

**Valley near Church.** To build; owner, August Kroeger; architect, W. H. Mead; contractor, W. H. Mead; cost, \$1,400; signed, March 10; filed, March 7; payments, \$300, frame up; \$500, brown mortar on; \$800, completed; \$500, 35 days.

**Valencia near 10th.** Alterations; owner, Otto Quellmats; architects, Wm. Schrof; contractor, Henry Weiss; cost, \$6,875; signed, March 14; filed, March 16; payments, \$1,280, frame up; \$1,280, roof of both buildings on; \$1,280, white coat of plaster on; \$1,280, all exterior and interior finish on; \$1,750, 35 days.

**Valencia and Mission.** To build; owner, H. F. Michell; architects, Martens & Coffey; contractors, M. Loftus; cost, \$5,100; signed, March 23; filed, March 31; payments, \$1,000, frame up and roof boards on; \$1,000, ready for plaster; \$1,200, hard finished; \$1,310, completed; \$1,540, 35 days.

**Vallejo near Powell.** Additions; owner, M. B. Thompson; architects, Wm. H. Wharf; contractor, A. Christensen; sutries, H. Levi, D. H. Bibb; cost, \$1,425; signed, March 24; filed, March 22; payments, \$366, underpinned; \$260, ready for m. ll work; \$300, ready for painter; \$305, completed; \$360, 35 days.

**Washington near Octavia.** To build; owner, C. E. Whiting; architect, W. J. Mathews; contractors, Smilie Bros.; cost, \$9,745; signed, March 23; filed, March 31; payments, \$7,305, work completed; \$2,440, 35 days.

**Washington st., No. 1,812.** Alterations; owner, Wm. Boericke; architects, Polk & Gamble; contractor, J. R. Whalen; cost, \$5,150; signed, March 10; filed, March 11; payments, \$500, brick work completed; \$1,000, enclosed; \$1,000, plastering finished; \$1,350, completed; \$1,300, 35 days.

**Waller near Broderick.** Carpenter work; owner, John Thode; architects, Martens & Coffey; contractors, Droge & Munster; cost, \$9,390; signed, March 13; filed, March 19; payments, \$1,400, frame up; \$1,300, floors laid and partitions set; \$1,000, white mortared; \$1,160, completed; \$1,400, 35 days.

**Waller near Broderick.** Brickwork, etc.; owner, John Thode; architects, Martens & Coffey; contractor, Martin Fennell & Son; cost, \$650; signed, March 13; filed, March 19; payments, \$250, foundation walls finished; \$250, chimneys finished; \$150, 35 days.

**York bet. 22nd and 24th.** To build; owner, Bessy McDonougnet et al.; architect, Geo. Houston; cost, \$2,701; signed, March 25; filed, March 26; payments, \$675, roof shingled; \$675, brown mortared; \$675, white mortared; \$675, 35 days.

#### Alameda County.

**Adeline near 32d, Oakland.** 1-story and basement; owner, Winnie Calahan; architect, E. A. Van; contractors, E. F. & A. F. Ware; cost, \$1,254; signed, March 4; filed, March 11; payments, \$400, frame up and roof on; \$400, plastering done; \$454, 35 days.

**Alameda ave. near 18th st., Alameda.** 2-story house; owner, Henry Mohns; architects, Cary & Johnson; contractors, Marcuse & Remmel; cost, \$1,475; signed, March 25; filed, March 25; payments, \$368.75, frame up and roof on; \$368.75, brown mortared; \$368.75, completed; \$368.75, 35 days.

**Alameda near Walnut ave., Alameda.** Two 2-story houses; owner, Henry Mohns; architects, Cary & Johnson; contractors, Marcuse & Remmel; cost, \$2,950; signed, March 25; filed, March 27; payments, \$737.50, frames up and roofs on; \$737.50, brown mortared; \$737.50, completed; \$737.50, 35 days.

**Bay st. near central ave., Alameda.** 3 two-story dwelling houses; owner, Henry Mohns; architects, Marcuse & Remmel; contractors, Marcuse & Remmel; cost, \$1,000; signed, March 7; filed, March 9; payments, \$1,000, frames up and roofs on; \$1,000, each white plastered; \$1,000, each building completed; \$1,000, 35 days.

**Benton st. near central ave., Alameda.** 2-story dwelling; owner, Henry Mohns; architect, A. Stenbit; contractors, J. R. & S. P. Richart; cost, \$2,100; signed, March 2; filed, March 5; payments, \$400, frame up and roof on; \$500, brown coated; \$675, completed; \$525, 35 days.

**Central ave. near 31st., Alameda.** 1-story frame; owner, E. Wisler; architect, A. R. Denke; contractor, A. R. Denke; cost, \$1,555; signed, March 4; filed, March 9; payments, \$500, shingled; \$500, completed; \$575, 35 days.

**Cowland Tract, Oakland.** 1-story frame; owner, D. W. Pratt; architect, Chas. Mau; contractor, J. B. Sprague; cost, \$1,702; signed, March 7; filed, March 9; payments, \$346.50, brick work done; frame up; \$325, roof on and first coat plaster; \$325, second coat plaster; \$325, completed; \$440.50, 35 days.

**Curtis st. near Lydia, Oakland.** Cottage; owner, Edward Dolan; contractors, McRay & Hill; cost, \$1,055; signed, March 25; filed, March 28; payments, \$400, chimney built, rustic and shingles on; \$400, first coat mortar on; \$400, completed; \$435, 35 days.

**Cor. 20th st. 23d ave., East Oakland.** 1-story frame; owner, Mrs. A. C. Whit; architect, Chas. Mau; contractor, P. F. Nelson; cost, \$2,335; signed, March 24; filed, March 24; payments, \$435.25, frame up; \$438, ready for 1st coat plaster; \$438, outside finish completed; \$437, building completed; \$583.75, 35 days.

**Daleys Scenic Park, Berkeley.** 1-story frame; owner, Earl H. Webb; architect, B. Summers; contractor, B. Summers; cost, \$1,463; signed, March 9; filed, March 12; payments, \$450, house enclosed; \$400, brown mortared; \$215, windows in; \$398, 35 days.

**Eighteenth st. near Encinal ave., Alameda.** 2-story dwelling; owner, Wm. Wilson; architects, Judd, Hanly & Co.; contractor, Geo. A. Benesman; cost, \$3,675; signed, March 6; filed, March 9; payments, \$915.75, frame up and roof sheathed; \$915.75, enclosed and ready for plastering; \$915.75, woodwork done, 1st coat paint; \$915.75, 35 days.

**Fifteenth st., bet. 3d & 4th ayes., East Oakland.** Owner, T. P. Schaller; architect, A. Ruch; contractors, Pierce & Ruch; cost, \$5,400; signed, Feb. 25; filed, March 6; payments, \$1,350, frame up; \$1,350, enclosed, rough plaster on; \$1,350, completed; \$1,350, 35 days.

**Encinal ave. near Faru st., Alameda.** 2-story dwelling; owner, Henry Mohns; architect, A. Stenbit; contractor, H. M. Finley; cost, \$2,220; signed, March 13; filed, March 17; payments, \$400, frame up; \$550, brown coated; \$715, completed; \$555, 35 days.

**Fifty Associates Tract, East Oakland.** Dwelling house; owner, Lester W. Forsting; architect, John Hodge; contractor, Herman S. Kribbs; cost, \$2,425; signed, March 10; filed, March 13; payments, \$606.25, frame up and rustic on; \$606.25, 1st coat brown mortar; \$606.25, completed; \$606.25, 35 days.

**Gaskill Tract, Oakland.** 2 buildings; owner, Henry Mohns; architects, Cary & Johnson; contractors, Marcuse & Remmel; cost, \$1,775; signed, March 24; filed, March 27; payments, \$445.75, frames up and roofs on; \$445.75, brown mortared; \$445.75, completed; \$445.75, 35 days.

**Klinkner ave., Herzog st., Golden Gate.** 2-story frame; owner, C. A. Klinkner; architects, J. J. & Thos. D. Newson; contractor, Thos. Bassett; cost, \$2,025; signed, March 9; filed, March 10; payments, \$500, rough frame and rustic on; \$500, rough coat plaster; \$500, completed; \$525, 35 days.

**La Margareta Ranch, Livermore.** 2-story dwelling; owner, A. B. Henderson; architect, A. B. Henderson; contractor, J. F. Meyers; cost, \$3,050; signed, March 7; filed, March 9; payments, \$500, frame up and roof sheathed; \$700, enclosed and brown mortared; \$500, plastering completed; \$600, work done; \$750, 35 days.

**Lot 15, block 132, Oakland City.** 2-story flat; owner, Mary Stanton; architect, C. F. Weidon; contractor, C. F. Weidon; cost, \$2,175; signed, March 28; filed, March 28; payments, \$350, studding up and rustic on; \$450, brown mortared; \$500, completed; \$775, 35 days.

**Myrtle st. near 21st, Oakland.** 1-story cottage; owner, Catherine Richter; architect, A. W. Smith; contractor, Thos. McGowan; cost, \$2,800; signed, March 10; filed, March 11; payments, \$400, frame up and brickwork done; \$400, framed and brown mortared; \$400, completed; balance 30 days.

**San Antonio ave. bet. 21st and 23d st., Alameda.** Cottage and basement; owner, Francis Lawrence; architect, J. H. Young; contractor, J. H. Young; cost, \$1,210; signed, March 5; filed, March 9; payments, \$400, frame up and roof on; \$400, plaster on and windows in; \$410, 35 days.

**Strawberry Ck. and Shattuck ave., Alameda.** 2-story frame; owner, F. K. Shattuck; architect, W. H. Weibye; contractor, W. H. Weibye; cost, \$7,700; signed, March 9; filed, March 11; payments, \$1,925, frame up and roof on; \$1,225, 1st coat paint on; \$1,925, plastering completed; \$1,925, 35 days.

**Tenth ave. near 17th st., East Oakland.** 2-story dwelling; owner, H. H. Nagle; architect, Geo. A. Bordwell; contractor, D. S. Brehaut; cost, \$2,810; signed, March 12; filed, March 18; payments, \$700, frame up; \$707, plastering done; \$700, completed; \$705, 35 days.

**Thirty-first near Market st., Oakland.** 1-story frame and basement; owner, Wm. H. McDonald; architects, C. R. & J. M. Wilson; contractors, Ingerson & Gore; cost, \$2,180; signed, March 19; filed, March 20; payments, \$345, rough frame up; \$345, brown mortared; \$345, completed; \$345, 35 days.

**Twenty-first near Telegraph ave., Oakland.** 2-story frame; owner, Susan C. Bruce; architect, Chas. Mau; contractor, Jas. Toohig; cost, \$4,443; signed, March 24; filed, March 25; payments, \$833, frame up; \$833, ready for 1st coat of plaster; \$833, 2d coat of plaster on; \$833, completed; \$1,111, 35 days.

**Sonoma.** Cottage for C. Aguilon; cost, \$2,500; architects, Mooser & Cuthbertson.

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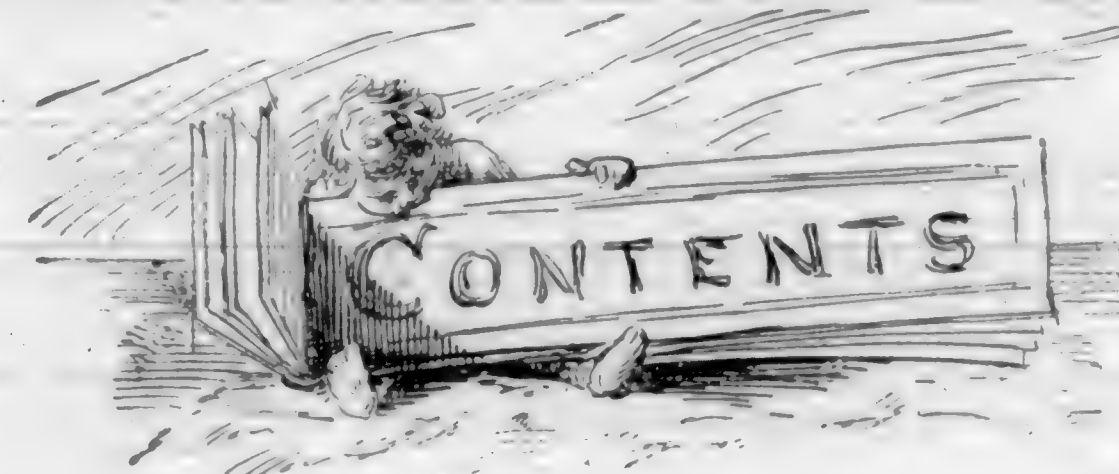
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WITH this May number of the CALIFORNIA ARCHITECT, we commence a series of illustrations and descriptions of the early architecture of this coast, by our special correspondents "Tres." The subject for this issue is the Old Church of the Mission Dolores, at San Francisco. These ancient structures mark the progress of civilization in the earlier periods. It is the intention to continue these representations of the ancient architecture as furnished by our correspondents, as they may journey through California and Mexico.

FROM time to time for a number of years we have been admonished that the old and well tried "Iron" was to be superceded by the new and untried "Aluminum" but the practical benefits have not been at the present time, so far realized as to replace the other metals. Within a short time experiments have demonstrated that Aluminum when combined with certain other metals forms an alloy which can be rolled into sheets which for lightness, ductility, and durability renders it invaluable for roofing on any place where sheet metal is used. An alloy called Stan-Alumin when rolled into sheets is readily bent and worked into any form; it will not corrode, therefore does not require painting as a protection from the elements.

This material from its durable and other superior qualities is destined in the near future to adapt itself to the requirements of the building trades.

The Master Painters and their employees are endeavoring to effect a more general recognition by the public, of the value of good work and materials, and awaken them to the fact that to obtain the best work, honest and competent men must be employed.

The evil of adulterated and worthless mixtures that are very often palmed off on the ignorant or unsuspicious public, does exist, and in the present effort of the Painters to obtain the aid and assistance of the Architects in securing a high standard of work and material, is worthy of the best help of the Architectural Profession and the public they serve.

An honest painter, using pure stock and not trying to rob his employer by substituting worthless compounds, technically termed *dope*, cannot compete with a dishonest man, and the property owners will find it to their advantage in the end, to support the best class of mechanics, as it is true of this as of almost everything, that *the best is the cheapest*.

We believe the Master Painters and their employees have taken a stand in the right direction. Anything that tends toward a higher standard of excellence for any class of work, must of necessity be of general good to the community.

The Painters should, and probably will be supported by all right thinking men.

## OLD MISSION DOLORES CHURCH, SAN FRANCISCO, CAL.

Of the many Missions scattered up and down the coast of California, the Mission at San Francisco is probably one of the least interesting, especially if looked at from an architectural point of view. If, however, we study it from its historical aspect as marking the most northern limit of civilization as established by the Spaniards on this coast, it at once becomes more interesting. Few indeed were the materials at hand in these early days; and it is well to reflect on the fact, that with no advantages save earnest perseverance these temple builders of a hundred years ago, were able to create that which has made so



Plan  
Mission Dolores.

