthwaite will give all information in regard to a \$6,000 school building to be erected.

CHEHALIS, W. T.

N. B. Coffman can be addressed in regard to a \$7,000 school building.

EUREKA, H. B.

Henry Buhne, the tug owner, will build a \$10,000 residence. Jas. Simpson has the contract.

FRESNO.

Architect' Praum, formerly a partner with Mr. Daley of this city, has taken Mr. Saffell into partnership.

They have let a contract to G. B. Campbell for \$10,000 additions to the building of J. W. Ferguson. Also a \$20,000 brick building to same contractor for S. W. Griffith; plans are being prepared for Griffith & Co's \$5,000 three-story brick building, also for a \$7,000 building for P. Myer.

PASADENA.

H. Ridgeway is preparing plans for Mr. Brockaway. A \$2,000 brick building is contemplated.

PETALUMA.

Work has been commenced on H. B. Higbee's new residence on the Stanley lot. Ed. Hedges has the contract. It will be a one-story cottage and have all the modern improvements.

PORTLAND, OR.

Architect Kleeman has let a contract to Works & Gilbert for a \$1,500 cottage for J. Barley.

SHELTON, W. T.

A hotel building is being erected by Wm. Shorter.

SAN DIEGO.

Architects Clements & Co. notify us that a portion of the Hamilton Building will be erected at once. The total cost will be near \$400,000.

Henry Timkin will erect a \$9,000 residence, he having let the contract for same to Brewster & Whalen.

Comstock & Trotsche send us word that they are preparing plans for improvements to the Consolidated National Bank. Will cost nearly \$60,000.

SEATTLE, W. T.

S. Frauenthal will soon build a \$10,000 house.

SCARCITY OF MASONS—Contractors complain that brick masons are very scarce in Seattle, while the bricklayers' union claims that there are plenty of masons here to do all the work on hand at the present time. This indicates an unaccountable difference of opinion between the contractors and the masons.

Two large school houses will be built. Total cost over \$100,000. Address contractor Jas. Parke, for information.

SAN MIGUEL.

G. W. Spencer will have erected a brick building.

A \$1,000 hotel is being contemplated.

W. J. Smith will soon commence a five-room cottage for Amos Whittemore.

Work will soon commence upon a five roomed cottage for Amos Smith. W. J. Smith has the contract.

SAN BERNARDINO.

Architects Jones & Griffith yesterday let a contract to W. G. Hastings to erect two five-room cottages on G, between Second and Third, for Major B. B. Harris.

Wendell Easton, of Easton & Eldridge, the great realty firm of California, has aptly said that in architecture Los Angeles is entering upon the "stone age." The progress is from adobe to frame, from frame to brick, from common brick to pressed brick, from pressed brick to red stone and granite. Our new quarries will soon inaugurate the "marble age."

SANTA CRUZ.

The plans are being figured on for an Odd Fellows' Building. Address D. A. Damkroeger.

SAN JOSE.

S. Ellsworth is having a house built on his Saratoga avenue property.

TACOMA, W. T.

Architects Farrell & Darmer have plans for Birmingham & Hogue's \$20,000 three story brick building, and also for an \$18,000 brick building for Geo. B. Kandler.

Rev. G. H. Greer will have built for him by H. M. Matheson, a \$12,000 brick building.

RIVERSIDE.

Dr. S. R. Magee is building a fine residence on Magnolia avenue.

Work will soon be commenced on a handsome new residence for Mrs. Chalmers, the plans for which have just been prepared by A. C. Willard. The building is to be erected on Magnolia avenue and when completed will cost about \$8,000.

A. C. Willard has severed his connections with J. C. Pelton, Jr., and has just opened an office in the Castleman block, where he is prepared to execute plans and drawings for any and classes of buildings.

The plans are out for the building to be erected at the corner of Eighth and Orange streets, and it is expected that work on the building will be commenced within eight or ten days. The building will have a frontage on Eighth street of 75 feet. It will be three stories high, and when completed will be the handsomest block in the city.

The accepted plans for a new residence for R. S. Crombie are now ready. They were drawn by A. C. Willard, and are of the Queen Anne Eastlake style of architecture, and will go into the hands of the contractors the first of the month to make bids. The building is to be erected on Orange street between Thirteenth and Fourteenth and will be a two-story eleven-room house.

Contract was let September 1st to J. L. Woodward for a building for G. N. Reynolds.

Pottinger & Kroonen have commenced building the house for Mrs. J. S. Johnson, on Orange street, opposite the Glenwood. It is to be a two-story eleven-room house.

Work has been commenced on the new building to be erected by A. H. Naftzger, A. Haeblerlin and Down & Alguire, at the corner of Eighth and Orange streets. It will be two stories with fifty feet frontage on Eighth street, and running along Orange street ninety feet. It will be an imposing structure, built of pressed brick with red Arizona sandstone trimmings. The plans for the building were drawn by J. C. Pelton, and the contract for the brick and stone work was taken by Down & Alguire.

LIVERMORE.

All the carpenters in town are very busy at present.

John Beck is improving his property by the addition of a large stable.

The contract for the erection of Philip Anspacher's new cottage, corner of L street and College avenue, has been let to Capt. A. J. Palmer, of this place, and ground was broken last week. The work will be pushed rapidly forward. This will be one of the handsomest cottages in our town.

Jos. Fletcher is building an addition to his cottage.

VICTORIA, B. C.

Fisher & Wilson have let contract to Elford & Smith for a two-story brick building.

SAN PEDRO.

A school house to cost \$2,500 will be built. A. G. Barton has the contract.

Remaining Numbers of this year given free to all new Subscribers for 1889.

THE CALIFORNIA ARCHITECT AND BUILDING NEWS

VOLUME IX

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A Square is One Inch In Depth By Width of Single Column.

Advertisements alone inserted that refer to materials used in the construction and furnishing of houses, and to matters and trades belonging to the building interest.

No Others Received.

SAN FRANCISCO, OCT. 15, 1888.

But Seldom We Speak of Ourselves.

Without being egotistical we may safely say that this number of the CALIFORNIA ARCHITECT exceeds any of its predecessors in the amount of valuable reading matter furnished to its subscribers. It contains:

An Editorial on the New City Hall Tower.

Proceedings of the Chapter of Architects.

President Sander's masterly Address.

The New Plumbing Law.

A very interesting letter from E. C. Gilbert.

Report in full of the Committee on New City Hall Tower.

A complete summary of City Building News.

Country Building News.

List of members of Builder's Association.

Superb Illustrations.

An instructive article by Arthur Seymour Jennings.

And many other notable features. A steady improvement will be noted in each successive issue.

An Extra Edition.

For the past two months we have largely increased the number of our monthly issue. In December we guarantee to print 5,000 extra copies, which will be sent to parties all over the Coast who are interested in building matters.

SUBSCRIBE NOW FOR 1889.

Weekly Building News.

We are making arrangements to re-establish the WEEKLY BUILDING NEWS. One of our largest real estate dealers will assume control of the department devoted to transactions in real estate. Taken in connection with weekly building reports, we will present a complete record of all transactions benefiting directly those who build and those who furnish materials after dwellings are erected.

The City Hall Tower.

SINCE the first move was made toward the erection of the New City Hall, no one feature of the construction has attracted more general attention, interest and comment, nor provoked more pronounced controversy and disagreement as between the gentlemen composing the Board of Commissioners, than the tower.

To the architect it has been a very hard nut to crack, and the insignificant stipend pocketed by him each month in the shape of salary is a miserable compensation for the numerous annoyances alone encountered, to say nothing of the time, services and skill required of him as an architect. That he has and should have pride and ambition in the matter is both natural and reasonable, and it would be much less than fair to attribute wrong motives to him in striving to carry out and complete, according to his best judgment, so conspicuous and important a part of the work on the City Hall as the tower, which, if he is allowed to proceed with, must stand for all time as a monument to his architectural skill and genius, or stamp upon his name and memory all the ignominy that failure to produce a handsome, well-proportioned and properly-constructed tower will entail. Professionally, it will be life or death to him, as present and future generations will associate his name with praise if good, and reprobation and condemnation if he shall produce an architectural deformity at the expense of the public treasury. All this Mr. Laver undoubtedly well understands, and, as a sensible and intelligent man, has fully weighed and considered in his earnest efforts to have his high-tower plan adopted by the Commissioners and carried into execution; and, if the option was left with him, not a day of the time required in the construction of the tower would be lost. Is Mr. Laver wedded to his high-tower proposition? There can be no question upon that point, as he, with many other competent critics and judges, is satisfied that, if erected, the architectural delineations will be imposing and handsome in detail, and the general effect such as to command admiration from those whose esthetic eye and good judgment are capable of seeing and accepting the products of other minds than their own, upon the real merits of the thing produced, divested of all selfish and prejudiced cavillings, which, when applied, will see nothing except from the limited standpoint of their own individual notions.

It may be charged by some that this style of reasoning is inconsistent on the part of this journal, in view of the facts connecting the writer with a report made to the City Hall Commissioners upon the subject matter of this article. If so, we do not see it in that light. We have taken no decided stand in the matter, nor in any way expressed a fixed opinion in favor of or against any "type" of tower. And it appears to us that the question under review and all others, whether square, round or polygonal, have more than one side, to comprehend which, each must be viewed from a proper standpoint.

Mr. Laver, in his recent defense before the Board of Commissioners, very naturally and reasonably commended and argued the force and value of the reports of the two well-known civil engineers named by him, whose qualifications none will question, as against the report of the Chapter of Architects. Mr. Laver would not have been just to himself had he not done so, as the report of the former fully recommended and sustained the carrying out of the high-tower plans, while the latter simply commended said plans as good in architectural design and possible of construction, and further suggested and recommended a change of "type of tower." But this suggestion was a disturbing and interfering element, which furnished Mr. Laver's opponents a new battle-axe and subjected him to new and increased difficulties. The two reports concur on some of the propositions involved but differ on others—one in nearly every particular sustaining the architect, the other doing so as far as the judgment and opinions of the chapter thought right, with suggestions added which it was hoped would lead to an amicable and intelligent settlement of all differences of opinion, and result in the erection of a tower satisfactory to all parties directly concerned in its construction, and which would meet favor in the eyes of the community, who are to be the payors for whatever may be done.

VERY IMPORTANT PROCEEDINGS, S. F. CHAPTER OF ARCHITECTS.

Inaugural Address of G. H. Sanders, President of the Chapter.

A goodly attendance of members was noted at the last meeting of the Chapter. Among those present were W. J. Cuthbertson, J. B. Whittemore, H. T. Bestor, J. Cash, R. H. Daley, A. Pissis, W. P. Moore, E. Kollofrath, G. H. Sanders, G. H. Wolfe, G. W. Percy, W. Patton and John Newsom were elected members as Fellows.

Proposition received from C. Herbert Hasty to become a Student Member. Referred to Committee.

President read annual address, which was ordered printed in the official organ of the Chapter. (It will be found in full in this issue.—ED. ARCHITECT.)

A vote of thanks was tendered the President for his able address.

A communication was received from the Secretary of the New City Hall Commissioners requesting the Chapter to examine the revised plan of the tower, as prepared by Architect Laver. Plan of same accompanied the communication. The same was referred to the committee who had charge of the previous report.

Following is the report in full of the Committee appointed by the Chapter to consider the plans of the New City Hall tower:

To the San Francisco Chapter of the American Institute of Architects:

Your Committee appointed at the last regular meeting to consider the resolutions of the New City Hall Commissioners in reference to the proposed tower, beg leave to report, as follows:

Immediately on their appointment, your Committee made arrangements to prosecute the task imposed upon them, and on the day succeeding their appointment, called for and received the necessary drawings and other data requisite to enable them to proceed.

Having made a thorough and repeated examination of the drawings submitted for their inspection, have unanimously arrived at the following conclusions:

First.—They consider that the design submitted by Mr. Laver for the New City Hall Tower is in itself well adapted in its external architectural features, to complete and adorn the building to which it is to be added. The height—which has been more or less called in question—is considerable, but is not, in the opinion of the Committee, in excess of the proportions permissible in so vast a structure as that to which it is to be applied. On the contrary, in view of the enormous frontage and other dimensions of the New City Hall, it would be difficult to fix an assignable limit, beyond which it would not be possible to harmonize and proportion a structure of this description under given conditions.

