

shutters and with floors undivided, so as to be practically a shell full of combustible material. The second was equally open and unprotected at the front, but had many four-inch terra cotta partitions, both longitudinal and transverse, above the ground floor. The third building was devided by wooden stud and metal lath partitions. While all three of these buildings suffered severely from the flames, the usefulness of the steel and terra cotta was revealed by a close examination of the buildings. The steel work, covered with terra cotta or concrete, suffered very little damage and the arches remained in position. All the buildings can be readily repaired. There was no twisting of columns. Of course, where fireproof buildings are full of light woodwork, as these seem to have been, the interiors will not be spared by the flames, and the natural conclusion is that it is absurd to call a building fireproof that contains any considerable amount of wood. In the case of these Pittsburg buildings, the flames found easy entrance because the large front windows and doors had no iron shutters. As soon as the glass cracked the interiors were doomed to destruction. It happened that the rear walls had small openings, with fireproof shutters. The iron in these was heated white and warped, but the flames went no further. The inflammable structures beyond were unharmed. Open floors in one building afforded plenty of opportunity for draughts, which spread the flames. Elevator shafts are especially dangerous in time of fire, but cannot well be dispensed with in tall buildings. The second building, by reason of its terra cotta partitions, suffered much less than the others. Terra cotta and concrete were both given a thorough trial at this fire and experts are unable to decide which better served the purpose of the builders. The chief necessity in fireproof buildings is to avoid unprotected openings in the walls through which the flames may enter; to provide fireproof partitions inside, and to enclose the elevator shafts, particularly at the bottom. After the architects have learned how to build an absolutely fireproof structure, they have still a harder task to convince the client who is paying for it that it is good economy for him to build as well as possible.—*Construction News.*

BOOKS AND PERIODICALS

We have received from the CALIFORNIA STATE MINING BUREAU, San Francisco, San Francisco, Bulletin No. 12, containing a list by counties of the mineral productions of California for the year 1896. Compiled by Charles G. Yale from direct returns by producers.

Any resident of California can procure a copy by applying to the State Mining Bureau, San Francisco, inclosing a one-cent stamp for postage.

Annual Report of the Board of Regents of the SMITHSONIAN INSTITUTION showing the operations, expen-

ditures and condition of the Institution to July, 1895. Washington—Government printing office, 1896.

This handsome volume of over 800 pages contains as usual a large amount of valuable information of a scientific and practicable nature appealing to the wants of the present time.

A description of the National Zoological Park with an illustration being a bird's-eye view of National Zoological Park from model; also a map of the locality showing adjacent properties give a very good idea of what has been done in the way of embellishment for this park in the District of Columbia. At present this park contains 520 animals on hand June 30, 1895—many of these animals were presented, some from Yellowstone National Park and some by exchange.

Space will not permit giving an extended review of this valuable work, but will call attention to an article that must attract a good deal of attention at the present time on account of our trouble with Japan—it is entitled "The Japanese Nation—A Typical Product of Environment."

AN OBNOXIOUS ORDINANCE.

THE RECENT ORDINANCE OF THE BOARD OF SUPERVISORS IN RELATION TO ROOFING.

WHAT ASPHALTUM MEN SAY.

THE RECENT action of the Board of Supervisors in passing an Amendment to the Ordinance in relation to roof covering on buildings in this city has occasioned a great deal of unfavorable comment and has been the leading topic of discussion among mechanics and all members of the building trades generally. Subdivision 1 of Sec. 30 of order No. 2927 has been amended to read as follows:

ROOF COVERING.

SUB. 1. The roof of all buildings hereafter erected within the fire limits, and the roofs of all brick or stone buildings hereafter erected within the City and County of San Francisco shall be covered with either metal, slate, tiles, terra cotta, or asphaltum, laid over felt, provided however that said asphaltum and felt shall be laid over a surface of either sheet asbestos, at least one-sixteenth (1-16) of an inch thick, tiling or other fireproof material, and shall in addition be covered with at least three-fourths (¾) of an inch of gravel screened through a screen the meshes of which shall not exceed one-half (½) of an inch square, to protect said roof of building from fire.

In Board of Supervisors, San Francisco, June 8, 1897.

After having been published five successive days, according to law, taken up and passed by the following vote:

Ayes—Supervisors Devany, Haskins, Delany, Sheehan, Lackmann, Morton, Britt, Smith, Rivers.

Excused from Voting—Supervisors Dodge, Rottanzi, Clinton.

This Amendment was vetoed by his honor, Mayor Phelan and returned to the Board on June 16th on the ground that such an ordinance savored too strongly of class legislation and was giving the members of one trade the power to make

the price of the labor of another. Despite the objections of the Mayor the order was taken up at the meeting of the board on June 28th and finally approved and passed by the following vote: Ayes—Supervisors Devany, Haskins, Delany, Sheehan, Lackmann, Rottanzi, Britt, Smith, Rivers. Noes—Supervisors Dodge, Morton, Clinton.

The Amendment, so it is claimed was prepared in the interest of the metal roofers of this city and was passed in direct opposition to numerous protests from property owners and the Asphaltum Roofers' Association; they are the most directly interested; as it is certainly an attempt to make asphaltum roofs less popular amongst owners owing to the additional cost, by the provision calling for asbestos or other fireproof lining beneath the felt. As this paper is committed to the defense of all home industries and home products, and as asphaltum is a very important product of this State, it was deemed proper to investigate the matter. The following interviews with some of the leading men in the Asphaltum Roofers' Association show that the sentiment amongst them is that they have been treated unjustly in the matter.

The Paraffine Paint Company is well and favorably known almost all over the entire civilized world, especially for their wood preserving preparations and fireproof roofing felt, and the universally known P. & B. Paint, which is conceded by all to be the greatest preservative paint ever discovered. The company has also been very successful with their pile covering material.

It is now nearly twelve years since this company prepared some of the piles for the Tiburon wharves and about three years ago they were inspected and found to be almost as perfect as when driven.

They are also interested extensively in the roofing business and also ship large quantities of refined asphaltum from their works, about 150 tons being exported by them to New York and Hamburg every year.

Mr. S. C. Irving, the manager of the company, who is also chairman of the Asphaltum Roofers' Association, when seen at the office of the company, 116 Battery street, expressed himself freely in relation to the ordinance and denounced it most forcibly as class legislation and against the interests of a particular line of trade, as well as a large number of taxpayers.

"All of the best buildings," said he, "were being covered with asphaltum and the metal workers commenced to kick, and backed by the International Metal Workers' Union and by the friendship of certain members of the Board of Supervisors, succeeded in having this ordinance passed. If allowed to stand it will add about \$2.00 per square to the cost of asphaltum roofs, making them as expensive, if not more so, than tin; by this means, the tin roofers think they can retard the growth of our trade, besides giving the California asphalt mining industry a slap, for the benefit of imported tin. Last year we mined in this State \$600,000 worth of asphaltum and that amount could be easily doubled if we had the market for it here. We filed a protest with the Board from property owners, signed by the largest real estate owners in the State, among which may be mentioned the following, as showing the class of taxpayers who favor our roofs: Union Iron Works, Crocker estate, Floyd estate, Sharon estate, Blythe estate, Pacific Imp. Co., Union Oil Co., etc.—but all to no avail."

Upon invitation, Mr. Irving appeared before the Board of Supervisors, who had agreed to grant the asphaltum men a hearing, but he was refused that simple courtesy; he, how-

ever, forwarded to the individual members copies of his argument against the adoption of the ordinance, in which he ably expressed himself as follows:

SAN FRANCISCO, June 8, 1897.

To His Honor, the Mayor, and the Hon. Board of Supervisors of the City and County of San Francisco.

GENTLEMEN:—As representative of the Asphaltum Roofers of this city, as representatives of thousands of dollars of capital invested in the roofing business, as representative of over one hundred workmen employed by the Asphaltum Roofers, I desire to emphasize the protests which have been submitted to you to-day concerning the proposed change in that part of the fire ordinance which relates to the covering of roofs.

Asphaltum roofs have been used in this city for more than thirty years, and a large percentage of the wholesale business portion of San Francisco is roofed with them, and never during that long period has the Fire Department, the Fire Underwriters or the property owners of San Francisco complained of them as being a menace to the safety of the city.

In the large cities of the East the fireproof qualities of an asphaltum roof are so thoroughly recognized that in Boston, Philadelphia, New York and Chicago, it is estimated that over 90 per cent of the business blocks, warehouses, mills and factories are roofed with asphaltum roofs. For more than thirty years the Underwriters of the United States have in their table of rates made no distinction between buildings covered with asphaltum.

In fact, gentlemen, to day among the better class of architects, among the most careful property owners, the asphaltum roof holds a firmer position than it ever did, and it is for this reason that the opposition on the part of the metal workers to this class of roof has been developed.

It cannot be claimed for a minute that the metal workers and the importers of English tin are the only persons interested in the prevention of fires in San Francisco. The three classes of citizens who are most deeply interested in this subject are the property owners, the fire underwriters and the fire department.

The property owners have not asked for any change in the ordinance. We have submitted here a protest signed by property owners representing millions of dollars of taxable property in San Francisco. These property owners express themselves as being satisfied with the present ordinance.

The fire underwriters of San Francisco state that so far as their rules are concerned a building is a first-class building where all its exterior walls are built of brick, stone, adobe or concrete, and has a metal, slate, tile or composition roof.

The fire department has not asked for a change to be made in this ordinance. Chief Sullivan has submitted his report to you, in which he states that during his long experience he has not known of a fire being communicated to buildings through asphaltum and gravel roofs.

To all these citizens referred to above, the present fire ordinance is satisfactory. This fire ordinance was the result of careful investigation carried on by the heads of the fire department for a number of years, and after consulting the fire ordinances of the different cities of the United States, and, if I mistake not, of Europe and Australia.

In the proposed change your fire committee had added as a prerequisite to the lawful laying of an asphaltum roof the use of a sheet of asbestos 1-16 of an inch thick. This requirement is unjust both to the asphaltum roofers and to the property owners of San Francisco. Its addition does not in-

SOCIALISM AND COMMERCIAL ART.

crease the durability of an asphaltum roof, nor does it add to its fire proof qualities, but it does add to the cost of the roof, and is an unjust tax on the property owners who desire to have their buildings covered with an asphaltum roof.

If, however, this asbestos sheet is deemed essential by your Honorable Body under an asphaltum roof, experience shows that it is doubly necessary under a metal roof.

As shown by the disastrous fire which took place not long ago, where the fire is under the metal, the solder of the joints soon melts and the metal sheets part and create draughts, which add to the fury of the flames. Had that building been covered with an asphaltum roof the roof would not have opened up, but would have remained intact until its supports had burned away, and then would have fallen with a crash, smothering the fire, and aiding the fire department in controlling the situation. That this would have been the result is shown by the statement made by Fire Marshal Swence of Chicago, who is the leading fire chief of the United States. He states: "I have seen all kinds of roofs tested and will say the standard Composition and Gravel roof from my experience will resist fire both inside and out more successfully than any other kind of roofing in use, except tile and brick when laid over a foundation of felt and composition. Taking all things into consideration, I think firemen can handle a fire more successfully under a gravel roof than under any other kind of a roof, except as above stated. The superiority of gravel roofs over those of metal placed over boards is best seen however when the fire is from the inside, in which case it not only serves to hold the fire in the building, but even when the support of the roof is completely burned away, the composition roofing in falling serves to smother the fire, while metal becomes loose and unsoldered under very little heat."

You, gentlemen, as property owners of San Francisco, and as citizens of the State of California, are anxious to promote the development of home industries, and yet the passage of this ordinance would mean to a large extent the destruction of vested interests, which employ a great number of men and keep considerable sums of money in circulation in this State, for not only do you discredit these products here, but you also discredit them wherever they may be shipped.

To take the place of these home products, you propose to compel the use of a foreign product, and a product which is hostile to this State's welfare, and for no other reason apparently than because a small class of self-interested individuals has asked for this change, individuals who are not interested in the safety of the City of San Francisco other than as far as it contributes to their private interests.

Now, gentlemen, in view of the statements made above, does it seem fair and just to us asphaltum roofers to pass an ordinance which is injurious to our interests and the interests of our clients, and for the benefit of another and smaller class of citizens? We think not, and we firmly believe that if your Honorable Body will carefully consider the case, it will deem that the best interests of this city and of the citizens of this city will lie in the maintaining of the present fire ordinance in relation to the covering of roofs.

We do not come here seeking your charity, but we do come here as the representative of a legitimate industry seeking justice.

Thanking you for the courtesies shown, we respectfully submit our case.

Respectfully submitted,
S. C. IRVING,
Chairman Asphaltum Roofers Ass'n.

—San Francisco Contractor.

AMONGST certain of our opponents no argument is more popular than that the advent of Socialism will mean the extinction of the artistic, a statement deduced from the fact that the Socialist propaganda generally ignores or contemns what is regarded as art in the present day. Such opponents, by seeming to prove their case so readily, doubtless influence the listening portion of an audience, and have a somewhat demoralizing effect even upon some Socialists. In the interest therefore, of the truth that looks below the surface of things, and to prove the unsoundness of this recurrent argument, it is necessary to enter somewhat fully upon the relationship which Socialism bears to the art of all time, as compared with that of the passing moment.

The stock answer to the statement is well known—that, whereas at present individuality is cramped into a groove and personal aspirations thwarted, Socialism will free both. The idea being that, while everyone must earn his living at the outset, the length of such working hours will be shortened, and facilities for development in any direction increased. It is further agreed that when an individual has shown such aptitude for producing work grateful to the senses as to fairly entitle him to be called an artist (in the specialized sense) he may be freed partly or entirely from the daily labor of "making his living," in order to devote his working hours to the beautifying of the public surroundings. Now, I consider that answer to be, in its way, perfect. Certainly it is merely general, but so is the criticism that called it forth. That which follows is put forward in the hope of affording a practical proof of this conclusion.

My first premise, that the opponent who makes use of the argument quoted has in his mind only what is technically called fine art (music, painting, sculpture and so forth), may readily be granted, the loose phraseology of the time ignoring the claims to that title of most forms of art other than these. That every town and village, every house and street and garden, should illustrate either the collective or individual artistic sentiment of man; that every room in its furniture, and every human being in its dress, remind one of the loveliness of humanity, or rather act unwittingly on the minds of people by sheer fitness, does not ordinarily, I am afraid, enter his thoughts. Yet in this lies the very reason of the existence of art at all. There is no veritable sense of art in a community which conceives it to be a specialization, a thing for the edification of mere individuals, and yet it cannot be denied that at the present day art, the original property and birth-right of everyone born into the world, has become a matter of deep interest to a few, and utterly unknown to the many. This is a complete reversion of the proper condition of things, and just as Socialism has as its chief end the readjustment of the material means of life in order to properly supply the just needs of all, so it must also readjust the distribution of interest in things beautiful. It needs, then, but a hint to show that, as Socialism is aiming at the root of the material capitalist system, it is (probably unconsciously) undermining all the art of the present day based upon that system. The parallel holds still further. Many Socialists speak of the coming communal state as a kind of reversion of what once was. It is pointed out that in savage communities the material necessities of life were held practically in common, and that state—modified by the advance already made—it is desirable to again realize through Socialism. At least one notable Socialist has put

his hand to it that in the realm of art also, that which has been must be again. The artistic Messiah who has so often visited the world, each time to die the death, must yet come again in a sort of glory to be lord over the earth. Both arguments are futile. The savage communal state can have no vital connection with the Social-Democratic community. Medieval art has gone its way, and not a hundred Morrisises can make it the art of the age of true freedom. Let us descend to particulars.

In its architectural design. What have we to boast of here? Miles upon miles of the most hideous villadom conceivable, piles of great buildings with no vestige of original idea—being nothing but senseless travesties of classic work, and finally, the most satanic erections of any historic age whatever, the four-square respectable abominations they designate "workmen's dwellings." This is the age that imagines itself imbued with the art of all the ages combined? The thing is a lie, a sham, of a part with the whole great lie upon which the pinchfork edifice of commercialism rests, and as certain to pass away in due course as filth and putrefaction is bound to be dissipated by pure air and bright sunlight in its turn. It will be said, and with perfect truth, that, admitting all this sham art and commercial hideousness, there are still true artists and earnest workmen doing good work in the world, and by their efforts should the time be judged. That is not so. True artists exist in spite of, not because of, commercialism. The fact that the "Banner of the Ideal" which they uphold is yelled at by the world until it is threadbare and outworn shows the nineteenth century artistic conceptions to be as sordid as its money-grubbing aim. By the time your earnest enthusiasts have forced their way to recognition and public acclaim, their fire has abated, their banner a mere wreck of what was, their place in the van taken by new spirits, who are trampled down in their turn. We do not find in the Athens of the Golden Age commercial companies exploiting their slaves by building "workmen's dwellings." They had slaves, and may have treated them ill, but this last great insult they did not—why? Solely because the national artistic instinct was too sincere and deep. Not because their "hearts" bled for the deserving poor (as the lords and ladies who live by the labors of those same poor, would say); not because their heads told them that clean houses meant a lower death-rate all round, but simply because an ugly building hurt the artistic eye—not of a few individuals, but of the nation as a whole.

