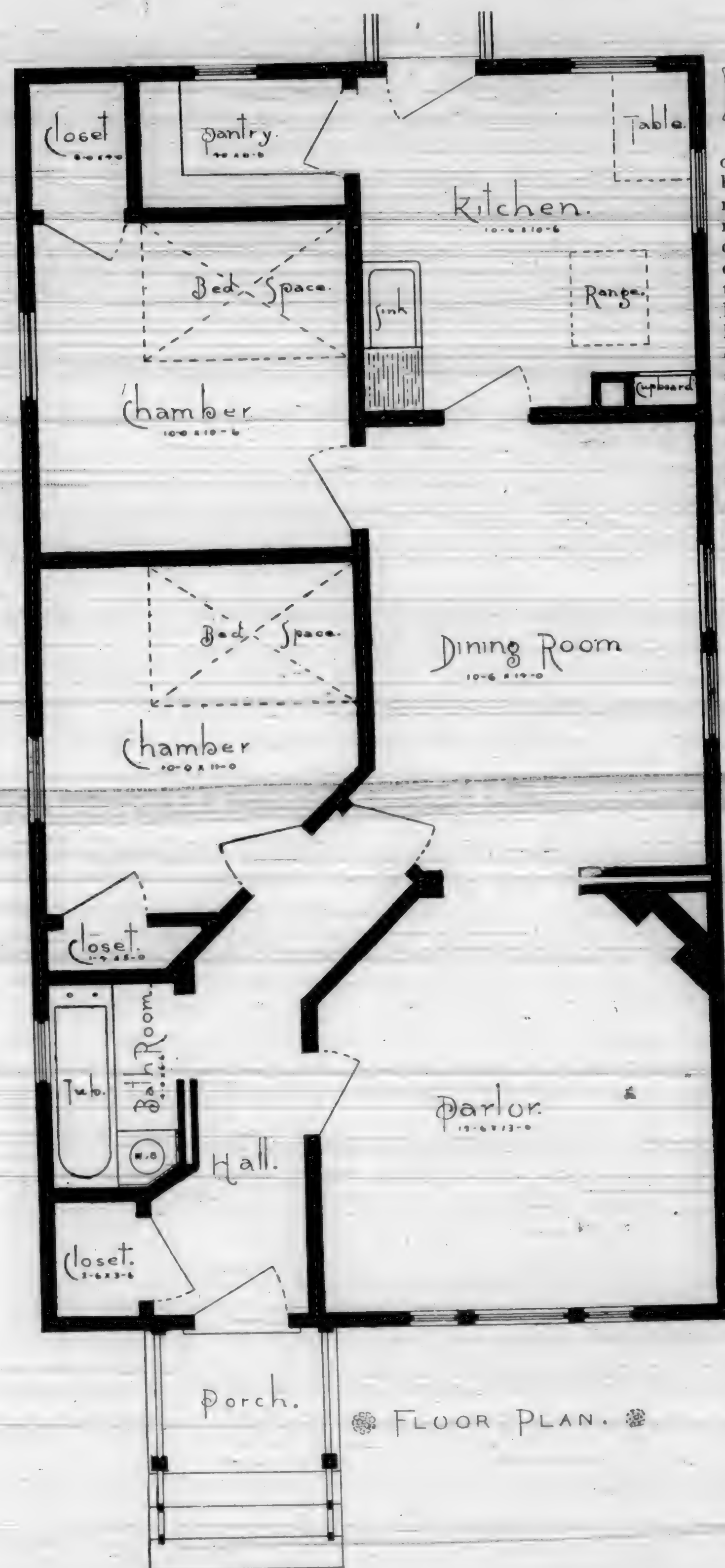




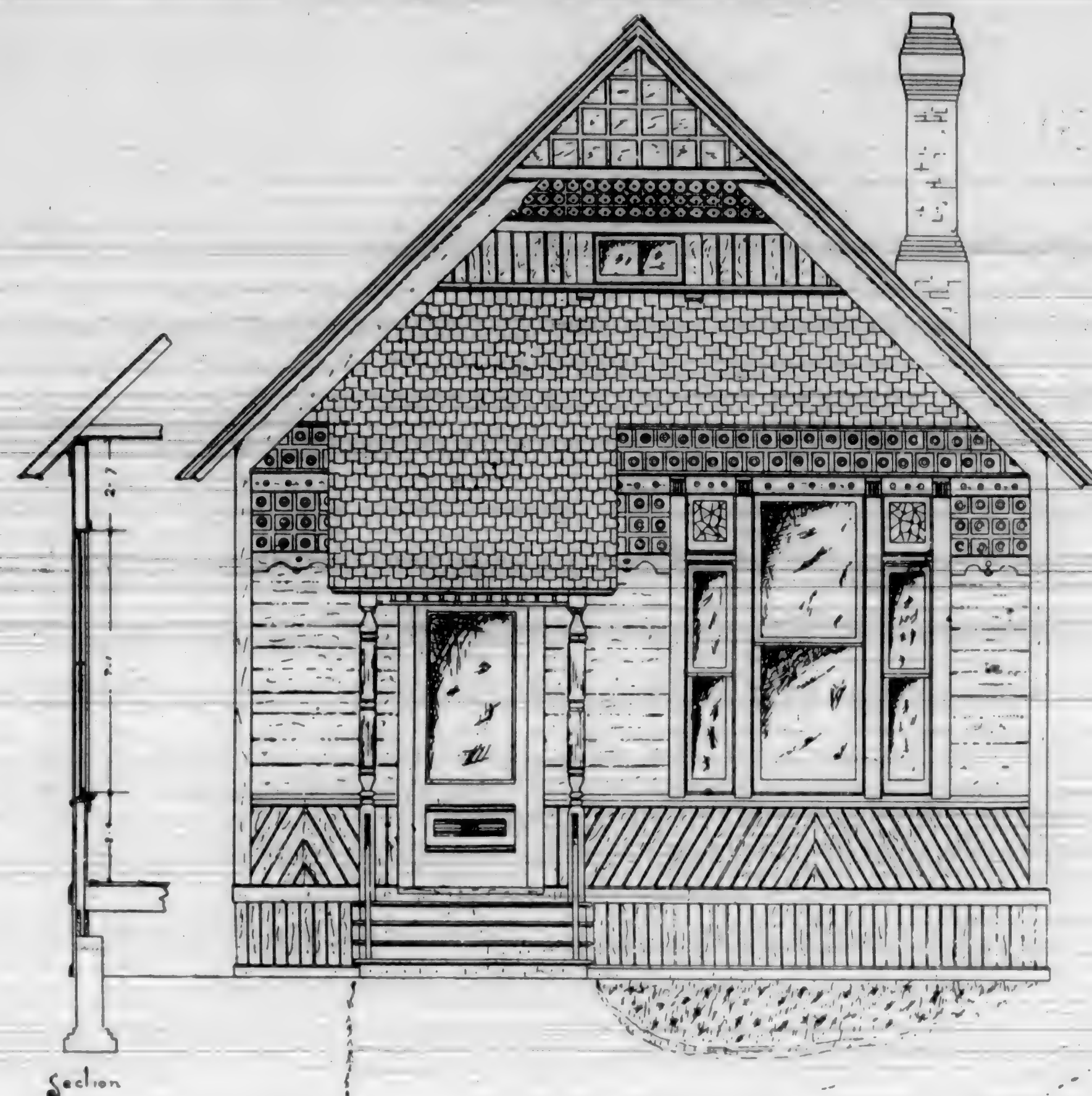
FLOOR PLAN.

EXPENSES OF ARCHITECTS.

FROM an article entitled "Are we Just to Our Architects," from the January *Century*, we quote as follows: "A doctor may manage a very large practice with a 'plant' consisting of a small office, a brougham, a single assistant and a boy to open his door. A lawyer's outlay need not be much greater. But what are an architect's needs? It may seem very simple work to the public merely to design a building on paper, and 'merely' to supervise its erection by contractors who 'do all the real work.' But to design a building means to prepare, not only the little sketches and plans a client sees, but very many large scale drawings, requiring much time for their elaboration, and not only artistic reflection, but long and complicated mathematical and pecuniary calculations too. And to supervise construction means frequent and extended visits from the architect or some competent assistant. All this implies very large and well-lighted and very expensive offices, a numerous corps of assistants, some of whom must be men of great skill and long experience, and constant journeys, often to very distant spots. Every one knows the immense commissions Mr. Richardson received; but who remembers that he had more than a score of artists in his employ and took monthly journeys to Washington and Chicago? All architects must bear such burdens, but they fall much more heavily upon the American than the foreign practitioner. Rents are enormously high with us; the intense competition of Europe sends an established architect pupils who are willing to pay large premiums, while here salaries must be given from the start and must rapidly increase if good men are to be retained; and there is of course no comparison between the cost of journeys in France or England and those in our wide-spread territory. There are other facts which make an artist's task much harder here than in Europe and which tend to perpetuate the public feeling of distrust, but we merely wish at this moment to lay stress upon the fact that even the largest commissions on the most expensive class of buildings bring him a reward so disproportionate to that secured by an equal amount and quality of labor in other professions, that he may rank himself with the clergymen as among the least well-paid of our professional men."

A NEW PADLOCK.—Among the novelties put on the English market is a new padlock called the swivel, the object of which is to simplify the operation of locking. The swivel is reversible, so that the shackle can be opened from either side. A further advantage in the new lock is that owing to there being no open space by the shackle, moisture is effectually excluded. Another English manufacturer is putting up sash cord in boxes, which have an opening in front, through which the end of the cord passes. This system is referred to as largely adopted by other English manufacturers, and is said to be far preferable to the old method of doing up goods in hanks.

Probably the oldest timber in the world which has been subjected to the use of man is that found in the ancient temple of Egypt, in connection with some work which is known to be at least 4,000 years old. This, the only wood used in the construction of the temple is in the form of ties, holding the end of one stone to another. When two blocks were laid in place an excavation about an inch deep was made in each block, in which a tie shaped like an hour glass was driven, it is therefore, very difficult to force any stone from its position. The ties appear to have been of the timarisk or Shittim wood, of which the Ark was constructed.



FRONT ELEVATION.

The Relationship of Architecture to the Arts and Crafts.

THE arts and crafts in this country suffer, at the moment, from over-much professional jurisdiction; the public taste is being formed to accept the productions of a few self-constituted "masters" as the highest efforts of high art; the craftsman as a rule is well paid; and a fair day's skillful work for a fair day's adequate pay is what should be, without any question whatever, demanded and insisted upon.

As regards these professors, every credit must be given them for their honest endeavors in art education, but we absolutely deny that either an artist or a craftsman can be turned out of their schools fitted for the work at the office, the studio, or the building. The requisite knowledge for the practice of the Arts and Crafts must be obtained after leaving the schools.

As regards the decorative arts, some of these professors appear to think that it is only necessary for them and a chosen few to meet in a room and declare themselves to be "Masters in the Arts," and thenceforth they are Masters. In visiting their work I am not to criticize, I am to fall down and worship the golden image which they have set up. Who is Mr. Professor, that he claims an exclusive right in forming opinions on decorations and drawings? He may be, from his own point of view, a very great and distinguished artist—we will assume that he is—all we can say is that we are ignorant of the fact; and he may rest assured that if he were to write a thousand volumes and paint a thousand advertisements proclaiming himself a master whose opinions on art are not to be questioned, the effect upon educated men would be nil. When such a one had seen, analyzed, and thought over his works, he should say that they were good, bad, or indifferent, according to the lights of himself, not of those of Mr. Professor. Architects do not profess to be able to execute terra cottas, or to paint ceilings and vases; they do

not claim the power to paint an easel picture better than a professional artist, nor to model a figure better than a sculptor; but they do claim the right to form their own opinions on questions relating to the fine arts without the benefit of a consultation with any decorative artist. To be sure the architect will find quite enough to do as regards the building proper, and the consideration and control of the high art accessories, without attempting himself to absolutely draw with his own hand, color with his own brush, and model with his own fingers those high art accessories. The architect's position is to design his building with beauty and build with truth—he is to lay down and appportion the parts to receive the designs of the sculptor, the painter, and the decorator—he is to review those designs, and to be able to pronounce upon them with wisdom and ability—he is to be, as it were, in consultation at all times with those artists, so as to produce that grand whole, that complete conception which is in his mind, and in his alone, but which is quite impossible that he can produce without the aid of specialists he is bound to consult and to work with. There is not, or ever will be, so much spare time left to the real architect that he can afford to fritter it away in silly drawings for silly women—let him leave table covers and curtains to those who know a great deal more about them and the proper designing of them; don't let us have too much of this taking Village Smith by the hand, and telling him that he is another Huntingdon Shaw, only he doesn't know it. Don't let us have too many grotesques and label them angels; but let us, on the contrary, while supporting in every way original talent and real art, crush this everlasting and sickening cry of—"We are a few superior artists; we are far, far removed from the common herd, and, although you may not think so, we really are great masters; for have we not ourselves declared it?"—WILLIAM WOODWARD, A. R. I. B. A.

Cast iron weighs per cubic inch, 2603 pounds; u
bers, one-fourth of a pound to the cubic inch.



Inadequency of Architects Compensation.

THE inadequency of the compensation received by architects for making plans, specifications, etc., for dwelling houses, and supervising the work, furnishes a fruitful theme for consideration. People do not, as a general thing, appreciate the amount of labor required in the preparation and completion of a set of plans, specifications, details, etc., for an ordinary dwelling house. The reason of this is found in the fact that most people have little or no means of knowing the inside history of the preliminary work which has to be done and the time which has to be spent before the real work of preparing plans can be fairly begun. Even those who build are usually so absorbed in the interest and pleasure of building that they do not stop to consider how much they are receiving for the small sum usually charged for the architect's services.

Perhaps, therefore, a simple outline sketch, showing the manner in which a dwelling house, costing anywhere from five to ten thousand dollars, is generally evolved, from the first step to its completion and acceptance by the owner, may assist the layman to understand what it actually cost the architect in time and labor to prepare and supervise such a set of plans, specifications, etc.

This picture will be drawn from the architect's point of view, and will therefore present a side little known to the public.

The client enters the office of the architect, full to overflowing of that all-absorbing topic—housebuilding, and, after the brief civilities of the day are over, informs him that he contemplates building a house for himself and family, and would like to talk about plans. He then usually produces a diagram showing the number and approximate arrangement of the rooms he would like, and proceeds to inform the architect what he wants, what he don't want, and how he wants it done. As soon as the client pauses for a moment, to catch his breath, the architect asks the question which has been trembling on his lips for the last half hour—"how much money are you willing to put into your house?" Almost invariably the client's reply to this simple question demonstrates the fact that what he wants and what he is willing to pay for do not agree, and the architect's first duty is to convince him of the fact. After an hour or two the interview terminates with a promise by the architect to make preliminary sketches and to guarantee satisfaction to the client. This latter promise is not always easily fulfilled, for sometimes a client proves difficult to please, but usually he is reasonable, and the architect succeeds, in time, in designing something which suits his client exactly. But he has merely found out what he really wants, and must now proceed to embody the same in the plans and specifications. Much time has already been spent in this preliminary work; perhaps half a dozen different sketches have been made, the client has visited the architect ten or a dozen times, sometimes bringing his wife and several other members of his family, and occasionally monopolizing a whole morning of the architect's valuable time, while important letters lay piled upon his desk requiring his personal attention, and requesting an immediate response, and several builders and contractors waited impatiently in another room for an interview regarding work already under contract or about to be let. By the time the house is completed some forty or more detail drawings may have been made, besides fifteen or twenty scale

drawings and about forty visits made to the premises to see that the work was being executed according to the plans and specifications.

But this is not all; every office should have duplicate drawings for the purpose of reference. The plumber and the furnace man must have duplicates of such portions of the plans as relate to their respective departments, and if the work is let out in several separate contracts each contractor requires a duplicate for his own personal information. The architect is the first one to do any work on the house and the last one with whom the owner settles. The house may be six months or a year in building. In the meantime there are running expenses of the office to be paid, such as rent, draughtsmen's salaries, drawing materials, etc., to say nothing of incidentals.

Thus it will be seen that taking a five-thousand dollar dwelling house at the schedule price of five per cent., the architect is very inadequately paid for his services. In fact no architect can pay expenses on dwelling house work alone even at five per cent., but when he is compelled to take such work at three per cent., as many are, he finds to his sorrow that it is a losing business. But as the grocer keeps sugar to accommodate his customers, even though he sometimes loses money on it, so the architect must do dwelling house work, even though he does it at a loss, depending on the heavy jobs he may chance to get to help balance his exchequer.—*Architectural Era.*

The foregoing remarks from the *Architectural Era* represent fairly the circumstances under which architects prepare plan, and the manner in which they are remunerated. Many architects in this city do not receive the true value of their services owing to the limit of professional charges being placed at five per cent. Take, for instance, the case of an owner who is erecting a fine dwelling with all modern conveniences, at the extreme westerly limit of the Pacific Heights. The cost thereof may be in the neighborhood of \$8000. The architect's commission is \$400. Compare the work outlined in the article above with the amount noted. Add the forty or more trips to the locality mentioned, and what profit does the architect have for his time and talents. The hints given should be carefully noted by owners, and they should take pride in seeing that those who studied long and earnestly to make plans for a comfortable home, should be remunerated in a manner befitting their professional calling.

Pay Day and Welcome.

Subscribers to this Journal should bear in mind that the annual pay time of a large number of subscriptions has rolled around, and is now due and payable. All are earnestly requested to call at once and settle arrearages, and renew for 1889, and thus express such

A HEARTY WELCOME.

To the new management as will assure it of undivided support from the members of the architectural profession, and every contractor, builder, material man, and of all classes and callings, engaged in works connected with building construction. Owners of property, those engaged in house furnishing, furniture, carpets or in any way identified or interested in housework should give both advertising and subscription support, as more than ever, this journal will become the great channel through which all important reliable business information and facts will flow.

Under a New Management.

This journal is now under the control of the "ARCHITECT Publishing Company." All accounts due are payable to the company, at their new offices, 408 California street, rooms 14, 15, 16 and 17.

All who intend to build a home for themselves should fully realize the importance of first knowing just what can be done with a given amount of money, in the building, furnishing and beautifying their buildings and grounds, so that when the whole is finished, they can truly say it is simply complete.

It has been found that steel mixed with twenty-four per cent of manganese becomes non-magnetic.

"Soaking" in the fire causes steel to become "dry" and brittle, and does it very great injury.

CHEAP LUMBER AND BUILDING.

WE took occasion, in a late issue, to allude to the rivalry that is being waged between our manufacturers of lumber and the damaging effect it is having on that interest, deprecating the same as tending to a useless waste of our own timber resources, besides being otherwise lacking in business sense. From the consequent cheapness of lumber there is resulting, however, some benefits to the community at large, albeit at the expense of the lumbermen themselves. The cheapness of this article has greatly stimulated building and other improvements involving a large use of lumber.

There is said to be in this city a greater number of dwelling-houses in course of erection at this time than ever before, the same being true of many other towns in the State, both interior and coastwise, except, perhaps, in the southern tier of counties, where the building "boom" has somewhat abated.

Aside from the houses being built, an unusually large number of contracts have been entered into for the erection of others to be put up during the coming spring and summer. Many business places, some of them large and costly structures, are also being built both here and elsewhere, their erection being prompted, in part at least, by the same consideration. Cheap lumber is not therefore, one of those ill winds that blows nobody any good.

It may in the end even work to the advantage of the lumbermen themselves, the impetus so given to building creating such a demand for their product as will, through the depletion of stocks, force up the price of that commodity.

It is surprising the effect that a drop of a few dollars per thousand in the cost of lumber has on the owners of real estate, causing them everywhere to be seized with a desire for improving their property. The cost of labor and other materials may remain as high as ever, and even be advanced, yet this is all lost sight of in view of the lessened cost of this one article.

While the lumber question is one of moment with all real estate owners, it undoubtedly weighs most with small holders, the owners of only two or three lots, or perhaps merely a homestead, on which they make haste to build when the cost of this one item drops a little below the ordinary standard. That this view of the situation is correct is obvious from the improvements going on in the outskirts of the city of San Francisco. Visiting that quarter of the city we see hundreds of small houses being built, the most of them evidently intended for occupancy by the owners. But beside this class of tenements, which are apt to be widely scattered, there are others put up in long rows designed for rent, the possessions of larger real estate proprietors.

One going into the Western Addition, and seeing there so many houses being built, gets the impression that this suburb is forging ahead at a specially rapid rate. If he visit the southern part of the town, he is in like manner led away with the idea that this section is meeting with an abnormal growth. Out along the old Mission and the old San Bruno roads building enterprise is undergoing a wonderful expansion, as well as along both sides of the Potrero, lying off in that direction. Even up the sides and over the tops of the high hills occupying the southwestern part of the city, improvements are creeping, showing that these less desirable localities are already in request, with the prospect of becoming densely populated in the near future.

By reason of this large consumption of lumber, it is to be hoped that the manufacturers of that article will, through improved prices, find some compensation for the meagre returns they are now realizing from the products of their business.

The above from *Wood and Iron*, of this city, expresses the true state of the lumber market. We take pleasure in printing the article, as it coincides with many of the ideas advanced by the *CALIFORNIA ARCHITECT*. "It is surprising the effect that a drop of a few dollars per thousand in the cost of lumber has upon the owners of real estate." Friend Everett, we cordially agree with you and beg to welcome you to our fold. Time over and again have we advanced that same proposition, and the same number of times have we been combatted, Friend Everett, taking the stand that a few dollars per thousand, more or less, did not or would not affect the price of building. It is not only the price of the rough lumber used, but the mill men make a vast difference on their bids, owing to the high value of surfaced lumber. This journal has always taken the stand that \$22.50 was too high for lumber, while \$12 or \$13 per M. was a ruinously low figure. We believe that \$18 is a fair price to consumers and manufacturers, and an earnest endeavor should be made to maintain the price of lumber at that figure.



FULL OF PROMISE.

The years since 1880 have been periods of gratifying and increasing prosperities in California, in all departments of building, commercial and business enterprises, checked only for a limited time by an occasional "dry season,"—some portions of the State "booming" to the utmost extent of possibilities, stimulated by every art and device known to those handling and manipulating property interests, while San Francisco and other cities, towns and sections have glided along in the even tenor of their ways, stimulated, growing and prospering alone upon the solid merits of the realities within their respective boundaries.

Such has been the state of facts particularly in the building interests. The building statistics from time to time appearing in this journal show the approximate, but not the ultimate, amount of investments, as often as the sum of contracts decided upon the commencement of operations, and upon which such statistics are based, are considerably increased before completion, by extras which in some cases amount to a considerable percentage on the sum of original contracts.

But viewing prospective results for current year from present data the generally expressed prediction is that 1889 will be one of the exceptionally good years in this State. Everybody who can control their finances to that end, expresses the determination to build, and ere the summer months roll around, every building operative from architect to sewer-layer will have ample employment, with the very certain probability that the supply of labor in many of the departments, especially skilled mechanics, will be short of the demand. Hence, advance in the rates of wages in some lines may reasonably be anticipated, and those who commence later in the season may expect to pay higher prices than those who at the present time have their plans prepared and in the market for bids. Notwithstanding the large number of tenement houses erected each succeeding year, there are few desirable habitations to rent, and as fast as new ones are completed tenants are found to occupy them, thus evidencing the fact that those who have property to improve, and money to invest, run no risk in planting their surplus or available coin in building improvements, particularly at the present low price of lumber materials.

PLATE GLASS MAKING.—This is now an extensive industry in this country. The principal works are at New Albany, Indiana, where 1,500,000 square feet is made annually. Nearly as much is made at St. Louis, Mo., and a works at Pittsburg, Pa., turns out 360,000 square feet each year. The total is 3,000,000 square feet, or 568 acres of plate glass ground true and polished. No enormous plates, such as were exhibited at the Centennial exposition by French makers have been produced and are not required. Plate glass of unusual dimensions is a luxury, and possesses no merit or advantage corresponding to its great cost. The value increases as the square of the area.

The manufacturers of perforated seats have combined. Their object can be seen through.

Testing Foundations.

ANY resistance of the soil to pressure or great loads is generally left to be determined by experience. In the erection of the weighty and lofty structures on the Champ de Mars in Paris, in connection with the forthcoming exhibition, experiments have been conducted with this object in view for the purpose of determining the size of foundations. The method adopted was to level a large surface of ground and place four rectangular blocks of cast iron, 1 foot, 8 inches square, so disposed as to form the corners of a square, the distance apart being 11 feet, 8 inches from center to center. These blocks were bridged by girders of T-irons, and these were then loaded with the same until a total weight of 143,923 pounds was reached, when a settlement occurred. The pressure on the ground was 7,311 tons per square foot. During the night the settlement was increased about three-quarters of an inch. The load was increased next day to 209,776 pounds, when some of the corner blocks had sunk out of sight, leaving the girders on the surface of the soil. It was found by these experiments that the soil was capable of resisting a load equivalent to 5.43 tons per square foot. When the load reached 7.31 tons, settlement took place, and the ground was incapable of supporting a load of 8.14 tons per square foot. In heavy structures a weight of 8 tons per square foot is not unusual; several chimneys at Birmingham and St. Rollox, at Glasgow, exceed this amount of stress. St. Peter's at Rome bears a weight under the dome of nearly 15 tons per square foot, and it is estimated that the piers carrying the dome of St. Paul's, London, bear a weight per foot at the base of 17.705 tons per square foot. The very inadequate data furnished in books makes it necessary for the architect and engineer to make experiments when any heavy or lofty structure has to be supported. How many of the central towers and

spires of our cathedrals have failed it would be impossible to say, though the examples of Chichester and Ely ought to be warnings. —London Building News.

State Rights For Sale.

State rights, or the entire Pacific Slope, for sale, at bottom prices, of the best and most effective weather strips. Patent February 4, 1888. Excel all others for preventing air, dirt, water or snow from entering houses at the sides, top and bottom of doors and windows. No rattling of windows. No rubber or felt to loosen its elastic, but life-lasting symmetry in shape, with concave and convex interlock forming close joints. For prices, circulars and samples, address with stamp, E. P. Bureau & Co., Hazelton, Pa.

Draughtsman's Situation Wanted.

Situation as draughtsman in an architect's office, by a young man about twenty-one years of age, who has served his time at the carpenter's trade, and has a good knowledge of framework construction. Has had no actual experience in office work, but can make plans, elevations and ordinary working drawings. Can also draw in plain perspective, and has a general idea of detailing. Wages not so much of an object as a good place, with a chance to work up. Can give references as to character and habits.

Address, this office.

