

of the "stream of cold water thrown forcibly against the bottom of the slab for fifteen or twenty minutes" was a concrete made of my (at that time) "New Portland Cement."

THADDEUS HYATT,

73 Henry street,
Brooklyn, New York.

May 15, 1894.

To the Editor of The California Architect and Building News:—

It is universally the fate of all new departures from old systems to meet with disparaging and denunciatory opposition, especially from sources that consider their corns trodden upon by the innovation. Long before and ever since the image making craft for the temple of Diana, set up the danger howl when Paul preached the Gospel in Ephesus, changes of old custom, in all departments of human interest, except in womens' dresses and bonnets, have been condemned as fraught with public danger.

After its extraordinary economical and safe use for more than fifty years, as a building material in all the countries of the world, it seems to have been lately discovered in this enterprising city of San Francisco, that Portland cement concrete is not a safe article to be applied for building purposes, especially in foundations. This discovery certainly will be news to the thousands of workmen, architects and engineers who in other places all over Europe, India and America, have employed this material in some of the largest and most important structures which have been erected in the present century, and coming from such an intelligent and influential source as a new San Francisco publication, must cause these unfortunate builders who have thus applied this unreliable composition to regret not having waited for this discovery before they ventured upon its dangerous application at the cost of the millions that have been spent upon it. Even those more ancient builders of centuries before the manufacture of this modern cement and its combinations, who used a much inferior article, if they have any consciousness and interest in their old mundane practice while yet in the spirit world where they are now supposed to be, most reproachfully regret their unadvised risk in adapting their crude conglomerations to the works that still remain as monuments of their imperfect art. Vitruvius, Michael Angelo and other old Italian and Spanish architects and engineers who made extensive use of concretes with natural but inferior cements of trass and puzzuolani, and now superceded by Portland cement, would be astonished to learn what hazards they run in this system of building, and so would be our more modern builders, Smiston, Brinley, Stevenson, Vicat, Pasley, our own countrymen, Baldwin, Col. Sylvanus Thayer and others of their date, as well as those distinguished men now living and who continue the practice, as the French Coignet and the whole of his professional contemporaries all over the world. To these experienced builders it would certainly be a queer intimation that they are guilty of using such a perilous material as concrete exposed as it is to destruction by fire and perhaps other causes as may be discovered in San Francisco.

In apprehension of the direful tendencies of concrete, now just discovered in "three lumps" of it and in a case of bad workmanship, and after the prolonged use of the material for centuries, it would be advisable on the score of humanity to notify these eminent but mistaken builders, to abandon its use and hereafter confine themselves to safer materials. It would also be an act of kindness on the part of those who have made this discovery of the inherent danger of concrete,

and the means of warding off some solemn catastrophe, to warn the public, especially in the case of fire near any work wherein it was used, to keep away from it. Particular attention should be directed against such buildings as the Pantheon of Rome, whose dome of more than 140 feet in diameter is composed of concrete and has stood over 2000 years, for should a fire occur under it, this unsafe piece of work might "easily crumble" and fall on somebody's head.

The writer has visited magnificent works in European cities in which concrete constituted the entire building from and inclusive of the foundation, to the roof—whole blocks of dwelling houses of six and eight stories; aqueducts of miles in length, railway bridges, monuments, lofty revetment walls and churches wholly of this material even to the surmounting spire and cross. The builders of these works evidently thought themselves well enough assured of the efficiency of the material they used and had the temerity to apply it without waiting to be informed of what might be said about its dangerous tendencies in San Francisco.

OLD CONCRETE USER.

CONCRETE AS A BUILDING MATERIAL.

AN article, said to have first appeared in a California building paper, reflecting severely upon concrete construction for foundations, etc., and as a fire-proof material, has recently been circulated gratuitously among architects and builders on this coast. While it is certainly a matter to excite comment that any reputable building journal should show a disposition to attack concrete construction at this late day, still as a matter of fact the article referred to contains nothing worthy of serious consideration. The writer, to demonstrate that cement concrete cannot be made to resist fire, states that he has taken a few pieces, subjected them to high temperature and immediately submerged them in water, after which they showed a tendency to disintegrate. He might have made the same experiment with pieces of many varieties of well known building stones with exactly the same or similar results. The very best building stone has been affected by the instant contraction incident to sudden cooling, while the poor qualities have been practically ruined. Lyell has calculated that a mass of sandstone a mile thick raised in temperature to 1000° F. would elevate its upper surface fully fifty feet by expansion. Disintegration must follow sudden contraction. Cement concrete, like stone, is various in quality. The reputation of the best is established. It is a highly valuable building material and is used with satisfaction for foundation work and in almost every position of trust by eminent architects and engineers. Not one but scores of tests have been made of its fire-resisting qualities and the result is that it is being used to-day more than ever before. There is a field for all good materials in building and every improvement should be welcomed.—*The Pacific Builder.*

REMOVAL.—W. J. Cuthbertson has removed his office from St. Ann's building to Room 93, Flood building, corner of Market and Fourth streets, where he will be pleased to see his friends.

MAN (entering dry goods store)—"Is that gentlemen at the desk the head of the house?" CLERK—He is the man that foots the bills.—*Transcript.*

BOOKS AND PERIODICALS.

ANNUAL REPORT of the Board of Regents of the Smithsonian Institution, Washington, 1893. This report as usual contains much of interest not only to the man of science but to the general public, any one who looks at the index, can hardly fail to find some subject referred to and written in such a way as to demand attention. "The Inventors of the Telegraph and Telephone" for instance, will be read with interest by all. The illustration of the "Tibetan Prayer Mill Turned by Water" will, we think, be found more curious than useful at this day.

GOOD ROADS.—An illustrated monthly magazine published by the League of American Wheelmen, Sterling Elliott managing editor, 12 Pearl street, Boston, Mass. This magazine judging by the April number that is before us, is certainly entitled to the credit of working faithfully in the cause it has adapted, and in which all are interested. The illustrations of good roads are very enticing to the reader, and ought to urge every one to become a subscriber, as for the sum of one dollar the magazine is sent for one year.

THE MERCANTILE ADJUSTER published by the Mercantile Adjuster Publishing Co., Times Building, New York. A monthly Legal Directory and Commercial Law Digest. This must prove a very valuable manual to those wishing to have debts collected at a distance, in fact is a law library in its self that one could carry in his pocket.

RICHEY'S GUIDE AND ASSISTANT for carpenters and mechanics. A work of practical information, giving almost every geometrical and practical problem likely to arise in the work of the carpenter, and quick and easy methods for their solution. The use of the steel square, etc., tables showing strength and weight of materials, methods of framing, useful receipts, etc., etc., by H. G. Richey, illustrated by 201 engravings. Address William T. Comstock, 23 Warren street, New York, price \$2.00 sent by mail free of postage to any part of the world.

This handy volume contains much information condensed into a small space, will be found useful; while nothing new in this line can be expected after so much has been written upon the subjects treated of, the author has succeeded in giving in a simple way directions that all can understand and freedom from much that often confuse the reader instead of giving him aid in understanding the subject.

DOES ADVERTISING PAY?

A book entitled "How to Get Money," published way back in the 'fifties, contains the following on advertising: "Whatever your occupation or calling may be, if it needs support from the public, advertise it thoroughly and efficiently in some shape or other that will arrest public attention. I freely confess that what success I have had in life may be attributed more to the public press than to nearly all other causes combined. There may possibly be occupations that do not require advertising, but I cannot well conceive what they are. Men in business will sometimes tell you that they have tried advertising and it did not pay. This is only when advertising is done sparingly and grudgingly. Homeopathic doses of advertising will not pay, perhaps; it is like a portion of physic, making the patient sick, but effecting nothing. Administer liberally and the cure will be permanent. Some say they cannot afford to advertise. They mistake; they cannot afford not to advertise. In this country, where everybody reads the



COTTAGE ON FRANKLIN STREET.

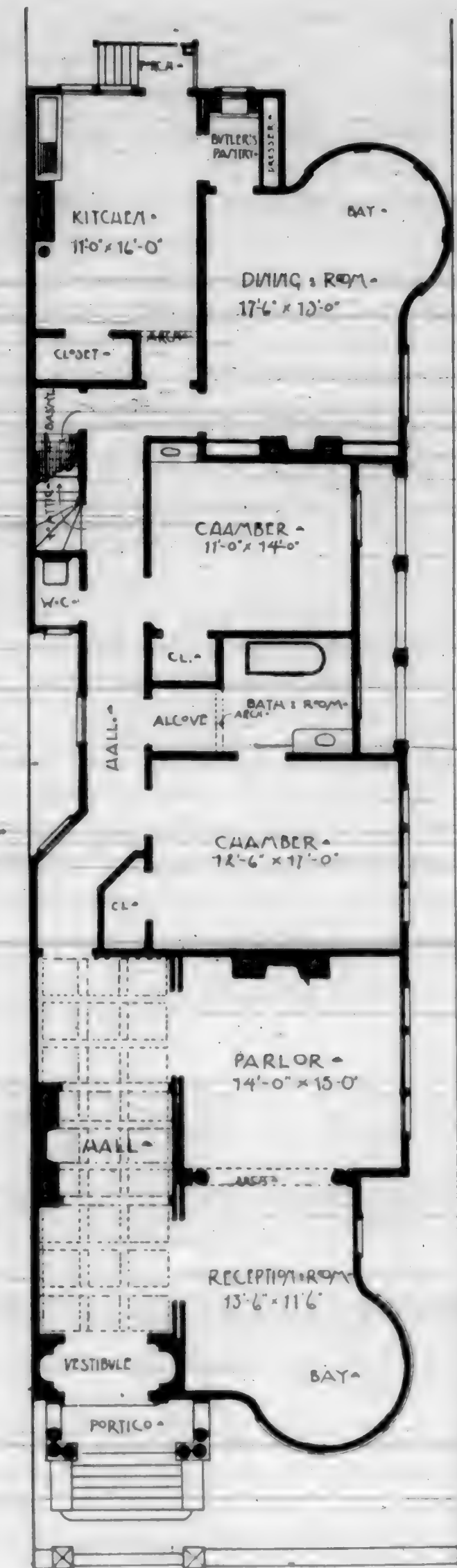
newspapers, it will be seen that these are the cheapest and best media through which persons can speak to the public, where they are to find their customers. Put on the appearance of business and generally the reality will follow. The farmer plants his seed, and while he is sleeping his corn and potatoes are growing. So with advertising. While you are sleeping or eating or conversing with one of your customers, your advertisement is being read by hundreds and thousands of persons who never saw you or heard of your business, and never would, had it not been for your advertisement appearing in the newspapers."—*Free Press.*

NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 403 California street
SETH BARSON, Pres. **GEO. W. PERCY, Vice-Pres.**
OLIVER EVERETT, Sec. **JOHN M. CURTIS, Treas.**

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
C. E. GRUNSKY, Pres. **GEO. W. DICKIE, Vice-Pres.**
OTTO VON GELDERN, Sec. **W. C. RALSTON, Treas.**

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
GEO. P. LOW, Pres. **C. O. POOLE, Vice-Pres.**
MAX CASPARI, Sec. **H. T. BESTOR, Treas.**



FIRST STORY: PLAN.

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.

PARTY WALLS.—A party wall is a wall on the division line of estates which each proprietor is at liberty to use as a support to his building. When such a wall stands in part on the land of each it is presumed to be owned by the two, unless the contrary is shown. At the common law no person was under obligation to unite with his neighbor in building a party wall, or even to furnish his portion of the land for it to stand upon; but an erection might be made a party wall by agreement, and if one person allowed another to make use of his wall for the support of a building, and to continue the use for twenty years, the grant of a right to do so was presumed, and the wall became a party wall by prescription. The inconveniences of the common law rule have been obviated to some extent by statutes which permit a proprietor to build into his neighbor's wall for the support of his own building, provided the wall is sufficient for the purpose, on making payment of the just proportion of the cost. These statutes establish the rule of the strict civil law. Where a party wall is built by agreement, the strict rule of law requires a deed, but if the agreement was by parol only,

the case would be a very strong one for the application of the doctrine of equitable estoppel, and no doubt a dissatisfied proprietor would be enjoined from repudiating the arrangement and interfering with his neighbor's enjoyment of the wall as a party wall afterwards. If one erects a block of houses or shops, and then conveys them separately to purchasers, the walls between them become party walls for the mutual benefit. Where a party wall exists, each proprietor has an easement in the land of the other for its use, repair and support; but the extent of his rights may be limited by the contract between them with respect to the wall, or by the user or by the statute under which it was built or is owned. Rights in party walls pass with the land to heirs or assigns without being specially mentioned in the conveyance. Each proprietor owes to the other the duty to do nothing that shall weaken or endanger it, and though each may rightfully, when he finds it for his interest to do so, increase its height, sink the foundations deeper, or on his own side add to it, yet it seems that in doing so he is insurer against damages to the other proprietor. If the wall becomes ruinous, and ceases to answer the purposes of support, the easement is at an end, and each proprietor may build as he pleases upon his own land without any obligation to accommodate the other. 472.