A. W. POWELL,
London "Justice."

LEGAL DECISIONS.

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

TESTIMONY BY ARCHITECT AS TO MATERIALS USED.—In a suit against the owner of a house by one to whom the contractor has assigned his claim subject to the claims of subcontractors and materialmen, the owner set up a defense that he had, since such assignment, paid sums due for certain materials. The court held that after proof that all of one class of such materials were furnished

by a particular subcontractor, the architect might testify as to the quantity of such materials used in the house.
McCormick v. Sadler, Utah, 47 Pacific Reporter, 667.

WHAT WILL NOT REVIVE LIEN.—The right of a laborer to a lien upon a building lost by the lapse of time cannot be revived by subsequent labor upon the building not performed by virtue of the contract with the owner.
Darrington v. Moore, Sup. Jud. Ct. Me., 34 Atlantic Rep. 419.

"OWNER" IN LIEN LAWS.—A party in possession of real estate under a bond for a deed will be deemed "the owner" of same for the purpose of creating a mechanic's lien upon it, as against a subsequent mortgagee of the same party.
Mulvane v. Chicago Lumber Co., Sup. Ct. Kas., 44 Pacific Rep. 613.

NOTICE OF MEETINGS.

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

SOUTHERN CALIFORNIA CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
THEO. A. EISEN, Pres. ARTHUR B. BENTON, Vice-Pres.
WILLIAM C. AIKEN, Sec't. AUGUST WACKERBARTH, Treas.

WASHINGTON CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, regular meetings at 8 o'clock P. M., the first Friday of each month, except July and August.
JOS. C. HORNBLLOWER, Pres. JAS. G. HILL, Vice-Pres.
E. W. DUNN, JR., Sec. W. J. MARSH, Treas.

ASSOCIATION OF ARCHITECTS OF ARIZONA, meetings held at Phoenix, Arizona.
D. W. MILLARD, Pres. T. H. MADDOX, Vice-Pres.
W. R. NORTON, Sec. and Treas.

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
E. J. MOLERA, Pres. W. F. C. HASSON, Vice-Pres.
OTTO VON GELDERN, Sec. EDWARD T. SCHILL, Treas.

MASTER PLUMBERS' ASSOCIATION, meets every first and third Friday of each month at the Flood Building.
JAS. E. BRITT, Pres. J. L. E. FIRMAN, Sec.

BUILDERS' EXCHANGE, Directors meet first Friday in each month at Mission and New Montgomery.
OSCAR LEWIS, Pres. JAS. A. WILSON, Sec.

MASONS' AND BUILDERS' ASSOCIATION, meet first Friday evening of each month.
ADAM BECK, Pres. M. V. BRADY, Sec.

BUSINESS MOSAICS.

Mr. James, the Pacific Coast representative of the J. L. Mott Iron Works can congratulate himself upon the fact that his company being established in 1828 has done more advance and improve the various branches of manufacturing in which they are engaged than any firm in their line of business. In proof of this statement we have only to examine the stock of goods in their show room 27, Flood Building, and compare it with that of others in the same line of business—for both room or kitchen—you will find what you want of the best. The motto of the firm appears to be "We take the front rank let others follow." Call and examine for yourself and you will be convinced of the truth of this statement.

Mike—I want to buy a hat. **CLERK**—Fedora? **MIKE**—No, not for Dora for Dinny.

Dixon's Silica Graphite Paint—In an examination of the Maria Kip Orphanage a few days since we could not but reflect what an improvement would have been made in the appearance of the building had the above paint been used for the roof instead of a bright red paint that has already faded. The lasting quality of the roof would doubtless have been greater to say nothing of the improved appearance.

"Why do you laugh at his jokes? It isn't possible you understand them, is it?" "No. But if I don't laugh, he'd try to explain them."—*Brooklyn Life*.

Bradley Bros.—Cement Laundry Trays, manufactured of the best Portland Cement, guaranteed not to leak, crack or sweat, can be found at their factory, 53-57 Tehama street between First and Second, San Francisco.

She—I don't know what makes her so positive? **HE**—Her sex.—*Puck*.

One can hardly walk in any direction in this city but they will find the use of cement has increased to an enormous extent in the past few years—sidewalks, garden walks, foundations and bulkheads all demand its use. W. R. Grace & Co., 203 California street are the headquarters of this article; if you want Josson, White Star, Scale, Comet, or any of the best brands of Portland cement 203 California street is the place to find it.

Man (in barber shop)—I want a hair cut. **BARBER**—Why not have them all cut?

P. & B. Building Paper manufactured by Paraffine Paint Co., 116 Battery street, San Francisco. By the use of this paper you not only obtain a first-class building paper, the company claim there is none "just as good," but you patronize home industry, a doctrine that is becoming quite universal in our city where there is an increased desire to build up home manufacture and thus keep our money at home instead of sending it east for the benefit of eastern manufacture.

CITY BUILDING NEWS.

- A street near 7th Ave. Cottage; owner, Mrs. Mary Comasky; contractor, W. B. Kenny; filed, July 30; cost \$1200.
- Alvarado near Hoffman Ave. Cottage; owner, J. Heyman; cost \$1500.
- Brannan near 4th. Two-story frame; owner, Eliza Lamey; contractor, H. Munster; signed, July 15; filed, July 16; cost \$3800.
- Broadway street No. 1210. Two-story frame; owner, George Goodman; contractor, G. M. Salisbury; signed, July 14; filed, July 16; cost \$2000.
- Bush near Buchanan. Three-story frame; owner, Mrs. Bella Harris; architect, J. H. Littlefield; contractor, H. Jacks; signed, July 17; filed, July 21; cost \$3875.
- California and Maple. Three-story frame and brick; owner, Hospital for Children; architect, A. C. Schweinfurth; contractor, Daniel Sweeny; signed, Aug. 2; filed, Aug. 10; cost \$7572.
- California and Steiner. Three-story frame; owner, Israel Kashow; architect, Geo. A. Bordwell; contractor, B. F. Ellis; signed, July 20; filed, July 22; cost \$4461.
- California Ave. near Courtland. Three one-story frame cottages; owner, J. M. Comerford; cost \$3000.
- California and Laurel. Two-story frame; owner, Geo. F. Lyon; contractor, W. W. Rednell; signed, July 30; filed, July 30; cost \$4900.
- City Hall Ave. near Park Ave. Two-story brick; owner, Wm. B. Craig; architect, Rowell & Collins; contractor, James Geary; signed, July 28; filed, July 29; cost \$3000.
- Clay near Laurel. Two-story frame; owner, Walter S. Newhall; architects, Hermann & Swain; contractor, J. H. Simpson; signed, Aug. 2; filed, Aug. 4; cost \$3095.
- Congo street No. 118, Sunnyside. Cottage; owner, E. T. Picasso; builder, H. H. Easter; cost \$1200.
- Congo street No. 116, Sunnyside. Cottage; owner, F. Z. Angle; builder, H. H. Easter; cost \$1200.
- Colma Gulch. Construction of a levee to contain 26,000 cubic yards; owner, Spring Valley Water Works; architect, Engineer of Company; contractor, A. E. Buckman; signed, July 30; filed, Aug. 2; cost 20 cents per cubic yard.
- Diamond near 17th. Two-story frame; owner, Ida L. Dillon; contractors, Douglass & Co.; signed, July 30; filed, July 31; cost \$1500.
- Dorland near Sanchez. One-story frame; owner, J. Egan; architect, O. Everett; contractor, R. Currie; signed, July 28; filed, July 28; cost \$1650.
- Eddy and Franklin. Changing two-story residence into two separate buildings; owner, Callaghan Estate Co.; architect, C. M. Rousseau; contractor, G. C. Nall; signed, Aug. 3; filed, Aug. 5; cost \$4975.

Turk near Mason. Excavation, brick work, etc., for three-story brick; owner, Geo. G. Burnett; architect, James E. Wolfe; contractor, M. V. Brady; signed, Aug. 3; filed, Aug. 4; cost \$5000.

Turk near Mason. Steel beams, etc.; owner, G. G. Burnett; architect, Jas. E. Wolfe; contractor, California Iron Construction Co.; signed, Aug. 6; filed, Aug. 9; cost \$1460.

Union and Vincent. Two-story frame; owner, Jas. B. Wiseman; architect, D. C. Coleman; contractor, D. P. Benson; signed, Aug. 3; filed, Aug. 4; cost \$2310.

Eddy and Mason. Stage in the Olympia Theatre; owner, A. Walterstein; architect, Salfeld & Kohlberg; contractor, H. Behrens; signed, Aug. 4; filed, Aug. 5; cost \$1500.

Eighteenth near Collinwood. Cottage; owner, Mrs. Clara Bennett; contractor, G. L. Bergren; signed, June 19; filed, July 15; cost \$1048.

Eighteenth near Diamond. Frame building; owner, M. J. Barto; contractors, Sarcander & Thompson; signed, July 10; filed, July 17; cost \$1200.

Ellis near Gough. Two-story frame; owner, Matthew Schwann; contractor, C. Zwiernik; signed, July 16; filed, July 16; cost \$5500.

Fell and Lyon. One brick and frame residence; owner, T. J. Clunie; architect, Wm. Grier; contractor, Wm. Linden; signed, July 20; filed, July 20; cost \$1812.

Fell near Cole. Plumbing, gasfitting, etc.; owner, M. Keating; architects, Cahill & Condon; contractor, G. C. Sweeney; signed, July 20; filed, July 20; cost \$1439.

Filbert and Bay. Addition to wharf; owner, Board of Harbor Commissioners; contractor, J. A. McMahon; cost \$965.

Filbert near Steiner. Two-story frame; owner, Mrs. Margaret McBride; contractor, H. T. Grieb; signed, Aug. 6; filed, Aug. 7; cost \$2000.

Flood Ave. No. 16, Sunnyside. Cottage; owner, J. D. Moreland; builders, McCarthy Co.; cost \$1230.

Folsom near 23d. Alterations and additions; owners, John A. and Wm. McCormick; architects, Hermann & Swain; contractors, Smith & Ely; signed, July 31; filed, Aug. 2; cost \$710.

Fourth Ave. near Clement. Cottage; owner, William Alpen; architect, L. T. Fenn; contractors, Weste & Fenn; signed, June 12; filed, July 17; cost \$1536.

Francisco near Dupont. Cottage; owner, W. H. Milestone; contractors, Morgan & Jackson; signed, July 8; filed, Aug. 3; cost \$1525.

Front and Pacific. Two brick ree lovens; owner, Standard Biscuit Co.; architect, H. B. Magee; contractor, J. A. Wilson; signed, July 17; filed, July 17; cost \$3885.

Geary and Stockton. Interior store finish, etc.; owner, City of Paris; contractors, Home Manf. Co.; cost \$12,000.

Grove near Fillmore. Two-story frame; owner, John L. Koster; architects, Martens & Coffey; contractor, C. Schuit; signed, July 15; filed, July 15; cost \$10,300.

Golden Gate Ave. near Lyon. Two-story frame; owner, Louis Klefer; architect, C. M. Rousseau; contractor, R. J. Favert; signed, July 16; filed, July 16; cost \$3230.

Golden Gate Ave. near 1st Ave. One-story frame; owner, Harry Simpson; contractor, A. Dahlberg; signed, July 26; filed, July 26; cost \$1085.

Greenwich near Stockton. Two-story frame; owner, Mrs. L. Thiel; architect, G. A. Berger; contractor, J. B. Penz; signed, Aug. 5; filed, Aug. 6; cost \$2400.

Hardy near 16th. Two one-story frame cottages; owner, J. M. Comerford; cost \$3000.

Hancock near 18th. Inside finish, painting, etc.; owner, T. A. Birmingham; contractor, R. Fahy; signed, Aug. 9; filed, Aug. 10; cost \$510.

Harper near 30th. Cottage; owner, M. S. Moe; contractor, Ed. Stephens; signed, Aug. 6; filed, Aug. 11; cost \$1500.

Hoffman Ave. near 24th. Two-story frame; owner, Christina M. Dettner; contractor, L. F. Williams; signed, Aug. 3; filed, Aug. 4; cost \$1225.

Hyde and O'Farrell. Alterations and additions; owner, Mark Sheldon; contractor, C. W. Duffie; cost \$1000.

Jackson near Buchanan. Mantels and wood finish for two-story frame; owner, L. and E. Emanuel; architect, W. H. Lillie; contractor, L. Stassberger; signed, July 16; filed, July 31; cost \$1838. Plumbing; contractors, Ickelheimer Bros.; signed, July 6; filed, July 31; cost \$1340. Painting; contractor, J. H. Keefe; signed, July 7; filed, July 31; cost \$1215.

Joost Ave. No. 42, Sunnyside. Cottage; owner, Mrs. Laura J. Woods; builder, H. H. Easter; cost \$2000.

Joost Ave. No. 215, Sunnyside. Cottage; owner, W. A. Hicks; builder, H. H. Easter; cost \$1200.

Kearny and Sutter. Plastering, etc.; owners, Adams Co.; architect, H. A. Schulze; contractor, Jesse E. Steere; signed, July 22; filed, Aug. 2; cost \$2558. Electric lighting; contractor, Electric Lighting Co.; cost \$1920. Painting; contractor, R. J. Goltz; cost \$2750.

Laguna near Filbert. Two-story frame; owner, Joseph Reich; architects, Salfeld & Kohlberg; contractor, L. M. Weisman; signed, July 17; filed, July 19; cost \$1540.

Leavenworth near Filbert. Alterations and additions; owner, F. Passe; architects, Salfeld & Kohlberg; contractor, H. Behrens; signed, July 29; filed, July 31; cost \$2300.

Lombard near Gough. Cottage; owner, H. Krause; architect, C. A. Meussdorffer; contractor, F. L. Beach; signed, July 12; filed, July 17; cost \$1400.

Market and Spear. Carpenter work, etc., for five-story brick; owner, W. W. Young; architects, Kenitzer & Barth; contractor, A. C. Hussey; signed, July 21; filed, July 21; cost \$8126. Brick and terra cotta work; contractor, Richardson & Gale; cost \$14,570. Steel and iron work; contractors, Western Iron Works; cost \$26,370. Terra cotta work; contractors, Gladding, McBean Co.; cost \$8250. Concrete work; contractor, G. Goodman; cost \$11,580. Excavations, piling, capping, etc.; contractors, Healy, Tibbitts & Co.; cost \$10,572. Cut stone work; contractors, Raymond Granite Co.; cost \$11,265. Plumbing and gasfitting; contractor, W. F. Wilson; cost \$1080. Fire proof floors; contractors, San Francisco Fire Proofing Co.; cost \$9947.

Market and Noe. Seven stores and a church tower; owners, Trustees Trinity M. E. Church; contractor, John O. Dyar; signed, July 15; filed, July 16; cost \$3125.

Market near Taylor. Three-story brick; owners, Silverman Bros.; architect, M. J. Lyon; contractor, W. J. Field; signed, July 24; filed, July 27; cost \$1000.

Market near 4th. Alterations to Emporium Building; owner, The Emporium and Golden Rule Bazaar; architects, Pissis & Moore; contractor, F. W. Kern; signed, Aug. 2; filed, Aug. 3; cost \$2515. Fixtures in stock room; contractor, Fred Miller; signed, Aug. 2; filed, Aug. 3; cost \$3125.

Maple street. Two-story frame; owner, M. Mamuth; architects, Kenitzer & Barth; contractor, G. Peterson; signed, Aug. 6; filed, Aug. 11; cost \$2545.

Montgomery and Sutter. Plumbing, etc., for three-story brick; owner, A. L. Whittell; architects, Townsend & Wyneken; contractor, W. E. Wilson; signed, July 15; filed, Aug. 3; cost \$1242. Galvanized iron work; contractor, J. Guilfofy; cost \$1000.

Montgomery street No. 419. Repairs; cost \$1000; days work.

Mission near 23d. Interior copper wainscoting; owner, Mission Masonic Society; architects, Hermann & Swain; contractor, Jas. Guilfofy; cost \$1200.

Pacific Ave. and Buchanan. Plumbing, etc.; owner, Albert Meyer; architect, Salfeld & Kohlberg; contractor, H. Williamson; signed, July 24; filed, Aug. 2; cost \$2014.

Peoples' Homestead Assn. Cottage; owners, Joseph J. Magee and Eliza J. Magee; contractor, T. F. Mitchell; signed, July 30; filed, July 30; cost \$1226.

Powell Ave. near California Ave. Alterations; owners, Lawrence Boyle and wife; contractor, A. O. Brown; signed, July 1; filed, July 15; cost \$1240.

Powell and Geary. Galvanized iron and tin work; owner, Mrs. Charlotte F. Clark; architect, P. Schwerdt; contractor, J. Guilfofy; cost \$1500.

Sacramento near Spruce. Two-story frame; owner, C. P. Fonda; contractor, P. River; signed, July 19; filed, July 20; cost \$2009.

