

NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 408 California street.
 SETH BARSON, Pres. GEO. W. PERCY, Vice-Pres.
 OLIVER EVERETT, Sec. JOHN M. CURTIS, Treas.

SOUTHERN CALIFORNIA CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
 OCTAVIUS MORGAN, Pres. A. M. EDELMAN, Vice-Pres.
 ARTHUR B. BENTON, Sec't. AUGUST WACKERBARTH, Treas.

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
 C. E. GRUNSKY, Pres. GEO. W. DICKIE, Vice-Pres.
 OPTO VON GELDERN, Sec. W. C. RALSTON, Treas.

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
 GEO. P. LOW, Pres. C. O. POOLE, Vice-Pres.
 MAX CASPARI, Sec. H. T. BESTOR, Treas.

BOOKS AND PERIODICALS.

SAN FRANCISCO BAY AND VICINITY—We are indebted to the Union Photo Engraving Company for a handsome map, published by the above company. We understand this map was modeled in clay, and is certainly a very creditable work that should adorn the walls of every business office in the city.

KIDDER'S ARCHITECTS and BUILDERS POCKET BOOK, published by John Wiley Sons, 53 East 10th street, New York, price \$4.00. We know this is considered a valuable book by some one, as it was stolen from our letter box before it reached our desk.

THE FORTNIGHTLY REVIEW for June contains an interesting sketch of "Mr. Chamberlain's Municipal Career." Mr. Chamberlain, at present a member of Parliament from Birmingham, twenty years ago was Mayor of that city, when after much opposition his plan for the requirement of the gas works by the city corporation, as afterwards the water supply of the city, which proved a great benefit; both these projects proving a great success and giving a large revenue to the city, at the same time reducing the cost to the company about one-third in the cost of gas, while double the supply of water was furnished.

THE BROCHURE SERIES OF ARCHITECTURAL ILLUSTRATION. Published by Bates & Guild, 6 Beacon street, Boston, Mass. The Brochure Series in its present form is a continuation of the little occasional circular of the same name already well known to the architects of the country. The favor with which these were reviewed has induced the publishers to establish a regular monthly publication at the low price of fifty cents a year. In regard to the illustrations what the publishers claim is true, viz:

"Photographs of the size here given cost from fifteen to fifty cents each . . . but in the present form they cost but one-half cent each and for all practical purposes are quite as valuable as the originals."

We take pleasure in presenting our readers an illustration from MODERN OPERA HOUSES AND THEATRES, a work about to be published in London by Edwin O. Sachs, Architect F. S. S. and A. E. Woodrow, Architect A. R. I. B. A., Waterloo Place Pall Mall, S. W. Illustrated by a series of 220 plates from drawings prepared for the work. The design below is the entrance to "D'Oyly Cartes Opera House."



ENTRANCE TO D'OYLY CARTES OPERA HOUSE.

POINTS IN THE INSPECTION OF ELECTRIC PLANTS.

IN a recent paper on points in the inspection of electric plants, read before the Fire Underwriters' Association of the Pacific, Mr. G. P. Low made a number of excellent suggestions. One of his most pertinent remarks was the following: The greatest enemy to safety in wiring is moisture, and the only flexible and durable material having high insulating qualities that will withstand moisture is rubber, or the compounds allied to it. These should be used exclusively for the insulation of all inside wiring, despite their inflammability. Wires should never be permitted to touch anything save their insulating supports; hence it follows that insulating tubes or bushings must be used wherever wires pass through walls, floors or partitions of any description. The hazard of wood base cutouts, switches, etc., is so well understood, that there is no occasion for making further effort to show the necessity for invariably ordering their immediate removal.—*Architects' Electrical Bulletin.*

THE DISPOSAL OF DUST.

HITHERTO the disposal of house dust and general refuse has been a matter involving considerable difficulty for municipalities, and always, even under the most favorable circumstances, one of the most costly items presented to the ratepayers in the parish bill. Thanks, however, to the public spirit displayed by the majority of the members of the St. Pancras vestry, says *Lloyd's*, and the skill of their engineer and chief surveyor, Mr. W. Nisbet Blair, the difficulty has been conquered, and this great metropolitan parish is about to show, not only how to get rid of its refuse at the lowest possible cost, but how to make the heretofore despised waste of commercial utility. Two years ago it was seen that the success attending the establishment of the parochial electric lighting works would necessitate an early enlargement of the scheme, and it was then that Mr. Blair proposed to the electrical engineer, Professor Henry Robinson, a plan for burning refuse in special destructors and utilising the heat for the generation of the power required. Together the two gentlemen formulated a complete scheme, and laid it before the vestry, which for a long time refused to be convinced that it was feasible, but at length perceived its advantages, and having adopted it pushed on the work, which is now rapidly approaching completion.

The buildings cover an area of about two and a-half acres, running from Georgiana street to Pratt street at the back of Great College street, and facing the King's road. Their most conspicuous feature is the great chimney built by Messrs. Kelly Bros., of Liverpool, and stated to be one of the most perfect pieces of work in the kingdom. This gigantic shaft, octagonal in shape, and faced with ornamental lines of red-brick Ruabon brick, rises from a bed of concrete eight feet thick, and twelve yards square, to a height of 231 feet, its altitude from the ground level being 207 ft. 6 in. At the base the brickwork has a thickness of five feet, and this is gradually reduced until immediately below the stone cap it is only 14 inches. The cap weighs no less than 32 tons 11 cwt., and the total weight of the whole shaft is 2,680 tons. A lining of fire-brick goes to a height of 78 feet, and between it and the main shaft is a three-inch cavity, to prevent the outer brickwork suffering damage by heat. When plumbed it was found to be less than a quarter of an inch out of the true perpendicular, an accuracy so rare as to be phenomenal. The cost of erection was 3,400/. The rest of the work has also been carried out in the same thorough fashion, and its details are full of novelty and interest. The refuse will be taken in through an entrance in Georgiana street, and there weighed and tipped into enormous tanks on each side of the main shed. To these tanks are attached hoppers, which convey the dust to furnaces underneath specially constructed to Mr. Blair's design, and regarded as the most approved type in existence.

The great feature of the whole scheme is its general automatic power, which enables it to deal with an enormous amount of matter, while necessitating but very little manual labour in proportion. This feature is specially exhibited in the furnaces, which are fitted with most ingenious appliances, the patent of Mr. Healey, an engineer, of 24 Queen Victoria street. The dust falls from the hoppers on to bars, arranged somewhat in the form of an enormous gridiron. Alternate bars move continuously up and down with an eccentric forward motion, carrying the refuse to the centre of the furnace. This motion is obtained by means of a special engine, the boiler of which is heated by the fumes of

the burning dust which thus assists its own destruction. The same boiler also drives the blowing machinery, by which the draught is obtained to ensure combustion, a mortar mill, and a stone-breaking machine. There are eighteen furnaces in all, capable of consuming 1,260 tons of refuse per week, and leaving behind only a certain amount of "clinker," which is withdrawn every six hours, and which, owing to its properties of making an exceptionally tenacious mortar, will fetch by sale something like 1,000/. per annum. In the electric light department, which has been arranged by Prof. Robinson, there are at present three boilers—though provision has been made for six to meet future contingencies—which are heated by the destructors. The fiery gases from the burning refuse pass through a flue—the longest section of which is 60 feet—to the boiler-room, round the outer shell of the boilers, descending again to the main flue, then to the front of the boilers, through a heat economiser, and into the chimney. It is calculated that the destructors will produce 12,000 degrees of heat, giving from three to four hundred horse-power with the three boilers. A novel arrangement of balanced dampers governing the various flues enables the heating fumes from the furnaces to be turned off or on to any portion of the works, or sent direct to the chimney shaft by the mere turn of a lever. Much smoke will also be avoided by combustion chambers above each furnace, which becoming white hot, will destroy all sooty particles in the vapours before they pass into the flues. In case extra pressure should be put upon the lighting department the boilers have been so arranged that they may also be fired by hand or mechanical stokers with coal, so that steam may be quickly raised to meet any emergency. The present plant is designed to serve 10,000 lamps.

"Efficiency with economy" seems to be the motto of the designers of this great enterprise, and on every hand are arrangements for securing it. For instance, water which is supplied by meter to the works might have proved a serious item of expenditure, but is ingeniously prevented from becoming so. The waste steam from the boilers passes through a condenser and then through a water-softening apparatus to a vast tank below, which has a holding capacity of 115,000 gallons. The water at the top of the tank attains to a heat of about 110 degrees, and this is pumped up to a cooling apparatus at the top of the building, whence it returns and re-enters the tank at the bottom, thus being used over and over again.

At present the vestry pays 3s. 6d. per ton for the cartage of its refuse away. On this item of cartage alone there will at once be a saving of a shilling per ton, which, with the revenue derived from the sale of the "clinker" mortar, will show a total saving to the parish of close upon 5,000/. per annum. There will also be a great saving in coal at the Stanhope street Electric station, as the new station will switch on and take the entire dayload by means of the destructors alone. What this means will at once be apparent when it is stated that the Stanhope street plant already returns a profit of six per cent upon the original outlay of 100,000/., while the ratepayers have the advantage of better street lighting, the possession of a valuable asset, and the satisfaction of knowing that they have not had to pay a farthing for it. And better things are in prospect with the inauguration of this new scheme. The possibilities of the use of refuse as fuel are endless, and the initiative may be followed by results as valuable and amazing in the case of "dust" as they have been in that of the once equally-despised coal tar. Nothing can exceed the energy with which the scheme has been forwarded—Mr. Blair and Professor Robinson carefully overseeing the carrying out of the designs for which they are responsible in their several departments with the assistance of an able lieutenant in the person of Mr. G. A. Ellt, the clerk of the works.

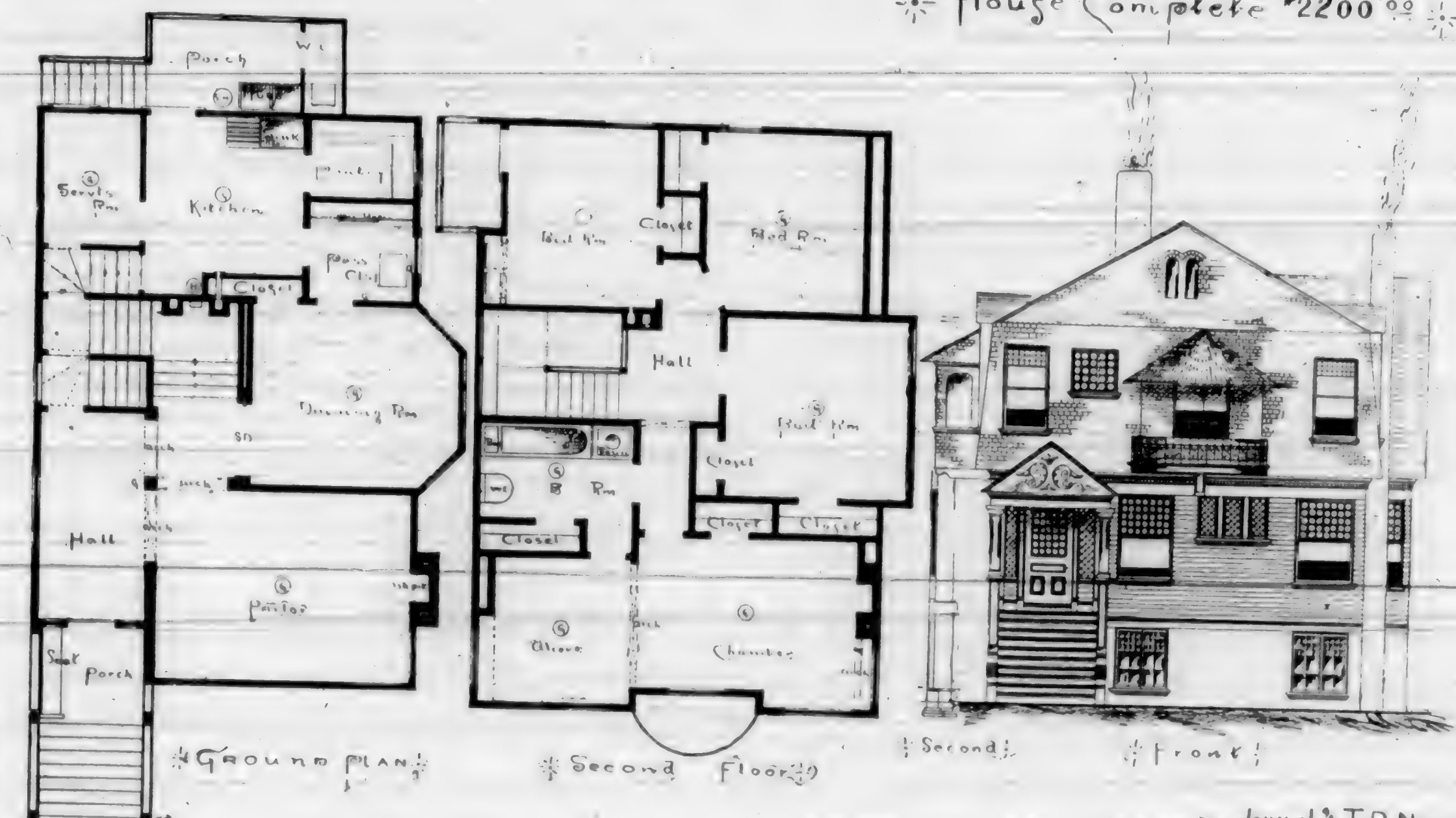
LEGAL DECISIONS.

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

PAYMENT OF CONTRACTOR BY CHECK.—Where parties upon being sued by a contractor alleged that they had given him a check in full payment of all claims under the contract, and a statement to that effect appeared on the face of the check; but the contractor denied that he had so accepted the check, and testified that the one who gave it to him told him that he would receive a further payment, and that the supervising architect advised its acceptance, saying that they would pay him in full afterwards, and this was corroborated by the architect, the Supreme Court of Washington held that the question of whether the check was given and accepted as full satisfaction was for the jury to determine. *Megrath v. Gilmore*, 39 Pacific Reporter, 131.

contract which is not in writing, the petition to enforce his lien need not set out in detail the material furnished and the work performed. *Texas State Fair Ass'n v. Caruthers*, Court Civ. App. Tex. 29 S. W. Reporter, 48.

ORDER BY CONTRACTOR AND MECHANICS' LIENS.—After a contractor had given a subcontractor an order on the owner, he abandoned the contract, and the owner completed the building under a clause authorizing him to do so in default of the contractor, and to deduct the cost of completion from any moneys due the contractor. The order had been presented prior to the filing of any liens. And the Supreme Court, 1st Department of New York held that such order was an assignment for so much of the balance due the contractor, after deducting for cost of completion, and was entitled to a preference over liens not filed until after its presentation. *Murry v. Micolino*, 31 N. Y. S. Reporter, 1109.



House Complete \$2200.00
— John J. T. D. Newson
— Architects
— 504 Kearny
— S. F. Cal.

EQUITABLE LIEN FOR BUILDING MATERIALS.—A contract for the purchase of materials to be used in the construction of a house, and notes given for the price, reserving title in the seller until payment, who is thus deprived of a lien under the statute, and also cut off from an action at law until the notes are due, creates an equitable lien on the house and lot which may be enforced in a court of equity. *Rose v. Perry*, Supreme Ct. Ala., 16 So. Reporter, 915.

DAMAGES FOR BREACH OF CONTRACT.—Where two parties have made a contract, which one of them has broken, the other must make reasonable exertions to render his injury as light as possible; and he cannot recover from the other damages which might have been avoided, had he performed such duty. *Uhlig v. Barnum*, 61 N. W. Reporter, 749.

STATEMENTS IN MECHANIC'S LIENS.—Where a contractor constructs a building as one job, for an entire price, under a special

ENFORCEMENT OF MECHANICS' LIEN.—Where the purchaser of land on which there is a mechanics' lien agrees to pay it off and save his grantor harmless as to same, the lien may be enforced against the land in the hands of the purchaser, without first exhausting the lienor's remedy against the grantor. *Cullers v. 1st Nat. Bank*, 6t. Civ. App. Tex. 29 S. W. Rep. 72.

PRESUMPTION OF NEGLIGENCE IN ERECTING A BUILDING.—Where a person lawfully upon a sidewalk is injured by material falling from a building in the course of erection, and it appears that the sidewalk was not covered or in any way guarded, it is sufficient to raise a presumption that the builder was negligent. This rule is necessary for the protection of those having occasion to use the sidewalks of public streets. The evidence as to how the accident occurred is most usually within the knowledge of the builder and his employees, and the person injured has no means of proving precisely how or why the accident occurred. The first warning of danger that he has is his injury, and then he has no opportunity to investigate the cause. *John v. Dawson*, Supreme Court, 1st Dept., 32 N. Y. S. Reporter, 59.

BUSINESS MOSAICS.

Open Doors—There are no secrets in making the best goods, is the title of the latest advertisement issued by Messrs. N. & G. Taylor Co., Manufacturers of American Tinplate, Philadelphia. This house has long been noted for its novelties in trade literature, but the present circular is something above the ordinary, and is quite original and striking. It conveys at once its meaning.

The reader is confronted with the massive double doors of a factory above which is the inscription "Open Doors", and underneath the words "There are no secrets in making the best goods." These two doors open at the touch, and bring immediately to view the interior of Messrs. N. & G. Taylor Co.'s tinning-house. This is a re-produced photograph by the half-tone process, and shows in reality the workmen, the tinning stacks, tin racks, dusting boxes, etc. This Tinning House is the largest in the United States, and as the firm states, "with facilities to produce every grade of bright or roofing tin that is made."

Twenty-two tinning stacks are shown that give an output of over 9000 boxes weekly by day work alone, but the most important thing that strikes the eye, is a large hand printed in bright red, pointing to the tinning stacks at the right foreground of the picture to which is inscribed "The Genuine Taylor 'Old Style' brand is made in the stacks shown on the right; notice there is no shafting or machinery, the work being done entirely by hand, the same as in 1830, and here the 'milk in the coconut' appears, and the whole import of the advertisement is quickly apparent.

In these days of mysterious manufacturing of Roofing Tin, N. & G. Taylor Co. boldly step forward and frankly invite inspection of their product. "Our doors are open, there are no secrets in making the best goods." Their celebrated brand, the Genuine Taylor "Old Style" brand of Roofing Tin is made in tinning stacks that show no shafting machinery or rolls. The work is done entirely by hand, the same as in 1830. No acid flux is used to injure the black sheets, pure Palm Oil only being employed. These sheets are allowed to soak, and are literally "boiled in oil" before they receive their metal coatings. Made in this way, without any secrets, and with "Open Doors," Messrs. N. & G. Taylor Co. may well advertise the brand which they originated so many years ago, and which they to-day hold as without a peer above their competitors. Jealousy and competition may go far in these days of close rivalry, but their brand, the Genuine Taylor "Old Style" is to well known and established in the hands of honest roofers to need any further encomium to praise its worth and durability.

The Maid—"There were four flies on the cake you sold us yesterday." CONFECTIONER (to clerk)—"Give the lady four raisins."—*Echo*.

San Francisco Gas Light Company, Gas Stove Department. By referring to page ii of this journal it will be seen by their advertisement that no charge is made for placing their stove, while the prices have been so much reduced for the stoves that there remains no excuse for the householder not to add this useful, and economical cooking arrangement to his outfit. We are aware among many who have not given much attention to the subject, that there is a false idea that gas costs too much when used for cooking

purposes. If a little care is applied in its use, it will be found not only cheaper than the use of coal, but a great saving of time, with a great increase of comfort to the housekeeper. At 226 Post street, San Francisco, you can see the stoves and find out all about their use.

Whizly—"One swallow does not make a summer." **Sizly**—"No, but one grasshopper can make a spring." *Philadelphia Inquirer*.

If you need water only when the wind blows; if you are satisfied to utilize but a small fraction of the water in your well, if you prefer heavy bills for repairs after each storm in winter, by all means use a windmill; but if you want water at any time, and up to the full capacity of your well, put in the Ajax Coal Oil Gas Engine, the latest thing in mechanics, an engine that uses common coal oil for fuel, and is built by the well known firm of Palmer & Rey, San Francisco, Cal.

