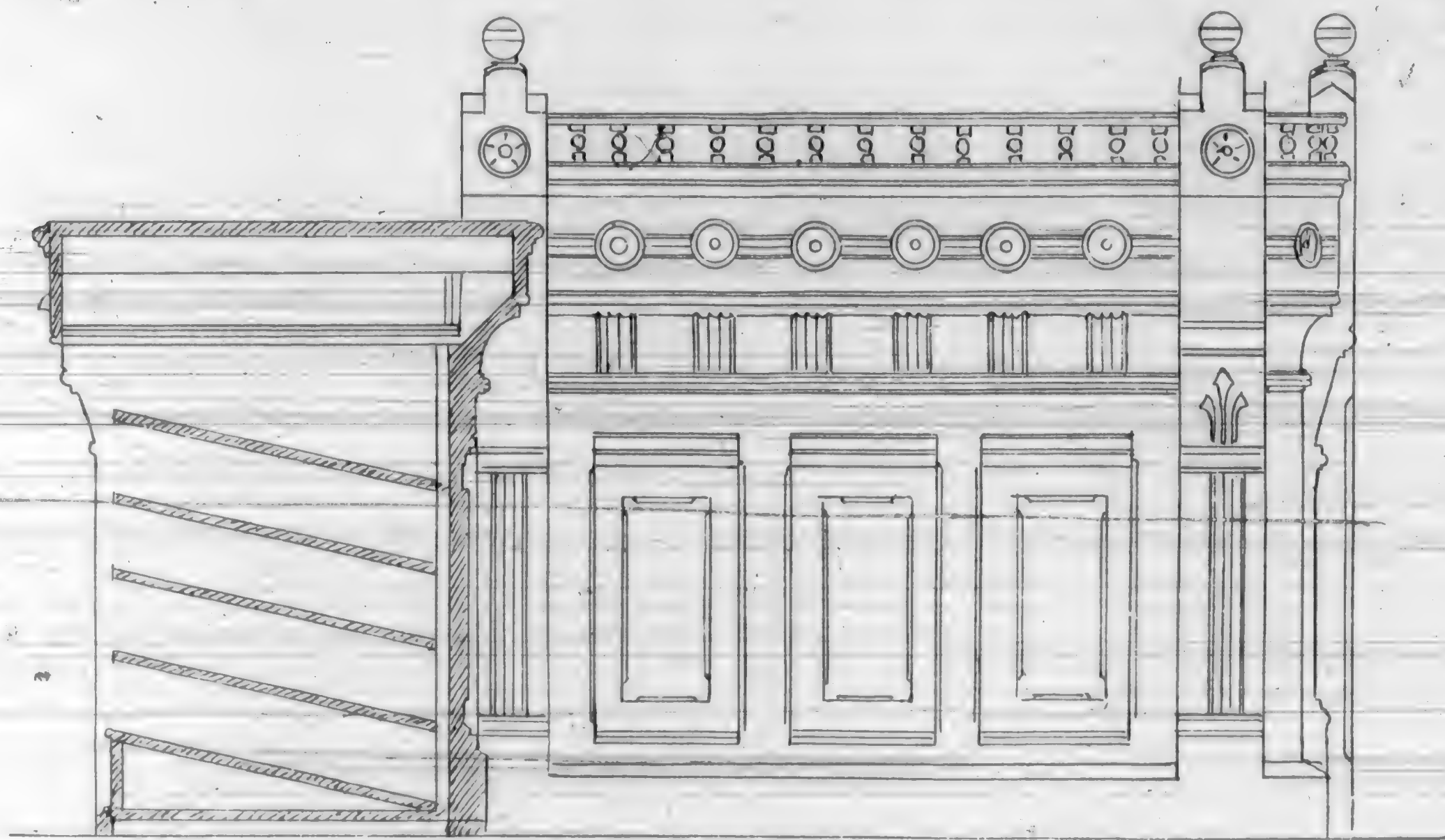




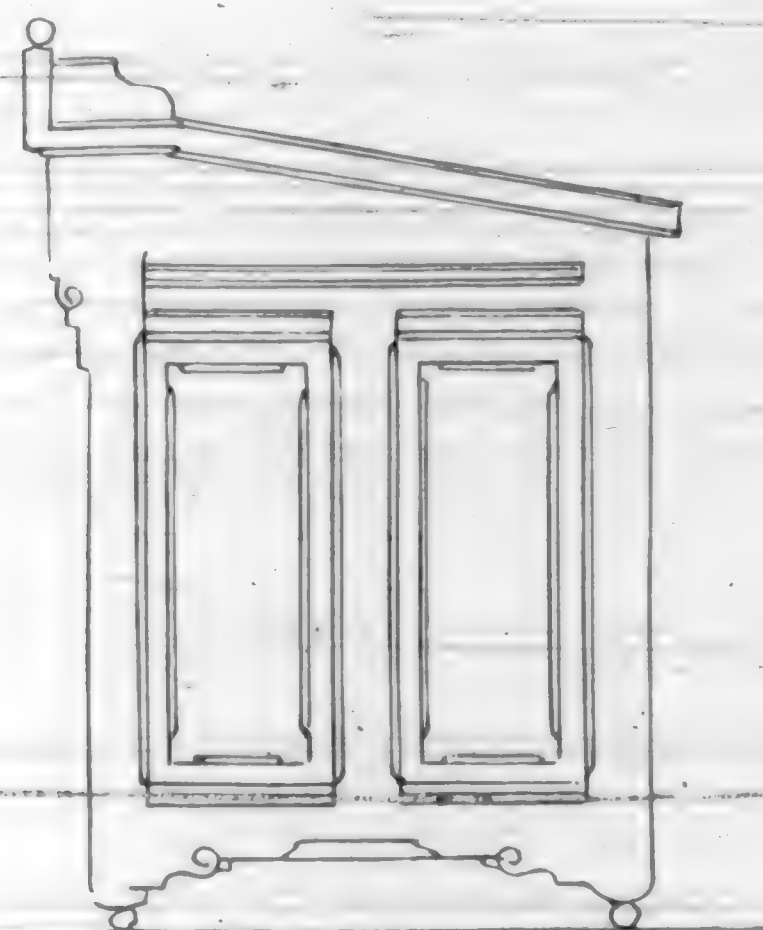
SECTION OF MAIN COUNTER AND ELEVATION OF SIDE DESK.

New Zealand Insurance Company.

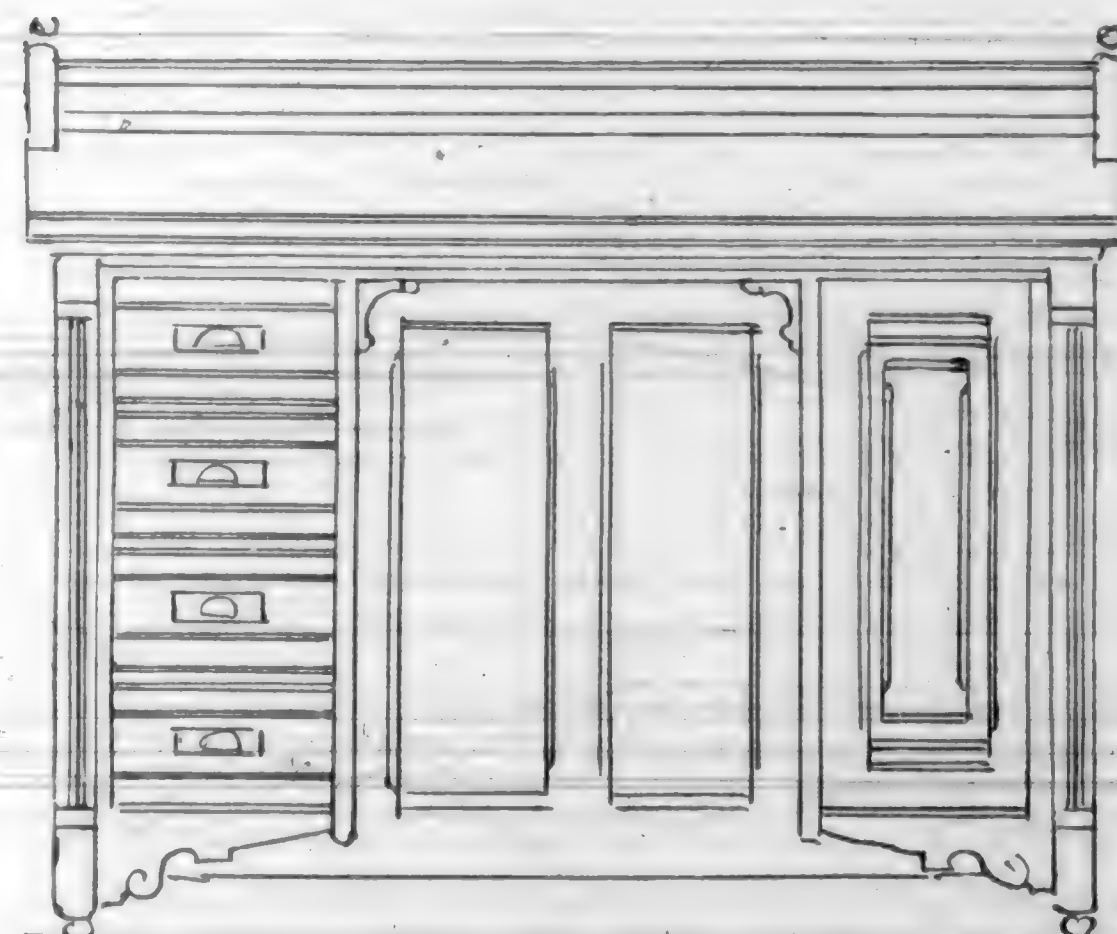
IN November, 1883, we illustrated the proposed new building of the New Zealand Insurance Company, to be erected in this city on their property, 310, 312, 314 California Street. The Pacific Coast manager, Mr. Hugh Craig, has lately returned from a trip to the head office, Auckland, New Zealand. The company, for the present, have decided to let the old buildings remain and fit up for their own convenience No. 312. To carry out this idea Messrs. Wright & Sanders were employed to prepare designs for the interior fittings. How well their instructions were carried out may be seen by a visit to the company's new quarters between the hours of 9 A. M. and 5 P. M.

The contract for the carpenter and mill work was given to Mr. W. A. Knowles, of Oakland. The interior decorating is the work of Cook Bros., 108 and 110 Post Street.

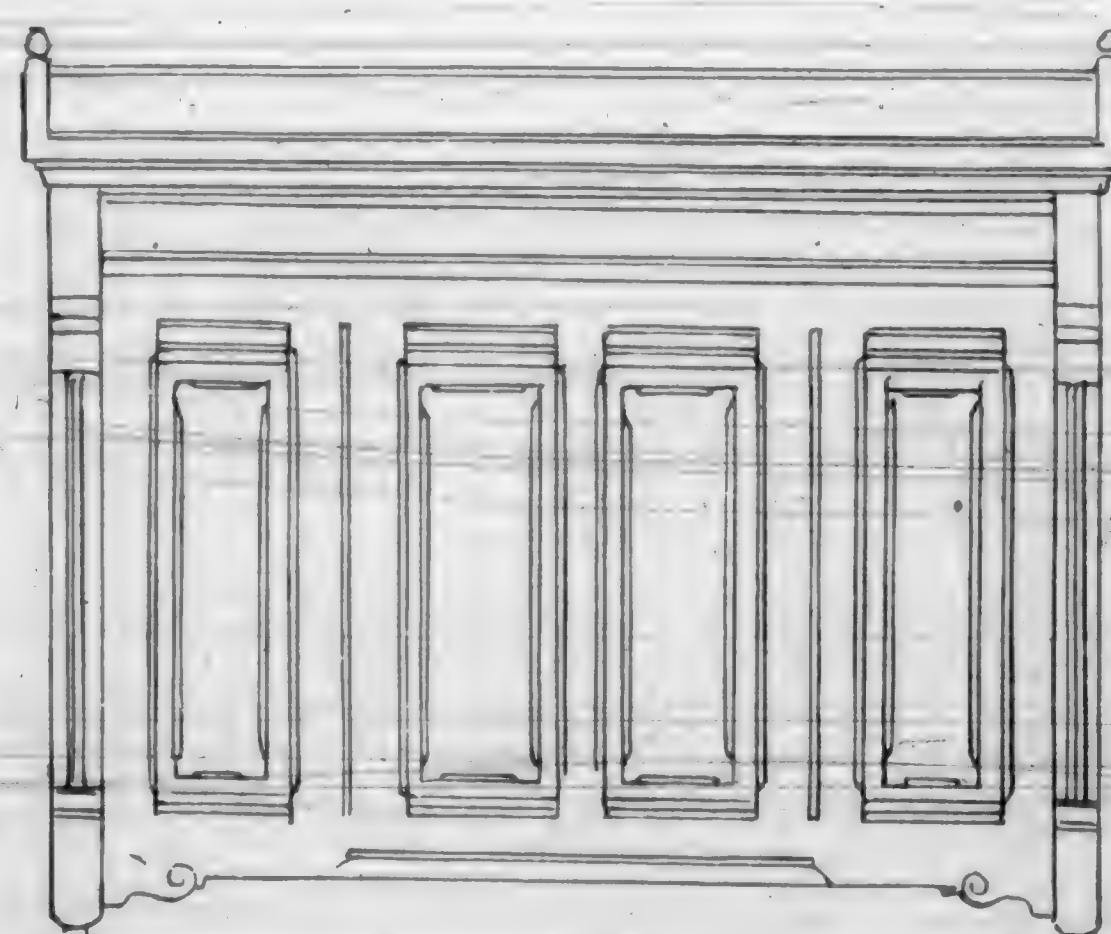
A general idea of the arrangements may be gathered from the accompanying desk elevations and interior perspective on following pages. All the woodwork is in solid Eastern oak. The wainscot is surmounted by a band of Lincaster Walton 15 inches in width. The frieze and cornice are finished in oiled, light greys, producing a very pleasing effect, and displaying excellent taste in this style of decorating. A vault of solid brick and cement 18 feet 6 inches by 9 feet 9 feet has been built across the rear of the room. The area of the office is 18 feet 6 inches by 68 feet 6 inches, and is only sufficient for the City Fire and Marine Departments.



SIDE ELEVATION BROKER'S DESK.



REAR ELEVATION BROKER'S DESK.



FRONT ELEVATION BROKER'S DESK.

We note from the last quarter's report of the Underwriters' Fire Patrol of San Francisco, that there are ninety-six fire companies operating in this city, and that the receipts of the New Zealand Insurance Company are neither least or last. The New Zealand has, since its advent upon this coast in 1875, taken a prominent position in the matter of receipts, as well as figuring in every large fire, and many of the smaller ones, from which our city has suffered during the last eleven years.

The property upon which the offices are located was purchased from Sir Robert Burnett, Aberdeen, Scotland, the Newhall heirs, and M. Rosenbaum of this city. The frontage of the three properties is 60 feet on California Street, with a depth of 124 feet, with a rear frontage on Halleck Street of 60 feet 6 inches.

When foreign capital, represented by companies of this standing, comes among us and identifies itself with our citizens, we cannot do better than give it our earnest support. Had the above investment been made by a company hailing from London, we would not have been at all surprised, because we can give them a much greater return than can be obtained in the United Kingdom. But it has remained for the most progressive and youngest of Britain's daughters to come to us and put New Zealand money, which brings a higher rate of interest at home, into property in San Francisco.

We wish them continual prosperity, and hope the receipts of this bold and conservative company will so far exceed the losses and expenses as to justify them in soon erecting the large building and spacious offices for which Messrs. Wright & Sanders have already prepared plans.

The following brief history, showing the progress of this company, was handed to us by Mr. Hugh Craig, Manager for the Pacific Coast:—

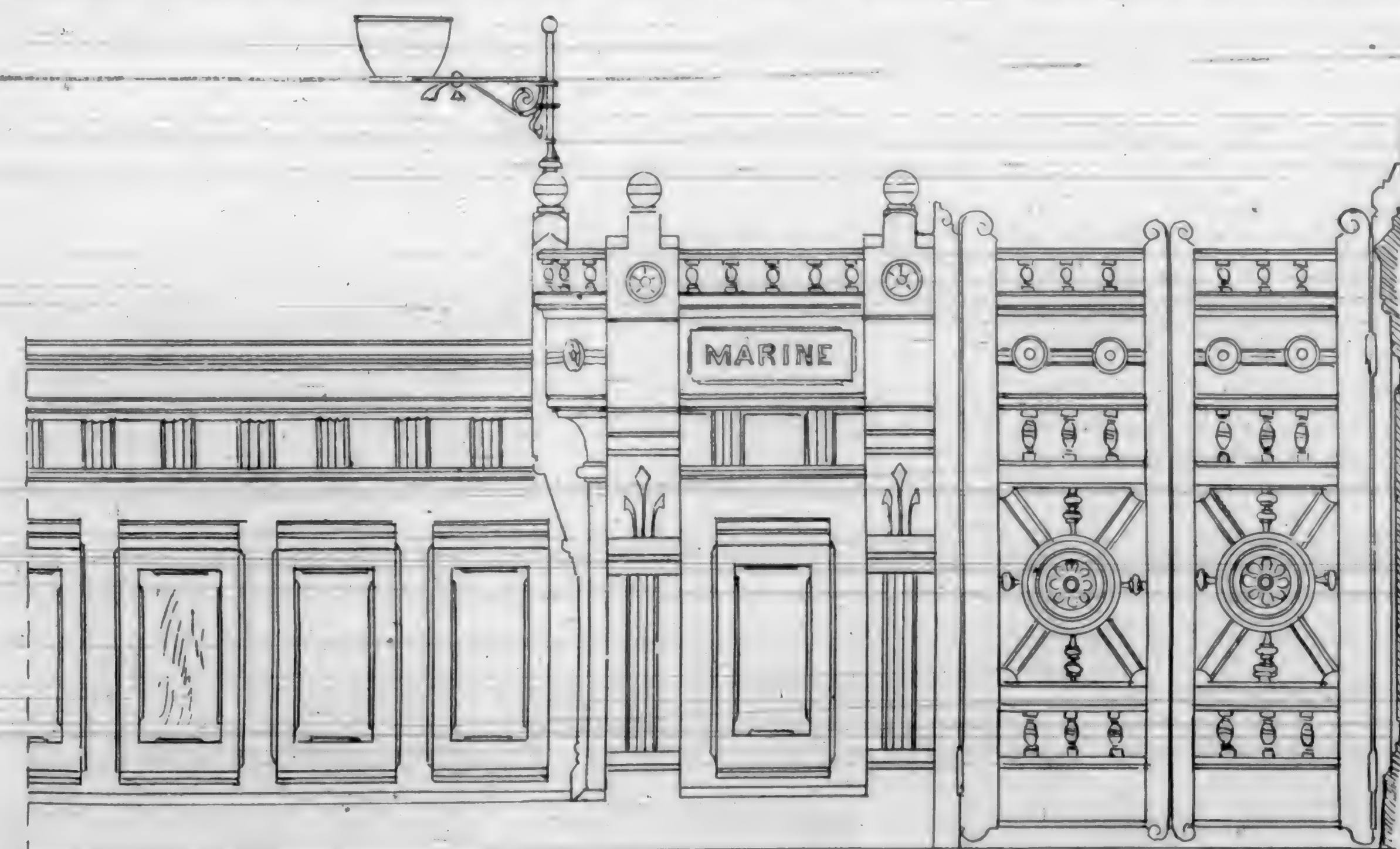
"The company was established in Auckland, New Zealand, May, 1859, with a paid-up capital of \$24,225. In 1862 its paid-up capital had increased to \$75,000; in July, 1863, to \$150,000; in July, 1864, to \$225,000; in January, 1865, to \$250,000; in 1871, to \$375,000; in 1873, to \$500,000; and to-day the paid-up capital stands at \$1,000,000; assets, over \$2,750,000, with unlimited liability of shareholders."

TO IMITATE BLACK ROSEWOOD.—The work must be grounded black, after which take some red lead well ground and mixed in the usual way, which lay on with a flat, stiff brush in imitation of the streaks in the wood; then take a small quantity of lake, ground fine, and mix it with brown spirit varnish, but not with more color than will just tinge the varnish, and if still too red, add a small quantity of Vandyke brown. If the work is well done, the surface, when varnished and polished, will scarcely be known from rosewood.—*Painters' Magazine and Coach Painter.*

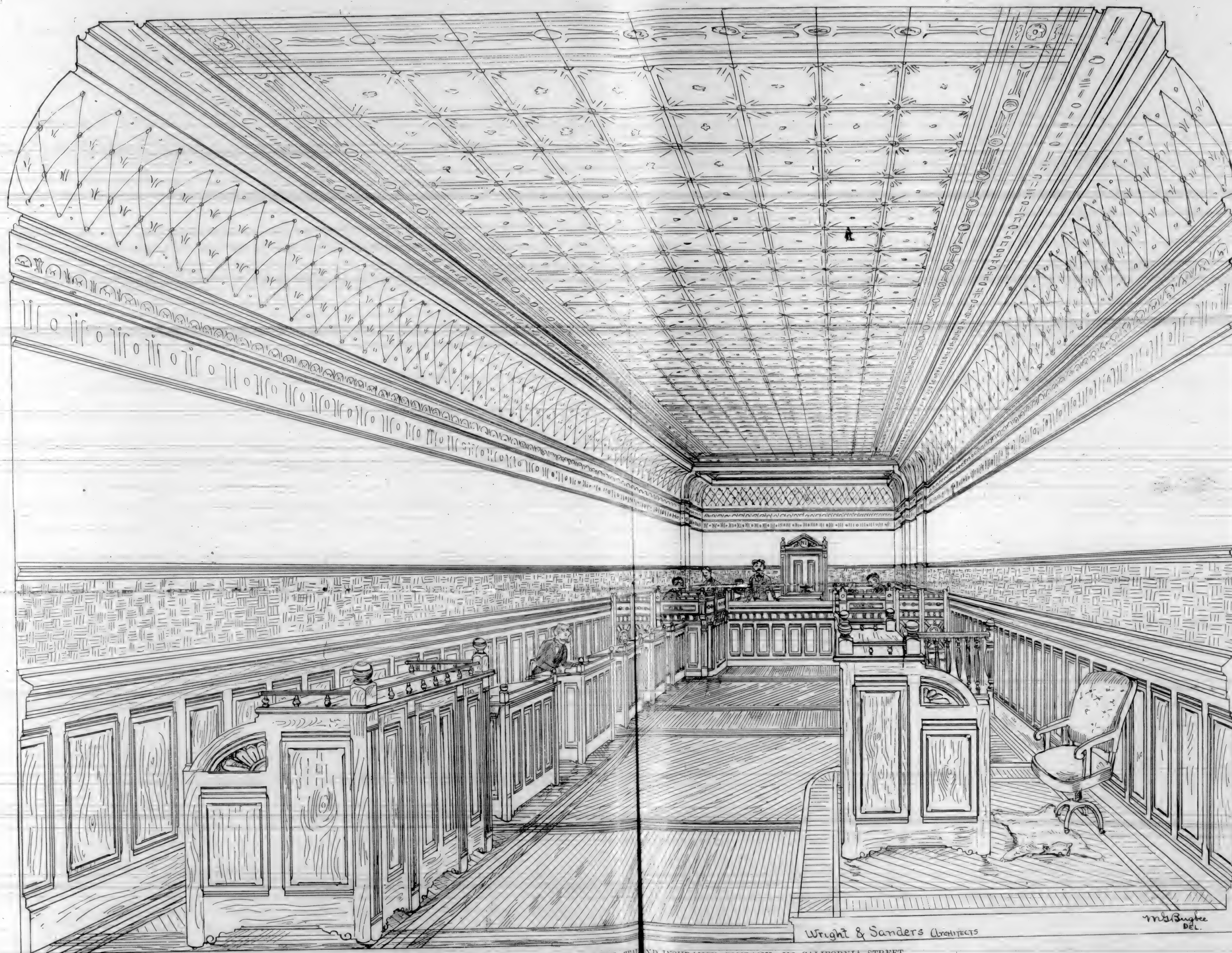
SHINGLE ROOFS SHOULD BE WELL PAINTED.—There is no portion of a building of greater importance, and none subject to greater "wear and tear," than the roof. And as a general rule, no part which receives so little attention after it is on. Owners seldom trouble themselves about the roof so long as it keeps out the rains, and no effort is made to preserve it, until it begins to leak; by which time the decay assumes such magnitude, that patching and repairs simply prolong for a year or two, the time when the putting on of a new roof will become inevitable. All exposed portions of buildings require constant attention and care, and this is supremely true in reference to roofs, whether laid of shingles or metal. Shingle roofs may be preserved for a lifetime, by being properly painted when new, followed by additional coats at proper intervals. The preservative advantages of painting shingle roofs have not attracted general attention from either owners or architects, although there is no place in the known world where the necessity is greater than in California, particularly in San Francisco, where as an almost universal rule none but thin redwood shingles are used. The severe and sudden changes to which roofs are subjected, of hot suns, heavy fogs and dews, drying "north winds," occasional spells of "scorching heat," heavy rains, etc., are very severe upon so light a roof covering as the fragile redwood shingles. It is, therefore, wise to protect them by painting, which increases durability, adds largely to appearances, and if a really good fire proof paint is to be found, and is used, gives security from fire to a considerable extent; as burning embers falling on a roof so painted, will not ignite the shingles.

EDITOR CALIFORNIA ARCHITECT—Dear Sir: How few there are who give credit to the architect, or appreciate his many perplexing studies. He is expected to furnish, off-handedly, all information demanded of him, by whomsoever asked, whether the inquirer be a tailor, a shoemaker, a hatter, a blacksmith, or even a full-blown flower of femininity—an old maid. Even the judicial mind makes demands upon the mental resources of the architect, and but little credit is given for the numerous and varied experiences and studies necessary to all this. The professional architect is looked upon as one whose mind is equal to a common library.

If duly qualified as such, he stands at the head of all the professions. He must be a good geometrician; must be skilled in the art of writing up contracts and bonds; must be fully conversant with the strength of all building materials—wood, iron, stone, bricks, cement, etc.; also the market value of lumber of all grades—hardware, wrought and cast iron, glass, paints, slate, plumbing



ELEVATION OF ONE-HALF MAIN COUNTER



INTERIOR OF NEW SAN FRANCISCO OFFICE, NEW ZEALAND INSURANCE COMPANY, 312 CALIFORNIA STREET.

materials, etc. Also enjoy a knowledge of the difficult science of acoustics—a study requiring a large portion of a life-time to gain proficiency. In addition to all these, the mechanical science of construction, ventilation, proportions, symmetry, foundations, stairs, and innumerable other things must be well, if not absolutely perfectly understood.

But in the matter of remuneration, it is too often the case that the professional man's services are demanded upon the basis of but little better than day's labor compensation, although his services are expected to be almost inestimable. If the standard of remuneration for architectural professional services could be measured by the rules applied in other professions, where far less hard mental work and general knowledge are required, the profession would represent a large amount of wealth. The doctor, for a dime's worth of powder, or a shilling's worth of fluid, accompanied by a grasp of the wrist and a glance at the tongue, is at liberty to demand five or perchance ten or more dollars as a fee for services rendered if not rendered in good faith, which multiplied by numerous patients each day, must—as it does in numerous cases—rapidly augment the cash or bank account of the medical man, and enable him to erect buildings, and luxuriate in all the pleasures of a fine span of horses, with appurtenances, etc.

The legal brother professional likewise for an hour's consultation may demand a fee of twenty-five to a thousand or more dollars, and the charge is more frequently paid than refused. But the architect is drawn down under taught, financial lines, without any of the soft snaps enjoyed in the other professions.

The architect must content himself with wending his way to buildings under charge as best he pleases, through mud, slush, and dust, and move around through mortar beds, under plasterers' scaffolds, to be besmeared with the compound of lime, sand, and hair; climb up ladders and upon scaffolds of not over safe construction, over roofs and dangerous places, sometimes spoiling a whole suit of clothes, lime burning a pair of boots, and knocking fifty per cent out of the value of a silk hat, if such a luxury is indulged in,—all in daily devotion to the duties imposed upon him as an architect.

But these are not all; at the office, numerous interviews draw upon time, and days in each month are wasted in profitless intrusions upon valuable time. Endless questions have to be answered, work on the boards criticised and corrected, calculations and estimates prepared, documents to write up, and the days filled up with cares and watchfulness for the best interests of clients, and sketching and planning carried late into the hours of night.

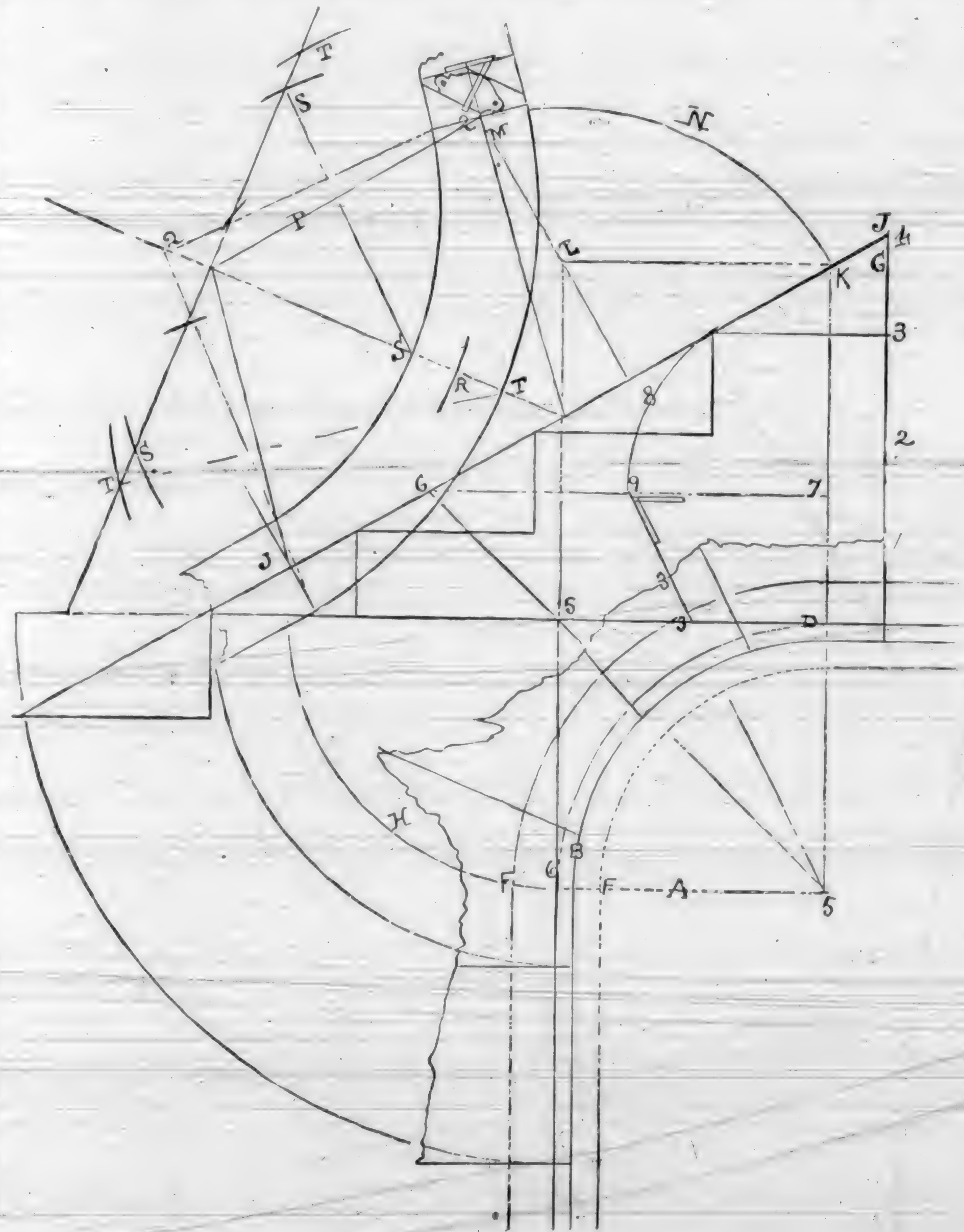
Pardon if I have assumed too much in this writing; but I have been so much in contact with architects' offices in so many States and large cities in the Union, that I feel an interest in the high and honorable profession, and regard its worthy, intelligent, and proficient practitioners as men entitled to the highest considerations. And pity it is that the profession is marred by a single

individual whose exalted standing in point of honor, competency, and invulnerable integrity and trustworthiness are not such as to defy criticism.