The interior is more interesting, for although there are no beautiful traceried windows casting their delicate shadows against a sky of blue and admitting just sufficient of God's perfect sunshine to illuminate without dazzling those who seek for the precious treasure within its walls. These temple builders have signified by their scanty use of light the spirit of the age they live in. An age in which the mysteries of life were rendered more mysterious by looking at them as through a glass darkly, rather than in these modern times closely scrutinizing and endeavoring to analyze the hidden meaning of the old philosophers. A rude segmental arch resting on pilasters projecting about two feet from the wall separates the nave from the chancel, the rear wall of which latter is entirely occupied by the reredos, an elaborate carving in wood, by the early fathers. In six niches, separated from one another by vertical shafts and moulded horizontal bands, stand the images of saints departed, the center niche being occupied by the patron, Saint Francis. To say that these carvings are beautiful, one would have to depend more on his

imagination than on his judgment, but remembering the manner in which these beatific characters have been represented on altar and stained glass windows the world over, one is not inclined to be hard on these sculptors, who wrought so diligently to embody the sweet or sad expression of some ideal on this high altar. On each side of the nave and near the chancel arch are two side altars of classic design and apparently of modern construction, for there is an air of machine made mouldings about them that seems to breath of contract-work and strikes. The ceiling of the church is formed of 6x8 beams, spaced about two feet apart—resting at their ends on corbels



Section  
Mission Dolores.

and covered over with planks, both beams and spaces being crudely decorated in diagonal bands and triangles in blue, buff, white and brown. There are two reasons, says Ruskin, why they may be considered beautiful; first, because it contains within itself both in mass and form that perfect proportion that brings us pleasure in beholding, and secondly because it is the silent witness that a human soul has labored, joyed and sorrowed and at last triumphed in the production of some thing, which if not beautiful in itself, was at least born of the highest motive, love to our fellow man, and so with our old Mission.—*Tres. San Francisco, May 6, 1891.*

## HISTORICAL DEVELOPMENT OF ORNAMENTAL ART.

Dr. Zerffi delivered the first of the ninth series of forty lectures on "The Historical Development of Ornamental Art," in the Lecture Theater, South Kensington Museum, in 1877. After some preliminary remarks the lecturer said that, passing back even to the remotest periods of the development of humanity, we should find certain traces of art expressed as poetry in popular songs, or in attempts at ornamentation, amongst all nations, even during their most primitive savage state. The farther we went back the more closely should we find æsthetical and religious feelings intermingled, so that it was exceedingly difficult to separate art and religion; as we advanced, however, we should find that the necessity for a "division of labor" had made itself felt, and art and religion had not only separated, but even assumed apparently antagonistic positions. This antagonism, however, was merely artificial, and had no lasting vitality. Art and religion were outgrowths of our emotional element, they

were twin-daughters of our higher and most elevated worship of the Creator and His works. The artist worked in absorbing impressions from *without* and reproducing them in new forms from *within*. This process of ideal filtration of the impressions of nature constituted the very essence of art, and transformed a mere *work of imitation* into a *work of art*. This process had to be carried out subject to the rules of taste, and these rules, scientifically systematized constituted æsthetics, for taste was based on the refined, well-trained action of the intellect, stimulated to activity by the imagination. It was impossible to deny that this process had had its historical development, and this development was intimately connected with the gradual progress of human civilization. Many of his (the lecturer's) hearers might possibly still say to themselves, "Of what use can a knowledge of Chinese customs or Greek mythology be to me? So long as I can draw and copy what I see I know as much as I want." If they wished to become mechanical draughtsmen, and not intelligent artists, it was undoubtedly true that they need not know much of Chinese customs to enable them to reproduce Chinese patterns correctly; but if they wished, not merely to reproduce, but to work in the Chinese style, it was essential that they should be able to follow the very mode of thinking of the Chinese artist in order to be able to produce an original Chinese work. Mere imitation, only, then became independent artistic work when such work had grown out of that clear consciousness which stamped a copy of the outward impressions of nature as a product of our inward mental power. The history of art scientifically treated should be as seriously and earnestly studied as the mixing of colors, the drawing of correct outlines, or the general practice of art. History taught us, beyond a doubt, that art had only succeeded in reaching the highest climax of classical or romantic beauty when the technical capacities of the artists were well-balanced by their intellectual powers—when science and taste had combined to guide the merely mechanical in the artists, and had aided them to bring thoughts and ideas into forms. If art did not improve our refined taste for beauty, soften our rude customs, banish vulgarity, and elevate our minds, then, indeed, the study of art would be a mere question of fancy or trade, unworthy the expenditure of physical or mental labor. But an art in which taste tried to grasp the beautiful, and imagination endeavored to give it form, was well worthy of our highest efforts. The ideal of spotless beauty, which should be the aim of art, was not to be found in nature. This did not mean that the elements of beauty were not given us in nature, but the selecting intellect of the artist had to find them, combine, and free them from the accidental, ugly, and grotesque, in order to change the forms given by nature into consciously conceived and created works of art. He (the lecturer) much regretted that he found it necessary, after eight years' teaching, still to remind his hearers that art history and æsthetics were sciences as strictly as botany or chemistry. Like the other sciences, art history and æsthetics were based on observation, on a correct classification of phenomena or facts, and on the careful tracing of certain effects in certain cases. That they allowed a broader range of opinion, and did not apparently directly influence our appetites, the safety of our property, or the material welfare of our body, did not in any way weaken their title to rank as sciences. We were not merely composed of phosphorous, chalk, lime, iron, oxygen, hydrogen, carbon, and—money, but we were endowed with consciousness, which we attained, through ideality, poetry, and art, the most glorious fruits of our intellectual capacity. Poetry and art led us into a world of possibilities and probabilities more beautiful than reality. Supposing that we know all the languages in the world, but were unacquainted with the poetical works of all nations, what dreary philological machines we should be! If reality were our sole end and aim, art would be superfluous; yet art had been practiced by man from the moment he had been able to use his intellectual faculty. Just as the rose had its innate beauty in color and fragrance, so man had his innate power to produce works of intellect and emotion in science and art, united by religion, by faith, and an ever firm belief that the culture of our higher faculties was the most sacred duty of an intellectual

being. That mere work could be disregarded in a work of art no one could attempt to assert. It would be as absurd as to seek to give shape to a beautiful creature without using visible materials for its representation. The idea, however, the spirit, the soul, must manifest itself in the work of art as did the Deity in the universe. The beautiful was the representation of the infinite in the finite, and in this in itself lay the close connection between ethics and æsthetics.—*Building News.*

## A DISCOURSE ON CALCAREOUS HYDRAULIC CEMENTS.

BY CALVIN BROWN, C. E., U. S. N.  
CONTINUED FROM PAGE 42.

My interest in the general subject of hydraulic cement was awakened by my acquaintance with Col. Sylvanus Thayer, of the United States Engineers, in 1840. I think it is to this eminent engineer we are indebted for the extensive introduction into the public works of the United States of this material in the preparation of concrete, although in his time we had only the natural cements of which the "Rosendale" constituted perhaps the most popular brand, the Portland not being then known in this country. I had no opportunity, however, for experimenting in the production of hydraulic cement until I came to California in 1861. The Benicia manufactory was then in operation, being the only one for making hydraulic cement on this Coast, and turning out a natural cement which could be mixed for mortar or otherwise in only small quantities, for use, on account of its rapid setting and hardening. The contrast of this native cement with those of slower induration I had employed in the East, led me to suspect there might, in other localities of the State, be found a substance that would yield a less energetic hydraulic cement. I set about their discovery and collection and subjected various specimens to treatment with varying results.

I pursued these investigations for several years, ascertaining that the country abounded with hydraulic limestones, calcareous marls, etc., several of them capable of furnishing cements equal to any then imported article. I also found that several of these limestones would supply, in large quantities, a superior hydraulic lime like the celebrated Thell and Seilly limes so extensively used in Europe and to some extent in the eastern part of the United States. This hydraulic lime as I found it was both of a pure white, like ordinary quicklime and also of a soft buff or cream-color; it will not slack in water like common fat lime and therefore would require grinding for purposes of mortar or other use.

Upon my return from a visit to Europe in 1873, where I had the best opportunities for observing the manufacture and application of Portland Cement, I occupied myself in experiments to determine the resources of this coast in regard to their adaptability to its production, and inquiry about which I had little doubt in consequence of my knowledge of the abundance of natural materials I had previously found here. In these experiments I realized the necessity of a strict observance of the chemical principles involved in the production of the article, and amid the great variety of materials eligible for use, realized the importance of chemical analysis in each case in order to determine their proper combination. Every grade of limestone, from that of almost pure carbonate down to that mixed with various ingredients of alumina, magnesia, silica, iron, etc., I found to exist abundantly in the State; a calcareous tufa was also found in several localities well adapted to the manufacture, and I was also presented with samples of a native carbonate of lime in a pulverulent condition said to exist in abundance in the southern part of the State. Suitable qualities of clay as shown by their analysis, were also found in large deposits, so that the presence of all these native materials gave undoubted assurance as to the feasibility of the desired manufacture.

In my operations, besides a careful observance of the involved chemical conditions, I found actual experience in manipulation to be the only means of acquiring a correct judgment in some of the more critical details in order to obtain satisfactory results. Such practical knowledge cannot be learned from any literature I have come across, nor could I obtain it from my correspondence with foreign manufacturers either in England or in Germany. After many trials, especially in the operation of burning, I succeeded in establishing a process that gave uniform and satisfactory results, and thus demonstrated the certainty of the

native resources of the State for the supply of a superior Portland Cement in all the abundance that its building interests will ever require. By referring to the notes of my operations, I could show you, gentlemen, the record of samples of cement made from California materials that far excelled in tensile strength the average of the reported trials made in foreign countries. I have the record of samples, which, after an immersion in water of 28 days stood a strain of 720, 786, 803, 806, 985, 988 pounds to the square inch, one sample going as high as 1112 pounds to the same area before it broke. All these specimens were subjected to the strains of a perfectly correct and standard testing machine owned by Mr. William Jones of this city, who, with other gentlemen, engineers and architects, were present at the trials. They were prepared from materials found on Mr. Jones' property in Alameda County, where they exist in great abundance.

Referring now to my experience in the application of Portland Cement to constructive works, I must take the occasion to express the obligations I owe to the late General B. S. Alexander, of the U. S. Engineers, for his sound recommendation to me to adopt a concrete in laying the foundation of the Mare Island Dry Dock, upon which I was then engaged. At that time, in 1872, Portland Cement was but little used on this coast; the only hydraulic cement we then, as a rule, employed, was the native Benicia and the imported Rosendale. This dry dock had been designed with a foundation of rubble masonry, in conformity with the usual practice in the buildings of the United States Navy, but subsequently, bearing in mind this able engineer's suggestion, and after seeing the widely extended use of concrete or beton in both foundations and superstructures in Europe, I determined to adopt his recommendation.

In my first deposit of concrete to this work, and in the absence of Portland Cement in this market, I was obliged to use the Rosendale and the Benicia manufacture; but one day meeting an acquaintance in this city, who was an importer, I was informed by him that he had several hundred barrels of Portland Cement for which he could not find a purchaser, as nobody seemed to know anything about it, and would I try it. I was glad of this chance for obtaining even so small a quantity as was offered of this superior article, and accordingly procured the authority for its purchase. It was the first I had used on a large work, and proved so eminently superior to anything of the kind I had ever before employed that its preference became an established conclusion. The Government requisitions for it made at a time correlative with its demand for other purposes then about being introduced in this city, soon instituted its regular importation, and the market began to be well supplied.

You have lately been favored, gentlemen, with an account and description of the Mare Island Dry Dock, and I need only refer to its concrete foundation for the purpose of illustrating the method of its preparation. The essential features of this operation are the materials employed, their mixture and disposition in the work. Experiments were first made to determine the proportion of the materials, which were a hard and angular broken stone, of quite uniform size, tolerably fine beach gravel, and cement with the water, the object being to find the most economical quantities of these ingredients, especially of the cement, which constituted the most expensive part of the mixture, at the same time the most essential one. It was also desirable to determine what quantity of the aggregate of the materials was necessary to be originally taken in order to make a given bulk in place after ramming, say a cubic yard. Thus, with the broken stone and gravel as the matrix, it was found that 13 measures of the former and fifteen measures of the latter, or in actual quantities say  $17\frac{1}{2}$  cubic feet of stone and 20 cubic feet of gravel with 200 pounds of Portland Cement and the water necessary for moistening the mixture, would exactly make one cubic yard in place after ramming. It will be seen in this case that the solidification by ramming was about 72 per cent. of the original uncompacted mass of the ingredients, and that the proportion of the cement in the solid concrete was

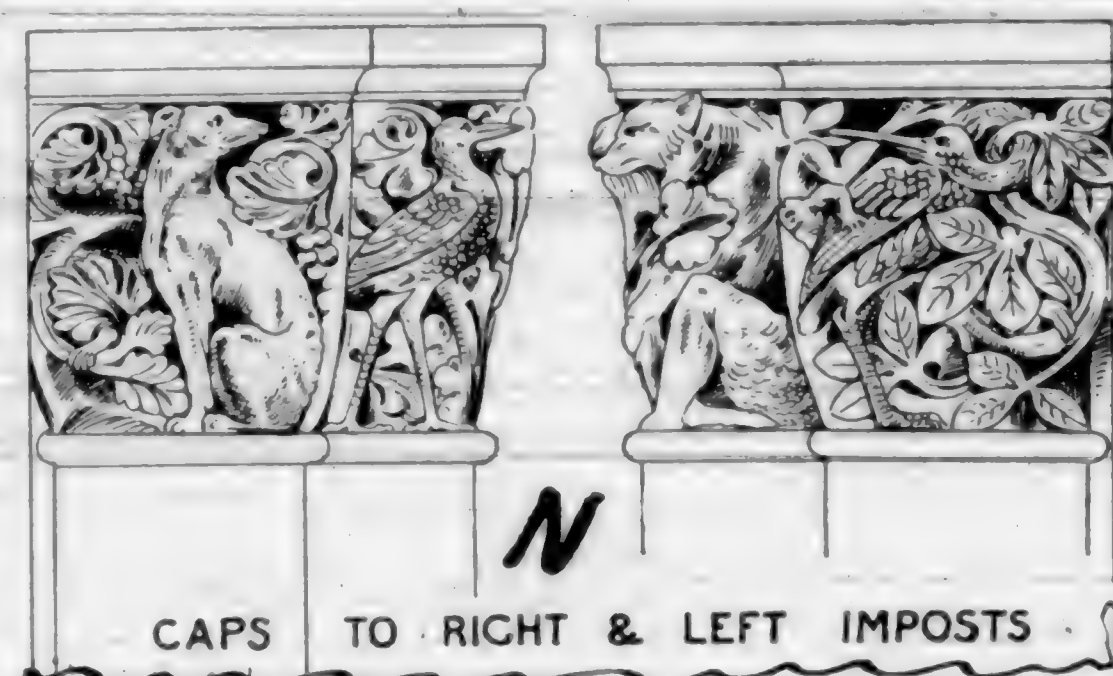
about one in thirteen, or twelve of the stone and gravel to one of the cement. This concrete as thus prepared and laid in place weighed 144 pounds to the cubic foot, or very near the weight of ordinary well laid rubble masonry; the stone used in the concrete at Mare Island was very solid and heavy. When there was occasion for removing any portion of the concrete for obtaining a bed for the granite superstructure, it was found to be of admirable strength and hardness, requiring powerful efforts with sharp picks and gads for its displacement. It was absolutely impervious to water. Besides broken stone and instead of it, a heavy mixed coarse and fine river gravel of extra sharpness was used, with the economical result of requiring less cement than the combined broken stone and beach gravel—the quantity of gravel thus used in the entire matrix was thirty-one and thirty-two hundredths cubic feet, and of cement 157 pounds for one cubic yard of concrete in place, or about one in seventeen.

The concrete was mixed half a cubic yard at a time by means of its passage through a fall of about 37 feet in a tremie—this convenient apparatus, available wherever a fall can be had for it, is fully represented and explained in the published transactions of your Society, and needs no further account from me. Neither is it necessary for me to describe particularly the operation of depositing the concrete in place, except to imitate one or two precautionary observances, which should be taken in this operation, namely: where masses of concrete are required of considerable depth and are built of successive layers, each layer should have ample time for solid induration before the superincumbent one is added, each layer being kept wet and shielded from a hot sun, as a rapid drying damages the exposed surface by rendering it pulverulent, and thus presenting to the succeeding layer an incoherent film, which prevents the bond that ought to exist in the joints between the two and so throughout the work.

To reduce as much as possible, on account of the joints, the number of layers in a deep mass of concrete, and at the same time to effectuate thorough ramming, the thickness of each layer should be regulated to meet those important conditions. We found at Mare Island that a layer of about ten inches thick was most favorable for the effective force of the rammers used on the work—a much thinner layer offering too little resistance for the prevention of a lateral scattering effect of the blow, while

in a much thicker layer the force would not act on the lower portions.