San Bruno Road near Erie. Cottage; owner, John E. Eberle; architect, D. C. Coleman; contractor, J. Kenealy; signed, Aug. 2; filed, Aug. 4; cost \$1145.

Scott near Fulton. One-story frame; owner, R. B. Kittrege; architect, W. O. Banks; contractor, A. G. Johnson; signed, July 27; filed, Aug. 3; cost \$1750.

Second Ave. near Clement. One-story frame; owner, Charlotte S. McLaughlin; contractor, M. C. Power; signed, July 15; filed, July 18; cost \$1600.

Seventh and Mission. Excavation for Post Office; owner, United States of America; architect, United States Architect at Washington; contractor, San Francisco Bridge Co.; cost \$36,830.

Sixteenth and Mission. Alterations and additions; owners, Pattison Co.; architects, Martens & Coffey; contractor, K. Trost; signed, July 15; filed, July 17; cost \$5185.

Spreckels Ave. No. 1, Sunnyside. Cottage; owner, H. H. Easter; cost \$1200.

Stevenson near 13th. Two-story frame; owner, P. Strickert; architects, Salfeld & Kohlberg; contractor, L. Thoenges; signed, July 15; filed, July 18; cost \$2320.

Stevenson near 3d. Concrete work for powerhouse; owner, Claus Spreckels; architects, Reid Bros.; contractor, Gray Bros.; signed, June 28; filed, July 17; cost \$3020; with addition of 15 cts. persquare foot for basement floor.

Stevenson near 3d. Excavations, stone and concrete work for two-story brick; owner, San Francisco Gas and Electric Co.; architect, Engineer of Co; contractor, J. H. Wilson; signed, July 28; filed, July 29; cost \$6917. Carpenter and mill work; contractors, Campbell & Pettus; signed, July 28; filed, July 29; cost \$1188. Roofing, etc.; contractors, Henshaw Grant Co.; signed, July 28; filed, July 29; cost \$375.

Tenth near Harrison. Two-story frame; owner, Mrs. Susan McClasky; contractor, John Flaherty; signed, July 26; filed, July 26; cost \$1700.

Thirteenth Ave. near Lake. One-story frame; owners, Henry and Augusta Pape; architect, H. Hess; contractor, A. G. Anderson; signed, July 17; filed, July 24; cost \$1804.

Thirteenth near Stevenson. Two-story frame; owner, Mrs. Julia E. Spinney; architect, C. M. Rousseau; contractor, P. L. Roberts; signed, July 31; filed, July 31; cost \$3050.

Thirtieth near Merced. Cottage; owner, Chas. T. Jurgens; architect, C. Koenig; contractor, Chas. J. N. Koenig; signed, Aug. 3; filed, Aug. 4; cost \$1220.

Turk near Scott. Additions; owner, H. Miller; contractor, H. Behrens; cost \$1000.

The California Architect and Building News.

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

OFFICE, 408 CALIFORNIA STREET,

VOLUME XVIII.

SEPTEMBER 20th, 1897.

NUMBER 9.

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

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

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

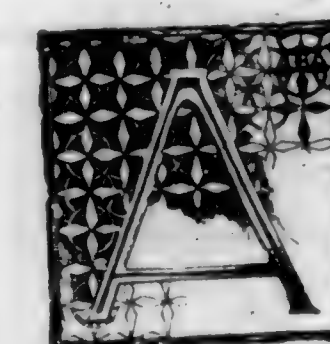
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ZOOLOGICAL Garden in the City of San Francisco is no doubt a very good idea and the wish for it should be gratified at as early a date as possible. All cities of the size of San Francisco should be provided with such gardens.

But a greater desideratum yet is the provision of small gardens for recreative purposes scattered amongst the residence part of the city. Fortunately the layers out of the city were farseeing and liberal and provided a number of these in the northern half of the City but for some reason or accident left the Mission district unprovided for. Now this matter wants attending to at once, before the prospective rise in real estate takes place—there is no doubt there are some vacant blocks yet left, that could be had cheap—e. g., there are some steep hilly places which it is very costly to cut down so as to make possible for dwellings; these could be

made very picturesque parks. However the agitation for any grounds that involve any large amount of money now is out of place—for the wants of our sick and destitute are of paramount importance over any matter of mere pleasure or even scientific interest. The accommodation required foremost at this time is a good public hospital built with all the appliances and arrangements which characterize a modern hospital, and made such a place that citizens should be able to go there without fear and dread as they go to the present one.

Meanwhile, notwithstanding the shocking state of our present hospital, much could be done in regulating it; and those unfortunate enough to need its use should be treated humanely and courteously and not be at the mercy of any tyro of a medico who may have charge of a patient's case, neither should his recovery be jeopardized for the sake of an exhibition for medical students.



THE FOLLOWING editorial, under the title "Peddling Bids" recently appeared in the *California Contractor*.—"Sub-contractors have a very just cause of complaint in a system which appears to have recently grown up among contractors of pressing or sweating their sub-contractors in a novel and unprofessional manner. They call for bids on a certain job and receive a number from sub-contractors. They then take the lowest bid and go to the man who is next lowest and showing it to him, ask if he cannot get down a notch lower than that; this particular sub-contractor consents to give him a lower bid. This bid is then used to operate the same way on the first mentioned contractor, who figures his bid down lower still and so gets the job, not, however, till about all the profit is squeezed out of the job and the figures at which the work is taken come to be dangerously near presenting a margin of loss to the contractor.

"Of course no reputable contractor would do such a thing as this yet the fact is that it is done by some. It is difficult to see how this sort of business can be prevented except by ascertaining the identity of those contractors who do this thing and letting them become known, then securing an agreement among the sub-contractors not to figure on any of their jobs. Perhaps if they were known, the architects might hesitate before they would award a contract, for one who would act quasi dishonestly would not have far to go to act dishonest all the way, should the opportunity be favorable. The understanding, when a bid is handed in, of course, is that each man is to stand upon what he has offered and if the sub-contractors who are solicited to give a lower bid would resolutely refuse to do so, of course that would settle it. But the severe competition in business these time forces men to take work almost for the sake of keeping at doing something and they are loath to let any opportunity go however scant such may be. Peddling bids is one of the products of the times. In good times men would neither attempt it, nor respond to the solicitations."

The evil complained of by our contemporary is an evil inherent in our system of so-called civilization. It is the logical and inevitable result of competition, and as long as competition rules our business life as it does to-day, there will be no hope of a better condition of things.

The work undertaken by the original contractor is frequently obtained only through similar means to those he in turn is forced to use towards his sub-contractors. Business is done on the principal of "Do your neighbor, or he'll do you." A modern novelist has just written a book to prove that a christian life cannot be lived under existing conditions. The fact is too self-evident to need argument. Such being the fact, is it just to blame the individual instead of the system of society that is the true cause of the trouble. Suppose nine-tenths of the contractors and a similar proportion of the sub-contractors should agree to change their methods and stand out for a proper price, what would be the result? Simply that the other one-tenth would secure a practical monopoly of the work. Nor is this true of any one line of business only; it is universal. Read the following statement by John P. Altgeld as another illustration:

"During the strike of 1894 one of the largest operators in Illinois stated that he had some excellent men in his employ, who had families to support, who were sober and industrious, and who had not been able to make over \$8 a month for a year past. The majority of the operators were not to blame; they had to compete in the market in order to sell their coal; they had their money invested in mines and in mining machinery; they found that a few unscrupulous and conscienceless men had taken advantage of the hunger of the miners and got them to go to work at starvation wages, and were thus able to put their coal upon the market at

greatly reduced prices. This forced the honest, humane, honorable men engaged in the mining business to sell their coal at a similar price or go out of the business, and the result was they likewise had to reduce wages. So that it was the unscrupulous and conscienceless men who fixed the wages."

PORTLAND CEMENT.

BY RICHARD TAYLOR—READ BEFORE THE GORDON COLLEGE SCIENCE CLUB.



ALTHOUGH Portland Cement is the subject I intend making a few remarks about, I will, in the first instance, leave the word *Portland* out, and say a few words about cement. Cement is a substance which is capable of assuming a liquid form, and of being applied between the surfaces of bodies so as to unite them firmly when solidifying, such as glue, paste or shellac, but the cement I wish to speak about is one which has for its chief constituent carbonate of lime; in fact carbonate of lime and cement are so closely allied that it is impossible to speak of one without touching upon the other; therefore I will first of all direct your attention to carbonate of lime.

Carbonate of lime occurs as a mineral in all geological ages, and it is very widely and abundantly distributed all over the globe. In its natural state it is largely used for building purposes, and when burnt it becomes quicklime, which is used for hundreds of different purposes in our arts and manufactures.

Limestone is divided into many qualities but for the present purpose I will only make three divisions:—

- 1st. The fat or rich.
 - 2d. The poor.
 - 3rd. The intermediate or hydraulic.
1. Fat or rich lime is that which is most free from foreign matter; when water is poured on a piece it hisses, crackles, and swells, gives off a quantity of hot vapor, and quickly falls to pieces. It increases two or three times in bulk, and if placed in a vessel of water, it falls to the bottom and always remains soft.
 2. Poor lime does not increase in bulk when water is poured over it, in fact water scarcely affects it at all; neither does it harden the water.
 3. Intermediate or hydraulic lime develops no heat when water is poured over it, nor does it increase in bulk; when, however, it is placed in a vessel of water it becomes a hard solidified mass after a few days, and will continue to harden for months.

To summarise these classes, we have

1. The fat or rich, which does not harden in water, and which will contain over 90 per cent of carbonate of lime.
2. The poor, which is in no way affected by water, and contains less than 50 per cent of carbonate of lime.
3. The intermediate or hydraulic, which when burnt and

ground sets in a hard mass when put in water, and contains from 70 per cent to 80 per cent of carbonate of lime.

Smeaton is undoubtedly the engineer to whom we are mostly indebted for our knowledge of hydraulic lime. His great work in rebuilding the Eddystone Lighthouse necessitated him using a lime that would set and become hard in water, and up to that period it was a somewhat doubtful point as to which limes did set in water; one of the commoner ideas was that the harder the limestone, the harder the mortar would ultimately become. Smeaton first tried experiments with a rich lime of undoubted repute for building purposes, but he found that when it was exposed to the action of water it was quite useless. During his searches in the various lime districts he stayed one day with a farmer who told him that the lime in his district was quite unfit for agricultural purposes, and what they used had to be carted a distance of forty miles. On enquiring as to the reason he was told that when the local lime was ground and put on the land it became quite hard after the first shower of rain. This was sufficient to give Smeaton a clue to work on, and he was not long in carrying out a series of experiments, which satisfied him that it was only the intermediate or hydraulic lime which became hard in water. He soon found that limestones containing about 70 parts of carbonate of lime were best suited for hydraulic purposes, and that the remaining 30 parts were an argillaceous clay. Further experiments were then made to see if it were possible to make an artificial hydraulic lime, and for this purpose a fat rich lime was taken and clay added until it became an intermediate lime—in other words, clay was added to a limestone of 90 per cent until it only contained 70 per cent of carbonate of lime. This, on being burnt and ground, set hard under water and gave a proof to Smeaton that the hydraulic properties of lime were due to its containing certain proportions of clay. These were the experiments that formed the foundation of our present knowledge and method of manufacture of cement and Portland cement.

About this time Roman cement came into use, and this is nothing more or less than an intermediate lime containing, perhaps, rather an excess of clay. It is made from a natural stone found on the east coast of England near Harwich, and called Septaria. There are large deposits of this stone all over England, and there is a small quantity of it to be found in Port Phillip Bay, at Mornington. Lias lime or Lias cement is another intermediate lime, which probably more closely resembles Portland cement in its constituent parts. None of these natural hydraulic limes were burnt at a high temperature; they were usually burnt at about the same temperature as ordinary lime. If by any chance any of the material was overburnt, it was thrown on one side as useless, so it was the aim of the burner to get as little overburnt material in his kiln as possible.

About the year 1824, a bricklayer name Aspdin, of Leeds, carried out a number of experiments with artificial hydraulic lime; by chance he ground up some of the overburnt parts—pieces which were burnt to a cinder and which, up to that time, everyone had been careful to exclude. He was surprised to find that these pieces not only set when put in water, but that they set infinitely harder than when only burnt to the same degree as ordinary lime. He was so satisfied that he immediately took out a patent for the manufacture of artificial hydraulic lime, and in his specification, when describing the process, he calls it "Portland cement." This is the first mention we have of Portland cement, and this industry, started in so small a way some sixty years ago

is now one of the great commercial industries of the world. In its early days it had many difficulties to contend with, especially from the makers of Roman cement, who opposed it by every means that lay in their power. Cases occurred where it failed to do its work, and in more than one instance it gave disastrous results, houses and walls that were built with it collapsing, until people were suspicious and afraid to use it. However, difficulties and troubles were one by one overcome, and many engineering feats which have since been executed, could never have been carried through without its aid.

Portland cement as manufactured to-day is in principle the same as that made by Aspdin, the only difference being in the details, but it is these details which constitute the difference between a good and a first-class cement. The name Portland cement is altogether misleading, and a better term would have been hydraulic or water cement. The name comes from its similarity in color and texture to a building stone extensively quarried at Portland, in the south of England.

To briefly summarize the process of manufacture, I will describe the method carried out at Fyansford as being in our immediate neighborhood. A rich lime containing about 90 per cent of carbonate of lime is thoroughly and carefully mixed with clay, and water is added for the purpose of moulding it into bricks. These bricks are dried and burnt in kilns until they become vitrified; the vitrified bricks or "clinker" are ground, and the resulting powder is cement.

Having roughly gone through the mode of manufacture, we now come to the point when it is delivered to the consumer, and also to the time when testing is requisite.

The tests generally specified are:

- 1st. Tensile strain.
- 2d. Soundness.
- 3rd. Fineness.
- 4th. Chemical test.

There are other tests, perhaps as equally important, but these four are the commonest.

The first test is carried out by making briquettes, which have a sectional area of one inch in the smallest part. These briquettes have to stand a breaking strain of 350 lbs. in 7 days, and 550 lbs. in 28 days. Some engineers require only 300 lbs., while others demand 400 lbs. in 7 days, but 350 lbs. and 550 lbs. will represent a fair average of the standard requirements. Care and manipulation are requisite in making briquettes, and I am sorry to say that instances have come under my notice in this colony where so-called experienced testers have not been able to get a breaking strain of one single pound out of a briquette, while, with proper handling, briquettes made from the same bulk, on the same day, in the same room, and with the same appliances gave a strain of over 400 lbs.

Briquettes are made in the following way:—the cement is gauged with a minimum of water, say from 15 per cent to 20 per cent, and it is put in brass moulds with all speed; the more quickly this operation is performed the better will be the results. For the first 24 hours they are covered with a damp cloth or put in a zinc-lined box—in any case they must not be put in the sun, or wind, or before the fire, so that the moisture can be dried out of them. At the end of the 24 hours they are put in water, where they remain until broken. When removed from the water for the purpose of testing, break them at once; if this operation is delayed an hour or two the breaking strain will be reduced. Such items as the temperature of the air, and of the water used, and the

speed with which the briquettes are made, affect the breaking strain.

I expect some gentleman present will say what is the use of all these tests; it is impossible to use cement in actual practice under such conditions, and it is unnecessary to get a cement giving a breaking strain of 550 lbs. to join two bricks together, when the bricks themselves are not half as strong. Now the object to be gained is to find out the very best results that can be obtained from a certain cement under the most favorable conditions. The foregoing are the standard tests, and provided ever sample is used in the same way, and under the same conditions, it is easy to get at the comparative values of the different brands.

It is a mistake to think that because a cement gives a high breaking strain at an early date it is therefore of more value than one which gives a low or moderate strain, for very often it is just the reverse. A cement that gives 650 lbs. in 7 days only gives 600 lbs. in 28 days, 550 lbs. in three months, and in this way gradually lose strength, until at the end of twelve or eighteen months it has all crumbled away, and has no more cohesion in it than sand. It is far safer to have a sample that will show a moderate strain at an early date, and slowly but continually increase in strength; say 350 lbs. in 7 days, 550 lbs. in 28 days, 700 lbs. in three months, and so on. High breaking strains are obtained by the admixture of a heavy percentage of lime; but it is quite possible to overstep the limit, and if your cement contains more lime than can be neutralized by the silicas, etc., you get free lime, which, while showing great strength to start with, ultimately disintegrates and rots the bulk away.

The test for soundness is an important one; it is carried out by making a small round disc, termed a "pat," about three inches in diameter and a quarter of an inch thick. Mix it with a minimum of water, work it up well, and put it on a piece of glass. This like the briquette, must be kept away from the sun, fire, or any hot dry place. At the end of 24 hours it is put in water and examined from day to day. If at the end of 7 days it shows no signs of cracks or blowing, you can pass it as sound; if, however, there are cracks, further examination is necessary to ascertain the cause. The chances are that the cement is too new and fresh, and if it is allowed to mature for a few days by spreading a sample out in a thin layer, these cracks will not appear with the next pats. If the cracks do occur again, be very chary about using the bulk.