The following cut furnishes a graphic illustration of finding the cuts over a quarter turn stairs. Let B be the face of cylinder; make C, D the center of rail; make half breadth of rail right and left of C, as F F; square through center of rail from C and D to 5', as tangents of rail full there; space off the risers in the cylinder as shown; set up the height of risers, as 1, 2, 3, 4; now continue line D, 5 to J; take compass and stand in 5, and draw curve from F to line 5 J; do the same with curve 1; next draw the line of pitch from J to J, 4; continue line from D to K; likewise line 5 to L; square from K, D, over to L, from pitch line J, J; square through L; take compass, and stand in 1; open out to K; draw curve N, cutting line M, M at 2; connect 1 and 2; which will give the tangent in mould; make line J, O parallel with line 1, 2; make line P, 2 parallel with J, 1; we will then have the parallelogram wherein the mould is found.

Now to find the bevel, draw through 5, 5' to 6; square from 6 over to 7; stand at 7; draw curve 8 to 9; connect 9, 5; that gives the bevel; breadth of rail is found at 3, 3; take breadth of rail; lay off each side of 2 and J; now find the pin points, and draw the curve of mould; after mould being drawn, you can cut and stand up as a model.

Explanation: Cut around curve S; cut from J to 5', from 6 to J 4; from 4 to line D; hinge from 5' to 1, from 5' to D, from J to 6; cut across the joints and stand up. M. J. M.



S. F. Chapter of Architects.

THE regular routine of business being disposed of, and the member designated to address the Chapter on "Ancient and Modern Plumbing" not being present, and having by letter informed the Secretary that it would be impossible for him to prepare a paper for the occasion which would be to him satisfactory, or instructive to the Chapter, other subjects were taken up and discussed until a late hour, with earnestness and profit.

Mr. Williams presented a drawing delineating a device for safety at elevator wells in cases of fire, which was favorably received and commented upon. The necessity for greater security in this connection was admitted, and it is only a matter of time when—as the outcome of destructive conflagrations—a practically perfect method will be found, serving that purpose, without the necessity of inclosing elevators in brick or iron shafts.

The recent destruction of Bancroft & Co.'s building, and facts known in connection with its construction, were freely talked over, with no flattering comments as to its sufficiencies as a five-story structure. It is generally understood that the best quality of hard-burned brick, laid in mortar composed of a good and sufficient quantity of Portland cement, were not imposed requirements at the time the building was erected; consequently the walls were not the most difficult ever built to topple and fall. The ruins, of course, expose the system of bond irons employed, which, if sufficient to meet the requirements of the fire law at the time the building was built, would not be so considered at the present time by any qualified architect.

The construction of the walls was such as is generally employed in California, as far as the bond is concerned; i. e., headers each fifth course. The value of this method of bonding was contrasted with that of the English and Flemish bond, with no concession in favor of the former, except custom and cheapness.

This was followed by a general and earnest discussion of the matter of plan competition in connection with the Stockton Court House, Hall of Records, and jail.

The course determined upon by the Board of Supervisors having the matter in hand was reviewed in plain terms and condemned as unjust, inequitable, and promotive of, if not designed to cover up purposes and intents which dare not face the clear light of square and upright dealings. It is well understood, and well and conclusively known by all intelligent architects having any experience in such matters, what is meant and intended by \$800 for the first, \$400 for the second, and \$300 for the third best plan—all of which, however, to remain the property of the Board. The *joker* in such cases is an old familiar card, and cannot be played with impunity upon those understanding the game.

It may be that the San Joaquin County Board may be better than other Boards have been, and may be innocent in the error they have made. But if so, then they had better seek shelter by resigning, as the responsibility of what they propose to do must rest on them, whether they are acting and do act understandingly and intelligently for themselves, or are the servitors of others.

There have been too many of the unfair and unjust, and too few honorably and equitably conducted competitions for informed and competent architects not to feel aggrieved at the repetition of what, upon its face, is transparent in the case under review; and while the members of the Chapter recognize their entire inability to reform the abuses practiced in such cases, or to convince those who have happened or managed to be placed in position, to repeat another competitive wrong in the Golden State, they have the right, as architects, citizens, and men, to express in unmistakable terms their hearty disapproval of the method and manner of competition resorted to by the Stockton managers.

Mr. Sanders presented a drawing, delineating a most ingenious device applicable in testing the strength of timbers in various ways, utilizing a one pound weight in a given position to produce a pressure at another point of 2,000 pounds. The whole affair is simple and possible of being made useful in many ways. Mr. S. proposes to complete a working model of the device.

A committee was appointed to consider the Stockton competition matter, and report resolutions in reference thereto to a special meeting of the Chapter, to be held on the 14th inst.

"Family colors" is a term familiar to English coach painters. In this benighted land of ours, under the new order of things, there is no distinction in "regard to color or previous form of servitude."

Pure linseed oil may be free from adulteration, yet unfit for use, because not properly refined, or freed from mucilaginous matter.

Transparent Colors.

IT is well understood that transparency in the proper sense is opposed to opaqueness. A transparent body—strictly speaking—suffers rays of light to pass through it, so that objects can be seen distinctly.

Air, water, and glass are examples of transparent bodies. The word, however, is sufficiently accurate for all practical purposes, and, although in the use of a transparent color we cannot see the ground color over which it is laid, still the groundwork exerts a modifying influence on the so-called transparent color, and the educated eye of the painter sees the ground color, or at least is conscious of its modifying effect on the superimposed color. There is a mutual support between the two, a giving and taking, the end sought being what painters term depth and richness, which cannot be gained by an opaque or heavy-bodied color.

An opaque color presents to the eye a compact film, while the beauty of a glazing color is due to its property of lying loosely, so to speak, and as varnish is employed the color is asserted by the transparent medium.

The painter may obtain transparent colors in crimson, scarlet, purple, blue, yellow, green, and brown, and semi-transparent ones of less purity of tone; and as the may be used clear, over various grounds, mixed with one another, or modified by small proportions of opaque colors, every desired effect presented in nature may be correctly imitated, and the extreme richness be produced on surface work.

Carmine and the lakes, from cochineal and the madder root, supply all that is desirable in red.

Dutch pink, Italian pink, and patent yellow furnish the yellow tones, and ultramarine stands unrivaled as a blue.

Verdigris, emerald green, and green lake add to the list transparent greens of great beauty; and asphaltum has no equal among the browns. Raw sienna supplies a dull yellow, and burnt sienna a very valuable brown orange. The list might be somewhat enlarged, but those given comprise those which are most useful.

An opaque color may be rendered semi-transparent by using a large proportion of the vehicle to that of color, but such mixtures are comparatively of but trifling value.

Transparent colors are usually applied so as to retain the tone of the pigment, as it appears when moistened with oil or varnish. Thus scarlet, crimson, and purple-toned lake are painted over grounds of light and deep vermilion, Indian and Tuscan red, and as greater depth of color is desired, the change is made in the ground color. A very brilliant red is produced, by giving a thin wash of carmine over vermilion, and the same shade of carmine may be deepened through browns of varying depths, the limit being black. We may glaze lake over blue, or blue over lake, and produce purple and violet hues, but this is not generally practiced outside of stripping and ornamenting. The red-toned lakes place at the disposal of the painter a wealth of warm glazing colors; in fact, nothing better could be imagined.

Next in order is yellow, which is termed an advancing color, and when free from the orange cast, and is glazed over white, or delicately tinted grounds, produces brilliance, without gaudiness.

Patent yellow gives clear, bright tones. Dutch pink and yellow lake, when "wet up," are of a dull yellow, and may be glazed over drab ground-colors, with good effect, but they are at present employed to add richness to what are termed sea, bottle, and olive greens. In this arrangement, the true color of the yellow is hidden, and its yellow tone interposes between the foundation color and the eye, a yellow medium thus producing transparency and richness that cannot be gained by any other means.

The soft, mild green, produced by English varnish over black, is well known to coach painters, and they know also, that the precise tone cannot be imitated.

A pure, dark, rich blue is supplied by ultramarine blue. It may be classed as more retiring than many shades of green that are popular, and yet blue is but little used for panels.

It is usually glazed over, dark lead color, and mixtures of Prussian or Antwerp blue and white.

But that is by no means the limit, as it may be successfully glazed over white, straw color, yellow, orange, etc., etc.

Verdigris is a perfectly transparent, bluish green, of exceeding beauty, and in former times was in constant use by coach painters, for the panels of heavy work.

Ornamental painters are now lavish of it on gold and silver leaf, and it has almost lost its place as a panel color.

Among the browns, asphaltum is the most transparent, and when painted over a dark groundwork, imparts richness, all its own.

Transparent colors are sometimes modified or changed by the addition of those that are opaque. Thus, burnt umber and yellow

low lake, or Dutch pink, produce a soft, warm brown; Prussian blue gives a rich green, and so on. The reverse of this process is to add a small proportion of the transparent to the opaque color, as lake added to Indian or Tuscan red, and to the strong-bodied, mixed browns. Of course this is in the line of economy, the purpose being to retain the body or covering power of the opaque color, and a tinge of richness from the transparent one. There is scarcely a limit to the variety that may be produced, and hence the skilled painter has no difficulty in bringing out new effects in colors. — *Painters' Magazine and Coach Painter.*

Mistakes in Building.

OWNERS are often sadly disappointed and grieved at their mistakes in the means adopted by them to avoid the expense of an architect, and obtain plans for their buildings. Sometimes they know, or become acquainted with some *honest mechanic*, to whom they are induced to intrust the whole matter of plans, specifications, and construction, only to repent when it is too late. The party to whom the proposition is made, elated with the splendid opportunity opened up to him, and full of conceit in his own abilities, uses all possible means to secure and consummate the arrangement, and plans are made—and *such plans!*—and the work progresses. Once under way, there is no stopping it, and step by step the owner discovers and realizes, one after another, grievous errors, which are difficult to remedy. And when the building is completed, he simply feels disgusted. Imperfect arrangement, poor construction, homely design, and innumerable defects crowd upon him, as the reward of his folly; and regrets for his error haunt him day and night, but it is too late—the building is erected, and he must endure its defects.

But the first general dissatisfaction is primary and bearable, compared with after experiences in their various details. The plumbing work has, perhaps, been done by some tenth-rate man—some spoiler of good materials, who calls himself a "practical plumber," but who has not the slightest idea of what constitutes a really good job, not to say first class. Nor would the payment of ten times the value of the work done secure skillful workmanship at the hands of such men, for the simple reason that they do not possess, and therefore cannot practice, mechanical skill and abilities. And owners who employ this class of plumbers are unfortunate, indeed. But to continue, defects show themselves in all connections. Pipes, under the old free and easy rule, were put in of insufficient capacity, wastes entirely too small, and sometimes so cramped in making bends as to diminish their practical size one-half. "Tinker" instead of "wiped" joints; leaks at various points and places; wetting and spoiling ceilings and walls, and not infrequently carpets have to be torn up to escape the deluge. All this was followed by a still more serious defect—one affecting the health and lives of the occupants, *viz.*, imperfect or insufficient traps, pipe ventilation, bad sewerage, etc., resulting in the distribution of the vicious and poisonous sewer gases through the building, and as a consequence, the ill health and sometimes *premature death* of loved ones. The intended pleasant home is thus transformed into a mere fume-castle, a disease-breeding charnel house, not fit for human habitation.

All this is followed by continual repairing, tearing up floors, removing finishes to get at concealed places, etc.; and for all this the owner has been made to pay a good round price, amounting to more, as a rule, than it would have cost him to have secured a good building erected under the superintendence of a trustworthy architect. But bad plumbing work is not the only serious defect which so often occurs in such cases. The foundation is often wholly insufficient, and settling occurs, with any quantity of ugly cracks in the plastering. The structure is perhaps so poorly braced that the edifice trembles with every wind that blows. And when the rains fall, leaks are found at every exposed window and opening, and the roof itself yields its proportion of internal wettings. But we will not continue our enumeration of "bad things," as to do so would consume columns of space. Such gases are known to all architects, and many a "served him right" is indulged in, upon the principle that a competent physician laughs at the sufferings of a patient whose pains and agonies result from self-treatment or quack practice, and the educated lawyer smiles when his client gets himself into a *terrible fix* by intrusting his case to some pettifogger, or who tries to work out the intricacies and problems of law by his own self-conceived legal ingenuity.

UNCOVERING THE BASE OF THE SPHINX.—Since the 7th of January last, several hundred Egyptian fellaheen have been at work under the direction of Brugsch Bey (formerly commissioner to the Centennial Exhibition) removing the sand which has hitherto enshrouded the great Sphinx up to its very neck. By the end of this month the whole of it, amounting to over 20,000

cubic meters, will have been removed, and the grand old monument, raised by the Pharaohs over 4,000 years ago, will be again visible in all its beauty. A high wall is being built around it, to prevent the desert-sands from again submerging it. — *New York Mail and Express.*

THE ARCHITECT OF THE CELESTIAL KINGDOM.—The Mormons have just had another revelation from Heaven, which indicates that their prophet, the late Mr. Joseph Smith, is much more innocently employed there than he was on earth. They are building a big tabernacle at Provo, the second city in importance in Utah Territory, and the architect, a Mr. Folsom, was much perplexed about the entrances and exits, when (so he says) the Prophet Joseph appeared to him in a vision and straightened out the crookedness, remarking that architecture is his particular employment in the celestial kingdom. The Salt Lake *Herald*, a journal run by Mr. Cairne, the Mormon delegate in Congress, observes:—

"As the arrangement is altogether novel, and a great improvement over similar edifices throughout the Territory, there is no reason for discrediting Mr. Folsom's somewhat startling assertion."

We recommend this seemingly well-attested vision to the consideration of the American Institute of Architects. We have heard that when the elevators were put into the Equitable Life Assurance Society's Building on Broadway, the contractor successfully consulted his deceased father or uncle, through a medium in Ohio, for the plan of them. If the Institute can make a permanent arrangement with the late Mr. Smith for professional services in difficult cases, it will be a great thing for American architecture. It is a pity that some way to communicate with him was not contrived during the building of our local monstrosity, the New York post-office. But it may not be too late even now to call him in for consultation about the Albany capitol. — *New York Herald.*

LIENS UPON PUBLIC BUILDINGS.—A decision of the supreme court involving the question of the validity of mechanics' liens upon public buildings, holds that liens of this character are contrary to public policy, and therefore void.

Parties contracting for the erection of this class of structures should therefore bear in mind the fact that the Lien Law affords them no protection in case of failure on the part of boards, and commission controlling constructive—public—works to pay the contract sum. There are methods by which collections may be reached, through suits, relief bills, etc., but these are always more or less vexatious, and often very expensive to the creditor.

Market Report.

Pine, Rough, No. 2, per M feet, \$15 00	
" " " 2 in. lengths, " " 12 00	
" " " 40 to 50 feet lengths, " " 13 00	
" " " 50 " 60, " " 18 00	
" " " Selected, " " 20 00	
" " " Clear, " " 25 00	
" " " Fire Wood, " " 8 00	
T. & G. Flooring, 1 x 6, " " 27 00	
" " " 1 x 6, 1 x 4, 1 x 3, " " 30 00	
" " " 1 x 3, and narrower, " " 22 00	
Sepping, No. 2, " " 35 00	
Furring, 1 x 2, " " 27 50	
Redwood, Rough, " " 14 00	
" " " Surfaced, " " 30 00	
" " " T. & G. 6 in. 12 ft. and over, " " 28 00	
" " " " 7 to 11 feet, " " 25 00	
" " " " under 7 feet, " " 20 00	
" " " Rustic, " " 30 00	
" " " No. 2, " " 26 00	
" " " T. & G. Beaded, 12 ft. and over, " " 30 00	
" " " " 7 to 11 ft., " " 25 00	
" " " " under 7 ft., " " 20 00	
" " " Siding, 1 inch, " " 22 50	
Pickets, Fancy, " " 25 00	
" " " Rough Pointed, " " 16 00	
" " " " Square, " " 14 00	
Battens, 1 x 3, " " 00 3	
Shingles, " " 2 00	
Laths, 1, " " 3 25	
" " 1 1/2, " " 3 75	

NAILS—Rates were recently reduced to—

200 keg lots, " " 2 70	
100 keg lots, " " 2 75	
Smaller quantities, " " 2 80	

PAINTS AND OILS.

Pioneer White Lead (local factory), 5-ton lots, " " 6 1/2 @ 6 1/2	
Cal. Linseed Oil, raw (single bbl lots), " " 4 5 1/2	
" " " boiled " " " 4 7 1/2	
Turpentine, per gallon, " " 58	
BRICK—California Building Description, soft, per 1,000, " " 5 50	
" " " " red, " " 6 50	
" " " " hard, " " 7 50	

Building Intelligence.

B	E	F	G	H	I	J	K	L	M	N	O
Broadway , south side, bet. Gough and Octavia. Two two-story frames. O.—T. C. Delanater. C.—G. M. Salisbury. \$5,000.	Eddy , cor. Devisadero. Two-story frame. O.—and B. F. Buckley, Jr. A.—J. H. Humphreys. \$3,500.	Fifteenth , bet. Castro and Noe. Two-story frame. O.—J. Hoelling. A.—R. Warren. C.—J. M. Maher. \$4,800.	Guerrero , bet. Eighteenth and Nineteenth. One-story frame. O.—J. J. Carroll. A.—P. R. Schmidt. C.—Cormack & Elam. \$2,200.	Hickory , nr. Gough. Two-story frame. Two flats. O.—W. Lang. A.—Saffield & John. C.—J. Klein. \$3,000.	Harrison , cor. Twenty-fifth and Twenty-sixth. One-story frame. O.—Mrs. Curran. C.—W. McKeon. \$2,000.	Herriman , nr. Fillmore. One-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Minnesota , nr. Solano. Two-story frame. O.—J. Money. C.—C. E. Dunshie. \$2,000.	Lapidge , nr. Nineteenth. One-story frame. O.—and B.—F. C. Kleibauer. Day work. \$3,000.	Market , bet. Church and Sanchez. One and one-half story frame. O.—J. B. Clott. C.—Cormack & Elam. \$2,000.	Mission , bet. Fifteenth and Sixteenth. Three-story frame. O.—J. W. Lahey. A.—M. J. Welch. C.—W. F. Fitzpatrick. \$7,000.	Montgomery Ave. , cor. Union. Three-story frame and brick basement. O.—L. Goedecke. A.—W. Mosier. C.—J. C. Classen. \$12,000.
Bryant , nr. Third. Two two-story frames. O.—J. Curry. A.—J. E. & T. D. Newsom. C.—J. Adams. \$11,000.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , nr. Scott. Two-story frame, two flats. O.—F. Volkmann. A.—Saffield & John. C.—B. Dryer. \$4,000.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Broderick , cor. Hayes. Two-story frame. O.—J. Klopfer. A.—H. Geilfuss. C.—T. Von Borstel. \$3,600.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Broderick , near Grove. Two-story frame. O.—Mrs. Russell. A.—McDougall & Son. C.—Kerrigan & Lufkin. \$4,000.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Broderick , nr. Fulton. Two-story frame. O.—H. R. Levy. A.—J. Chadwick. C.—H. G. Monrad. \$4,000.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Bush , bet. Baker and Lyon. One-story frame. O.—W. D. Nicholson. C.—G. G. Gellspie. \$2,500.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Castro , cor. Fifteenth. One-story frame. O.—and B.—T. Darcy. Day work. \$2,000.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Castro , cor. Seventeenth. Two-story frame. O.—J. D. Wulzen. Day work. \$6,000.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Church , nr. Twenty-fourth. Additions. O.—J. Duffy. Day work. \$700.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Columbia , nr. Harrison. Additions. O.—H. B. Russ. A.—McDougall & Son. C.—J. H. McKay. \$2,500.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
California , bet. Buchanan and Webster. Additions. O.—H. Erlinger. A.—C. Kenitzer. C.—H. Jackson. \$5,000.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Devisadero , nr. Oak. Two-story frame. O.—J. Gatto. C.—J. Sheppard. \$2,500.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Devisadero , bet. Hayes and Fell. Additions. O.—J. R. Dever. A.—S. & J. C. Newsom. C.—J. H. McKay. \$600.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Dapont , cor. Geary. Four-story and basement brick. O.—A. M. Davis, of Davis Brothers. A.—Copeland & Banks. Carpenter work—Treadwell & Thompson, \$15,885. Iron work—O'Connell & Lewis, \$1,419. Sidewalk lights—Mahoney Bros., 4,051. Total, \$39,185.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Devisadero , nr. Oak. Two-story frame. O.—J. Gatto. C.—J. Sheppard. \$2,500.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Devisadero , bet. Hayes and Fell. Additions. O.—J. R. Dever. A.—S. & J. C. Newsom. C.—J. H. McKay. \$600.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
Dapont , cor. Geary. Four-story and basement brick. O.—A. M. Davis, of Davis Brothers. A.—Copeland & Banks. Carpenter work—Treadwell & Thompson, \$15,885. Iron work—O'Connell & Lewis, \$1,419. Sidewalk lights—Mahoney Bros., 4,051. Total, \$39,185.	Ellis , bet. Pierce and Scott. One-story frame. O.—Mrs. Lang. C.—W. Pluss. \$2,500.	Fulton , bet. Fillmore and Steiner. Two-story frame. Day work. \$4,500.	Freelon , bet. Fourth and Fifth. Two-story frame school-house. O.—Father Nugent. C.—J. Clark. \$4,500.	Howard , bet. Eleventh and Twelfth. Additions. O.—J. Crowley. A.—M. J. Welch. C.—E. & F. J. Owens. \$2,000.	Herriman , nr. Fillmore. Two-story frame. O.—H. Eschburg. A.—W. H. Bayless. C.—Schaffer & Co. \$2,300.	Haight , nr. Fillmore. Two-story frame. O.—Mrs. C. Shaw. A.—S. & J. C. Newsom. C.—J. Rehman. \$5,000.	Market , near Jones. Two-story brick. O.—Beixotto & Silverman. A.—Copeland & Banks. C.—Treadwell & Thompson. \$21,185.	Liberty , bet. Noe and Church. Two-story frame. O.—M. Brook. A.—Townsend & Wynekin. C.—H. Cragenbush. \$5,500.	Market , bet. Eighth and Ninth. Three-story frame. O.—L. Haber. A.—C. Kenitzer. C.—C. F. Rupper. \$12,000.	Mission , cor. Franklin. Three-story frame. O.—J. Nightingale. A.—A. J. Barnett. Plastering—John Donovan, \$4,350. Plumbing—J. K. Prior, 4,070. Total, \$8,026.	Montgomery Ave. , cor. Francisco. Three-story frame. O.—J. Cano. C.—M. F. Harley. \$3,500.
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P Pacific, cor. East. Two-story frame. O.—Geo. Livingston. C.—W. H. Wharf. \$1,700. Protero Ave., bet. Twentieth and Twenty-first. Two one-story frames. O. and B.—C. E. Dunshie. Day work. \$2,000. Post, nr. Scott. Two-story frame. O. and B.—J. C. Wier. Day work. \$4,000. Pine, bet. Broderick and Baker. Two-story frame. O.—J. Cassidy. A.—Chas. I. Havens. C.—M. W. Kahn. \$5,500. Pierce, bet. Tyler and Turk. Two-story frame. O.—M. Doolley. Day work. \$4,000. Pine, cor. Baker. Six two-story frames. O. and B.—B. F. Norris. Day work. \$10,000. Post, bet. Broderick and Baker. Two one-story frames. O.—H. Johnson. A.—E. W. Pratt. Day work. \$3,000. Pacific, nr. Fillmore. Two-story frame. O.—A. W. F. Smith. C.—G. Hussey. \$4,000. Park Ave, nr. McAllister. Two-story frame and brick basement. O.—California Title Insurance and Trust Co. A.—W. F. Smith. Carpenter. Gray & Storer. Brick work. R. Mitchell. \$6,000.	Rincon Place, cor. Bryant. Alterations. O.—H. Diedrich. A.—J. J. Clark. C.—J. J. Dunn. \$3,000. S Silver, nr. Fourth. Two-story frame. O.—M. Mephist. A.—W. C. Hoagland. C.—I. Selander. \$2,000. San Jose Ave, nr. Twenty-seventh. Two-story frame. O. and B.—J. M. Comerford. Day work. \$3,500. San Jose Ave, nr. Duncan. One-story frame. O. and B.—J. M. Comerford. Day work. \$1,700. Seventeenth, nr. Sanchez. One-story frame. O.—Jas. Wolf. A.—Huerne & Everett. C.—W. J. Bowring. \$2,000. Sutter, cor. Laguna. Additions. O.—P. N. Butte. Day work. \$1,600. Stevenson, bet. Eighth and Ninth. Two three-story frames. O.—L. Haber. A.—C. Kender. C.—C. F. Ruppee. \$8,000. Sacramento, nr. Stockton. Alterations. O.—H. Rothschild. A.—J. E. Wolfe. C.—J. Smith. \$700.	Twenty-sixth, cor. Harrison. Two-story frame. O.—John Ryell. A.—M. J. Welch. C.—J. O. O'Connell. \$1,800. Twenty-first, cor. Howard. Two-story frame and brick basement. O.—H. Ludwig. A.—H. Gellius. C.—F. Klatt. \$16,500. Thirteenth, cor. Harrison. Two-story frame. O.—Geo. Munsterson. A.—John J. Clark. Day work. \$4,500. Turk, bet. Taylor and Jones. Additions. O.—M. H. La sak. A.—J. M. Curtis. C.—C. B. Green. \$10,000. Turk, nr. Franklin. Additions and alterations. O.—F. Bramah. C.—B. Pfarrer. \$6,000. Taylor, cor. O'Farrell. Two-story frame, four flats. O.—L. M. Starr. A.—S. & J. C. Newson. C.—D. B. Spangler. \$12,000.	V Van Ness, cor. Ash Ave. Four two-story frames. O.—J. Rich. C.—Townsend & Wynken. C.—C. H. Plummer. \$20,000. W Waller, bet. Buchanan and Webster. One-story frame. O.—Thos. Magee. A.—Curtlett & Cuthbertson. C.—W. E. Cummings. \$2,000. Webster, bet. Herman and Waller. One-story frame. O.—L. Goodchild. A.—Salfeld & John. C.—D. B. Spangler. \$1,400. Washington, bet. Octavia and Laguna. Additions and alterations. O.—Wm. Dunphy. A.—T. J. Welch. C.—J. Blake. \$12,000. Y York, nr. Twenty-third. Additions. O.—M. L. O'Brien. A.—G. P. Aston. C.—H. Wren. \$1,200.
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MISCELLANEOUS.

Los Angeles. Main cor. Court. Three-story and basement brick. O. Maxwell & Morra; C. Curlett & Cuthbertson; \$25,000. Two-story frame. O. W. H. Mansfield; C. S. McNally; \$6,000. Main cor. Laurel. Two-story frame. O. Dr. Custer; C. S. H. White; \$5,000.

Napa. Caymus. Frame church. O., St. John's Catholic Church; A. W. H. Corlett; \$2,000. Two-story frame. O. W. J. Kibbler; C. Bassett Bros.; \$7,000. Two-story and basement frame. O. M. J. Blanchard; C. Mison & Son; \$6,000. One-story cot; tags. O. Thos. Erwin; day work; \$900. Three-story wine cellar; O. John Benson; mason; J. Deluchi; carpenter; Mison & Son; \$10,000. Two-story frame. O. D. H. McLennan; day work; \$1,600.

San Jose. Market cor. San Fernando. Alterations to brick building. O. Rev. N. Congrat; A. Jacob Lenzen & Son; C. R. Summers; \$1,250. San Fernando, opp. San Pedro. O. Horticultural Society; A. Jacob Lenzen & Son; C. F. Davis; \$6,000. On the Alameda. Alterations. O. J. Ivanovich; A. Jacob Lenzen & Son; C. H. Skow; \$1,300. Second, bet. San Carlos and San Antonio. Two two-story frames. O. J. Hart; A. Jacob Lenzen & Son; C. R. Summers; \$4,610. Santa Clara cor. San Fernando. One-story frame. O. Mrs. Fairchild; A. Jacob Lenzen & Son; C. S. W. Lanning; \$1,855. On Alameda, bet. San Jose and Santa Clara. Two-story frame and brick basement. O. W. S. Clark; A. Theodore Lenzen; day work; \$55,000. Chapman & Davis Tract. One-story frame. O. A. Oswald; A. Jacob Lenzen & Son; C. F. Davis; \$1,250. Vine, nr. San Fernando. One-story frame. O. Louis Pfau; A. Jacob Lenzen & Son; C. G. Drew; \$1,400.

San Rafael. Two-story frame. O. D. H. Whittenmore; A. W. H. Wharf; \$3,400. Two-story frame. O. — Sweeney; A. Pissis & Moore; C. L. Frichette; \$11,500.

HILL'S PATENT INSIDE SLIDING WINDOW BLINDS

Are Adapted to Any Style of Window

And Suitable for all Buildings, Dwellings, Stores, Office Buildings, and for Houses Built to Rent, Boarding or Lodging-Houses are Unexcelled.

THEY are entirely inside of the window casing, and while requiring no turning out or boxing, make it an impossibility to tear curtains, interfere with plants or window ornaments, or become broken by contact with chairs or other movable articles.

The light can be admitted and sunlight excluded from any part of the window; can be instantly removed and taken to any part of the house to clean, and as easily replaced.

