

Bennett & Schutte, of 148-150 Valencia street, have just received a fine line of mantels of the latest designs. Parties building will do well to call and see them when requiring anything in their line. See advertisement on page xiii.

The watch worn by John Milton is said to be exposed in a Chicago shop. The watch was made with raised figures on the dial to enable the poet to read the time of day with his fingers.

The necessity for perfect insulation of buildings has produced a large variety of building and sheathing papers in this market, as well as throughout the United States generally. The most favorably known of the various manufactures of this article is the P. & B. Building Paper, which is

the only paper of the kind manufactured on this Coast. The superior qualities of this paper for the purposes mentioned has been thoroughly demonstrated by the use of this article in the extensive buildings of the South San Francisco Land and Improvement Co. at Baden, San Francisco, San Jose and Oakland, also the Union Stock Yards at Rodeo and this city. The Paraffine Paint Co., 116 Battery street, San Francisco, besides manufacturing this and their well known P. & B. Paints, have also on the market for the past eight years the P. & B. Roofing. The latter product is daily growing in favor, and several long tests which the Company can with pride point to are developing a reputation for this article that is indeed an enviable one. All the products of this Company being entirely Californian makes the fact of their rapid progress a matter of satisfaction to all lovers of home industries.

CITY BUILDING NEWS.

Ashbury near Frederick. Cement walk; owners, N. C. and N. J. Dyer; contractor, C. L. Leffler; signed, Nov. 18; filed, Feb. 8; cost \$100.

Block 13, Lots 3, 4, 13 and 14. Out-building and tank; owner, D. Lapoultie; architect, Emil Desjardis; contractor, L. Cevighino; signed, Jan. 31; filed, Feb. 1; cost \$1,700.

Bush and Powell. Plastering of a building; owner, Mrs. River; architect, W. H. Little; contractor, J. J. Morehouse; signed, Jan. 18; filed, Jan. 20; cost, \$1,700.

California and Sansome. Inside wood finish; owner, Mutual Life Insurance Co.; architect, Clinton Day; contractor, John T. Grant; signed, Jan. 26; filed, Jan. 26; cost, \$25,332.

California near Drumm. Mill work and carpenter work; owners, Luning Co.; architects, Coxhead & Coxhead; contractor, M. C. Lynch; signed, Jan. 24; filed, Feb. 4; cost \$8,600.

Clay and Leavenworth. Two-story frame; owner, Jos. Wolf; architects, John & Julezowski; contractor, Adam Miller; signed, Jan. 18; filed, Jan. 21; cost, \$5,200.

Clay and Webster. College; owner, Dr. L. C. Lane; architects, Wright & Sanders; contractor, Thos. McLaughlin; signed, Jan. 19; filed, Jan. 20; cost, \$28,300.

Crescent Ave. near Boscoe. Carpenter work; owner, Edward Norton; architect, M. G. Hughes; contractor, W. A. Griffith; signed, Jan. 31; filed, Feb. 3; cost \$3,200.

Dupont near Sacramento. Brick building; owner, Paul Fleury; architects, Pissis & Moore; contractor, Thos. H. Day; signed, Jan. 11; filed, Jan. 16; cost, \$6,800.

Dupont near Sacramento. Plumbing, etc.; owner, P. F. Fleury; architects, Pissis & Moore; contractor, R. A. Vance; signed, Jan. 11; filed, Jan. 23; cost, \$1,150.

Dupont near Sacramento. Plastering; owner, Paul Fleury; architects, Pissis & Moore; contractor, Chas. Dunlop; signed, Jan. 19; filed, Jan. 25; cost, \$1,300.

Ellis near Fulton. Plumbing and gas fitting; architects, Stone & Munson; contractors, G. and E. Snook; signed, Jan. 8; filed, Feb. 8; cost \$1,017.

Ellis near Fulton. Plastering; contractor, Thos. E. Winter; signed, Feb. 8; filed, Feb. 8; cost \$1,451.

Ellis near Fulton. Galvalva iron work and tin roofing; contractor, J. C. Robert; signed, Feb. 8; filed, Feb. 8; cost \$1,650.

Fair Oaks near 22d. Alterations and addition; owner, John Christensen; architect, M. J. Welsh; contractor, Ivory Wells; signed, Feb. 4; filed, Feb. 4; cost \$1,100.

Fifth Ave. near Point Lobos. Two-story frame; owners, N. L. Lelan and A. O. Donogh; contractor, Chas. Murrell; signed, Feb. 6; filed, Feb. 7; cost \$1,300.

Haight near Broderick. Alterations; owner, Thos. J. Walsh; architect, Wm. H. Armitage; contractor, Jno. J. O'Brien; signed, Jan. 27; filed, Jan. 27; cost, \$3,300.

Hayes and Devisadero. Two-story frame, three flats; contractor and owner, Robt. Porter; signed, Jan. 21; filed, Jan. 21; cost, \$6,000.

Hayes and Octavia. Mantels and gas-fixtures, etc.; architect, J. C. Newsom; contractor, Jno. Furness; sub-contractor, Bush & Mallett; signed, Jan. 10; filed, Jan. 20; cost, \$1,270.

Howard and Fourth. Four-story brick and frame building; owner, Annie N. Farrell; architects, Shea & Shea; contractor, Jas. Cochrane; signed, Jan. 9; filed, Jan. 16; cost, \$32,980.

Jackson near Central Ave. To build; owner, J. C. Johnson; architect, M. J. Lyon; contractor, Thos. Kinread; signed, Jan. 17; filed, Jan. 23; cost, \$1,000.

Laurel near California. Cottage; owners, J. & Peter Schaeffer; contractor, Peter Rednall; signed, Jan. 2; filed, Jan. 23; cost \$1,600.

Lombard and Taylor. Royal Wash Machine; owner, Chas. Wreden & Co.; architect, W. Winterhalter; contractor, Rapp, Bepler & O'Neill; signed, Jan. 12; filed, Jan. 14; cost \$1,400.

Loft near McAllister. Six flats; owner, E. E. Cook; architect, Wm. H. Armitage; contractor, Jos. Buckner; signed, Jan. 10; filed, Jan. 14; cost, \$7,100.

Mission between 1st and 2d. Two-story brick; owners, Luning Co.; architects, Townsend & Wyncken; contractor, M. C. Lynch; signed, Feb. 7; filed, Feb. 8; cost \$6,950.

Pacific near Dupont. Two-story brick; owner, Ng Chong; contractors, M. Fennell & Son; signed, Jan. 21; filed, Jan. 21; cost, \$3,200.

Park near Holly. Cottage; owner, Frank Shoen; contractors, Miller & Miller; signed, Jan. 26; filed, Jan. 27; cost \$1,390.

Pine near Hyde. To complete building; owner, Peter Jorgensen; architect, W. H. Little; contractor, C. P. Moore; signed, Jan. 17; filed, Jan. 18; cost \$2,300.

Post near Taylor. Plumbing work; owner, Mrs. J. Pinet; architects, Pissis & Moore; contractor, H. Williamson; signed, Jan. 24; filed, Jan. 25; cost \$1,344.

Randolph and Arch. Cottage; owner, Wm. Sheppard; contractors, Morrison Cook; signed, Jan. 19; filed, Jan. 20; cost \$1,400.

Rhode Island near Yolo. Five-roomed cottage; owner, Mary E. Eastwood; contractor, John Sandeen; signed, Jan. 28; filed, Jan. 31; cost, \$1,292.

Roach bet. Filbert and Greenwich. To build; owner, W. A. Stringer; contractor, J. P. Sheppard; signed, Jan. 20; filed, Jan. 20; cost \$1,980.

Sacramento near Franklin. Alterations to residence; owner, H. W. Newbauer; architect, J. E. Wolfe; contractor, John Furness; signed, Jan. 31; filed, Feb. 2; cost \$2,040.

Spruce and Washington. Millwork; owner, D. D. Baldwin; architect, Samuel Newsom; contractors, Pacific Coast Door Co.; signed, Jan. 30; filed, Feb. 1; cost \$1,600.

Spruce and Washington. Stone work; owner, O. D. Baldwin; architect, Samuel Newsom; contractors, Sutton & Johnstone; signed, Oct. 26; filed, Feb. 1; cost \$3,300.

Spruce and Washington. Brickwork; owner, O. D. Baldwin; architect, Samuel Newsom; contractors, Richardson & Gale; signed, Jan. 28; filed, Jan. 28; cost \$5,050.

Steuart near Mission. Carpenter work; owner, P. M. Patridge; architect, D. E. Melis; contractor, Thos. H. Day; signed, Jan. 17; filed, Jan. 18; cost \$4,573.

Union near Mason. Three-story frame; owner, Samuel Wehrli; architect, H. Gelfuss; contractor, F. Klatt; signed, Jan. 27; filed, Jan. 27; cost \$6,940.

ALAMEDA COUNTY.

Benton near Central Ave. To build; owner, A. T. Fletcher; architect, C. S. Shaner; contractors, J. E. Henderlong & Bros.; signed, Jan. 27; filed, Jan. 28; cost \$3,219.

Berkeley. Glass work; owner, State University; architect, Wm. Curlett; contractor, A. L. Campbell; signed, Dec. 30; filed, Jan. 27; cost \$2,000.

Broadway, Oakland. Cast iron work; owner, P. and B. of T. of Pac. T. S.; architect, W. J. Mathews; contractors, Judson Mfg. Co.; signed, Jan. 16; filed, Jan. 21; cost \$2,000.

Central Ave. near Park. Five-room cottage; owner, Eugene Young; architect, Alfred J. Wood; contractor, A. L. Campbell; signed, Jan. 25; filed, Jan. 25; cost \$1,625.

Estadillo tract, San Leandro. Five-room house; owner and architect, Fred. Straub; contractor, M. G. Comancho; signed, Jan. 17; filed, Jan. 19; cost \$1,100.

G. and H. and 7th and 8th streets, Livermore. Two-story frame school building; owners, Union High School; architects, Piercy & Hamilton; contractor, F. Meyers; signed, Jan. 3; filed, Jan. 13; cost \$9,220.

Hudson and 2d. Two-story house; owner, C. G. Simonds; architect, L. Nichols; contractors, G. S. and G. H. Johnson; signed, Jan. 23; filed, Jan. 23; cost \$3,418.

Inez tract, lot 2, Brooklyn. To build; owner, Edward Clark; contractor, Hugh McCracken; signed, Jan. 14; filed, Jan. 14; cost \$2,660.

Newbury tract, Block E, Berkeley. Cottage; owner, Wm. C. Bissell; architect, John Conant; contractor, Jos. T. Francis; signed, Jan. 17; filed, Jan. 18; cost \$1,050.

Santa Clara Ave. near 3rd Ave. Frame cottage; owner, Eliza White; architect, David Brehant; contractor, J. J. Boyle; signed, Jan. 23; filed, Jan. 24; cost \$1,515.

Stuart near Fremont. Six-room cottage; owners, G. and A. MacMillan; architect, E. N. Hyde; contractor, J. J. Rose; signed, Jan. 13; filed, Jan. 19; cost \$1,600.

Summit near Orchard, Oakland. Two-story frame; owner, E. C. Morrison; architects, A. N. Pattiani & Co.; contractor, J. J. Boyle; signed, Jan. 20; filed, Jan. 23; cost \$4,700.

Tehama near Dover, Oakland. Two-story stable; owner, J. E. McElrath; architects, Wharton & Weigands; contractors, A. L. Kendalls & Co.; signed, Jan. 24; filed, Jan. 25; cost \$2,580.

West street. One-story cottage; owner, Jas. McDonnell; architect, B. McManus; contractor, C. S. Barnard; signed, Jan. 26; filed, Jan. 27; cost \$1,340.

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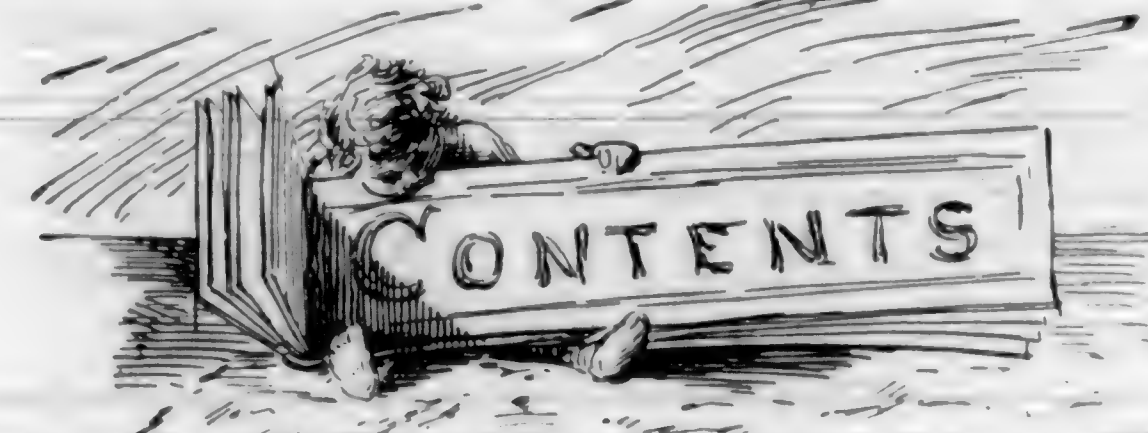
MARCH 20th, 1893.

NUMBER 3.

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

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WE notice that another attempt is to be made to cover over one of the few open spaces of San Francisco—we refer to the building of a Fire Headquarters at the corner of Bush and Market streets.

Down town in the wholesale districts the only open spaces we have are those made at the intersection of the cross streets with Market, and while other cities are demolishing their buildings to make open spaces for themselves, having seen the necessity of them, it ill becomes a city of San Francisco's reputation to retrograde instead. Let every

other consideration go before we reduce our lung space. We don't feel the want of it now because fortunately tall buildings have not run rampant over the lower part of our city and there are yet a number of vacant lots to be filled, but when the whole will be put up solidly with high buildings we will vainly regret every foot of space given up.

There is no doubt a Fire Headquarters is a desideratum, but there are plenty of convenient vacant lots which can be condemned without having recourse to the one which is most objectionable, if built upon, to the health and the traffic of the busy part of the wholesale mercantile region.

THE recent delivery of a paper by Mr. Geo. P. Low, Electrician for the Fire Underwriters of the Pacific Coast, on "Electric Imposters," brought out very forcibly the fact that under existing practices the general public, in so far as electric light wiring in particular is concerned, is at the mercy of electrical pirates who unblushingly pursue their swindlings and generally escape prosecution because of their shrewdness or their irresponsibility.

The fact is that the only city on the Pacific Coast which receives systematic inspection of its electrical work is San Francisco, and even here the underwriters' inspector is frequently absent from one to four months each year. In almost every other city of the west, electrical charlatans have full swing, and the recent enormous increase in the losses sustained by fire underwriters from fires attributed to "Unknown Causes" circumstantially attest the hazard of their existing methods under which "veneered," "half-baked" and irresponsible electricians are permitted to foist most wretched electric work upon the public. A great many instances have been cited where all the wire concealed behind

plastering has been of various brands, long since condemned as hazardous, while at outlets, where wires are visible, short lengths of high grade wire have been spliced on. A case has recently been found in which an electric wireman offered to pay a bribe to a building foreman to have the electric work closed in before an inspection could be made. It always creates no little trouble for an inspector to demand the raising of floors or the tearing off of lath and plaster, yet in several instances where this has been done, most hazardous electric work has been found by the local inspector, despite the assurances he had received in writing that the work was per requirements. Other cases have been found where the owner, wishing to light his house, that he paid handsomely to have wired, has learned to his dismay that his electric wiring consisted only of short bits of wire sticking out at center pieces and that the man who did his wiring and who "appeared to be a really clever electrician" was totally irresponsible or in parts unknown. It is a fact, admitted by all legitimate electricians that no instrument has yet been devised, nor is there any method extant of ascertaining the permanent electrical condition of electric wiring that has been placed in out of sight and inaccessible places.

The paper referred to lays particular stress upon and thoroughly proves the statement that electricians and fire underwriters have jointly committed a "national error" in permitting the placing of electric light wires in a concealed and inaccessible manner in buildings.

In order to test the condition of electric light wiring, a visual examination is absolutely necessary and the fact that the eye detects hazards and poor construction, which cannot be determined by any known means in concealed work, appears to be proof positive of the correctness of the position taken.

The paper shows the lecturer to be a very careful student of the situation and his independent position, and his freedom from any affiliation with all electric companies renders the solution he proposes for the problem, of special interest to architects. The contention is made that all electric circuits of whatever nature should be so run as to be accessible at all times. They should not be exposed to sight, nor is this necessary and he maintains that wires may be placed so as to be accessible with the same facility that ordinary wiring may be installed, whether the building be under construction or finished. With such accessible construction, no technical electrical knowledge is necessary to apply the requisite tests and every architect may make his own inspection and assure himself that the installation is without a fire hazard.

To do this but two tests are necessary: first, the ability to withdraw and re-insert wires in their proper channel-ways, and second, the ascertaining by visual examination as to whether all wires are covered by a solid rubber insulation. Nothing could appear more simple.