Test for fineness. The usual specification is that it shall be ground so fine as to leave no residue on a sieve having 2500 holes to the square inch, and that not more than 10 per cent will remain on passing it through a sieve having 3,600 holes to the square inch. As a rule manufacturers grind to a far greater degree of fineness than this standard. The fineness of grinding largely determines its usefulness as a constructive material, for it is well known that the finer a cement is ground, the better will be the result obtained when mixed with sand. There is a growing demand for finer cement, but it must be remembered that finer grinding means extra wear and tear on the machinery, and consequently an increased cost.

The chemical test is often of corroborative value in estimating the properties of a sample; at the same time it is a test which is of more use to the manufacturer than to the consumer. The chief constituents of a cement are about—

Lime, 60 parts.
Silica, 24 parts.
Alumina and iron, 12 parts.

The remaining four parts are composed of alkalies, magnesia, and carbonic acid. The alkalies will not average more than 0.75 per cent, and although present in so small a quantity they play a very important part, as they form a flux for the lime and the silica.

You often hear the term "set" applied to cement. It is a very ambiguous one. "Set" usually means the ultimate hardness due to its nature attained by a substance originally in a liquid state. Cement, however, does not attain its ultimate strength for years, so the word in this case has a different signification. Cement sets in a few minutes, or hours; after that it hardens. A very common test to apply to cement to see if it is set is to press the pat with the thumb nail. The proper method is to use the Vicat needle, which is a weighted steel rod of about a quarter of an inch in diameter. The rod is suspended over the pat and allowed to fall on it like the monkey of a pile-driving machine, penetrating the sample until such time as it is sufficiently set to withstand any impression. With regard to a quick or a slow setting cement, this must be determined by the nature of the work for which it is intended. The characteristics of each are that a quick cement will probably attain a fair strength in a short time, but will not improve much afterwards, while the slower setting sample will not do so well as the quick one at an early date, but will eventually attain much greater strength. Cement may be rendered slow in setting by exposing it to the air, but such treatment does not give to a quick-setting sample the characteristics and the ultimate strength of a naturally slow one.

The uses Portland cement is put to are numerous, but in any case it is seldom used in its neat state. For the engineer it is in constant demand for foundations, piers and harbor works, in the shape of concrete. Concrete is composed of an aggregate (such as broken stone), sand and cement in varying proportion according to the class of work to be executed. A very small specification is three parts of aggregate to two of sand and one of cement. This, when set, makes an extremely hard and compact mass. The builder more often uses the cement mixed with sand only, for laying bricks or plastering walls in the proportion of two or three parts of sand to one of cement.

It is sometimes contended that there are instances in which the addition of sand in small quantities improves the cement. Such instances are however quite the exception, for sand can but be regarded as a diluent, and the only reason that can be urged for its use is on the score of economy by the admixture of so much cheaper a material.

These are the chief uses, and I should like to enumerate a few of the abuses, for cement is often asked to do work it was never intended for. One of the most frequent causes of failure in making concrete is the use of unsuitable aggregates, such as a soft sandstone, or a half decomposed basalt or stone overgrown with vegetable matters. Another great trouble is the sand. Sand for concrete or mortar should be entirely free from both loam and clay. Do not take sand out of the road or ditch, or a fine drift sand; neither let it be round-grained or soft. To obtain the best results use a coarse, sharp, angular sand such as one gets from quartz rocks. The greatest enemy to cement is loam, clay or dirt, and it is of the utmost importance that the aggregates or sand should be washed perfectly clean before being used. Too much importance cannot be laid upon this point. A very common practice on the mining fields in this colony is to use the so-called sand or sludge from the mullock heaps. At the best of times this sand is quite unsuitable, having

been ground to a very fine state by the stampers, and to use it direct from the heap without washing is throwing good money away, for ordinary lime would answer just as well.

Again in hot weather cement commences to set very quickly, and to get first class work it is necessary to have it in its allotted place as soon as possible after the water has been added. This necessitates mixing a very small quantity at a time, a practice workmen do not care about, and often a larger quantity is gauged than can be used before the setting action commences. The result is that more water is added, to the detriment if not the total destruction of the setting properties of the cement. When cement begins to set crystals are formed, which, when united, becomes one solidified mass, and when the setting action once commences the less the mass is disturbed the better. Another evil is in not having the walls thoroughly wetted when plastering. The water that is added to cement is put there for a purpose—to make it set; now if you put this mortar on to a dry wall the bricks readily absorb a great deal of the water, and deprive the cement of what it requires in order to set and harden.

In the summer months, in a hot climate, plastering and even brickwork in cement, should be well hosed down with water every day or so after the work is done, and on a north wind day no outside plastering should on any account be allowed.—*The Wombat.*

FIRE PREVENTION.

FIRE Prevention, an article on this subject in the *Pacific Coast Wood and Iron*, says it is well to have at hand a simple contrivance for extinguishing a small fire at its start, making the suggestion that the use of bottles filled with the following solution to serve as hand grenades:—Take twenty pounds of common salt and ten pounds of Sal Ammoniac (Nitrate of Ammonia to be had at any druggist) and dissolve in seven gallons of water.

Sal Ammoniac is, as any druggist will tell you, Chloride of Ammonium, an entirely different substance from Nitrate of Ammonia which would rather add to the danger of a conflagration than suppress it.

THE EMERY SUPPLY.

THE bulk of the world's emery is obtained from the island of Maxos, in the Mediterranean. Its hardness prevents it from being dug out or even blasted, so fires are kept burning around the blocks until they crack, when they are pried open with levers, the process being repeated until the blocks are reduced to a cubic foot or less. Three hundred men are engaged in the work, but no bachelor miner can be admitted to the fraternity, which is composed exclusively of benedicts.—*Architecture and Building.*

Preachleigh—What do you expect on the day of judgment? **SPENDTHRIFT**—Supplementary proceedings.—*Truth.*

TESTS OF THE WEARING QUALITIES OF FLOORING MATERIALS.

MR. FRANK Furness, the well known architect of Philadelphia, lately carried out an extremely valuable series of tests to determine the relative durability of various flooring materials. The experiments were made on May 15th, by Messrs William Gray & Sons, large contractors for stone work in Philadelphia, says *Pacific Coast Wood and Iron*. All kinds of material possible for use in flooring were tested and the results proved very interesting as well as instructive. The samples were all placed face downward upon a horizontal iron rubbing wheel 10 feet in diameter, which was run for a space of one hour at a speed of 75 revolutions per minute. A suitable frame held the blocks loosely in place and prevented them from rotating with the wheel, care being taken to let the full weight of the blocks bear upon the wheel. The face of the wheel was freely supplied during the test with sharp rubbing sand and water and the friction produced was most intense. The results were all important and many extremely peculiar, the behavior of the marble and mosaics especially. They could not withstand the action of the wheel and their average resistance, indeed, was not as high as that of the woods.

One of the most curious results is shown in the action of the woods, where teak lost nearly double as much as the softer white pine, the wear being respectively 13-16 and 7-16 of an inch. Yellow pine showed the same wear as white pine, and the oak specimen lost the same amount as its great rival Oregon pine, which was reduced by $\frac{5}{8}$ of an inch.

VANDERBILT'S FORESTS.

THE BILTMORE WOOD DOWN IN NORTH CAROLINA—HINTS BY WHICH LUMBERMEN MAY PROFIT.

THERE is no doubt that the Vanderbilt forest and arboretum in North Carolina constitute together one of the greatest undertakings that have ever been attempted by individual enterprise the world over; and ex-Secretary Morton of the United States Bureau of Agriculture, has himself declared that nothing owned by sovereign or subject will compare with it.

There are 110,000 acres of woodlands on the Biltmore estate, says *Milwaukee Journal*, according to the report of the North Carolina State Board of Agriculture, just issued, and the plan and endeavor will be to carry out only those exact principles of forestry which apply as well to Government forests as to timber owned by lumbering firms.

Mr. Vanderbilt has undertaken to furnish the highest possible example of the science of tree culture in every one of its branches; and to this end he has divided his immense tract into two distinct parts, each to be treated by entirely different methods. The first, containing 10,000 acres, lies in the valley of the French Broad river, and is known distinctively as the Biltmore forest. The merchantable timber has been cut out in former years, and so it was decided to grow only firewood there, an ample market being wide open in Asheville, and other near-by towns. The trees are chiefly oak and pine, and as the pine grew the fastest, the oaks were given a start when saplings by growing them in separate groups, or by cutting back the pines when they

threatened to overtop and kill the oaks. A sufficiently dense covering has to be kept at all times so that the soil may not deteriorate. The other, and larger tract of nearly 100,000 acres, lies almost entirely in the mountains; and is known as Pisgah forest, so called from Mt. Pisgah dominating, which has an elevation of over 5,000 feet.

These are virgin woods and the timber is of large size, some trunks attaining seven feet in diameter, with frequent groups of yellow poplars averaging three or four feet in diameter. There are cherry, curly walnut, hickory and various valuable furniture woods in great abundance.

On this division the forestry department is growing only timber trees, and under this system the amount of either timber or firewood which shall be cut is fixed by what is known as the "sanctioned annual yield." From the amount of wood fiber added to a tree each year it is quite possible to deduce the amount of wood added to the whole forest each year. If no more than this increment is cut, the forests cannot be diminished. No trees are taken under a specified diameter. The mother trees are left to seed the ground again, which they do most liberally in that particular climate and location. Add, most important of all, the undergrowth is especially looked after. Every tree is felled carefully, the smallest possible amount of danger is done and the underbrush is sedulously cleared away.

Here are hints by which the lumbermen of the big woods and north shore might profit. Inordinate gain will alone tempt inordinate haste, else we could all secure from now on a lasting revenue. But odd-zooks! It is so much less trouble just now to haul out the logs this year, let the topplings lie and the fires run! And for the hereafter? Well, we discover simply a charred and unproductive waste.

Up to date the United States has been behind all other nations in the care and management of their timber lands but under the prospects of the great emoluments which this beginning in forestry forecasts (all praise to the genius who inspired it), the country may well congratulate itself that the scheme of segregating large forestry areas of the public domain, to be cared for by the Government, has not miscarried after all; and that the superlative reservations are to stand as defined by the Forestry Commission, except that entries may be made for milling purposes—a provision which is eminently proper and satisfactory.

Within six years a tree nursery has been established on the alluvial flats of the Swannanoa river, near Asheville, and since the erection of the first propagating house, between 3,000,000 and 4,000,000 of forest trees and shrubs have been turned over to the planters, and the annual output may now be estimated at something over 2,000,000 of plants. These are almost inconceivable figures, and yet they constitute only some of the preliminary steps toward the establishment of a vast museum, of living trees and shrubs, to be called the Biltmore Arboretum, in which will be living examples of every species and subspecies of woody vegetation, indigenous and introduced, that will thrive unprotected in the soil and climate of the locality. The line of display will appear like a continuous highway or drive traversing the valleys and slopes for a distance of twelve miles, including loop roads; and on either side, extending back for 200 feet or more, will be arrayed the trees and shrubs on permanent exhibition in their fullest perfection and pride of life, in isolated specimens in small masses and in bulk.



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.

SKETCH of Residence on Clay street, Samuel Newsom, Architect.

RESIDENCE for Mr. Parker, Marinita Park, San Rafael, Samuel Newsom, Architect.

HOLY CROSS CHURCH, Cahill & Condon, Architects.

AT THE request of Mr. Cuthbertson we state that through a mistake of the lithographer the title of his "Study of a Church" in our last number was wrong. W. J. Mathews is the architect of St. John's Episcopal Church, Oakland.

WOLSEY AND ARCHITECTURE.

WOLSEY'S taste and knowledge of architecture must have been great. Who can see the tower of Magdalen College and doubt it? And Christ Church and Hampton Court, though mutilated, bear sufficient testimony to his knowledge and love of that excellent art of architecture which none but superior minds should venture to meddle with, for if it makes greatness and wisdom conspicuous to the world, it makes folly so too, and therefore the more contemptible. Architecture is the natural constructive instinct of a great mind, the throwing off into palpable form of high thoughts. It is part of that noble constructiveness which would build up institutions, the practical language of a governing mind. It is an empire in itself, in which genius

HOLY CROSS CHURCH.

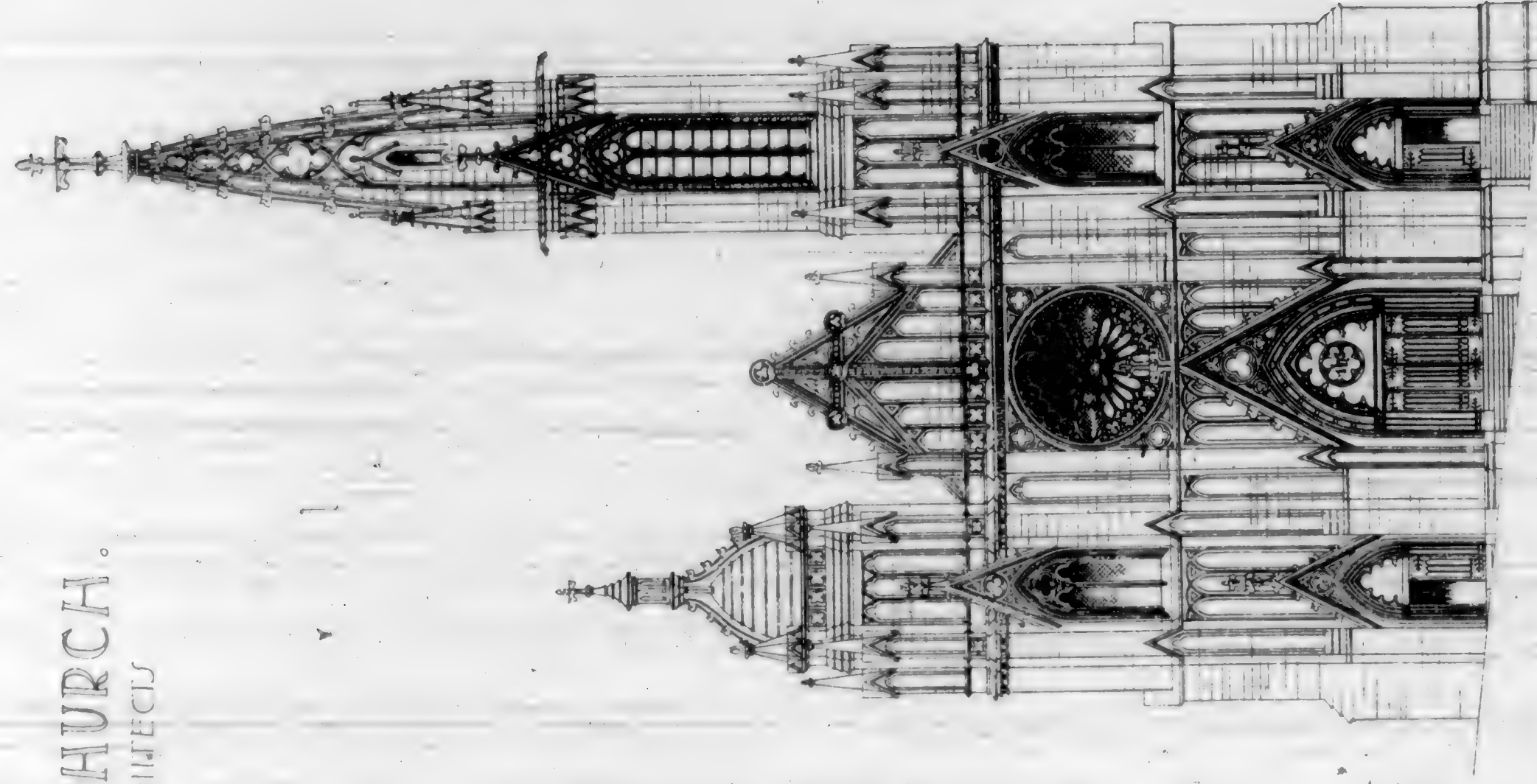
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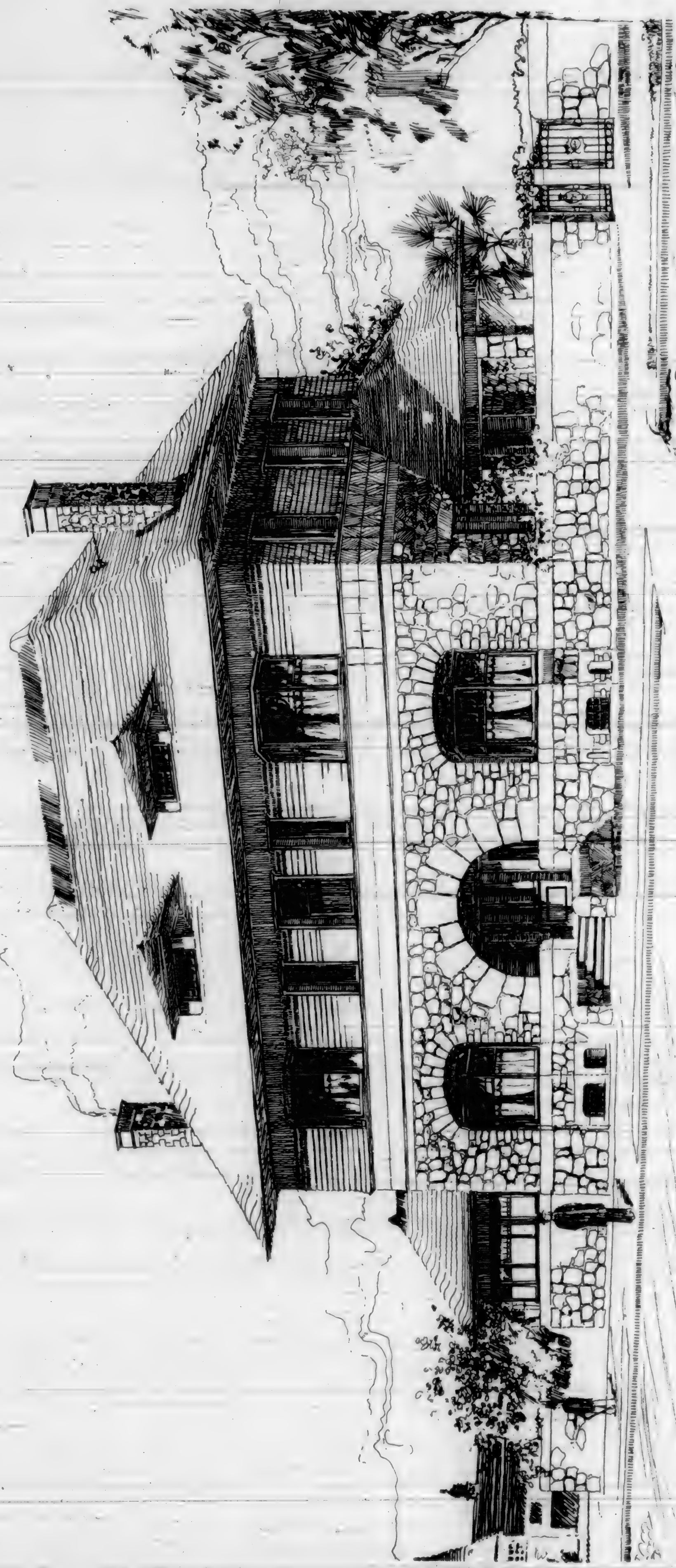
ALTERNATE ELEVATION

VOL. XVIII No 9 SEPTEMBER 1897.