They can be opened or closed with the window raised, and without removing articles from the window-sill, and cannot blow open or rattle. The Blind is very light (one-half inch in thickness) and strong, possessing more durable qualities than a hinged blind one inch in thickness.

There is NO SAGGING, BANGING, OR GETTING OUT OF ORDER!



They are made in three sections in height (each section sliding past the others), and any number of divisions in width corresponding to the folds in the old-fashioned folding blinds. They require no HINGES—all trimmings furnished with blinds—are MADE OF ALL WOODS, finished or unfinished, and COST LESS than old-style folding blinds. They have been extensively used by the best architects and builders throughout the East and West, and have given perfect and entire satisfaction wherever introduced.

The following are a few of the owners who have adopted the HILL BLIND in preference to any other:

U. S. Government, four sets officers' quarters, Presidio Res., S. F.; H. F. Bruns, cor. Geary and Taylor, S. F.; J. C. Weir, Post, near Scott, S. F.; John MacKenzie, cor. Grove and Broderick, S. F.; L. H. Sweeney, San Rafael; R. B. Gray, cor. Pacific and Van Ness, S. F.; Raymond Hotel, 1,600 windows, Pasadena, Cal.

ENGLISH AND AMERICAN VENETIAN BLINDS IMPROVED.

The only Perfect Venetian Blind in the market. For samples, prices and information, address,

EDWARD B. HINDES, 330 Pine St., Room 55. PACIFIC COAST AGENT.

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

VOLUME VII.

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

NUMBER 6.

THE California Architect & Building News.

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PRICE, \$2.00 PER ANNUM.

The official organ of the Pacific Coast Association of Architects. Published by the SAN FRANCISCO ARCHITECTURAL PUBLISHING CO. NO. 240 MONTGOMERY STREET, ROOMS 11, 12, 13.

Subscribers will please notify us promptly of any failure to receive this journal, and also of any change in their address.

Advertisements inserted at reasonable rates.

SAN FRANCISCO, CAL., JUNE 10, 1886.

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Summary of Building Activities.

THE building trades have been fairly active during the past thirty days, with results as shown by our summary of facts and figures, as follows:—

Engagements, frame, 82.....	Cost, \$346,379
“ brick, 1.....	“ 10,000
Alterations and additions, 12.....	“ 45,160
Total for the month, 95.....	“ \$401,539
FOR THE SAME PERIOD IN 1885.	
Engagements, frame, 126.....	“ \$469,100
“ brick, 2.....	“ 72,000
Alterations and additions, 20.....	“ 60,810
Total for the month, 148.....	“ \$601,910
Showing a decrease for 1886 of—Engagements, 53.....	“ 200,371
First Quarterly Report for 1886—Engagements, 252.....	“ \$1,359,532
Second Quarterly Report for 1886—Engagements, 418.....	“ 2,127,101
Total for first six months, 1886—Engagements, 670.....	“ \$3,486,633
First Quarterly Report for 1885—Engagements, 291.....	“ \$1,967,750
Second Quarterly Report for 1885—Engagements, 463.....	“ 2,299,625
Total for first six months in 1885—Engagements, 754.....	“ \$4,267,375
Showing a decrease for the first six months in 1886 of—Engagements, 84.....	“ \$780,742

In view of the fact that the preceding year was one of extraordinary activities, the falling off, as shown by present report, should not be considered discouraging; for the movements in building operations are fully up to the requirements of the times, and a greater rush would simply add to the number of houses to rent, which, while not numerous, are sufficient to suggest a little moderation for the present.

The demand for good draughtsmen during the month has been large, owing to the competition for the Court House and jail at Stockton, which required a large force to compile ten sets of plans for a single building, three-fourths of which labor was simply thrown away, not a farthing being paid for the services rendered, beyond the paltry sum of premiums, insufficient in amount to compensate for a single set of plans, even had one architect received the entire amount. But with the *divis* and expenses deducted, the actual balance to the premium parties will be but little, and the rest of the competitors, who were silly enough to waste their time in efforts to secure results not assured upon merit, can only console themselves with the glory of the attempt, and hold their conceptions as the reward of their folly, and be ready for the next move made by some Board of Supervisors to humbug ambitious aspirants into another farcical competition, which nine-tenths, if not forty-nine-fiftieths, of all general competitions are.

To Our Friends.

THE proposition announced in another part of this issue, offering to dispose of our entire interest in this journal, will be a surprise to very many of its readers, and, in view of the fact that it is, and is recognized as, one of the journalistic successes of the period, it will naturally lead to inquiry as to the reasons for the course proposed.

We answer: It is a conclusion most reluctantly reached; but there is a period in human life when nature calls for relief from excessive cares and labor; when ambitions should yield to the restful peace of contentment with that which has been accomplished.

More than is meet for one to attempt, is not wise; nor can any one divide between two pursuits the time required for one, and do either well.

This we realize, and therefore propose to relinquish our editorial relationships, and devote ourselves exclusively to the duties of our profession as practicing architect, with the earnest hope and desire that those who succeed us may, in every way, be fitted and qualified for the responsible duties of directing and managing its future successfully, profitably, and alike creditably to themselves and to the class journal literature of the United States.

The multiplicity of personal engagements, and other drawbacks and interruptions in our editorial work, have imposed undue and excessive mental and physical labors, and prevented the utilization of the

NUMEROUS POSSIBILITIES OF THE SITUATION.

Which are practical, accessible, and important, and rightly manipulated, sufficient in themselves to furnish an almost exhaustless amount of matter and fact for future publication.

A change of management will also remove all the objections, prejudices, and jealousies more or less existing among architects, builders, and others, by reason of the fact of its being published by a practicing architect. For while it has been edited and conducted upon the broadest and most generous and liberal principles, consistent with its reputation as a representative journal, carefully avoiding and excluding all matter and references which could—in reason, without torture or forced construction of plain language, and a total disregard of fair interpretation of intended meanings—be charged as designed for personal, professional benefit, still there are those who claim to be able to trace the personal feature in every issue, from which they draw the conclusion and advocate the theory that a practicing architect in the chair editorial, no matter what the qualifications, is improperly seated.

We have realized and do realize the delicacy of our position in this regard, and have often restrained the free use of our pen in directions where to have done so would have been attributed to wrong motives on our part.

This restraint need not exist under a new administration, and we hope our successor will exercise his fullest liberty without fear or favor; for in California, of all other places, those who read journals of any class, like fire and force in the lines they read, eloquence simplified to the common understanding, and information and instruction plainly and clearly expressed.

AS AN INDIVIDUAL ENTERPRISE.

It offers strong inducements for investment, as, in the hands of right parties, it can be made

THE VERY BEST PAYING CLASS JOURNAL PUBLISHED WEST OF THE ROCKY MOUNTAINS.

And the fact is beyond all question, that a journal of its kind is an absolute necessity in San Francisco, to represent all interests in any manner pertaining to the architecture, erection, decoration, furnishing, and completion in every detail, of buildings of every class, together with all mechanical, laboring, manufacturing, and producing interests.

ITS PRESTIGE.

Occupying the field alone during the past eight years—the quarterly of 1879 included—has gained for it a

SUBSTANTIAL AND PERMANENT ADVANTAGE

Over all possible competition. And its most favorable recognition by the class journals of the United States and Europe has secured to it a widely spread popularity and prominence, which time, energy, and money alone could secure. The journal and

all its interests are entirely free and clear from all indebtedness and incumbrances.

Its future in the hands of an incorporated company of architects and builders, collectively or separately, or of individuals seeking investment, with proper editorial and managerial appointments, can be made to yield a large return upon the sum required in its purchase and improvement; particularly so, if, combined with the journal enterprise, there is a complete outfit and presses added for general and job printing, in addition to the journal work. We have thus far continued the printing, etc., of the journal by contract, but have frequently considered favorably the arrangement above suggested, and declined its adoption solely upon the ground that such a course would augment cares and responsibilities of which we have had more than we wish to continue in the journal work alone, in addition to our numerous architectural engagements and duties.

It is but seldom that an interest of so great value and assured prospects is offered for sale, but, feeling the twofold weight of professional and editorial responsibilities, it is a personal duty to ourselves to be content with the results of the former.

Redwood vs. Brick Foundations.

IN the "early days of California," redwood was considered to be a suitable and lasting material for foundation purposes, and was almost universally adopted. Many stories were related in regard to its durability, among which was one, that a certain post then (1851-52) standing in a "perfect state of preservation" at Santa Clara, had been planted by "the fathers, a hundred years ago." The general impression prevailed that redwood would last for all time, and nothing better was necessary for foundations, as a rule. But experience has demonstrated the fallacy of these first formed opinions, and shown that the redwood of California yields to the processes of decay when placed in the ground, varying only in rapidity of decomposition, according to the special characteristics of the earth, sand, or clay formation in which it is bedded, and the sapless quality of the wood itself. The black-heart redwood is far preferable to the softer, more punky and fibrous wood, but for many years it has been difficult to obtain the better kind in quantities, without selecting and extra cost. So that while some of the earlier put in foundations, where the better quality of redwood was employed, have lasted well, the material generally used at the present time, and for a few years back, is from upland growth, and will not last one-half as long, particularly with the common practice of the day, not to spend any time in selecting the really good pieces, and rejecting the bad, but to "take it from the pile," using all that does not possess conspicuously bad defects; and contractors generally are not critical in their judgment on this score. When a load of lumber is sent to a building, the next most important question is its speedy consumption in the work of construction, which might be retarded if portions of the materials were set aside, and a delay occasioned until a substitution could be effected. So, generally the good and bad go in together, either and both of which answer all purposes to the fulfillment of the contract, and the matter of last and decay is left with the owner, as a matter to be attended to as after circumstances may develop.

The old-wood foundations of very many buildings have been substituted by brick, and many more will have to be. Some



St. Lewis Alley north end.

very good structures rest on wood foundations, but the progress of decay and settling is such that changes are necessary. The removal of the poorer for the better and more durable is always expensive, and more or less damaging to the edifice. The difference between wood and brick is so small that no prudent man who is not pressed in circumstances is wise to build on wood foundations.

There are, however, in San Francisco, localities where either redwood or Oregon pine will last for generations, if not forever. Along the filled-in city front, where timber is bedded below the

tide level, rot does not occur. Illustrations establishing this fact can be seen at the office of this journal, one of which is of Oregon pine, taken from the foundation of an old brick building which stood on the northeast corner of Battery and Sacramento

old bulkhead built on the line of Market Street, below First, on the property of Mark Sheldon, Esq., as nearly as can be ascertained, built in 1852, and removed in 1885, show no sign of decay. Each of these were, however, buried in the mud, at or below tide water. The fourth example, in contrast, is from a foundation renewed under a building erected on Sacramento Street, above Franklin. The house was built in 1874, and when re-underpinned, in the latter part of 1878, the redwood taken out was more or less badly rotten, and, as may be seen by the sample, portions of the mudsills so thoroughly decomposed that chunks of it can be crumbled up in the hand like so much dry earth, scarcely sufficient fibrous tenacity remaining to resist the gentlest touch. From the foregoing, it is proper to advise that owners who desire substantial and lasting buildings should in all cases adopt brick, stone, or other indestructible material for foundations.

Interiors and Furniture.

EDITOR CALIFORNIA ARCHITECT: It certainly seems to me that persons who contemplate building homes for themselves will do well to consider thoroughly all of the points and features, present and prospective, before giving orders for their plans. Now, we all know that the general course pursued is to consult an architect, tell him what kind of a house is wanted, how much money is to be expended, and if these primary considerations are all satisfactory, the order is given to proceed with the plans. The house is finally erected, but as the total cost may have exceeded first expectations, economy becomes necessary in the fitting up of the interior, and the furniture and elaborations have to be curtailed. Now, it certainly seems to me that most people display a want of good taste and judgment in profuse exterior finishes, and exhaust their means in that which possesses no practical value as far as the real comforts of home are concerned, as compared with the pleasures to be derived from a due consideration of, and provisions for furniture and internal finishes. But few owners consider these points, or consult with their architects as to what furniture and finish will best suit certain rooms. This matter they reserve to themselves, and hence great inconsistencies exist in many fine edifices. Now, in my opinion, it is important that more attention should be paid to interior fittings and furniture. The greater portion of the leisure hours are spent with the family around the fire-side, and therefore it is highly important that the surroundings should be pleasing, which cannot be when there is a lack of harmony in those things which the eye must see and the hands handle. The furniture and decorations should be suitable for the respective rooms. Among the first thoughts in connection with the building of a home should be the matter of furniture, so as to secure a final result

satisfactory in every particular, which can be obtained by proper attention in the premises. Often the pleasure excited by exterior appearances receives a check upon the survey of the internal finishes and furniture. The confusions of styles, and absence of appropriateness, diminish the final admiration of all parts. The trims and finishes of the rooms may be in the Gothic style, but the furniture may be of no style, or a medley of all styles



St. Lewis Alley south end.

Streets. It was placed in the ground in 1852, as planking under the walls of the building, and removed in 1875 for the erection of a new edifice. It is not only apparently as sound as ever, but exhibits signs of petrification, and perhaps would have maintained its soundness for a hundred years or more, if it did not by that time assume an everlasting character. Two other samples, one of redwood and another of Oregon pine, taken from the

—the chairs being, perhaps, Renaissance, the table no particular style, the mirror Grecian, the mantel Egyptian, and the carpet some gaudy thing without any particular appropriateness or design. Too much care cannot be exercised in these and all other particulars, so as to insure harmony and appropriateness. The matter of hardwood finishes is one which adds much to the comforts of home where there is an appreciation of the beautiful and elegant, while the extra cost to indulge in them, in certain rooms, is not so great as to preclude their use where absolute restriction in outlay does not exist.



FRONT ELEVATION.

But many men erect homes which they admire, but have no conception of the style of its architecture. The only thing clearly understood by them is, that the front door is the principal entrance to the building. But the effect of the interior finishes and furniture is a different thing. The commonest mind is enabled to distinguish between interior harmonies and distracted taste, or no taste at all. Consistency and harmony in these particulars enlarge and increase the pleasures of home; for where all the parts harmonize, pleasurable results follow, inspiring the sentiment, "there is no place like home."

It is not necessary to expend large amounts of money to accomplish the suggestions herein made. As a rule, furniture can be obtained made to order from original designs, at about the price that similar things would cost in any first-class establishment ready made, and it would certainly be more satisfactory.

A word or two on the subject of finishing may not be amiss. Take for instance the parlor. It should present a cheerful and pleasing appearance. The trim may be in some bright-colored wood, say butternut, prima vera or cherry, combined with black walnut; or, if preferred, make it all black walnut. The furniture should show quiet taste, simple in construction, but strongly made. If carvings are added they should be from natural subjects. In fact, a piece of furniture should be like a book—something from which to educate the mind. The carpets should be of quiet colors, harmonizing with the curtains and hangings. The hall, if laid in hard wood, say two inches wide, with a narrow carpet, presents a fine appearance; and if the hat-rack is placed in a recess, removes an obstacle which generally exists in halls; and if doors with cut or colored glass inclose the same, so much the better. A dining-room with floor of hard wood, either continuous lengths of narrow widths or in ornamental figures, would obviate the expense of carpets, except the cost of a rug in the center for the table, which, with neatly-

paneled wainscoting, paneled ceiling, and trim of openings in butternut or oak, or other suitable hard wood, make a neat finish. The side-board should be built in a niche, and in my opinion should be a picture of the building and part of the room. The table should be of proper size, with the legs well under it, so that those sitting around it would not be required to hold a table leg between their knees.

Now, my reader, let me remark, that when you are ready to build, take the advice of your architect in reference to the interior finish and furniture of your building. When you are sick, you send for a physician. When you want to build, consult an architect; and in doing so, consult him in everything, for his studies and experiences qualify him to be your best adviser.

W. D. B.

Honorable Emulations.

PRACTICED in the higher and more elevated senses, free from all the belittling influences of the human mind, they are proper and productive of good, and tend to higher developments, and greater and grander results to mankind. They are simply the result of mind upon mind, thought feeding thought, and he who produces the greater should honor the source from whence his thinking came. For the larger part of the brain, scientific and mechanical developments of the nineteenth century, derive their source of origination in something that has been suggested, produced, or expressed in ages gone by. There is scarcely anything of recent production which does not find its *thought inception* in the past; as the steam, with its ten thousand applications and uses, came to light through the humble teakettle, and the prolific brain of a boy. And those who have emulated and improved upon those first thoughts, are indebted to a very insignificant and humble origin.

The proudest achievements of the present day are largely the borrowed ideas of the past. Perhaps the origin in many cases may be very obscure, and their obscurity may almost obliterate identity, yet the germ has been planted in years or centuries gone by, and as still and quiet inspirations have come to men of later days, from inconceivable sources, their minds have enlarged and expanded into greater achievements, whether scientific, intellectual, or mechanical, commanding and receiving the admiration of the world. The world is a great school-house, and all men are scholars, some bright and apt to learn, while others are dull and slow, groping along in mediocrity and scaling down to the lower grades of humble life, and some sinking into the depths of vice and degradation. The apt scholars grasping, mastering, and perfecting the more difficult problems, bringing forth hidden treasures of mind and matter, and making the world wiser, brighter, and better. As the rains from the clouds descend to refresh, invigorate, and fructify the earth, causing the seed planted in the soil, the trees and flowers, to grow and mature, and produce other seed and fruit, so do good and bad, wise and unwise thoughts spread broadcast before the world give birth to other thoughts, similar in kind, and the fields of good and evil, advancement and retrograde, are replenished and enlarged by the daily developments of life.

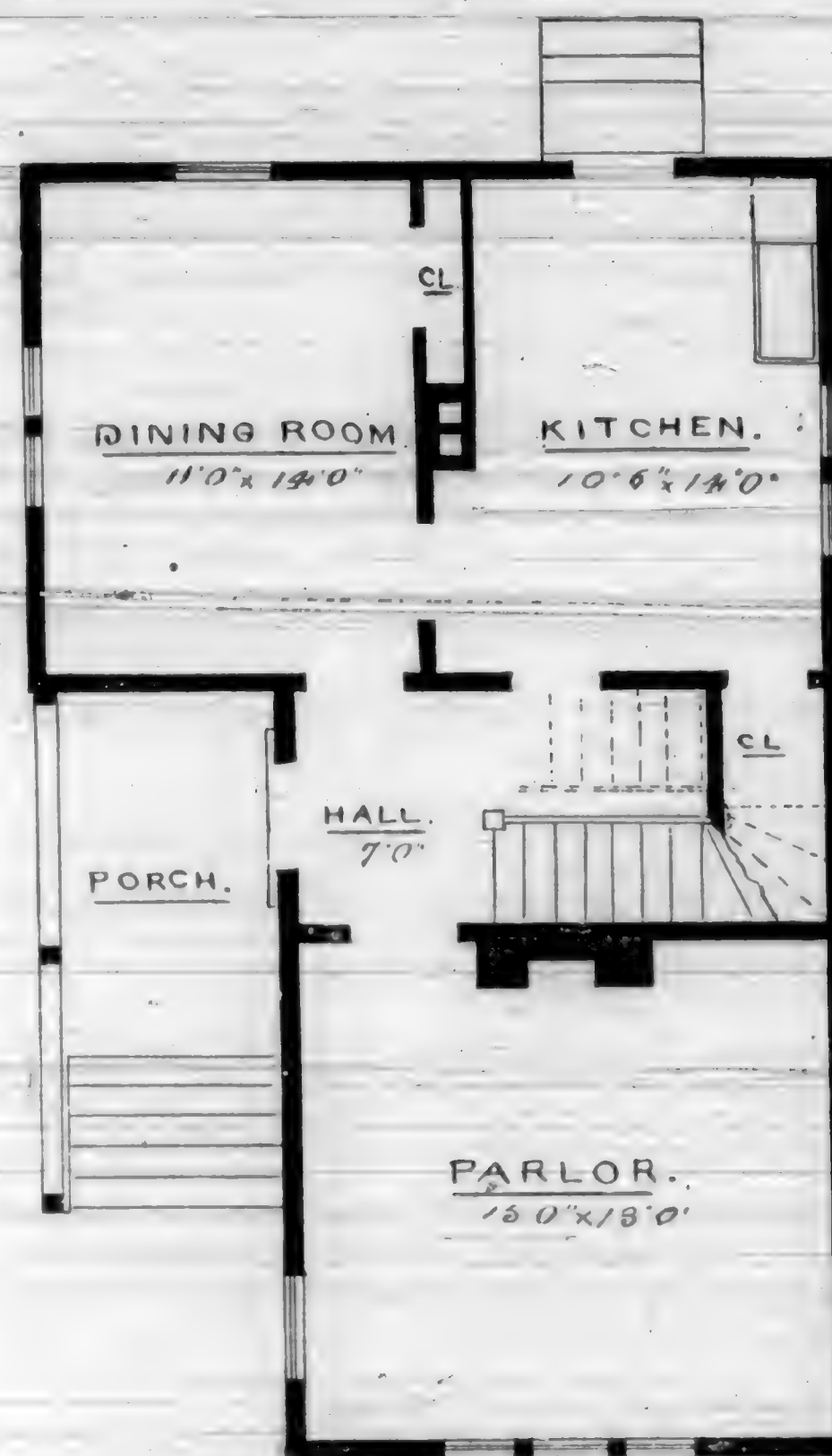
Personal glorifications too generally enter into results produced and laudations are poured upon those who have simply improved upon and perfected results, from the conceptions of some other and perhaps humbler minds to whom the birth right



PERSPECTIVE SKETCH.

properly belonged. As Jacob, through his mother's device, secured to himself the birthright of Esau, so have thousands since that time secured to themselves credit and praise for results produced, which would not have been conceived or reached by them, had not the origin existed in other quarters. Still, honorable emulations are proper, and the world and society are improved and

rendered wiser and better by the opening up of new, and the onward march of *improved thought*. And while present generations rejoice in their attainments over the past, they are furnishing ideas which will be emulated and improved upon in the future, by those who will hereafter perform their part in the great drama of life; and with increased learnings and experiences as age after age rolls on in the great volume of time, other and greater accessions will be made to the record of mind develop-



FIRST FLOOR.

ments, and one after another will appear on earth, simply to emulate, and still further improve upon the past and present, adding link to link, lengthening the great chain of human thought, results and developments, the ends of which will never meet, until human life shall cease, and the great family of mankind pass from earth.

REPORT OF COMMITTEE

APPOINTED BY

San Francisco Chapter, A. I. A.

TO CONSIDER AND REPORT UPON THE MATTER OF

PLAN COMPETITION

FOR THE PROPOSED

STOCKTON COURT HOUSE AND JAIL.

SAN FRANCISCO, May 14, 1886.

To the officers and members of San Francisco Chapter, American Institute of Architects:—

YOUR committee to whom was referred for consideration and report, the matter of competitive plans invited by the Board of Supervisors of San Joaquin County, State of California, in connection with the erection of a public building to be located in the city of Stockton, and for the purposes of Court House and county jail, respectfully report and submit the following:—

That the invitation issued to architects by said Board to submit plans for said building, contains provisions and features recognized by the profession generally as objectionable, and subversive of all right rules which should govern in all such cases.

That the conditions and propositions are inequitable, and therefore unjust; that the sums proposed as awards are insufficient—the cost of the building considered—and not so apportioned as to be an inducement to qualified and competent men, to employ their time and professional skill in the preparation of plans; that the apparent arrangements are such as to invite and make possible the practice of manipulations, the like of which, in many well-known instances have wrought great injustice upon architects who have relied wholly and only upon the merits of their plans

for success; that the retention by the Board of all plans receiving awards of premiums, should receive the unqualified condemnation of San Francisco Chapter, and all intelligent architects individually, as a suspicious means, through and by which great injustices may be, and in other cases have been accomplished, by the controlling powers selecting any one set of plans to receive the first premium, whether meritorious or otherwise; thus preparing the way for placing the work in the hands of preferred parties, and then in execution adopting in part or as a whole, either of the other premium plans, as the basis of construction; thus depriving their authors of the professional credit and financial profits which should accrue to them.

Such things are both supposable and possible, because known to have been so often repeated, that a large majority of qualified architects refuse to participate in any class of competitions; the fact being recognized in professional circles, that fair and just results are seldom meted out to participants.

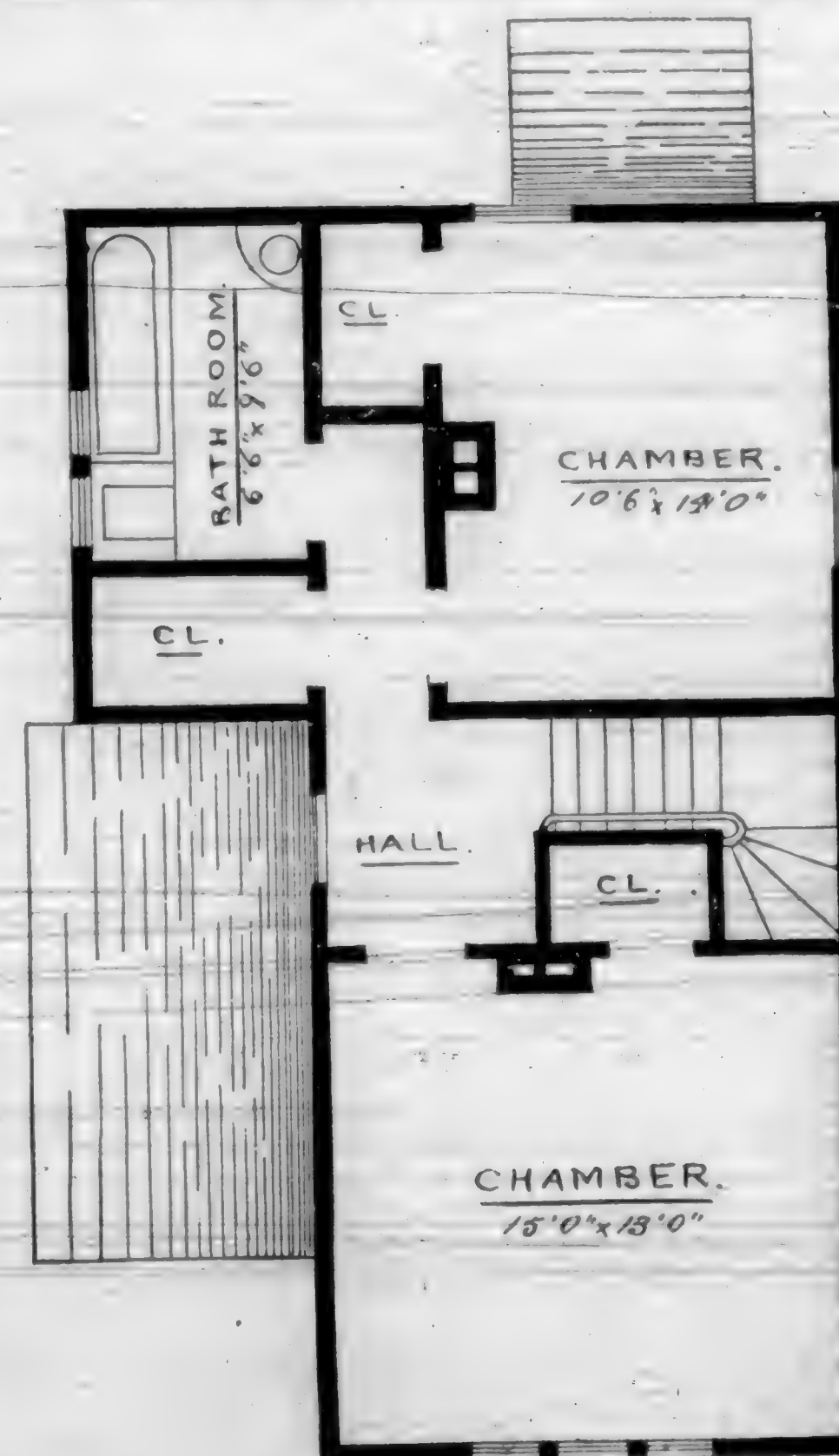
The propositions tacitly expressed, to terminate all architectural services with the adoption of plans, is unjust. If this is adhered to, then the all important and material work of details and construction must be entrusted to some favored party, who may or may not be competent. Whether this is intended as challenging the integrity of architects, or is provided to serve special purposes, it is a course which, if persisted in, must and will militate against the best interests of the commonwealth supplying the funds for construction. And if the proposition is not suggested in good faith, with full intent to carry the same into practical execution, then its present intimation is misleading and deceptive.

The Board certainly has erred in withholding the assurance of full architectural services and fee to the successful competitor. The right of an architect to furnish details, and supervise the construction of buildings planned by him, is one recognized and held throughout the profession, universal—as sacred. It cannot be questioned that the man who conceives and matures thought and study into practical illustrations on paper, is the better and only one fully qualified to exemplify such thoughts in practical execution. Plans are but outward expression of general ideas in tangible form—the germ of proportions and fitness lying in the development of the unexpressed thoughts, made complete through the harmonies and combinations in the details.

The need for the services of architects in planning important edifices, is universally conceded, in and by the fact that such services are sought in all such cases, as an indispensable requirement—Stockton not excepted; and so sought because of their value and materiality. Then why these studied efforts to withhold from those whose services and skill are admittedly so essential, fair, full and right compensation for services performed?

An important omission also appears in the entire absence of any provision for an impartial and intelligent arbitration of the merits of the respective plans. While this should be done by experienced and reliable men, fully qualified by practical, architectural and mechanical experiences—men entirely disinterested and free from all bias and personal or local interests or feelings,—such determination, and the rights and equities of the competing parties are left contingent upon the judgment, whims, and caprices of the honorable Board, and such influences as may be brought to bear.

It further appears that this is another of the numerous cases in which



SECOND FLOOR.

the attempt is being made to procure three sets of plans for a public building, at a price far below the rates of charges established by architectural societies, and the usages of the profession the civilized world over—for a single set—total cost of building considered; in addition to the large wastage of time and labor by those whose chances of any award is exceedingly remote and doubtful.

While it may not be, and confessedly is, not within the province, power, or influence of San Francisco Chapter, nor any number of chapters combined, to define and dictate rules, regulations, and methods of procedures in matters of competition for any class of building, nor to prescribe and regulate conditions, fix rates of compensation, nor determine the rights and privileges that shall be held as binding in such cases, we may, as a Chapter, and as individual architects, express our hearty disapproval of practices and procedures which are calculated to be, and in numerous well-known instances have, been so prolific in impositions upon our fair and equitable rights, that the echoes of favoritism, tricks, schemes, plots, and manipulations are, and reasonably may be pre-supposed in every case where general competitions are invited.

The intimations outlined may appear comprehensive, and to some questionable; but the facts known in architectural circles are such that we feel warranted in the assumption, that the reasonable and possible proofs fully sustain all and more than is intimated in this report.

We further recommend that no member of this Chapter, nor any reputable practicing architect in this State, countenance or participate in the competition in question, nor any of like objectionable character that may hereafter be offered for general competition.