Another observance, which seems necessary to intimate, is involved in the use of the water for mixing the concrete. It is to be remembered that the mortar of hydraulic cements is a hydrate, and that its perfect crystallization requires an exact equivalent of its water, any excess being thrown off and any deficiency leaving it devoid of strength from incoherency. Recent investigations in France have shown that the ultimate strength of Portland Cement depends greatly upon the proportion of water used in its conglomerates or when mixed neat. In my own practice in making and testing neat cement, I have used of water from 20 to 33 per cent. by weight of the loose powder, the smaller quantity giving the best results. In preparing concrete my practice was to add only water enough to a little more than moisten the whole mass, so that in ramming a very slight excess would appear upon the rammed surface. The disadvantages of too much water are several. In the first place in the ramming a jelly like mass is produced, rendering proper solidification impossible; in the second place, following of course the first named effect, the porosity of the mass renders it weak and pervious. These precautions are often overlooked by the ordinary users of Portland Cement conglomerates and in its neat applications; impressed with the erroneous notion that a large quantity of water is needed for a strong cement, and not understanding the principle of its crystallization, they literally drown their mixtures, thus placing them beyond proper solidification and rendering them honeycombed and weak. The entire system of mixing the ingredients of a concrete in the practice of certain operators is highly vicious; a pile of broken stone, perhaps, mixed with gravel or sand, or perhaps the gravel or sand alone,



is spread and covered with a quantity of cement, more or less according to the guess of the workman, then turned or shoveled over when dry, and finally is deluged with water squirted through a jet nozzle hose, which forces the cement to the bottom of the mass, where most of it remains, rendering its equal dissemination impossible by any amount of hand shoveling in the effort of mixing. It ought to be obvious to the slightest consideration of the effect of this torrential treatment that the amount of water should be limited and carefully applied by the gentle action of a rose nozzle pipe; in this manner a stronger concrete would be produced and with a less quantity of cement.

In the manufacture of Portland Cement I have mentioned the importance of exact proportions of its ingredients as contained in the lime and clay. I have now to speak of the effects of their disproportions when they vary from certain narrow limits allowable in the preparation of the raw cement. It is evident that any undue excess, especially in the lime or alumina, causes the existence of an element which may not only be superfluous but detrimental; if there be an excess of clay or alumina added in the mixture the product is likely to be a quick-setting cement and deficient in strength. With European engineers one of the tests of Portland Cement governing its acceptance for their works is that it must not set within a given number of hours, except in cases where a rapid set is required, as in water currents. It might seem that the initial setting is an indication of the

subsequent hardness and strength of the material, the slow process promising best results in these respects. From certain native limestones abounding in clay, I have made a natural cement whose powder would instantly be converted to a hard stone the instant water touched it—placed under water it would remain for several months in this state, but upon being removed would crack and fall to pieces. An excess of lime in Portland Cement, or lime uncombined, results in a slacking process of this excess, which, taking effect in work built with the material, causes it to swell or "blow," as it is technically called, showing itself in reticulations upon the exposed surfaces and sometimes in cracks throughout. The obvious remedy for this excess of lime is to eliminate its causticity by the process of air slacking, which is done by exposing the cement in powder spread in a moderately thin layer to the air or a few days before it is used.

It is the manufacturer's duty to see that this aeration is done before the cement is packed for the market, and honest men of this class will not neglect it. Not fully confiding in the integrity of the entire fraternity of makers, it was the practice at the dry dock works at Mare Island to be certain of this aeration by exposing all purchases of cement to the process described. In illustration of the behavior of an over-limed cement when used too soon after its manufacture, and the remedial effects of aeration, I have to show you this photograph taken of samples of my own preparation.

I am aware, gentlemen, that I have presented to you but a hasty and crude statement of the subject upon which I was invited to speak; knowing, however, that its more exhaustive treatment has been undertaken by able hands and expressed in the extensive literature of your respective professions, I was conscious you could avail yourselves of this resource to supply the deficiencies of this brief address. It ought to be a matter of felicitation among you that massive concrete works have already been undertaken in this city, and that one of the members of your Society, and formerly its President, has had the boldness and sound judgment to propose and carry into practical construction an original public structure by the exclusive employment of this material. It is to be hoped that we shall

not long be dependent for the supply of Portland Cement upon foreign importation, and that the resources of the State for its manufacture will be appreciated by capitalists and the necessary works for its production be established.

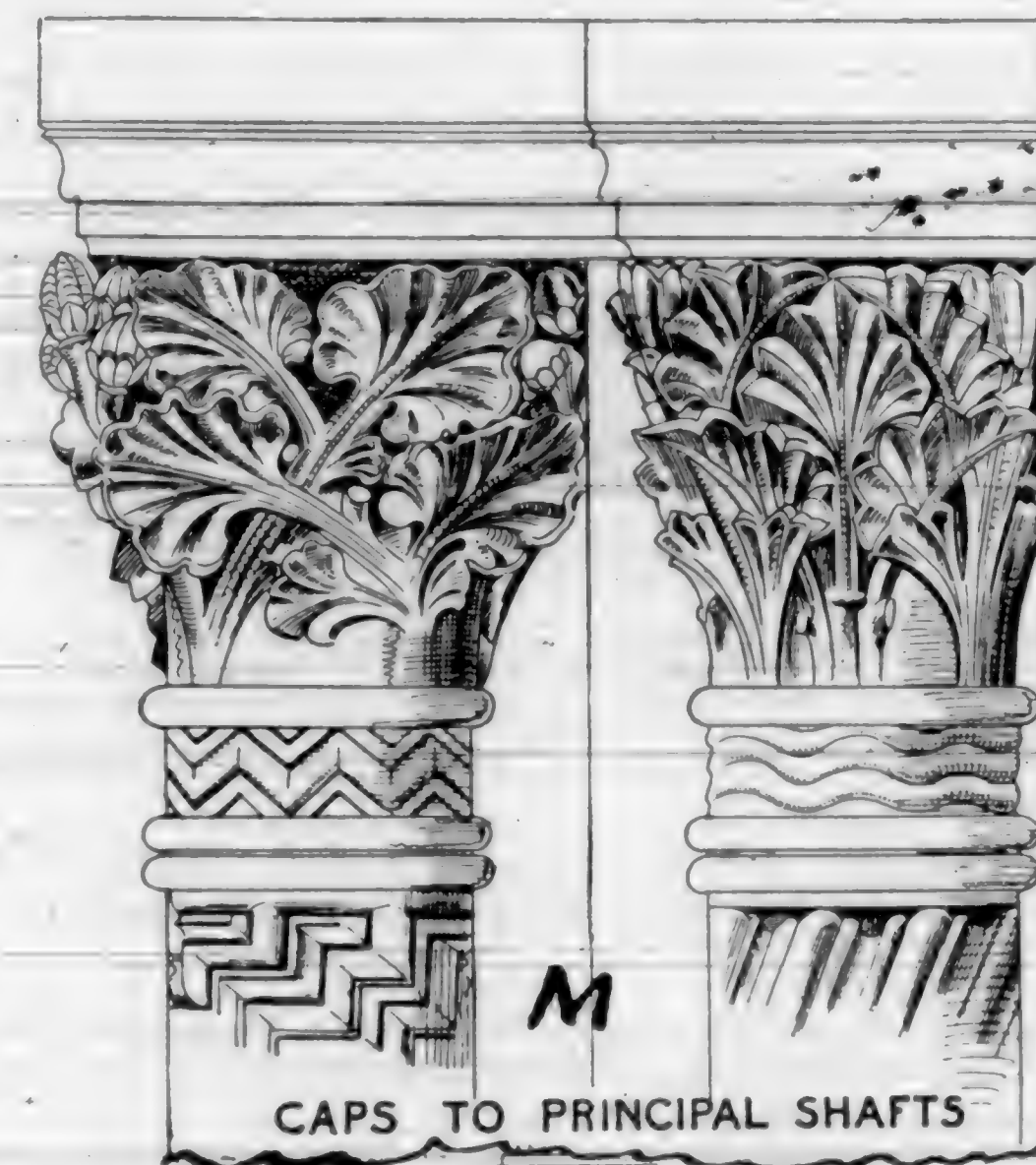
A paper read by Calvin Brown, C. E., U. S. N., before the Technical Society of the Pacific Coast, at the September meeting 1890, and republished by permission from the Journal of the Transactions of the Technical Society.

## EXPRESSION IN ARCHITECTURE.

It is not unusual to hear a person exclaim, "How heavy that building is, or how light! it is more fit for a prison, or it has the look of a music-hall." Such opinions come from those who are perfectly ignorant of what architecture is, as well as from others critically conversant with the art. However unintelligible the language of architecture may be to the uninitiated, these outer forms of expression are well understood by the majority of them at least. In our times, however, a kind of spurious expression is admitted. Thus we hear of such-and-such a building spoken of as having too much of the club-house character, or as being too like a church, simply from the association accidentally attached to those structures. An able writer on design has well stated this fallacy of confounding the few causes of expression in architecture with association. The ideas of expression which the uninitiated majority—and, indeed, all who are

capable of perceiving distinctions—have, are totally different from the ideas which the sentimental study of art invokes. These last are based really on a very superficial study of a few examples without going any deeper. The writer alluded to says: "It is most important for all who attempt to practice or understand this art to be perpetually on their guard against the insidious attacks of this error, the mistaking (i. e., acquired) expression for that which is natural, and therefore permanently true. I cannot but consider this the chief source of the acknowledged great utility of travel to the architect. Its use is not to show him much of the world, but to teach him how little of it he has seen. Nothing but the emancipation from narrow local prejudice will set a man thinking and searching in earnest to distinguish what is local and accidental, in beauty and expression, from what is universal and essential." Just now there seems to be

a greater prevalence of this false estimate of design, and architects and writers generally appear to fall into the same mistake in distinguishing buildings. It is a species of hypercriticism that has become the bane of *soi-disant* critics, and some amateurs. Is smacks of a meagre acquaintance with a few examples, instead of a generalized study of all styles. Thus the first adverse critics indulged in lampooning porticoes to churches, because they were first used in front of heathen temples, as another set stigmatized the earlier works of the Gothicists, forasmuch as they recalled mediæval superstition. It was not uncommon for the critics of forty years ago to apply all sorts of pseudonyms and sobriquets to any buildings that savored too much of some typical or well-known example, as if the resemblance detracted from the merit of the composition as a whole. To be brief, we must spurn this kind of comparison if we are to benefit at all in an age essentially eclectic like the present. What matters if a building is adorned with a cupola too much like those which crown the facade of Wilkins' National Gallery? They may look "pepper-casters" upon the aforesaid structure, but it would be unwise, as well as foolish, to denounce the adaptation or even copy of one of them as too much like a pepper-box is it suitably met the conditions of a new structure. To apply this kind of stricture is not at all to the point, however clever and smart



it may appear. Unfortunately art-writers are a little too much addicted to the "sensational," too fond of conjuring up likenesses, however far-fetched, and flavoring their remarks with illustrations and analogies that unfortunately often cut as much one way as another. There is one excuse for this, however: it is an easy way of dealing with a dislike when more substantial reasons cannot be adduced. Architectural or art disquisitions would be sometimes a little wearisome, and too much like theological subtleties, for the easy digestion of most people, if examples were not given; but let them, at least, be well chosen.

Architectural expressions, then, are considerably narrowed when we have struck out these spurious ones—in fact, they cannot for a moment be considered so numerous as the multitudinous wants of all our buildings—that is to say, it would be absurd to suppose there was an expression suitable to each kind of building. If our domestic buildings are sometimes like convents, and occasionally like club-houses, there is nothing to complain of, for individual tastes are equally as diverse. Neither should we be so fastidious as to censure the proclivities of church-builders, who in one instance embodied the extreme sacrificial type of plan, and in another the congregational auditorium. These are differences for which there are ample apologies to be found; and yet in both cases our ideas of true art expression would be shocked if these extreme religionists carried their tenets so far into the fabrics as to violate what would be considered to be proper architectural adaptations in plan or external features. Thus it is possible to admit a certain degree of diversity into our designs, even if we appear to trespass upon the character of other buildings so long as we confine ourselves to justifiable expressions.

Let us here consider for a moment the range of these architectural expressions, and how far we may make them intelligible. Mr. Fergusson, in his "Essay on the Principles of Beauty in Art," divides the arts into five classes: the technic, as carpentry; the technic and æsthetic, as plain architecture and gastronomy; the technic, æsthetic and phonetic, as sculpture; the æsthetic and phonetic, as poetry; and the phonetic simply, as rhetoric.

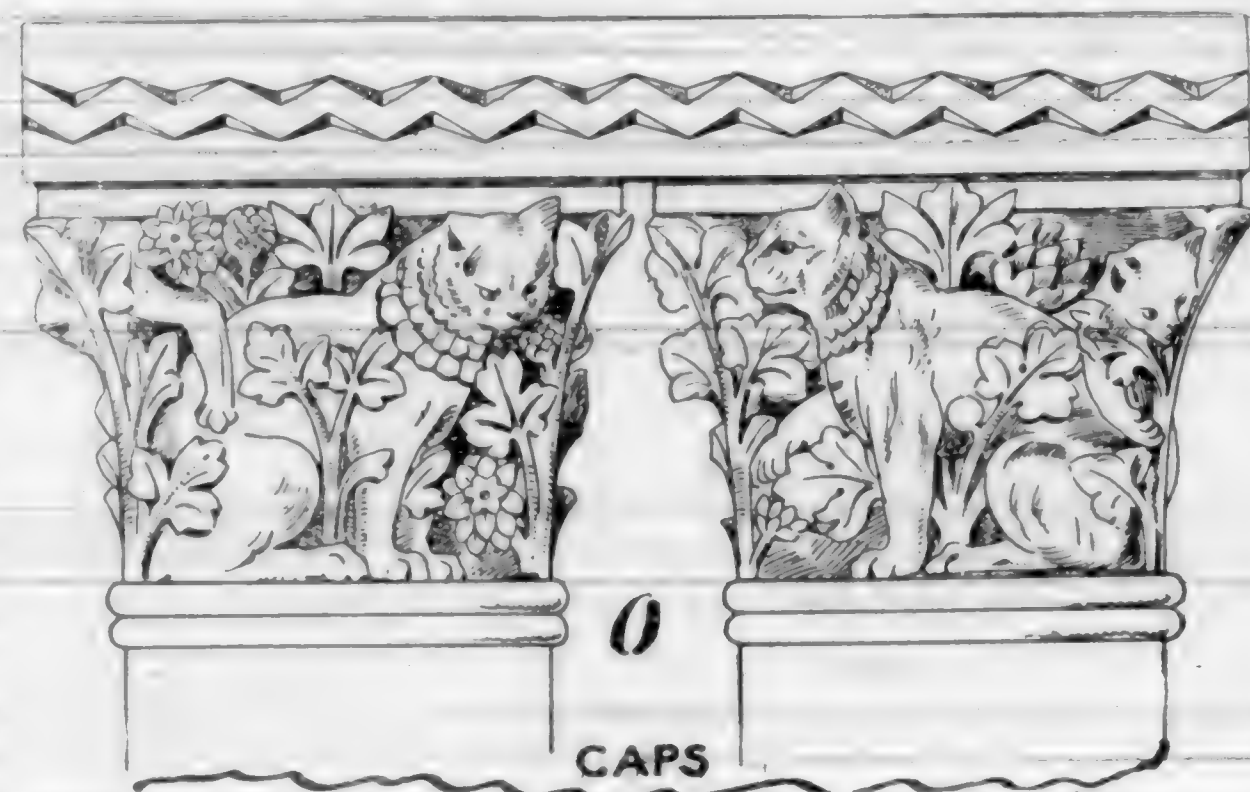
This ingenious classification embraces all the arts. To the highest class of architecture this author awards equal proportions of the three merits—that is to say, of technic or mechanical merits; æsthetic or those giving pleasure; and phonetic, those capable of telling a tale. But the author says this is only the case when architecture *per se* is connected with sculpture or painting, and the Greek architecture is selected as fulfilling this condition. As justly observed by Mr. Garbett, the system, however ingenious, fails to show in what respect the architect is superior to the picture-frame maker or the cook, and the same writer points to an intermediate kind of expressiveness in architecture—one that is capable of doing more than simply please by exciting different emotions, and yet incapable of speech. This kind of "dumb expression," as he terms it, is common to all the fine arts; we see it in architecture as well as in instrumental music. It is a language common to all the arts of form and sound—it appeals to everybody alike, there can be no ambiguity about it. The pyramids and temples of Egypt convey an impression that cannot be mistaken of one extreme kind, while the aerial fancies of the Arab or the cunning artifice of the Hindoo palace or temple are equally apparent in awakening a different impression. Thus, after looking at the ruins of Karnac, with their massive forms based upon the square and circle, a sense of majesty or solemnity steals over us; not like the impression felt upon viewing a mediæval cathedral or that awakened by the splendid remains at Delhi. One over-awes by its mass, the other captivates. But we may illustrate three or four well distinguishable expressions of great historic periods. There are those represented by Thebes, Athens, Rome and mediæval Europe, all well marked—that is, the impressions or feelings they are calculated to convey or arouse apart, from as-

