

or mineral oils are liberally used are untrustworthy, for these are light-giving and smoke-producing liquids, and do not imitate the conditions of an ordinary fire.

Although we may succeed in rendering new buildings satisfactorily fire-resisting, a much more important question for the present generation is the improvement of the condition of old buildings. This is well worth the attention of those who have the charge of building estates already covered, of ordinary town property, or of those old historic mansions filled with family treasures, one of which as I write has been added to the number of those wrecked by fire. In an ordinary building, purely domestic, if the joints are not strong enough to carry a filling in of concrete they will carry ordinary pugging, and if no more than a breadth of three or four feet all round a floor is well filled in on some fire-resisting system, every hollow behind adjacent cornices, skirtings, and partitions being carefully stopped, a very considerable amount of resistance to fire will be afforded. If, besides, the points of contact between chimney stacks and floors and roofs be examined and timber cut away, the condition of an old house might be made approximately as good as that of a new building. In certain cases, where in London a domestic building is changed into a public building, and where a building partly domestic and partly used for trade is increased in area, something of this kind has now to be done.

To be continued.

ON THE SALINE EFFLORESCENCE OF BRICKS.

THE CAUSES LEADING TO IT, AND THE PRACTICAL MEANS
OF AVOIDING THE SAME.

BY OSCAR GEKLACH (PH. D., BERLIN.)

CONTINUED FROM LAST NUMBER

BURNING



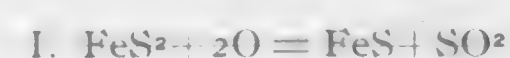
HE efflorescences produced by the sulphates in the green brick or during the water-smoking are always visible on the surface of the burnt product, either in the form of whitewash or in that of minute warty, crystalline kernels. On the other hand, the burnt products may come from the kiln faultless in appearance and without a visible trace of coloration, and yet conceal in their interiors considerable quantities of sulphates, which, when the bricks are later wet by water, are dissolved and make their appearance at the surface. These salts arise always during the burning,—not before,—and are particularly annoying because of their usually appearing first in the finished building, where, through the effects of rain and frost, they gradually are drawn to the surface.

Hitherto the opinion has been erroneously entertained

that, in burning, only the sulphurous acid gas due to combustion participates in the formation of whitewashing sulphates, whereas the undisintegrated iron pyrites still remaining in the clay was left entirely unnoticed. Now Dr. Hans Guenther, of Karlsruhe, has recently shown by a series of instructive experiments that also the iron pyrites in the clay participates in the formation of whitewashing sulphates during the burning; and this is readily intelligible when we reflect that the sulphurous acid gas, produced by the combustion, must act mainly on the surface of the bricks and can only gradually penetrate into their interior, whereas the combustion of the finely distributed iron pyrites in the brick itself brings the generated sulphurous acid gas into immediate contact with the finely distributed carbonates of the clay, and so renders possible a perfect absorption of the acid by the carbonates.

The formation of whitewashing sulphates during burning takes place as follows:—

A part of the sulphur in the iron pyrites (FeS_2) is very loosely combined with the iron, and oxidation of this part begins at approximately 650 degs. Fahr., whereas the other part burns only at red heat. The products of the disintegration are oxide of iron (Fe_2O_3) and sulphurous acid gas (SO_2). Expressed in chemical formulae, we have:—



The sulphurous acid gas SO_2 , when heated in contact with solid porous bodies, is oxidized by the superfluous oxygen of the air of combustion to sulphuric acid, or converts existing oxides into sulphuric salts. It was for a long time erroneously believed that the presence of water or of water vapor was necessary to the formation of sulphates; but as early as 1856 Plattner in his book, *Der metallurgische Rostprozess*, demonstrated experimentally that sulphurous acid gas in combination with the oxygen of the air and in contact with minute particles, or in contact with porous solid bodies, oxidizes to sulphuric acid, and that the water vapor in the air was not of consequence for the formation of this acid. If the minute particles or porous bodies are or contain oxides, these oxides are converted into whitewashing sulphuric salts. The following of Plattner's experiments is of special interest to the brickmaker. He conducted a mixture of sulphurous acid gas and atmospheric air, once wet and once dry, over some unslacked lime (CaO) in a glass tube. At red heat the lime was converted into calcium sulphate ($\text{CaO} + \text{SO}_2 + \text{O} = \text{CaSO}_4$) without a trace of sulphurous acid or sulphuric acid being noticeable at the free end of the tube. All the sulphurous acid, accordingly, was absorbed by the lime and converted by the oxygen of the air into sulphate of calcium. The same experiments were made with other oxides with the same results.

In the burning of clay products the same conditions prevail, provided the fuel contains sulphur and the clay contains carbonates of calcium, of magnesia, or of alkalies—which is to a greater or lesser extent usually the case. At red heat the carbonates, liberating their carbonic acid, are converted into their respective oxides, which, being finely distributed throughout the porous brick by the oxidizing action of the air, combined with the sulphurous acid gas to form whitewashing sulphates.

To turn these laboratory experiments to account for practical brickmaking, the experiments were made on a large scale. Different clays were burnt with different fuels, and

the amount of sulphates contained in the products determined both before and after burning.

EXPERIMENT I. Clay alone contains sulphur.

Material. Clay containing both iron pyrites and a small quantity of carbonate of lime.

Mode of Burning. Red heat (about 1650 to 1750 degs. Fahr.). Gas furnace. Oxidizing flame. The gas employed showed only the merest traces of sulphur. A kilogram of the unburnt clay contained 0.584 grams of CaSO_4 . **Result.** Since the fuel contained no sulphur, the fivefold increase of the amount of whitewashing sulphates in the burnt product must have been entirely due to the presence of the iron pyrites in the clay.

EXPERIMENT II. Both the clay and the fuel contain sulphur.

Material. Same clay as in Experiment I.

Mode of Burning. Red heat. Coal fuel. Oxidizing flame. Coal contained 3 to 4 per cent FeS_2 , or iron pyrites. The amount of sulphates was determined in several different burnt bricks. A kilogram of the burnt clay contained on an average 12.76 grams CaSO_4 .

Result. A more than twenty-fold increase of the whitewashing sulphates.

EXPERIMENT III. Fuel alone contains sulphur.

Material. Clay free from iron pyrites, but containing much carbonate of lime.

Mode of Burning. Red heat. Fuel, coal, etc., as in Experiment II. One kilogram of the unburnt clay contained 0.483 grams CaSO_4 . One kilogram of the burnt clay containing 16.85 grams CaSO_4 .

Result. An almost forty-fold increase of white washing sulphates.

EXPERIMENT IV. Clay and fuel free from iron pyrites (at least containing traces only).

Material. Same as in Experiment III.

Mode of Burning. Gas furnace. Oxidizing flame. Red heat. One kilogram of the unburnt clay contained 0.483 CaSO_4 . One kilogram of the burnt clay contained 0.621 CaSO_4 .

Result. A very slight increase of whitewashing sulphate.

EXPERIMENT V. Fuel free from iron pyrites. Clay containing great quantities of iron pyrites, but only traces of carbonate of lime.

Material. Clay containing large quantities of iron pyrites, but almost free from carbonate of lime and other carbonates.

Mode of Burning. Gas. Oxidizing flame. One kilogram of the unburnt clay contained 0.321 grams CaSO_4 . One kilogram of the burnt clay contained 0.510 grams CaSO_4 .

Result. A very slight increase.

EXPERIMENT VI. Fuel and clay both contain iron pyrites, but the clay shows only traces of carbonate of lime.

The materials and the results were the same as in Experiment V.

CONCLUSION.—It follows from the above experiments that the whitewashing sulphates are formed in large and annoying quantities only when sulphurous acids and carbonate of lime, or other carbonates, occur together in chemical action. Sulphurous acid has no injurious effect on clays containing no carbonates of lime, magnesia, or alkalies. Such clays, accordingly, can be burnt with sulphurous coal without any fear of an increase of whitewashing sulphates, whilst clays containing carbonate of lime require a fuel free from sulphur.—*The Brickbuilder.*

KEELY MOTOR UP-TO-DATE.

PROCEEDINGS OF ENGINEERS' CLUB OF PHILADELPHIA
BY E. J. SCOTT, ACTIVE MEMBER.

(CONTINUED FROM LAST NUMBER)



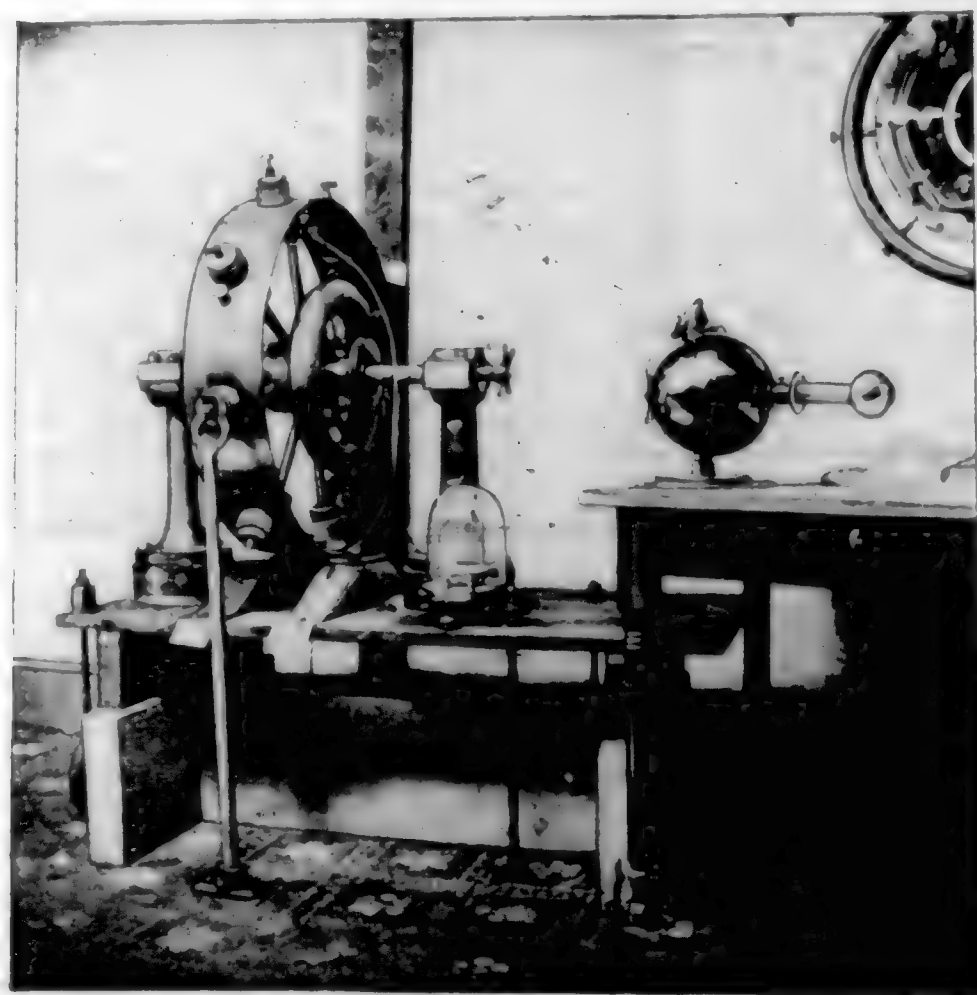
FROM what has already been explained, it will be at once evident that the rise and fall of the weights in the jar of water is due to their varying specific gravity. The weights sink, because they are heavier than the water, bulk for bulk; they rise because they are lighter than an equal volume of water. Keely's weights were so balanced that a slight difference in the air-pressure in the enclosed space above the water would make them rise or fall by changing their size sufficiently to make them of less or greater specific gravity. This is easily accomplished by having some portion of the weight compressible. It is a child's toy. Keely's transmitter, containing compressed air, was capable of increasing the air-pressure in the jar by turning the handle or switch to some point which would connect the jar with the reservoir of compressed air, or diminish the pressure by a change of the switch which would connect the jar with the open air.

Keely, whose eyes were always on the weights, shut off the switch as soon as the weights either rose or fell. With great skill and by letting in the air very slowly, he was sometimes able to leave one weight at the bottom, the other going to the top, or even to send one of them down after it had partly risen. It was particularly noted, however, that the one which always sunk first was the only one which he could arrest in its upward movement. Indeed, he replied to the writer's inquiry on that point, that he could not make the other go down first. He might have done so between the visits of the same investigators by changing the relative specific gravity of the weights. His explanation of his inability to do this was made in such terms of the new science that, while it sounded all right in the ear, it conveyed no meaning to the listener. It may have been stupidity on the part of the visitor. Indeed, when Keely heard of his explanation of the experiments, he said that he "considered that the Professor's testimony outweighed Mr. Scott's suspicions, and he did not think it necessary to do anything to convince him of his ignorance."

The Keely motor, or engine, is the last of the long series of Keely's inventions, of which the apparatus before referred to are only experimental studies. The word "vibrodyne" was coined by Professor W. Lascelles-Scott, as being more nearly expressive of the character of the character of the machine than "dynamo," which Keely had used. It is supposed to embody the principles which Keely has labored so many years to establish. He says it is operated directly by "apergy," a force hitherto unknown, existing in nature and only waiting to be utilized; that it consists, like light, in the extremely rapid vibrations of the ether, or matter infinitely divisible which pervades the universe; the problem being to devise apparatus which will respond to these vibrations. The vibrodyne may be thus described:

A heavy cast-iron bed plate, supported eighteen inches above the floor by an iron slab at each end, bolted to the floor at each of the four corners by heavy iron rods, and braced from the side wall, forms the foundation for a machine which can be prevented from running by the pressure of a finger, or stopped when at full speed by grasping it with one hand.

A flat brass ring about four feet in diameter is supported on two wooden slabs resting upon the iron bed plate, which are held to it by brass straps. On the outside of this ring, at equal distances apart, are fastened clusters of short tubes, each about a half-inch in diameter and three inches long, forming resonators. These tubes are partially filled with amalgam, or stopped up with diaphragms at varying distances from the ends. They are called resonators. There are nine of these clusters on the circumference of the ring, and on the outside of each is a hollow binding post, to which wires can be attached. On the inside of the ring, immediately opposite the resonators, a "sensitized disk" is attached, similar in appearance to the heavier weight used in the jar experiment (a brass cover filled with amalgam). On



—THE VIBRODYNE OR KEELY MOTOR.

the inside of this disk is another binding post similar to the one outside the ring, which is also hollow, and making an open passage between the inside and outside binding posts. There is thus a set of nine binding posts and disks pointing inwards, which are connected together by the mysterious platinum wire which figures in nearly all the experiments. The outside resonators and inside disks are about two inches apart.

Concentric with and inside of this ring is the revolving wheel. Its axis is supported at each end upon large iron pillars much enlarged at the bearings of the axle. A large hub in the middle of the axle has radiating from it eight spokes, one less than the number of opposing disks on the inside of the flat ring. These spokes do not terminate in a rim, but on the end of each is a disk similar in size and character to those which project inward from the ring. There is upon the axle near the hub a heavy iron ring about fourteen inches in diameter, which revolves with it, presumably as a balance wheel to make a steady motion. This ring had been added at some time between the last two visits, probably at the suggestion of the Professor.

On the occasion of the last visit Keely set the wheel revolving in the following manner: Taking a 10-inch sympathetic negative transmitter (the large, brass ball) he placed it on a table having a glass top, on one side of the room, and connected it with the vibrodyne by a platinum wire, attaching one wire to the binding post of the transmitter, and the other to the binding post projecting from a resonator on the

top of the vibrodyne. Then, snapping some of the wires on the scale of the transmitter and turning the handle backwards and forwards, the wheel commenced to revolve, slowly at first and with gradually increasing speed, until the revolutions were about 180 per minute.

The Professor asked: "Am I right that you can stop the wheel by withdrawing that kladna?" (The kladna on the axis would be withdrawn by turning the axis or handle of the transmitter in one direction.)

Keely said "yes," and appeared to turn the handle about twenty times, and, snapping one of the wires, which he said was note B, the wheel slowed down, and finally stopped.

He started the wheel again as before, and said: "As the machine now revolves the subdivision is 42,800 to the second. That is disintegrating vibration. I could disintegrate quartz with that vibration and powder it into dust." He did not offer to powder any quartz in that way, however.

Keely suggested that he could stop the wheel in several ways, two of which he illustrated. He pulled the wire out of the binding post of the transmitter, and it stopped as before. Again starting it, he stopped it by pulling out a plug in a hole in the binding post on the machine, the hole being a continuation of the hole into which the wire was thrust on the other side. This left the transmitter attached to the machine, and gave the writer an unexpected opportunity to further confirm his belief that the so-called platinum wire was a small platinum tube. He had noted on his first visit that the method of attaching the wire to a binding post was peculiar. The post was in form like a T and was hollow. There was no screw to hold the wire in place, but the ends of the wire terminated in plugs which were pushed into the end of the hollow arms of the T. On this occasion he observed that not only the horizontal arms of the T, but also the perpendicular leg, were hollow, leaving a passage down into and through the resonator, the flat ring, the sensitized disk on the inside of the ring and the binding post upon the disk, to which was attached the platinum wire before described, which encircled the interior side of the flat ring.

On the present occasion the writer took his seat next to the revolving wheel, not following Keely's suggestion to take another position. When Keely pulled out the plug from one arm of the T, leaving the wire sticking in the other arm, the other end of the wire still being connected with the sympathetic negative transmitter, he moved his face close to the hole left by the plug, which had been pulled out, and distinctly felt a blast of air from the tube (or "wire").

To make certain that the air current did not come from the revolving spokes, he kept his face in the same position until the wheel had stopped, and still felt the full force of the blast of air from the tube.

Here then was a confirmation of his belief that the wire was a tube carrying compressed air, the reservoir of which was the 10-inch globe of the "sympathetic negative transmitter." It was evident, however, that a sufficient amount of power to run the wheel for any length of time, or to run it at all, could not be stored in a globe of that size. He did not believe that it was so run, but that the air pressure performed the office either of an automatic switch-closer or automatic pole-changer on an electric circuit. This belief was to some extent confirmed by an oracular remark of the Professor to Mr. Elliott, to whom he said: "The wire does not supply the power, but it unlocks the power which runs the wheel." The writer at once said to him: "Professor, you have exactly expressed my opinion."

To be Continued.

DUNHAM, CARRIGAN & HAYDEN CO.

17 and 19 BEALE ST., San Francisco Cal.

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

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

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

NOISELESS—The operation is noiseless and extremely easy.

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

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

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

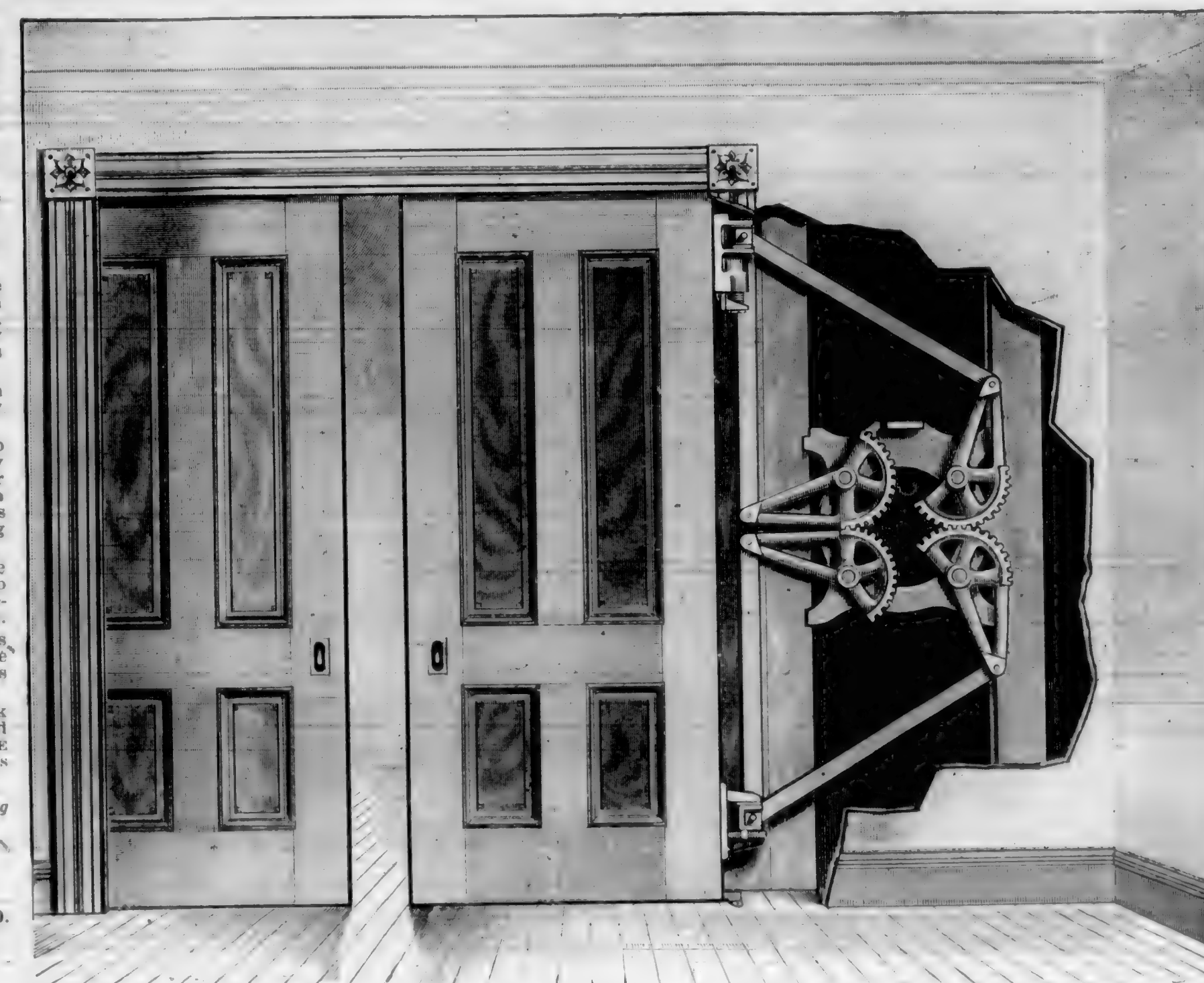
ONE PACKAGE—We pack the Hangers fully assembled and ready to attach, in ONE package, including all bolts and screws necessary.

See a full size working model at our store.

WE SELL

The Yale & Towne Mfg Co.
CELEBRATED

YALE LOCKS.



W. & P. SHINGLE STAINS

In soft and pleasing tints.

Of highest grades of material.

SPECIALLY ADAPTED TO REDWOOD.

PACIFIC COAST PRODUCT.

PACIFIC REFINING & ROOFING CO.

113 NEW MONTGOMERY STREET, S. F.

See sample Tablets on Application.

Sold by Dealers.

723 MARKET ST.
San Francisco, Cal.

230 1/2 S. SPRING ST.
Los Angeles, Cal.

SMITH & YOUNG BUILDING SUPPLIES

OUR SPECIALTIES:

FOUNDATION - AND WALLS	INTERIOR FINISH	EXTERIOR FINISH
Marble. Georgia White, Southern Marble Co Serpentine, Fire and Electric Proof	McDonough Weather Strips. Acts as a stop and prevents window from rattling.	Ceiling. [STEEL CEILING]
Sandstone. [BUFF] GOODRICH QUARRY	Alpine Cement Plaster For brown and white coat	Chimney Hood. CLAWSON'S PATENT To prevent smoky fire-places, and increase heat.
Joist Hangers. GOETZ PATENT Forged Wrought Iron	Porcelite Enamel Paint Does not craze or crack	Mouldings. TURNED, CARVED AND PRESSED
Lath. SHEET STEEL Painted and Unpainted WIRE LATH. G. & B. System	Oils. S. & Y. PURE LINSEED Triple Boiled, Raw and Varnish	Shingle Stains. DEXTER BROS. PERMANENT COLORS A PERFECT PRESERVATIVE Send for Samples.
Mortar Stain. PECORA For coloring mortar, cement, and sand finish	Varnish. S. & Y. TRANSPARENT	Paints. S. & Y. EXTRA QUALITY "GRAPHITE" For metal and wood
Paper. BUILDING S. & Y. BRANDS Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19.	Filler. S. & Y. LIQUID AND PASTE	MIXED ROOFING AND HOUSE PAINTS
Wall Ties. MORSE'S PATENT	Deadening Felt. S. & Y. BRANDS 1, 1½ and 2 lbs. per sq. yd.	Roofing. Slate, Mastic and Steel "Ready-Rock" Asphalt Strongest and most durable roofing in the market. Easily applied.
	Ornaments. PRESSED WOOD	Roofing Cement. S. & Y. BRAND For repairing leaks about chimneys, skylights, copings, and old tin and shingle roofs.
	Casing Blocks Corner, head, center and base blocks	OTHER SPECIALTIES
	Carvings. [WOOD]	Infusorial Earth Fire proof. Used for boiler and pipe covering
		Soapstone. CRUDE, GROUND AND BOLTED
		Mineral Wool For fire-proofing and deadening

CHAS. J. WATERHOUSE

BOX 78 BUILDERS' EXCHANGE. PHONE BLACK 1807. BOX 132 BUILDERS' ASS'N.

OFFICE 421 MARKET STREET, S. F.

DEALER IN

RELIABLE BUILDING MATERIALS

ART MOULDINGS

SAMUEL CABOT'S

CREOSOTE SHINGLE AND RESTIC STAINS
SHEATHING AND DRAFFENING QUILT
MORTAR STAIN PULPS - BRICK PRESERVATIVE

N. & G. TAYLOR CO.'S

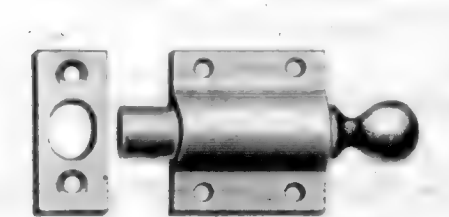
"OLD STYLE" ROOFING TIN
"THE TAYLOR ROOFING TIN"
"COLUMBIA ROOFING TIN"

THE VAN DORN IRON WORKS CO.'S

VAN DORN STEEL JOIST HANGER

ALL ABOVE GOODS ALWAYS IN STOCK.

ALSO SELL FROM THE EAST FOR

THE E. T. BURROWES CO.
Window and Door ScreensHUTTIG BROS. M'FG CO.
Hardwood Interior Finish.WASHINGTON SLATE CO.
Roofing and Blackboard Slates

Window Ventilating Bolt.

IVES PATENT



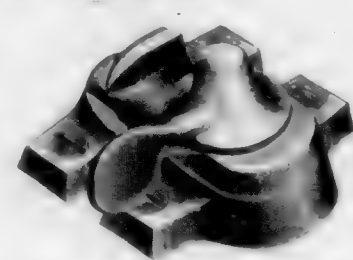
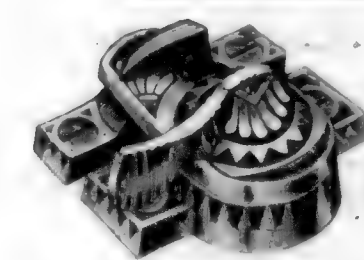
Window Stop Adjuster

Satisfaction guaranteed.
There's no hanger like it
Outlasts any door.
Well made and strong.
Easy to adjust.
Lasts a lifetime.
Liked by architects.

STOWELL

Mfg. & Fdy. Co.
South Milwaukee, Wis.

Window Hardware Specialties

Leaders with Architects and the Trade
Thirty page Catalogue mailed free.Manufactured only by
HOBART B. IVES & CO.
New Haven, Conn., U. S. A.

The "LINCOLN" LAUNDRY TUBS and SINKS

GLADDING, McBEAN & CO.
1358 - 1360 Market St.
San Francisco.

CAMPBELL & PETTUS.

CONTRACTORS.

Office, Builders' Exchange, San Francisco.

September, 1898.

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

xi

MEMBERS OF THE BUILDERS' EXCHANGE.

CORNER NEW MONTGOMERY AND MISSION STREETS.