"Was he very much cast down after he'd spoken to papa? "Yes. Three flights of stairs."—*Punch*.

P. & B. Paper is the only Building Paper manufactured on the Pacific Coast, and that, moreover, it is manufactured exclusively of materials produced on the Coast. Its quality has been so thoroughly demonstrated that it now almost exclusively used on all first-class buildings that are constructed in San Francisco and elsewhere. In price it is no higher than the ordinary grades of eastern Building Papers. We believe preference should be given to it on all occasions where Building Paper is specified, as every dollar spent for it means just so much more money kept in circulation at home. Their place of business is at 116 Battery street, San Francisco.

Did you make a hit with that red tennis blazer of yours down on the farm? "Did I? It struck the bull's eye the first time I wore it."—*Indianapolis Journal*.

If you have to be tempted to take a bath, it is only necessary to look at the picture of a porcelain roll rim bath tub as shown on page v to make the temptation impossible to resist. The J. L. Mott Iron Works manufacture these, also every thing else in the way of perfect plumbing materials if you call upon Mr. M. S. James, their Pacific Coast Representative, room 35 Flood building, San Francisco, you can find out all about it.

As it appears to be fashionable to patronize home manufacture you have an opportunity to keep in fashion by ordering your plumbing from the establishment of Joseph Budde, 575 Mission street, San Francisco, if in want of sanitary closets you have your choice. Supreme, Pioneer, Ocean Spray, Cyclone Syphon Jet, Embossed Front Washout Closets with Tank, Seat and Nickel-plate Flushing Pipe. They give the best satisfaction of all Washout Closets, on account of their Superior Tank and Workmanship. They have been adopted by the Palace, Miramar, Sutherland, Occidental and Grand Hotels, Mechanics' Institute, St. Mary's Hospital, and other prominent buildings of San Francisco.

CITY BUILDING NEWS.

Bayview Ave. near 21st. To build; owner, J. J. Noonan; contractor, T. C. Cochran; signed, May 22; filed, May 23; cost \$2925.

Brannan near Fourth. Granite work on church; owner, D. Nugent; architect, J. J. Clark; contractor, Thomas B. Roche; signed, June 3; filed, June 8; cost \$3500.

Brannan near 4th. Siding, copper and iron work; owner, D. Nugent; architect, J. J. Clark; contractor, J. D. De Gear; signed, May 16; filed, May 22; cost \$3344.

Bush near Baker. To build; owner, J. H. Hunt; architect, J. V. Hull; contractor, A. W. Goss; signed, May 17; filed, May 21; cost \$1600.

Bush and Webster. Additions and alterations; owner and builder, Tim Sullivan; architect, A. J. Barnett; days' work; cost \$2000.

Bush near Laguna. To build church; owner, Congregation Chahal Phalom; architect, J. M. Lyons; contractor, Henry Rohling; signed, June 11; filed, June 14; cost \$12350.

Buchanan and Ivy. To build; owner, D. Edwards; contractors, Harrigan & Williams; signed, June 13; filed, June 13; cost \$2250.

Buchanan near Hayes. To build; owner, Margaretta Johnson; architect, V. Monet; contractors, Harrigan & Williams; signed, May 8; filed, May 20; cost \$3295.

Capp near 17th. To build; owner, Margaret I. McNamara; architect, F. B. Wood; contractor, Neil Molloy; signed, June 6; filed, June 8; cost \$3215.

Caroline near Howard. Cottage; owner, George Heuston; day's work; cost \$1000.

Church near 18th. To build; owner, L. Lange; architect, G. A. Berger; contractor, J. B. Pence; signed, May 18; filed, May 19; cost \$2765.

Cherry near Sacramento. To build; owner, Mrs. C. H. Berlin; architect, Frank Mead; contractors, Dahlberg & Land; signed, May 18; filed, May 17; cost \$2485.

Clement near California. To build; owner, C. B. Adams; contractor, A. J. Clout; cost \$3500.

Clement near 5th Ave. To build; owner, Geo. M. Coon; architect, A. J. Barnett; contractor, J. J. Manseau; signed, May 21; filed, May 21; cost \$1400.

Clay and Locust. To build; owner, E. Dora Cutler; architects, Bugbee & Gash; contractor, D. B. Monroe; signed, May 23; filed, May 23; cost \$1750.

Clementina near 4th. To build; owner, Mary Drummond; architect, H. Gellfuss; contractor, L. Cuneo; signed, May 21; filed, May 21; cost \$3225.

Cliff House. Electric wiring, etc.; owner, Adolph Sutor; architects, Colley & Lemme; contractor, E. H. Frost; signed, June 1; filed, June 12; cost \$1352.

Cliff House. Plumbing, marble floors, etc.; owner, Adolph Sutor; architect, Colley & Lemme; contractor, G. C. Sweeney; signed, June 1; filed, June 12; cost \$2985.

Craut and Nye. Cottage; owner, Wm. McCall; architects, Shea & Shea; contractors, B. Duffey & Son; signed, June 7; filed, June 11; cost \$1015.

Eddy near Broderick. Alterations and additions; owner, Otto Grunzel; architects, Laist & Schwerdt; contractor, H. Behrens; signed, May 16; filed, May 18; cost \$1675.

Eddy near Scott. To build; owner, Louis B. Hetty; contractor, J. J. Manseau; signed, June 14; filed, June 15; cost \$3750.

Ellis near Franklin. To build; owner, Daniel Neill; architect, B. J. Clinch; contractor, P. J. Brophy; signed, June 15; filed, June 15; cost \$4700.

Ellis and Mason. Alterations; owner, Harriet McCarthy; architects, Shea & Shea; cost about \$2000.

Ellis near Buchanan. To build; owner, Elizabeth Taylor; architect, C. R. Wilson; contractor, J. W. Saunders; signed, April 28; filed, May 13; cost \$1465.

Eighteenth near Clover Ave. To build; owner, Johanna Sheehan; contractor, P. F. Lynch; signed, May 25; filed, May 21; cost \$2311.

Erie near Howard. To build; owner, Margaret I. McNamara; architect, F. B. Wood; contractor, Neil Molloy; signed, June 6; filed, June 8; cost \$2805.

First near Fulton. Additions; owner, H. Hunkin; cost \$1200.

Filbert near Jones. Alterations and additions; owner, Board of Education; architect, C. I. Havens; contractors, M. C. Brennan & Son; signed, June 6; filed, June 6; cost \$15,000.

Filbert and Mason. To build; owner, Catherine Borders; architects, Mosser & Son; contractor, L. W. Weissmann; signed, May 25; filed, May 27; cost \$2945.

Fillmore near McAllister. Cottage; owner, Mrs. Laura Albrecht; contractors, Marcuse & Remmel; signed, May 24; filed, June 15; cost \$8800.

Fillmore near Grove. To build; owner, C. A. Worth; architects, McQuigley & Son; signed, May 25; filed, May 25; cost \$2785.

Fillmore near Grove. To build except plumbing; owner, August Jungblut; architects, Martens & Colley; contractor, F. V. Steinman; signed, May 15; filed, May 21; cost \$5200.

Folsom near 24th. Two two-story frames; owner, A. B. Broger; architects, Martens & Colley; contractors, Williams & Foster; signed, May 23; filed, May 23; cost \$7750.

Folsom near 24th. Plumbing; owner, A. B. Broger; architects, Martens & Colley; contractors, Gulick & Wetherbee; cost \$1050.

Folsom near 7th. Additions; owner, Mr. Murray; Carpenter, Mr. Allen; house raiser, A. T. Pencinsky; cost \$1000.

Folsom near 5th. Alterations and additions; owner, Mrs. Mary A. McHaffie; architect, T. H. Welsh; contractor, J. Hendry; signed, May 21; filed, May 23; cost \$4550.

Folsom near 5th. Plumbing; owner, Mrs. Mary A. McHaffie; architect, T. J. Welsh; contractor, J. E. Britt; signed, May 22; filed, May 23; cost \$1047.

Fourth near Howard. Excavation and concrete for four-story brick; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Geo. Goodman; signed, May 17; filed, May 20; cost \$1884.

Forty-eight Ave. near J. street. To build; owner, Wm. Gercke; builder, J. Heyman; cost \$2500.

Gary near Octavia. Alterations and additions; owner, Mrs. Clemence Goldsmith; architects, Safford & Kohlberg; contractor, J. V. Hull; signed, June 3; filed, June 6; cost \$4100.

Grove and Devisadero. To build; owner, Mrs. H. W. Armstrong; contractor, W. Little; signed, May 17; filed, May 21; cost \$1195.

Grove near Laguna. Alterations and additions; owner, Mrs. C. W. Hall; architects, Hatherton & Ross; contractor, H. W. Pritchard; cost \$1775.

Green near Mason. To build; owner, Hermine Donahue; architects, Shea & Shea; contractors, Magner & Gallagher; signed, May 13; filed, May 17; cost \$4130.

Guerrero near Camp. To build; owner, Geo. Kennedy; architect, H. Geiffus; contractors, Hood & Watson; signed, May 25; filed, May 27; cost \$3335.

Harrison near 40th. To build; owner, J. McHermott; architect, M. J. Welsh; contractor, M. J. Feeley; filed, May 28; filed, May 29; cost \$17850.

Hampshire and 18th. To build; owners, L. Kundson and Else Nassen; architect, L. Kundson; contractors, Wiegandt & Lassen; signed, May 24; filed, May 29; cost \$1330.

Hartford near 18th. To build; owner, Michael Dolan; contractors, Marcuse & Remmel; signed, June 7; filed, June 8; cost \$3000.

Haight and Scott. To build except plumbing and painting; owner, Chas. F. Decker; architect, R. H. White; contractor, H. Behrens; signed, June 4; filed, June 8; cost \$12,000.

Haight and Scott. Plumbing, etc., on three-story building; owner, Chas. F. Decker; architect, R. H. White; contractor, E. J. Lawton; signed, June 4; filed, June 14; cost \$1497.

Hoffman Ave. near 23d street. Cottage; owner, S. W. Boyston; builder, Heyman; cost \$2500.

Hoffman Ave. near 23d street. Cottage; owner, A. Harge; contractor, J. Heyman; cost \$1250.

Howard near 26th. To build; owner, Catherine Daley; contractor, John L. McLaughlin; signed, May 31; filed, May 31; cost \$3400.

Howard, Second and Market. Excavating trenches; owner, Mutual Electrical Co.; contractor, A. E. Buckman; cost 24 cts. per lineal foot of trench, 25¢ each for large man holes, \$19 for second size, \$17 for third size.

Humboldt near Rhode Island. Cottage; owner, Mr. Hartmann; contractor, J. Bae; cost \$900.

Jackson and Pierce. Concrete work, etc.; owner, Abbey M. Scott; architects, Coxhead & Coxhead; contractor, Rhody Ringrose; signed, May 4; filed, May 16; cost \$4450.

Jackson and Pierce. To build; owner, Alice Scott; architects, Coxhead & Coxhead; contractor, M. C. Lynch; signed, May 22; filed, May 23; cost \$4700.

Jackson near Front. Additions and alterations; owner, Hildebrandt, Posner & Co.; architect, J. J. & T. D. Newson; contractor, H. T. Brady; signed, May 16; filed, May 16; cost \$1773.

Jackson near Mason. To build; owner, Geo. H. Jacot; architect, C. M. Rousseau; contractor, R. J. Pavett; signed, May 16; filed, May 17; cost \$445.

Jackson near Franklin. Excavation and concrete; owner, Henry Sahleim; architects, Salfeld & Kohlberg; contractor, Geo. Goodman; signed, May 16; filed, May 20; cost \$1000.

Jackson near Franklin. Carpenter work; owner, Henry Sahleim; architects, Salfeld & Kohlberg; contractor, John Furness; signed, May 16; filed, May 29; cost \$13,380.

Jackson near Franklin. Plumbing, etc.; owner, Henry Sahleim; architects, Salfeld & Kohlberg; contractors, Ickelheimer & Bro.; cost \$2845.

Jackson near Franklin. Granite work, etc.; owner, Henry Sahleim; architects, Salfeld & Kohlberg; contractor, James Rae; cost \$3600.

Jackson near Franklin. Plastering; owner, Henry Sahleim; architects, Salfeld & Kohlberg; contractor, C. C. Morehouse; cost \$355.

Jackson near Franklin. Painting; owner, Henry Sahleim; architects, Salfeld & Kohlberg; contractors, M. J. & J. J. Donovan; cost \$1535.

Jackson and Franklin. Brick work; owner, Henry Sahleim; architects, Salfeld & Kohlberg; contractor, J. Wagner; cost \$1275.

Jackson near Laurel. Three two-story frames; owner, Chas. Clark; contractor, Casper Zwierlein; signed, June 4; filed, June 7; cost \$11,709.

Jessie near 13th. To build; owner and builder, L. B. Schmidt; cost \$3000.

Julian Ave. near 14th. To build; owner, Mrs. Bridget Costello; contractor, R. Fahy; signed, June 10; filed, June 10; cost \$1700.

Lake Merced to the bluff on the Ocean Shore. owner, Spring Valley Water Works; architect, Engineer of S. V. W. W.; contractor, A. E. Buckman; cost \$1.45 per lineal foot about 3,100 ft.

Laguna and Jackson. Heating and ventilating; owner, W. F. Whittier; architect, E. R. Swain; contractor, W. W. Montague; signed, May 16; filed, May 16; cost \$2665.

Leavenworth near Glover. To build; owner, Jas. Reilly; architect, T. J. Welsh; contractor, R. Fahy; signed, June 12; filed, June 12; cost \$2245.

Market near Fifth. Low pressure steam heating; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, G. H. Tay & Co.; signed, May 29; filed, June 6; cost \$10,190.

Market near 5th. Interior fire-proof partitions; owner, Parrott Estate; architect, Pissis & Moore; contractor, A. Wanner; signed, May 29; filed, May 29; cost 12½ cents per sq. foot.

Market near Montgomery. Alterations and additions; owners, Brown Bros. & Co.; architects, Kenitzer & Barth; contractor, I. L. Binet; signed, May 31; filed, June 1; cost \$1840.

McAllister and Devisadero. To build; owner, J. J. McCarthy; Sec. Board City Hall Com.; architect, Clinton Day; cost about \$75,000.

Mission near West Ave. To build; owner, C. A. Clinton; architects, Havens & Toepke; contractors, Holm & Shelby; signed, June 11; filed, June 11; cost \$2864.

Mission near Main. Carpenter, plumbing, painting, etc.; owners, H. Bird and C. H. Haugby; architects, Martens & Coffey; contractor, A. McElroy; signed, June 15; filed, June 17; cost \$3044.50.

Mission near Hermann. Repairs; owner, Board of Education; architect, L. R. Townsend; contractors, Holm & Shelby; signed, May 13; filed, May 21; cost \$1181.

Mission near Hermann. Heating for school buildings; owner, Board of Education; contractor, Geo. H. Tay & Co.; cost \$1590.

Mission near Hermann. Painting; owner, Board of Education; contractor, Wm. Linden; signed, May 4; filed, May 21; cost \$1400.

Mission near 4th. Carpenter and mill work, etc. for brick building; owner, A. Wilson; architect, J. R. Miller; contractor, Woodworth Wetted; signed, May 21; filed, May 22; cost \$11,400.

Mississippi street No. 429. Frame building; owner, Ernest and Charlotte Johnson; architect, P. J. Ellis; contractors, Peterson & Person; signed, May 23; filed, May 24; cost \$1935.

Nehrenska and Volo. To build; owner, John J. Hickey; contractor, John D. Coleman; signed, May 23; filed, May 31; cost \$3150.

Noe and 14th. To build; owner, John C. Voose; architect, C. Geddes; contractor, J. J. Walsh; signed, May 21; filed, May 27; cost \$4000.

Nineteenth and Guerrero. Four three-story frames; owner and builder, F. Nelson; cost \$16,000.

Pacific Ave. near Webster. To build; owner, Ray Wertheimer; architect, J. E. Kraft; contractors, Gardner & Boyder; signed, May 9; filed, May 15; cost \$6838.

Pine near Taylor. Concrete and iron work for retaining wall; owner, E. B. Hinde; architect, S. G. Hinde; contractors, Cushing, Wetmore Co.; signed, May 24; filed, May 29; cost \$1485.

Post near Franklin. Alterations and additions; owners, Simon Newman; architect, James E. Wolfe; contractor, John Furness; signed, June 1; filed, June 3; cost \$1645.

Polk near Filbert. To build; owner, Luke Burk; contractor, C. C. Blair; cost \$390.

Polk and Vallejo. To build; owner, Martin Hink; architects, Martens & Coffey; contractor, J. Bucher; signed, June 10; filed, June 10; cost \$5619.

Sanchez near 17th. To build; owner, Frank P. Currie; contractors, White Bros.; signed, May 17; filed, May 20; cost \$1900.

San Jose Road near Brook street. To build; owners, John and Mary Lally; architect, R. Reichenbach; contractor, J. Kenealy; signed, June 3; filed, June 3; cost \$1530.

Scott near Turk. Alterations and additions; owner, Claus Wreden; architect, W. Winterhalter; contractor, A. B. Schmit; signed, May 16; filed, May 17; cost \$2465.

Steiner and O'Farrell. To build except plumbing; owner, D. J. Murphy; architects, Townsend & Wyneken; contractor, W. H. Field; signed, May 18; filed, May 18; cost \$10,470.

Steiner and O'Farrell. Plumbing; owner, D. J. Murphy; architects, Townsend & Wyneken; contractor, J. Doherty; signed, May 27; filed, May 29; cost \$1525.

Stockton near Lombard. Additions and alterations; owner, Ole Joergensen; architects, Martens & Coffey; contractor, H. Behrens; signed, May 27; filed, May 31; cost \$2200.

Sixteenth near Guerrero. Additions and alterations; owner and builder, L. B. Schmidt; cost \$2000.

Taylor and Post. To build; owners, Executors Mollenhauer Estate; architect, P. J. Welsh; contractor, A. L. Campbell; signed, May 31; filed, June 3; cost \$4700.

Tenth near Howard. To build; owner, Norwegian Danish Methodist Congregation; day's work; cost \$4000.

Tenth Ave. near California. To build; owner, Chas. Braun; contractor, J. Heaney; signed, May 21; filed, May 25; cost \$1525.

Tennessee street No. 1711. Additions; owner, Mr. Grady; carpenter, C. Holm; house raiser, A. T. Penesky; cost \$600.

Third Ave. and Clement street. To build; owner, Mattie de Curtion; architect, Wm. Armitage; contractor, Carl Rosst; signed, May 24; filed, May 29; cost \$2800.

Twenty-third near Douglass. To build; owner, S. W. Royston; architects, Townsend & Wyneken; contractors, Williams & Foster; signed, May 21; filed, May 23; cost \$1880.

Twenty-fourth near Alabama. To build; owner, Samuel McKee; architect, Evan Woods; contractors, Westerlund & Holmgren; signed, June 6; filed, June 7; cost \$1705.

Twenty-first and Valencia. Additions; owner, J. Lennon; contractor, J. O'Sullivan; cost \$2500.

Union near Powell. To build; owner, Jos. Garibaldi; architect, E. Deplierre; contractor, D. Ross; signed, May 16; filed, May 18; cost \$2877.

Utah near 24th. To build; owner, Martin Johnson; contractor, Thomas F. Mitchell; signed, June 15; filed, June 17; cost \$1175.

Vallejo and Hodges Alley. To build; owners, A. Gutell and A. Lucel; architect, E. Picasso; contractor, Felice Torgino; signed, May 31; filed, May 31; cost \$1600.

Varennas near Union. To build; owner, Davis Garibaldi; contractor, L. Cuneo; signed, June 6; filed, June 6; cost \$250.

Vermont near Humboldt. Cottage; owner, L. Rendler; day's work; cost \$1500.

Washington near Walnut. To build; owner, W. S. Gage; architect, H. Burns; contractor, F. A. Williams; signed, May 15; filed, May 16; cost \$7283.

Washington near Walnut. Plumbing, etc.; owner, W. T. Gage; architect, H. Burns; contractors, W. S. Snook & Son; signed, May 15; filed, May 16; cost \$1730.