In conclusion, we claim that, as a Chapter, and as individual members of an honorable profession, we have just and honorable rights which should be respected by those desiring our professional service; that the intelligence, knowledge, skill, and proficiency enjoyed by all qualified architects, are the results of arduous study and earnest devotion to their high calling, and as a Chapter, and as individual members, we would not be just to ourselves to remain silent and permit infringements of our rights to pass without an expression of disapproval.

All of which is respectfully submitted.

JAMES E. WOLFE,
HENRY C. MACY,
GEORGE H. SANDERS,
WILLIAM CURLETT.
Committee.

The above report was unanimously adopted as expressive of the views and sentiments of the Chapter upon the subject matter involved in the report.

Art and Architecture.

[Special for this Journal. By F. HILLERT, Architect and Mechanical Engineer.]

IN the first part of the present century, some architects at the time had the praiseworthy ambition—so far as the ambition went—to invent the sixth order of architecture; but it was simply recommended to them to study the orders existing, to study the principles of art and the laws of nature governing them.

This continent was settled by the Caucasian race of Europe. The southerly part was invaded and conquered by Spain, the conquerors having in the one hand the sword, in the other the emblems of Christianity. Judging from the constant strife and struggle, the Spanish conquerors were not able and rigorous enough to create out of the existing and destroyed civilization a new and better culture. The object of the conquerors was to gather from the conquered, treasures to be brought to the homes of the conquerors; they gave nothing in return. Christianity has not fulfilled its mission.

The northern part was peaceably settled by emigration from nations of the European countries, the emigrants bringing with them their customs, knowledge, culture, and unlimited energy, to make themselves here a new and happy home under the wings of liberty, social and religious, and a moderate climate, conditions required for a progressive, higher culture, if not retarded and stopped by political strife, interference and undisputed dishonesty.

The culture forming here had its beginning, its history, and tradition at the homes of the emigrant, and to there we must look and turn for information and assistance. So is it with art and architecture. The architect cannot invent a new style of architecture, unless he invents and applies a new building material, of a different cohesive structure than the one used in old and present times.

Art and architecture, to produce works of art, result from the collective exertions of all nations, from the very cradle of humanity. A true work of art will only be produced by genius, or by the application of rules on esthetics, reason formed from art work, and based on the laws of nature, and not by trying to produce something without that thought and phantasy have been exerted. The rule of thumb will not make a new style. Some works of pretension, appearing in execution and in print, show no symmetry and symmetrical equilibrium; do not bear out the stamp of purpose and utility. They are unnatural, and not truthful. They show really the want of knowledge of the beautiful, and of thought; and simply to criticise them in the spirit of art, would be doing injustice, unless it is known that the

designer was in possession of the laws of the beautiful, when, being conscious of the same, he would and could not help using and applying them.

When architecture follows the dictations of popular fashions, of an unartistic taste and useless purpose, and imitating those vagaries and abnormalities of an unhealthy imagination, over and over again, then this is a sign of a degenerated art time. When architects of some pretensions send off such work on the public, such artists have failed in their mission as instructors and cultivators of the public taste. Art, then, has failed to take its place in the general culture of mankind.

Modern architecture has no new style or types. It uses old perceptions, improving them in form and beauty, assisted in the execution of this work by a perfected mechanism and skill. Different is it with mechanical science, which in the last half century has made large strides in the progress, aided by the progressive sciences. To it society is indebted for the immense progress made in every branch of human activity.

I. UNALIENABLE DRIFT IN MEN FOR ACTIVITY.

The necessity of self-preservation compels man, even at the lowest state of culture, to express his wants and make an effort on the natural things surrounding him, to use them to satisfy his wants. The cravings of hunger compel the individual man to seek food to sustain his existence; the feeling of cold, to find shelter; these, and other wants and needs, compel him to exert his mental and bodily powers to provide against them. The first and primitive drift in man, is a deeply seated instinct for the exertion of his energies.

The result of his exertions on the outside world, and the benefits derived hereby, create in him not only satisfaction, but also the action itself. The feeling of his power, and the confidence in using the same, create pleasure and delight in him. He is urged from action to action; and therein rest in human beings an unalienable drift and impulse, the proof of which every leaf in history shows, and a glance in his own bosom proves.

II. THREE KINDS OF ACTIVITY.

In three kinds of activity, in which all human efforts range and concentrate, this natural drift shows and expresses itself, and obtains final results, which designate and mark the highest



possibilities of our feeling, actions, and thinking. As ideal, without which human being is impossible, and accordingly to it, are set up the ideas of liberty, immortality, and of God himself.

Liberty is the highest aim of our will, to which reason prescribes the laws of morality, without which, liberty is impossible. The idea of God leads to truth, then out of the conception of God, as the highest condition of the possibility of all, follows the perception of truth. The idea of immortality leads to beauty. Then the preservation of human products in their first original form, amid the constant changes of nature, gives us a presentiment of eternal duration, and we name, without prejudice to other definitions of beauty, the most perfect of such products, out of which, more than of others, the semblance of imperishability is shown, beauty.

The aims of all human efforts are, therefore, in intellectual respects, truth; in ethics, liberty, and in esthetics, beauty.

III. EXISTENCE OF THE SAME.

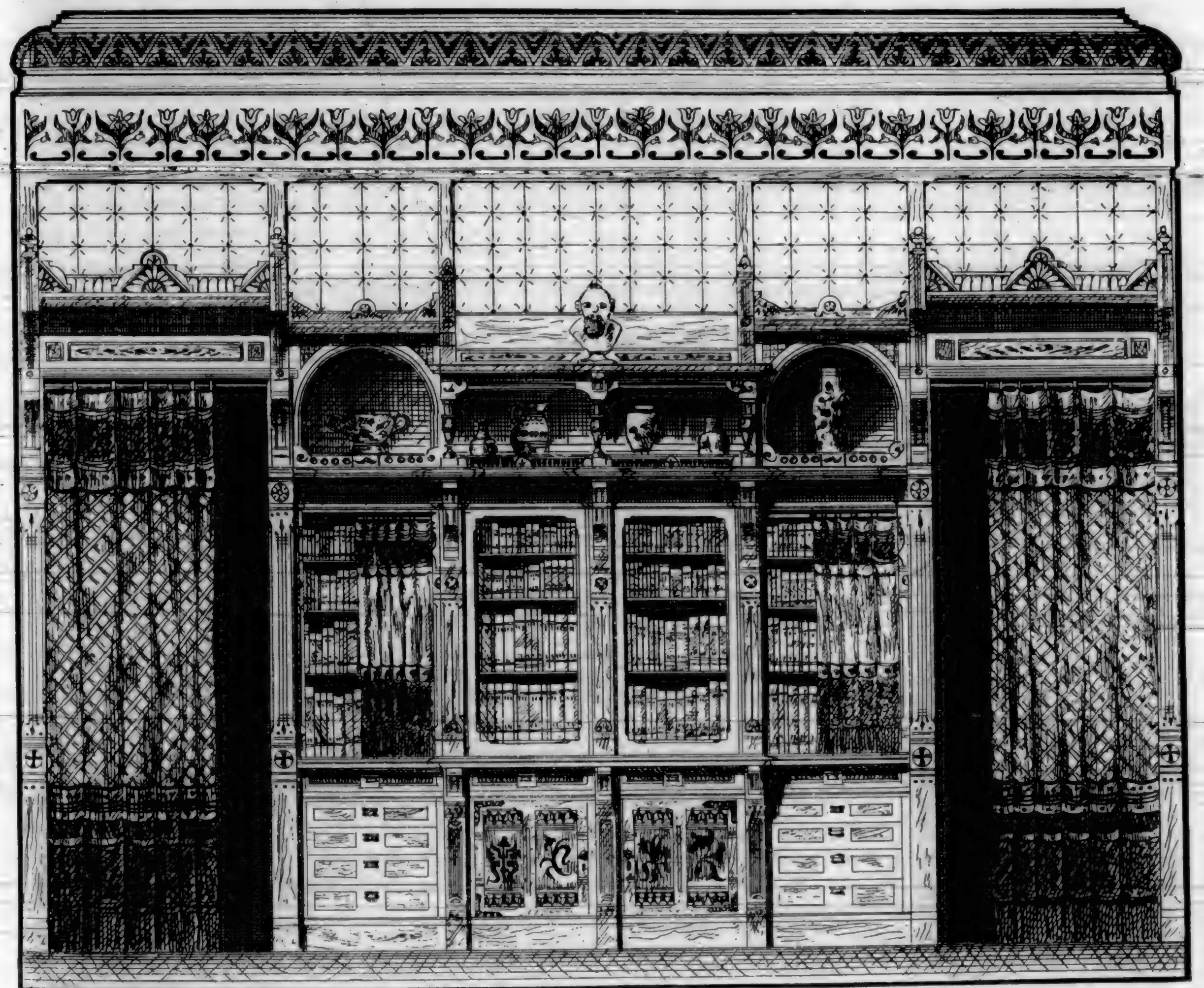
The natural instinct in its three different forms exists in every man, and shows itself with all nations, from the first and oldest traces of human culture up to our present day. The child's

question, "What is it," on seeing a strange object, is an expression of his inner instinct after truth. The struggle of a grown person with his bad instincts is nothing else but his effort for liberty; and the crippling of the feet of the Chinese woman is only the outcome of the instinct for beauty. Everywhere are perceptible the traces and the results of the activity of these impulses; here, in a known, clear practice; there, in an unknown, instinctive expression; here, in a uniform, systematic relation; there, in a sharp contrast of crude exaggeration and stupid neglect. With the India man the intellectual capacity is very small, the ethic laws deficient, and the esthetic creations, or forms, variegated exaggerations of an unclear phantasy. Harmony and accord predominated with the ancient Greeks. In the Middle Ages the intellectual stood back. Ethic and esthetic were shrouded and tied to positive, unremovable and fixed statutory laws and forms. In modern times these spheres balance each other more and more.

time created a clear way and put a stop by the secretions of the sick places; at least it tried, even if not everywhere with success; and open warfare exists yet between its spirit and the one of its predecessor. But only in conflict man tries his powers, and is the same decided, destiny will call on him again. But our time makes its moral law by the sentence, "Do good for the sake of good," which is comprehensible, and points hereby to the rapture consummated to the obedience of human fancy or to the dogmas of ecclesiastic by means of education to the belief of temporary or eternal punishment or blessedness.

V. IN THE INTELLECTUAL SPHERE.

The thoughts of men moved in an uninterrupted progressive education through centuries, even if the particular developing epochs were only of short duration and seldom returned. But in the time between them the attained culture acted quietly and powerfully, in making large strides onward, and preparing out of



WALL OF A LIBRARY.

IV. PROGRESSIVE DEVELOPMENT OF THE SAME. FIRST, IN THE ETHIC DOMAIN.

Only those denying history will dispute progress, and deny the educational advance made by mankind in ethical respect, during the last thousand years. From barbaric custom and degrading slavery, men lifted themselves to a regulated form of state, and to nobler, finer sentiments. But neither the theocracy of the Jews in their supersensible doubtfulness, nor the democracy of the Greeks in their dissoluble development; neither the Jew's polygamy, nor the Greek's contempt of woman, designate a happy solution of the important part of the moral problem. Milder customs and perceptions were brought about and introduced by Christianity. But the sanctity of family, love of fellowship, and the pure moral laws, stood under an outside influence, not necessarily belonging to the spirit of Christianity, and gradually threatened to destroy the fruits of one and a half thousand years—threatened to make the priest a god. Our

itself a new power, which again, together with the remnants of the old, started the same developing process over again. From the nearest outside things to begin, which thought men, as if it were, the spelling of thinking, he went over to other meditations on himself, inquiring after the laws of thinking and the boundary of his reason; he inquired after the connection of nature and the cause of all being—God.

VI. IN THE ESTHETIC SPHERE.

Not less is the same continuous succession to a continuous higher development in the esthetic sphere in existence. If we concentrate the exertions of the human intellectual drift in this direction in the widest sense, we comprehend hereby every change made on the objects nature has offered, and we will here unite all arrangements for the exterior living—all things that serve for the necessity, utility, convenience, education and the pleasure. It is evident that from the men of remote antiquity, living in forest and caverns, to the men living in wooden huts or

solid houses, the most influenced progress took place. Just so from this to the one which gave to the letter thousand tongues; to the wheel the speed of the wind; to the transmission of thought the speed of lightning. So on in general and the whole. A certain kind of things is between them, which we do not actually call necessary, useful, instructive, or agreeable, but which we call beautiful. These we separate and select from the many, to explore, investigate, and unite scientifically; and this is the problem of art history. To recognize their beauty and prominently the spirit of them, is the subject matter of the fine arts, or esthetic, in a limited sense.

The word esthetic means every observation made by our senses. In such an expansion it was used, setting in opposition esthetic and logic in relation to the sensible observation and reason. In the late new language, it is confined only to beautiful things, and we understand, in general, by esthetic, the science of the beautiful.

VII. CONTINUOUS PROGRESS IN ALL THREE SPHERES.

The progress in intellectual, ethic, and esthetic relation increases in an uninterrupted succession, notwithstanding the seeming retrogradation and stagnation in the activity of man; and with his larger achievements grows his next problem, and so on; thus a never-resting process of development is uninterruptedly effected, being the result and consequence of preceding conditions and the necessary conditions of all later exertions. Then it seems as if at many times, many nations were at a complete standstill; that the development and progress of the human race was at rest. This was even only seemingly. Unobserved, here and there, are germs of culture formed, and at another place just at the same time important visible steps of progress are made. An illustration may be cited: the first centuries of our independent Christianity. They discarded the old culture, philosophy, forms of state, literature and art, and returned in thinking and forming to cruder customs, their ethic feeling inclined to supersensible fanaticism, and missed frequently the right position and relation to actual life. But notwithstanding this clearly visible retrogradation, the most powerful progress was effected in the necessary fundamental principles, and later centuries proved that this time was of a far-reaching consequence, and its appearance was conditioned by the inner necessity.

VIII. COMMUNITY IN ALL THREE SPHERES.

The expression of the esthetic impulse in man is the first; then, before he is capable and in a position to think and to act morally, other objects impress on his mind, through his senses, and his necessary wants and requirements compel him to approach them direct, and unknowingly make them serviceable to himself. His first exertions are instinctively those of forming, moulding. From the simplest forms of formation, the club, broken from a tree, with which he killed an animal, men progressed continuously to make a multitude of well-formed instruments and tools, made well-arranged habitations, hereby above all assisted by the prometheic gift of the fire. But now he began to act; the one was the master of the other; parents brought up their children; families united to larger communities; and, lastly, originated from many such families and communities a whole—a State—in which ruled a law made and sanctioned by all, or they were governed by the fancy of a chief. In the same time the unknown impulse led men to inquire of the cause of the nature surrounding him, and also of himself, and brought him to think of the same as of a divine spirit. So was religion formed. Inasmuch as not one has much truth, as imperfection and sham is in each, they are, nevertheless, the most important means of culture of the human race, and early man manifested the desire to make himself of that which he venerated as the highest cause, a picture or image, to give to his sensitive views a nutriment heretofore required. If now he venerated the fire, it was easily made; was it an animal, he shaped it as well as he could, or something similar; was it a higher developed spirit, he fell to the impossibility and adhered to the commands which the servants of this god, the ecclesiastics, proclaimed as his divine will. Fitting samples are the Brahman pictures of the India people, with their fantastic monstrosities. Liberal thinking outside of the ecclesiastic rules could alone be serviceable in this direction, and, consequently, art returned to the simple and natural. So with the Greek nation. When the human race has once outgrown its primitive condition, its impulses are rarified and refined from the instincts to the known, and are in a constant reciprocity, leading in a constant flow to a harmonious expression of all impulses together. The action must be forethought; the forming and shaping desired and wanted; and even thinking itself can only, by exercise, give sense to those of action and forming and made capable to turn to the abstract; then a purely contemplative

condition towards nature cannot be thought of. In this large, general, and intensive reciprocity, men strive together for truth, liberty, and beauty, and try to perfect their beings in every direction.

(To be continued.)

The Average Life of Buildings.

How long does it take for a city to re-build itself? said the Building Inspector. "Well, that depends upon the progressiveness of the city. I should say about seventy-five years. That is the average life of a building now-a-days. There are very few houses in this city that were standing seventy-five years ago. The old houses on North Capitol Street, built by General Washington, are older than that, and there are other old buildings, but I am speaking of private houses. The buildings erected by the Government, under careful supervision and at great expense, of course, are more durable structures than those erected for private residences. The building which is being erected by Mr. Abell, on F Street, will cost more per foot, I suppose, than most Government buildings. No; it may not be a good investment, but it is not being put up as an investment; it is a monument. The new State, War, and Navy Department Building is, however, just as well built as that. That building will be standing a thousand years from now. It may, of course, need some repairs before that time, and the roof, of course, may have to be rebuilt. No material or work is allowed to go into that building unless it is up to the standard. The army engineers who have charge are very strict. Of course a private individual would not put up such a building. It would not pay. Yes; good brick ought to be as durable as stone. It depends a great deal upon the manner in which the bricks are laid. Good mortar becomes harder with age. It becomes harder than the brick itself. When dry bricks are laid during the warm months the bricks will absorb all the strength of the mortar. Brick laid at such a time ought to be wet. A wall erected in April or May, or October and November, of sufficient thickness, ought to last two or three centuries."—*Washington Star*.

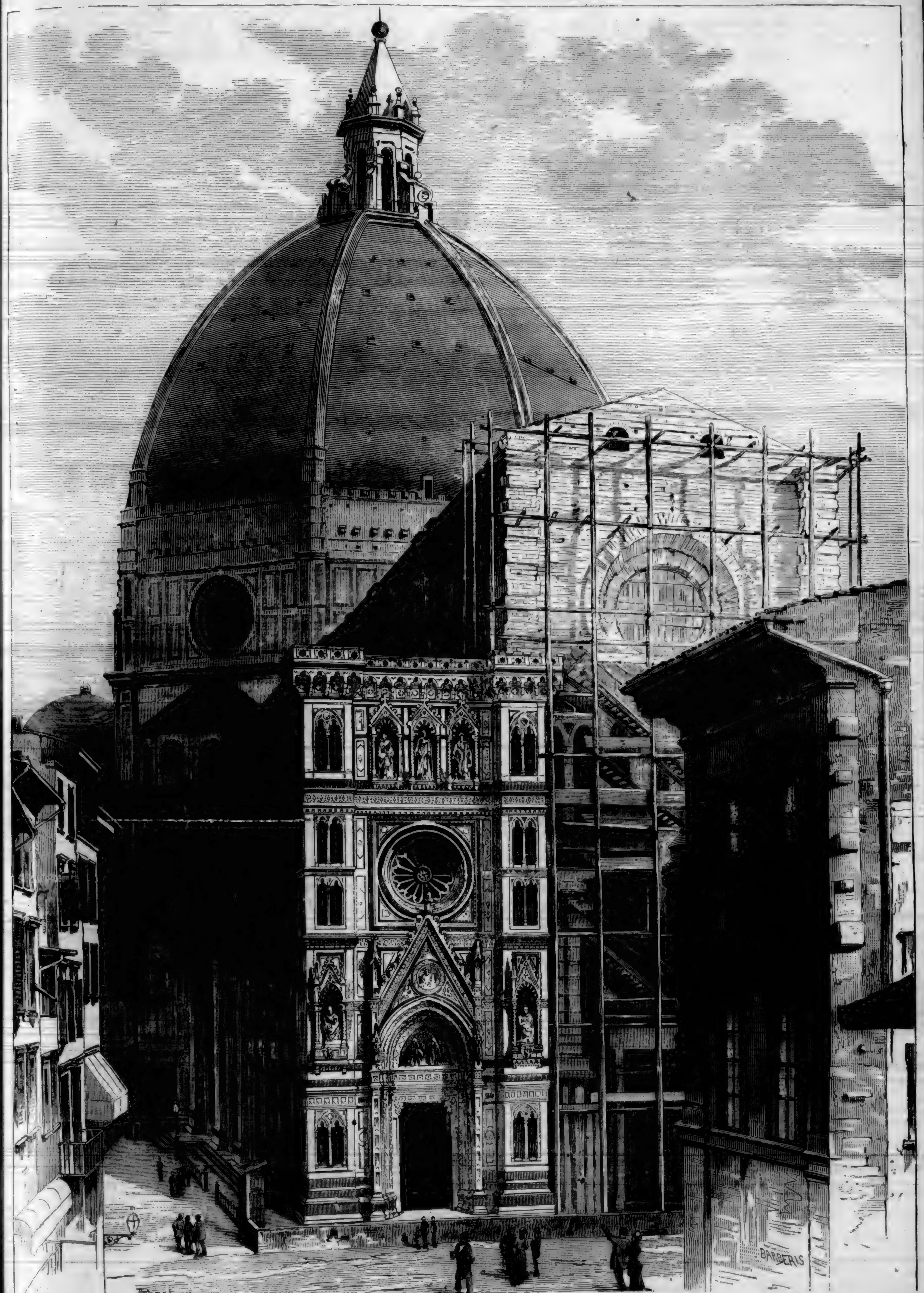
In a recent editorial article entitled "Architectural Conservatism Indoors," the *British Architect* draws the following characteristics of English architecture:—

"We are, as a profession, too conservative, and too apt to reject a useful suggestion because it happens to be new and contrary to our preconceived notions of what is right according to recognized rules and practice. We think some of the fault of this conservatism can be traced to a lack of thorough education, and the consequent inability to found a correct judgment upon things practical and theoretical, which may not have been included in past experience. Then, again, we need a more liberal spirit of inquiry amongst us, and instead of using a material or an article merely because it is made by a particular firm, there should be some certain knowledge on the part of the architect that no better is in the market. And when a new suggestion is made, or a new invention brought out, which has a reasonable likelihood of being turned to practical account, it is as well to try how best it can be utilized, rather than to see how effectually we can put stumbling-blocks in the way of its adoption."

Much of which is, without doubt, equally true of our American architects.

According to the *British Architect*, there is some talk of erecting the huge metallic tower invented by M. Eiffel, the mechanical engineer, on some convenient site within the precincts of the Paris Exhibition Buildings, and it is also satisfactory to know that a jury of experts will be impaneled to decide upon its structural safety prior to its erection. It will be 300 meters in height, and entirely constructed of iron. It will rest on five pillars, forming four immense arcades, lofty enough to exceed in height the towers of Notre Dame. On the summit of the tower will be erected an electric light-house, and a terrace to which visitors will be admitted. The form of the tower is specially adapted to give it stability in high winds. The oscillation at the top, under the influence of the most severe storm, will not exceed 75 centimeters. On a first platform, at a height of 70 meters, there will be a gallery of glass, which may be used as a café, or restaurant. A lift will take visitors to the summit. The expense of construction is estimated at from 5,000,000 to 5,500,000 francs.

The elaboration of interior decoration with hard woods is increasing to a great extent in the cities, and daddoes of satin, maple, cherry, mahogany, etc., are freely used.



THE NEWLY-CONSTRUCTED PORTION OF THE FACADE AT SANTA MARIA DEL FIORE, FLORENCE.—PROF. DE FABRIS, ARCHITECT.

THIS JOURNAL

WITH ALL ITS INTERESTS,

WILL BE DISPOSED OF

TO

Parties Qualified to Assume Its Management
and Control.

THE

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IS THE PIONEER JOURNAL

Published Within the Boundaries of the Pacific States of America,

IN THE INTERESTS OF

Architectural, Building, and Collateral Sciences,

AND THE

Manufacturing and Labor Arts and Interests.

Its publication as a Monthly was inaugurated during the dark and gloomy period of 1880
preceded by the Quarterly of 1879. And from the feeble beginning, which
then lacked all the essential elements of journalistic experi-
ence, in addition to the absence of innumerable
facilities requisite to its publication,

It Has Grown in Reputation and Influence,

Until It Is Now Recognized,

Throughout the United States and Europe,

AS THE

Representative and Leading Class Journal

Published West of the Rocky Mountains,

IN THE INTERESTS IT ADVOCATES.

The Following Notices, Selected from Scores of Like Character, Illustrate Its High Position and
Standing in the Field of Class Journalism.

The CALIFORNIA ARCHITECT AND BUILDING NEWS is consid-
erably enlarged and very much improved mechanically and
editorially, which places it in the fore rank of class journals,
where it belongs. It is a credit to this coast, and we take
pleasure in perusing its clear and entertaining pages.—*Ala-
meda Semi-Weekly Argus*, Jan. 28, 1886.

Another old friend, the CALIFORNIA ARCHITECT AND BUILD-
ING NEWS, is greatly improved by its new form and style.—
American Architect, Feb. 13, 1886.

The first number of the eighth volume of the CALIFORNIA
ARCHITECT AND BUILDING NEWS appears in an enlarged form
and new type. These signs of prosperity denote an appre-
ciation of the journal by those in whose interests it is ably
conducted.—*S. F. Chronicle*, Jan. 18, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS.—We find it
one of the best architectural journals published, and, unlike
some journals, it believes in justice to all, and upholds all
legitimate efforts for the elevation of mankind, whether
"professionals" or "laboring men." We wish it success and
recommend it to our readers.—*Granite Cutters' Journal*,
Philadelphia, Pa., Feb., 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS has been
enlarged and much improved. The number issued to-day
would be a credit to any city.—*S. F. Daily Report*, Jan. 16,
1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS in its new
dress and make-up renders it more acceptable than ever. It
is always replete with valuable matter, and is ever an ac-
ceptable visitor.—*Alameda Encinal*, Feb. 8, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS appears in
greatly improved and enlarged form. The current number,
we think, is the best that has been issued. It shows wonder-
ful improvement within the past two years. It is just such
a journal as is needed for the Pacific Coast.—*Northwestern
Farm and Dairyman*, Feb. 11, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS, enlarged
and much improved in appearance. As to its contents, it
has always been good. It is the best class paper that comes
to our table, and we always find it worth perusal.—*Lakeport
Democrat*, Feb. 20, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS appears in
an enlarged form and new type. These signs of prosperity
denote appreciation by those in whose interest it is ably
conducted. It has a large circulation. We wish it success.
—*Weekly Sun*, Jan. 23, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS is the lead-
ing architectural monthly of the Pacific Coast. Its articles
are well written on important topics.—*Brooklyn Real Estate
Review*.

The CALIFORNIA ARCHITECT AND BUILDING NEWS is the official
organ of the association of architects, and is a fit repre-
sentative of that interest. It should find a wide circulation.—
Petaluma Weekly Argus, Jan. 28, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS comes to us this month very
much improved in every way—a decided credit to the Pacific
Coast.—*Brick, Tile, and Pottery Gazette*, Jan., 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS is a very
useful and interesting publication. It is handsomely illus-
trated with designs for home and business buildings.—*Reno
Evening Gazette*, Jan. 21, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS is a monthly
journal devoted to architecture, building, decorating, and
furnishing, and is the official organ of the Pacific Coast asso-
ciation of architects. In its enlarged form it is most admir-
able.—*New Age*, S. F., Jan. 21, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS, in its enlarged and improved
form, is a publication which will interest all who are con-
nected with the building trade.—*News Letter*, Jan. 30, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS comes to us
very much enlarged and improved. It holds its own remark-
ably well against the older Eastern journals of the same
class.—*American Building Association News*, Chicago, Feb.,
1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS is an inval-
uable periodical, not only to architects and contractors, but to
house owners as well. It gives valuable plans for houses, and
careful attention to drainage, ventilation, and sewerage.—
Daily San Jose Herald, Feb. 8, 1886.

The CALIFORNIA ARCHITECT AND BUILDING NEWS comes to our
table enlarged and materially improved. This enterprising
journal, we are pleased to note, is keeping pace with the de-
mand of a growing constituency.—*Northwestern Architect*,
Feb., 1886.

ITS PUBLICATION IN SAN FRANCISCO,

DEVELOPED IN THE FULLNESS OF ITS POSSIBILITIES, is a universally accepted necessity; and under increased,

ENERGETIC, ENTERPRISING, AND COMPETENT MANAGEMENT,

Parties who can and will devote their TIME and TALENTS to the work, it is destined to become

A PEER IN AMERICAN CLASS JOURNALISM.

If from the adverse surroundings of its inception, with the many divided professional and other engagements and duties of its founder,
it has been brought to its PRESENT, but by NO MEANS

ITS POSSIBLE STANDING AND REPUTATION,

What may it not become, with its interests and destinies under more Efficient, Diligent, Capable, and Scholarly Editorial and
Managerial Control and Direction?

THE ARCHITECTURAL PROFESSION requires a Journal of its kind to represent its interests; to assist in sustaining unselfish
and generous relationships; to advocate the right and expose wrongs wherever found in architectural circles, and assist in promoting fraternal
ethics, and every right and reputable course calculated to elevate the honorable and worthy members of the profession far above the
reach of reproach or disrepute, and, by all reasonable, right means, fix upon those who degrade and disgrace the profession, the mark of
professional ignominy. In these directions this Journal has accomplished much, but more remains to be done.

CONTRACTORS AND BUILDERS of every class need it as a medium through and by which they may learn of every new fact and
principle in mechanical science, and cultivate and develop into practice, those rules and methods best calculated to improve them as men and
master mechanics—to furnish them with all current, local facts of interest, and give information from every city and town upon the Coast
in reference to prospective works of public and private character.

TO MECHANICS AND WAGE-EARNERS it is a great necessity, as all men, high and low, learn and grow wiser by what they read,
and the impressions made upon the senses by lines and figures representing ideas and conclusions of facts.

MANUFACTURERS AND PRODUCERS of building materials and devices of every kind need it as a means of communication
with consumers.

THE COMMON INTERESTS OF THE STATE require it as a means of information at home and abroad, as to its unbounded
resources in timber, building stone, marbles, iron, and numerous other valuable deposits and productions.

OWNERS OF PROPERTY require it as a channel through which they may be informed upon all matters relating to the erection of
buildings.

CARPENTERS, MASONS, PLASTERERS, PLUMBERS, PAINTERS,

DECORATORS, FURNISHERS, AND ARTISANS GENERALLY,

Require it as a nucleus in and around which their interests may center, and through which each alike may derive special benefit.

Its Future is Full of Assurance and Promise.