Box No.	Box No.
Abrahamson, P.; patent ventilators.....123	OP'Connor, Thomas, mason and builder.....47
Adams, John G.; contractor and builder.....270	Ogle, John, contractor and builder.....215
Alameda Brick & Tile Co.; brick.....170	O'Sullivan, D.; mason contractor.....277
Arizona Sandstone Co.; building stone.....326	Pacific Bridge Co.....40
Bass-Huter Paint Co.; paints, oils and varnishes.....136	Pacific Refining & Roofing Co.....306
Bateman Bros.; contractors and builders.....294	Pacific Lumber Co.....365
Beck, Adam, mason and builder.....41	Pacific Manufacturing Co., Mill Work.....192
Bell, Wm.; contractor and builder.....75	Pacific Rolling Mills.....81
Bibb Lumber Co., D. H.....75	Pachiz, Gus, J.; electrician, etc.....272
Bellingham Bay Imp. Co.; lumber.....241	Palace Hardware Co.; builders' hardware.....272
Boyd, Robert; mason and builder.....77	Paradine Paint Co.; roofers, building paper.....144
Brady, M. V.; mason and builder.....380	Patent Brick Co.; brick.....172
Brady, O. E.; mason and builder.....380	Peacock & Butcher, masons and builders.....122
Brennan, D. J.; mason and builder.....51	Petersen Brick Co.; original red pressed brick.....68
Brennan James, plasterers.....152	Petersen, H. M. & Co.; concrete.....245
Britt, James E.; plumber.....26	Piaget, F. L.; hardwood.....76
Brode, R.; iron works.....235	Please, Henry; mason and builder.....280
Burden, W.; mason and builder.....230	Pool, Jas. R.; house mover and raiser.....217
Burnham, Stanford Co.; planing mill.....28	Rae, James; stone contractor.....56
Burrell, E. H.; building material.....146	Raisson Iron Works.....175
Burt, W. J.; house mover.....236	Raymond Granite Co.; contractors for stone work.....165
Butler, Wm. A.; mason and builder.....235	Reichley Geo.; contractor and builder.....109
California Art Glass Works.....223	Reigle & Janderson; machine white washing.....240
California Mills; planing mills.....300	Reinhardt Brick Co.; pressed stock and common brick.....278
Campbell, Alex. L.; contractor and builder.....105	Richardson & Gale; masons and builders.....328
Carey, J. E.; brick manufacture.....282	Rehmuller, Geo.; door opener.....335
Cignarini and Masou.....133	Riley, John P.; masons and builders.....325
Cartwright, D. S.; teaming.....10	Ringrose, R.; mason and builder.....18
Central Lumber & Mill Co.; lumber and planing mill.....345	Robinson & Gillespie; contractors and builders.....111
Chatham, Wm.; contractor and builder.....42	Rosenbaum, Fr. H.; glass.....36
Chemical Paint Co.....317	Ruffino & Bianchi; marble.....219
Chisholm, C.; contractor and builder.....44	Sacramento Transportation Co.; patent and stock brick.....332
Clark, N. & Sons; terra-cotta, etc.....200	S. F. Lime & Mortar Co. C. Bennett.....136
Clawson, L. E. & Co.; patent chimneys.....66	San Francisco Lumber Co.....157
Coghlan, Frank; plasterer.....91	San Francisco Novelty and Planing Works.....231
Collin & Gunn; lathors.....111	San Francisco Planing Mill, Wm. Crocker.....12
Conannon Wm.; contractor and builder.....24	San Joaquin Brick Co.; brick.....288
Conlin & Roberts; metal roofers.....90	San Jose Brick Co.; brick.....5
Coppleiers & Mockel; grill work.....42	Saunders, J. S. W.; contractor and builder.....250
Coswell, H. & Co.; lime, cement, fire brick, etc.....348	Schneider, Wm.; art glass.....43
Crichton, Peter; contractor and builder.....330	Scott & Van Arsdale Lumber Co.....183
Crocker, Wm.; planing mill.....12	Sessions, M. P.....304
Cronan, Wm.; Eagle Sheet Metal Works.....313	Smith, J. W.; carpenter.....17
Currie Donald; contractor and builder.....27	Smith & Young; building supplies.....374
Currie, Robert; contractor and builder.....143	Smith & Quinby; street contractors.....67
Cushing-Wetmore Co.; concrete and artificial stone.....218	Shell, E. L.; lime and plaster.....101
Curry, J. M.; stone dealer.....85	Shen, W. S. & Son; plumbers.....372
Daniels, Gus, V.; painter and decorator.....42	Soule Bros.; carpenters.....61
Davis, Geo. & Son; house movers.....257	Sleiger, A.; sons architectural terra-cotta.....134
Day, Thos. H. & Son; contractors and builders.....151	Soboles, R. M.; patent chimneys.....15
Degan, Patrick; stone contractor.....366	Stockton Brick & Terra Cotta Works.....16
Dillon, David; teamster and contractor.....189	Stratton, Jno. S.; house mover.....362
Donovan, M. J.; painter.....121	Sullivan, J. E.; painter and decorator.....1
Dunbar, Wm.; mason and builder.....284	Sullivan, T.; carpenter.....81
Dunham, Carrigan & Hayden Co.; hardware.....4	Sullivan M. E.; grading and teaming.....148
Dwyer, L. J.; painter and decorator.....187	Sweeney, Daniel; carpenter.....325
Dyer Bros.; Golden West Iron Works.....94	Sweeney, G. C.; plumber.....135
Egan, & Knowles; carpenters and builders.....202	Tacoma and Roche Harbor Lime Co.....280
Excelsior Mill Co.....72	Taylor, Geo. H.; Co.; plumbers supplies.....321
Feely, M. J.; contractor and builder.....180	Tobin, J. R.; plasterer.....173
Fennell, M. & Son; masons and builders.....58	Towle & Broadwell.....286
Field, Wm. J.; contractor and builder.....89	Trotter, John; contractor and builder.....288
Field, Z. O.....128	Trupper, O. M.; lime.....281
Flanagan, L. G.; lime and cement.....88	Tuttle, John; teamster, plasterers' supplies.....70
Foley, Michael; grading and teaming.....251	Union Lumber Co.; lumber.....335
	Vermont Marble Co.....335
	Vulcan Iron Works.....281
	Wagner, Henry E.; painting and decorator.....312
	Wagner, J. Fred; mason and builder.....181
	Walker, George H.; carpenter.....267
	Warren, C. A.; grading.....272
	Washington Street Planing Mill.....310
	Waterhouse, C. J.....48
	Watson, W. C.; plasterer.....99
	Western Granite & Marble Co.....216
	Western Iron Works.....171
	White Bros.; carpenters.....257
	White Bros.; hardwood lumber.....145
	Whittle, H.; mason and builder.....40
	Williams, F. A.; contractor and builder.....178
	Wilson, Bros. & Co.; lumber.....254
	Wilson, W. F.; plumber.....238
	Wilson, James A.; mason and builder.....221
	Wilkie, Andrew; planing mill.....305
	Wilkie, Andrew, Jr.....125
	Warrel, C. R.; mason and builder.....2
	West Coast Wire Works.....273
	Western Expanded Metal & Fire Proofing Co.....49
	Yates & Co.; paints.....340
	Young, S. T.; grading and teaming.....330

WESTERN IRON WORKS.

MANUFACTURERS OF

STEEL BUILDINGS AND WAREHOUSES.

Stairs, Elevator Enclosures, Roofs, Iron Fencing and Gates.

JAIL AND BANK WORK.

GAS HOLDERS, SHEET AND PLATE METAL WORK.

FORGINGS.

Telephone Main 737.

123-125 BEALE STREET, S. F.

TEL DRUM 80

W. HEIDT

FORMERLY OF

ARCHITECTURAL SHEET METAL WORKS*Metal Tile and Slate Roofing. Patented Ventilated Skylights and Spanish Tile*

224-226 MISSION STREET, SAN FRANCISCO

JOBGING PROMPTLY ATTENDED TO

GEORGE GOODMAN,

PATENTEE AND MANUFACTURER OF

ARTIFICIAL STONE, IN ALL OF ITS BRANCHES.

(SCHILLINGER'S PATENT.)

SIDEWALK AND GARDEN WALK A SPECIALTY.

307 MONTGOMERY STREET,

NEVADA BLOCK, SAN FRANCISCO

BUILDING NEWS.**SANTA ANA**

Messrs. Bristol & Hawley have leased the corner of Main and Fourth streets for twenty years and intend to erect a two story brick building. It will front 80 feet on Main by 65 feet on Fourth.

City engineer Kellogg has asked for a two weeks extension of time to prepare his report with plans and specifications of the sewer lines through the city at the expiration of which they will be ready for bids.

SANTA BARBARA

A new sugar beet factory to be located near Santa Maria, Santa Barbara County, at a cost of \$135,000, is in contemplation.

SANTA ROSA

Simpson and Roberts will begin the erection of an addition to the Miller & Hotchkiss winery at Windsor. The new building will be 80x130 feet. It is the intention of Messrs. Miller & Hotchkiss to increase the capacity of their winery at least two hundred thousand gallons. The new wing will be in place in time to receive this year's wine. An addition is being built to the Fulton winery and its capacity will be materially increased. A handsome new cottage is being erected on the site of the one recently destroyed by fire on the Briggs estate property at Fulton.

STOCKTON

Contracts have been awarded for the erection of an eight room brick school building for Fair Oaks District. Chas. Bessley & son, Architects, Len & Lewis do the carpenters work and Robbins & Hanks the brickmasons work, the cost aggregating \$15,300.

Thus, J. Levy has awarded the contract for building a cottage on California & Lindsay streets to Robt. Powell for \$117 - Geo. Rushforth was the architect.

TRACY

Bids for the re-building of the Odd Fellows Building were opened on the 21st of September and the contract for carpenters work, plumbing, ironwork and plastering was awarded to Ed. Woodruff of Stockton and the brickwork to Coner Shannon and Tucker of Stockton their bids aggregating \$900. The Odd Fellows to furnish all brick, cement, lime and sand which will run the cost of building to about \$6500. Geo. Rushforth of Stockton is the architect and the building will be pushed to completion under his supervision.

AUBURN

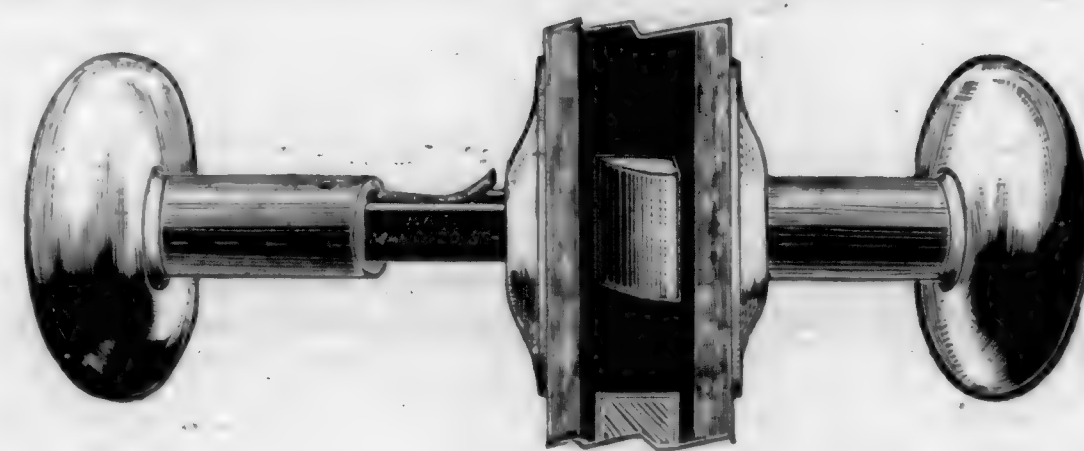
Building is picking up, work is about to start in a \$800 school house, Rock Creek School District. A five room cottage for John Davis. Foundation just completed for a \$1500 School House at Dutch Flat, J. C. Woodward, contractor, M. T. Barnett is building a small cottage.



Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

Scientific American.

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newscasters.
MUNN & Co. 361 Broadway, New York
Branch Office, 625 F St., Washington, D. C.

SPECIFY**THE WEATHERWAX****Patent Screwless Door Knob.**

Plans and Specifications

Invited for an Hospital Building.

THE Rapid Safety Filter

Is in use in San Francisco in all the leading Hotels, Schools, Stores, Saloons, Restaurants and **THOUSANDS** of Private Residences, including those of the leading **PHYSICIANS**, who endorse and recommend its general use.

No charge for fitting. Kept in order and cleaned by the Company. Leased only. Terms \$1.50 per month for private residences. Office and Show Room,

1209 MARKET ST., near Eight.

RUBEN H. LLOYD,
President.W. D. MANSFIELD,
Secretary.**P. H. JACKSON & CO**

Contractors for

Wrought Iron Building Work**Sidewalk Lights, Floor Lights****Fire and Burglar-Proof Arched and Flat Sky Lights****Patent Water-Proof Sidewalk Doors****Basement Ventilators, Etc.**

228 and 230 First Street, 7 and 9 Tehama Street

SAN FRANCISCO.

WM. BATEMAN,

MANUFACTURER OF

Wood Mantels, Interior Finish, Inlaid Floors,

Banks, Offices, Stores and Steamboats Fitted Up

411 MISSION ST., Bet. 1st and Fremont.

SAN FRANCISCO, CAL.

**Cabot's Creosote Shingle Stains.**

The Original and Standard Shingle Stains, and the only Creosote Stains.

Cabot's Insulating and Deafening 'Quilt'

A soft, elastic cushion of dead air spaces. The perfect sound deadener.

House of A. W. Pooley, Millwood, Cal.,
H. A. Klyce, Architect, Eastland.**Mortar Colors and Brick Preservative.**

For mortar staining and waterproofing brickwork.

Samuel Cabot, Sole Manufacturer, Boston, Mass.

Stock carried in San Francisco by

CHAS. J. WATERHOUSE, 421 Market Street.

Stock carried in Los Angeles by

P. H. MATHEWS, 238 South Main Street.

Public notice is hereby given to architects that competitive plans and specifications for the erection of an hospital building will be received by the Board of Supervisors on **MONDAY AFTERNOON, September 12, 1898.**

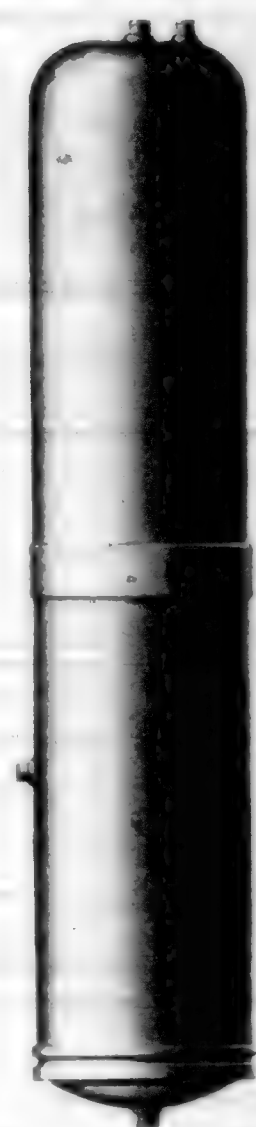
The proposed building to be of modern design and to be constructed of stone or brick, or of both, with all the latest scientific improvements.

The said hospital building to be erected on the lot of land commencing at the most southeasterly corner of a tract of land known as and designated, on the official map of the city and county of San Francisco, as the "Almshouse tract."

The said plans and specifications to be so prepared that the cost of the building shall not exceed in the aggregate the sum of three hundred thousand (\$300,000) dollars.

The architect whose plans are adopted will be appointed architect and superintendent of the building, and will be required to give a good and satisfactory bond to insure the completion and construction of the said building for the amount of the cost as made by the said architect. The architects submitting plans determined by the Board to be second, third and fourth in merit will receive premiums of \$1000, \$750 and \$500 respectively, with the understanding that any features of said plans and specifications which may be considered useful or necessary to be embodied in the plans adopted may be used without further cost of charge.

JNO. A. RUSSELL, Clerk.



For Sanitary Reasons

You Should Specify the

Brown Brothers' Cold Drawn Seamless Copper House Range Boiler.

The smooth copper surface is heavily tinned inside. This absolutely insures against corrosion or rusting of any kind and affords no rusting place for sediment. You always get

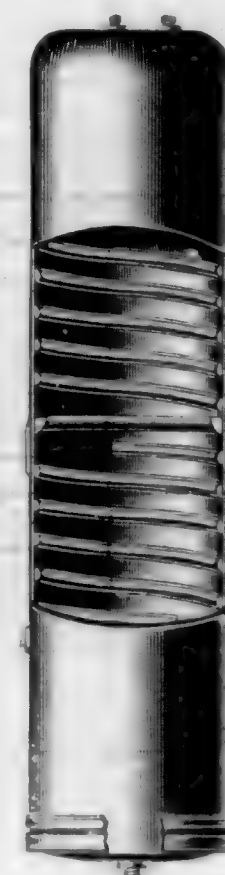
Clean Hot Water

own Boilers are made of two pieces of cold drawn copper, united under great hydraulic pressure, so that they are practically one piece. No seams nor rivets, means freedom from leaks. The inside spiral rib guarantees against collapse. Ordinary weight boilers stand a pressure of 150 lbs. to the square inch; extra heavy, 200 lbs.

Boiler Booklets sent on request.

RANDOLPH & CLOWES, Sole Manufacturers

BOX 47. WATERBURY, CONN.



Candelabra and Decorative

Incandescent Lamps and Receptacles.

Adapted for decorative illumination of interiors of fine residences and hotels, and extensively used for that purpose (Catalogue No. 9044).

X-RAY TUBES FLUOROSCOPES Catalogue No. 9050

EDISON Decorative and Miniature Lamp Dept.

GENERAL ELECTRIC CO.
HARRISON, N. J.

Scott & Van Arsdale Lumber Co.

MATT HARRIS, Manager.

Wholesale and Retail Dealers in

SUGAR AND YELLOW PINE.

Yellow Pine selected for Natural Finish

Redwood, White Cedar, Oregon Pine, Spruce Shaving, Curly Redwood, Burl, Shingles.

Mills at Upton, McCloud River

TRIM & MAXWELL, Siskiyou Co.

Office and Yards:

CORNER FIFTH AND BRANNAN STREETS

R. W. Cargoes Furnished

TELEPHONE SOUTH 173

San Francisco

PLASTER OF PARIS.

Golden Gate Plaster Mills,

215 and 217 Main Street,

bet Howard and Folsom, SAN FRANCISCO.

LUCAS & COMPANY,

Manufacturers of

Calcined Plaster.

(PLASTER OF PARIS.)

Marble Dust, Land Plaster and Terra Alba.

THE NATIONAL BUILDER.

Each number contains a complete set of

architects plans for a low priced building.

Published at Chicago, Ill.

Main Office, Adams Express Building,

185 Dearborn street.

It maintains its standard as a high class practical Builders' Journal.

W. D. HOBRO,

Plumber and Gas Fitter,

728-730 Washington Street,

Opposite the Plaza, SAN FRANCISCO.

Work done at Reasonable Rates. All orders promptly attended to. Res. 2618 Clay St., bet. Steiner and Pierce

W. J. Cuthbertson,
Architect.

Flood Building, Room 93,
Cor. Market and Fourth Sts.,
SAN FRANCISCO.

John M. Curtis & Co.,
Architects.

126 Kearny Street, between Post and Sutter,
SAN FRANCISCO.

T. J. Welsh,
Architect.

Room 95, Flood Building, corner Market and
Fourth Streets.

Wm. Mooser & Son
Architects

Rooms 62 and 63, No. 14 Grant Avenue
SAN FRANCISCO.

Oliver Everett,
SUCCESSION TO HUERNE & EVERETT,
Architects.

126 Kearny Street, Room 41,
SAN FRANCISCO, CAL.

Chas. J. I. Devlin,
Architect.

Supreme Court Building,
N. W. Cor. McAllister & Larkin Streets,
SAN FRANCISCO.

W. Curlett
Architect

Offices, 307 Phelan Building, Market Street,
SAN FRANCISCO.

Stone & Cahill,
Architects.

Room 88, Donohue Building, corner Market
and Taylor Streets, San Francisco.
Branch Office, 507 Central Bank Building,
Oakland Cal.

Fred. B. Wood,
Architect.

214 PINE STREET, Room 57.
San Francisco.

Pissis & Moore,
Architects.

807 Sansome Street, Rooms 16 and 17,
SAN FRANCISCO.

Havens & Toepke,
Architects.

FLOOD BUILDING, Room 55.
San Francisco. Tel. Main 5429.

Jas. E. Wolfe,
Architect.

FLOOD BUILDING Room 31.
San Francisco, Cal. Take Elevator.

R. H. White,
Architect.

104 Flood Building, Market and Fourth Sts.,
SAN FRANCISCO.

Wm. H. Armitage,
Architect.

319-321 Phelan Building, Market Street,
SAN FRANCISCO.

H. Geilfuss,
Architect.

120-122 Fulton St., bet. Polk and Van Ness Ave's,
SAN FRANCISCO.

B. McDougall & Son,
Architects.

330 Pine Street, Rooms 61 and 62,
SAN FRANCISCO.
Take the Elevator.

M. J. Welsh,
Architect.

Office, 1564 Market St., Cor. of th. Rooms 7-8.
SAN FRANCISCO.
Residence, 906 Treat Avenue.

John T. Kidd,
Architect.

Furnishes Plans, Specifications, Superintendence
for the construction of every description of build-
ing. 410 Kearny St. Office Hours, 12 to 2, 3 to 4.

Seth Babson,
Architect.

408 California Street, Rooms 12, 13.
SAN FRANCISCO.

Harold D. Mitchell,
Architect.

126 KEARNY STREET.
Plans and Specifications prepared with the great-
est Accuracy.

A. C. Lutgens,
Architect.

Phelan Building, Room 225.
SAN FRANCISCO.

John Cotter Pelton.
Architect.

Telephone Building, Bush St., Room 62.
SAN FRANCISCO.

Edmund Kollofrath,
Architect.

Gutzkow Bldg., 933 Market St. Tel. Jessie 461.
SAN FRANCISCO.

Chas. S. Tilton,
Engineer and Surveyor.

420 Montgomery St. Take the Elevator.
SAN FRANCISCO.

Emile Depierre,
Architect.

334 KEARNY STREET.
SAN FRANCISCO.

EMIL GUNZBURGER,

SECRETARY

BUILDING and

LOAN ASSOCIATIONS

214 PINE STREET, ROOM 3.

Loans on Real Estate

EASY TERMS

Information Willingly Furnished.

FACTS ABOUT PAINTS.

PHOENIX

The best paint is made of White Lead, Zinc and Linseed Oil.

PHOENIX PURE PAINT is made of these materials only.

To make perfect paint these materials must be finely ground and thoroughly mixed with heavy machinery.

PURE

PHOENIX PURE PAINT is made in that way.

During the past five years PHOENIX PURE PAINT has been the one most generally specified by Architects on the Pacific Coast.

PAINT

It is guaranteed absolutely pure and satisfactory on the building or we will replace it with any material the architect may select.

The New Wall finish or Washable Water Color.

Petrifies on the wall and will not crack or chip off.

Damp Walls do not affect it.

DURESCO

Can be washed any number of times and will not change color.

It strengthens the wall and prevents crumbling.

The strongest, most brilliant and most durable Wall finish made.

MANUFACTURED BY

W. P. FULLER & CO.

L. E. CLAWSON & CO.

1340 MARKET STREET, SAN FRANCISCO.
TELEPHONE SOUTH 257.

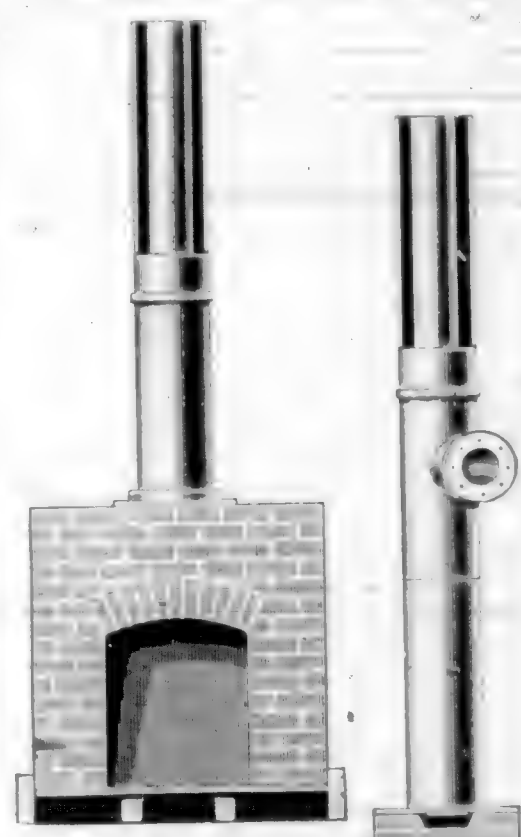
CLAWSON'S PATENT HOOD OR THROAT AND ARCH-BAR COMBINED.

The arch-bar forms a bond for arch in brick work. The hood being bolted on the arch-bar, forms a bond from brick work to mantel.

The throat is one solid piece, having lugs admitting three (3) inches adjustment, to suit depth of mantel.

This hood makes the bricklayer conform with mantel man's work, and guarantees you a safe chimney with a perfect draught.

Clawson's Patent Hoods, Thimbles and Chimneys, comply with the new Fire Ordinance.



CLAWSON'S PATENT CHIMNEY.

See **CLAWSON'S LIVE VENTILATOR.** It is as much better than a dead one, as a live man is of a dead man.

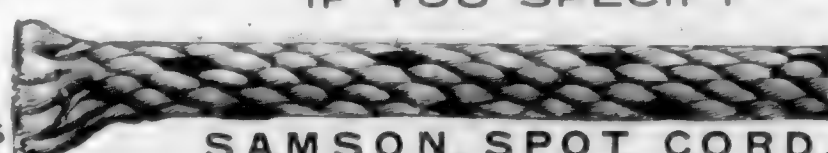
Price, \$2.50 for any size from 18 to 26 inches.

Send for illustrated circular.

CLAWSON'S PATENT THIMBLE.

IF YOU SPECIFY

SEND FOR SAMPLES



SAMSON SPOT CORD,

You can tell at a glance that no other cord is substituted. Warranted free from waste and imperfections of braid.

SAMSON CORDAGE WORKS,

BOSTON, MASS.



TRADE MARK.

THE CALIFORNIA ARCHITECT AND BUILDING NEWS

\$3.00 PER YEAR

VOLUME XIX, No. 10.

OCTOBER, 1893.

CONTENTS

Index to Advertisers.....	V1
The Beginning of a New Era.....	110
Depopulation of San Francisco.....	110
Extending the Fire Limits.....	111
The Hearst International Competition.....	112
Engineers for Fire Protection.....	112
Correspondence.....	112
Assessment for Fire-Proofing.....	113
Proposed New Constitution for A. J. A.....	114
Lesson From Fire and Panic.....	114
Boys and Periodicals.....	115
Building Notes.....	116
Valuable Information Gained From our Exchanges.....	117
Paint and Protection From Rust.....	117
Notice of Meetings.....	117
Illustrations.....	118
Pure Water in Cities.....	119
Floor Test at the Young Building.....	119
The Keely Motor Up-To-Date.....	120

PRICE THIRTY CENTS.

D. J. Patterson - 98

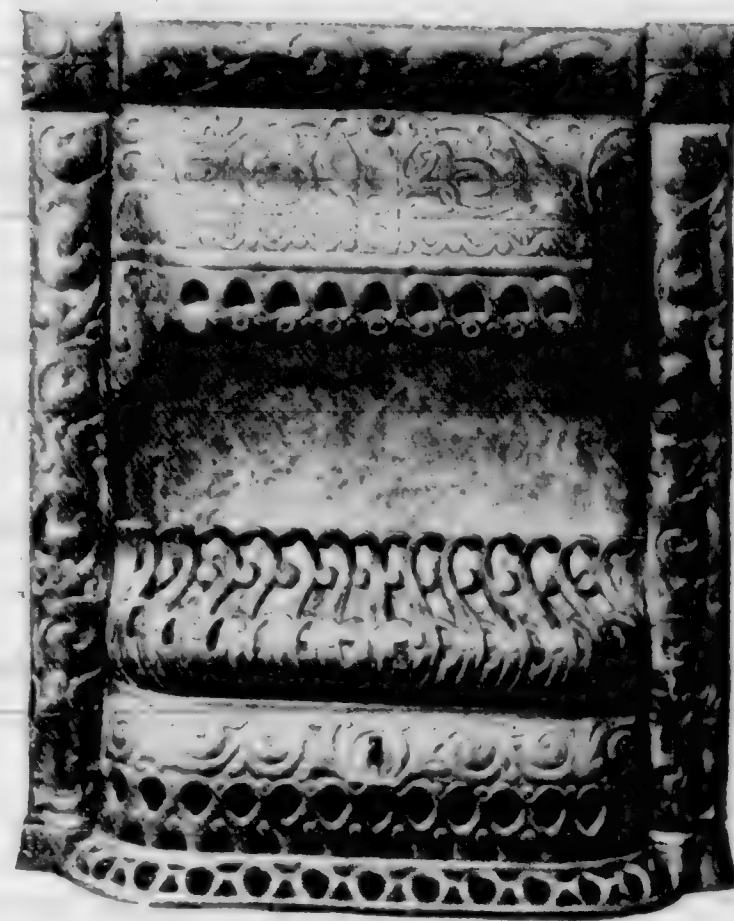
OFFICE 408 CALIFORNIA ST

For a modern house, get modern things!!

Be up to date.

Consider, in building, the innumerable advantages and economy of gas grates.

PERFECTION Gas Grates.



Always ready.

Always clean.

Gets to work instantly.

Expense stopped when heat is not needed. This is not so with coal.

Examine the various designs of Grates and Heaters of the
SAN FRANCISCO GAS & ELECTRIC LIGHT COMPANY.
STOVE DEPARTMENT

415 POST STREET, SAN FRANCISCO.

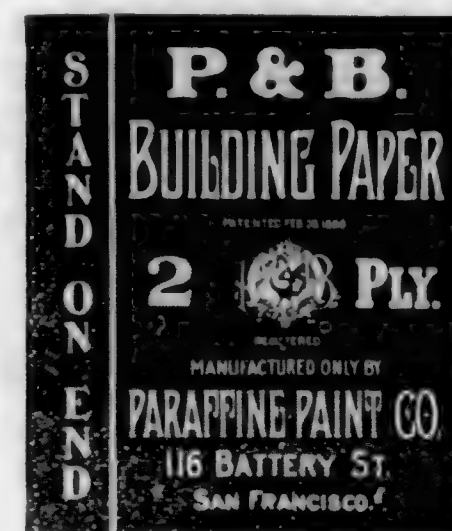
A modern home for a modern man, planned by an up-to-date Architect is always sheathed with

P & B BUILDING Paper

PARAFFINE PAINT CO., Sole Manufacturers,

The only Water-proof and Vermin-proof paper on the market that is odorless.

Do you Specify it?



116 BATTERY STREET
SAN FRANCISCO.

A Tin Specification

To be drawn correctly should call for a **Guaranteed** brand of Roofing and one that is known to the architect. It should also stipulate that each sheet must be stamped with the brand, the thickness 10 or 12, and the maker's name.