sociation, are readily defined in language. Thus, awe in the first, majestic repose in the second, grandeur and sumptuousness in the third, and aspiration in the fourth, are well understood sensations, which none but the most deadened to art influences can fail to have experienced. If we inquired we should find the greatest ignoramus was influenced by those works of architecture in the same or nearly in the same degree as the educated, showing that associations have nothing whatever to do with these broad and simple forms of expression. But let us next inquire into some of the sources of these various effects. Unfortunately there have been various deadening influences, such as association and the indiscriminate employment of different styles as the fashion of the day, leads which have dulled our perceptions; and so, if a gentleman wishes to build a country residence any of the styles or expressions we have indicated may be used just as well as any other, regardless of the occupant's tastes and feelings, and at variance with the scenery. Expression is not studied by the architect, because his pet style is adopted and carried out in accordance with his own idea—that is to say, if a regular-featured Classic kind of exterior was best adapted it would be ten to one rejected for a broken, picturesque house; and, where irregularity of outline and sharp contrasting features would be a charm, a regular or placid-looking edifice would be designed. Now, the true avocation of an artist, rightly so called, and we presume every architect believes himself to be one, is an ability to convey an impression—not any sort, but the right one in the right place—just as he may use his pencil in conveying an expression of countenance or giving a clear idea of a portrait or a group of figures by a few well understood touches. Above all

things an artist, like a rhetorician, should be enabled to convey an impression in the shortest way. He should make the study of form and color or sound, in their various effects upon the eye or ear, and through it to the sympathies and feelings, the great one; he, in fact, should become a physician in the art of allaying and soothing and giving pleasure or excitement to the emotions, or of swaying them in a pleasing manner. If he cannot do this he is no artist, and if he prescribes the wrong style he is unskillful if not an impostor. The alphabet of expression consists of

but a few characters. We have rectangular forms, or those in which the horizontal lines are continuous, and the vertical discontinuous, as in the Greek styles of composition. "A severe purity reigns supreme." Such an expression may be found in the Grecian Doric, and it appeals to the soberer qualities of the mind. In the Roman and Palladian we find a milder repose.

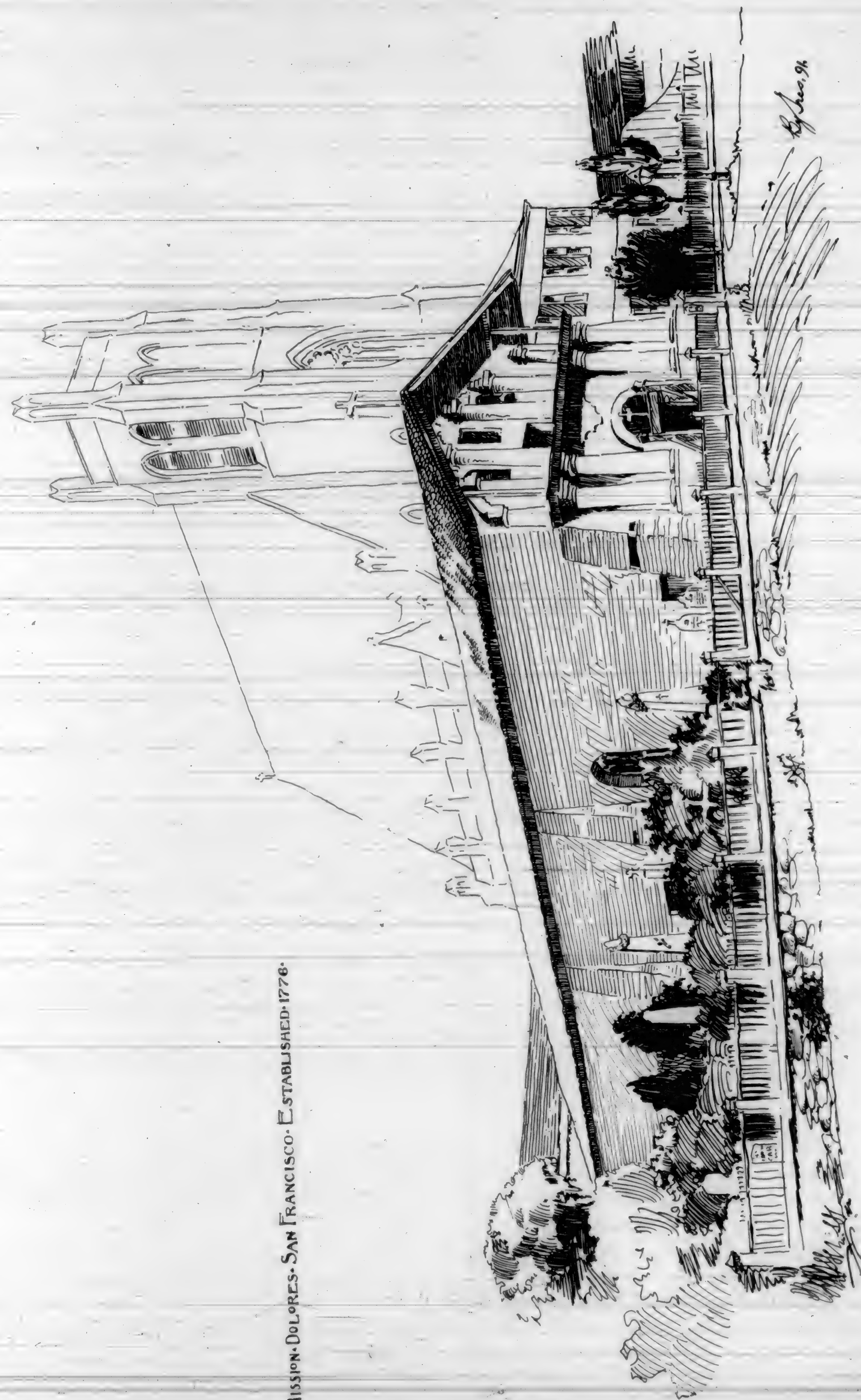
The vertical features are more prominent and less massive, the circular and angular features break the extreme simplicity of the Greek composition. Under Scamozzi and the Venetian artists we find the curved or circular forms breaking still more into the severe rectangular treatment of the Greeks, as in the Vandramini Palace, Venice. Here the voids encroach largely upon the solids or walls, and if we study the Venetian palaces we shall find the arcade and the fenestration as conspicuous as the solid portions. In the court of the Ducal Palace, and in the earlier semi-Renaissance, a playful picturesqueness prevails. In the first building the introduction of the arch and the paneling of the piers give a light and playful expression to the façades, and this is increased by the admixture of semi-circular and pointed arcades. Again, we have an inviting and extremely elegant expression in the Palladian style, as we see it in the Barbarano Palace at Vicenza, and in the arcaded fronts of the Vicentine basilica. The superimposed orders, so favorite a treatment of Palladio, eminently suggest a festive and domestic expression—one admirably fitted for civic and palatial purposes no less than for buildings destined for music and the drama. Now, in both these extreme expressions of the Classic school, a repose though of different degrees prevails, the features and architectural lines all partaking of a contrast, rather of gradation than of suddenness. The angles, for instance, are generally right angles, or obtuse ones, suggesting ideas of sublimity and



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THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

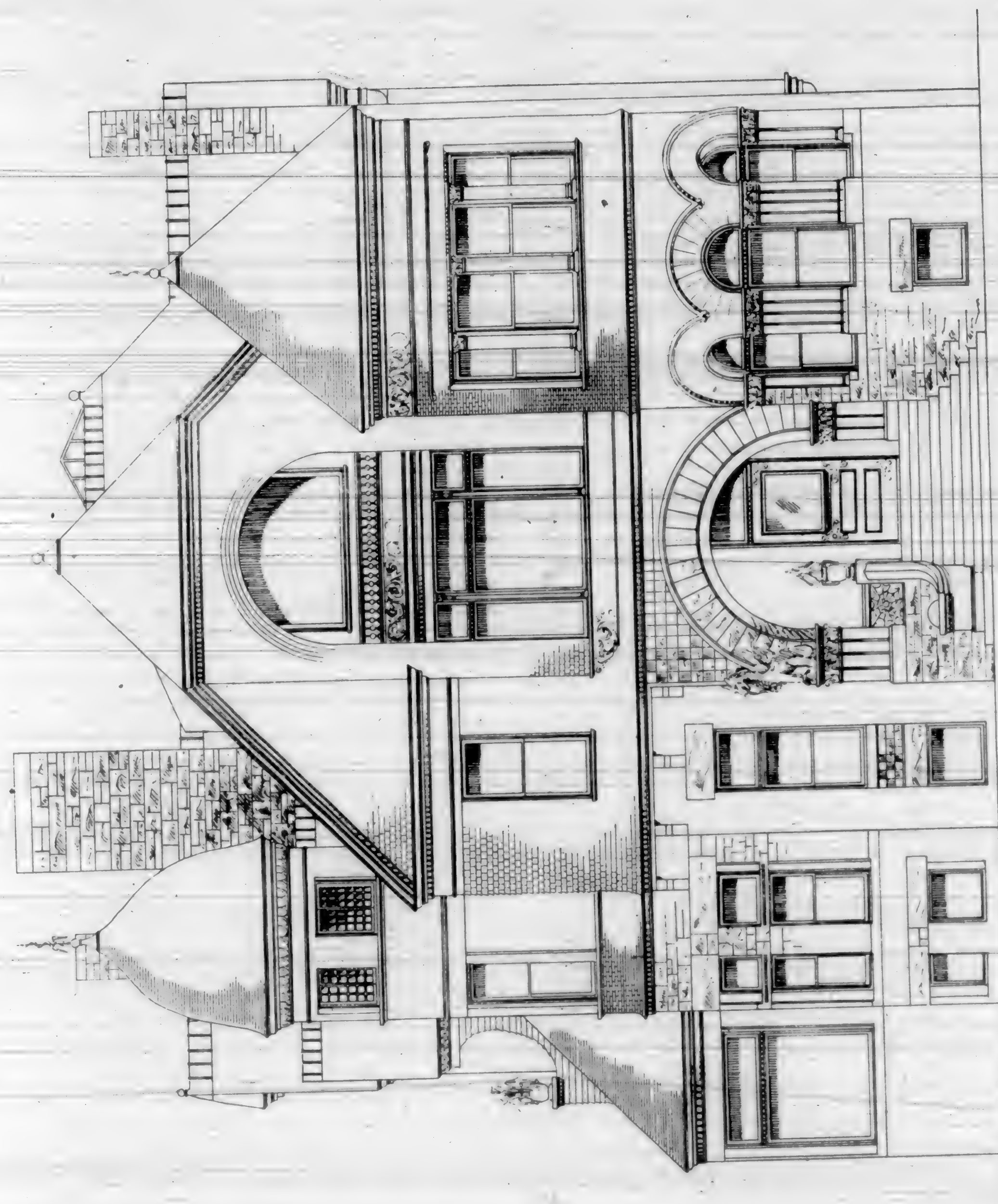


MISSION DOLORS. SAN FRANCISCO. ESTABLISHED 1776.

MAY 1891.

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

VOL. XII. NO. 5.



RESIDENCE  
CALIFORNIA WEBSTER ST.

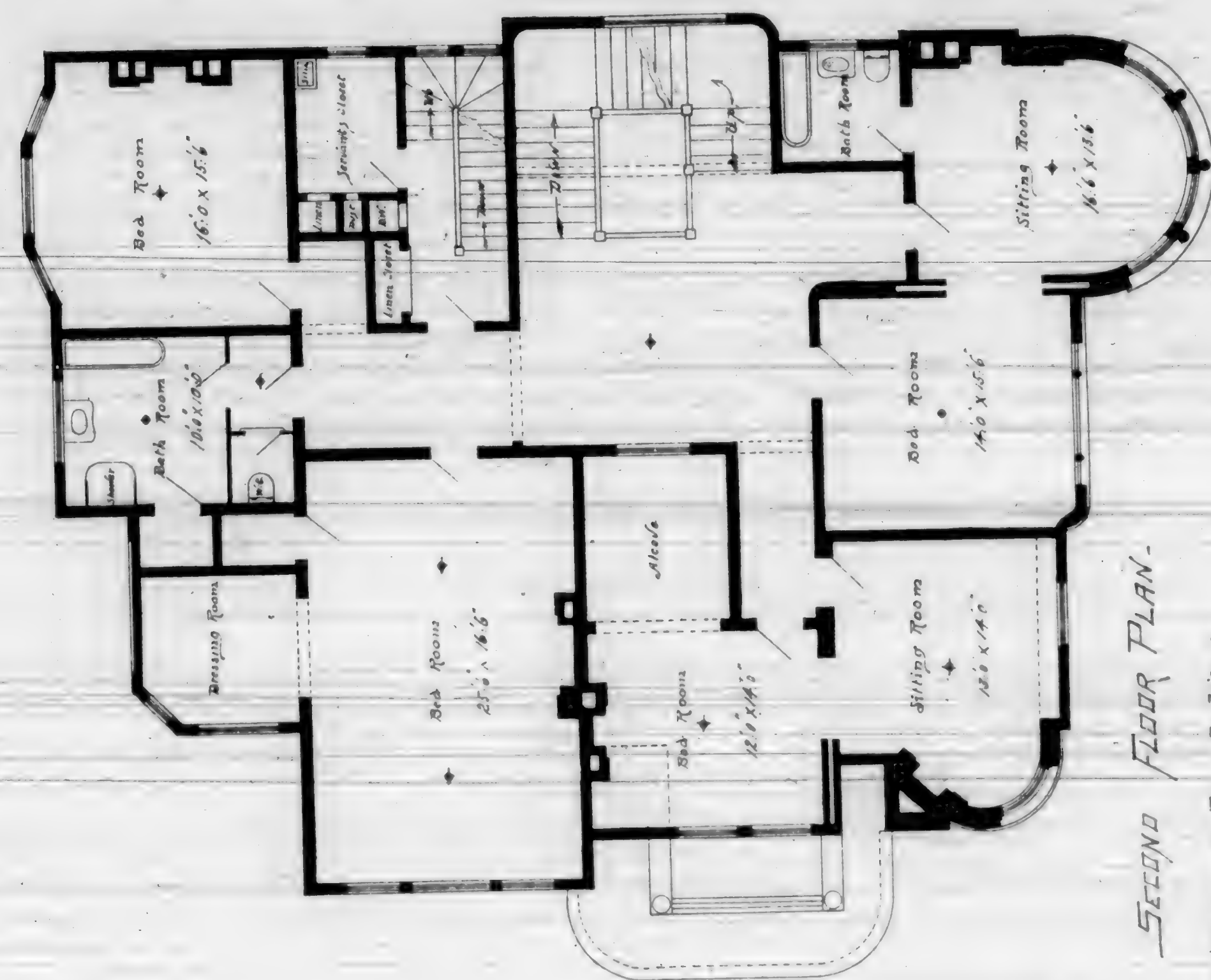
San Francisco, Cal.

M. A. Comstock - Architect.

MAY 1891.