The importance of this matter to architects cannot be underestimated and fortunately the editor, as a member of the California Electrical Society, is in possession of information establishing in part the correctness of the lecturer's ideas. To illustrate:—A large new modern fire-proof building on Market street, San Francisco, was wired by one of the most responsible electric companies in the country, with ordinary concealed wiring. Some months after, the same electric company wired a similar large office building on Montgomery street, but in the Montgomery street building the wiring was of the accessible construction recommended. In each of these buildings a new brand of insulation was used which was

endorsed in the east but which, it transpired, has failed to give entire satisfaction in San Francisco. To rewire the Market street building has necessitated the chiselling up of tiling, mosaic floors, etc., with an expense of over \$3,000 to the contractor and infinite annoyance to the owner and tenants, while should it become necessary to rewire the Montgomery street building, it can be done in less than a week without entailing broken plaster, great expense or other inconvenience. Again in refutation of the charge of impracticability of the plan of accessible concealed wiring is cited, the installation now about finished in the Mutual Life Insurance Company's building, corner of California and Sansome streets, San Francisco, which contains electric light, telephone, district telegraph and call bell wiring, all of which is concealed, all of which is accessible, and all so arranged so that subsequent wiring of any nature may be placed from any room in the building to any other room without breaking an inch of plaster or exposing an inch of wire. Moreover the architectural features of the building are not impaired in any sense. With such a system at hand it would appear that little else is to be desired in the way of facilitating electrical work or of insuring owners against the wiring troubles that have so long proved most annoying and exasperating.

ON the day of the inauguration of Grover Cleveland as president of the United States, Edward F. Searles, by a deed of gift, transferred the Hopkins' mansion in this city, to the Board of Regents of the University of California, to be held by them in trust for the use and benefit of the San Francisco Art Association.

The name by which the residence of the late millionaire will in future be known, is the Mark Hopkins Institute of Art. Mr. Searles object in making this generous gift, is to create a memorial that will exist as a commemoration of the achievement of one of California's noted men, and to found an art gallery that will serve for the use and enjoyment of the general public as well as for the benefit of the association that has been chosen to carry out the wishes of the donor.

The School of Design will be removed to and installed in its new home in the near future, and the nucleus of an art collection will have been formed.

The public is to be congratulated on this successful termination of Mr. Searles' endeavors, for many unforeseen difficulties, that stood in the way of the realization of his wishes, were encountered, and had to be overcome by him, to reach the present consummation.

The field of usefulness of the Art Association is thus immeasurably broadened, and many beneficial effects should result to the community by a wise and judicious use of the means that have been placed at its disposal.

BY invitation of Mr. Jos. B. Crockett, President of the San Francisco Gas Light Co., the members of the Technical Society of the Pacific Coast visited the new works recently constructed at Laguna and Bay streets. These works, although in addition to those already in use, are of the most extensive and complete of modern plants. The gas is manufactured by the latest improved process.

The primary or heavy gas is first prepared from the coal which heats the chambers of the retort to a white heat when the crude petroleum and steam is introduced, which becoming superheated in the retort combines with the heavy gas to form the best combination of the chemical equivalents for this purpose. The heating and introduction of the separate in-



gredients into the retort has been ingeniously arranged so that the whole process is under the care and control of one man. From the retort the gas is carried over and through the scrubbing tank where several impurities and the greater part of the ammonia is removed (and saved as separate products) and then through a washing process for taking out the last trace of ammonia. The sulphureted hydrogen, (or bad smelling product) which was formerly removed by the use of lime, is here taken out by the use of iron oxide, which is regenerated by a current of air through an apparatus arranged by Mr. Jones the superintendent. By this improvement the ill-smelling gas is oxidized and carried off as a new compound having no objectionable properties, and the iron oxide may be used over again. Through the process, as here carried out, the gas is of the purest and best quality for illumination, heating and mechanical purposes.

The gas holder is one of the three largest in the world, the diameter is 165 feet and has a rise of 108 feet, formed in three sections. By the use of steel plates and superior workmanship the weight of the holder has been arranged to balance the difference between the gas and air pressure, therefore, no balance weights are required. The iron frame work surrounding and guiding the holder is a model of lightness and strength. Straining plates, beams or rods have been ingeniously introduced to counteract all weak points.

The buildings have been constructed with red stock bricks for the walls, and chocolate colored terra-cotta trimmings for openings and accentuated points. Some of the buildings will have the rooms or apartments subjected to great variations of temperature, consequently the walls were made of considerable thickness and strength to withstand the expansion and contraction of the iron floor beams. One of the difficulties encountered was to construct a fire-proof floor, and yet have it sufficiently elastic to allow for the changes in the iron construction under the variations of temperature. Through the theoretical and practical knowledge of the president and superintendent this difficulty appears to have been overcome.

H. T. B.

WHERE SHOULD THE KITCHEN BE?

THE learned Dr. Price, who, in the last century, compiled the famous Northampton tables of mortality, would have been surprised as well as gratified, if he could have known the improvement which the statistics of the present day show in the expectation of the duration of human life. However, in that as in every other branch of research though "much has been done, more remains to do." Increased knowledge of the laws of hygiene and improved conditions have done much towards the preservation of

health and the prolongation of human life, yet sanitary precautions have by no means been devised and applied to the extent they should be. Dwellings, even for the well-to-do, continue to be constructed on unscientific principles, with a barbaric, in a double sense, disregard of health and convenience. In many respects we have progressed little beyond the hut of the savage with a hole in the roof for the egress of the smoke. True, we have chimneys, and the smoke from our fires no longer torments our eyes, irritates our respiratory organs, nor begrimes our bodies, but the vapors and odors from cooking our food and allied operations still permeate our dwellings and offend our senses.

Kitchens and other household offices are still so placed that as "sparks do upward fly" so do the ill smelling fumes from saucepan, pot and kettle diffuse their volumes in parlor, hall and chambers. The advent of the boiled dinner with its accompaniments of the savory onion and succulent turnip is disclosed to the members of the household and their visitors long before the appearance of the meal on the family table. The preparation of salted cod-fish and mackerel is long known to the nose before those eatables greet the sight of the assembled household.

Just why these never ceasing, still beginning nuisances are allowed to maintain their place in the domestic economy of any intelligent family, is difficult to determine, but the fact remains the same that they do in ninety-nine cases out of a hundred. Seeing that the fumes arising from the household menage, immediately ascend so soon as liberated, common sense teaches us that if we desire to avoid the annoyance caused by their presence that the only effectual plan is to place the scene of the preparation of food on the top instead of the bottom of the dwelling as is usually the case.

Fatty, sooty and sulphurous vapors contaminate and speedily destroy curtains, carpets and upholstered furniture, besides causing no end of annoyance to all who encounter them. In spite of these acknowledged evils we seem to take infinite pains to secure their unfailing presence. And we shall always do so so long as our dwellings are built on the plans now usually adopted. Of course, the questions of convenience and expense, always controlling factors in house building, are to be considered. They would be immediately urged by those who are governed by, and are part of the *vis inertia* of all communities.

Such people are always opposed to change. No matter whether that change brings with it greater comfort and less

expense, they oppose it because it is a change. With such people it is useless to theorize or argue, nothing but the stern, undeniable logic of events has any weight with them. They have, like Ephraim and Manasseh, to be let alone, till they wake up some fine morning with the usual ejaculation "Bless me who'd a' thought it!"

But leaving them to their lethargic repulsion, it would not seem difficult to show that kitchens and culinary offices might be placed immediately beneath the roof of dwellings and yet comply with the reasonable requisitions of economy, both as regard construction and service. Little examination will show that the cost of building in the first instance cannot be but very slightly, if at all, greater.

As regards service, there is something to be said. Fuel and household supplies are usually bulky matters and the transportation of such material and the disposition of waste and refuse call for the exercise of intelligence and practical ingenuity. The problem is not, however, so difficult of solution as it may seem. The every day experience of tenants of flats show that such conditions can be successfully met,



COUNTRY CHAPEL COMPETITION.

with no great outlay of expense or labor. A properly planned and constructed dumb-waiter would, in most cases, fully answer the needs of transportation, and the skilled architects and mechanics of the present day could easily devise methods of construction and use which would leave little to be desired in the way of convenience and labor, with the never failing complement of the latter, expense.

Of course the dining-room would have to be placed in the upper regions as well as its relative the kitchen. To that there could be little or no objection. As arranged on the plan now generally adopted, the dining, or room devoted to the purpose of partaking of meals is usually a sort of den or cellar which is a good place to get out of so soon as, to use a Homeric phrase "the rage of thirst and hunger is appeased." A change that could cause meals to be eaten in a light, airy and cheerful room is not one to be deprecated or avoided.

All things considered a system which would free the dwelling from the vapors and odors caused by cooking and its refuse, would thus seem not only to be desirable but practicable.

NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 408 California street.

GEO. H. SANDERS, Pres.
OLIVER EVERETT, Sec.

W. J. CUTHBERTSON, Vice-Pres.
JOHN M. CURTIS, Treas.

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

C. E. GRUNSKY, Pres.
OTTO VON GELDERN, Sec.

CHARLES D. MARX, Vice-Pres.
GEO. F. SCHILD, Treas.

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.

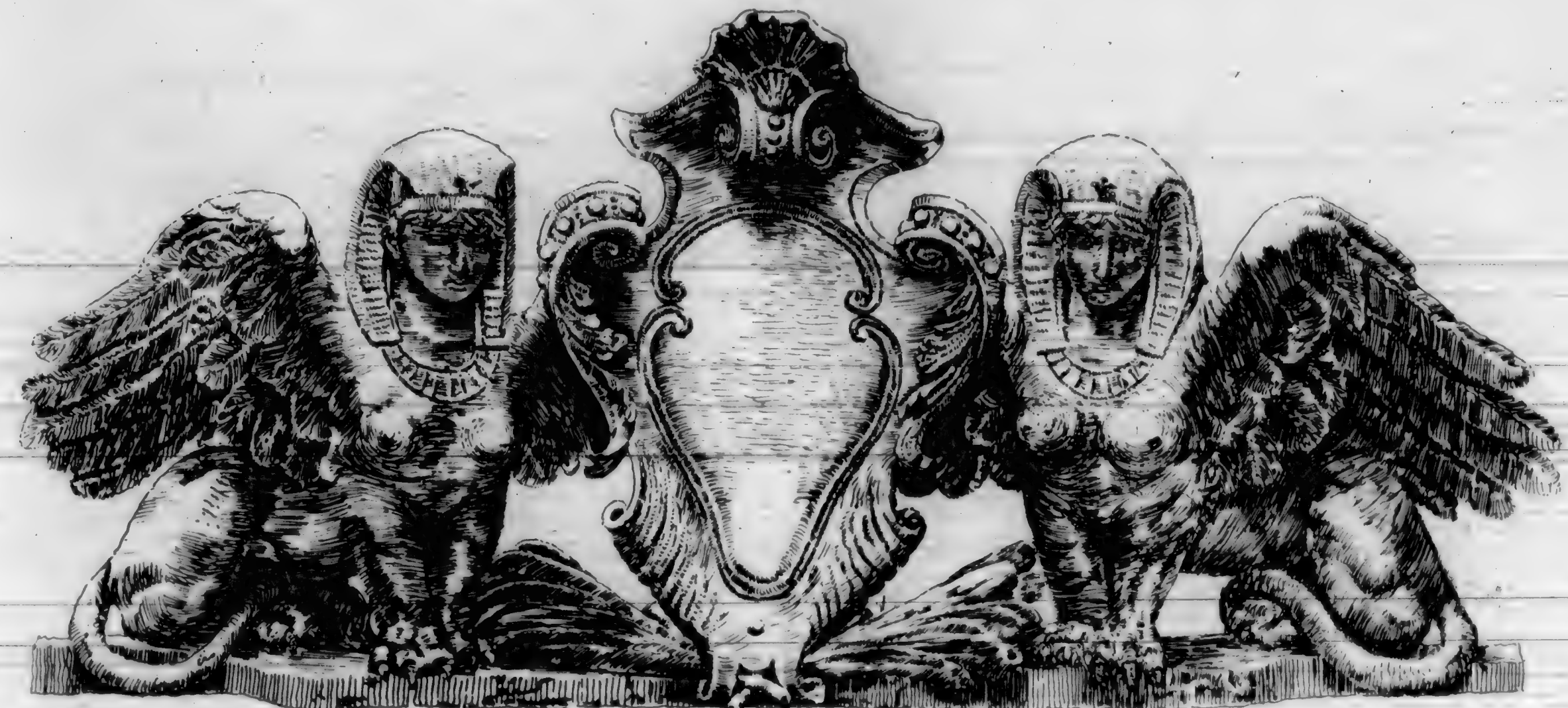
GEO. P. LOW, Pres.
MAX CASPARI, Sec.

C. O. POOLE, Vice-Pres.
H. T. BESTOR, Treas.

MASTER PAINTERS' ASSOCIATION OF THE PACIFIC COAST.

E. M. GALLAGHER, Pres.

H. G. JARMAN, Sec.



Swain - Del.

Chapter medals, in accordance with the schedule now in the hands of committee on classes. They also recommend that students who desire to compete for said medals in accordance with said schedule shall be enabled to do so on payment of a nominal sum to be hereafter determined on.

In the designs in question it is very difficult even to criticise them intelligently, as in no case have the definite needs of a house of worship been intelligently understood by the respective competitors.

However, taking a broad view of the various features and points of merit or demerit exhibited by the four designs, the Committee have unanimously placed "Z. Y. X." first in design and execution. As to design, while it displays no particular feature which can ally it with any known style it yet preserves the spirit and feeling of a country chapel and would not be mistaken for a library, a wayside inn or country store. The eaves of the tower are somewhat heavy and the tower is perhaps rather low, but on the whole both circumstances are in favor of the style adapted, and the nature of materials of construction, which appears to be the country rock of the neighborhood. There is also some artistic feeling in the quiet and easy lines of roof and spire and in the general trend of the lines of composition.

As regards plan, however, there is less to be said that is favorable though even there may be seen a good deal of architectural forethought in the arrangement of the cloister, *Porte Cochere* and driving shed in the rear, the shady arches of which look cool and refreshing on a hot day in the country. The entrance for the carriage porch is well managed; but when it comes to the entrances there is much to be desired. While it is well for the chief entrance to be in the front of the building, and in view of the use of the *Porte Cochere*, it would be difficult to arrange the entrance on the side. There should be a direct and straight line of entrance and exit between the auditorium and the outside steps. This is especially needed in the case of funerals, and a stampede in case of a panic on account of earthquakes or fire. In the rear or chancel end of the church, there seems to have been no clear idea in the mind of the designer as to the uses of the various parts. For instance, a deep chancel is provided with provisions for the choir to the left hand side, outside the chancel with a recess for a very small organ behind it.

On the opposite side there is a font shown on a platform corresponding in size to the choir. This is wholly unauthorized by precedent, except in cases in which, as in the present case, precedent is entirely lost sight of.

The choir in the ancient Basilica occupied the center of the nave before the high altar, in the rear of which was placed the Bishop's chair in an apsis or bema. Afterwards the altar was placed in the bema, the Bishop's chair or throne to the left side, and the seats of the choristers on each side of the elongation of the apse. This is the arrangement in an Episcopal cathedral at the present time, the only true correspondent to the ancient medieval practice at the present time. In the Roman Catholic churches of Europe and America, the choir is almost universally placed in the western gallery, at the opposite end to the high altar in the east. The elongated chancel in the example under consideration is thus; it will be seen quite useless. If the choir seats were placed in it, as in the design marked, "lead pencil", and the extensions on each side for choir and font done away with, the arrangement would be restored to correct precedent and in accordance with modern practice in ritualistic churches.

The design marked "Wood Tick," has been placed second on account of the direct arrangement of the entrance and the simplicity and general harmony observable in the general elevation. The tower, however, (placed on the sloping line of the roof) is objected to, and the style appears to be an indefinite and confused sort of Gothic. The entrance would be greatly improved by leaving out the divisional column and the arrangement of the vestry and organ chamber is somewhat crowded.

The general form of the chancel and communion rail and the shape of the choir and chancel and position of altar are however, quite correct, and in this respect, better than the preceding design, and the baptistry, if placed at the northwest instead of the southwest angle (according to Orientation) would be in the authorized position, though some position at the chancel end is not uncommon at the present time. The execution of this design is very coarse and sketchy and at the same time, over done, and the placing of the building in the picture is badly managed.

No. 3, "Lead Pencil." The arrangement of chancel in this

example is correct, but the arrangement of vestry robing room, etc., is without meaning or utility, and the entrance is unspeakably bad. The tower is too conspicuous for a small church and the general effect somewhat poor. The use of buttresses, however, in the body or nave of the building, and the arrangement of openings on each side are well managed and correct.

No. 4, "Fire," Seems to be simply a denominational chapel having a very large octagon recess, presumably for organ, choir, and pulpit platform, etc., at the end opposite entrance; and a confused encumbrance of entrance, vestibules, etc., on each side, blocking up light which is admitted only from the front and the first side bays of the nave. The elevation is very poor and ineffective, but still the whole design conveys the idea of a country chapel. The execution is poor and not improved by color.

The report on these designs is much longer and more elaborate than the merit of either one of them would render necessary, but is purposely developed to indicate the necessity for the adoption of a more systematic method for competitions in the future.



ARCHITECTURAL COMPOSITIONS, by Henry P. Kirby, comprising a series of fifty sketches, part of which have been made in connection with actual projects, but many being the result of study during leisure moments. Bates, Kimball & Guild, of Boston, are the publishers.

A short notice like the present one cannot do justice to the subject. The well-known sketches and composition of the author previously published, have found their way into many of the offices throughout the country. The series of sketches before us have been made on heavy paper 15x20 inches, the designs are architectural and picturesque, the massing has been done with strength and the details handled



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

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

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

THE 6th Ward School, Oakland, is to be built of brick, stone and terra-cotta, and slate roof. It is one of several which are about to be put up in Oakland. W. J. Cuthbertson is the Architect and it will cost \$35,000.

A residence on Nuuanu avenue, Honolulu, H. I., showing front and side elevations and ground plan, by Messrs. Ripley & Reynolds, Architects.

THE Abrahamson Building on the corner of Washington and 13th streets, Oakland, is by Architect C. Mau.