Walter street No. 309. Alterations and additions; owner, Mrs. Margaret Hooper; architect, E. C. McManus; contractor, P. J. Brophy; signed, April 4; filed, May 15; cost \$1710.

Wisconsin near Napa. Cottage; owner, C. Mackintosh; contractor, J. Young; cost \$1200.

York near 21st. To build; owner and builder, Wm. Hebbing; cost \$8000.

The California Architect and Building News.

Copyrighted 1895, by the California Architectural Publishing Company.

OFFICE: 408 CALIFORNIA STREET,

SAN FRANCISCO, CAL., U. S. A.

VOLUME XVI.

JULY 20th, 1895.

NUMBER 7.

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

Published on or about the 20th of each month by The California Architectural Publishing Company. The Stockholders being Architects and others interested in the profession.

SUBSCRIPTION TO THE JOURNAL, \$3.00 PER YEAR IN ADVANCE.

ESTABLISHED 1879.

INCORPORATED 1889.

NOW IN THE SIXTEENTH YEAR.

W. J. CUTHBERTSON, President.

OLIVER EVERETT, Secretary.

Remittances should be in the form of postal orders, payable to THE CALIFORNIA ARCHITECTURAL PUBLISHING COMPANY, and all communications addressed to the office of the Company, 408 California Street, San Francisco, Cal.

ADVERTISING RATES:				
Space	1 Month.	3 Months.	6 Months.	12 Months.
1 inch.....	\$ 1 50	\$ 4 00	\$ 7 50	\$ 13 00
2 inch.....	4 00	10 00	18 00	35 00
3 inch.....	7 50	18 00	32 00	60 00
1 Column.....	12 50	35 00	65 00	125 00
1/2 Page.....	20 00	57 50	105 00	200 00
1 Page.....	40 00	110 00	200 00	350 00



THE Manufacturers and Producers Association of the Pacific Coast is doing good work in calling attention to the excellence of California manufactures and work and the undesirability of patronizing goods and work from elsewhere. And in line with the argument let us draw attention to the CALIFORNIA ARCHITECT AND BUILDING NEWS, the representative of Pacific Coast Architects. This should be certainly patronized and helped by the architects, builders and owners of this coast. It now stands on a par with any other publication of its class and price in the world—and in the general return of sense in the matter of trading with our neighbors we believe that the CALIFORNIA ARCHITECT AND BUILDING NEWS will not be forgotten either by California advertisers or by subscribers.



It goes without saying that the proper bringing up of the rising generation is one of the most important objects before us, and to see that it is properly housed during the time that it is occupied in common education is one of the duties of the commonwealth.

To judge from the Report of the Chairman of the Building Committee of the Board of Education of San Francisco, this city is not quite up to date in this regard. From it we find that taking the school buildings generally they are not in the best condition for a proper æsthetic effect upon the pupils studying therein. Twenty-eight buildings have dirty walls and need whitening or rather tinting, as white walls should not on any consideration be allowed in a school room. Thirty-nine need painting. The playgrounds and yards

are just as necessary to be kept in good order as the buildings themselves. We find, however, that forty-two require their yards bitumenized; planking should no more be used, both on account of decay and for unevenness of surface; not good for running around on.

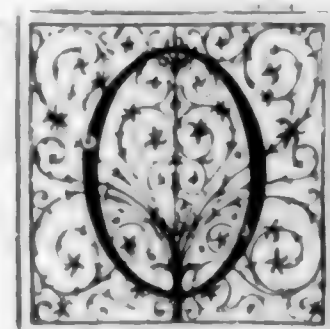
Proper privacy and clean sanitary appliances in the latrines are other things that tend to rear healthy and modest children—therefore crockery troughs instead of the present thirty-three wooden asphatum lined ones are required and proper partitions, etc. Again, an untidy environment to a school house has its bad effect on the characters of the young ones, therefore nine fences and gates ought to be repaired.

Next, there is no doubt but that over-crowdedness is detrimental to a proper teaching and quite a number of the school buildings are not large enough and require class rooms, principal's rooms, libraries, etc., added thereto.

Twenty-eight buildings require their roofs repaired and nine new floors. In one school the sash and glass are so bad that it is necessary to replace them—the Lincoln School needs repairs, but really a new building should be put up on the site as the present one is dark, gloomy, antiquated and a disgrace to the city. Another building according to the report is in a "dangerous condition and not fit for habitation" and the old Polytechnic School is "in a very bad condition" another is "in a generally dilapidated condition" and so on.

It seems to us good policy to spend money on works which will tend to prevent crime by aiding in rearing better young people; in fact more reasonable than to spend money in finding out, hunting up and punishing crime when it is committed; less police—more proper education.

ROADWAYS AND STREET PAVEMENTS.



UR people begin to realize the importance of excellent roads and their value to all of our industries. The saving made on the wear and tear of our horses and vehicles, also that made by business men in the difference in time it takes to ride over a good and a poor road, and the pleasure to be derived from riding over a good road, are all points which show the need of having first-class roads.

The increased value of property generally amounts to more than the cost of building a good substantial road, and then, too, they are a standing advertisement for the community in which they are built, making the city or town a desirable one in which to reside, helping thus to increase the population and taxable property. A stranger's impression of a city or town depends largely upon the ease with which he can go from place to place in the transaction of business, or in the pursuit of pleasure. The cost of wagon transportation over the roads of France does not exceed one-third the like expense in America, it being common in rural districts to haul three tons, and in the cities from three to five tons net freight with one horse. These and many more facts the people are weighing, and the more they investigate the better it is for the whole country. This movement has already reached such dimensions that it is being agitated all

over the United States, and the people are not going to allow it to stop.

Byrne says countries inhabited by the least civilized people, whose wants are supplied by nature in the immediate vicinity of their dwellings, are almost destitute of roads; hence it has come to be said that roads are the physical symbol by which to measure the progress of any age or people. If the community is stagnant the condition of the roads will indicate the fact; if they have no roads they are savages. There are many methods used in the construction of broken stone roads, and a variety of materials used for street paving, of which I will treat briefly for want of time.

As near as can be ascertained the first broken stone pavements were constructed in France in 1764. In the early part of the present century two systems were introduced into England, the first by Telford and the second by MacAdam. The name of Telford is associated with rough stone foundation. MacAdam disregarded this foundation, contending that the subsoil, however bad, would carry any weight, if made dry by drainage, and kept dry by an impervious covering. The names of both have ever since been associated with the class of roads which each favored, as well as with roads on which all their precepts have been disregarded. MacAdam omitted the foundation of large stones, claiming that it was not only useless but injurious. He was the pioneer of good roads in England, and from his name the word macadamized is derived.

Since the time of Telford and MacAdam the art of road making has been greatly improved by the introduction of rollers and crushing machines. The modern road builder endeavors to adapt himself to circumstances; he must secure a good foundation, either with the natural foundation or with the use of gravel, sand or Telford base, for without this the most expensively-built road will fail. It will not stay in position any more than a building will without a good foundation. Good drainage must be secured, the stone should be properly screened, the largest to pass a two and one-half-inch ring, the second size a one and three-quarter-inch, the third a one and one-quarter-inch, and the fourth a one-half-inch ring. The foundation should be brought to a proper grade and crown, and thoroughly rolled. The depth of stone should be varied according to the foundation and the traffic expected. If a good foundation four inches is enough; if a poor foundation twelve inches might be needed. The crushed stone should be spread in light, uniform layers, well rolled, commencing at the bottom with the largest stone, and using the smallest size for the finish. Nothing but the best quality of stone should be used; for this purpose trap rock is the most desirable, and will wear more uniformly, thus keeping a smoother surface than an inferior stone. We cannot afford to use an inferior quality of stone; it is economy to use the best.

Macadamized streets are the cheapest to build, and give good satisfaction when placed under the right conditions, namely, when the traffic is not too heavy and not confined to a narrow space. For instance, one street is always in good condition, as it has an average traffic which is distributed over the entire surface, while all of the macadamized streets in the business portion of the city, where the traffic is too heavy, are often in bad condition, and should be paved. This class of roads cost from 50-cents to \$1 per square yard, varying according to the cost of stone, length of haul, depth of stone and cost of foundation. The cost of maintenance with a moderate traffic, of a thirty-foot roadway, is .013 per square yard. With a heavy traffic, where macadam cannot

be used with economy, it costs from .03 to .25 per square yard. The date of the first introduction of street pavements cannot be determined with certainty. Livy informs us that in the year 584 (about 170 years B. C.) the Censors caused the streets of Rome to be paved from Ox market to the temple of Venus. Streets paved with lava, having deep ruts worn by the chariots and raised banks on each side for foot passengers, are found at Pompeii. The first act for paving and improving the city of London was passed in 1532. Orders were issued by the government for pavements in Paris in the year 1184. In the United States, Boston appears to have been the first city to pave its streets. Drake says the paving of the public streets began very early and was made important about 1700.

STONE PAVEMENTS.

Stone in a variety of forms has been used for paving material for 2,500 years or more. It was used by the Romans in the form of large irregularly-shaped blocks; these blocks being laid on a massive concrete foundation. For solidity and durability this form is unequaled. Boston, Mass., it is recorded, had its streets paved with pebbles as early as 1663, and cobble-stone pavements were introduced into Philadelphia in the year 1718. Cobble stones bedded in sand are very cheap, but their roughness requires a large amount of power and energy to be expended in order to move a load over them; besides they do not make a good pavement, as they are so irregularly shaped that it is almost to hold them in place. They are difficult to keep clean and very unpleasant to ride over. In Brussels this form of pavement was displaced by small cubical blocks of stone, and these were used in Paris and finally came to the United States.

GRANITE BLOCKS.

Granite blocks were of large dimensions. The present granite block is of a narrow, rectangular shape, proportioned and laid on a hydraulic cement base, the joints filled with small gravel stones and paving cement. This method is practically a return to the Roman system, only with blocks of smaller dimensions. Without a doubt this form of pavement is the most durable for roadways which are subjected to a very heavy traffic. If a poor quality of stone is used, for instance those that polish, the surface becomes slippery quickly and is rendered unsafe for travel. In some cities Medina stone is used. It is not so lasting as granite, but is quite durable, less noisy and does not become slippery. Buffalo, N. Y., Cleveland and Columbus, O., afford the best examples of this class of pavement. Limestone block pavements were tried in Kansas City, but in a year or two they wore unevenly and split by the action of frost. Granite block pavements cost from \$2.50 on sand foundations, with joints filled with sand, to \$4.80 with concrete base and joints filled with paving cement. No satisfactory figures can be obtained for the cost of maintaining granite block pavements in America.

BRICK.

Brick is one of the oldest materials used for paving, having been used upwards of a hundred years in the Netherlands. Pavements laid fifty years ago are still in good condition. There are several brick pavements in the United States, from twelve to twenty-two years old, which are still

in good condition. The general experience with this class of pavements is that it furnishes a smooth and durable surface, well adapted to moderate traffic. Many failures have occurred with this class of pavements, owing to poor foundation, defective construction and poor material. Whenever proper materials have been used, good foundation laid, with proper construction, excellent results have been obtained. Amsterdam is paved almost entirely with brick, and it is successfully used in Rotterdam, which is a commercial city. There are many ways of laying a brick pavement. A sand foundation, with joints filled with sand, cost \$1.50 per square yard; laid with two courses of brick, one flatwise, with a cushion of sand and a wearing surface set on edge, with joints filled with Portland cement—this costs \$2.06 per square yard. If laid on concrete base, with joints filled with paving pitch it costs \$2.73 per square yard.

Bricks made from blast furnace slag have been tried, and they have been found to be durable, but soon wear slippery. Ordinary building bricks saturated with gas tar have been experimented with in Nashville, Tenn., but the results were not satisfactory. The advantages of brick pavements are, ease of traction, and good foothold for horses; yield but little dust and mud; are adapted to all grades, and are very easily repaired and kept clean; but slightly absorbent; pleasing to the eye and quickly laid. The principal defects of brick pavements arise from lack of uniformity in the quality of the bricks, and the liability of using bricks too soft which crumble under the action of traffic and frost.

ASPHALT.

In Paris asphalt was first employed for street paving in 1838, though it was not used to any extent until 1854. London introduced it in the year 1869, and it has since then been used extensively throughout Europe and in different sections of this country during the past few years. The difference between the asphalt pavements of Europe and those of America is due to the character of the materials. The former are composed of limestone rock which is naturally impregnated with bitumen, while the latter are composed of an artificial mixture of bitumen, limestone and sand. Many deposits of bituminous rock are to be found in the United States; they have been used to a limited extent. The Island of Trinidad continues to be the source of supply for the United States. The cost of construction varies from \$2.50 to \$4.50 per square yard. Cost of maintenance in America is placed at an average of 10 cents per square yard per annum; in London for an average of fifteen years at 21 cents per square yard. In Paris it costs about 40 cents per square yard per annum to maintain it, including the charge for renewing one-fifteenth part of the surface every year. In this country the cost of maintaining asphalt pavements is usually included in the original contract for construction for a stated term of years, and after that any repairs that are needed are made by the asphalt companies at the expense of the city, as it calls for expert work and an expensive plant.

The advantages of asphalt pavements are, that they are comparatively noiseless under traffic, are pleasing to the eye and are easily cleaned. The defects of the same pavements are, that they are slippery under certain conditions of the atmosphere, they will not stand constant moisture, and will disintegrate if excessively sprinkled. It is not adapted to grades steeper than 2½ per cent. Colonel Haywood states that in his opinion asphalt will last without

extensive repairs from four to six years, and that in the course of ten years the entire surface will have been renewed.

WOOD.

Wood pavements have been used extensively in Europe and the United States, though with different results in both countries. The experience in this country has been with but few exceptions unsatisfactory, while in Europe, especially in London, wood pavements have been used successfully and are quite popular, due probably to the thorough manner in which they were laid and the careful maintenance. The shoeing of horses and the width of tires has something to do with the wear of pavements no doubt. In some portions of Europe this matter is regulated by law, and should be in the United States. It is claimed that wood pavements absorb the filth of the street, and are very unhealthy.

DISTILLATE PAVEMENTS.

During the years 1886 and 1887 many coal-tar or distillate pavements were laid in Washington, D. C., but many of them proved unreliable. In some towns in England coal-tar macadamized roadways are made. This consists in mixing ordinary coal tar with crushed stone; it should be borne in mind that the stone used must be limestone or some soft stone, otherwise it will not wear down evenly with the tar, thus producing a lumpy surface. Concrete macadam, introduced by Mr. Mitchell, London, Eng., is composed of broken stone, sand and Portland cement, so proportioned that the space, otherwise vacant, is filled with an admixture of Portland cement. Mr. Mitchell states that the first piece of concrete road was laid in Inverness, in the approach to the freight station, in 1870. After the road had been used four and one-half years the wear was hardly perceptible.

GRAVEL ROADS.

We have miles of gravel roads in my city that are very fine in dry weather, but a few minutes rain makes the worst kind of red mud. On residential streets where there is light traffic and sand foundation it makes a fair surface, but on most of the streets where this material is in use, it would be economy to employ some other material. We have often been told of the excellent roads of Europe, which are under the government's control. On these roads a force of skilled men are continually at work making repairs, and any defect, however slight, is immediately repaired. It is not considered that the necessity for continual repairs is an evidence of poor workmanship in the original construction, but rather that an earnest endeavor is being made to keep the roadway in perfect repair. This prompt and constant repairing explains the superior condition of the roadways of Europe.

The men who have these repairs in charge are men skilled in this kind of work, and hold their positions because they are thus qualified. Politics has nothing to do with them as it has in this country. These men are removed for cause only. It takes years to teach men the art of road building and the proper method to be employed in making repairs. Generally in this country cities and towns pay for educating the men in charge of their roads and then politics removes them, but time will make this matter right. It will certainly be made right when people find that it is the only way to have good roads. All of us have much to learn in regard to road building. To a very large extent it is in an experimental stage in this country at the present time, and without doubt millions of dollars will be foolishly expended on worthless pavements. This waste of time and money

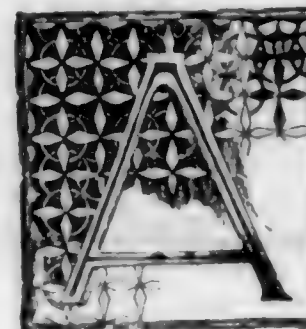
could be saved to a large extent if every person who has a theory or scheme of his own would consult with men thoroughly informed on the subject.

For instance in this state (Massachusetts) we have a Highway Commission composed of three men appointed by the governor, and who are in touch with the most experienced road builders in the world. Fortunately for our state we have on this commission very bright, intelligent men who have the cause at heart. These men are workers, and are not afraid to go into the field themselves. They are well informed on the construction and maintenance of our roadways, and are in every way qualified to give sound, practical advice, and the officials of our cities and towns could not do better than to avail themselves of their advice and experience. When the people become thoroughly aroused on this subject they will demand and finally secure the best possible methods of construction and maintenance.

Aside from the facts quoted from well known authors I am indebted for much information to the kindness of many of our citizens who have traveled in this country and in Europe.—William L. Dickinson in Stone.

WHAT TO EXHIBIT IN MEXICO.

BY OTTO SCHROEDER.



AFTER fifty years of revolutions and political changes, Mexico is now enjoying peace and prosperity. The administration of General Diaz has incited confidence in Mexico's finances at home and abroad. Industry and Commerce have considerably developed during the last twenty years, export and import have doubled. The value of the exports from Mexico for the financial year 1891 was more than \$63,000,000 and of the imports more than \$50,000,000. Of the total exports for 1892 the United States received \$50,000,000, Great Britain \$15,000,000, France \$5,000,000, Germany \$4,000,000. There are more than 7000 miles of railroad open to traffic. The telegraph lines have a total length of 38,000 miles. The postoffice receipts of the Mexican Government were in 1891-92 \$1,142,182. Navigation is practised on lakes and rivers at the coasts and across the Ocean. Mexico possesses a merchant navy of 1268 vessels and there are more than 30 excellent harbors.

Mexico's Trade with the United States increases more rapidly than it does with any other country.

In 1888-1889 Mexico received the following articles of import:

Cotton goods from United States, England, France, Germany.....	87,534,080
Comestibles from United States, Spain, Italy.....	4,893,706
Drugs from United States, France, Germany.....	1,697,830
Woolen goods, from France, England, United States, Germany.....	1,613,186
Iron and steel ware from United States, England, Germany, France.....	1,510,310
Paper from United States, Spain, France, Germany, Italy.....	1,352,143
Silk goods, pure and mixed, from France.....	788,581
Linen and hemp goods, from England, France.....	673,029
Hardware from United States, Germany, France.....	658,854
Glass and porcelain from United States, France, Germany.....	607,727
Copper ware from United States, France, Germany.....	593,167
Machines from United States.....	539,582
Furs from United States.....	414,100
Gold ware, silver ware, platin ware from United States.....	320,844
Arms and munition from United States.....	280,453
Carriages from United States.....	213,796
Stone and earthen ware from United States.....	81,816
Lead ware, tin ware, zinc ware from United States.....	75,969

This list shows the American exporters what they may

with profit exhibit at the International Fair, which will be inaugurated at the City of Mexico on the 2d day of April 1896. The American manufacturers must make a display of their electrical and steam machinery, hardware and tools, plated ware and cutlery, agricultural implements, rails and locomotives, well boring apparatus and pumps, pianos, and organs, railroad cars for passengers and freight, mining apparatus, silk and woolen goods, printing presses and type, books and paper, maps and globes, slates and lithographic stones, canned meats and preserves, clocks and watches, quicksilver and petroleum and a hundred other articles which Mexico does not produce herself.

Nobody ought to miss this golden opportunity. Our American Industry cannot afford to stay away from the Mexican Exposition as Spain and France, Germany and Italy are already making strong efforts for a great participation.

The Federal Government of Mexico has liberally consented to admitting free of duties all materials and machinery to be used in the construction of any buildings on the Exposition grounds, while all goods and articles imported from abroad for the Exposition will be treated by the Mexican Government as imported "in bond" and import duties will have to be paid only in case of sale.