They find, also, that the mansard roof, so called, in both the modified as well as the complete example exhibited in the drawings submitted to the Committee, while serving to fill up and prepare the structure for the reception of the tower, is by no means indispensable; at the same time it establishes the fact that should additional space be at any time required, the same may be obtained by its addition, with advantage, whenever deemed desirable.

They find, however, upon examination of the internal structure of the proposed tower, that on account of the position and nature of the bearings available, it will be necessary to construct it in iron instead of the solid material composing the walls of the completed portions of the building. They also find that in order to perfectly adapt the designs submitted by Mr. Laver to the existing structure, some additions to or modifications of the plans submitted to the Committee seem necessary; but these, considering the comparatively and unnecessarily immature condition of the drawings are probably intended by Mr. Laver in the final execution of the work when determined on. In the mean time your Committee, with this proviso, beg to suggest that in their opinion, to secure the entire stability of the superstructure, the iron beams forming the foundations of the whole should be extended under the projections at the angles of the tower, no provisions for that purpose appearing on the drawings as submitted to the Committee. They also think that a broad sill plate com-

posed of wrought iron beams and top and bottom plates should be placed on the circular brick wall surrounding the great circular hall under the tower. This would serve to equalize and distribute all unequal strains and bearings, and rectify any possible defects in the foundations of this part of the building. The Committee deem this provision absolutely necessary, for though the construction of the tower (which is of wrought iron, steel and sheet metal) is of the lightest practical description; the weight of the whole tower will be in the neighborhood of three thousand tons. But dead weight alone is not the only consideration, since the variable strains caused by windage will be very considerable, under even ordinary circumstances, and there are times when, at such a height, the velocity of the wind will mean several hundred tons added to the ordinary weights at different points of the circle.

SECOND.—For the above reasons, while the Committee have full confidence in the ability of Mr. Laver to carry to completion the excellent design proposed by him in as satisfactory and substantial a manner as is possible under the circumstances, and with the materials at his command, they feel compelled to say in view of the various objections which may be urged against the erection of any structure of the sort proposed, that they believe some such type as that adopted by the first Commissioners, would be found on the whole, more suitable for the purpose than the new and loftier design, though in the nature of things, less imposing in appearance and less in proportion to the size and importance of the building. The difficulty and expense of keeping such a structure in repair and proof against the destructive effects of climate and season, is a powerful argument, though one of an economical rather than artistic nature, in favor of reducing as much as possible the area, and especially the height of the exposed surfaces. And here your Committee would suggest that instead of employing materials, such as galvanized iron or steel in the external casing of the tower, which would need the preservative applications of some sort of paint, and would lead, as before stated, to endless repairs, they are of opinion that the use of copper, though of greater prime cost, would in the end prove of much more economical and of vastly greater architectural value, as it is a material beautiful and artistic in its application and effect, and eminently durable and in every way admirably adapted to the work proposed.

THIRD.—This brings your Committee to their last and final position. While they fully concede the many points of artistic merit as a whole, of both designs exhibited in Architect Laver's projects for the proposed tower of the New City Hall, and while they are quite ready to admit the possibility of their construction with safety and substantiability compatible with materials of such a perishable nature as those rendered necessary by the adoption of the peculiar method of construction hitherto submitted, they are not so ready to admit the advisability of such a course; and in view of the conditions existing in the present building, consisting as they do, of a great circular chamber, some 80 feet in diameter, surrounded by a massive brick wall, and including a circular peristyle of columns some 60 feet in diameter from centers, they believe that the possibility exists of erecting a perfectly unique structure in the form of a circular tower, or dome tower, which would offer features superior to any square structure yet proposed, and that before either of the designs now before the Commissioners are finally decided upon, it would be advantageous to furnish, as an alternative, such a design—homogeneous in material, with the existing building and equal to it in durability, and as free from necessity for endless protection and renovation.

Such a structure, we believe, would not only redound to the credit of all concerned in its production, but would ultimately be found to be of great economical advantage to the city generally.

It would be of a height proportioned to its possible diameter, and would compensate in dignity of material for comparative lack in magnitude, though a tower or dome of more than ninety feet in outside diameter, is one out of which it would seem that a very grand and imposing structure could surely be evolved. All of which should be left with confidence to the well-known genius and artistic ability of the architect of the building.

Respectfully submitted,

ALBERT PISSIS,
JAMES E. WOLFE,
B. E. HENRICKSEN,
W. J. CUTHBERTSON,
JOHN WRIGHT,

Committee.

SAN FRANCISCO, Sept. 17, 1888.

INAUGURAL ADDRESS OF G. H. SANDERS, PRESIDENT OF THE CHAPTER.

Fellows and Associates of the San Francisco Chapter:

Duly recognizing the honor and responsibility of addressing you a second time in an "Inaugural," and acknowledging also the ground of expediency which brought this about, I can only promise to fulfill this, and the succeeding duties of so important an office during the following year, as well as I know how.

It is conceded that an address of this kind should aim at something more than a mere review of a year's progress, seasoned with a few glowing prophecies of future advance in matters architectural.

So far, indeed, as the Chapter and its work and prospects are concerned, it may be said that we have not been altogether standing still, but that some advance has been made towards winning a position of honorable usefulness and gaining the confidence of the public in matters relating to the important province of constructive taste.

Our membership has somewhat increased during the year; and there has been a marked tendency among professional brethren still outside our society, to cast in their lot with the Chapter. This is a movement which should meet with every encouragement on our parts, as every added member widens our influence, increases our means of general utility, and brings us more and more *en rapport* with every portion of the building public and the constructive problems of the day.

It would be easy to tell a long story of our aspirations and our aims, about which indeed, we are apt to talk much and do little.

Perhaps it will be better worth while just at the present time to say a few words about a man who, though leaving but little so far as formal expressions of thought in set phrases is concerned, has left large evidences on every side of having done more to solve the problem of the architecture of the future, at least in America, than any other man of this or any age, for the time in which he lived—I allude of course, to the widely influential name of "Richardson." In some degree, like Phidias among the Greeks, or Michael Angelo among the Moderns, but in a wholly different way, the man, Richardson, lived and worked among us—well known and respected while he lived, but who bids fair to be better known and still more widely respected, nay revered in his works, and the example which those works place before the impressionable minds of the men of this age and nation—I repeat of this age and nation, for who can doubt that as the age is made by men, men are also made for each particular age, and by each particular age; in other words, are the outcomes of the times in which they live, and of their peculiar environment.

Now, as to this man, Richardson, I propose in the following remarks to elucidate from his works as well as I am able, some of the principles of design which have made this particular artist and professional man, at this time, so notable a figure in the foreground of architectural art.

In the first place I would say that I do not propose to give anything like a regular review of the man or his works, though an admirable basis is laid for the same in the notable book of Mrs. Van Rensselaer on the life and works of Richardson, lately published, and to which I am indebted for such authentic data as may be found in what I shall read to-night.

Born in 1838, of noble ancestry, (among which, on the mother's side, may be mentioned the well-known philosopher, divine and author, Priestly) educated at Harvard, and professionally trained at the Ecole des Beaux Arts in Paris, the man was undoubtedly broadened out into a very cosmopolitan character, and on that very account was doubtless better fitted than any other man of his day and generation for the life work which fell to his lot. He was constitutionally a large bodied, large hearted, large minded man, who wanted everything about him as "big" as himself, and who, almost immediately throwing off the superficial effect of his education and training, forthwith set to work with stone-axe and gavel, unfettered by rules and untrammelled by precedents, to hew out a system—an architecture for himself, for his clients, and for such of his brother architects who would follow in his footsteps, or at least join him in exploring the new fields he had discovered.

It was inevitable with such a character as his, but that the type of his selection, as regards style, if type he must have, should be full, large and capacious as himself, and nothing could better fit his fancy than the massive and ponderous features of the round arched styles of Southern France. But in his hands it assumed a new guise. With him, pillar, arch and lintel seemed to become vitalized into a new existence. Base, shaft

and cap seem to be so united and so well fitted for their purpose, that no other shaft, base and cap could by any possibility be devised which could do their work equally well in any other way; the arch becomes a new creation, each vousoir is in its turn the only vousoir in the whole arch, and every lintel would rest quietly under the weight of the whole world and never wake up. Every window becomes in turn the most important window in the structure, and every part of it is so thoroughly adjusted to every other part that it is without a peer among windows in its particular place and station. The wall surface is so carefully studied and adjusted, that it is difficult to find fault with a single stone.

The settled purpose he always had before him was absolute perfection in every part. One notable quality of the man, however, was the devoted zeal which he seemed to inspire in every one around him; they worked for him as they worked for no other man, and as if each was responsible for the whole, and so each and all conspired to carry out his suggestions in the most thorough manner, as the only way of securing the best result in the whole, so that every part of the work on his buildings shows indefatigable industry and zeal in those who have executed it. A piece of carving is wrought as if it was the only carving in the structure, and worked out with a care and minuteness, and such regard for the whole result, as if the artistic effect of the structure depended on it alone.

Every window, door, turret, column, arch, lintel, or feature of whatever kind is carefully designed and laboriously adjusted until each fits into its place like a wheel in a complicated mass of machinery, and each of which is indispensable to the action of the whole system.

Apply the above remarks to each department and to each material throughout a building, inside and out, and it is easy to see the thorough "technical" quality which would be certain to pervade the structure. But not alone this more strictly utilitarian element with its three subordinate attributes of utility, strength and adaptation or fitness, is to be thought of as entering into the sum total of the design, but considerations definitely ornamental must claim a still larger share of careful study in proportion to their higher artistic value in the domain of art. Every part must be carefully and completely subordinated to every other part and to the whole, so that every design must have entire unity of effect, and not only as to its general forms, but each detail, however unimportant, must be subjected to the same careful scrutiny, consideration and re-consideration—and this as regards color as well as form, even to the veriest shade.

Decoration, both in form and color, must be made truly ornamental. Every particle of ornamentation must be made in its turn as thoroughly a part of the building and as indispensable as any other merely utilitarian feature; it must be properly distributed as regards the whole, as well as within its own limitations. It must be thoroughly satisfying to that sixth sense, as it has been called, the sense which is capable of appreciating the subtle qualities of beauty styled "Esthetics" by the Greeks (and meaning that which is capable of affording pleasure to the senses), and this as regards both form and color and arrangement of both, and not of individual parts alone, but of the parts in relation to the whole, and the whole to its parts.

Thus again we have a trine, the Esthetic series of attributes—decoration or ornamentation, symmetrization and beauty. But we must take higher ground still if we would adequately grasp the full meaning and intent of the remarkable work of the remarkable man we are considering. As the swelling undulations of the wide-spreading plains are to the sweeping lines of the rolling hills, even so are these hills to the lofty mountains around whose feet they group themselves in humble yet contented emulation. And so are the exaltations of mere technical utility with such incidental and inseparable pleasure-giving qualities as arise from recognized adaptation of material and purpose, to the vastly greater and more exquisite results of ornamental qualities sought for their own sake and capable of gratifying the yearnings of the human soul for the beautiful; and these again to those pure aspirations of the intellectual faculties of the mind, rising far above the illusions and seductions of sense into the lofty regions and untainted atmosphere of Truth. Under the austere supervision of this high principle, *Nee Vile fanos* becomes a potent and most all-pervading legend, written in effect on each substance, form and subject throughout the whole realm of design, from the lowest foundation stone to the highest finial, from the outermost outline to the innermost recesses of the material temple; all things therein become representative of the designer and embody and incarnate him in his work. Every virtue and every vice, which either strengthens or weakens the creative power of thought, will

find its corresponding impress on the substance and form of every structure which has been evolved out of his consciousness or has obtained the seal of his approval.