VALIDITY OF CONTRACTS.—It is, no doubt, the general rule of law that no right of action can spring out of an illegal contract. And the rule that an illegal contract cannot be enforced applies as well to contracts prohibited as to contracts bad in themselves. But it does not necessarily follow that all the consequences attending a contract which is contrary to public morals or founded on an immoral consideration attend and affect a contract prohibited merely. The law, in the former case, will not undertake to relieve parties from the position in which they have placed themselves, or to adjust the equities between them. But in the latter case, while the law will not enforce the prohibited contract, it will take notice of the circumstances, and, if justice and equity require a restoration of money or property received by either party there under, it will, and in many cases has given relief.

Winegard v. Panning, Supreme Court, General Term, Third Dep't., 27 N. Y. Supp. 566. 153.

CONSTRUCTION OF CONTRACT FOR PARTY WALL.—Where one being about to erect a building on his lot on the west side of an adjoining lot on which the owner had a three-story building, running back 104 feet, the rear seven feet of the lot being covered with a one-story shed built for wood, on the side toward his lot, made a contract with him providing that the east wall of his building should be erected as a party wall, the cost to be borne by him, the adjoining owner to pay \$3000 whenever he should make use of the party wall, and for the support of any building which he might thereafter construct. As his building came to the dividing line of the lots, it was necessary to take down the west wall, to make room for the party wall, and in doing this his building was built into and attached to the party wall. He was not liable for the \$3000 till he thereafter constructed a building on his own lot, and he was not liable by reason of fastening his front wall into the party wall in making repairs, nor for covering over the wall on the inside of his building with plaster and wainscoting, and on this hanging gas fixtures and coat racks. Nor was the tearing down of the wooden part of the one story shed on the rear seven feet of the lot, and extending the rear brick wall of the shed, and fastening it into the party wall with cement joints, no wall being put between the shed and the party wall, the construction of a building within the contract.

Fox v. Mission School, Supreme Court of Missouri, 25 S. W. Rep. 171. 279.

CONSTRUCTION OF BUILDING CONTRACT.—In a building contract, it was stipulated that, in case of the failure or unreasonable delay of the contractor to provide the necessary labor and materials to complete the work by a certain time, in the judgment of two architects named, then the other party to the contract might, after three days notice, provide other labor and materials, and complete the work. The contractor could not lawfully be stopped from proceeding with his work in constructing said buildings, upon the judgment of said architects, where the judgment of one was based solely upon what the other had informed him, and not upon his own examination of the premises and a proper inquiry into the facts constituting such default on the part of the contractor. He was entitled to the benefit of the joint judgment of the architects, based upon a full knowledge by each one of the facts which constituted such default, especially where the examination of the condition of affairs called for a personal examination of them, as a condition precedent for the exercise of the discretion and judgment of each architect.

Benson v. Miller, Supreme Court of Minnesota, 57 N. W. Rep. 943. 188.

TO ARCHITECTS AND BUILDERS.

PLEASE note that Phoenix Pure Paint has been purchased by W. P. Fuller & Co., who will continue its manufacture in connection with their own Manufacturing Department, under my personal supervision. Its high grade and absolute purity will be fully maintained. It will be my aim to make it as it always has been, the purest, best and safest paint to specify.

I thank you for your cordial support in the past, and hope to merit its continuance. Respectfully yours,

L. H. BUTCHER,

Formerly of The Phoenix White Lead and Color Works.

A CURIOUS QUESTION.

A curious question has come up in New York, says the *American Architect*. Mr. Elbridge T. Gerry, who is well known as a yachtsman, is having a building on Maiden Lane, belonging to his wife, painted a bright orange color. It happens that Maiden Lane is mostly occupied by jewellers, and some of these, who have windows opposite Mrs. Gerry's building, find that, when the sun falls on its orange-colored

paint, the reflected rays affect the color of the white diamonds displayed in their windows, making them look yellow, and apparently, destroying a great part of their value, as a yellowish diamond is worth only a small fraction of the value of a pure white stone. The jewellers whose property is thus affected met the other day, and civilly requested Mr. Gerry to allow his building to be painted of a different color, offering to pay the whole expense themselves. This request Mr. Gerry is reported to have refused, saying that he once painted another building of his, on Broadway, of a bright red color, and that the neighbors objected, but afterwards became reconciled to it. Mr. Gerry has the reputation of being a fair-minded and amiable man, and it ought not to be necessary to point out to him that a diamond merchant, to whom it is essential to be able to judge the color of stones correctly, could hardly carry on business in a glare of orange-colored light, however it might be with clothiers on Broadway. If the buildings opposite the flame-colored front were tenanted by artists, Mr. Gerry might count with confidence on seeing them pack up their goods and move away before his decoration was even finished, and there must be some limit to the right of a man to destroy his neighbors' business by his whims. He would probably not be pleased if the jewellers, unable to carry on their own business, should sublet their buildings to copper-smiths and soap-makers, yet their right to do so would be much less questionable than his right to indulge an extraordinary freak at their expense.

BUSINESS MOSAICS.

Joseph Budde will be found to be well represented in his line of sanitary appliances; every thing relating to good plumbing, including the various new designs will be seen in this exhibit. In fact it will almost tempt one to build a house in order to be able to fix it up with such closets as are here presented to view.

If you do not go to the fair, remember the number of Mr. Budde's factory and show rooms, 575 Mission street, San Francisco, Cal.

Conductor—"No smoking allowed." **IRISHMAN**—"I'm not smokin'." **CONDUCTOR**—"Well, you have your pipe in your mouth." **IRISHMAN**—"Sure I have my feet in my shoes but I'm not walking."

As the march of improvement goes marching on, our houses which at one time we only thought a shelter from storms, now demand attention to ornamental decoration and glass staining and decoration, and glass staining and embossing works come to the front. What can be more delicate in the way of ornament than a shelf of art glass in your favorite room. Now all these wants are supplied by Mr. John Mallon's Pacific Glass Staining and Embossing Works. Call and see the endless variety that can be finished by Mr. Mallon at 19 Fremont street and 1213 and 1215 Howard street, San Francisco, Cal.

Caller—"One of your sons is a minister and the other a physician, aren't they?" **MOTHER** (proudly)—"Yes; one preaches and the other practices."—*Detroit Free Press*.

Paraffine Paint Company are the only manufacturers of P. & B. Building Papers, Water-proof and Odorless; 500,000 square feet on the Midwinter Fair buildings were used as roofing. Anything in their line will be found at 116 Battery street where fair treatment and prompt delivery of orders make it a pleasure to do business with the firm. See their advertisement on page V in this journal.

As the merits of Fitzgerald Prepared Wall Plaster becomes known, the demand increases, nothing is a better assurance of a good thing, than the constant increase of its use; if you are in doubt where to go when you want your walls well plastered, call on the Pacific Patent Plaster Co., 216 Bush street, examine what they have to show, hear what they have to say and thus remove any doubt you may have on the subject.

Elder Sister—"Come, Clarence, take your powder like a man. You never hear me making any complaints about such a little thing as that." **CLARENCE**—"Neither would I if I could daub it on my face; it's swallerin' it that I object to."—*Life*.

The Bostwick Steel Lath Co. warns all persons from buying, selling or using the Turnbull & Cullerton Metal Lath, recently put on the market as an imitation of their old and unrivaled Lath; their notice of suit entered under their several patents covering their Lath and the machinery for making the same, and their guarantee to their customers against actions for infringements.

Penmen—"I'm getting out a book to be called 'First Aid for the Injured.' Tell me, what is the best thing to do when a bather has been in the water too long?" **OLD SALT**—"Send for the Coroner."—*Spare Moments*.

San Francisco Novelty and Plating Works, manufacturers of artistic metal work for bank, office, show window fixtures, elevator enclosures, cages, railing, etc. we have only to enter any of the lately finished bank buildings, to notice the great strides in this stile of work that has been within a short time. Gold, silver and nickel plating is no small part of the business of this firm, as well as the supply of gas and electric fixtures. Office First and Mission streets, San Francisco.

Gold, silver and nickel plating.—Every description of metal goods plated, at the old stand of the San Francisco Plating Works, 653 and 655 Mission street. E. G. Denniston the proprietor of these works has for so many years been at the old stand, and the work he has so faithfully executed, that he needs no notice to call the attention of old friends—but as new arrivals may not be so well posted where they can have work well done, we venture to call attention to his advertisement on page iii of this journal.

Mrs. Chatter—"Do you believe that cures can be effected by the laying on of hands?" **MRS. CLATTER**—"Most certainly. I cured by boy of smoking in that way."—*Spare Moments*.

Dixon's Graphite Cycle Lubricant.—The Joseph Dixon Crucible Co., Jersey City, N. J., are putting a Cycle Chain Graphite on the market, which for purity of graphite and usefulness is vastly superior to anything of the kind heretofore prepared. The graphite is not only of the choicest stock, but is ground to an impalpable powder, and then reground with a high grade of lubricating oil. This material, when applied to the chain of a bicycle, penetrates the bearings and thoroughly lubricates and protects them from wear and rust.

The Dixon Company will shortly put the same material on the market in the form of a solid stick, for the convenience of wheelmen who wish to carry it in their tool bags.

"Here," said the farmer, "just split up some of that railroad timber and I'll give you a good meal." **"Alas! I cannot,"** said the tramp; "the greater part of my life has been passed walking on such as those. It is too much like breaking up home ties."—*Puck*.

The Pacific Coast Door Co.—This is an incorporated company, office 808 Bryant street near Fifth, San Francisco, for the manufacture of doors, windows and blinds, a complete apartment of stock doors and windows, as well as sash weights and cord always on hand. Any kind of door will be made to order and estimates made for special work, T. A. Pettus, Superintendent.

We call the attention of our readers to the advertisement on the last page of this issue, of Phoenix Pure Paint. Phoenix Pure Paint has been largely used by the architects of the Pacific Coast for the last few years, and has proven itself a very meritorious article. As it is sold under a guarantee of absolute purity, architects find that where they specify it to be brought on a contract, in original unbroken packages, it saves them a great deal of trouble in watching their paint materials. Being a combination of strictly pure Lead, Zinc and Linseed Oil, it seems to be about as perfect a paint as can possibly be made. The manufacturers of this paint have demonstrated that it is possible to produce not only as good paint on the Pacific Coast as is made in the United States, but even a better article. Wherever Phoenix Pure Paint has been used it has proven itself to be of the highest possible grade, and we commend it to our readers as a perfectly safe paint.

"Er—has young Hifi come into his money yet?" **"Come into it?"** Great Scott, man! He's gone clear through it."—*Buffalo Courier*.

San Francisco Slate Co., rooms 4 and 5, 10th floor, Mills Building. The quarries of this company have a capacity of three thousand squares per month, are situated in El Dorado county in this state, the quality is every thing that can be desired, while the prices are the cheapest—what more can be asked for. Therefore if you want slate either for roofing or for vaults you will know where to go for a first rate article at a fair price. In our volume for 1893 you will find an illustrated article upon these slate quarries that is well worth referring to by those interested in this subject.

He—"Is that a love story you are reading?" **SHE**—"No; all the people in it are married."—*Chicago Inter-Ocean*.

The Vulcan Iron Works, 135 and 145 Fremont street, should be visited if you wish to get an idea what you can find in the way of architectural and ornamental iron works. Those about to furnish or remodel their stables should not go however, unless they wanted to be induced to order new fixtures all round as the temptation to do so will be great.

CITY BUILDING NEWS.

Belvedere near Waller. To build; owner, S. L. Strickland; architect, W. H. Little; contractor, F. G. Kronnick; signed, April 12; filed, April 16; cost \$3100.