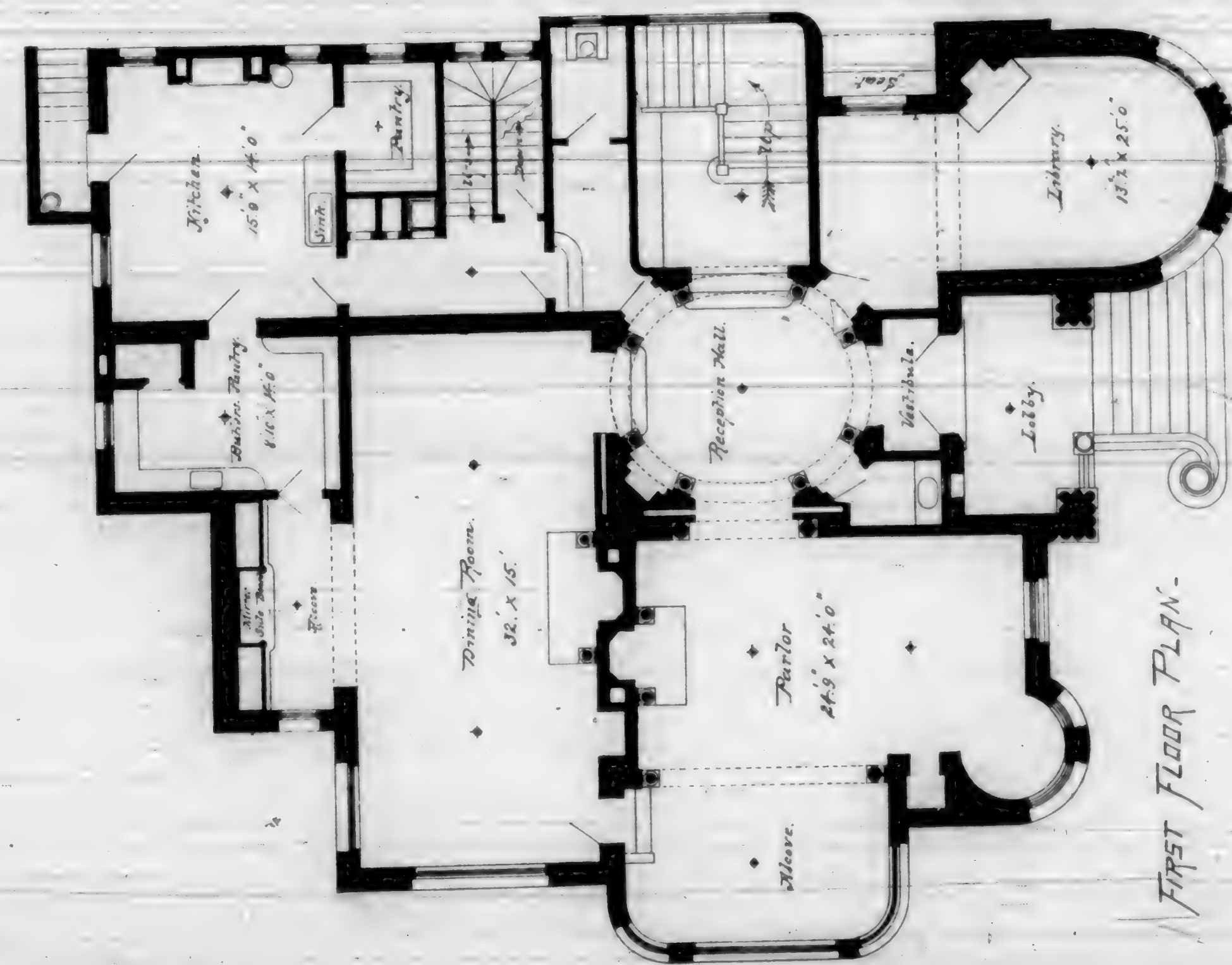
THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

VOL. XII. NO. 5.



SECOND FLOOR PLAN.

M. A. Comstock - Architect.



FIRST FLOOR PLAN.

MAY 1891.

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THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

*BUILDINGS for J.V. O'BRIEN.*

*N.E. CORNER of*

*Fine & Powell Sts.*

*JOHN GASH,*  
*Architect.*



repose rather than energy and unrest as in the Pointed styles. In the latter the forms are more angular, the lines meet at sharper angles, indicating rigidity and energy; thus the vertical features of buttresses and shafts rise uninterruptedly, no horizontal members disconnect them or stop them, as we find in the column and entablature of the Classic orders; the buttresses spring beyond the bounding lines of the building, and terminate in pinnacles, and these converge in their turn to points. Again, in the pointed windows and the spire the same piercing energy or character is seen; their angular apices and points indicate an upward growth—a dynamic rather than static condition; the whole composition, indeed, of such an edifice as Salisbury or Amiens Cathedral is one suggesting energy and force, not repose. We may briefly enumerate a few of the abstract principles upon which architectural expression depends. Alison and other writers on the subject have agreed upon certain kinds of form which suggest ideas to the mind. Thus angular forms and lines express strength, energy and force; the same qualities produce strong contrasts of light and shade on surfaces, and these sharp transitions characterize rocky scenery and Gothic buildings. The contrary kinds of form—those that are curvilinear and winding, and which give rise to gradation of light and shade—indicate delicacy, ease, grace and refinement, and characterize the Italian modes of Classic treatment. The Greek character, as seen in the Greek Doric, shows a combination of these opposite forms; we get the square and circular forms combined as in the Doric order. In the Roman styles the curvilinear and rectilinear are equally blended, producing grandeur and richness of expression; and in the Gothic forms they are again united, though the angular forms are predominant. In one extreme we have contrast, expressive of grandeur, force, and exciting qualities, and in the other extreme of gradation, elegant and soothing qualities. The architect should be master of these combinations, and be able to apply such varieties of form as will best conduce to a particular expression. Unlike painters and sculptors, architects are the professors of abstract design, and, as we have said, should be able to discover the general laws of expression in the same manner as the physicist does with inert matter. Another principle well worth noticing is the proportion of opening to solid wall in our buildings; and we dwell upon it here as it has scarcely been noticed by other writers. We have styles in which the wall is everything, and others in which the openings dominate over the design. In the Greek, the openings were merely apertures compared with the wall; but in the Venetian Italian it becomes a framework only—so extreme is the difference. In the early Gothic the windows were mere piercings and slits in the walls; but in the later Gothic—the Perpendicular, for instance—they occupy by far the largest area, the wall spaces being reduced to attenuated piers or mullions. This principle is indiscriminately applied by architects, as we see in churches. In one, we find all window in the clerestories and aisles; in another all wall space. It is generally an excess of one or the other that is to be condemned. If the admission of light had anything to do with it we would not complain; some architects prefer "a dim religious light," and to this they conform their design. But the principle has a great deal to do with expression also; a windowless building like Newgate prison has a forbidding expression, a repelling character not unsuited in that case; but a building full of windows has an inviting cheerful aspect no one can mistake. The Italian schools illustrate not only the formal principles of expression we have enumerated, but this one of lighting also. Thus, in the Florentine, there is scarcely any arcuation, though the style is astylar; windows bear a small proportion to the wall space, while, in the Venetian schools, arcuated effects are largely used, and the window is an important feature. The Roman holds a kind of intermediate ground between these two. In the Florentine we have almost Doric simplicity and severity in structural features; in the Roman a more varied treatment; and in the Venetian highly broken lines, large windows and picturesque features. As an English style for country residences, and when ample light and cheerful expression are wanted, the Venetian is best suited, and it has been largely adopted by English architects of the Renaissance; for town and civic structures, in which a more severe expression is required, the Florentine or the Roman is better adapted. In the Gothic styles we have quite as large a range to choose from. Of course, in regard to windows, lighting must always be mainly regarded, though these may be expressed variously, and the architect may always give his buildings their own suitable expressions by selecting the proper formal element of those we have referred to.—*London Building News*.



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

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

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

The double plate shows the elevation and plans for a residence on the N. E. corner of California and Webster streets for Mrs. Wieland, from designs by N. A. Comstock, architect.

The design for four dwellings on the N. E. corner of Pine and Powell streets for J. V. O'Brien, is from designs by John Gash, architect.

The Mission Dolores Church is from sketches from our special correspondent, "Tres."

The cuts M, N and O are from the terra cotta capitals from the Museum of Natural History at Kensington, England.



Architectural Iron and Steel, and its application in the construction of buildings is a new work on construction, by Wm. H. Birkmire, and published by John Wiley & Sons, 53 East 10th street, N. Y.

It is a neatly bound book of 200 pages, 6x9 inches, on fine heavy paper and is fully illustrated. The work is intended for those who wish to keep pace with the science of buildings where iron or steel enters into the construction. The tables for reference and formulas have been carefully revised and adapted to this work. It is a book that no architect or builder can afford to be without.

Palliser's Architectural Designs and Details is a book of 90 pages, 10x14 inches, published by Palliser, Palliser & Co., at 24 East 42nd street, N. Y.

This work contains designs for a great variety of buildings, villas, cottages, barns, stables and out houses. Price in paper, \$2.00.

## NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE ARCHITECTS, meets second Friday of each month at Academy of Sciences Building.

SETH BABSON, Pres. W. J. CUTHBERTSON, Vice-Pres.  
OLIVER EVERETT, Sec. JOHN M. CURTIS, Treas.

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

JOHN RICHARDS Pres. L. WAGONER, Vice-Pres.  
OTTO VON GELDERN, Sec. GEO. F. SCHILD, Treas.

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evening of each month at the Murphy Building.

W. C. QUIMBY, Pres. O. BROOKS, Vice-Pres.  
C. E. PURINGTON, Sec. W. C. CROSETT, Treas.

BUILDERS' ASSOCIATION OF CALIFORNIA, meets every Monday at 330 Pine Street, Rooms 9-12, at 1:30 P. M.

S. H. KENT, Pres. P. G. MARTIN, Vice-Pres.  
A. JACKSON, Sec'y. WM. B. KREGER, Treas.  
L. A. LARSEN, Clerk and Financial Sec'y.

THE regular meeting of the San Francisco Chapter of the American Institute of Architects, was held in their new rooms at the building of the Academy of Sciences, on Market St. on the 8th instant. The Architectural Sketch Club submitted competitive designs for suburban school houses. A committee was appointed to examine same and report at the next meeting of the Chapter. The following communication was received from the Master Painter's Association of San Francisco.

San Francisco, April 30, 1891.

To the San Francisco Chapter of Architects A. I. A.

Gentlemen:—The Master Painter's Association of San Francisco, realizing the absolute necessity that some efficient and adequate means should be adopted calculated to correct a grievous and long existing evil and abuse, hitherto by far to extensively prevailing in the painting trade in this city, by men claiming, but not honoring the name of Master Painters, in the substitution and use of impure and worthless admixture as paint, called by the common name of "dope," which is in no way allied to, nor contains one particle of pure lead and oil paint materials.

We as Master Painters, willing and desirous always to fulfill honorably and squarely the requirements of every specification placed in our hands, ask you gentlemen of the Architectural Profession, and the source through which comes to us the greater number of our contract engagements, that you lend us your aid and assistance in rendering it possible for honestly inclined men to compete squarely for work offered, without being subject to the humiliation of business classification with men possessed of no worthy mechanical principle or ambition.

In the move now being made, the journeymen's organization known as the Brotherhood of Painters and Decorators of America, Union No. 140 & 175 of San Francisco, have taken a worthy and aggressive stand in the matter, and will to the extent of their opportunities, expose and refuse to work for those who use the impure and meritless stuff called "dope" in any of its manifold forms, for it is Hydra headed in that its components are without formula and as varied and vile as the minds that control their manipulations and use.

Hence, if you, gentlemen of the Architectural Profession, standing in your high and honorable position as between the good and the bad, will by your influence and acts, close and lock the door, the key of which is held almost absolutely in your

grasp, and shut out from competition on works under you charge, every one who is not beyond all question, honest and honorable in all transactions and where mixtures of paints will not bear the closest scrutiny and analysis.

Be kind enough gentlemen to express to the Master Painter's Association your views upon this to us, and by reasonable presumption to you, most important matter. You want good work, executed with good material, and these you can get only at the hands of good men. Will you aid us?

Awaiting your reply, we remain,

Yours respectfully,

MASTER PAINTER'S ASSOCIATION OF THE PACIFIC COAST.

H. G. JARMAN, Sec. E. M. GALLAGHER, Pres.

After a general exchange of views on the advantages to be derived from a higher standard than that hitherto prevailing for painter's and decorator's work, the action of the Master Painter's Association was considered a material advance in the right direction, and the following resolution was unanimously adopted.

Resolved, That this movement on the part of the Master Painter's Association is approved by the Chapter, and that we as individual members of the Chapter will do all possible to further the aims of the Association.

THE Masters Painter's Association of the Pacific Coast held a special meeting on April 30th, to consider the subject of a more general use of pure material in the painter's and decorator's art. A resolution was adopted and a communication ordered sent to the San Francisco Chapter of Architects requesting the co-operation and assistance of the architectural profession in their efforts to obtain a more general recognition and appreciation of the benefits to be derived from the use of pure materials.

The following resolutions were also offered and adopted.

Resolved, that the Master Painter's Association of the Pacific Coast, do adopt the "California Architect and Building News," as their Official Organ.

Resolved, That the Secretary be instructed to send to the manager of the California Architect and Building News a copy of all the proceedings of future meetings for publication.

For resolution and communication to S. F. Chapter of Architects, see report of meeting of S. F. Chapter, A. I. A.

## LEGAL DECISIONS.

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

ENFORCEMENT OF MECHANICS' LIEN.—In an action to foreclose a mechanic's lien for work done and materials furnished under a contract, a counter claim may be set up for damages for omissions and defaults in the performance of the contract. In such a case, a judgement for the damages recovered in another court is conclusive evidence of the amount.

Bulky v. Healy, Supreme Court of New York, General Term, Second Department, 12. N. Y. Supp. 54. (70-C)

SALE OF MORE THAN DEBTORS INTEREST UNDER MECHANICS LIEN.—Where the statute prescribes that only the interest of the person causing the buildings to be erected, or materials to be furnished, shall be subject to the lien therefor, it is error to decree a sale of the whole property under a lien for materials furnished to one in possession under a contract of purchase, without ordering payment of the unpaid purchase price.

Bremen v. Foreman, Supreme Court of Arizona, 24 Pac. Rep. 539. (844.)

PERFORMANCE AND CONSTRUCTION OF CONTRACT.—When a contractor in good faith substantially performs a building contract, he can recover on the same, less a just reduction for slight defects or omissions. A provision in a contract that "all flooring to be made smooth and level, and free from knots," means free from all kinds of knots, both hard and soft. The evidence as to the number of knots being conflicting, it was for the jury to determine whether such knotty condition was a trivial or material violation of the contract.

Rust v. Wagner, City Court of Brooklyn, 12 N. Y. S. 2. (1014)

LIABILITY FOR FALLING BUILDINGS.—The owner of a building is responsible for the damage occasioned by its fall, when it is caused by his neglect to properly brace it so as to prevent its fall; but the damage may be reduced according to circumstances if the owner of the thing has exposed it imprudently. When a building threatens ruin, the neighbor has a right of action against the owner to compel him to cause such a building to be demolished or propped up. In the mean time if there be danger of any damage by its fall, he may be authorized to make the necessary works, for which he shall be reimbursed, after the danger shall have been ascertained.

Factors' and Traders' Insurance Co. v. Werlein, Supreme Court of Louisiana, 8 South Rep. 435.

CONSTRUCTION OF BUILDING CONTRACT.—A provision in a building contract that "no new work of any description done on the premises, nor work of any kind whatsoever, shall be considered as extras unless a separate estimate, in writing, for the same before it is commenced shall have been submitted by the contractor to the superintendent and proprietor, and their signatures obtained thereto," may be consequently waived by parties by verbal agreement.

The owner of a building is liable for work and materials furnished by the contractor in its construction not called for by the original written contract, where the owner or his authorized agent, by a subsequent oral agreement, promised to pay therefor, or knew that the contractor would charge for the same as extras, and assented thereto or permitted the same without objection. Where a contractor omits to furnish materials called for by his contract, he is liable therefor in damage to the owner. The contract provided for the completion of the buildings by a specified date, "provided there be no interference from labor strikes." The fact that the mechanics quit work upon the building on account of the contractor failing to pay them their wages, as agreed, did not release the contractor from completing the building by the time agreed upon.

McLeon v. Genius, Supreme Court of Nebraska, 47, N. W. Rep. 473. (2244)

## BUSINESS MOSAICS.

The Vulcan Iron Works, 135-145 Fremont Street, of this city, are at the present time manufacturing a great variety of work in the line of machinery, such for instance as Corliss steam engines, Meyer cut-off engines, saw mill, mining, cable road, power transmitting, ice and refrigerating machinery. These works also have facilities for light and extra smooth castings, and a large number and variety of patterns for new or repair work.