A residence for Mr. Thiele of San Jose is from the designs of W. D. Van Sieten, architect of that place.

effectively. Here the student and draughtsman can find pen drawing in almost any style to suit his taste, examples being given in the most severe outline through all the grades, including some very delicate lining, more like "copper plate work," and including full line work, having the effect of "half tone work."

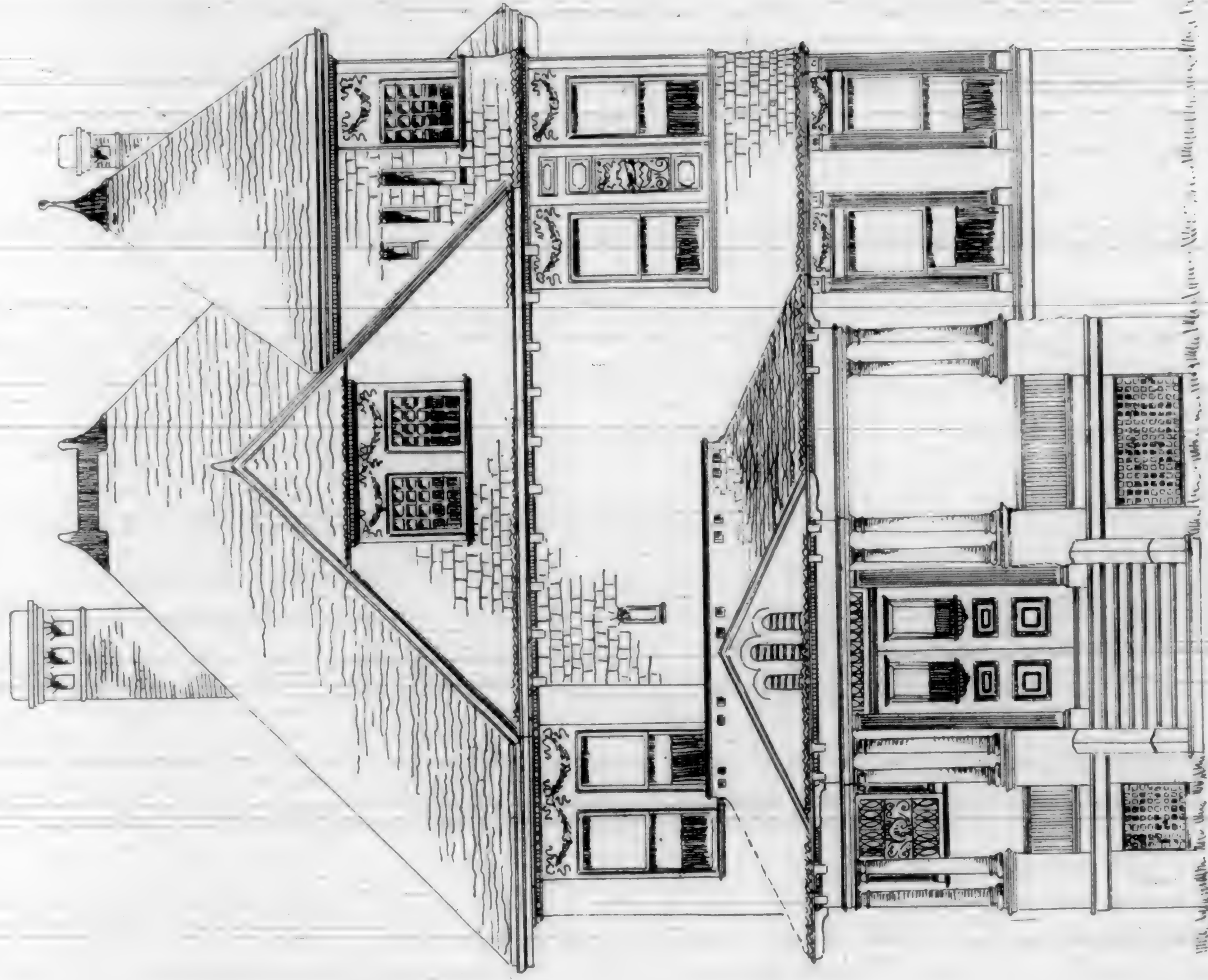
It is a valuable work for the architects' office, viewed either from the designs to the skillful execution. Messrs. Osborn & Alexander, 409 Market street, San Francisco, have the album for sale.

LIPPINCOTT'S for March comes to hand and contains a finished story, "Waring's Peril," by Captain Charles King. U. S. N., and the usual amount of interesting reading.

The Puget Sound Lumberman is authority for the statement that the amount of standing timber in the State of California is in round numbers 100,000,000,000 feet; this is less than half the quantity that is credited to Oregon, and only about one-quarter the quantity in Washington. The land covered by timber in the latter state would form a belt around the world three miles wide.

On advertising page x will be found a list of practising Architects in the State of Washington.



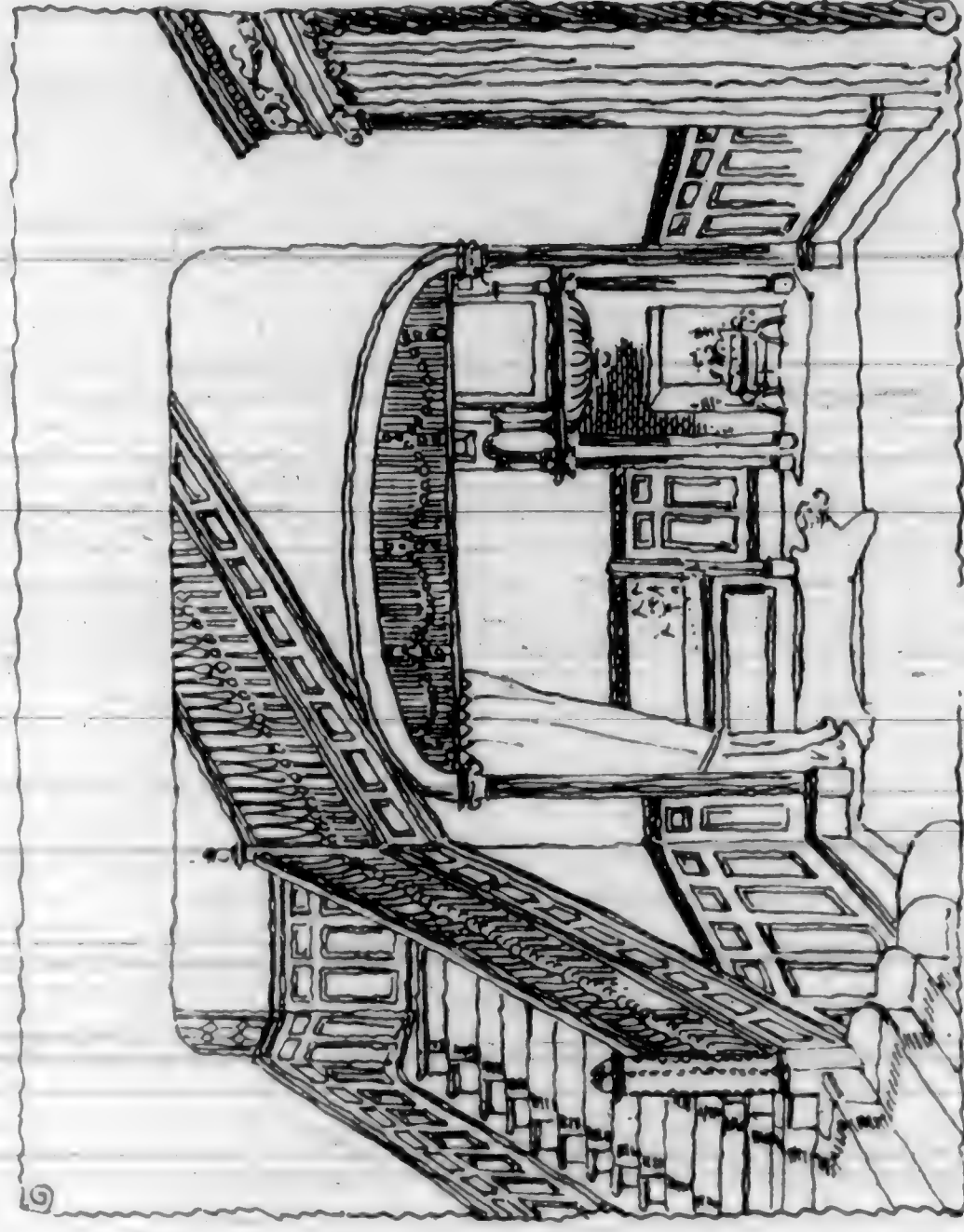


DESIGN FOR RESIDENCE ON SCHIELE AVENUE

W. D. VAN SICLEN,
ARCHITECT.

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO LITH.

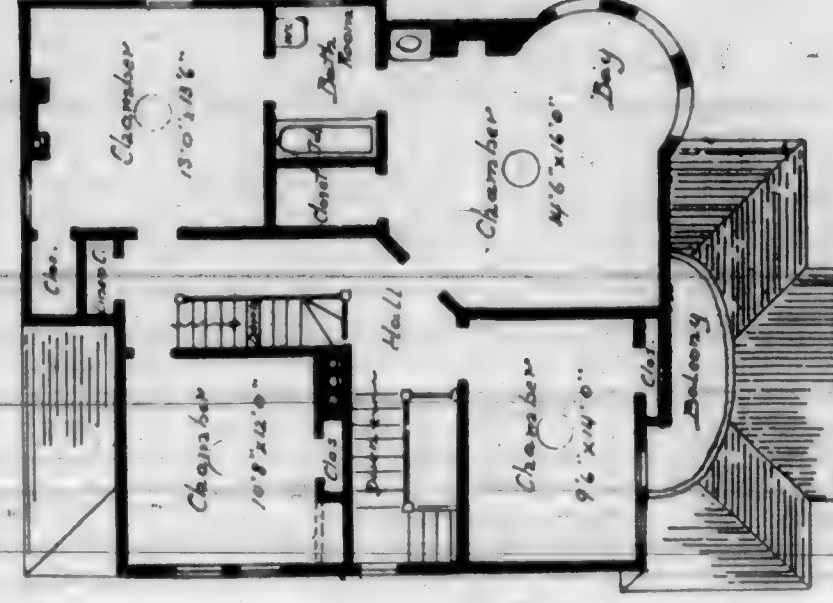


VIEW OF THE HALL IN THE RESIDENCE ON SCHIELE AVENUE

DESIGN FOR RESIDENCE ON SCHIELE AVENUE



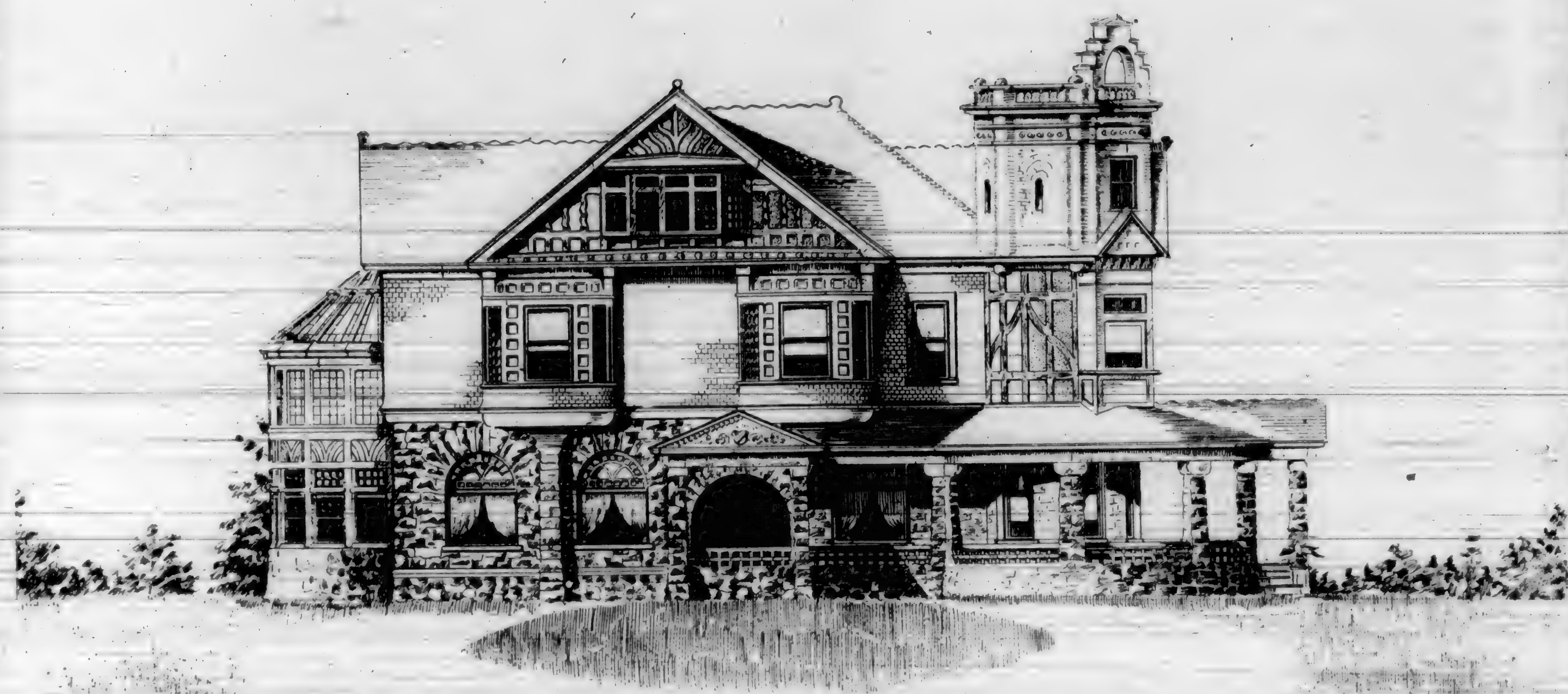
FIRST FLOOR PLAN



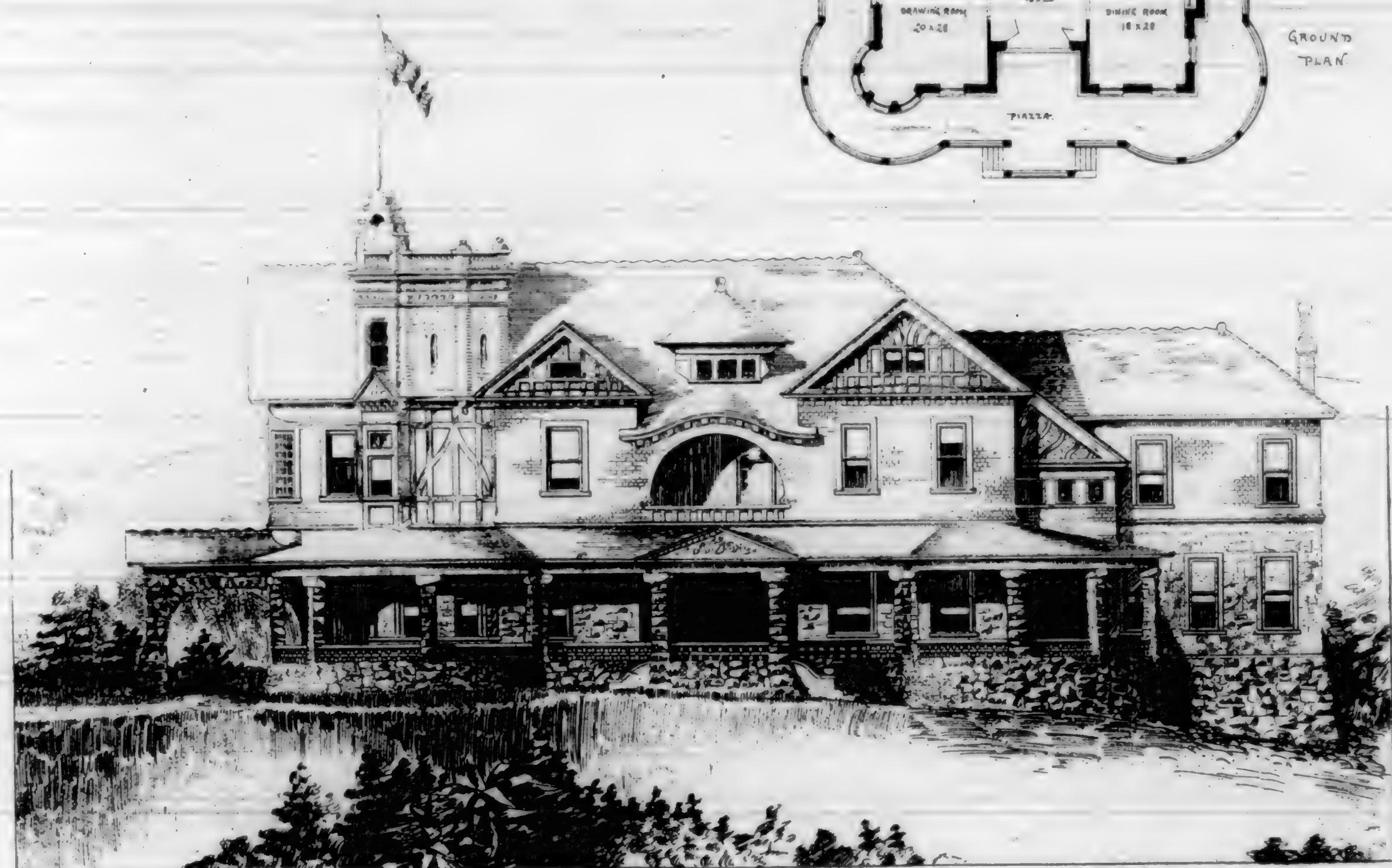
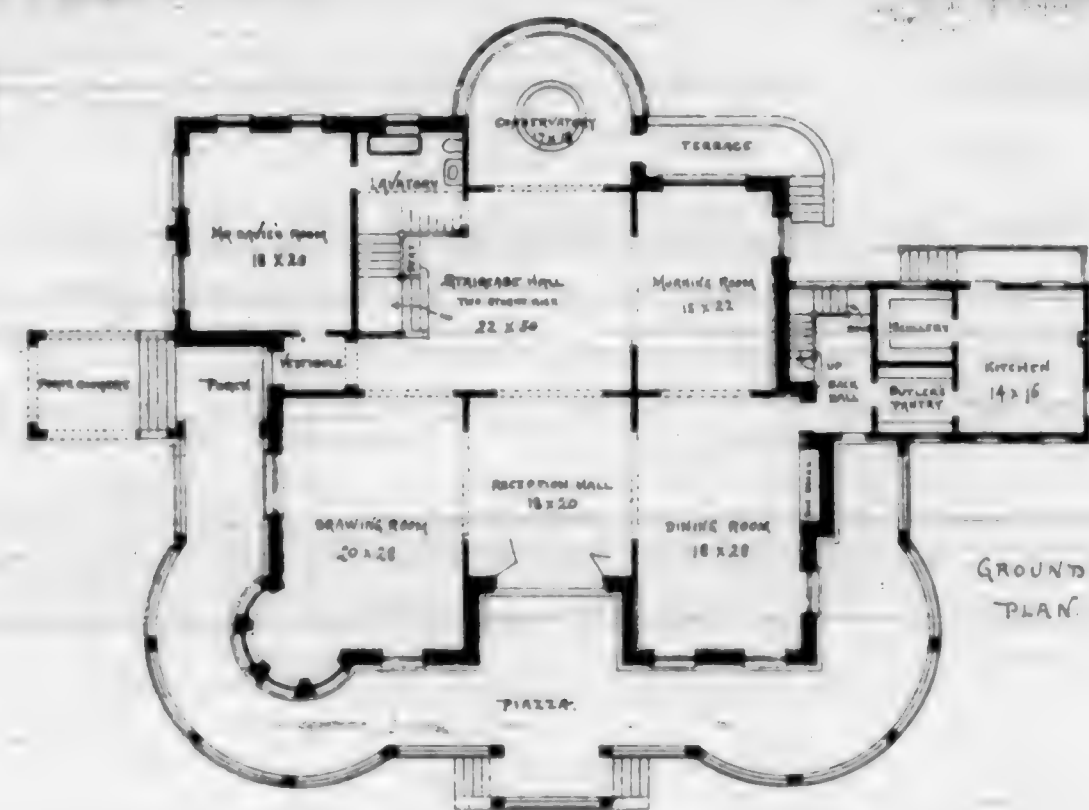
SECOND FLOOR PLAN

VOL. XIV NO. 3. MARCH 1893.