In planning a large edifice particular attention must be paid to the situation of the stairs, so as to give the most convenient and easy access to the several rooms.



CITY BUILDING NEWS.

Broadway and Scott, two-story frame. Owner, A. Bouvier; architect, F. Wilcox; contractor, R. Smith; cost, \$5,500.

Buchanan, near Union, two-story stable; cost, \$600.

Broadway and Scott, two-story and basement frame. Owner, Alfred Bouvier; architect, Fred. E. Wilcox; contractor, Robert Smith; amount, \$1,242; limit, 120 days; filed, January 17; signed, December 11. Payments, \$1,200 framed; \$1,200 plastered; \$781.50 completed; \$1,060.50 35 days.

Bartlett and 22d. Owner, F. L. Turpin; architect, Geo. A. Bordwell; contractor, R. P. Waddell; amount, \$3,912; limit, June 1; filed, Jan. 23; signed, Jan. 21. Payments, \$590, framed; \$590, brown coated; \$590, white coated; \$597, completed; \$790, 35 days after.

Bush, between Kearney and Dupont, stone work. Owner, Kate M. MacDonough; architect, J. M. Wood; contractor, O. E. Brady; amount, \$14,500; limit, 60 days; filed, Jan. 22; signed, Nov. 8, 1888. Payment, 75 per cent work done, etc., on first Tuesday of each month; balance, 35 days after completion.

Brannan, near First. Owners, Warehouse Land and Improvement Co.; architects, Schulze & Meeker; contractors, Gray Bros., Artificial Stone Co.; amount, \$2,472; sureties, C. A. Warren and F. S. S. Buckingham, \$900; limit, 30 days. Pavement of one-story and basement of warehouse, \$618; 11,735 square feet are laid; \$618, 23,470 square feet are laid; \$618, completed; \$618, 35 days.

Church, between Twentieth and Twenty-fourth, carpentering. Owner, Frank Giroi; architects, Schulze & Meeker; contractor, Jacob Klein; amount, \$4,812.50; sureties, C. S. Holmes and F. Joost, \$1,600; limit, 90 days; filed, Jan. 30; signed, Jan. 26. Payments, \$608.50, framed; \$1,000, partition studs up; \$1,000, white coated; \$1,000 completed; \$1,204, 35 days.

Chestnut, near Larkin, improvements; cost, \$500.

Central Ave., near California, two-story frame. Owner, Mr. Green; contractor, F. Weineohl; cost, \$4,500.

Caroline, near Howard, two-story frame. Owner and builder, Chas. Warren; cost, \$1,200.

Devisadero and Pacific, dwelling. Owner, A. D. Moore; architect, Clinton Day; contractor, Peter Crichton; amount, \$14,200; limit, June 1; filed, Jan. 7; signed, Dec. 29. Payments, \$4,000, ready to paint; \$4,000, stairs and ready to paint; \$2,650, completed; \$3,500, 35 days.

Ellis, near Broderick, one-story frame. Owner, Mr. Green; contractor, Deane; cost, \$2,000.

Eddy, near Broderick, two-story frame. Owner, Mr. Fortjee; contractors, Wheeler & Burdick; cost, \$4,500.

Eighth, between Market and Mission. Owner, Manning; cost, \$2,500.

Fifteenth and Noe, two-story frame. Owner, Robt. Acton; architect, R. H. White; contractors, Rountree Bros.; amount, \$4,325; sureties, J. F. Kennedy and L. B. Doe; limit, 90 days; filed, Feb. 2; signed, Jan. 31. Payments, \$900, roof boards on; \$800, rough mortared; \$700, finished up; \$825, completed; \$1,100, 35 days.

Frederick, near Second, additions; cost, \$1,000.

Fourteenth, near Howard, two-story frame. Owner, L. Dumas; architect, J. Behrens; cost, \$3,500.

Fourteenth Ave., between N street and Railroad avenue, one-story frame and basement building. Owner, Christian Hoerner; architect, D. Dodge; contractor, J. P. Rines; amount, \$1,200; filed, Jan. 22; signed, Dec. 27, 1888. Payments, \$250, framed; \$250, covered; \$300, brown mortared; \$400, 10 days.

Gough, between Vallejo and Green, two-story frame. Owner, Annie Cassell; architect, W. H. Wharff; cost, \$4,500.

Green, between Gough and Octavia, two-story frames. Owner, architect and builder; cost, \$6,000.

Geary, near Gough, one-story frame. Owner, Crandall.

Geary, No. 428, moving and alterations. Owner, John Michel; architects, John & Zimmermann; contractors, Schutt & Krecke; amount, \$3,995; limit, April 1; filed, January 17; signed, January 17th. Payments, \$1,100 sidewalk walls completed; \$995 brown mortared; \$900 accepted; balance, 35 days.

Harrison and Fourth, two-story frame; 4 flats. Owner, F. E. Hesthall; architect, Geo. E. Voelkel; contractor John McKay; amount, \$5,100; sureties, Frank P. Latson and J. F. Kennedy, \$5,000; limit, 3 months; filed, January 17; signed, January 7. Payments, \$500 enclosed; \$825 first coat plastering on; \$1,300 second coat plastering on; \$1,200 accepted; \$1,275 35 days.

Henry between Sanchez and Noe, one-story frame. Owner, Winifred Ford; architect, J. C. Brown; contractor, J. C. Brown; amount, \$1,250; sureties, Jno. O. Doane; filed, January 10; signed, January 8. Payments, \$400 roof boards on; \$500 plumbing done; \$350 completed.

Howard, corner Fourteenth, one-story additions. Owner, L. Dumas; cost, \$2,000.

Henry, between Sanchez and Noe, one-story frame. Owner, Mrs. G. W. Ford; contractor, J. C. Brown; cost, \$1,500.

Howard, between Seventh and Eighth; frame. Owner, Thos. Brannan; architect, Wm. Mosser; contractor, C. A. Laherty; amount, \$6,400; sureties, ehrend Joost and John Rogers; limit, 100 days; filed, Jan. 29; signed, 25. Payments, 75 per cent as work progresses; balance, 25 per cent, 35 days after completion, receipted bills being produced.

Jackson and Devisadero, dwelling; owner, Annie M. Healy; architect, T. J. Welsh; contractor, James W. Smith; amount, \$3,455; limit, three months; filed, Jan. 9; signed, Jan. 7. Payments, \$800, framed; \$800, brown coated; \$900, finished; balance, 35 days.

Julian Ave., near 15th, additions; cost, \$600.

Jackson and Buchanan, two-story frame. Owner, R. C. Foute; architect, Geo. A. Bordwell; contractor, R. P. Waddell; amount, \$3,495; limit, May 1; filed, Jan. 31; signed, Jan. 29. Payments, \$870, rustic on; \$880, plastered; \$870, completed; \$875, 35 days.

Kearny and Geary, build vaults. Owner, M. H. de Young; architects, Burnham & Root; contractors, Wilshire Safe & Scale Co.; amount, \$3,600; limit, Oct. 1, filed, Jan. 7; signed, Jan. 5. Payments, 75 per cent of labor and material to be paid for at end of each month, and balance, 25 per cent, 36 days after completion.

Kearny and Geary, painting and glazing. Owner, M. H. de Young; architects, Burnham & Root; contractor, H. J. Milligan; amount, \$13,622.50; limit, 10 days after carpenter work is done; filed, Jan. 7; signed, Oct. 15. Payments, 75 per cent, to be paid in amounts proportionate to work done; balance, 25 per cent 36 days after completion and acceptance.

Kearney and Geary, brown sandstone. Owner, M. H. de Young; architects, Burnham & Root; contractors, McLellan, McGowan & Butler; amount, \$4,500; limit, March 22, 1889; filed, Jan. 22; signed, Dec. 22, 1888. 75 per cent to be paid monthly, according to work done; balance, 25 per cent, 36 days after completion.

Kearny and Geary, plastering. Owner, M. H. de Young; architects, Burnham & Root; contractors, Boland Bros.; amount, \$6,995; limit, 60 days; filed, Jan. 22; signed, Oct. 9, 1888. Payments, 75 per cent, payable on 1st and 15th each month in installments proportioned to work done; balance, 25 per cent after completion and acceptance.

Larkin between Greenwich and Filbert, cottage. Owner, Mary T. Loveland; contractor, M. Shea; amount, \$2,100; sureties, J. W. Wesson; limit, 90 days; filed, January 9; signed, January 3d. Payments, \$400 framed; \$400 brown coated; \$400 inside finish on; \$375 completed; \$525 35 days.

Market, corner City Hall avenue, finish basement. Owner, Geo. T. Marye, Jr.; architect, Wm. F. Smith; contractor, E. L. Ransome; amount, \$7,650; limit 40 days; filed, Jan. 22; signed, Jan. 19. Payments, 75 per cent of value of work done, to be paid as contractor may desire; balance, 35 days after completion.

Market, between City Hall avenue and Jones, four-story brick building. Owner, G. G. Burnett; architect, J. E. Wolfe; contractor, J. J. Conrad; for brick, stone and iron work; amount, \$14,740; limit, May 4, 1889; filed, Jan. 24; signed, Jan. 19. 1st payment, to be made when brick work is completed; 2d, when brick work is completed for 2d tier joists; 3d, when brick work is completed for 3d tier joists; 4th, when brick work is completed for 4th tier joists; 5th, when brick work is ready for ceiling, equal to 75 per cent of value of material used; balance, 25 per cent after completion and acceptance.

Market, between City Hall avenue and Jones, 50x100. Owner, G. G. Burnett; architect, James E. Wolfe; contractors, Bateman Bros.; amount, \$15,475; limit, 5 months; filed, Jan. 26; signed, Jan. 19; 75 per cent of value of labor performed, etc., in periods 20 days; 25 per cent 35 days after.

Market, between City Hall avenue and Jones, carpentering, four-story brick building. Owner, Margaret Lynch; architect, James E. Wolfe; contractors, Bateman Bros.; amount, \$6,940; limit, 5 months; filed, Jan. 26; signed, Jan. 19. Payments, 75 per cent to be paid every 21 days; balance, 25 per cent when completed.

Market and City Hall avenue, four-story brick building. Owner, Margaret Lynch; architect, James E. Wolfe; contractor, J. J. Conrad; amount, \$9,441; limit, May 4, 1889; filed, Jan. 26; signed, Jan. 19. 1st payment, brick work ready for main floor joists; 2d, ready for 2d floor joists; 3d, ready for 3d floor joists; 4th, ready for 4th floor joists; 5th, ready to receive ceiling joists, 4th story; each payment equal to 75 per cent work done, etc.; balance, 25 per cent, 35 days.

Main and Howard, carpentry. Owner, Est. Geo. H. Dana; architects, Pissis & Moore; contractor, J. Wissinger; amount, \$9,480; limit, 40 days; filed, Jan. 25; signed, Jan. 24. Payments, tin and hardware, \$1,500; 2d floor joists in, \$1,500; all roof trusses are in place, \$2,000; roof, timbers and floors laid, \$2,100; completed, \$2,380, 35 days.

McAllister and Scott, brick and carpenter work, etc., two-story and basement frame buildings. Owners, G. M. Perine and Wallace T. James; architects, John & Zimmerman; contractor, W. M. Fletcher; amount, \$17,000; limit, May 1; filed, January 11; signed, January 8. Payments, \$3,000 framed; \$3,000 partition set; \$3,750 rough plastered; \$3,000 accepted; balance, 35 days.

McAllister, between Scott and Pierce, four two-story frames. Owners, G. M. Perine, et al; architects, John & Zimmerman; contractor, W. M. Fletcher; amount, \$17,000; sureties, J. F. Kennedy; limit, May 1, 1889; filed, Jan. 28; signed, Jan. 8. Payments, \$3,000, framed; \$3,000, partitions set; \$3,700, outside finish on; \$3,000, accepted; \$4,250, 35 days.

McAllister and Scott, plumbing. Owners, G. M. Perine and Wallace T. James; architects, John & Zimmerman; contractors, S. Ickelheimer & Bro.; amount, \$2,069; filed, January 11; signed, January 11. Payments, \$700 first certificate delivered; \$869 all certificates; balance, 35 days.

McAllister, between Scott and Pierce, gas-fitting. Owners, G. M. Perine, et al; architects, John & Zimmerman; contractor, S. Ickelheimer Bros.; amount, \$2,069; sureties, Pauline Ickelheimer; limit, April 15; filed, Jan. 28; signed, Dec. 28. Payments, \$700, first certificate delivered; \$869, accepted; \$500, 35 days.

McAllister, between Scott & Pierce, painting. Owners, G. M. Perine, et al; architects, John & Zimmerman; contractor, J. Cooney; amount, \$1,195; sureties, John G. Adams; limit, May 1; filed, Jan. 28; signed, Jan. 11. Payments, \$400, inside finish ready to grain; \$395, accepted; \$400, 35 days.

Mission street and Sullivan alley, three-story and basement brick building. Owner, W. A. Aldrich; contractors, Richardson & Gale; amount, \$16,485; sureties, Frank Williams and Oscar Lewis, \$16,000; limit, 60 days; filed, January 16; signed, January 2. Payments, on 25th of each month owner will pay 75 per cent of estimated value of work done; balance, 25 per cent.

Main and Howard, three-story brick building. Owner, Est. Geo. H. Dana; architects, Pissis & Moore; contractor, E. R. Shain; amount, \$15,554; limit, 80 days; filed, January 16; signed, January 16. Payments, \$2,500 concrete is completed; \$2,000 walls are up to 1st story ceiling; \$2,500 walls are up to 2d story ceiling; \$2,000 walls are ready for roof trusses; \$2,500 when completed; \$4,044 35 days.

Mission, near 14th, two-story frame. Owner, A. S. Perly; day work; cost, \$6,000.

Mission, corner 14th, additions; cost, \$1,000.

Mission, near 15th, additions; cost, \$1,200.

Mason, No. 803, alterations. Owner, Richard Valentine; architects, Salfeld & Kohlberg; contractor, Henry Rohling; amount, \$2,475; sureties, F. Joost, \$2,475; limit, two months; filed, Feb. 1; signed, Jan. 21. Payments, \$900, roof on; \$925, completed; \$650, 35 days.

Noe and Ridley, two-story frame. Owner, Jane Noonan; architects, Copeland & Banks; contractor, Thos. D. Jones; amount, \$3,550; limit, April 1; filed, January 12; signed, December 24. Payments, \$800 framed; \$1,050 brown coated; \$800 completed; \$900, 35 days.

O'Farrell and Octavia. Owners, Young Women's Christian Association; architects, Wright & Saunders; contractors, Kincaid & Thompson; amount, \$20,497; limit, July 1; filed, Jan. 9; signed, Jan. 1. Payments, installments on 1st day of each month, as work progresses, to value 75 per cent, and balance, 35 days.

Oak and Broderick, concrete, pumping and excavating. Owner, Omnibus Cable Co.; architects, Percy & Hamilton; contractor, E. L. Ransome; amount, \$6,100; sureties, S. B. Cushing and A. A. Wigmore, \$2,500; limit, 35 days; filed, January 12th; signed, January 11. Payments of 75 per cent, on first Saturday of each month; balance, 25 per cent.

Oak and Broderick, cast and wrought iron work. Owner, Omnibus Cable Co.; architects, Percy & Hamilton; contractors, O'Connell & Lewis; amount, \$13,000; sureties, Robt. Mitchell and D. F. N. Little, \$5,000; limit, as fast as possible; filed, January 12; signed, January 11. Payments on first Saturday of each month of 75 per cent; balance, 25 per cent, after completion.

Oak and Broderick, carpenter work, painting, plumbing, plastering, etc. Owner, Omnibus Cable Co.; architects, Percy & Hamilton; contractor, O. E. White; amount, \$21,470; sureties, Charles F. Doe and Frank P. Latson, \$7,000; limit, 20 days after brick work is done; filed, January 12; signed, January 11. Payments on first Saturday of each month of 75 per cent of value of work done; balance, 25 per cent, after completion.

Oak and Broderick, brick and stone work. Owner, Omnibus Cable Co.; architects, Percy & Hamilton; contractors, McGowan & Butler; amount, \$34,300; sureties, C. S. Holmes and W. P. Dougherty, \$12,000; limit, 50 days; filed, January 12; signed, January 11. Payments of 75 per cent, on first Saturday of each month; balance, 25 per cent, after completion.

Oak and ———, two-story frame. Owner, A. Foreman, Jr.; architect, G. G. Gillespie; contractor, G. G. Gillespie; amount, \$3,200; limit, 80 days; filed, January 10; signed, January 10. Payments, \$600 framed; \$600 brown mortared; \$600 white mortared; \$600 completed; \$800 35 days.

Oak and Broderick, plumbing. Contractor, O. E. White; sub-contractor, Thos. Clark & Sons; amount, \$1,900; limit, 15 days; filed, January 15; signed, January 15. Payments, 75 per cent of value of work done, etc., to be paid in installments the 1st Saturday of each month; balance, 25 per cent, 35 days.

Oak and Broderick, roofing and galvanized iron work. Architects, Percy & Hamilton; contractor, O. E. White; sub-contractor, W. S. Snook & Son; amount, \$6,785; limit, 25 days; filed, Jan. 15; signed, Jan. 12. Payments in installments on first Saturday of each month as work progresses, of 75 per cent of value of work done, etc.; balance, 25 per cent, 35 days.

Pacific and Steiner, plumbing. Owner, J. J. Wells; architect, Chas. I. Havens; contractor, Wm. F. Wilson; amount, \$1,180; sureties, H. W. Smith and Jas. J. Colvin; filed, January 11; signed, January 10. Payments, \$400 rough pipes in; \$480 completed; \$300 35 days.

Parker Ave., near Point Lobos, one-story frame. Owner, John Ogilvie; architect, D. F. McGraw; contractor, D. F. McGraw; amount, \$1,500; limit, April 1; filed, January 19; signed, January 7. Payments, \$500 when brown mortared; \$500 outside work done \$500 completed.

Parker Ave., near Point Lobos avenue, one-story frame. Owner, Geo. Wright, architect, D. F. McGraw; contractor, D. F. McGraw; amount, \$1,500; limit April 1; filed, January 19; signed, January 7. Payments, \$500 when brown mortared; \$500 when outside work done; \$500 completed.

Pine, between Lyon and Central avenue, dwelling and stable. Owner, Fred K. Rake-man; architect, Townsend & Wyneken; contractor, Wm. Linden; amount, \$2,800; limit, 120 days; filed, Jan. 15; signed, Jan. 9. Payments, \$560, framed; \$560, enclosed; \$560, 1st coat paint; \$560, completed; \$560, 35 days.

Page, between Gough and Octavia, building. Owner, James Reilly; sureties, W. A. Meeker; architects, Jno. J. Clarke; contractor, W. Linden; amount, \$5,300; limit, 120 days; filed, Jan. 22; signed, Jan. 10. Payments, \$1,000, framed; \$1,000, enclosed; \$1,000, brown coated; \$1,000, inside finish complete; \$1,300, 35 days after.

Page and Scott, three-story frame. Owner, Jos. Hess; architect, H. Geilfuss; contractor, H. J. Weiss; amount, \$7,168; filed, Jan. 7; signed, Jan. 2. Payments, \$900, framed; \$900, roofed; \$900, partitions set; \$900, brown coated; \$900, white coated; \$868, completed; \$1,800, 35 days.

Pacific, near Larkin, improvements, \$1,000.

Sutter, near Powell, brick and stone works. Owner, Wm. T. Commary; architect, Robt. H. Daley; contractor, Geo. D. Nagle; amount, \$2,700; limit, 30 days; filed, Jan. 15; signed, Dec. 8. Payments, 75 per cent as work progresses; balance, 25 per cent, 35 days.

Scott and Post, frame building. Owner and architect, T. J. Welsh; sureties, Frank P. Latson and J. J. McKinnon; amount, \$4,000; contractors, Brennan Bros.; amount, \$4,540; limit, 90 days; filed, Jan. 25; signed, Jan. 19. Payments, brick and carpenter work for frame building; \$1,000, framed; \$1,000, brown mortar on; \$1,000, accepted; \$1,540, 35 days after.

Stockton, between Ellis and O'Farrell, five-story and attic brick building. Owners, E. D. Keyes, Marianna C. Loughsbrough and F. George; architect, Chas. Geddes; carpenter, A. Miller; \$47,700; mason, J. McCarthy, \$36,232; iron, O'Connell & Lewis, \$9,500; plumbing, Shephard Bros., \$7,696; Gal. iron, Conlin & Roberts, \$9,580; glass, Whittier & Fuller, \$3,575; painting, Downing, \$3,000; wrought iron, Ralston, \$7,388; stone, R. A. Lewis, \$1,548.

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

Sacramento, near Larkin, two-story frame. Owner and builder, R. Grier; cost, \$4,500.

Twenty-third and Dolores, painting. Owner, N. J. Stone; architects, Percy & Hamilton; contractor, P. S. Poland; amount, \$1,260; limit, as soon as possible; filed, Jan. 31; signed, Jan. 22. Payments, installments of 75 per cent, on first Saturday of each month, as work progresses; balance, 25 per cent, after completion.

Turk, between Laguna and Buchanan, three-story frame. Owner, Wilhelmina Hess; architect, Bernard Dryer; contractor, Bernard Dryer; amount, \$5,600; limit, May 10; filed, Feb. 2; signed, Feb. 1. Payments, \$1,500, framed; \$1,200, brown coated; \$1,500, white coated; \$1,490, 35 days.

Twenty-third and Alabama, two-story frame and moving stable. Owner, Jos. M. Schulz; architect, H. Geilfuss; contractors, Gray & Stover; amount, \$3,625; filed, Feb. 2; signed, Jan. 30. Payments, \$905, framed; \$905, white coated; \$905, completed; \$910, 35 days.

Treat Ave., between Twenty-fifth and Twenty-sixth, two-story and basement building. Owner, Wm. Ferris; architect, Geo. Houston; contractor, Geo. Houston; amount, \$2,690; limit, 90 days; filed, January 19; signed, January 11. Payments, \$500 rustic on; \$500 brown coated; \$500 white coated; \$500 completed. \$690 35 days.

Twenty-third and Dolores, carpenter work. Owner, N. J. Stone; architects, Percy & Hamilton; contractor, F. W. Kern; amount, \$13,490; limit, 90 days; filed, Jan. 24; signed, Jan. 22. Payments, carpenter work in installments, on first Saturday each month, of 75 per cent as work progresses; balance, 25 per cent 35 days after completion.

Twenty-third and Dolores, plastering and deafening. Owner, N. J. Stone; architects, Percy & Hamilton; contractor, J. L. Crich-ton; amount, \$1,697; limit, when building is ready; filed, Jan. 24; signed, Jan. 22. Payment in installments, on first Saturday of each month, of 75 per cent, as work progresses; balance, 25 per cent, 35 days after completion.

Twenty-third and Dolores, brick and artificial stone work. Owner, J. N. Stone; architects, Percy & Hamilton; contractor, J. Wagner; amount, \$2,545; limit, 25 days; filed, Jan. 24; signed, Jan. 22. Payments in installments on first Saturday each month, 75 per cent as work progresses; balance, 25 per cent, 35 days after completion.

Twenty-third and Dolores, plumbing and sewerage. Owner, N. J. Stone; architects, Percy & Hamilton; contractors, Shepard Bros.; amount, \$2,128; filed, Jan. 24; signed, Jan. 22. Payments, installments on 1st Saturday of each month, of 75 per cent as work progresses; balance, 25 per cent 35 days after completion.

Twenty-fourth and Dolores, two-story frame. Owner, Geo. I. Mouck; architect and contractor, Geo. Houston; amount, \$2,818; limit, 100 days; filed, Jan. 14; signed, Dec. 31. Payments, \$703, shingled; \$705, brown mortared; \$705, doors and windows in; \$705, 35 days.

Twenty-second, between Fair Oaks and Guerrero, double frame building. Owner, James C. Blair, et al; architect, Henry T. Bestor; contractor, R. Doyle & Son; amount, \$2,889; sureties, C. H. Castle and John McCarty, \$1,500; limit, 70 days; filed, Jan. 15; signed, Jan. 14. Payments, \$450, rustic on; \$600, brown mortared; \$600, white mortared; \$514, completed; \$725, 35 days.

Union, between Fillmore and Steiner, two-story frame. Owner, Mr. Harper; contractor, R. Brotherton; cost, \$3,000.

Union, near Buchanan, one-story addition; cost, \$1,200.

Union and Fillmore, two-story frame. Owner, A. Postel; architect, B. E. Hendrickson; contractor, Robt. Currie; amount, \$3,420; sureties, Frank P. Latson and John J. Cooney, \$3,400; limit, 65 days; filed, Jan. 25; signed, Jan. 19. Payments, \$640, roofed; \$640 outside finish on; \$640, sashes glazed and hung; \$640, trimmings on; \$860, 35 days after.

Valencia, near 25th, one-story frame; cost, \$800.

Vernon Place and Third, two-story frame. Owner, John Demartini; architect, Geo. E. Voelkel; contractors, C. F. Robertson and Fritz Roettger; amount, \$2,254; sureties, J. W. Wesson; limit, 60 days; filed, January 12; signed, January 5. Payments, \$300 enclosed; \$500 first plastered; \$800 completed; \$564 35 days.

NEW CITY HALL CONTRACT.

The bids for constructing the plinth course of the McAllister street wings for the construction of an elevator in the Larkin street wing, and finishing five rooms in the main building are as follows:

PLINTH COURSE.	Small Wing.	Large Wing.
M. J. Healey & Co.	\$7,939	\$8,411
McGowan & Butler	8,800	9,100
Anton III & Doe	7,083	7,380
F. E. Knowles & Co.	11,750	11,750
FINISHING ROOMS.		
J. Kemp & Co.	\$9,900	
F. A. Williams	5,995	
McCann & Ridd	5,690	
McGowan & Butler	7,710	
Antonelli & Doe	6,500	
CONSTRUCTION OF ELEVATOR.		
A. J. McNicoll	\$4,500	
W. T. Garratt & Co.	6,049	
W. H. Birch & Co.	4,830	
W. H. Birch & Co.	4,895	
W. H. Birch & Co.	5,550	
W. H. Birch & Co.	5,976	

All the bidders will be required to produce samples of the stone to be used in construction.

COUNTRY BUILDING NEWS.

THE LOS ANGELES BUILDING.

Bids Opened by the Supervising Architect at Washington.