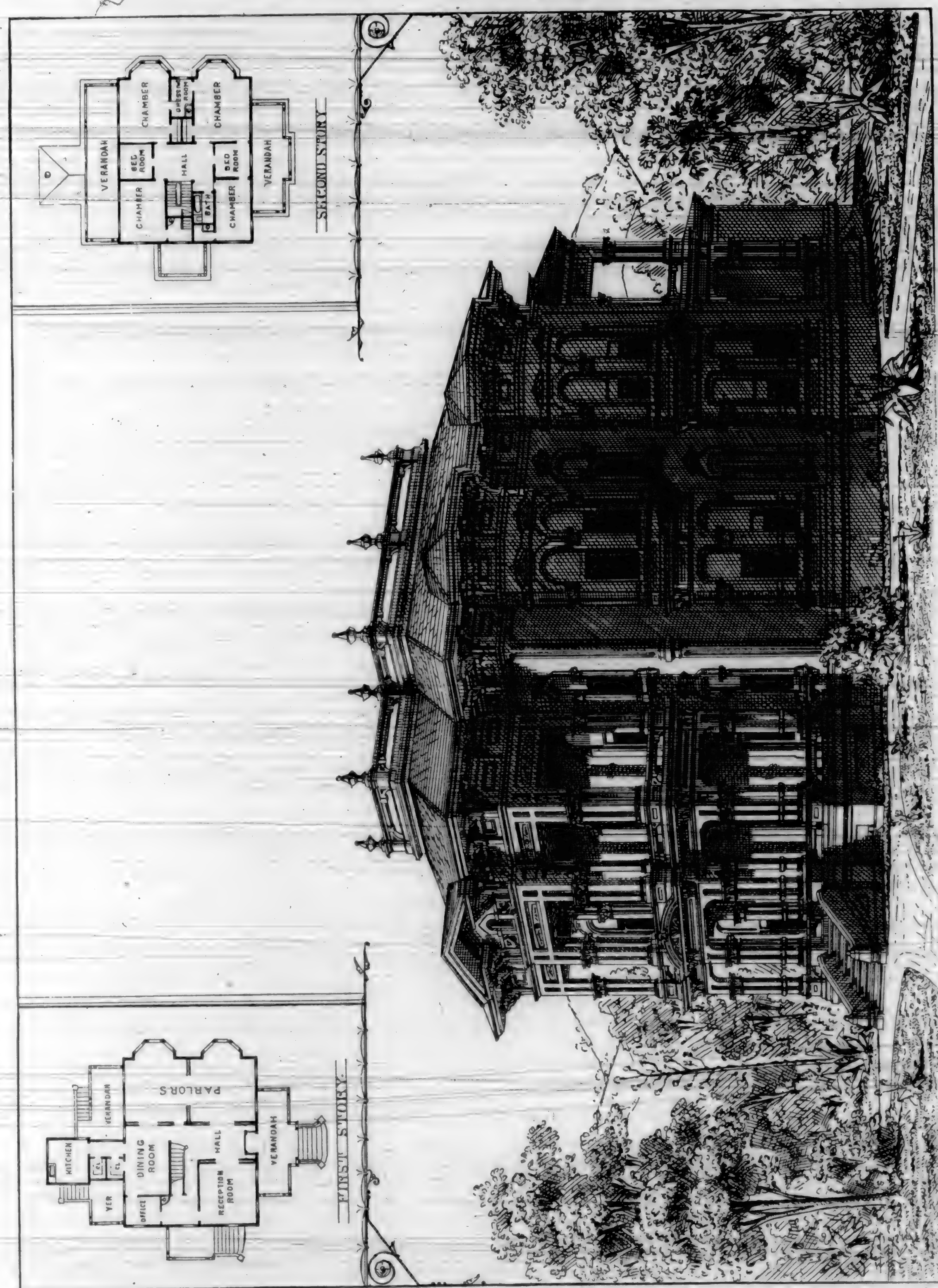
With All Possibilities Wisely Utilized and Judiciously Handled, but which, from force of circumstances, have been
to a large extent hitherto neglected, it may be more than doubled in every interest.

ITS ADVERTISING PATRONAGE.

But few Class Journals present better evidence of substantial prosperity and general favor than is shown by the advertising column
of this Journal. Yet not one-half of what may be, has been reached. LOCAL ADVERTISEMENTS can be greatly increased
and a large, neglected PATRONAGE FROM THE EASTERN STATES SECURED.

THIS PROPOSITION OF SALE

Is made to relieve ourselves from the excessive and double cares and responsibilities involved in editing a Class Journal and pursuing the
responsible duties of practicing architect—to the latter of which we propose to devote our undivided attention, yielding control of the Journal,
we hope, to more able and competent hands. We also hope its future will pass to some one of the manor born—some live Californian,
familiar with all coast and local interests and requirements, either individually or in the form of an incorporated company. But if not this,
then that some Good—Eastern, Western, Northern, or Southern—Man will enter the field with complete connections with all great
centers of business and life, east, west, north, and south, and give not only to California, but to the people of the United States, Europe,
and All Civilized Places on the Globe, a Journal of Peerless Merit.



PERSPECTIVE AND PLANS OF A COUNTRY RESIDENCE (ERECTED AT HONOLULU, M. L.)

EDITOR CALIFORNIA ARCHITECT—Dear Sir:

As I have been frequently requested by some of the most able and competent master builders to give an easy rule for finding the cuts and covering of conical, hexagonal, and octagonal roofs, I offer the following, trusting it will be of service to them in laying out this kind of work.

The accompanying cut shows the timbers in position over ground plan. The method of obtaining this result is as follows: 0, 0, 0, 0, 0, 0, is the ground plan; 1, and 3, is the height of elevation. Make 1, 2, in ground plan, equal to the elevation, viz., 1, 3; after which connect 2, 2, in the ground plan, which will give the length of hip needed. Square out from O, H, right and left, indefinitely, then take the distance 2', 2 in the compass and stand in O, describing curve, cutting line squared from H, then cut at X, as shown; move compass to 2', and cut at X, and Y; move compass to O, and cut at Y, right and left; move compass to 2, and cut at Y, and X; move compass to O, and cut at X, and H. Thus obtaining the accurate length of all timbers, lay the jack rafters, or cripples, a suitable distance apart, and the problem is finished. To make a stand-up model, cut all around the outside, following the straight lines, viz., H, to O, to X, to 2', to Y, to O, to Y, to 2; to X, to O; to H. Now weaken on all the base lines, fold from you, and the model will show all timbers in their correct position. Yours truly,

M. J. MARION.

the marble in Oran, ready for shipping, at a price of 450 francs—90 dollars per cubic meter. The marble of this quarry, originally of a pure white color, has assumed an ivory tint due to presence of oxides of iron. There is also a pink variety, capable of being highly polished. Other varieties are also found, notably a yellow marble, similar to the *giallo antico*, a dark red marble, resembling the *rosso antico*; another variety called *panazzo*, on account of its resemblance to the colors of the feathers of a peacock. Some of the varieties of marble were used in the construction of the English church at Algiers. It is also rumored that a French geologist has discovered clues towards the finding in Upper Egypt of the Lucullan marble, a pure black variety, used in Roman architecture.—*Building*.

Book Notices.

"A PLEA for Sanitation in Factories and Workshops." By Wm. Paul Gerhard, Consulting engineer for Sanitary Works; 6 Astor Place, New York.

Author of the following works: "House Drainage and Sanitary Plumbing," "Hints on the Drainage and Sewerage of Dwellings," "Diagram for Sewer Calculations," "Sanitary Questions," "Sanitary Drainage of Tenement Houses," "A Guide to Sanitary House Inspection," "Domestic Sanitary Appliances," etc. Mr. Gerhard offers professional advice on questions of Drainage, Sewerage, Sewage Disposal, Water Supply, Ventilation, Heating, and Sanitary Architecture. Plans and specifications also prepared for house drainage, and the sanitary arrangement of plumbing work. Correspondence solicited.

"BUILDERS' Work and the Building Trade." By Col. H. C. Sheldon, R. E. Bound in cloth; price, \$4.00. For sale by Jos. A. Hofman, 208 Montgomery Street, San Francisco, Cal.

This is an English work just published by the Rivingtons, of London, England, and makes a valuable addition to the two volumes, "Notes on Materials and Building Construction," published some time since by this firm.

This work has nearly 300 illustrations, showing nearly every style of brick and stone work, diagrams of constructive carpentry and joiner's work, tiling and slating, and a lot of other information pertaining to the building trades.

There is a very useful and practical chapter on bricklayers' work; also one on concrete and plastering; and some useful information is given on painting, coloring washes, and the tools used for cutting and rubbing for ornamental brick work. Very useful hints are also given for estimating the cost of all kinds of brick, stone, and concrete work. The methods of framing, in the chapter on carpenter's work, will be found very explanatory, as many illustrative diagrams have been given. The other trades appear to be thoroughly dealt with. There are several useful appendices, giving experiments upon concrete slabs, forms of specifications for concrete floors and roofs, and several valuable tables.

This work will undoubtedly take its place as a text-book of technical reference in all that relates to practical building operations.

Copp's Lists of Patented Mines.

HENRY N. COPP, the land and mining lawyer of Washington, has issued a book of 150 pages, which gives lists of about 10,000 mines patented by the United States up to January, 1886. These lists are arranged by States and Territories, and thereunder by counties and districts. It also gives instructions for the restoration of lost and obliterated corners of the public surveys.

This publication is an added evidence of Mr. Copp's industry, and will, without doubt, be in every mine owner's library. In it we observe the names of many of our wealthy and enterprising citizens. Parties contemplating the purchase of a mine can now readily determine if it has been patented. The purchase of unpatented mines is a risky business, as lawsuits are frequently purchased at the same time. The book sells for fifty cents, and can be had through the news dealers and of the publisher.

ARCHITECTS and sculptors will be much interested in the statements recently published in some of our foreign exchanges, that the long-lost quarries of valuable ancient marbles have been rediscovered. Among colored marbles employed by the Romans in their palaces and monuments some authors quote the Numidian marbles. But this name is misleading, for several quarries containing the genuine *giallo antico*, also a rose-hued marble, and a brown *breccio*, are located outside of the geographical limits of Numidia. One of these is situated east of Numidia, near Simmittu, in the Medscherdan Valley, along the railroad between Algiers and Tunis. The other quarry is said to have been discovered by a Mr. Delmonte, dealer in Carrara marble, and is described as being situated along a line of hills near the village of Kleber. Mr. Delmonte offers to deliver

Publications Received.

THE May number of *Art and Decoration* contains fifty-four illustrations among which are pictures in the National Academy, two studio interiors in perspective, designs for stained glass window, suggestions for panel in lobby of theater, suggestions for *rapoussé* work, designs for tapestry painting, and twenty illustrations by Raguenet, with many short, interesting, and instructive articles pertaining to interior and exterior ornament. Subscription price, \$2.50 per year. Single copies, 25 cents. Published by Art and Decoration Company, 7 Warren Street, New York.

THE May number of the *Inland Architect and Builder* is unusually attractive and valuable. The leading articles are reminiscences of the late architect, H. H. Richardson, who ranked at the head of his profession in the U. S., written by P. B. Wight, and a practical illustrated essay on Brickwork, by George Beaumont. Reports of the Nebraska State Convention of Architects and of the Cleveland meeting of the National Engineers' Society are given, besides building news from over one hundred Western cities. Among the illustrations are the new Court House at Madison, Wis., the West Chicago Club House, a design by Architect Beman for a Grant memorial, and several well-designed residences by prominent architects. Architects and others interested in building will find the *Inland Architect and Builder* profitable reading. Published by The Inland Publishing Co., Chicago. Subscription price, \$3 a year.

THE *American Architect and Building News* (Gelatine Edition). The following is the table of contents for the May number:—

CONTENTS.—Mural Painting—Wood Architecture of the Northern Hartz—The Erection of Colossal Statues—Concrete Floors—Pile Driving—Communications—Notes and Clippings—Trade Surveys.

ILLUSTRATIONS.—Rood-screen in St. Peter's, Louvain—House at Ottawa, Canada (Gelatine Print, issued only with Imperial and Gelatine Editions)—Wood Architecture of the Northern Hartz, Germany—Court House, Clar on County, Pa.—House at Garrison on Hudson, N. Y.—Ancient Light-house, Island of Pharos—Modern Light-house, Island of Pharos.

Subscription for the Gelatine Edition, \$7.00. Published by Ticknor & Co., 211 Tremont Street, Boston, Mass.

THE June number of *Mind in Nature*, discusses the question of "Mind in Animals," by Lady Murray-Aynsley, followed by notes on "Intelligence of the Elephant and the Orang." Doctor Valin continues his quest for the "Spiritual Evidence of Man's Descent," this time in the "Demon of Science." A. N. Waterman asks, "Is Spiritualism Only a Nervous Disease?" and F. A. Becher contributes "A Few Notes upon Mental Phenomena and Mathematics." Professor Thwing tells, "How to Induce the Trance." John Wetherbee reviews "The Spirits of Darkness." H. M. Hugunin describes an "Electrical Cloud Birth." Wm. Q. Judge in his remarks on "Matters Touching Theosophy," replies to the discussion on "The Occult World" in former numbers of "Mind in Nature."

There are also extracts from Rev. T. T. Munger on "Truth," from Doctor Pettegrew, on "Faith as an Element in the Cure of Disease." "More Metaphysical Twins," is a report of several cases where persons were seemingly united in some psychical manner, that caused one to suffer the same mental or physical pains that disturbed the other, even though they were hundreds of miles apart. All those interested in the problem of "Mind in Nature" will find this little magazine well worth ten cents. COSMIC PUBLISHING COMPANY, 171 Washington Street, Chicago.

DECIDEDLY unique and original is the little cycling scrap-book just issued by the Pope Manufacturing Co., of Boston, Mass. Upon the covers are fac-similes of the covers or front pages of thirty-seven of the leading American publications, and inside are between two and three hundred newspaper and magazine clippings and quotations from prominent personages pertaining to the hygienic, business, and pleasurable advantages of cycling. By an arrangement of tint and type, the selections have the appearance of genuine pasted scraps, which makes the book worth possessing as a curiosity, as well as for the really valuable information it contains. The book will be sent upon request free by mail upon receipt of stamp, to any one interested in cycling.

COMPLAINTS are often made by those using iron saw-tables that the table becomes charged with electricity to such an extent as to be disagreeable. The table is undoubtedly charged by the friction of the belt. To prevent the table from becoming charged run a small copper wire from the leg of the table to a water, gas, or steam pipe. Anything that will carry off the current as fast as produced will do the work effectually.

Master Plumbers' Association.

Howard Building, S. W. Cor. Stockton & O'Farrell Sts., S. E., Cal.

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The Building Interest of Woodland and Yolo County.

FOR THE SECOND QUARTER OF 1886.

EDITOR OF THE CALIFORNIA ARCHITECT: In comparison with the corresponding three months of 1885, the reader will readily see a decrease in the amount of capital invested this quarter, and as a ready conclusion infer that the building interest has taken a retrograde movement, and the following report is conclusive evidence. But when the true cause is considered, the effect is not serious nor depressing, but, to the contrary, is believed as an indication of prosperity.

The present outlook of the grain crop, the fruit of the orchard and vineyard, are, beyond a doubt, better and far more promising than ever before known in this county; therefore all are too much engaged in preparing for the coming harvest to look after building, which is considered of second importance, and the lull is only an index of better and more prosperous times in the near future; and with the coming fall it is anticipated that building in all its branches will be brisk, and there will be plenty of work.

CITY OF WOODLAND.

15 frames, value	\$40,005
7 improvements, value	4,550
Total	\$44,555

YOLO COUNTY.

22 frames, value	\$35,150
4 improvements, value	1,600
Total	\$36,750

Total for city and county, 48 buildings; value, \$81,305. Number for corresponding months of 1885, 45 buildings; value, \$120,600, presenting a decrease of \$39,295. Accept our thanks for past favors and courtesies. Respectfully yours, GILBERT & SON.

Woodland, June 4, 1886.

The Building Interest.

SOME idea of the relative spread of the rapidly growing cities in the United States may be gathered from the following statistics of buildings erected during 1885:—

Philadelphia	5,937
St. Paul	3,451
Minneapolis	3,370
New York	3,368
Chicago	3,133

There were 7,900 building permits issued in Philadelphia during the year. In the above computation, however, the only buildings included are 5,627 dwelling houses, and 310 other separate and substantial buildings for factories, stores, etc. Smaller structures, or additions to buildings already erected, are not included. It will be seen that Philadelphia is 2,500 buildings ahead of its foremost competitor. Twenty-five hundred buildings of this class furnish enough accommodation for a new city of 10,000 inhabitants.—*Iron Trade Review*.

Carpenters.

AND others interested in building: We call your attention to the advertisement of *Ives' Patent Sash, Lock, and Door Bolt*, on page XI. Mr. Ives offers to forward to any carpenter one *Ives' Patent Sash Lock* for ten cents in stamps to cover expense of mailing. These locks are undoubtedly the best we have seen, and we think it would be an advantage to all interested in building to send for one of these samples before selecting any other style, and see the advantages obtained by using the *Ives' patent*.

San Francisco Chapter of Architects.

OWING to death and sickness in the family of the Secretary, the usual postal notices were not mailed in proper season, and but few members received them until after the evening of the meeting. Consequently, there were so few in attendance that all business, and the discussion of the subject appointed for the evening, was deferred until the July meeting, reports in the daily papers to the contrary notwithstanding.

The San Rafael Unpleasantness.

WE have received several letters in reference to the school building at San Rafael, in which the position is assumed that the Chapter of Architects should take the matter in hand, as the name of one of its officers is, to some extent, mixed up in the affair, which, as far as the purchase of the school-house lot is concerned, has led to the resignation of the Board of Trustees and their arrest for bribery, etc., terminating in the suicide of one of the parties to the transaction—a man who, until the exposures in the case became a matter of public concern and notoriety, had maintained a good reputation for integrity and good citizenship.

As far as the architect in question is concerned, the reflections thrown out are wholly speculative and inferential, beyond the fact that the new Board have found, or claim to have found, the necessity for, and have advertised to "receive sealed bids for doing certain work in the new school-house on Fourth Street, in the town of San Rafael," etc., with all of which the Chapter certainly can have nothing to do, nor is it a part of the Chapter work to interfere in matters of the kind, unless the same is brought before it in some tangible form by the parties aggrieved.

Our Illustrations.

TWO sketches representing views in Chinatown are from life, and correct in every part, except that there is but one Chinaman represented for every twenty to be seen in the same locality from early morn till midnight. The front elevation, perspective, and plans of cottage are self-explanatory.

The perspective and plans for a residence are those of a building planned by us, and erected at Honolulu, H. I. The remaining illustrations carry with them sufficient explanations.

Market Report.

Pine, Rough	per M feet	\$15 00
" " No. 2	" "	12 00
" " 2 in lengths	" "	13 00
" " 40 to 60 feet lengths	" "	17 00
" " 50 " 60 "	" "	18 00
" " Selected	" "	20 00
" " Clear	" "	25 00
" " Fire Wood	" "	8 00
T. & G. Flooring, 1 x 6	" "	27 00
" " 1 1/2 x 6, 1 x 4, 1 1/2 x 4, 1 1/2 x 3	" "	30 00
" " 1 x 3, and narrower	" "	22 00
" " No. 2	" "	35 00
Sepping	" "	27 50
Furring, 1 x 2	per lineal foot	00 1/2
Redwood, Rough	per M feet	18 00
" " No. 2	" "	14 00
" " Surfaced	" "	30 00
" " T. & G. 6 in. 12 ft. and over	" "	28 00
" " " 7 to 11 ft.	" "	25 00
" " " under 7 ft.	" "	20 00
" " Rustic	" "	30 00
" " No. 2	" "	26 00
" " T. & G. Beaded, 12 ft. and over	" "	30 00
" " " 7 to 11 ft.	" "	25 00
" " " under 7 ft.	" "	20 00
" " Siding, 1/2 inch	" "	22 50
Pickets, Fancy	per M	25 00
" " Rough Pointed	" "	16 00
" " Square	" "	14 00
Battens, 1/2 x 3	per lineal foot	00 1/2
Shingles	" "	2 00
Laths, 1 1/2	per M	3 25
" " 1 1/2	" "	3 75

NAILS—Rates were recently reduced to:—

200 keg lots	2 70
100 keg lots	2 75
Smaller quantities	2 80

PAINTS AND OILS:—

Pioneer White Lead (local factory), 5 ton lots	6 1/2 @ 6 1/2
Cal. Linseed Oil, raw (single bbl lots)	45 1/2
" " " " " "	47 1/2
Turpentine, per gallon	58

BRICK—California Building Description, soft, per 1,000

" " " " " "	5 50
" " " " " " red	6 50
" " " " " " hard	7 50

Building Intelligence.

Where owners' names are left blank, it is so done in most instances by special request.

Baker , near McAllister. One-story frame. O.—John Boyd. A.—Eisen & Pierce. C.—O. Perry. \$2,500.	Baker , bet. Washington and Jackson. Four two-story frames. O. and B.—W. F. Lewis. Day work. \$14,500.	Baker , bet. Washington and Jackson. One-story frame. O. and B.—W. F. Lewis. Day work. \$3,000.	Baker , nr. Golden Gate Avenue. One-story frame. O.—J. T. Fitzhenry. C.—O. Carberry. \$2,000.	Bryant , bet. Twenty-fourth and Twenty-fifth. One-story frame. O.—J. Belle. A.—J. Gash. Day work. \$2,000.	Broadway , cor. Laguna. Two and one-half story frame. O.—Peter Hopkins. A.—Clinton Day. C.—R. T. Gilbert. \$12,500.	Birch Avenue , nr. Larkin. Three-story frame. O.—F. Fanstman. A.—P. R. Schmidt. C.—A. Norton. \$3,000.	Brannan , bet. Sixth and Seventh. Alterations. O.—E. L. Goldstein. A.—P. R. Schmidt. C.—H. Keenan. \$1,300.	Bryant , cor. Second. Three-story brick addition to wine cellar. O.—Lachman & Jacobi. A.—P. R. Schmidt. C.—Mahoney Bros. \$9,250.	Clay , bet. Dayisadero and Scott. Two two-story frames. O.—D. S. Culp. A.—Copeland & Banks. C.—O. E. White. \$10,000.	California , cor. Baker. One and one-half story frame. O.—C. Oengrand. A.—W. F. Smith. C.—Gray & Stover. \$3,000.	Eddy , bet. Octavia and Laguna. Two-story frame. O.—L. Kaplan. A.—P. R. Schmidt. C.—Ommary & Beardsley. \$1,000.	Ellis , bet. Van Ness and Franklin. Alterations. O.—I. Levy. A.—E. John. C.—B. Dryer. \$1,000.	Eighteenth , nr. Castro. Two-story frame. O. and B.—J. M. Comerford. Day work. \$7,000.	Eddy , cor. Laguna. Six two-story frames. O.— A.—W. F. Smith. C.—J. Robinson. \$30,000.	Fulton , nr. Larkin. Three-story frame base. O.—F. Fanstman. A.—P. R. Schmidt. C.—A. Norton. \$4,500.	Fell , bet. Laguna and Buchanan. Two-story frame. O.—R. J. Stinsen. A.—T. J. Welch. C.—Bateman Bros. \$5,500.	Fourteenth , nr. Howard. Two-story frame. O. and B.—L. Cuner. A.—W. Mooser. Day work. \$4,000.	Fifth , bet. Mission and Howard. Three-story frame. O. and B.—A. Zehn. Day work. \$5,000.	Guerrero , nr. Twenty-first. Additions. O.—J. Davis. C.—G. W. Lang. \$2,200.	Golden Gate Avenue , bet. Pierce and Scott. Two-story frame. O.—J. P. Lartigan. A.—T. J. Welch. C.—H. Monrad. \$8,000.	Golden Gate Avenue , southeast cor. Larkin. Additions. O.—Michael Skelly. A.—H. D. Mitchell. C.—Owens Bros. \$12,500.	Green , bet. Powell and Mason. Two-story frame. O.—V. Menisini. A.—G. V. Coppelletti. C.—J. J. Dunn. \$4,000.	Greenwich , bet. Kearny and Dupont. Two-story frame. O. and B.—Thos. Merry. Day work. \$4,500.	Gough , cor. Grove. Three-story frame. O.—R. E. White. A.—McQuinn & Son. C.—H. Townsend. \$9,000.	Golden Gate Avenue , cor. Lyon. One-story frame. O. and B.—J. McPherson. Day work. \$2,000.	Grove , bet. Octavia and Laguna. One-story frame. O.—M. Kelly. Day work. \$600.	Howard , cor. Tenth. Improvement for school-house. O.—P. Scanlan. A.—T. J. Welch. C.—John Blake. \$2,000.	Haight , bet. Webster and Fillmore. Two-story frame. O.—T. Brown. A.—T. J. Welch. C.—Jas. Haven. \$3,000.	Hayes , southeast cor. Laguna. Two three-story frames and brick basement. O.—L. M. Fabry. A.—Miller & Armitage. C.—R. Mitchell, brick and iron work. \$5,315. Balance of contract not yet let.	Hayes , bet. Gough and Octavia. Two-story frame. O.—H. Tobelmann. A.—H. D. Mitchell. C.—Chase & Taggart. \$4,000.	Hyde , cor. Sutter. Two and one-half story frame. O.—Dr. J. Rosenstern. A.—Fisch & Moore. C.—A. Jackson. \$13,500.	Howard , bet. Fourteenth and Fifteenth. Two-story frame. O.—W. H. T. Dowling. A.—M. J. Welch. C.—R. Sinnott. \$2,600.	Harrison , bet. Twenty-fourth and Twenty-fifth. One-story frame. O.—T. O'Brien. C.—Jos. Sullivan. \$1,400.	Hartford , nr. Nineteenth. One-story frame. O.—A. F. Thing. A.—G. F. Bordwall. C.—F. Bruce. \$2,000.	Haight , bet. Webster and Fillmore. Two-story frame. O.—R. Sutherland. C.—H. Lukes. \$4,200.	Jackson , cor. Franklin. Two-story frame. O.—W. H. Martin. A.—Curlett & Cuthbertson. C.—D. Perry. \$23,650.	Jones , bet. Lombard and Chestnut. Two-story frame. O.—S. Castle. A.—Miller & Armitage. C.—F. W. Kern. \$3,750.	Liberty , nr. Guerrero. Two-story frame. O.—Jos. Hutchensin. A.—W. F. Smith. C.—R. O. Chandler. \$3,000.	Linden Avenue , bet. Octavia and Laguna. Additions. O.— C.—A. Allspaugh. \$700.	Mission , north side, bet. Fifth and Sixth. Alterations. O.—Sol. Tesmore. A.—B. E. Henriksen. C.—John Apel. \$5,750.
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McAllister , nr. Steiner. Two-story frame, two flats. O.—John Dunhand. A.—E. John. C.—J. F. Long. \$4,000.	Pacific , bet. Mason and Taylor. Additions and alterations. O.—S. McAllister. A.—Miller & Armitage. C.—B. Kroeger. \$1,500.	Sacramento , bet. Jones and Leavenworth. Two-story frame. O.—B. H. Gallagher. Day work. \$2,250.	Union , bet. Octavia and Laguna. Two-story frame. O.—G. and L. Ratto. A.—W. Mosser. C.—G. B. Caraglia. \$3,500.
Market , bet. Tenth and Eleventh. Three-story frame store and two flats. O.—Mendo estate. A.—T. J. Welch. C.—Anderson Bros. \$12,000.	Post , nr. Pierce. Two-story frame. O.—B. J. C. Wier. Day work. \$8,500.	Steiner , bet. Pine and California. Two-story frame. O.—Chas. McLane. A.—C. J. I. Devlin. C.—Lufkin & Kerrigan. \$2,764.	Van Ness , cor. Clay. Repairs. O.—Mrs. Greenwald. A.—J. E. Wolfe. Day work. \$1,200.
Madison Avenue , off Harrison, bet. Fifth and Sixth. One-story frame. O.—Thos. McCreagh. A.—Elias & Moore. C.—G. Tressler. \$2,500.	Pierce , bet. Post and Sutter. Two-story frame. O.—Mrs. Durand. A.—T. J. Welch. C.—Samuel T. Green. \$3,500.	Sacramento , bet. Jones and Leavenworth. Two-story frame. O.—Win. Hogan. C.—H. Gallagher. \$2,000.	Valencia , nr. Twenty-second. Two-story frame. O.—P. Dean. A.—J. E. Wolfe. C.—Alexander Flood. \$2,000.
Market , bet. Church and Eighteenth. Additions. O.—G. Smith. A.—Miller & Armitage. C.—R. Doyle & Son. \$2,200.	Page , cor. Broderick. Four two-story frames. O.—B. John Hinkle. Day work. \$16,000.	Sutter , cor. Laguna. Additions. O.—W. Butt. Day work. \$1,500.	Valencia , junction of Mission. Three-story frame. O.—F. S. Wensinger. C.—J. H. McInnis. \$11,000.
Mission , bet. Third and Fourth. Four-story and basement brick. O.—Hermann Meese. A.—Miller & Armitage. C.—Brick work, C. Morrell. \$10,000.	Quinn , bet. Valencia and Guerrero. Two-story frame. O.— A.—T. J. Welch. C.—J. W. Smith. \$2,500.	Twenty-second , nr. Valencia. Two three-story frames. O.—Dr. T. D. Whitney. A.—R. E. Henriksen. C.—Jos. Steele. \$11,300.	Valencia , cor. Twenty-fifth. Two-story frame. O.—A. Merry, M. D. C.—A. Nelson. \$2,500.
Market , bet. Sanchez and Noe. Two-story frame. O.—John Johnson. A.—Chas. I. Havens. C.—Jas. Geary. \$3,000.	Sutter , bet. Pierce and Scott. Two-story frame. O.—Mrs. Brainer. C.—A. Walker. \$3,300.	Twenty-third , bet. Valencia and Guerrero. One-story frame. O.— C.—H. Norris. \$1,501.	Washington , nr. Fillmore. Two-story frame. O.—A. M. Starr. A.—S. & J. C. Newson. C.—John Rehman. \$5,000.
Noe , cor. Ford. Two-story frame. O.—C. Gallagher. Day work. \$3,000.	Sanchez , bet. Seventeenth and Eighteenth. Two-story frame. O.—Jos. Clark. A.—J. Marquis. C.—Chalwin & Wilson. \$3,000.	Turk , nr. Pierce. Two-story frame. O.—Mrs. J. Webster. Day work. \$3,500.	
Olive Avenue , bet. Polk and Van Ness. Two two-story frames. O.—J. W. Bridgeman. A.—H. T. Bestor. C.—Thos. Rendell. \$6,350.	Seventeenth , nr. Sanchez. Two-story frame. O.—P. Hallahan. A.—J. J. Clark. C.—J. B. Gunyan. \$3,500.		
Oak , cor. Divisadero. Three one-story frame stores. O.— C.—J. Sheppard. \$2,000.	San Jose Avenue , nr. Twenty-seventh. Two and one-half story frame. O.—B. J. M. Comerford. Day work. \$4,000.		
Oak , bet. Pierce and Scott. One-story frame. O.—A. Wolf. C.—B. Dryer. \$2,500.	Stevenson , nr. Herriman. Two two-story frames. O.—Mrs. H. A. O'Brien. A.—T. J. Welch. C.—H. A. Conrad. \$7,000.		

HILL'S PATENT INSIDE SLIDING WINDOW BLINDS

Are Adapted to Any Style of Window

And Suitable for all Buildings, Dwellings, Stores, Office Buildings, and for Houses Built to Rent, Boarding or Lodging-Houses are Unexcelled.