RESIDENCE FOR MR MARKER MARINITA PARK SAN RAFAEL.
 SAMUEL NEWSON ARCHT MILLS BLDG. SF.



• SKETCH OF RESIDENCE •
 • ON CLAY STREET •
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CALIFORNIA ARCHITECT & BUILDING NEWS
 SAN FRANCISCO

BRITTON & REY, PHOTO LITH.

VOL. XVIII No. 9 SEPTEMBER 1897.

loves to reign and be supreme. It was highly characteristic of Wolsey. We believe all really great men love architecture. A man who builds to himself a notable palace or house, and by his arrangements adequately shows forth and appropriates a fine estate, makes to himself at least a centre of the world, to which all things come or seem to come, and from which all thoughts radiate by enclosing apparently so much of the world's wilderness as he wants; all within his eye's reach is his real, and all without his imaginary domain. He creates the happiest delusion of space, regulates it by his own ideas, making it what he would have it and ornaments it to charm him. In a fair and noble mansion a man must, in some degree, feel himself a king, for his will has sway and room to move in. It has a tendency to elevate, to give him character, decision and that dignity which ever arises from repose within one's self; that need not be shoved and hustled from meditation and reflection by the too near proximity of ill-assorted things and persons. We look upon the taste for architecture as a national good. It is the means of raising families to a visible responsibility, giving them something to keep up and to hand down to others, greater than the littleness of uncultivated, unadorned republican man. The other arts require it, and all arts thus assisting each other, build up and constitute all that is beautiful in the world, visible and moral. How hard is it to give up anything we make and call our own. Now in nothing was Wolsey's superior greatness more shown than in the readiness of so large a sacrifice as Hampton Court. Had he pride, he had enthroned it here, but his pride was a part of him. Driven out forcibly from one palace, it had a snug refuge in himself. Nothing, no outward act of malice or tyranny, could rob the world's history of Wolsey. He knew it, and even in his fall was greatest. The noble fabric of Hampton Court was, however, readily resigned by Wolsey into the king's hands, who subsequently seized, too, his palace afterward called Whitehall. It is a curious fact, and one that marks a visible retribution upon things, names and persons, whereby a sort of moral history of the world is written by a divine hand and carried on in continuance by striking incidents; it is a curious fact that these two palaces of Wolsey, as they are monuments of the rapine of royalty, so they are of the humiliation of royalty.—*Tesserae, in London Architect.*

THE PLACE OF RESEARCH IN EDUCATION.

THOUGH the advice given below is from an Englishman's point of view in regard to education it is nevertheless applicable to our own schools.

From an interesting article entitled "The Place of Research in Education" published in the last report of the Smithsonian Institution we extract the following:

"There can be no question that the future of this country is very largely in the hands of its schoolmasters and school-mistresses, and there are many among us who are convinced that our progress is much hindered by their failure to feel the pulse of the times—who think, indeed, that they do not suitably prepare the material which we subsequently are called on to mold into its final shape. We look to the new commission to recommend drastic changes which will enable us to utilize to the full the marvelous ability latent in the English race, and which will help parents in solving the truly terrible problem with which they are confronted in

these days of unreasoning and unreasonable competition when the time comes to secure a career for their children. English boys and girls at the present day are the victims of excessive lesson learning, and are also falling a prey, in increasing numbers year by year, to the examination demand, which threatens to become by far the most ruthless monster the world has ever known either in fact or in fable. Ask any teacher who has to do with students fresh from school his opinion of them, he will say that in the great majority of cases they have little if any power of helping themselves, little desire to learn about things, little if any observing power, little desire to reason on what they see or are called on to witness; that they are destitute of the sense of accuracy and satisfied with any performance however slovenly; that, in short, they are neither inquisitive nor acquisitive, and as they too often are idle as well, the opportunities offered to them are blindly sacrificed. A considerable proportion undoubtedly are by nature mentally very feeble, but the larger number are by no means without ability, and are in fact victims of an acquired disease. We must find a remedy for this state of things or perish in the face of the terrific competition now setting in.

"Boys and girls at school must be taught from the very earliest moment to do and to appreciate. It is of no use our teaching them merely about things, however interesting—~~the~~ facts must be taught without their use being taught simultaneously; and, as far as possible, they must be led to discover the facts for themselves. Instead of our placing condensed summaries in their hands, we must lead them to use works of reference and acquire the habit of finding out; they must always be at work applying their knowledge and solving problems. It is a libel on the human race to say, as many do, that children can not think and reason, and that they can only be taught facts; early childhood is the time at which these faculties are most apparent, and it is probably through failure to exercise them that they suffer atrophy. The so-called science introduced into a few schools in answer to the persistent demands of its advocates has been in most cases a shallow fraud, of no value whatever educationally. Boys see oxygen made and things burnt in it, which gives them much pleasure; but, after all, this is but the old lesson learning in an interesting shape, and has no superior educational effect. I would here repeat what I have recently urged elsewhere, that in the future all subjects must be taught scientifically at schools, in order to inculcate those habits of mind which are termed scientific habits; the teaching of scientific method—not the mere shibboleths of some branch of natural science—must be insisted on. No doubt some branch of chemistry with a due modicum of physics, etc., is the subject by means of which we may, in the first instance, best instill the scientific habits associated with experimental studies, but it must be true chemistry of the discoverer, not the cookery-book-receipt pseudoform which has so long usurped its place. Whatever be taught, let me repeat that mere repetition work and lesson learning must give place to a system of allowing children to do things themselves. Should we succeed in infusing the research spirit into our teaching generally, then there will be hope that, in the course of a generation or so, we shall cease to be the Philistines we are at the present time; the education given in our schools will be worthy of being named a 'liberal education,' which it never will be so long as we worship the Old World classical fetish, and allow our schools to be controlled by those who reverence this alone, having never been instructed in a wider faith."

COLOSSAL BRICK STRUCTURE.

VERY few know it, but it is a fact, says the Washington *Star*, that the Pension Office Building is the largest brick building in the world. It has been subjected to much criticism, but it can stand it, for as time passes along there are many things seen about it that escaped notice when it was newer. In all there are over 10,000,000 bricks in the building.

General Meigs took liberties with bricks that no other architect had ever attempted. He not only used bricks exclusively for the building, but he used them in constructing the stairs throughout the building. In the matter of stair building bricks have often been used for the riser, but the step has always been of iron, wood, slate or stone. In the Pension Office both riser and step are of brick. As a brick building, therefore, pure and simple, it is unique in construction, outside of the fact that it is the largest exclusively brick building in the world.

NOTES AND COMMENTS

ONE is glad to hear that Mr. Ruskin is in good health, and that he takes daily walks in the neighborhood of Conington. The addresses he delivered some years ago at Oxford on landscape painting are at length to be printed. The reason given for their tardy publication is that Mr. Ruskin has not until recently been satisfied with the progress made in the art of photogravure, it being of course, necessary to have reproductions of those pictures to which he referred. The volume will contain eighteen large plates, including some reproductions from Turner.

CHARLES KNORR, a Chicago architect, killed himself so his creditors could get their pay out of his insurance policy. This is a most delightful system. It certainly equals the suttee custom of the natives of India—where the wives burned themselves on the funeral pyre of their husbands.

BOOKS AND PERIODICALS

Weeping Ferry by Margaret L. Woods, is the complete novel in LIPPINCOTTS' for September, a story that had better not have been written. The other articles are of interest. The complete novel for the October number which is promised to be ready September 22d, is entitled A Knight of Philadelphia by Joseph A. Altsheuler author of The Sun of Saratoga.

Journal of the WESTERN SOCIETY OF ENGINEERS for August, contained a very interesting article entitled Deep and Difficult Bridge and Building Foundations, by Geo. E. Thomas, M. W. S. E. The illustrations are very good and cannot fail to interest engineer and others engaged in like work.

THE WOMBAT, is the singular name of a little magazine that comes to us from Australia, it is published by the Gordon Technical College and the Allied Associations. An article on Portland-Cement by Richard Taylor in the July number of the magazine will be found in another part of our journal.

FIGHTING FIRES IN TALL BUILDINGS.

AT THE recent convention of the fire chiefs, held in New Haven, Conn., the principal matter under consideration was fighting fires in tall buildings. The large number of these buildings erected of late years in our cities has made this a vital question in case of fire, and while but few of these buildings have actually been destroyed in this way, yet what has been done has shown the utter inadequacy of the departments to meet the demands made upon them in such cases. The general opinion expressed was that laws should be passed restricting the height of such buildings. Legislation against such structures was strongly advocated. It was also advocated that the insurance companies make concessions in favor of buildings of moderate height. No other branch of the city service appreciates more fully the danger from fire that goes with buildings of such immense height, and it was claimed that some day there will be a fatality in a sky-scraper that will appall the world. The part of wisdom is to prevent by law the erection of any structure beyond the number of stories that is consistent with safety and the capacity of fire apparatus.—*Architecture and Building*.

CORRESPONDENCE

The Editor is not responsible for any opinions of Correspondents.

To the Editor of the California Architect and Building News.

I had a few moments to spare while waiting for the San Rafael boat this morning and I strolled along in front of our new depot. I admired the beautiful proportions and the good construction, I thought what a credit it was to the architect, the late A. Page Brown, other works of whom I had often admired; I came to the main entrance and on a huge stone my eye caught some lettering which I found was a statement that the building was built by the present Board of Harbor Commissioners, a Mr. Holmes, engineer, and Mr. Swain the architect; the intention seems to be to ignore the real architect altogether. I do not think this ought to be allowed and I do not think it will be when the matter is understood.

Yours truly,

SAMUEL NEWSOM, Architect.

LEGAL DECISIONS.

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

SUIT FOR QUANTUM MERUIT.—On a quantum meruit—for the amount of work done—on the erection of a building, the owner is entitled to an allowance for attorney's fees incurred in consequence of the failure of the contractor to defend a mechanic's lien filed against the building by a subcontractor.
Dempsey v. Schawacker, Mo., 38 Southwestern Rep. 954.

If a contractor seeks to recover on a quantum meruit, after being denied the opportunity to finish his contract, he must prove what work he did, its value, and that it was not paid for; he cannot throw on the one sued the burden of showing what he omitted under contract.

Wyckoff v. Taylor, 43 N. Y. Supp. Rep. 31.

EVIDENCE AS TO HEATING APPARATUS.—On an issue as to the sufficiency of a heating apparatus to properly warm a building, where it was claimed that its failure was due to the faulty construction of the building, evidence of the comparative results obtained from such plant and another subsequently placed in the same building is admissible.

Kramer v. Messner, Iowa, 69 Northwestern Reporter, 1142.

WHEN CONTRACTOR IS NOT LIABLE FOR INFERIOR BRICK.—A building contractor's right to recover the contract price is not de-

feated by the fact that the bricks purchased by him, in good faith, and used in the building, were made of inferior clay; the defect not being discovered by careful inspection, nor until developed by exposure to the weather after the building was completed.

Wis. Red Pressed Brick Co. v. Hood, Minn., 60 Northwestern Rep. 1091.

NOTICE OF MEETINGS.

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

SOUTHERN CALIFORNIA CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.

THEO. A. EISEN, Pres. ARTHUR B. BENTON, Vice-Pres.
WILLIAM C. AIKEN, Sec't. AUGUST WACKERBARTH, Treas.

WASHINGTON CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, regular meetings at 8 o'clock P. M., the first Friday of each month, except July and August.

JOS. C. HORNBLOWER, Pres. JAS. G. HILL, Vice-Pres.
E. W. DUNN, JR., Sec. W. J. MARSH, Treas.

ASSOCIATION OF ARCHITECTS OF ARIZONA, meetings held at Phoenix, Arizona.

D. W. MILLARD, Pres. T. H. MADDOX, Vice-Pres.
W. R. NORTON, Sec. and Treas.

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

E. J. MOLERA, Pres. W. F. C. HASSON, Vice-Pres.
OTTO VON GELDERN, Sec. EDWARD T. SCHILD, Treas.

MASTER PLUMBERS' ASSOCIATION, meets every first and third Friday of each month at the Flood Building.

JAS. E. BRITT, Pres. J. L. E. FIRMAN, Sec.

BUILDERS' EXCHANGE, Directors meet first Friday in each month at Mission and New Montgomery.

OSCAR LEWIS, Pres. JAS. A. WILSON, Sec.

MASONS' AND BUILDERS' ASSOCIATION, meet first Friday evening of each month.

ADAM BECK, Pres. M. V. BRADY, Sec.

BUSINESS MOSAICS.

If we look backwards to the year 1828, it is surprising to see how little was required in the plumbing line to make homes comfortable. Now this was the year that the J. L. Mott Iron Works was established in the State of New York; ever since that time this firm has been striving to increase the good qualities of articles so essential to the health, comfort and happiness of our people until it appears impossible to make a further advance; still we never can predict certainly of the future, and know not what may be in store in the way of improvements. Nevertheless, those who may be about to fit up their dwellings for health and comfort would do well to call upon Mr. M. S. James who is the Pacific Coast representative of the above named company. A glance at his advertisement on page v of this journal will convince the most prejudiced that they cannot do better than call and see Mr. James at his office, room 27 in the Flood Building.

"Spicer" must be fearfully superstitious—he never comes near his office on Friday. "Superstitious nothing! That's the day he tells the collectors to call!"—*Chicago Journal*.

Roche Harbor Lime for sale by all the principal dealers, said to be the purest in the world—first prize awarded at the World's Fair as well as from various other fairs from New Orleans to Washington. For particulars address Tacoma and Roche Harbor Lime Co., box 289 Builders' Exchange, 40 New Montgomery street, San Francisco, Cal.

She—I wonder who first said "It is better to be born lucky than rich?" HE—Some old fool whose wife married him for his money. I guess.—*Cleveland Leader*.

The Rischmuller Door Opener and Closer is so well and favorably known that it is hardly worth while to call attention to its merits, nevertheless it may be well to give some of the advantages claimed for this contrivance. As there are two wires used, one for opening and the other for closing the door, it will be seen that the door is under full control. It is perfectly burglar proof as the wires do not run below the floor, and therefore the door cannot be opened from the basement.

A full sized working model can be seen at 320 Nineteenth street, orders should be left with Geo. Rischmuller, at that address.

She—Mr. d'Auber is wedded to his art. HE—Well, there's nothing mercenary about the union.—*Life*.

It looks as if before this century is out that the swearful wobbling door knob, which rattles when touched will be a thing of the past—for now come the Patent Screwless Door Knob which is as firm as the rock of Gibraltar—immovable and unratteable.