And it is manifest that this principle in its turn, will pervade everything which is the subject of the designer's art, from the most utilitarian arrangement of plan to the highest expression of his skill in sculpture and painting. In the first it speaks in mechanical adaptation of means to ends; in the latter it, voices itself in distinct symbols—modified by more or less powerful expression, into an utterance of ideas—simple or complex, as the case may be, and capable of telling the most momentous truths, with all the added force of dramatic incident and forcible illustration.

This highest, or "phonetic" phase of the architectural art thus also includes a trine of attributes, viz.: Symbolical form, artistic expression, and ideal representation.

It is not claimed that all these particular and more or less complicated expressions of analytic thought found any definite utterance in the words or expressed ideas, or even had a conscious existence in the mind of Richardson. It is only claimed in that so far as the above sentiments and principles, crudely expressed and imperfectly formulated as they are in this paper, may be found embodied in the works and example of this man who was so earnest in his efforts to establish and promulgate true art; he has left an impress on the age, and has aroused a taste for the substantial, the beautiful and the true, which no other man of the present century, or few before him, have succeeded in accomplishing, none indeed in so brief a period as the active portions of Richardson's life really covered. He constantly sought in the evolution of a design, to obtain a single broad and comprehensive idea, and every subordinate part was carefully studied and brought into harmony therewith. In every department of the execution, and in every subordinate feature, truth of form, truth of material, truth of expression, with few and only early exceptions, was sought for with unswerving devotion.

In the often elaborate carvings which adorn his works, this is constantly found to be the case. Not contented with good general forms, authentic detail, graceful curves and some sort of ideal character, every part of even the least important feature is arranged with scrupulous attention to its relative effect in the whole composition. The beauty and grace must be of the right sort and harmoniously adapted to every other bit of grace and beauty found elsewhere in the structure, and the ideality must be expressed in consistent terms. Another notable point was his attention to materials. They must be of the best and carefully selected as to both quality and color. Again they must be properly placed. No degradation of a nobler by subordination to an inferior substance in the general construction is tolerated for a moment—stone, brick, metal, wood, plaster or glass must be of the best attainable quality and placed in the order of their dignity and character.

To convince oneself of the value of these principles, one has only to look about him to find them violated on every side.

Fatal facility of bedizenment in wood, paint and plaster has given us a terribly corrupt heredity, in a love for all sorts of flimsy ornament and useless and meaningless decoration. "Constructed Decoration" instead of "Decorated Construction" being regarded apparently as a cardinal virtue and one of the leading canons of architectural art in San Francisco. Even in many of our recent structures in which the materials partake of a substantial character and the mass and lines have been otherwise treated with dignity and propriety, the superimposition of false bearings and the misuse of materials has been altogether disastrous to all truly artistic values in the composition. But not alone in the houses we live in but in the garments we wear, the pictures we buy, and the books we read, is the regenerating influence of principle needed to rectify our taste and improve our moral sense.

The paltry "decoration" of our houses is too often paralleled in the puffing, paint and powder of our female friends and acquaintances and both in the shallow mockery of our religion, which seems in its most notable developments amongst us, for the most part, to glorify the *apparent*, whilst almost utterly ignoring the *real*.

The works of Richardson embraced every variety of structure from the humble cottage and railway side station to the stately church; the massive Court House and Town Hall as well as the ponderous warehouses and in all, in different degrees, his leading principles are found embodied in mechanical adaptation, beauty of design and truthful expression of purpose and appropriate treatment of material.

In the Pittsburg Court House and jail, and the great Marshal Field warehouse of Chicago, Richardson himself thought he had

touched the highest point of his ideal, and the latter clearly formulates in its great arches and their horizontal and vertical divisions, the peculiar features of the style which obtains in the most notable of the great structures of the present time devoted to mercantile or commercial purposes. Many will give the palm of excellence to his exquisite library buildings, so many of which were carried into execution, and all of which are unique in their way, and certainly never excelled in their unity, originality and beauty of design and detail, and perfect fitness of adaptation to the purposes for which they are intended.

Trinity Church, Boston, the first example of the peculiar style which at once became the favorite vehicle of his artistic taste should not, in our opinion, be considered, though it often is, the best or greatest example of his genius. Externally, though very fine in conception and execution, it is accompanied by some rather unnecessary adjuncts, which somewhat detract from the more solid and dignified features of the design. Internally it is for the most part simulated construction, and to the true artist unworthy of its reputation and of its designer. It should be said, however that Richardson himself defended it as being an intended sham, and to that extent a truthful structure, a logic seemingly worthy of a better cause.

In his dealings with his pupils, Richardson was accustomed to throw as much as possible the burden of the responsibility of design upon them, thus early developing their powers, arousing their ambition and making them feel the importance of the work committed to them; in this way it was that he succeeded in uniting all with whom he came in contact with himself in the effort to improve and to perfect such work as was placed in their hands. A true co-operation of the noblest sort, a co-operation of art workers for art's sake, striving to embody in lasting forms and living principles, the useful, the beautiful and the true.

NOTE.—The peculiar expressions "technical," "aesthetic" and "phonetic" were first employed, in the particular connections indicated above, by Ferguson, in the revised edition of his "History of Architecture," published about twenty years since. It is intended to further develop the subject in a future paper on another occasion.

Alameda 'Encinal.'

We are pleased to record the most convincing evidence upon the prosperity of a town that can be chronicled by any one living outside of the place to be noticed. The *Encinal* has been published for twenty years and the name of its editor is a synonym all over the State for genial character, and also as the exponent *par excellence* of editorial courtesies. Alameda is outgrowing itself and its inhabitants are no longer satisfied with a weekly paper. So our good friend Krauth comes out with the *Semi-Weekly Encinal*. We hope he will soon be able to change it to a daily. As an exponent of bright local news, with not a word but can be read by our children, the *Semi-Weekly Encinal* stands without a peer in the State. The best sign of a go-ahead place is the increase of its newspapers, or having those already established appear oftener than once a week.

Notes on Painting.

The best time to paint the outside of a house is early in the winter, or in spring, when the air is cold and no dust is flying.

Knots in boards may be killed before painting by several methods. The surest and best, in fine work, is to cover the knot with an oil size and lay silver leaf over it. Glue size, mixed with red lead, or gum shellac dissolved in alcohol and mixed with red lead, or gutta percha dissolved in ether, will satisfactorily cover knots not exposed to sunshine. The heat of the sun draws the pitch in the knot to the surface, through the paint.

If woods to be painted are soiled by smoke or grease, those parts are to be washed with a solution of saltpeter in water, or with very thin lime whitewash. If soap-suds are used to wash of the smoke or grease, they should be thoroughly rinsed with clean water, or the paint will not harden.

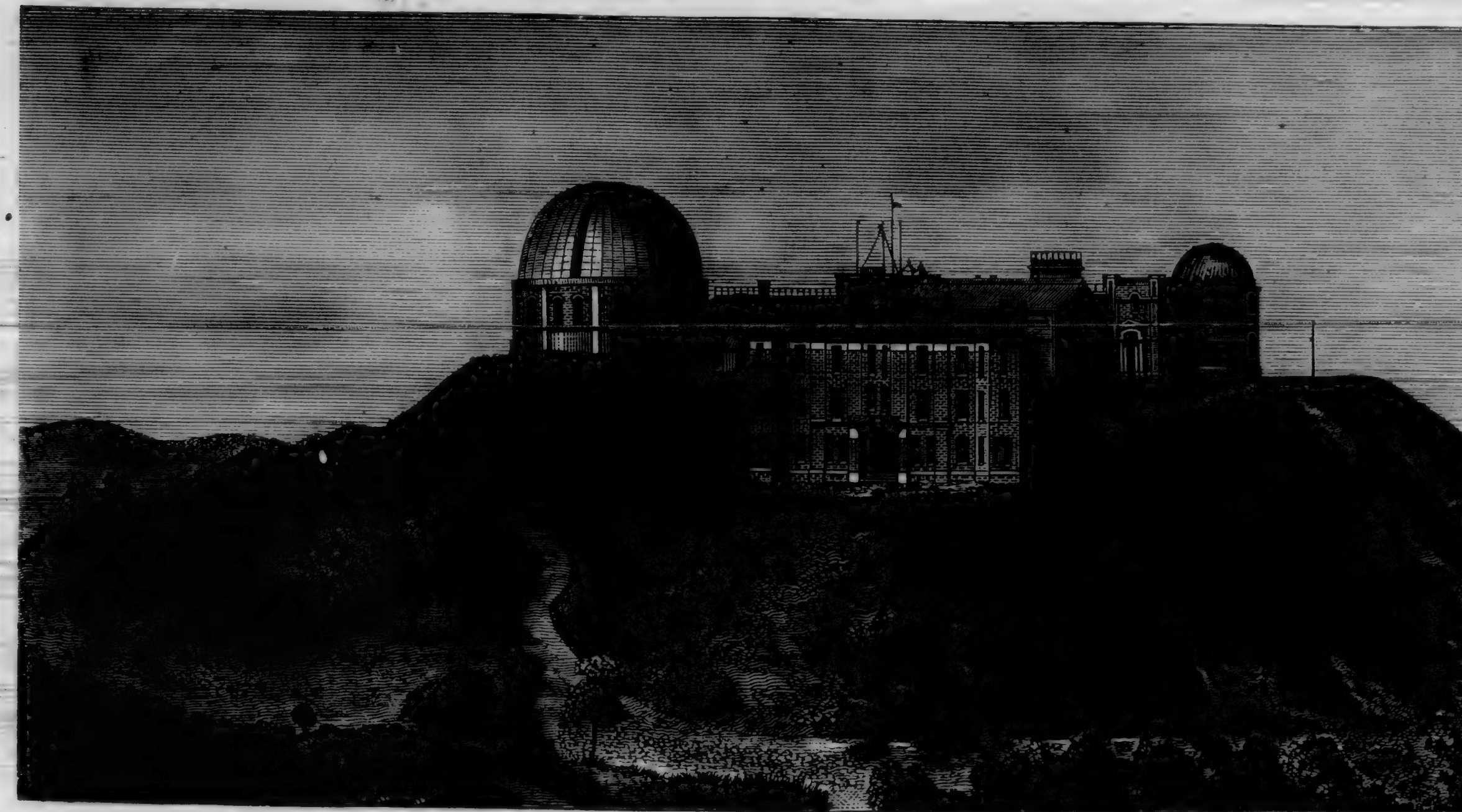
The first, second, and third coats of paint, on the outsides of buildings, should be prepared by mixing the white lead with boiled linseed oil, and allowing each coat to dry hard before applying the next.

PRICE OF LUMBER.

Price of lumber is still on the downward grade. It can be bought for \$18 per M for rough lumber.

Shingles have also declined 25 cents per M.

At \$18 per M the price is just to the millmen and low enough to consumers.



MT. HAMILTON, SANTA CLARA COUNTY, CALIFORNIA—THE SITE OF THE GREAT LICK TELESCOPE.

BERLIN, Sept. 1, 1888.

EDITOR ARCHITECT AND BUILDING NEWS.—

Dear Sir: It may be of interest to some of the readers of your valuable journal to know a few observations taken by a Californian while journeying through Europe—of the great variety of buildings and their furnishings, etc. We wrote you last from London, where we took steamer for Christiania (three days' journey). The first thing which pleased us, on our arrival, was the massive stone docks, which are similar to those at Liverpool, but not so extensive; next the streets, which were well-paved with hewn stone and cobbles. Most of the streets are very narrow and crooked, and the sidewalks are so narrow in some places that one is obliged to step into the gutter to allow another to pass. The main thoroughfare leading up to the palace is broad and straight and pleasant to ride upon. Owing to the narrowness of the sidewalks, the people are obliged to walk in the streets. This is not so bad, as the streets are well paved and always kept clean. The first thing which the eye of a mechanic lights upon is the buildings—how they are built and the materials of which they are constructed. One thing impresses itself upon your mind right away, and that is, the Norge people build to stay; all of their buildings have a solid, substantial look, if they are not all of that style which we of the nineteenth century enjoy seeing. Most of the buildings are of brick, then covered with a coat of cement, and subsequently covered in imitation of various stones. Others are built of granite and sandstone, and all the roofs are either slate or tiles, the latter being most used. Among the most conspicuous buildings here which we visited are the Palace, Houses of Parliament, University Buildings, Victoria Apartments, Akers Gaden and the Cathedral, the dome of which was very odd indeed, being a combination of the Gothic and old oriental Mosque. In the afternoon we took a ride down through the Fjords to King Oscar's Castle, a beautiful structure of solid masonry, with twisted tower. We were shown all through the various apartments, and then on top, where we had an extended view of the surrounding country and could see over the land and water for miles and miles. Sometimes, when it is clear, you can see down through the Fjords as far as—the "moon." We also visited several buildings in course of construction and found them putting in 14x14 inch hewed pine for sub-sills with 12x12 inch girders framed together strongly with 4x14 inch floor joists, all hewed and mortised and tenoned together—this was for an ordinary dwelling—and the roof put together in the same style, having timbers in the plates and rafters heavier than those which we in California put into foundations. And they go on this principle all the way through; even the locks and keys on the doors are as large as those of St. Peter's, and they still cling to the old brass knockers on the doors in place of our electric bells. We saw men hauling granite for a building coming down a steep hill with no breaks for their wagons. I expected to see the whole business roll on to the horses before they got to the foot.