ELEVATION TOWARDS MIAMI AVE.



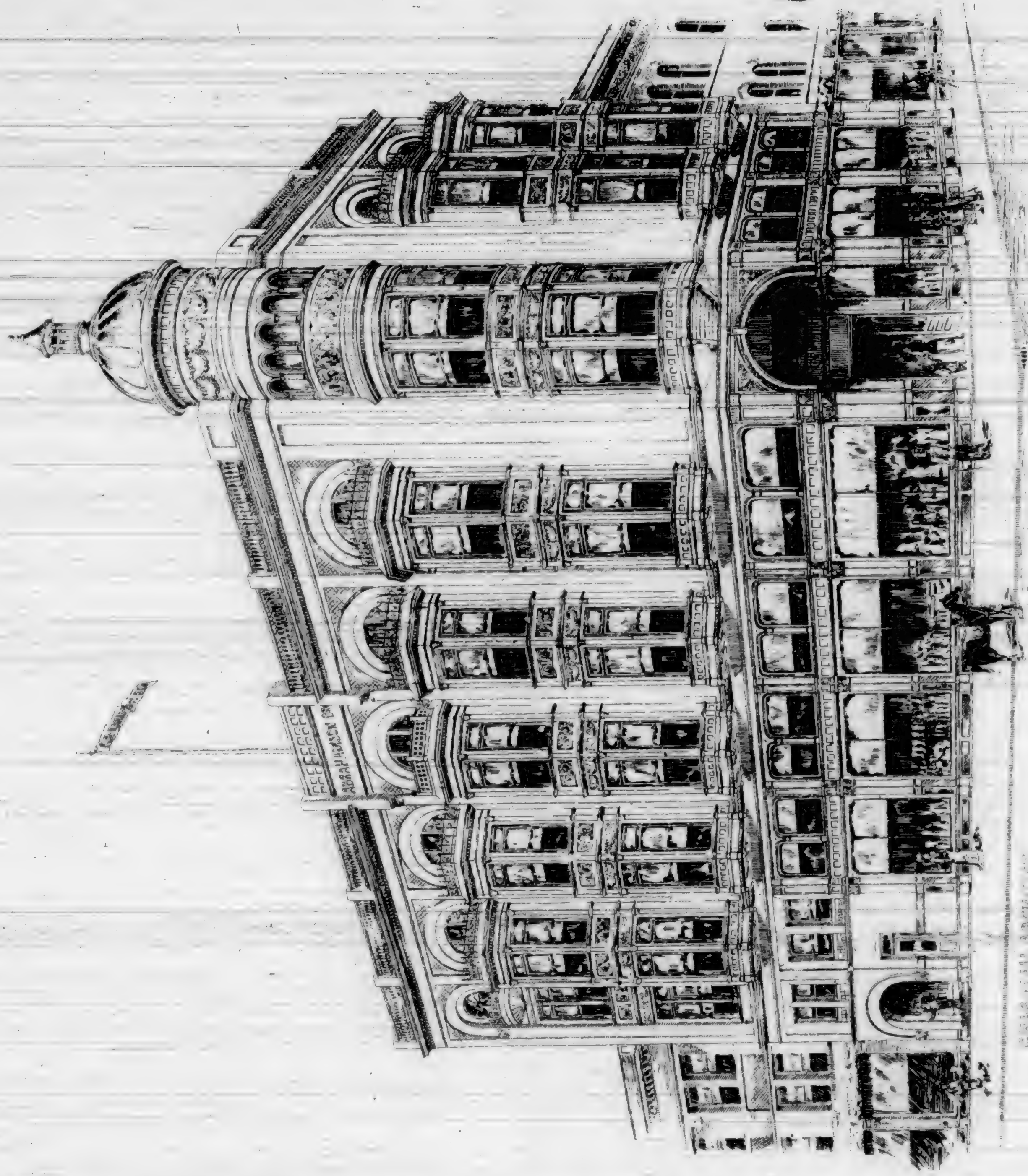
Scale 1/4 inch = 1 foot

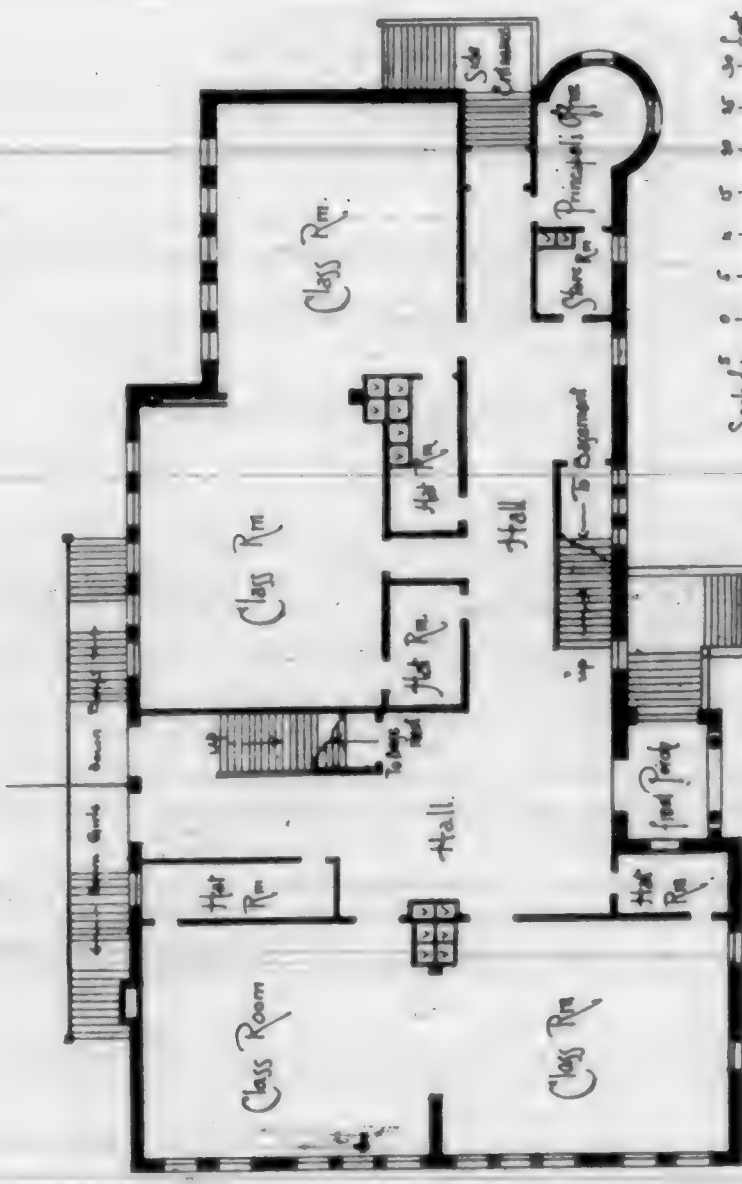
ELEVATION TOWARDS CITY

C. B. Ripley, Architects
A. Reynolds.

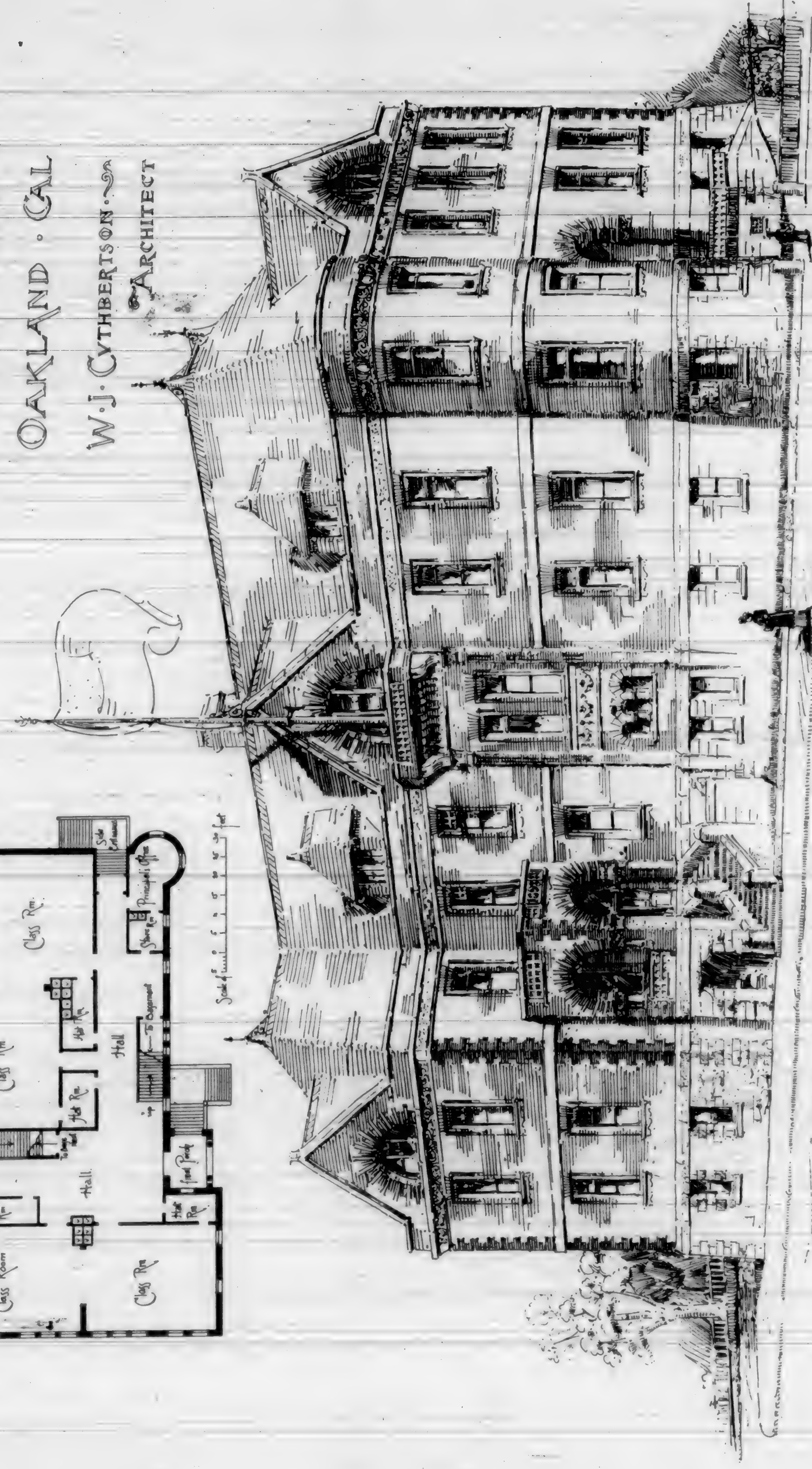


THE CROCKER BUILDING.
A. PAGE BROWN, ARCHITECT.





SIXTH WARD
SCHOOL - HOUSE.
OAKLAND - CAL
W.J. CYTHBERTSON - ARCHITECT



PLATING A TOWER WITH ALUMINUM.

THE work of electro-plating with aluminum the iron work of the new city hall tower in Philadelphia, a surface of 50,000 square feet, is progressing so steadily at the Tacony Iron Works, that it is expected that the great task, if carried on as fast as it has been this year, will have been entirely completed in a little over three years. It will require 20,000 pounds of aluminum to plate the entire surface of 50,000 square feet.—*The Age of Steel.*

The fact that the resisting powers of the metal Aluminum have been greatly over estimated, should render the Architect careful in the use of this metal, as both acids and the atmosphere will oxidize the metal far more than is generally supposed.—*Ed. Cal. Architect.*

Since the construction of the works the consumption of water for street watering has been annually less than 5,000,000 gallons at five cents per 1,000 gallons, instead of 7,000,000 gallons at twenty-four cents per 1,000 gallons, as before. There is also a considerable saving on the gravel and flint for macadamized roads, and the author believes that these roads can be maintained for about 15 per cent less than when fresh water was used. The salt water does not seem to hurt them in any way. During the summer months the dust is kept under by the qualities of salt water, and in the early autumn, if the surface coating is removed by the broom upon the appearance of the first frost, no evil effect is traceable to the use of salt water. No complaints are made by shopkeepers, jewelers, etc., and the three reasons urged by the committee of chemical experts have given no cause for anxiety. Used in sewer flushing, salt water has cleaned them thoroughly, and after five years' experience no



INTERIOR VIEW OF RESIDENCE ON NUUANU AVENUE, HONOLULU, H. I., RIPLEY & REYNOLDS, ARCHITECTS.

MUNICIPAL USE OF SALT WATER.

THE advantages to be gained by the employment of salt water for street watering, sewer flushing, fire extinguishing and similar purposes in coastwise towns has received considerable attention from experts in municipal engineering during the past few years, and before long we shall unquestionably witness its widespread use for this purpose. Among others, H. P. Boulnois, a well-known English engineer, has had the subject under consideration, and makes the following report as to the practicability of its utilization:

"Watering the streets with sea water should be adopted wherever it is feasible, as it not only gives a delightful freshness to the air and dispels iodine, but it also causes the surface of the street to maintain its humidity for a longer period than when fresh water is used, as it impregnates the soil with hygrometric matter. This has been attempted artificially by adding common salt to the water used for watering. The general results may be stated as follows:

nuisance of any kind has followed. Its effect in the Yarmouth, England, sewers has been to reduce and almost prevent the generation and accumulation of sewer gas. Sewers can now be entered at once on the removal of the manhole cover, which was not the case before. An 18-inch pipe sewer on a gradient of 1 in 300 was formerly constantly clogged by deposits; it is now kept thoroughly clean by two flushes per day from a 3,000 gallon tank, which fills the sewer two-thirds full. There are no deposits of any sort in the sewers, except in several of the larger ones, and there it has been reduced one-half since salt water has been used. As to the effect of salt water on iron, the author says that the syphons are of galvanized sheet iron only, but they have required no repairs since they were put in. As to the sulphates in sea water, no evil effects are traceable; the town possesses no manufactories, and no acids are discharged into the sewers. The salt water has never been used for extinguishing fires, though it is available if needed. The author does not recommend it for this purpose, as he considers that a dwelling would not be habitable after its walls had been saturated with sea water."—*The Sanitary Plumber.*

ARCHITECTURAL LEAGUE EXHIBITION.

THE eighth annual exhibition of the Architectural League of New York was almost lost this year in the spacious and magnificent halls and galleries of the American Fine Arts Society's Building, 215 West Fifty-seventh street, New York.