WASHINGTON, Feb. 5.—Bids for the construction of the new public building at Los Angeles were opened at the office of the Supervising Architect to-day. Bids from Los Angeles were received as follows: John Hanlon, \$150,000; Fletcher & Smith, \$163,566; P. E. Green, \$181,360; McNally & McCormack, \$199,700. From Washington, D. C.—Holtz-law Bros., \$126,355; McCarty & Baldwin, \$132,000; Lane & Malone, \$141,956; Bright & Humphrey, \$148,637; James H. Coster, of Baltimore, \$130,877; J. L. Garing & Son, of Detroit, \$134,000.

The * California * Architect * and * Building * News

VOLUME 10.

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

NUMBER 3.

NOW IN ITS TENTH YEAR!

THE California Architect and Building News.

ESTABLISHED JANUARY, 1879.

Office, 408 California St., San Francisco.

(Next to the Bank of California.)

Official Organ of the San Francisco Chapter American Institute of Architects.

TERMS PER ANNUM, - - - - \$2.00 IN ADVANCE

Published on the Fifteenth of each Month.

When money is sent for subscriptions, the receipt of a copy of this Journal is an acknowledgment that it has been received. Unless requested we do not send receipts.

OUR ADVERTISING RATES.

SPACE.	1 MONTH.	3 MONTHS.	6 MONTHS.	12 MONTHS.
1 Inch,	\$ 1 50	\$ 4 00	\$ 7 50	\$ 13 00
3 Inch,	4 00	10 00	18 00	35 00
6 Inch,	7 50	18 00	32 00	60 00
1 Column,	12 50	35 00	65 00	125 00
1/4 Page,	11 00	30 00	57 50	105 00
1/2 Page,	20 00	57 50	105 00	200 00
3/4 Page,	30 00	80 00	150 00	275 00
1 Page,	40 00	110 00	200 00	350 00

Full-page advertisements inserted among reading matter, fifty per cent extra on above rates.

Specially attractive advertisements, without extra cost, will be set up in the finest style where the advertiser furnishes cuts.

CASH MUST ACCOMPANY ALL ORDERS FOR ADS.

ADVERTISEMENTS ALONE INSERTED THAT REFER TO MATERIALS USED IN THE CONSTRUCTION AND FURNISHING OF HOUSES, AND TO MATTERS AND TRADES BELONGING TO THE BUILDING INTEREST.

— NO OTHERS RECEIVED. —

PARTICULAR NOTICE.—Each advertising page contains three columns, each of which is about two and a half inches wide. One inch means one inch in depth by two and a half inches in width.

Spaces on Cover and on page preceding reading matter are subject to special rates.

SAN FRANCISCO, MARCH 15, 1889.

San Francisco Chapter, American Institute of Architects.

Since the Chapter secured rooms under their own control, the meetings have been better attended than at any previous time in its history. At the first gathering held in the new quarters, there were seventeen members present; at the last one held on March 1, after the regular business was disposed of, the members indulged in an all around conversation that was greatly enjoyed by those present.

Chas. Mau, of Oakland, was unanimously elected a member as Fellow.

Messrs. Babson, Daley and Cuthbertson were appointed a committee to revise the By Laws and present the same to the Chapter for consideration.

The following resolution was adopted. That it is the sense of this meeting that a prize be offered for the best design for a book case, for the use of the Chapter.

Under the new Regime.

The stockholders of the ARCHITECTURAL PUBLISHING COMPANY met last Tuesday and formally adopted the By-Laws previously presented for their consideration. The election of Directors immediately followed and the following were declared elected for the first year:

W. P. MOORE. W. J. CUTHBERTSON.
E. J. MOLERA. A. PISSIS.
S. BABSON. H. T. BESTOR.
O. EVERETT.

Subsequently the Directors met and elected the following named as officers:

PRESIDENT, W. P. MOORE.
VICE-PRESIDENT, W. J. CUTHBERTSON.
TREASURER, S. BABSON.
SECRETARY, O. EVERETT.

For the present, the business management will remain the same as usual. All the officers elected are well known in the architectural profession and their names guarantee that the CALIFORNIA ARCHITECT will show a decided improvement in every department, over those of previous issues.

The success of the Journal since moving into their new quarters, has been somewhat remarkable. Scores of new names have been added to our subscription lists. The advertising pages tell their own story. Our illustrations are far superior to those we have hitherto presented. The paper used in printing was imported solely for our own use. Our offices are beautifully furnished. List of exchanges include all the prominent ones in the U. S. The reading room will be supplied with all the latest works on architecture and kindred sciences. All our friends are invited to call and examine the new Architectural Headquarters in the building, 408 California street, next to the Bank of California.

Premium for a Design for Book Case.

At the last meeting of the Chapter of Architects, it was decided to offer a premium for the best design for a book case for the new rooms of the Chapter. The prizes will be announced in our next issue.

Draftsmen and Students Edition.

We would like to hear from more of our students in architects' offices in the country. Those in the city have expressed a great willingness to do all they can towards presenting an edition that will justly represent the progress made by them since adopting their profession. We want the country well represented. The edition will be solely in the interests of draftsmen and students.

The Hibernia Bank Competition.

Architects generally are satisfied with the awards made in the Hibernia Bank competition. Architects from different sections of the east entered the competition. A large number of our local talent prepared plans for same. The result is as follows:

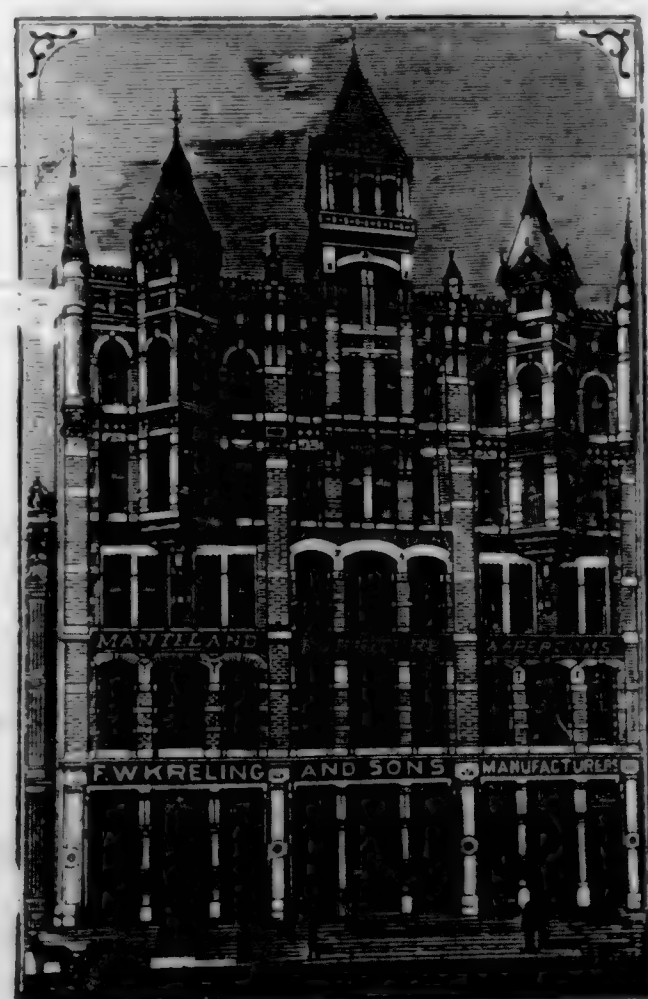
First premium, Pissis & Moore. These gentlemen prepare all plans, have the superintendency of the buildings, etc.

Second Premium, \$1,000 awarded to Schmidt & Shea.

Third premium, \$500 awarded to T. J. Welsh.

One noticeable feature in the competition should be mentioned, viz. the general good feeling that prevailed among the contestants. There was no sign of jealousy shown. The fact that Eastern firms were preparing plans, only stirred our own architects to greater exertions, and had the prizes been won by our friends on the other side of the Rockies, they would have received hearty congratulations from their professional brethren in this city.

The building contemplated will be one of the finest in the city, and, when fully completed, will not have cost much less than \$400,000.



F. W. KRELING & SONS,
Manufacturers of Elegant
PARLOR and CHAMBER SETS,
DINING-ROOM, BANK AND OFFICE FURNITURE,
WOOD MANTELS AND INTERIORS,
Rich Upholstery, Draperies, Bedding, Etc.
SOLE OWNERS OF THE
SQUARE & OCTAGON TURNING MACHINES,
For Balusters, Newel Posts, Etc., Etc.,
WAREROOMS: 534 and 536 MARKET STREET.
Telephone 3192.
FACTORY: 319-329 GUERRERO STREET.
Telephone 6113.
SAN FRANCISCO, CAL.

Filing and Abstracting Contracts.

Between the legal requirement that all building contracts in excess of \$1,000 shall be filed with the County Recorder to insure their validity and force, and the stealing thereof from the official files, there is but little difference in a moral aspect of the case. Both are wrongful acts, and neither is defensible by the logic of reason, right or justice.

When, a short time since, it became known that one or more—and how many more has not been made known—of contracts, filed in compliance with the requirements of a form of lien law found upon the statute book of this State, had been carried away without permission—i. e., stolen from the office of the County Recorder—the question became general as to the reasons why they were taken, and the motives that influenced the theft. The special reasons and motives that actuated in each case are the secret of the stealer alone; but it is very transparent that the motives were dishonest and corrupt, and the purpose in view to gain some point of advantage not possible under the rightful order of things, and which could be secured only by the removal and virtual destruction of the legal, written testimony; or a spirit of malice and spite toward one or both of the parties to the contract missing might have led some one to pocket the papers, not for any pecuniary advantage to the party, but with the intent to make trouble between others. Very many additional possible and probable suggestions might be added, but they are immaterial as to the facts of the case.

But the affair serves to illustrate one of the numerous beauties of the lien law in this State, which requires that *only building contracts*, when in excess of \$1,000, shall be filed in the County Recorder's office to save them from being "*cholly void*"—a proposition as devoid of reason and fair dealing as it is of merit and soundness. Still, such is the law on the statute books, although both State and National constitution declare that no law shall ever be passed by any State Legislature "impairing the obligations of contract." But the law making Solons of Californians who aided in formulating and passing the present lien law, among its numerous other unjust and oppressive provisions, injected the filing idea as a mild but decidedly effective means of nullifying constitutional restrictions upon the points in issue, beside which its supreme special character renders it unconstitutional and void.

Quarterly Summary of Building Operations.

But once, since records have been kept, has the summary for the present first quarter of the year been exceeded in value, and then only by the bonanza year of 1885. The comparison stands for the first quarter of each year, as per table:

YEAR.	ENGAGEMENTS.	VALUE.
1885.....	288	\$2,069,261
1886.....	252	1,359,532
1887.....	191	1,209,100
1888.....	173	1,049,800
1889.....	238	1,874,600

For the present quarter the summary shows:

MONTH.	Brick.	Value.	Frame.	Value.	Alterations.	Value.	Total.	Value.
January.....	4	\$131,000	64	\$120,200	16	\$93,500	84	\$420,200
February.....	9	832,000	49	218,600	13	26,900	71	1,077,500
March.....	4	63,000	69	287,000	10	26,900	83	376,900
Totals.....	17	\$1,026,000	182	\$925,800	39	\$147,300	238	\$1,874,600

In above we have allowed \$450,000 as the cost of the new *Chronicle* building. The numerous large buildings to be erected will make the summary of this year equal to or surpass that of 1885. The Academy of Science building, the Hibernia Bank, the Parrott building, the Olympic Club edifice, etc., are all costly buildings, the value of the four mentioned being well on to one and a half millions of dollars.

Owners are to be congratulated on the present prices of building materials. Several of the leading lumbermen have assured us that the large prices asked last year for lumber will not be reached this year. They seem determined to have a market in San Francisco, irrespective of any country demands.

On the whole, prospects never looked better for an active season than they do at present.

IRON SHUTTERS AND FIRES.

FIRE and water calls attention again to the discussion which has been going on in the newspapers about the value of iron shutters in protecting buildings from the effects of conflagrations outside of them, and makes some very timely remarks on the subject. The history of the curious case in New York, where a building considered nearly fireproof was destroyed, with its contents, because the firemen found it for a long time impossible to open the iron shutters, or break through the brick roof, so as to throw water on the blazing goods inside, has been copied into nearly all the daily journals in this country, and many foreign ones, and, with their usual celerity in reasoning from the smallest possible number of facts, the newspaper theorists have decided that buildings would be better off without any shutters at all, and there is some danger that they may persuade owners of store property in some cases to refuse to use them. It ought to be needless to say that this would be a grave misfortune, and the underwriters' associations should be on their guard against the dissemination of such notions. Of course, the real object of shutters is to keep fire on the outside from entering a building, and they accomplish this object a hundred times for every time that they prevent firemen from reaching a blaze inside the building so protected. Moreover, there is no necessity for fastening iron shutters in such a way as to keep firemen from opening them from the outside. In New York where burglars are more dreaded than fire, as there is no insurance against their ravages, outside shutters are usually firmly secured on the inside, but in Chicago, if we are not mistaken, it is the rule to arrange the shutters so that all of them can be opened from the outside, and in many places one window in each story is protected by shutters so arranged. One of the best shutters we have seen is a patented one, which fastens on the inside, with a latch hooking over a bar, in the usual way, but has on the outside a plate, connected with a small lever passing through the shutter, by which the latch can be lifted. The plate protects the small opening through which the lever passes, and is so arranged that by directing a powerful stream of water upon it, from a fire engine or hydrant, the lever is moved, lifting the latch, and allowing the shutters to swing open, which they do under the pressure of light springs. A shutter of this sort is as safe against fire as anything that can be made, yet it can be opened in a moment from the street by the firemen without requiring ladders, which can hardly be used if a fire is raging on the opposite side of the street, or after the flames have burst out of the lower windows of the building to be dealt with.

Draughtsmen and Students' Edition.

We have received a fine collection of drawings from a student in the Livermore Valley, and they will appear in the edition which we will present, illustrating the progress of our draughtsmen and students. We hope to have at least the studies of young men from twenty-five different offices. On our part, we will take extra care in having the cuts (illustrating the drawings) of a superior character. Please send word to this office in regard to your furnishing drawings.

Our Illustrations.

The engraving on page thirty-three represents an elevation of a tall building similar in design to many of those being erected in the East.

"Precita" and "Tiburón" were kindly furnished us by Mr. S. Newsom, architect, of this city.

By the first of April, it is now officially reported, that wonderful creation the Eiffel Tower at Paris will have reached its full height and been entirely completed. At present it stands 825 feet high and weighs 7800 tons, and there remain but 800 tons to be added. The committee has selected three different models of lifts. Two lifts will go up to the first platform, two others to the second, and another lift will move between the second and the third platform in a vertical line. The whole trip up will take five minutes, and the cages will be able to take up 750 persons an hour to enjoy the novel and magnificent panorama spread before them from a height of close to 1,000 feet. The building of this novel structure was a tremendous undertaking; it remains to be seen whether or not it will, as has been predicted by some, turn out simply a costly curiosity of a day.

A Man in the Kitchen.

NO man worthy of the name, permits his wife, or any woman in the house, to perform the heavy drudgery of carrying coal and wood, caring for furnaces and stoves, moving stoves or heavy furniture, beating carpets, and so on. But this need not be the limit of a man's usefulness about the house. There is no good reason why a man should not be able to broil a steak, boil or bake potatoes, cook an egg, make coffee or tea, and prepare other articles of food should an emergency arise to make it desirable (and such emergencies do often arise); and do it, too, without turning the kitchen and dining-room topsy-turvy in the operation. Some men can, and do, accomplish such work, and even make biscuits, griddle cakes, and the like. A woman whose husband is in the habit of "taking hold" when needed in housework, has been heard to say that she would rather have him to depend on in case of indisposition, or other emergency, than any girl that could be hired. He does not interfere when there is no cause for it, but he saves labor for his wife and expense for himself, and he is not at all ashamed of doing it, nor afraid to undertake it. No man need be; rather any man should be ashamed of unwillingness, and should regret inability to perform any ordinary household task on occasion.—*Good Housekeeping.*

Preliminary Announcement—Mechanics' Institute Fair.

The Board of Trustees of the Mechanics' Institute announce that the Twenty-fourth Industrial Exposition will open at the Pavilion on Larkin street on Tuesday, August 27th, 1889, and close Saturday evening, October 5th, 1889, and respectfully solicit contributions in every Department of Invention, Industry, Art, and the natural resources of this Coast.

Medals of gold, silver and bronze, with an elegant engraved diploma, will be awarded to such articles as may be found to merit special distinction, and competent jurors will be appointed to examine and report on the same, unless the owner shall, at the time of their reception give notice that they are for exhibition only.

The Department of Machinery will be enlarged and specially prepared for machinery in motion, for which ample steam and power will be furnished, including water.

By the easy approaches to the building, heavy goods can be conveniently handled, while all contributions can be quickly and inexpensively placed.

The Art Department will be specially attractive in oil and water color paintings, black and white, sculpture and photography.

A Musical Programme will be rendered each afternoon and evening by an orchestra of fifty eminent performers.

At night the building will be brilliantly illuminated with gas and electricity, and at all times everything possible will be done by the management for the comfort and convenience of visitors.

Inventors of new machinery or appliances will find this a rare opportunity to bring their improvements before the public for approval or sale.

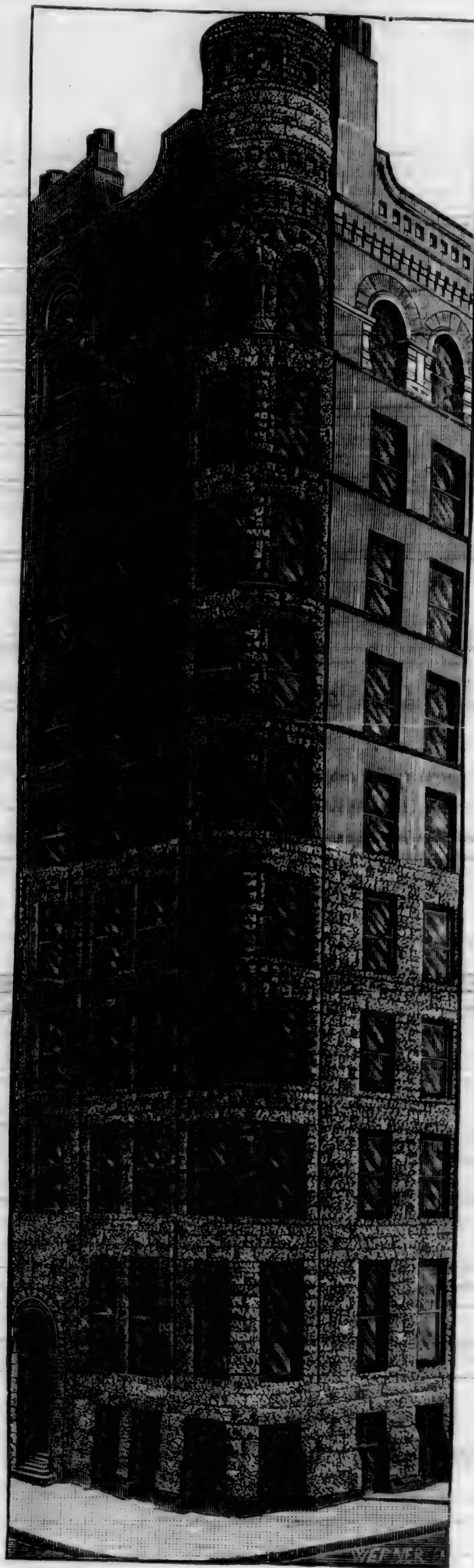
The value and advantages of these Fairs of the Mechanics' Institute to the Community and State is now unquestioned, as they disseminate information, and bring to the eyes and judgment of visitors the advancement, superiority and variety of the manufactures and products produced here.

A vast influx of desirable immigration may be expected to this State in the near future, owing to the great efforts lately made to illustrate our natural advantages, and the eyes and hearts of thousands of our fellow men eastward are longing for the west, and when they arrive, naturally go to these Expositions to examine for themselves what has been done and judge what may be accomplished.

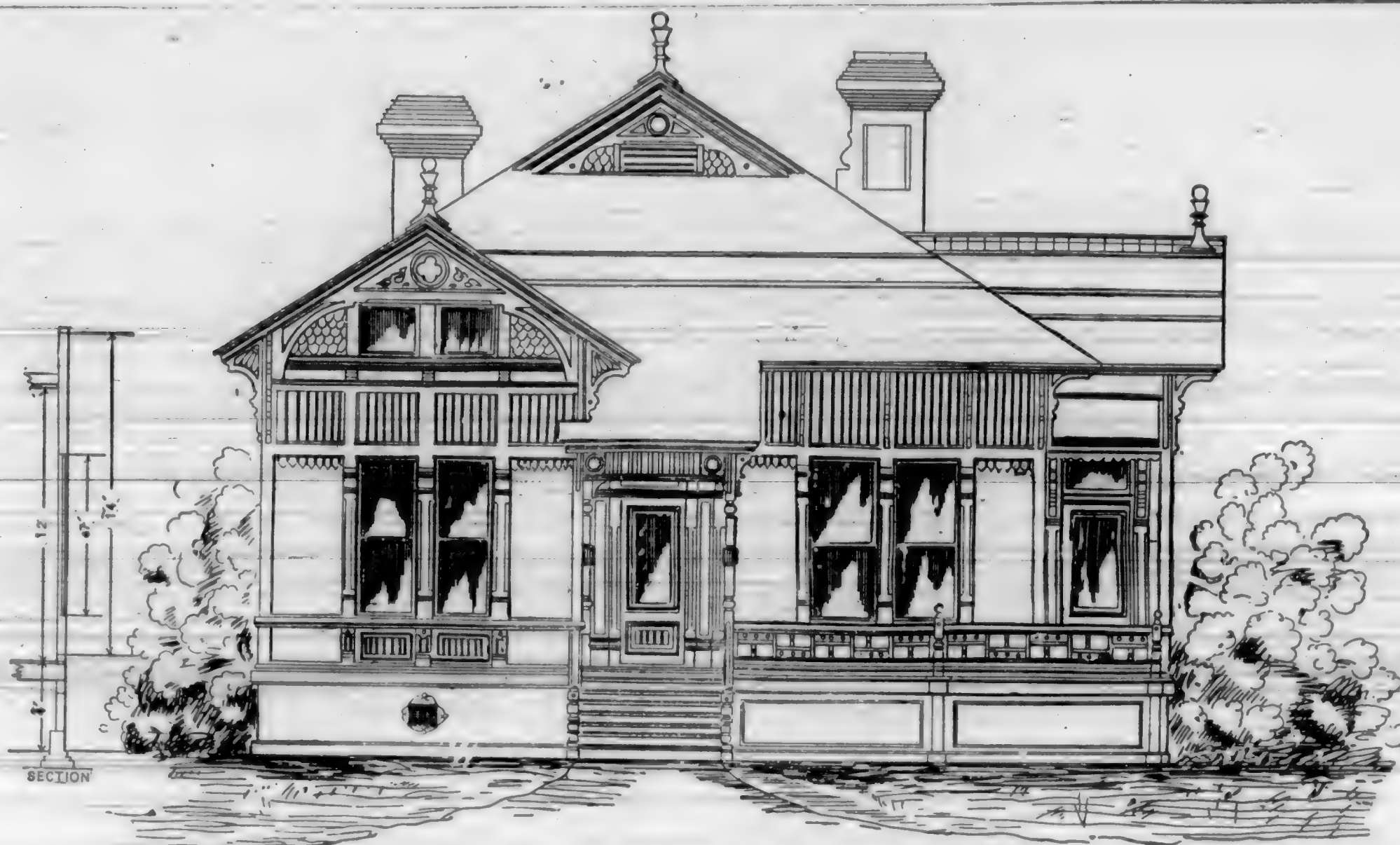
You are earnestly requested to give the matter attention, as the managers greatly desire an exhibit from you this year. Aside from direct personal benefit, any one who places or exhibits specimens of his or her handiwork, does something that tends to establish an enlightened and prosperous population, extend practical knowledge, excite emulation, and add something to the greatness of the State, and benefit to the community.

A carefully revised Premium List is being prepared, and, with the Rules and Regulations, will be ready for distribution at an early day.

Any desired information will be promptly sent or given on application to the Assistant Secretary, No. 31 Post street



In our January issue we inadvertently made use of a wrong word in our description of the cuts presented. Only a word, and yet it caused quite a misunderstanding. We said, "the cuts were designed by C. Bryant Schaefer." We should have said *sketched* instead of *designed*. Plate 11, illustrating the "Old Colonial Style" was prepared by Mr. Schaefer expressly for the *CALIFORNIA ARCHITECT*. The others, for which credit is given to the gentleman named, should have read—sketched from the originals for presentation in this Journal. We are exceedingly sorry for the blunder made, and cheerfully, as far as in our power, release the gentleman named from any complicity in the matter. It was solely and wholly our own fault.



"TIBURON." Front Elevation of a One Story Cottage.

Present State of the Lumber Trade.

Building in the city is more than fairly active for this season of the year. As a rule, activities in the building line in the various counties of the State are in a forward condition. While the erection of buildings in the southern part of the State received a severe set back last year, we are pleased to note there is a partial recovery and many new engagements are being made.

The price of lumber has been raised and we now quote rough pine \$16 per M; 1x6 flooring \$28 per M; 1x4 flooring \$30 per M; rustic No. 1, \$35 per M; surfaced, No. 1, \$30; rough redwood \$18 per M.

The above rates are none too high. This journal has always advocated the price of \$18 per M, as being a just and equitable one to mill men and those who use their manufactures. Even this price may be subject to a small advance during the very busy parts of the year, when wages are abnormally high in all branches of trade.

But we will enter our protest against the unusual high standard of rates adopted last year being again enacted the present season. Should another boom strike any portion of the State, and the residents thereof desire an unusual quantity of lumber in an unusual short time, we are perfectly willing that they be permitted to pay for such unusual quantity. As the demand, however, in this city is a steady one, we think prices ought to correspond, and we see of no reason why the prices of lumber should vary to any considerable extent from those quoted above.

Ventilation of Public Buildings.

The question of ventilation has always been a serious one with architects. No matter how cold it may be, a proper amount of fresh air is absolutely necessary. The colder it is, the more fires it is necessary to have, and the more demand is made on the oxygen in the air in the room. So in a school house; hundreds of little bodies must have air to breathe, and yet must not have that air introduced in such a manner as to cause sneezing fits, colds in the heads, and all those little ills that come to those who sit in a draught. ABRAHAMSON'S VENTILATORS are the one thing needful to remedy the above defect. By their use, one can sit in a room, and no matter how loud the winds may howl, can breathe all the fresh air necessary, with no danger of catching cold. Try them in one window and you would soon order your whole house to be thoroughly equipped with them throughout.

New Plans Adopted.