Broadway near Hyde. Raising and altering; owner, Ellen Roward; architect, A. L. Roward; contractor, H. Behrens; signed, April 6; filed, April 7; cost \$1700.

Bush near Scott. To build; owner, Mrs. Anna C. Tietjen; architect E. Kollofrath; contractor, Wm. Loudon; signed, April 14; filed, April 16; cost \$3736.

Buchanan and Beach. Bulkhead and foundations; owner, S. F. Gas Co.; contractors, S. F. Bridge Co.; signed, April 25; filed, April 25.

Capp near Adair. Two flats; owner, D. B. Beaver; contractor, T. C. Cochran; signed, April 9; filed, April 9; cost \$4038.

Clayton near Oak. To build; owner, J. F. English; architect, J. B. Hall; contractor, J. J. Dunn; signed, April 10; filed, April 28; cost \$4900.

Clarendon Heights. Excavation; owner, Spring Valley Water Works; contractor, A. E. Buckman; signed, April 27; filed, May 3.

Connecticut and Napa. To build; owner, H. Lillenthal; contractor, H. Munster; signed, April 10; filed, May 2; cost \$2325.

Dupont near Green. To build; owner, E. C. Palmetre, et al.; contractor, G. Massoletti; signed, April 18; filed, April 17; cost \$3675.

Eddy near Laguna. To build; owner, Jno. Ross; architect, R. H. White; contractor, Jas. Campbell; signed, April 10; filed, April 12; cost \$4245.

Eighteenth and Shotwell. Alterations to St. Charles Church; owner, Rev. P. J. Cummins; architect, C. J. I. Devlin; contractor, Dan Powers; signed, April 14; filed, April 16; cost \$4100.

Fillmore near Jackson. Mill work on two four-story frames; owner, Sarah Kahn; architect, E. A. Hermann; contractors, Pacific Coast Lumber Co.; signed, May 4; filed, May 8; cost \$1642.

Fillmore near Jackson. To build; owner, Sarah Kahn; architect, E. A. Herman; contractor, M. J. Gallager; signed, April 7; filed, April 9; cost \$4570.

Fillmore near Clay. A livery stable; owner, Gertrude S. Bowers; architects, Percy & Hamilton; signed, April 19; filed, April 20; cost \$17,760.

Fillmore near Washington. To build; owner, Mrs. T. Meyer; contractor, G. G. Gillespie; signed, May 9; filed, May 9; cost \$3000.

Filbert street. All work plumbing excepted; owner, Henry Beck; contractor, F. Hansen; signed, April 23; filed, April 23; cost \$2200.

Filbert and Webster. To build; owner, Richard Malon; architect, W. O. Banks; contractor, Geo. H. Walker; signed, April 30; filed, May 3; cost \$5700.

Florida near 22d. Foundation floors and roofing; owner, Jno. McAdams; contractor, H. P. Conrady; signed, May 1; filed, May 3; cost \$2350.

Folsom near Pacific Ave. A school building; owner, P. Leo Bruner; architect, R. A. Van de Paret; contractor, R. Frost; signed, April 20; filed, April 24; cost \$3,701.

Fremont near Market. Alterations, etc.; owner, H. Huntington Co.; architect, Wright & Sanders; contractors, Robinson & Gillespie; signed, April 10; filed, April 11; cost \$4273.

Golden Gate near Pierce. Alterations; owner, H. Bingham; architect, R. H. White; days work; cost \$4000.

Golden Gate Ave. near Baker. To build; owner, R. G. Wenzel; architect, E. J. Vogel; contractor, Robt. Currie; signed, April 14; filed, April 14; cost \$1800.

Golden Gate Ave. near Octavia. Plastering; owner, Wm. John; architect, Emil John; contractor, C. Dunlap; signed, April 27; filed, May 1; cost \$1150.

Golden Gate Ave. near Octavia. Plumbing; owner, Wm. John; architect, Emil John; contractor, Ickelheimer & Co.; signed, April 27; filed, May 1; cost \$2783.

Golden Gate Ave. and Broderick. Raising and additions; owner, Kate Oliver; architect, T. J. Welsh; contractor, H. Jacks; signed, April 27; filed, May 2; cost \$3887.

Haight near Broderick. Brick two-story frame; owner, Jas. C. Malon; architects, Shea & Shea; contractors, M. Fennell & son; signed, April 11; filed, April 16; cost \$1196.

Haight near Broderick. Plumbing; owner, Jas. C. Malon; architects, Shea & Shea; contractor, P. F. Ward; signed, April 11; filed, April 16; cost \$1070.

Haight near Broderick. Carpenter work, tin and plastering; owner, Jas. C. Malon; architects, Shea & Shea; contractor, P. Griffin; signed, April 11; filed, April 16; cost \$8945.

Harrison near Third. Alteration; owner, H. Goldstein; architect, W. H. Armbrage; contractor, T. C. Cochran; signed, April 2; filed, April 8; cost \$9100.

Howard near 11th. To build; owner, P. J. Stolz; architects, Martens & Coffey; contractor, Jno. Foster; signed, April 18; filed, April 20; cost \$5700.

Kissling near 11th. Brick work; owner, Verein Eintracht; architects, Martens & Coffey; contractor, J. Magner; signed, April 16; filed, April 21; cost \$1723.

Kissling near 11th. Carpenter work and iron; owner, Verein Eintracht; architects, Martens & Coffey; contractor, H. Behrens; signed, April 16; filed, April 21; cost \$19,000.

Kissling near 11th. Painting; owner, Verein Eintracht; architects, Martens & Coffey; contractor, J. C. Derison; signed, April 16; filed, April 21; cost \$1550.

Kissling near 11th. Tin and iron work; owner, Verein Eintracht; architects, Martens & Coffey; contractor, J. D. Gear; signed, April 16; filed, April 27; cost \$1879.

Kissling near 11th. Plastering; owner, Verein Eintracht; architects, Martens & Coffey; contractors, H. E. Holgoth; signed, April 16; filed, April 27; cost \$1945.

Kissling near 11. Plumbing, etc.; owner, Verein Eintracht; architects, Martens & Coffey; contractor, C. Rehn; signed, April 16; filed, April 27; cost \$2193.

Leavenworth near Eddy. Raising and alterations; owner, Franz Acker; contractor, S. T. Crawford; signed, April 12; filed, April 12; cost \$2270.

Leavenworth street. Carpenter work, plastering and painting; owner, L. A. Phelps; architects, Townsend & Wyneken; contractor, L. N. Fletcher; signed, April 16; filed, April 20; cost \$2685.

Laurel Hill Cemetery. A vault; owner, Henry Williams; contractor, D. T. Pierce; cost \$2100.

Liberty near Valencia. To build; owner, G. H. Clifford; architect, R. H. White; contractor, W. W. Fancher; signed, April 18; filed, April 20; cost \$5000.

Lombard and Leavenworth. Alterations, etc.; owner, J. S. Hand; architect, H. D. Mitchell; contractor, M. P. Power; signed, April 20; filed, April 23; cost \$1885.

Market near 6th. Brick, granite, iron work; owner, F. Gutzkow; architect, E. Kollofrath; contractors, Richardson & Gale; signed, April 17; filed, April 18; cost \$27,700.

Market near 6th. Plastering; owner, F. Gutzkow; architect, E. Kollofrath; contractor, W. C. Watson; signed, April 17; filed, April 18; cost \$3815.

Market near 6th. Carpenter work; owner, F. Gutzkow; architect, E. Kollofrath; contractor, Adam Miller; signed, April 17; filed, April 18; cost \$30,650.

Market near 6th. Concrete to six-story brick; owner, F. Gutzkow; architect, E. Kollofrath; contractor, Geo. Goodman; signed, April 18; filed, April 18; cost \$430.

Market near 6th. Artificial stone; owner, F. Gutzkow; architect, E. Kollofrath; contractor, Geo. Goodman; signed, April 18; filed, April 18; cost \$1294.

Market near 6th. Painting; owner, F. Gutzkow; architect, E. Kollofrath; contractor, H. F. Wagner; signed, April 17; filed, April 18; cost \$1400.

Market near 6th. Plumbing; owner, F. Gutzkow; architect, E. Kollofrath; contractor, R. A. Vance; signed, April 18; filed, April 18; cost \$4686.

Market near 6th. Sandstone for six-story brick; owner, F. Gutzkow; architect, E. Kollofrath; contractor, D. Kilpatrick; signed, April 28; filed, April 28; cost \$7300.

Market near Post. Marble work; owner, Est. W. S. Hobart; architects, Percy & Hamilton; contractors, Inyo Marble Co.; signed, April 25; filed, April 28; cost \$11,904.

Market near Post. All heating work; owners, Ex. Est. W. S. Hobart; architects, Percy & Hamilton; contractor, W. W. Montague & Co.; signed, April 10; filed, April 13; cost \$2720.

Market near Post. Plumbing; owner, Ex. Est. W. S. Hobart; architects, Percy & Hamilton; contractor, W. F. Wilson; signed, April 10; filed, April 13; cost \$9765.

Market near Post. Carpenter work; owner, Ex. Est. W. S. Hobart; architects, Percy & Hamilton; contractor, R. Smilie; signed, April 10; filed, April 13; cost \$14,100.

Market near Post. Iron work; owner, Ex. Est. W. S. Hobart; architects, Percy & Hamilton; contractors, Dyer Bros.; signed, May 7; filed, May 9; cost \$2676.

Market near Octavia. To build; owner, Mrs. Carrie Fallon; architect, E. D. Gavarich; contractor, Tim Williams; signed, April 9; filed, April 9; cost \$7000.

Mission near 4th. To build; owner, Jos. Westall; architect, C. R. Wilson; contractor, R. Boyd; signed, April 7; filed, April 12; cost \$16,500.

Minerva near Plymouth. To build; owner, Louis F. Messler; contractor, D. V. Devel; cost \$1000.

Mission near Tingley. To build; owner, G. Risto; contractor, G. Ratto; signed, April 18; filed, April 19; cost \$1200.

Minna near 7th. To build; Thomas Molloy and wife; architect, C. J. I. Devlin; contractor, R. Van Parent; signed, April 16; filed, April 24; cost \$1995.

Montgomery street, no. 427. Alterations, etc.; owner, Emma Egan; architect, J. B. Whittemore; contractors, Brodee & Hickox; signed, April 27; filed, May 2; cost \$2100.

Nineteenth and Guerrero. Carpenter work; owner, Mrs. Emma Lolar; architect, H. Geiffuss; contractors, Schutte & Kreeker; signed, April 11; filed, April 12; cost \$15,275.

Nineteenth and Guerrero. Painting; owner, Mrs. Emma Lolar; architect, H. Geiffuss; contractor, F. Wagner; signed, April 10; filed, April 12; cost \$2223.

Nineteenth and Guerrero. Brickwork; owner, Mrs. Emma Lolar; architect, H. Geiffuss; contractor, Jas. O'Sullivan; signed, April 10; filed, April 10; cost \$2333.

Nineteenth and Guerrero. Plastering; owner, Mrs. Emma Lolar; architect, H. Geiffuss; contractor, Arthur O'Brien; signed, April 10; filed, April 12; cost \$2293.

Nineteenth and Guerrero. Plumbing; owner, Mrs. Emma Lolar; architect, H. Geiffuss; contractor, H. Williams; signed, April 10; filed, April 12; cost \$2754.

Oak near Scott. To build; owner, Mary A. Rollins; contractor, Wm. Plant; signed, April 20; filed, April 23; cost \$3310.

Pacific Ave. and Devisadero. Carpenter work; owner, C. L. Ellinwood; architects, Smith & Freeman; contractor, R. M. Murray; signed, April 10; filed, April 16; cost \$13,110.

Pacific Ave. and Devisadero. Plastering; owner, C. N. Ellinwood; architects, Smith & Freeman; contractor, Alex. Menzie; signed, April 10; filed, April 16; cost \$1097.

Pacific Ave. and Devisadero. Mason work; owner, C. N. Ellinwood; architects, Smith & Freeman; contractor, S. B. Cushing; signed, April 10; filed, April 16; cost \$3475.

Pacific Ave. and Devisadero. Plumbing; owner, C. N. Ellinwood; architects, Smith & Freeman; contractor, R. Rice; signed, April 10; filed, April 16; cost \$5183.