After spending two delightful days here, we went to Stockholm, which is sometimes called the Venice of the North. It is certainly very beautiful, both for what nature and man have done for it. Mr. Werner Cronquist, Chemist for the Royal Navy, took your correspondent around the city and showed him the sights, which were many, and he took pride in them, I was convinced, as he pointed them out to me. Here we have the solid granite docks and bridges that characterize all these cities which I have visited. We see many long blocks of beautiful buildings, built of brick and stone, which will compare favorably with those of any city in the world. We see here that the later styles prevail, making a striking contrast with the city just left. Such a variety of modern architecture one is surprised and pleased to see. The new St. Johannes Church, now being built, is a monster structure, and will be very beautiful when complete. Architect Moller is a man of large experience and has designed some of the finest buildings here. The Church of the Kings is the first I have ever seen with a cast-iron spire and complete spear scroll work. It looks oriental, indeed.

On Sunday I attended the sacred concert given in the new German church, which is a solid granite edifice. The heavy stone columns through the center are six feet in diameter. Some of the most beautiful stained glass memorial windows made are in this church. The choir and organ loft and also the work around the altar is very richly carved and gilded. The pulpit is black and white marble, and was made in 1660. It was transferred from the old church to the new, and is a very pretty work of art. The largest telephone station in the world is located here—so I am told. Certainly the beautiful building, the immense tower, and the myriads of wires running hither and thither would indicate as much. I see they use here a preparation for coating brick buildings cemented, which makes them look like various kinds of marble. They use a scaffold such as I never saw in America in putting it on. It is a box 5x5 feet that holds two men. This is held in position by an immense pole 8x8 feet and 80 feet long, running through the center like a gauge on end, with a rope and racket attachment to hold it in place. It is certainly a novel scaffold. I notice that women are employed on many of the larger buildings to carry brick and wait on the men. They can run up and down five and six-story scaffolds as nimbly as the men. Among the prominent buildings we visited here are Drottningholm, Royal Castle (Tessin architect), Catarina lift building, The Polytechnical High School (Eddersd architect), Grand Hotel, Germania and Reidberg are large and commodious. The Royal Opera House and the Queen's Palace are solid granite structures. But the people must not be overlooked. They are just what they appear to be—kind, gentlemanly and generous-hearted, and know how to entertain strangers. I speak from experience.

Yours truly,

E. C. GILBERT.

Practical, Plane and Solid Geometry.

BY ARTHUR SEYMOUR JENNINGS.

* Prepared especially for the ARCHITECT AND BUILDING NEWS. (Copyrighted.)

CONSIDERING that everything made by man is of geometrical form, it would appear that a more or less perfect knowledge of geometry should be possessed by everyone. To the mechanical draftsman, the subject is essential and especially that branch which relates to solid geometry and projection, while to the mechanic a knowledge of it forms, almost invariably, a means to the end of advancement. The artisan in many trades who understands geometry, is he who becomes foreman or superintendent. This is especially the case in the building and engineering industries where the operations from beginning to end depend upon the application of geometrical principles. Hence, the civil engineer and the architect find it necessary to gain a knowledge of the subject, while those working under their directions—the builders, carpenters, masons and other mechanics—must be cognizant with it in order that they may be enabled to read the plans and drawings drawn out for their guidance. The land surveyor is simply one who is versed in geometry and its application to the measurements of the earth's superficies. Measurement is a science which depends upon a knowledge of geometry and arithmetic for its solution.

The wide usefulness of the subject has had the effect of producing a deal of literature on the subject. For the most part, such books as exist are either too elementary or too advanced for the man of average intelligence; they are either more suitable for the school room than the practical man or else are so far advanced as to be without the scope of a person of ordinary "school education." So far as it is possible within these pages, it is proposed to give a series of articles which shall form the basis of an extended study in this important subject. A solution of the more elementary problems will not be given unless they are not generally known, but sufficient reference to and explanation of them will be made to enable those readers who may not be already familiar with them to obtain their solution from sources. Particularly in connection with projection, it is hoped that architectural draftsmen and others may find the benefit from studying—not merely reading—this series.

At the risk of a charge of advertising, the author will, where occasion requires, make mention of either firms or books which, from his personal knowledge, he deems likely to be of assistance to the reader. The object of the paper is simply to assist the student in acquiring this knowledge, and with that end he invites criticisms or questions addressed to the editor and will always be pleased to render whatever assistance he can in this connection.

INSTRUMENTS.

The student of geometry will need a number of instruments in order that he may work out the various problems which are given. These must consist of, at least, a compass with pen and pencil points, a pair of dividers and a right line or drawing pen. Drawing boards, triangles, pencils, paper, rubber and thumb tacks will also be needed. Considering that sets of instruments may be had from 25 cents up to \$300, it will be seen that a description of them would occupy too much space to give here. The student is advised to obtain the catalogues of the various firms of mathematical instrument makers which will be sent free of charge to any one who mentions this paper. In most of the large cities are found dealers, or makers, who publish catalogues and it will be useful to give one or two names here for reference: Kauffel & Esser, Fulton street, New York; Queen & Co., Chestnut street, Philadelphia and W. Stanley, Norway Junction, London, Eng., are among the chief firms, each of which will be found of much value and interest.

Among the less known of mathematical instruments may be mentioned the compass illustrated in Fig. 1 which is employed for describing minute circles. The principle difference between this and other compasses lies in the fact that the pen works on a vertical rod which is held stationary. Pens for making dotted lines up to recent date usually consisted of wheels placed between the ribs of an ordinary right line pen, but they were very far from satisfactory. Probably the best dotting instrument is that shown in Fig. 2 which not only is adaptable to any description of dotted line but does its work clearly and quickly. To change the length or description of the dots, the wheel B is taken out and another one is inserted. It is found of con-

Fig. 1.—Compass for describing minute circles.

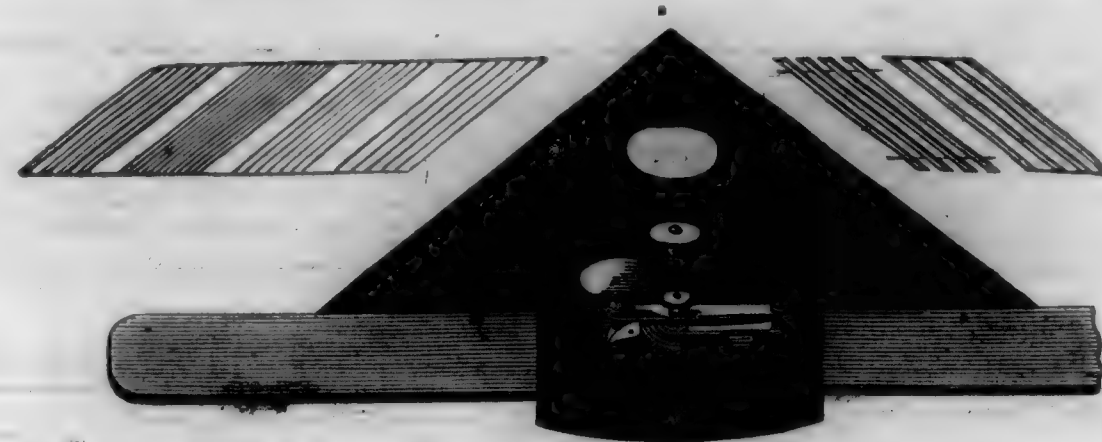


Fig. 3.—Bergen's Section Liner.

siderable service to have at hand a curve which may be used in describing ornamental work and a large number of different curves are manufactured in paper, hard rubber and wood for the purpose. These however, are to some extent unsatisfactory inasmuch as a great number of them will be required in setting out the work in an ordinary office. To meet the difficulty an instrument has been introduced, consisting of a flexible edge connected by a strip of pure drawn lead and it may be readily adjusted to any curve. One of the most difficult things to do in mechanical drawing is to draw a number of parallel lines at equal distance apart and it is required so often that several instruments for the purpose have formed the subject of patents in recent years. Among these may be mentioned Harden's section liner which is adapted for use on both sections and cylindrical work. Bergen's section liner in Fig. 3 is a very serviceable instrument of the same class while another is the "Universal Ruler," shown in Fig. 4. An entirely new description of form in mathematical instruments has lately been introduced into this country from Germany. They are constructed mainly in cylindrical form and in strength and convenience are claimed to exceed those of the old style. Having possessed himself of the suitable instrument the student will now proceed to study scales.

SCALES.—A scale drawing intended to represent some object

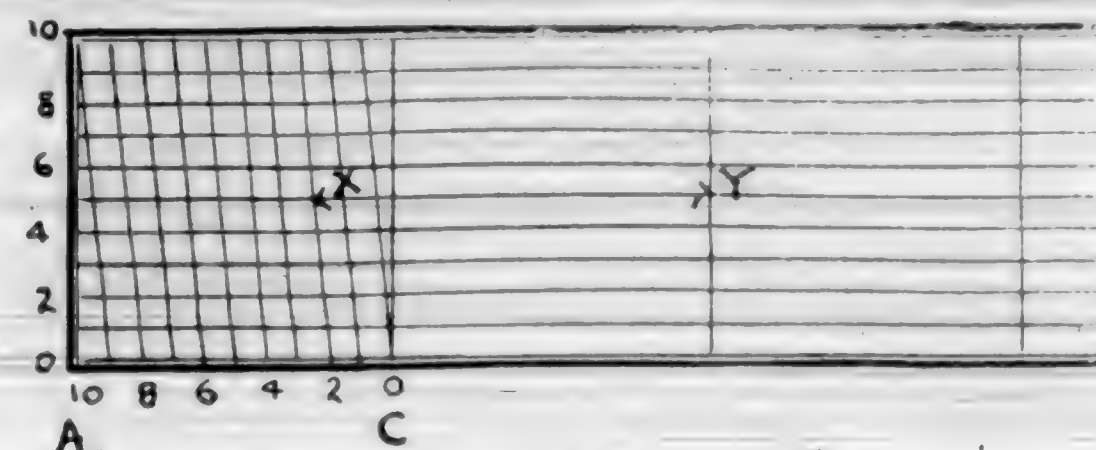


Fig. 5.—The Diagonal Scale.

such as part of a portion of mechanism, etc., may be full sized or it may be larger or smaller. In the last two cases it is said to

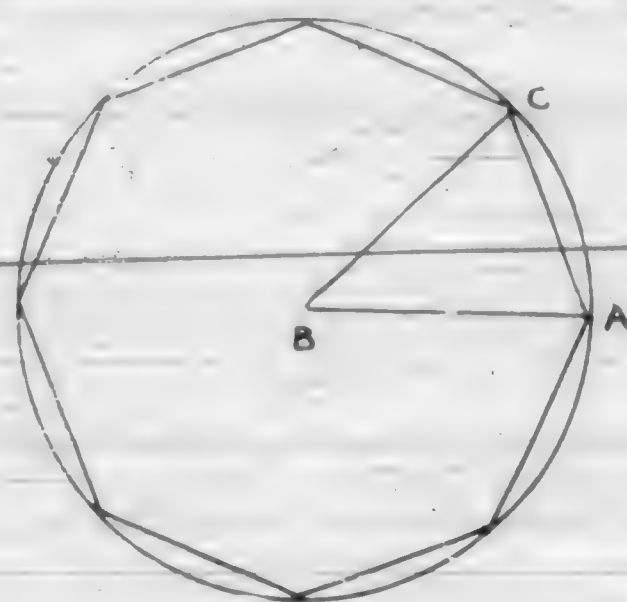


Fig. 6.—Construction of Polygon in circumscribing circle.

be drawn to scale. In the erection of an ordinary building some drawing (termed details or detail drawings) are full size and the majority on a scale of about a quarter of an inch to one foot. The fraction which exists between a drawing and the object which it represents is termed the representative fraction because it represents the fraction or proportion between the drawing and the object. Thus in a scale of an inch to a foot one inch represents 12 inches and the representative fraction is therefore 1-12. The construction of a plain scale must be very accurate and as it

involves considerable time and care to make, it is advisable that scales should be purchased ready made. These are made on wood, ivory and paper. The last are not at all reliable. The student will do well to make himself thoroughly acquainted with scales and should make for himself several until he is able to produce a result essentially accurate.