The exhibitors and concessionaires—those who sell foreign articles, or have hotels, restaurants, barrooms, theaters, circuses, and other shows in the foreign section, are to be exempt from all federal taxes.

A Lottery will be conducted in such a way that all prizes are to be bought from exhibitors.

The railway and steamship companies will carry exposition freight for considerably less than the regular tariff.

It is proposed to offer special premiums for the best model houses of different countries, said houses to be entirely constructed of material produced in the country which they represent.

Prizes will also be offered for large hotels which are to be erected on the American and European plans, an inducement which will certainly incite the competition of prominent architects and builders of different countries.

Concessions will be granted by special contract for the sale of souvenirs and novelties of every kind.

So it is of vital interest for the American architects and builders, the cabinet and upholstery branch, the carpet trade, the carriage and harness branch, the clothing and furnishing line, the crockery and glass dealers, the drug and paint manufacturers, the dry goods men, the iron and hardware line, the type foundries, the sewing machine makers, the slate trade, the manufacturers of textile goods, the jewelers, to exhibit at the City of Mexico.

To encourage immigration the Mexican Government has granted free introduction of constructing and repairing materials for tramways for a period of thirty years, it will give concessions for hotels free from taxes for a period of ten years and will allow a free introduction of all furniture, crockery, glassware, etc., to be used in said hotels. It has promised to a Colonization Land Co., which is now being organized at Chicago, the special concessions of free introduction of houses, implements, etc., and the liberation from paying taxes for a period of ten years.

There is no doubt, that Mexico's population will in the near future increase in the most surprising manner, and there will be a vast field for American enterprise and business speculation.

The visitors of the Exposition of 1896 will to a great ex-

tent consist of Spanish talking people. Mexico and Costa Rica, Cuba and Guatemala, Honduras and Porto-Rico, the Argentine Republic and Brazil, Chile and Colombia, Paraguay and Peru, Ecuador and Venezuela will be represented by thousands of people, who will investigate and compare the exhibits of all nations and of all individual firms and who will form their opinions according to their experience. To exhibit in Mexico means to make a display of samples to all Latin-American States. Each American exhibit will be an advertisement for American Industry. No American firm ought to neglect this great opportunity.

SEMI-ANNUAL SUMMARY OF BUILDING OPERATIONS.

It will be seen, that though the number of buildings has slightly reduced, the total amount for the first six months of 1895 show an increase.

FOR FIRST SIX MONTHS, 1895.

1895	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value	No. of Buildings	No. of Contracts	Alterations & Additions Value	No. of Buildings	No. of Contracts	Total Value
January.....	2	3	\$ 50,025	31	33	\$ 148,880	4	4	\$ 20,847	37	40	\$ 219,732
February.....	7	9	\$ 95,386	38	42	\$ 122,880	4	6	\$ 12,071	51	57	\$ 340,267
March.....	6	9	\$ 170,480	70	81	\$ 208,081	8	11	\$ 17,418	86	101	\$ 395,568
April.....	7	9	\$ 103,383	57	69	\$ 274,080	24	24	\$ 87,111	88	102	\$ 464,824
May.....	3	7	\$ 36,043	85	90	\$ 383,037	19	19	\$ 33,973	107	116	\$ 463,053
June.....	2	5	\$ 74,775	67	85	\$ 288,791	11	11	\$ 21,612	80	101	\$ 385,178
Total.....	27	42	\$ 490,001	354	400	\$ 1,435,749	72	75	\$ 103,332	453	517	\$ 2,125,082

To this amount should be added the further estimated sum of \$500,000 where costs have not been given, which would make the total for the first six months, \$2,625,082.

FOR FIRST SIX MONTHS, 1894.

1894	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value	No. of Buildings	No. of Contracts	Alterations & Additions Value	No. of Buildings	No. of Contracts	Total Value
January.....	1	5	\$ 64,807	27	37	\$ 124,630	19	29	\$ 46,016	47	71	\$ 255,453
February.....	2	6	\$ 36,436	22	31	\$ 96,975	7	12	\$ 17,452	31	49	\$ 150,863
March.....	1	3	\$ 11,225	56	60	\$ 385,470	14	17	\$ 31,591	71	80	\$ 441,286
April.....	7	15	\$ 165,437	121	144	\$ 280,214	16	21	\$ 33,004	141	180	\$ 488,255
May.....	5	12	\$ 126,091	33	46	\$ 190,533	16	16	\$ 30,281	66	74	\$ 376,925
June.....	7	11	\$ 74,704	40	46	\$ 152,592	13	13	\$ 39,166	60	70	\$ 266,962
Total.....	23	52	\$ 470,360	301	364	\$ 1,258,924	85	108	\$ 221,140	419	524	\$ 1,959,424

The business of the first six months for several years is shown by the following table.

1885—754 contracts.....	value, \$4,267,375
1886—670	2,486,633
1887—516	3,269,914
1888—437	2,719,820
1889—546	3,910,600
1890—556	3,793,858
1891—583	3,916,973
1892—411	2,942,496
1893—475	3,024,498
1894—524	2,456,424
1895—517	2,625,082

AN ALMSHOUSE INSCRIPTION.

IN front of some almshouses at Leominster, England, there is the quaint stone figure of a man holding a hatchet in his hand, and underneath there is this inscription:—

He who gives his money before he is dead
May take up a hatchet and cut off his head.

The story current in the neighborhood says that the founder of these almshouses came to want through being involved in building expenses for them, and actually had to seek refuge within their walls as one of the inmates.—Exchange.

GAS AND GAS LIGHTING.

SINCE Mr. W. Murdock who lighted his premises in Cornwall with coal gas in 1792, the increased use of this gas has been enormous, as the many millions of tons of coal consumed in its manufacture prove, but even in the early days of its use there were found many old fogies who promised all kind of evil would follow if the use of gas was allowed. More than one hundred years have passed and we find the old fogy still busy at the same old cry of danger in its use to the health of the user; thousands of those at the present time know better by their personal experience and enjoy the luxury of cooking and heating their rooms by its use; the old fogy still lives and croaks however.

THE NEW FRENCH HOSPITAL.

SUNDAY, June 30th, the French Hospital was open to the public for inspection. We think no one of the many thousands that passed through the gates on that day but felt fully rewarded for the trouble of a trip to Richmond. From the reception room through the various wards, into the operating room and last though not least to the famous kitchen with its magnificent range (we say magnificent because it struck us that way upon the first glance), visitors were allowed perfect freedom to inspect and admire the various departments, and many comments were heard upon all sides upon the thoughtful care that must have been displayed by the designers and directors of this most beneficial and useful addition to our city, with the thought that generations yet unborn will rise to repeat the praise of the gentlemen who with such untiring perseverance have provided such a blessing to the community.

Each visitor was presented with a beautiful souvenir programme of the New French Hospital containing a history of the French Mutual Benevolent Society, the various illustrations in this souvenir give excellent views of the new buildings as seen from Point Lobos avenue, from 5th avenue as well as interior of main court and various other interior views of the wards and other rooms of interest.

Our space will not permit us to do justice to this subject, but we cannot refrain from giving some general figures to give the reader an idea of the size of this ornamental building erected and dedicated for the welfare of our citizens.

This New French Hospital, occupying a beautiful site 240 by 600 feet on Point Lobos avenue between 5th and 6th avenues and only a few minutes walk from Golden Gate Park is something to be proud of and every one having an interest in the health and welfare of our city will rejoice at the successful completion of such a blessing to humanity.

BOSTON'S PUBLIC LIBRARY.

THE completion of the Boston Public Library, the erection of which has caused a good deal of discussion in architectural journals, though the general opinion appears to be that notwithstanding a Boston architect was not employed as its designer, the building has much to admire.

The *American Architect and Building News* writing in regard to the cost of the building and expense of running the Library make the startling announcement that it would be cheaper to purchase and give outright the book required, than to lend it from the Library.

It may not be uninteresting to note the commencement of the Boston Public Library as an illustration of what can be

accomplished in a community where public interest is once aroused to act for the good of the public.

At the time Mr. Bigelow was Mayor of Boston, Edward Everett, then President of Harvard University, or to write more exactly, University of Cambridge, wrote to Mr. Bigelow, as Mayor of Boston, that if the city would provide a room for the purpose he would donate a thousand volumes as a commencement for a Public Library; at the next meeting of the Aldermen, Mayor Bigelow announced that he would donate a thousand dollars for the commencement of a Public Library. Shortly after this a room was provided in the City Hall and Mr. Everett's books were sent to that place, from that small beginning the present establishment has been founded.

To Mr. George Ticknor of Boston however, perhaps the credit should be given of making the Library a popular institution, Mr. Ticknor's idea was to have a large number of duplicates purchased of any popular work that less delay might be caused in obtaining the book required for the moment.

This plan was adopted with some hesitation on the part of the trustees and from that time the Library became a Boston institution in touch with the public, therefore a success.



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

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

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

ROBERT Clark Testimonial Medal Competition, Art Club House, submitted by Renaissance. T. O'Connor. *del & invet.* Elevation and Perspective.

STUDY for Town Hall by D. J. Patterson.

TENDERS TO BE RECEIVED.

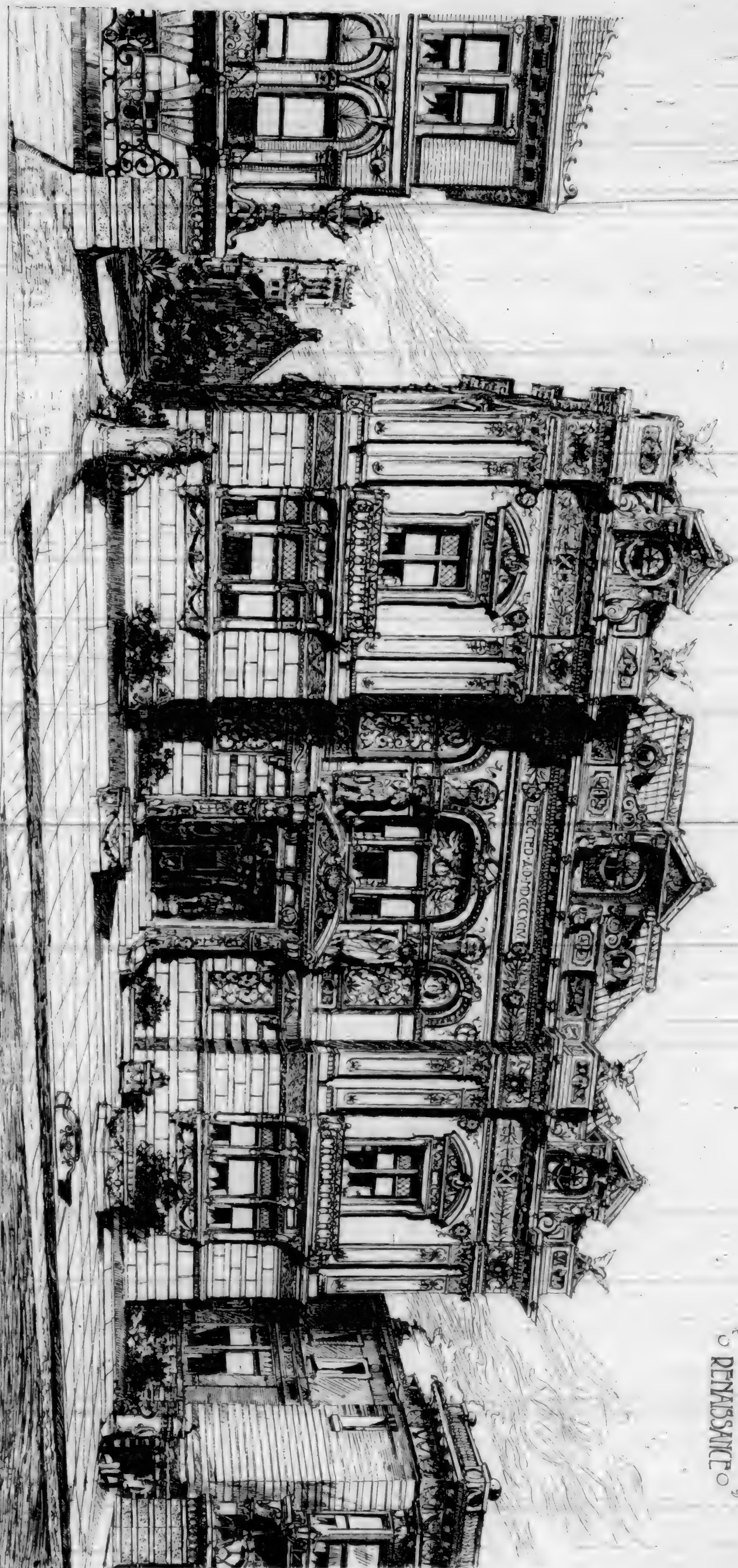
Office of the Custodian, U. S. Quarantine Station at Angel Island, San Francisco, California, July 9, 1895. Sealed proposals will be received at this office until 12 o'clock M. on the 31st day of July, 1895, and opened immediately thereafter, for all the labor and materials required for the new bulkhead, etc., at the above named station, in accordance with the drawing and specification, copies of which may be had at this office.

Each bid must be accompanied by a certified check for a sum not less than two per cent of the amount of the proposal. The right is reserved to reject any or all bids, and to waive any defect or informality in any bid if it be deemed in the interest of the Government to do so. Proposals received after the time stated for opening will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposals for New Bulkhead, etc., at the U. S. Quarantine Station, Angel Island, San Francisco, California," and addressed to

DR. D. A. CARMICHAEL,
Custodian.

ROBERT CLARK TESTIMONIAL
MEDAL COMPETITION

T.O. CONNOR-95



SUBMITTED BY
RENAISSANCE

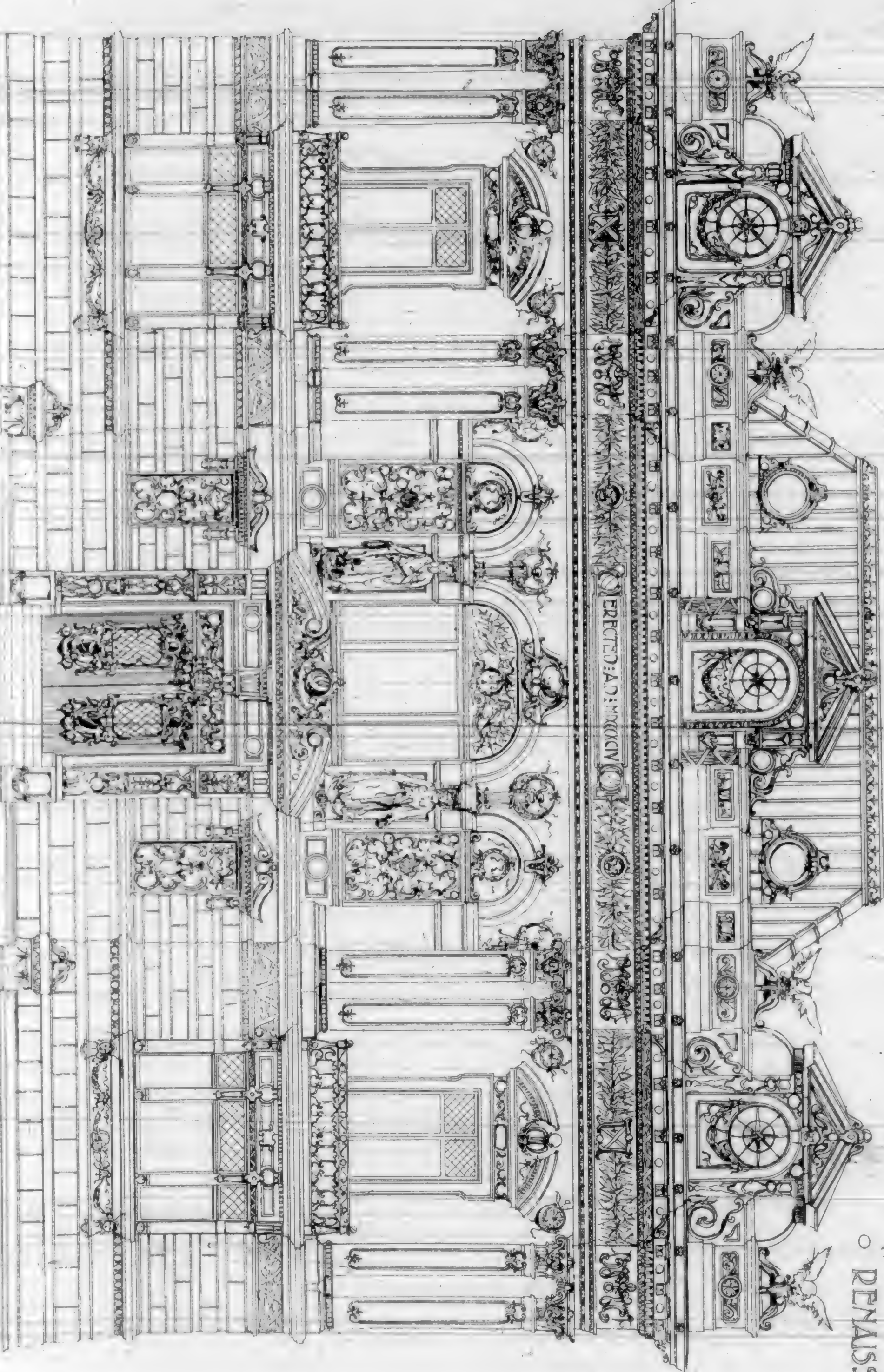
CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO

BRITTON & REY PHOTO LITH.

VOL. XVI No 7 JULY 1895.

ROBERT CLARK TESTIMONIAL
MEDAL COMPETITION
ART CLUB HOUSE

T.O. CONNOR-95



SUBMITTED BY
RENAISSANCE

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO

BRITTON & REY PHOTO LITH.

VOL. XVI No 7 JULY 1895.

STUDY FOR TOWN HALL
- 1895 BY D. J. PATTERSON -



NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 405 California street.
 SETH BABSON, Pres. GEO. W. PERCY, Vice-Pres.
 OLIVER EVERETT, Sec. JOHN M. CURTIS, Treas.

SOUTHERN CALIFORNIA CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
 OCTAVIUS MORGAN, Pres. A. M. EDELMAN, Vice-Pres.
 ARTHUR B. BENTON, Sec'l. AUGUST WACKERBARTH, Treas.

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
 C. E. GRUNSKY, Pres. GEO. W. DICKIE, Vice-Pres.
 OTTO VON GELDERN, Sec. W. C. RALSTON, Treas.

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
 GEO. P. LOW, Pres. C. O. POOLE, Vice-Pres.
 MAX CASPARI, Sec. H. T. BESTOR, Treas.

THE POSTOFFICE SITE.

THE following official report of the United States Government engineers, as to the stability of the site selected for the new Postoffice building in San Francisco, located at the corner of Seventh and Mission streets, seems to set at rest all questions as to the permanency of any building erected on this lot, and removes the last reasonable ground for longer delaying the commencement of work on this long needed and long hoped for building.

SAN FRANCISCO, CAL., July 8, 1895.

The Honorable Secretary of the Treasury, Washington, D. C.

SIR:—The undersigned, appointed in accordance with the provisions of the act of Congress, approved March 2, 1895, to examine the site for the Postoffice and Courthouse building in San Francisco, have the honor to render the following report:

Under date of April 5, having received notification of appointment to perform the duties assigned to us, we reported to you for instructions to guide us in the proposed examinations. On May 27th instructions were issued from the acting Secretary of the Treasury and received by us on June 4th. In this letter we were requested "to examine the nature of the subsoil and bed of the foundation, and to report to the department whether the character of the same is proper for the contemplated building, and what would be the cost of making the foundation for said building, and whether the construction of said building should be proceeded with on said site." We were further requested to make a recommendation as to the character of the foundation and present an approximate estimate of same.

Immediately after the receipt of the above mentioned letter proposals were invited from S. M. B. Haley, who made the former borings on the site, and the Beal Core Drill Company. One bid was received, that of Haley. Mr. Haley proposed to bore the site to a depth of 30 to 50 feet at the rate of \$1.25 per foot; beyond 50 feet he was to receive 50 cents additional for each foot.