Pacific Ave. and Devisadero. Painting; owner, C. N. Ellinwood; architects, Smith & Freeman; contractor, W. S. Udhani; signed, April 10; filed, April 16; cost \$1040.

Pacific Ave. 2118. Moving and alterations; owner, Asa Wells; architect, J. N. Newsum; contractor, R. Ringrose; signed, April 10; filed, April 19; cost \$1150.

Pacific Ave. near Broderick. Painting school house; owner, Board of Education; architect, C. J. Haven; contractor, C. H. Anderson; signed, April 20; filed, April 23; cost \$210.

Pacific Ave. Alterations, etc.; owner, Wm. Thomas; architects, Smith & Freeman; contractors, Ingerson & Gore; signed, April 24; filed, April 24; cost \$3200.

Page near Lyon. To build; owner, C. Dorgeich; contractor, Jos. Kemp; signed, April 24; filed, May 1; cost \$3680.

Post and Montgomery. Alterations and additions; owners, Masonic Hall Assn.; architects, Kenitzer & Barth; contractor, A. J. Sanborn; signed, May 5; filed, May 9; cost \$1885.

Post near Devisadero. Cement bulkheads; owner, H. A. Rosenbaum; architect, M. J. Lyon; contractors, P. M. Ward & Co.; signed, April 6; filed, April 9; cost \$1000.

Pine near Front. Brick work; owner, Kate C. Kirkham; architect, C. Geddes; contractor, G. R. Long; signed, April 6; filed, April 11; cost \$2550.

Pierce and Golden Gate. To build; owner, Nellie V. Bingham; architect, R. H. White; contractors, White Bros.; signed, April 12; filed, April 14; cost \$3278.

Pierce near Greenwich. To build; owner, Fred Haussler; architect, H. Geiffuss; contractor, W. H. Bush; signed, April 26; filed, April 27; cost \$3230.

Seymour Ave. near Turk. To build; owner, Jacob Schmidt; architect, A. C. Lutgens; contractor, Chas. Koenig; signed, April 31; filed, May 2; cost \$4125.

Sutter near Grant Ave. Alterations and additions; owner, Alice P. Sullivan; contractors, Ingerson & Gore; signed, May 6; filed, May 8; cost \$2915.

Tenth Ave. and Point Lobos. Extra brick work; owner, Wm. Danrowe; architect, H. Geiffuss; contractors, Flood & Watson; signed, April 5; filed, April 7; cost \$1180.

Twentieth near Capp. To build; owner, Jno Reid; contractor, J. T. Grant; signed, April 16; filed, April 27; cost \$9888.

Twentieth near Guerrero. To build; owner, J. T. Adeock; contractor, Adam Miller; signed, April 10; filed, April 23; cost \$4830.

Twenty-first and Alabama. To build; owner, Patrick McKaon; architect, T. J. Welsh; contractor, C. Douglass; signed, April 24; filed, April 28; cost \$3725.

Twenty-second near Fulton. To build; owner, Mrs. M. Morton; architect, M. J. Welsh; contractors, Brennan Bros.; signed, April 11; filed, April 12; cost \$1774.

Twenty-fourth near Folsom. Additions to house; owner, Margt. McGrath; architect, D. V. Duet; contractor, Chas. Fish; signed, April 13; filed, April 19; cost \$1200.

Vulcan Lane and Vallejo. To build; owner, T. E. Pierran; architect, C. M. Rousseau; contractors, R. Doyle & Son; signed, May 9; filed, May 9; cost \$9949.

Washington near Broderick. Repairs to building; owner, Mrs. C. D. McLean; architect, C. Geddes; contractor, Jas. Mix; signed, April 20; filed, April 24; cost \$1485.

Webster and Germania. To build; owner, Fredrick Huber; architect, Wm. Schrof; contractor, Henry Weiss; signed, May 9; filed, May 9; cost \$3930.

Zoe near Bryan. To build; owner, Timothy and Mary McAuliffe; architect, T. J. Welsh; contractor, A. Fisher; signed, April 11; filed, May 8; cost \$2667.

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In the last twenty-five years the American Institute of Architects and members of the profession who do not belong to that body, together with many others who are deeply interested, have been trying to bring about a reform in the method of designing and constructing buildings for the United States Government, but the efforts of a quarter of a century have failed, and although the Institute has labored long and earnestly, and has faithfully and persistently exerted every means of persuasion in its power, to convince Congress and the public, of the truth of its arguments, and justice of the stand the profession has taken in this matter, yet the goal is apparently no nearer than it was at the commencement of the crusade, and this unfortunate condition of affairs is the more discouraging, as success seemed at one time already certain. But although the Honorable Secretary of the Treasury remains wedded to the present system and thinks the machine made designs turned out under his supervision, to be the best that architecture can accomplish, and all the public should require, yet the Institute has bravely resolved to again take up the fight, and convince the public and its law-makers, that the public buildings of this country should be designed by the best professional talent in the land, working under the stimulating effects of ambition and emulation, instead of by draftsmen at a nominal salary.

The following is a statement of some of the existing facts

concerning this matter presented in a circular prepared by the Secretary of the American Institute of Architects, and which will be of interest to the tax-payer as well as to the patriotic citizen, who desires to think with pride, and not with shame, of the architectural monuments of his native land:

OFFICE OF THE SECRETARY OF THE AMERICAN INSTITUTE OF ARCHITECTS.

Providence, May 21, 1894.

THE ABUSES TO BE REFORMED.

- 1st. The needless cost of the public buildings.
- 2d. The needless cost of architectural service.

The authority for the figures quoted below is Mr. Glenn Brown's article in the *American Architect* of April 7th, 1894, entitled "Government Buildings Compared With Private Buildings."

Mr. Brown's statistics show the actual cost of a large number of government and private buildings, which he compares with each other, class by class.

COST OF BUILDINGS.

These statistics prove that the United States Government Buildings cost sixty-seven per cent more per cubic foot than private ones of similar construction, finish and size.

COST OF ARCHITECTURAL SERVICE.

Private "architectural service" covers the following:

Preliminary sketches, which include competitive drawings. The final designs of every sort. The working drawings, details and specifications. All necessary reproductions of drawings. All services of mechanical, sanitary, heating, electrical and constructional engineers, together with the draftsman-ship, details and reports, necessary to carry out their ideas. All paper, stationery, book-keeping, estimating and rendering of accounts, making of certificates, etc., etc. All preliminary and final adjustments.

For the above services the regular fee is five per cent on the total cost of the building. To this should be added the sum of one per cent, estimated on the cost of the building for travelling expenses, in case there are any, and for clerk-of-the-works, both of which are usually paid for by the owners themselves.

The cost, therefore, of complete private architectural service, including the clerk-of-the-works and travelling expenses, amounts to six per cent.

Mr. Glenn Brown's statistics, taken from the actual cost of a large number of *separate structures*, shows that the government expends for the same architectural service, as listed above, *over nine per cent* (9 per cent).*

COMPARISONS.

Cost of architectural service, public buildings	- 9 per cent
Cost of architectural service, private buildings	- 6 per cent
Excess of cost of government over private architectural service	- 50 per cent
But this last comparison is made as if the government and private buildings cost the same per cubic foot, which, however, is not the case, as the government buildings cost on an average sixty-seven per cent more than private buildings. The true comparison, therefore, on a basis of the same cost per cubic foot for private and public buildings is:	
Architectural service, public buildings,	15 per cent
Architectural service, private buildings	- 6 per cent
Excess of cost of government over private architectural service	- 150 per cent

NOTE.

It is stated by Acting Secretary of the Treasury Curtis, in House of Representatives, 53d Congress, 2d Session, Ex. Doc. No. 179, which was recently sent to the speaker of the House of Representatives, that:

"It appears from the schedule of fees customarily charged by architects that the expense of preparing plans, drawings, and specifications and administration under the act might be greater than at present, but how much cannot be satisfactorily determined until a definite and detailed scheme is prepared for its development."

Does the Acting Secretary mean that the extravagant system now in vogue in the office of the Supervising Architect of the Treasury Department must be retained, and that to the total percentage must be added, that paid to outside architects, should they be employed to make designs? If so, one of the main purposes of any new legislation, so far as the architects are concerned, should be cut off this frightful extravagance in the office of the Supervising Architect in order that the government may have its work done at the same price that individuals pay, and by means of a service more able, expert and satisfactory.

It is this very matter of enormous expense that we are striking at.

The government can have its work done as cheaply as anyone else, provided a mandatory law be passed, insuring the employment of the expert architects of the country.

THE ARCHITECTURAL RESULTS.

This point needs no argument:—That after spending fifty per cent more for a given building, and one hundred and fifty per cent more for full professional services than there is need of doing, and after taking from twice to ten times as

*"Civis" (Adolf Cluss, who from service in the office of the supervising architect knows whereof he affirms) in a paper on this subject printed in 1888, says that the architectural service cost the Government more than 118-10 per cent.

long to finish the structure, the result is inferior. The government buildings obtrude themselves upon us; are inferior not only to the *best* contemporary private structures, but to the *average* ones; few, if any, are well planned, and all are more or less offensive in appearance.

We wish to stop this great waste of the people's money, and to prevent the erection of any more structures which shall debase public taste.

LETTER FROM THE ACTING SECRETARY OF THE TREASURY.

* * * IN REPOSE TO HOUSE RESOLUTION ADOPTED MARCH 16, 1894, RELATIVE TO PLANS AND SPECIFICATIONS FOR PUBLIC BUILDINGS.

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY, Washington, D. C., March 31, 1894.

SIR:—In response to a resolution adopted by the House of Representatives March 16, 1894, requesting the Secretary of the Treasury to inform the House of Representatives what measures, if any, had been taken by him under the act entitled "An act authorizing the Secretary of the Treasury to obtain plans and specifications for public buildings, etc.," approved February 20, 1893, and to inform the House what, if any further legislation is in his opinion necessary to carry out the provisions of the said law, I have the honor to make the following statement:

Early in March, 1893, the subject-matter of the act in question was brought to the attention of the Secretary of the Treasury by several members of the American Institute of Architects, and at their suggestion a conference was held on the twenty-second of March, 1893, at which the provisions of the act were discussed, and some of the difficulties in the way of putting it into practical operation mentioned. Subsequent thereto certain correspondence took place between the officers of the American Institute of Architects and the Secretary of the Treasury, and also between them and the Supervising Architect, individually.

Early in January, 1894, a committee of the American Institute of Architects submitted a written protest against the sketch plans of the United States public building at Buffalo, N. Y. which had then been prepared by the Supervising Architect and approved by the Secretary of the Treasury, and two conferences in regard thereto, one on January 10th and the other on February 6th of this year, were held by the committee with the Assistant Secretary of the Treasury, having general direction and supervision of all matters relating to the public business assigned to the Supervising Architect, the Secretary being unable to meet them owing to other engagements. These conferences, and the tenor of the correspondence arising therefrom, emphasized the inadequacy of the provisions of the act to accomplish the desired object, and it was then decided that the designs for the Buffalo building, which had been temporarily held in abeyance, be proceeded with, but that this should not prevent further negotiations in the endeavor to effect the intention of Congress in making the enactment. * * *

The following suggestions were made to the architects' committee:

That there was a conflict between the provisions of the present act and the provisions of certain other statutes regarding public buildings; that it was necessary to prepare a comprehensive scheme under which a competition could be arranged and a method provided for selecting a jury of award to pass upon the designs received in such competition; that the relations of the successful competitor with the Secretary of the Treasury and with the Supervising Architect's Office should be clearly established and defined by contract; that the required change in the method of preparing the plans, drawings, and specifications would necessitate a reorganization of the office of the Supervising Architect, a reduction in its force, the rearrangement of the different divisions, and the work to be performed therein; that they

should examine the workings and details of the office in order to make intelligent criticisms and suggestions thereon.

The act of March 3, 1875 (sundry civil act, section providing for payments, contracts, etc., for public buildings), was neither repealed nor amended, and this requires that—

No money shall be expended upon any public building on which work has not yet been actually begun until after drawings and specifications, together with detailed estimates of the cost thereof, shall have been made by the Supervising Architect of the Treasury Department, and said plans and estimates shall have been approved by the Secretary of the Treasury, the Secretary of the Interior, and the Postmaster-General.

This provision conflicts with the evident purpose of Congress expressed in the present act.