The construction and use of a diagonal scale does not seem to be so generally known as it might be, considering its efficiency. Its use is to give minute measurements such for example as one hundredth part of an inch. The principle upon which it is constructed will be clear on reference to Fig. 5. A B is divided into inches the first inch A C is divided into tenths as indicated by the figures placed against the divisions. To obtain the hundredth part of an inch, that is, the tenth part of the smaller divisions, lines are drawn diagonally, being divided up by horizontal lines into ten equal parts. It will be seen that if the diagonal line slope to the left 1/10th of an inch that the horizontal lines will

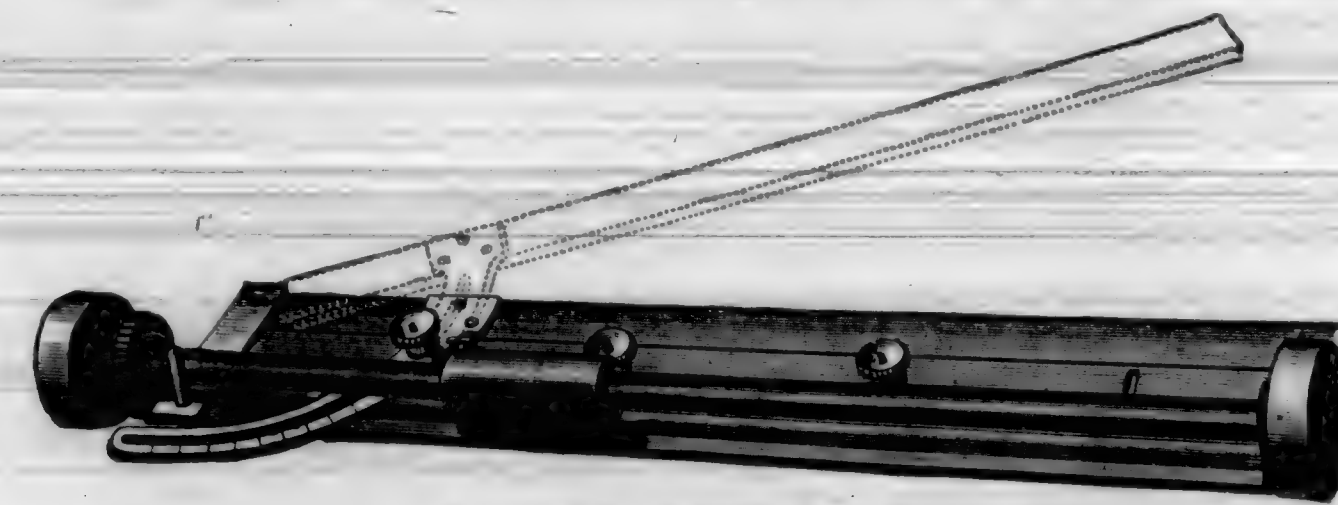


Fig. 4.—The Universal Section Liner.

divide that distance up into ten parts, giving the hundredth part of an inch. For example, the distance from X to Y in the figure will be 1.25 inches; that is, one inch, two tenths and five hundredths. It will be obvious that the most minute measurements by this system may be easily obtained and their utility in setting out on a small scale is very considerable.

ELEMENTARY PROBLEMS.

We may here pause to advise the student who is unfamiliar with the methods, to learn how to work out the following problems: Divide a line into equal parts or proportionally, making angles with compass only; bisecting angles and lines; erecting perpendiculars; polygons, triangles, squares and rectangles in circles.

POLYGONS.—The polygon is a figure having more than four sides and angles. When the sides are equal in length it is said to be a regular polygon, and when of unequal length an irregular polygon. The construction of the latter depends upon the length of lines and angles being given. Regular polygons, however

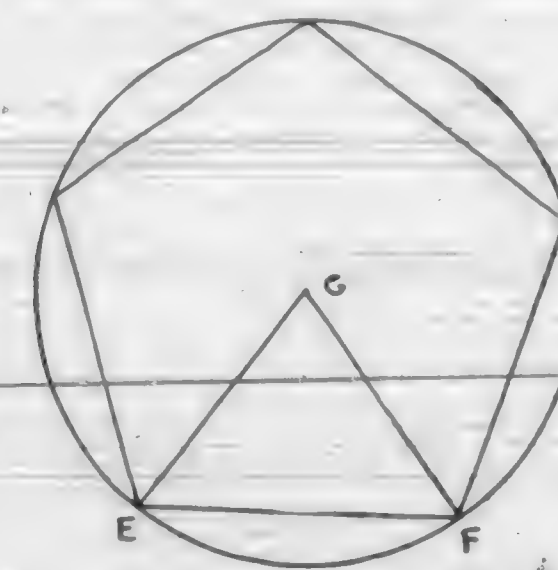


Fig. 7.—Construction of Polygon when one side is given.

may be constructed in a variety of ways. The geometrical methods are given in the books and are not within the scope of these papers. A quick way which is not generally known is by means of the protractor and is as follows: First. When the circle is given, divide 360 by the number of sides in the required polygon. Draw the circle shown in fig. 6 and a radius, making an angle with the first equal to that obtained by dividing as just mentioned. Thus suppose that it is required to draw an octagon or eight-sided figure in the circle A B: 360 divided by 8 equals 45, set up for the angle, 45 degrees, A B C, join A C, which is one side of the required polygon. Considering that all the sides are of equal length, the distance A C will step round the circle

eight times as required. Second. When the length of side is given set out the one side E F fig. 7, then work out the following sum:

$$(N - 2 \times 90)$$

N

In this formula N equals the number of sides in the required polygon. Now take the angle so obtained and set it up at E and F respectively, and where the two lines meet at G, stick in the compass and with radius G F describe a circle. The line E F will now step round exactly the number of times required. For example, suppose it is required to draw a pentagon or five sided figure, N in this case equals 5, therefore 5 divided by 2 equals 3 times 90 equals 270 divided by 5 equals 54. The angles of course may be either set up by means of a protractor or by the scale of chords. This method of constructing polygons



Fig. 2.—Patent Dotting Instrument.

is an exceptionally quick one, and with a little care is very accurate. Another way to do the same thing is by an instrument known as the sector, an explanation of which will be given in our next paper. To be continued.

ODD FACTS ABOUT BUILDINGS.

The Definitions Used by Insurance Companies.

WHAT is a building, anyhow?

A reporter was securing some facts about insurance, and was surprised to find that a fishing scow comes under that heading, while a shanty does not always.

"That depends upon circumstances. Under the rules governing insurance companies a building is described briefly as follows: 'A building or house' is an edifice erected by art, composed of stone, brick, wood or other proper substance, fixed upon or over the soil, and designed for use in the position in which it is fixed."

"A policy upon a 'building' simply, without qualifications, will cover only the building as therein described. But the insurance will not include the contents, nor extend to the occupancy of the premises beyond that described in the policy."

"If the word building be qualified by additional words, as 'sawmill buildings,' it would then include everything appurtenant and necessary to fit it for occupancy as a sawmill, and carry with it the right to be used for such purposes."

"Fishing Scows are Buildings—When it is proved that they are used and occupied during the fishing season as dwellings and places of business, and after the fishing season as residence on land."

"A Shanty Not a Building—When used for storing tools, but not used for a workshop."

"Stories of a Building—Where the several stories of a building were owned by separate parties, it was held that such owners of distinct buildings, the one situated over the others, and the owner of the upper story must keep the roof in repair at his own expense; and he cannot recover from the owners of the stories below any portion of such expense, although the repairs were to protect the property of such owners."

"Gilbertson's Old Method" Roofing Tin has been specified by the Architect of the new B. & O. Depot at Smithfield street. One thing certain, the coming generation are sure of a good roof from rain and storm while waiting for trains at the B. & O.—The Builders' Gazette, Pittsburg, Pa., Aug. 15, 1888.

PLUMBING AND DRAINAGE.

*Rules and Regulations adopted July 19th, 1888,
by the Board of Health, City and County
of San Francisco, to take
effect immediately*

ORDER NO. 1,982.

Providing for the protection of the Public health, and requiring Plumbers to register their names and addresses at the Health Office, and comply with regulations of the Board of Health in reference to the drainage and plumbing of buildings.

The People of the City and County of San Francisco do ordain as follows:

[Plumbers to Register at Health Office.]

SECTION 1. Every master and journeyman plumber, carrying on his trade in this city and county, shall, under such regulations and rules as the Board of Health of said city and county shall prescribe (not in conflict with general laws), register his name and address at the Health Office of said city and county. And after the establishment of such rules and regulations, it shall not be lawful for any person to carry on the trade of plumbing either as a master or journeyman plumber, or otherwise, unless his name and address be registered as above provided.

[List of Registered Plumbers to be Published in yearly Report of Health Officer.]

SECTION 2. A list of the registered plumbers shall be published in the yearly report of the Health Officer or Board of Health.

[Penalty.]

SECTION 3. The drainage and plumbing of all buildings, both public and private, hereafter erected in said city and county shall be executed in accordance with plans previously approved in writing by the Board of Health of said city and county; and suitable drawings and descriptions of the said drainage and plumbing shall, in each case, be submitted to the Board of Health and placed on file in the Health Office.

[Drawings of Drainage and Plumbing to be filed.]

The said Board of Health is also authorized to receive and place on file drawings and descriptions of the drainage and plumbing of buildings erected prior to the passage of this Order.

[Penalty.]

SECTION 4. Any person violating any of the provisions of this Order shall be deemed guilty of a misdemeanor and upon conviction shall be punished accordingly.

In Board of Supervisors, San Francisco, May 28, 1888.

After having been published five successive days, according to law, taken up and passed by the following vote:

Ayes—Supervisors Curran, McDonald, Boyd, Pescia, Bush, Burns, Hawkins, Knorp, Heyer, Lambert, Joost, Morton.

JNO. A. RUSSELL, Clerk.

Approved, San Francisco, May 20, 1888.

E. B. POND,

Mayor and ex-officio President Board of Supervisors.

In pursuance of Order 1,982 of the Hon. Board of Supervisors, "providing for the protection of the public health and requiring plumbers to register their names at the Health Office and comply with regulations of the Board of Health in reference to the drainage and plumbing of buildings approved May 29, 1888," the Board of Health for the City and County of San Francisco, have adopted July 19, 1888, the following Rules and Regulations, to take effect immediately:

1. All material must be of good quality and free from defect. The work must be executed in a thorough and workmanlike manner.