THEY are entirely inside of the window casing, and while requiring no furring out or boxing, make it an impossibility to tear curtains, interfere with plants or window ornaments, or become broken by contact with chairs or other movable articles.

The light can be admitted and sunlight excluded from any part of the window; can be instantly removed and taken to any part of the house to clean, and as easily replaced.

They can be opened or closed with the window raised, and without removing articles from the window-sill, and cannot blow open or rattle. The Blind is very light (one-half inch in thickness) and strong, possessing more durable qualities than a hinged blind one inch in thickness.

There is NO SAGGING, BANGING, OR GETTING OUT OF ORDER!



They are made in three sections in height (each section sliding past the others), and any number of divisions in width corresponding to the folds in the old-fashioned folding blinds. They require no HINGES—all trimmings furnished with blinds—are MADE OF ALL woods, finished or unfinished, and COST LESS than old-style folding blinds. They have been extensively used by the best architects and builders throughout the East and West, and have given perfect and entire satisfaction wherever introduced.

The following are a few of the owners who have adopted the HILL BLIND in preference to any other:

U. S. Government, four sets officers' quarters, Presidio Res., S. F.; H. F. Bruns, cor. Geary and Taylor, S. F.; J. C. Weir, Post, near Scott, S. F.; John MacKenzie, cor. Grove and Broderick, S. F.; L. H. Sweeney, San Rafael; R. B. Gray, cor. Pacific and Van Ness, S. F.; Raymond Hotel, 1,600 windows, Pasadena, Cal.

ENGLISH AND AMERICAN VENETIAN BLINDS

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The only Perfect Venetian Blind in the market. For samples, prices and information, address,

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THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

VOLUME VII.

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NUMBER 7.

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Advertisements inserted at reasonable rates.

SAN FRANCISCO, CAL., JULY 10, 1886.

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Building Intelligence Facts.

ALTHOUGH there has been a great deal of complaining about dull times during the past month, the number and cost of buildings reported as commencements since our last issue, show that the work still goes bravely on, and that many owners of property are by no means inclined to allow their real estate to lie unimproved. This would not be the case were the indications not encouraging and promising. Those who buy or own building lots are, as a general thing, competent to judge correctly the advisability of planting more of their means in building improvements. And, further, such persons are generally cautious and calculating, and require good and sufficient evidence to induce them to invest, which they are not apt to do unless there exists at least fair assurances of satisfactory returns upon the money invested. Hence it may reasonably be inferred that the outlook is sound and prospectively good.

There is a permanent, healthy tone and under-current which stimulate many owners to active operations in building improvements, while others, who hold back, are strongly inclined to break away from the influences that restrain them, which state of facts assures of a continuation of activities. For those who "want to improve," and do not from trivial cause, will not long remain inactive, while others go ahead and reap the results of their greater confidence.

As will also be noticed by the report, many of the improvements are of the better class, and in the list of "flats," and houses for renting, the cost indicates good buildings generally. The labor agitation has had a somewhat retarding influence, as some owners are disposed to resent by withholding expenditures, when seeming arbitrary demands are imposed. But in the building trades in San Francisco, there have been no strikes among operatives calculated to unduly advance prices. The tendencies have rather been, among contractors, to under-value and under-bid on work offered; so much so, that during the season the *pro rata* settlements have been numerous.

REPORT FOR JUNE.	
79 frame buildings.....	cost, \$512,526
2 brick ".....	" 29,000
18 alterations and improvements.....	" 111,195
99, total of buildings.....	total " \$652,721
FOR SAME PERIOD IN 1885.	
96 engagements at a total value of.....	\$457,721
Showing a gain for 1886 of.....	195,311
And a gain on preceding month of 1886 of.....	251,182

Negotiations not Concluded.

THE announcement in its last issue, that the entire interests of this Journal could be purchased, has resulted in large numbers of inquiries and offers, but none as yet conclusive. The opinion that it is

"A SPLENDID PROPERTY,"

Has been freely expressed, but the query of personal qualification to edit and manage such a Journal seems to intervene. There has not been to us a single doubt expressed that, in right hands, it is the

BEST CLASS JOURNAL PLANT WEST OF CHICAGO;

Still, the "peculiar personal qualifications and fitness" called for seem to be a barrier, and a thousand suggestions have been volunteered as to the class of mind, intelligence and executive abilities required in its conduct, all of which we know from experience to be more or less imaginary and hypothetical; for when the present management began its publication, in 1879, it was without the slightest experience in connection with the publication business, and equally as little as editor and manager; besides which, at the time of its commencement, the building, financial and all other interests of the State, were encompassed and engulfed by the terrible state of depression brought about by sand-lotism, and the fearful gang of demagogues and panders, to the worst and most wicked passions and fancies of the deluded and thoughtless crowds of unreasonable men, who were incited to clamor and hope for *Reform!* with the ultimatum of murder, arson and the annihilation of all "bloated bond holders," which included a large proportion of the successful and well-to-do citizens of this city. This state of things brought about a condition of approximate or absolute poverty and distress among mechanics and the working classes, and great financial contraction in all directions. Yet with all these

MOST TERRIBLE CONDITIONS,

Which passed away only by slow degrees as time rolled on, *this Journal worked and paid its way*, increasing in influence and public favor, until it has reached its present high position among the class journals of the country.

If, therefore, from a beginning unaccompanied by a single encouragement, other than a personal determination and purpose to brave the issue, so much has been accomplished, what we ask may not be anticipated for its future, with its foundations well and firmly laid and cemented, its superstructures all well proportioned, and its surroundings all of the most favorable character.

WHO SHOULD OWN AND CONTROL IT?

Many personal propositions have been made to purchase, by men seemingly well, if not in every respect qualified for its management, but who have not the financial resources.

The more general sentiment prevailing is, that it should be controlled by the architectural profession as a whole, or by a *syndicate of prominent architects*, to make it absolutely THE REPRESENTATIVE ARCHITECTURAL JOURNAL of California and the entire Pacific States and Territories.

Under such management and control, the splendid reputation it has already gained by the unaided efforts of a single individual, would be increased ten-fold.

At present there exist jealousies and prejudices, which would disappear, with the Journal under the general, interested management of a number of reputable architects.

If, as some now suppose and say, the present and past successes of the Journal are the results of the influence of one architect and his office, is it not then fair to presume that if twenty or more architects should concentrate their personal and office influence in its favor, its

FUTURE WOULD BE GRAND BEYOND COMPARISON.

Present management urged to continue. A large number of personal friends and patrons, among them many of our most prominent professional brethren, leading contractors, advertising patrons, and owners of real estate, have urged us to continue our publication labors, adding, "The Journal must be continued;" "It is a necessity on this coast;" "Such a Journal we must

have," etc., to all of which we have given the one reply stated in our first announcement, that we want and must have relief from the excessive cares, labors and responsibilities imposed by the triple duties of editing and managing the Journal, and as practicing architect,—a complication of more than any one individual can master successfully, without compromise of all personal comforts, and undue strain upon the mental and physical strength and energies.

Many well-informed parties have said to us during the past month, "We know of no one in San Francisco qualified to assume its charge." This may be true as far as individual knowledge is concerned, but it is not so as a general fact. There are, beyond question, in this city,

HUNDREDS OF COMPETENT MEN

Who, if not familiar with all the details of monthly publications, are sufficiently qualified to master the situation within sixty days, during which time the assistance that will be given by the present management, will perfect them in the entire work.

If it passes to parties who are not practical architects, it will gain instead of

LOSING ARCHITECTURAL FAVOR,

As such a change will secure patronage in directions at present inimical to its success; and influences now opposed to it among mechanics will change to support, and so give it additional strength and prosperity.

The many offers thus far received are held contingent upon those that may follow. As we are not in haste to make the change, we shall deliberate thoughtfully upon each proposition submitted, hoping that when a change is made, it will be such as to place the Journal in right hands, and thus make its future an assured success for all time.

Appropriate Souvenir.

MR. JAMES E. WOLFE—Dear Sir: In laying the cornerstone for the new Methodist Episcopal Church South, of Woodland, on the 10th inst., we took the liberty to present to the officers of the church the last number of the CALIFORNIA ARCHITECT, with your regards, which was accepted with thanks, and the volume placed in the casket with many other valuable articles, and the casket was sealed and deposited in the cornerstone of the edifice, there to remain until some future generation may, perchance, open it and again unveil to the world that *May number of 1886*, from its long and peaceful rest, and those columns you have so earnestly and ably furnished will be perused by many an ardent observer, who will carefully scan the record of the past and mark the infinite diversity of human aims in this short-lived struggle of dependent humanity. Let us work and work well, while the day lasts, and be ready when the great Architect of the universe has need for us, and hope that our bodies may rest as secure and peaceful as the volume in the corner-stone, while our spirits and good influence will ever on.

Respectfully yours,

GILBERT & SON.

Woodland, June 14, 1886.

Press Excursion.

THE annual excursion of the Press Association will take place this month. The members, in a special train over the C. P. R. R., will leave this city on the 19th, and will visit Reno, Truckee, Lake Tahoe, Carson, Virginia City, and other points of interest. As press of business will prevent a personal inspection of the country in regard to building news, we have secured the services (kindly volunteered) of a brother editor, and will report in this Journal the state of building activities as they exist over the line traversed by the excursionists.

ALL law-abiding citizens regret the late terrible scenes of riot and bloodshed in Chicago, caused by the misguided anarchists, and every true American citizen, whether native or adopted, is ready to advise that they be stamped out, and to assist, if necessary, in doing it. But that riot has been of value to the trade organizations of the country in showing the public the great difference between the anarchists and organized labor, offered by men who are outspoken upholders of law and order, and who seek to hold in check the vast heterogeneous mass comprising their assemblies. They counsel peace, moderation, arbitration, and when very serious grievances appear they are ready to say to employers, "Come, let us reason together."

A bound volume of this Journal, for either of the years 1880, 1881, or 1882, will be sent free to all new subscribers for balance of this year and 1887.

Twenty-first Industrial Exhibition of the Mechanics' Institute.

THE annual exhibition of the Mechanics' Institute will be opened in this city on Monday, August 16. Its general character will be similar to that of its predecessors. The Directors have separated the exhibits into two classes, viz., those that are entered for exhibition, and those for competition. If the latter, they must be in position, and receipted for, on or before August 26. If not entered by that time, under no circumstances will such articles be allowed in competition, except with the written consent of all the contesting exhibitors, and the sanction of the Board of Trustees.

The following extract from the Rules and Regulations will be of benefit to those desiring to enter articles for either exhibition or competition:—

The award of a gold medal for best general display will debar any article in the same from competing for any other premium.

Space applied for and not occupied by August 21, may be assigned to other exhibitors.

No articles will be allowed in the Exhibition of an explosive, inflammable, dangerous, or offensive character.

No nostrums allowed in the building.

Articles must remain on exhibition until the close of the Fair.

All exhibitors will be required to keep the space under their control clean, and in good order. All coverings over goods to be removed before 11 A. M.

The greatest care and vigilance will be exercised by the managers, and the most effectual means taken, through the agency of the police and otherwise, to effectually guard and protect the property on exhibition; but under no circumstances will the Mechanics' Institute, or the managers of the Fair, be responsible for any loss or injury to articles placed on exhibition. *The owner must take all risks.*

The list of articles in the premium list is divided into forty-seven classes. The prizes consist of gold, silver, and bronze medals, and diplomas. Coin prizes will be given in the various classes as follows:—

Horticulture and Farm Products. In the former class the first, second, third, and fourth prizes are, respectively, \$75.00, \$60.00, \$40.00, and \$25.00. In addition, special prizes will be awarded to best display of flowers from private gardens. Premiums in this class will be a medal and coin, the latter being in amount, \$15.00, \$10.00, and \$5.00, according to merit.

The largest premium to be given is in Class 47, Farm Products, viz.: For the best, most extensive, and varied exhibit of farm products (exclusive of live stock) by any county in the State, Gold Medal and \$250; second best display, Grand Silver Medal and \$150; third best display, Silver Medal and \$100; fourth best display, Bronze Medal and \$75.00.

All articles entered under the headings, Fruit, Dried Fruits, Nuts, Canned and Preserved Fruits, Vegetables, Dairy Products, Honey, Meats, etc., Wools and Cottons, will be subject to competition for medals or diplomas, and a monetary prize, ranging in value from \$75.00 to \$5.00.

The Directors have been very earnest in their endeavors to include in the different classes all articles liable to be placed on exhibition, but should anything be entered not included in the list, they have reserved the right to declare the exhibitor entitled to a special prize.

We sincerely hope that the Directors will take measures to illustrate to their patrons the *practical* workings of technical schools. This can be readily done, and perhaps be the means of inducing some of our moneyed men to encourage the establishment of such schools in many different portions of the State.

As an inducement to increase their membership, the Directors wisely adopted a rule by which each and every one belonging to the Institute can purchase a season ticket to the Fair at one-half the usual rates.

Risk of Contractors.

ONE of the most serious risks which building contractors incur and yet one which many of them habitually overlook till a costly damage suit opens their eyes, is the civil responsibility of an employer for injuries suffered by his employees while in his service. A recent suit in Paris, reported in *La Semaine des Constructeurs*, is instructive as showing the tendency of French courts to hold contractors to increased responsibility for their workmen. A mason employed in the erection of a building in Paris was struck on the head and instantly killed by a large piece of iron, which was accidentally dislodged from an upper floor directly over where the mason was at work. His widow sued the contractor for twelve thousand francs dam-

ages. It was held to be a contractor's duty diligently to care for the safety of his men by all reasonable means, to warn them of the dangers attending their employment in various locations, and to furnish adequate protection where possible. In this case, the contractor, failing to do this or even to warn the man of his danger, was responsible for the fatal accident, which a little more care on his part might have prevented. The editor remarks, in comment, that the tendency of the French courts is to increase severity in estimating the responsibilities of employers for the safety of their workmen, and cites another case where it was explicitly held that contractors are bound "to care for the safety of their men, and to protect them from the dangers incident to their work;" that "under penalty" they must anticipate "possible causes of accident," and take, and cause to be taken by their agents, all necessary precautions to prevent or avert them; that "they are bound even to guard the workmen against the consequences of their own imprudence." The general rule of the French courts is, further, to acquit the employer of responsibility only where "the imprudence of the victim has been the sole cause of the accident." This looks severe, but we should hesitate to say it is not in strict accord with the dictates of a sound public policy, as well as of humanity. It would certainly be well for American contractors to lay it to heart, as a measure of their moral, if not legal, responsibility.

In connection with the rigid rulings of the French courts, it may be well to note the tendency of English law on the same subject. A recent case, that of Griffiths against the St. Katherine's Dock Co. of London, reported in the *Building and Engineering Times*, furnishes an illustration. The plaintiff was injured by the fall of an iron door, which had been in an unsafe condition for a long time previous to the accident, and this fact was well known to the defendant company, as was proved and admitted on the trial. The court held that this alone was not sufficient to make the company answerable in damages, that it was necessary further to prove that this danger was unknown to the plaintiff, up to the time of the injury. The general principle was laid down that, "if a servant enters or continues in an employ, knowing of the danger incident thereto, he cannot recover, since he might have escaped by leaving the service." It may be well, perhaps, to admonish some classes of employees, that if they continue in dangerous work, they do so at their own risk; but it is not difficult to imagine cases where the peculiar nature of the business or of the workman's position is such that he is practically unable to leave his employment, though he knows it to be dangerous. In overcrowded London, a man who should throw up one place might suffer much privation before he could get another, and the new place might prove yet more dangerous than the old, and farther from his home and in many other ways less desirable. But it is difficult to imagine a reason other than criminal negligence, why a corporation should knowingly permit the premises occupied by its workmen to be in an unsafe condition and remain so; and the law which relieves a corporation of responsibility for accidents which happen to its men through such willful neglect to repair its own premises, on the heartless excuse that the injured men knew of the danger, looks more like a temptation to manslaughter than anything else. We trust it will not be considered an authoritative precedent for American courts.—*The Inland Architect and Builder.*

Farm and Fireside of April 1 gives some interesting figures showing how the mechanics of Springfield, Ohio, are kept in poverty. It cites two cases of losses, the first being a loss of \$25,000 a year on coal. "The retail price of coal in Springfield has been a dollar a ton higher than in Columbus, the difference in price being more than double the difference in cost of hauling." The five thousand families will burn during the year not less than fifty thousand tons of coal, on which they have been wrongfully taxed more than a half dollar a ton, or \$25,000 per annum, which might have been saved by uniting in the purchase of coal. The other loss is one that comes through rum. Springfield maintains 175 saloons, and the estimate is made that the 25,000 inhabitants expend \$350,000 annually, which enormous sum is mainly drawn from the pockets of laboring men.

The first Bessemer steel converted in the South was made at Chattanooga, Tenn., on April 19, by the South Tredegar works. The experimental cast of two gross tons proved excellent steel under all tests applied. The material used was pig-iron from Cranberry ores, North Carolina, and shows that ore to be excellent steel material. The plant has a capacity of eighty-five tons per day. The success has caused much gratification among Southern iron-masters.

A bound volume of this Journal, for either of the years 1880, 1881, or 1882, will be sent free to all new subscribers for balance of this year and 1887.

Building Permits.

AS we understand it, in nearly all the Eastern cities, laws or ordinances exist, requiring the obtaining of building permits in all cases of the erection of new or remodeling of old buildings. Such a regulation is good, and should be in practice everywhere, as it would regulate procedures and prevent many of the difficulties which so often arise in San Francisco, particularly in connection with the alteration of buildings within the fire limits. At present, there are ordinances requiring permits to open streets, for the putting in of sewers, etc., on which a deposit of twenty dollars is required, to insure the proper replacing of the street, and also permits to occupy a certain portion of the street during the erection of buildings, building areas, etc., in certain parts of the city, at least. If this permit rule was general and imperative in all cases, it would furnish an easy method of ascertaining the extent of building improvements made during the year. As it is now, everybody does and acts as he pleases, and there is no check upon irregularities. There should be a compulsory and imperative law upon this point. It would be an easy matter for an owner, architect, or builder, to report every improvement entered into, and obtain a permit; and a penalty should attach to every violation of the rule. The do-as-you-please practice is all well enough in most matters, but there are others in which individual rights and privileges should be made to subserve public interests. No harm could possibly result from such a regulation, while the general information afforded by it would be at least gratifying to every one interested in the growth and improvement of the city. Speculative estimates are often indulged in as to the amount of work under way at certain periods, often varying materially from actual facts. The permit system would remedy this, and furnish daily statistics of what was being done in the building line. Excessive or diminished estimates of business conditions sometimes do harm, and the degree of business prosperity is often misrepresented, leading to wrong conclusions. In cases of death, and in other matters, obligatory ordinances compel notices of the occurrences, because the public good seems to demand it, and the growth and prosperity of the city is a matter in which all citizens are interested, and in reference to which they have a right to be informed, which would be the case if a perfect permit system was established; one which could not be ridden over with impunity, as too many of the regulations on the ordinance book are.

The modern improvements of the past few years have received great favor and general adoption in nearly all classes of buildings—but practically in the better kind. But with the convenience afforded by them, they have been the medium of a vast amount of sickness, suffering, and loss of life,—not of necessity, but because too great neglect and carelessness have been practiced in their application, and too much indifference to serious consequences. The modern improvements as a general thing are good, but the best invention in the world may be rendered worthless, or injurious by being tampered with by unskillful hands. There are hundreds of *pretending* mechanics, to whom it would be unwise to intrust anything requiring good judgment and practical mechanical skill, and the greater number of defects and failures in connection with the introduction of these improvements, grow out of this one cause or fact. There is no good reason why wash basins, etc., may not be set in any chamber or place, with perfect freedom and security from all bad effects, yet there are *hundreds of ladies* who object to their introduction, because of known cases where they have proved offensive,—while in fact, the whole difficulty exists in the incompetency of the superintending party, or the mechanic doing the work, and not in the thing objected to.

Circumstances.

THAT circumstances have a great deal to do in shaping a man's life, no one can deny; for experience teaches us, and observation and historical research prove it so.

Shakespeare says, "There is a divinity [or something else] which shapes our ends, roughhew them as we will." There is no absolute dictation or iron-bound fatality in this quotation, but rather the opposite. While we would not ignore the existence of a divine power in the universe, in whose hands, and under whose control are all things in heaven and earth, while there is at times some circumstances over which man has no control, still there is nothing in these two facts which in any way hinder man from being successful and happy if he observes well the laws of his being and the laws that govern and control the movements of ordinary life.

We are not, by any means, mere living and breathing human machines, but, on the contrary, we are free, responsible agents, gifted with the power of choice, and capable of discovering right from wrong, and with full liberty to do what we will, and be what we may.

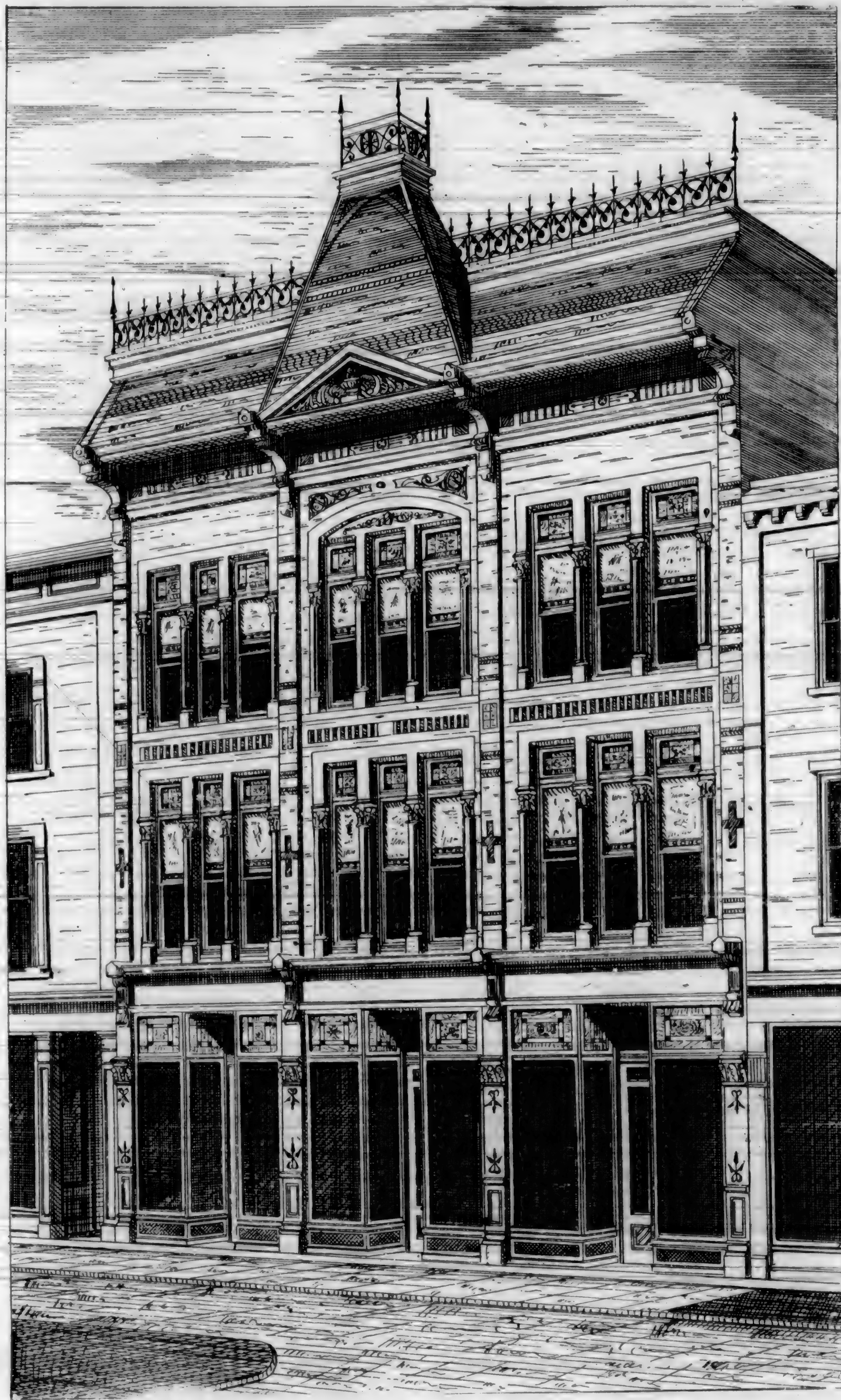


PLATE 1.—FRONT ELEVATION FOR A MERCANTILE EDIFICE.

S. F. Chapter of Architects.

THE regular night for the meeting of the Chapter occurring this month on the eve of the holiday, the attendance was limited to but a few members. The time was, however, profitably spent in general conversation and discussion of topics of interest to the profession. The reading of papers by Mr. Sanders was postponed until next month, when it is hoped there will be a full attendance.

Ash, oak, walnut, etc., must step down and out before many years, and give place to mahogany, which is now used for insides and for ornamental work on railway coaches; 10,000,000 feet of mahogany annually is now the figure, as against 500,000 feet five years ago. It is said that the mahogany is now but slightly dearer than our native woods—walnut and cherry—but that it is superior to them, in that it does not warp nor check.

Eight-Hour Movement.

THE full strength of the eight hour movement at the end of the first week after May 1, the date of its attempted inauguration, was clearly shown by statistics published. The total number of workmen committed to it in all parts of the country was estimated by *Bradstreet's* at 325,000. The demand for shorter hours was early conceded to 150,000 without a strike, and to 356,000 as the result of the strike, leaving 140,000 still striking at the time referred to, or defeated. The trades in which the movement was most successful are those connected with house building, agricultural implement making, furniture making and machine building. These trades are not subject to foreign competition. In those which are subject to such competition, either in the way of exportation of the domestic product or importation of the foreign, the movement met with very little success. The whole movement may be regarded as experimental. In those branches of industry which yield sufficient profit to warrant an increase of wages, for that is what shorter time most commonly signifies, the increase has been very generally granted. In others it has not been granted, or, if granted, it will be withdrawn later. The principal part of the loss entailed by such an experiment proceeds from the stoppage of machinery. This machinery may be of the nature of general business superintendence, clerical force and organized system, as well as actual machines and tools in use. A deduction of 20 per cent. from the producing power of a large manufacturing establishment means more to the community than the loss of one-fifth of the laboring force.

The organization of labor has thus far proceeded upon a false assumption, namely, that the wage-earners are a class having rights and interests other than and different from those of other classes. In a republic, where all men are equal before the law, and where the theory of government presumes that the greatest good of the greatest number will be sought in the framing and execution of all statutes, the idea of class rights and interests is mischievous. The interests of the wage-earner are the interests of all citizens. The time cannot be far distant when the need of yet another organization among the workmen of this country will be recognized—an organization to protect intelligent and conservative men in the exercise of their civil rights against the oppression of those who follow the lead of dangerous demagogues, and are blinded by ignorance, prejudice, and passion, to their own welfare. The happenings of the past six months have been very instructive as emphasizing the tendency of labor to oppress labor, and the need of protection for those of independent thought and action against its cruel coercion. The order of Knights of Labor, however restrained, cannot accomplish this object. Its purpose, as defined in its fundamental law, is not that to which a majority of the thoughtful and intelligent wage-earners of the country can subscribe. It demands a scheme of national and State legislation inconsistent with the best interests of the community, and especially of the wage-earner. Those who are attracted to the order by its profession of principles are not safe leaders of a movement which wise men can follow.—*Carpentry and Building.*

Proportion of Rooms.

SPEAKING on the subject of proportion of rooms, with reference to their sanitary features, Douglass Colton says: "For purposes of ventilation the height must bear some relation to the size. Adequate movement in the currents of air cannot be secured in a room unless the height be proportioned to the width and length. The minimum height must be fixed with reference to that which will allow the currents of air to circulate without being inconvenient to the occupants. Therefore, in proportion as the width and length of a room are increased, so must the height be increased. On this account it is not advisable to make rooms much less than ten feet high. With large rooms, as the height should be increased in proportion to the size, if the cubic space be the measure of the number of occupants, the area or floor space per occupant would diminish with the size of the room. As, therefore, the height of rooms is necessarily variable, it follows that it is rather the floor space which must be considered in allotting accommodation to the occupants of a room than the cubic space. In barracks a floor space of from 50 to 60, and occasionally 80, square feet is allowed per occupant. These are for rooms occupied by day as well as for sleeping-rooms. In work-houses, for dormitories, a minimum floor space of 25 square feet has been admitted, provided the ventilation was carefully attended to. In nurseries and servants' rooms from 50 to 60 square feet are desirable per occupant—that is to say, a room 10 feet square, or 10 feet by 12 feet in area, should not contain more than two persons. In school rooms which are only occupied during parts of a day, and where the air can be changed between the periods of occupation, a less amount would suffice, and from 15 to 20 square feet are sufficient."

OUR ILLUSTRATIONS.—

Plate 1, front elevation for a mercantile or business house. Plate 2, a cabinet and case of drawers. Plates 3, 4 and 5 descriptions of the ferry steamer *Solano*, the largest ferry boat in the world. Plate 6, the better class of Chinese garden huts, many of them being far more wretched in general appearance, the walls and roofs being covered with old tin cans, etc.

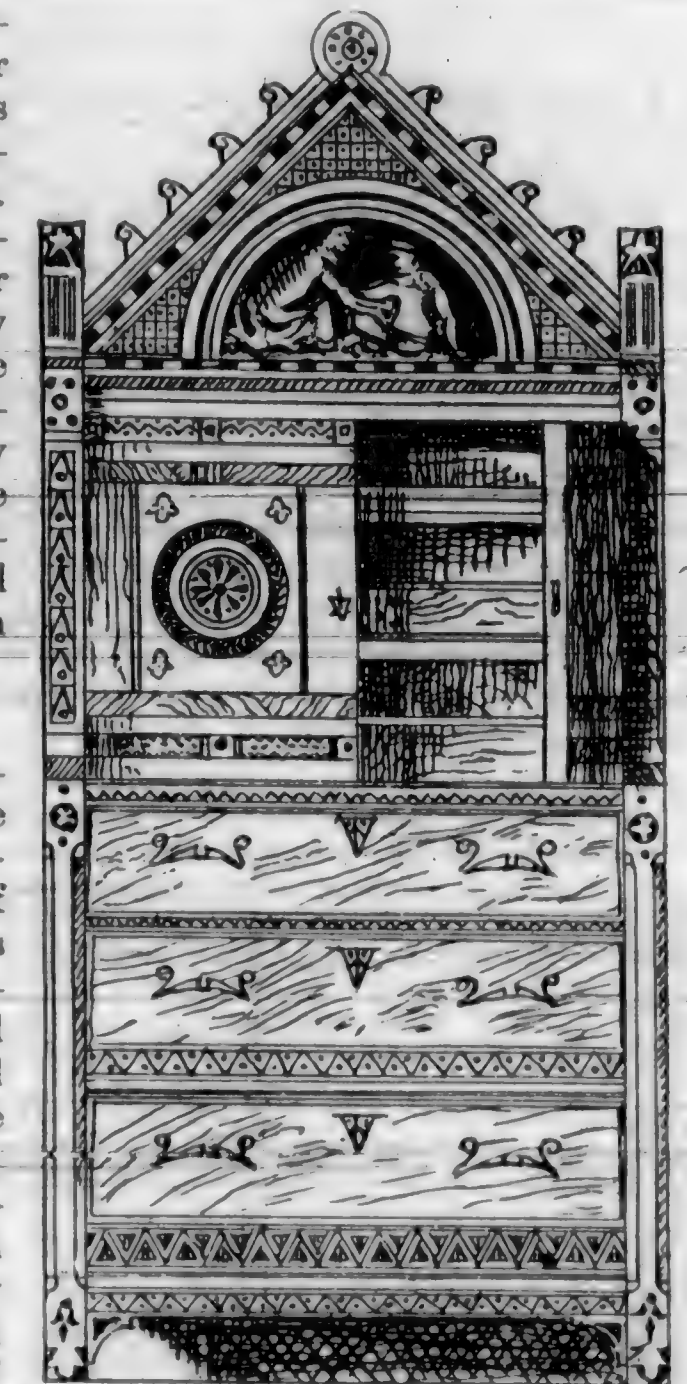


FIGURE 2.