As well as being a Godsend to the householder and tenant, it is also to the carpenter who will now be saved that niggling handling of small screws which tries his patience; it is labor saving and money saving which says it is in line with modern progress.

Does away with washers and screws and can be adjusted at once to any thickness of doors, fits all locks, and can be removed almost instantaneously by any one. It is worthy of all attention.

"Me an' Billy don't have to study 'bout Alaska this year." "Why not?" "Pap's done wore th' map o't our gogafy."—*Free Press*.

Joseph Budde, the manufacturer of sanitary appliances in the plumbing line can be found at his old stand 575 Mission street—architects and others are cordially invited to call at his sample room. He claims that home industry is encouraged when employment is given to this establishment every dollar remains at home.

Mr. Budde is successor to Wm. Smith late of 21 Montgomery street, also of W. B. Rustemeyer & Co., known as the Pacific Water Closet Works, 126 Main street. His motto "First-class work, low price and two years guarantee of all my work!" should make him popular with his customers.

He—What strain is that? SHE—(playing on the mandolin)—That was no strain; only an ordinary effort.—*Examiner*.

The color effect in Cabot's Creosote Shingle Stains has been very ingeniously illustrated in a colored chart prepared by Samuel Cabot of Boston, Mass. This might be called a movable chart as by turning the leaf the same building is shown in different colors. This chart, like all the work turned out of Mr. Cabot's establishment, is first-class. Nothing could be more convincing of the merits of Cabot's Shingle Stain as the division of the plates allows sixteen separate and distinct combinations to be seen—enough to give a very clear idea of the blending of the various colors.

Subscribe for CALIFORNIA ARCHITECT AND BUILDING NEWS—\$3.00 Per Year.

The Pacific Refining and Roofing Co., 113 New Montgomery street, San Francisco, advertise on page vii of this journal, W. P. Shingle Stains and also W. & P. Creosote Paints. The stain is in soft and pleasing tints, of the highest grades of materials, specially adopted to use on redwood, is a Pacific Coast product.

The Creosote Paints are an excellent wood preservative, for use on surfaces new or old. A first class wood and shingle covering in soft shades resembling slate.

Minnie—Nellie is a regular genius. She put her frizzes up in tin foil off champagne corks. MADGE—And way off champagne corks? MINNIE—Because it makes 'em tight.—*Judge*.

Joseph Dixon Crucible Co., Jersey City, N. J., are always having something new on hand, the latest novelty is Brazing Graphite. Not a little of the expense in brazing is due to the cost of removing the brass which has stuck to the metal where it is not wanted. The removal of this brass is usually attained only by patience and diligent filing. Now comes to the aid of the brazier that unique mineral, graphite, which is not affected by acids, alkalies, heat or cold. Braziers who have made use of Dixon's Pure Flour of Graphite pronounce it worth its weight in gold. A sample will be sent without charge by the Joseph Dixon Crucible Co., Jersey City, New Jersey, who are the only manufacturers.

Sierra Lumber Company corner of Fourth and Channel streets, manufacturers of and dealers in doors, windows, and blinds, also sugar pine, yellow pine, spruce and fir lumber to order.

She—I know that I am not good-looking, but people forget my face when I sing. HE—Won't you sing now?—*Fliegende Blätter*.

Dunham, Carrigan & Hayden Co., 17 and 19 Beale street, San Francisco. In their advertisement on page ix of this journal is shown an illustration of their American Sliding Door Hanger for which they claim unusual advantages—great saving of time and expense, and superior excellence in operation. It is trackless, no wheels and also no noise, what more can be wanted of a door hanger? This firm are dealers in the Yale & Towne Manfg. Co's. Celebrated Yale Locks.

"Johnnie, I hope you are not beginning to swear?" "Oh, no, not till I am as big as papa!"—*This Little World*.

Samson Cordage Works, Boston, Mass.—manufacture Samson Spot Cord, it can be told at a glance and is warranted free from waste and imperfections of braid. Send for samples, 115 Congress street, Boston, Mass.

CITY BUILDING NEWS.

Ashbury near Fredrick. Cottage; owner, T. Wollweber; architects, Kenitzer & Barth; contractor, C. Schutt; signed, Aug. 18; filed, Aug. 18; cost \$4880.

Brazil Ave. and Lisbon. Cottage; owner, Mrs. C. Murphy; architect, Thos. McKee; contractor, D. R. Perry; signed, Aug. 28; filed, Aug. 30; cost \$1237.

Broderick near Sacramento. Two-story frame; owner, T. G. Cockrill; contractor, E. W. Hyde; signed, Aug. 11; filed, Aug. 13; cost \$2700.

Buchanan near Broadway. Two-story frame; owner, Chas. H. Huffman; architects, Percy & Hamilton; contractors, Thomas H. Day & Son; signed, Aug. 13; filed, Aug. 14; cost \$4550.

Buchanan and McAllister. Excavation, brick work; owner, Mrs. Louis Junker; architect, C. Haupt; contractors, Gray Bros; signed, Sept. 8; filed, Sept. 8; cost \$1596.

Brighton near Holloway. To build; owner, Employee of the branch jail; builders, McCarty Co; cost \$9000.

Capp near 24th. Two-story frame; owner, Sarah A. Lawson; architect, F. B. Wood; contractor, Allan De Lair; signed, Aug. 12; filed, Aug. 13; cost \$3895.

Capp and 19th. Two-story frame; owner, C. F. Wm. Fahrerkrug; architect, E. J. Vogel; contractor, I. W. Coburn; signed, Sept. 8; filed, Sept. 8; cost \$3276.

Chelsea Place near Buan. Three-story frame; owner, Babette Federlein; architect, C. A. Meussdorffer; signed, Aug. 17; filed, Aug. 18; cost \$3400.

Church and Clipper. Cottage; owners, Jas. Linden and wife; contractor, John Kenally; signed, Sept. 7; filed, Sept. 13; cost \$1080.

Clay and Pierce. Excavation, brick and iron work; owner, Caroline Wingerter; architect, A. C. Lutgens; contractor, Fred Wagner; signed, Aug. 30; filed, Sept. 2; cost \$1500.

Clay and Pierce. Carpenter work for two-story frame; owner, Caroline Wingerter; architect, A. C. Lutgens; contractor, J. B. Cogswell; signed, Aug. 30; filed, Sept. 8; cost \$4880.

Clayton near Hayes. Two-story frame; owner, Mrs. Wilhelmine English; architects, Hill & Bowers; contractor, F. W. Kern; signed, Aug. 11; filed, Aug. 14; cost \$3850.

Clement near 7th Ave. Cottage; owner, R. E. Donohue; contractors, Marcuse & Remmel; signed, July 28; filed, Aug. 31; cost \$1400.

Clementina street No. 525. Alterations; owner, Mary Menihan; architect, A. J. Barnett; contractor, Chas. Alsop; cost \$1000.

Devisadero near Washington. To build; owner, Frank Kayser; architect, C. M. Rousseau; contractor, W. B. Kenny; signed, Aug. 25; filed, Aug. 27; cost \$2300.

Diamond near Sussex. To build; owner, Mrs. F. Smith; contractor, D. Ross; signed, Aug. 18; filed, Aug. 19; cost \$1540.

El Dorado and Rhode Island. Office building, bins, etc; owner, Sanitary Reduction Works; architect, Chas. Thacker; contractor, Maccono & Rosso; signed, Aug. 12; filed, Aug. 12; cost \$4722.

Ellis near Mason. Brick work, etc, for six-story brick; owner, L. H. Sly; contractor, Thomas Butler; signed, Aug. 28; filed, Sept. 1; cost \$665.

Eighteenth near Castro. Two-story frame; owner, W. C. Johnson; contractor, W. B. Helbing; signed, Aug. 31; filed, Sept. 1; cost \$3050.

Eugenia near San Jose Road. One-story frame; owner, Wm. Henly; contractor, C. M. Lee; signed, Sept. 7; filed, Sept. 8; cost \$1185.

- Fell** near Masonic Ave. Two-story frame; owner, B. F. Hawes; contractor, C. Zwierlein; signed, Aug. 21; filed, Aug. 25; cost \$1500.
- Forster**, Lakeview. Cottage; owner, W. B. Peel; builders, McCarthy Co; cost \$1200.
- Fredrick** near Cole. Two-story frame; owner, Susan Jaenike; architect, C. F. Robertson; contractor, T. T. Pottinger; signed, Sept. 8; filed, Sept. 8; cost \$254.
- Golden Gate Ave.** near Baker. Cottage; owner, S. G. Seavern; architect, John McHenry; contractor, Thos. Kinread; signed, Aug. 18; filed, Aug. 23; cost \$1500.
- Golden Gate Ave.** near Buchanan. Alterations and additions; owner, Samuel Rainey; contractor, P. Rive; signed, Sept. 10; filed, Sept. 11; cost \$1373.
- Grove** near Fillmore. Plumbing, etc.; owner, John L. Koster; architects, Martin & Coffey; contractor, W. F. Wilson; signed, Aug. 27; filed, Aug. 30; cost \$1477.
- Green** near Polk. Cottage; owner, I. H. Goldmeyer; contractor, Geo. M. Salisbury; signed, Aug. 18; filed, Aug. 21; cost \$1650.
- Guerrero** and 26th. Two-story frame; owner, D. J. Shinn; architect, U. M. Rousseau; contractors, Thayer & Hughes; signed, Aug. 17; filed, Aug. 19; cost \$1673.
- Haight** near Scott. Two-story frame; owner, G. F. Hanckamp; architect, J. E. Kraft; contractor, J. Wuefken; signed, Aug. 18; filed, Aug. 21; cost \$3210.
- Howard** near 25th. Alterations; owner, Geo. L. Payne; architect, N. Blaisdel; contractor, Geo. Harris; signed, Aug. 12; filed, Aug. 16; cost \$3075.
- Jackson** near Central Ave. Two-story frame; owners, Frieda Stauff and C. C. Dohrmann; architect, S. Blaisdel; contractor, C. Kreeker; signed, Sept. 11; filed, Sept. 11; cost \$6840.
- Jones** near Lombard. Three-story frame; owners, Caroline E. G. Jacques and Thomas G. Jacques; contractors, A. W. Paltiani & Co.; signed, Aug. 14; filed, Aug. 16; cost \$1639.
- Jones** near Chestnut. Two-story frame; owner, Peter H. Fleming; contractor, N. G. Chadwick; signed, Aug. 30; filed, Aug. 30; cost \$3500.
- Jones** near Greenwich. Three-story frame; owner, Conrad J. Bill; contractor, H. T. Grieb; signed, Sept. 8; filed, Sept. 8; cost \$3330.
- Juniper** near Folsom. Two-story frame; owner, Mrs. Mary J. Angie; architect, F. P. Rabin; contractors, W. Horstmeier & Co.; signed, Aug. 28; filed, Aug. 28; cost \$1200.
- Laguna** near Washington. Grading, brick work, etc.; owner, Dr. A. Barkan; architects, Pless & Moore; contractor, F. W. Kerr; signed, Sept. 1; filed, Sept. 2; cost \$13,240.
- Lakeview** (Ingleside). Cottage; owner, Chas. Zissig; contractors, McCarthy & Co.; day's work; cost \$3000.
- Lee Ave.**, Lakeview. Cottage; owner, G. G. Unsworth; builder, McCarthy Co; cost \$2000.
- Lyon** near Golden Gate Ave. One-story frame; owner, J. P. Simmons; architect, M. G. Bugbee; contractor, W. Sorensen; signed, Aug. 18; filed, Aug. 19; cost \$1200.
- Lyon** near McAllister. One-story frame; owner, Janet Sutherland; contractor, T. A. Born; signed, Aug. 29; filed, Aug. 27; cost \$1618.
- Liberty** near Castro. Cottage; owner, Jacob Bauer; contractor, W. W. Redhall; signed, Aug. 31; filed, Aug. 31; cost \$1830.
- Market** near Kearny. Alterations; owners, S. N. Woods & Co.; architect, M. J. Lyon; contractors, Campbell & Pettus; signed, Aug. 14; filed, Aug. 17; cost \$2700.
- Maple** and California. Steam power, etc.; owner, Hospital for children, etc.; architect, A. C. Schweinfurth; contractor, J. G. Grannis; signed, Aug. 23; filed, Sept. 13; cost \$3955.
- Mission** and Precita. Two-story frame; owner, John Collins; contractor, E. N. Jones and J. A. Cotter; signed, Aug. 26; filed, Aug. 27; cost \$2350.
- Mission** and Second. Excavations, bulkhead, etc.; owner, Wells, Fargo & Co.; architects, Percy & Hamilton; contractors, Buckman Contracting Co; signed, Aug. 27; filed, Aug. 27; cost \$1700.
- Mission** near 2d. Concrete work, etc. for four-story brick; owner, Robert Dalziel; architect, J. W. Mathews; contractor, Geo. Goodman; signed, July 28; filed, July 31; cost \$3700. Brickwork, etc.; contractor, R. W. Beattie; signed, July 28; filed, Aug. 31; cost \$1169. Cast iron work; contractor, Judson Mfg. Co; signed, Aug. 19; filed, Aug. 31; cost \$4700. Carpenter work; contractors, Bignami & Masow; signed, July 17; filed, Aug. 21; cost \$5483.
- Ninth** near Bryant. Two-story frame; owner, Wm. Garms; architects, Salfield & Kohlberg; contractor, H. Munster; signed, Sept. 8; filed, Sept. 8; cost \$3270.
- Oak** and Devisadero. Moving a building; owner, Mrs. S. Misk; architects, McDougall Bros; contractor, John H. McKay; filed, Aug. 12; cost \$1700.
- Pacific Ave** and Buchanan. Painting; owner, Albert Meyer; architects, Salfield & Kohlberg; contractors, J. St. Denis Co; signed, Aug. 7; filed, Sept. 13; cost \$10151.
- Plymouth** near Patton. One-story frame; owner, Martin T. Cooney; contractor, Cornelius March Lee; signed, Aug. 16; filed, Aug. 20; cost \$1230.
- Post** near Lyon. Two-story frame; owner, John Mahoney; contractor, J. T. McInnes; signed, Aug. 28; filed, Aug. 30; cost \$2650.
- Richmond Ave.** block 8 lot 26. Cottage; owner, W. A. Hicks; contractor, McCarthy Co; cost \$1000.
- Sansome** and Pine. Alterations and additions; owner, Royal Insurance Co; architects, Percy & Hamilton; contractors, A. J. Forbes & Son; signed, Sept. 3; filed, Sept. 3; cost \$1644.
- Sanchez** near 17. Dwelling and stable; owner, Martin Nolan; architects, Townsend & Wyncken; signed, Aug. 17; filed, Aug. 18; cost \$2055.
- Seventh and Mission**. Fence around Post-office block; owner, U. S. Government; contractor, J. A. Shillie; cost \$1445.
- Seventh Ave.** near M street. To build; owner, Patrick Hallinan; architect, M. J. Welsh; contractor, J. B. Quinn; signed, Aug. 21; filed, Aug. 21; cost \$2650.
- Stevenson** near 1th. Steel and iron work; owner, Claus Spreckels; architects, Reid Bros; contractor, Pacific Rolling Mills; signed, July 14; filed, Aug. 20; cost \$421. Brick work; contractors, Peacock & Butcher; signed, Aug. 2; filed, Aug. 20; cost \$5515.
- Stockton and Geary**. Grading, concrete, etc. for 6-story brick; owner, Union Trust Co; architects, Pless & Moore; contractors, Cushing-Wetmore Co; signed, Sept. 1; filed, Sept. 4; cost \$2300.
- St. Mary's Ave.** near Mission. To build; owner, Rev. Peter D. Brady; architects, Shea & Shea; contractors, Barrett & Leahy; signed, Aug. 28; filed, Aug. 31; cost \$5505.
- Sutter** near Kearny. Alterations and additions; owner, A. W. Rose; architects, Percy & Hamilton; contractor, B. F. Ellis; signed, Aug. 21; filed, Aug. 23; cost \$1332.
- Tenth Ave.** near Clement. Cottage; owner, George Hensel; architect, A. J. Barnitt; cost \$1200, day's work.
- Third and Market**. Marble and slate work; owner, Phoebe A. Hearst; architect, A. Schweinfurth; contractor, Vermont Marble Co; signed, Aug. 27; filed, Sept. 3; cost \$8989. Plastering, cementing, etc.; contractor, J. R. Tobin; signed, Aug. 31; filed, Sept. 3; cost \$13,200. Metal stair case work; contractor, Western Iron Works; cost \$3865.
- Third Ave.** near Lake. Cottage; owner, E. D. Fell; architect, H. D. Munson; contractor, W. R. Kenny; signed, Aug. 13; filed, Aug. 14; cost \$1545.
- Third near Market**. Alterations and additions; owner, Hyman Bros; architect, Percy & Hamilton; contractor, B. F. Ellis; signed, Aug. 18; filed, Aug. 18; cost \$4321.
- Turk** near Mason. Carpentry, etc. for 3-story brick; owner, Geo. G. Burnett; architect, James E. Wolfe; contractor, John Furness; signed, Aug. 5; filed, Aug. 13; cost \$4538.
- Turk and Taylor**. Wood mantels, etc.; owner, A. W. Wilson; architects, Shea & Shea; contractors, Lowrey & Daly; signed, Aug. 17; cost about \$8000.
- Twenty-third and Valencia**. To build; owners, Carrie L. Dick and W. M. Cowie, trustees; architects, McDougall Bros; contractor, D. Currie; signed, Aug. 19; filed, Aug. 20; cost \$2754.
- Twenty-third near Noe**. Cottage; owner, E. A. Knowles; contractor, Wm. Plant; signed, Aug. 21; filed, Aug. 27; cost \$1000.
- Twenty-fourth near Castro**. Alterations and additions; owner, Catherine Sullivan; architects, Shea & Shea; contractor, Allen De Laiz; signed, Aug. 10; filed, Aug. 12; cost \$2000.
- Twenty-seventh near Church**. To build; owner, James Murphy; architect, M. J. Welsh; contractor, V. G. Goodin; signed, July 19; filed, Aug. 25; cost \$1155.
- Union** near Devisadero. To build; owner, John Martinon; architect, N. Blaisdel; contractors, Campbell & Pettus; signed, August 24; filed, August 26; cost \$2725.
- Union and Marion Place**. Alterations and additions; owner, Catherine Hatfield; contractor, L. C. Berger; signed, Sept. 3; filed, Sept. 8; cost \$1156.
- Valley street** near San Jose Ave. To build; owner, Daniel Carmody; architect, M. J. Welsh; contractor, R. Fahy; signed, Aug. 30; filed, Sept. 1; cost \$2322.
- Van Ness Ave.** near Green. To build; owner, Jennie Schonwasser; architect, M. J. Lyon; contractors, Hannah Bros; signed, Aug. 14; filed, Aug. 19; cost \$4918.
- Vermont** near Yolo. To build; owner, Mr. Balz; contractor, Casper Zwierlein; cost \$1700.
- Washington and Baker**. Excavation and brick work; owner, Clinton Henry Ball; architects, Laver & Mullany; contractor, H. H. Larsen; signed, Aug. 28; filed, Aug. 27; cost \$1380.
- Washington and Baker**. Carpentry work; owner, Clinton Henry Ball; architect, Laver & Mullany; contractors, R. Weeks and Son; signed, Aug. 28; filed, Aug. 28; cost \$8065. Plumbing and gas fitting; contractor, W. F. Wilson; signed, Aug. 27; filed, Aug. 28; cost \$1320.
- Yerba Buena** near Clay. Two-story frame; owner, Daniel Carmody; architect, M. J. Welsh; contractor, Ed. Mooney; signed, Aug. 30; filed, Aug. 31; cost \$2450.