2. The arrangement of soil and waste pipes must be as direct as possible.

3. Every house or building must be connected with the street

sewer by a cast-iron or iron-stone pipe extending out to the line of the street, and in the case of buildings erected on the line of street, said cast-iron pipe shall extend three feet beyond the front walls or any area wall. From the points above designated to the street sewer, the drain shall be continued either by the above mentioned cast-iron pipe or by a vitrified iron-stone pipe laid at a uniform grade from the street sewer to a point of juncture with the cast-iron pipe. All joints on said iron-stone pipe shall be made with Portland cement, and each joint of pipe when laid must be properly cleaned on the inside by a suitable scraper before the succeeding pipe is put in place. All joints on a cast-iron pipe shall be made with a suitable packing of hemp or oakum, and run full with molten lead and properly caulked.

4. Every house or building hereafter erected must have the house drain constructed of cast-iron where it lies under the building; but when the house drain is outside the building lines, or where there is an open space under the house of four (4) feet clear in height, it may be of iron-stone pipe. The house drain must have a fall of at least one-quarter of an inch to the foot; it should run along the cellar wall where practicable, or if laid under the lower floor of a building should be hung in iron straps securely fastened to the floor joists; it should be laid in as straight a line as possible. All changes in direction must be made in curved pipes and all connections with Y branches and one-eighth bends, with a trap placed under the sidewalk. The trap must be provided with a fresh-air inlet on the house side of the water-seal, of at least four inches in diameter, leading to the outer air. No brick, sheet metal or earthenware flue shall be used as a sewer ventilator, nor shall any chimney flue be used for this purpose. No T's to be used except in places where otherwise not practicable.

5. Every soil pipe shall be of cast-iron; waste pipe shall be of cast-iron, wrought-iron or lead.

6. All cast or wrought-iron pipe and fittings for waste, vent and soil pipe must be coated both inside and outside with coal-tar pitch, applied hot, or some other equivalent substance.

7. All iron soil or waste pipe, before being covered up, must have all openings stopped, and filled with water and be allowed to stand until inspected and approved. All connections of lead with iron pipe must be made with a brass ferrule of the same size as the lead pipe, and caulked into the iron pipe and connected to the lead pipe by a wiped joint. All connections of lead pipe should be wiped joints.

8. Every water-closet, sink, basin, bath or set of wash-trays or other vessel connected with the drain pipes, must be separately and effectively trapped. The traps must be placed as near the fixtures as practicable.

9. Traps must be protected from syphonage by special air-pipes of lead, wrought iron or cast iron, not less than the size of waste pipes, and, if to supply air to traps of water-closets, not less than two inches in diameter. These pipes must extend two feet above the highest point of roof or coping, or they may be branched into the soil pipe three feet above the highest fixture; they may be combined by branching together those which serve several traps. These air pipes must always have a continuous slope, to avoid collecting water by condensation. When the trap of any fixture is set more than two feet from the vertical line of pipe, a return connection must in all cases be provided.

10. Every safe under a basin, bath, urinal, water-closet, tank or other fixture, must be drained by a special pipe of lead or wrought-iron, not directly connected with any soil, waste-pipe, drain or sewer, but made to discharge outside the house.

11. Rain-water leaders must never be used as soil, waste or vent pipes, nor shall any soil, waste or vent pipes be used as a rain-water leader. All leaders from points below main roof must discharge into open trapped hoppers, on the surface of the ground.

12. No steam exhaust will be allowed to connect with any drain, soil or waste pipe.

13. All waste pipes from all interior plumbing, exclusive of water-closets, shall discharge into an open trapped hopper, except rooms which contain a water-closet, or where a building covers the entire width of the lot of ground.

14. Every line of waste and soil pipe must extend full bore to the ridge of the roof, or two (2) feet above the fire walls. When not more than one water-closet on the basement of first floor of a building connects with a line of soil pipes, an air pipe of cast or wrought-iron two (2) inches in diameter, extending to the ridge of the roof, or two feet above fire-walls, may be used.

15. All leaders, soil, waste, air and drainpipes inside of buildings before being covered up, must have all openings stopped up and be filled with water. The said test shall be made in the presence of the Inspector of Plumbing, and if satisfactory, he shall issue a proper certificate. Notice must be given to the Inspector when the work is sufficiently advanced for inspection.

16. All iron-stone pipe house drains, under houses, shall, after being laid, be filled with water and allowed to remain uncovered until inspected by the Plumbing Inspector of the Board of Health. When cast iron or iron-stone pipe is specified in the foregoing rules and regulations, if desired, wrought-iron pipe of standard steam thickness may be used, provided that the fittings are so constructed as to form a uniform bore with the pipe, without burrs or recesses.

17. No opening shall be provided in the sewer pipe of any building, for the purpose of receiving the surface drainage of the cellar, unless special permission is granted; and any opening so made must be immediately and permanently closed when directed by this department.

18. When a building is moved from one part of the city to another, or when an addition is made to a building, the plumbing rules and regulations adopted by the Board shall be followed.

19. On and after the first day of August, 1888, all plumbers doing business in the City and County of San Francisco, shall register, pursuant to the provision of Order 1,982 of the Board of Supervisors, approved, May 29th, 1888, at the office of the Board of Health.

20. Every master plumber, before he shall be allowed to be registered, shall give a bond to the State of California in the sum of five hundred dollars with two good and sufficient sureties, for the faithful discharge of his duties as plumber; which said bond shall be approved by and filed with the Board of Health.

21. All applications for registration as master or journeyman plumber shall be made by the party desirous of being registered; and said application shall be subscribed and sworn to by the party making the said application, on blanks to be provided by the Secretary of the Board of Health.

22. There shall be appointed by the Board of Health an Inspector of Plumbing and Drainage. He shall take and subscribe to an oath that he will faithfully perform the duties of his office, and shall, before entering upon his duties, execute a bond to the City and County of San Francisco, in the sum of five thousand dollars, with two good and sufficient sureties, conditioned for the faithful performance of the duties of his office, and for the benefit of persons aggrieved by his acts or neglect. Said bond shall be approved by and filed with the Board of Health.

23. The salary of the Inspector shall be fixed at one hundred and twenty-five dollars per month.

24. There shall be appointed by the Board of Health an Assistant Inspector of Plumbing and Drainage, to act under the orders of the Inspector of Plumbing and Drainage, and assist him in the fulfillment of his duties.

"SECTION 25. It shall not be lawful for any person to carry on business or labor as a master or journeyman plumber, in the City and County of San Francisco, until he shall have obtained from the Board of Health of said city and county a license authorizing him to carry on business or labor as such mechanic. A license so to do shall be issued only after a satisfactory examination by the Board of each applicant upon his qualification to conduct such business, or to so labor. All applications for license, and all licenses issued, shall state the name in full, age, nativity, and place of residence of the applicant or person so licensed. It shall be the duty of the Secretary of the Board of Health to keep a record of all such licenses issued, together with an alphabetical index of the same."

DUTIES OF INSPECTOR.

First. He shall be in attendance at the Health Office between the hours of 8.30 and 9.30 A. M. and 4 and 5 P. M., to receive plans of proposed plumbing and drainage, and to make appointments for the inspection of work in the course of construction.

Second. He shall number and file all plans and specifications accepted, and record the names of the owner and architect, and plumber, and location of work.

Third. He shall, upon being notified, examine all plumbing work before the same is covered up and concealed, and, if found to be in accordance with the Rules of the Board of Health, upon presentation of an accurate plan and specification of same by the plumber, shall issue a certificate to that effect. If, on examination of said work, he finds any violation of the rules of the Board of Health, he shall report the same to the Health Officer, with a note explaining the necessary corrections, and have it altered accordingly. Upon completion of any plumbing work he shall examine the same, and, if found to be in accordance with the Rules of the Board of Health, and the plans and specifications filed, he shall issue a final certificate.

Fourth. He must make a monthly report to the Board of Health of the number of plans and specifications received; the number approved and rejected; also stating the number of first and final examinations made, and where and by whom the rules have been violated, and such other matter as may be required by the Board of Health.

BOUND VOLUMES FOR 1888.

Owing to the demand for back numbers of this journal, the number of bound volumes we will have for purchasers in December will be very limited. Those desiring the same should engage them in advance. The price will be the same as for preceding years, \$2.50 each.

ESTABLISHED MARCH 17, 1860.

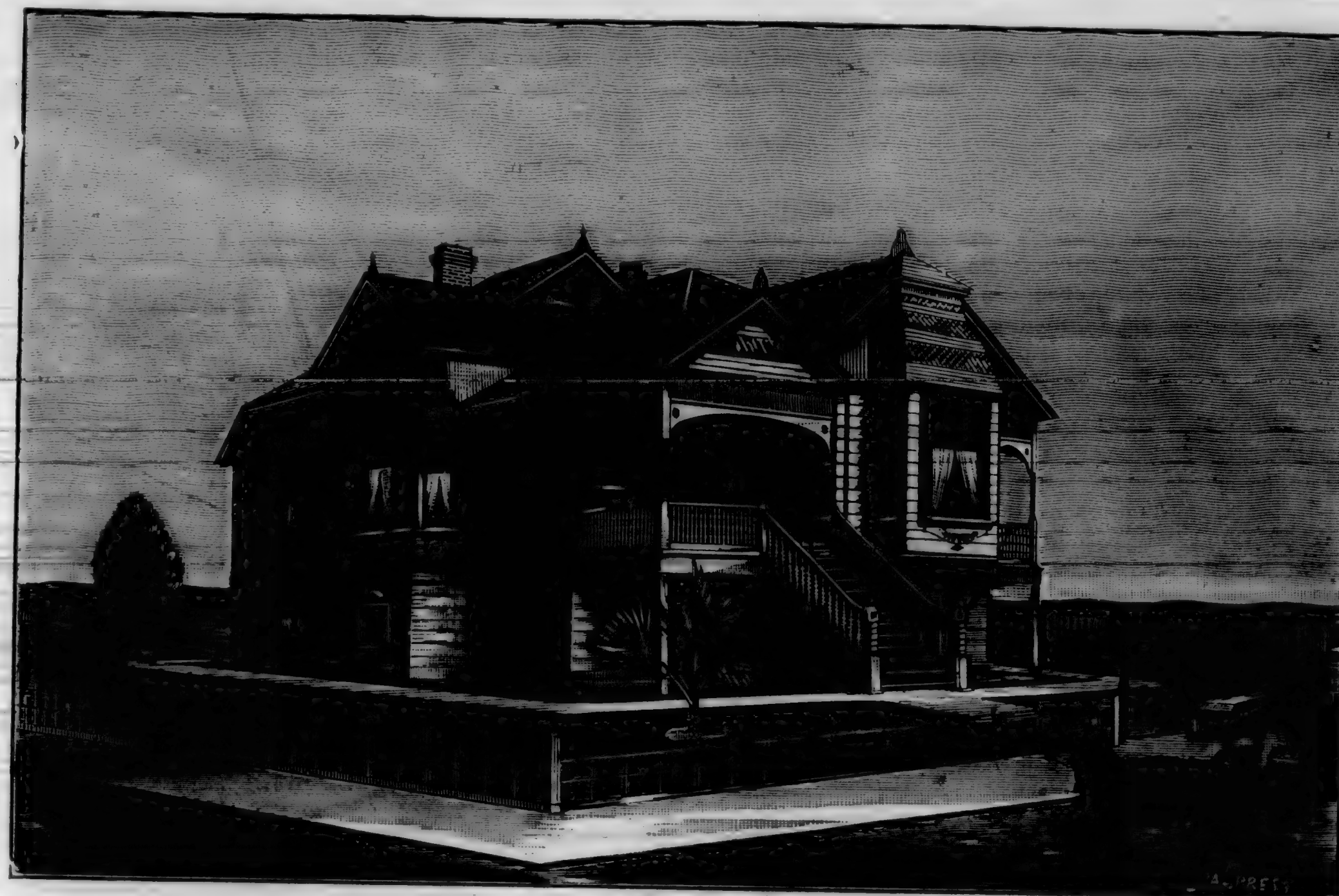
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California Architect and Building News

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OFFICE: 240 MONTGOMERY STREET, SAN FRANCISCO, CAL.

Well up Heavenward.—28 Stories.

SCARCELY a day passes that does not bring to light some wonderful or strange proposition or development, and no man knoweth what to-morrow may bring forth.