The Taylor "OLD STYLE" Brand

Is made exactly the same as roofing Tin was first made in Philadelphia in 1830. No other Roofing Tin is made like it or of the same materials.

EACH SHEET IS STAMPED AND GUARANTEED

N. & G. TAYLOR CO., Sole Manufacturers, Philadelphia.

For Sale by **CHARLES J. WATERHOUSE**, 421 Market Street, San Francisco.

To our Customers and Friends on the Pacific Coast.

Through frequent complaints made to us, we have learned that unprincipled and dishonest dealers on the Pacific Coast have counterfeited our trademark numbers and substituted inferior, spurious goods as ours, when ours were distinctly ordered, thus defrauding their customers and injuring our trade and reputation.

Our goods are acknowledged to be the best, and are fully warranted by us, and are marked with our name or initials or with our well-known trademark and catalogue numbers.

We request direct notice if any goods alleged to come from us, or bearing our trademark or numbers, prove to be other than the best, and perfect in every respect, as we will follow up and expose such frauds for our customers' and our own protection. We have no exclusive agents on the Coast, but our goods are obtainable from all respectable dealers in drawing materials, stationery, hardware, artists' material, etc.

RESPECTFULLY,

KEUFFEL & ESSER CO.,

New York.



D. H. GULICK

CHAS. WETHERBEE

A. ZELLERBACH & SONS.

GULICK & WETHERBEE
Plumbing and Gas Fitting

ESTIMATES GIVEN ON ALL WORK

210 Mason Street

YOUNG MEN'S CHRISTIAN
ASSOCIATION BUILDING

San Francisco

TELEPHONE BUSH 16

IMPORTERS
AND
DEALERS
IN
PAPER
OF ALL
KINDS

419-421 CLAY STREET,

Bet. Sansome and Battery, San Francisco.

TELEPHONE 1133

THE JOHN DOUGLAS COMPANY
CINCINNATI, PHILADELPHIA, ST. LOUIS, CHICAGO, SAN FRANCISCO.



EXCELSIS
List Price, \$35.00



JUNO
List Price, \$31.75



ELLWOOD
List Price, \$28.50

Three Syphon Jet combinations, with seat attached to bowl; woodwork made of selected cherry quartered oak, and walnut. Polish finish.

For our other combinations, see '98 Catalogue or visit our showroom.

Ask for Catalogue. Correspondence solicited.

EDWARD DOUGLAS, Manager

THE JOHN DOUGLAS COMPANY,
208 ELLIS STREET S.F.

D. E. GARRISON, Jr., President. S. W. BACKUS, Secretary. C. F. RUNYON, Vice-President.
N. L. BELL, Manager.

WESTERN EXPANDED METAL AND FIRE PROOFING CO.

MAUFACTURERS OF AND CONTRACTORS FOR

Expanded Metal System of Fire Proof Construction.

Fire proof arches, solid partitions and attaching metal lath to ceilings, walls, columns, beams, etc.

LATH ALWAYS IN STOCK.

OFFICE: Rooms 414-15-16 CLAUS SPRECKELS BUILDING.

TELEPHONE Main 5829

FACTORY: Corner Townsend and Clarence Streets, San Francisco.

BUILDING NEWS.

Hartlett near 22d. Alterations and additions; o. Mrs. A. E. McIntyre; a. L. E. Wyneken; c. A. McElroy; signed and filed, Sept. 23; cost \$1725.

Broadway near Pierce. Alterations and additions; o. Mrs. C. L. Nokes; a. Frank S. Van Trees; c. T. O'Connor; signed, Sept. 17; filed, Sept. 20; cost \$2300.

Castro and 22d. To build; o. Theodore Enderle; a. Martens & Coffey; c. John Furness; signed, Sept. 19; filed, Sept. 21; cost \$500.

Clay street No. 41-45. Alteration to two-story brick; o. Mrs. Ross Oppenheimer; a. M. J. Lyon; c. M. Fennell & Son; signed, Oct. 18; filed, Oct. 19; cost \$1000.

Clay near Jones. Three flats; o. Jas. A. Johnson; a. M. F. Bugbee; c. Wm. Bell; signed, Oct. 1; filed, Oct. 5; cost \$300.

Connecticut near Napa. To build except plumbing, tinning, and muntel; o. William and Jane Williams; c. C. C. Blair; signed, Sept. 23; filed, Sept. 26; cost \$1350.

Dolores near 24th. To build; o. Mr. and Mrs. J. F. Anderson; a. C. A. Doss; c. Schley & Doss; signed and filed, Oct. 19; cost \$300.

Dolores near D. Y. One-story frame; o. B. Dinneen; a. M. J. Welsh; c. D. Currie; cost \$1055.

Dupont near Filbert. All work except removal, excavation, etc.; o. F. Belizer; a. H. S. Munson; c. H. Behrens; signed, Sept. 24; filed, Oct. 3; cost \$2455.

Eddy street, No. 8. Alterations; o. Jesse E. Marks & Co.; a. W. O. Banks; c. G. H. and S. Walker; signed, Oct. 17; filed, Oct. 17; cost \$2400.

Filla near Jones. Plastering for five-story brick; o. L. H. Sly; c. Alexander Menzie; signed, Oct. 11; filed, Oct. 13; cost \$2100.

Eighteenth Ave. Hot water heating plant for the Institutional building; o. Roman Catholic Orphan Asylum; a. C. J. L. Devlin; c. W. Morgan & Co; signed, Sept. 23; filed, Sept. 30; cost \$10,300. Boiler room; cost \$9175.

Fifteenth Ave. To build; o. A. Legallet; a. Depierre & Righetti; c. L. B. Perramont; signed and filed, Sept. 20; cost \$2075.

Franklin street, No. 508. Reconstruction and repairs; o. Schussler & Goldman; a. James A. Wolfe; c. Biller & Qualman; cost \$905.

Folsom near 22d. Cottage; o. Margaret McKittrick; a. Hermann & Swain; c. J. B. Baubman; signed, Sept. 20; filed, Sept. 21; cost \$2315.

Geary near Devisadero. To build; o. Anna Brune; c. C. Zweierlein; signed, Oct. 15; filed, Oct. 17; cost \$3500.

Geary near Laguna. To build; o. Mary E. Ackerson; a. Martens & Coffey; c. J. E. Mooney; signed, Oct. 2; filed, Oct. 22; cost \$2750.

Green street wharf, Pier No. 15; o. R. C. Chandler; engineer, Howard C. Holmes; c. S. F. Bridge Co; signed, Oct. 17; filed, Oct. 22; cost \$23,887.

Green near Fillmore. Alterations and additions; o. Clara E. Curtis; a. Tharp & Holmes; c. Moore & Cameron; signed, Sept. 23; filed, Sept. 27; cost \$1025.

Guay Place near 1st street. Alterations; o. E. A. Sandstrom; c. Douglass & Co; signed, Oct. 20; filed, Oct. 21; cost \$1085.

Guerrero near 18th. Alterations and additions; o. Miss Kate Hynes; c. Robert Currie and Son; signed, Sept. 20; filed, Sept. 23; cost \$1155.

BUILDING NEWS.

Howard near 1st. Concrete brick work, etc.; o. Judson Mfg. Co; a. Percy & Hamilton; c. Miller & Beck; signed, Oct. 12; filed, Oct. 14; cost \$9315.

Jones near Vallejo. Alterations and additions; o. S. S. and Sarah J. Rankin; c. W. O. Peterson; cost \$1800.

Kearny near Washington. Iron armored conduit system for electric light wiring of Hall of Justice; o. City of San Francisco; a. Shea & Shea; c. Bateman Bros; sub-c. Wybro-Hendy Co; signed, Oct. 7; filed, Oct. 19; cost \$2110.

Larkin near Sacramento. To build; o. George W. Harris; a. W. H. Armistage; c. R. J. Pavert; signed, Sept. 19; filed, Sept. 20; cost \$6050.

Larkin street, No. 427-429. Sidewalk areas, side walk, dead lights; o. G. G. Burnett; a. James Wolfe; mason work, John Downs; sidewalk lights; P. H. Jackson Co; cost \$700.

Market near Sacramento. Elevator; o. Mrs. E. F. Pope; a. Pisis & Moore; c. W. H. Holman; signed, Sept. 26; filed, Oct. 4; cost \$3655.

Main near Howard. To build; o. P. F. Dundon; a. T. J. Welsh; c. A. McElroy; signed, Oct. 11; filed, Oct. 19; cost \$6810.

Mason near Washington. To build; o. L. Pierand; a. O. Everett; c. Hugh McCracken; signed, Oct. 10; filed, Oct. 12; cost \$5647.

Mission and 20th. To build; o. Henry Toost and Marie Toost; a. J. C. Jepson; c. R. J. Pavert; signed and filed, Oct. 12; cost \$4000.

Mission and 14th. Heating and ventilating; o. Southern Pacific R. R. Co; a. Henry A. Schulze; c. Geo. H. Tay Co; signed, Sept. 23; filed, Oct. 1; cost \$14,700.

O'Farrell near Pierce. To build; o. Henry Grupe; c. C. Schutt; signed, Sept. 2; filed, Sept. 24; cost \$6820.

Pacific near Polk. To build; o. P. J. Hall; a. Shea & Shea; c. Martin J. Gallagher; signed, Sept. 27; filed, Sept. 29; cost \$3400.

Pacific Ave. near Pierce. To build; o. Chas. Page; a. F. S. Van Trees; c. Williams Bros; signed, Oct. 15; filed, Oct. 19; cost \$12,400. Plumbing, etc.; c. W. F. Wilson; cost \$3075. Painting, etc.; c. J. H. Keefer; cost \$1045.

Page near Clayton. Carpentry, etc.; o. Mrs. Nellie Mitchell; a. William Koenig; c. Charles A. Depew; signed, Sept. 26; filed, Sept. 27; cost \$4200. Plumbing, etc.; c. G. C. Sweeney; cost \$950. Painting, etc.; c. A. Quandt; cost \$975.

Page near Clayton. To build; o. Mrs. M. Mitchell; a. William Koenig; cost \$5500.

Park Ave. near City Hall Ave. Two-story brick; o. Sadie Forman; a. N. Blaisdell; c. T. Kinread; cost \$1300.

Post and Grant Ave. Alterations and additions to three-story brick; o. Katharine A. Rivers and Eliza Kibbe; a. J. E. Kraft; c. S. H. Kent; cost \$1000.

Powell near Geary. Carpentry, etc.; o. M. A. Dorn; a. Shea & Shea; c. A. Olson; signed, Sept. 10; filed, Oct. 11; cost \$7390. Grading, etc.; c. Martin Connell & Son; cost \$5000. Plumbing, etc.; c. Allen & Looney; cost \$2750.

Second and Mission. Painting and whitewashing for 6-story brick; o. Wells, Fargo & Co; a. Percy & Hamilton; c. W. T. Veitch & Bros; cost \$1065.

BUILDING NEWS.

Seventh Ave. near Lake. To build; o. S. R. Harvey; a. A. W. Smith; c. C. M. MacGregor; cost \$2524.

Seventh Ave. near L. To build; o. William Mander and wife; a. Kenitzer & Barth; c. M. J. Savage; signed and filed, Sept. 23; cost \$2750.

Seventeenth and Capp. Alterations and additions; o. C. Johnson; c. W. W. Rednall; signed and filed, Sept. 23; cost \$2075.

Steiner and Elliott Park. To build; o. John R. Aitken; a. M. G. Bugbee; c. Theo. S. Hoin; signed, Oct. 7; filed, Oct. 11; cost \$7005.

Stevenson and Third. Seven-story brick; o. Lean and Philip Meyer; a. M. J. Lyon; c. G. H. Moore; signed, Aug. 27; filed, Sept. 20; cost \$10,800.

Sutter and Hyde. Alterations and additions; o. Dr. Julius Rosenfeld; a. H. A. Schultz; c. W. H. Wickersham; cost \$1475.

Sutter near Scott. Carpentry, etc.; o. Mt. Zion Hospital Ass'n; a. W. J. Lyon; c. M. J. Field; signed, Sept. 27; filed, Oct. 4; cost \$3550. Excavations, brick work, etc.; c. Martin Fennel & Son; cost \$604. Sewers, etc.; c. Schanz & Grandy; cost \$1390. Painting, etc.; c. D. Zelinsky; cost \$500. Electrical work; c. J. H. Wolf; cost \$2525.

Texas near Yolo. To build; o. John P. and Julia Sauer; c. Gustave Hasmussen; cost \$600.

Third near Market. Plumbing; o. Ed. Bolkin; a. Percy & Hamilton; c. Jekelheimer Bros; signed, Oct. 13; filed, Oct. 14; cost \$1485.

Twelfth Ave. near P St. Cottage; o. Wm. H. and Mary Koch; c. R. Rechenback; signed, Sept. 4; filed, Oct. 1; cost \$2000.

Twenty-second and Florida. To build six ft. 10; o. Thomas Pennington; c. Wm. Heibing; signed and filed, Oct. 12; cost \$5570.

Twenty-second near Howard. Barn; o. Jas. Burke; c. day's work; cost \$1000.

Van Ness and Clay. Steam heating, etc.; o. St. Luke's Church; a. A. Sutton; c. W. W. Montague & Co; signed, Oct. 11; filed, Oct. 12; cost \$1944.

Washington near Scott. To build; o. E. B. Catter; a. Edgar A. Mathews; c. Edward Letter; signed, Sept. 22; filed, Sept. 26; cost \$7342.

ALAMEDA

Walnut near San Jose Ave. Alterations and additions; o. Mrs. Gardner; a. Charles Shaver; c. C. S. Brown; signed, Sept. 23; filed, Sept. 27; cost \$1450.

BERKELEY

Bancroft Way near Bowditch. Ten-room house; o. Annie E. Voorhies; a. A. W. Smith; c. Stockholm & Anderson; signed, Oct. 6; filed, Oct. 7; cost \$2347.50.

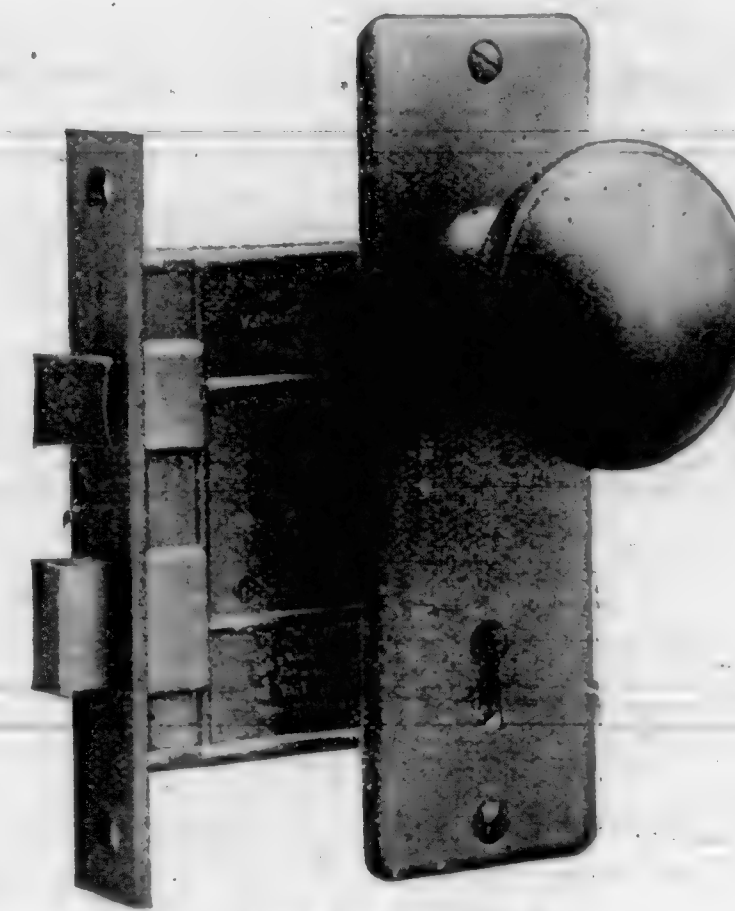
FRUITVALE

Fruitvale Ave. and Tellant. Heating, etc.; o. Trus tees of Fruitvale School; a. D. P. Oliver; c. J. S. Bur pe; signed, Sept. 23; filed, Sept. 24; cost \$829.

Continued on page xii.

The "Vulcan" Locks

All Wrought Metal—with "Compensating" Hubs.



Lock Set No. 220B.
One-half Actual Size.

Our General Offices in New York have recently received the following unsolicited letter from a prominent builder and contractor. Believing that the statement of experience it contains will be of interest, we reproduce it below.

An Artistic Brochure on Vulcan Locks, also a Catalogue of 90 pages, will be sent on request.

The Yale & Towne Mfg. Co.

LOCAL OFFICE:
Mills Building, San Francisco.

GENERAL OFFICES: 9-11-13 Murray St., NEW YORK.
WORKS: Stamford and Branford, Conn.

OFFICE OF A. BEINHAUER,

124 Maiden Lane,

NEW YORK, July 11th, 1898.

The Yale & Towne Mfg. Company,

9-11-13 Murray Street, New York.

Gentlemen:—Having lately had occasion to use and apply your "Vulcan Locks" in the Anderson Building, 12-14-16 John Street, I take pleasure in mentioning the fact that in the application of these locks there is a large saving of labor as compared to the ordinary CAST-case locks.

The difference, as I found it, was that while a man put on six to eight of the latter, he could in the same space of time put on twelve to fourteen "Vulcan Locks," thus decreasing the cost of labor to a considerable extent.

Another feature about these "Vulcan Locks" is that while they give as good service as any cast-case lock of their denomination, they do not require as much cutting away of wood in the lock-rail, thereby strengthening the door to an appreciable extent.

Wishing you all success with your "Vulcan Locks," I remain

Yours truly,

(Signed) ALFRED BEINHAUER.

GENERAL INDEX OF ADVERTISEMENTS.

CLASSIFIED INDEX.	CLASSIFIED INDEX.	CLASSIFIED INDEX.
Architects. Goodman, Geo. xlii	Iron Hangers Van Dorn, Chas. J. Waterhouse, Agent. vi	Sash Locks. Ives, H. B. & Co. xiv
Artificial Stone. Randolph & Clowes. xiv	Iron Works Western Iron Works. x	Sewer Pipes. Gladding, McBean & Co. xi
Boilers. Smith & Young. ix	Iron Cornices. Cronan, Wm. xvi	Sewer Traps. Dallimore, G. C. viii
Building Supplies. C. J. Waterhouse. x	Incandescent Lamps. General Electric Co. xiv	Sash Lines. Samson Cordage Works. xvi
Building and Loan Assn. Gunsburger, Emil. xv	Lumber. Scott and Van Arsdale. xiv	Shingle Stains. (Cabot's) C. J. Waterhouse—Agent. xlii
Brick Preservative. Cabot's. xlii	Mantles Tiles, Etc. Montague & Co., W. W. xlii	Pacific Refining and Roofing Co. iii
Cement Trays. Bradley, Bros. viii	Metal Lath. Western Expanded Metal Lath and Fire Proofing Co. iv	Sidewalk Lights. F. H. Jackson & Co. xlii
Chimneys Patent. Chawson. xli	Mortar Color. Cabot's Mortar Color. xlii	Sliding Door Hanger. Durham, Carrigan & Hayden. ix
Door Opener. G. Rischmuller. viii	Paint. L. R. Butcher and Co. viii	Stonework. Raymond Granite Co. v
Engineers. Tilton, Chas. S. xix	Paper. Zeilerbach & Sons. viii	Terra Cotta. Gladding, McBean & Co. xi
Filters. Rapid Safety Filter Co. x	P. and B. Building Paper. Cabot's Sheathing and Deading Quilt. xlii	Tin Roofing. N. & G. Taylor Co. ii
Furniture and Upholstery. Batesman, W. xv	Plaster. Lucas & Co. xiv	University. Harvard. vi
Hardware. Yale & Towne Lock Co. y	Plumbers and Gasfitters. Hobbs, W. D. xiv	Ventilators. N. & G. Taylor Co. ii
Heating and Ventilating. W. Morgan & Co. xlii	Gulich & Wetherbee. iii	Water Closets. John Douglas Company. iii
		Window Cord. Samson Cordage Works. xvi
		Wood Preservative. Cabot's. xlii
		Pacific Refining & Roofing Co. iii

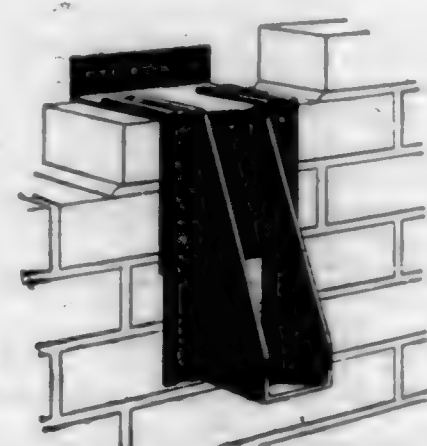


No 1-Steel joist hanger for wooden header

VAN DORN'S Steel Joist Hanger

CHAS. J. WATERHOUSE, Agent

421 MARKET STREET, S. F.
PHONE BLACK 1807.



No. 4-Steel joist hanger for brick walls.

Sierra Lumber Company

Manufacturers of and Dealers in

Doors, Windows, Blinds, Sugar Pine.

Yellow Pine, Spruce and Fir Lumber.

Corner Fourth and Channel Streets, San Francisco

HARVARD UNIVERSITY.

Lawrence Scientific School

OFFERS COURSES IN

Civil Engineering
Mechanical Engineering
Electrical Engineering
Mining and Metallurgy
Architecture
Anatomy and Physiology (as a preparation for Medical Schools).

Chemistry.
Geology.
Biology.
General Science.
Science for Teachers.

For Descriptive Pamphlet apply to

M. CHAMBERLAIN, Secretary.

N. S. SHALER, Dean, Cambridge, Mass.

DIXON'S SILICA GRAPHITE PAINT

FOR TIN OR SHINGLE ROOFS AND IRON WORK. Tin roofs well painted have not required repainting for 10 to 15 years.

IT IS ABSOLUTELY WITHOUT AN EQUAL.

If you need any paint it will pay you to send for circular.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

TELEPHONE SOUTH 224.

EAGLE SHEET METAL WORKS

WM. CRONAN

Manufacturer of Plain and Ornamental

Copper and Galvanized Iron Cornices

Tin, Iron, Slate Roofing, Galvanized Iron Sky-lights

and Cast-Zinc Work.

Steam, Hot Water and Warm Air Heating.

Power Fans for Heating and Ventilating Work.

ROOFS REPAIRED AND PAINTED GENERAL JOBBING ATTENDED TO
Nos. 1213 1215 Market Street, Near Eighth
SAN FRANCISCO, CAL.

A SYSTEM OF WARMING AND VENTILATING



A SYSTEM OF VENTILATED FLUSHING WATER CLOSET AND URINAL RANGES

FOR PUBLIC BUILDINGS.

IMPORTANT

ARCHITECTS

W. MORGAN & CO. HEATING, VENTILATING AND SANITARY ENGINEERS. 108 First St., S. F. Cal.

GUARANTEE:
A system of warming and ventilating that shall have the capacity to warm and supply each room with enough pure air to renew the entire volume of air in said rooms from four to six times per hour without unpleasant draughts as from pen doors or windows.

GUARANTEE:
A system of sanitary closets (separate and distinct from the ventilation of the building), so constructed; that no matter how much they may be used, the ventilation and flushing device connected there with, shall prevent any disagreeable odor from either the closet or urinal apparatus.

PORTLAND CEMENTS:

"JOSSON" "ROOSTER"

SCALE, RHINOCEROS

W. R. GRACE & CO.

203 California Street,

San Francisco.

Subscribe for The California Architect.

WASHABLE **ZINOLITH** ^{TRADE MARK} SANITARY
LIQUID STONE

THE IDEAL FINISH FOR INTERIOR SAND FINISHED WALLS.

The only Water Color for Plastered Exteriors and Light Wells.

L. H. BUTCHER & CO.

539 Mission Street, S. F.

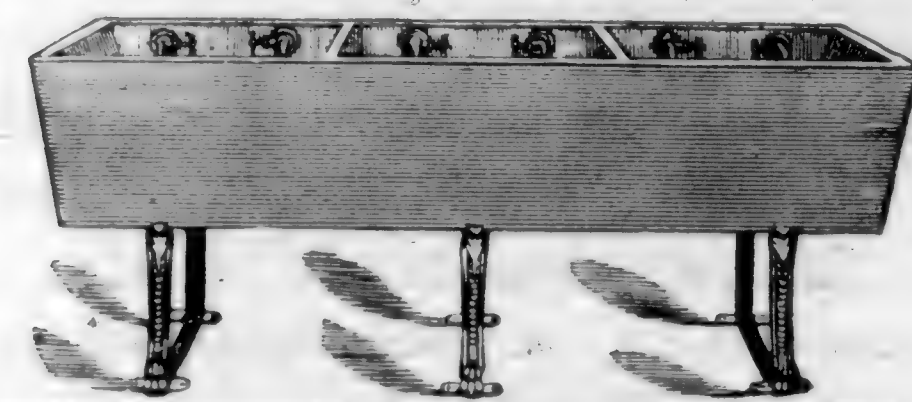
A. BRADLEY

Successor to BRADLEY BROS.

CEMENT

LAUNDRY

TRAYS



Manufactured of the best PORTLAND CEMENT and GUARANTEED not to LEAK, CRACK or SWEAT.

Office and Factory

53-57 Tehama St.

Between 1st & 2d.

Architects are respectfully requested to specify them.

G. ORSI.

17 Montgomery Avenue

INTERIOR DECORATOR

IMPORTER OF AND DEALER IN

Paints,

Oils,

Varnish,

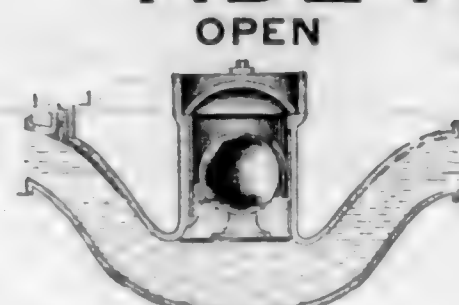
Paper Hangings, Etc.

I make a specialty of interior Painting, Frescoing and Paper Hanging.

Special Agent for Lincrusta Walton; a large and complete stock always on hand.

Estimates cheerfully given.

The Titus Improved Patent Sewer Gas Trap
TIDE AND FLUSHING GATE



OPEN

Isolates the House from the Main Sewer in Street, thus stopping the prolific cause of Sewer Gas Infection.

By Report of Board of Health, 33 per cent of deaths in this and other cities are caused by Zymotic Diseases arising from Sewer Gas Infection.



CLOSED

First Premium Medal

Institute. Awarded 1882, 1883, 1884, 1885 & 1886.

Testimonials, References and Traps can be seen at 414 DEVISADERO STREET, Telephone Pine 1405.

Manufactured by G. C. DALLAMORE, Practical Plumber, Gas and Steam Fitter.

RISCHMULLER'S

PATENT DOOR OPENER

AND CLOSER.

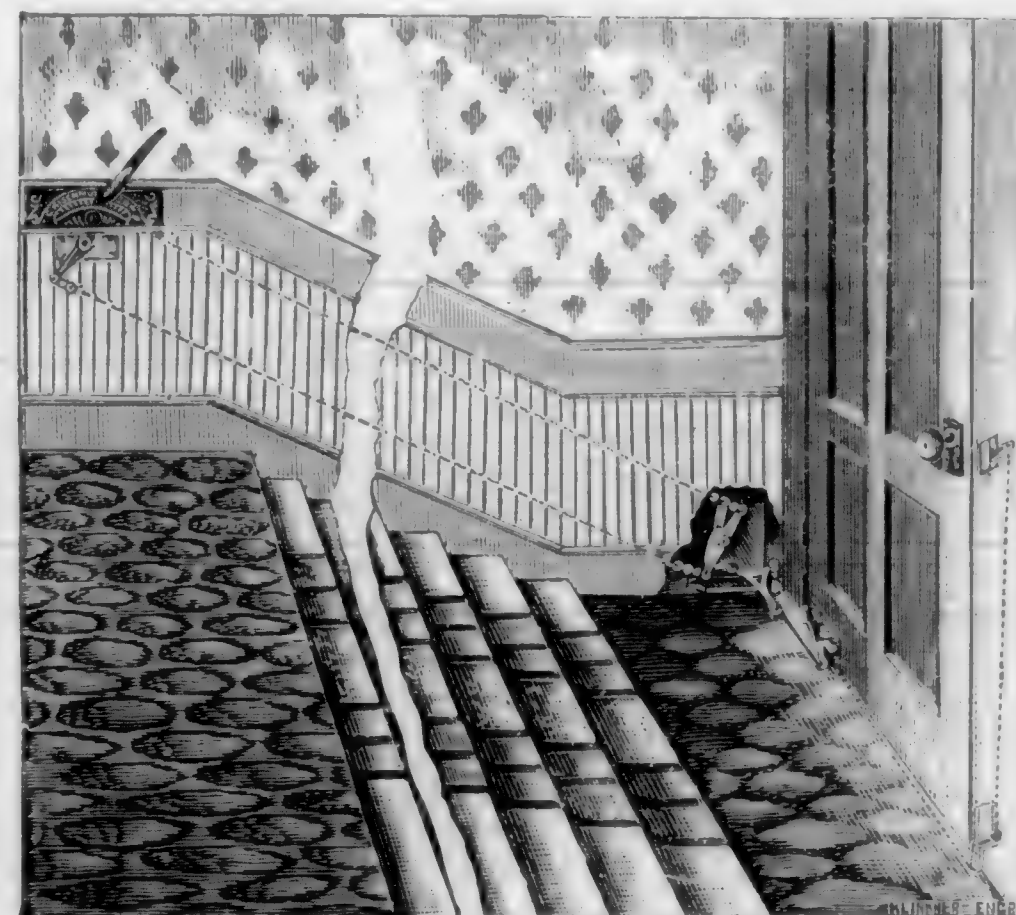
Proven to be the only one CONSTRUCTED ON CORRECT PRINCIPLES.