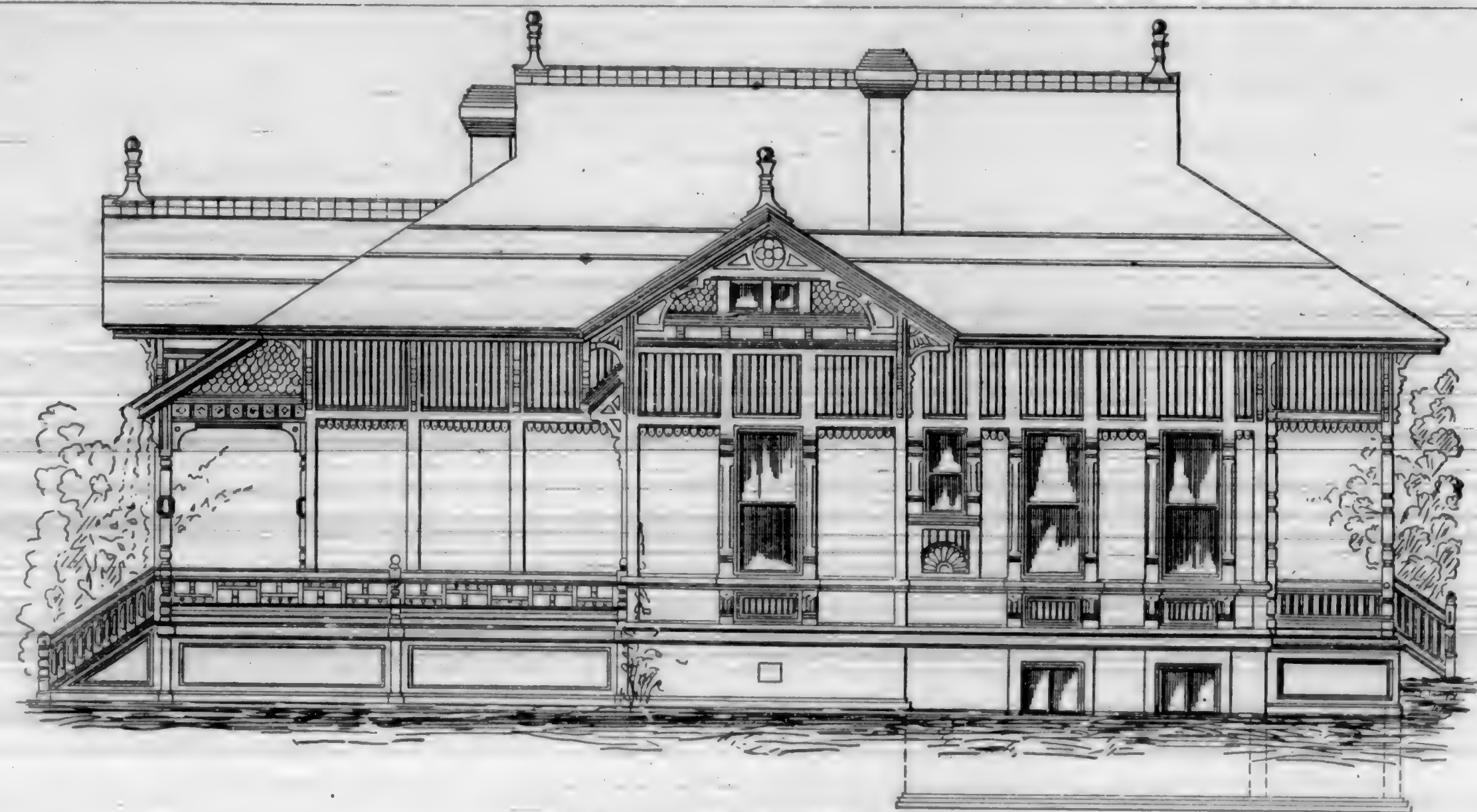
The Trustees of the Lick Baths have accepted plans for a building prepared by architects Wright & Sanders to be erected on the lot corner of Howard and Tenth streets. This lot is 113 x 220, and cost \$38,000.

The new building will cover a portion of the lot, having a frontage of seventy-six feet and a depth of 220 feet, leaving the remainder of the lot for the present unoccupied. The designs show a one-story stone building, with a dividing hall near the Howard street end of the lot. In the rear of the building there will be a high tank tower, and still further to the rear of the lot an engine-house and chimney. There will at present be only tub baths, the idea being at a later period to build a plunge bath on the remaining portion of the lot. On the right and left of the wide entrance, waiting rooms are to be provided, and behind them the baths. The remaining length of the hall between the two sets of baths will be divided into laundry and drying rooms, as well as a kitchen and apartment for attendants. The new structure will be perfectly fire-proof, the bath-tub walls being built of cement bricks, and the floors tiled throughout.

Admission of Air to Rooms.

AIR should be introduced and removed at those parts of the room where it would not cause a sensible draught. Air flowing against the body at, or even somewhat above the temperature of the air of the room will cause an inconvenient draft, from the fact that, as it removes the moisture of the body, it causes evaporation or a sensation of cold. Air should never, as a rule, be introduced at or close to the floor level. The opening would be liable to be fouled with sweepings and dirt. The air unless very much above the temperature of the air of the room, would produce a sensation of cold to the feet. It may be regarded as an axiom in ventilating and warming that the feet should be kept warm and the head kept cool.

The orifices at which air is admitted should be above the level of the heads of persons occupying the room. The current of inflowing air should be directed toward the ceiling, and should either be as much subdivided as possible by means of numerous orifices, or be admitted through conical openings, with the smaller opening toward the outer air and the larger openings toward the room, by which means the air of the entering current is very rapidly dispersed. Air admitted near the ceiling very soon ceases to exist as a distinct current, and will be found at a very short distance from the inlet to have mingled with the general mass of the air, and to have attained the temperature of the room, partly owing to the larger mass of air in the room with which the inflowing current mingles, partly to the action of gravity in cases where the inflowing air is colder than the air in the room.



Side Elevation of "TIBURON" Cottage

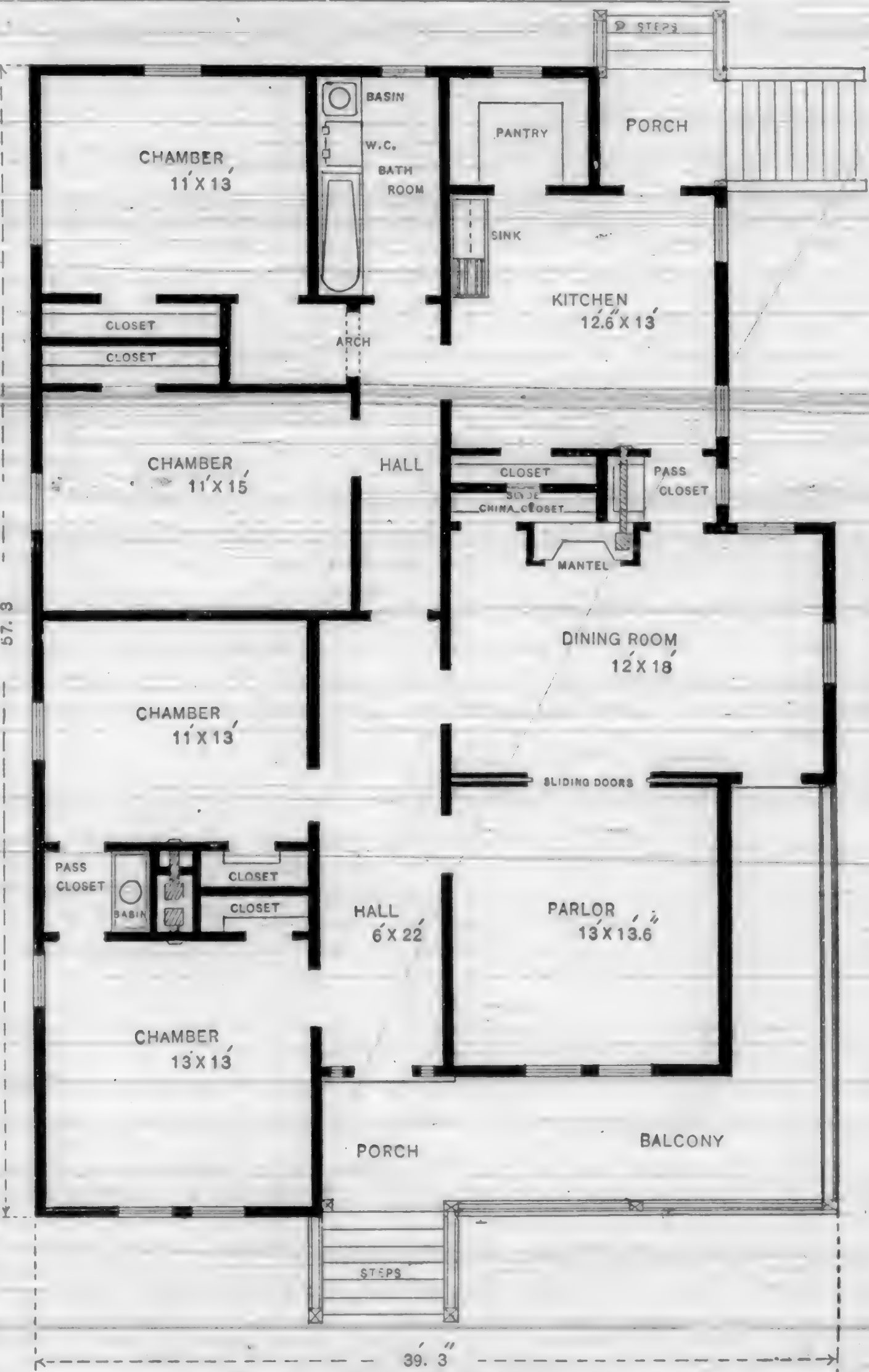
The Lumber Dealers' Exchange.

In 1881, the California Lumber Exchange was organized by the Retailers of lumber in San Francisco. Its fortunes were varied, as the lumber trade has varied in the years past, and when the fall in prices last fall startled the whole community the California Lumber Exchange disbanded, and became a thing of the past. But the dealers in lumber did not despair, and in October last the Lumber Dealers' Exchange was organized, and the following firms became members: Blyth & Trott, Mission and Spear streets; Kennedy & Shaw Lumber Co., 840 Fourth street; Christenson & Lord, 24 Tenth street; Doe, Chas. F. & Co., Spear and Howard street; Engle & Son, Filmore street wharf; Humboldt Lumber & Mill Co., 727 Bryant street; Hooper, C. A. & Co., Fourth and Channel streets; Hill & Co., 237 Berry street; Harris & Jones, 838 Bryant street; Kruse, J. H., Mission and Shotwell streets; Kentfield, J. & Co., 318 Stuart; Kelly, Hare & Co., Eleventh and Railroad avenue; Lewis & Swift, 215 Spear street; Little & Knowles Lumber Co., Mission and Main streets; C. E. Pillsbury, 2735 Mission street; Morrison, G. H., 575 Brannan street; Preston & McKinnon, Pier No. 5, Steuart street; S. H. Harmon Lumber Co., 316 Steuart street; Pattridge R. K., 128 Steuart street; Starbird & Goldstone, 101 Market street; Simpson Lumber Co., 48 Market street; Smith, G. F. & Co., Pier No. 9, Steuart street; San Francisco Lumber Co., Pier No. 12, Steuart street; Wesson, J. W., Pier No. 19, Steuart street; Asmussen Geo., 2813 Mission street; Slade S. E. & Co., Pier No. 14, Steuart street. At their first meeting, Col. W. C. Little was elected President; R. K. Patridge Vice-President; J. J. McKinnon, Treasurer, and F. E. Preble, Secretary.

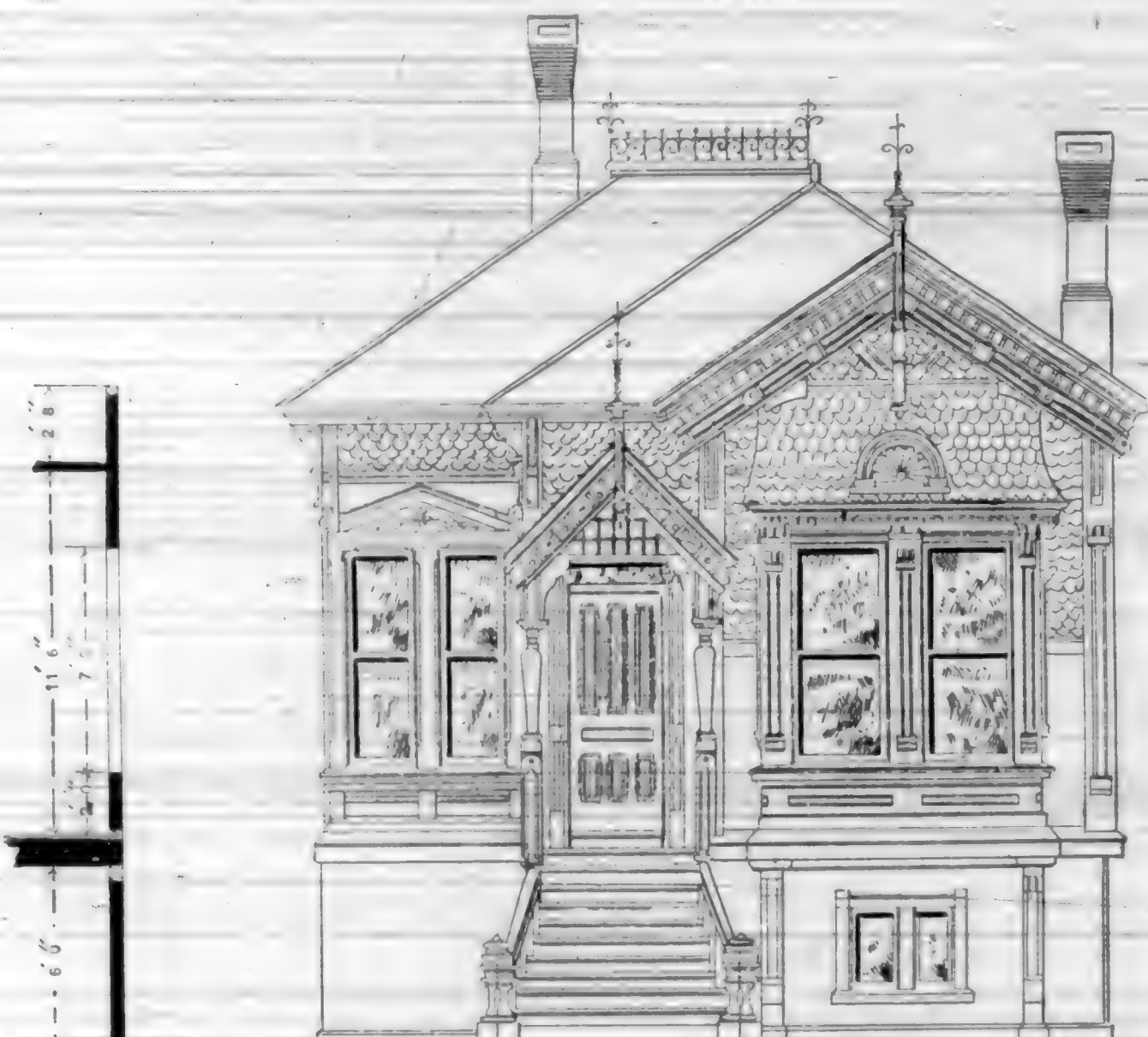
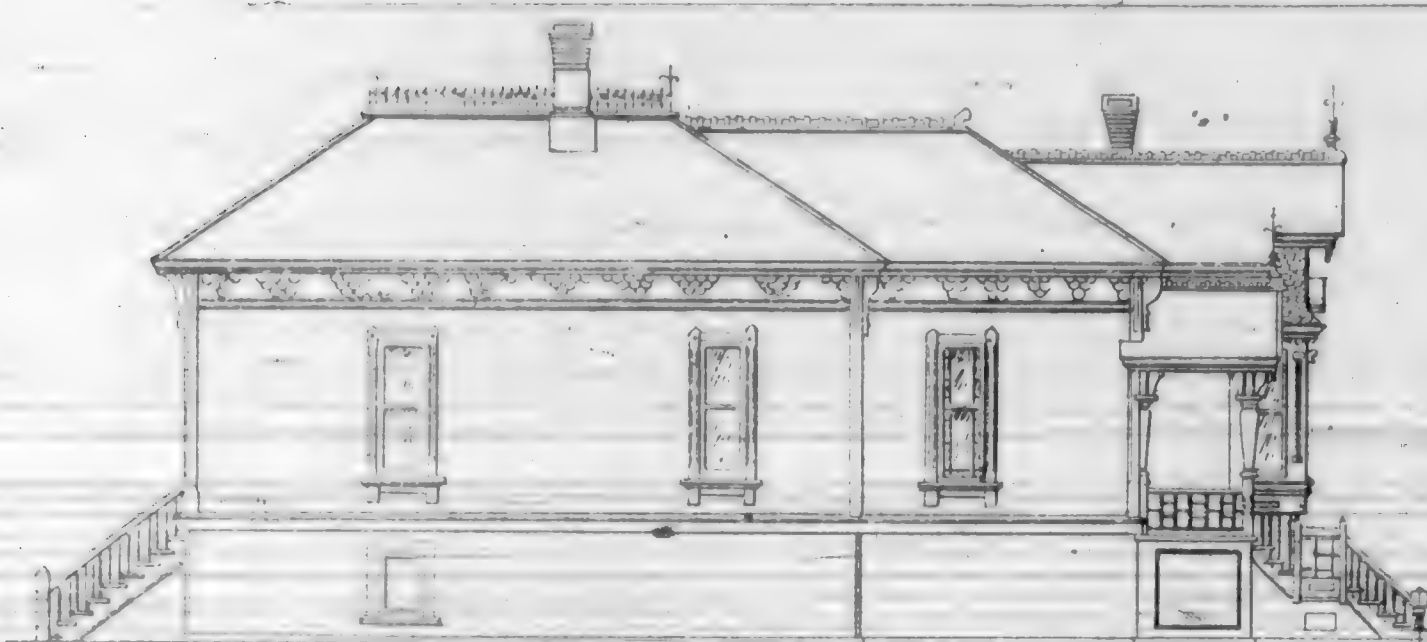
This association consists of the largest and most extensive dealers on the coast and the capital represented extends into the millions.

Brick Residences Should be Painted.

Statistics show that people live longer in brick houses than in stone, and that wooden houses are the healthiest. This suggests the idea of using paint on masonry. An authority states that a hundred years ago it was fashionable to paint brick buildings white, and many charming old structures remain to attest the value of the coat of paint in preserving the masonry, and its pleasant, homelike effect is a foil to the vines and shrubs with which even city houses are now commonly adorned. If it should prove, as might be easily ascertained, that the painted brick houses preserve their inhabitants more effectually from sickness and premature death than the unpainted ones, it would be worth while to revive the ancient fashion, and with our greater resources in the way of materials and ideas, exterior coloring might become as important an accessory to the architecture of the twentieth century as it was to that of the twelfth or thirteenth.



Plan of "TIBURON" Cottage.



"PRECITA." Front and Side Elevation of Suburban Cottage.

Photography in the Draughting Room.

H. T. BESTOR.
No. 1.

THE time is not far distant when every well appointed architectural draughting room will have a full apparatus and facilities for the reproduction of drawings by the aid of photography.

Some of the processes in use are comparatively inexpensive and easily worked; the more complicated formulas being more economical than the old method of tracing.

Singular as it may seem, the first attempts to utilize the action of light in the formation of pictures was for the purpose of making copies of line drawings and writings.

It was not long before the possibilities of the art had become so extended that the experimentalists of that period diverged into two main lines or branches, each with a definite object in view.

One set of experimentalists followed the original course, and endeavored to perfect the methods for the reproduction of drawings, more especially for the purposes of the engraver and etcher.

The result being that almost every class of engraving has profited by the use of the art.

The other branch of experimentalists worked with the desire to produce and fix the pictures from nature with all the gradations of light and shade, and to print the same, retaining the delicate half lights and shades.

That this was also successful may be seen in portraiture and views.

The "blue print" and some other process for making duplicate drawings, lay dormant for thirty or more years and then resumed.

In certain instances where processes were declared of no practical utility, they have been improved upon and made practical.

In some of the methods in use, the operator can procure paper already prepared, which is very convenient, but it is often useful to know how to prepare it when required.

Some of the processes tried during the earlier periods of the art as curiosities, are now being revised and experimented with by capable persons, and one in particular, the platinum, may be the process of the future.

Nearly all photographic formulas and instructions are based upon the supposition that the reader has already attained to some knowledge of the subject.

The object of these articles will be for the instruction of those who do not know. Even at the risk of being tedious the various manipulations and modifications required for office work will be described in detail.

Not a ray of sunlight can fall without modifying the structure and properties of the substances exposed to its action, and under certain conditions appears to impart to bodies some power by which they more readily enter into chemical combination with others.

Surfaces prepared in a manner to hasten their mutual reactions under the influence of light are termed sensitive or sensitized.

The science and art of photography deals with such changes for the production of pictures.

Such being the case, we will first consider the light, its quality and intensity being of the utmost importance.

The theory of optics will be considered only in relation to the subject before us.

The theory is that the blue or violet, and of the spectrum has the most intense actinic influence, a red or even a yellow light being used to light the "dark room," with the introduction of bromide, sensitive surfaces it was found that the yellow did not sufficiently retrain the actinic rays, and red lights were substituted for the yellow. Recently surfaces have been prepared, which are sensitive to the influence of both yellow and red rays, as red light does not afford the necessary protection, the question remains unanswered, how to light the dark room?

Heat hastens chemical action, therefore, it is not improbable that the red or heat rays assist in the chemical reactions under the influence of light.

Some have advised that the printing should be done under blue glass—no particular advantage appears by so doing.

For camera work and for printing, where the more delicate half lights and shades are to be brought out, the light may be graded to suit the work in hand.

For most printing from line drawings, a full strong sunlight is best, and in all cases the rays of light should strike the glass perpendicular to its face.

When the drawing is made upon paper, the light will work under the lines and mar the effect, more especially when the light falls obliquely upon the glass.

For blue prints, the best effects are produced by strong, direct sunlight, when the drawing is made upon paper unprepared. Indirect light is unreliable, when the drawing is on linen, or on paper made very translucent; an indirect light, as from the sky in an area may give fair results.

When such conditions exist, or when any combination of circumstances interfere with the direct rays of the sun, a series of experiments should be made, noting the time of day, appearance of the sky, whether clear or cloudy, how the light appears upon any surface which may reflect upon the work, noting at the same time the material upon which the drawing is made.

These experiments should be noted in a small book kept for the purpose, and hanging against the wall near the printing window.

In experiments to ascertain the proper time of exposure for printing, the following method will be found useful:

Take strips of the different materials used for the drawings, and make a few lines upon the face with the same ink as is used for the drawing; put these strips in the printing frame properly, set to strips of sensitive paper as used; expose in whatever light available, say, five minutes, then cover a portion of each strip with a heavy cardboard; expose five minutes longer, then slide the cardboard so as to cover another portion; continue these partial exposures till half an hour or so has passed; then remove from the frame, wash and fix.

It will be seen at once, what exposure to make, under existing circumstances.

If the chloro bromide process is worked, diffused light is to be preferred; in fact, it requires a few seconds only by gaslight.

It will be seen by the foregoing remarks, that whatever the conditions may be as regards light, some process can be worked even with gas or candle light.

Architecture as a Profession.

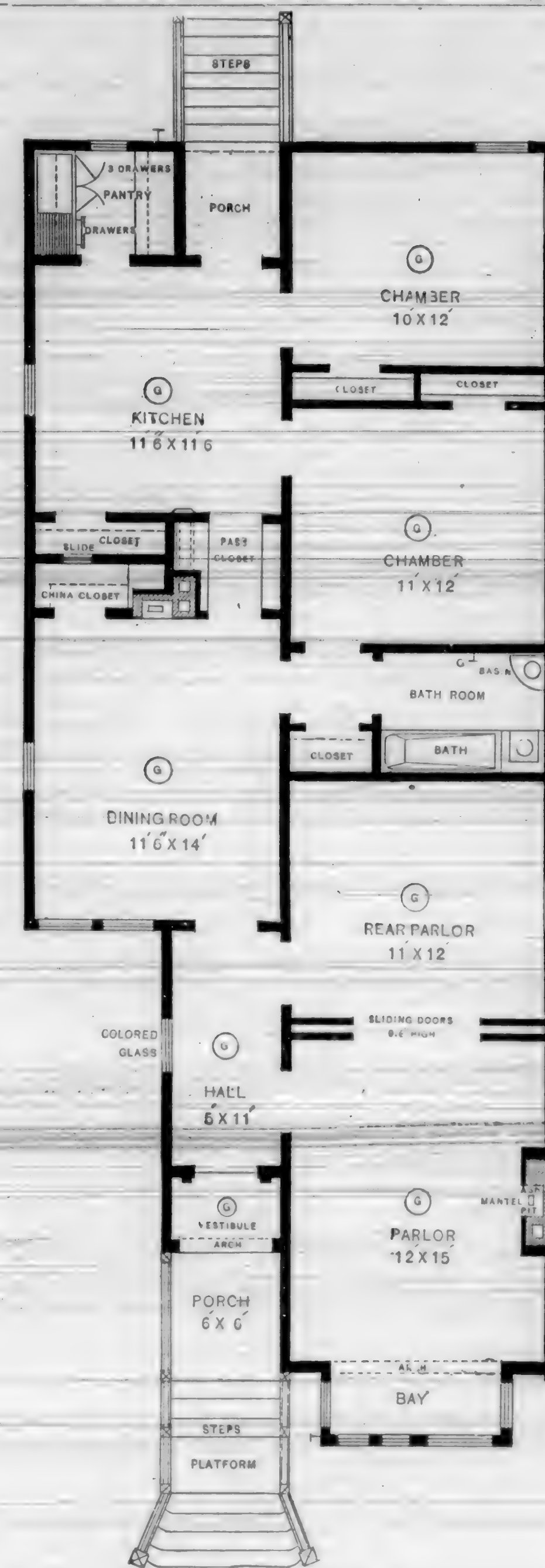
ONLY eagles and reptiles can attain to very high places, was the epigram of the witty Frenchwoman who in her day was also confronted with the idea contained in the saying, "There is plenty of room at the top." This, says the *Building Budget*, is perhaps the most grimly oracular remark ever uttered and misunderstood by the young, in whose bright lexicon there is no such word as fail, and has undoubtedly caused more heart breakings over misapplied lives than can be even approximately estimated. All professions are crowded with men, who dazzled by the prizes of wealth and fame, gained sometimes at a sacrifice of everything that makes life enjoyable, still struggle blindly on, though every one but themselves can see that they are forever doomed to disappointment. The only profession, if it may be so called, in which a man at once realizes his unfitness is that of the prize fighter. In this country there is one frequent cause of failure, viz., the short time which is requisite for a man to obtain a smattering of law, medicine, architecture, etc., so that a young man is everything by turns and nothing long, and after spending considerable good material, say for an architect, and just as he is really becoming of some use, thinks that the law or medicine is his forte or else thinks himself capable of setting up as a full-fledged architect, to the damage of the profession in general.