As the season of the year is upon us when the country residence is in demand, we beg leave to call your attention to Fay's waterproof building manilla as a covering. With it you can build much cheaper than all wood, and it is as suitable for small houses as for large ones. Write to the Company for catalogue and samples.

See advertisement, page vi.

Kitchens at the present time are being fitted up with the latest improvements for the use of gas in lieu of the wood and coal range. Plans are being made by an architect of this city for a residence which when completed will have many novel features. The heaters for all kinds of cooking are arranged along one side of the room which is well lighted; over the cooking appliances a hood and ventilators are arranged for collecting and conveying away the gases generated. Each part of the apparatus is arranged for its special purpose so that it shall not require any surplus heat for heating some department that may not be wanted at such times. All waste heat from any or all the heaters is to be conducted to a central point where it is to be utilized for partially heating the water before entering the water heater direct.

This set of apparatus is to be a combination of the cooking and heating appliances as furnished by the San Francisco Gas Company and may be seen at their show rooms No. 16 Post Street.

Stan-Alumin is a new metal or alloy manufactured by the Stan-Alumin Metal Co., of Canton, Ohio. This metal is a com-



bination of Aluminum with other metals, as its name implies, and has such desirable qualities for many purposes as will before long bring it into general use. It is very flexible, and possesses great tensile strength, is easily cut and worked, and does not require painting for protection. We have received a sample of the sheet metal which appears to fulfill all that the company claim for it. This company will furnish pure Aluminum, or Aluminum Alloys. Architects, builders and metal workers should send to this company for catalogue and price list.

We have received from Samuel Cabot, the manufacturer of creosote stains, at Boston, a view of a cottage as it would appear when stained with these stains. As we should naturally suppose with these beautiful stains the effect is harmonious and artistic. Creosote is coming into use as a preservative for wood more extensively as the years go by. When these stains are used the preservative effects of the creosote is utilized and at the same time the beauty of the structure is enhanced.

Chimney cowles of various patterns was recently the subject of experiment at the "Kew Observatory." The results proved that none of them caused a velocity of current exceeding that in an open pipe.

The Gardner steel ribbon and attachments for sash hangings, have recently been used for hanging some heavy vertically sliding doors weighing some 300 lbs. or more. All the methods heretofore used having proved defective, the Gardner appliance was tried with entire satisfaction.

The man who is willing to work and able to reason is too independent to beg others to take care of him. It is only those of weak mental structure and wanting in energy who are unable to take care of themselves. Yet, with this self-confession of inferiority they insist upon entire equality and right to compel the more enterprising and successful to share with them, not on the ground of equal service, but upon that of equal necessity. No one whose efforts bring him a surplus at the end of the year ever turns Socialist. It is the man with the annual deficit that insists upon becoming more worthless and more dependent by having the community take care of him and get any work out of him that they can.—*Brickmaker.*

Tin of American make is about to be introduced to the building trade. The old and well-known house of N. & G. Taylor Co. will in a few weeks at most, be prepared to furnish American tin and Terne plates at their own works in Philadelphia, Pa. The standing and reputation of this firm as furnishing for many years superior grades of roofing tin and sheet metal is a guarantee that the product made under their own immediate supervision will be the best that our advanced state of knowledge and machinery can produce.

Blue prints of large size and superior quality are now made by Edward Denney & Co., 418 Montgomery street, for architects and civil engineers, from drawings as furnished.

## CITY BUILDING NEWS.

**Bluxome** between Fourth and Fifth. Carpenter work, etc.; owners, Bridge & Beach Manufacturing Co.; architects, Percy & Hamilton; contractor, A. H. Plummer; cost, \$1,677; signed, April 14; filed, April 20; payments, first Saturday of each month 75 per cent. as work progresses; 25 per cent. 35 days.

**Broadway** near Franklin. To build; owner, Winfield W. Coulter; architect A. J. Barnett; contractor, K. Thaler; surety, \$1,000; cost, \$4,065; signed, April 16; filed, April 22; payments, \$1,070, frame and roof rafters ready; \$1,000, brown mortared; \$1,000, completed; \$1,025, 35 days.

**Broadway** near Scott. Brickwork; owner Wm. F. Herrin; architect, Julius E. Kraft; contractor, G. C. Sweeney; surety, \$1,000; cost, \$2,014; signed, April 6; filed, April 20; payments, \$700, rough work done; \$80, completed; \$315, 35 days.

**Bush** near Laguna. To build; owner, W. J. Simmons; architect, J. Carther New; contractor, H. Jacks; surety, \$4,500; cost, \$8,790; signed, April 15; filed, April 16; payments, \$1,028.75, floor joists in; \$1,028.75, rough frame up; \$1,028.75, enclosed; \$1,028.75, brown mortared; \$1,028.75, white coated and outside primed; \$1,028.75, accepted; \$2,197.50, 35 days.

**Bush** near Laguna. Painting; owner, M. J. Simmons; architect, J. C. Newsom; contractor, Chapman Bros.; cost, \$620; signed, April 13; filed, April 17; payments, \$270, exterior finished and first coat on interior; \$350, completed.

**California** near Van Ness Avenue. To build; owner, Leon Sloss et al.; architect, Clinton Day; contractor, C. Chisholm; cost, \$55,250; signed, April 24; filed, April 25; payments, \$9,999, second story joists set; \$2,000, brown mortared; \$8,000, white plastered; \$11,000, standing finish ready for painters; \$6,431, completed with 75 per cent. of any extra charges; \$13,812, 35 days.

**Capp** near Twentieth. Brickwork, etc.; owner, W. Z. K. ng; architect, A. J. Bryan; contractors, Ryan & Montgomery; cost, \$4,023; signed, March 31; filed, April 4; payments, \$240, brick foundations laid; \$500, frame up; \$500, rough finished; \$700, plastering set; \$750, plastering finished; \$23, completed; \$1,000, 35 days.

**Capp** near Twenty-first. To build; owner, George Christie; architect, H. B. Schomucker; contractor, H. B. Schomucker; surety, \$6,000; cost, \$2,910; signed, April 7; filed, April 8; payments, \$1,350, frame up; \$1,350, brown mortared; \$1,350, white coated; \$1,133, accepted; \$1,727, evidence given that bills are paid.

**Church** near Twenty-second. To build; owner, B. Cocks; architect, G. A. Birdwell; contractor, J. M. Williston; cost, \$3,197; signed, April 15; filed, April 18; payments, \$700, frame up; \$600, brown mortared; \$497, white plastered; \$600, completed; \$800, 35 days.

**Clay** between Hyde and Leavenworth. Concrete work; owner, Hugh Huddleston; architects, Percy & Hamilton; contractors, Gray Bros.; cost, \$1,057; signed, March 30; filed, April 20; payments, first Saturday of each month 75 per cent. as work progresses; 25 per cent. 35 days.

**Clay** between Hyde and Leavenworth. Ornamental concrete work; owner, Hugh Huddleston; architects, Percy & Hamilton; contractors, Chatain Gietti Stone Co.; cost, \$1,000; signed, March 30; filed, April 20; payments, 75 per cent. as work progresses; 25 per cent. 35 days.

**Clay** between Hyde and Leavenworth. Painting; owner, Hugh Huddleston; architects, Percy & Hamilton; contractor, Paul Agmar; cost, \$1,475; signed, April 16; filed, April 20; payments, first Saturday of each month, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Davis and Sacramento.** Cement work; owner, Sol Wangerheim; architect, Jas. E. Wolfe; contractor, George Goodman; cost, \$5,300; signed, April 14; filed, April 20; payments, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Devisadero and Waller.** To build; owner, Thos. H. Cornish; architects, Currie & Loomer; contractors, Currie & Loomer; cost, \$1,350; signed, April 8; filed, April 15; payments, \$500, enclosed; \$500, rough mortar on; \$500, completed; \$499, 35 days.

**Cor. Fell and Baker.** Carpenter work, etc.; owner, Monroe Greenwood; architect, Fred B. Wood; contractor, George R. Lang; surety, \$4,000; cost, \$16,000; signed, April 28; filed, April 29; payments, \$5,000, frame up; \$3,000, brown mortared; \$5,000, building finished outside; \$3,000, completed; \$4,000, 35 days.

**Cor. Fell and Baker.** Plumbing; owner, Monroe Greenwood; architect, Fred B. Wood; contractor, G. C. Sweeney; cost, \$1,500; signed, April 29; filed, May 1; payments, \$565, rough work in; \$560, completed; \$375, 35 days.

**Cor. Filbert and Sansome.** Iron work; owners, Judson Manufacturing Co.; architects, Wright & Sanders; contractor, J. W. Wissinger; cost, \$4,155; signed, April 8; filed, April 14; payments, first day of each month 75 per cent. as work progresses.

**Cor. Howard and Creek Lane.** To build; owner, Mary McCarthy; architect, William Armistage; contractor, J. O'Connell; surety, \$700; cost, \$2,775; signed, April 20; filed, April 25; payments, \$390, when rough frame is up; \$600, brown mortared; \$600, completed; \$715, 35 days.

**Cor. Jackson and Mason.** To build; owner, John Bullwinkle; architects, John & Balzanski; contractor, Adam Miller; cost, \$5,500; signed, April 23; filed, April 24; payments, \$1,200, frame up; \$1,200, floors laid, partitions set and enclosed; \$1,200, white plastered; \$1,275, finished; \$1,625, 35 days.

**Cor. Jones and McAllister.** Wrought iron work; owner, Herbert S. & L. Society; architects, Pissis & Moore; contractors, Western Iron Works; cost, \$13,725; signed, April 20; filed, April 24; payments, first day of each month, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Market and Second.** Art glass work; owner, Wm. J. Sullivan; architect, Chas. L. Havens; contractor, John Mallon; cost, \$1,000; signed, April 13; filed, April 20; payments, \$500, entire work finished; \$500, 35 days.

**Cor. Market and Second.** Gas fixtures, etc.; owner, W. J. Sullivan; architect, Chas. L. Havens; contractors, A. T. Nye & Co.; cost, \$1,510; signed, April 28; filed, April 30; payments, \$755, completed; \$755, 35 days.

**Cor. Mission and Seventh.** Elevator; owner, Wm. H. Birch & Co.; architects, Wilson & Wilson; contractor, A. Martinez; cost, \$1,200; signed, April 6; filed, April 6; payments, 2d certificate for payment due, \$360; 4th due, \$340; 5th due, \$300.

**Cor. Montgomery and Sacramento.** Marble work, etc.; owner, Pacific Mutual Life Insurance Company; architects, Wright & Sanders; contractors, Montone Sandstone Co.; cost, \$37,000; signed, February 25th; filed, April 30; payments, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Olive Avenue and Laguna.** Alterations; owner, Jos. Gosling; architect, S. Hatfield; contractor, John Martin; cost, \$1,000; signed, April 16; filed, April 6; payments, \$250, roofs boarded, inside ready for lathing; \$250, plastering finished; \$500, completed; \$250, 35 days.

**Cor. Page and Laguna.** To build; owner, Rose A. Reid; architect, T. J. Welsh; contractors, Madden & McKay; sureties, J. J. McKinnon and W. H. Emery; cost, \$5,300; signed, April 11; filed, April 13; payments, first day of each month, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Pierce and Broadway.** Carpenter work; owner, Alice N. Towne; architects, Percy & Hamilton; contractor, A. H. Plummer; cost, \$3,987; signed, April 14; filed, April 24; payments, first day of each month, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Pierce and McAllister.** Alterations; owner, Chas. Goodall; architect, J. Marquis; contractor, J. R. Wilson; cost, \$5,000; signed, April 21; filed, April 24; payments, \$1,250, additions up, outside finish on gas and sewer pipes in and work ready for plaster; \$2,500, accepted; 35 days after completion.

**Cor. Pierce and Devisadero.** Millwork, etc.; owner, Jas. McNerny; architect, C. L. Havens; contractors, O. N. Young & Co.; cost, \$3,225; signed, April 9; filed, April 15; payments, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Pine and Taylor.** Alterations; owner, Mrs. Theresa Fair; architect, J. C. Newsom; contractor, Jno. Furness; surety, \$7,725; cost, \$30,898; signed, April 22; filed, April 24; payments, 1st and 15th days of each month, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Pine and Taylor.** Elevator; owner, Theresa Fair; architect, J. C. Newsom; contractor, A. J. McNicol & Co.; cost, \$3,325; signed, April 22; filed, April 24; payments, when completed and accepted by architect.

**Cor. Pine and Taylor.** Painting, etc.; owner, Theresa Fair; architect, J. C. Newsom; contractors, Chapman Bros.; cost, \$2,685; signed, April 22; filed, April 27; payments, \$500, outside of new building primed; \$500, interior has one coat on; \$1,013.75, completed; \$671.25, 35 days.

**Cor. Pine and Taylor.** Plumbing; owner, Theresa Fair; architect, J. C. Newsom; contractor, M. C. Kean; surety, \$3,000; cost, \$5,500; signed, April 22; filed, April 24; payments, \$2,125, rough work completed; \$2,000, when accepted by architect; \$1,375, 35 days.

**Cor. Post and Hyde.** Alterations; owner, Mrs. C. Lauenstein; architects, Kenitzer & Kolhofrath; contractor, Wm. Pluss; cost, \$5,365; signed, April 15; filed, April 16; payments, \$1,400, roof completed; \$1,400, plastering finished; \$1,365, completed; \$1,400, 35 days.

**Cor. Powell and Green.** Alterations; owner, Antonio Devoto; architects, Mooser & Cuthbertson; contractors, Cuneo & Cassaretto; surety, \$1,400; cost, \$5,400; signed, April 27; filed, April 29; payments, \$1,350, frame up; \$1,350, when brown mortared; \$1,350, completed; \$1,350, 35 days.

**Cor. Shotwell and Twenty-second.** To build; owner, D. Coffey; architect, T. J. Welsh; contractors, R. Doyle & Son; surety, \$1,340; cost, \$5,350; signed, April 18; filed, April 21; payments, \$1,003, frame up; \$1,003, brown mortared; \$1,003, white coat finished; \$1,003, completed; \$1,343, 35 days.

**Cor. Tennessee and Butte.** Cement work, etc.; owner, P. O'Connell; architects, Shea & Shea; contractor, Thos. L. Wand; sureties, R. C. Mattingley and A. Walrath; cost, \$2,750; signed, April 21; filed, April 24; payments, 75 per cent. as work progresses; 25 per cent. 35 days.

**Cor. Washington and Walnut.** To build; owner, A. Sharboro; architect, T. J. Welsh; contractor, Chas. L. Lombard; surety, \$3,000; cost, \$11,500; signed, April 14; filed, April 15; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days after completion.

**Cor. Washington and Walnut.** Cement work, etc.; owner, A. Sharboro; architect, T. J. Welsh; contractors, Chatain & Gietti; surety, \$500; cost, \$2,200; signed, April 1; filed, April 8; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days after completion.

**Dolores** near Valley. Alterations; owner, Karl Koch; architect, F. M. Schweitzer; contractor, F. M. Schweitzer; cost, \$2,300; signed, April 11; filed, April 13; payments, \$600, raised and sides and rear enclosed; \$600, first coat plaster on; \$600, completed; \$600, 35 days.

**Eddy** near Devisadero. To build; owner, L. V. Paulucci; architect, W. H. Armistage; contractor, F. V. Steinman; surety, \$1,200; cost, \$5,388; signed, April 20; filed, April 21; payments, \$1,300, rough frame up; \$1,400, brown mortared; \$1,300, completed; \$1,388, 35 days.

**Eighteenth** near Noe. Carpenter work, etc.; owner, J. D. Davidson; architects, Gould & Colley; contractors, James and William McPhee; surety, \$2,550; cost, \$2,550; signed, April 28; filed, April 29; payments, \$637.50, frame completed; \$637.50, brown mortared; \$637.50, completed; \$637.50, 35 days.