The evolutions in all directions are ceaseless, rapid, and often stupendous and grand. There is to-day before the world of mankind, very many proposed or recently accomplished results which to have been suggested fifty years ago, would have subjected the parties advancing the ideas, to the suspicion of absolute lunacy, or serious mental derangement.

The latest in the building line is a proposition to erect a building in Minneapolis, Minn., *twenty-eight stories high*—four times the number of stories contained in the Palace Hotel in San Francisco, which when built, was considered a monster edifice. But with an addition to the Palace of the character suggested by the latest conceit—*twenty-eight stories*—the building, which when built, was in fact the largest hotel edifice in the world, would appear as but little more than an annex for kitchen purposes, dormitories for servants, chambermaids, porters and hired help.

Without discussing the merits or feasibility of the projected high edifice, it must be admitted that the designer's notions were very elevated, and that nine-tenths of the people of the United States will at first sight condemn the aspiring latitude of the architect in his attempt to utilize space so high above the level of terra firma. But it is a question whether this latest architectural adventure is any more startling and scare-crowish to the people of the present day than would have been the proposition to erect ten, twelve and thirteen story structures, made to the granddaughters of those who have since conceived and completed buildings in New York, Chicago, Boston and others of the older and the newer cities now assuming great commercial and business importance in parts of the continent which, but a generation or two ago, was known as the wild West, and the hunting ground for buffaloes and the home of the red man of the forest—buildings quadrupling the limits of height practiced in the earlier years of our nation's history.

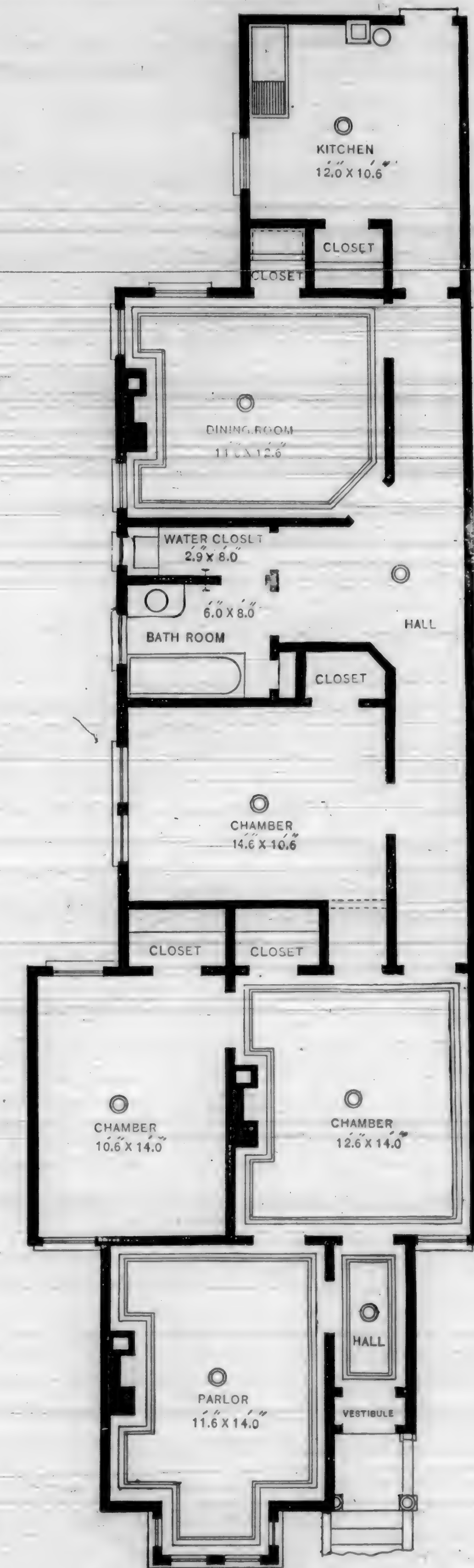
Even the immortal "Father of his country," if at the time he was quartered at the lower end of Broadway, N. Y., within sight of the Battery, opposite Bowling Green, in a building then of the larger type—where he was near being made a prisoner of war—been told that on that very site, before the year 1885, there would be a building erected twelve stories in height, and conveniently and comfortably occupied in all its stories, he would have laughed to scorn the folly of the presumptuous man who would have dared to predict such a result. Yet it is to-day an accomplished fact, and the "Washington Building" stands just there, as one of the magnificent structures of the commercial metropolis of America. Arguing from these premises, is it not possible that infants, if not well grown lads, or even young men of the present era, may yet see or participate in the erection of buildings even as high as twenty-eight stories? It is far-reaching toward the clouds, but other things seemingly as unreasonable a quarter of a century ago, are now demonstrated facts, and the science of architecture and building may yet achieve results not yet grasped, and the "mad men's" projects of to-day may be among the recognized utilities of the future.

Newspaper editors and correspondents may dip their pens deep into ink and write up fierce denunciations, nineteen-tenths of business committees resist for the present, all such mad-architectural libertinism, and laws even be passed prohibiting such construction; still the evolutions will roll on, and in time buildings approximating if not exceeding twenty-eight stories may no more be a questionable proposition, then are the numerous ten to thirteen story buildings of to-day, which are to be seen in all the progressive and great cities outside of San Francisco.

A SERIES OF "GEM" COTTAGES.

Next issue we will commence in this journal a series of "GEM" cottages. They will be prepared expressly for us by A. W. Putnam, a draughtsman recognized by all who know him, as possessing rare abilities as an original designer.

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A STUDIED PLAN FOR A ONE-STORY COTTAGE.



There is no Paper or Journal on
the Pacific Coast that pretends to
give a Full Report of Build-
ing News, except the

CALIFORNIA Architect and Building News. CITY BUILDING NEWS.

Bush, west of Pierce, three two-story frame buildings; owner, Pardon A. Cook; architect, Wm. H. Wharf; contractor, O. E. White; amount, \$7,531; signed, September 14th; filed, September 15th; limit, 67 days. Payments: framed, \$1,400; brown coated, \$1,400; white coated, \$1,400; completed, \$1,431; \$1,900, 35 days.

Pine street, No. 520, repairs. Owner, Kong-Chow Association; architect, Townsend & Wyneken; contractor, Rhody Ringrose; amount, \$3,019; sureties, Wm. P. Dougherty and H. M. Peterson, \$5,000; signed, September 12th; filed, September 15th; limit, 35 days. Payments: completed, \$2,264; \$755, 35 days.

Page, southeast of Webster, two story frame building. Owner, Chas. B. Perkins; architect, R. H. White; contractor, Jas. Geary; amount, \$3,850; sureties, C. S. Holmes & W. A. Meeker; signed, September 18th; filed, September 22d; limit, 90 days. Payments: framed, \$775; brown coated, \$700; white coated, \$700; completed, \$700; \$975, 35 days.

Eddy street No. 1,916, additions, etc. Owner, P. A. Fortier; architect, P. A. Fortier; contractor, Wheeler & Burdick; amount, \$3,150; sureties, A. W. Starbird; signed, September 19th; filed, September 22d; limit, 100 days. Payments: studded, \$800; brown coated, \$800; white coated, \$749; \$801, 35 days.

Golden Gate Ave. and Polk, tin and galvanized iron work. Owner, H. Keenan; architect, C. J. I. Devlin; contractor, Jos. Forderer; amount, \$1,340; signed, August 20th; filed, September 21st. 75 per cent as work progresses; balance, 35 days.

Eddy street, between Jones and Leavenworth. Alterations. Owner, Annie K. Botsford; architect, T. J. Welsh; contractor, G. W. Hansbrough; amount, \$14,265; sureties, John F. Taylor, J. M. Manning; signed, September 14th; filed, September 17th; limit, 120 days. Payments: framed, \$2,500; brown coated, \$2,500; completed, \$5,565; \$3,700, 35 days.

Powell, between Post and Sutter, frame building. Owner, Mrs. A. M. Parrott; architect, Pissis & Moore; contractor, Wm. Langstaff; amount, \$7,390; sureties, E. P. Latson, F. H. Rosenbaum; signed, September 18th; filed, September 19th; limit, 70 days.

Payments: brick work of basement up, \$1,200; framed, \$1,200; brown coated, \$1,600 ready to paint, \$1,400; completed, \$1,400; \$1,850, 35 days.

Eddy street, No. 326, plumbing and contractor. Owner, G. W. Hansbrough; architect, T. J. Welsh; contractor, E. Kraus; amount, \$1,820; signed, September 20th; filed, September 21st.

Plumbing, \$455; brown mortar on, \$455; tubs and bowls set, \$455; completed, \$455; balance, 35 days.

Twenty-fifth, between Bryant and York, two-story frame building. Owner, F. Dooly; architect, M. J. Welch; contractor, R. Doyle & Son; amount, \$1,860; sureties, John McGuire, J. Wagner, \$1,860; signed, September 18th; filed, September 19th; limit, 65 days.

Payments: framed, \$500; brown coated, \$600; completed, \$745; \$615, 35 days.

Bush street, No. 220 to 226, alterations. Owner, Estate of C. D. O'Sullivan; architect, C. J. I. Devlin; contractor, C. P. and G. H. Moore; amount, \$5,259; sureties, C. S. Holmes, F. Joost, \$5,000; signed, September 12th; filed, September 19th; limit, 45 days.

Payments: iron girders, \$1,000; brown coated, \$1,800; completed, \$1,144; \$1,315, 35 days.

Francisco, west of Stockton, building; Owner, Annie Hare, contractor, R. Doyle & Son; amount, \$2,460; sureties, J. B. Coffin, Jno. McCarthy; signed, September 11th; filed, September 22d; limit, 70 days.

Payments: framed, \$465; 1st coat of mortar is on, \$465; completed, \$465; \$465, 35 days.

Turk, east of Franklin, frame building. Owner, J. Brown; architect, Salfield & Kohlberg; contractor, H. Rohling; amount, \$6,050; sureties, J. J. McKinnon and F. Joost, \$6,050; signed, September 11th; filed, September 13th; limit, 3 months.

Payments: framed, \$1,550; partitions set, \$1,000; brown coated, \$1,000; completed, \$1,000; \$1,500, 35 days or bills paid.

O'Farrell east of Laguna, building December 1st. Owner, Winifred & Margaret Gallagher; architect, J. J. Clark; contractor, Jno. G. Adams; amount, \$3,500, signed, September 15; filed, September 20. 75 per cent as work progresses; balance, 35 days.

Bush street, No. 226, cast iron work. Owner, Estate of C. D. O'Sullivan; architect, C. J. I. Devlin; contractor, J. Hendy Machine Works; amount, \$2,650; sureties, A. R. Wells, Jas. Patterson, \$2,000; limit, 40 days. Payments: completed, \$1,975; \$675, 35 days.

Russ street, No. 22, raise and move. Owner, A. and S. Simon; contractor, A. C. Rogers; amount, \$2,400; signed, August 4th; filed, September 13th. Payments: payment as work progresses.

Howard street and Tenth, wrought-iron work. Owner, Omnibus Cable Company; architect, Percy & Hamilton; contractor, C. Nutting & Son; amount, \$16,350; sureties, P. Crichton, Wm. Cronan, \$5,000; signed, September 13; filed, September 20; limit, 110 days.

75 per cent on 1st Saturday of month as the work progresses; balance 35 days.

Howard street and Tenth, cast iron work. Owner, Omnibus Cable Company; architect, Percy & Hamilton; contractor, O'Connell & Lewis; amount, \$11,145; sureties, Robt. Mitchell, J. Mahony, \$4,000; signed, September 13; filed, September 20; limit, 100 days.

75 per cent on 1st Saturday of month as work progresses; balance, 35 days.

Howard street and Tenth, artificial stone work. Owner, Omnibus Cable Company; architect, Percy & Hamilton; contractor, G. Goodman; amount, \$4,680; sureties, Robert Mitchell, J. Mahony, \$2,000; signed, September 13; filed, September 20; 75 per cent on 1st Saturday of month as work progresses; balance, 35 days.