PALO ALTO

Palo Alto. Cottage; owner, M. D. Hall; architects, Cuthbertson & Williams; contractors, Powell & Dean; signed, Aug. 18; cost \$1320.

The California Architect and Building News.

OFFICE, 408 CALIFORNIA STREET,

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

VOLUME XVIII.

OCTO 20th, 1897.

NUMBER 10.

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

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

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

ESTABLISHED 1879

INCORPORATED 1887

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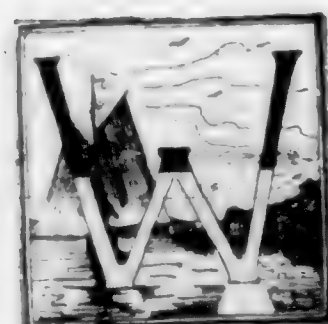
OUR WORTHY Mayor of San Francisco, with the laudable purpose of securing for the government of this city a suitable organic law, appointed some weeks ago a committee of one hundred citizens representing all shades of political opinion, and requested that they prepare or formulate a new charter on progressive lines, in the hopes that a non-partisan board of free-holders could be elected to officially submit the same to the voters of the metropolis, for their acceptance. This committee has been steadily at work on the task, and has outlined a charter which they hope would be approved by the voters and give a better and more economical government for this city than is possible under the existing antiquated and complicated hodge-podge of special enactments that have from time to time during the last thirty or forty years been enacted by the legislature for the government of San Francisco. The committee has pro-

posed many features that are in line with modern ideas of Municipal government, among others the acquisition and control by the city of public utilities. This naturally would arouse the active opposition of the corporations that profit annually to the tune of millions of dollars by conducting these utilities, and there are signs that they have already begun to lay wires to defeat the charter that will be proposed by the committee of one hundred. Bear in mind that the present committee is unofficial, and that the charter as submitted to the voters must be (at least nominally) prepared by the duly elected freeholders chosen for that purpose. It is the intention of the committee to present to the electors a board of free-holders pledged to the support of the instrument now being formulated. Should this plan be allowed to mature without opposition, there is little doubt that the charter would be ratified by the electors, as the need of a proper and definite governing authority is becoming more and more imperative. But this is dealing with the question

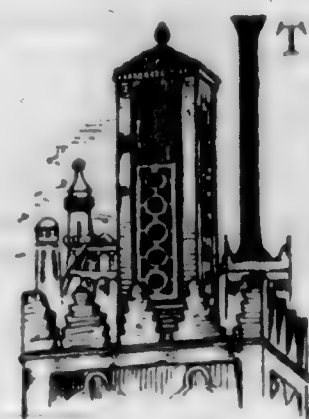
and leaving the corporations and politicians out. The politicians and corporations do not wish to be left out however, and it is dollars to doughnuts that they will make themselves felt. Suppose the regular political machines combine forces and nominate a set of free-holders conjointly; they would certainly have a fighting chance to elect their men in opposition to the candidates proposed by the committee of one hundred, and the result would be that the charter submitted by them to the people for the adoption would be no more like the committee's charter than chalk is like cheese. The developments in the game during the next month will be full of interest to all public spirited citizens.



WITH THE death of one woman and the awful experience of many others, the recent terrible explosion and fire at the California Fuse Company's works, has demonstrated very strongly the necessity of Legislation prohibiting completely the use of any kind of light or fire in any building used for the manufacturing or storing of combustibles and explosives. This fire started from an electric lamp, conclusively corroborating what has been said before. There are plenty of hours during the position of the Sun above the horizon for any employe to work, and any building for the purposes stated above can be planned and built so that the Sun's light penetrates to all corners and places. The only explanation that work has to be done by artificial light or that buildings are built so as to need the same during the daytime, must be therefore the infernal greed for pelf which seems to possess almost all humans, and which should be made a criminal offense when endangering others.



WITHOUT arrest and without trial by judge or jury, twenty workmen were shot to death the other day by order of the Courts of this country for disobedience to a Court decree. But they were poor men, ignorant of the implicit obedience that all good citizens render to the voice of the constituted authorities. Thus does the MAJESTY OF THE LAW compel the respect of cringing foreigners. By the way! Some years ago the proper authorities of San Francisco ordered several miles of unused railroad track on Bush street to be torn up: the Courts decided that the order was a lawful order and must be obeyed. Yet the rails still rust peacefully on Bush street and none of the recalcitrant directors of the corporation have as yet been shot. It is high time that San Francisco awoke from her slumbers and took a lesson from the more progressive Eastern States, as to the most effective methods of compelling respect and obedience to the mandates of the Courts. It is really disgraceful that this city should be so much behind the times, and we sincerely trust our sheriff will at once take the necessary steps to secure the number of rifles and gattling guns that may be necessary to place us on an equality with our sister cities, that our citizens may hold their heads erect, proud in the consciousness that San Francisco is no longer a jay town.



IT AFFORDS us considerable satisfaction that verdicts have been given by Juries in at least two recent cases in San Francisco, in favor of architects as against clients. The decision in these cases indicates that in the opinion of the Jury the client desired and tried to effect the robbery of the architect he employed. The opinion of a large class of the building public that an architect is a safe man to mulct is still very rife, and we hope the eminently just decision of the jury in the two cases referred to will serve to make people think twice before attempting to get something for nothing; another name for robbery.

In the first case *Laver & Mullany vs. Hotaling*—the defendant had used the time, labor and talent of the plaintiff in obtaining means by which he could judge of his ability in getting an income out of certain property and offered some petty sum for the experience and advice offered him. When the defendant goes to a physician or lawyer for advice he expects to be called upon to pay a good fee for it, but the plaintiff being only an architect with no organization to back him, he was considered safe prey—the jury luckily thought otherwise.

In the last case that of *Deprosse & Meusdorffer vs. The Eagle Distilleries* the attempt at thievery was just as palpable. The defendant had made working drawings and partly superintended the building, when they were dismissed and payment for their services refused. The Jury evidently could find nothing in the evidence showing why they should not be paid the value of their services and decided accordingly.

We would advise architects in the future to have jury trials, as a body of twelve ordinary men are not swayed by legal quibbles and technicalities as we generally find to be the case when a matter is tried by a judge, as some architects have found to their cost, but look at the honest rights of a case, and when they see an attempt at squirming out of paying for things clients order, give verdicts accordingly.

If the architects had a protective association like all other businesses, giving mutual help and protection against the unconscionable conduct of those who sneak around to get their labor and brains for nothing—such things would not be so ready to attempt it.

PROSPECTUS FOR THE PHEBE HEARST ARCHITECTURAL PLAN OF THE UNIVERSITY OF CALIFORNIA, BERKELEY, CAL.



THE UNIVERSITY OF CALIFORNIA has undertaken an enterprise which it is hoped to make one of the most notable in the history of architecture; and in this hope it asks, through the wise and loving kindness of Mrs. Phebe A. Hearst, the co-operation of the architects and artists of every land and clime, in the preparation of a plan for an ideal home of education.

The purpose is to secure a plan to which all the buildings

that may be needed by the University in its future shall conform. All the buildings that have been constructed up to the present time are to be ignored, and the grounds are to be treated as a blank space, to be filled with a single beautiful and harmonious picture as a painter fills his canvas.

The University of California was founded under an Act of the Congress of the United States, passed in 1862. It received a large land grant and subsidies, and still receives, in addition, a yearly income from the United States. The Charter of the University was granted to it by the State of California, in 1868, and a part of its income is derived from a tax of two cents on each \$100 of the taxable wealth of the State, which income is, of course, constantly increasing in amount.

It will thus be seen that the University has both a National and State character. Its present resources are valued at about nine million dollars and, in addition to the revenue derived from part of such resources, it has a yearly income of about \$40,000 from the United States, and of about \$250,000 from the State tax. The University has trebled its number of students in six years. It has 777 in 1897: it has 2300 now, and it will probably have 5000 after ten years, which is the number of students for whom the architectural plan should be calculated.

The site of the University of California, at Berkeley, California, comprises two hundred and forty-five (245) acres of land, rising at first in a gentle and then in a bolder slope from a height of about two hundred feet above the sea level to one of over nine hundred feet. It thus covers a range of more than seven hundred feet in altitude, while back of it the chain of hills continues to rise a thousand feet higher.

It has a superb outlook over the Bay and City of San Francisco, over the neighboring plains and mountains, and the ocean. It is the desire of those who have charge of this enterprise, to treat the grounds and buildings together, landscape gardening and architecture forming one composition, which will never need to be structurally changed in all the future history of the University. It is thought that the advantages of the site, whose bold slope will enable the entire mass of buildings to be taken in at a single *coup d'oeil*, will permit the production of an effect unique in the world, and that the architect who can seize the opportunity it offers, will immortalize himself.

It is seldom in any age that an artist has had a chance to express his thought so freely, on so large a scale, and with such entire exemption from the influence of discordant surroundings. Here there will be at least twenty-eight buildings, all mutually related and, at the same time, entirely cut off from anything that could mar the effect of the picture. In fact, it is a city that is to be created,—a City of Learning,—in which there is to be no sordid or inharmonious feature. There are to be no definite limitations of cost, materials, or style. All is to be left to the unfettered discretion of the designer. He is asked to record his conception of an ideal home for a University, assuming time and resources to be unlimited. He is to plan for centuries to come. There will doubtless be developments of science in the future that will impose new duties on the University, and require alterations in the detailed arrangement of its buildings, but it is believed to be possible to secure a comprehensive plan so in harmony with the universal principles of architectural art, that there will be no more necessity of remodeling its broad outlines a thousand years hence, than there would be

of remodeling the Parthenon, had it come down to us complete and uninjured.

In the great works of antiquity, the designer came first, and it was the business of the financier to find the money to carry out his plans. In the new building scheme of the University of California, it is the intention to restore the artist and the art idea to their old pre-eminence. The architect will simply design, others must provide the cost.

About five million dollars have already been pledged for a beginning, and such a general desire to contribute has been manifested, that it is thought that all the funds required will be forthcoming as fast as the work can be carried on.

Mrs. Phebe A. Hearst, widow of the late United States Senator George Hearst, and a lady well known for her philanthropy and public spirit, and her interest in and taste for all things artistic, has provided ample funds for securing the architectural plan. For this purpose she has appointed a Board of Trustees consisting of the Governor of the State, James H. Budd, representing the State; one of the Regents of the University, J. B. Reinstein, representing the Board of Regents, and one of the Professors of the Faculty, William Carey Jones, representing the University.

While the method of obtaining the architectural plan has not been decided on in detail, it is thought that it will be done by an international *concours*, open to all the architects of the world, with an international jury of five members, who will have full charge of the *concours* and of the award of all the prizes. This *concours*, while partaking in some degree of the nature of the usual competition, will possess all the main features of an actual co-operation of the best architectural and artistic talent available for the purpose, as will be seen from the programme which has been prepared with that idea as a controlling one.

There will be two competitions, and ample prizes will be provided. Maps, casts and photographs of the ground will be placed at various accessible points in Europe and America, for the convenience of architects desiring to enter the *concours*, and the programme thereof, prepared by Professor Guadet, of the School of Fine Arts of France, is now under consideration by the Trustees, and it is hoped to distribute the same within the next sixty days.

Copies of this programme, when issued, may be obtained by architects from the various architectural societies in America and Europe, or upon application to the Board of Trustees, at their office, 217 Sansome street, San Francisco, California.

The University of California is destined in no long time to be one of the great seats of learning of the world, and the architect who plans for it a home worthy of its future, and of what a famous authority has called "the most beautiful site on earth for the purposes of a University," will make his name imperishable.

San Francisco, California,
August 31, 1897.

J. B. REINSTEIN,
JAMES H. BUDD,
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ALTERATIONS.



PERHAPS the most troublesome and vexatious of the duties of the architect is that of planning and supervising the alterations of old buildings and premises. We have heard many architects say that they would rather have to do with two new houses than to alter one. In the preparation of designs for a new building, the whole is plain sailing. The requirements understood, the plan and elevations made, the architect has to execute them. There is the site, free and unencumbered by any other buildings, there are no heights and levels to arrange; but, both in area and vertical dimension, there is an unrestricted field for the carrying out of the design which has been previously worked out to scale in plans and sections. The artist feels, too, that he has a *carte blanche* to do what he pleases: he has the instructions and a free scope for his talents without limit. Like the painter with a clear canvas, or the sculptor with a block of marble, he is master of the situation, and can use his own discretion in making the best of his opportunities.

There are two general kinds of architectural alterations. One is when the existing building or premises has to be altered internally or be remodeled; the other when a new portion has to be added, and the parts simply connected without any interference with the older part. More correctly, the latter is an addition. When a partition is erected to divide one into two rooms, or a passage has to be thrown into a room, a staircase altered, we have an alteration coming within the first class. A new wing to an old house, a bay window, a chancel or transept to an old church, or the erection of a spire, all come within the second class of alteration. We all know which of these two classes of work the architect would sooner have to deal with. Take a badly arranged or an old, dilapidated house: several internal alterations are necessary to be made to it; a plan and specification are prepared, and tenders are invited. The first difficulty of those who tender is to know exactly what has to be done. Men of little experience guess at the amount; those of long experience in alterations hesitate—they are careful to make a personal examination before committing themselves to price. Where to stop? How will this wall or that floor or roof bear cutting into or patching? What are the risks and contingencies to be incurred?—these are the sort of questions which arise in the mind of the cautious builder before signing a contract for alterations. A wide margin is the only safeguard, for every one conversant with building alterations knows the utter impossibility of discovering beforehand what a certain alteration will entail, or what lead to, by the time the work is finished. The record of specifications for this class of work and actual experience, as furnished by practical builders, will remove any doubt in the mind of those who think that alterations and building are to be regarded in the same light. Take, for example, an old floor. A partition below it has to be removed to make a room larger. The architect specifies for the shoring up of the floor and ceiling, and the insertion of a beam or rolled girder to carry the ends of joists of the old floor. Actual experience discovers that the plan is impracticable. The joists are found to be too decayed at the ends to be reused; or, what is more probable, the binding-joists are quite incapable of doing duty after they have been disturbed by

the operations. Instead of a few new joists or a single girder, the work entails a new floor. Even greater risks attend the alteration or raising of an old roof. The timbers, which might have lasted for years if undisturbed, quickly crumble and the joints of the framing are found to be rotten. Old leadwork is the same; often it will not bear disturbance, such as would be the case in the raising of a flat. Between patching and thoroughly making good the difference is exceedingly great, and there is a strong temptation among small builders on this account to evade the terms of the specification. To remove the old timber or lead and to credit the value of the materials is no easy matter.