The exhibition opened on the 2d and closed on the 24th of January. The attendance was larger than heretofore, and in some respects the exhibit was more deserving. This, however, can hardly be said of the purely architectural department, for, although there were some excellent representations of executed work, and a number of meritorious designs, there were not so many of either class as were shown in the expositions of 1891-92. This may be accounted for by the fact that in the years named there were certain causes which stimulated the ambition of American architects. Thus, in 1890 the competitive designs for St. John's Cathedral formed a special and important feature of the exhibit, while last year the Columbian collection would have been sufficient in itself to make an interesting and instructive architectural show. But while this may be called an off year, it must not be concluded that there is any decadence of interest or degeneration of genius manifest in League work; rather the contrary, for the general work is above former standards, and several sets of drawings are decidedly original. We might say American, in conception with a breadth of treatment far beyond the scope of the mere imitators, and adaptors who could not if they would, and would not if they could, depart from the conventional track. First and most striking among these is the California State Building, to be erected in Jackson Park, Chicago. This is a spacious but low, yet imposing structure in the characteristic Mission style of the Spanish settlements. Connecticut, Maryland, Rhode Island, New Hampshire, New Jersey, Pennsylvania, Nebraska, New York, North Carolina, Iowa, Georgia, Ohio, Minnesota, Texas and Massachusetts are also represented by designs of State buildings for the Columbian Exposition, but the Georgian design by G. L. Norrman, of Atlanta, is the only one which can be considered an exponent of a type. The design is characteristic of the Sunny South, where the public buildings have always been more ornate and graceful than in the more material North. It is of the Grecian temple style, but there is enough originality and boldness in the treatment to defend the architect from any suggestion of a too slavish conservatism. There

is a beautiful proportion carried out in the details, and the whole is a harmonious picture.

Among the studies is a design by Henry B. Herts, for the Columbian Memorial Arch in New York. This was fully described and illustrated in a former number, but in passing we may express our regret that it is not to materialize in marble, or at least not so soon as was anticipated when its temporary forerunner was receiving the plaudits of the hundreds of thousands who passed under it three months ago.

If Mr. Herts had been an architect of the Pecksniffian type he might have had enough pull to work off on a committee a much less meritorious work by some unfortunate Chuzzlewit, but such is life, and even in architecture the reward of merit too frequently goes to the ostentatious pretension.

The grand market at Lima, by A. Page Brown, has something in common with the California design mentioned above although there is no similarity whatever in the buildings. The style is distinctively South American, with arcade and colonnade, and is a happy combination of the graceful Spanish-Morisco, with a leaning to the solidity of the Flemish.

The annex to the exhibit which includes antiquities, bric-a-brac, painting, sculpture, etc., would be deserving of a much more extended notice if it were not that our last year's description nearly covers the same ground, except that the patrons of the League have been more than ordinarily liberal in their contributions to the loan department.—*The Architectural and Building Monthly.*



TENDERS TO BE RECEIVED.

Treasury Department, Office Supervising Architect, Washington, D. C., February 23rd, 1893. Sealed Proposals will be received at this office until 2 o'clock p. m. on the 30th day of March, 1893, and opened immediately thereafter, for all the labor and materials required for Hospital and Attendants' Buildings, Laundry Building, etc., U. S. Quarantine Station, Angel Island, San Francisco, California, in accordance with the drawing and specification, copies of which may be had on application at this office or the office of the Superintendent at Angel Island, San Francisco, Cal.

Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of 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. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for Hospital, Attendants' Buildings, Laundry Building, etc., U. S. Quarantine Station, Angel Island, San Francisco, California," and addressed to, W. J. EDBROOKE, Supervising Architect.

Treasury Department, Office Supervising Architect, Washington, D. C., March 2d, 1893. Sealed proposals will be received at this office until 2 o'clock p. m. on the 6th day of April, 1893, and opened immediately thereafter, for all the labor and materials required for the interior finish of the U. S. Post Office, etc., building at Sacramento, California, including iron work, lathing, plastering, iron stairs, concrete floors, joiner work, wood flooring, marble work, painting, polishing, glass, hardware, etc., in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Sacramento, Cal.

Each bid must be accompanied by a certified check for a sum not less than 2 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. All bids received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes sealed and marked, "Proposal for Interior Finish of the U. S. Post Office, etc., Building at Sacramento, California," and addressed to, W. J. EDBROOKE, Supervising Architect.

LEGAL DECISIONS.

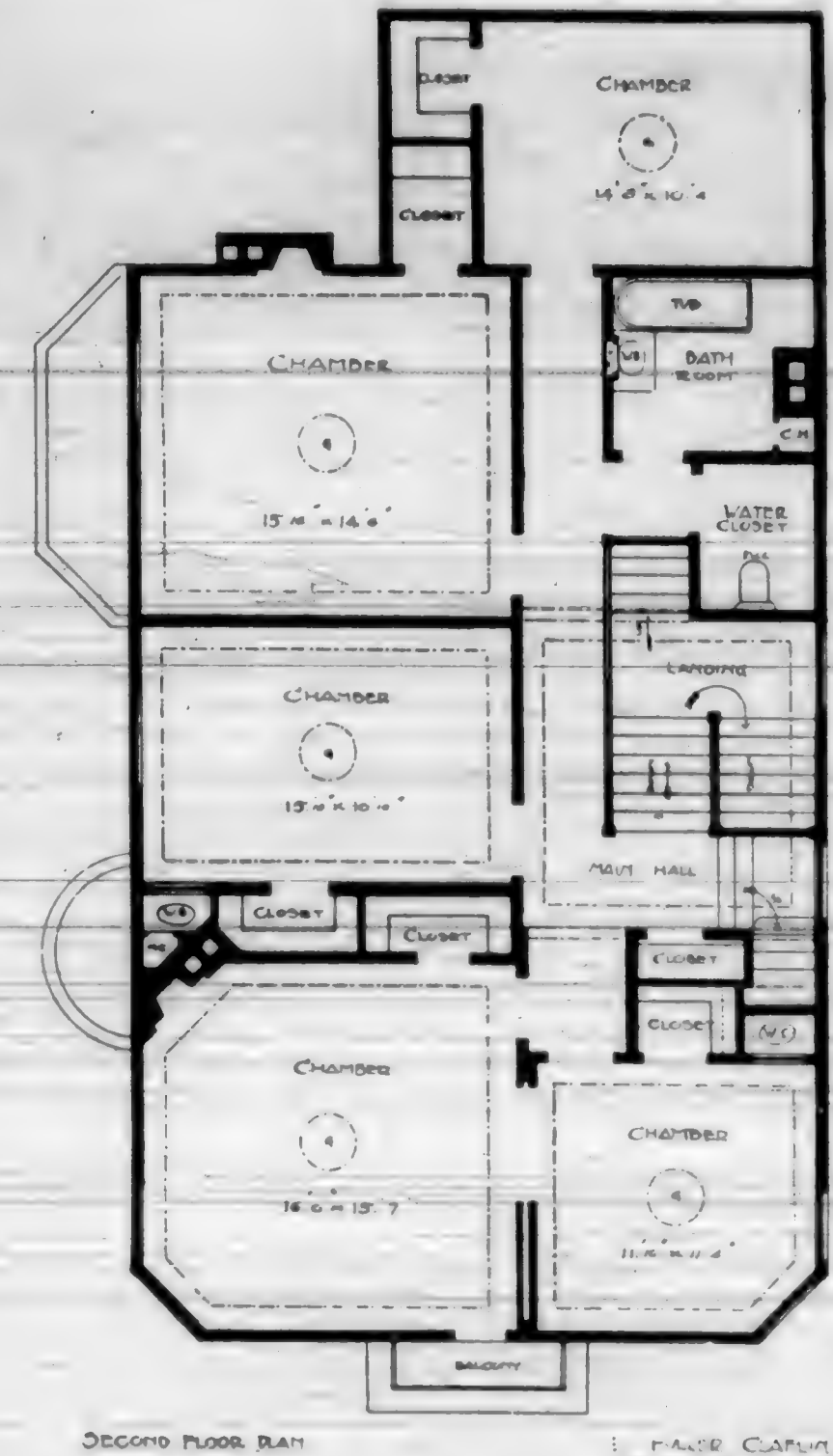
From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

DISTRICT COURT CANNOT ALTER PERIOD OF REDEMPTION.—A district court cannot, in the exercise of the discretionary powers conferred upon it by statute, extend or enlarge the period of time within which real property must be redeemed from a sale made in proceedings to foreclose a mechanics' lien.
Anderson v. Kerr, Supreme Court of Minn., 53 N. W. Rep. 719, 43.

WHEN BUILDER IS NOT LIABLE FOR REFUSAL TO ACCEPT BID.—The terms of the proposals to receive bids not being proven, not that the builder was to be bound by the offer of the lowest bidder, and it not being established that a certain bidder was the lowest, the builder is not liable in damages for violation of contract.
Reusch v. American Brewing Co. Supreme Court of Louisiana, 11 S. Rep. 719, 59.

JURISDICTION OF COURT OVER MECHANICS' LIEN.—Where there is due a contractor a certain amount for which, less his liens allowed his sub-contractors, laborers and material men, he is entitled to a lien, and the court allows the lien of such sub-contractors, laborers and material men, to an aggregate less than the amount for which the contractor would otherwise be entitled to a lien, and deducts that aggregate from such amount, allowing him a lien only for the remainder, the owner is not prejudiced by error in determining the amounts due the sub-contractors, laborers and material men, and cannot complain. Where a pleading for a mechanics' lien sets up but a single lien, no bills of particulars need be filed.

Menzel v. Tubbs, Supreme Court of Minnesota, 53 N. W. Rep. 653, 119.



SECOND FLOOR PLAN

1. PARLOR CLASP 22'0" x 24'0" 2. D. B. FLOOR DUCK 27'0" x 27'0"

EFFECT UPON LIENS OF GIVING FALSE RECEIPT.—A material man is not estopped from seeking to foreclose his liens for materials furnished by him to the contractor by reason of his giving a false receipt for the amount due him, to enable the contractor to obtain a payment from the owner, where the owner has paid out no money, and suffered no loss on account of such receipt.

Washburn v. Kahler, Sup. Ct. of California, 31 Pac. Rep. 741, 68.

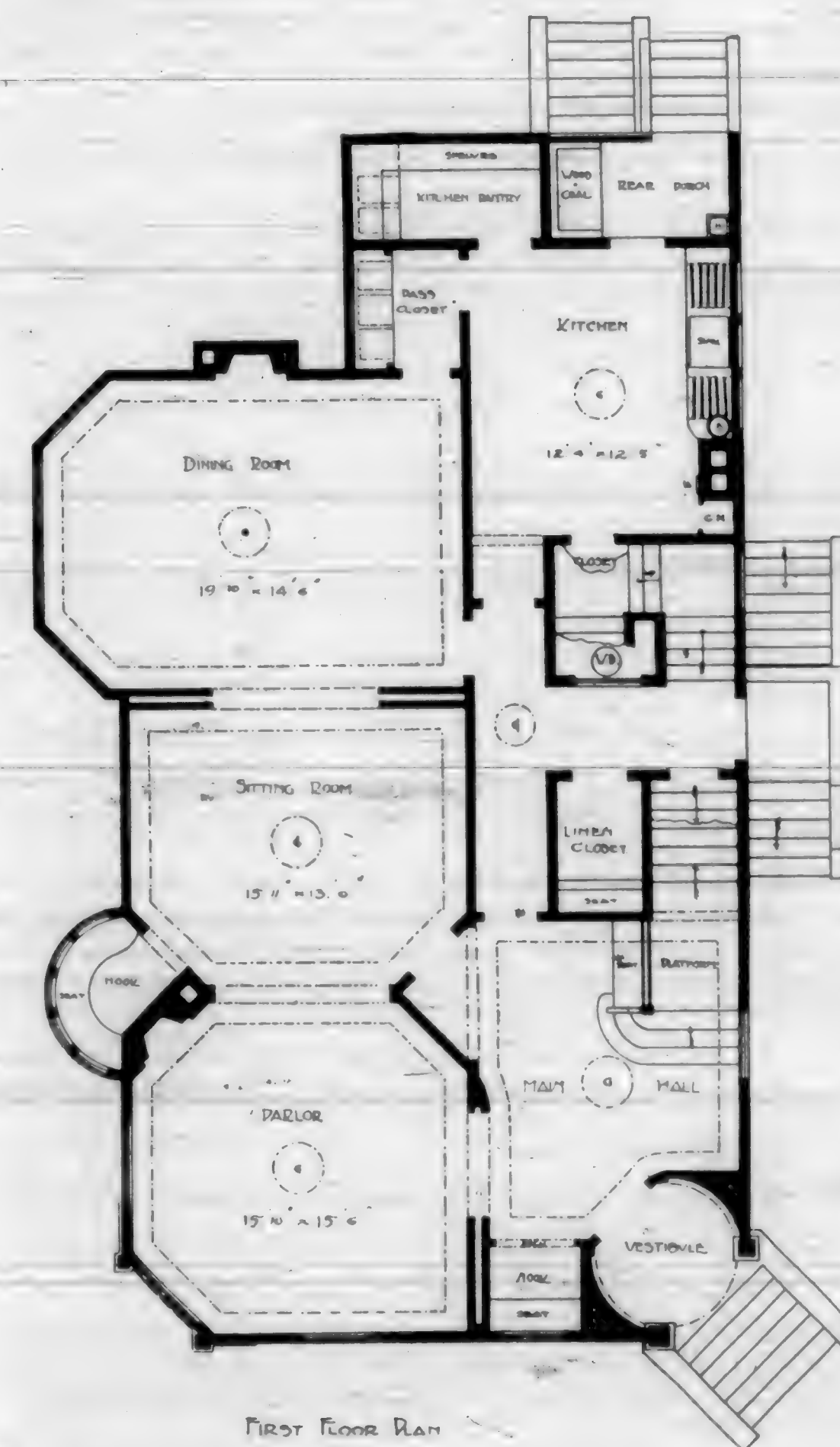
PRIORITY OF MECHANICS' LIEN OVER MORTGAGE.—Under the statute providing for a lien for work on any building or other improvement on land under contract with the owner of the building and the land on which it is situated; and that such lien shall be preferred to all other liens and incumbrances attached to such building and land subsequent to the commencement of the building, a lien for work done as a mechanic on a building was superior to the lien of a mortgage on the property given and recorded before the work was begun, but after the building had been commenced.
Apperson v. Farrell, Supreme Court of Arkansas, 20 S. W. Rep. 514, 102.

MISTAKE IN LIEN STATEMENT.—The Oregon statute provides that the statement filed shall contain a true statement of the claimant's demand, after deducting all just credits. Plaintiff filed a lien stating that the value of the material furnished by him was \$783, and that no payments had been made thereon. On the trial, plaintiff admitted that prior to the filing of the lien \$100 had been paid, and stated that the misstatement in the lien was due to a mistake of his agent. Held, that the mistake not being one about the amount or price of labor, or the quantity or value of material furnished, in regard to which there might be an honest difference of opinion, but being one which could have been avoided by the exercise of reasonable diligence, the lien was invalid.

Nicola Bros. & Co. v. Van Fridagh, Supreme Court of Oregon, 31 Pac. Rep. 288, 135.

ENFORCEMENT OF MECHANICS' LIENS.—The seller of a certain building agreed with the purchaser, to remove and completely rebuild it upon a lot belonging to the latter. The seller then contracted with a builder to furnish all materials needed, and to perform the necessary labor in accordance with the terms of his agreement with the purchaser. The builder failed to complete the reconstruction of the building as agreed upon, and also allowed lien claims to be filed against the property, for materials furnished to him for rebuilding, in an action to foreclose the liens, a mortgage given by the purchaser to secure the payment of his note to the seller, for the amount agreed upon as the price of the completed building, was secondary to the liens of the material men, and as between the seller and the purchaser and the seller, the latter was liable to the former for the failure of the builder to complete the contract.

Bassett v. Menan, Supreme Court of Minnesota, 53 N. W. Rep. 1064, 163.



FIRST FLOOR PLAN

A. H. WARD'S RESIDENCE. FULLER CLAFLIN, ARCHITECT.



The Hawaiian Islands have not yet been annexed.

Edward R. Swain, Architect, has resumed the practice of his profession. Room 227, Crocker Building, eleventh floor.

The Assembly Bill introduced by the Hon. J. M. Curtis, in regard to regulating the practice of Architecture in this state came up on the 8th instant and was defeated.

The municipal ordinances regulating the erection of buildings in the city and county of San Francisco are to be remodelled, to bring them more in harmony with the requirements of modern construction.

An interesting feature of the Government exhibit will be a model of the earth, with all the geometrical accuracy that mechanism and art can give to such a difficult representation. It is intended to form a part of the exhibit from the General Land Office of the Interior Department. So far as known it is the largest globe ever constructed. It will surmount a star-shaped edifice, which pedestal will elevate the monster globe fifteen feet above the floor, so that it will rise above the surrounding exhibits. The globe will be sixty-three feet in circumference. A stairway in the pedestal will give access to a gallery at the base of the globe, which will revolve on a horizontal axis. —*Warner's Building Review.*

We have no genuine art, as a people, and we can never have so long as that which calls itself "Modern Civilization" possesses so little kinship with the true civilization which has created art in the past. We never consider the essential impulse of art, and it is pitiful to see the poor little attempts we make towards this end, still dimly felt to be desirable. We build big museums of art and crowd them with pictures filched from their homes; and casts which for purposes of art educating, are useless.

Then the people go and stand before the mute memorials of dead civilization, wistfully and hopelessly. It would be laughable were it not miserable. One is reminded of a child who gathers roses and lilies and thrusts their stalks into the sand, hopeful of a fair garden. —*Ralph Adams Cram in The Architectural Record.*

In view of the large number of petty larcenies from buildings, special preference being shown for mechanics' tools, it would be well for mechanics of all kinds to have their names stamped in several places on all of the tools. A steel stamp costs a very small sum. Saws may be indelibly marked by writing your name on same with a sharp pointed piece of hard wood, which has been dipped in Nitric Acid. —*Wolfe's Building Review.*

Probably the oldest timber in the world which has been subjected to the use of man is found in the ancient temple of Egypt, in connection with stone work, which is known to be at least 4,000 years old. This was the only wood used in the construction of the temple, and it is in the form of ties, holding the end of one stone to another. When two blocks are laid in place, an excavation about an inch deep was

made in each block, in which one of these wooden ties, shaped like an hour glass, was driven. It is, therefore, very difficult to force a stone from its position. These ancient ties are made of timarisk or Shittim wood, the same as that from which the ark was constructed. —*St. Louis Republic.*

Ambrose Bierce recently criticized, with much reason, the backhanded way our laws are made and enforced. Mr. Bierce has no patience with stupidity, and it does one good to read his vigorous language in denunciation of the senseless system by which our laws are enforced first and declared void afterward—after mentioning a particular case he generalizes as follows:

"In this State, in every State, thousands, millions of dollars are lost, great industries ruined, families reduced from prosperity to poverty, whole communities driven from their homes, by some Supreme Court coolly declaring unconstitutional laws that have for years been enforced by the terrible power of the State or the Nation. There is no way to distinguish such laws from other laws—the greatest jurist in the world cannot do it; yet of them it may be said that to resist them is calamity, to obey, disaster. The only safety is emigration.