The Supervising Architect of the Treasury is the proper Government official to prepare a scheme for the competition contemplated in the act in all its various details. He has the necessary experience and acquaintance with his professional associates, and can give the time and attention required therefor. A proviso that such scheme should be approved by the Secretary of the Treasury would seem to insure the satisfaction of the public.

In the selection of a satisfactory design for a public building both practical and architectural questions are presented and any jury of award to pass upon the plans should consist, not only of architects, but also of business men or Government officials who are familiar with the practical uses and necessities of the public building under consideration at the time. A commission or jury of award consisting of five members, three of whom should be architects of recognized professional standing and experience, and two business men or Government officials to be appointed by the Secretary of the Treasury, and paid for their services while actually engaged in their work, is suggested.

Under the present act the successful competing architect will have the preparation of the plans, drawings and specifications, while the preparation of the proposals, the award of contracts, and the payment of all moneys are delegated to the Supervising Architect, and the latter is to perform all duties that now pertain to his office, except the preparation of drawings and specifications for the buildings and the local supervision of construction. This language fails to clearly define the duties of either. It would, therefore, seem necessary that the architect should have entire control of all the details pertaining to the construction of the building in the manner in which architects customarily control them, and the duties of the Supervising Architect be limited to a general supervision, to protect the interests of the Government during the course of construction, or that the competition should be limited to designs to be carried out by the Supervising Architect. In any event the Secretary of the Treasury should be authorized to use his discretion as to this, and directed to contract with the architect, and obtain an agreement defining strictly his duties and rights in the premises, the amount of his fees, the method to be followed during the course of construction, and to make any other provisions deemed advisable.

The office of the Supervising Architect is engaged with other work besides the construction of public buildings. It arranges for and supervises the repairs and preservation of the public buildings in the country, finished and occupied, numbering 273, the assignment of rooms therein to various officials as the needs of the public services require, the keeping a large number of records regarding the Government buildings, the proceedings regarding the obtaining of sites, the condition of the various appropriations and expenditures thereunder, and many other details. It would be necessary to retain a considerable portion of the present force of the Supervising Architect to carry out this work effectually.

It appears from the schedule of fees customarily charged by architects that the expense of preparing plans, drawings and specifications and administration under the act might be greater than at present, but how much can not be satisfactorily determined until a definite and detailed scheme is prepared for its development.

I am of the opinion, then, that in order to carry out the intention of Congress in enacting this law, it will be necessary to amend the act by substituting the following:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and is hereby, authorized, in his discretion, to

obtain competitive designs or complete plans, detailed drawings, and specifications for the erection of the public buildings of the United States authorized by Congress to be erected under his supervision and direction. The Supervising Architect of the Treasury Department shall prepare a scheme for free or open competition among the architects of the United States, therefor, such scheme to be approved by the Secretary of the Treasury. That the Secretary of the Treasury shall nominate and appoint a commission or commissions, each consisting of five citizens of the United States, three of whom shall be architects of recognized professional standing and experience, and two of whom shall be men of business or Government Officials who are familiar with the uses and necessities of the public building under consideration at the time, to select the best design or complete plans from those submitted in accordance with the scheme of competition hereinbefore provided. The members of the said commissions shall be paid their actual travelling expenses and subsistence while actually engaged in the performance of their official duties.

The expenses of the commission and the fees for the services of the architect successful in said competition shall be paid from the appropriation for the building respectively passed upon or designed. In case the complete plans, detailed drawings, and specifications are furnished by competition, as herein provided, the Supervising Architect of the Treasury Department shall be the representative of the Government to inspect the erection and completion of the building, the receipt of proposals, award of contracts therefor, and the disbursement of moneys thereunder. In case designs only are supplied by competition, the Supervising Architect shall perform the duties now required of him by law, in the usual manner, excepting the preparation of such designs. That in the discretion of the Secretary of the Treasury, the architect selected as herein provided to furnish complete plans, drawings and specifications shall have the entire direction and control of the construction of said building, and the direction and control of the local superintendent of construction, and the Secretary of the Treasury is hereby authorized in all cases to make a contract with said architect for his services, providing for such erection and control, fixing his duties and responsibilities during the construction of the said building, and making proper provision for modification or change in the plans and specifications during the progress of the work, and for additions thereto; also determining the amount of his fees and charges, and including such other provisions in the contract as may, in his discretion, appear advisable to protect the interests of the Government. Any or all of the designs, or plans, detailed drawings and specifications presented in the competition herein provided may be rejected by the commission, and in case the competition fails for any cause, or it is practicable to obtain designs or plans, detailed drawings, and specifications by competition, the Secretary of the Treasury shall direct the Supervising Architect to prepare plans, drawings and specifications and supervise the construction of the building in the usual manner according to law.

All acts or parts of acts inconsistent or in conflict with this act are hereby repealed.

Respectfully yours,
W. E. CURTIS,
Acting Secretary.

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

OUR NEW POSTOFFICE.

THE Treasury Department has been urged by Representative Maguire to commence work on the new San Francisco Postoffice, and according to a dispatch in the daily papers it is probable that early action will be taken to this end.

The new building is to be of classic architecture, comprising three stories and basement, with a square elevation over the main entrance, which is to be on Seventh street. The four corners of the elevation will consist of pillars surmounted by appropriate statues. The external plans of the building are as yet but roughly drawn, and the Supervising Architect will not permit any inspection of them or any photographs or copy to be taken until they have been perfectly finished, which will not be for three or four weeks, as the force of the Architect's office is wholly inadequate to the work now being carried on.

The completion of the floor plans of the building has been greatly delayed by the insufficiency of the force in the office. The Supervising Architect states, however, that the building when completed, according to the approved plans, will be from an artistic standpoint one of the handsomest in the United States.

The attempt of Representative Bankhead to delay the

erection of this building till he has had time to prove that the Government paid too much money for the site, is sheer folly—nobody expects or hopes that any portion of the excessive price can be recovered, and still less expects that the vendors will consent to take back their lot. This being the case, the building must perforce be built on the lot now in possession of the Government, and to delay the erection of the building now, would be only to add another blunder to the folly already consummated. As besides the advantage of giving employment to many workmen now idle the importance of having the building finished as soon as possible cannot be too strongly impressed upon the powers that be. In fact we want the use of the new Postoffice without any delay.

HOSPITAL PLANNING.

A PAPER READ BY MR. GEO. H. SANDERS BEFORE THE
SAN FRANCISCO CHAPTER OF THE AMERICAN
INSTITUTE OF ARCHITECTS, ON
JUNE 9, 1894.

GENTLEMEN:—This paper on hospitals is merely an introduction to a series of articles taking up the subject of hospitals, past and present, in the endeavor to treat the subject tentatively by gathering up such available information as has gradually developed, along the line of adaptation of ends to purposes, from the first inception of the idea to the present time. The object will be to demonstrate the advantage of closely following up the evolution of motives in architecture, by showing that the only progress ever substantially made in art, as in science of any kind is that effected by the one only process of advancing step by step in a definite direction rather than by merely travelling in a circle or series of circles as the case may be. True it is that the real advance will be made in this way, perhaps by "natural selection" or "the survival of the fittest," or shall we not rather say as applied to architecture *progressive adaptation*, or, by whatever term is employed, *principle* is meant which is just as evident in architecture as in any other of the arts of mankind. The point I wish to make is, that by the practical recognition of this principle in the art of design, of which architecture is undoubtedly the first and chiefest, the younger element amongst us, at least, may be led to train their energies by a definite effort in one direction, instead of being led astray in a mad chase after the will-o-the-wisp of mere popularity for the time being, of some one or other, of the many beautiful forms which art has assumed in the past.

We cannot clothe ourselves either becomingly or comfortably in the cast off and worn out habiliments of our ancestors, remote or recent. All our modes of construction at the present time should be the result of past experience, wedded to new conditions, and the result would be—progress. Witness the development of the ship. From the catamaran of the Malay, to the oceanic greyhound of the present time; from the warship of the Norseman, to the modern man-of-war, a continual uninterrupted progress is visible—and what a progress! From the cave temple of the ancient Etruscan or the mighty Trilithons of Stone-Henge, to the vast cathedral of the fifteenth century, again what a progress! It is only where the latter is clothed like St. Peter's or St. Paul's in the effete forms of the architecture of the Augustan

age that a step backward has been taken and with what disastrous consequences. From that day, progress in architecture has been hampered by conditions inimical to success, and we find ourselves making shorter and shorter circles, and ringing the changes by periodically reverting, not only to the erst time noble forms of Greece and Rome, but, in time debasing every beautiful creation of every age, and of every land, by absurd parodies in every style, from Romanesque to Old Colonial, and from Egyptian to Japanese, utterly regardless of adaptation of means to ends, or materials to uses, until a modern city has become little more than a mere collection of imitation architectural bric-a-brac.

True, we have the elevator, electricity and steel, together with the unknown possibilities of aluminum. What these and other modern improvements of the present day will develop in the coming century, who can say? Let us hope and strive for the best, and our efforts, however feeble and inefficient individually will not be wholly in vain.

Historically, there seems to be but little evidence of hospitals proper amongst the ancients. The Eastern Kahn or caravansary appears to have been the earliest form of which the hospital of modern times, with all its elaborate sanitation, multiplication of parts and aggregation of conveniences is the heir lineal.

Plato speaks of refuges for travellers and there were Inns in the time of Christ, in one of which He was born—the first lying-in hospital on record! The Good Samaritan also is described as taking the wounded traveller to an Inn. But the Beth-Esda or "Home of Mercy" by the sheep market in Jerusalem, which consisted of five porches or sheds it may be, in which a multitude of sick folks awaited the moving of the waters (of a spring probably possessed of medicinal qualities,) is the first example we read of, describing the forerunner of a modern "springs" hotel, the sojourners at which like the Beth-Esdans of old, seek the angel of mercy in the waters of healing for the relief of their physical ailments.

But eight hundred years or more before the Christian Era, (so says Phœnician tradition) the springs located on the site of present town of Bath in England, were resorted to from far and near on account of their curative properties, and only a few years ago, in the neighborhood of the present baths, which are still copiously supplied by the warm waters of the original spring, the remains of extensive Roman baths were uncovered, showing how that practical people had taken heedful note of the situation, and had devoted to public use the local "natural opportunity." Architectural remains of considerable magnificence were revealed. The property has been appropriated to public purposes, and the ancient basin is still brimming with the medicinal flood as of yore.

But the above is a digression; neither the Bethesda nor the springs having more than a relative significance in this connection.

Etymologically, the word "hospital" seem to have been evolved from the word "hospes", indicating "host," and is easily traced through its derivatives, "hospitalis," "hospitium," "hospitale," "hospitalia," and thence through the English "hostel," the French "hospice," "hospital" and "hotel". In the process, the last four terms seem to have served to differentiate the meaning of the word into its several designations, (1st) as a place of temporary residence, as an inn; (2nd) a temporary residence for the sick; (3d) a permanent residence for the poor and the infirm, the aged, the incurable and the insane, answering in some degree to the English

alms-house, and (4th) a term applied to dwelling houses both public and private.

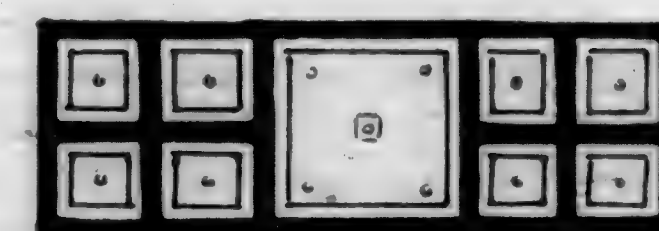
Amongst the English, the word "hospital" (adopted from the early French) and directly derived from the Latin "hospitalis" and the Italian "ospitale", frequently includes both the first and second of the above meanings. It is also commonly applied to structures specially designed for the exclusive reception of one or other of the different classes of disease, such as the blind, the insane, the deaf and dumb, etc. Whilst *infirmaria* from "Infirmaria", a place set apart in monasteries for the reception of the sick, the infirm, the weak, the blind, etc., has come to be applied extensively to structures designed for the general reception of those afflicted with disease both acute and chronic.

Amongst the Greeks of the time of Pericles there seems to have been but scant provision for the care of the sick in any sense, and with the Romans, while the "valetudinarium" and a medical staff, appear to have been provided for the army there seems to be no indication of anything like a hospital for the use of the general public having been in existence.