It is durable and far the cheapest in the end.

Orders promptly filled by

G. RISCHMULLER,

No. 3446 Nineteenth St., S. F.



THE CALIFORNIA ARCHITECT AND BUILDING NEWS

13.00 PER YEAR

PUBLISHED ABOUT THE 20TH OF EACH MONTH BY E. H. BURRELL, LESSEE, PUBLISHER. OFFICE 408 CALIFORNIA ST. SAN FRANCISCO CAL.

ESTABLISHED IN 1879 NOW IN THE NINETEENTH YEAR. INCORPORATED 1889

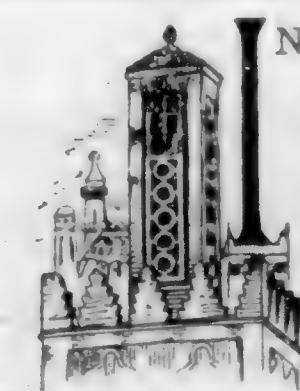
VOLUME XIX.

OCTOBER 20th, 1898.

NUMBER 10.

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

CAUTION—Pay no money to persons representing themselves to be connected with the CALIFORNIA ARCHITECT AND BUILDING NEWS unless a written authority to receipt for the same is shown and accept no receipt unless it be on our printed blanks. All Checks and Drafts are to be made payable to the order of E. H. Burrell.



IN OUR issue of the 20th of last month, we called attention to the difference between the Constitution of the State, and as it had been constructed by the Supreme Court of our State, with reference to Mechanic's Liens, and the amount for which they can be enforced, the Constitution saying that the lien should extend to the full value of the labor performed and materials furnished, while the Supreme Court have added the proviso that such amount shall not exceed as to the owner the contract price.

We stated in that issue that we would, in this, call attention to the manner in which the Constitutional provision referred to had also been departed from in practice as to the speedy and efficient enforcement of the lien. The Constitution not only intended by its provision that a man should have a lien for the full value of his labor and his materials, but that he should also have a speedy and efficient enforcement of it. It meant that he should have an "efficient"

remedy, so that his claim would not be exhausted by the expenses of collection, nor impossible of collection by being weighed at every step with impeding technicalities calculated to defeat him. And yet, it is a common thing to hear some of our Superior Judges from the bench state openly that they do not like Mechanic's Liens, and will, at every opportunity, interpose any technicality for the purpose of defeating them. Every technicality open to the conception of the human mind has been resorted to by the trial courts, for the purpose of defeating them, these Courts forgetting that they are called upon to give a most liberal construction in favor of the Mechanic's lien by reason of the fact that the right to it is a Constitutional right and that Constitutional rights are always to be looked upon with favor, instead of with disfavor.

Now, as to the speedy enforcement of the lien. After providing that the lien should be for the value of the labor done and material furnished, the Constitution says:—"the Legislature shall provide by law for the speedy and efficient en-

enforcement of such liens." The Constitution intended that there should be no "laws delays" in reference to the enforcement of such liens. In practice, however, since the adoption of the Constitution, mechanic's lien cases are about the hardest to enforce, so far as delays are concerned. A number of cases are commenced against the same party. They are finally set for trial. Then a move is made by the defendant to consolidate all of the cases. The consolidation takes place, and the cases, as consolidated, are continued from time to time, it being difficult to get all of the parties ready at the same time. Then, finally, they are tried, an appeal is taken, and another delay takes place. Neither in the Superior Court nor in the Supreme Court have the cases been set down immediately for trial; but they have had to take their places on the calendars in regular order with other cases, the Constitutional provision that they shall be speedily tried, evidently being overlooked by the Courts.

In marked contrast to this practice in reference to the foreclosure of Mechanic's Liens is the disposition made of an action for unlawful detainer. There is no provision of the Constitution as in the case of a Mechanic's Lien requiring the speedy disposition of an action of unlawful detainer, and yet the Court without any such provision, sets down for trial such actions in advance of other cases and speedily disposes of them. A laborer who has a lien against property is delayed in the enforcement of his lien, and cannot get his money secured by it for the purpose of paying his rent. The landlord, not getting his rent, brings an action of unlawful detainer. The case is at once disposed of, and the laborer is evicted for non-payment of the rent. The wealthy landlord who has no constitutional provision behind him, giving him a speedy remedy, and who is able to wait for his money, commences his action and evicts the laborer and his family, while the laborer, with the constitutional provision behind him for the speedy enforcement of his lien, is unable to get his money through its foreclosure, with which to pay his rent. This is an anomalous state of affairs.

THE BEGINNING OF A NEW EPOCH.



THE YEAR 1898 will always be distinguished as the one of all others marking the extremest limit of depression reached by the building trades in California. No great structures were either begun or ended in that year and the number of smaller buildings erected was less in proportion to the population than ever before known. The war, drought, the Klondyke all had their depressing influences but more than all other reasons combined, the drought, which decreased the general income of the State not less than \$50,000,000, and universally contracted individual resources in every direction, is directly responsible. It was a catastrophe that no business sagacity or foresight could prevent and coming after years of liquidation and low prices was an additional burden and hard to bear. It is not to be wondered therefore that architects, builders, mechanics and all kindred trades should have suffered from a period of depression quite unique in the history of the State.

It is believed, however, by men whose judgment is entitled to great consideration, that the extreme limit of business depression has passed and that future indications are

unmistakably encouraging. Besides the abundant supplies of money and decreasing rates of interest, real estate has reached a point where any change involves an increase of values. Under these conditions building interests cannot but be stimulated. The period has also arrived when a general movement is to be made in altering the old fashioned office buildings into structures that will attract tenants. The great modern structures like those erected in the last three years are absorbing all the desirable renters. Without transformation there will be no income from these old and desirably located buildings and at the first sign of improvement in business a general renovation will be in order. It is a highly encouraging indication also that most of the local architects are busy in the preparation of plans for proposed buildings to an unusual extent for this season of the year.

But it is not from these internal or local signs of improvement that lead sagacious men to believe in better times in the near future, it is thought that a great movement has begun towards this coast that will have a wonderful effect upon the future of this city and inaugurate a period of advancement such as San Francisco has never known before.

As soon as the government decides upon a definite policy for the Philippines hundreds of companies that are ready to undertake their development will be found and naturally their head-quarters will be in San Francisco. An era has begun in China that will open that populous country to new enterprises. Russia-Siberia, will soon begin to contribute to this city's trade. All these projects mean increased commerce and new lines of steamers to this port. The result cannot but be stimulating to the last degree. With this new epoch, about to begin, San Francisco cannot but expand in a remarkable degree.

DEPOPULATION OF SAN FRANCISCO.



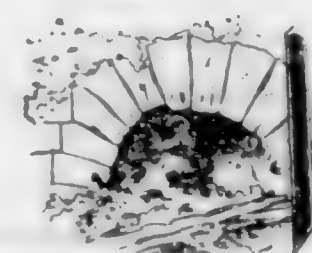
IT IS estimated by a very reputable authority that the population of San Francisco is now, not in excess of 320,000. In 1890 the census gives the number at 298,977 and if the above estimate is correct the increase for eight years is only 21,000, or considerably less than one per cent per annum, and very much below the average natural increase. While these results may be disputed it is admitted by the most sanguine that neither in commerce or population is San Francisco holding its own. This stagnation appears to be local. The Sound ports, Portland and Los Angeles are each making wonderful strides in advance while Denver has not only recovered from its exploded boom but is building with greater rapidity than ever. Even the small cities over the bay as well as upon the peninsula are making rapid and permanent progress, filling up with people who by preference would live in a city if conditions permitted.

Only San Francisco, notwithstanding its incomparable position as a maritime and commercial metropolis, gives indications of actual retrogression. Never before has the number of vacant tenements and business blocks been so great.

The Klondike exodus or the drought does not explain the general flatness of the building trades or why with the abundant supplies and low interest rates of money and with real estate lower than for many years, a reasonable degree of

activity should not prevail. The difficulty is believed to be internal altogether and a natural result following the subordination of business to politics. Taxes, out of all proportion to the benefits accruing, confront the manufacturer and drives him to other locations where the cost of living is less and business not taxed out of existence. The custom also which prevails in San Francisco, with a virulence surpassed no where else, of "nagging" corporations prevents new enterprises and drives capital away. So with the family. It is believed that San Francisco loses hundreds yearly who will not trust the lives and education of their children in schools which common report says are insanitary, overcrowded and out of repair, managed and controlled by a board of directors which is incompetent, venal and corrupt. The numbers who are driven from San Francisco to neighboring cities is too great to be regarded with indifference. There are other reasons for this wholesale abandonment of San Francisco. When the painful facts are realized perhaps some method of relief may be discovered.

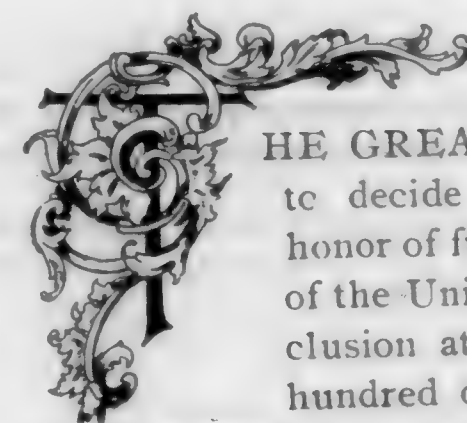
EXTENDING THE FIRE LIMITS.



IT IS said that a movement has already begun, under the auspices of the Board of Underwriters with the active cooperation of the authorities, for a considerable extension of the present restricted fire limits. How soon the change will be made, is not known, it is intimated that it will be gradual, but, it is believed that the practical inclusion of the entire city, excepting possibly the extreme borders, will be accomplished within five years.

That the movement will be opposed by that class of property owners who are indifferent to the general welfare of the city is to be expected. That a change in the fire limits so as to include all those large business sections of the Mission and Western Additions which are now beyond the present boundaries will be welcomed gladly by a large majority of the investing class is already assured. Official notice of an impending change of such great importance ought to be given as early as practicable.

THE HEARST INTERNATIONAL COMPETITION.



THE GREAT international contest of architects to decide the successful competitors for the honor of furnishing plans for the new buildings of the University of California, reached a conclusion at Antwerp on the 4th inst. Over a hundred different plans were submitted, some of them from the most accomplished architects in the world. Foreign architects were greatly interested in the contest and

the competition seems to have excited much attention all over the continent of Europe.

Of the one hundred plans submitted, eleven received the unanimous commendation of the committee of experts chosen to decide which were the most worthy. This committee consisted of Norman Shaw, R. A., London; M. Pascal, Paris; Professor Wallot, Dresden; Walter Cook, New York and J. B. Reinstein, San Francisco.

The names of those whose preliminary sketches entitle them to enter for the final competition are as follows:—

Barbaud & Bauhain of Paris; E. Benard, Paris; F. Blunschli, Zurich; D. Dexpradelles & Stephen Codman, Boston; Rudolf Dick, Vienna; J. S. Freedlander, New York; Heraud & Eichmuller, Paris; Howard & Cauldwell, New York; Howells, Stokes & Hornbostel, New York; Whitney Warren, New York.

The reward gained by each successful competitor, besides the distinction of success in such a noted contest, is in cash \$1200, and the privilege of entering into the final competition. In addition to this reward, an allowance will be made to those who desire to study the environments of the University, to defray traveling expenses to and from San Francisco. Six months are to be allowed in which to mature the preliminary sketches for the final competition. All the completed plans are then to be placed upon exhibition in this city.

Norman Shaw, the English expert is reported to be enthusiastic over the results of the competition though his predictions as to the ultimate cost of carrying out the plans is ominous of their final acceptance. He is quoted as saying that \$100,000,000 would probably be required to complete the plans, though \$20,000,000 was the sum suggested as the limit cost of constructing the University buildings.

The adoption of a harmonious plan at this time would not necessitate, of course, immediate construction, but nothing would justify saddling the future with an obligation which events and conditions might prove to be entirely impracticable—especially as at this time the University of California is but an immature child and far removed from full growth. Columbia College of New York, though the wealthiest college in the world, will expend but \$7,500,000 on its buildings and the Leland Stanford, Jr. University with an endowment of \$20,000,000, finds that \$3,000,000 invested in college structures, is entirely adequate to its needs, why then, it is asked, should California contemplate the expenditure of such an enormous sum as proposed or adopt plans for future expenditure of such dimensions? If the purpose is to out do the whole world in lavishness in providing university buildings that result might be attained but at a cost of self respect. It would neither be prudent or sagacious.

It is for this reason that a lack of practical results is feared from the great international competition and explains why California architects hesitated before embarking in an enterprise that from the nature of things, of which they were fully informed, was liable to result in no practical conclusion. The limited time allowed to formulate sketches, might have also had some influence, six months is a very brief period in which to conceive in detail a colossal group of twenty-eight large structures even for architects most fertile in ideas and rapid in execution. The time allowed appears much too contracted too plan that which may take half a century to construct.

As to the style of the selected plans it is known that, generally, they are of French school, certainly the most

admirable in the world, a school that has supplied California with some of its most eminent architects, yet to many it would be disappointing to learn that the Regents of the University of California should adopt any school so distinctly national as the French as the style in which these buildings are to be erected.

In the opinion of some thoughtful men, there are signs of the development of a new school of architecture, composite it may be, but sufficiently distinctive for our own clime and appropriate to our national life. So splendid an example of college architecture as the university buildings are expected to be will afford an opportunity for the introduction of new ideas embodying in it the traditions, hopes and ambitions of the most lavishly endowed of all the states.

ENGINEERS FOR FIRE PROTECTION.

ONE of the demands of the municipality is that all new buildings and old shall be protected against fire and that any installations contained therein shall be free from any immediate possibility of fire. Modern buildings of large size are equipped with steam and electric light machinery, fire from which could arise at any moment unless precautions are taken of a most definite character to prevent the same. In consequence of this a department of engineering new in its way has been suggested by Mr. H. L. Phillips, which will consider ways and means of protecting property from fire in any form due to the arrangement of machinery within. This is a most interesting field of investigation and worthy of serious consideration by not only professional men or engineers, but the public at large, to whom the loss by fire annually exceeds one hundred millions of dollars.

The electrician should feel particularly impressed with the necessity of putting in an installation safe in every respect and amply protected with the proper fuses and adjustment of wires from fire risk. Whenever there is a mystery attached to a fire, allusion is made to the electric light wires in the building; but in answer to this we may say that under no circumstances is a building under less risk from fire than when wired by a conscientious contractor in a manner that meets with all the requirements of the city fire underwriters.

Attention need not be especially directed towards the purely electrical portion of the work, but to the steam pipe system, boiler, position of coal supply, etc. The general arrangement of these things counts for a great deal in the eyes of insurance companies when application for insurance is made by a large concern. A casual examination of the interior of a building does not always disclose the immediate chances of fire present there. Such an examination should be backed by considerable experience and an extensive knowledge of the effects of too close a juxtaposition to materials normally safe, but which under the influence of a constant heat, vibration, etc., might change in character and give rise to a conflagration.

As the hygienic demands of city residences became more pronounced and it was necessary to discover and prevent the mischief arising from poor sanitary accommodations, a new field of engineering developed and received recognition in many of the largest universities under the name of "Sanitary

Engineering." In the same sense the necessity for a department of fire-protection engineering in some of the universities is obvious. A degree of this kind would confer upon its holder an immense amount of responsibility in the inspection of buildings and demand from him an intimate knowledge of many of the details of construction in electrical and mechanical engineering.

Mr. Phillips makes mention of the fact that "the electrical engineer must give consideration to the element of fire in arranging the lighting or power apparatus, and special rules have already been formulated regarding the installation of such an equipment. All matters of this sort, strictly speaking, come within the scope of fire-protection engineering and should be taken up in connection with it. And here we have another field for men trained in the new science."—*The Electrical Age.*



To the Editor of the California Architect and Building News.

DEAR SIR:—Your remarks in your last number as to the interpretation of the Constitution of California by the Supreme Court in regard to Mechanics' Lien Law were very timely and *apropos*.

Taking your quotation of the Constitution as correct, there cannot be any doubt whatever to any man with a mind and who understands the English language, as to the meaning and the intention of said clause. There is only one meaning to this which is self-evident—"Mechanics, material men, artisans and laborers of every class, shall have a lien upon which they have bestowed labor or furnished material for, the value of such labor done or material furnished."

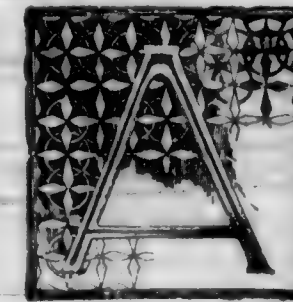
There is a moral to all this, and that is, the utter futility of putting the interpretation of Fundamental Law into the hands of men brought up to the practice of law. Six honest unprejudiced men picked up at hazard with a knowledge of the meaning of words, are more to be trusted, experience shows than the greatest jurists, whose education has been the twisting of language from its legitimate meaning.

It would be well in the matter of statute law, to have all bills introduced in the legislature passed upon at once by the Supreme Court, or other more reliable authority—before they became law; this will eliminate all that uncertainty which now prevails as to judicial decisions, continuing until the matter in dispute has gone through all the expensive process of procedure in the lower courts and final appeal to the Supreme Court—a needless waste of both time and money.

If the proposed amendment to the Constitution passes, allowing an interval between the introduction of bills in the legislature and their consideration, that interval could be used by the Supreme Court or other more reliable authority in finding out and reporting whether these bills are constitutional or not; so that no more time might be wasted on those which are declared unconstitutional.

STROLLER.

ASBESTOS CEMENT FOR FIRE-PROOFING.



AMONGST the various products for fire-proofing, the Asbestos Cement Kuhlwein, invented by Engineer A. Kuhlwein in Berlin, has attracted great attention. This asbestos cement has a fine color (about that of slate), is absolutely fire-proof and smoke-proof, and remains unchanged when exposed to heat or cold, as well as when exposed to any atmospheric conditions and changes, including that of temperature. The cement is capable of being nailed, planed, sawed or cut. It is of very light weight. It also deadens the sound, which latter capacity is by no means unimportant. It can be polished, painted or papered. The highest ministerial building and fire departments have examined and tried this product, and have recommended the use of the same.

At the great official fire trials which took place at Berlin on 9th and 11th February, 1895, where the asbestos cement doors were exposed to the highest temperature then established of 1200 to 1300 degrees C, and withstood the same, from both sides, without showing any change in shape or material, the asbestos cement Kuhlwein was accorded the diploma on account of its excellence.

Further trials were made in the year 1895 with this cement at Altona, in the yard of the fire department. For this purpose a small house had been built with it in the shape of walls, ceilings, floors, doors, columns, and also as protecting-covers of supports. The trial was extended six hours. All the different parts withstood the heat perfectly, the building was entirely sound and not damaged after the fire.

In Hamburg the same was tried in the gas house by the city authorities on the 30th of September and 1st of October. For these trials shells of asbestos cement about 4 centimeters thick were furnished, which can be put around columns and taken off again; the temperature was 1300 to 1400 degrees D. These shells protected the pillars 4 hours and 35 minutes.

This cement is used for various building purposes, and being absolutely fire and smoke-proof, as well as indifferent to the highest and lowest temperatures, also having the capacity of deadening the sound, being impervious to the influence of weather, its light weight and its adaptability to all kinds of building constructions, renders it one of the most valuable building materials.

Coverings in thickness of 1½ centimeters, and for walls or doors, etc., of 2 to 3½ centimeters, render the same fire-proof, even in case of prolonged fire. It is to be remembered that a fire-proof material should not only not burn, but it must not be injured by either fire or smoke, nor lose its strength. Asbestos Cement Kuhlwein is acknowledged the most perfect protection against fire in the form of coverings of iron constructions, as pillars and supports, for fire-proof doors, inferior walls, ceilings, fire-walls, stair-case coverings, cases and safes for documents, money, etc. Further, a protection against heat and cold, and all heating apparatus and hot-air conduits. Also a protection against noise, as for instance in buildings where gas motors are working. How indifferent and protecting against heat and cold was proved in Berlin in the former Gambrinus (now Rudesheimer) cellars, where the hot air conduit pass through the ice cellars without decreasing the heat in the hot-air conduits, nor affecting the ice in the cellars in the least degree.

The deadening of sound was proved by the covering of the motors and covering of the cellar walls and ceiling in the National Hotel, Berlin. The success was perfect, since the noise from the cellar could not be heard in the other parts of the hotel after this was done.

For the shipbuilding industry, the covering of all walls and ceilings would render it impossible that the wood fixings could be affected by fire rising on shipboard.

Doors made of Asbestos Cement Kuhlwein are far preferable to iron doors, in so far as they are fire and smoke-proof, and they do not become hot, and thus the men of the fire department can, at all times, closely approach the same. Furthermore these doors can be more easily demolished in case of necessity to get at the location of the fire. These doors have found their introduction in many of the barracks, manufactories, mills, warehouses, stables, and they are made in the most simple and most elegant shapes, so that the same can readily be used in dwellings, theatres, museums, etc., etc.

It is brought to commerce in slabs, or other shapes, in thickness of 1½ centimeters and upwards, on zinc wire netting, but also more extensively in the shape of cement powder. In the latter case it is worked as a paste, like all lime, cement and gypsum, upon the zinc wire netting, and can thus be worked by any laborer.

In order to prove the absolute fire-proofness of asbestos cement, the following trial with a safe was made at Aix La Chapelle. The filling of this safe consisted of asbestos cement only. The trial took place on the 15th of April, 1893, in the large furnaces of a local firm, and a number of engineers and experts were present. The safe was filled in the presence of these gentlemen. With papers and printed matter, such as we were handed over by some of the gentlemen present. The safe was closed and put into the furnace.

The heat in the furnace was so great that the safe had reached whiteheat after fifteen minutes. After another fifteen minutes the iron of the safe commenced to burn, emitting sprays of sparks. Then the safe was taken from the furnace, was immediately fastened to a crane and elevated as high as the crane would permit, and then dropped. The temperature of the hot safe was then decreased by applying cold water, and the safe was then opened. The door worked as easily as prior to this trial, and to the greatest astonishment of all the witnesses present the contents were well preserved and undamaged. The experts were unanimous in the opinion that the result of this test, carried to an extreme, was an excellent one and nobody of those present had believed prior to the opening of the safe that of the contents there would be anything found but ashes. The experts signed every one of the papers contained in the safe with their names and the safe itself was stamped with the stamp of the Steam Boiler Revision Association of Aix La Chapelle. The heat required for rendering wrought iron malleable is 1300 to 1400 degrees C; the burning of wrought iron takes place at 1500 to 1600 degrees C. These are, therefore, temperatures to which heretofore safes have not been exposed at any trials, nor at any conflagrations.

The Institute for Testing of Building Materials at Charlottenburg, certify that samples of this asbestos cement of an age of 28 days were exposed to a water pressure of 2 to 2½ atmospheres during three days, and no water percolated the slabs.

The chief of the fire department of Bremen, Germany, Mr. Dittmann, certified under date of September 18th, 1897, that of all materials known at the present time which served as

protection against the effects of fire, or for the fire-proof covering of iron or steel, the Asbestos Cement Kuhlewein is the best, and by far the most effective.

PROPOSED NEW CONSTITUTION FOR THE A. I. A.



THE following draft of a Revised Constitution has been unanimously adopted and recommended as a substitute for the present Constitution by the committee appointed by the President by virtue of a vote passed at the Thirty-first Annual Convention, at Detroit, September 30, 1897, and is now to be submitted for letter-ballot. The amendments to the by-laws will be brought before the convention to be held in Washington, November 1, 2, 3, 1898, for action, an outline of which prepared by the committee is appended hereto.

ALFRED STONE, Secretary.

CONSTITUTION.

ARTICLE I.—NAME.

The corporate name of this Organization shall be, "The American Institute of Architects."

ARTICLE II.—OBJECTS.

SECTION 1. The objects of this Institute are: To organize and unite in fellowship the architects of the United States of America, and to combine their efforts so as to promote the artistic, scientific and practical efficiency of the profession.

ARTICLE III.—MEMBERSHIP.

SECTION 1. The membership of the Institute shall consist of Fellows, Associates, Corresponding and Honorary members.

SEC. 2. The condition of membership shall be honorable service in the field of one of the above classes of membership, as defined in the By-Laws.

SEC. 3. The title of Fellow shall be granted for professional merit only.

ARTICLE IV.—OFFICERS.

The Officers of the Institute shall be a President, First and Second Vice-Presidents, and a Secretary, who shall also be Treasurer; all of whom shall be Fellows. There shall be a Board of Directors consisting of the four above-named officers, *ex officio*, and such additional Fellows as shall be prescribed by the By-Laws.

ARTICLE V.—ORGANIZATION.

This Institute is an association maintaining local organizations of its members known as Chapters, incorporated under the laws of the several States wherein they are established.

ARTICLE VI.—CHAPTERS.

The President and Secretary of each Chapter shall be fellows or Associates of the Institute.

Each Chapter shall hold an annual meeting and present an annual report to the Institute.

ARTICLE VII.—GOVERNMENT.

SECTION 1. The Government of the Institute shall be by Delegates from the Chapters in convention assembled, its Officers and Board of Directors.

SEC. 2. The Board of Directors may by a formal vote delegate its powers in whole or in part to an Executive Committee chosen

from its membership, stating the powers granted and a limit of time for their exercise.

SEC. 3. The Board of Directors shall annually elect a Judiciary Committee from its own membership and establish rules for its guidance. This Committee shall hear and adjudge all complaints of members against members, and its findings shall be conclusive upon all questions of fact involved in the evidence submitted. Appeal in writing may be made to the Board of Directors upon questions of professional or ethical policy. If satisfied of the existence of newly discovered evidence material to the issue, the Board may, in its discretion recommit the case to the Committee for a rehearing upon the facts; but, save as to the existence of newly discovered evidence, the Board shall have no evidence except such as may be reported to it by the Committee.

ARTICLE VIII.—MEETINGS.

The Institute shall hold an Annual Convention and such other meetings as are provided for in the By-Laws.

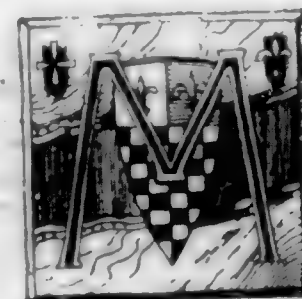
ARTICLE IX.—DEFINITION.

The term "State" throughout this Constitution and the By-Laws shall also apply to the District of Columbia and Territories.

ARTICLE X.—AMENDMENTS.

This Constitution may be added to, altered, or amended, on the written proposition of ten or more Fellows by a three-fourths vote of the delegates voting at an Annual Convention; provided three months previous notice of the proposed change shall have been sent by the Secretary to each member of the Institute and to the Secretaries of the several Chapters.

LESSON FROM FIRE AND PANIC.



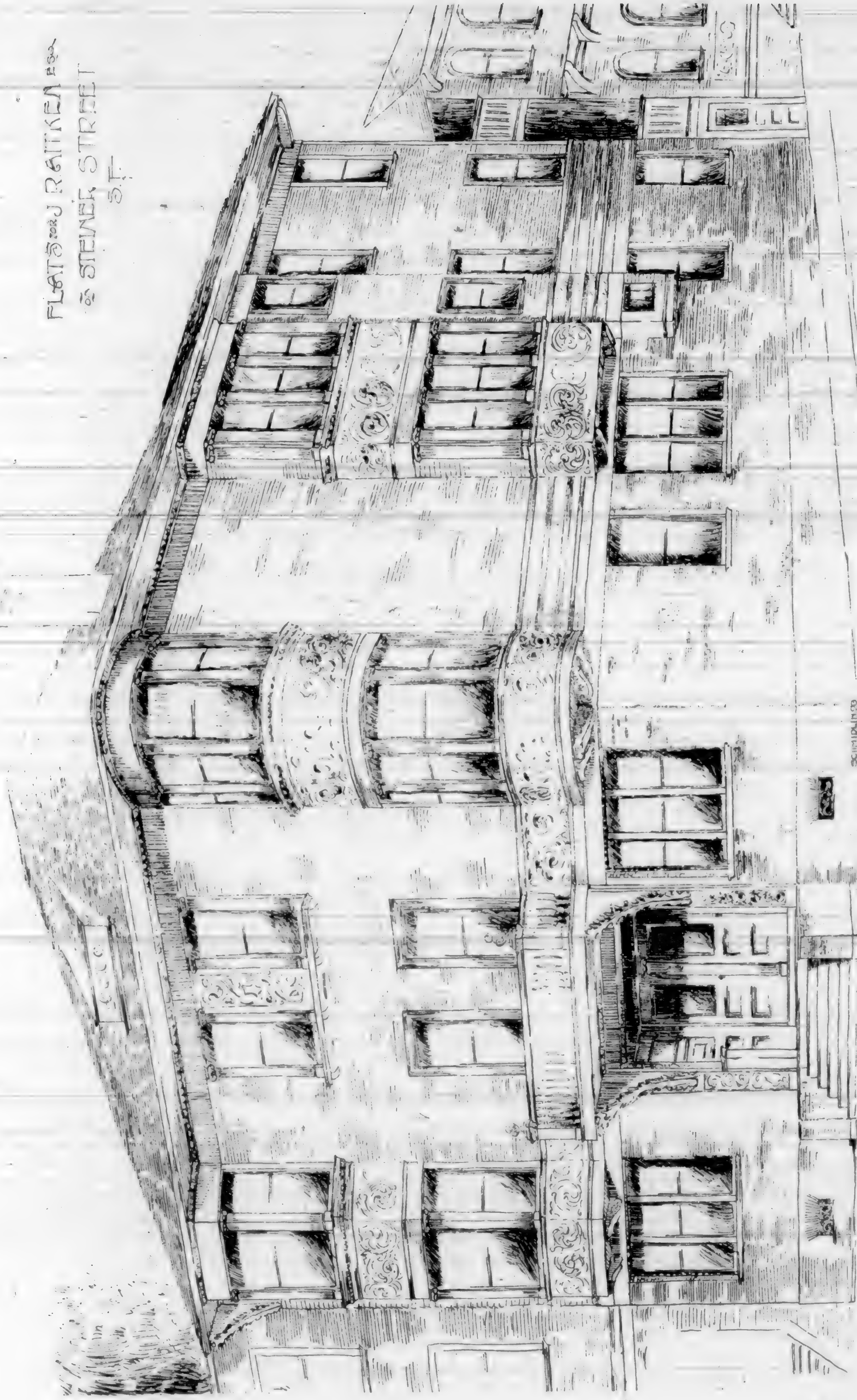
MORE important than these details of construction is the question of arrangement of buildings with the view of preventing loss of life from fire. Warned by frequent disasters, the legislature has from time to time made provision for protecting persons from sudden fire and panic, and for insuring to the inmates of certain buildings reasonable means of escape.