Howard street and Tenth, stone work. Owner, Omnibus Cable Company; architect, Percy & Hamilton; contractor, Degan & Orford; amount, \$15,728; sureties, F. E. Knowles, Wm. Mathews, \$5,000; signed, September 13; filed, September 21, limit, 125 days.

75 per cent on 1st Saturday of month as work progresses; balance, 35 days.

Howard street and Tenth, brick work engine house. Owner, Omnibus Cable Company; architect, Percy & Hamilton; contractor, W. Burden; amount, 25,150; sureties, Robert Mitchell, C. A. Warren, \$10,000; signed, September 13; filed, September 20th; limit, 140 days.

75 per cent on 1st Saturday of month as work progresses; balance, 35 days.

Howard street and Tenth, carpenter, plumbing, and painting. Owner, Omnibus Cable Company; architect, Percy & Hamilton; contractor, Thomas H. Day; amount, \$28,200; sureties, J. F. Kennedy, and B. Joost; \$10,000; signed, September 13; filed, September 20; limit, 80 days.

75 per cent on 1st Saturday of month as work progresses; balance, 35 days.

Brannan, north west side First, one-story and basement, wine warehouse. Owner, Warehouse Land and Improvement Company; contractor, Richardson & Gale; amount, \$39,500; sureties, Schulze & Meeker, E. O. & J. G. Denning, \$13,200; signed, September 14; filed, September 21; limit, 120 days.

Payments: area walls built, \$7,800; side walk, iron and first joists in \$6,600; brick work to under side, of ceiling, joists done, \$3,850; fire walls built, roof done, tin and skylights, \$4,675; completed, \$445, 35 days.

Kisling, between 11th and 12th streets, frame building. Owner, Owen Carroll; architect, M. J. Welsh; contractor, T. Sullivan; amount, \$3,787; sureties, W. Thyarks, B. Joost; signed, September 15th; filed, September 18th; limit, 70 days.

Payments: framed, \$946.75; brown coated, \$946.75; completed, \$946.75; \$946.75, 35 days.

Oak and Broderick, two-story frame building. Owner, C. Sancken; architects, Copeland & Banks; contractor, Jno. Adams; amount, \$3,482; surety, B. Joost; signed, September 19; filed, September 22; limit, 120 days.

Payments: \$800, framed, \$1,200, brown coated; \$607, completed; \$975, balance, 35 days.

Fourteenth between Howard and Shotwell, two-story flat. Owner, Geo. Heyle; architect, Geo. Houston; contractor, Geo. Houston; amount, \$2,790, signed, September 17; filed, September 20; limit, 80 days. Payments: \$690; shingled, \$700; brown coated, \$700; windows in, \$700, 35 days.

Stewart, south of Market, three-story, basement brick. Owner, Gualala Mill Company; architect, C. I. Havens; contractor, Mahoney Bros.; amount, \$30,353; surety, C. S. Holmes; signed, September 18; filed, September 20; limit, 125 days.

75 per cent as work progresses; balance, 35 days.

Francisco west of Kearny, foundry and pattern shop. Owner, Joshua Hendy; architect, R. Chartrey; contractor, Thomas H. Day; amount, \$8,493; sureties, J. F. Kennedy, F. P. Lawson; signed, September 18; filed, September 19; limit, 90 days. 75 per cent on 1st of month as work progresses; balance, 35 days.

Van Ness and McAllister, alterations, plumbing, etc. Owner, John DeWitt Allen; architect, George Voelken; contractor, John Doherty; amount, \$1,825, signed, September 4th; filed, September, 15th; limit, 40 days. Payments: pipes in, \$900; completed, \$468; \$457, 35 days.

Hampshire, between 24th and 25th, building December 15th. Owner, Anton King; architect, H. Geilfus; contractor, J. F. Logan; amount, \$3,493; signed, September 15th; filed, September 15th. Payments: framed, \$500; partitioned, \$500; brown coated, yard in, \$550; inside finish on, \$550; completed, \$500; \$893, 35 days.

Jackson, east of Pierce, carpenter work. Owner, Robert Bruce; contractor, Wm. F. Kern; architect, Wm. F. Smith; amount, \$10,025; surety, O. W. Nordwell, signed, July 14; filed, September 12, limit, four months.

Payment: four equal payments as work progresses of \$1,875; balance, 35 days.

Golden Gate Ave. between Hyde and Larkin, two-story frame, stable. Owner, W. H. Carpenter & Son; architect, Wm. H. Armitage; contractor, Mead & Kennedy; amount, \$3,800; surety, J. P. McMurray \$2,000; signed, September 4; filed, September 12; limit, 60 days.

Payments: framed, \$750, brown coated, \$750; white coated \$600; 35 days.

Bush street, No. 226, stair work. Owner, Estate of C. D. O'Sullivan; architect, C. J. I. Devlin; contractors, J. R. Drew, F. McLaughlin; amount, \$1,180; sureties, H. C. Gray and C. C. Terrill, \$1,000, signed, September 5; filed, September 19; limit, 35 days.

Payment: treads and risers in place, \$450; completed, \$435; \$295, 35 days.

Sanchez, between Sixteenth and Seventeenth, two-story frame building. Owner, Jas. Warren; architect, Casper Zwielerlein; contractor, Casper Zwielerlein; amount, \$2,645; sureties, J. F. Kennedy; signed, September 14; filed, September 14; limit, 80 days. Payments: framed, \$600; brown coated, \$800; completed, \$645; balance 35 days.

Main, between Mission and Howard, two story frame building. Owner, Geo. H. Mixer; architect, Geo. H. Mixer; contractor, Jno. G. Day; amount, \$4,500; signed, September 13; filed, September 14; limit, 21 days.

Payments: framed, \$1,650; battened, \$1,650, completed, \$1,200, balance 35 days.

Waller near Buchanan, two story basement frame. Owner, Louisa Otto and Gottlob A. Mauerhaus; architect —; contractor, Rountree Bros.; cost, \$4,400; signed, Sept. 20, 1888; filed, Sept. 28, 1888; limit, 90 days; sureties, Jno. Coop and F. R. Latson; amount of bond, \$4,000.

1st payment, when framed, \$800; 2d, when enclosed, \$800; 3d, when brown coated, \$800; 4th, when completed, \$800; 5th, usual 35 days, \$200.

728 Fulton, building. Owner, Margaret McGinney; contractor, Geo. M. Salsbury; cost, \$1,800; signed, September 21st, 1888; filed, September 25th; limit, December 1st.

1st payment, when framed, \$450; 2d, building enclosed, \$450; 3d, when brown coated, \$450; balance, usual 35 days.

Oak, near Gough, building. Owner, Jno. Madden; architect, R. Warren; contractor, Charles Coady; \$1,275; limit, November 20th, 1888; signed, September 18th; filed, September 26th. 1st payment, when ready to paint, \$425; 2d, carpenter work done, \$425; 3d, usual 35 days, \$425.

215 Fell, in rear, frame shed. Owner, A. Larfargue; architect, B. E. Henriksen; contractor, Moore Bros.; cost, \$1,445; limit, October 29th; signed, September 22d; filed, September 24th.

1st payment, when building is completed, \$1,085; balance, usual 35 days, \$360.

Stewart, between Mission and Howard, one-story brick. Owner, S. Harris; architect, J. Marquis; contractor, R. Parker; cost, \$2,700; limit, 63 days; signed, September 26th; filed, September 27th.

1st payment, when walls are up, \$1,000; 2d, when completed, \$1,000; 3d, and balance, usual 35 days, \$700.

Waller, near Webster, one-story frame. Owner, Jno. Michel; architect, John & Zimmerman; contractor, J. Klein; cost, \$2,587; signed, September 25th; filed, September 27th; limit, December 8th.

1st payment, when framed, \$600; 2d, when rough coat is on, \$800; 3d, when ready to paint, \$537; balance, usual 35 days, \$650.

Filbert, near Jones, two-story and basement frame. Owner, Fred. Todd; architect, John & Zimmerman; contractor, A. Rohling; cost, \$3,900; limit, December 15th; signed, September 12th; filed, September 24th; sureties, J. J. McKinnon and F. Joost.

Fulton, near Franklin, two-story frame and basement. Owner, T. Kronenberg; architect, John & Zimmerman; contractor, Fuchs & Bucher; cost, \$8,096; limit, January 2d; signed, September 13th; filed, September 24th; sureties, W. Hume & Kroenecke.

Fuller, near First avenue, frame attic and basement. Owner, Sophie Henicke; architect, H. T. Bestor; contractor, R. P. Traxler; \$2,660; signed, September 26th; filed, September 27th; limit, 90 days. 1st payment, when framed, \$400; 2d, when rough coat is on, \$550; 3d, when windows are in, \$550; 4th, when completed, \$490; balance, usual 35 days, \$670; surety, C. A. Malm; amount of bond, \$900.

Castro, between 16th and 17th, building. Owner, Wm. J. McAllup; contractor and builder, J. A. Shepherd; cost, \$3,700;

signed, Sept. 27, 1888; filed, Sept. 27 1888; limit, Jan. 1, 1889. 1st payment, when framed, \$920; 2d, when brown mortared, \$950; 3d, when completed, \$950; 4th and balance, usual 35 days, \$950.

Eddy, between Polk and Van Ness avenue, frame building, painting contract. Owner, Geo. Haas; architect, J. H. Littlefield; contractor, Jos. Larsen; cost, \$720; signed, September 26th; filed, September 29th; limit, 16 days.

Payment, 75 per cent. as work progresses.

Eddy, between Polk and Van Ness avenue, plumbing contract. Owner, Geo. Haas, architect, J. H. Littlefield; contractor, Sweeny & Kearns; cost, \$900; signed, September 26th; filed, September 29th; limit, 12 days.

Payments, 75 per cent. as work progresses.

Twenty-sixth and Valencia, plumbing. Owner, A. E. Hecht; architect, H. C. Macy; contractors, Duffy Bros.; cost, \$1,770; limit, Nov. 10, 1888; signed, Sept. 16, 1888; filed, Sept. 27, 1888. When completed, \$1,770.

Church, between 23d and 24th, one-story cottage. Owner, Geo. A. Rice; architect, Schmidt & Shea; contractor, Martin & Maguire; cost, \$2200; limit, 90 days; signed, September 21st; filed, September 25th; surety, F. P. Latson.

1st payment, when building is framed, \$400; 2d, when brown coated, \$400; 3d, when white coated, \$400; 4th, when completed \$400; 5th, usual 35 days, \$600.

Elm Ave., between Van Ness and Franklin, building. Owner, Martin O'Dea; architect, Chas. I. Havens; contractor, Wm. Pluns; cost, \$5,870; signed, September 26th; filed, September 28th; limit, 90 days; sureties, F. & B. Joost.

1st payment, framed, \$1,000; 2d, brown coated, \$1,000; 3d, hard finished and outside primed, \$1,000; 4th, completed, \$1,170; 5th, usual 35 days, \$1,700.

Hartford, near 19th, building. Owner, M. Dolan; architect, J. J. Clark; contractor, R. O. Chandler; cost, \$3,140; limit, 90 days; signed, September 22d; filed, September 28th; sureties, E. Aigeltinger and C. A. Bennet.

1st, framed, \$750; 2d, brown coated, \$750; 3d, inside finish on, \$750; 4th, balance 35 days, \$890.

Sonoma, between Utah and Nebraska, one story car house and stable. Owner, Omnibus Cable Company; contractor, H. A. Conrad; cost, \$6,665; limit, 30 days; signed, September 29th; filed, October 1st; Payments, 75 per cent as work progresses.

Green near Laguna, one-story and basement frame. Owner, Mary Coghlan; architect, John & Zimmerman; contractor, Reichley & Vierhus; cost, \$1,900; limit, December 8th; signed, September 24th; filed, September 24th; surety, F. Joost.

1st payment, when frame is up, \$500; 2d, when rough coat is on, \$425; 3d, inside ready to paint, \$500; balance, usual 35 days, \$475.

Eddy, between Polk and Van Ness avenue, frame building. Owner, George Haas; architect, J. H. Littlefield, contractor, Jas. Logan; cost, \$9,378.

Payments at the rate of 75 per cent as work progresses; balance, usual 35 day