A youth wishing to become an architect in England has first to find a vacancy for an articled pupil in the office of some first-class architect, to whom his parents and guardians pay a premium, sometimes as high as five thousand dollars, and agree that the boy shall do all that may be considered as lawfully pertaining to the business of an architect, at the command of his employer, for the space of five years, frequently without any compensation whatever, excepting the use of the library, etc., found in all the important offices. During this time he has to support and clothe himself in the manner becoming a professional man, and accustom himself to doing whatever he is told without question. Knowing that at the end of his term he will have invested five of the most valuable years of his life, as well as several thousand dollars, he is naturally impelled to be diligent and to profit all he can by what he sees, hears, and reads—knowing that, if he does not, he will never reimburse himself for his outlay, and also that he cannot enter any other profession except at an equal expense of time and money, and that after a few years he will be considered to old to begin anything. This system has its advantages as well as its disadvantages. One advantage is that it renders a parent very careful to find out as far as possible if the bent of the boy is well defined, otherwise, at the end of the time, it will be so much thrown away.

The disadvantage is that an idle pupil who does not care to improve his opportunities goes away at the end of his apprenticeship, and throws, to a certain extent, discredit upon the office where he was supposed to have studied. English architects have become so impressed with this fact that many of them openly advocate the entire abolition of articled pupils, and prefer the encouragement of technical schools, where the old motto over the college door will be strictly enforced, "Learn or depart." America, in this respect, as in many others, has the advantage of profiting by the experience of the old world, and never having adopted the articled clerk system, now that it has proved unsatisfactory after years of trial, can, untrammelled by tradition, bend her attention to fostering those very technical schools which she already possesses, and which are advocated as a remedy for the evils of the older system by those who were once its strongest supporters.

Hints to Mechanics.

IN hanging a number of doors which are of the same size, the time expended upon measuring the correct position of the hinges may be saved in a very simple manner, which is as follows: Take a lath and mark upon the top and bottom, the exact position where the hinges should come; drive in at these marks sharp pointed brads, and you have a gauge which may be used in hanging all doors of the same size. In using it all that is necessary is to place it against the edge of the door with the top of the lath on the level with the top of the door, give it a sharp tap of the hand, when the brads will mark the exact position of the hinges. The same gauge lath may be used in marking out the position of the hinges of the style of the door frame, excepting that a nail should be driven in the bottom of it, so that there may be sufficient room left at the bottom to allow proper play of the door; the use of a gauge lath in the case referred to, is an example of its use. It is of equal utility in hanging many other pieces, such for instance, as inside and outside blinds, shutters, etc.



Plan of "PRECITA."

Highly Interesting.

"A TIN ROOF" is the title of a little book just issued by Messrs. Merchant & Co., 517 Arch street, Philadelphia. The purpose of the publication is to supply to builders, architects and the general public some exact information as to the best methods of constructing a tin roof and as to the right materials to be used to secure satisfactory and permanent results. We especially recommend the book, which is intended for gratuitous distribution, to mill-owners. They are very apt to entrust the matter of roofing wholly to builders and they usually know really very little about the character of the tin used or the excellence or defectiveness of the job. This pamphlet will help them to protect their interests. It is very explicit, perfectly comprehensible, and we think wholly trustworthy. It is quite profusely illustrated and the cuts indicate processes of applying tin roofing which insure excellence.

Why Two Saws That Are Alike do not Always Run Alike.

BY "SUPERINTENDENT."

TAKE two saws from the same maker that are alike in size, gauge, speed, feed and hammering, and running in the same kind of timber. One saw works well when often the other will not work at all. They, being alike, should certainly run near enough alike that neither should be condemned. What can be the trouble? To take the theory of some saw makers, we cannot get out of the trouble, they claiming that no two saws can be made to run alike, same size, etc. We take it for granted that they allow us the discrimination, or the assertion would not be made; so, where we find that two saws do not run alike, there is a vast difference in the saws somewhere. When we take into consideration temper, teeth, etc., we find often why two saws made to run alike do not. We hear a great deal said about more teeth, the ones being set forth claiming the more teeth the saw has, the more feed it can stand, and make better lumber. To show how a great many are thus deceived when certain conditions are not considered. I know of a man who has a good mill, making good lumber, running on four-foot feed in pine. This idea of teeth struck him and he concluded to increase his capacity by adding more teeth. He made an allowance in his estimation of how much more he could cut, and cut the allowance in half. He was running fifty teeth in the saw, but concluded to order ninety teeth. He ordered of the same saw maker, and the saw came, hammered to speed. It was tried. It wouldn't go straight. Several trials were made, but the saw heated so badly on the rim that it was impossible to run it. So it was sent back to the saw maker and he couldn't tell why the saw did not go. The trouble was the saw had too many teeth, and the feed (four-inch) was not sufficient for each tooth to cut a chip but cut, or rather scraped the dust so fine that it escaped on each side of the throat of the teeth, and binding between saw and board, heated the saw. If the saw could have had the feed increased to eight inches it would have worked well. Both saws were alike. One run well; the other would not run at all. But, says one, they were not alike, one having forty teeth more than the other. We will then take them of the same number of teeth, speed, feed, gauge, timber, etc., hammered alike, and yet, one saw will run well and the other will not, one being of a milder temper than the other. The milder temper is soon condemned, the higher temper running well. The trouble is this: The milder temper expands more from centrifugal force, and from the start it is weaker on the rim and soon lets down; the higher temper remaining more firm, has slightly changed in its adjustment. The other is laid aside or sent back to the saw maker. The mill man is impressed that saw making is a kind of guess work, and that occasionally they make a good one. I am not claiming the high temper to be the best of the two.

When certain things are taken into consideration, the milder temper might have suited him best; speed might have been high enough to crack the higher temper, then the milder temper would have been the best saw. Two saws can be made to run exactly alike even when there is a slight difference in the temper. There are saw makers that claim to make saws to run alike, and so they do.

This little difference in temper is considered something, and the saw is hammered a little more open, and when a man jumps up twice as many teeth on the same saw, the saw maker notifies him that the saw will not work satisfactorily and explains why; and if a saw is sent to him he does not blame the saw maker if it does not go right.

There can be a little more deviation to this teeth business when a man is sawing soft timber, but in hard wood the teeth are confined to a limit. — W. W. Mechanic.

AN American machinist, who went to Japan to put up some machinery, says that the Japanese are excellent workmen and only too faithful copyists. One of them made a pulley pattern from a drawing; and to make sure of having it a solid pulley the draftsman made a wavy line over the center line in the drawing, to indicate, of course, that it was erased. What does the Japanese workman do but make a special saw to cut the pulley in two parts, exactly as indicated by the wavy line!

The Relation of Owners and Builders to Plumbing.

A. D. KEARNS, a St. Louis plumber, has addressed some very sound remarks to one of the city papers, which will make good reading outside of St. Louis, and we take the liberty of reproducing them:

"In order to bring before the public some of the evils that are present at all times with us, it often becomes necessary to open up matters of a personal nature, and ill feelings arise in consequence; yet, the opinion of all, individually and collectively, to a generous, democratic mind, should not encounter this biased feeling, where the object to be attained is for the good of the public, and for the advancement of the city's interests. Although it is a fact that one of the greatest sources of danger from our house drains is by bad workmanship, yet, too often is our worthy plumber censured and condemned for bad work when the real cause of the trouble is found in badly-constructed appliances and poorly-made pipes, which are forced into the market by unscrupulous dealers and jobbers.

"The allied interests of the dealer and plumber have of late years affected a wonderful combination throughout the United States, and so carefully are the lines drawn that this 'combine' works very advantageously for the people in many ways. Still, competition, sharp and unscrupulous, has been the means of forcing strict honesty out of the market, and we find miserable substitutes for what once were reliable and perfect appliances. It is to the use of such goods that our poorer people owe so much misery and sorrow.

"That the manufacturers of such goods are not wholly to blame for the deplorable state of such things can be argued from the fact that our wealthy capitalists and our builders, in the endeavor to cheapen their work, often neglect the needs of the plumbing system, put more money into embellishments that 'catch' the eye of the ignorant.

"This same cause of complaint can be charged to many of our best architects, and too often it has been said of our noble homes that 'they are beautiful sepulchres.' Why this condition of things should go on is a question of serious importance to us all. To whom is the blame due?

"The public need homes. Knowing this, capitalists, in the hope of gain erect these homes. Should not these wealthy speculators be responsible for the construction of the houses they build? It would appear so.

"The difference in the cost of a good system of plumbing, with safe, reliable appliances and materials is not very greatly in excess of a like system with poor fixtures and poor piping. The work of the plumber is precisely the same. In the end the poorer materials will cost far more than the good ones, for repairs are always necessary, while a perfect system, with good care, will last as long as the house of which it is a part.

"The remedy, then, of our trouble lies with the owners and builders of our homes, and it becomes their duty and is to their benefit to make our houses what they should be—safe, secure, and clean in so far as they are able. In return for money spent in a good, safe plumbing system, it is not extravagant to say such good results will come by reason of our healthier, happy homes, that the time is not far off when cheap, miserable, filthy retaining appliances, now so generally used, will be discarded.

"Our capitalists, householders and our builders should take all possible precautions and care with the house drain. The material for piping should be extra heavy cast-iron piping, free from defects such as sand-holes or improper casting. The whole piping system should be carefully tested by the hydraulic or water test, and inspected carefully in every part to note the minute leaks that sometimes escape notice. The appliances such as closets, basins, etc., should be of earthenware, and free from all concealed and filthy collecting parts. Each fixture should have a trap which should be self-cleaning and non-siphonable. All outlets from sink, basin or closets should be so constructed that the waste-pipe be filled "full bore" while in operation in order to insure thorough flushing. The entire system must be simple, well at top and bottom, and when all the fixtures have been attached the peppermint test will show the merits or demerits of the joints.

"Thus, with conscientious builders and careful plumbers the house-drainage system will soon prove a more profitable investment to the householder and owner, and in return for the money spent will come clean, well-ventilated and happy homes not only to the poor and lowly, but to the rich and prosperous, who now suffer like the poor from old and wretched appliances."

THE "WILLER" SLIDING BLINDS.

THE "Willer" Sliding Blinds, manufactured by William Willer, Milwaukee, Wis., have been in the market but a few years, but in that short period they have become so generally known amongst architects, builders, and the building public in general, that a detailed description of them here is unnecessary. The catalogue shows some 20 different classes or 20 distinctly different ways of arranging these blinds in the windows. For illustration we select Class E, this class being universally used for buildings of medium cost, on account of its simple construction and moderate price. This class consists of three separate sections of blinds, covering the entire window, and running in a guideway containing three grooves, one for each section of blind, all within the space of the window-opening, no pockets being employed at the bottom or top of the window.



Class E. Three Sections to the Window.
No Pockets.

The other classes in the catalogue show windows fitted with blinds of two, four and six sections, without pockets and with pockets at either the bottom, top or both ends of the window.

The "Willer" Blinds have rolling slats of a new construction throughout all sections, or in as many divisions of the blinds as may be desired; the springs are of the latest pattern, and the only springs adapted to hold the blinds in place. The blinds are handsomely trimmed with full sets of hardware, finger-plates, drop-handles and lifts, in Berlin or Genuine Bronze. Each set of blinds is finished complete, varnished, rubbed and polished as desired, and when fitted to the window is ready for use.

The "Willer" Blinds on account of their superior quality and merit, and their adaptability to windows of every description, have been selected

in preference to all others and accorded the first rank in all parts of the country. They are now being placed in the residence of the widow of the late Emil Schandeln, Vice-President of the Philip Best Brewing Co., of Milwaukee, erected at a cost of over \$300,000. Mr. Schandeln had examined all forms of Inside Blinds, and had given these the preference over all the others.

A public school house in Denver, Col., has lately been fitted with these blinds, the total order for the purpose amounting to nearly \$6,000.

award, made to any exhibitor of Sliding Blinds, and although there were others on exhibition, none of these has received any award, diploma or medal whatever. In their report the jury said: "awarded on account of excellent workmanship," etc. We print herewith an illustration of the Willer exhibit at the above Exposition, taken from a photograph; also a fac simile of the medal.

The firm employ a force of 150 men, of whom 110 are employed exclusively in the manufacture of these blinds. Their sales of their blinds for 1888 amount to over \$100,000. The blinds are in use in all parts of the country, from Maine to California and Manitoba to Texas. Over \$10,000 worth have been sold in Canada alone.

The firm will send their No. 8 Catalogue of 1888, free of charge to any architect or builder, etc., upon application.

They have now in press their new catalogue of 1889-1890, which will be issued about May, 1889, and from an advance description we have received from the same, it will be the most artistic and complete catalogue of its kind in the country.

They also make a specialty of fine stair work, of which line they will issue a separate catalogue in the spring.

Mr. Willer is introducing these blinds all over the Pacific Coast, and hundreds of owners can testify to their merits. Mr. G. H. Van Houten has the agency for Oregon; A. W. Young that of Sacramento and northern cities of California; S. E. Baur in Seattle, W. T.; D. D. McDougall in Spokane Falls, W. T. For the present all information for this City can be obtained at the office of this Journal.

Does it Pay to Own a Home?

A GREAT many people go on year after year renting a house in which to live and bring up their families. They move from place to place as the whim seizes them, and of real home life in its best sense, they know nothing. They do not stay long enough in any house to "take root." There are none of the hallowed associations about their domiciles which hang about the "old homestead," and so they go through life, wandering from house to house, and never finding a home until they reach that narrow house which becomes their final resting place.

Ask such a man as this why he does not buy a place and settle down, and he will reply, "Oh, it doesn't pay to own a house in the city." And no amount of persuasion can induce him to change his views. He urges the bugbear of taxes and insurance as a reason for not investing in a home, seemingly oblivious of the fact that his landlord has to pay all these expenses from his rental and still make a comfortable profit.

If the housekeeper would only look into the matter a little more closely, he would quickly ascertain that the only true economy lay in owning his own home. Aside from all the associations connected with the home, it is a money making proposition for a man of family to own his roof-tree.

The average business man who lives in a good locality must pay anywhere from \$50 to \$100 a month rent for a comfortable house. Say that he pays \$75 a month. That means an outlay of \$900 a year, or 10 per cent. on an investment of \$9,000. Every one who rents knows very well that few homes built for renting cost more than half that sum. In the course of ten years the renter will have paid out \$9,000 and have nothing to show for it but a pile of landlord's receipts. In twenty years (and many a man in this city has stood a drain of this size for longer than that,) he will have paid out over \$18,000, with nothing to show for it. And that by no means represents the whole truth. The man, who ten years ago, undertook to buy a house and lot in a good locality worth at that time \$9,000, finds himself to-day, with a property rising, worth from two to four times as much.

The man who exercises common prudence in purchasing a home in San Francisco will not only save the amount which he would have paid out for rent, but in the course of ten years his property will have increased in value by at least as much more.

In the meantime the expense for repairs, taxes and insurance will not possibly have been in the aggregate as much as one-fourth of the amount that would have been paid for rentals.

The home buyer thus, aside from mere considerations of sentiment (which are not to be overlooked by any means,) will find that in buying a home he not only does a really economical thing, but puts himself in a position to reap a large profit where otherwise there would have been a total loss.

The experience of home buyers in San Francisco abundantly bears out this assertion.

Exact Reproduction of the Willer Exhibit at Cincinnati, 1888, taken from a Photograph.

As a further attest to the superior quality of these blinds over all others, the firm has been awarded the Bronze Medal at the late Centennial Exposition, held in Cincinnati, July to November, 1888. This Bronze Medal is the highest and the only

Loggers' Fare in the Woods.

The first requisite necessary to obtain all the work from men of which they are capable, when working in the woods, is to provide an abundance of well cooked food. Second: to provide ample and comfortable sleeping accommodations. Without these two necessities, no man can do a full day's work satisfactory either to himself or his employee. When a man eats a hearty breakfast after a night's restful sleep, he enters upon his day's duties feeling fresh and satisfied, and is ambitious to do his share. Having performed all that is required of him during working hours, he naturally feels like having a rest. By giving the sleeping quarters a home-like appearance, furnishing late papers and magazines, providing a large stove by which the house can be kept warm, many of the visits to the tavern by the cross-roads will be dispensed with. Men who work must have recreation, and when it is provided for in the camp, the small expense attending the same will be more than returned by the extra work done by the men.

We do not think that in any part of the country, men in logging camps are better provided for than they are on this Coast. Manufacturers of lumber vie with each other in having their camp called the model camp. In fact, some of them induce their men to build their own houses near the scene of their daily labor. A school teacher attends to the education of the children. Religious services are held weekly. A doctor is located near by, whose services are gratuitously given to those who work in the camp, the "boss" paying him a stated monthly salary so as to have a physician always near.

All in all, the men who work in the woods on the Pacific Coast are as well fed and as comfortably housed as any working at the same occupation in any part of the globe.



CITY BUILDING NEWS.

Bay and Mason, three-story frame. Owner, Henry Wreden; architect, Henry Geilfuss; contractor, F. Klatt; amount, \$6,930; signed, February 9; filed, February 14. Payments: Framed, \$860; roofed, \$860; partitions set, \$860; brown coated, \$860; white coated, \$860; completed, \$860; \$1,770, 35 days.

Bartlett, near Twenty-Third, repairs. Owner, Hannah Armstrong; architect, M. J. Welsh; contractor, F. Sullivan; cost, \$4,350; signed, Feb. 27; filed, Feb. 27; limit, 70 days; \$1,087.50 framed; \$1,087.50 brown mortar; \$1,087.50 finished; \$1,087.50, 35 days.

Blazome between Fourth and Fifth carpenter work for two-story brick warehouse. Owner, Mrs. M. F. S. Searles; architects, Schulze & Meeker; contractor, Thomas H. Day; cost, \$7,560; signed, Jan. 28; filed, Feb. 7; sureties, C. S. Holmes and C. Hanson; \$2,500 limit; April 15, 1889; \$2,000 gallery joists and second story joists are in position; \$2,116 roof is on and tinned; \$1,548 completed; \$1,890, 35 days.

Blazome between Fourth and Fifth, brick and iron work. Owner, Mrs. M. F. S. Searles; architects, Schulze & Meeker; contractor, Edwin R. Shain; cost, \$5,999; signed, Jan. 28; filed, Feb. 7; sureties, P. Degan and W. C. Dougherty \$2,000; limit May 1, 1889; \$1,772 brick done to underside of second story joists, \$1,128 brick done to underside of ceiling, \$1,599 completed, \$1,500, 35 days.

Bush and Sansome, plumbing. Owner, First National Bank; architect, Wright & Sanders; contractor, Fritz & Kean; amount, \$5,050; signed, January 30, filed, February 14, limit, May 30, 1889. Payments: Installments on first day of each month to value of 75 per cent; balance, 35 days.

Bush street, Nos. 224 and 226, additions. Owner, estate, C. D. O'Sullivan; architects, Chas. J. I. Devlin; amount, \$1,845; signed, Feb. 19; filed, Feb. 21; limit, 30 days; 75 per cent. as work progresses; balance, 25 per cent. when completed.

Buchanan, near Turk, two-story frame; Owner, C. Whelton; architect, M. J. Welsh; contractor, R. Parker; cost, \$3,500; signed, March 1; filed, March 1; limit, 70 days; \$875 framed; \$875 brown coated; \$875 finished; \$875, 35 days.

Bartlett near Twenty-First, two-story frame. Owner, J. W. Williams; architect, M. J. Welsh; contractor, M. C. Lynch; cost \$3,775; signed, Feb. 20; filed, Feb. 23; limit, 65 days; framed, \$943.75; brown coated, \$943.75; completed, \$943.75; 35 days.

Castro corner Nineteenth, addition. Owner, George Dawson; contractor, M. Sherman; cost, \$2,500.

Collingwood and Seventeenth, two two-story frames. Owner, Mr. Gimble; contractor, B. Dryer; cost \$6,000.

Collingwood between Eighteenth and Nineteenth, four one-story frames. Owner, Mr. Schrieber; contractors, Spellman & Son; cost, \$4,000.

California and Octavia, carpenter work. Owner, Clinton Jones; architect, J. H. Littlefield; contractor, R. P. Hurlbut; amount, \$21,500; signed, February 5; filed, February 13; sureties, F. Joost and J. F. Kennedy; limit, June 25, 1889. Payments: 75 per cent. from time to time as work progresses; balance, 25 per cent. in 35 days.

California and Octavia, painting. Owner, Clinton Jones; architect, J. H. Littlefield; contractor, James Larsen; amount, \$1,635; signed, February 5; filed, February 13; surety G. Ammerup; limit, without delay. Payments: 75 per cent as work progresses; balance, 25 per cent in 36 days.

One and all are perfectly welcome to our reading room. We will be pleased to have you call and look over our exchanges. Rooms open from 9 A. M. to 4 P. M.

Our Reading Room.

Our Exchanges.

We have added to our office a large Exchange rack, to which any one, whether they subscribe or not, can have free access. We will be pleased to have you call, as the office is open from 9 A. M. till 4 P. M.

MANUFACTURER AND BUILDER.—This Journal is printed at 83 Nassau street, New York; it is one of the best of its character published. Lately, many new improvements have been made. The new design for the title page is very attractive. We have published many articles taken from its columns, and have always been pleased to credit the Journal from which they were taken.

Brother Gerard, we wish you success, and only hope that soon a ton of paper will be necessary for each issue.

THE ART AGE.—The February number of this Journal presents a pen and ink supplement, entitled: "An Autumn Morning" by Bruce Crane. In addition, there are many designs given of buildings, notably that of the Grolier Club, Chas. W. Romeyn & Co., Architects. The price is but \$2.50 per year.

CANADIAN ARCHITECT.—Our friends across the line are determined not to be outdone, and so present a Journal as well edited and illustrated as many of those in the United States. We heartily congratulate the editor on the greatly improved appearance of his Journal.

California and Octavia, plumbing etc. Owner, Clinton Jones; architect, J. H. Littlefield; contractor, Fritz & Kean; amount, \$2,360; signed, February 5; filed, February 13; sureties, Wm. Little; limit, without delay. Payments: Sewerage completed, \$885; completed, \$885; \$590, 36 days.

California and Gough, two-story building. Owner, Daniel Meyer; architect, Jacob Lenzen & Son; contractor, Peter Crichton; amount, \$19,800; sureties, C. S. Holmes and C. Hanson, \$5,000; filed, February 5; signed, January 31; limit, six months. Payments: First story and joists are on, \$3,000; framed, \$3,000; roof completed, \$3,000; brown coated, \$3,000; completed, \$3,000; \$4,800, 35 days.

Capp, near Twenty-Fourth, one-story building. Owner, Marie S. C. Hundt; architect, S. G. Worden; contractor, S. G. Worden; amount, \$1,660; signed, Feb. 9; filed, Feb. 16; \$160 chimneys built; \$400 floors; laid \$400 completed, \$400 35 days.

California and Octavia, excavations and brick work of six dwellings. Owner, Clinton Jones; architect, J. H. Littlefield; contractor, James O'Sullivan; amount, \$2,675; signed, January 5; filed, February 13; sureties John Hammond; limit, without delay. Payments: 75 per cent. from time to time as work progresses; balance, 25 per cent, 36 days.

Devisadero, near Ridley, two story frame. Owner, H. E. F. Williams; architect, M. J. Welsh; contractor, A. J. Ahren; amount, \$3,808; signed, Feb. 20; filed, Feb. 27; limit, 90 days; \$952 framed; \$952 brown coated; \$952 completed; \$952 35 days.

Devisadero, near Ridley, two-story frame. Owner, H. E. F. Williams; architect, M. J. Welsh; contractor, A. J. Ahren; cost, \$3,880; signed, Feb. 20; filed, Feb. 28; sureties, W. A. Meeker, \$1,000; limit 90 days; \$970 framed; \$970 brown mortar; \$970 finished; \$970, 35 days.

MARCH 15, 1889.]

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

41

Elgin Park, near Ridley, two-story and basement frame. Owner, Wm. Becker; architect, Bernard Dreyer; cost, \$3,300; signed, March 2; filed, March 2; limit, June 1, 1889; framed, \$825; brown mortar, \$825; white mortar, \$825, 35 days.

Ellis street, No. 321, without delay, plastering. Owner, Wm. Wolfe; architects, Salfeld & Kohlberg; contractors, C. C. Morehouse; amount, \$1,175; signed, Feb. 6; filed, Feb. 11; sureties, John T. Grant, \$1,175; \$500 brown coated; \$375 completed; \$300 35 days.

Eight and Clementina. Owner, Leopold Jusic and wife; architect, O. E. White; contractor, O. E. White; cost, \$4,459; signed, Feb. 4; filed, Feb. 7; sureties, Chas. F. and Frank P. Doe \$2,000; limit 60 days; \$1,000 enclosed; \$1,344 brown coated; \$1,000 completed; \$1,115, 35 days.

Eighteenth, near Dolores, two-story building. Owner, Michl. Kane; architect, Chas. J. Devlin; contractor, A. A. Willis; cost, \$4,340; signed, Feb. 21; filed, Feb. 25; sureties, C. S. Holmes and Behrend Joost; \$3,000 limit, 90 days; \$500 framed; \$600 roofed; \$640 brown coated; \$500 plastered; \$700 ready to paint; \$215 completed; \$1,085, 35 days.

Eureka near Eighteenth, one-story frame. Julius Haug; contractor, August Discher; amount, \$1,500; signed, February 15; filed, February 21; limit, 90 days. Payments: Framed, \$375; first coat of plaster on, \$375; completed, \$375; \$375, 35 days.

Ellis, No. 321, without delay, excavations. Owner, Wm. Wolfe; architects, Salfeld & Kohlberg; contractor, Patrick Fitzsimmons; amount, \$695; signed, February 8; filed, February 13. Payments: Foundations in, \$300; completed \$395.

Ellis, No. 321, carpenter work. Owner, Wm. Wolfe; architects, Salfeld & Kohlberg; contractor, Henry Rohling; amount, \$6,450; signed, February 8; filed, February 13; sureties, J. J. McKinnon and F. Joost; limit, 90 days. Payments: Framed, \$700; roofed, \$1,200; inside finish on \$1,100; completed, \$1,830; \$1,620, 35 days.