Under the former action of the Treasury Department four borings were made at the site. These borings will be designated A, B, C and D. Their locations approximate to the four corners of the building. A was near the southwest corner and was sunk to a depth of 149 feet. B was near the southeast corner, depth 111 feet. C was near the northwest corner, depth 147 feet. D was near the northeast corner, depth 140 feet. In a general way the borings at B, C and D show that to a depth of 38 to 40 feet clean sand of varying colors was found; thence to a depth of 50 feet clay was found and below that sand of different grades and colors.

In boring A the indications were not so favorable in the upper strata, as the sand was found mixed with vegetable matter, debris, peaty sand, etc. Our boring indicates like nature of material at same location, extending through only a limited area.

We made eleven additional borings to a depth of 50 feet each. Their location is shown on the foundation plan. They are designated by numbers. Borings 1 to 6 inclusive show that to a depth of about 38 feet clean sand of varying colors was found, as in the previous borings; then a stratum of black peat about 6 inches in thickness; then about a foot of heavy black mud, and below that to 50 feet slate-colored clay. Borings 7, 8, 9 and 10 were made at the southwest corner, as at this location the nature of the sub-soil appears to indicate that some additional precautions should be taken in preparing the foundation, and the accompanying diagram shows the locations of these five borings. No. 7 was in the immediate vicinity of A. Yellow, black and white sand was found to a depth of 24 feet; thence to 40 feet sand, mud, debris, in general rather soft material, and below that to 50 feet sand and clay. No. 8 showed the general characteristics of borings 1 to 6. No. 9 showed common sand to 19 feet; then 1 foot of soft black mud and decayed vegetation; then 1½ feet of black peaty mud and sand, filled with sticks, roots, etc.; then good sand for 18½ feet, with a few grass roots at about 29 feet; at 40 feet 1 foot rotten wood and soft mud; then black clay, hard and sticky; 1 foot thick; then slate-colored and yellow sandy clay to 50.3. Nos. 10 and 11 had the usual characteristics of the first borings; that is, sand to 38 and 40 feet, and clay below to 50 feet. The results of the borings are shown on the tracings inclosed.

Throughout the site the general indications are of hill sand to depth of about 28 feet below the surface of the ground, and below that clay. The Coast Survey chart of 1858 shows that the site was a sand lot covered with brush and small trees. There was no indication of running water on the lot. It is only in the northwest corner for a distance of from 50 to 60 feet along Seventh street and along Mission that the material is of such a nature as to cause extra precautions to be taken with the foundation. Water was found at a depth of 8.8 to 12 feet. The surface of the ground was connected by levels with the beach mark (29.04) and the level of the water standing in each well was determined. This latter level is shown on the plats.

It may be stated that the material as found and brought to the surface may not show its condition in place, as the boring apparatus necessarily broke up the mass, and its mixture with the water in the well caused it to appear soft and yielding. It may be that in its natural condition it may stand the same amount of pressure as in other portions of the site.

To the first inquiry, therefore, whether the character of the subsoil is proper for the contemplated building, we are of the opinion that the building can be safely constructed upon it. As to the inquiry whether the construction of the building should be proceeded with, from an engineering point of view we see no reason to report otherwise.

It remains for us to state in a general way only the character of the foundation and to present an approximate estimate of the same. The foundation should be of concrete. The depth is given at 4½ feet. For the purpose of approximating to the cost we have taken that depth for the main walls and a depth of 3 feet for the columns, making the top of said foundation two feet wider than the base of the wall. For a length of 60 feet on Mission street and on Seventh street, where the soft material is found, the base of the foundation is increased to 25 feet. It is assumed that the ground can be drained into the street sewer for a depth of about nine feet. The water that may be found in the sand to be extracted by pumping will probably depend upon the season in which the excavation may be done. It is hardly capable of estimate, although we insert an item for the work.

The approximate estimate of the cost of the foundation is as follows: Excavation of 9528 cubic yards of material and disposal of same at 50 cents per cubic yard, \$4764; 3892 cubic yards of concrete at \$7.50, \$29,190; pumping, \$2,000. Total, \$35,944. Contingencies, 10 per cent, \$3,595. Total,

\$39,549. The concrete proposed consists of the best Portland cement, with twelve cubic feet of selected sand and thirty cubic feet of broken stone to the barrel.

Very respectfully, your obedient servants,

G. W. MENDELL,
Colonel Corps of Engineers.
W. H. H. BENYAUD,
Lieutenant-Colonel Corps of Engineers.

EUROPEAN FORESTRY WORK.

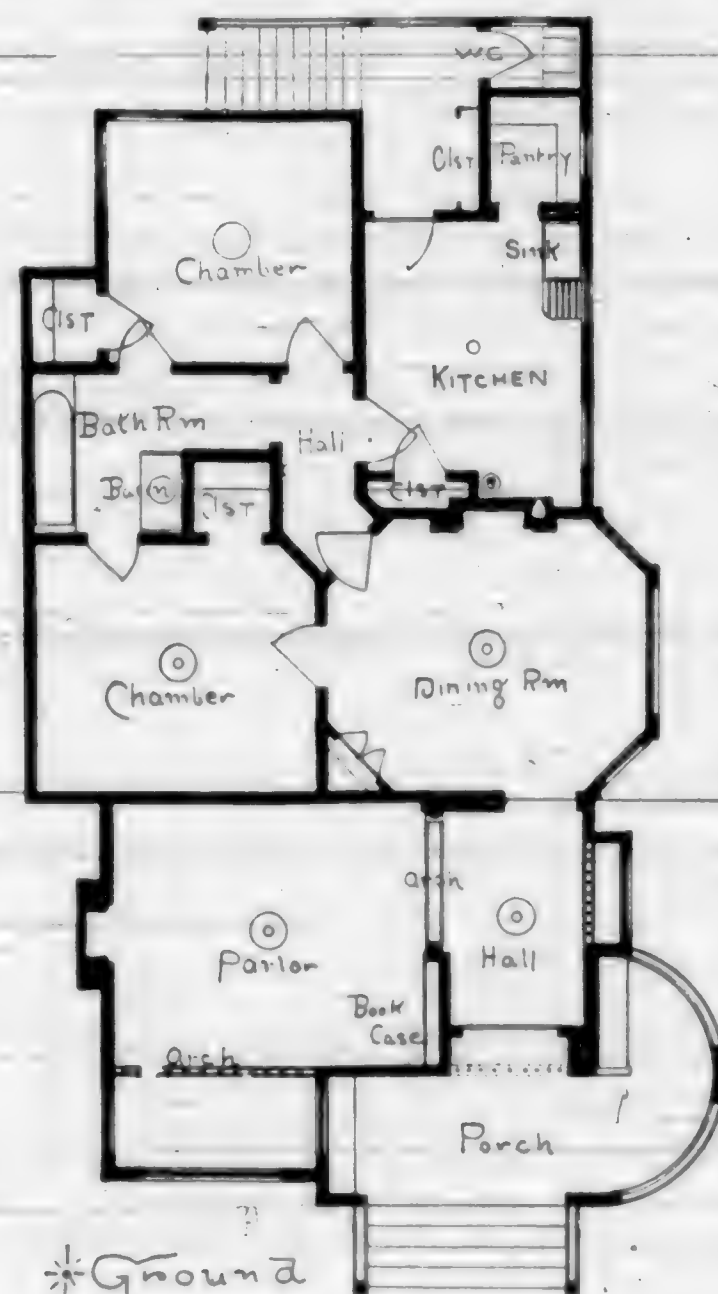
NEARLY all the nations of Europe are engaged at the present time in so controlling the forest supply that every bit of public and private property in trees is placed under restriction against destructive cutting. The forests are all so highly protected, says the *Boston Herald*, and even where no state control exists, the freedom in cutting trees which exists in this country is unknown.

In Germany during the last twenty-five years some

subject of forestry, and schools are everywhere maintained for the purpose of instructing men in this work. Russia has been the only nation where forests have been until lately under no restriction, but since 1888 even this country has had its forest laws, and offers loans on favorable terms for the protection and increase of the forests. Hardly any European nationality is without its state control of the forests or without the training schools in which men are instructed how to take care of them.

They are trying in Europe in every way possible to save the forests, and in the United States efforts are now being made in nearly every commonwealth to regulate and control the wooded lands, but our people are not ready to accept the stringent measures which have been employed as a necessity for preservation.

Mrs. Doolan—"It's too proud yez are t' talk, Norah Foley since yez won th' bicycle in th' tin cint raffle; but if thim ain't yer ould man's pants Oi'm a nagur."—*Leslie's Weekly*.



COTTAGE \$1800.00 COMPLETE



300,000 acres have been reforested, and the government has granted \$300,000 in this way to private owners of waste land. In Austria, since 1852, a forest law, which exercises a strict supervision over the forests, both public and private, has been in existence, and no one is allowed to devastate a forest to the detriment of adjoining holders of land, and cleared or cut forest must be replanted within five years.

In Italy the effort is constant to increase the amount of wooded-lands, and the government contributes three-fifths of the cost of reforestation, upon condition that the work is done according to its plan and instruction. In Switzerland the national government contributes from 30 to 70 per cent of the establishment of new forests, and from 20 to 50 per cent for the planting of protected forests, and the law is very strict in regard to cutting.

France is also deeply interested in public forest property. The forests belong largely to communities and public institutions, as well as to the state, and they are controlled in a manner similar to the regulation of forests in Germany. Here, as well as there, no clearing is allowed except by consent of the forest administration.

In all these countries the strictest attention is paid to the

BOOKS AND PERIODICALS.

LIPPINCOTT'S Monthly Magazine for July has for the complete novel "A Social Highwayman" by Elizabeth Phipps Train. Among the contents we notice "The Whole Duty of Women" by Emily B. Stone and "The Recall of Flathers" by Charles Dudley Rhodes, U. S. A., is a sketch that will make the readers laugh.

THE ENGINEERING NEWS—We would call the attention of our readers to an able article in this magazine on "Painting Iron Railway Bridges," by Walter G. Berry of New York. In the course of his professional duties Mr. Berry was called upon to prepare a report upon this subject, and certainly he has made a very able one.

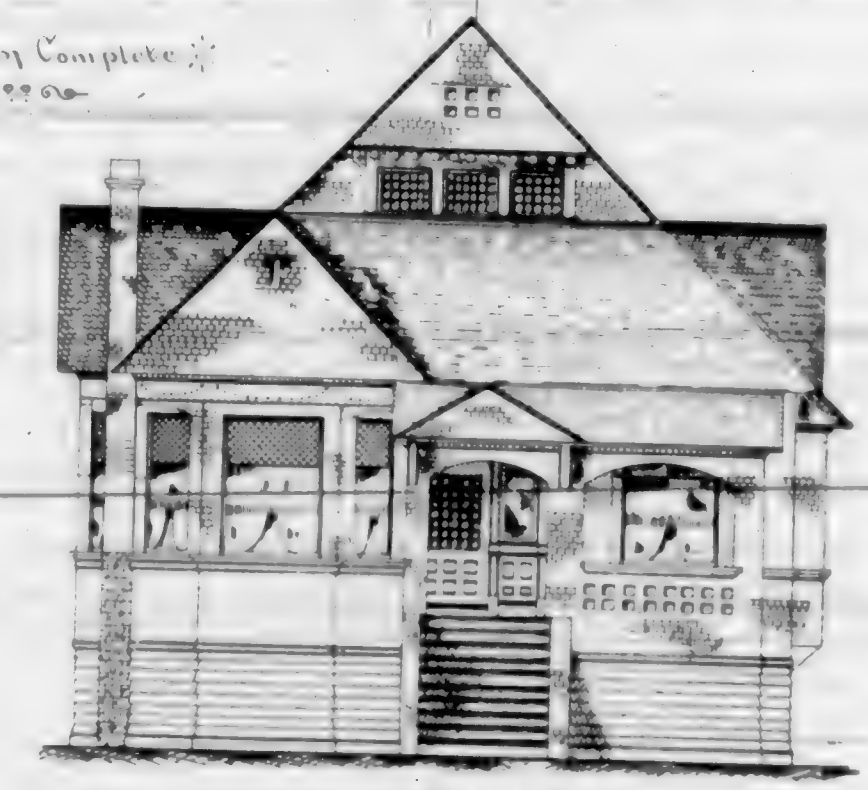
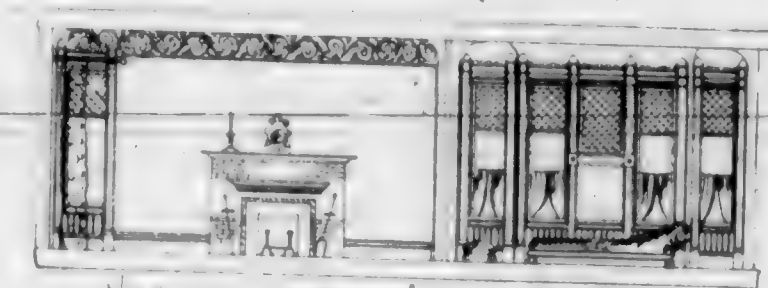
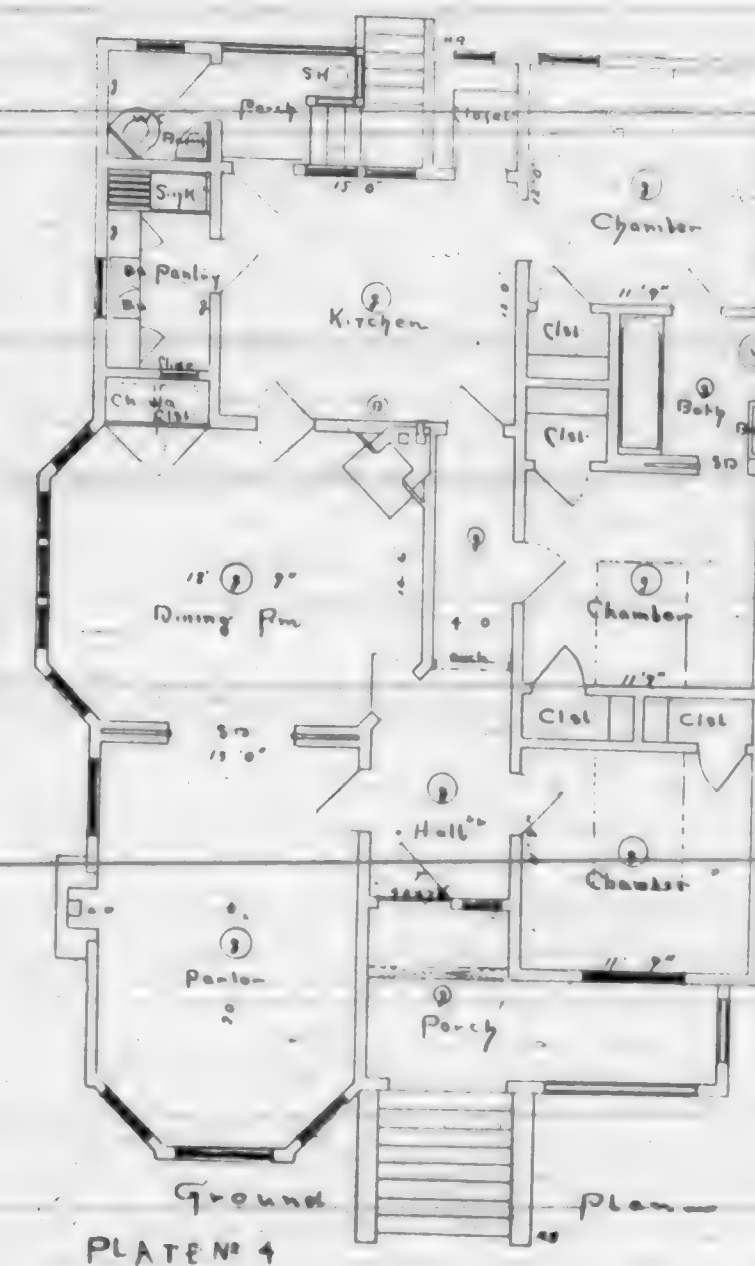
THE NEW GALAXY, published by Harry C. Jones, 92-96 Fifth Ave., New York. Subscription price one dollar a year. Volume 1, No. 1 of this magazine for June, 1895, makes a very pictorial appearance while it contains much interesting reading, fully illustrated; it appears to be a tender for the *Monthly Illustrator* at \$3 a year, which the same publishers announce as the finest magazine published, containing only original matter by the very best writers and the most beautiful pictures.

THE NEW SCIENCE REVIEW for July 1895, published by the Transatlantic Publishing Company, 63 5th Ave., New York, has a table of contents of unusual interest.

a note she would come, always crossing the note. I became so certain about it after awhile that I would write the note and tear it up. The thought would stir in her the desire to see me. There was no use in mailing it.

"The sight of a certain handwriting would always make my heart sink; it was something that I could not reason myself out of, yet the letters were pleasant and the words fair. One dark day I found out that my instinct was right. I trust it now."

"The trouble with too many women," says the cornfed philosopher, "is that they regard the marriage ceremony mainly as a license to eat onions and wear ill-fitting clothes."—*Journal Indianapolis*.



The following from an article on "Mental Telegraphy" by Claude Stuart Coles is certainly curious if true:

"Within us is a power, sleeping. Once in a while some sensitive soul has felt it stir, but there was no known law that governed it, no logic with which to convince others of its being; so it was buried deep in the inner consciousness, where hide ideas that dare not seek light, because they are in advance of their age."

"Long ago, at the house of a friend, I saw a photograph of a man's head. As I picked it up there came over me a sense of having known the original; it was the face of a friend! When my hostess entered I asked about the photograph, and she told me who it was. The name meant nothing to me, but the face meant all things that I knew. Several times in the next week I looked at the photograph, always with the same sense of 'having known.' Then eight years elapsed, during which no memory of that face came to me. One day at the theatre, there flashed over me that same curious sense of 'having known.' Instinctively I turned and caught full the glance of the original of the photograph. What he was doing there I have never found out."

"Several miles away from me lived a friend. Days would elapse without our meeting, but if I sat down and wrote her

"Grace before meat," said Noah, as he held the elephant back to make room for the antelope.—*Yale Record*.

CONTRACT vs. DAY LABOR.

THE question as to whether day-labor or contract is the more economical appears to have received a very decided answer in the experiences of the Canadian Federal Government. The point is being continually brought up in municipal councils, but in such cases, it is to be feared, the arguments *pro* or *con* are usually propounded by those more or less biased one way or the other, and a clear candid opinion as to the merits or demerits of either system can hardly be expected from city aldermen. The opinion of Parliamentary committees ought to be worth more, at any rate, both systems have been given fair trials in the last few years here, and the results are eminently in favor of contracts. The case of the Lachine bridges, which was re-

counted in the last Canadian letter, proved conclusively how easily the country may be defrauded, and up to almost any amount, by unscrupulous contractors. A legal precedent for the construction of the Lachine bridges was set some years ago by the plan pursued in the case of the Fort Francis locks. This costly and magnificent work was carried out by the Government, under its own inspectors, without contract, and the results were not satisfactory; but it was thought that in a city like Montreal, where labor was plentiful and wages moderate, better results must be obtained. However, as was shown in the former letter, the Government was doomed to bitter disappointment which was only aggravated by the police magistrate, Judge Desnoyers, refusing to commit the contractor for trial, although the evidence seemed clear enough as to the alleged frauds, but not, in his opinion, sufficient to warrant committal. The matter, however, is not at an end yet. Although the Government has failed in the criminal prosecution, a case for the return of overpayments is to be proceeded with. The country will hardly care to see more of its great works carried out by day-labor. The experiment of the Toronto Council in having its new municipal buildings finished by day-labor is being watched with interest. This building was begun under contract, but only reached some twenty feet above the ground level, when the contractor was dismissed. Owing to certain difficulties in obtaining satisfactory tenders for the completion of the works, it was decided to proceed with them by day-labor.