Examination of this kind must be thorough, for it is difficult to exhaust the possibility of mischief caused by careless workmen in old or in modern times. I have found in an old house the brickwork of a chimney breast cut away to enlarge a cupboard, a thin board being substituted, which had evidently done duty for years in that position.

And with regard to any building, the architect cannot be too cautious against assuming that reasonable care will be taken in managing it. Most houses are at times, often for a very long time, left in the hands of people without sense of responsibility. That is an additional reason for making every structural provision against the chance of a fire. The fate of Cowdray House, in Sussex, though the story is a hundred years old, contains nothing that might not now be paralleled.

The mansion, which was one of the grandest in the country, was being repaired and decorated in preparation for the owner's wedding, and it was left in the hands of caretakers and workmen. All the more valuable of its contents were temporarily stored in a gallery, and a room close to this place was selected for the carpenter's shop, the fires being closely surrounded with shavings. During the night on which all was finished, fire was observed in the workshop. The neighbors assembled. The moat was full of water,

FLATIRON BUILDING
at STEINER STREET
S.F.



M. G. BUDDEE ARCHT.
350 MARKET ST. S.F. CALIF.

VOL. XIX NO. 10 OCTOBER 1898

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY, PHOTO LITH.

RESIDENCE OF MR. H. HUDDLESTON.
WASHINGTON & SPRUCE STS., SAN FRANCISCO.
PERCY & HAMILTON, ARCHITECTS.



but nobody could find the key of the engine-house. The destruction was practically complete.

The London Building Act, 1894, provides, by Section 61, that every building over 30 feet in height used wholly or in part as a dwelling house or factory, and having a parapet, shall have a dormer window or door opening on to the roof, or a trap door with a fixed or hinged stepladder leading to the roof, or with other proper means of escape. If there happens to be no parapet there is no such provision. I venture to think that it would only be ordinary prudence to make this provision in any house or factory where there is reasonable doubt as to the means of escape by the ordinary route. Section 62 partially meets this view by requiring that any storey in the roof, the floor of which is over 60 feet above the street, shall be constructed of fire-resisting materials; and Section 63 provides that every building over 60 feet high shall have on the storeys, where the floors are over 60 feet above the street, "such means of escape in the case of fire for the persons dwelling or employed therein as can be reasonably required in the circumstances of each case." No such storeys can be occupied until the London County Council certifies that this has been done. This is new legislation, and it has now become a very important part of the duty of the Council to say what can be reasonably required in such cases.

The height of 60 feet is fixed because that is the greatest height to which a movable fire-escape will reach, and without some special provision the only means of escape from these high stories would be by descending, if that were possible, to the lower stories, and increasing the number of persons there in peril. Schemes to be applied to lofty hotels and houses more or less crowded at night have come before me in great variety, many of these very inadequate. It seems clear that the law, which leaves the occupiers of floors up to 60 feet in height to take their chance, intends that those on higher floors shall escape. They may have a gallery or an iron ladder or staircase for access to the roof of an adjoining building, or a series of ladders may be contrived that will conduct them clear of the windows of the burning building down to the ground. But 60 feet is a great height from which to expect women, children and sick persons, scantily dressed, suddenly alarmed in the night, and for the first time in their lives, to descend by an external ladder, in any weather, and probably in the dark. We may realize the condition in which people escape, from the account of a fire that happened at the Scottish mansion of the Duke of Argyll, in which praise was given to the Princess Louise for her presence of mind in running back from the garden to get stockings for the rest of the household who had rushed out barefooted. For people in that condition steep ladders with ordinary rungs are useless. They must be of tolerably good slope, have flat treads and hand rails and there must be suitable protection where necessary against falling into areas or through skylights. The escape door must have such fastenings only as can be easily opened from within. It must be easily found by night, and the bottom of the escape must be in some open space quite clear of danger. But whether the escape delivers to the ground or on to some willing neighbor's roof, there is risk that it will be made use of by burglars and by inmates of both premises for improper purposes.

If a separate staircase leading down to a separate door of exit is provided in the building, it will very likely be allowed to go out of use, and will be turned into a store place for lumber. On the other hand, if the construction of dwell-

ing rooms above the 60 feet limit is of very great consequence, the owner may reasonably be required to make and keep up such arrangements, however costly, as will be really efficient.

By the 74th Section of the London Building Act, when a building over 1,000 feet in area is used in part for purpose of trade and manufacture and in part as a dwelling house, the two parts must be separated by walls and floors of fire-resisting materials, and all means of approach to the dwelling house portion must be constructed throughout of fire-resisting material. But the walls of staircases and passages may have openings fitted with fire-resisting doors to communicate between the two portions, for which purpose hard wood two inches thick is reckoned fire-resisting. For staircases hard wood two inches thick is also permitted, and good concrete when filled in between the joists of floors is fire-resisting.

It will be observed that the term "fire-resisting" is used and not "fire-proof." The construction must not add fuel to the fire, but resist it for at least a considerable time, during which the inmates of a building may escape and fire appliances be brought to bear. If the contents of the room or even of the building cannot be saved, so much the worse for the owner or the insurance company; but the fire should rarely extend to the adjoining apartment on either side or to a storey above or below, and the smoke should be kept from staircases and passages. This means giving to adjoining sections of a house as nearly as practicable the same protection against each other as a good party-wall affords to the inhabitants by an adjoining house.

To be continued.

BOOKS AND PERIODICALS

BUILDING CONSTRUCTION AND SUPERINTENDENCE by F. E. Kidd, Fellow A. I. A., is a work highly esteemed by architects and invaluable to the builder. Part II devoted to Carpenter work has just been issued and is fully equal in practical value to Part I which treated of masonry and its details. Numerous engravings adorn the work.

The complete novel in the November issue of LIPPINCOTT'S, "A Triple Entanglement," by Mrs. Burton Harrison, has its scenes mainly in Spain and England. The hero is an American, whose course of true love does not by any means run smooth, but leads him into a safe harbor at last. The tale is one of this favorite author's best, and perhaps the longest which has ever appeared in LIPPINCOTT'S the rest of the short stories are more than interesting.

STOCKHOLDERS' MEETING.

AT a meeting of the Stockholders of the Western Expanded Metal Fireproofing Company held at their offices in the Claus Spreckels Building, October 6, 1898. The following officers and directors were re-elected for the ensuing year:—D. H. Garrison, Jr., President; Chas. F. Runyon, Vice-president; S. W. Backus, Secretary; Nathan L. Bell, Manager; Chas. F. Kinsman.

PURE WATER IN CITIES.

WATER from wells dug within the limits of a city is always to be looked upon with suspicion, even when its smell is sweet and its taste good.

Those who have had experience in such matters can vouch for the fact that such dug wells may become the receptacles of all sorts of foreign bodies, while neither the taste nor the

topped over into the well and was drowned, whereupon it was determined to draw out all the water and clean the well thoroughly. There had been no cleaning for years, and the kitten's death was seized upon as a good excuse for having one. The water was accordingly drawn off and a man sent down to scrape the bottom of the well. In the first bucketful he sent up were discovered the remains of three toads, a dead cat, and the sleeves of an old shirt in which had been



THE YOUNG BUILDING—MARKET AND SPEAR STREETS.
KENITZER & BARTH, ARCHITECTS.

smell of the water, may be affected. Binghamton, N. Y., has recently furnished a case in point. One of its citizens had a dug well of some fifty feet deep, the purity of whose water was noised abroad all over the neighborhood. Being of a liberal disposition, he allowed all who had a mind so to do to supply themselves freely. They readily availed themselves of his offer during the past summer, when the city water had a pretty nasty taste—though, as the small amount of sickness in Binghamton during the hot months proved, it was by no means unwholesome. It fell upon a day—and a very recent day at that—however, that a sportive kitten

was tied up and consigned to a watery grave, no less than six small kittens! In the next bucket which was hauled up, was a peck of earth worms such as are called "nightwalkers" by fishermen. They were all dead! This was the last straw. The owner of the well, convinced that his well (as is commonly the case in cities) has been used as a dumping place for dead animals, refused to try any further experiments in the cleaning line, and instead, had his much-vaunted well filled up and rendered useless for the future. He now drinks the city water which he once so contemptuously despised.—*Fire and Water.*

FLOOR TESTS AT THE YOUNG BUILDING.



DISTINGUISHING feature of the architectural profession of the Pacific Coast is its prompt recognition and generous encouragement of local enterprises when established on a basis that entitles it to confidence. This is especially true at the present time when the remarkable advancement in the methods of building construction creates a demand for new devices whereby the maximum of efficiency and strength is attained and valuable space economized.

The Western Expanded Metal and Fireproofing Company affords a conspicuous instance of the alacrity with which our architects adopt new and meritorious ideas and the immense demand which has followed the introduction of the productions of the company indicate, more than words can describe, the confidence entertained by builders in their adaptability to structures of every class.

The five-story, steel frame, brick and stone building situated on the corner of Market and Spear streets, and owned by Wm. W. Young, Esq., is one of the latest of considerable magnitude that is fireproofed throughout with expanded metal floors and laths and offered a first class opportunity for a scientific and convincing test of the real merits of the inventions. The test was made on Monday, October 5th, in the presence of several architects of eminence, a number of first-class builders, the owner and many interested spectators, under the supervision of all the officers of the company.

The test was as follows:

San Francisco, Cal., Oct. 25, 1898.

Office of Kenitzer & Barth,
601 California St.

Description of test of an arch constructed by the Western Expanded Metal & Fireproofing Company in building S. W. cor. Market and Spear streets.

Span of arch 16 ft. from centre of bearing. Steel straps 3"x5" placed 4 ft. on centers. Thickness of concrete 4 inches with No. 16 expanded metal 2 1/2" mesh at bottom of arch. The concrete for arch is made of the following proportions: 5 parts of cinders, two parts of sand and one part of Jossan Portland Cement.

A uniform load of 500 lbs. per square foot was applied over an area extending from center to center of straps and between flanges of the supporting beams—equal to an area of 60 square feet and a uniformly distributed load of 30,000 lbs. The supporting beams were previously propped up so as to guard against their deflection.

The loading was effected by means of bricks, each brick weighing 6.2 lbs. With a load of 200 lbs. per square foot uniformly distributed, the deflection of arch at the center registered 7/8 of an inch, with 287 lbs., nearly 1/4 of an inch, with 350 lbs. it deflected 5-16 of an inch, with 450 lbs., 7-16 of an inch.

The loading was then discontinued and allowed to remain on over night. On examination the following morning, it was found that the deflection had not increased. Loading

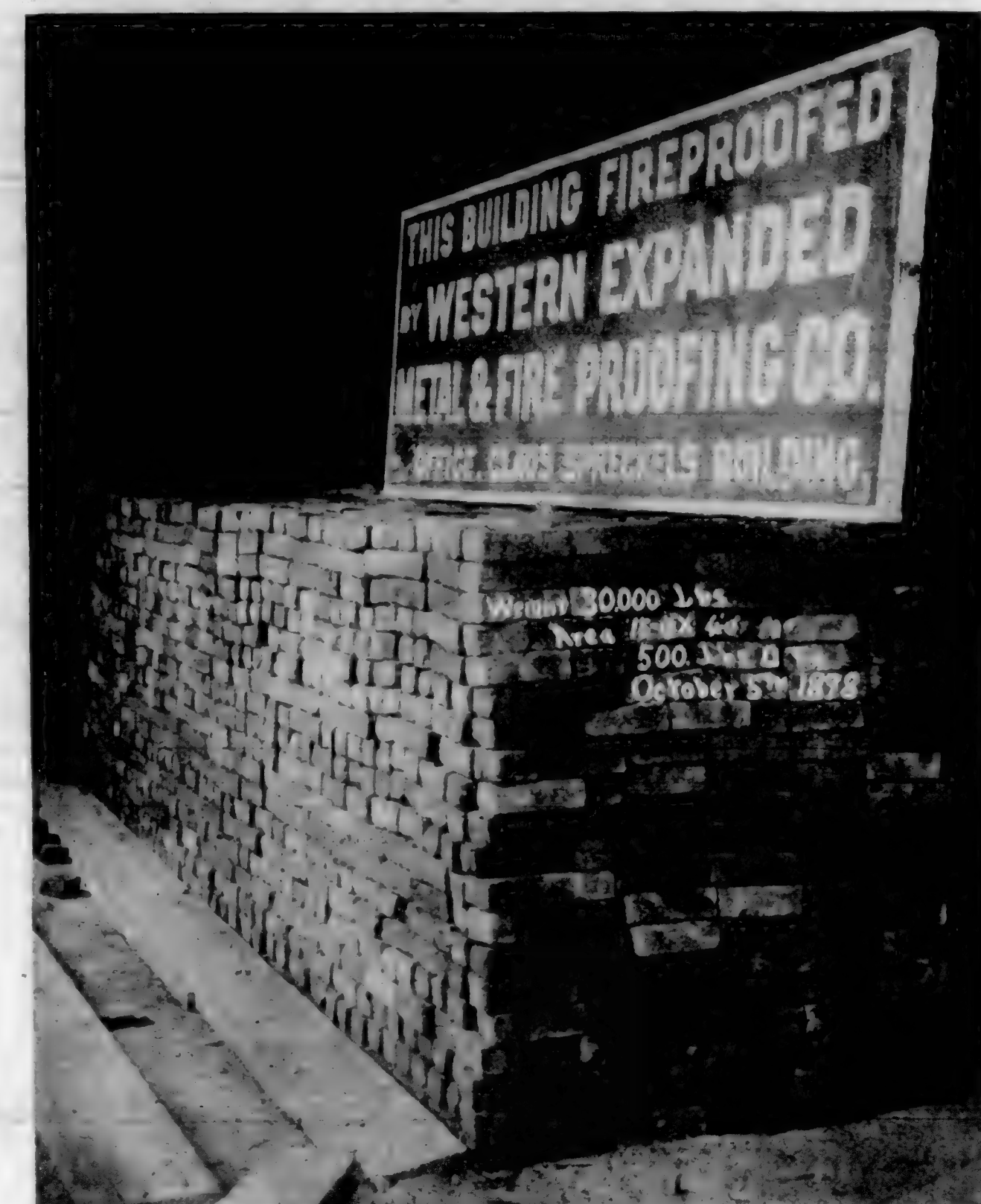
was then resumed until 500 lbs. per square foot was reached, the total deflection then registered 1/2 of an inch. The load remained on for two hours with no increase in deflection.

On removing the load in the same manner as it had been deposited, the deflection diminished exactly corresponding to the deflection as it had been caused by loading the arch and at the time all the load was removed, the arch had straightened to its original position. It remains to be stated, that the concrete of which said arch is composed, was only six weeks old at the time of testing.

Respectfully,
KENITZER & BARTH.

It is but fair to admit that all the gentlemen present were amazed at the solidity and elasticity shown by the floor under the exacting conditions.

It is not surprising therefore that the company reports so rapid an expansion of its prosperous business and that it is



being intrusted, in a constantly increasing degree with the interior construction of most of our largest buildings. The great ferry building is a monument of the excellence of its methods which were adopted by the State Harbor Commissioners after the most searching investigation and the new San Francisco Hall of Justice, when completed, will be another instance. Neither is the list of great buildings the company has undertaken complete, that does not include many in Los Angeles, Pasadena—notably the Green Hotel Annex, and others of the larger cities of the State.

Not only for economy in weight of material is the expanded metal and fireproofing distinguished but for a sensible amount of remarkable space saved by their use.

Moreover, it should not be forgotten, the Western Expanded Metal and Fireproofing Company is a local industry, owned, controlled and managed by San Francisco men. The factory is at Third and Townsend streets and interested parties are invited to call and inspect it.

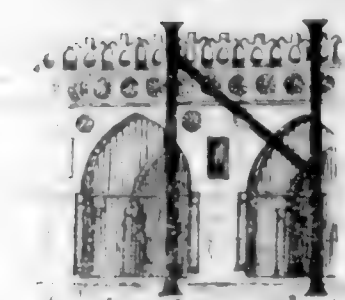
In the advancing prosperity of San Francisco, the company will be a large factor in the new era of scientific reconstruction which is about to dawn.

KEELY MOTOR UP-TO-DATE.

PROCEEDINGS OF ENGINEERS' CLUB OF PHILADELPHIA

BY R. J. SCOTT, ACTIVE MEMBER.

(CONTINUED FROM LAST NUMBER)



OW, as to the electrical features of the vibrodyne. Assuming that the compressed air flowing through the tube performed the office only of a starter, that it produced the conditions in the machine necessary to allow a more potent force to act, what force was applied by its action? The construction of the machine points directly to electricity acting through magnetism. If Professor Lascelles-Scott took the apparatus apart, he must have discovered the mode of its operation. The unnecessarily heavy parts of the machine afforded every opportunity for the concealment of the small wires necessary for the power developed, or the bolts which run down through the floor to hold down the iron foundation could have served as conductors. It was an easy matter to bring a current to electro-magnets concealed in the mine interior disks, and no great amount of ingenuity would be required to construct a switch, operated upon both by the compressed air and magnetism, which would cut the magnet into or out of circuit at the proper time to attract the armature on the end of each revolving spoke. Had there been nine spokes as well as nine opposing disks, the wheel would have got on a dead-center, and could not always have been started; but with only eight spokes there were always some in a position to receive a magnetic pull before the magnets were cut out of circuit by the opposing disks being exactly opposite each other. The evidence of design here is sufficiently strong to warrant the conclusion that the wheel is operated by electro-magnets. Apergy would not have required this arrangement.

Keely said to the writer that the hub of the wheel was loose on the axle, and that when running at a high rate of speed he could knock out the axle and the wheel would continue to turn in space. Such an exhibition would have been interesting, and would have convinced the writer that the force was not magnetism, which was the chief object of the exhibition, but he did not do it, nor did he offer to do many other things which he spoke of as being easy, and which would have astonished the investigators.

It was decided on the occasion of the second visit by both of the investigators, that magnetism had nothing to do with the jar experiment, as the motion of the bodies was uniform, which it would not have been if actuated by a magnet. The theory of a tube made every thing plain, and Mr. Burk has had constructed a jar which he used in explaining the phenomenon before the Spring Garden Institute last winter, using an air pump for the transmitter.

Within half an hour after the close of the last visit, Mrs. Moore called on the writer at his residence to learn of him his conclusions. He explained to her fully the use of the platinum tube, and advised her to have the experiment repeated and convince herself of the fact by taking a pair of

pincers and pressing the sides of the tube together, when the revolving wheel would stop; or to cut for herself a section from the middle of the supposed wire while the machine was in action and examine it. She consented to have the experiment repeated in her presence and permit the writer to make the cut, but he told her she could never persuade Keely to repeat the experiment for such a purpose. She was more than half convinced, but afterwards saw the Professor and asked him to see the writer on this subject.

The English scientist came the same evening, and for four hours the events of the day were discussed. He gave an account of his investigations in vibratory physics, and particularly in reference to the simultaneous explosions of two or more powder mills situated at considerable distances apart, the result of vibration; and considered the phenomenon analogous to some of Keely's experiments. Criticisms by the writer on Keely's work, and inquiries as to the discoveries the Professor had made, led up to the Professor's part in the preparation of the second jar, the one used in the experiments of that day. He told of his care in procuring the distilled water, and in obtaining the exact weight of the globe and disk, which were placed in the jar. When asked if he personally placed the weights in the jar or saw them placed there, and saw the jar sealed, he admitted that he did not, but that Keely did this himself. He was asked, "Do I understand that you, a professional expert in physics, would trust to the man you are investigating to do these things, and then have the conscience to make a report to your employer of the result of such an investigation?" He mildly admitted that it would have been better to be present.

Likewise when the platinum tube was mentioned, he stoutly denied that it was a tube, saying that he had several samples of the platinum wire and knew it to be solid. He had taken samples of almost everything he had investigated. When asked where he got his samples and whether he had cut them from wires he had seen used in the experiments, he said he had taken them from a reel of the wire.

The Professor agreed with the writer that the best way to prove or disprove the use of the tube would be to have the experiments repeated and allow the writer to show the character of the wire employed. The writer told the Professor that Keely would never make such an exhibition under those conditions. The Professor visited Keely the next day, Sunday, and on the following day informed Mrs. Moore that Keely had declined point blank to repeat the experiments, "just as I was told he would do," he added. He suggested to her the absolute necessity of Keely doing this in his own best interest. Keely could not, however, be induced to do so. The Professor left the city at once, and under the circumstances, as he explained, thought it best not to appear a second time before the Franklin Institute.

The explanation here given is not, of course, a complete explanation of all that is to be seen in Keely's laboratory. Indeed it would take more than four visits to look over, which is all that was permitted, the apparatus which was accumulated in a quarter of a century. It is enough, however, to show that nothing was shown in motion which required a force to move it which is not already known. The manner of the use of such forces, as used in these experiments, would probably, in the minds of most people, throw a doubt upon the probability of Keely's knowledge of any more mysterious force.

THE END.

DUNHAM, CARRIGAN & HAYDEN CO.

17 and 19 BEALE ST., San Francisco Cal.

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

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

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

NOISELESS—The operation is noiseless and extremely easy.

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

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

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

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

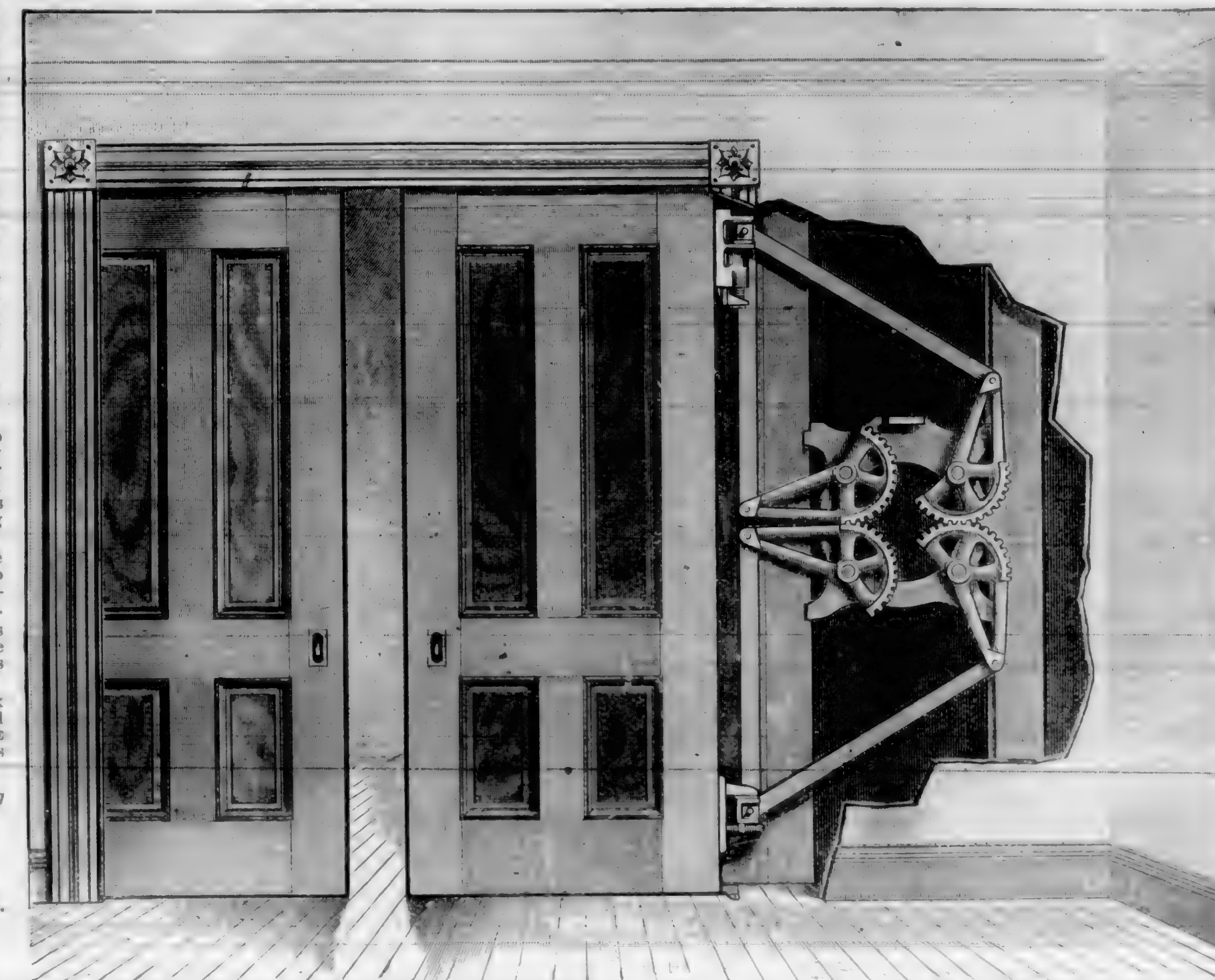
See a full size working model at our store.

WE SELL

The Yale & Towne Mfg Co.

CELEBRATED

YALE LOCKS.



W. & P. SHINGLE STAINS

In soft and pleasing tints.
Of highest grades of material.

SPECIALY ADAPTED TO REDWOOD. PACIFIC COAST PRODUCT.
PACIFIC REFINING & ROOFING CO.

113 NEW MONTGOMERY STREET, S. F.

Sample Tablets on Application.

Sold by Dealers.

723 MARKET ST.
San Francisco, Cal.

SMITH & YOUNG

BUILDING SUPPLIES

OUR SPECIALTIES:

230 1/2 S. SPRING ST.
Los Angeles, Cal.

FOUNDATION AND WALLS	INTERIOR FINISH	EXTERIOR FINISH
Marble. Georgia White, Southern Marble Co Serpentine. Fire and Electric Proof Sandstone. (BUFF) GOODRICH QUARRY Joist Hangers. GOETZ PATENT Forged Wrought Iron Lath. SHEET STEEL Painted and Unpainted WIRE LATH. G. & B. System Mortar Stain. PECORA For coloring mortar, cement, and sand finish Paper. (BUILDING) S & Y BRANDS Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19. Wall Ties. MORSE'S PATENT	McDonough Weather Strips. Acts as a stop and prevents window from rattling. Alpine Cement Plaster. For brown and white coat Porcelite Enamel Paint. Does not craze or crack Oils. S & Y Pure LINSEED Triple Boiled, Raw and Varnish Varnish. S & Y TRANSPARENT Filler. S & Y LIQUID AND PASTE Deadening Felt. S & Y BRANDS 1, 1 1/2 and 2 lbs. per sq. yd. Ornaments. PRESSED WOOD Casing Blocks. Corner, head, center and base blocks Carvings. (WOOD)	Ceiling. [STEEL CEILING] Chimney Hood. CLAWSON'S PATENT To prevent smoky fire-places, and increase heat. Mouldings. TURNED, CARVED AND PRESSED Shingle Stains. DEXTER BROS. PERMANENT COLORS. A PERFECT PRESERVATIVE. Send for Samples. Paints. S & Y EXTRA QUALITY "GRAPHITE" For metal and wood MIXED ROOFING AND HOUSE PAINTS
		Roofing. Slate, Mastie and Steel "Ready-Rock" Asphalt Roofing. Strongest and most durable roofing in the market. Easily applied. Roofing Cement. S & Y BRAND For repairing leaks about chimneys, sky lights, copings and old tin and shingle roofs. OTHER SPECIALTIES Insusorial Earth. Fire proof. Used for boiler and pipe covering Soapstone. CRUDE, GROUND AND BOLTED Mineral Wool. For fireproofing and deadening

CHAS. J. WATERHOUSE

BOX 78 BUILDERS' EXCHANGE. PHONE BLACK 1807. BOX 132 BUILDERS' ASS'N.

OFFICE 421 MARKET STREET, S. F.

DEALER IN

RELIABLE BUILDING MATERIALS

ART MOULDINGS

SAMUEL CABOT'S

CREOSOTE SHINGLE AND RUSTIC STAINS
SHEATHING AND DEAFENING QUILT—
MORTAR STAIN PULPS—BRICK PRESERVATIVE

N. & G. TAYLOR CO.'S

"OLD STYLE" ROOFING TIN
"THE TAYLOR ROOFING TIN"
"COLUMBIA ROOFING TIN"

THE VAN DORN IRON WORKS CO.'S

VAN DÖRN STEEL JOIST HANGER

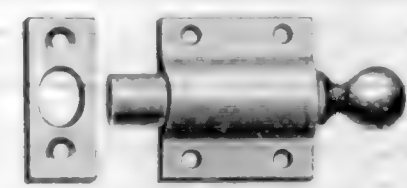
ALL ABOVE GOODS ALWAYS IN STOCK.