Ellis street, No. 321, plumbing, etc. Owner, Wm. Wolfe; architects, Salfeld & Kohlberg; contractors, L. Ickelheimer & Bros; amount, \$1,175; signed, Feb. 9; filed, Feb. 13; limit, without delay; \$400 rough work done; \$475 completed; \$300 35 days.

Fulton and Scott, building. Owner, W. West-erfeld; architect, H. Geilfuss; contractors, Schmitt & Kreeker; cost, \$9,985; signed, Feb. 25; filed, Feb. 26; \$1,250 framed; \$1,250 roofed; \$1,250 partitions set; \$1,250 outside finish is on; \$1,250 inside finish is on; \$1,235 completed; \$2,500, 35 days.

Fifteenth, near Church, one-story frame. Owner, Wm. Nicol; architect, H. T. Bestor; contractor, Wm. J. Peters; amount, \$1,800; signed, Feb. 15; filed, Feb. 15; \$300 rustic on; \$300 brown coated; \$400 glass and sash on; \$350 completed; \$450, 35 days.

Folsom, between Tenth and Eleventh, three-story frame. Owner, Cal. Medical College Building Association; architect, John J. Clark; contractor, R. O. Chandler; cost, \$11,995; signed, Feb. 9; filed, March 1; limit, 120 days; \$2,375 framed; \$2,375 partitions set; \$2,370 inside finish is complete; \$4,875, 35 days.

Filbert near Powell, frame building. Owner, Carlo Casassa; architect, Wm. Mooser; contractor, G. Damkroeger; amount, \$4,100; signed, Feb. 8; filed, Feb. 11; sureties, Herman Mattern and W. J. Trott; limit, 90 days; 75 per cent. as work progresses; balance, 25 per cent., 35 days after.

Geary and Kearny, May 28, 1889. Constructional iron work. Owner, M. H. DeYoung; architects, Burnham & Root; contractors, Dearborn, Foundry Co; amount, \$63,000; signed Nov. 26; filed, Feb. 11; sureties, Christopher & Ed. Christy; 75 per cent. payable up to completion of work in proportional payments the 25th of each month, according to amount of work done.

Golden Gate Avenue and Lyon street, frame dwelling. Owner, R. L. Conn; architect, S. Hatfield; contractors, Farnum & Thornton; cost, \$2,400; signed, Feb. 6; filed, Feb. 9; limit, 81 days; \$550 roof boarded; \$415 brown coated; \$415 windows in; \$420 finished; \$600, 35 days.

Green, between Webster and Buchanan, two-story frame. Owner, Edward J. Duffield; architects, Copeland & Banks; contractor, John A. Shepard; cost, \$4,906; signed, Feb. 28; filed, March 1; sureties, T. H. Jones and J. P. Shepard; limit, 90 days; \$1,000 fram d; \$1,000 brown coated; \$682 white coated; \$1,000 completed; \$1,224, 35 days.

Haight corner Webster, three-story frame. Owner, John Cordes; architect, B. E. Henriksen; contractors, Rountree Bros; amount, \$7,755; sureties, J. Thos. Richardson, John Coop; signed, February 16; filed, February 19. Payments: roofed, \$1,454; outside finish on, \$1,454; sashes glazed and hung, \$1,454; trimmings on, \$1,454; \$1,939, 35 days.

Harrison and Fifth, stable. Owner, J. L. Moody; architect, Chas. I. Havens; contractor, F. W. Kern; cost, \$5,295; signed, Feb. 26; filed, Feb. 27; sureties, Behrend Joost and O. W. Nordwell; limit, 40 days; \$1,000 roof rafters on; \$1,200 roof complete; \$1,595 completed; \$1,500, 35 days.

Howard, near Fourteenth, alterations, etc. Owner, L. Dumas; architect, M. J. Welsh; contractor, C. E. Dunshee; amount, \$1,691; signed, Jan. 31; filed, Feb. 11; limit, 40 days; \$600 rustic on; \$600 ready to plaster; \$491, completed.

Henry, between Noe and Ridley, additions. Owner and builder, P. N. Williams; cost, \$2,000.

Henry between Noe and Ridley, one-story cottage. Owner, Mrs. Ford; contractor, Mr. Brown; cost, \$1,300.

Jackson, near Fillmore, building. Owner, Katie Jacobs, et al; architects, Salfeld & Kohlberg; Contractor, John T. Grant; amount, \$5,087; signed, Jan. 20; filed, Feb. 13; sureties, C. S. Holmes & C. Hanson; \$5,000 limit, 90 days; \$800 framed; \$1,000 roof on; \$1,000 brown coated; \$1,287 35 days.

Jackson, near Mason, two-story frame. Owner, M. Hartmann; architect, Henry Geilfuss; contractor, L. M. Weissmann; amount, \$3,050; signed, Jan. 28; filed, Feb. 14; \$450 framed; \$450 partitions set; \$450 brown coated; \$450 white coated; completed, \$765 35 days.

Jones and Pleasant, frame building. Owner, George Whittell; architect, Clinton Day; contractor, C. A. Parker; cost, \$4,475; signed, Feb. 1; filed, Feb. 8; \$900 ready to shingle; \$800 brown coated; \$800 stairs ready for painter; \$856 completed; \$1,119, 35 days.

Kearny and Post, shelving, glazing, etc. for store. Owners, Roos Bros; architect, Henry Geilfuss; contractor, George R. Bowles; amount, \$2,250; signed, Feb. 8; filed, Feb. 15; \$1,687 50 set up; \$562 50 35 days.

Lyon, near Grove, two-story frame. Owner, Julia A. Campbell, architect, Chas. I. Havens; contractor, John G. Adams; cost, \$3,929; signed, Feb. 25; filed, Feb. 27; sureties, S. H. Harmon and F. Joost; limit, 90 days; \$700 enclosed; \$700 brown coated; \$750 outside primed; \$779 completed; \$1,000, 35 days.

Liberty, near Guerrero, two-story frame. Owner, D. W. Parkhurst; architect, A. J. Barnett; contractor, Brennan Bros; cost, \$5,800; signed, Feb. 4; filed, Feb. 28; sureties, Frank P. Latson and Martin Connor, \$3,000; limit 90 days. Payments to be made as work progresses, at the rate of 75 per cent. of value of work done, balance 35 days after.

Market, between Ninth and Tenth, repairs. Owner, Mrs. M. F. S. Searles; architects, Schulze & Meeker; contractor, John T. Grant; cost, \$2,800; signed, Feb. 2; filed, Feb. 9; \$1,000 boiler house is built and main building roofed and tinned; \$1,100 completed; \$700, 35 days.

Market cor Gough, repairs. Owners, Will & Finck; cost, \$1,200.

Mission, near Thirteenth, two-story frame. cost, \$1,800.

Market, near Noe, two-story frame. Owner, Dennis H. Boyle; architect, A. J. Barnett; contractors, G. W. Farnum and R. R. Thornton; cost, \$3,666; signed, March 1; filed, March 1; sureties, Hugh B. Jones and Matthew Harris, \$2,000; limit, 60 days; \$800 main roof on; \$945 brown coated; \$1,000 completed; \$915, 35 days.

Market near Fourth, concrete work. Owner, California Academy of Science; architect, Percy & Hamilton; contractor, George Goodman; amount, \$3,294; sureties, Jeremiah Mahoney and Calvin Nutting; signed, February 2; filed, Feb. 2; limit, 30 days. 75 per cent. on first Saturday of each month as work progresses; balance, 25 per cent., 35 days.

McAllister near Lott, two-story frame. Owner, Ed. E. Cook; architect, Wm. H. Wharff; contractor, F. A. Williams; amount, \$4,739; signed, Feb. 21; filed, Feb. 21; limit, 90 days; sureties, H. C. Smith, \$2,000; \$700 framed; \$700 enclosed; \$700 brown coated; \$700 outside carpenter work done; \$754 completed, \$1,185; 35 days.

McAllister, near Gough, two-story frame and barn in rear. Owner, G. Ammerup; architect, H. Geilfuss; contractors, Von Borstel & Conrad; amount, \$5,350; signed, Feb. 18; filed, Feb. 19; \$800 framed; \$800 floor laid; outside finish on \$800; inside finish on \$800; completed, \$1,350; 35 days.

New City Hall contracts for the plinth course let to Antonelli & Doe. Value, 14,500; for finishing rooms, to McCann & Riddle; cost, 5,700.

Nebraska, near Sonoma, altering cottage and building new one. Owner, Henry Kohler; contractor, Thomas F. Mitchell; amount, \$1,914; signed, Feb. 18; filed, Feb. 19; \$638 old house is raised and frame of new one up; \$800 brown coated; completed, \$634.

Oak and Franklin, three-story building. Owner, John F. Schroeder; architect, H. D. Mitchell; contractor, Richard Sinnott; amount, \$12,300; signed, February 11; filed, February 12; sureties, H. C. Smith and W. J. Adams. Payments: First floor, \$2,000; rustic on, \$2,000; outside frames set, \$2,500; framed, \$2,500; 2,300, 35 days. Limit, June 15, 1889.

Powell, near California, additions, cost, \$500.

Pond, between Sixteenth and Seventeenth, two-story frame. Owner, Wm. Schottler; contractor, C. H. Murasky; cost, \$2,800.

Plymouth avenue, near Patton street, one-story frame. Owner, Mrs. M. K. O'Brien; architect, M. J. Welsh; contractors, L. Cuneo & Co; amount, \$1,725; signed, Feb. 13; filed, Feb. 14; limit, 70 days; \$400 roofed; \$400 brown mortar on; \$400 completed; \$525 35 days.

Point Lobos Ave. and Tenth avenue, two-story frame and barn in rear. Owner, Chas Callahan; architect, C. I. Havens; contractors, Chas. Johnson and R. J. Andrew; amount, \$4,400; signed, February 6; filed, February 19; sureties, A. F. Johnson and Geo. A. Hartman; limit, 112 days. Payments: framed, \$800; brown coated, \$800; outside primed, \$800; completed, \$900; \$1,100, 35 days.

Pacific, between Gough and Octavia, two-story building; Owner, Alice and Edith Hastings; architects, Percy & Hamilton; contractor, J. C. Bateman et al; amount, \$6,997; signed, February 1; filed, February 5; limit, 10 1/2 months. Payments: 75 per cent. on first Saturday of each month, of the value of work done; balance, 25 per cent, 35 days.

Sanchez and Ridley, two-story frame. Owner, D. McSweeney; architect, A. H. Daley; contractor, N. R. Ellis; cost, \$4,000.

Sixteenth, between Noe and Castro, two-story frame. Owner and builder, Mr. Hyde; cost, \$4,500.

Sixteenth, between Noe and Castro, two-story frame. Owner and builder, Martin Dempsey; cost, \$5,000.

Sixteenth, between Noe and Castro, two-story frame. Owner and builder, Mr. Smith; cost, \$4,000.

Second corner Frederick, three one-story and one two-story frames. Owner, R. Hughes; day work; cost, \$5,000.

South Park between Second and Third, three-story frame. Owner, Henry Joost; architect, Casper Zimierlein; contractor, Casper Zimierlein; cost, \$7,635; signed, Feb. 5; filed, Feb. 9; sureties, J. F. Kennedy; limit, 90 days; \$1,500 enclosed; \$1,500 brown mortar; \$1,500 white mortar; \$1,225 completed; \$1,910, 35 days.

Seventeenth, near Poud, one-story frame. Owner Mr. Henry; contractor, A. J. McKee; cost, \$1,700.

Stockton, near Sacramento, brick building. May 1, 1889. Owner, James Goetz; contractor, Rhody Ringross; architect, T. J. Welsh; amount, \$10,000; signed, Feb. 20; filed, Feb. 20; sureties, W. P. Doherty and Charles L. Hinckley; \$2,500 basement is built, \$2,500 columns set; \$2,500, 3d story is up and joists set; \$2,500 completed; \$3,775 35 days.

Sacramento, near Lyon, two-story frame. Owner, B. B. Dobbas; architects, B. McDougall & Son; contractors, P. J. and M. Brannan; cost, \$5,500; signed, Feb. 9; filed, Feb. 9; \$900 frame up; \$900 floors laid, etc.; \$1,000 brown coated, etc.; \$1,325 completed; \$1,375, 36 days.

San Jose avenue and Army street, grading and brick work. Owner, F. Kaufman; architects, Townsend & Wyneken; contractor, I. H. Wilson; amount, \$1,550; signed, Feb. 9; filed, Feb. 11; limit, 35 days; \$500 raised; \$600 brick work done; \$390 35 days.

Steiner and Sacramento, building. Owner, Georgette Bitter; architect, Wm. Mooser; contractor, J. H. McKay; amount, \$3,350; signed, Feb. 2; filed, Feb. 12; sureties, E. Depiere; limit, 90 days; 75 per cent. as work progresses; balance, 25 per cent. 35 days.

Seventeenth, between Mission and Howard, two-story building. Owner, Jacques Puchen; architect, Wm. Mooser; contractor, J. J. Lunn; amount, \$3,837; sureties, Behrend Joost, C. S. Holmes; signed, January 31st; filed, February 5th; limit, 90 days; Payments: 75 per cent. as work progresses; balance, 25 per cent. 35 days.

Twenty-Eight, near Church, one-story frame. Owner, G. Rolando; cost, \$800.

Twenty-Eight, near Church, two one-story frames. Owner and builder, R. Bergfeld; cost, \$3,600.

Twenty-Eighth, near Church, one-story frame. Owner, Winder; contractor, K. Taylor; cost, \$1,800.

Twenty-Second, near Fair Oaks, double tenement, frame. Owner, James C. Blair, et al; architect, H. F. Bestor; contractors, Doyle & Son; amount, \$2,950; signed, Feb. 14; filed, Feb. 16; \$175 rustic on; \$600 brown coated; \$600 doors, sashes and glass in; \$525 completed; \$740, 35 days.

Tehama, between Fifth and Sixth, additions. Owner, Caroline K. Bowes; architect, R. H. White; contractors, Moore Bros.; amount, \$1,865; signed, February 11; filed, Feb. 13; limit, 60 days. Payments: Ready to lath, \$700; white coated, \$600; completed, \$565.

Twenty-Fourth street, between San Jose and Guerrero street, May 1, 1889, two-story frame. Owner, Charles Thompson and wife; contractor, Christian Peterson; architect, Christian Peterson; amount, \$2,850; signed, Feb. 20; filed, Feb. 20; \$550 foundation in \$600 framed; \$600 partitions set; \$600 primed on outside; \$500 completed.

Texas, between Solano and Mariposa, two-story frame and basement building. Owner, J. Gardiner; architect, Wm. Fyffe; contractor, John M. Robertson, et al.; amount, \$2,600; signed, January 27; filed, February 2. No payment given.

Third and Stevenson, two-story and basement, brick. Owner, G. W. Beckh; architects, Schmidt & Shea; contractor, Chas. H. Ackerson; cost, \$20,850; signed, March 1; filed, March 2; sureties, C. Hanson and C. S. Holmes; limit, 100 days; \$10,000 ready for roofing; \$5,600 completed; \$5,250, 35 days.

Vienna and Naples, two-story frame stable. Owner, Wm. G. Loeme; architect, Emil John; contractor, Adam Miller; cost, \$5,300; signed, Feb. 25; filed, March 2; limit, May 1, 1889; framed \$100; outside boarded, \$1,000; upper floors are laid \$975; finished, 1,000; \$1,325, 35 days.

Washington and Baker, two-story frame. Owner, H. C. Firebaugh; architect, J. E. Kraft; contractor, W. Plums; amount, \$6,700; sureties, D. Wormser and F. Joost; signed, February 4, filed, February 5; limit, 105 days. Payments: Roof on, \$1525; brown coated, \$1,500; completed, \$2,000; \$1,675, 35 days.

AN ENGINEER'S SUIT His Claim for Inspecting the Plans of the City Hall Commission.

Calvin Brown has commenced an action against the New City Hall Commissioners to recover the sum of \$1,900, which he claims is due him for services rendered the city. The complaint sets forth that the plaintiff is a civil engineer, and was employed under a resolution adopted by the Commission in August, 1888, to make a scientific examination of the plans proposed for the new main tower, and the foundations of the McAllister street wings. He alleges that he performed the work and furnished the Commission with his views. He now asks for payment for his time and labor.

CURTIS vs. BENNETT.

A complaint filed in the Superior Court by John M. Curtis, sets forth that complainant and A. A. Bennett, on the 15th of February, 1883, formed a partnership for two years, as architects, under the firm name of Curtis & Bennett; that during the existence of said partnership they drew plans and specifications for a court house and jail to be erected at Eureka, Humboldt county, under a contract with the Supervisors of that county, for a remuneration of 5 per cent on the contract price for buildings, less \$400 paid on adoption of plans and specifications. The architects superintended the work on the building until October, 1885, when Bennett, as Curtis alleges, assumed the entire superintendence of the work without the consent of Curtis. The firm partnership was dissolved on the 15th of February, 1885, and their business affairs were settled between them,

except the Eureka contract. The contract price of this work was \$141,580, and it is charged that Bennett received \$7,079, of which he paid Curtis \$448, instead of one-half, which he claims to be entitled to. Curtis prays for an accounting and judgment for the amount found to be due him.

OAKLAND AND VICINITY.

Oakland mechanics are busy, and although the price of lumber has advanced slightly it is still within bounds, and sales are larger than ever.

The number of houses built since the opening of the year is 130. Not including the cost of the several large business blocks now building, the cost of new structures will aggregate \$430,000. At the present rate of growth Oakland will see an accession of fully 1,000 homes during the year, at a cost of nearly three million of dollars. From the bay to the foothills the signs of improvements are visible. The cottage predominates in numbers, and is an indication of ownership. Probably a larger proportion of the population of Oakland own homes than that of any city of like size in the United States. This evidence of thrift and prosperity is gratifying. Oakland will have a population of 100,000 by the year 1893. And this growth is mainly due to the ease with which homes are secured, by reason of the moderate rates for real estate and the facilities for purchase on the installment plan given by builders and dealers.

A larger number of contracts has been made and is being let or considered than in any previous first two months of the year in the history of Oakland. All mechanical branches are active, while the recent rains give great encouragement to hopes for a prosperous year in agricultural matters. Cities and towns will share in the prosperity.

W. T. Veitch states that he has a large amount of work in view and that the growth of Oakland is more steady and healthy than that of towns he has visited, where spasmodic increase was followed by a corresponding depression.

Mrs. T. B. Simpson is building a modern residence of eleven rooms on the northwest corner of Telegraph and Simpson avenues. Two-hig & Moore, contractors; Charles Mau, architect. The cost will be \$6,000.

A cottage of seven rooms, costing about \$2,000 is going up on Seventh and Alice streets. It is for the Kreyenhagen estate, and W. N. Concanon is the contractor.

A. P. Patridge is building an eight room residence on Ninth street, between Chester and Center streets, to cost \$2,000.

Mr. Edwards is building two cottages, one to cost \$2,500, the other \$2,000, on Tenth street, between Magnolia and Union.

J. N. Paul is building a cottage of six rooms on Jones street, between Telegraph and San Pablo avenues, to cost \$1,500. McCracken, contractor.

V. W. Gaskill is building two cottages on Twenty-seventh street, near Grove, each to cost \$1,300.

The * California * Architect * and * Building * News

VOLUME 10.

ENTERED AT POST-OFFICE SAN FRANCISCO, AS SECOND-CLASS MAIL MATTER. ESTABLISHED JANUARY, 1878.

NUMBER 4.

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THE
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ESTABLISHED JANUARY, 1879.

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(Next to the Bank of California.)

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of Architects.

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6 Inch,	7 50	18 00	32 00	60 00
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about two and a half inches wide. One inch means one inch in depth by two and a half
inches in width.

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SAN FRANCISCO, APRIL 15, 1889.

On Wednesday, May 1st, 1889, at the regular monthly meeting of the San Francisco Architectural League, an interesting stereopticon exhibition on "Scenes through Italy," will be delivered by Frank Shea, Esq., architect.

San Francisco Chapter American Institute of
Architects.

Never, since the first formation of the Chapter, has there been such a meeting of architects and students, as was witnessed on the evening of April 5th, at the new rooms 408 California street. In addition to a large percentage of the membership of the Chapter, many of the students of the Architectural League, and several draughtsmen from the various offices were in attendance.

George E. Voelkel was proposed for membership as a Fellow. Referred to Committee, Percy, Babson and Pissis.

Mr. Bestor remarked that E. J. Molera could not be present owing to unavoidable detainance, but it was the desire of the latter named to request the Mechanics' Institute to have at their next exhibition and to offer premiums for the best exhibit of building materials. In order to properly have the matter come before that Institution, it was proposed to have a committee appointed by the Chapter to confer with committees from other associations and decide on some course of action. He would, therefore, make a motion to that effect. Committee appointed, Bestor and Percy. The communication from the Builders' Association in regard to the appointment of a committee on "Legislation" was favorably received and on motion S. Babson and J. E. Wolfe were appointed as such Committee. Mr. Sanders then began the reading of a most interesting paper on the subject, the "Age of Iron." The speaker gradually traced the different formations, through the various geological periods; from the mine to the foundry; from the manufactory to the bridge and building where the material was to be used. The whole paper was beautifully illustrated by dissolving views. The views of various bridges throughout the world was the most complete ever seen in the city. Beginning with the massive structures of ages past, the various developments in construction were successfully shown, until the modern iron bridge with its long spans, its light and airy grandeur combined with wonderful strength, was shown in all its grandeur. All the details of construction were successfully pictured on the canvas. Turning from the subject of bridges, the speaker portrayed the uses of iron in the construction of roofs.

The lecture was listened to with profound attention, and the beautiful illustrations brought forth murmurs of applause. At its close, the speaker was tendered a vote of thanks by the Chapter and the paper was ordered printed in full in the CALIFORNIA ARCHITECT.

Many of those present were in the new rooms for the first time and expressed themselves as well pleased with the arrangements. It is already necessary to enlarge the meeting room and a further space of sixteen feet will be added, making the room sixteen feet wide by fifty-four feet in length. This will be ample for some years to come. Students' room is also on the same floor.

The next meeting will be held on Friday, May 3d. Visiting architects are always welcome to the rooms and to the meeting of the Chapter.

Venice and Rome.

Lecture Delivered by Miss Jewett, Before the San Francisco
Architectural League.

The regular monthly meeting of the league was held Wednesday evening, April 3, 1889, at their rooms, 408 California Street, with Vice-President J. F. Wieland in the chair, and eighteen members present. Messrs. Smith, O'Brien and Wetmore elected members, and Messrs. Bugbee, Larsen and Pass were proposed as members of the league.

After the business of the evening was completed a very interesting lecture on "Venice and Rome" was delivered by Miss F. Jewett, the well known High School teacher, who was introduced to the league by President Louis Stone.

Miss Jewett, who recently returned from Europe, described her impressions of Venice and Rome very clearly. Her remarks were illustrated by a very fine collection of large photographs, which added greatly to the interest of her hearers.

In entering Venice, you arrive by train, in the northwestern part of the city, and are taken by gondoliers through the Grand Canal, which passes southeasterly through the city, and is two miles long, and varies from forty to sixty yards in width. She spoke of the luxuriousness of the gondolas, which glide along so quickly, and with so little apparent motion that it seems to go by magic. Especially is the feeling intensified as the gondolier stands behind the passengers, and one does not see the actual



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SAN FRANCISCO, CAL.

motive power. The lady described the "Rialto Bridge," and "Bridge of Sighs," which span the Grand Canal in single arches, and are entirely built of marble. She was greatly impressed with St. Mark's Church, with the beautiful Mosaic work, of which there is 47,000 square feet in the building, and of the magnificent effect of the afternoon sun upon the gilding, and the rich mosaic work in the spandrels of the arches. The Doge's Palace and Palace of Desdemona were also described, with their beautiful gothic tracery, and immense variety of carved capitals, every one being different. A large number of photographs of the Campanile, Doge's and Desdemona's palaces, St. Mark's Church, the many bridges and other points of interest were passed around among the members, who manifested great interest, and asked many questions. From Venice, Miss Jewett carried her audience to Rome.

Rome is entirely surrounded by a wall fifty feet high and eighteen feet wide, which is complete and in excellent condition. Miss Jewett, in describing the "Strangers' quarter" in Rome, said that the streets of that part reminded her of the new portion of New York City, as there are many five-story apartment houses of modern construction, of much the same appearance. She described the monastery of the Capuchin monks, and exhibited a photograph of the interior, showing the walls and ceilings decorated with skulls, vertebrae and other parts of the bodies of monks who died there.

From describing Rome generally, she came to the center of attraction, the great church of St. Peter's and the Vatican. She was one of the 90,000 people who occupied St. Peter's during the Pope's jubilee, last June. At the jubilee, invitations were issued only to fill the nave and the transepts, or 120,000 people could have been placed in the body of the church. She spoke of the great size of the Vatican, with its 13,000 rooms, and vast retinue of servants.

The splendid photographs of the St. Peter's, Arch of Constantine, the Roman Forum, Colosseum, the many temples, statuary and fountains, were especially interesting to the league.

At the conclusion of the lecture a vote of thanks was tendered Miss Jewett for her kindness in consenting to lecture before the league.

On the 17th of this month there will be a lecture delivered on "Chemistry," by Mr. D. C. Stone, who will illustrate his subject with a number of experiments.

The following is a list of the San Francisco Architectural League's membership and its officers:

MEMBERS.

Lionel D. Deane, Geo. H. Sanders, Augustus Borradale, J. F. Wieland, Geo. P. Wetmore, Obert F. Simpson, Joseph W. Rowell, Samuel Benson, Sylvester W. Hemenway, C. Herbert Hastly, Victor Monet, Carl Hilpisch, F. Rabin, R. M. Turner, Smith O'Brien, W. C. Mahoney, Louis Stone, Alfred Owen, J. Brady, M. G. O'Brien, H. J. Van Vlack.

BOARD OF DIRECTORS.

Louis Stone, President; J. Farley Wieland, Vice-President; Lionel D. Deane, Treasurer; S. W. Hemenway, Secretary; William Shea, Augustus Borradale, R. M. Turner.

SEMI-ANNUAL COMPETITION

.....OF THE.....

San Francisco Architectural League

Open to all draughtsmen and students in City of San Francisco. Subject, "Town Library," with requirements as follows: Entrance Hall, Library proper to accommodate 20,000 volumes, Librarian's and Reference rooms, Newspaper and Periodical room, Ladies' and Gent's Toilets. Location—Center of square. Material—Stone, Brick or Terra Cotta.