**Ellis** near Stockton. Alterations; owner, Jos. Guadalupe; architect, Clinton Day; contractors, Connon & Shay; cost, \$1,380; cost, \$4,733; signed, April 13; filed, April 16; payments, \$5,000, store portion completed; \$4,000, brown mortared; \$5,000, white plastered; \$4,500, completed; \$5,000, 35 days.

**Fillmore** near Fulton. Carpenter work, etc.; owner, H. Berker; architects, John & Balzanski; contractor, Wm. Pluss; cost, \$8,500; signed, April 16; filed, April 18; payments, \$1,600, frames up; \$1,500, enclosed and partitions set; \$1,000, white plastered; \$1,675, completed; \$2,125, 35 days.

**Franklin** between Washington and Jackson. Mill work; owner, W. W. Ackerson; architect, W. Winterhalter; contractors, N. Parrish & Co.; cost, \$4,444; signed, April 8; filed, April 9; payments, 75 per cent. of value of work done; balance, 35 days.

**Front** near Pacific. Iron work; owner, James G. Fair; contractor, Reese Llewellyn; cost, \$1,230; signed, March 31; filed, April 21; payments, first day of each month, 75 per cent. as work progresses; 25 per cent. 35 days.

**Franklin** near Washington. To build; owner, Mrs. Sophie Wieland; architect, W. Winterhalter; contractor, W. W. Ackerson; cost, \$10,730; signed, April 4; filed, April 6; payments, \$2,000, frame up; \$2,000, roof finished; \$2,000, hard finished; \$2,000, completed; \$2,730, 35 days.

**Franklin** near Washington. Brick work; owner, Sophie Wieland; contractor, W. Winterhalter; contractor, Carl Wolf; cost, \$1,125; signed, April 7; filed, April 8; payments, \$500, foundation walls finished; \$325, brickwork done; \$300, 35 days.

**Fulton** near Webster. To build; owner, Theo. Frolich; architects, Z. Gelfuss & Co.; contractors, Templeton & Lord; cost, \$15,150; signed, April 10; filed, April 11; payments, \$550, frame up; \$500, enclosed and partitions set; \$500, white coat and inside finish on; \$600, accepted by architect; \$800, 35 days.

**Fulton** near Webster. To build; owner, T. P. Meigham; architects, Z. Gelfuss & Co.; contractors, Templeton & Lord; cost, \$3,150; signed, April 10; filed, April 11; payments, \$550, frame up; \$500, enclosed and partitions set; \$500, white coat and inside finish on; \$600, accepted by architect; \$800, 35 days.

**Golden Gate Avenue** near Steiner. To build; owner, P. P. Nolan; architect, T. J. Welsh; contractor, J. J. Dunn; surety, \$3,700; cost, \$14,733; signed, April 3; filed, April 16; payments, 75 per cent. as work progresses; 25 per cent. 35 days.

**Grove** near Broderick. To build; owner, Bertha Dale; architect, R. H. White; contractor, F. B. Butterfield; surety, \$3,000; cost, \$4,694; signed, April 22; filed, April 24; payments, \$894, frame up; \$863, brown mortared; \$863, standing finish on; \$863, completed; \$1,151, 35 days.

**Grove** near Lot. To build; owner, Mary Wiesenhausen; architect, N. Comstock; contractors, Kirkwood & Coggin; surety, \$1,500; cost, \$3,794; signed, March 30; filed, April 4; payments, \$600, foundation in; \$500, enclosed; \$1,000, white coat plaster on; \$14, completed; \$950, 35 days.

**Green** near Laguna. Alterations; owner, Mary Coghlan; architect, Wm. H. Wharf; contractor, J. W. Mayer; cost, \$1,865; signed, April 14; filed, April 14; payments, \$350, brick work done; \$350, brown mortared; \$350, white plastered; \$350, completed; \$465, 35 days.

**Green** near Powell. To build; owner, N. P. Johnson; architect, Chas. M. Rousseau; contractor, Andrew Christensen; surety, \$3,000; cost, \$3,375; signed, April 6; filed, April 8; payments, \$545, frame up; \$545, brown mortared; \$545, completed; \$816, 35 days.

**Guerrero** near Eighteenth. Alterations; owner, J. E. Richards; architects, Huene & Everett; contractors, Tegeler & Muller; surety, \$480; cost, \$1,325; signed, April 2; filed, April 4; payments, \$62.50, brown mortared; \$481.25, completed; \$481.25, 35 days.

**Haigh** near Broderick. To build; owner, Wm. Jones; contractor, Geo. Houston; cost, \$3,914; signed, April 9; filed, April 10; payments, \$975, roof shingled; \$975, brown mortared; \$975, doors and windows hung; \$999, 35 days.

**Harrison** near Fourth. To build; owner, J. P. Canhapé; architect, C. M. Rousseau; contractors, Knox & Cook; surety, \$1,000; cost, \$3,400; signed, April 15; filed, April 16; payments, \$500, frame up; \$500, brown mortared; \$500, accepted; \$500, 35 days.

**Harrison** near Fourth. To build; owner, Mano Dillon; architect, T. J. Welsh; contractor, Jas. McNerny; surety, \$3,585; cost, \$14,113; signed, April 8; filed, April 10; payments, \$3,528.25, frame up; \$3,528.25, brown mortared; \$3,528.25, completed; \$3,528.25, 35 days.

**Hyde** near Pine. Alterations; owner, Chas. E. Broad; architect, S. Hatfield; contractor, L. T. Moore; cost, \$1,091; signed, March 31; filed, April 4; payments, \$200, building in position and brickwork in; \$900, ready for lathing; \$400, completed.

**Jesse** near Tenth. To build; owner, F. T. Doolan; architect, F. T. Doolan; contractor, Daniel Powers; cost, \$1,445; signed, April 4; filed, April 6; payments, \$1,111.25, frame up; \$1,111.25, brown mortared; \$1,111.25, finished; \$1,111.25, 35 days.

**Jackson** near Gough. Grading; owner, N. R. Rideout; architects, Mooser & Cuthbertson; contractors, J. J. O'Connor; cost, 40 cents per yard; signed, April 16; filed, April 29; payments, 65 per cent. when work is completed; 35 per cent. 35 days.

**Jackson** near Mason. Alterations; owner, Mrs. Roccatagliata; architects, Mooser & Cuthbertson; contractor, Louis M. Weisman; surety, \$800; cost, \$2,800; signed, April 16; filed, April 21; payments, \$720, raised and brick foundation in; \$720, brown mortared; \$720, completed; \$720, 35 days.

**Lakeview**, lots 29, 30 and 31. To build; owner, Parker & Rane; contractor, C. Barmby; cost, \$660; signed, April 20; filed, April 25; payments, \$320, outside is primed; \$320, painted; \$320, completed.

**Larkin** between Broadway and Vallejo. Painting; owners, Golden State Land Co.; architects, Z. Gelfuss & Co.; contractor, J. M. Sindlinger; cost, \$1,965; signed, April 2, filed, April 4; payments, 75 per cent. as work progresses, 1st and 15th days of each month; 25 per cent. 35 days.

**Larkin** between Broadway and Vallejo. Paper-hanging, etc.; owner, Golden State Land Co.; architect, Z. Gelfuss & Co.; contractor, John Quast; cost, \$1,100; signed, April 11; filed, April 13; payments, 1st and 15th days of each month, 75 per cent. of value of work done; balance, 35 days.

**Larkin** between Broadway and Vallejo. Shingling; owner, Golden State Land Co.; architects, Z. Gelfuss & Co.; contractor, F. W. Kern; cost, \$1,165; signed, April 3; filed, April 4; payments, \$955, work finished; \$300, 35 days.

**Larkin** near Chestnut. To build; owner, Jennie S. Prince; architects, J. J. & T. D. Newsom; contractor, W. S. Wilson; cost, \$5,230; signed, April 13; filed, April 15; payments, \$991, frame up; \$991, first coat mortar; \$991, plastering finished; \$991.50, completed; \$1,327.50, 35 days.

**Leavenworth** near Lombard. To build; owner, Thomas C. Jacques; architect, A. W. Pattana & Co.; contractor, A. W. Pattana & Co.; cost, \$2,429; signed, April 16; filed, April 22; payments, \$700, roof on and chimney built; \$600, brown mortared; \$500, completed; \$629, 35 days.

**Lyon** near Fulton. To build; owner, Mary Howe; architect, Emile Depierre; contractor, Wm. Reese; surety, \$3,225; cost, \$3,225; signed, April 23; filed, April 27; payments, \$604, frame up; \$604, enclosed; \$604, white plastered; \$606.50, completed; balance, 35 days after, when receipted bills are shown.

**Market** near Montgomery. Interior finish, etc.; owners, M. J. and F. H. Burke; architect, J. C. Newsom; contractors, F. W. Kreling & Sons; surety, Theo. C. Marceau; cost, \$5,750; signed, April 15; filed, April 25; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days.

**Market** near Powell. Cast-iron work; owner, Annie Donahue; architect, Chas. I. Havens; contractors, O'Connell & Lewis; cost, \$20,479; signed, March 26; filed, April 21; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days.

**Market** near Powell. Wrought-iron work; owner, Annie Donahue; architect, Chas. I. Havens; contractors, J. K. Firth & Co.; cost, \$17,675; signed, March 26; filed, April 24; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days.

**Market** near Powell. Sandstone work; owner, Annie Donahue; architect, Chas. I. Havens; contractor, Owen E. Brady; cost, \$28,925; signed, April 23; filed, April 24; payments, 15 per cent. when to owners; 65 per cent. as work progresses; 25 per cent. 35 days.

**Mason** near Pacific. Brickwork, etc.; owner, F. T. Fletcher; architects, Z. Gelfuss & Co.; contractor, Chas. Johnson; cost, \$5,529; signed, April 3; filed, April 4; payments, \$828, frame up; \$828, enclosed; \$828, brown mortared; \$828, inside standing finish on; \$828, completed; \$1,380, 35 days.

**Mission** near Ninth. Brickwork; owner, Peter McGovern; architect, J. E. Kraft; contractor, D. J. Brennan; surety, \$3,000; cost, \$7,300; signed, April 3; filed, April 24; payments, \$3,000, basement walls up; \$1,475, patent chimneys built; \$1,000, completed; \$1,825, 35 days.

**Noe** near Fourteenth. To build; owner, J. C. McGinnis; architect, M. J. Welsh; contractors, Sandy & Gillogley; surety, \$2,000; cost, \$6,350; signed, April 16; filed, April 16; payments, \$1,587, frame up; \$1,587, brown mortared; \$1,587, completed; \$1,587, 35 days.

**O'Farrell** near Scott. Alterations; owners, Lang Bros.; architects, John & Balzanski; contractor, Wm. Pluss; cost, \$5,529; signed, April 15; filed, April 18; payments, \$600, ready for lathing; \$700, white plastered; \$720, completed; \$650, 35 days.

**O'Farrell** near Webster. Concrete work; owner, First New Jerusalem Society; architect, Wright & Sanders; contractor, James Geary; cost, \$3,050; signed, March 31; filed, April 4; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days.

**O'Farrell** and Webster. Concrete work; owner, First New Jerusalem Society; architect, George H. Sanders; contractors, Ransome & Cushing; cost, \$4,900; signed, April 8; filed, April 10; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days.

**Olive** avenue near Van Ness. To build; owner, Charles Hogan; architect, John T. Kidd; contractor, George Cannon; cost, \$10,000; signed, April 24; filed, April 25; payments, \$1,944, frame up; \$1,944, brown mortared; \$1,994, white plastered; \$1,994, completed; \$2,659, 35 days.

**Pacific** avenue near Franklin street. Painting; owner, J. F. Pohelm; architect, J. Marquis; contractor, Fred Schaefer; cost, \$1,100; signed, March 17; filed, April 21; payments, \$300, outside of house and stable painted; \$206, inside ready to grain; \$334, accepted.

**Pacific** avenue near Franklin street. Plastering; owner, J. F. Pohelm; architect, J. Marquis; contractor, Fred Schaefer; cost, \$1,100; signed, March 17; filed, April 21; payments, \$415, brown mortared; \$415, plastering finished; \$300, 35 days.

**Pacific** avenue near Franklin street. Plumbing; owner, J. F. Pohelm; architect, J. Marquis; contractors, Danly Bros.; cost, \$2,300; signed, March 17; filed, April 21; payments, \$700, gas and water pipes in; \$500, finished; \$500, 35 days.

Scott between Geary and O'Farrell. Ironwork, etc.; owner, Wm. B. Glen; architect, T. J. Welsh; contractor, Geo. H. Tucker; cost, \$3,850; signed, March 30; filed, April 3; payments, 75 per cent. as work progresses; 25 per cent. in 35 days.

Scott near Page. To build; owner, Peter Schlegel; architects, Z. Geilfuss & Co.; contractors, Tegder & Muller; cost, \$6,600; signed, April 2; filed April 4; payments, \$950, frame up; \$1,000, enclosed and floors laid; \$1,000, brown mortared; \$1,000, inside st'd finish on; \$1,000, completed; \$1,655, 35 days.

Shotwell near Twentieth. To build; owner, Samuel Forthmore; architect, Chas. W. Rousseau; contractor, C. C. Dryden; surety, \$2,000; cost, \$5,270; signed, April 25; filed, April 27; payments, \$1,300, frame up; \$1,300, brown mortared; \$1,300, completed; \$1,370, 35 days.

Shotwell near Twenty-fifth. To build; owner, D. M. Dickson; architect, Wm. H. Armitage; contractor, L. M. Weismann; surety, \$1,000; cost, \$3,983; signed, March 28; filed, April 13; payments, \$900, rough frame up; \$900, brown mortared; \$900, entire work finished; \$929, 35 days.

Sitter near Third. To build; owners, J. J. Cass and wife; architect, A. Klahn; contractor, A. Klahn; cost, \$4,320; signed, April 30; filed, April 30; payments, \$1,000, frame up; \$1,000, brown mortared; \$1,000, finished; \$1,320, 35 days.

Sutter No. 120. Alterations; owner, Mrs. Kate Johnson; architect, Wm. Patton; contractor, J. W. Wissing; surety, \$2,150; cost, \$8,595; signed, April 13; filed, April 14; payments, first day of each month 75 per cent. as work progresses; 25 per cent. 35 days.

Sutter near Baker. To build; owner, Geo. W. Mitchell; architect, Geo. W. Mitchell; contractor, Ivory Wells; surety, \$625; cost, \$2,500; signed, April 21; filed, April 24; payments, \$625, frame up; \$625, brown mortared; \$625, completed; \$625, 35 days.

Sutter near Jones. Plumbing; owners, E. Menesini & Co.; architects, C. R. and J. M. Wilson; contractors, S. Ickelheimer & Bro.; cost, \$1,735; signed, April 21; filed, April 24; payments, \$546, rough work in; \$617, completed; \$182, 35 days.

Sutter near Pierce. To build; owner, Wm. Wertsch; architects, Z. Geilfuss & Co.; contractor, Henry Kolling; cost, \$6,272; signed, April 17; filed, April 18; payments, \$940, frame up; \$940, enclosed and partitions set; \$940, porch and fence work done; \$940, inside standing finish done; \$940, completed; \$1,572, 35 days.

Sutter between Taylor and Jones. Interior finish; owner University Club; architect, A. Page Brown; contractor, Wm. T. Comary; cost, \$4,591.85; signed, April 18; filed, April 21; payments, 75 per cent when work is completed; 25 per cent. 35 days after completion.

Sutter between Taylor and Jones. Painting; owner, University Club; architect, A. Page Brown; contractors, Frazer & Keefe; cost, \$1,400; signed, April 20; filed, April 21; payments, on completion of work.

Tenth avenue near Clement street. Carpenter work; owner, E. F. Dennison; architect, Jordan E. Lyon; contractor, J. S. W. Saunders; surety, \$1,250; cost, \$1,850; signed, April 18; filed, April 22; payments, 75 per cent as work progresses; 25 per cent. 35 days.

Tenth between Howard and Polson. Alterations; owner, Elizabeth Roche; architect, Bryan J. Clinch; contractor, T. R. Bassett; cost, \$2,878; signed, April 4; filed, April 6; payments, \$700, frame up; \$700, additions completed; \$700, completed; \$778, 35 days.