BUT few fully and rightly understand or realize that errors may be committed in the erection of a home for their families calculated to produce sickness and death to loved ones. Yet it is so, and those who contemplate the erection, particularly of private dwellings, cannot exercise too much care and caution in every particular, so as to avoid mistakes and errors of every sort. Too often pretenders, willing to render services for nominal compensation, whose knowledge beyond the mere matter of drawing lines and coloring plans is exceedingly limited, and so far as possessed, of an imperfect character, are intrusted with the responsible duties of an architect. Consequently when they enter into details by specifications of that which is to be done, they conglomerate ideas so badly, and specify so much at variance with good mechanical judgment and common sense, that a superabundance of serious blunders and impracticabilities at variance with all proper mechanical principles follow. This is particularly the case in reference to plumbing and sewer work, than which there are no more essential features in connection with house-building. They commit, virtually, criminal errors; for their mistakes sometimes destroy more valuable lives than their own. Both owners and architects should consider this subject carefully, the former to avoid the mistake that all men are competent in the lines of business or profession followed by them, and the latter, not to claim an understanding of matters beyond their actual qualifications and the reach of improvement. No man is fitted to perform duties in any connection, who conceives the notion that beyond the bounds of his own knowledge there can be no advancement. Advancement and progression have been going on since the day that Noah left the ark, and sensible and practical men realize the fact that there is and ever will be more to learn, and that the fountains of improvement and knowledge will continue to flow so long as life lasts. It is only simpletons who *know it all*, and assert for themselves absolute superiority of thought and practice. Care is therefore necessary in the selection of parties to intrust with responsible duties, and owners will best subserve their own interests by its fullest exercise in connection with the erection of homes for their families. There can be no question but that *tens of thousands of lives* have been sacrificed by the employment of cheap, incompetent architects, plumbers, etc., resulting in imperfect dwellings, where, through defective plumbing and sewer work, the poisonous gases have entered buildings, to work out their own terrible results. The veriest fraud of a plumber will often assert, absolutely perfected knowledge of the intricacies in this connection, and with the cavalierism of a highwayman claim that those things that have occupied and puzzled capable minds are, to him, well understood. Good meaning, honest owners are often entrapped by such deceivers into a reposal of confidence, which results injuriously. If the plastering, painting, and other works of a building are poorly executed, each and all are annoyances, but not fatal to health and life. Hence the importance of certainty in these special directions, by and through which alone healthful homes can be secured.

It would require 50,000,000 pounds of wire to erect a telegraph around the earth at the equator, and but a half-pound of the thread made by a certain species of spider.

The Ferry Steamers of California.

GREAT credit is unquestionably due those who conceived the plans, and to the skill and genius of California mechanics and artisans in the production of the many elegant and powerful steam vessels used as "ferry-boats" upon the bay of San Francisco and its tributary waters.

Pre-eminent for massiveness and power is the *Solano*, the special object of the accompanying illustrations, plying between Benicia and Port Costa, across the flowing and ebbing waters of Suisun Bay, and completing the connection of Central Pacific Railroad travel to and from Sacramento and across the continent, while the *Piedmont* and many other large and commodious passenger ferry-boats, fill out the link between San Francisco and Oakland. The *Tiburon*, *Newark*, *Bay City*, and numerous other elegant ferry vessels—population and travel considered—provide ferry facilities as great and comfortable as are to be found in any part of the world; and in the matters of convenience, size, and completeness, the ferry steamers upon the bay of San Francisco are unsurpassed.

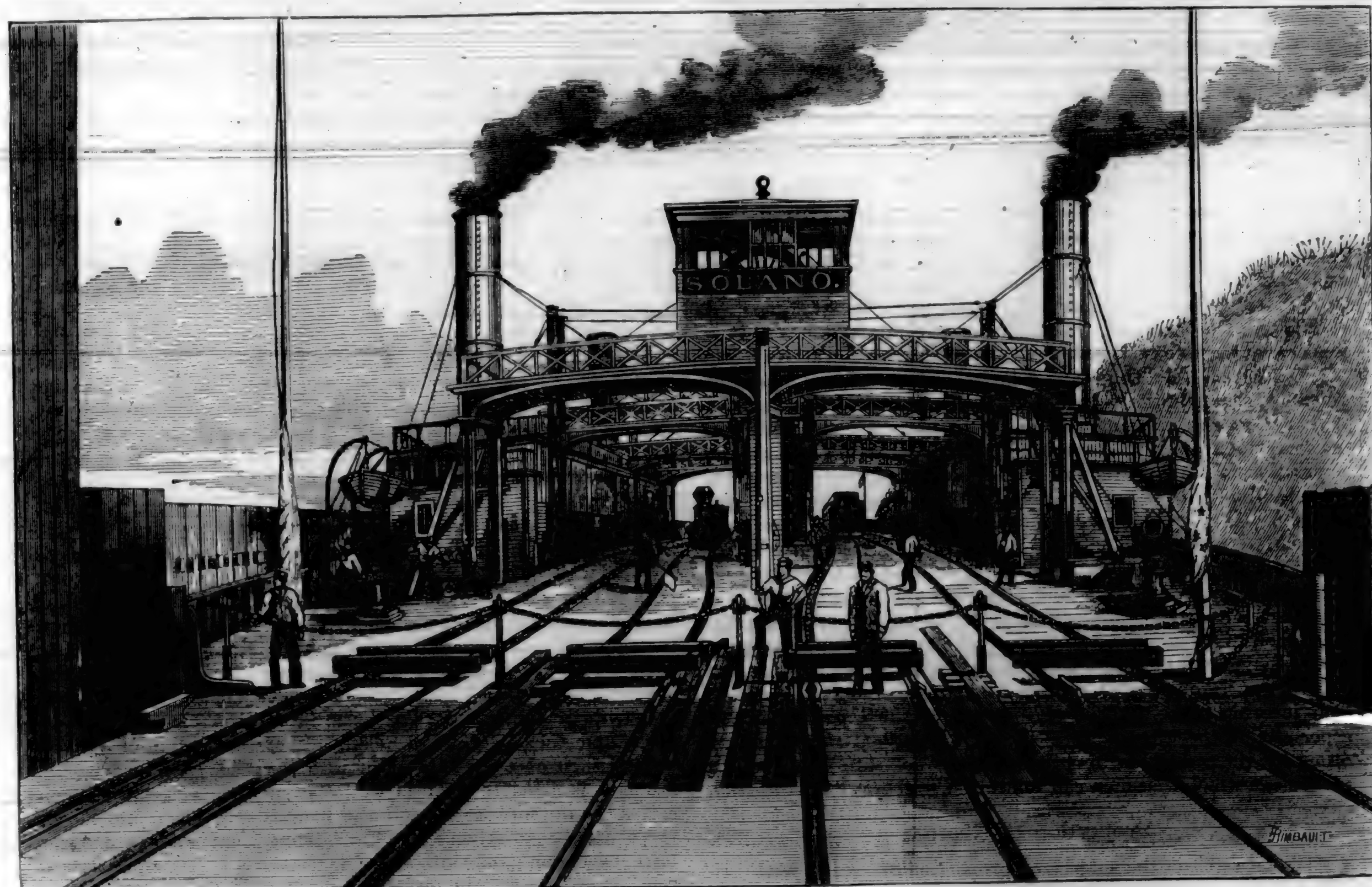


PLATE 3.—THE "SOLANO" IN DOCK, SHOWING GENERAL LONGITUDINAL APPEARANCE.

Equal credit is also due to the companies who have by their means brought about these handsome results, in that home labor and material have been employed in nearly every instance, and local industries encouraged. Large amounts of money have been disbursed among mechanics and working people in steam ferry enterprises. The first connection between San Francisco and Sacramento by Central Pacific Railroad was by way of Niles; but the considerable grades on that route and the greater business promise of a shore route, induced the company to seek a right of way along the margins of San Francisco, San Pablo, and Suisun Bays, and the straits of Carquinez. But the first change made in the location of the road, while it avoided grade, did not diminish the distance, and this fact, combined with other considerations, culminated in the building of a shorter and more direct line of travel. The distance between San Francisco and the capitol city, Sacramento, by the "old river route," is one hundred and twenty-five miles, and about the same by the first located roadways. To overcome this, and remedy the discomforts of tedious traveling by water, the project was conceived of building an air-line railroad across the tule and marsh land and through the counties lying westerly from Suisun Bay. To this end, proper surveys were made, showing a decrease of nearly forty miles.

In order, however, to render the proposed new route practicable, it was found necessary to establish a ferry at Port Costa,

situated thirty-two miles from San Francisco. To gain time was the principal idea which led to the conception of the largest ferry-boat in the world. Size, indeed, was needed in order to accommodate the numerous trains, crossing and re-crossing, in order that travelers and merchants would not suffer from long and tedious delays incident to small boat accommodations.

It will be noticed that there are four lines of rails on the deck of the steamer. To show its immense carrying capacity, the following measurements will enable any one conversant with railroad cars to estimate the number the *Solano* will take at one time. The extreme length of the main deck is 494 feet 8 inches; length of hull, 406 feet 2 inches; width over all, 116 feet; width between wheel casings 64 feet; height amidships, 18 feet 6 inches; height at ends, 15 feet 9 inches; draught when loaded, 6 feet 6 inches; tonnage 3540 tons. From the above measurements, it will be seen that there is ample accommodations for forty-eight freight cars, or twenty-four passenger cars, besides locomotive and tender. As long trains have to be divided, it is necessary that an extra locomotive accompany each

train that is ferried over. Our engraving also accurately shows the arrangement of the apron or stage by which trains are transferred to and from the boat. This is so nicely arranged and balanced that scarcely a jolt is felt by the passengers in the cars when the train leaves the steamer for *terra firma*.

Two separate vertical beam engines propel the boat. These were built by Messrs. Harlan and Hollingsworth, of Wilmington, Delaware. The cylinders are 5 feet 2 1/4 inches in diameter, with 11 feet .28 inches stroke. Each engine is fully capable of developing 2,000 horse-power. Steam is furnished by eight boilers, each 7 feet .25 inches in diameter and 16 feet long. They are made of steel, and have 143 tubes 3.94 inches in diameter, and 16 feet long. The total heating service is 19,630 square feet. No coal is used, the steam being developed by the burning of crude petroleum. The wheels are 30 feet in diameter and have 24 floats. Each wheel can be worked independently of the other. Unlike any other steamer that we have seen, the wheels are not on a line, one being considerably in advance of the other; this was done so that the boat could be easily and quickly turned in order to enter the slips on each end of the ferry route without injuring the same.

The above engraving represents the general construction of the *Solano*. Beneath each line of rails runs a deep Pratt truss, the top flange of which is attached to the deck and the bottom to the hull of the boat. The latter is divided by bulkheads into

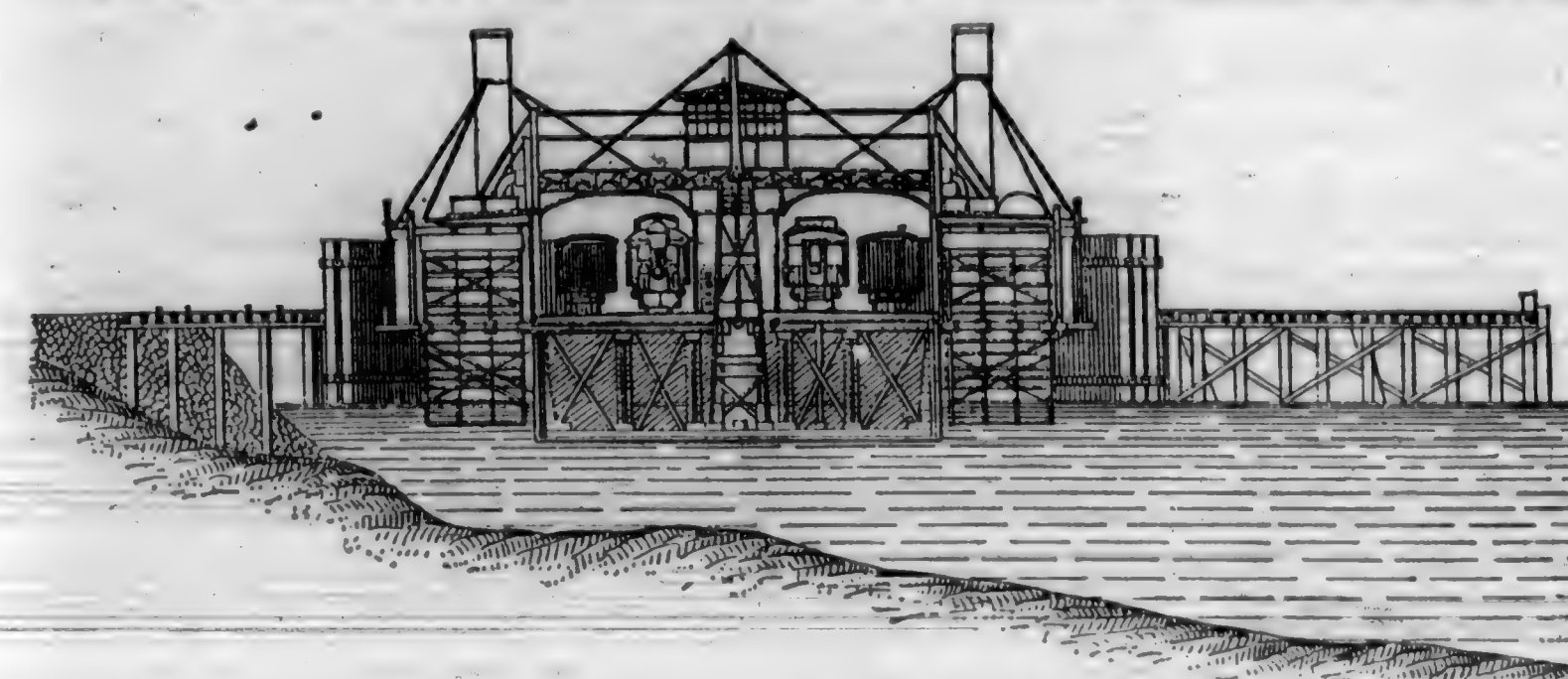


PLATE 5.—FIG. 2, SECTIONAL VIEW OF HULL.

twelve compartments. There are four balanced rudders at each end of the vessel, 10 feet 6 inches long and 6 feet 6 inches high. These are worked by hydraulic steering gear, but can be actuated by hand when desired. The pilot-house is more than 40 feet above the deck. The stages, or aprons, for embarking and disembarking trains, are massive iron structures, 98 feet 6 inches long and weighing 150 tons. They are provided with four lines of rails, and are controlled by hydraulic gear to adapt their position to the rise and fall of the tide.

The two towers seen in the back ground (Figure 2) near the center of the engraving, are similar to those near the slip where the *Solano* is at rest. They mark the entrance to the slip on the Benicia side of the bay. The large mountain on the right is called Mount Diablo. The track on the right is the one by which passengers and freight are conveyed to Stockton, Los Angeles, New Orleans, and way stations. It also connects at Lathrop with trains for Sacramento and all points east to New York, via Central Pacific Railroad. Immediately around the turn as shown, are the immense warehouses and docks of the Nevada Transportation Company.

Some difficulty was experienced in selecting a name for the subject of this article. The inhabitants of Benicia, with a just pride, desired the leviathan to be named after that place. After careful deliberation, the company decided that too much confusion would likely be caused in regard to the distribution of mail matter. Letters and packages intended for the boat *Benicia*

might be delivered to the town by that name, and *vice versa*. So the name of the county in which Benicia is situated was given to the magnificent specimen of marine architecture, justly entitled to be called the largest ferry-boat in the world.

Why Nearly All the Railroads Are Four Feet and Eight and One-half Inches Wide.

A CORRESPONDENT asks: "Why was the standard gauge of railroads fixed at 4 feet 8 1/2 inches? What was the scientific reason for adopting the fraction of an inch?"

There is no scientific or any other reason for it, except precedent and custom. In fact, all scientific or practical considerations that can enter into the question are against it. When Mr. Stephenson built his first locomotive, he, for some reason best known to himself, built it to the gauge of the old tramways—for vehicles drawn by horses—in England, which was 4 feet 8 1/2 inches. That became what was known as the "narrow gauge" in England, and was naturally followed in this country to a very great extent. Some of our roads have a gauge of 4 feet 8 1/2 inches; others, 4 feet 8 3/4 inches; and still others, 4 feet 9 inches. In England they have a 6-foot "broad-gauge," and at one time, for a very little while, tried a 7-foot gauge. The Erie road, built by English capital, was at first a 6 foot gauge, but in 1876 the changing of it to 4 feet 8 1/2 inches was begun, and now it is all of that gauge. The Pennsylvania Railroad Company uses a gauge of 4 feet 9 inches, because that is a compromise gauge between the former gauge of 4 feet 8 1/2 inches on the Eastern lines and 4 feet 10 inches on its roads west of Pittsburg. It would be well if the 4 feet 8 1/2 inches gauge could be widened a little, to enable greater width of the fire-boxes of locomotives, and consequently more powerful engines, such as it would be desirable to employ.

Light colors absorb less and reflect more heat than dark colors. White is the best reflector, and black the best absorber and radiator, provided the colors are not covered by coatings of varnish.

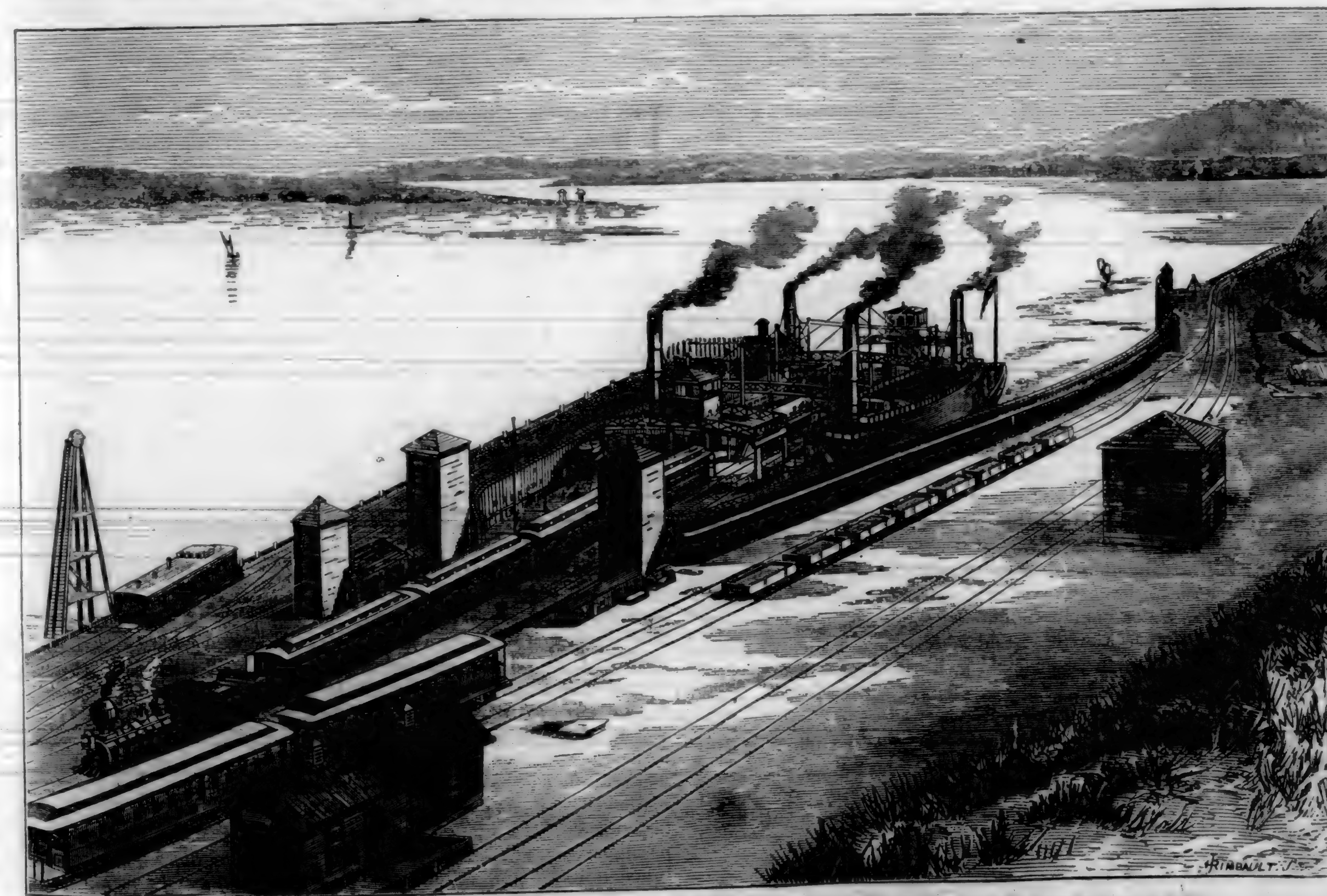
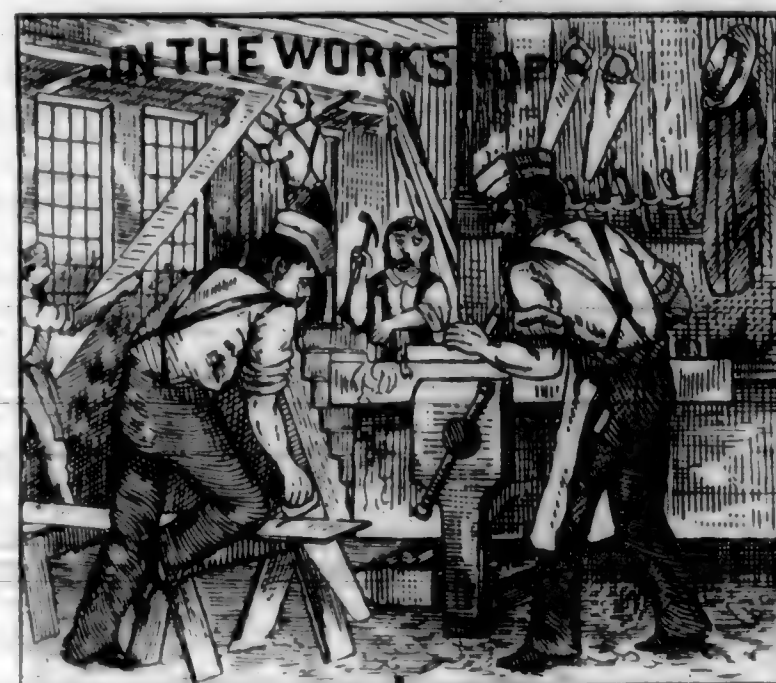


PLATE 4.—ISOMETRICAL VIEW OF "SOLANO" SHOWING WHARVES AND GENERAL APPROACHES.



We will be pleased to receive for publication in this column items of information in regard to practical ideas connected with the mechanical part of the building trade. We especially invite suggestions from apprentices and young mechanics.

"A CARPENTER is known by his shavings." He is also known by the character of his work, and the state of his tools may be known by the same standard.

TO FIND NUMBER OF STUDS REQUIRED AROUND THE OUTSIDE OF BUILDING.—Take three-quarters of the circumference—in feet—of the outside of the building. Add one stud for each corner, angle, and opening; or, allow one stud for every foot of the outside measurement.

In planning stairs, think of your head room from the lowest starting point to the highest landing, or somewhere in ascending or descending stunning falls and broken limbs may accompany bruised foreheads and broken heads.

THE "Steel Square and Its Uses," as it originally appeared in these columns, will not be published in book form. We have, however, a work by that name which we will forward to any address upon receipt of \$1.00, either in coin or one-cent stamps.

Bad work is set out by the "rule of thumb."

DRIVING NAILS.—The handle of a hammer should be grasped at a short distance above the end of the handle, in such a manner that the end of the handle projects an inch or more beyond the side of the hand. The hand and the eye act so well together in concert that, after a little practice, the amateur will have no difficulty in hitting a nail square on the head. If not so hit, the force of the blow will be partly lost, and the nail will be moved out of position. In driving nails in hard wood, a hole should first be made, either with a bradawl or a gimlet. Sometimes a knot will cause a nail to swerve from its right direction, and even to curl up, thrusting the point through the wood at no very great distance from the hole at which it has entered, "coming out," in workman's parlance, "to have a look at the fool that is driving it."

ONE thousand feet of lath are 2,000 pieces, and will cover 120 square yards.

JACK PLANES; WHY SO CALLED.—"Since every Jack became a gentleman, there's many a gentle person made a Jack." So wrote W. Shakespeare, Esq., in his immortal tragedy, "Richard III." The term "jack" seems to have been applied to any mechanical contrivance for replacing the personal service of an attendant, or to an implement subjected to rough and familiar usage. In England the most common name is John, and the familiar synonym of that cognomen—Jack—was applied to the plane. It is derived from the Jewish word "Jacobus," and was corrupted into "Jacques" in France, and, being the commonest Christian name in the latter country, was used as a contemptuous expression for a common man; hence the term "jack" is applied as mentioned above. Besides the jack plane, we have roasting jack, jack screw, boot jack, jack towel, jack boots, black jack, etc.

ONE and one-fourth yards of good sand will suffice for 100 square yards of plastering; 1½ barrels of lime for one coat, and 2½ barrels for two coats, for same number of yards; one bushel of hair to above quantities. One-third barrel plaster will harden 100 square yards.

TALL CHIMNEYS AND SPIRES.—Lowell has four chimneys over 200 feet high. The Merrimack Company has two chimneys

283 and 206 feet respectively; also 110 steam engines. Glasgow, Scotland, has a 446-foot chimney, not for smoke, but for chemical fumes, and another chemical chimney of 350 feet; and Manchester, England, has one of 415 feet. The Merrimack Company's is the tallest smoke-chimney in the world. The Tremont and Suffolk Company has one 225 feet, and the Lawrence Company one 211 feet. The chimney of the Pacific Mills, Lawrence, is 227 feet; that of the Navy Yard, Boston, 239½ feet. Bunker Hill monument is 221 feet tall. Trinity Church spire, New York, is 284 feet.

FIFTY pounds of building paper will cover sixty yards.

MANY thoughtless workmen seem imbued with the notion that the more glue there is used in joining wood together, the stronger will be the joint. This is a great mistake, for a *thick layer of glue makes a weak joint*. Indeed, the thinner, in reason, the glue, the stronger will be the joint, the great desideratum being the exclusion of air. If the air could be *entirely* expelled from between two surfaces, they would adhere one to the other without glue. In the manufacture of a certain sort of glass, where one piece is ground against another to bring them to a *face*, it is sometimes the case that the air is so perfectly excluded that the two plates adhere so firmly to each other that they cannot be separated without fracture. Glue should be used while hot, and the surfaces to be joined rubbed together before the clamps are applied.

WHITEWASH.—One-half bushel good, fresh, unslaked lime. Slake it with boiling water, covering it during the process, to keep in the steam. Strain the liquid through a fine sieve or strainer, and add to it a peck of clean salt, previously dissolved in warm water; three pounds of good rice, ground to a thin paste and stirred in while boiling hot; one-half pound powdered Spanish whiting, and a pound of clean glue, which has been previously dissolved by first soaking it well, and then hanging it over a slow fire, using an ordinary glue pot. Add five gallons of hot water to the mixture, stir it well, and let it stand a few days, carefully covering it over. *Must be applied hot.* One pint will cover one square yard of finished surface. This wash retains its brilliancy for years; can be applied to surfaced lumber instead of paint.

TINTS may be imparted to whitewash by adding a little blue black, or indigo, or orange red, or Venetian red.

The Flight of Time.

ITS tramp is steady, quiet, rapid, sure, and its periods certain. It has been flying for myriads of ages, carrying with it growth and decay, happiness and misery, light and darkness, sunshine and storm; and still it speeds its onward course, heeding not the wails of grief and anguish, as it lands one after another of the human family beyond its confines. Its history is made up of joys and sorrows, hopes and disappointments, bright suns and dark hours, silvery lit and starry skies and midnight gloom; balmy zephyrs and resistless storms, each and all passing away in the breath of time. Millions of years mark its duration, and millions more will yet pass to its account; yet it matters not how fast it flies, if in its flight it bears no story of misspent days and hours, as far as those now wafted upon its ever-vanishing course are concerned. Its records will tell how well or badly each has improved its fleeting moments. That which has been and is we know. That which is beyond in the vast immensity of the great hereafter, is hidden from human knowledge by the dark and impenetrable veil of uncertainty, through and beyond which no mortal eye hath seen or penetrated, except so far as revealed to multitudes who live in the light of faith in things not made manifest by sight, allured by the angel Hope to realize that when time and mortality to them shall have passed away, a brighter and better condition awaits them, where, purified from all the entanglements and ills of time, the realms of purity and perpetual rest will be entered and enjoyed; where, in the immortality that will abide forever, they will revel in scenes of perpetual peace and uninterrupted love and purity. Thus the votaries of Hope, holding faith in future bliss, draw consolation to themselves, and the embitterments of time are mellowed and softened by the dews distilled from faith in things hoped for. Still flying time stops not nor pauses in its speedy passing away, nor stays its onward course, because from its embrace millions and millions of human kind have passed away, nor any remain beyond their allotted time to enjoy its enchantments and opportunities.

ASKED, ANSWERED, AND COMMUNICATED.



Architects, Contractors, Carpenters, and Mechanics generally are respectfully requested to furnish us items of interest for this column. We will gladly answer any and all questions pertaining to the architectural and building interests. If illustrations are necessary to explain your ideas, send us a sketch of them and we will make the cuts.

A YOUNG mechanic inquires for a "correct method of finding the length of one of the sides of an octagon, the diameter being given."

Rule.—Knowing the diameter of an octagon and the length of one of its sides, to find the length of side of any octagon, add or subtract, as the case may be, to the known length, two and one-half inches for each six inches of diameter.