ALSO SELL FROM THE EAST FOR

THE E. T. BURROWES CO.
Window and Door Screens.

HUTTIG BROS. M'FG CO.
Hardwood Interior Finish.

WASHINGTON SLATE CO.
Roofing and Blackboard Slates

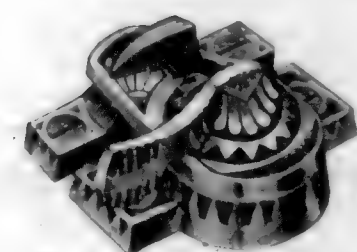


IVES PATENT

Window Hardware Specialties

Leaders with Architects and the Trade
Thirty page Catalogue mailed free.

HOBART B. IVES & CO,
New Haven, Conn., U. S. A.



The "LINCOLN" LAUNDRY TUBS and SINKS

They are made of	selected clays
glazed in light yellow, and more durable	seamless, non-absorbent than iron.

GLADDING, McBEAN & CO.
1358 - 1360 Market St.
San Francisco.



STOWELL

Mfg. & Fdy. Co.
South Milwaukee, Wis.

CAMPBELL & PETTUS.

CONTRACTORS.

Office, Builders' Exchange, San Francisco.

MEMBERS OF THE BUILDERS' EXCHANGE.

CORNER NEW MONTGOMERY AND MISSION STREETS.

S. H. Kent, President.		Box No.	
Gus V. Daniels, Vice-Pres.	Jas. A. Wilson, Sec.		
Edw. B. Hinde, Treasurer.			
DIRECTORS:			
S. H. Kent,	John Tuttle,		
Jas. A. Wilson,	Ging V. Daniels,		
Edw. B. Hinde,	D. McPhree,		
Thos. Elmh,	R. Herring,		
E. L. Snell,	Edw. B. Hinde,		
J. R. Tobin.			
COMMITTEES:			
ROOMS.		Thos. Elmh,	
J. R. Tobin			
MEMBERSHIP.			
E. B. Hinde,	T. McIncham,	G. V. Daniels	
ART. ARBITRATION.			
Jas. A. Wilson,	D. McPhree,	Gus V. Daniels	
FINANCE.			
E. L. Snell,	Gus V. Daniels,	D. McPhree	
Box No.			
Abrahamson, P. patent ventilators.	123		
Adams, John G. contractor and builder.	120		
Alameda Brick & Tile Co. brick.	150		
Alameda Portland Cement Co. building.	150		
Bass-Huter Paint Co. paints, oils and varnishes.	136		
Bateman Bros. contractors and builders.	206		
Beck, Adam; mason.	10		
Bennett, Wm. contractor and bu ider.	10		
Bibb Lumber Co. D. H.	10		
Bellingham Bay Lumber Co. lumber.	21		
Bennett, Wm. contractor and bu ider.	10		
Brady, M. V. mason and builder.	34		
Brady, O. E. mason and builder.	300		
Brennen, D. J.; mason and builder.	159		
Brown, James plasters.	159		
Britt, James E. plumber.	36		
Brown, R.; iron works.	20		
Garwood, W. C. mason and builder.	10		
Burnham, Stanford Co. planing mill.	10		
Burrell, E. H.; building material.	10		
Burt, V. J.; home mason and builder.	10		
Buller, Wm. A. mason and builder.	25		
California Art Glass Works.	65		
California Electrical Works.	120		
California Milk planing mills.	10		
Campbell, Alex L. contractor and builder.	105		
Carey, J. R.; brick manufacturer.	202		
Cargill and Co.; teaming.	10		
Central Lumber & Mill Co.; lumber and planing mill.	10		
Chemical Paint Co.	317		
Chisholm, C.; contractor and builder.	44		
Clark, S. & Son; terra cotta.	10		
Clark, S. & Son; terra cotta.	10		
Cognlan, Frank; plasterer.	91		
Collin & Gunn; lathers.	114		
Conley, Wm. contractor and builder.	10		
Conlin & Roberts; mill roofers.	10		
Coppeters & Mockett; grill work.	10		
Cowell, H. C.; time, cement and brick.	7		
Crichton, Peter; contractor and builder.	50		
Crocker, Wm.; planing mill.	12		
Cronan, Wm.; Seattle Sheet Metal Works.	313		
Crook, Donald; contractor and builder.	10		
Curtis, Robert; contractor and builder.	143		
Cushing-Wetmore Co.; concrete and artificial stone.	218		
Curry, J. M.; stone dealer.	25		
Daniels, Gus. V.; painter and decorator.	10		
Davis, E.; plasterer.	10		
Davis, Geo. & Son; house movers.	203		
Davis, Geo. H. & Son; contractors and builders.	203		
Deagan, Patrick; stone contractor.	306		
Dillon, David; teamster and contractor.	139		
Donovan, M. J.; painter.	10		
Donovan, Wm.; mason and builder.	10		
Dunham, (Arrigan & Hayden Co.); hardware.	10		
Dunlop, Chas.; plasterer.	10		
Dyer, B. L.; painter and decorator.	10		
Dyer, B. L.; Golden West Iron Works.	10		
Elam, & Knowles, carpenters and builders.	202		
Excelsior Mill Co.	10		
Fenly, M. J.; contractor and builder.	180		
Fennell, M. & Son; masons and builders.	50		
Felt, Wm. J.; contractor and builder.	50		
Felt, W. J. & Co.	50		
Flanagan, L. G.; lime and cement.	53		
Foley, Michael; grading and teaming.	294		
Forreder Cornice Works; patent sky lights, roof-	10		
ing, etc.	164		
Fortin Brick Co.	10		
Frazier, J. P.; painter and decorator.	10		
Fuller, W. P. & Co.; paints, oils and glass.	132		
Furness, John; contractor and builder.	132		
Gardner, C. M.; Marble, Staining Mills.	10		
Gilletti, Secondo; artificial stone.	308		
Gilchley, Geo.; teaming.	324		
Gladwin & Edwards; iron and steel.	10		
Gladwin, McLean & Co.; architectural terra cotta.	162		
Golden West Iron Works, Dyer Bros.	10		
Goodman, Geo.; artificial stone, etc.	384		
Gray, J. C.; stone grading.	10		
Gray Bros.; artificial stone and concrete work.	10		
Griesse, Carl; artificial stone and concrete work.	231		
Heald, Philip; mason and builder.	10		
Hanson, A.; planing mill.	3		
Hanson, P. L.; contractor and builder.	108		
Hansen, M. & Co.; planing mill.	10		
Harrison Lumber Co.; lumber.	10		
Harris & Jones, Lumber Dealers.	10		
Haustein, H.; tiles.	82		
Heidrich, J. C.; brick.	10		
Hendel, Ed. F. & Co.; electricians.	375		</

TEL. DRUM 80

W. HEIDT

FORMERLY OF

FORDERER CORNICE WORKS

ARCHITECTURAL SHEET METAL WORKS*Metal Tile and Slate Roofing. Patented Ventilated Skylights and Spanish Tile*

224-226 MISSION STREET, SAN FRANCISCO

JOBGING PROMPTLY ATTENDED TO

50 YEARS' EXPERIENCE
PATENTS

TRADE MARKS

DESIGNS

COPYRIGHTS &c.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

Scientific American.

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms: \$3 a year; four months, \$1. Sold by all newsdealers.

MUNN & Co. 361 Broadway, New York

Branch Office, 625 F St., Washington, D. C.

GEORGE GOODMAN,

PATENTEE AND MANUFACTURER OF

ARTIFICIAL STONE, IN ALL OF ITS BRANCHES.

(SCHILLINGER'S PATENT.)

SIDEWALK AND GARDEN WALK A SPECIALTY.

307 MONTGOMERY STREET,

NEVADA BLOCK, SAN FRANCISCO.

BUILDING NEWS.**OAKLAND**

Adams Point Property, lots 6 and 7 block 5. To build: o. Alexander Young; a. Perry & Hamilton; c. W. P. and R. M. Veitch; signed, Oct. 13; filed, Oct. 15; cost \$2000.

Broadway and Moss Ave. Work except heating, ventilating, etc. for Dottie Cook Annex to Fabiola Hospital; o. Mrs. H. E. Cook; a. D. F. Oliver; c. I. & H. Bingham; signed, Oct. 13; filed, Oct. 20; cost \$2757.

Block 64, lots 19 to 24. To build: o. S. Ringolsky; c. Chas. A. Doss; signed, Sept. 25; filed, Oct. 3; cost \$2540.

St. Charles and Louisa St. To build: o. Marie Farthman; a. G. A. Wright; c. Knox & Cook; signed, Sept. 10; filed, Sept. 16; cost \$2300.

Albion near Telegraph Ave. Two-story frame; o. Cynthia C. N. Walter; a. John Laughland; c. E. P. McGowan; signed, Sept. 14; filed, Sept. 15; cost \$2100.

Market and 10th. All work except plumbing, painting, etc. o. Charles Camden; a. Charles Mau; c. D. McLeod; signed, Sept. 17; filed, Sept. 27; cost \$1800.

Fifteenth and Castro. Alterations and additions; o. William Quintana; a. W. Smith; c. Ben J. Johnson; signed, Sept. 23; filed, Sept. 24; cost \$1025.

Claremont Ave. To build: o. C. J. Anderson; c. C. A. Henderson; cost \$2250.

Harrison near Durant. To build: c. Geo. Lydskov; cost \$1500.

OAKLAND

East 16th near 3d Ave. To build: o. A. J. Wilson; a. Cunningham Bros; c. A. T. Spence; cost \$3551.

PALO ALTO

Building in connection with Stanford University; o. Mrs. Jane Stanford; a. Percy and Hamilton; c. Thomas and Charles Demicheli and William Schurr; cost \$13,208.

AUBURN

Business block—Anderson Bros building a two-story house to cost \$2700 and Burt and Lecher will build a ware house of corrugated iron 50x100, architect A. D. Fellows.

S. P. Co. will build an over head high way crossing 100 feet long on Colfax Ave.

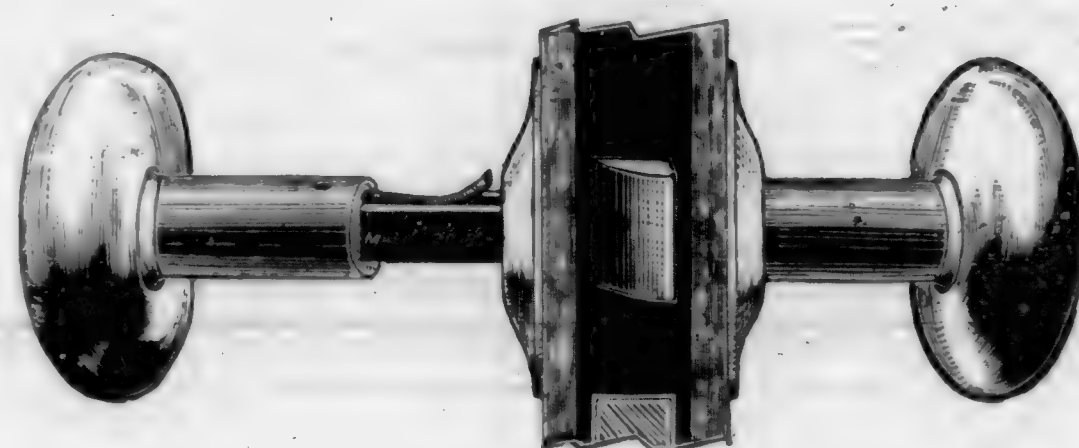
John Davis is building himself a cottage, cost \$1200. Much repairing and fixing for winter.

STOCKTON

Frank S. Boggs has just let the contract for the erection of his residence on east Magnolia street according to the plans and under the supervision of housing a d Lemme, architects; which will cost complete \$4200. The design will be of the English "Manor House."

Contractors are bidding upon a two-story brick building 50x30' for the W. C. T. U; which is to have a handsome front of Roman brick, etc. it will be erected on California street near Weber Ave. Geo. Rushforth is the architect.

The "Christian Church" of Stockton have selected the designs for a new church submitted by Geo. Rushforth, architect; and its erection will be commenced as soon as bids can be received. It will be located on the corner of California and Lindsay streets.

SPECIFY**THE WEATHERWAX****Patent Screwless Door Knob.****THE Rapid Safety Filter**Is in use in San Francisco in all the leading Hotels, Schools, Stores, Saloons, Restaurants and **THOUSANDS** of Private Residences, including those of the leading **PHYSICIANS**, who endorse and recommend its general use.

No charge for fitting. Kept in order and cleaned by the Company. Leased only.

Terms \$1.50 per month for private residences. Office and Show Room.

1209 MARKET ST., near Eight.

RUBEN H. LLOYD,
President.W. D. MANSFIELD,
Secretary.**P. H. JACKSON & CO**

Contractors for

Wrought Iron Building Work**Sidewalk Lights, Floor Lights****Fire and Burglar-Proof Arched and Flat Sky Lights****Patent Water-Proof Sidewalk Doors****Basement Ventilators, Etc.**

228 and 230 First Street, 7 and 9 Tehama Street

SAN FRANCISCO.

WM. BATEMAN,
MANUFACTURER OF**Wood Mantels, Interior Finish, Inlaid Floors,**

Banks, Offices, Stores and Steamboats Fitted Up

411 MISSION ST., Bet. 1st and Fremont.

SAN FRANCISCO, CAL.

House of A. W. Pooley, Millwood, Cal.,
H. A. Klyce, Architect, Eastland.**Cabot's Creosote Shingle Stains.**

The Original and Standard Shingle Stains—and the only Creosote Stains.

Cabot's Insulating and Deafening 'Quilt'

A soft, elastic cushion of dead air spaces. The perfect sound deadener.

Mortar Colors and Brick Preservative.

For mortar staining and waterproofing brickwork.

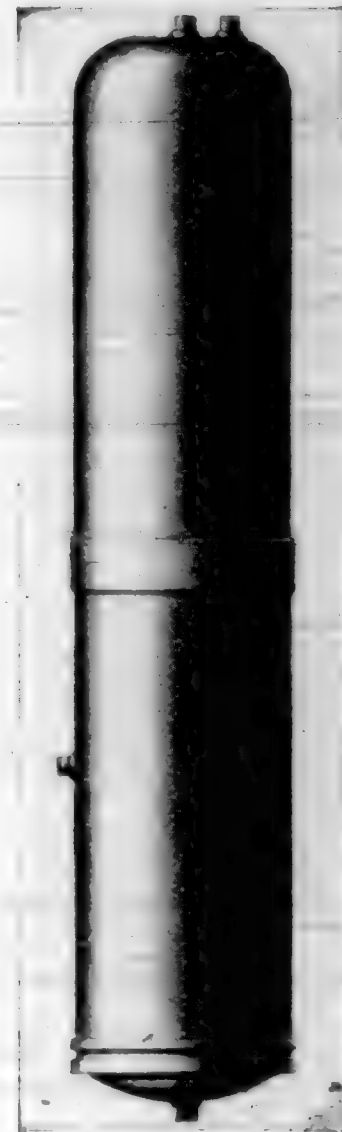
Samuel Cabot, Sole Manufacturer, Boston, Mass.

Stock carried in San Francisco by

CHAS. J. WATERHOUSE, 421 Market Street.

Stock carried in Los Angeles by

P. H. MATHEWS, 238 South Main Street.Now is the time to subscribe for
The California Architect, \$3.00 Per Year.
For 1899.



For Sanitary Reasons

You Should Specify the
Brown Brothers' Cold Drawn Seamless Copper House
Range Boiler.

The smooth copper surface is heavily tinned inside. This absolutely insures against corrosion or rusting of any kind and affords no rusting place for sediment. You always get

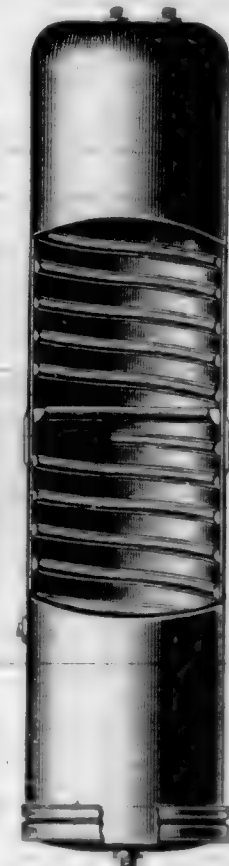
Clean Hot Water

own Boilers are made of two pieces of cold drawn copper, united under great hydraulic pressure, so that they are practically one piece. No seams nor rivets, means freedom from leaks. The inside spiral rib guarantees against collapse. Ordinary weight boilers stand a pressure of 150 lbs. to the square inch; extra heavy, 200 lbs.

Boiler Booklets sent on request.

RANDOLPH & CLOWES, Sole Manufacturers

BOX 47. WATERBURY, CONN.



Candelabra and Decorative

Incandescent Lamps and Receptacles.

Adapted for decorative illumination of interiors of fine residences and hotels, and extensively used for that purpose (Catalogue No. 9044).

X-RAY TUBES FLUOROSCOPES Catalogue No. 9050

EDISON Decorative and Miniature Lamp Dept.

(GENERAL ELECTRIC CO.)
 HARRISON, N. J.

Scott & Van Arsdale Lumber Co.

MATT HARRIS, Manager.

Wholesale and Retail Dealers in

SUGAR AND YELLOW PINE.

Yellow Pine selected for Natural Finish

Redwood, White Cedar, Oregon Pine, Spruce Shelving, Curly Redwood, Burl, Shingles.
 Mills at Upton, McCloud River TELMO & MAXWELL, Siskiyou Co.

Office and Yards:

CORNER FIFTH AND BRANNAN STREETS
R. W. Cargoes Furnished San Francisco
 TELEPHONE SOUTH 173

PLASTER OF PARIS.

Golden Gate Plaster Mills,

215 and 217 Main Street,

bet Howard and Folsom, SAN FRANCISCO.

LUCAS & COMPANY,

Manufacturers of
 Calcined Plaster.
 (PLASTER OF PARIS.)
 Marble Dust, Land Plaster and Terra Alba.

THE NATIONAL BUILDER.

Each number contains a complete set of

architects plans for a low priced building.
 Published at Chicago, Ill.

Main Office, Adams Express Building,
 185 Dearborn street.

It maintains its standard as a high class practical
 Builders' Journal.

W. D. HOBRO, Plumber and Gas Fitter,

728-730 Washington Street,
 Opposite the Plaza. SAN FRANCISCO.

Work done at Reasonable Rates. All orders
 promptly attended to. Res. 2613 Clay St.,
 bet. Steiner and Pierce

W. J. Cuthbertson, Architect.

Flood Building, Room 93.
 Cor. Market and Fourth Sts.,
 SAN FRANCISCO.

John M. Curtis & Co., Architects.

126 Kearny Street, between Post and Sutter,
 SAN FRANCISCO.

T. J. Welsh, Architect.

Room 95, Flood Building, Corner Market and
 Fourth Streets.

Wm. Mooser & Son Architects.

Rooms 62 and 63, No. 14 Grant Avenue
 SAN FRANCISCO.

Oliver Everett, SUCCESSOR TO HUERNE & EVERETT, Architects.

126 Kearny Street, Room 41,
 SAN FRANCISCO, CAL.

Chas. J. I. Devlin, Architect.

Supreme Court Building,
 N. W. Cor. McAllister & Larkin Streets,
 SAN FRANCISCO.

W. Curlett Architect.

Offices, 307 Phelan Building, Market Street,
 SAN FRANCISCO.

Stone & Cahill, Architects.

Room 89, Donohue Building, corner Market
 and Taylor Streets, San Francisco.
 Branch Office, 507 Central Bank Building,
 Oakland Cal.

Fred. B. Wood, Architect.

214 PINE STREET, Room 57.
 San Francisco.

Pissis & Moore, Architects.

307 Sansome Street, Rooms 16 and 17,
 SAN FRANCISCO.

Havens & Toepke, Architects.

FLOOD BUILDING, Room 55.
 San Francisco. Tel. Main 5429.

Jas. E. Wolfe, Architect.

FLOOD BUILDING Room 31.
 San Francisco, Cal. Take Elevator.

R. H. White, Architect.

104 Flood Building, Market and Fourth Sts.,
 SAN FRANCISCO.

Wm. H. Armitage, Architect.

319-321 Phelan Building, Market Street,
 SAN FRANCISCO.

H. Geilfuss, Architect.

120-122 Fulton St., bet. Polk and Van Ness Ave's,
 SAN FRANCISCO.

B. McDougall & Son, Architects.

330 Pine Street, Rooms 61 and 62.
 SAN FRANCISCO.
 Take the Elevator.

M. J. Welsh, Architect.

Office, 1564 Market St., Cor. of th. Rooms 7-8.
 SAN FRANCISCO.
 Residence, 905 Treat Avenue.

John T. Kidd, Architect.

Furnishes Plans, Specifications, & Superintendence
 for the construction of every description of build-
 ing. 410 Kearny St. Office Hours, 12 to 2; 3 to 4.

Seth Babson, Architect.

408 California Street, Rooms 12, 13.
 SAN FRANCISCO.

Harold D. Mitchell, Architect.

126 KEARNY STREET.
 Plans and Specifications prepared with the great-
 est Accuracy.

A. C. Lutgens, Architect.

Phelan Building, Room 325.
 SAN FRANCISCO.

John Cotter Pelton, Architect.

Telephone Building, Bush St., Room 52.
 SAN FRANCISCO.

Edmund Kollofrath, Architect.

Gutzkow Bldg., 833 Market St. Tel. Jessie 461.
 SAN FRANCISCO.

Chas. S. Tilton, Engineer and Surveyor.

420 Montgomery St. Take the Elevator.
 SAN FRANCISCO.

Emile Depierre, Architect.

334 KEARNY STREET.
 SAN FRANCISCO.

EMIL GUNZBURGER, SECRETARY

BUILDING and
LOAN ASSOCIATIONS
 214 PINE STREET, ROOM 3.

Loans on Real Estate

EASY TERMS

Information Willingly Furnished.

FACTS ABOUT PAINTS.

PHOENIX

The best paint is made of White Lead, Zinc and Linseed Oil.

PHOENIX PURE PAINT is made of these materials only.

To make perfect paint these materials must be finely ground and thoroughly mixed with heavy machinery.

PURE

PHOENIX PURE PAINT is made in that way.

During the past five years PHOENIX PURE PAINT has been the one most generally specified by Architects on the Pacific Coast.

PAINT

It is guaranteed absolutely pure and satisfactory on the building or we will replace it with any material the architect may select.

DURESKO

The New Wall finish or Washable Water Color.

Petrifies on the wall and will not crack or chip off.

Damp Walls do not affect it.

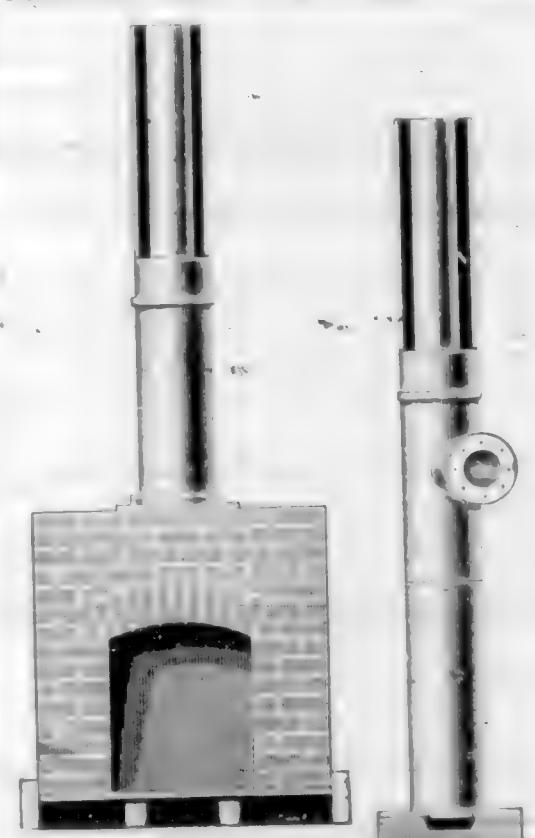
Can be washed any number of times and will not change color.

It strengthens the wall and prevents crumbling.

The strongest, most brilliant and most durable Wall finish made.

MANUFACTURED BY

W. P. FULLER & CO.



CLAWSON'S PATENT CHIMNEY.

L. E. CLAWSON & CO.

1340 MARKET STREET. SAN FRANCISCO.
TELEPHONE SOUTH 257.

CLAWSON'S PATENT HOOD OR THROAT AND ARCH-BAR COMBINED.

The arch-bar forms a bond for arch in brick work. The hood being bolted on the arch-bar, forms a bond from brick work to mantel.

The throat is one solid piece, having lugs admitting three (3) inches adjustment, to suit depth of mantel.

This hood makes the bricklayer conform with mantel man's work, and guarantees you a safe chimney with a perfect draught.

Clawson's Patent Hoods, Thimbles and Chimneys, comply with the new Fire Ordinance.



See **CLAWSON'S LIVE VENTILATOR.** It is as much better than a dead one, as a live man is of a dead man.

Price, \$2.50 for any size from 18 to 26 inches.

Send for illustrated circular.

CLAWSON'S PATENT THIMBLE.

IF YOU SPECIFY

SEND FOR SAMPLES



SAMSON SPOT CORD,

You can tell at a glance that no other cord is substituted. Warranted free from waste and imperfections of braid.

SAMSON CORDAGE WORKS,

BOSTON, MASS. Trade Mark.



THE CALIFORNIA ARCHITECT AND BUILDING NEWS

\$3.00 PER YEAR

VOLUME XIX, No. 11. NOVEMBER, 1893.

CONTENTS:

Index to Advertisers	vi
Passing of the Old Buildings	122
Dr. Bazel's Microscopic Hatchery	123
Destruction of the Baldwin	124
Color in Street Architecture	125
Members of the Architectural Studio Hard at Work	126
The Acoustics of Trinity Church	127
Thirty-Second Annual Convention of the American Institute of Architects	128
Obituary	129
Trade Notes	130
Illustrations	131
Hotel Green, Pasadena	132
Notice of Meetings	133
Books and Periodicals	134
Tests of Cast-Iron Columns	135
Lesson From Fire and Panic	136

PRICE THIRTY CENTS.

DJ. Patterson '98

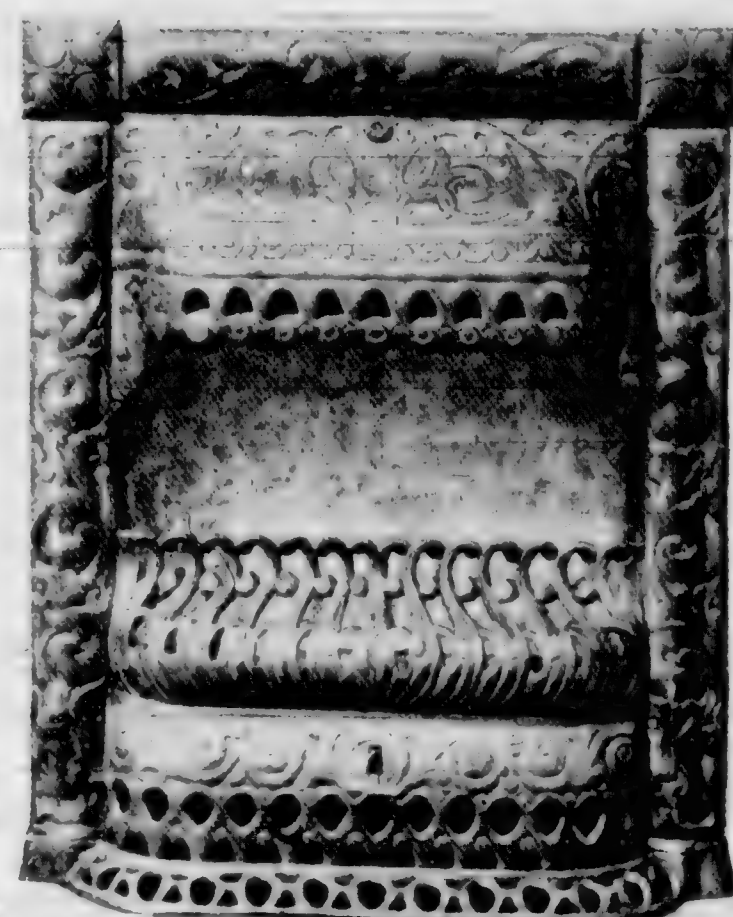
OFFICE 408 CALIFORNIA ST

For a modern house, get modern things!!

Be up to date.

Consider, in building, the innumerable advantages and economy of gas grates.

PERFECTION
Gas Grates.



Always ready.

Always clean.

Gets to work instantly.

Expense stopped when heat is not needed. This is not so with coal.

Examine the various designs of Grates and Heaters of the
SAN FRANCISCO GAS & ELECTRIC LIGHT COMPANY.

STOVE DEPARTMENT

415 POST STREET, SAN FRANCISCO.

A modern home for a modern man, planned by an up-to-date Architect is always sheathed with

P & B
BUILDING
Paper

PARAFFINE PAINT CO., Sole Manufacturers.

The only Water-proof and Vermin-proof paper on the market that is odorless.

Do you Specify it?



118 BATTERY STREET
SAN FRANCISCO.

The California Architect, \$3.00 Per Year.

UNFAIR COMPETITION.