Mr. Provand, M. P. for the Blackfriars Division of Glasgow, the managing director of the Chignecto Marine Railway Company, has been in Canada interviewing the Government, and requesting for this Company an extension of time for completion of the works at Chignecto by two years. About three and a half millions have been already expended on the works, and about a million and a half more are required. The amount has been subscribed by shareholders, and it is claimed that the work could be completed in the time asked for. The Canadian Government guaranteed a subsidy of \$170,000 a year, for twenty years after the completion of the works, the period of construction being limited in the Charter granted to the Company. Mr. Provand stated that it was through no fault of the Company that the work was not completed within the time specified. It was the fault of the contractor, who was largely interested in contracts in the Argentine Republic at the time of the suspension of Baring Bros., which caused his failure and the stoppage of the works. The engineer of the Company, together with Mr. Provand, visited Canada last year, with the same object in view, and interviewed the premier, the late Sir John Thompson, but, so far as is known, did not obtain any definite promise from him. Whether Mr. Provand has been successful this time or not is still uncertain, but a contention has arisen over the interpretation of the expression "efficient working" of the railway, which occurs in the agreement referring to the granting of the subsidy. The Company interprets the words to mean simply having the railway completed and ready for traffic. The other interpretation is that the road should be actually handling a reasonable amount of traffic, and it is said that if the Company desires the extension of time, it will have to show that it is carrying a minimum amount of traffic, which is put down at a million tons of shipping, annually. Mr. Provand has, in the meantime, gone home, and it is possible some time will elapse before anything is settled.—*The American Architect and Builder.*

LEGAL DECISIONS.

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

LIABILITY OF CONTRACTOR'S BOND.—Where a building contractor abandons the work before it is completed, and absconds, the guarantor of his contract, who elects to treat the failure and flight of his principal as settled facts, and to co-operate with the owner in completing the work, becomes liable as surety. *Tender v. Kluge, Supreme Court, Penna., 31 Atlantic Reporter, 550.*

UNGUARDED EXCAVATION IN SIDEWALKS.—The Supreme Court of California holds, that a contractor who has completed an excavation in a sidewalk, as required by his contract, is not liable for injuries to persons falling into it, due to the absence of proper guards, if he did not contract to guard the excavation after it was completed. *Cotter v. Lindgren, 39 Pacific Reporter, 950.*

RIGHT OF ADJOINING OWNER IN OVERHANGING WALL.—The Supreme Court of New York, 1st Department, holds that where the owner of a lot erects a wall, the foundation of which is wholly on his lot, but a part of which overhangs an adjoining lot, the adjoining owner will not be enjoined from removing so much of the wall as overhangs his property. *Lyle v. Little, 33 N. Y. S. Reporter, 8.*

MECHANICS' LIENS.—Where it appeared in an action to foreclose a lien on property owned by husband and wife, that the title was in the name of the husband only, and that knowledge of the fact that he had a wife was not brought home to the lien-holder, it was not error to render judgment for the latter, although the notice omitted the name of the wife. *Wash. Rock-Plaster Co. v. Johnson, Supreme Ct. Wash., 39 Pacific Reporter, 115.*

COLLECTION OF NOTES GIVEN FOR BUILDING.—Where notes were given in prepayment for the performance of a building contract, and their sale as negotiable paper was consented to by the makers at the time the contract was entered into, they cannot, in the absence of fraud, raise the issue of no consideration, in an action upon the notes by an indorsee; and they cannot contend that such party is not a bona fide holder. *Churchill v. Bielstein, Ct. Civ. App. Tex. 29 S. W. Reporter 392.*

MECHANICS' LIEN—BOND OF OWNER.—A bond given by the owner of buildings upon which a notice of lien for materials and labor has been filed, conditioned for the payment of any judgment that may be rendered against the property, (as provided by the laws of New York, and some other states) takes the place of the property, and discharges and becomes the subject of the lien; and an action is maintainable upon the bond against all parties interested, including the sureties, without first foreclosing the lien upon the property. *Morton v. Packer, Ct. App. N. Y., 40 N. E. Reporter, 3.*

PENALTY OR LIQUIDATED DAMAGES.—A party advertised for bids for a court house, the notice requiring each bid to be accompanied by a check for \$500, "as guaranty of good faith that the bidder, in case his bid is accepted, will enter into a contract," etc. One whose bid was accepted failed to enter into a contract within a reasonable time, whereupon the check was appropriated. The Court of Civil Appeals of Texas held that the money deposited was not liquidated damages, but a penalty, and only so much of it could be retained as would cover the actual damage. *Lindsey v. Rockwall County, 30 S. W. Reporter, 380.*

LIABILITY OF OWNER FOR DANGEROUS PREMISES.—A party was injured by the falling of a wall of a building. The owner denied negligence, and alleged that the property was in the possession of an insurance company, who were making repairs. The Supreme Court of Louisiana held that, there was negligence and that whatever may have been the responsibility of the insurance company during the time that the repairs were being made to a portion of the wall, the owner, aware of the facts as to defective condition, and who takes no part to prevent an accident, is liable for the damage occasioned by the fall. The safety of walls in a populous city is a public interest, and the interest of one injured is blended with the public right that cannot be subordinated to indefinite agreements between the insurer and insured. *Knoop v. Alter, 17 So. Reporter, 139.*

BUSINESS MOSAICS.

Heating and Ventilating.—Wright & Olsen at 27 New Montgomery street will furnish estimates for buildings of any size, for heating with either steam, hot water or warm air, also a combination of hot water and warm air.

This concern is agent for the Magee furnaces and ranges as well as Abram Cox Furnace Co., Barbers Ideal Heaters, and Dr. Buckley's water purifier.

Mr. Nincom.—"He presented a pistol and declared he'd blow out my brains if I didn't yield." MISS SHAPLEY—"Oh, Mr. Nincom, why didn't you yield?"—*Truth.*

A. Steiger Son's manufacturers of Architectural Terra Cotta, with every thing in their line of business. For further information apply to San Jose, Cal. or San Francisco office Builders' Exchange, 16 Post street.

Pat.—"I tell you, Mike, astronomy is a great thing. Why by it you can tell when there will be an eclipse to the very hour and minute." MIKE—"Oh, faith, an' that's nothin', you can look in the almanac an' see that."—*Truth.*

Concrete and Twisted Iron.—The Ransome Patents, now operated by the firm of Keatinge, Leonard & Ransome, rooms 11 and 12 Nucleus building, are showing the advantage of this style of work as is in evidence by the three large tanks for the Portland Water Works, and to come near home an example of their work at Main and Mission streets in this City may be seen, and quite at our own door as it were, the work on the Safe Deposit Building will show the advantage of this style of construction.

Customer.—"So you sell these watches at \$2.50 each? It must cost that to make them." JEWELER—"It does." CUSTOMER—"Then how do you make any money?" JEWELER—"Repairing them."—*Standard.*

When a man decides upon improving his shop, factory or farm, by the addition of power, he naturally looks for something entirely up to date. He investigates, considers, and finally decides to buy an Ajax Coal Oil Gas Engine as meeting his requirements more fully, and being safer, than any other power obtainable. Palmer & Rey, San Francisco, Cal., the manufacturers of this engine, have earned the gratitude of the public by placing within its reach a reliable, economical power, that defies the restrictions of insurance companies. It is the latest and best.

The J. L. Mott Iron Works, New York, Boston, Chicago and San Francisco, Mr. M. S. James, agent of the well-known firm has removed his office to room 27 Flood Building, third floor.

The new apartments are very favorably situated for the display of goods shortly to arrive from New York when a show room will be opened for the inspection of those interested in their line.

No doubt there are disinterested politicians, my son; but when you find one it will be upon the same day that you discover a shad without bones."—*Boston Transcript.*

The Union Pressed Brick and terra cotta Co., with their works at Vallejo, California, have removed their general office to 310 Pine street, room 15, San Francisco, and are prepared to fill orders in their line for architectural terra cotta, fire proofing, paving tile, etc. A catalogue will be sent on application.

Robinson.—"Well, old chap, how did you sleep last night?" SMITH (who had dined out)—"Like a top. As soon as my head touched the pillow, it went round and round!"—*Punch.*

F. H. Rosenbaum & Co. Anything in the way of plate and window glass can be supplied by the above mentioned firm, who are also manufacturers of mirrors, either quicksilver or patent backs. Ornamental cutting and bevelling a specialty, 567 Market street, San Francisco.

Temperance LECTURER.—"Friends, how can we stop the sale of liquor?" INEBRIATE (in the rear of the hall)—"Give it away."—*E.V.*

Plaster of Paris. The Golden Gate Plaster Mills, 125 and 217 Main street, San Francisco. Lucas & Co., manufacturers of Calcined Plaster (Plaster of Paris,) dealers in marble dust, sand plaster and terra alba.

Jones.—"Come, go fishing with me old chap." BROWN—"Can't do it: just signed the pledge."—*Judge.*

Sierra Lumber Company, manufacturers and dealers in doors, windows and blinds, also on hand sugar pine, yellow pine, spruce and fir lumber. Yard, corner Fourth and Channel street, San Francisco.

CITY BUILDING NEWS.

Baker near Fell. To build; owner, Premier Cycle Co.; architects, McDougall & Son; contractor, J. M. Weir; signed, June 19; filed, June 19; cost \$1794.

Brannan bet. 4th and 5th. Brick warehouse; owner, Ed. Nicholas; mason work by contract; carpenter work by day; cost \$5000.

Brannan bet. 4th and 5th. To build; owners, Morgan & Catter; cost \$800.

Brannan bet. 4th and 5th. One-story frame; owner, Father Nugent; contractors, Cameron & McDonald; cost \$2000. Only a temporary structure.

Bryant near 22d. To build; owner, C. W. and Anna M. Peck; contractor, Thos. Cochran; signed, June 24; filed, June 27; cost \$2250.

Bryant and Alameda. Alterations and additions; owner, Market Street railway Co.; architect, H. H. Lynch; contractor, J. W. Miller; signed, July 8; filed, July 9; cost \$15,330.

Bryant and Alameda. Carpenter work; owner, Market Street Railway Co.; architect, H. H. Lynch; contractor, Frank Schaad; signed, July 9; filed, July 9; cost \$1130.

Bryant near 5th. Concrete foundation; owner, John Horstmann; architect, H. Geiffuss; contractors, Gray Bros.; signed, July 9; filed, July 9; cost \$2265.

Broadway near Kearny. To build; owners, A. Coreghino and G. Demartini; architects, Wm. Mosser & Son; contractor, H. H. Larsen; signed, July 10; filed, July 11; cost \$1100.

Broadway near Kearny. Carpenter work and plumbing; owners, A. Coreghino and G. Demartini; architects, Wm. Mosser & Son; contractors, Ingerson & Gore; signed, July 10; filed, July 11; cost \$1360.

Bluxome bet. 4th and 5th. To build; owner, Mr. Smith; contractors, Schmitt & Kreeker; cost \$600.

Bush near Laguna. Sewers, plumbing, etc.; owner, Congregation Ohabei Salome; architect, M. J. Lyon; contractors, Bertram & Son; signed, June 11; filed, July 1; cost \$911.

Bush near Laguna. Brick and cement work for foundation; owner, Congregation Ohabei Salome; architect, M. J. Lyon; contractor, Wm. Stevenson; signed, June 13; filed, June 18; cost \$1600.

California near Mason. Excavations, concrete, etc.; owner, Elizabeth J. Elliot; architect, E. Depierre; contractors, Gray Bros.; signed, June 29; filed, July 3; cost \$1768.

Castro and 19th. To build; owner, M. Sanders; architect, H. Geiffuss; contractors, Lorenzen & Feyder; signed, July 3; filed, July 3; cost \$1490.

Caselli near Douglas. To build; owner, Mrs. Annie Lucy; architects, Shea & Shea; contractor, Arthur Stevens; signed, July 3; filed, July 10; cost \$2295.

Church near 27th. Additional story; owner, John Foge; architects, Havens & Topke; contractor, D. Ross; signed, June 28; filed, July 2; cost \$1645.

Cole and Waller. Five two-story frame dwellings; owners and builders, Cranston & Keenan; cost \$20,000.

Cole and Waller. To build; owners and builders, Cranston & Keenan; cost \$500.

Clayton near Waller. Three two-story frame dwellings; owner and builder, Wm. Hinkel; cost \$12,000.

Clement and 33d Ave. Car house; owner, Suto Railroad Co.; architect, V. Krolow; contractor, T. McLachlan; signed, June 16; filed, June 27; cost \$7250.

Fourth near Howard. Carpenter work for four-story brick; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, J. W. Smith; signed, June 20; filed, July 8; cost \$6695.

Fourth near Howard. Plastering; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Martin Garlick; cost \$1100.

Fourth near Howard. Brick, granite, etc.; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, P. F. Fitzsimmons; cost \$5895.

Fourth near Howard. Plumbing; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Jas. E. Britt; cost \$1987.

Fourth near Howard. Iron work; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, H. Halston; cost \$5600.

Fourth near Brannan. To build barn; owner, Mrs. Zoe J. Vengard; architect, C. M. Rousseau; contractor, R. J. Pavert; cost \$1240.

Fourth near Howard. Galvanized iron work for four-story brick; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Jas. Guilfoxy; cost \$1000.

Fourth near Brannan. To build; owners, King & Young; architect, F. Mead; contractor, W. H. Mead; cost \$1000.

Fourth near Brannan. To build barn and stable; owner, H. B. Gockens; days' work; cost \$1000.

Filbert near Mason. To build; owner, Mrs. Mary Bogan; architect, C. M. Rousseau; contractor, C. Knutler; signed, July 10; filed, July 11; cost \$4209.

Filbert and Jasper. To build and alterations; owner, Trinidad Boyling; architect, P. Boyling; contractor, L. M. Weissmann; signed, June 25; filed, June 27; cost \$2129.

Fillmore near Waller. Alterations and additions; owner, Geo. Scott; architect, A. J. Barnett; contractor, M. Hartnell; signed, June 22; filed, July 2; cost \$1725.

Fifth near Bryant. To build; owner, C. Reichling; days' work; cost about \$2000.

Francis near Mission. Cottage; owner, J. B. Mathews; contractor, W. W. Rednall; signed, July 9; filed, July 9; cost \$695.

Fulton near Broderick. To build; owner, Patrick Lally; architect, H. Gelfuss; contractor, W. A. Muller; signed, June 17; filed, June 17; cost \$3635.

Gough near Vallejo. To build; owner, Edward B. Rambo; contractor, W. H. Wharf; signed, June 20; filed, June 21; cost \$5554.

Green near Scott. To build; owner, Robert K. Palach; architect, Edgar A. Mathews; contractor, Andrew T. Ruch; signed, June 6; filed, July 2; cost \$1729.

Greenwich near Jones. Two three-story buildings; owner, C. Bill and J. Chienutz; architect, Emil John; contractor, J. McLean; signed, June 11; filed, June 28; cost \$7725.

Guerrero near 15th. Two two-story frames; owner, W. J. B. Henryville; architect, T. Godart; contractor, J. A. Arnott; signed, June 20; filed, June 22; cost \$6885.

Harrison near 25th. Alterations and additions; owner, Mrs. Margaret Godin; contractors, Westerlund & Holmgren; signed, May 18; filed, June 21; cost \$1400.

Hayes near Webster. To build; owner, Mrs. Mary Marsily; architect, C. M. Rousseau; contractor, R. J. Pavert; signed, June 22; filed, June 25; cost \$8875.

Haight near Scott. To build; owner, Mrs. F. Cahill; architects, Mahoney & Ryland; contractors, Ackerson & Paterson; signed, June 23; filed, June 29; cost \$4923.

Haight and Fillmore. Alterations and additions; owner, Chas. Haignauer; contractor, G. F. Gillespie; signed, June 6; filed, June 18; cost \$4500.

Helen near California. Alterations and additions; owner, John J. Mundwyler; contractor, H. R. Schmuckert; signed, June 27; filed, June 27; cost \$2645.

Holy Cross Catholic Cemetery. Vault lined with marble; owners, Executors Estate of J. Krasovicky; architect, B. J. Clinch; contractor, A. Battaghi; signed, June 21; filed, June 21; cost \$9425.

Jackson near Steiner. To build; owner, Austin C. Tubbs; architects, Matheson & Howard; signed, June 12; filed, June 21; cost \$3340.

Jessie near 14th. To build; owner, Mrs. C. L. Straven; contractor, A. Petty; signed, July 8; filed, July 8; cost \$1000.

Laurel Hill Cemetery. Granite coping and concrete foundation; owner, Sharon Estate Co.; architect, A. Page Brown; contractor, P. Deegan; signed, June 28; filed, July 1; cost \$1498.

Lombard near Fillmore. Three two-story buildings; owner, Michael Hogan; contractor, C. Andresen; signed, June 1; filed, June 19; cost \$6250.

Market near 5th. Sowers, plumbing, etc.; owner, Mrs. Abbey M. Parrott; architects, Pissis & Moore; contractor, R. A. Vance; signed, June 19; filed, June 24; cost \$38,775.

Market bet. 5th and 6th. Mosiac floor, etc.; owner, Miss Emma Spreckles; architects, Reid Bros.; contractors, W. W. Montague & Co.; signed, May 28; filed, July 2; cost \$8000.

Market bet. 5th and 6th. Marble work; owner, Miss Emma Spreckles; architect, Reid Bros.; contractor, W. S. Brown & Co.; signed, June 13; filed, July 2; cost \$2116.

Market and Sanchez. To build; owner, Mrs. E. L. O'Neil; architects, Salbarn & Embury; contractors, West & Fenn; signed, July 6; filed, July 6; cost \$4235.

McAllister and Fillmore. To build; owner, Caroline B. Watson; architects, Percy & Hamilton; contractor, Winslow Hall; signed, June 26; filed, June 26; cost \$10,943.

McAllister and Fillmore. Plumbing; owner, Caroline B. Watson; architects, Percy & Hamilton; contractor, R. Rice; signed, June 26; filed, June 26; cost \$1500.

McAllister and Pierce. To build; owner, Mrs. B. Morris; architect, J. E. Kraft; contractors, Ackerson & Paterson; signed, June 19; filed, July 8; cost \$6170.

Mission and New Montgomery. Carpenter work on two-story brick; owner, Builders' Exchange; architect, A. Page Brown; contractor, D. Powers; signed, July 8; filed, July 11; cost \$2070.

Mission and New Montgomery. Mason work, Spanish tiles, etc.; owner, Builders' Exchange; architect, A. Page Brown; contractors, Riley & Loane; signed, July 8; filed, July 11; cost \$2307.

Mississippi near 18th. To build; owner, J. Greig; contractors, Westerlund & Holmgren; signed, July 3; filed, July 3; cost \$2464.

Oak and Clayton. To build; owner, Ellen B. Franzell; architects, Coxhead & Coxhead; contractor, Wm. Knowles; signed, July 12; filed, July 12; cost \$7261.

O'Farrell near Powell. Additions and alterations; owner, Mrs. S. O. Alexander; architects, Salfeld & Kohlberg; contractor, H. Rohling; signed, May 24; filed, June 25; cost \$3025.

Pacific near Leavenworth. Alterations and additions; owner, Margaret Wolfarth; contractor, H. R. Schmuckert; signed, June 18; filed, July 9; cost \$1845.

Pacific near Leavenworth. To build; owner, B. Frank; architect, H. Gelfuss; contractor, John H. Munster; signed, June 18; filed, June 20; cost \$3124.

Pennsylvania Ave. and Butte. Alterations and additions; owner, James Eva; architect, R. H. White; contractor, W. Chatham; signed, June 19; filed, June 19; cost \$1993.

Pierce and Fulton. To build; owner, Wm. McCormick; architect, A. J. Barnett; contractors, Ogle & Smith; signed, June 28; filed, July 1; cost \$9700.

Pine near Buchanan. To build; owner, J. A. Ulrich; architect, E. J. Vogel; contractor, M. J. Savage; signed, June 20; filed, June 24; cost \$4630.

Pine near Taylor. Carpenter work; owner, Edward B. Hinds; contractor, M. J. Savage; signed, June 17; filed, June 20; cost \$6500.

Pine near Taylor. Plumbing, etc.; owner, Edward B. Hinds; contractor, Philip Haub; signed, June 17; filed, June 20; cost \$1195.