In order to use this rule, it will be necessary to remember some one certain measurement. Assume 8 feet as the average width. The length of side will be 3 feet 3¾ inches. Paste this with the rule on inside of your tool-chest lid. Suppose diameter is 9 feet 9 inches. Difference between 8 feet and 9 feet 9 inches is 21 inches. Apply the rule, and we have 3½ × 2½ = 8¾; add this to the length of side given, and the result is 4 feet ½ inch, which is the correct length of side.

THE weight of zinc per superficial foot is as follows:—

Nos.	10	11	12	13	14	15	16
Weight, oz.	9	11	13	16	19	22	25

NEVER use iron nails in laying zinc, as iron and zinc combined, causes galvanic action, which ultimately destroys the latter named metal.

THERE is no absolute need of painting zinc work; for exposing it to the atmosphere has the effect of coating it with a thin film of oxide, which protects it from the further action of the air as effectually as paint.

PAPER HANGER'S PASTE AND HOW TO APPLY IT.—Good paste for paper hanging is made of old flour, mixed to a milk-like consistency with water. When put in a kettle to boil, a little size or glue may be added, which will increase its tenacity. A little alum may also be added, in order to keep the paste sweet and to cause it to spread more freely. When boiled, it should be of the thickness of ordinary gruel, and laid on the paper smoothly and equally with backward and forward strokes of the brush. Care should be taken not to load the brush with too much paste at one time, lest the paper be rendered too damp. When an over-abundance of paste is used, a little is pressed out at the edge when the cloth is used to dab the paper against the wall. This may be removed by a sponge dipped in clean water.

In answer to a student; there are three primary Greek orders: Doric, Ionic, Corinthian, to which the Romans added the Tuscan and the Composite.

THE ancient Greeks seem to have been unacquainted with the principle of the arch, all their doorways, windows, and spaces between columns being on the principles of the architrave. In Roman architecture, the arch is one of the principal features. In Greece, the rivers are very small and the means of crossing them were simple; but in Italy the width of the rivers necessitated the use of arched bridges.

DORMER windows are small windows built out of a high-pitched roof; they are so called because they were originally used for dormitories or sleeping chambers.

A WOMAN made the first orange box in California, and has built up an industry that now amounts to 50,000 boxes a year. —*Ex.* Truly, Californians have to go away from home for items.

INDICATIONS point to an increased price for tools in the wood-working line. Mechanics should make calculations accordingly.

MORTAR and paint may be removed from window glass with hot, sharp vinegar.

SOOT falling on a carpet, if covered thickly with salt, can be removed without injury to the carpet.

A GOOD moth powder is made of ground hops one dram, Scotch snuff two ounces, camphor gum one ounce, black pepper one ounce, cedar saw-dust four ounces; mix thoroughly, and strew among the furs and woollens to be protected.

LARGEST MASS OF SOLID BRICK WORK.—The Mengoon pagoda is one of the most interesting sights in Burmah, and in its unfinished state is the largest mass of solid brick work in the world.

ORIGIN OF THE DORIC SHAFT.—The Doric shaft, with its characteristic diminution and channelings, was known in Egypt more than 1,000 years before its introduction into Greece, as is proved by the monuments of Beni-Hassen. Commercial relations had existed between the two countries for centuries, and it cannot be assumed that the Greeks had not seen Egyptian works of architecture. They could not have arrived at precisely the same results by independent invention.

NEW YORK CITY embraces an area of 24,394 acres.

"TOO MANY IRONS IN THE FIRE."—This is an old proverb, another version of which is: "He that hath too many irons in the fire, some of them will burn." This morsel of metaphorical wisdom, evidently the work of a blacksmith, is, of course, intended as a warning against undertaking too much, and, at first sight, sounds like a prudential maxim, well adapted to secure efficiency and singleness of aim on the part of all workers. But, more closely considered, the precept shows for itself what it really is—a piece of narrow-minded, petty prudence, adapted only to the guidance of incapables and fools.

The fact is, nobody who is good for anything needs any such cowardly caution about having "too many irons in the fire." Your active, efficient characters, they who do the largest share of work in the world, are the men who want and will have a great many "irons in the fire." Shovel, poker, tongs and all, these masterly workmen keep them always hot and always busy. The rapidity of their daily accomplishment is only equalled by its variety. Both their combinations and their execution are such as perplex and startle little minds, and lead them to repeat in full chatter much such petty maxims as the one now under consideration. It is by such men that human progress is advanced, inventions and discoveries are made, fortunes are won, and all valuable improvements and reforms are achieved.

ONE cwt. per superficial foot is an ample allowance for the probable load on an ordinary dwelling-house floor, exclusive of the weight of the floor itself. Two cwt. per superficial foot is sufficient, in many cases, for warehouses and factory floors.

THE weight of a crowd of men closely packed is about 84 pounds per superficial foot.

GIRDERS are often sawn through the middle, and the two pieces bolted together with the sawn sides outwards, not, however, as is often erroneously supposed, to increase the strength of the girder. It is really weakened by such an operation. The main benefit to be derived is that an opportunity is given to examine the heart of the timber, and thus expose cases of rotteness. Girders cut as suggested are much less liable to rot. The oldest author on architecture, Vitruvius, "directs a space of two fingers' breadth to be left between the beams for forming the architrave over columns in order that air may circulate between and prevent decay." Every observing mechanic has noticed that decay begins at the joints and other places where the pieces are neither perfectly close, nor yet sufficiently open to allow any dampness to evaporate.

In Amsterdam, there is a floor constructed which has no joists whatever. The room is sixty feet square. The floor consists of three thicknesses of tongued and grooved flooring, each layer being one and a half inches thick. The first course is laid diagonally across the opening; the second, also diagonally, but the reverse of the first; and the third course is laid parallel with one of the sides of the room. Each layer is securely nailed to the other. The middle of the floor is kept about two and one-half inches higher than it is at the sides of the room.

Art and Architecture.

(Special for this Journal. By F. HILLERT, Architect and Mechanical Engineer.)

IX. THE SENSE FOR BEAUTY.

AS the first efforts in forming must naturally have been crude and simple, nevertheless man tried any way to give to the objects of the same a form which pleased him, if only by its agreeability the purpose in view was expressed. So is it proper, even on the most



primitive or simple building, a projecting cornice is attached, that the rain-water falling from the roof does not run down the wall; but this cornice gives to the structure an inditing and marked form, pleasant to him if only by the purpose which is by it expressed. Gradually we seek, with consciousness to perfect the necessary and required raw material to such forms, agreeable to the purpose, which, on the whole, finish and complete a work pleasant to our view. In this way manifests itself in the highest degree the impulse or drift to form the sense for beauty. But this sense for beauty is manifoldly graded, and shows itself in most different ways; nevertheless it is the highest ornament of a nation, and the high perfection of the same by the Greek people, giving to them as such the brightest luster, and shine for all time to come. With the development of such perfections is necessarily united and conditioned a high standard of culture of the impulse for liberty and truth; then the last impulse could not express itself either with a nation existing in brutal stupidity, or with such living in despotic fetters and bondage, or living together in immoral concubinage. There would be the sense for beauty, and its expressions and manifestations for nobody's approbation and admiration, and never would come to a perfect execution. Here it would shrivel through fear, or grow wild in licentiousness. Uniform harmonies, development of thought and will, are indispensable for his own perfection, and by the same he gains such active capacities as he can and must use and apply for the general culture of mankind.

X. ITS IMPORTANCE FOR THE EDUCATION OF THE HUMAN RACE.

That the sense of beauty is necessary and unalienable for the promotion of the education of the human race, is clear and evident in every way. If we would take the sense to feel it from our world, we would cease to be human beings. Not only would it destroy the one who is used to live in artistical ideas, and find in its enjoyment the highest pleasure and satisfaction, but even of the most modest and contented every attraction to live would be taken away; from the simple peasant girl, the pleasure of a flower; from the wild man of the desert, the delight in his plumage and colored adornment.

With necessity is the sense for the beautiful implanted in humanity, and in each human being are unquestionable traces to be found. By the awakening, enlivening, and cultivation of the same will be effected the imperceptible, uninterrupted, and most powerful influence on the whole human race. He knows to give form to the first religious inspiration; he permits the eye to rest always, and always with love, on nature; it leads to deep meditation over the same; it leads to respect of the sexes, to mildness of manners, and, lastly, to art; and by artistical works a considerable retractive effect is exercised. The importance of the sense for beauty has been intelligently explained and made to become universal property. It would therefore appear as if beauty is only the servant of attaining truth; but this is an illusion; for if this be true, it must be first established that the highest purpose of life would be exclusively the attaining of truth. But who will assert this, since the purpose of life could be, with the same right, the perfect ennobling and refining of our soul, the reaching of the highest good? And, lastly, should not also the attaining of the highest beauty, in the viewing of the "epitome of all heavens" be revealed and disclosed,—be a worthy purpose of life, but not an exclusive one? But also this cannot be correct. The spheres do not exclude, but condition each other; are inseparable, and act always through and by each other, so that it is no profanation of Christian mysteries, but a deep, in its self supported, truth, when in the meaning and comprehension of the sense of the "undivided Trinity,"

truth, goodness, and beauty, the common aim of the intellectual, the ethical, and the esthetic impulses of men have combined. So aspires the sense for the beautiful to the same aim, and finds, lastly, its termination in the same idea, in which rest the origin and fulfillment of truth, and liberty, God.

XI. ART AND POETRY.

As far as history dates back, we find in the earliest nations the coincidence of activity in the sense of the beautiful in the most differing and manifold manner. The first traces of the same appear in the habiliments of man, his utensils, arms, and such like, which were embellished, not showing directly their practical purpose, i. e., the seam in a cloak being covered by a strip of cloth of a different color; or such as by the form of the object the purpose and its conditions were directly visible and evident, as in a column, as of something free-supporting. To such structures nothing compels man but his own instinct and drift, so that which he makes he gives its form a charm, pleasant to the eye or ear, to read on his mind by the two organs, to give him pleasure in the object made.

Such exertions in the sense of beauty we name art, in the widest sense, or poetry, poeie. Then here are the arts of forming and sounding not yet separated, and the Greek word and meaning taken therefrom means a making, producing, and forming by tradesmen as well as artists and poets. The law which guides and inspires him is his own feeling and sense. He is able to bring the undetermined into form and shape. He is able to perceive, if his inner instincts and impulses are expressed, that his sense of beauty is satisfied. The process which goes on in the mind of men we lead back to the fancy or imagination, that is, the capacity of the soul to conceive and put before her things or objects which the organs of sense do not observe. Free and independent out of his imagination and conception, man learns to make and form beautiful objects and things, and he uses for this purpose the natural material and stuff, to bring them (beautiful things) into existence.

XII. DIFFERENCE IN THE ARTS OF SOUNDING AND FORMING.

Is the material or stuff used or employed words or sounds, then the objects formed belong to the dominion of the sounding arts, poetry in the closer sense and the art of sounding or music. Are the former objects of a bodily form, then they belong to the domain of the forming arts, such as the art of building, sculpture, painting. The means of the first group, that is, the condition by which necessarily the work of the same reach our observation, is time. Those of the latter group is space. The objects of the first group act on the ear, and its forms are conditioned by the motion in the time. Those of the latter act on the eye, and its form is conditioned by bodily stuff being in space. Different are both kind of objects, not by their origin and meaning, but merely by the way and manner in which the originators brought them to appearance and expression. There exists not only no opposition and contradiction between each of them, but more of a complete uniformity in their origin. Both are only daughters of the same mother; but she gave them to different husbands, and the children of the one worked with rule and square, the chisel, the palette, while those of the other took to the pen and to the lyre; but not one of them denies the common origin, and they acknowledge and recognize each other as sisters and brothers, and all breathe the same inspiration.

A series of pursuits and activities are rightfully included in the arts, but with the same rights the objects of the same belong to the beauties of nature. Those are all living, and man only forms the living, without taking from them the conditions of their origin and the passing from their existence. They form and make a transition from nature to art, and consist principally in the art of gardening, dancing, with the art of riding, to which may be added mimic and the art of play acting.

XIII. ART AND THE BEAUTIFUL.

The common definitions and explanations of "Art" and its spirit are, as known, insufficient and partly empty phrases. This lays in the difficulty of giving a definition of "Beauty," and we must limit ourselves to understand and comprehend the capacity of man to produce beautiful objects, either immaterial, as the bodily or the sounding, and further expanded and narrowed down to the totality of all such things, which we call works of art, although we should use analogy, as in the dominion of nature (kingdom of animation), the kingdom of art. If we would give an abstract definition of art, we would lose ourselves in the domain of phrases, or proceed solely descriptive, by separating the human action from its subject and make it objective. In the last manner may be seen in art a presentation, that is, an activity, by which the inner thought or spirit comes to appearance. But this illustration is hereby so limited and bounded that

this activity has no useful, practical purpose, but only to produce or represent. It is clear that by this definition man is forcibly removed, but again being introduced in the same, it would only make clear that art is nothing else but man's activity, respective capacity, to produce and make beautiful things. In the same time it has been tried, those which are beautiful things, to be solved with this definition. Nobody and nothing gives us the right to exclude man from this definition of art, since art is not conceivable without a human representative, or its products without a human originator. Art, man has alone.

XIV. WORKS OF ART.

The object and purpose of art are the making and creating of beautiful things. Beautiful things made by man are therefore works of art, and only because they are beautiful are they works of art. The spirit of a work of art is its beauty, and, figuratively speaking, the purpose of art is beauty. Things having another purpose are called useful, lovely, agreeable, useless, or bad.

If now we review a multitude of such things, which generally are included within the sphere of art, we find between them a large number of such which, to us, do not appear beautiful, and which we must call ugly as the works or objects of remote people; nevertheless we don't object to adopting them as works of art. The reason therefor is that such things and objects, at the time they were made and to their people, appeared beautiful; or were considered as such by their own maker. Who could in real earnest call beautiful the images or figures of the Assyrians at Khorsabad, the paintings of the Egyptians, or a Madonna of the Byzantines; and who could call beautiful the abortions of the Rococo? The decision on all these objects is, that they were produced by the originators in a clear, or in an indistinct and with an unconscious intention to make beautiful objects; or that, at the time of their creation and making in general, they were thought to be beautiful.

A complete contrary and contrast would be that which was made intentionally to be ugly and was made ugly. Such an idea of ugliness does not exist, since all which is ugly or kindred to it has other purposes to fulfill; let it be for the existing of fear or grief, a tickling of a sensual pleasure, or other perceptions or objects, transformations and deformities, as exist in nature. The humorous, the comic, and the satirical are connected herewith, and will be mentioned hereafter.

An uncultured, coarse sense and mind will hold that as beautiful which appears to a cultured and refined mind, hard, ugly, and such like. With the general advance of education and culture, the appreciation of beautiful things will increase with the individual man as well as with whole nations—and the human race. In regard to its originator, he shows by his work of art his own coarse or refined sense, and since the same, with very few exceptions, always corresponds and is the outgrowth of the sense of beauty commonly existing in his people; then this work of art will show the sense, way of thinking, and sense of feeling of the whole nation. In the series of the works of art made by the same is revealed its inner and particular development and historical culture, which would, without the same, be forever lost and unknown to us. What would we, for example, know of the Greeks, if of the high temples and towns, of the marble figures of the gods, of the pictures and utensils, no trace was preserved; the genius of Homer would be dumb and silent to us, the muse of Sophocles lost forever, and all that, which, being kindred to those spheres, would be to the slightest presentiment strange to us. To think this, though, is already impossible, since Greek life without art is not conceivable. By our works of art we will be judged by posterity, justly, according to the merits of the present age.

XV. BEAUTY.

Since the purpose and the spirit of a work of art is the beautiful, we have now arrived at the question: What is beauty? A general logical definition of beauty cannot, by any means, be established or put up; since it must be brought back to that capacity of man which is not of a logical nature, the mind. But the beautiful is, nevertheless, not possible without certain practical relations; the same are again to be put up with difficulty and explored, as the reasonable necessity of a conclusion is missing. Then, from the divided opinion of men, and the want of proof bearing the logical test of such opinion, to call an object beautiful is to raise the question, Are objects beautiful themselves, or do we only feel in our minds the impression of beauty; or, Is beauty an objective property of bodies, such as gravity, expansion, color and such like; or, Is it only a subjective sensation in man transferred to one subject? Without illustrating these points for and against it, and perhaps arriving at a result, it may be sufficient to state that beauty is neither purely objective nor purely subjective, but is both at the same time. If beauty

was purely objective, she must appear to all men alike, as a red colored body must appear red to all; but would beauty be purely subjective, she would not make on the many one and the same impression, but would appear different to all; so much different from each other as each individual man's form, mode of thinking and of feeling, differs from those of another. At the same result we would arrive, when we reflect that beauty is not purely spiritual, but is attached to a certain concrete form, through which it operates on our senses by our eyes and our ears. The peculiar form being unconditionally attached to the object, is inseparable from the beauty of the thing itself; then the same would, when changed in its form, cease to be beautiful. In this sense, beauty is something objective, adhering to the thing itself. Otherwise is this form, for such a one not comprehending the same, just as incomprehensible as if beauty did not exist, and he would not call the thing beautiful; but only the one will find the same beautiful, having a suitable fine feeling, refinement, a fit and proper way and manner of perception, from which it can be concluded that the beauty is transferred to the things by the person enjoying it.

But how are we to proceed? If from general truth, a logical conclusion of the spirit of the beautiful cannot be formed, lays therein generally the impossibility to get closer and nearer to the same? or does a method exist which at least approximately leads to this aim? This is the empirical method, which tries to deduct from experience a principle. It has been truthfully said that we cannot proceed in the same way as in geometry, which goes from the general to the special, and singly and from the spirit of the thing to their properties and concludes, but we must content ourselves, from only single pieces, to draw probable conclusions. Of what sort or kind these conclusions must be is clear; that they cannot be purely defining the object; nor be purely of a physiological kind, to explore and investigate the affections and emotions in the human mind; but must refer themselves from the relation of the beautiful thing to man, which in the main will be objective and formative explanations. But the conclusive characteristic signs or marks which we perceive by viewing beautiful things are these—that the thing itself pleases us well, and that we in the same thing, merely as stuff and as a body, positively take no interest. When we, for example, find a bronze monument beautiful, we do not consider by far the value of the material which, when coined to pennies, would make to many no indifferent object. In this feeling, not wished for nor desired (disinterestedly) lays a deep satisfaction in the mind of man to make and produce beautiful things. The capacity and ability on which this satisfaction and pleasure is based, is "Taste," which is man's esthetic capacity of judging things in regard to the beauty of the subject; taste is ruling. The word "taste," being raised to a school expression, is nothing else than the sense for beauty of the single individual man, so that it is eas to be seen, in regard to the definition for the beautiful, we move around in a circumference. Two illustrative reflections come to our aid,—one that the pleasure of the beautiful is not purely sensitive, and the other, that in the appearance of the beautiful thing lays direct the semblance of a spirit; both differences we must recognize clearly and plainly by our intellect and reason. If now this contentment and pleasure are not purely sensitive and expanded, are not exclusively in our feeling, then they exist necessarily in accord with feeling and thought, the mind and the spirit, or, as may be expressed, in the harmonious play between imagination and intellect. But that in the appearance of the beautiful lays direct a spiritual sense, leads to the recognition of the purpose of the beautiful thing, which directly becomes perceptible; without that the intellect sees directly the purpose. The point in question is the spiritual meaning of the beautiful thing, which in the aspect comes directly to view, in the most suitable manner, so that a perfect harmony between the spiritual meaning and contents—the idea, and the outward appearance of its form, exists.

XVI. BEAUTY OF NATURE.

It is now the time to mention in a few words the relation of beauty in nature to beauty in art. In nature all things have certain practical reasons and purposes, and undergo and underlay an uninterrupted change; and beauty is here only an adornment of the necessary, even if the same in a higher sense itself is needed, and so united, that with and by each change, the same itself is changed, dissolved, or destroyed. The conditions under which beauty is attached to nature are inconstant, continuously beginning and ending. Man alone is capable of producing things of which beauty is not a subordinate aim, but is the sole and exclusive purpose, untouched by the changes of nature, unalienable, retaining its beauty, giving a presentiment of eternal duration.

(To be continued.)



PLATE 6.—CHINESE GARDEN HUT.

Graining.

IN graining work that is paneled, the lights and shades of the panel should be stronger than on the rest of surface. The rails and stiles of doors should be more simple than the panels in the imitation of dark decorated woods, as rosewood. If the cross rails are full of work, make the upright stiles plain, for their appearance is changed by their position with regard to light. Perhaps the greatest triumph in staining is imitating successfully the curls of mahogany. Graining in maple wood is suitable for dining-rooms; the color of maple varies very much, and therefore it is necessary to select a choice piece for imitation. Pollard-oak graining suits well for a dining-room, with its warm color and rich effect, the color varying from the lightness of maple to the darkness of mahogany, so affording a range of choice. Oak color is adapted to all styles of wainscot, harmonizing with warm colors on wall space, whether this be papered or painted, and making pleasing contrasts with cold ones. It also looks well on the ceiling cornices of lobbies. In wainscot graining the lights and shades on the panels should be the strongest. If the prevalent color of a room be warm, the graining of the wood-work should correspond; if crimson, maple, satin wood, or oak graining may be employed; if green, some cool-toned and light-colored wood. Smoothness of surface is important in the grained imitation of woods, as well as the rendering of deep, transparent, and shadowy half tints. The grainer should not revel, as we have seen some do, in knots, which, indeed, should be left out, as well as the representation of cross-grained stuff, which the architects would avoid in real wood, whether for stiles, rails, or panels. Where wood has been previously painted, the grainer should examine it closely to see that it is not liable to peel off, and so spoil his work. Where marble has to be imitated, in order to secure a transparent effect the best polished copal should be used with colors, never turpentine.—*Painters' Magazine and Coach Painter.*

THE world moves on, inventions and progress still rush together for the benefit of the present generation; but we look back with a feeling of veneration to the art and talent displayed in ancient architecture. In all the modern edifices of which we pride ourselves, the striking features are but a reproduction of the thought of the old masters, with the exceptions that we build in a few months buildings that would have taken them years to complete. We are gradually returning to the age of artistic

wrought iron, cunning designs in brass, elaborate wood carving and marble tessellate pavements. Acquiring wealth rapidly, we are less inclined to look at the cost of the work so artistic and durable. The old Romans prided themselves on the marble floors of their dwellings, and the proof of their knowledge of its durability is demonstrated by the recent discoveries made in Roman ruins, where the marble mosaic pavement retains its original designs and colors. Of late years, an Italian artist, Mr. Caretti, has introduced this work in some of our new-fashioned residences, and a handsome design for the hall of Mr. A. D. Kohn's house is his latest work. Should, in centuries to come, Macaulay's New Zealander be digging in the ruins of Chicago, a marble mosaic pavement may be brought to light, and create a discussion as to whether Chicago was an old Roman city or the creation of a more modern age.

SOME of our scientific exchanges are describing a kind of concrete that is said to be in use for building purposes in France. It possesses the desirable qualities of solidity and hardness. It is said to be composed of 8 parts of sand, gravel and pebbles; 1 part of common earth, burnt and powdered; 1 part of powdered cinders, and 1½ parts of unslaked hydraulic lime. These materials are thoroughly beaten up together, their mixture giving a concrete which sets almost immediately, and becomes in a few days extremely hard and solid, which property may be still further increased by the addition of a small quantity—say 1 part—of cement. Among other constructions to which this material has been applied is a house three stories in height, 65x45 feet, standing on a terrace, having a perpendicular retaining wall 200 feet in length and 20 feet high. Every part of this structure was made of the hard concrete, including foundations, vaults of cellars, retaining wall, and all walls, exterior and interior, as well as the cornice work, mouldings, string courses, balustrades, parapets, and the building is without band iron, lintels, or wood throughout.

In order to render glue insoluble in water, it is only necessary to add a little potassium bi-chromate to the water in which it is dissolved, and expose the glued part to the light. One-fiftieth part of the bi-chromate will suffice.

A bound volume of this Journal for either of the years 1880, 1881, or 1882, will be sent free to all new subscribers for balance of this year and 1887.

Glimpses of Sunshine.

MECHANICS are apt to compare their life of toil and scanty pay to a long season of cloudy weather. They feel that they are under a shadow, hemmed in by circumstances which they cannot control, and that they must keep on treading, as does the horse, on an endless treading-machine. Skilled mechanics here and there have good-paying positions, but the great mass have all they can do to make ends meet. Probably this is partly due to this era of extravagance in the mode of living and of dress. The American mechanic cannot submit to live like a savage, nor even like some in our midst, who swarm together like pigs. He is fond of home, and no matter how humble it may be, he will make it as bright and cheerful as his means will permit; in fact, he is more likely to spend a little more than he earns, than he is to pinch and deny himself to save a few dollars every year.

But in the last ten or fifteen years the men who work at trades have experienced a steady decline in their incomes, partly from lower wages, and partly from lack of work.

It used to be that men were employed from January to December, but that day is past, and nine months is now about the average time made. Week and piece-work prices were formerly higher, and probably the employers obtained better prices than they do now. But labor-saving machinery has placed the employers on a footing by which they make as much clear profit as formerly, but it is distributed over an increased output.

The mechanics, especially the skilled ones, have had no means of competing by their labor, as an offset to the rapidity of steam power. The effect has been to push them aside, or compel them to accept greatly reduced pay, or turn their hand to something else. There has been a steady weeding out of good mechanics, and a steady influx of laborers who had brains enough to feed a machine.

Crowded out of their regular work, and compelled to squeeze in wherever there was an opening, it engendered a spirit of unrest, and a determination to make an effort to better their condition by concerted action. We now witness the result in the gigantic organizations that have been formed, and which are making demands that are rapidly being acknowledged by the public as reasonable and just.

For a time there was a chaos of doubts, fears, and misapprehensions on the part of the public, and even many workmen stood trembling, and fearful that the demands of organized labor would but increase their burdens. But when the workmen stated their case calmly and fearlessly, and showed that they were in earnest, and that nothing could swerve them from their purpose to gradually and lawfully compel just treatment, a little blue sky began to appear, letting in glimpses of sunshine in the form of concessions by a generous firm here and there over the country.

The Saturday half-holiday movement among merchants has grown out of the great labor agitation, and it is plain to be seen that capital is on the giving hand. Labor must not make unreasonable demands, even under sore oppression; but having once decided on what is fair and just, it should not cease all lawful efforts until its claims have been granted. The crying need of the hour among mechanics and laborers is a little business knowledge. They need to learn that but a small proportion of men have the ability to start and develop an enterprise which may give employment to hundreds of men.

They need to learn that out of these one hundred that are steadily employed probably not one of them has the business capacity to carry on the works for a single day. They need to learn that the finished products must find a market, and that the profits over and above the cost of labor, stock, and contingent expenses are not always sufficiently large to warrant an increase in the first cost.

When the majority acknowledge the above stubborn facts, they will be much stronger in self-defense, for it will guard them against foolish outbursts of temper, and strikes, which always result in heavy losses of money and great privation in their families. What labor needs is perfect organization, guided by common-sense views of business, and plenty of money to stand out against oppression.

The money can be easily had; for if one million wage-people pay in but one dollar a year apiece, a fund is at once created that in a few years will command the respect of even the most exacting capitalist.—*Painters' Magazine and Coach Painter.*

THE *Journalist* for March says: "The trade journals are a recognized and important factor in the journalistic profession, and many of the brightest and ablest men in the country are engaged in their conduct."

Amateur Carpenters.

IT is an excellent thing for any man, whatever his business in life may be, to acquire a fair degree of mechanical skill and familiarity with tools and machinery. Such knowledge never comes amiss, even if its possessor is so fortunate as to be under no necessity of ever using it as a means of livelihood; just as a thorough practical acquaintance with the minutest details of housekeeping is valuable to any woman, though she may be surrounded by luxury all her life, and have a servant to wait on her at every turn.

But it does not follow, by any manner of means, that an amateur or half-trained workman is profitable to his employer, even at half price, or at any price. Experiments of that kind are oftener made, it would seem, in the various branches of carpenter work than in most other trades—for the reason, probably, that it is easier and more common to pick up in a desultory way a superficial knowledge of carpentry than of other callings which do not in fact require so much skill and judgment for their thorough mastery. To become a good carpenter, capable of estimating a job fairly and performing it honestly, is a matter of not a few weeks or months, but of years of diligent and conscientious work. And while the temptation is very great, in awarding the contract for a job, to give it to the lowest bidder without due regard to the probability of getting the worth of one's money, it is generally found that a single lesson of that kind is sufficient. In a broad sense the rule that "the best is the cheapest" holds good in carpenter work, as in nearly every other.

A vigorous protest against the employment of what it calls "saw and hatchet carpenters" is made by the *Southern Lumberman*, which imputes to them not only want of skill, but want of honesty as well. As an illustration, it mentions a building contract which one of that class of carpenters offered to take for \$500, while the material alone came to \$570. Somebody was badly cheated, of course, and probably the lumber dealer, the workmen, and the owner of the building all suffered more or less. Incompetency and false pretense in all trades and professions should be steadily discouraged; and the only way to put an effectual check upon them is to give the preference invariably to the trained workman, who has earned and can rightfully wear the title he claims.

What Will Come of the Labor Troubles.

DEFINITE and excellent results will come out of the chaos of strikes and violence and the accompanying discussions. Experience is a thorough teacher.

The first result will be the cutting loose of respectable workmen from association with the anarchists. They see with consternation the hideous purposes of these social bandits, and are hastening to denounce them. The manifesto of the Chicago Knights of Labor has the right ring.

A second result will be an end of strikes and boycotts to force non-union men out of employment. The utter collapse of the great St. Louis strike and of the Third Avenue strike in New York, and the multiplying arrests of boycotters for conspiracy, settle that question. If men want to strike on their own account, they can do it; but by the same measure that their right to quit work is defended, the right of other men to earn a living by any employment that is offered them will be defended also, and at any necessary cost.

A third result will be a little longer in coming, but it will come. American workmen will learn the lesson which a majority of British workmen learned several years ago, that the only successful strike is the one that never occurs. The waste of strikes has become so enormous that the imagination can scarcely picture it. It has become a chief factor in trade depression, and, as such, a prime cause of low wages. The only way to raise wages is by keeping at work, respectfully presenting the demand for an increase, and abiding loyally by the decision of conference or arbitration, holding the strike in reserve as a last and extreme resort.

The present disturbances are deplorable and disastrous, but they will clear the air.—*Ec.*

Book Notices.

OSBORN'S TABLES OF MOMENTS OF INERTIA, AND SQUARES OF RADII OF GYRATION. By Frank C. Osborn, C. E. Is designed to supply partially, at least, a need felt by engineers and draughtsmen engaged in structural works in iron and steel.

DIRECTORY OF ARCHITECTS FOR 1886. By Bryan & Co., Holyoke, Mass., and New York. Supplies in main part the names and addresses of architects in the United States, California included.