Our recent announcement that inferior goods had been sold and billed on the Coast as our goods, and that our trademark numbers had been counterfeited, has disclosed an even greater extent of these practices than we had supposed to exist. To make the resulting damage to the reputation of our goods as small as possible and to protect our would-be patrons we repeat:

All our catalogue goods, except those listed by us as manufactured by others are stamped with our name "Keuffel & Esser Co." or our initials "K. & E. Co." and where there is room for it, with our trademark. Our German drawing instruments bear only the numbers only, and goods so stamped are there-fore not ours. All our goods are fully warranted to conform to the description we give of them in our catalogue and to be of the quality and grade specified. We make some lines of cheaper goods for the jobbing trade, but they differ from our catalogue goods in quality and appearance. These inferior goods are not stamped with any of our trademarks. Our catalogue goods are not furnished to any dealer or agent without our complete stamp as described above, and any claim that we furnish our catalogue goods by special arrangement without our stamp is therefore an attempt to deceive. Our special papers in rolls or sheets

Duplex Universal Anvil Saragow Normal

are watermarked or stamped along the edge with their name. Any claim that our papers are furnished by us in bulk without these names or that these papers have been obtained otherwise than through us, are absolutely false.

We will thankfully accept any information bearing on the counterfeiting of our trademark numbers or the palming off of other goods as ours.

VERY RESPECTFULLY,

KEUFFEL & ESSER CO.,

D. H. GULICK

CHAS. WETHERBEE

A. ZELLERBACH & SONS.

GULICK & WETHERBEE
Plumbing and Gas Fitting

ESTIMATES GIVEN ON ALL WORK

210 Mason Street

YOUNG MEN'S CHRISTIAN
ASSOCIATION BUILDING

San Francisco

TELEPHONE BUSH 16

IMPORTERS
AND
DEALERS
IN **PAPER** OF ALL KINDS.

419-421 CLAY STREET,

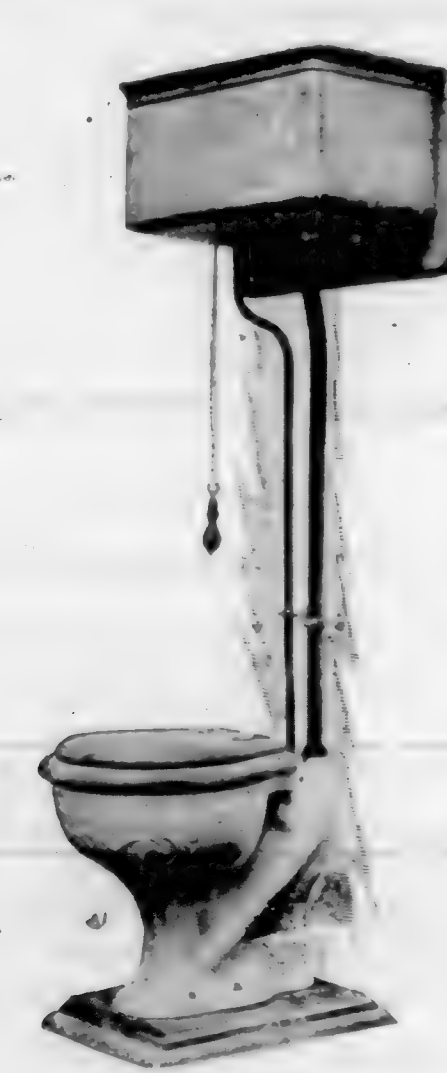
Bel. Sansome and Battery, San Francisco.

TELEPHONE 1133

THE JOHN DOUGLAS COMPANY
CINCINNATI, PHILADELPHIA, ST. LOUIS, CHICAGO, SAN FRANCISCO.



EXCELSIS
List Price, \$35.00



JUNO
List Price, \$31.75



ELLWOOD
List Price, \$28.50

Three Syphon Jet combinations, with seat attached to bowl; woodwork made of selected cherry quartered oak, and walnut. Polish finish.

For our other combinations, see '98 Catalogue or visit our showroom.

Ask for Catalogue. Correspondence solicited.

EDWARD DOUGLAS, Manager

THE JOHN DOUGLAS COMPANY,
208 ELLIS STREET S F

D. E. GARRISON, Jr., President. S. W. BACKUS, Secretary. C. F. RUNYON, Vice-President.
N. L. BELL, Manager.

WESTERN EXPANDED METAL AND FIRE PROOFING CO.

MAUFACTURERS OF AND CONTRACTORS FOR

Expanded Metal System of Fire Proof Construction.

Fire proof arches, solid partitions and attaching metal lath to ceilings, walls, columns, beams, etc.

LATH ALWAYS IN STOCK.

OFFICE: Rooms 414-15-16 CLAUS SPRECKELS BUILDING.

TELEPHONE Main 5829

FACTORY: Corner Townsend and Clarence Streets, San Francisco.

BUILDING NEWS.

Andover Ave. Additions to cottage; owner and contractor, J. B. Alexander, architect, W. J. Culbertson; cost \$500.

Bannan Place near Green. Three-story frame; o. Antonio Silvestro; a. John McHenry; c. A. N. Nelson; signed and filed, Oct. 28; cost \$1700.

Birch Ave. near Laguna. Additions and alterations; o. J. Kline; c. S. S. Weeks; signed and filed, Oct. 27; cost \$1465.

Broadway near Scott. Alteration and additions; o. Mrs. C. L. Nokes; a. F. S. Van Trees; c. Thos. O'Connor; signed and filed, Oct. 28; cost \$382.

Capp and 19th. One-story frame; o. H. Schomaker; a. Mariens & Coffey; c. J. T. Lorenzen; signed, Oct. 25; filed, Oct. 26; cost \$700. Plumbing; c. Chas. Rehn; signed, Oct. 25; filed, Oct. 26; cost \$400. Painting; etc; c. J. Stroetgen; signed, Oct. 25; filed, Oct. 26; cost \$550.

Chattanooga near 21st. Two-story frame; o. George Towns; a. W. W. Kednall; c. W. Plant; signed, Nov. 5; filed, Nov. 7; cost \$7750.

Church near 15th. Three-story frame; o. Walter A. Green; a. P. Schwerdt; c. Jas. F. Ford; signed and filed, Nov. 18; cost \$1290.

Devadero near Vallejo. Two-story and attic; o. Henry E. Monroe; a. F. D. Van Trees; c. Chas. M. Depew; signed, Nov. 10; filed, Nov. 11; cost \$3365.

Fair Oaks near 21st. To build; o. Sol Marks; c. Douglass & Co; signed, Nov. 15; filed, Nov. 17; cost \$1880.

Ferry Building. Benches, tables, etc; o. C. I. State Mining Bureau; a. Edward C. Swain; c. John Trounson; signed, Nov. 9; filed, Nov. 11; cost \$1488.

Golden Gate Ave. and Lyon. Three-story frame; o. Joseph Jacquemet; a. C. M. Rousseau; c. R. J. Pavert; signed, Oct. 13; filed, Nov. 15; cost \$5440.

Green and Devisadero. T. build; o. W. J. Gunn; a. E. A. Mathews; c. A. S. Ruch; signed, Nov. 1; filed, Nov. 2; cost \$10,088.

Greenwich and Jansen Alley. Alterations and additions; o. A. and T. Schablagne; a. J. Godart; c. P. A. Antonelli; signed, Oct. 27; filed, Nov. 5; cost \$2768.

Hayes near Fillmore. To build; o. Isaac Ellaser; c. E. C. Blitch; signed, Nov. 12; filed, Nov. 14; cost \$2240.

Hayes near Steiner. Carpentry, plastering, etc; o. George Hildebrandt; a. P. Schwerdt; c. T. J. Crawford & Son; signed, Oct. 22; filed, Oct. 27; cost \$3100.

Henry near Noe. To build; o. J. F. Fleming; a. William Koenig; c. Ira W. Coburn; signed, Nov. 10; filed, Nov. 12; cost \$3000.

BUILDING NEWS.

Larkin near Sacramento. Plumbing, etc; o. Geo. W. Harris; a. Shea & Shea; signed, Oct. 29; filed, Nov. 8; cost \$1024.

Main near Howard. Furnishing and driving 104 piles; o. Pelton-Water Wheel Co; a. Walter J. Mathew; c. Jas. A. McMahon; signed, Oct. 22; filed, Oct. 23; cost \$2125.

Main near Folsom. Brick warehouse; o. Geo. W. Gibbs; a. Reid Bros; c. C. Krecker; signed, Nov. 15; filed, Nov. 17; cost \$1675.

Mason and O'Farrell Alley. Brickwork, chimney, etc; o. Thos. Ashworth; a. Newson & Meyer; c. John McMurthy; signed Oct. 25; filed, Oct. 31; cost \$2375.

Mason and O'Farrell Alley. Carpentry, concrete, etc; o. Thomas Ashwood; a. Newson & Meyer; c. Malory & Swenson; signed, Nov. 10; filed, Nov. 16; cost \$10,600. Plumbing, etc; c. James F. Ford; signed, Nov. 10; filed, Nov. 16; cost \$1500. Plastering, etc; signed, Nov. 10; filed, Nov. 16; cost \$1870. Painting, etc; c. Kuss & Storz; cost \$1400.

Mason and O'Farrell Alley. Carpentry, concrete, etc; o. Thomas Ashwood; a. Newson & Meyer; c. Malory & Swenson; signed, Nov. 10; filed, Nov. 16; cost \$10,600. Plumbing, etc; c. James F. Ford; signed, Nov. 10; filed, Nov. 16; cost \$1500. Plastering, etc; signed, Nov. 10; filed, Nov. 16; cost \$1870. Painting, etc; c. Kuss & Storz; cost \$1400.

Mason and O'Farrell Alley. Carpentry, concrete, etc; o. Thomas Ashwood; a. Newson & Meyer; c. Malory & Swenson; signed, Nov. 10; filed, Nov. 16; cost \$10,600. Plumbing, etc; c. James F. Ford; signed, Nov. 10; filed, Nov. 16; cost \$1500. Plastering, etc; signed, Nov. 10; filed, Nov. 16; cost \$1870. Painting, etc; c. Kuss & Storz; cost \$1400.

Market and 8th. Brick work; o. William Wehner; a. O. Everett; c. Sinnott & McCann; signed, Nov. 23; filed, Nov. 27; cost \$3388.

McAllister near Laguna. Three-story frame; o. William and Augusta Gans; c. William Heldberg; signed, Oct. 12; filed, Oct. 31; cost \$9750.

Mission and 14th. Painting, etc; o. Southern Pacific R. R. Co; signed, Nov. 10; filed, Nov. 15; cost \$240.

Mission and 14th. Painting, etc; o. Southern Pacific R. R. Co; signed, Nov. 10; filed, Nov. 15; cost \$240.

Ninth Ave. near C. N. Cottage; o. Capt. Fred Nielsen; c. Marcuse & Rimmel; signed, Nov. 1; filed, Nov. 15; cost \$1800.

Nineteenth and Angelica. Electric light, etc, for four-story brick; o. Youths Directory; a. C. J. I. Devlin; c. Gas Consumers Ass'n; signed, Nov. 7; filed, Nov. 14; cost \$1100.50.

O'Farrell near Laguna. Alterations, etc; o. M. J. Franklin; a. Philip Schwerdt; c. H. Jacks; signed and filed, Nov. 21; cost \$3165.

Pacific Ave. near Pierce. To build; o. Charles Page; a. F. S. Van Trees; c. Chas. and Walter Williams; signed, Nov. 10; filed, Nov. 11; cost \$12,400.

BUILDING NEWS.

San Bruno Ave. and Dwight street. To build; o. F. H. Dieckman; c. L. Medus; signed, Oct. 28; filed, Nov. 2; cost \$1000.

Second Ave. near Presidio Reservation. Plumbing; o. Golf Syndicate; a. F. S. Van Trees; c. Walter and Chas. Williams; signed, Oct. 28; filed, Oct. 28; cost \$345.

Seventh near Folsom. Additions and alterations; o. M. S. Johnson; a. Sharp & Holmes; c. F. W. Knight; signed, Nov. 15; filed, Nov. 18; cost \$2185.

Seventh and Minna. Two-story and three-story to building; o. Thomas G. Taylor; a. Martens & Coffey; c. J. B. Gonyman; signed, Nov. 3; filed, Nov. 7; cost \$10,147. Plumbing, etc; c. Henry Ernst; cost \$1475.

Seventeenth near Folsom. Concrete, brick and wood building; o. The St. Nicholas Laundry Co; c. F. W. Kern; signed, Oct. 31; filed, Nov. 2; cost \$5050.

Sutter street. No. 238. Additions and alterations; o. Mr. Weil; a. P. Schwerdt; c. P. Schwerdt; cost \$2500.

Elizabeth near Hoffman Ave. Cottages; o. and c. Jacob Heyman; cost \$3000.

Trent Ave. near 22d. Alterations; o. John C. Flood; a. C. M. Rousseau; c. George C. Nall; signed, Oct. 24; filed, Oct. 26; cost \$1400.

OAKLAND

Army Tract lots 12, 13 and 14, block A. To build; o. Dr. G. and Bertha Thomas; a. D. F. Oliver; c. A. T. Spence; signed, Oct. 15; filed, Nov. 17; cost \$1462.

Center street near 8th. Cottage; o. W. J. and John Edwards; a. A. W. Smith; c. Jacob House; signed, Nov. 1; filed, Nov. 2; cost \$1795.

Eighteenth and West. To build; o. Thomas Moran; a. Cunningham Bros; c. Chas. S. Barnard; signed, Nov. 7; filed, Nov. 12; cost \$1948.

Knox Place. Two-story frame; o. Mrs. William Owens; a. F. S. Van Trees; c. William Bros; signed, Nov. 4; filed, Nov. 5; cost \$3080.

Moller Tract. To build; o. Wm. B. and Elizabeth M. Ward; c. A. W. Pattiani & Co; signed, Nov. 17; filed, Nov. 17; cost \$1417.

Oak and 12th. To build; o. Thos. W. Corder; a. Thos. D. Newson; c. G. W. Hick; signed, Oct. 27; filed, Oct. 27; cost \$4591.

Terminal Depot. Changing present heating plant; o. Southern Pacific R. R. Co; a. Engineer of Company c. Geo. H. Tay Co; signed, Nov. 4; filed, Nov. 19; cost \$1100.

ALAMEDA

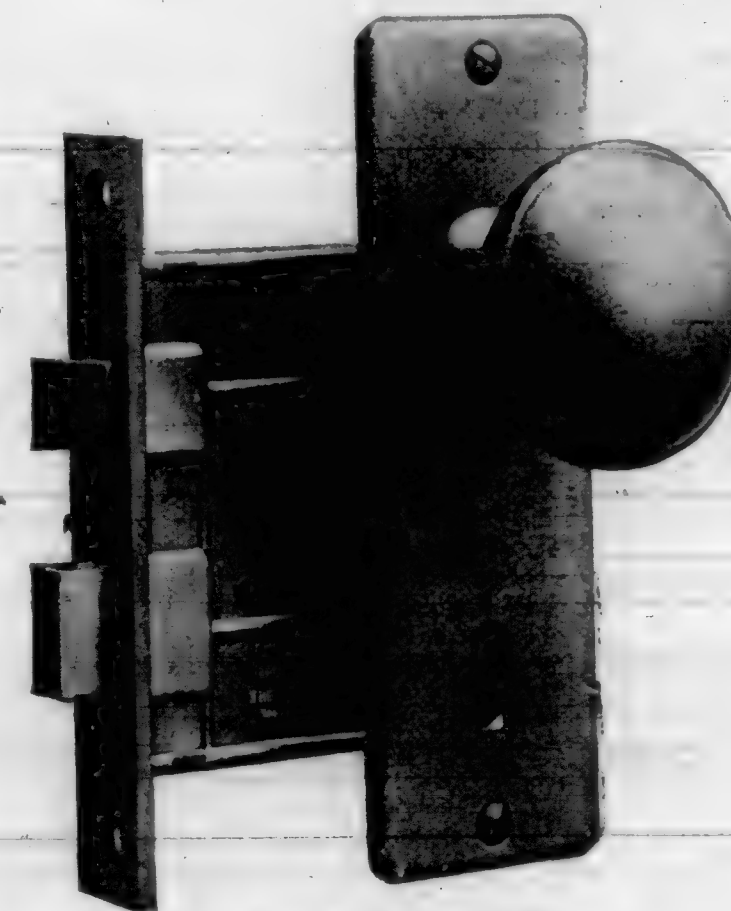
Santa Clara Ave. Frame dwelling; o. O. W. Moore; a. B. E. Rimmel; c. Brehant & Cornelius; signed, Oct. 25; filed, Oct. 27; cost \$2670.

Telegraph Ave. near Webster. To build; o. Miss M. Darling; a. A. W. Smith; c. C. M. MacGregor; signed, Nov. 14; filed, Nov. 15; cost \$1830.

Continued on page xlii.

The "Vulcan" Locks

All Wrought Metal—with "Compensating" Hubs.



Lock Set No. 220B.
One-half Actual Size.

Our General Offices in New York have recently received the following unsolicited letter from a prominent builder and contractor. Believing that the statement of experience it contains will be of interest, we reproduce it below.

An Artistic Brochure on Vulcan Locks, also a Catalogue of 90 pages, will be sent on request.

The Yale & Towne Mfg. Co.

LOCAL OFFICE:
Mills Building, San Francisco.

GENERAL OFFICES: 9-11-13 Murray St., NEW YORK.
WORKS: Stamford and Branford, Conn.

OFFICE OF A. BEINHAUER,
124 Maiden Lane,

NEW YORK, July 11th, 1898.

The Yale & Towne Mfg. Company,

9-11-13 Murray Street, New York.

Gentlemen:—Having lately had occasion to use and apply your "Vulcan Locks" in the Anderson Building, 12-14-16 John Street, I take pleasure in mentioning the fact that in the application of these locks there is a large saving of labor as compared to the ordinary CAST-case locks.

The difference, as I found it, was that while a man put on six to eight of the latter, he could in the same space of time put on twelve to fourteen "Vulcan Locks," thus decreasing the cost of labor to a considerable extent.

Another feature about these "Vulcan Locks" is that while they give as good service as any cast-case lock of their denomination, they do not require as much cutting away of wood in the lock-rail, thereby strengthening the door to an appreciable extent.

Wishing you all success with your "Vulcan Locks," I remain

Yours truly,

(Signed) ALFRED BEINHAUER.

GENERAL INDEX OF ADVERTISEMENTS.

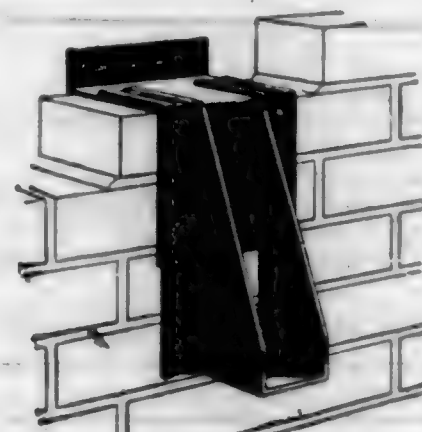
CLASSIFIED INDEX.		CLASSIFIED INDEX.		CLASSIFIED INDEX.	
Architects.	xv	Iron Hangers	vi	Sash Locks.	xiv
Architects' Supplies	iii	Van Dorn, Chas. J. Waterhouse, Agent.	vi	Ives, H. B. & Co.	xiv
Keuffel & Esser.	iii	Iron Works	x	Sewer Pipes.	xi
Artificial Stone.	xii	Western Iron Works.	x	Gladding, McBean & Co.	xi
Goodman, Geo.	xii	Iron Cornices.	vi	Sewer Traps.	viii
Boilers	xiv	Cronan, Wm.	vi	Dallimore, G. C.	viii
Randolph & Clowes.	xiv	Wm. Heldt.	vi	Sash Lines.	xvi
Building Supplies.	ix	Incandescent Lamps	xiv	Samson Cordage Works.	xvi
Smith & Young.	x	General Electric Co.	xiv	Shingle Stains.	xiii
C. J. Waterhouse.	x	Lumber.	xiv	(Cabots)—C. J. Waterhouse—Agent.	xiii
Building and Loan Assn.	xv	Scott and Van Arsdale.	xiv	Pacific Refining and Roofing Co.	xiii
Gunsburger, Emil.	xv	Sierra Lumber Co.	vi	Sidewalk Lights	xiii
Brick Preservative	xiii	Mantles Tiles, Etc.	xiv	P. H. Jackson & Co.	xiii
Cabot's.	xiii	Montague & Co., W. W.	xiv	Sliding Door Hanger	ix
Cement	vii	Jateman.	xiii	Stowell.	x
W. R. Grace & Co.	vii	Metal Lath	iv	Terra Cotta.	xi
Chimneys Patent.	xii	Western Expanded Metal Lath and Fire	iv	Gladding, McBean & Co.	xi
Clawson.	xii	Proofing Co.	iv	Tin Roofing.	ii
Door Opener	viii	Mortar Color	xiii	N. & G. Taylor Co.	ii
G. Rischmuller.	viii	Paint.	viii	University	vi
Engineers.	xix	L. R. Butcher and Co.	viii	Harvard.	vi
Tilton, Chas. S.	xix	G. Orsi.	vii	Ventilators.	xvii
Filters.	x	Paraffine Paint Co.	ii	N. & G. Taylor Co.	xvii
Rapid Safety Filter Co.	x	Fuller & Co., W. P., & Co.	xvi	Water Closets.	xiii
Furniture and Upholstery.	xv	Paper.	viii	John Douglas Company.	xiii
Bateman, W.	xv	Zellerbach & Sons.	viii	Window Cord.	xvi
Hardware	v	P. and B. Building Paper.	xiii	Samson Cordage Works.	xvi
Yale & Towne Lock Co.	v	Cabot's Sheathing and Deadening Quilt.	xiii	Windows—Revolving	xii
Heating and Ventilating	xii	Plaster.	xiv	J. E. and L. L. Kennedy.	xii
W. Morgan & Co.	xii	Lucas & Co.	xiv	Wood Preservative	xii
		Plumbers and Gasfitters.	xix	Cabot's.	xii
		Hobbs, W. D.	xix	Pacific Refining and Roofing Co.	xii
		Gulich & Wetherbee.	iii		



No 1—Steel joist hanger
for wooden header

VAN DORN'S
Steel Joist Hanger
CHAS. J. WATERHOUSE, Agent

421 MARKET STREET, S. F.
PHONE BLACK 1807.



No. 4—Steel joist hanger
for brick walls.

Sierra Lumber Company

Manufacturers of and Dealers in

Doors, Windows, Blinds, Sugar Pine.

Yellow Pine, Spruce and Fir Lumber.

Corner Fourth and Channel Streets, San Francisco

HARVARD UNIVERSITY.

Lawrence Scientific School

OFFERS COURSES IN

Civil Engineering. Chemistry.
Mechanical Engineering. Geology.
Electrical Engineering. Biology.
Mining and Metallurgy. General Science.
Architecture. Science for Teachers.
Anatomy and Physiology (as a preparation for Medical Schools).

For Descriptive Pamphlet apply to

M. CHAMBERLAIN, Secretary.

N. S. SHALER, Dean. Cambridge, Mass.

DIXON'S SILICA GRAPHITE PAINT

FOR TIN OR SHINGLE ROOFS AND IRON WORK. Tin roofs well painted have not required repainting for 10 to 15 years.
IT IS ABSOLUTELY WITHOUT AN EQUAL.

If you need any paint it will pay you to send for circular.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

EAGLE SHEET METAL WORKS

WM. CRONAN

Manufacturer of Plain and Ornamental

Copper and Galvanized Iron Cornices

Tin, Iron, Slate Roofing, Galvanized Iron Sky-lights

and Cast-Zinc Work.

Steam, Hot Water and Warm Air Heating.

Power Fans for Heating and Ventilating Work.

ROOFS REPAIRED AND PAINTED GENERAL JOBBING ATTENDED TO
Nos. 1213 1215 Market Street, Near Eighth
SAN FRANCISCO, CAL.



A SYSTEM OF
**WARMING AND
VENTILATING**



A SYSTEM OF
**VENTILATED FLUSHING
WATER CLOSET
AND URINAL RANGES**

FOR PUBLIC BUILDINGS.

GUARANTEE:

A system of warming and ventilating that shall have the capacity to warm and supply each room with enough pure air to renew the entire volume of air in said rooms from four to six times per hour without unpleasant draughts as from pen doors or windows.

IMPORTANT

ARCHITECTS

W. MORGAN & CO. HEATING, VENTILATING AND SANITARY ENGINEERS. 108 First St., S. F. Cal.

GUARANTEE:

A system of sanitary closets, (separate and distinct from the ventilation of the building), so constructed; that no matter how much they may be used, the ventilation and flushing device connected therewith, shall prevent any disagreeable odor from either the closet or urinal apparatus.

PORTLAND CEMENTS:

"JOSSON"

"SCALE"

ROOSTER,

RHINOCEROS.

W. R. GRACE & CO.

203 California Street, : San Francisco.

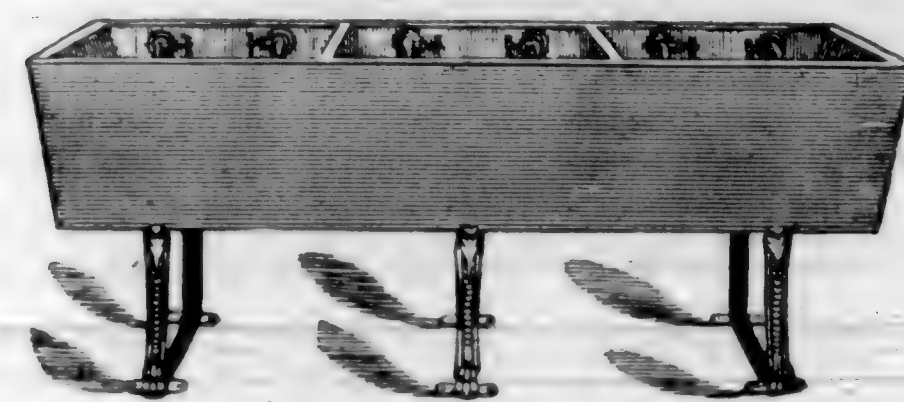
Subscribe for The California Architect.

WASHABLE **ZINOLITH** ^{TRADE MARK} SANITARY
LIQUID STONE

THE IDEAL FINISH FOR INTERIOR AND FINISHED WALLS.
The only Water Color for Plastered Exteriors and Light Wells.

L. H. BUTCHER & CO.
539 Mission Street, S. F.

A. BRADLEY
Successor to BRADLEY BROS.



CEMENT

LAUNDRY

TRAYS

Manufactured of the best PORTLAND CEMENT and GUARANTEED not to LEAK, CRACK or SWEAT.

Office and Factory 53-57 Tehama St. Between 1st & 2d.
Architects are respectfully requested to specify them.

G. ORSI.
17 Montgomery Avenue
INTERIOR DECORATOR
IMPORTER OF AND DEALER IN

Paints,
Oils,
Varnish,
Paper Hangings, Etc.

I make a specialty of interior Painting, Frescoing and Paper Hanging. Special Agent for Lincrusta Walton; a large and complete stock always on hand.

Estimates cheerfully given.

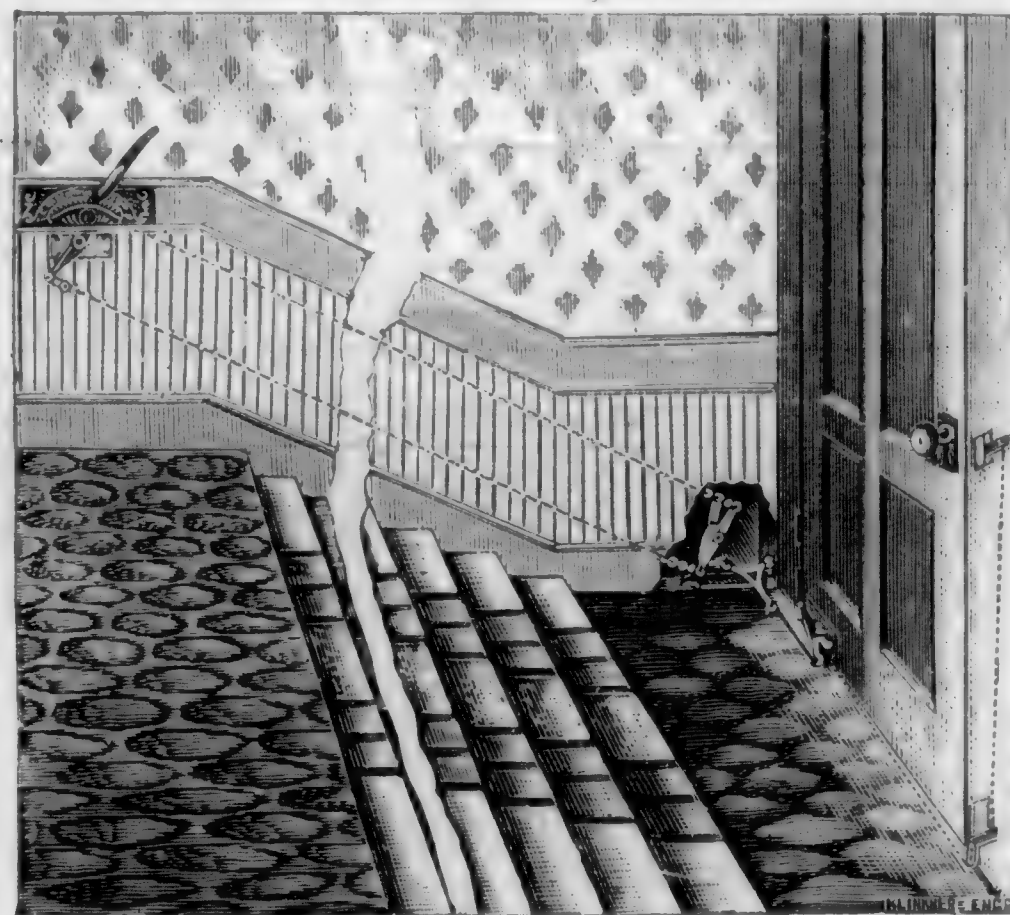
RISCHMULLER'S
PATENT DOOR OPENER
AND CLOSER.