Allowance for old timber that may turn out to be rotten is almost impossible. Restorations or repairs are generally involved in contracts for alteration; and in these works credits make a considerable item in the bill. Thus, we constantly find in specifications for alteration the phrase "remove and credit" when the extent of removal may be uncertain, and the condition of materials still more so. In church restoration the difficulties are often great. Thus we find such an item as the following, "Remove roof of aisle, comprising two bays, and make good work disturbed." This may involve the removal of a few squares of boarding, roof-timbers, and lead. Unless the exact quantity of lead is stated the item is a very doubtful one. It is hardly necessary to urge the importance of giving the quantities of the old materials and their position in the building. With regard to such material as lead, it is better to measure the same as it is removed, the contractor stating in his tender how much per cwt. he will allow for it. Much difficulty, however, is avoided when the old materials are sold at the onset, which can only be done when the building is pulled down. But, whichever mode be adopted, there is an element of uncertainty and doubt in tendering for work of this description—one which can only be reduced by a careful and analytical examination of the building before the prices are affixed. As we occasionally find, there is a great difference in work of this kind under architects. One will enforce the terms of the specification, another will allow of a loose interpretation. Hence work executed from the same specification under one man's supervision may cost 50 per cent more or less than under another. For instance, what a divergence of opinion will be found among builders in such matters as cutting out to insert new windows, or in repairs to stonework. In the repair of an east window, which included cutting out decayed stones, inserting new, and the removal of saddle bars and glass, one tender was £10, and another nearly £30; but instances may be multiplied proving the various interpretations placed by builders upon items. Nor can such divergencies be materially lessened by the ordinary methods of practice; the good sense, moderation, and judgment of the architect, and the careful examination of the contractor, are the only means of diminishing the contingencies. In bills of quantities and specifications for alterations, more accurate results would be arrived at by a preamble describing clearly what was intended to be accomplished, so that those who tender may understand the motives and objects of the architect and client, instead of being compelled to grope in the dark, and to find out how best they can meet the liabilities that they will have to incur in the execution of the work. Instead of clearness, vague descriptions are given, and the aim appears rather to throw the interpretation upon the contractor.

But the architect's difficulties do not end with the speci-

EGYPTIAN MONUMENTS.

In the first place, he is tied to existing conditions. He is restricted to certain levels and to a certain style. Structural difficulties are also great, and then when he has done his best the work is unsatisfactory. It is only a compromise after all. Such in brief is the experience of those who have had much to do with alterations of old houses of inferior type. The desire to do what is best and right is constantly interrupted by some existing circumstances, so that very little can be done thoroughly. But the chief troubles commence when the work is begun. Unexpected things are discovered directly the old work is touched, and these often render a different method of procedure necessary. An order for extra work is generally the consequence, needing an incessant attention to details which have perhaps never been thought of before. Much of the trouble and anxiety which interfere with the architect's peace of mind arises from inaccuracies in the drawings, which sometimes are found to disagree with the old work. However careful the dimensions may have been taken, discrepancies will occur; and it may perhaps be worth while to remark that if in such cases architects in furnishing drawings were not to figure dimensions, such as heights, but to direct on the drawings that these are to be taken by the contractor from the actual building before commencing the work, a good deal of risk and labor would be saved. We have known of such cases being made to agree with a section, which, turning out to be inaccurate in the levels as figured, have had to be altered. Sometimes an additional window has had to be added, much to the detriment of the staircase. But the increased labor and trouble entailed is not estimated by the employer.

It is seldom architects charge more than the customary percentage for alterations, which is miserably inadequate as a remuneration. The drawings may be few—and correct plans and elevations are the chief requirements—but a very full and complete specification is absolutely essential, requiring a close and accurate survey of every part of the structure. In short, the proper plan is to write the specification, or to make notes for it in the building itself, so that no point or detail may escape notice. Quantities for such work can be only accurately prepared from a personal inspection. The greatest task of all is the supervision of alterations. To meet contingencies and difficulties when they appear, and to be able to cope with them, is a trying ordeal for the young practitioner. So much depends upon discovery in the progress of pulling down or removal, that nothing less than a vigilant inspection and watchfulness on the part of the clerk of works or the architect will be of much good. To be forewarned is to be forearmed, and to be able to apply an alternative method to any problem is one of the tests of the resources of the architect. Yet a great deal of uncertainty as well as anxiety might be spared if architects and builders intrusted with alterations were to be permitted to make experimental examinations before plans or estimates were prepared. Superficial surveys, such as making plans, are quite inadequate to discover hidden construction or the actual condition of materials. These ought in all instances to be supplemented by examinations of those parts which are affected by the proposed alterations.—*The Building News*.

WHILE repairing the Heidelberg Castle ruins some workmen found a window group, the style revealed the fact that the castle was not begun in 1411 but about 200 years earlier.

UPON looking at the monuments of ancient Egypt anterior to the eighteenth dynasty we find two great groups belonging to distinct ages, which are in a certain measure connected, but certainly not linked together by other minor groups which can be proved to stand between them. The first of these groups is that of the pyramids of Gizeh and of the tombs surrounding them. These are unquestionably the oldest monuments of Egypt, and probably of the world. Their massive architecture, which wears an air of primeval antiquity, the similarity of their form to primitive structures in various part of the world, and the archaic style of the sculptures of the tombs, alike prove their remote age. The subjects of the sculptures also differ greatly from those of later Egyptian art. One of the most striking and remarkable distinctions is the absence of representations of divinities and funeral rites, which are constantly found in tombs of a later period. The manners and customs belong to a primitive age. Laboring men are usually represented naked, which is not usual in other monuments; the chief occupations are connected with agriculture and the tending of cattle, and there is no trace of an army. The language appears in a more primitive form, and the inscriptions, which are for the most part merely descriptive of the sculptures, are very difficult to read.—The second important group of monuments bears the names of kings of Manetho's twelfth dynasty. They consist of a small temple, remains of other temples, tombs, obelisks and statues. The architecture is very different from that of the Pyramids, being less massive and more elegant. The sculptures, though still resembling in style those of an earlier date, exhibit a considerable advance. Separate statues have a better form and superior finish. The animals are admirably represented. There is still an absence of religious representations in the tombs, but divinities are portrayed upon other monuments. The subjects are of a less simple character than previously. The arts appear to have been more advanced, and life to have been more refined and luxurious. Soldiers are represented, and the laborers are usually clothed. The language is more developed, and perhaps may be considered to have reached its perfect state. Such is the impression which an intelligent observer would receive upon examining the monuments on the spot. He could have no doubt of the relative age of the two groups, but he would find no means of determining the period of time which intervened between them. He could see that no one in Egypt could possibly confound two such different epochs, and that therefore the priests would place, as a matter of course, the kings of the first group in an earlier dynasty than those of the second group. So far Manetho's account is confirmed by the monuments, but further than this we cannot venture to go before the eighteenth dynasty. Our real knowledge of the most ancient history of Egypt is almost entirely confined to the Pyramids and their builders.—*The Architect*.

TESSERÆ.

DETAIL IN PAINTING.

THE contempt expressed for paintings of fruit, flowers, and what is called still life, is, like most other general and unqualified expressions of the kind, unjust; for though it be true that an artist may be able to paint such things

well without possessing skill in any of the higher branches of the art, the converse is not so, no artist having been able to paint great things well who could not also paint little things. In the grandest and most perfect production of the pencil, the *Peter Martyr* of Titian, all the trailing plants, spreading leaves and flowers which decorate the foreground are painted from nature, with all the accurate truth of a botanist, though with all the light, airy, playful brilliancy and harmony of effect of a great master. We are aware, indeed, that Sir Joshua Reynolds has hastily denied the fact, and the merit of it if it were so; but the picture, though injured, is still existing to attest it; and if significant and entertaining objects can be employed in such decorations, common sense proclaims them to be preferable to unmeaning blots and random flourishes, which, like all other ornaments

yielding nothing, have an offensive character of obtrusive affectation. Hence, so far from despising skilful and elegant imitations of such objects, all the great masters of the art have studiously practised and successfully employed them; and, in proportion to their general excellence in the whole, has been their particular excellence in these subordinate parts. The leaves, fruits and flowers of Titian and Rubens are far superior to those of any professed and exclusive painter of such subjects, and their vases, phials and implements to those of any other artist whatsoever. Even the patriarchs of the truly grand and severe style, the founders of the Roman and the Bolognese schools, found it expedient to pay no less attention to these matters of decoration as the fruit in a picture of Ludovico Caracci, in the Earl of Ashburnham's collection, and the writing-desk, inkstand, books and hour-glass in a portrait of Cardinal Ribbena by Raphael, publicly exhibited some years in London, may sufficiently evince. Teniers might have envied the fidelity, delicacy and transparency with which the latter are finished. Neither did Salvator Rosa, the most bold, negligent and sketchy of the great painters, think it beneath him to attend to such matters, as appears by the admirable truth, force and brilliancy with which the weathered leaves, tattered volumes and bones of fishes and animals are finished in his picture of Democritus.

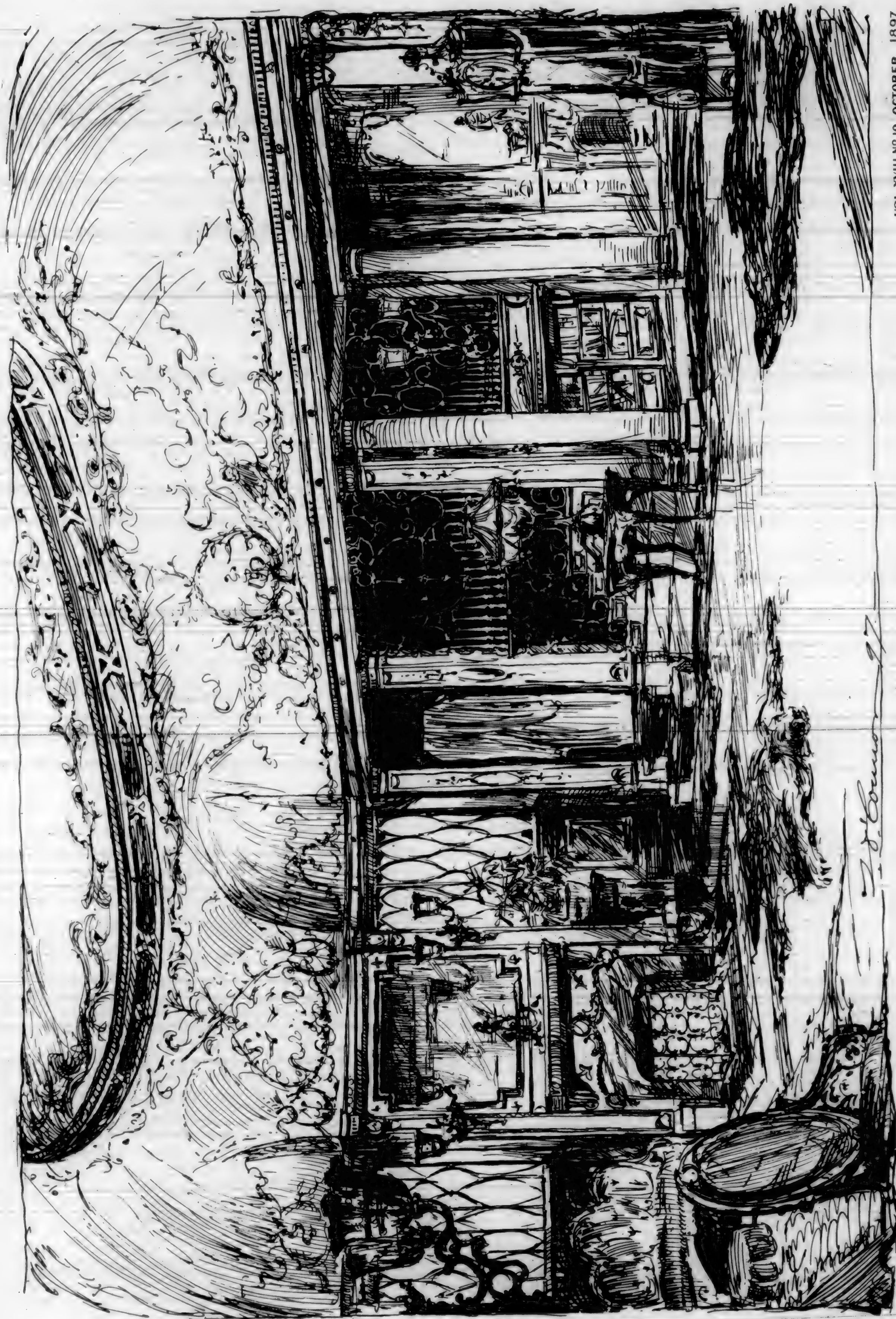
COLOR IN THE ARTS.

The thing in the sense of art called "color" is never absolute in itself, but derives its value, like the varying lots of human life, from comparison with what is next and around it. The same tint will be bright or dull, according to its environments. As a rule, no color in a fine work will be found so bright as it looks, and inversely, no color in bad or ordinary work will look so bright as it is. A tawny sail on a gray sea and sky by Ruysdael will shine like a ruby, while all the reds, blues and yellows, indiscriminately shuffled together, as in some of the painted glass of the present day, will fail to produce the effect of brilliancy, and, indeed, each of them will destroy its neighbor. In this principle of interdependence in the scale of his palette the true painter becomes more and more conscious, his chief art being to work it out in practice. But no similar consciousness can be attributed to unreasoning races. Therefore, for such evidences of the prevalence of fine color as are found among them, a different operation of the same principle must be sought. In countries where there is much light we shall invariably find rich and harmonious coloring in the costumes of men and the trappings of animals. Much light bleaches the landscape, and for the greater part of the year, and, in

some localities, for the year round, the eye rests only on an arid and neutral-colored world. This monotony renders all color, as such, both precious and distinct. Nature sets the example by the brilliant plumage of her birds, and the hues of smaller creatures—a brilliancy never raw or crude; and nature herself gives the materials as well as the example for the same harmonies in the accessories of human life. Eastern races have for ages been aware that only the rich and true colors supplied by their native dyes—the madders, indigos, etc.—and their combinations, will stand the hot and dazzling conditions of their climate. The use of these colors has therefore become such a mere habit that the reasons for their preference may be said to be forgotten. The selection of the fittest has been made for them by nature herself; it being reserved for the Englishwoman in India, who ignores this law, to discover with dismay the dirty mixture to which her fresh Parisian dress in the last tint of the fashion is promptly reduced. Even in their fadings the dyes of India and Arabia—aided by the quality of the native wools, which have an affinity for them—maintain their relative harmonies; and the painter will often prefer the worn rug or robe to the new one. Nor must we overlook another reason for richness and depth of tone, equally independent of the taste of man; namely, the use of color as an ingredient of distinctness. Seen from afar, across the neutral mass of the ocean, the brilliant hues of the ship's flag or pennon are no matter of mere taste or fancy, but of necessity. In the same way the robe and the turban of the traveler in the desert, and the housings of his horse or camel, have their allotted purpose. Thus it happens that the harmonious combinations of the Persian carpet or Indian shawl are hardly to be credited so much to the "feeling for color" of the native weaver as to the light and heat which render all false tints fugitive and which these combinations alone resist; the providence of nature having also bestowed materials in which he can hardly go amiss. Not that we would deny to the Eastern weaver, who in such countries offers the only approach to the position of a painter, the exercise of taste, and that sometimes of a high kind, the result of culture of the eye under long-continued traditional arrangements; but he moves and works, to a great extent, in a groove formed for centuries before him. To turn now to our own land, where, far from having the light and heat and consequent neutral monotony of landscape to which we have endeavored to trace the use of the rich coloring of the East, our native landscape presents, more or less, all the year round, a mass of that color most foreign to the Oriental eye and most grateful to our own, namely, that of a soft and refreshing verdure. We sigh not nothing better, nor for more harmonious correlative than the time-worn hues of stone or brick—the gray church tower and the old brick mansion—the neutral yellows and grays of the cornfield, whether in ear or stubble, and the ever-changing varieties of gray and luminous cloud, all of which receive a relative value from the surrounding green. Other forms of so-called "color," such as masses of sparkling mosaic, patches of enamel, painted architecture, even precious marbles, are not what the prevalent tones of English landscape and sky really relieve. The lady's Indian shawl is known to be the true and choice thing by a limited jury, but, in her heart, the lady's maid thinks it a dull affair to have cost so much. For we have not light, and therefore neutral tint enough to set it off. That under these differing and even unfavorable conditions English art, from the period of its revival, should have been pre-eminent in the quality of "color," may be

Residence of J. L. Kaster
MARTEN & COFFEY, Architects.





CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY, PHOTO LITH.

VOL. XVIII NO 10 OCTOBER 1897.

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CALIFORNIA ARCHITECT & BUILDING NEWS
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VOL. XVIII NO 10 OCTOBER 1897.

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