"The overthrow of this barbarous and inhuman system is too much to hope for; it has behind it the inert strength of too many centuries. There is not a lawer, out of jail—and none get in—but can give you two score reasons why things should be as they are; and there is not a fool but will swallow the whole forty with never a twist of the face."

Obviously, the good of the community would be served by making the Supreme Court pass on the Constitutionality of Laws, before compelling the executive to enforce them.

Is it not worse than childish, is it not absolutely idiotic, to allow legislatures to make, and governments enforce laws, that it is unconstitutional and to make consequently the refinement of cruelty to enforce?

Mr. Bierce insinuates that the lawyers are too much interested in the continuance of the present senseless method to allow of reform; yet it is a reform that would be of incalculable benefit to the public.

The proposition to change the location of the State Capital from Sacramento to San Jose will be submitted to the people at the next election.

One of the recent industries added to the already numerous manufactures carried on in Chemnitz, Saxony, is the production of curtains made of india-rubber as the main ingredient. The material employed for this purpose

consists of 75 per cent of india rubber, 5 per cent of wool dust, 5 per cent of pulverized fruit stones, 10 per cent of bleached amber varnish and 5 per cent of bleached leather waste; to these being also added, if deemed necessary, a quantity of infusorial earth. The various substances thus named are together worked up with bisulphide of carbon in the most perfect manner into a thick mass, and from this are rolled out thin leaves, which are capable of being decorated with the greatest variety of ornamental patterns, and several of these leaves are combined to form a curtain. —*New York Sun.*

The Legislature lately adjourned has modified the Lien Laws.



BUSINESS MOSAICS.

Roche Harbor Lime in quantities to suit the trade, C. L. Dingley, Agent, 29 Stuart street, San Francisco.

FARMER—"Well, I've heard of red currants, black currants and white currants, but I'll stop chewin' if ever I heard of alternating currents." —*New York Truth.*

Messrs. Dyer Bros. of 110 Main street have only been in business a short time, but by doing good work, and at living prices, giving satisfaction to their customers, they now number among their patrons the first architects of the city. They made all the fence work on the Hibernia Bank. Persons requiring iron work of whatever description should give them a call. Hammered wrought iron work a specialty.

PROFESSOR (to class in physics)—Now, describe this electrical machine if you please. **HEAD BOY**—It consists of a large glass wheel, turned by a crank. (Applause from the class.) —*Brooklyn Life.*

On page V of this number we would call architects attention to the advertisement of the J. L. Mott Iron Works. As with all things gotten out by this company the articles shown are unique in design and beauty of finish and well worthy the attention of those contemplating building a residence. The company's representative in this city is always willing to furnish all necessary information.

An interesting piece of information brought out during the Brussels conference is the fact that there are at present no less than \$100,000,000,000 of counterfeit silver in money circulation in France, Belgium, Switzerland, Italy, Spain and Portugal.

The Vulcan Iron Works of 135-145 Fremont street, make everything in the way of stable fittings, also architectural and ornamental iron work of every description; hand hoists, tramways, refrigerators and ice machines. If you are in want of anything in their line call on them.

Careful scientific investigations show that the average speed of the transmission of earthquake shocks is nearly 16,000 ft. per second.

Persons building houses should not be without Dixon's Cement Laundry Tray, both from a sanitary as well as an economical point of view, no foul odors arise from them as is the case with wooden ones and they last longer and are easily kept clean. Mr. Dixon's place of business is 40 and 42 Eighth street between Market and Mission.

It is difficult to pardon in another the weakness that is your own pet vice.

The Phoenix White Lead and Color Works of 713 Sansome street, guarantee the Phoenix Pure Paint and will replace it free of charge with any material the architect may select if it is not satisfactory; being machine mixed it is ground to the last degree of fineness, does not chalk and is much more economical than paint mixed by hand. See advertisement on page XV.

Some people are of the opinion that heating a house by the use of steam or hot water has a tendency to make the house too damp or dry as the case may be. This is not so. Call on Mr. J. J. Lawton, agent for the Gurney heater, of 418 Fulton street, who will be pleased to give the reasons therefor and any information relative to the merits of heating by the use of steam or hot water.

The government of Belgium has formally taken over the telephonic system of that country.

Yellow Pine has been in use on this coast since the earliest days of its settlement. The superior qualities of this wood for finishing for house and office work should be more generally known. The wood grown down on the lower levels of the coast line make a superior framing lumber, as it does not have the springing tendency that Oregon pine has. As we ascend the mountain ranges the yellow pine becomes softer and better adapted for doors, sash and finish, and after reaching the summit, that grown on the easterly slope, resembles the eastern pines. Therefore, the location of the saw-mills has a very considerable bearing on the quality of the product.

The lumber mills of Messrs. Harris & Jones, are located in one of the best of these tracts of soft yellow pine, where they are preparing a superior quality of this lumber and which may be had at their yards, 728 Bryant street, in this city.

In a letter to the Rapid Safety Filter Co., W. T. Wenzell, M. D., Professor of Chemistry in the California College of Pharmacy, Department of the University of California, says:—From an examination of the city drinking water made by me some years ago at the instance of the Board of Health, I became satisfied of the great necessity of filtering the water. Not until I had seen and tested the workings of the Rapid Safety Filter, had I found a filter that to my idea could do this work properly.

Its chief merit lies in the fact that though connected with the service pipe, it is a non-pressure filter; the water filtering through it by percolation only and not by hydraulic or other artificial pressure. No pressure filter can prevent the transmission of microscopic disease germs.

I predicted at once the success of your filter, because I believed that there was not a family in San Francisco able to procure one that would persist in boiling unfiltered water and its germs for soup, tea and coffee, when the luxury of removing the impurities from these beverages by filtering the water could be enjoyed.

As an antiseptic filter, none better could be constructed. The filtering medium used is the best absorbent for odorous gases and putrid organic matter known; and renders the water so filtered as limpid, sparkling and wholesome as the purest mountain spring.

If every user of the Rapid Safety Filter derives as much satisfaction as I have from mine in my laboratory, and enjoys the exemption from sickness that my family has since its use in my residence, you will have abundant testimony to the superior merit of your filter over all others now in use.

CITY BUILDING NEWS.

Alpine near Ridley. To build; owner, Wm. Patterson; contractor, A. J. Duke; signed, Feb. 10; filed, Feb. 13; cost \$2,500.

Ash Avenue near Laguna. To build; owner, August Koerber; architect, H. Geiffuss; contractor, L. D. Frichette; signed, March 2; filed, March 2; cost \$1,400.

Battery between Pine and Bush. Store alterations; owner, Levi Strauss; architects, Wright & Sanders; contractor, T. McLachlin; cost \$5,700.

Broadway and Steiner. Two-story frame; owner, M. Van B. Watson; architect, J. B. Mathison; contractor, A. Jackson; signed, Feb. 7; filed, Feb. 11; cost \$4,200.

Bush near Powell. Plumbing, two-story frame; owner, Mrs. L. M. Bigelow; architect, J. C. Newson; contractor, Wm. F. Wilson; signed, Jan. 31; filed, Feb. 16; cost \$1,050.

Bryant Avenue 24th. Alterations and additions; owner, Margret Burns; architect, E. A. Hornan; contractor, H. Jacks; signed, Feb. 28; filed, March 1; cost \$1,880.

California near Laguna. Three-story frame; owner, J. and Mary Dowling; contractor, Allen MacDonald; signed, Feb. 17; filed, Feb. 18; cost \$5,500.

California and Taylor. Granite wall; owner, C. P. Huntington; architect, J. D. Isaacs; contractor, Robt. Kirk; signed, Feb. 18; cost \$9,500.

California and Taylor. Iron fence; owner, C. P. Huntington; architect, John D. Isaacs; contractor, H. Ralston; signed, Feb. 27; filed, Feb. 28; cost \$1,000.

Capp between 18th and 19th. Two-story frame; owner, W. T. Little; contractors, Houston Bros.; signed, Feb. 27; filed, Feb. 28; cost \$4,000.

Cook corner Pl. Lobos Ave. Mill work; owner, Carster Otten; architect, M. F. Le Berge; contractors, California Mills; signed, Feb. 14; filed, Feb. 15; cost \$800.

Eleventh Ave. near Clement. One-story cottage and stable; owner, Chas. Leamon; architects, John & Balczynski; contractor, Jas. Geary; signed, Feb. 16; filed, Feb. 21; cost \$1,850.

Eleventh near Folsom. Alterations, etc., except plumbing; owner, Ellen Huebner; architect, Jas. P. Brady; contractor, J. W. Connell; signed, Feb. 23; filed, Feb. 24; cost \$4,350.

Elmira and Augusta. Cottage; owner, J. H. Dolan and wife; contractor, A. Klahn; signed, Feb. 16; filed, Feb. 16; cost \$1,190.

Ellis and Mason. To build; owner, Y. M. C. A. Assn.; architect, A. Page Brown; contractors, Mahoney Bros.; signed, March 2; filed, March 2; cost \$30,000.

Fair Oaks near 23d. Alterations and additions; owner, Roger Carroll; architect, J. F. Kenne; contractors, Currie & Loomer; signed, Feb. 17; filed, Feb. 24; cost \$2,125.

Fifth and Clara. One-story frame; owner, architect and contractor, J. J. Clark; cost \$2,150.

Fulton and Broderick. To build; owners, A. Brown & E. Gruber; architect, W. H. Lillie; contractor, J. G. Adams; signed, Feb. 14; filed, Feb. 14; cost \$5,000.

Fulton and Scott. Two-story frame; owner, Henry Knist; architects, John & Balczynski; contractor, C. A. Hippely; signed, Feb. 18; filed, Feb. 14; cost \$5,450.

Golden Gate Ave. near First Ave. To build; owner, Herman Waling; contractor, J. Schuler; signed, Feb. 13; filed, Feb. 17; cost \$1,400.

Howard and 4th. Plumbing, four-story brick; owner, Annie M. Farrell; architects, Shon & Shon; contractor, Richard Rice; signed, Feb. 28; filed, March 2; cost \$4,000.

Humboldt near City Hospital. To build; owner, Geo. Hartman; architect, J. G. Behrens; cost \$1,800.

Kearny near Clay. Iron work; owner, E. L. Heuter; architect, H. Geiffuss; contractor, Fred Wagner; signed, Feb. 23; filed, Feb. 23; cost \$8,644.

Kearny and Clay. Remove old building and carpenter work on same; owner, E. L. Heuter; architect, H. Geiffuss; contractor, F. W. Kern; signed, Feb. 23; filed, Feb. 23; cost \$5,550.

Leavenworth near Filbert. Alterations; owner, Amelia C. Rochford; architect, S. W. Hemenway; contractor, H. Behrens; signed, March 2; filed, March 2; cost \$2,400.

Lyon near Haight. Cottage; owner, Robert N. Silver; architect, J. B. Wuerschling; contractors, Home Bldg. Co.; signed, Feb. 23; filed, Feb. 24; cost \$2,383.

Main street No. 344. Alterations; owner, Margaret Curtin; contractors, Craig & Fulton; signed, Feb. 18; filed, Feb. 17; cost \$1,850.

Market near Guerrero. To build; owner, Benj. Goldfish; architect, W. H. Lillie; contractor, W. H. Wickersham; signed, Feb. 25; filed, Feb. 27; cost \$2,600.

McAllister near Lyons. Two-flats; owner, Mary Doherty; architect, J. B. Wuerschling; contractors, Home Building Co.; signed, Feb. 11; filed, Feb. 16; cost \$3,600.

Minna near 7th. Alterations; owner, Sarah J. McLaughlin; contractor, J. Ehmann; signed, Feb. 17; filed, Feb. 17; cost \$1,900.

Mission street, No. 147. Alterations; owners, J. W. McElroy, et al.; architect, P. R. Schmidt; contractor, S. H. Kent; signed, Feb. 13; filed, Feb. 14; cost \$3,800.

Octavia and Green. To build; owner, Konrad Schneider; contractor, Wm. Knapp; signed, Feb. 16; filed, Feb. 18; cost \$3,900.

Pacific near Hyde. Millwork, 8 flats; owner, Pauline Greenberg; architect, W. C. Dickerson; contractor, W. R. Johnson; signed, Feb. 25; filed, Feb. 28; cost \$1,525.

Perry near 5th. Two flats; owner, Annie Galfather; contractor, Jas. McDonald; signed, March 1; filed, March 3; cost \$1,700.

Pine near Montgomery. Three-story brick; owner, Henry Caillaud; architect, Emile Deperre; contractor, H. Behrens; signed, Feb. 28; filed, March 1; cost \$3,000.

Pine near Montgomery. Three-story; owner, Henry Caillaud; architect, E. Deperre; contractor, A. T. Mills; signed, Feb. 21; filed, Feb. 28; cost \$2,250.

Point Lobos and 1st Ave. Plumbing; owners, Geary street R. R. Co.; contractor, H. Williamson; signed, Feb. 16; filed, Feb. 16; cost \$1,134.

Polk street, Nos. 1710 and 1712. Alterations and additions; owner, Jas. Podesta; architect, Oliver Everett; contractor, Fred Renfort; signed, Feb. 27; filed, Feb. 27; cost \$2,625.

Post near Gough. Two-story frame; owner, Emma Taylor; architect, G. W. Kenitzer; contractors, Schutte & Kreeker; signed, Feb. 28; filed, Feb. 28; cost \$5,389.

Randall and Chenery. Eight flats; owner, Sophie Koster; architect, H. D. Mitchell; contractor, J. N. McLeod; signed, Feb. 11; filed, Feb. 14; cost \$8,540.

Scott near Vallejo. To build; owner, C. A. Murdock; architects, Coxhead & Coxhead; contractor, F. G. Kronnick; signed, Feb. 20; filed, Feb. 20; cost \$1,763.

Sickles and Huron Ave. To build; owners, Jno. and Bridget Maloney; contractor, J. L. McLaughlin; signed, Feb. 13; filed, Feb. 24; cost \$3,200.

Sullivan near Stanyan. Cottage; owner, Chas. Duffy; architect, J. Wuerschling; contractors, Home Building Co.; signed, Feb. 11; filed, Feb. 11; cost \$1,950.

Sixteenth near Dolores. Three-story frame; owner, Hannah Boyle; architect, H. Geiffuss; contractor, Henry Rohling; signed, Feb. 27; filed, Feb. 27; cost \$4,418.

Tenerville near Susquahanna. Two-story frame; owner, Father T. Fitzpatrick; architect, T. J. Welch; contractor, W. J. B. Warner; signed, March 2; filed, March 2; cost \$4,485.

Townsend near 4th. Three-story corrugated iron house; owner, David Hewes; architects, Percy & Hamilton; contractor, A. H. Plummer; cost \$3,077.

Twentieth near Church. Two-story frame; owner, Edienne Garneau; contractor, Jos. L. Binet; signed, Feb. 20; filed, Feb. 21; cost \$2,200.

Twentieth near Howard. Two-story frame; owner, Rachael Rosenblum; architect, A. J. Barnett; contractor, I. Wells; signed, Feb. 13; filed, Feb. 18; cost \$5,000.

Twenty-first near Castro. Two-story frame; owner, J. A. McCormick; contractors, Marcuse & Remmel; signed, Feb. 27; filed, March 2; cost \$4,300.

Walter and Ashbury. Two-story frame; owner, Wm. B. Dolan; architect, A. C. Lugens; contractor, C. M. Mason; signed, Feb. 15; filed, Feb. 18; cost \$2,330.

Webster near Geary. Two-flats; owner, Josephine Read; architect, W. H. Lillie; contractor, T. T. Pottinger; signed, March 1; filed, March 2; cost \$3,000.

ALAMEDA COUNTY.

Addison near Shattuck avenue, Berkeley. Two-story frame; owner, R. Johnson; contractor, G. A. Emburg; signed, Feb. 18; filed, Feb. 21; cost \$3,400.

Albion near Telegraph Ave., Oakland. To build; owner, Mrs. R. M. DeGolia; architect, J. S. Adams; contractor, John P. Baudin; signed, Jan. 30; filed, Feb. 2; cost \$4,007.

B near Fifth, Haywards. To build; owner, H. P. Jessen; architect, E. W. Mervin; contractor, A. Ubbhoff; signed, Feb. 7; filed, Feb. 13; cost \$1,575.

Brush and 7th street, Oakland. Two-story frame; owner, J. T. Kelley; architect, Chas. Mau; contractors, Bassett Bros.; signed, Feb. 23; filed, Feb. 28; cost \$4,445.

Ellsworth near Dwight Way, Berkeley. To build; owner, W. E. Loy; architects, Coxhead & Coxhead; contractor, E. A. Wheeler; signed, Feb. 4; filed, Feb. 10; cost \$3,100.

Eighteenth and San Pablo Ave. Additions and alterations; owner, Mrs. J. E. Johnson; architect, John Johnson; contractor, C. N. Bolles; signed, Feb. 1; filed, Feb. 6; cost \$3,230.