Proven to be the only one CONSTRUCTED ON CORRECT PRINCIPLES.

It is durable and far the cheapest in the end.

Orders promptly filled by

G. RISCHMULLER,
No. 3446 Nineteenth St., S. F.



THE
CALIFORNIA ARCHITECT
AND
BUILDING NEWS

ESTABLISHED IN 1879

PUBLISHED ABOUT THE 20th OF EACH MONTH
BY
E. H. BURRELL, LESSEE, PUBLISHER.
OFFICE 408 CALIFORNIA ST. SAN FRANCISCO CAL.

INCORPORATED 1889
D. J. PATTERSON, Sec.

ESTABLISHED IN 1879

NOW IN THE NINETEENTH YEAR.

VOLUME XIX.

NOVEMBER 20th, 1898.

NUMBER 11.

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

CAUTION—Pay no money to persons representing themselves to be connected with the CALIFORNIA ARCHITECT AND BUILDING NEWS unless a written authority to receipt for the same is shown and accept no receipt unless it be on our printed blanks. All Checks and Drafts are to be made payable to the order of E. H. Burrell.



THE SUCCESSFUL architects who participated in the great Hearst competition and gained the coveted rewards have all arrived on this side of the Atlantic and by the time this number of the CALIFORNIA ARCHITECT AND BUILDING NEWS is issued most, if not all, of the visitors will have reached this city and be busily engaged in studying the environments of the University of California at Berkeley. It is said that before leaving Europe all the successful competitors arranged to meet in New York the latter part of November and then proceed in a body to California. The date of arrival will be duly announced. Beyond a corporation reception presided over by Mayor Phelan, which, it is expected, will be tendered the distinguished strangers, no general movement seems to have been made for entertaining them by local architects so far as heard from. Perhaps it is thought that a welcome from personal members of the profession will answer every purpose but it appears to us that

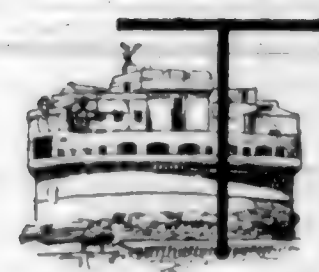
the opportunity for a combined and representative acknowledgment of the presence of the strangers would be a highly gracious attention to accord. The Hopkins Art Institute could be secured for the purpose and every student of architecture ought to be allowed the chance of making the acquaintance of these giants of the profession and to listen to the words of wisdom and enlightenment that is sure to fall from their lips. The hospitality to be extended to these eminent men ought to be equal to that displayed by the people of the Dutch metropolis at least. But this can safely be left to the right feeling of our local architects, who will remember that the reputation of California hospitality is very great and extended and that it will be their pleasant duty to see that it suffers no diminution at their hands.

The presence of these accomplished gentlemen ought to be of equal value to themselves and to local architects as well. They will be interested in observing the adaptation of the rules of construction to the peculiar conditions that exist here unlike as they are, to those of any great capita

in the world. Neither need our architects be ashamed of the results of their labors. There are plenty of examples among our public buildings, mansions and business blocks that are monuments of original design and difficulties overcome. Fortunately there are but few "gems" of architecture like the Chronicle and Hearst buildings to blush for, but such blemishes are more than offset by others which are the admiration of every one who makes building construction a serious study.

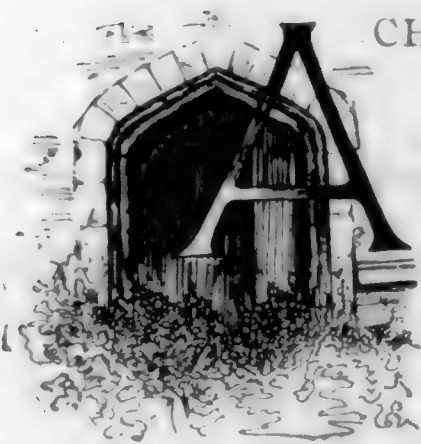
The impression that the splendid site of the University will make upon these gentlemen can be faintly imagined. Such another location, no institution in the world possesses. A combination of vast extent of mountain, sea and plain, is rarely to be witnessed. It will be an inspiration that will be quickly grasped by the strangers and their designs can but receive added beauty and increased impressiveness after personal contact with the sites and scenes where their mental embodiments are to take visible shape.

DESTRUCTION OF THE BALDWIN.



THE total destruction of the Baldwin Hotel by fire is to be regretted. That such a fate was to be the ultimate destiny of this building was fore-ordained. It was a monument of lavish expenditure and depraved architectural methods. The destruction is so complete that a new structure will now be required. The location is unequalled for hotel purposes and a new one surpassing in magnificence anything in the west will probably take the place of the building that is to day in ashes. The site for a grand opera house could not be excelled. It is to be hoped that when the new hotel is planned a dramatic and musical temple will be part of its equipment. The site is too central to remain unoccupied longer than the time required to replace the odd structure. California architects will here have an opportunity for acquiring new distinction.

PASSING OF THE OLD BUILDINGS.



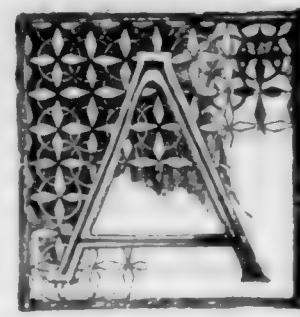
CHEERING indication of the general revival of faith in the future of this great city is the fact that numerous owners of down town buildings that were at one time occupied as offices, professional or otherwise, are contemplating, in many instances, either total demolition of their out-of-date holdings or else such a transformation or rearrangement of the interiors as to make them quite as desirable for business purposes as those lofty and complete structures that have been erected during the past three years in other sections of the city. It would seem that the natural wholesale center is in that section bounded by Market, Kearny and Clay streets and there is no reason why it should not remain within these boundaries for all time unless the business public should be driven away by a lack

of proper facilities for transacting their commercial affairs. It ought not to be forgotten also that in these days of telephonic connections the necessity of a location within easy proximity to the center of exchange is not so great as formerly. It might be remembered also that within the past forty years one change has been made that carried the commercial center from Dupont to California street and there is nothing to prevent the same thing happening again. The actual trend of finance is to the south of California street. Banks and other financial institutions are slowly but surely moving in the direction of Market street where the crowd is concentrating. The new Federal buildings at Seventh and Mission will have a powerful influence upon locating a new business center. Something ought to be done towards retaining what is left of California street as the commercial center and a general movement that will eliminate the old and obsolete office building as in order. The early architects of this city have much to answer for. There is hardly an architectural feature of the early days that could, with advantage, be retained. Such unscientific treatment of floor space as these early edifices show excites the derision of up-to-date architects.

The Merchant's Exchange is a conspicuous example of absolutely defective architecture. It ought to be torn down forthwith. Fully one half of its superficies is wasted. It occupies as much ground as the Mills building—compare the two structures as rent producers. It can be easily established that in replacing any of the old style buildings fully one half more space can be utilized in its present cubical area than now and not taking into account the possible increased height either.

Therefore it is to be hoped that the elimination of the old style building, so auspiciously begun will be continued until every one of "those monuments of early days" will be allowed to disappear. A chance is here given for the architectural adornment of the city's streets. Here a responsibility is laid upon the profession that should never be lost sight of.

DR. BAZET'S MICROBE HATCHERY.



At a recent meeting of the local Board of Health a proposal was made by Dr. Bazet, a member, to abandon the plan of erecting a stone or brick hospital for the county and substitute a cheap temporary affair built of wood that could be destroyed every "ten or fifteen years or so" and another built in its place. This process to continue indefinitely. The advantage gained being in the saving of cost between a first class and a make shift hospital. Dr. Bazet in his remarks advocating this plan of his on the occasion referred to, stated that a wooden hospital would be very cheap and could be made at the same time "very attractive". The learned doctor, however, neglected to state whether a wooden affair would be attractive to the patient or to the microbes, whose propagation was to be thus encouraged until such a time as the hospital became thoroughly infested when it would be burned down and another one erected. Such a hospital, Dr. Bazet advocated in the interest of science admitting that medical science was impotent in its capacity to remedy evils requiring only cleanliness and antiseptic solutions

for completely extirpation. Dr. Bazet is too competent a physician to have much faith in the claim of a certain medical charlatan, that he could cure by drawing the microbe responsible for the disease out of the patient with the aid of a powerful magnet but his proposition to make the conditions about his hospital "attractive" seems to indicate something of that sort.

Dr. Bazet's proposition seems to be open to serious objection in more than one respect. He deliberately favors a plan that encourages the accumulation of filth, a plan also that has never been adopted by any first class municipality in the world and that originated in the tropics as the fruit of military exigency which required certain precautions against the spread of virulently infectious diseases never met with in this latitude excepting in sporadic form. In the new hospital no infectious diseases will be treated, separate provision being made for occasional cases received. It would seem to be a mean thing for a great, wealthy city, like San Francisco, to ask the poor wretches dependent upon it for care during wasting illness, to go to a hospital no better built than a pioneer shack or an Indian tepee. The management of such a hospital would also be seriously affected by the temporary character of the buildings. The effort to keep affairs in perfect condition would be dominated by the knowledge that in a short time the hospital would be destroyed any way. Does the Board of Health wish to perpetuate the scandals, conflicts and corruptions which always accompany the erection of every municipal structure and leave such a legacy to their successors? Is it not known that in ten years a movement for the removal of such a temporary hospital would be demanded wherever it may be placed? Would Mr. Phelan care to distinguish his administration by a measure that would bring ridicule upon it forever or have his name associated with the only structure erected during his term of office that would require obliteration, on the score of public health, in ten years or so? It would be thought not.

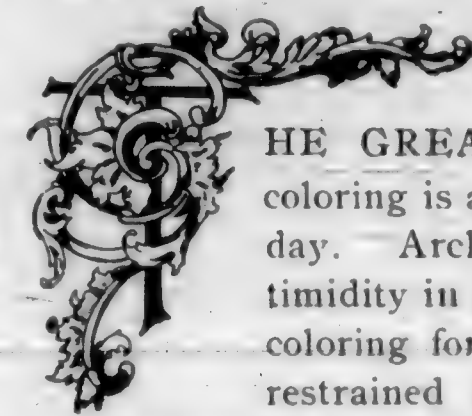
The fact is that Dr. Bazet's plan has been thoroughly considered by scientific minds on both continents, and it has yet to be learned, the Glasgow instance notwithstanding, of one single municipality that has even seriously considered its adoption. The great St. Luke's hospital of New York, erected at a cost of \$3,000,000, and the finest in the world, is one that will last for generations. The new Chicago hospital is permanent and the cities pride. London's hospitals are of the most substantial character and every where except possibly in China or India where plague is always rampant and where hospitals are necessarily temporary in their character, these monuments of the magnanimity of communities are strong, substantial and architecturally beautiful.

The plan of Dr. Bazet, to a layman, appears to be rather for the propagation and cultivation of diseased microbes, and designed to convey infection to the thousands of those unfortunates who in the "ten or fifteen years or so" will be obliged to accept its ministrations and through them the entire community will have to endure an ever present and increasing danger from infection.

A Draughtsman of experience desires to obtain employment in San Francisco or some California town. Would purchase an interest in an established office.

Address—C. E., CALIFORNIA ARCHITECT AND BUILDING NEWS.

COLOR IN STREET ARCHITECTURE.



THE GREATER attention given to exterior coloring is a pleasant feature of building of to day. Architects have heretofore, evinced timidity in advising the use of more positive coloring for decorating buildings or have been restrained from following their own artistic conceptions on the subject by property owners who, as a matter of course, have the final word and, as a general thing, hesitate to take the initiative in defying long established custom. It is a sign of progress in the right direction when color as an adjunct of street ornamentation is receiving more intelligent attention from the architect. The people of tropical or semi-tropical countries seem to understand this subject better than we of temperate zones. The bright colors either in combination or otherwise that are to be observed in all communities of Southern people is a feature of the most pleasing character to travelers and is frequently remarked. These people are simply following their own artistic instincts of beauty and fitness and while the effect is sometimes grotesque and extravagant yet the general result is bright, pleasing and cheerful.

The Saxon on the contrary is disposed to confine all color to the interior and to regard any effort to make the exteriors of their dwellings, otherwise then dull, as a violation of good taste. The Greeks, whose judgment in all matter relating to absolute correctness in art was undeniable even covered their temples, constructed of the purest Pentelican marble, with color and the statues of Phidias, in their opinion, derived added beauty from applied colors by making them more like the living subjects which these unequalled statutes were carved to represent. Under such skies as are usually to be observed in San Francisco where cloudy days are the exception and bright sunshine the rule, a greater latitude in color for outside adornment ought to be permitted. Market street, from the ferry to Sixth represents a most monotonous effect of color, occasionally a yellow or brick red but almost altogether drab, cheerless, dispiriting, inartistic. There are some bright instances of street color, notably on the crest of California street, where half dozen handsome structures afford an example of the pleasing effect of decided tints. How much would be added to the appearance of the new City Hall if, instead of an exterior covering which now only emphasizes the cheap material of which it is constructed and detracts from the real beauties which the edifice possesses, it were colored in white or a light terracotta. The expense would not be great and the result would be a distinct gain. There is a building near Mason and Ellis streets whose exterior is glazed brick of a deep bottle green. The effect is beautiful.

In the city of Mexico, opposite Hotel Iturbide, there is a mansion of a Mexican grandee, as large as the Flood residence and constructed in Spanish style, with a large patio in the center, filled with tropical foliage and protected from the street by a splendid wrought iron grill. The whole exterior of this house is veneered with light blue and white porcelain tile, imported from Paris at enormous cost but producing a most striking and beautiful effect. It would require great courage for a builder in this latitude to follow such an ex-

ample but there is no house in the United States that is its equal and very few builders that could afford it.

To make street color more effective will require time and the destruction of old established prejudices but that a harmonious result would be accomplished and the general appearance of our cities be greatly enhanced few will doubt.

MEMBERS OF THE ARCHITECTURAL STUDIO HARD AT WORK.

THE members of the Architectural studio of the Mark Hopkins Institute of Art have buckled down to hard work for the Winter season. At the last monthly competition held on November second nearly every member presented drawings and sketches which were ably criticized by Mr. Coxhead. The subject of the competition was "Given the intersection of two narrow and crowded streets to cut away the buildings on the corners so as to relieve the traffic and produce an imposing architectural effect. The schemes followed the plan of the London "Circuses" only they were octagonal instead of circular and the general criticism was that sufficient importance was not given to the skyline. The sketches were the preliminary studies for a park bridge, the subject of the next competition, finished drawings of which are to be presented on the first Wednesday in December.

The Class in History, after having pursued, under the direction of Mr. Sanders, the subjects of Prehistoric, Egyptian, Babylonian, Assyrian, Persian and Jewish architecture is now fairly advanced in the study of Grecian architecture. The life class still retains its hold on the members and is both profitable and interesting.

At a recent meeting it was decided to compile a paper for publication in the CALIFORNIA ARCHITECT AND BUILDING NEWS on the greatest architectural need of San Francisco. It is hoped that by showing how and where the architecture of the city may and should be improved that popular interest may be aroused that will result in many needed improvements and architectural reforms.

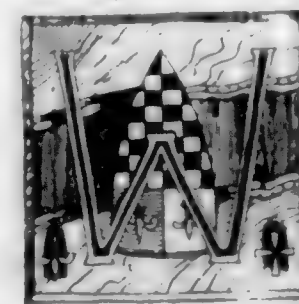
THE ACOUSTICS OF TRINITY CHURCH.



TRINITY Church in this city is one of the finest ecclesiastical structures in the state, and will comfortably seat nine hundred persons. It is built in the Old English style and architecturally is attractive and complete. Nearly \$200,000 is invested in the edifice and its splendid adornments. Its congregation is aristocratic, wealthy and influential and its rector, scholarly and devoted. Everything that the most exacting worshipper can possibly demand is found in this sacred edifice but, after the church building was newly occupied it was discovered that the acoustics were fatally defective and that no matter how loud the clergyman might shout only those in the immediate proximity of the chancel could understand what was said and even then but imperfectly. The sound everberated again and again and became a mixed jumble of dis-

cordant words. Even the tones of a powerful organ failed to make the proper impression and the most exquisite harmonies were distorted by the sharp and protracted echoes that followed the sounding of the key board. The result is discouraging to the last degree and efforts have been and are being made to remedy the evils or at least mitigate them. It is thought by some who have studied the case that the interior architecture of the church is faulty and that no absolute cure will be accomplished until drastic changes are made. Over the junction of nave and transepts there is a tower of large dimensions, open to the roof and extending several feet above the ceiling of the church. This tower forms a great square cavern into which the words of the preacher and the tones of the organ are first carried and are then shattered against the four walls into a mass of unintelligible echoes. It is believed that the whole fault lays in the defective construction of the tower. Some time ago, following the suggestion of an architect, the west walls of the church were hung with silk curtains but the result was not noticeable. Lately a sounding board was placed over the pulpit and an improvement was apparent at once. The sounds were thus carried away from the tower and into the nave. But the defects have not yet been entirely remedied. It is now proposed to string innumerable wires across the opening to the tower and possibly the effect of this experiment will be an improvement but architects generally are disposed to believe that nothing but an entire rearrangement of the architecture of the tower whereby the great opening may be completely or partially closed, will eliminate the distressing echoes and purify the acoustical defects. The problem is an interesting one and excites great interest.

THIRTY-SECOND ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS.



WASHINGTON, D. C., Nov. 1.—The proceedings of the Thirty-Second Annual Convention of the American Institute of Architects opened at 10:30 this morning in the Banquet Hall of the Arlington Hotel, with Mr. George B. Post, the President, in the chair, and with about 100 delegates in attendance from various parts of the country, among whom were: George B. Post, Robert W. Gibson, Julius Kastner, Wm. Martin Aiken, John M. Carrere, T. E. Crossman, Charles I. Berg, Edward Kendall, Henry C. McKey, New York; Alfred Stone, Ed. J. Nickerson, George A. Frederick, Edward F. Eley, Providence, R. I.; W. L. B. Jenney, Charles S. Frost, G. A. Trent, Robert Craik McLean, editor *Inland Architect*, Chicago, Ill.; A. W. Longfellow, Edwin J. Lewis, Jr.; A. G. Everett, H. Langford Warren, Boston, Mass.; C. M. Bartberger, Thomas Boyd, T. D. Evans, S. F. Heckert, Pittsburg; F. H. Young, Jacob Agne, Jr., Utica, N. Y.; C. A. Wallingford, Bernard Vonnegut, Indianapolis, Ind.; Guy Kirkhorn, Springfield, Mass.; A. W. Hayward, J. W. McLaughlin, George W. Rapp, Gustav W. Drach, A. O. Elzmer, Cincinnati, O.; Isaac Ditmaes, A. G. Thomson, A. Porter, L. D. DeCorb Berg, Walter Dickson, Brooklyn, N. Y.; Frank C. Baldwin, John M. Donaldson, A. W.

Chittenden, J. S. Rogers, Jr., George D. Mason, Detroit, Mich.; Addison Hutton, Frank Miles Day, Philadelphia, Pa.; Charles F. Swinefurth, Levi T. Schofield, Cleveland, O.; J. W. Yost, Columbus, O.; L. Boucherts, Youngstown, O.; J. Foster Warner, Rochester, N. Y.; J. H. Pierce, Elmira, N. Y.; E. C. Ernest Lamb, F. B. Pyle, A. Didden, T. F. Schneider, Robert Stead, James K. Taylor, James G. Hill, J. L. Smithmeyer, Washington, D. C.; M. S. Mahurin, Fort Wayne, Ind.; W. H. Conway, George H. Helme, Springfield, Ill.; E. B. Green, John H. Coxhead, C. Cary Buffalo, N. Y.; J. O'Rourke, Newark, N. J.; Robert E. Dexter, Dayton, O.; F. D. Allen, Juliet, Ill.; Prof. Trowbridge, Cornell University; Arthur N. Gibb, Ithaca, N. Y.; Henry Brunse, F. B. Noel Wyatt, E. G. Lind, Baltimore, Md.; N. W. Mortimer, M. S. Malewin, Fort Wayne.

The address of Welcome by Mr. J. C. Hornblower in behalf of the Washington Chapter, was short and to the point. This was followed by Commissioner Wight who said:

"I extend to the American Institute of Architects a hearty welcome on behalf of the District Commissioners of the District of Columbia and on behalf of the District itself, to all I give a kindly welcome, and venture to express the hope that it will be as agreeable for you to be with us as it is to us to have you here.

"Last week it was my privilege to welcome to the District another convention, that on Municipal Improvements. They took up for consideration the subjects of sewerage, street improvements, electric lighting, etc., all of which were important, and in which we, as a city were greatly interested, but not any more so than the matters that will be dealt with here by this Institute. This meeting of your Institute is very timely in coming to us when we have begun some important steps in the matter of the architecture of our public buildings. We have expressed ourselves as of the opinion that the designing of our public buildings and bridges should not all be the work of one person, and our experience leads us to believe that we have taken a wise step. We believe that the competition in the matter of public bridges and grounds should only be open to those who have shown that they were able to design such structures, so that the result may be designs that will be an addition to the architecture of this District, both as to beauty and suitability for the purpose for which they were designed.

"Another step upon which we insist is that there shall be no sky-scrapers in the District of Columbia; to that end we have enacted that the maximum height of buildings shall be 90 feet, unless on business avenues of 160 feet in width.

"We trust these matters will commend themselves to you and will receive your support. I therefore again welcome you in the name of the Commissioners of the District of Columbia."

PRESIDENT'S ADDRESS

"The programme of the Thirty Second Convention of the American Institute of Architects as usual requires that the proceedings shall be opened by an address from your president.

"On former occasions I have directed your attention to the unexampled rapidity with which the fine arts have developed in America since the first organization of this association, and to the prominent part taken by the architects in this development; to the growth of the association itself from a body weak in numbers and weaker still in the influence of its members individually and collectively, to an organization extending over the length and breadth of this

enormous country; an organization which has become a recognized power in all questions directly or indirectly pertaining to architectural art.

"I have directed your attention to the dangers which menace our art, and to the fact that if true to itself the future of the profession is clearly in the control of this Institute.

"I now desire to extend to its members my most hearty congratulations, for although a period of general depression in individual business, the past year has been marked by three events which will form an era in the history of American architecture.

"The wise Secretary of the Treasury, the present honored head of that Department which is the great builder for the Government, has not only established a most important precedent and practically made a public recognition of the fact that educated talent is essential to economy and success in the work of our profession, but more important still, that there should be no politics in art:—by the appointment of a Supervising Architect after a most careful and exhaustive competitive examination conducted by a specially appointed Civil Service Commission, consisting of a Board of Architects of recognized position in their profession.

"For almost the first time in the last three decades we have seen architects in private practice selected by fair competition judged by expert jurors, for the design and erection of Governmental buildings. A practical recognition of the fact for years asserted by the unanimous vote of the profession that worthy architecture cannot possibly be secured, except by accident, from a Government office; no matter how great the ability of its chief, where the mass of business in the maintenance and repair of existing buildings is so enormous that the work of design is of necessity largely delegated to assistants. Under these circumstances excellence must be at best a lottery.

"In all ages and in all countries employment for the design and erection of Government work has been the maximum reward of professional distinction. Consequently the structures erected by the Government of a country have been generally and properly accepted as the most reliable and decisive proof of the civilization of the period and race by which they were produced.

"Alas for the verdict of future ages upon the excellence of the art and civilization of America in the latter half of the Nineteenth Century, if judged by such monuments as the Pension Building and the Post Office, and the great majority of structures erected from designs prepared in the offices of our Government.

"Unfortunately these buildings are built with extravagant excellence and will stand for ages a travesty upon the art of the country, a reproach to the intelligence of those in power who have refused to listen to the urgent and repeated opinions of those qualified by education and experience to give advice, and have persistently refused to use the means always at their hands to procure designs which should at least represent the average skill and economy daily shown by the architects of the country in private practice.

"It is the clear duty of this body, the great representative society of American architects, never for an instant to relax its efforts until such time as the creation by the Government of such artistic monstrosities shall be impossible.

"We have seen by the recent precedent established by the Treasury Department that persistent protest and untiring effort will surely bear its fruit.

"This Institute should never pause in its exertions until Congress has passed the necessary amendments to make it

mandatory that for the design and construction of each important building to be erected by the government in any of its departments, there should be appointed directly or by limited competition, an architect whose ability has been thoroughly proved by success in private practice, and that the fees paid for his services by the Government shall be those recognized throughout the civilized world as the proper and just recompense for such services—the fees rehearsed in the Schedule of Charges of the American Institute of Architects, and uniformly paid by individuals and corporations in all of our great business centres.

Provisions should be demanded for the appointment of proper juries of award composed of experts in the case of all competitions, and to provide for the expenses of such jurors as well as for the payment of a moderate and proper fee.

For the first time in its history the Institute has established a permanent headquarters. As is eminently proper the permanent home of the national organization is located in the National Capital.

In the march of events the institution has outgrown its old code of laws and under a new constitution you are called upon to consider a new code of by-laws. It is a matter of regret that so large a part of the time of this convention must be of necessity devoted to this subject, and it is earnestly hoped that your consideration of the subject may be so careful and your decisions so wise that the time of future conventions may be free for the discussion of the mass of subjects of more general interest than the minute details of interior organization.

This left the meeting open for the general order of business, which opened with the report of the Board of Directors, read by Mr. Alfred Stone, the genial secretary of the Institute, who is so ably fitted for the responsibilities of the arduous position which he occupies.

The report is as follows:

"To-day the Institute enters upon a new era in its history which is fraught with no little anxiety. The step it has taken without precedent, as no similar society has broken away from the commercial metropolis of the country and established its home in the National Capital. It may therefore, properly be called an experiment, and is one that will depend for its success upon the individual and united efforts of the members of the Institute, and may easily prove to be a failure without such effort. The first way in which it may make itself manifest is by an increase in its membership, which the proposed by-laws, if adopted, will facilitate. It is only by a membership large in numbers and representing the best equipped members of the profession who not only combine to a high degree professional skill and training, but exalted views as to the ethics of the profession that the Institute can realize the full advantage of its mission and reap the benefits of its new departure.

The question of the present home for the Institute has been an ever-recurring subject for consideration, and many years ago an effort was made to procure a building fund, but not until after the passage of the following vote on February 11, 1898, was any real progress made:

"Voted—That a committee of three be appointed by the president to secure a lease of the so-called 'Octagon House,' Washington, D. C., for a term of five years if possible, for a rental not exceeding \$360 per year, and with further power to formulate a plan, obtain funds and put the house in condition for occupancy."

It was also voted "That the committee be authorized to issue debenture bonds of small denominations to an amount

not exceeding \$5000, and that the form of the bond is to be approved by the Executive Committee before issuing the same."

In pursuance of that vote the president of the Institute, in accordance with instructions of the Board of Directors, appointed Frank Miles Day, Robert Stead and Wilson Eyre, Jr., a committee to procure a lease of the Octagon House and put it in a condition for occupation, and issue bonds to the extent of \$5,000 to meet the expense thereof. To-day we shall open and enter upon the occupation of our new home and the enjoyment of the fruits of their labors.

The passage of this vote was the outcome of the report of the Washington Chapter presented to the Board of Directors at that time. Among the advantages set forth in this report were: That it afforded the broadest field for the Institute to obtain national legislation in relation to art and construction; that it could here more efficiently advocate the establishment of a Government testing station and a National Architectural Museum, and would be in a position to make its influence felt in the methods adopted by the Government for procuring designs for national buildings, which has been so successfully inaugurated under the direction and by order of the Secretary of the Treasury, the Hon. Lyman J. Gage, an honorary member of the Institute and an efficient supporter of the best interests of the profession.

A fuller and detailed history of the movement and its results will be visible at the reception, to take place this afternoon, and will be heard in a report of the chairman of the committee which has so successfully accomplished the task set before it.

At the last annual meeting the conduct of the competition for the Pennsylvania State Capitol furnished an engrossing topic of consideration, but without producing the desired results. In fact, the outcome is, if possible, still more discreditable to the State than was anticipated, but in other quarters several notable competitions which have been conducted with fairness and in compliance with ethical rules of practice although they may not have resulted to the individual satisfaction of each and every individual competitor, and it is not improbable that the publicity which was given to the action of the Institute in the matter of the Harrisburg Capitol has not even greater effect than if it had resulted in the adoption or the course advised by the Institute.

The more than questionable conduct of the commissioners, their unjust treatment of its professional advisers, the defeat of the machinations of the firm that expected to capture the prize and the subsequent still more scandalous action of the commissioners has been an object lesson to what ends publicity and unfair dealings may lead, and it is believed that the State of Pennsylvania has but entered upon a gigantic scheme that will extend through many years and be productive of still other and larger results to the discredit of the State and with heavier demands upon its treasury. In view of the failure of the Pennsylvania State Capitol competition and the success of that for the New York Public Library building, it has been suggested by a distinguished member of the New York bar, that the Institute appointed a committee to have power to employ legal counsel to prepare a formal programme of competitions and have it recognized in legal enactments and ordinances authorizing commissioners to secure an architect by means of competitions; such an act or ordinance might make it legally incumbent upon a corporate body or even upon a State itself, to pay promised fee, which the State of Pennsylvania successfully dodged, with no legal redress for the architects employed by it. There is,