It was not until 370 A. D. that we read of a hospital founded by Valens in Caesarea, and another, in Rome in 382-4 by a Roman lady, Fabiola by name. These were probably the first establishments on a scale sufficiently large to attract historical notice of a sentiment which must have been growing constantly under the influence of the new religion which made the welfare of the individual a matter of interest to the public, based on duty, rather than on self-advantage. In other words, these early hospitals, which were, possibly, also almshouses, must have been the final outcome of many previous attempts of a tentative character. However this may be, it is certain that the real origin of the modern hospital is to be found in the monasterial "infirmaria", rather than in the "hospitales" of the Romans or "Zenon" of the Greeks.

During the Middle Ages, as above remarked, the "sick" and "indigent" appear to have been tacitly relegated to the care of the various monasteries, which became, virtually, houses of entertainment, as well as the resort of people of all conditions of life throughout the civilized world. The "infirmaria" and the "infirmarius" became permanent and very important constituents of every monastery and nunnery, and although there is no doubt that under the then existing conditions of society, they were a vast and almost indispensable benefit, there is plenty of evidence to show that many evils had their origin in these institutions as well. This arose from the absorption of the infirm into the benefices of the Clergy, with the easily understood result of inefficiency and malfeasance in the conduct of these departments, so that many regulations had to be issued by the Roman Pontiff, restraining and forbidding the wrong practices which had arisen.

The best example known of an infirmaria of the Middle Ages, is that of the projected plan of the great Monastery of St. Gall (9th Century) in which the wards apparently for



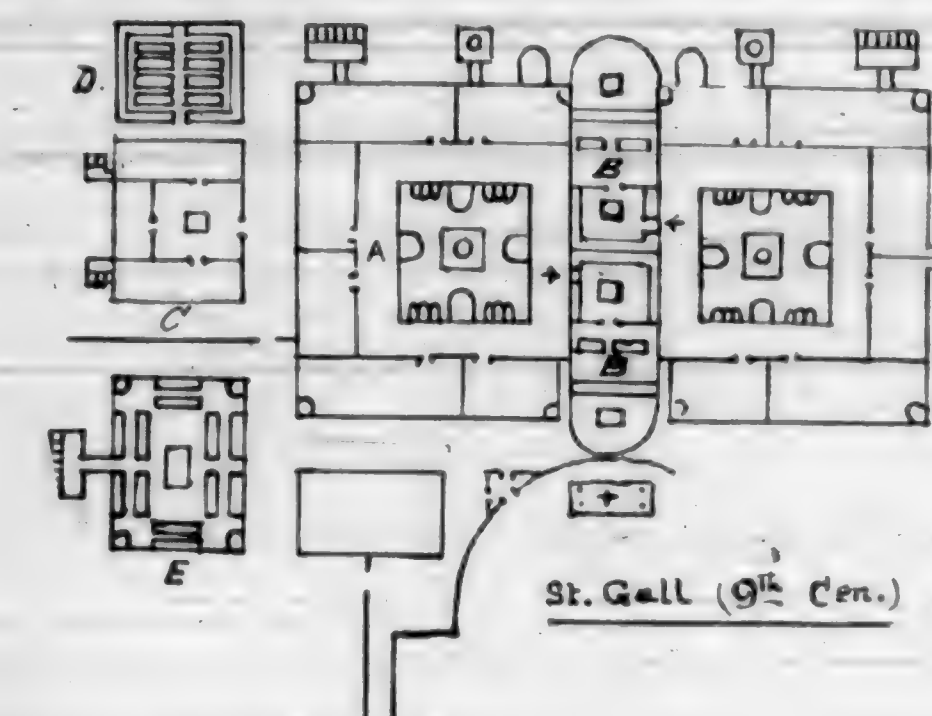
OSPITAL GRANDE
MILAN (1567)

both sexes are seen arranged around a cloistered court or garden on one side of a double Chapel. There is also a

doctor's residence, a garden for medicinal herbs and "simples", a dispensary and other details of arrangement so complete and well understood that it is evident the whole was the result of system and practice, no longer in the experimental stage.

The first regular hospitals erected for the purpose in England, were those founded by Lanfranc, Archbishop of Canterbury, in London, A. D. 1080; one for leprosy and one for ordinary diseases.

Amongst the many notable hospitals of the world, perhaps the most noted of them all, is the "Ospedale Grande" in Milan, Italy, begun in 1456 and completed in 1621. It is certainly one of the grandest, if not the very grandest, building of the time, built for such a purpose, during the whole period preceding the great hospital-building epoch of the eighteenth century, and still holds its own, not only in regard to beauty an appropriateness of design, but also on account of climatic adaption to the purpose for which it is intended. It consists of an immense garden court adorned with fountains, and blooming with flowers, the court is 340 feet square with a block about equally large at each end,



St. Gall (9th Cen.)

divided into four smaller courts, each and all, surrounded internally by two story cloisters or arcades on to which the wards open, thus affording cool shade in the brilliant Italian atmosphere, as well as shelter in all weathers for those who are able to move about. Of course the general arrangement of the wards round courts is not that of a modern hospital, and there is no doubt but that the pavilion plan is much superior to any connected system of wards or series of wards such as that employed in the Ospedale Grande, nevertheless, for the time in which it was erected and with the experience and conditions such as those then existing in Italy, the structure presents fewer defects than under the circumstances would be expected. It was, however, during the eighteenth century above alluded to, that the hospital became as did the cathedral of the thirteenth century, the special object of attention in the civilized countries of the world. In Great Britain and Ireland alone, upward of fifty of these great structures were erected, and in every country of Europe the same activity in this direction was observable. The evolution of the hospital idea, as in future papers will be seen, has served to develop as before mentioned, the special characteristics of these structures in a remarkable manner, but this must be left for consideration in our next paper.

M. S. James the Pacific Coast Agent of The J. L. Mott Iron Works has removed his office from Room 45 Flood Building to Room 35 in the same building.

PORTLAND CEMENT IN THE CITY WATER WORKS OF PORTLAND OREGON.



THE Engineer in charge of the City Water Works of Portland, Oregon, furnished the following report to a committee of one hundred representing the tax-payers of that city, in refutation of charges that had been made of favoritism in the awarding of the contract for furnishing the cement to be used in the work.

Those interested in the use of cement and concrete will be interested in the table of comparative tests contained in the report which follows:

ENGINEER SMITH'S RECOMMENDATION.

It was finally agreed to read the communication of Engineer Smith, with the accompanying extracts from minutes of the board and exhibits pertaining to the analysis of the different kinds of cement. The letter is as follows:

OFFICE OF THE CITY WATER WORKS,

PORTLAND, OR., MAY 11, 1894.

H. W. CORBETT, ESQ., PORTLAND, OR.—Dear Sir: I enclose herewith a transcript, prepared by Mr. Dodge, of all proceedings of the water committee in relation to the cement contracts; also specifications on which proposals were made, and a copy of the reports of the engineers on the tests made in accordance with the specifications.

According to the specifications, it was necessary that the cement should conform to the requirements stated in article 8, in relation to fineness, time of setting after mixture, tensile strength, etc.

The result of the tests for fineness and time of setting is shown in the following table, from reports of the engineers:

PROPOSAL TO FURNISH 15,000 BARRELS CEMENT.

Brand	Price bid per barrel	Per cent of residue on sieve of 8000 meshes per square inch	Cost per bbl. of available cement after rejecting on sieve of 8000 meshes per square inch	Time of setting minutes
Josson	\$2.50	4.05	\$2.60.52	75
North	2.50	5.00	2.63.15	42
Whites	2.45	8.54	2.67.88	42
K. B. S.	2.40	10.70	2.68.78	20
Gresham	2.40	12.70	2.74.91	25
Gillingham (Extra)	2.60	6.16	2.77.07	22

The residue of the cement remaining in the screens after testing is of no greater value than so much sand, as was shown by specimens presented to the committee.

The bid on the Josson cement was \$2.50 per barrel, but as it contained 4.05 per cent of refuse, the cost per barrel of the pure cement was \$2.60.

The bid on the Gresham cement (from George Pope & Co.) was \$2.40 per barrel, but as it contained 12.70 per cent of refuse, the cost of the pure cement was \$2.74 per barrel.

From this test it appears not only that the cements offered by Taylor, Young & Co. were the cheapest, but that they were the only ones coming up to the requirements of the specifications in relation to fineness.

When cement sets before being used it is of no value, and therefore it was stated in the specifications that all cement setting within thirty minutes after being mixed would be rejected.

In this respect also the cements offered by Taylor, Young & Co. were the only ones coming up to requirements of the specifications.

For these reasons all bids were rejected, except those of Taylor, Young & Co. and Meyer, Wilson & Co., and the

engineers were directed to make further tests for tensile strength at intervals of three, seven and twenty-eight days.

After making these tests the engineers reported that the Josson brand was superior to all the others in cost, fineness and strength.

The reason for letting a contract for 30,000 barrels, instead of the 15,000 barrels called for, are stated in the following extract from the report of the engineer:

"When I first called for 15,000 barrels, I understood that there were 45,000 to 50,000 barrels of standard brands of cement in the city, all of which I supposed would be available, and I mentioned 15,000 barrels as a quantity desirable to start on the works, and sufficient to contract for at once, presuming that the remaining amount could be had at any time during the year; but after making our tests it developed that the Josson was the only brand that fulfilled all our requirements, and in order to get what we need of that this year, it was necessary to order more immediately. There is no time to wait and advertise for more bids, and there would be no use doing so if we stick to our specifications."

For making the tests a new Fairbanks cement-testing machine, borrowed from Mr. McCracken, was used, and all bidders were invited to be present at the testing of the different brands.

The tests were all made in the same room, with the same proportion of water, and under like conditions.

Mr. Graves, the representative of Messrs. George Pope & Co., was frequently present when the tests were made, and expressed himself as being perfectly satisfied with the results. The same gentlemen brought to the office several briquettes, which he said had been made by Mr. Pope, and they were tested at his request.

Mr. London for Balfour, Guthrie & Co., also had the mixtures made in accordance with instructions from the English makers, and was present when the tests were made.

Mr. McCracken was also present at some of the tests which were made with his own machine, and so far as I know, expressed no dissatisfaction at the results.

All the tests have been registered and can be inspected, although they were not furnished for publication.

The tests all show, not that the rejected brands are of a bad quality, but that in respect of strength, time of setting, fineness and cost, the Josson brand was the best of all.

Respectfully yours,

ISAAC W. SMITH,

ENGINEER OF THE WATER COMMITTEE.

NOTE—The bid of Corbett & Macleay for 11,500 barrels was not in accordance with the specifications, which called for 15,000 barrels, but it would have been accepted if the engineers had not reported that after making the tests it proved to be deficient in strength.—*The Sunday Oregonian*, Portland, May 13, 1894.

INGENUITY IN SHINGLING.

THE Ferguson Cedar Shingle Company, at Latona, have hit upon a happy idea to save the transportation of waste material from the woods to their mill by removing their "cut off" saw and "knee bolter" to a point on the Seattle, Lake Shore and Eastern road where it crosses the Pillchuck creek. There the company have put in a boom and established a camp. The bolts are taken from the water and sawed and trimmed ready for the shingle saw. By means of an endless belt they are loaded upon cars especially prepared to receive and transport them to their mill at Latona. The saving in transportation is estimated at one-third and saves the necessity of maintaining a fire to consume the waste, thereby lessening the danger from fire. The change has also enabled them to increase their daily output from 90,000 to 120,000 per day.—*Seattle Intelligence*.