Twelfth near Clement. To build; owner, Robert Haslett; architects, Shea & Shea; contractor, R. Sinnott; surety, \$675; cost, \$2,700; signed, April 25; filed, April 27; payments, \$500, frame up; \$500, brown mortared; \$500, hard finished; \$507, completed; \$675, 35 days.

Twentieth near Capp. Carpenter work, etc.; owner, G. H. Richards; architect, Charles I. Havens; contractors, Miron & Robertson; cost, \$16,000; signed, April 18; filed, April 20; payments, \$3,000, rough frame up; \$3,000, outside finish up and brown mortared; \$3,000, mill work done; \$3,000, completed; \$4,000, 35 days.

Twentieth near Capp. Painting; owner, G. R. Richards; architect, Charles I. Havens; contractors, Swan & Stein; cost, \$1,025; signed, April 17; filed, April 20; payments, \$350, inside roof done; \$400, completed; \$275, 35 days.

Twentieth near Capp. Plumbing, etc.; owner, C. H. Richards; architect, Charles I. Havens; contractor, H. Williamson; cost, \$2,074; signed, April 17; filed, April 20; payments, \$750, rough gas and water pipes in; \$750, completed; \$750, 35 days.

Twenty-third near Guerrero. To build; owner, Margaret M. Willis; architect, Wm. H. Armitage; contractor, S. T. Greene; surety, \$882; cost, \$3,530; signed, April 23; filed, April 25; payments, \$880, rough frame up; \$880, brown mortared; \$880, entire work completed; \$880, 35 days.

Twenty-third near Florida. To build; owner, Alex. Duffy; architect, Frank Pierce; contractor, Robert Gillespie; surety, \$2,625; cost, \$2,625; signed, April 20; filed, April 22; payments, \$656.25, frame erected; \$656.25, brown mortared; \$656.25, inside finish on; \$656.25, 35 days.

Twenty-third near Mission. To build; owner, Mrs. C. Warnke; architect, A. C. Luigens; contractors, P. Droge et al.; surety, \$905; cost, \$3,980; signed, April 7; filed, April 9; payments, \$746, roof boarded; \$746, first coat of plaster; \$746, second coat; \$747, completed; \$905, 35 days.

Warren near Grove. To build; owner, Edwin Liddle; architect, John Hayes; contractor, John Hayes; cost, \$1,350; signed, April 25; filed, April 27; payments, \$400, building roofed; \$400, rough mortared; \$550, receipts shown to owner.

#### Alameda County.

Academy Homestead, Oakland. Cottage; owners, E. Lacazette and wife; architect, J. A. Eastman; contractor, J. A. Eastman; cost, \$1,505; signed, April 8; filed, April 8; payments, \$395, frame up; \$400, brown mortared; \$400, completed; \$400, 35 days.

Alice and Seventh, Oakland. Two-story frame; owner, Vincent Chlonpek; architect, J. C. Matthews; contractor, J. C. Bassett; cost, \$2,200; signed, April 20; filed, April 22; payments, \$550, frame up and roof sheathed; \$550, first coat mortar and first coat paint; \$550, completed; \$550, 35 days.

Associates' Tract 50, Oakland. Six-room cottage; owners, Charles H. Blaker and wife; architect, C. W. Goldwell; contractor, C. W. Goldwell; cost, \$1,530; signed, April 21; filed, April 23; payments, \$400, frame up; \$400, first coat mortar; \$400, completed; \$530, 35 days.

Beuna Vista avenue and Oak street, Alameda. Two-story frame; owner, Geo. F. Taylor; architect, C. M. Jenkins; contractor, John Sath; cost, \$2,350; signed, April 3; filed, April 4; payments, \$587, frame up and rustic on outside walls; \$587, enclosed and brown mortared; \$587, woodwork done and priming coat paint on; \$589, 35 days.

Beuna Vista avenue near Oak street, Alameda. Two-story dwelling; owner, Capt. J. Jensen; architect, Charles H. Shaner; contractor, P. Christensen; cost, \$2,095; signed, April 22; filed, April 23; payments, \$523.75, frame up and rafters and sheathing on; \$523.75, brown mortared; \$523.75, ready for painting; \$523.75, 35 days after completion.

Blake Tract No. 3, Berkeley. Two-story dwelling; owner, F. E. Armstrong; architect, A. H. Broad; contractor, N. L. Freese; cost, \$2,387; signed, April 3; filed, April 9; payments, \$746, frame up and enclosed; \$746, brown mortared; \$746, completed; \$749, 35 days.

Blake Tract, Oakland. Dwelling; owner, S. Hoepfersberger; architect, J. J. Rose; contractor, J. J. Rose; cost, \$1,510; signed, April 20; filed, April 21; payments, \$400, frame up; \$310, first coat plaster; \$400, completed; \$400, 35 days.

Block 57, Town of Niles. Two-story frame; owner, J. J. Martin; architect, J. S. Welby; contractor, Robert Irvine; cost, \$2,400; signed, April 8; filed, April 17; payments, \$600, frame up; \$600, first coat plaster; \$600, completed; \$600, 35 days.

City San Jose, on road to. Additions; owner, Mrs. S. Rainey; architect, T. J. Welsh; contractor, John J. Dunn; sureties, B. Joost and R. L. Taylor; cost, \$9,339; signed, April 2; filed, April 10; payments, 75 per cent. of value of material furnished and work done first day of each month; 25 per cent. 35 days.

Cor. Encinal avenue and Park street, Alameda. Two-story dwelling; owner, L. Van Orden Jr.; architect, G. A. Bordwell; contractor, John J. Boyle; cost, \$2,336; signed, April 22; filed, April 23; payments, \$834, frame up; \$834, plastering done; \$834, completed; \$834, 35 days.

Cor. Filbert and Seventh, Oakland. Cottage; owner, George Louis Yager; architect, Howard Burns; contractor, Charles W. Ormsby; cost, \$1,600; signed, April 20; filed, April 21; payments, \$350, frame up; \$350, first coat of plaster; \$350, second coat plaster and windows in; \$350, 35 days.

Cor. Railroad avenue and Nineteenth street, Alameda. Two-story frame; owner, Thomas K. Statler; architect, Fred. P. Fisher; contractors, D. Straub & Son; sureties, J. M. Robertson and J. Cory; cost, \$2,838; signed, April 4; filed, April 8; payments, \$675, roof completed; \$675, plastering done; \$675, completed; \$675, 35 days.

Cor. Seventh and Franklin, Oakland. Altering in 'Puddy's' Hotel; owner, Henry Ruedy; architect, Julius Frey; contractors, Smith & Lake; cost, \$3,200; signed, February 17; filed, April 18; payments, \$600, roof raised and enclosed; \$600, outside finish done and brown mortared; \$600, ready for painting; \$600, completed; \$600, 35 days.

Eighteenth street near Encinal avenue, Alameda. Two-story house; owner, W. H. Palmer; architect, Charles Shaner; contractors, Brehant & Diamond; sureties, E. B. Juntunen et al.; cost, \$2,560; signed, April 27; filed, April 28; payments, \$600, rough frame up; \$600, enclosed; \$600, windows in, etc.; \$337.50, ready for paint; \$712.50, 35 days.

Fifth avenue near Ninth street, Clinton. Two two-story dwellings; owner, O. C. Kirk; architect, F. A. Brown; contractor, F. A. Brown; cost, \$5,600; signed, April 18; filed, April 14; payments, \$1,400, frame up; \$1,400, first coat mortar on; \$1,400, completed; \$1,400, 35 days.

Mendenhall place, Livermore. One-story brick store; owner, Louis Schaffor; architect, Henry H. Meyers; contractor, J. F. Meyers; cost, \$2,125; signed, April 7; filed, April 10; payments, \$400, brick on ground and first tier joists on; \$400, walls up and second tier on; \$400, roof shingled; \$350, completed; \$675, 35 days.

Mountain View Cemetery. Tomb; owner, estate of S. Merritt; architect, H. P. Merritt; contractor, Knowles & Hosmer; cost, \$38,600; signed, April 2; filed, April 13.

Porala Heights, Oakland. Two-story frame house; owner, Thomas A. Deasy; architect, F. A. Brown; contractor, F. A. Brown; cost, \$2,760; signed, April 17; filed, April 20; payments, \$687.50, frame up; \$687.50, brown mortared; \$687.50, completed; \$687.50, 35 days.

Prospect avenue, McTure street, Oakland. Two-story dwelling; owner, J. C. Martin; architect, Charles Mau; contractors, P. Ahern & J. Moore; cost, \$3,830; signed, April 18; filed, April 14; payments, 75 per cent. value of work done on first day of each month; \$2,462.50, balance, 35 days.

San Antonio avenue near Union, Alameda. Two-story dwellings; owner, G. H. Murdock; architect, Geo. A. Bordwell; contractor, J. J. Boyle; cost, \$2,940; signed, April 6; filed, April 8; payments, \$735, frame up; \$735, plastering done; \$735, completed; \$735, 35 days.

San Leandro road, Fruitvale. Two-story house, 7 rooms; owner, Geo. A. Douglass; contractor, Henry C. Barker; cost, \$2,200; signed, April 25; filed, April 27; payments, \$500, house enclosed; \$500, brown mortared; \$500, completed; \$500, 35 days.

Santa Clara avenue between Fourth and Fifth streets, Alameda. Two-story frame; owner, Carl A. Joseph; architect, A. R. Denke; contractor, A. R. Denke; cost, \$2,580; signed, April 3; filed, April 8; payments, \$700, frame up; \$500, first coat plaster on; \$880, completed; \$700, 35 days.

Shattuck avenue near Cedar, Berkeley. Two-story dwelling; owners, J. and S. Pierce; contractor, Ira A. Boynton; cost, \$3,400; signed, April 14; filed, April 19; payments, \$850, frame up and rustic on; \$50, outside finish on; \$850, inside ready for paint and outside completed; \$850, 35 days.

Taylor avenue, McPherson street, Alameda. Two one-story cottages; owner, Henry Mohs; architects, Marcuse & Remmel; contractors, Marcuse & Remmel; cost, \$3,000; signed, April 16; filed, April 17; payments, \$750, frames up and roof on; \$750, white plastered; \$550, completed; \$550, 35 days.

Telegraph avenue near Twenty-second street, Oakland. To build; owner, B. Wright; architect, Charles Mau; contractors, Concanon & Shay; cost, \$14,449; signed, April 14; filed, April 14; payments, \$2,700.75, one-quarter materials furnished and one-quarter work done; \$2,700, one-half materials furnished and one-half work done; \$2,700, three-quarters materials furnished and three-quarters work done; \$2,700, completed; \$3,612.25, 35 days.

Thirteenth street near Encinal avenue, Alameda. Two-story house; owner, P. H. Patrick; architects, Judd Hanley & Co.; contractor, John Sath; cost, \$3,650; signed, April 20; filed, April 28; payments, \$912.50, frame up and sheathing on roof; \$912.50, roof shingled and ready for plastering; \$912.50, priming coat paint on; \$912.50, 35 days.

Twelfth street near West, Oakland. Two-story frame; owner, Mary S. Bartlett; architect, M. S. Libbey; contractor, M. S. Libbey; cost, \$4,100; signed, April 11; filed, April 15; payments, \$1,025, one-third materials furnished and one-third work done; \$1,025, two-thirds materials furnished and two-thirds work done; \$1,025, completed; \$1,025, 35 days.

Union near Tenth, Oakland. Three-story frame; owner, Giles H. Gray; architects, J. J. and T. D. Newson; contractor, Thomas R. Bassett; cost, \$11,165; signed, April 11; filed, April 13; payments, \$1,395, frame up; \$1,395, roof finished; \$1,395, floor laid and rough plumbing done; \$1,395, first coat plaster and outside primed; \$1,395, plumbing and plastering done; \$1,398, completed; \$2,792, 35 days.

View Homestead, Oakland. Two-story dwelling; owner, A. W. Havens; architect, W. J. Mathews; contractor, C. L. Lombard; cost, \$4,339; signed, April 8; filed, April 10; payments, \$813, one-quarter of work completed; \$813, one-half of work completed; \$813, three-fourths; \$1,087, 35 days.

Villa (2) lots adjoining University. One-story frame; owner, Robert Forbes; architect, Robert Seidel; contractor, Robert Seidel; cost, \$1,100; signed, April 22; filed, April 23; payments, \$600, brown mortared; \$250, completed; \$250, 35 days.

Williams street near San Pablo avenue, Oakland. One-story frame; owner, C. Hooley; architect, Charles Mau; contractors, J. Brandin & G. Eber; cost, \$1,850; signed, April 27; filed, April 28; payments, \$500, one-fourth materials furnished and one-fourth work done; \$500, one-half materials furnished and one-half work done; \$500, three-fourths materials furnished and three-fourths work done; \$837.50, completed; \$462.50, 35 days.

## The California Architect and Building News.

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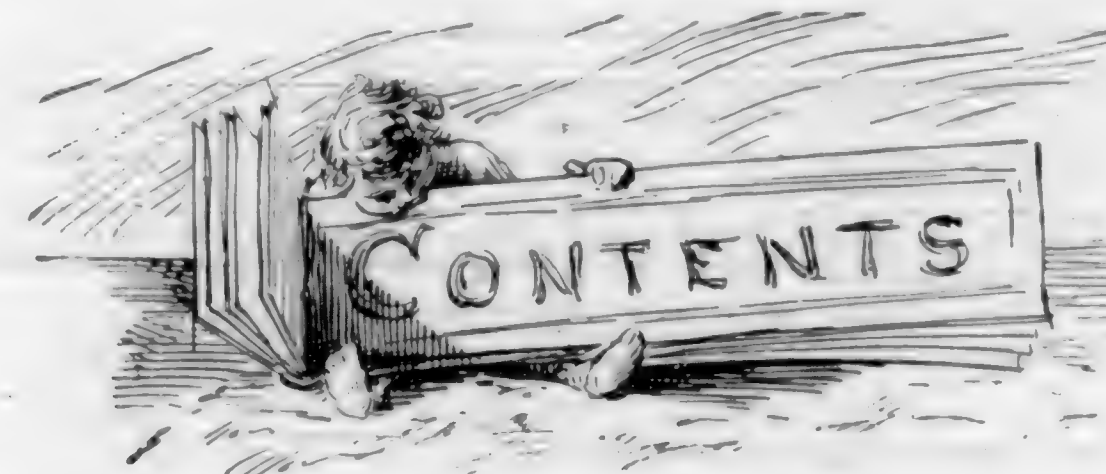
W. P. MOORE, PRESIDENT.

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#### NOTICE.

Correspondents should address their communications to the California Architect and Building News, 408 California Street, San Francisco, Cal.

THE question of how to dispose of the garbage with the least offense is as yet unsettled. We know of no method adopted which is devoid of objectionable features. The offensive and unhealthy nature of garbage begins as soon as made, and continues with increasing virulence till its final disposal. In most, if not in all Eastern Cities, the garbage is placed in receptacles made of wood, which are at intervals placed on the street to be removed by the scavengers. These receptacles become saturated after a time, with the decaying refuse matter, from which emanate continuously offensive odors and disease-breeding germs.

In San Francisco the usual custom is to have an iron box to receive the refuse of the house. These boxes are placed in basements, back stairs, rear balconies, etc.; and, upon being opened to receive a new deposit, they send off the pent-up fumes of decaying matter. Thus they become reservoirs of decomposing filth, continually generating noxious miasma, and forming a generating center of disease germs to permeate the building. A great portion of the more objectionable material which accumulates in the swill box, can and should be burned in the kitchen range. This course would probably meet the necessities of the case so far as the house alone is concerned.

The city ordinance requires the scavengers to have closed tanks on the carts, which is correct as far as it goes; but the tanks and covers are of wood, which, after a time, become saturated and give off offensive odors and putrefying effluvia, which vitiates the air and becomes an active feeder for preventable diseases. The principal dangers which arise from the saturated receptacles on the carts could be overcome, in a measure, by the substitution of iron tanks and covers for those of wood.

While our Public Health Officials have been zealous in their desire to have the owners of property adopt every precaution against danger to health, we feel confident they will see the necessities arising from this most important sanitary requirement and adopt some regulations for securing this essential sanitary provision; and issue some rule for the guidance of persons engaged in the removal of accumulated refuse material, so that it shall cease to become a source of annoyance and danger.