Ford's Addition, Lot 7, East Oakland. To build; Mrs. M. Ebeling; architect, A. W. Smith; contractor, H. E. Brown; signed, Feb. 8; filed, Feb. 9; cost \$1,200.

Grant and Santa Clara Ave. To build; owner, Nellie Liese; contractor, A. W. Cornelli; signed, Feb. 13; filed, Feb. 16; cost \$4,250.

Robert and Grove, Oakland. Church to build; owner, Rev. T. McSweeney; architect, C. J. L. Devlin; contractors, P. B. and P. H. Hughes; signed, Feb. 1; filed, Feb. 3; cost \$8,400.

Relsey near Russell, Berkeley. To build; owner, L. C. Williams; architect, R. H. White; contractor, H. S. Haseltine; signed, Feb. 21; filed, Feb. 24; cost \$3,800.

Lorina street and Ashbury avenue, Berkeley. To build; owner, J. L. Woods; architect, G. A. Bordwell; contractor, C. L. Lombard; signed, Feb. 18; filed, Feb. 18; cost \$5,018.

Main and Second streets, San Lorenzo. Alterations and additions; owner, San Lorenzo V. Hall Association; architect, G. Bordwell; contractor, Wm. Smith; signed, Feb. 1; filed, Feb. 14; cost \$1,895.

Morton near Santa Clara Ave. To build; owner, H. V. Herbert; architect, A. Steubit; contractor, J. J. Boyle; signed, Feb. 8; filed, Feb. 9; cost \$1,875.

Oakland Heights Tract, Oak. lot 3, block L. To build; owner, E. A. Walz; contractor, W. H. Weilbye; signed, Feb. 16; filed, Feb. 21; cost \$3,500.

Occidental near McKee street, Oakland. House and barn to build; owner, R. Wilkinson; architect, C. Winstanley; contractor, T. E. Armstrong; signed, Feb. 6; filed, Feb. 11; cost \$2,600.

Pacific Ave. near St. Charles street. To build; owner, R. H. Baird; architect, F. P. Fisher; contractors, D. Straub & Son; signed, Feb. 13; filed, Feb. 15; cost \$1,550.

San Antonio Ave. near Willow. To build; owner, B. Ghilleri; architect, Chas. Shaner; contractors, C. H. Foster & Son; signed, Feb. 8; filed, Feb. 8; cost \$4,057.

Santa Clara Ave. and Encinal streets. To build; owners, J. H. & S. Harris; contractor, A. R. Denke; signed, Feb. 15; filed, Feb. 17; cost \$2,560.

Santa Clara Ave. To build work shop; owner, F. J. Fletcher; architects, Percy & Hamilton; contractor, J. E. Henderlong; signed, Feb. 21; filed, Feb. 23; cost \$1,066.

Ten-tonia Park, Block 6 and 7. To build; owner, Geo. Whittel; architects, Coxhead & Coxhead; contractors, W. T. Veitch & Son; signed, Feb. 8; filed, Feb. 24; cost \$10,800.

Thirteenth Ave. and Twentieth, East Oakland. To build; owner, Isabella Wright; contractor, J. A. Aymar; signed, Feb. 21; filed, Feb. 24; cost \$3,300.

Twenty-fourth and Eighth Ave., Oakland. To build; owner, Mrs. M. B. Smith; architect, W. J. Mathews; contractor, F. W. Knight; signed, Feb. 21; filed, Feb. 23; cost \$10,393.

Union near Bancroft Way, Berkeley. To build; owner, R. H. Longbridge; contractors, W. T. Veitch & Son; signed, Feb. 18; filed, Feb. 20; cost \$3,900.

Valdes and Den'n, S. M. Tract, East Oakland. To build; owner, Alex. Dolg; architect, J. Conant; contractor, W. F. Whyte; signed, Feb. 16; filed, Feb. 16; cost \$2,075.

Verdi near Railroad Ave. To build; owner, C. H. & F. Smith; contractors, Marcuse & Remmel; signed, Feb. 21; filed, Feb. 23; cost \$2,850.

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

VOLUME XIV.

APRIL 20th, 1893.

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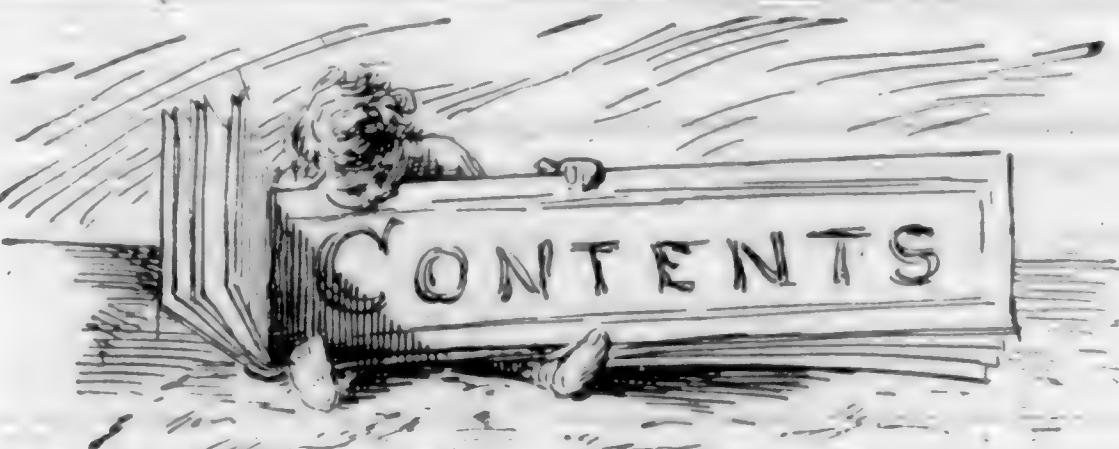
W. J. CUTHBERTSON, President.

OLIVER EVERETT, Secretary.

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It is to be regretted that the Governor vetoed the bill providing for a State Building for this city. It will prove to be "penny wise and pound foolish" to the people of California, as the saving in rents would have greatly overbalanced the interest on the amount of money required. We lose, besides, the chance of having a building that might have been made a most attractive architectural feature.

THE new section added to the lien law of the State of California by the last legislature, makes it obligatory on the owner of any proposed building, or structure when it is to be erected by contract, to secure from his contractor "a good and sufficient bond" in an amount equal to at least twenty-five per cent, of the contract price, which bond shall, by its terms, be made to inure to the benefit of any and all persons who perform labor for, or furnish materials to the contractor, failure on the part of the owner to exact such bond, renders the latter liable for the debts incurred by the contractor.

The design of this amendment is to afford more ample protection to the creditor class, and this object is achieved by making the owner financially responsible for the solvency of the contractor and the contractors bondsmen. Not a very just or logical method of procedure perhaps, but reasonably sure of being effective.

On the whole, the new law will we think be of benefit to the parties honestly interested in the welfare of the building business. It will have a tendency to cause owners to choose a responsible man in preference to an impecunious "cheap John" when giving out their work. It will require much precaution on the part of both owners and architects in the acceptance of bondsmen and without doubt responsible parties will be equally cautious about becoming security for irresponsible or tricky contractors.

Neglect of proper prudence on the part of either owner or bondsmen, will be so dearly paid, that the man who now secures a large amount of work at figures that will not cover the actual cost of construction will find it more difficult to

continue their methods, and will be ultimately driven from the business, or forced to mend their ways. The new departure will afford many a case for the lawyers.

Just what will constitute "a good and sufficient" bond will of course have to be decided by the courts, and the prospects are that a good many decisions will be rendered and appeals argued before positive precedents will be at the disposal of the would-be house builder.

Whether an owner would be safe after having secured a rich and prosperous bondsman who should become insolvent before the completion of the contract; or in accepting a man of "straw" who should duly qualify before a notary (but whose real estate might be of no more value than an unimproved lot in a suburban cemetery) are problems that will perplex the brains of the architect, and possibly deplete the purses of the owner, till the law is again amended and further experiments made as to the best way to make men honest.

WIRING OF BUILDINGS FOR ELECTRIC LIGHTS.

IT is almost universally the practice in drafting specifications for electric light wiring to stipulate that "the loss in potential in circuits shall not exceed two (2) per cent" or that "the wiring shall have not more than two (2) per cent drop," meaning that the loss in volts on any conductor, due to the resistance encountered by reason of the current passing through that conductor, shall not exceed two per cent of the voltage applied. Why two per cent loss is so generally stipulated is not plain, neither is it always necessary that it should be specified in every case, as in some instances a loss of three, or four or even five per cent would be more advantageous to the owner of a building, than would a loss of two per cent. Nevertheless, a two per cent "drop" is generally specified, yet it is a fact that of all the larger buildings in San Francisco, hardly one of them comes up to the two per cent limit specified. When it is realized that fifty per cent more copper is required to wire a building under two per cent loss than under three per cent loss, the importance of the matter becomes apparent. To place the facts in another light: a certain building is to be wired for incandescent lighting under specifications calling for two per cent loss. To carry out these electric specifications would require the installation of, say, 3,000 pounds of copper wire. The electrician, however, realizing that the architect generally has no means of determining whether the specification has been adhered to in the matter of "drop" concludes to install the circuits at three per cent loss. He does so and what occurs: The insurance inspector examines the installation and accepts it, for he only looks at the work from the fire underwriters' standpoint and his certificate only attests that the wiring presents no fire hazard. The central station people also examine the work and finding it to be safe and properly laid out, they too pass the work, for they do not compare it technically with the specifications any more than the insurance inspector does. The current is thrown on to the wiring, it works satisfactorily, all lamps burn to the satisfaction of the architect, nothing more is said about the two per cent loss stipulation, the work is accepted and paid for and that is the end of it so far as ninety-nine cases in a hundred are concerned. Yet what has the wireman done: Instead of installing 3,000 pounds of copper wire, as called for under the two per cent clause, and as he was paid for doing, he wired the building for three per cent loss, and saved thereby

1,000 pounds of copper wire, for under three per cent loss but 2,000 pounds was required, and no one was the wiser.

These frauds, so palpable to an expert electrician, yet concerning which laymen are utterly ignorant, are practiced daily by all save a very few first-class wiring companies and indeed many concerns, ignore the loss requirement altogether in wiring, yet consider it in making up bids. Others will maintain that their work is figured for two per cent loss; say, while upon questioning it soon become apparent that they do not know how to figure drop in potential, or they will use a two per cent wiring table and will generally get a two per cent loss each on mains, sub-mains and ultimate circuits, or six per cent loss in all, while two per cent was called for. A large concern having a capitalization of several hundred thousand dollars, when questioned as to the fulfillment of the two per cent clause in a certain building it had wired, struck the keynote in the matter when it frankly and honorably admitted that it had not carried out the two per cent requirement for the reason that it could not do so and compete for business. It had, however, placed the wiring in accordance with commercial usage and it maintained that for that reason the work should be accepted.

The writer has frequently been asked to assign a reason why such a discrepancy so frequently exists between the bids of different electrical concerns on the same piece of work. Reasons for this may be found from the facts above recited. Some few concerns will follow the specifications vigorously in every detail, while others, taking advantage of the almost universal ignorance prevailing in regard to electrical matters contract to do work that they never intend to perform. A dual result ensues: Owners pay for something they do not get—but they do not know it—and the electric wiring business is utterly demoralized both physically and morally.

It must not be inferred that a two per cent specification is never advisable or that a three per cent clause will prove equally satisfactorily as in the instance cited. To lay down a general law even for a given class of building is impossible and each building must receive specific consideration both in the matter of proper loss in potential as well as in the load basis upon which to figure the circuits. It is evident then that the drafting of electric wiring specifications is a matter worthy of most serious consideration and concerning which the architectural profession is deeply interested.

THE NEW LIEN LAW.

THE following is a copy of the New Section to the Lien Law introduced by the Hon. J. M. Curtis and passed at the last session of the Legislature.

SECTION 1. A new section is hereby added to the Code of Civil Procedure of the State of California, to be known and designated as section one thousand two hundred and three:

SEC. 1203. Every contract required to be filed under the provisions of this chapter shall be accompanied by a good and sufficient bond in an amount equal to at least twenty-five per cent of the contract price, which said bond shall be filed at the same time and in the same manner as herein provided for the filing of such contract, or memorandum thereof. Said bond shall, by its terms, be made to inure to the benefit of any and all persons who perform labor for, or furnish materials to the contractor, or any person acting for him or by his authority; and any such person shall have an action to recover upon said bond, against the principal and

sureties, or either of them, for the value of such labor or materials, or both, not exceeding the amount of the bond; but such action shall not effect his lien, nor any action to foreclose the same, except that there shall be but one satisfaction of his claim, with costs and counsel fees. Any failure to comply with the provision of this section shall render the owner and contractor jointly and severally liable in damages to any and all material men, laborers, and subcontractors entitled to liens upon the property affected by said contract.

bled and unbled timber, results which in themselves justify the expenditure by the government of money on such work.

The Forestry Division will exhibit the methods pursued in this work at the World's Fair, which will be of interest, since nowhere in the world has such comprehensive and systematic investigation of timbers been ever devised. The working plans for a similar undertaking by the Prussian Government have only just been perfected.

Another exhibit of interest to railroad engineers and those interested in reducing forest waste will be a collection of the most approved types of metal railroad ties.



UNITED STATES TIMBER TEST WORK.

ALTHOUGH all the leading railroad engineers, architects, professors of engineering and others interested in the Timber Tests had flooded with hundreds of letters their Representatives and Senators and the Committee on Manufacturing in whose hands the special appropriation for the work was pigeon-holed, neither the Committee nor the House paid any attention to this expression of public interest. The Senate, however, realized that there was value in the work and sincerity in its endorers and increased the appropriations for the Forestry Division by \$8,000, that is twenty per cent of the amount asked and considered by those in charge as necessary to continue the work on a proper business basis.

Under the circumstances, the testing will be discontinued until after July, when the new appropriations become available and then proceed at the slow pace which Congress has set.

Although the result of the efforts of those, who took active interest in securing appropriations for the work were not crowned with that success which they deserved, this is the only proper method of influencing legislation and those interested in the investigation should not fail to move again when the new Congress assembles.

The first compilation of test results is now in the hands of the printer and will probably be issued within six or eight weeks as Bulletin 8, Timber Physics, Part II. It will contain the results obtained on Longleaf Pine and will especially discuss in detail the results of tests and examinations of

PROPOSED NATIONAL GALLERY OF HISTORY AND ART.

MR. Franklin W. Smith, a Boston gentleman, delivered on the 12th inst an illustrated lecture under the auspices of the Mechanics' Institute, describing his design for a national gallery of history and art.

His proposition is for the United States Government to take hold of the project, which will, if carried out afford a most interesting and instructive permanent exhibition.

The design exhibits eight courts and galleries, viz: Egyptian, Assyrian, Greek, Roman, Byzantine, Mediæval, Saracenic and East Indian; surmounted by American galleries, for illustration of the history of the United States, and a memorial Parthenonic temple. This temple to contain a hall of the presidents; an American Walhalla, such as stands to-day in grandeur and beauty of marble upon a hill-top of the Danube, a proud manifestation of the patriotism and artistic inspiration of the Bavarian people.

The courts are to contain reproductions in full size of dwellings, temples, monuments, etc., of their respective nationalities; typical of their religion, life and art.

It is proposed that the ranges of galleries enclosing the courts be filled with mural paintings, illustrating in its orderly, chronological succession the history of the peoples whose architecture is shown upon their walls; similar to the pictorial history of Bavaria in the national museum of Munich; the basement stories being filled with casts and models—architectural, artistic and historical; supplying abundant material for elucidation in study.

Mr. Smith reports great encouragement as the result of his explanations, in confident assertion that "It ought to be, it can be, it will be."

OBITUARY.

THE death of David Scannell, Chief Engineer of the San Francisco Fire Department, took place on March 30th. Chief Scannell was seventy-three years of age, and had been connected with the Fire Department of this city for a period of over forty years. He was born in the year 1820 in New York. He served through the Mexican war and took part in the battles of Vera Cruz, Cerro Gordo, Contreras, Cherubusco, Chapultepec, Carrita de Berlin and the City of Mexico, and was promoted to the position of Captain for bravery. In 1851 he came to California in time to take part in the memorable fire of that year. David Scannell was Deputy Sheriff at the time of the Vigilant Committee, and he was the first sheriff under the Consolidation Act.

In 1860 he was elected Chief of the San Francisco Volunteer Fire Department, holding the office for six years and until the paid department was organized. In 1871 he was again elected Chief of the Paid Department which position he has held to the time of his death.

THE REDWOOD TREE.

ON the camping grounds of the Bohemian club on Austin creek, and in the Armstrong tract near Guerneville, one finds the low land redwood imperfection. In such places there are often rings of great trees inclosing pits five or six feet deep and thirty, forty, or even fifty feet in diameter. Each of these pits is supposed to show where the venerable ancestor of the surrounding circle of trees once stood. Long before it fell, innumerable sprouts grew from the yet living roots. Afterwards, when the giant yielded, the rains washed new soil into the "bottoms" from the mountain sides to fill the deep chasm. For a century or so there was a struggle among the children of the fallen monarch, and at last only seven or eight remained to become great trees of twelve feet in diameter set on the rim of the pit formed by the decay of the roots of the ancient tree, and each having a complete root system of its own.