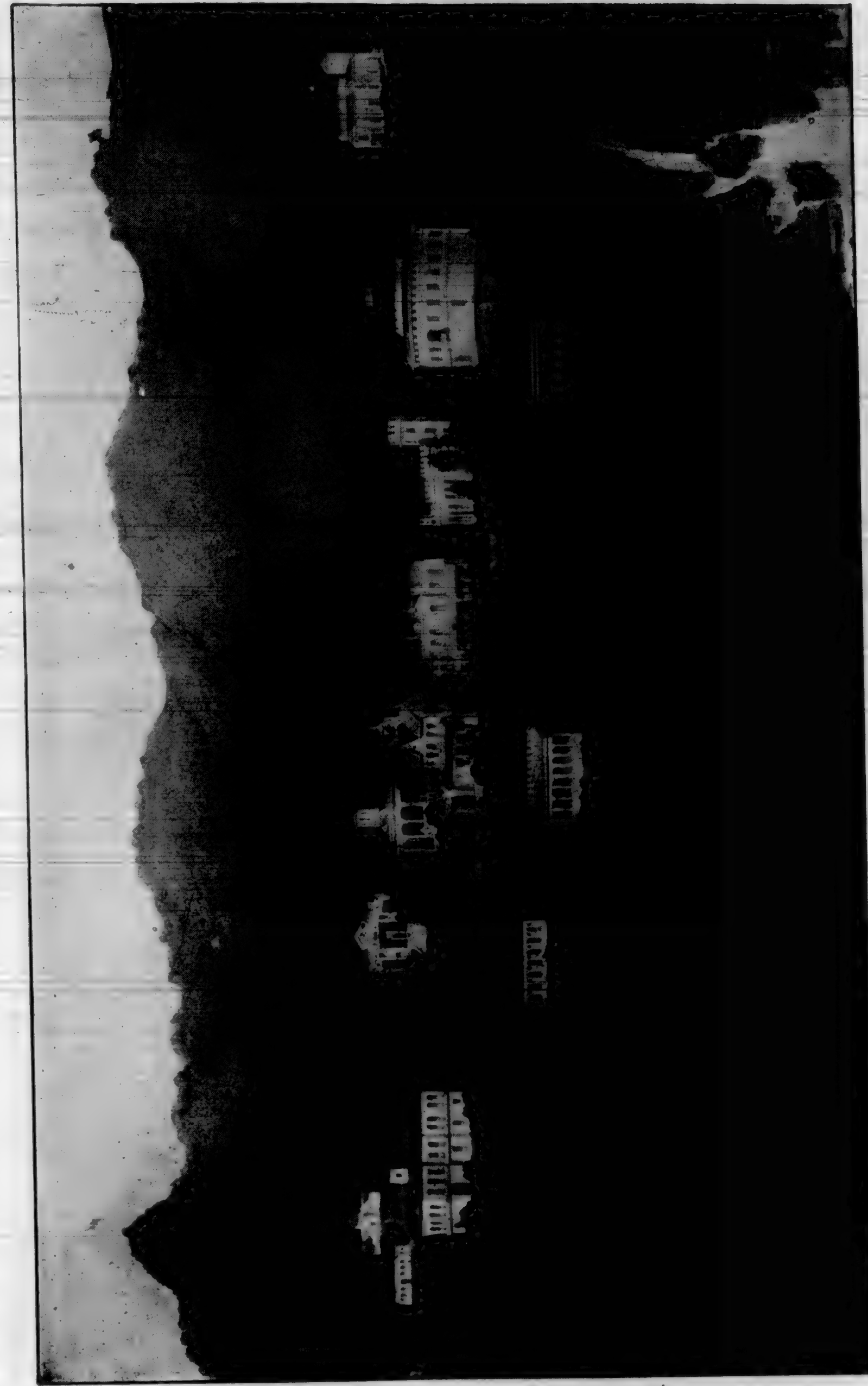
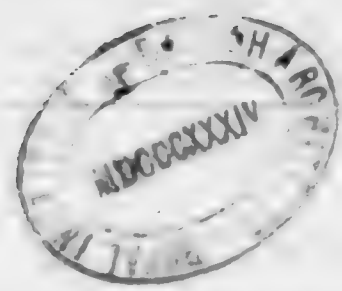


EDWARD B. HINDES & CO'S. EXHIBIT, MANUFACTURES AND LIBERAL ARTS BUILDING.

CALIFORNIA MIDWINTER INTERNATIONAL EXPOSITION.

CALIFORNIA ARCHITECT AND BUILDING NEWS,
SAN FRANCISCO.

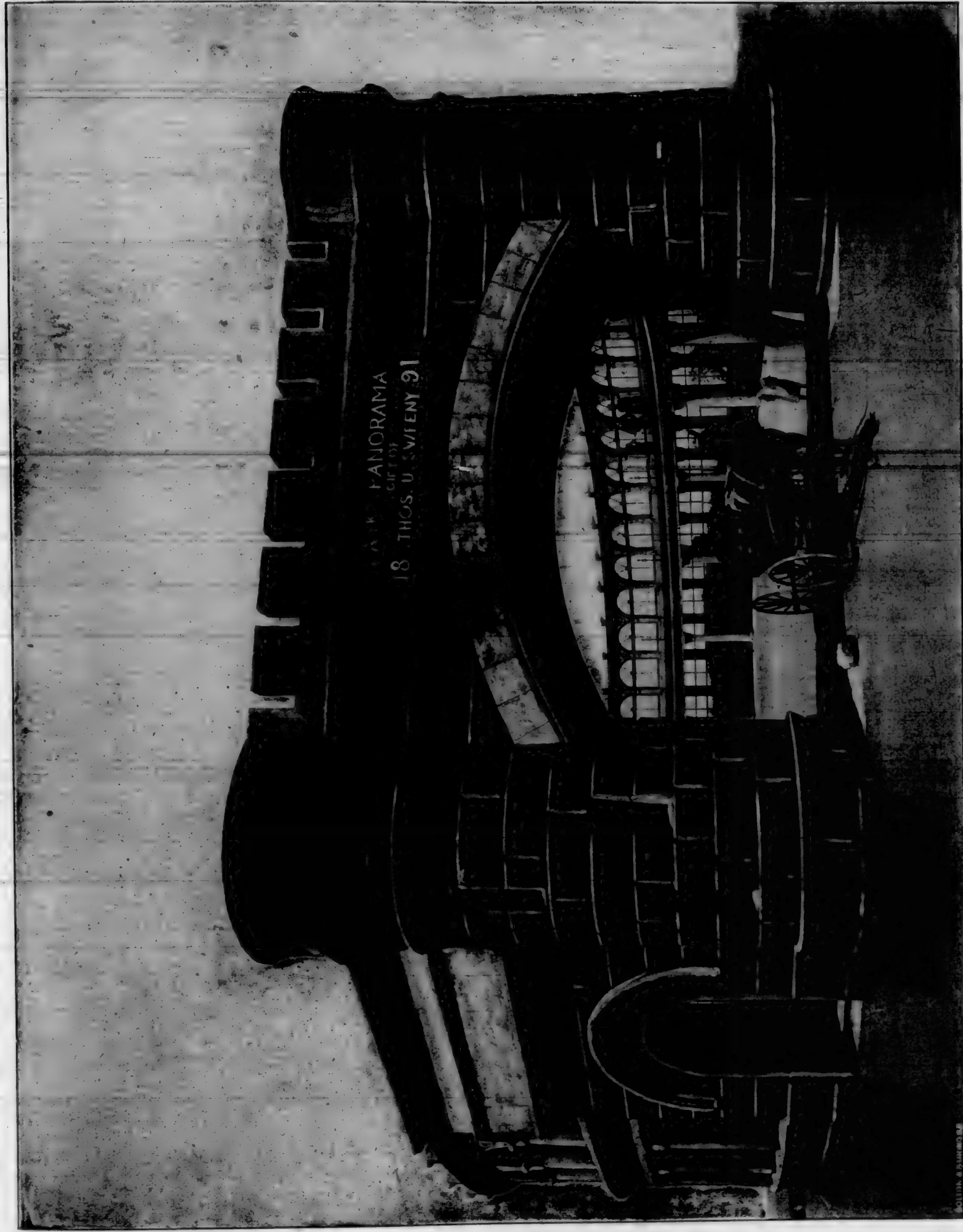
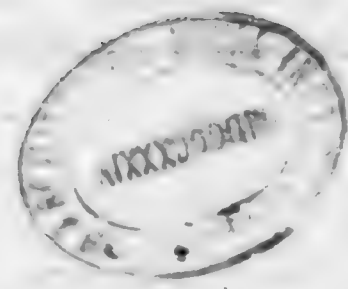
VOL. XV. No. 6. JUNE 1894.



NAPA SODA SPRINGS.

CALIFORNIA ARCHITECT AND BUILDING NEWS.
SAN FRANCISCO.

VOL. XV No. 6. JUNE 1894.



PARK PANORAMA AND OBSERVATORY ON THE SUMMIT OF STRAWBERRY HILL, GOLDEN GATE PARK.
CALIFORNIA ARCHITECT AND BUILDING NEWS.
SAN FRANCISCO.

VOL. XV, No. 6, JUNE 1894.



STUDEBAKER BROS. CARRIAGE REPOSITORY, MARKET AND TENTH STREET,
SAN FRANCISCO, CAL.
CLINTON DAY, ARCHITECT.

THE MONTHLY MEETING OF THE SAN FRANCISCO
CHAPTER OF THE AMERICAN INSTITUTE OF
ARCHITECTS.

AT the monthly meeting of the San Francisco Chapter of the American Institute of Architects held in their rooms Friday June 8th, the Exhibition Committee reported a very favorable exhibit of architectural drawings at the Art

PELE, THE HAWAIIAN GODDESS OF FIRE.

THE traditions say that she was the most beautiful woman that ever lived, and the most capricious. She made her home on various islands from which she was successively driven by the Water God "Kamapuaa," who had the body of a man and the head of a hog. She finally took re-



PELE, THE HAWAIIAN GODDESS OF FIRE.

Institute. The application of Architect M. J. Lyon for application for fellow membership, was favorably reported by the executive committee, and will be balloted on at the next meeting.

The paper on "Hospital Planning," read by Mr. Geo. H. Sanders, will be found in another column of this number.

POLITENESS is the result of good sense and good nature.

BOOKS AND PERIODICALS.

YELLOWSTONE NATIONAL PARK—An illustrated pamphlet giving information about Yellowstone Park and the Northern Pacific Railroad is well worthy of mention; this brochure in the way of a guide to the northwest will well repay a careful study. Seldom do we find so much information about what may be seen upon a journey placed before the reader in such a charming manner.

The illustrations are not only well executed and printed,

of both gold and silver to the currency of the world; without the aid of England the desirable object cannot be obtained.

LIPPINCOTT'S Monthly Magazine for June as usual is full of good things "The Wonder Witch" by M. G. McClelland is the complete novel, while the last installment of the "Tresspasser" by Gilbert Parker finishes what may be called a sentimental story that we are glad to see the last of; "My First Library Acquaintance" by R. H. Stoddard will call to the recollection of old timers the New World with its motto

"No pent up utica contracts our powers
The whole boundless continent is ours."



A SUBURBAN COTTAGE FOR TWO SMALL FAMILIES.

but give a delightful insight into a comparatively unknown region; already it requires two steamers to accommodate the travel of this line upon Puget Sound to Alaska, thus proving it will not remain an unknown region much longer.

For six cents in postage stamps the agent of this line will send a copy of "Indianland and Wonderland" giving a detailed account of routes, price of fare, etc.

THE FORTNIGHTLY REVIEW for May contains among other interesting articles one upon the "Appreciation of Gold" by Robert Barclay, Director of the Manchester Chamber of Commerce. This timely article is well worthy the serious consideration of every one, and is certainly very encouraging that the evils of a single gold standard of value is beginning to open the eyes of the English people to the fact that the maintenance of a single standard is likely to react upon the English people in a way not favorable to either their commerce or manufacturers, thus inducing them to urge the Government to take steps to restore the use

ORNAMENTAL IRON—A monthly journal devoted to industrial art. The April and May furnishing a double number and completing the first volume gives us a good opportunity to review the good work done and the many excellent specimens of ornamental iron work presented in this volume, this style of metal work so essential to modern commercial use and public buildings has come among us to stay; it is therefore important to have at hand a standard authority on the subject and certainly the Winslow Bros. Co., 759 The Rookery, Chicago, have furnished exactly what was wanted. Architects will do well to see that this very clever magazine is always at hand and often referred to.

"How did Algy get so frightfully burned?"

"He was warming before the grate, just after a bath, when his clothes caught fire."

"Didn't he jump back into the bath tub?"