All drawings are to be designated by motto and accompanied by letter with name of competitor. They must be sent to S. W. HEMENWAY, Secretary of the League, room 6, 418 California Street, not later than May 14, 1889.

A committee of three prominent architects will be appointed by the League to decide the competition.

First prize, gold medal; second prize, silver medal.

S. W. HEMENWAY, Secretary. LOUIS STONE, President.

An Examination for Architects.

It would seem needless, after the experiences of the last few years, to urge upon our lawmakers the necessity of an examination for architects. I am not pleading for the "regulars," neither am I opposing the "quacks," but as an architect, looking after the interests of my clients and the public welfare, I must advocate measures which, in my opinion, will tend to remove the cause of many building disasters.

Our profession is made up of three distinct elements: First, students from technical institutions; second, students from the offices of architects; third, those who have "picked up" the business. Of the first element—technical students—there are two classes: those who have taken the regular four-year course, and others who have been put through by telegraph in two years. Although the number of practicing architects who have taken the four-year course is small, they exert an elevating influence upon the profession, and such a course will be the rule instead of the exception in a few years. The two-year course of the "specials" does them no harm, and when supplemented by a few years in the office of a skilled architect, they become sufficiently familiar with the profession to practice without injurious results.

Those composing the second element who have been fortunate enough to get a liberal education, and have made themselves familiar with the standard architectural work, have an aptitude for the work, and who have been connected with an architect for three or more years, have thus far proven the most successful architects. Aided by able and intelligent papers like the *American* and *CALIFORNIA ARCHITECT*, these architects have brought the standard of the profession to its present elevation, and are working hand in hand with the institute graduates to raise it still higher, and at the same time are educating the public to understand the difference between good taste and abjectness.

The third element, those who have "picked up" the business, have shown excellent judgment in choosing something to "pick up;" they display commendable ambition in seeking to elevate themselves by their own bootstraps. They certainly are not to be blamed for wishing to ally themselves with a profession, the members of which prosper only as their fellow men prosper, and the history of which is the world's history. But have the public no rights in the matter? Are important questions of construction and design to be intrusted to those who, like Miss Wozenham's relatives, have "failed in pick?"

We can liken the standard of architecture to that of literature, and the public will say, "All books can be published, why cannot all styles of buildings be erected?" But the public cannot be compelled to read all the vicious or absurd works which get into print; but we are absolutely obliged to look upon abortions in architecture, because they surround us on every side. Yet this is, perhaps, the least of the evils resulting from "picking up" the business.

That many human lives have been sacrificed because of ignorance of the principles of construction, who can deny? That today many important buildings are being erected in a manner discreditable to this age, and false in nearly every principle of construction, is a fact, which, if the matter is honestly investigated, must be acknowledged. True, our building laws are good, and our inspectors intelligent and watchful; but a skillful and conscientious architect is better than both put together.

Light, heat, and air, upon the proper distribution of which every human being is dependent, are all utterly ignored by this "picking-up" genius in architecture, as he goes blundering through the world, making life shorter and more disagreeable by his ignorance of the principles of the profession upon which he wished to grow financially fat. But, it will be asked, may not some of the first two elements be also incompetent? Are they as likely to be? And will not the examination be a fair test of the abilities of all?

We need an examination for architects. The first element does not object to it, the second will welcome it, and the public safety requires that no one ignorant of the principles of construction should be allowed to construct.

W. H. M.

We are in receipt of the advertisement of the Dunning Boiler which appears on page three, with a very suggestive motto which is strikingly peculiar, as we do not know of any other steam heating boiler having such an established record. The motto is "The sun never sets upon the Dunning Boiler because it is in use all over the world." Read advertisement and apply for catalogue with full information as to its merits.

OUR ILLUSTRATIONS

The California Hotel and Theater.

THE California Hotel and Theatre Building, situated on Bush street near Kearny in San Francisco, will be one of its representative structures and in fact may be put down as the first strictly modern hotel and theatre building in this city. As the accompanying cut in this month's issue of the *ARCHITECT* indicates the style of architecture, of the front is in the modern Romanesque and the object of the architect has evidently been to produce a building which would attract notice more on account of its dignity, lines of proportion and symmetry, rather than the elaboration of ornament and the crowding the front with projecting excrecences so common to San Francisco architecture. The two lower stories of the front are of rock faced Arizona brown stone. Above that point the remaining stories are in red pressed brick and red terra cotta. A description of arrangement of the front would hardly be necessary as the accompanying cut gives a perfect idea of the front when finished, but it might be well to state that the arches at main entrance to theatre and at the hotel entrance are richly carved. The interior of the hotel, as well as the entrance to the theatre will be finished in the Romanesque school of architecture. The interior of the theatre in the East Indian. The hotel will be supplied with every adjunct of a strictly modern and first class hotel. It will be heated by steam and lighted throughout by the incandescent electric light. In general arrangement and finish the hotel will be second to none in this country, and San Francisco can not only speak with pride of the elegant cuisine of its restaurants as it is noted for this, but will soon be able to boast of a cafe whose surroundings will aid its patrons to a better enjoyment of the good things served. Regarding the theatre, one of its most important features is the absolute safety to its patrons. It stands by itself detached from any other building, with exits and iron stairways on all sides. It has four independent exits on each floor from the auditorium and two from the stage, the aggregate width of exits being seventy-four feet. Next to the question of safety to patrons is the one of perfect lines of vision and on this point it can be definitely stated that there is not a single seat even in the back of Proscenium boxes, that do not command a view of the entire stage. The question of ventilation has been thoroughly considered, and the architect guarantees a change of air in the house every fifteen minutes, and says that the question of acoustics has given him no uneasiness as he has built nearly fifty theatres and holds the indorsements of the most prominent stars of the profession, regarding the perfection of the acoustic of every theatre. The stage is fitted with every modern appliance and it will be supplied with an equipment of scenery unexcelled for variety and modern effects by any theatre in the eastern metropolitan cities. The comforts of the profession has not been neglected, as an addition has been added to the building which is devoted to their use, furnishing fifteen dressing rooms, each having a window opening on to the open court and supplied with hot and cold water, marble make-up stands, etc., with toilet room on each story of addition. There are also commodious scene rooms, property rooms, etc., a carpenter shop sixty feet long disconnected from the stage.

The entire theatre is supplied with the Barnes Automatic Fire Extinguishers and with stand pipes and thirteen hose reels in plain sight and so distributed through the auditorium and stage, and adjusted that an incipient fire could be extinguished instantly without the aid of the fire department. To operate this apparatus there will be at all times in the building during an entertainment, firemen detailed by the fire warden. The theatre will be supplied with ladies' retiring and toilet rooms, and gents' smoking and toilet rooms. The opera chairs, carpets and draperies were designed expressly for this house and everything in the line of architectural design, decorations and furnishings will be thoroughly East Indian. The entire building will be practically fire proof. The building is being erected by Mrs. Kate M. McDonough who left with her family for Europe before it was commenced and whose interests are represented by her attorney, Mr. E. F. Preston of this city. The architecture and superintendence of the work was entrusted to Mr. J. M. Wood of Chicago, upon the recommendation of Messrs. Booth & Barrett, the eminent artists who will dedicate the theatre on the evening of the 13th of May, 1889, and there is no doubt

but that it will be one of the greatest events in the history of San Francisco. Mr. Wood is now building the Benhawk theatre of Los Angeles, California. The Loring of Riverside, California. The Tacoma theatre of Tacoma, W. T., and is completing plans for an elegant theatre and business block at Portland, Oregon. A magnificent theatre and bachelor apartment building at Denver, Colorado and a hotel and theatre at Lincoln, Nebraska.

CUT-STONE WORK.

The stone of which the front is being built came from Flagstaff, Arizona, and is of beautiful reddish brown color, of a very dense nature and has the property of withstanding the most intense heat. It can be quarried to any size or dimension required for any ordinary purpose. Blocks have been taken out 20 feet long, 10 feet thick and 15 feet broad. Were it necessary to order larger stone, the only drawback would be the means of transportation, as the average railway car only carry a specified weight. The new Court House, now being built by O. E. Brady in Los Angeles, will have two stories of this stone, also the new Post Office in the southern metropolis, as well as numerous other buildings. Since the introduction of the stone about one year ago, the demand for it has steadily increased, until now the proprietors find it onerous to fill the many orders. The stone is handled in this part of the state by O. E. Brady, the gentleman who has put up the cut stone work of our present sketch and from the quality of work performed by Mr. Brady, the fact is evident, that he will be able to point with pride, in the future, to the new California theatre and hotel.

IRON WORK.

The iron work of the California Hotel and Theatre was furnished by the Joshua Hendy Machine Works. Our description of this massive structure would be incomplete without reference being made to the heavy cast iron columns, girders and stairs which form so important a part, and add strength to the building.

This work was performed under a contract with the Joshua Hendy Machine Works, of Nos. 39 to 51 Fremont street, this city, in which corporation the City Iron Works have been merged, and this capacious and admirably arranged foundry is now situated at, and has recently been erected on the block bounded by Kearney, Bay, Dupont and Francisco streets, and where they are prepared to furnish architectural iron work, and light and heavy castings of every description. And the character of the work supplied for the use of this building, attests their ability in this department.

INTERIOR WOOD WORK.

The interior wood work for this elegant structure is being manufactured by the well known firm of F. W. Kreling & Sons, 532 to 536 Market street, from designs furnished by J. M. Wood, the architect, and abound with beautiful ideas. The main entrance will be one of the features, with red oak finishes, beautifully carved. The doors will have elegantly stained glass in upper panels, the lower ones being of metal.

Removal Notices.

Chas. J. I. Devlin has moved from 330 Pine street to 240 Montgomery street. The new offices are very handsome in their appointments.

Chas. Geddes has moved from 528 California street to 415 Montgomery street.

Reid Bros., formerly of San Diego, and architects of the Colorado Beach Hotel, have opened an office in the McCreery Building, 213 Sansome street.

John W. Curtis, so long at 528 California street, has moved to the Thurlow Block, 126 Kearny street.

M. T. Welsh has moved his office to the corner of Market street and City Hall avenue.

Under a New Management.

This journal is now under the control of the "ARCHITECT Publishing Company." All accounts due are payable to the company, at their new offices, 408 California street, rooms 14, 15, 16 and 17.

Iron Beam and Girder Connection.

THE strength and safe bearing loads that rolled iron and steel beams will bear, in the tables of our text-books, are based on loads evenly applied, either upon their top, or equally on each side, as in the support of brick or other arches, so that all the resisting parts of the beam are uniformly employed in support of the load.



Fig. 3

In figure 3, the beams *d* and *dr* form a girder, each bears its proportion of the load of beam *c* on its top, and the compressive and tensile resisting parts of each beam are equally employed in the manner intended in the tables of strengths and safe-bearing loads of beams; deviate from these direct applications and the beams will fail to sustain the loads given in the text-books.

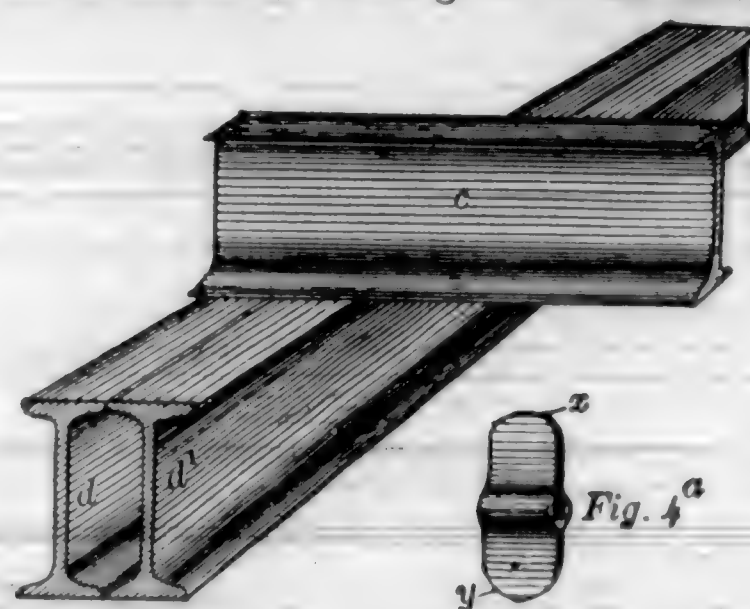


Fig. 4

In many cases this construction (figure 3), with the beam upon the top of the girders is not admissible for want of room, as for the support of vault roofs under sidewalks, floors of buildings and the like, to meet this requirement the faulty construction shown in figure 4 is frequently used.

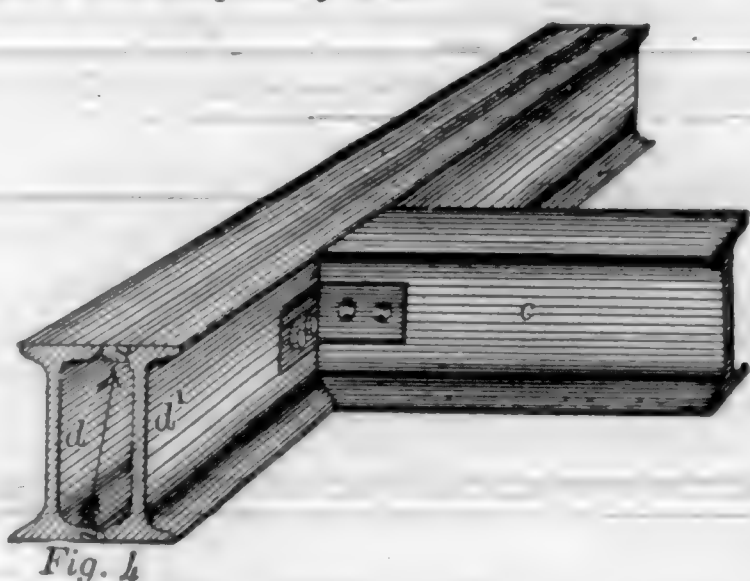


Fig. 5

In figure 4, the beams *d* and *dr* form the girder, and sustain the load of the end of beam *c*, but each beam of the girder is engaged quite differently than in figure 3 as hereafter explained, and it is questionable if the two are much or any stronger than if the girder was but a single beam with the load on its top. In this figure the single beam *dr* of the girder supports the weight of the end of the beam *c*, and to the disadvantage of its strength upon one side, and that upon a single bottom flange. The diaphragm *ga*, when in place, fits between the beams of the girder, and is employed as explained in the next section as a medium to transmit the strength of beam *d* to its companion beam *dr* which carries the load of the end of beam *c*.

The deflection of the beam *d* from carrying the load *c* independently considered, is not directly in a downward direction, but inclines towards the side load it is carrying.

Downward deflection is resisted on the opposite side of the beam to the load, by a diagonal upward resistance or pressure from the bevel top edge *x* of the diaphragm *ga* when in place by pressing under the flange *x* of the beam. This pressure is impelled by the bottom of the diaphragm at *y* resting upon the single bottom flange *y* of the companion beam *d*.

The direction of this assisting diagonal upward force is indicated by the arrow in figure 4, and tends to further distress the already burdened beam *dr* by forcing it abnormally and straining it across the web.

With two solid beams of timber this severe application of the load on one side would not have the same effect.

The treatment of the loaded beam *d*, figure 4 may be compared to the man shown in figure 3b carrying a heavy load in one hand sufficient for two men, bending him over in the direction of the load, and his companion assisting him (an equivalent to beam *d*) by forcing up his shoulder opposite the load, further contributing to double up the loaded man in the direction of the load.

The strength of the assisting beam *d* considered independently, loaded as it is upon the single flange *y* and upon one side, cannot be much in excess of one-half its normal strength when loaded properly on its top as in figure 3. Therefore, the strength of the two beams *d* and *dr* forming the girder in figure 4, may be considered not greater than a single beam girder properly loaded.

One instance of this faulty construction is in the girder beams supporting the vault roof and sidewalk of buildings No. 309 to 317 Market street, this city, beam *dr* of the girder is deflected more than its companion beam *d* from carrying beam *c* with the incumbent vault-roof and sidewalk, and the deflection of *dr* varies in proportion as the sidewalk is loaded, causing it to leak between the beams of the girder whenever it rains.

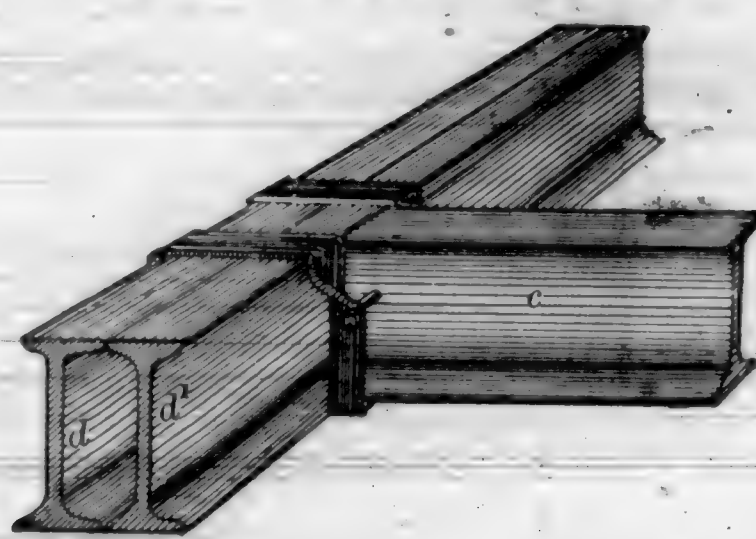


Fig. 6

Figure 5 is the same construction as figure 4, but an effort is made to remedy the fault by using a bridge or stirrup iron, one end of which is secured to the back of beam *d*, and passing over the tops of beams *d* and *dr* and down, receives and supports the end of beam *c*. The diaphragm *ga* is used between the girder beams with the result as described in figure 4.

The supporting value of this stirrup iron in addition to that shown and described for figure 4, is only what weight it will take to bend two strap irons, each a half of five-eighths inch in thickness, across the edge of beam *d*, if for a 10 1/2 inch beam would be at a leverage of 4 1/2 inches the width of *dr*. This will not exceed 250 or 300 pounds. Figure 6 shows the stirrup iron bent from the load.

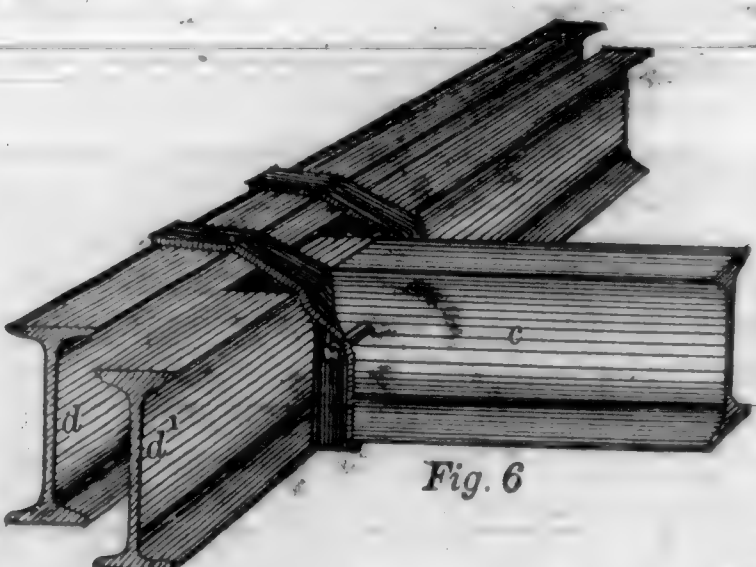
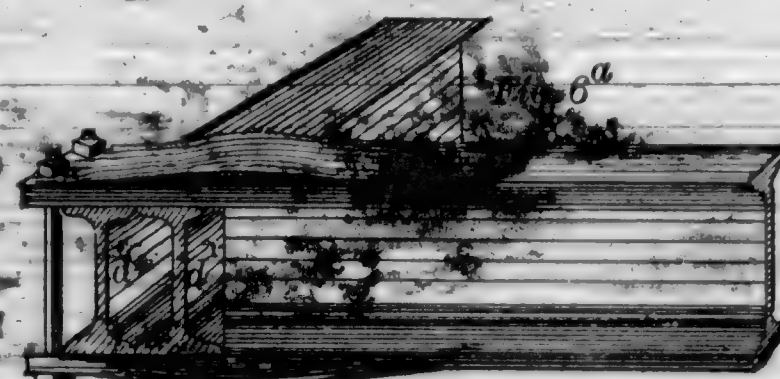


Fig. 7

Roller iron and steel beams are costly, their top and bottom flanges are adjusted to resist compressive force and tensile strain, and are connected by a thin web; with the load applied

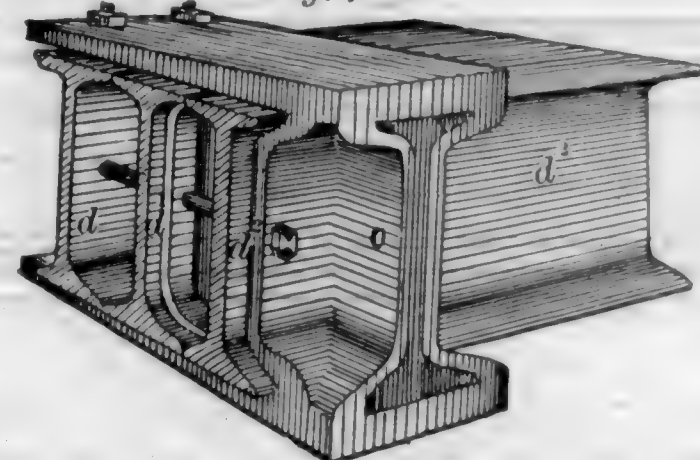
in a direct manner they fulfill the intention for which they are proportioned, but deviate from it, and their strength is diminished in proportion to the treatment, and largely in cases of figures 4 and 5. This has been the writer's experience in testing over 700 iron beams and girders by weight and hydraulic pressure for the Department of Buildings of New York City.

The strength of any construction is that of its weakest part. It is evident if the top and bottom flanges at the end of beam *c* (with the web between them cut away) extended above and beneath the beams of the girder, and were bolted to each other at the back, and the junctions of the flanges to the main part of the beam was of increased thickness to provide against any possible bending, as in figure 6a, when employed, it would be the same as if the entire beam *c* laid on top of the girder beams, as in figure 3.



It is evident if the top and bottom flanges at the end of beam *c* (with the rib between them cut away) extended above and beneath the beams of the girder, and were bolted to each other at the back, and the junctions of the flanges to the main part of the beam was of increased thickness to provide against any possible bending as in figure 6a, when employed it would be the same as if the entire beam *c* laid on top of the girder beams as in figure 3.

Fig. 8



The writer invented to meet this purpose what is shown in figure 7, a heavy cast iron shoe, which is rigidly secured to the end of beam *c*, and becomes an extended part of it, with heavy top and bottom tongues or flanges (equivalent to the top and bottom flanges of beam *c*, with the web between cut away, as described for figure 6a). These project over the top and bottom of the beams of the girder and are bolted to each other at the extremity. These two flanges are equal to the single top flange of beam *c*, of a combined thickness of both. These combined tongues or flanges bolted to each other from their thickness, width and shortness of span are rigid against bending, and are fully equal as if beam *c* rested on top of all the beams of the girder, as in figure 3.

This met the problem.

The great weight of the cast iron shoe (to be consistent in strength with remaining part of beam *c*) with the bolts, are fully 200 pounds. This, together with the expense of punching holes in the beams, makes them so costly as to forbid their general use in competition with the cheap and frail constructions before described. But they are in use in several prominent buildings in San Francisco.

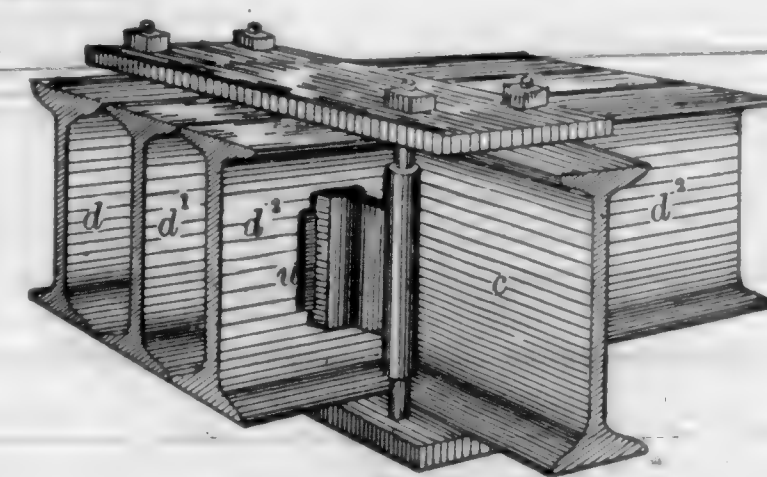


Fig. 10

The writer afterward devised to meet the demand for a cheaper article, a wrought iron shoe, as shown in figure 8, composed of two heavy wrought iron plates, equivalent to the two tongues or flanges described before, for figure 7, of a combined

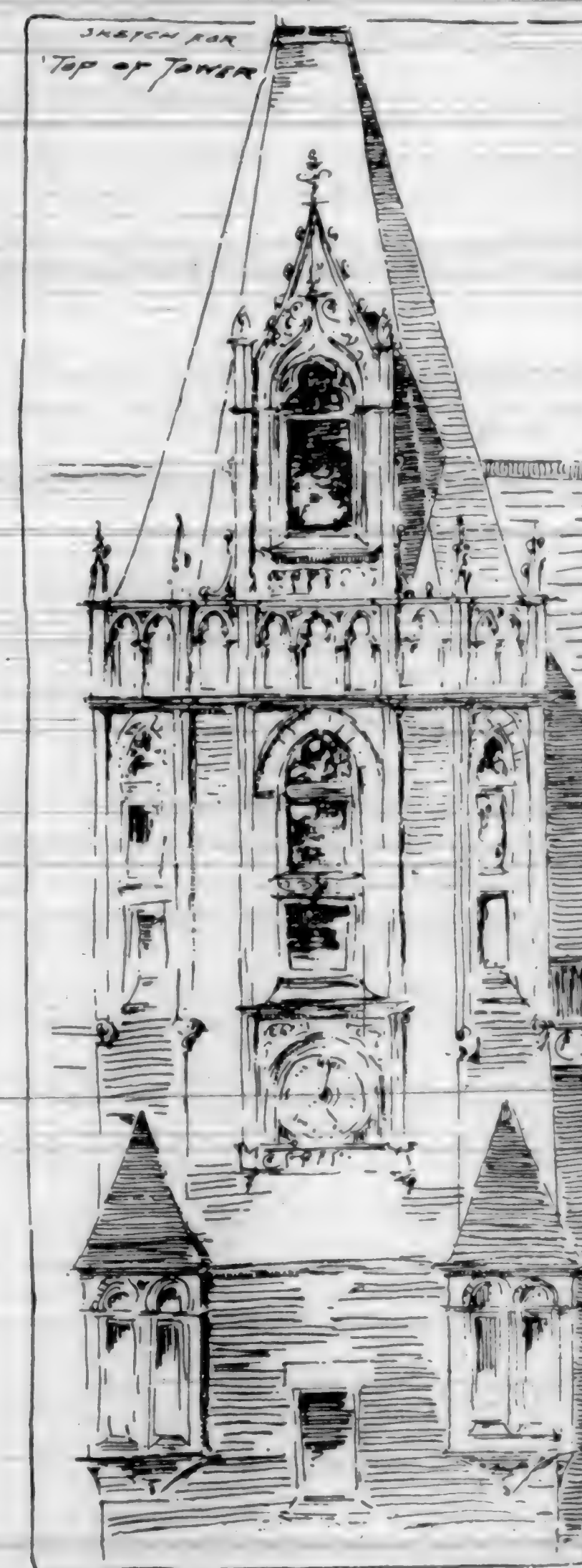
thickness of 1 1/2 inches; these are clamped to the end of beam *c* and to the beams of the girder by heavy bolts and nuts, holding all the beams as if in a vise.