Pt. Lobos Ave. near 33d. Cottage and stable; owner, Eliza Potter; contractor, W. W. Rednall; signed, June 18; filed, June 20; cost \$2000.

Richland Ave. near Anderson Ave. To build; owners, E. F. and Nellie Sautter; architect, J. V. Embury; contractors, Salisbury & Embury; signed, June 12; filed, June 20; cost \$1700.

Sacramento near Baker. To build; owner, J. H. Loeler; architects, Townsend & Wyneken; contractor, D. Currie; signed, June 25; filed, June 27; cost \$2330.

Sacramento near Devisadero. To build; owner, Esther M. Wilson; architect, W. H. Little; contractor, W. J. Field; signed, June 27; filed, June 28; cost \$4825.

Sacramento near Laguna. To build; owner, Richard E. Queen; architect, A. Page Brown; contractors, Mahoney Bros.; signed, June 18; filed, June 18; cost \$27,095.

Sagamore near Capital. Two cottages; owner, William Forbes; contractor, John Flaherty; signed, June 21; filed, June 22; cost \$1250.

Sixth Ave. near Clement. To build; owner, John Higgins; contractor, M. J. Scott; signed, July 3; filed, July 3; cost \$1170.

Sixth and Stevenson. Steam heating in four-story brick; owner, Margarethe Schwerdt; architects, Faust & Schwartz; contractors, J. G. Grannik & Co.; signed, July 1; filed, July 11; cost \$1246.

Stockton and California. Additions and alterations; owner, Alfred E. Davis; superintendent, J. W. Duncan; carpenters, Cannon & Mooney; cost \$10,000.

Second Ave. near California. To build; owner and builder, Mr. Haskell; cost \$2000.

Second Ave. near California. Cottage; owner, G. H. Earle; architect, J. C. Pelton; contractor, Jas. McConahy; signed, June 20; filed, June 29; cost \$1700.

Second Ave. near Clement. Cottage; owner, Isador I. Green; contractor, W. W. Rednall; signed, June 18; filed, June 18; cost \$2000.

Scott near Fulton. To build; owner, Mrs. Eliza Baum; architects, Kenitzer & Barth; contractors, Schutt & Krecker; signed, June 25; filed, June 26; cost \$4114.

Tennessee near 19th. To build; owner, Rev. P. O'Connell; architects, Mahoney & Ryland; contractors, R. Doyle & Son; signed, June 16; filed, July 1; cost \$9089.

Third Ave. near Clement. To build; owner, R. I. Whelan; contractor, H. Rowe; cost \$2100.

Twelfth Ave. near California. To build; owners, Jules J. Bailey and wife; contractor, Wm. R. Kenny; signed, June 28; filed, June 28; cost \$1225.

Twenty-second and Guerrero. To build; owner, A. Maracek; architect, E. J. Vogel; contractors, Patterson & Person; signed, June 28; filed, July 2; cost \$8872.

Van Ness Ave. and Clay. Steel work; owner, Claas Spreckles; architects, Reid Bros.; contractors, Western Iron Works; signed, June 12; filed, July 2; cost about \$8000.

Washington near Mason. Alterations and additions; owner, J. Mueller; architects, Mooser & Son; contractors, Patterson & Person; signed, June 28; filed, June 28; cost \$2880.

Washington near Central Ave. To build; owner, Constant Richert; architect, E. Depierre; contractor, Davie Ross; signed, June 21; filed, June 26; cost \$3420.

Washington near Fillmore. To build; owner, Emma Joseph; architect, W. H. Little; contractors, Moore & Cameron; signed, June 28; filed, June 28; cost \$2517.

Waller near Masonic Ave. Four two-story frames; owner and builder, J. Stierlein; cost \$16,000.

Waller near Masonic Ave. To build; owner, Mrs. Martin; builder, J. Stierlein; cost \$4000.

York near 22d. Cottage; owners, Ella and Peter Kammerow; contractors, Ogle & Smith; signed, July 6; filed, July 6; cost \$1700.

York near 22d. Cottage; owner, Robert Goetze; architect, Emil John; contractor, F. A. Hellmuth; signed, July 10; filed, July 12; cost \$1625.

The California Architect and Building News.

Copyrighted 1895, by the California Architectural Publishing Company.

OFFICE, 408 CALIFORNIA STREET,

SAN FRANCISCO, CAL., U. S. A.

VOLUME XVI.

AUGUST 20th, 1895.

NUMBER 8.

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

Published on or about the 20th of each month by The California Architectural Publishing Company. The Stockholders being Architects and others interested in the profession.

SUBSCRIPTION TO THE JOURNAL, \$3.00 PER YEAR IN ADVANCE.

ADVERTISING RATES:				
Space	1 Month.	3 Months.	6 Months.	12 Months.
1 inch.....	\$ 1 50	\$ 4 00	\$ 7 50	\$ 13 00
2 inch.....	4 00	10 00	18 00	35 00
3 inch.....	7 50	18 00	32 00	60 00
1 Column.....	12 50	35 00	65 00	125 00
1/2 Page.....	20 00	57 50	105 00	200 00
1 Page.....	40 00	110 00	200 00	350 00

ESTABLISHED 1879.

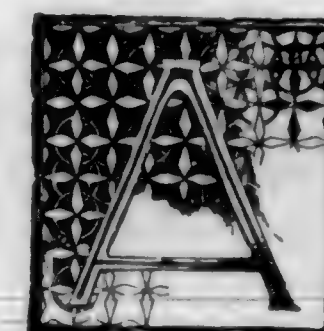
INCORPORATED 1889.

NOW IN THE SIXTEENTH YEAR.

W. J. CUTHBERTSON, President.

OLIVER EVERETT, Secretary.

Remittances should be in the form of postal orders, payable to THE CALIFORNIA ARCHITECTURAL PUBLISHING COMPANY, and all communications addressed to the office of the Company, 408 California Street, San Francisco, Cal.

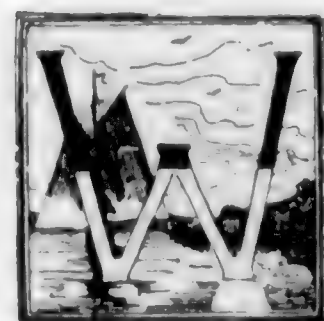


GOOD deal of friction and bitterness will probably be caused between the various parties whose interests are concerned, by the action of the Builders' Exchange in voting that their members shall not bid for the erection of any building where any of the work is segregated. The large contractors hold that to protect themselves it is necessary that they have full control of the building during its construction, and argue that the work can be advanced more rapidly, and done more satisfactorily, than when each branch of the work is made a separate contract, and performed by mechanics who pay no regard to other interests than their own.

This is certainly true on small buildings, and saves time to the owner, and annoyance to the architect; but when it comes to construct a modern building costing tens or hundreds of thousands of dollars, there are arguments to be

advanced in favor of subdividing the work. The owner may have preferences as to who shall perform certain branches of the work and is desirous of choosing such parties as he has reason to believe will give the best satisfaction and do the best work, whereas the main incentive of the principal contractor will naturally be to secure the performance of the work at the lowest possible figure. The contractors for the sub-branches feel more security in dealing directly with the owner, knowing that they run no risk of having to accept a *pro rata*, that bugbear of the sub-contractor.

The questions involved will, from all appearances, be brought to a test in erection of the latest improvements projected by one of our largest capitalists, and as all parties are ready for the fray, interesting developments may be confidently expected, for both sides seem to be confident of the correctness of their positions, and firm in their intentions to maintain them.



We learn from a telegraphic dispatch published in *The Call*, that the Supervising Architect of the Treasury Department is to visit this city for the purpose of inspecting the site of our long proposed, New Postoffice Building, which of late years seems to have assumed the proportions and characteristics of other Castles in Spain. It is sincerely to be hoped that Mr. Aiken will find the site material and substantial enough to warrant him in beginning the preparations of plans for the building, but nothing short of seeing building operations commenced will ever make the public of San Francisco believe there is any remote future possibility of having a more suitable postoffice building than the tumble-down, rattle-trap of a shanty that has done service for so many decades.

THE MECHANICS' INSTITUTE EXHIBITION.

AFTER a lapse of two seasons the Mechanics' Institute is again being held—with some improvements on the old ones in the way of decoration and arrangement. The ground and gallery plans are arranged in an open and systematic way which conduces to a rapid and exhaustive survey of the whole exhibits by those who come for that purpose and at the same time affords a good *coup d'œil* from all parts of the building for those who come simply to lounge. The exhibit of the Arts relating to Building and Architecture is not as complete as it ought to be and it strikes us that a grouping together of all these Arts in one part of the building and arranged in classes; so that an easy comparison may be made between different materials, patents, etc., of the same description, would be a desideratum; this could evolve into a permanent museum of the Building Arts placed in one corner of the spacious pavilion, always open to the public.

Glancing over the exhibits already installed, we find in the way of building material commencing at the foundations the following:—

A fine exhibit of different sized crushed rock suitable for concrete and other purposes—as well as a part of a wall built of stone from a quarry in San Francisco which makes a fine hard blue building stone and of which the new Golden Gate Park Lodge is being built by Gray Bros., and is especially suitable for Rubble work. Marble is represented by Inyo Marble Company, who present a collection of their beautifully marked marble—good both for building and decoration purposes—while the capacities of terra cotta are exemplified by an East Oakland Terra Cotta works. Marble, granite and other stones as applied to monumental purposes are exhibited by Jones Bros.

In the Hallidee Ropeway—of which there is a large and a small sized model—we have an economical means of transporting building material from their resting place in the earth to place of manufacture, and it allows of development of quarries, mines, etc., in places which otherwise would have to remain undeveloped for years. It seems to us that this might be used to advantage on buildings covering a large area in course of construction for the transportation of brick, mortar and other material from one scene of operation to others.

In the way of miscellaneous articles relating to buildings we notice saws for wood-working machinery by Pacific Saw Manufacturing Company. Building paper, including a

model showing roofing paper applied to a gravel roof, and deadening felt by the Paraffine Paint Co., Asbestos by Joshua Hendy Co., and a paint and its application by the Ferre Elastic Paint Co.

In the matter of heating and ventilating, Wm. Cronan has a very creditable exhibit as well as a model of a patent Ventilated Iron Skylight—all of which is deserving of attention.

In furniture and decoration, there are some very good exhibits, those of Plum and of Fredericks standing out as attractive. Some artistic metal hanging lamps in Oriental style are exhibited by G. Benyard. We miss the always attractive exhibit of Stained Glass by Mr. John Mallon, which had become quite a feature of former fairs but are compensated for it by the extensive and good exhibit of Butterworth & Company.

In plumbing—the Furlong Cement Wash Trays offer a cleanly and durable article. Finally the Patent Swing Window turns up as usual, in what seems to be the most feasible shape yet for locking the sash and for swinging it inwards for washing purposes, including an ingenious method of fixing the inside stop of the frame. This is exhibited by the Surety Window Hinge Co., E. S. Barney, manager.

Coming to the Fine Arts we find Architecture unrepresented—sculpture in a very slight degree and painting in many cases very well. This is not as it should be and we hope before the next exhibition that an effort be made to have the Noble Art of Architecture thoroughly well and systematically represented—an Art in which the public requires to be educated more than in any other for the reason that it is one in which the choice of an architect by a client is made in ignorance more often than in other professions, the people trust to themselves and do without professional advice and in consequence the educated eye has to endure many offences against it. For which reason an exhibit of only the good in architecture should be made in such a popular resort as the Mechanics' Fair. We hope that the Architects and the Chapters may get together and get a good collection of their works at the next exhibition—and that the directors appoint a competent hanging committee.

The other Fine Arts, those of Feeding and Draping the human body, are very well represented and it is a good sign that such important arts are not neglected, for without proper food and clothing we cannot expect to have noble architecture, sculpture or painting.

A VISIT FROM THE SUPERVISING ARCHITECT OF THE TREASURY DEPARTMENT.

WASHINGTON, D. C., Aug. 15.—Now it is the supervising architect's turn to take a junket. A representative of *The Call* had an interview with him to-day concerning the construction of the new postoffice building at San Francisco.

Mr. Aiken is a secretive official, and is careful to give out as little information as possible regarding public works. He keeps himself carefully behind closed doors, and outside of his sanctum stands a guard who has been given strict orders to rigidly exclude newspaper men.

The Supervising Architect is naturally a little bit disgruntled, because of many severe newspaper criticisms of the conduct of his office. He is also nettled because many

influential newspapers advocate a change whereby the plans for Government buildings will be awarded to outside architects, after competitive examination. It is believed that this plan will secure the best talent in the country, and Government buildings of the future may be of architectural beauty, instead of the grand, gloomy and peculiar edifices now in vogue.

Mr. Aiken is quite an independent individual, and takes care that this fact shall become known. When he was seen to-day, *The Call* representative said to him: "The San Francisco people are anxious to know when their postoffice building is going to be commenced. They have been trying for so many years and have met with so many disappointments that they are beginning to feel that it is almost a forlorn hope. But now that the Board of Engineers has reported that the Seventh and Mission streets lot is firm enough to support the structure, they would like to know what is the occasion for further delay."

The architect said: "Yes, I know all about that, I know the whole history of the matter, but we cannot perform impossibilities. There are 125 new buildings to look after, and 480 that have to be patched up continually. We will begin work on the San Francisco postoffice just at soon as possible. Next week I am going to start for San Francisco to make a personal inspection of the premises. Director of Mint Preston will accompany me, and we will stop off at Denver to examine different sites offered for the new mint to be erected there. We will then stop a day or so at Salt Lake, where is to be a new building erected. I will also visit Portland, Or., and may stop on my return at Boise. The two Idaho Senators are involved in a dispute as to the selection of a lot for the new postoffice there, and I may decide that matter myself."

Replying to a question Mr. Aiken said he thought the Seventh and Mission streets lot at San Francisco was all right, but would not state the exact nature of the business that required his presence there. The architect was asked whether or not, in his opinion, the work of construction would be commenced this fall or winter.

"The angel Gabriel can answer that question better than I," he said, "I expect to be back in Washington within thirty-five days from the time I start, and immediately upon my return I expect to begin drawing plans. You must understand that thus far only sketch plans have been prepared, and these have been published. I don't know how long it will take to finish the plans or how long it will be before the work of excavation will be begun."

The Call correspondent suggested there was fear expressed in some quarters that Secretary Carlisle was really responsible for the delay in the construction of the building, as well as other Government works, as he wanted to keep every dollar possible in the treasury in view of the state of finances.

"Yes, I know," replied the architect scornfully; "the people are not discriminating enough to lay the blame where it properly belongs—on Congress."

It was then suggested that California people were inclined to believe that there State was a little too far from the seat of Government; in other words, that they were not "in it," geographically speaking.

"I cannot help what they think," said he. "We will not favor any city because of its proximity, or neglect it by reason of its remoteness. You can wire that to your people."—*The Call*.

WHAT makes life dreary is want of motive.—George Eliot.

REASONABLE SKILL AND CARE.



HE phrase "reasonable skill and care" is so often used in a legal sense, and so much turns upon its meaning in the discharge of the architect's functions, that it may be worth while asking what it implies in the ordinary duties of the practitioner. When an employer claims damages from his

architect for negligence or want of skill, he has to prove by attested witnesses the truth of his allegation, and of course, this is a question of expert evidence. It is not an arbitrary or fixed measure of skill, but sufficient under the circumstances of each case, which varies, as a matter of course. For example, in the design of a hospital, it would be reasonable to suppose that the architect planned his sick-wards on principles that were generally recognized; that the sanitary provisions were sufficient and convenient; that the heating and ventilation were devised upon good models. If he failed in any of these points of plan or provision, he could not be said to have shown reasonable skill. Mr. Brown is a good general house designer, but has had no experience in the planning of a free library. Would it be just to charge him with having failed to carry out the requirements of the committee? Here the question of limited experience might be urged; that the promoters knew beforehand Brown had no experience in building libraries, says *Building News*, and that they could not therefore expect him to exercise a high degree of skill in the design or plan. Such a view of the matter has been held by judges and juries, they holding that "reasonable skill" must be interpreted in a limited sense in such a case. But there is a presumption that every professional man represents himself as possessed of the requisite ability and skill. When an architect is employed to carry out any building, no matter of what description, and he undertakes the work, there is an implied warranty on his part that he is reasonably competent to the task. And this is the general and reasonable view. Mr. Tompkins, the architect, who undertakes to design Mr. Smith a house or a shop, is supposed to bring to his task all necessary knowledge and experience, and on his part Mr. Smith expects all that he has bargained for, and certainly holds Tompkins responsible for any defects in design or negligence in superintending the building. If it were not so, an employer might just as well engage a builder or a foreman of works to carry out what he wants in his own way. In the same manner, a man who was suffering from illness or some malady might save the cost of a doctor's fee by going to an apothecary, and would be himself to blame if by mischance a wrong medicine was given to him. On the other hand, if he went to any registered medical practitioner—whether or not he was a specialist matters little—he would be justified in assuming that his case would be treated with a certain or reasonable amount of skill, or that at least, his competence for the task would be assured him. If it was an eye or throat trouble, the general practitioner would, at least, prescribe safe measures that were generally followed; or, if it was too complex a case, would at once recommend his patient to go to an hospital or consult a specialist. And so the professional architect is presumed to understand the requirements of any particular building he undertakes—so far, indeed, as to protect his client against loss or damage.

One of the frequent charges brought against the architect is that of under-estimating. A client has a right to expect a certain degree of accuracy in the estimate he receives, and

if he prescribes an outside limit of expenditure, he has reason to be dissatisfied if the lowest tender exceeds that limit to any large extent. A reasonable approximation to the actual cost is certainly a question of skill. When the contract sum exceeds, say, by thirty per cent the architect's estimate, it can hardly be said that reasonable skill or care has been exercised, unless of course, as often happens, additions, changes, or alterations have been made during its progress. Estimating is certainly one of those branches of architectural practice about which a certain degree of skill is looked for. The Law Court reports afford ample evidence of what is expected from the architect. No doubt the profession are great sinners in this respect. The exceeded estimate is a common reproach leveled against architects, but that is no reason why they should be content to bear the brunt of a charge which is damaging to their interests, and which in many instances can be avoided. An architect is blamed for many things which are not to be placed to his charge. For instance, he cannot foresee the nature of the soil on which his building is reared. When the digging for foundations is begun, it often turns out that they must be sunk to a greater depth than shown or specified, and expense of concrete or even piling may be incurred. The architect is blamed because he has not foreseen this, and provided for it. His estimate has been based on a superficial examination, or on borings that have been supplied him; these turn out misleading, and his charges are disputed because he neglected to make a more thorough personal examination. In one or two cases cited the architect has failed to recover on this ground. But such charge can scarcely be said to be due to want of skill; it is merely an excusable omission on his part, which may be made up at any time without incurring loss.

Then we have supervision. What is a reasonable amount of supervision will always be a very debatable question, because some people are apt to think that every part of the building should be inspected and approved by the architect; while his notion of his duties is that he gives only a general supervision, and is not responsible for such things as improper bricks in any conceivable situation, or the stone to be laid on its natural bed in every part, nor is he responsible for the laying of drains underground or their proper jointing. The charge of want of skill or negligence may be raised by an irate client in several ways. There may be mistakes in the design in the use of materials, and it is for every architect, in the particular circumstances in which he is placed, to avoid these as far as he can. Want of skill in design is again a question depending on the evidence of experts, which may vary. Conceptions of plan, for example, would be difficult to define in many cases unless there was some glaring omission, or some self-evident want of skill—as, for instance, a hall with inadequate means of ingress and egress, a too-narrow main entrance, cramped or dangerous staircase, a dark corridor. Want of skill would arise if an architect planned a block of offices with windows too small for giving adequate light, or without considering the right of the dominant adjoining owner to obstruct. A court of law will assume, naturally, that it is the duty of an architect to make himself familiar with the law of easements, such as those of light and air and support, as his ignorance of the law may involve his client in serious litigation and loss. Examples of such cases abound in our columns of "Legal Intelligence." Every architect is presumed to know so much law as will be necessary to protect his client's interests. There is no excuse for a professional man in London

or elsewhere if he blunders in not complying with the Building Act or by-laws, and thereby puts his client to needless expense. The law will not excuse him by pleading ignorance of its provisions.