Other trees, seedlings or sprouts, grew up between them, and in a few more centuries the process of forming another redwood tree ring will be repeated about the largest of the second growth. Rings of this sort can be found in all stages of formation in every canyon and valley of the redwood country. Some very large rings still show the broken edges of the central tree's roots projecting like the staves of a barrel around the hollow, over-grown with ferns and wild oxalis, or filled to the brim with fresh, spicy redwood sprouts. The green spires of the living forest, 300 feet

high, filter the air through their innumerable branches and shut out all but faint blue sparkles of the sky. The dust of one of the pioneers is under foot, and a little tree of last year's growth is struggling to gain a place.—*Charles H. Shinn in Century.*

Another instance of the remarkable vitality of the redwood may be given, a redwood tree growing on the bank of a stream, became undermined, and fell across the ravine, a portion of the roots still retaining their hold in mother earth, while the once lofty head found repose on the opposite bank. The tree soon adapted itself to the changed conditions of its life, and behold! A dozen or more small branches on the upper side of the trunk, ambitious to rise in the world, transformed themselves into redwood trees, drawing their nourishment from the parent trunk, and flourishing as though their roots were in nature's own soil.

THE USE OF BRICK.

IT is noticeable that during the year the use of the better bonds—English bond and Flemish bond—has been more common in the best work, to say nothing of the lavish use that has been made in some instances of the more complicated bonds in ornamental work. We are, of course, a long way yet from any frequent use of English or Flemish bond in every course in purely constructional work; it might be said, indeed, that these bonds are never used except in facade walls. But if our brickwork is to become what it ought, the abominable "American" bond must be abandoned or at any rate, restricted in its use to the cheaper and commoner constructions, except in cases where it may be made of value decoratively where constructional considerations are not paramount.

Such cases are, however, very exceptional; and the use of the bond ought to be regarded as a sign of cheap and generally poor work. In addition to the wonderful variety of expensive bricks of ornamental color, the past year has shown more appreciation of the beauty of variety of color in common brickwork also; and there have been several instances which have come under our notice in which common brick has been used with telling effect for the sake of its variety of color, just as the yellow brick, which takes its name from the Madison Square Garden, where it was first used, is especially esteemed for its beautiful variety of color, for there is other yellow brick of which one sees only too much. To see the relative effect of the two, we have but to compare the wall of the Madison Square Garden itself; or any building in which this brick has been used (for we are now speaking merely of the effect of the brick in producing an agreeable wall surface without regard to the design of the building in which it may happen to be used)—we have but to compare, we repeat, the exquisite beauty of



David Scannell
Chief of Department

the wall surface of the Madison Square Garden, in which every brick differs in color from its neighbors, with, for instance, the wall surface of the yellow brick walls of the addition to the State House of Boston, now in course of con-

France in the modern as well as in the old work these sources of effect are well understood.

On the other hand, it is refreshing to note that the mon-pressed brick is coming more and more into well-deserved contempt, especially among the best architects. We suppose it will take a long time for New York, as well as for some Western cities, to wean itself from the use of the vermilion paint pot. But this too will come in time. It is curious to note that in architecture, as well as in politics, while many of the best reforms emanate from New York, some of the worst abuses seem to find their last refuge there.—*The Brickbuilder.*

GAS LEAKAGE.

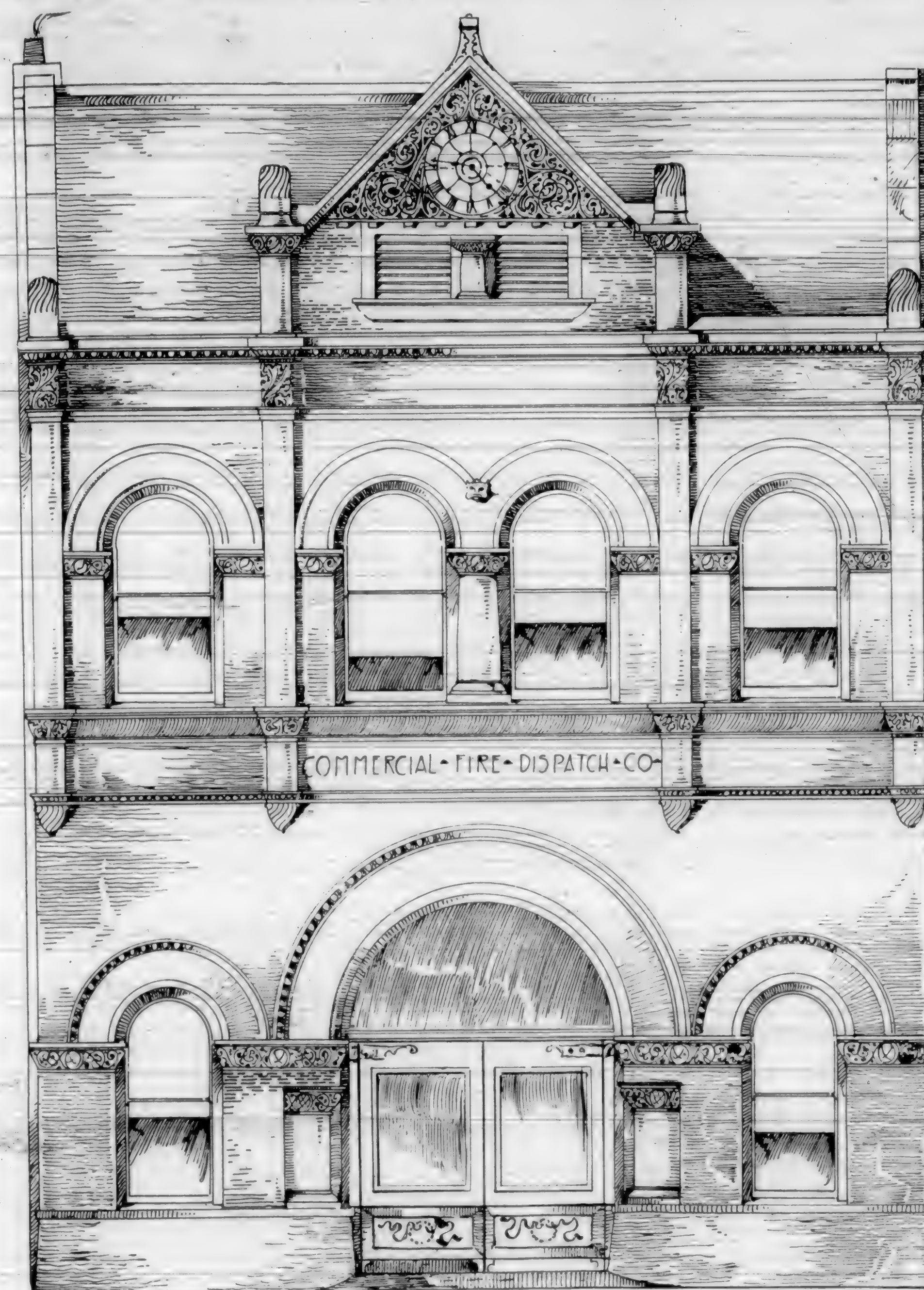
A very curious result from gas leakage is described by Dehnhardt in the *Centralblatt für Bauverwalt.* It appears that an asphalt pavement had been laid down, and in spite of the fact of the material having been carefully mixed and applied, in about two years afterwards faulty places were observed to appear. These were duly repaired, and in the course of a short time became again faulty; the asphalt at these places was soft and tarry and exhibited upon the surface a number of tiny radiating fissures. The asphalt was broken up and the cause of the trouble investigated. Beneath the faulty places it was discovered that there was an escape of gas from pipes laid beneath the pavement.

On analysing samples of the impaired asphalt it was observed that it

had absorbed the heavy hydrocarbons, and especially the benzene contained in the gas, rendering the pitch contained in the asphalt soft and tarry.

INQUIRY.

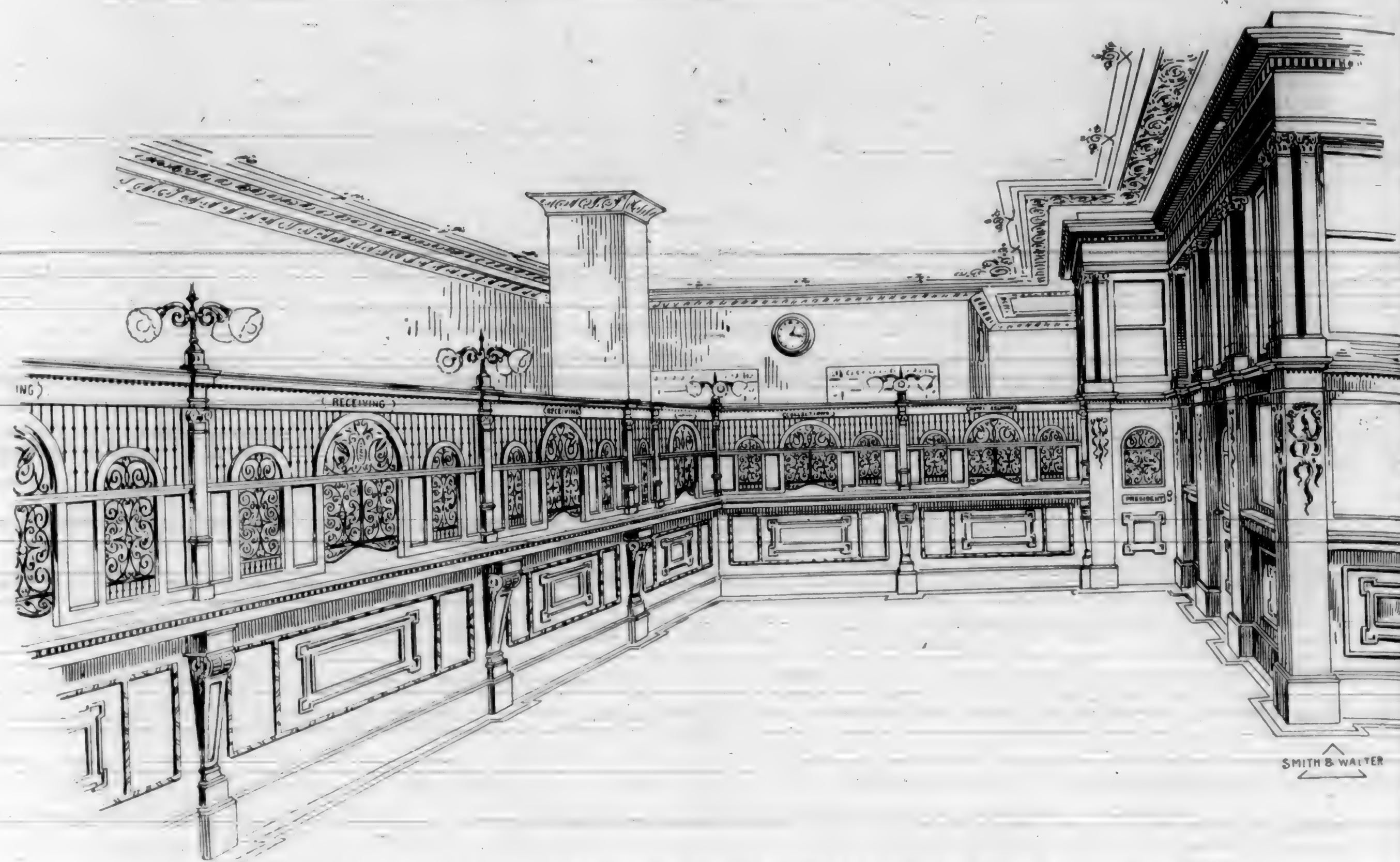
DOES any one know of a material to put on walls, of an impervious character, similar in quality to what is put on bath tubs so as to make them perfectly washable?



PROPOSED NEW BUILDING COMMERCIAL FIRE DISPATCH CO., C. I. HAVENS, ARCHITECT.

struction, where the absolute monotony of color of the brick ruins the effect of the building.

In addition to the points we have already adverted to, we ought, perhaps, also to draw attention to the recognition of the joints of brickwork as a means of effect, and also of the texture of different bricks when contrasted with each other. Both these sources of effect have received much more attention during the past year than formerly, and brick diapers produced by different bonds and using brick of different colors have come much more into use. In England and



INTERIOR OF THE AMERICAN BANK AND TRUST COMPANY'S OFFICE, MILLS BUILDING, S. F.



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

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

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

THE Third Ward School is one of several which are about to be put up in Oakland, Elmer Childs is the architect.

A residence in Alameda with plans for same is for Henry K. Field. Architect, Fuller Clafflin.

THIS design for the Oakland High School was submitted in competition by Seth Babson. The basement provides a set of rooms for the janitor and family, a large Dining-Room, Kitchen and Pantries for use on festive occasions, and for a students' lunch room; a lecture room for the Superintendent, and class-rooms for night school. The first-story provides twelve class-rooms, a lecture room and rooms for the Principal and Teachers. The third floor provides a large assembly hall and ante rooms, drawing rooms and rooms for classes in chemistry, physics, and their apparatus.

NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 408 California street.

GEO. H. SANDERS, Pres. W. J. CUTBERTSON, Vice-Pres.
OLIVER EVERETT, Sec. JOHN M. CURTIS, Treas.

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

C. E. GRUNSKY, Pres. CHARLES D. MARX, Vice-Pres.
OTTO VON GELDERN, Sec. GEO. F. SCHILD, Treas.

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.

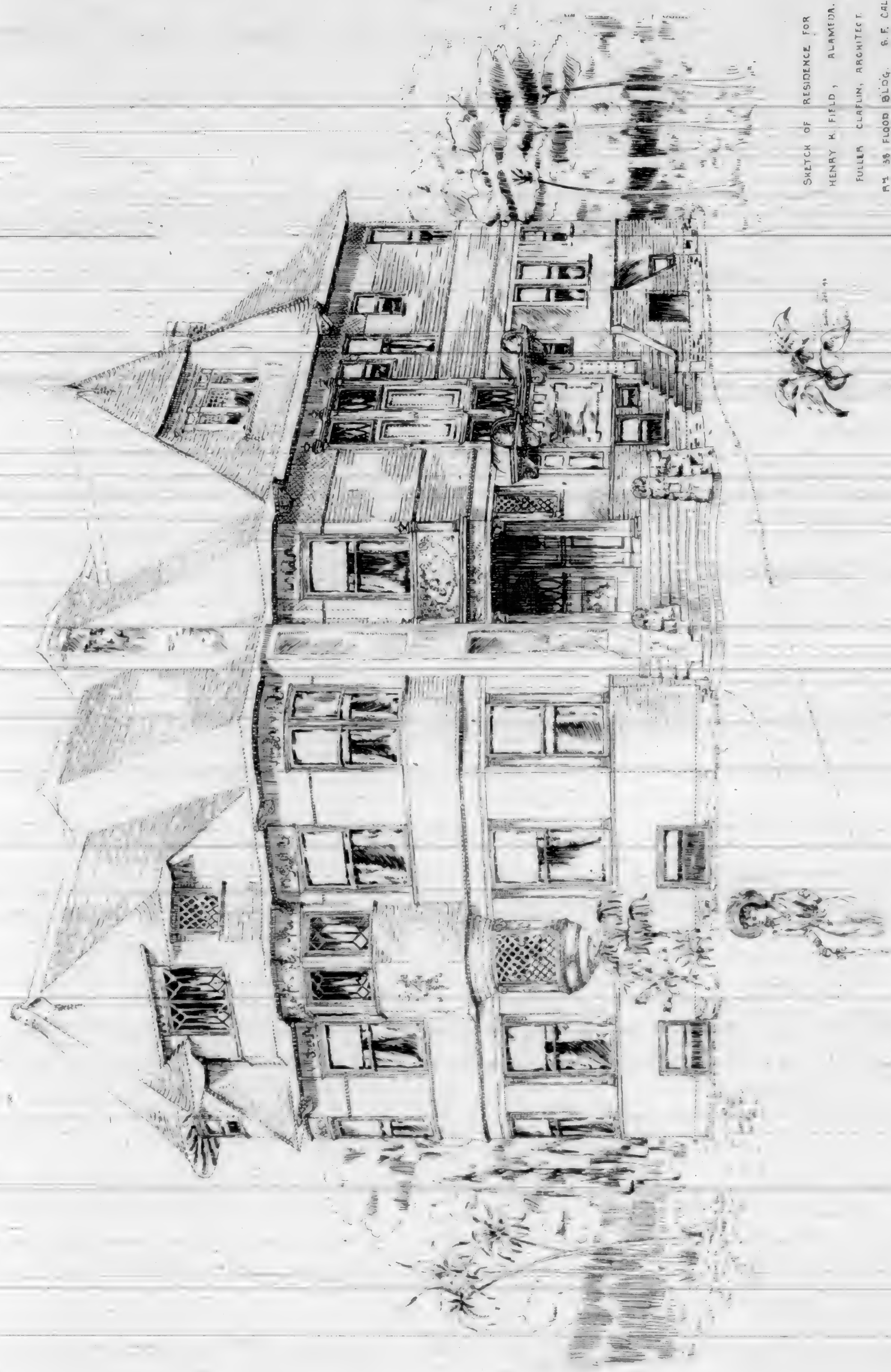
GEO. P. LOW, Pres. C. O. POOLE, Vice-Pres.
MAX CASPARI, Sec. H. T. BESTOR, Treas.

THE regular monthly meeting of the San Francisco Chapter A. I. A., was held on the 15th inst. A communication was received from Alfred Stone, Secretary A. I. A. in reference to the eligibility of architects to join the Institute, explaining to all inquirers that the first step to be taken is to become a member of the Chapter in the vicinity where they reside, as it is necessary that every application for fellow membership in the Institute should be endorsed by the President and Secretary of the Chapter of the Institute of which the applicant is a member.

The printed report of the proceedings of the Boston Society of Architects was received and the secretary instructed to suitably acknowledge the receipt thereof.

The following report on the Students' classes was adopted: This Chapter of the A. I. A. from its inception, has, among its other objects, the promotion of the general welfare of the pupils of its members and that the education and guidance of these students should be carried along





SKETCH OF RESIDENCE FOR
HENRY H. FIELD, ALAMEDA.
FULLER CLARKE, ARCHITECT.
N.Y. 98 FLOOD BLDG. S. F. CAL.

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

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