The wrought iron plates being of increased strength compared to cast iron, permitted a considerable reduction in thickness, and were then of equal strength. This construction reduced the cost to nearly one-half of those of figure 7, and at a slight increase cost over the common deceptive as to strength of the kind described. These wrought iron plates are of considerable width, and extend over the top and bottom of the beams of the girder, be they one, two three or more beams (three are shown in the figure 8), and from their thickness and width are rigid against bending.

By this construction, none of the beams require drilling, punching, or other workmanship, but may be delivered direct from the Rolling Mill to the building or structure, and set in place, and the wrought iron plates and bolts are then readily adjusted. The end of the beam *c*, and also where the ends of the beams of the girder meet, is where they abut against each other, are so tightly clamped as to be immovable, a pulling force of tons makes no impression, requiring no fishplates to bind the ends of the beams together. In addition, the wedge pieces *u u* clamp the beams of the girder in a cross direction by forcing them over against the resisting bolts at the back. By this means the beams of the girder are clamped transversely as well as vertically.

Figure 1 shows the application to the best vault construction, in so far as it is all of wrought iron, and is of less depth and less cost than cast iron of equal strength.

P. H. JACKSON.





The Cogswell Technical School, San Francisco.

CHAS. GEDDES, Architect.

Dr. H. D. Cogswell and Caroline E. Cogswell on March 21, 1887, executed a trust deed, setting apart certain real property to establish and endow the Cogswell Polytechnic College. The trust deeds declare the object of the college is to give the boys and the girls of the state of California a practical training in the mechanical arts and other industries.

The college is not designed to teach trades, but to fully prepare the student to enter successfully upon any line of work. The aim is to fully develop the boy and the girl, mentally, morally and physically, thereby producing self-reliant and self-helpful men and women.

This college affords students an opportunity to continue their literary, scientific and mathematical studies and at the same time, to receive a thorough training in the industrial arts.

Dr. H. D. Cogswell thus describes the importance of manual training:

"The education that does not prepare one to intelligently direct his labor is not worthy of a moment's consideration. Most of our boys and girls have no occupation, and are not prepared, to intelligently learn one, when they leave school. They have a certain kind of learning, but no capacity for work. The new education, demanded by the necessities of the nineteenth century calls for the training of the eye and the hand, and stamps such a training as being just as important as the study of language, science or mathematics."

COURSE OF INSTRUCTION.

The course of instruction covers a period of four years. In addition to a thorough course in principles of construction and the literature of the various languages, applied mathematics, applied science, chemistry, phonography, telegraphy, and other branches, the following will show the advantages to be derived by students of the two sexes:

For boys only, a course in mechanical art, including free-hand

and mechanical drawing, carpentering, wood turning, wood carving, pattern making, iron turning, iron finishing, iron forging, iron moulding, copper and brass work, and a thorough course in the principles of machine construction.

For girls only, a course in industrial art, including clay moulding, drawing, designing, interior decoration, china painting, wood carving, metal work, plain and ornamental needle work.

THE OBJECTS OF THE SCHOOL

Are best told in the words of James G. Kennedy. "The theory on which the school is based is that education should correspond to the spirit of the people. That is, in an agricultural district it should be agricultural; in manufacturing and commercial districts it should pertain to manufacturing and to commerce, so that when a boy goes out he may have not only something to do, but be recognized as a superior workman, having intelligence outside of his practical knowledge of the use of tools. For boys we have first, a wood laboratory where they will learn to make all kinds of joints and everything else a carpenter can learn. Second, is an iron shop; third, a forging shop; fourth, a foundry; fifth, assaying laboratory.

"The girls learn first clay modeling—the basis for all kinds of modeling of brackets, chandeliers, etc. Second is drawing, third designing, fourth china painting, fifth *repose* work—hammering out brass, gold, silver and copperwork—sixth wood carving, seventh plain and ornamental sewing. Cooking may come later, but thus far no provision has been made for it. That is merely an outline of the manual work. Of course while the pupils are pursuing their course in handicraft, they are also learning English and either Latin, French, German or Spanish, applied mathematics, etc. We will teach on the principle that it does not take a boy as long to learn the principles of physics and chemistry while working at the bench as it does to

teach him the theory without the practice. We will waste no time on the study of English, but we will study English, spelling, grammar and rhetoric daily with our history or other subjects. It is my hobby that those branches which we use every time we read or talk or write should be inseparably interwoven into all other studies. It will be the teaching of the future. In future there will be no such thing as a separate hour devoted to spelling, one to grammar, one to composition, but all will come in with the study of history or any other branches wherein are to be found words and ideas new to the pupils. These boys will go hence with more sound practical English, grammar, higher mathematics, chemistry, physics (besides a trade they can follow) than any boy graduated from the San Francisco High School. Mind you, I don't say that when they begin they will be as rapid workmen as those who have devoted all their lives to work and work only. But after a little practice they will not only become as rapid in the accomplishment of their work but will be more valuable employees from their knowledge of the relationship their special work bears to other work in the shop. They will be superior in many other ways. I have spoken to leading founders and builders and they encourage me by promising to give the graduates of the college a fair trial after graduation. That is all I shall ask. I know that with but few exceptions the graduates of the Cogswell Polytechnic College will be acceptable in any industry they are taught."

The college buildings are on the southeast corner of Twenty-sixth and Folsom streets, and the main building faces on Twenty-sixth street. The lot fronts 245 feet on Folsom street and 182 feet on Twenty-sixth. The building is three stories in height and from its imposing and substantial appearance is the most notable structure in the southwestern portion of the city. It is seventy-one feet in width by eighty-five feet in depth, not including the projections. On each side is a wing two stories in height, each 35x40 feet. The building is surmounted with a metal roof with handsome cresting on the ridges. In front a high tower rises to the height of 127 feet, the apex topped with a revolving crystal star set in a copper pinnacle. On the face of the tower, above the third-story line, is the dial of a clock, and still lower down the name of the college. The main entrance is spacious and surrounded with a wide porch. On each side of the door is a niche for the placing of pieces of statuary. There are also two side entrances, one for boys and the other for girls. The main entrance porch is approached by a flight of stone steps. The main hallway is ten feet in width, and it opens into a cross-hallway twelve feet wide, which crosses the building from end to end. From the cross-hall stairways lead to the second story; stairs also lead to the stage at the rear and to the front of the assembly hall, in the story above. It will thus be seen that the means of egress are unusually excellent there being three wide doorways from the ground floor to the street and two from the second story to the assembly hall. There are to be ten classrooms, each 28x30 feet, four to be on the main floor and the other six to be on the second story. Two classrooms are already ready. On the first floor also are the offices of the President and Secretary, a reception parlor, a library 16x28 feet, and a museum 20x28 feet, besides a number of dressing and toilet rooms. A spacious assembly hall occupies the entire third story. It is 68x70 feet in size, and will have a seating capacity for 1,000. It will be used for the delivery of scientific and other lectures in connection with the regular courses of study in the school. This hall will eventually be handsomely furnished and provided with a stage, with all the necessary adjuncts for completeness. All the rooms are well lighted and every appliance known to modern skill is introduced to make ventilation perfect. They are lighted with electricity, and electric bells and speaking-tubes are run throughout the structure.

A short distance in the rear of the main edifice is another building in which the shops and laboratories are fitted up. It faces the north and is 152 feet in length by 40 feet wide and two stories in height. The ground floor is devoted exclusively to iron work, both designing and molding, having departments for filing, fitting and chipping. A laboratory is established in a room 35x40 feet and fitted with all the essentials for thorough instruction in polishing, fitting and setting up of various pieces and descriptions of machinery. A machine tool laboratory is 40x40 feet in size and completely equipped with iron laths, a drillpress, planers and rollers, by the aid of which pupils will be instructed in the arts of turning, drilling and planing iron so that they will be qualified to construct tools and small pieces of machinery. A forging furnace and laboratory have also been established and occupy a space 40x40 feet. The founding laboratory will be

35x40 feet in size, and contain a smelting furnace and other necessary appliances.

The second floor will be devoted to the chemical, wood and physical departments. The carpentry department is 40x35 feet, and supplied with an extensive assortment of tools. A wood-turning factory is 40x40 feet, and supplied with lathes, a planer, a circular-saw, a bandsaw, a mortise-machine, a mold and several other machines. The remaining space on the floor will be at the disposal of the physical and chemical departments. One room, 20x20 feet in size, is fitted up with shelving inclosed in a glass front, where all the philosophical apparatus will be kept that is used in experiments in chemistry and physical instruction. The furnaces in connection with this department are in the adjoining room, 40x50 feet in size.

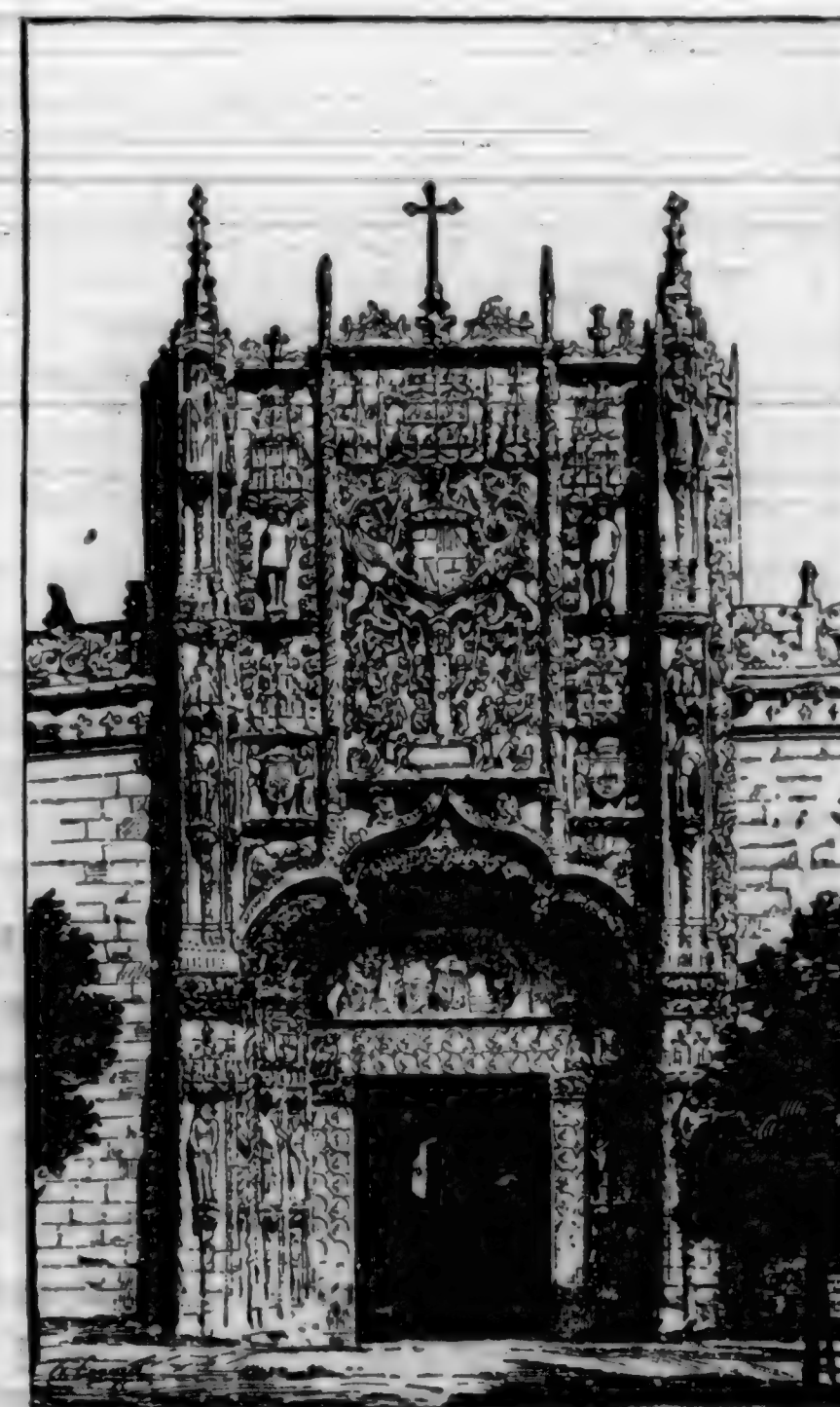
GIRLS' DEPARTMENT.

The department for instruction of girls will be fully as complete in detail as that for the boys. Here instruction will be given in wood and metal carving, sewing, cutting and fitting, as well as other mechanical studies. In the basement are well-lighted lunchrooms for the boys and girls; also rooms for the janitors and others who will reside permanently on the premises. There is also some additional space which may be utilized for classrooms or shops that may hereafter be required or found desirable. All the departments of machinery will receive motive power from a seventy-five horse power horizontal engine, which, together with the boilers, will be of the most approved pattern.

We intend to give the whole subject for which this college is founded, a thorough examination, and will report from time to time, the success, attending the efforts of those who are so nobly endeavoring to prepare the youth of both sexes to be worthy of the future government of the country's affairs.

CORPS OF TEACHERS.

The following named are those selected to preside over the various departments: James G. Kennedy, President; Mrs. Mary E. Arnold, Vice President and Superintendent of Girls' Department; Mr. A. T. Bruegel, M. E. Professor of Mathematics; Mr. Harold Howard, Professor of Modern Languages; Miss M. Van Vleck, M. I. A., Teacher of Industrial Art in Girls' Department; Miss Francis Hotchkisson, Teacher of English; Mr. J. M. Stockman, Teacher of Woodwork. Mr. G. A. Merrill, B. S., Prof. Sciences.



Good Hardware.

WE are pleased to notice an increased demand for good hardware for public buildings and residences on this coast. For the past few years there has been but little attention given to this feature of building—there being so little said in the specifications regarding it. The builder has had but little difficulty in finding locks, etc., good enough to meet the demands of his contract, his greatest difficulty has been to find them cheap enough, as for instance the architect specifies, "Mass face locks," the builder can buy them for \$3.00 to \$3.50 per dozen. Now any one with the average amount of common sense knows that 25 or 30 cents will not buy a lock fit to put into a door. Yet this has been one of the best markets in the United States for that class of house hardware. But property owners from past experience are becoming convinced of the importance of using a higher grade, not only of locks but of "Butts Knobs," and see that constitutes the interior hardware of a building and are treating it as they do any other feature of the structure by going personally and informing themselves in regard to the points of excellence and durability of the different styles and manufactures.

Dunham, Carrigan & Hayden Co. are taking the lead in the matter of urging the use of better goods. They have fitted up a "Bronze sample room," furnished in panels of polished woods representing the products of all parts of the world, particularly California. It would be difficult to find a more beautiful or extensive display of native woods than that which they have introduced into their room.

On these panels they have exhibited a complete line of Hopkins & Dickinson Manufacturing Co's newest designs of bronze hardware, the prominent styles "Colonial," "Grecian" rope molding, "Fluted," French" and "Italian Renaissance" are very handsome, and mark the best of an entirely new idea in the adaptation of interior hardware to the style of architecture and inside finish, harmony and contrast, as to color, size, shape, etc. All these are shown in "Bronze," "Oxidized Silver," "Antique Brass," "Steel," "Old Copper" and "Bower Barff."

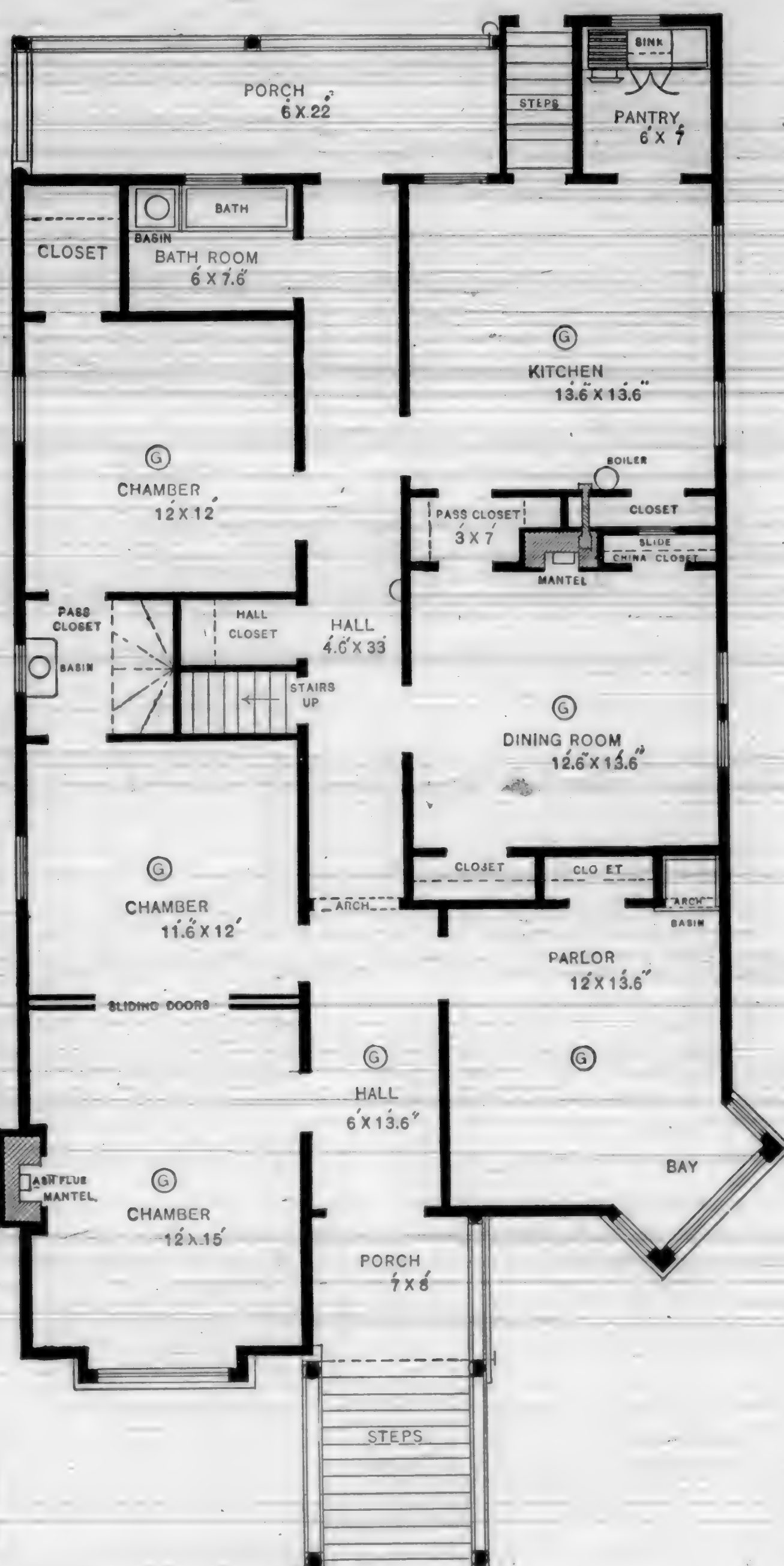
This room is fitted up extensively for the use of architects and builders who desire to take their patrons there and make selections or obtain ideas, and for those building or contemplating building. The room is always open to such, and so valuable an assistance as this to a proper choice of one of the most important features of building ought to be appreciated, and we are sure will.

Among the latest important inventions we notice Hopkins & Dickinson Manufacturing Co's new "office door cylinder locks," with the key above the knob, making key entrance easy. The key is very small and convenient to carry. These features, combined with the strength and durability of the lock, renders it most desirable for office buildings. Another fine thing is their new "hotel communicating door lock," hand made, and of the best quality.

Dunham, Carrigan & Hayden Co. cordially invite all who are interested in building to visit this department, assuring them that all specialties and novelties in their line will be exhibited in the most practical manner possible.

The Iron Age.

The paper read before the San Francisco Chapter, A. I. A., by G. H. Sanders, was ordered printed in full in the CALIFORNIA ARCHITECT. The utmost dispatch was used in preparing the engravings, but, although we delayed publication for a few days of this issue, we found it impossible to present the paper in the artistic manner desired. So, reluctantly, we are compelled to delay the printing the "Iron Age" until our next issue. It will be the best illustrated article that has ever appeared in this Journal.



Plan of "Rio Dell Cottage."

The MAY NUMBER of this Journal will be the best illustrated issue ever presented.

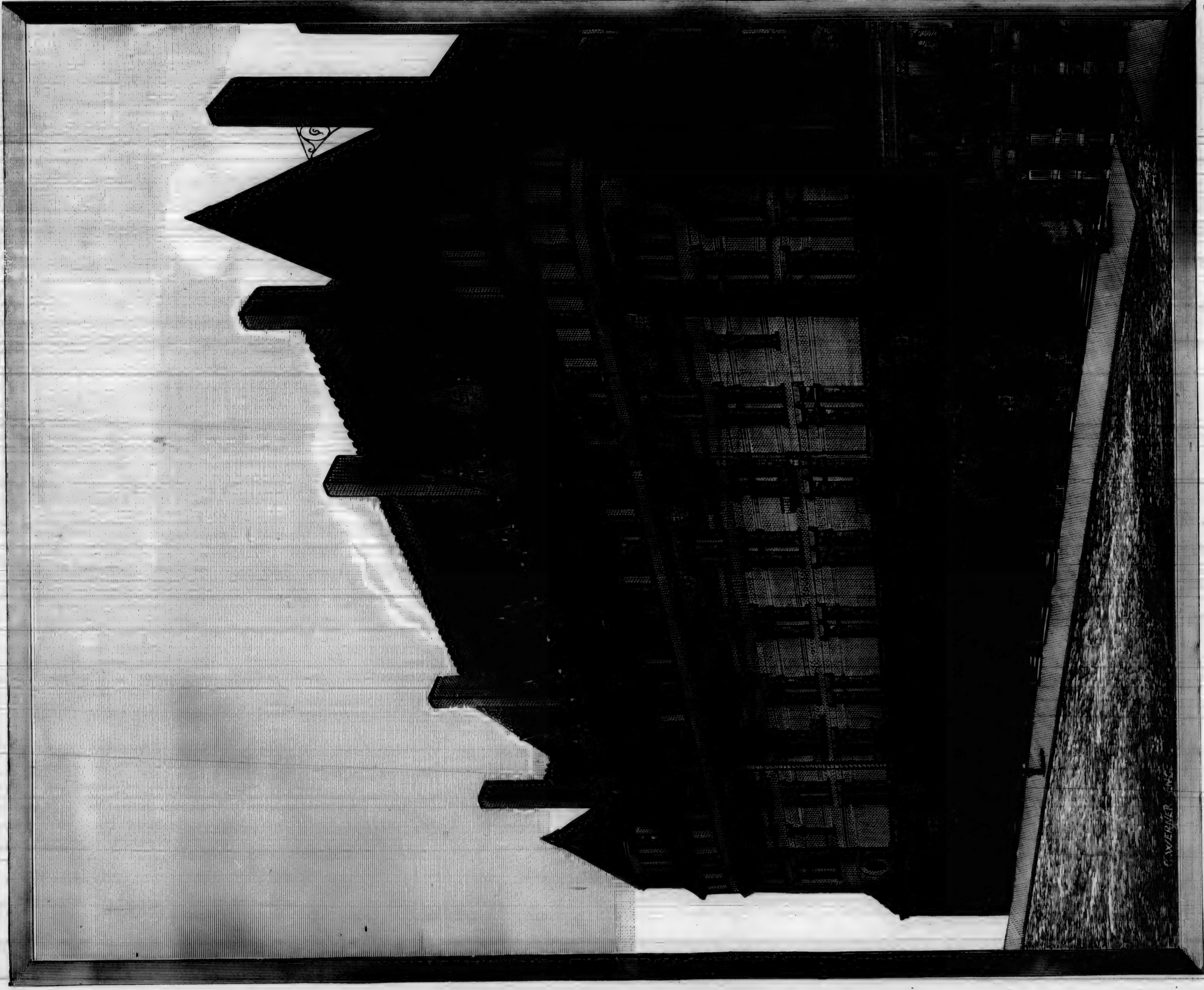
SUBSCRIBE NOW.

Two dollars per annum.



Elevation and Details of "Rio Dell Cottage."

FOR PLAN, SEE INSIDE PAGE.



Engraved by G. Werner.

Size of Building—157x165.

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THE NEW CALIFORNIA THEATRE AND HOTEL.

Architect—J. M. WOOD, Chicago.

Owner, MRS. KATE M. McDONOUGH.

Terra Cotta Work furnished by GLADDING, McBEAN & CO.

"Roof" Boilers furnished by Geo. H. TAY & CO.

Decorations furnished by SPIERLING & LINDEN.

W. J. SLOANE & CO. supply the Carpets, Draperies and Furniture.

Iron Work furnished by JOSHUA HENDY MACHINE WORKS.

Interior Wood Work furnished by KRELING & SONS.

Electroliners furnished by California Gas Fixture Co.

Plaster Decorations furnished by KELLETT & McMURRAY.

Plumbing Work by DAVID BUSH.

Plut Stone furnished by O. E. BRADY

Plaster Decorations furnished by KELLETT & McMURRAY.

Plumbing Work by DAVID BUSH.

Wrought Iron Work by W. J. BRADY.