So also with respect to other matters than those directly connected with his profession. There is no excuse for him to plead ignorance of engineering. He cannot plead that he knew nothing of treacherous soils or the substrata of the site if the foundations give way and the building settles, or that it was a technical matter outside the architect's work. If he did not know how to provide for wet sand or clay, or what engineering expedients to adopt, such as piling, or planking, or coffer dams he should have called to his assistance someone who did. Again, if through defective design an iron girder gives way, precipitating a wall, or an iron roof collapses, causing serious injury, it will not do for the architect to exonerate himself and lay the blame on the engineer. If an arch fell in from want of sufficient abutment, as shown by scale on the drawings, the architect would certainly be held liable, and the same if any wall or column proved too weak. Perhaps in questions like ventilation and acoustics there would be more difficulty in proving incompetency. We are not aware that any legal charge of incompetency has been made out against any architect because the ventilation of his building was bad, or because the acoustical properties of a concert or lecture hall were defective. These are matters about which there are conflicting views and theories. It may indeed be affirmed generally that the term "reasonable skill and care" could only be applied to those practical and definite matters relating to building which every architect is supposed to know, and not to questions of any speculative or doubtful kinds, about which opinion would naturally vary. A wide interpretation of the meaning of the phrase would be given by any jury in some cases where, for instance, the complexity of the building or its conditions rendered the architect not altogether responsible, and the phrase would bear a more definite meaning in connection with buildings of ordinary size and every-day use.—*Building News*.

INCREASE OF BUILDING IN THE NEAR FUTURE.

EVERYTHING points to a great increase in building operations in the near future, all over the country. In New York, which, as the centre of business, feels very promptly improved general conditions, the amount of building is already enormous. The number of permits for the erection of new buildings during the past six months, says *The American Architect and Building News*, is almost exactly twice as great as the number issued during the corresponding part of 1894, and the proportion between the intended cost of the buildings for the two periods follows nearly the same ratio. Meanwhile, the number of permits for alterations has not very much increased; showing that the hesitating season of alterations, which usually precedes a time of confident and extensive building, is nearly over, and that New York, at least, is entering on a new era of development. How soon its example will be followed by other cities remains to be seen; but nothing is more certain than that the prosperity of one part of the country means the prosperity of all; and local conditions can only in a slight degree delay or modify the change which building interests have for the last few years looked and hoped for.

THE BLAST AT PENRHYN SLATE QUARRIES.

A SPECIAL correspondent of the London *Times* writes:—Until the afternoon of Saturday, April 27, Y Talcen Mawr was the central point and perhaps the most striking feature of those famous quarries near Bethesda which have been in operation since the reign of Queen Elizabeth, and have changed half the rugged protuberance of the mountain called Bronllwyd into a deep amphitheater. Many thousands of people who have visited the quarries must carry with them a memory of the Talcen. It was a rough slab-sided obelisk of grey rock, with a bold vein of white quartz at the summit. Its height from the bottom of the quarry was about 300 feet, and it was pierced at regular intervals with tunnels representing the level of operations at various periods in the past history of the quarry. At all times this great pillow of green rock presented a picturesque appearance, whether it was viewed from above or below, for the terraces, which the quarrymen call galleries, of purple slate, rising tier upon tier, one upon another, almost to the top of the mountain, formed a singularly effective background. Opinions vary as to the reason why this upstanding fragment of a dyke which ran across the center of the quarry from north to south was suffered to remain, while the dyke itself was cut away on either side; but the better opinion is that a manager of the quarry who flourished at the beginning of the century, not foreseeing the colossal scale upon which the quarry would be worked in the future, hoped that this portion of the green rock might serve as a support for one side of the quarry. But the quarry grew beyond his expectations. The quarrymen cut through the dyke on either side, and left the Talcen in obelisk, which grew more and more picturesque and more and more dangerous every day and every year as the slate rock was cut away deeper and deeper at its base.

It was in August of 1894 that, after a report from the chief agent had caused Lord Penrhyn to make a personal inspection, the Talcen was doomed, and the wisdom of the sentence was proven almost at once by the sudden fall, fortunately in the night of a fragment weighing several tons, which if it had fallen in the day, must have destroyed a large number of quarrymen. From that date till Saturday preparations for the great blast proceeded, and on Saturday the huge pillar, weighing 125,000 tons at the least, was demolished. The spectacle was imposing in the extreme. On the very brow of the quarry, fully 500 yards away from the scene of the coming exploding, and some hundreds of feet above it, a knot of privileged spectators was assembled near a flagstaff. The time was a few minutes past three. All along the brow of the quarry, and up on the slopes of the mountain above were crowds of spectators. All knew that in the bowels of the Talcen were two charges of powder, one of three tons and the other of four tons. At last the decisive moment came. The flag on the brow of the quarry was hoisted. A blue wisp of smoke from the base of the pillar, and all present knew that the triplicate fuses had been lighted, and that the huge bricked-up chambers of powder would do its work shortly. There was a silence of expectation for five minutes or so, an interval which was almost painful; but still the wisp of blue smoke rose lazily, and a little cascade of water on the Bethesda side of the rock fell down merrily. The minutes passed very slowly, but at last—sixteen minutes and a half after the flag had been hoisted—there was a crashing sound. The noise was not so loud as one would have ex-

pected. With it came an outburst from the base of the pillar of smoke, of minute dust and of something that was either flame or red-hot powder of stone. Away from the top of the pillar sped two kestrel hawks which have nested there for many a year. The base of the great rock seemed to fall away as water falls from a fountain jet at its highest point. There was no sign of any stone being thrown to a great distance. Then, in less time than these words occupy in the writing, but in orderly sequence none the less, there was the roar of huge masses of stone rolling one upon another, and with it came the spectacle of the huge rock sinking and subsiding with a slowness that was almost majestic until it was a mere chaotic mass of boulders reeking with smoke, quivering and gliding downwards for many minutes like an avalanche. Another minute followed, and then the whole of the quarry was vested in a cloud of heavy and evil-smelling smoke, of which however, the keen wind made short work.

MR. RICHARD MORRIS HUNT.

THE profession of architecture, not only in this country, but throughout the world, has suffered a great loss in the death of Mr. Richard Morris Hunt, which occurred at his country house at Newport on Wednesday. Mr. Hunt was born at Brattleboro, Vermont, October 31, 1828, of a distinguished family. The sons of this generation seem to have been endowed with artistic talent in a remarkable degree, for a brother, the late William M. Hunt, became one of the most noted painters that this country has ever produced. Richard, while yet a very young man, was sent to Europe to complete his education, and, while there, was taken with a fancy for architecture. With characteristic energy, he prepared himself for entrance into the School of Fine Arts in Paris, remaining there for about seven years, under the great Lefuel. On leaving the School, he travelled extensively, and, returning to Paris, was invited by Lefuel, who was then engaged in building the wings connecting the Tuileries and the Louvre, for the Emperor Napoleon III, to become his assistant. He accepted the invitation, and is reputed, according to the tradition among New York architects, to have designed many of the details of the building, including the entrance archway from the Rue de Rivoli to the court-yard. At this time, Hunt was much more a Frenchman than an American. At the time that he entered the School of Fine Arts, he was, we think, the only American in the School, or, at least, in the Department of Architecture, and he was identified with French architectural design, and French architectural practice, until his work on the Louvre was finished. Returning then to America, he was employed for a time by Dr. Walter on the extension of the Capitol at Washington, and then entered into practice on his own account in New York. Although comparatively rich, both by inheritance and by marriage, he worked assiduously and ardently in his profession, and designed and carried out an immense number of fine buildings. In New York, those which occur to us at the moment are the Lenox Library, on Fifth Ave., the *Tribune* Building, on Printing-house Square, the W. K. Vanderbilt house, on Fifth Ave., the Osborne house, on Park Ave., a hospital near Third Ave., the Marquand house, and many other dwelling-houses, besides several mercantile buildings on Broadway and elsewhere; and the pedestal to Bartholdi's Statue of Liberty; besides the Vanderbilt Mausoleum, on Staten Island, and a large number of monuments. In Newport,

he built many splendid country houses, including the so-called Marble Palace, belonging to Mrs. W. K. Vanderbilt, and the magnificent Golet house, reputed to have cost a million dollars. In Boston, his work is represented by the two Brimmer houses on Beacon street. At Asheville, North Carolina, he was engaged, at the time of his death, in the completion of an immense house for another of the Vanderbilt family. In the assignment of the work for the Chicago Exposition, he was given the principal place, by being asked to design the Administration Building, and all the world knows how he succeeded. Before that time, however, his great talents had long been recognized in the profession. He had been repeatedly elected President of the American Institute of Architects, to whose interests he devoted the most earnest and wise attention, both in office and out of it; and was decorated many years ago with the cross of the French Legion of Honor. Later, the French, who seemed to have followed his career with an affectionate interest, which was fully returned on his part, raised him to the highest honor that could be bestowed on a foreign architect, by making him Corresponding Member of the Institute of France, in the Section of Fine Arts; and similar honor was recently done him on the other side of the Channel, by the Royal Institute of British Architects, in the award of the Royal Gold Medal.—*The American Architect and Building News.*

AN INTERESTING PIECE OF FOUNDATION WORK.

AN interesting piece of foundation-work has been going on in New York, at the corner of Exchange Place and Broad street, where a sixteen-story office-building is to be erected for the John Taylor Johnson estate, says *The American Architect and Building News*. The soil at this point is a stiff clay, mixed with gravel and boulders, and resting on rock, at a distance of about forty feet from the surface. As usual in New York, where such lofty buildings are to be erected in the lower part of the town, caisson foundations are used, but the method of sinking the caissons is novel. Instead of forcing air into them, so that the earth can be excavated under them, the work of sinking them is performed mainly by water-jets, directed in a very ingenious manner. Around the lower edge of the caissons, which are of the usual form, and proportioned in size to the weight which is to come upon them, are fixed hollow castings, each of which is pierced with a row of holes, about one-eighth of an inch in diameter. Pipes, descending on the outside of the caisson, enter the castings, and convey to them water, at a pressure at a hundred pounds or more to the square inch. The water issues in jets from the holes in the castings, washing away the earth from under the edge of the caisson. Around the lower edge of a caisson of moderate size there are something like a thousand of these jets, and their combined effect loosens the earth so effectually as to allow the caisson to sink rapidly. The movement is hastened by loading the top with iron weights, and by exhausting the air from the interior; and it is said that a caisson can be sunk forty feet in about a day, including all the delays incident to testing and rectifying the movement, and riveting together the three sections of which each caisson is made. As might be expected, the sections do not sink with perfect accuracy, and the work must be stopped at intervals to apply gauges, and modify the current through the water-jets, until the necessary correction is made. In

most cases, this is all the rectification required, but when the descending edge of the caisson meets a large boulder, it is sometimes necessary to apply a special treatment, which consists in directing a jet of water upon the earth below the boulder, and a little outside of it. This jet soon excavates a hole, into which the boulder falls by its own weight, out of the way of the descending caisson. After the caissons are sunk to the rock, they are excavated in the usual manner, the surface of the rock trimmed and leveled if necessary, and concrete and masonry put in, filling them to the top. As soon as the concrete has set, the foundation is ready to receive the superstructure. As usual with modern caissons foundations, the steel cylinder is intended to serve only as a form in which to mould the concrete pier, which is the real support of the building, so that the metal may corrode away at any time, after the concrete has set, without diminishing in the least the security of the structure. Compared with the older method of making caisson foundations, the new one, which is the property of the Hydraulic Construction Company, has great advantages in point of rapidity, the sinking of a caisson being a matter of a few hours, instead of several weeks.



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

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

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

TUDY for a Village Inn, Havens & Topeke, Architects.

I. O. O. F. Building, Redwood City, J. Marquis, Architect.

OUR double plate shows the new building to be erected by Claus Spreckles, on the corner of Third and Market streets, in which *The Call* is to make its home.

SAN FRANCISCO CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

AT the August meeting of the San Francisco Chapter of the American Institute of Architects, officers for the coming term were nominated, to be voted for at the annual meeting in September. A full attendance of members is requested at that meeting.





CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

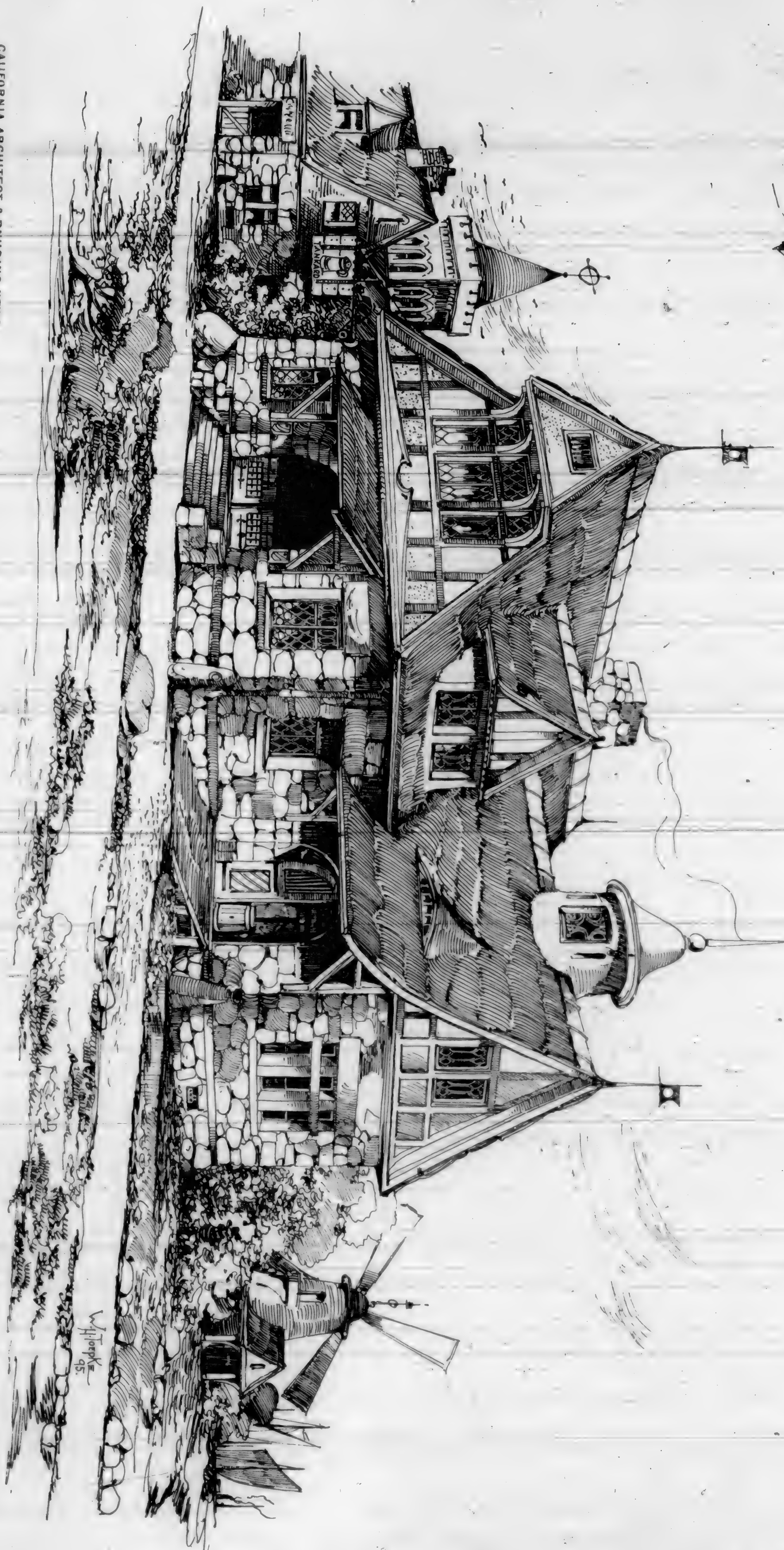
BRITTON & REY PHOTO LITH.

VOL. XVI No 8 AUGUST 1895.

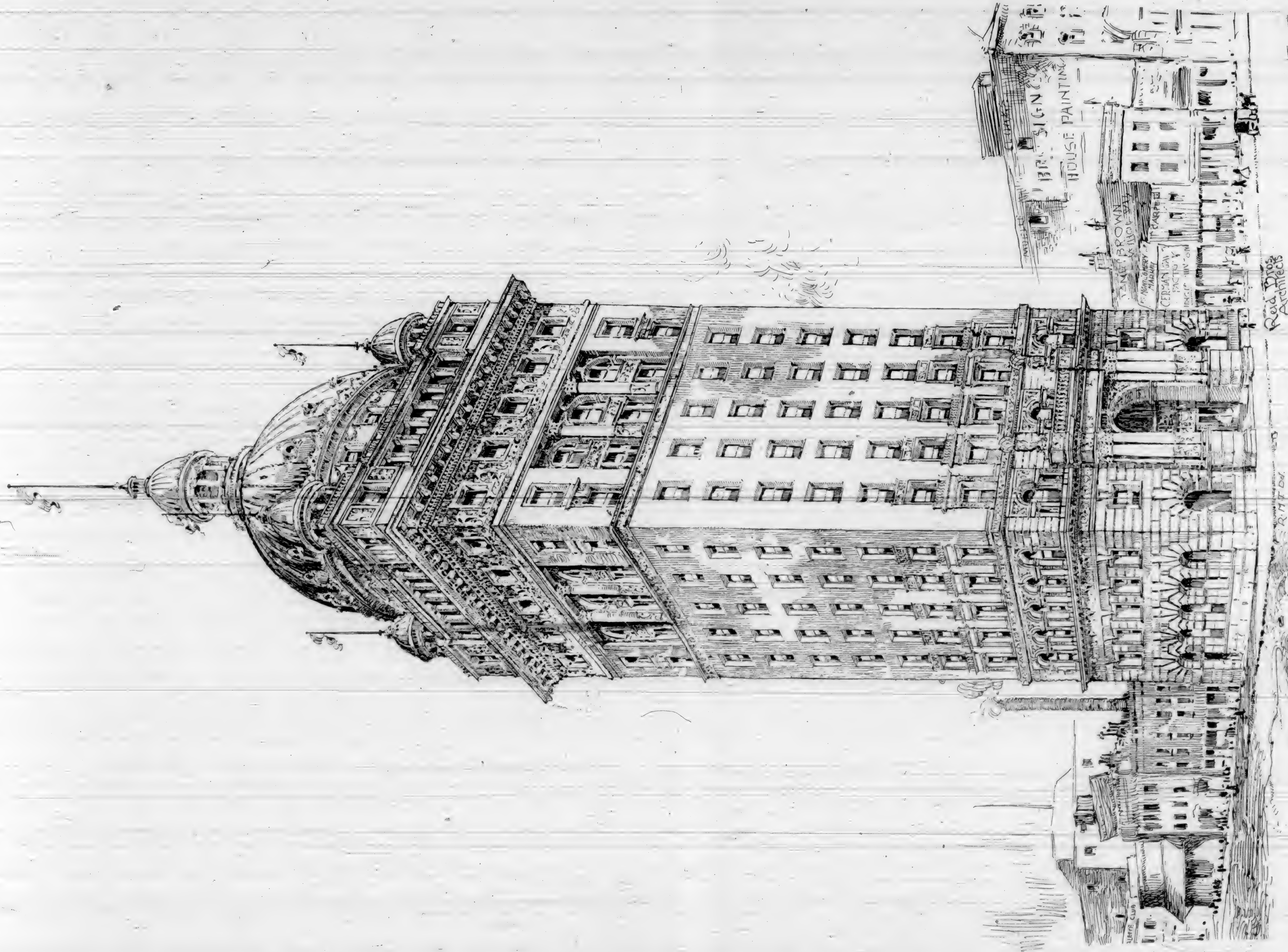
CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO

BRITTON & REY PHOTO LITH.

VOL. XVI No 8 AUGUST 1895.



STUDY FOR A
"VILLAGE INN"
HAVENS & TOEPKE ARCHTS.



CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO LITH.

VOL. XVI No. 8 AUGUST 1895.