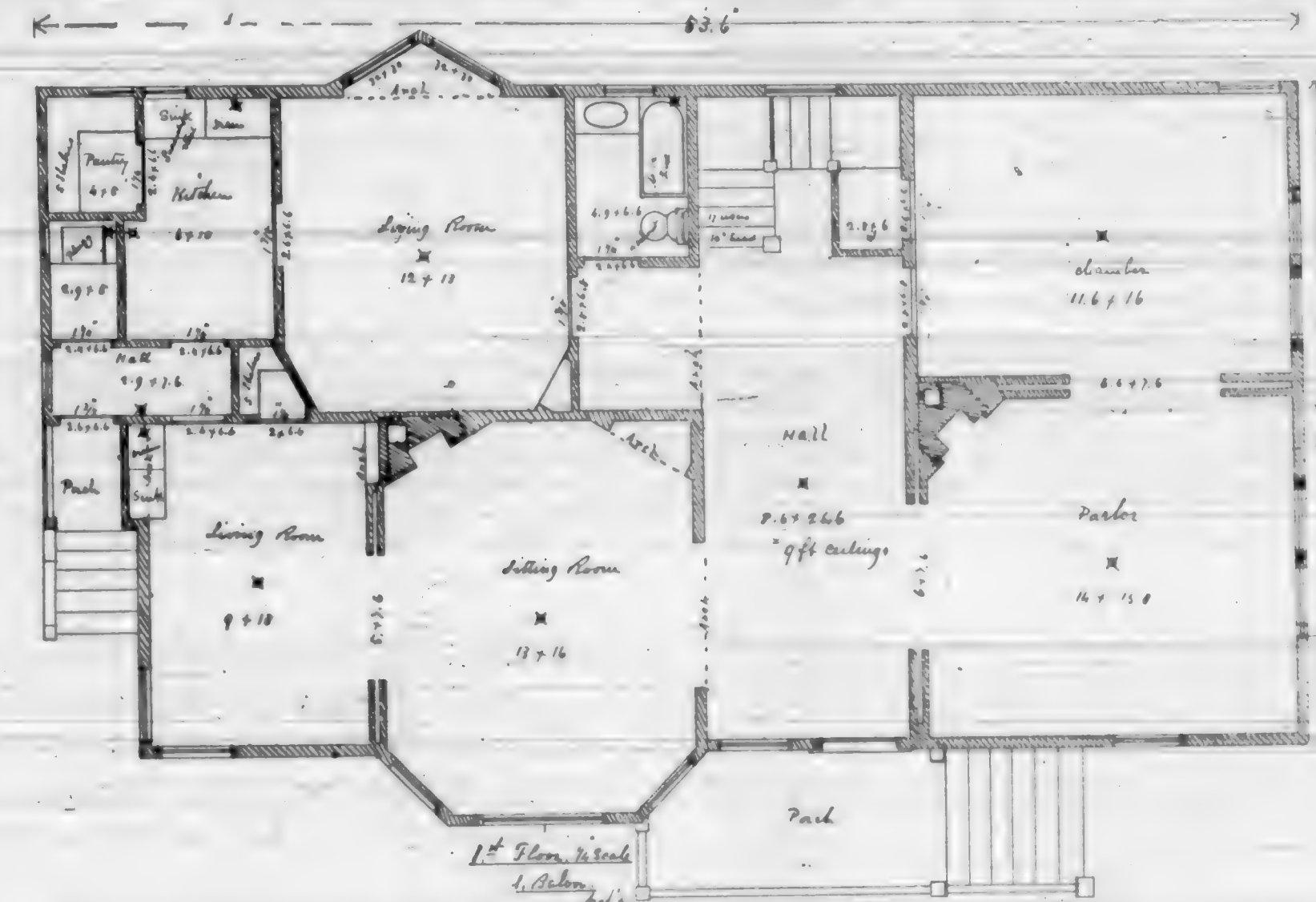
"No. He ran out on the fire escape."—*Life*.

NOTICE OF MEETINGS.

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

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
C. E. GRUNSKY, Pres. GEO. W. DICKIE, Vice-Pres.
OTTO VON GELDERN, Sec. W. C. RALSTON, Treas.

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
GEO. P. LOW, Pres. C. O. POOLE, Vice-Pres.
MAX CASPARI, Sec. H. T. BESTOR, Treas.



PLAN OF SUBURBAN COTTAGE FOR TWO SMALL FAMILIES.

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.

RIGHT OF REDEMPTION BY JUDGMENT CREDITOR.—A mortgagee who has obtained a decree of foreclosure is a "decree creditor," within the meaning of the statutes, which declares that "any decree or judgment creditor" may redeem from an execution or foreclosure sale after twelve and within fifteen months from the sale. *Whitehead v. Hall*, Supreme Court of Illinois, 35 N. E. Rep. 871. 50.

LIABILITY OF AGENT FOR UNDISCLOSED PRINCIPAL.—An agent who fails to disclose his principal is personally liable to a person with whom he contracts, though such person might have discovered the agency; actual knowledge being necessary to relieve the agent of liability.

Mahoney v. Kent, Common Pleas of New York City and County, General Term, 28 N. Y. Supp. Rep. 19. 42.

LIABILITY OF CORPORATION FOR ACTS OF PROMOTOR.—A promotor is not an agent, for agency implies the exercise of a principal, and a delegation of authority from the principal to the agent. Therefore a corporation is not responsible for acts performed or contracts entered into by a promotor before it came into existence. But a corporation may, however, make itself responsible for such acts and representations by adoption. The adoption of an agreement made by a promotor of a corporation may be implied from the

acts of acquiescence of the corporation without any express acceptance. After a corporation has knowingly received the benefits of an arrangement or understanding entered into by its promoters, it will not be permitted to deny that it did not agree to it. *Huron Printing & Bindery Co. v. Kittlesome*, Supreme Court of South Dakota, 57 N. W. Rep. 235. 78.

BREACH OF CONTRACT TO REPAIR.—Where a lessor agreed to put in a new furnace, but there was no stipulation as to the amount of heat that it should give, and it failed to give out heat according to its capacity because of a defect in the pipe connections. Failure of the landlord to remedy such defect which could have been done at a small expense, was not an eviction, as the lessee could have done it, and set off the cost against the rent.

Doolittle v. Selkirk, Common Pleas of New York City and County, General Term, 28 N. Y. Supp. Rep. 43. 85.

LIABILITY FOR DEFECTIVE APPLIANCES.—The owner of a building is not liable for injuries to one of the workman employed thereon, caused by the breaking of the joist, in consequence of an obvious defect, where the person injured was an experienced carpenter, and assisted in placing the defective joist.

Griffiths v. New Jersey & N. Y. R. Co., Superior Court of New York City, General Term, 28 N. Y. Supp. Rep. 75. 49.

LIABILITIES OF OWNER FOR MATERIAL FURNISHED CONTRACTOR.—A personal judgment cannot be obtained against the owner of a building for material furnished the contractor on his own account, if the owner had no knowledge of the purchase of the material by the contractor.

May & Thomas Hardware Co. v. McConnell, Supreme Court of Alabama, 14 S. Rep. 768. 43.

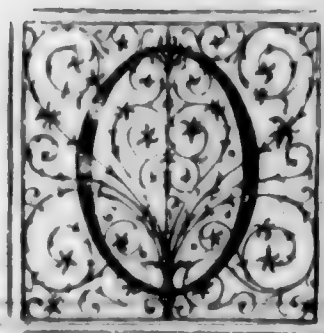
INTERPRETATION OF CONTRACTS.—Where a building contract provides that the contractor shall receive as compensation the cost of material and labor used in the building, "and ten per cent, added thereto as profit," the accounts paid by the contractor on sub-contracts for various portions of the work, including the customary profit of the sub-contractors, will be considered as "the cost of labor and material," in estimating the amount due to the contractor.

Hamilton v. Coogan, Common Pleas of New York City and County, General Term, 28 N. Y. Supp. Rep. 21. 73.

COUNTY PROPERTY EXEMPT FROM MECHANICS' LIENS.—The public buildings of a county are wholly exempt from the operations of the mechanics' lien law, and cannot be sold under execution or other process. The county court of a county cannot be compelled by a bill in chancery to issue an order against the county funds for any debt or claim, just or unjust, against the county. The statutory law furnishes the remedy in all such cases, and it must be strictly pursued.

Hall's Safe & Lock Company v. Seites, Supreme Court of Appeals of West Virginia, 18 S. E. Rep. 895. 80.

WASHINGTON ARCHITECTS ORGANIZE.



N the afternoon of May 10th, a meeting of architects of Tacoma and Seattle was held in the city hall council chambers of Tacoma. The object was the formation of an organization of architects with the final object of becoming a Chapter of the American Institute. The meeting was composed of eight members from Seattle together with eight architects of this city, making sixteen who signed the constitution and by-laws. It is proposed to hold a meeting at Spokane a little later to interest the architects in that city and give them an opportunity to join. The Tacoma members are as follows: G. W. Bullard, Wm. Farrell, Albert Sutton, A. L. Robinson, Louis Mendell, L. C. Houser, A. J. Russell and C. B. Talbot. The Seattle members are: Messrs. Boone, Wilcox, Saunders, Chas. H. Bebb, James Stevens, Albert Wickersham, G. H. Parks and Emil De Neuf. The officers are: President, W. E. Boone of Seattle; First Vice-President, W. H. Wilcox of Seattle; Second Vice-President, G. W. Bullard of Tacoma; Secretary, C. W. Sanders of Seattle. At the meeting in this city an interesting paper was read by architect G. W. Bullard on the subject of "Architects as Pioneers." President Boone's opening addressed was listened to with interest. A condensed report of it is as follows:

"For some time past the architects of this state have, in a desultory and unsystematic way, been debating with one another the advisability of establishing a chapter of architects which should bring together and organize all the worthy members of the craft within the boundaries of Washington. The necessity for such an organization was admitted by everybody. Its absence was deplored by all who desired to preserve in their integrity, on this virgin soil, the honorable traditions and gentlemanly practices of the profession. As a check and deterring restraint upon the greedy and unscrupulous, it was rightly held that an organization would be not less beneficial to the great body of upright architects than to the entire community. It was also strongly desired that we should take the necessary steps for admission to that important body, the American Institute of Architects, whose influence upon American architecture has already become most extensive and beneficial. Firmly impressed with the very great importance of organization, the architects of the city of Seattle resolved to take some practical measure for the establishment of a chapter of architects in this state. What form this measure should assume was the first matter for decision. It was deemed better to create a chapter out of the material at hand, and then solicit the cordial co-operation of the entire profession in the state making it really and truly what it is already in name—the Washington Chapter of Architects. We accordingly organized this chapter by the adoption of a constitution and by-laws and the election of officers; and we are now before you, gentlemen of Tacoma, for your approval and co-operation, of which, indeed, we have never entertained a doubt. Your brethren in Seattle claim no primacy, pre-eminence or privileges in the chapter. The work which they submit to you is provisional only, and they expect it to be amended, improved and strengthened by your zeal, intelligence, wisdom and experience. Their hope and wish is, that after you have subscribed the by-laws and thus become members of the chapter, a meeting of the chapter be held, as early as possible, in the city of Spokane, to afford our brethren there an opportunity of joining hands with us. With Seattle, Tacoma and Spokane thus enrolled under the banner of the chapter, we can arrange for further meetings in the large towns of the state, so as to enable all the reputable and honorable architects of Washington to affiliate with us.

When the organization is thus perfected, with every part of the state represented, the permanent home of the chapter can be fairly and satisfactorily located. Within the past decade no part of the United States has done more building relatively than Washington. Much of it has been of a highly important character, and still more important work is to be done in the near future. It behooves the profession to exert all its influence in the most systematic and effective manner for the establishment and maintenance of a high standard of professional ethics, architectural skill, and solidity of construction. The public judge us favorably or unfavorably in proportion as we erect and aim for our own guidance and control a high or low standard and rule of action in these transcendently important respects."—*The Pacific Builder*.

A SUMMER HOTEL IN THE ATLANTIC OCEAN.

FROM *The New York World*, we learn of the proposition to build a summer hotel in the Atlantic Ocean.

The exact spot in the ocean where the buildings will be erected is not made public. Mr. Coen said yesterday that it had been selected and the soundings had been made and the exact location marked by buoys. It is off the Long Island coast, probable somewhere between Fire Island and New York, and it will be fourteen miles from the shore. Atlantis, as it is to be called, will not be built upon a sand-bar. It will not even be built over shoal water. Now, at the first thought it seems ridiculous that any structure could be made strong enough to resist the power of the waves of the ocean in a storm, but Mr. Coen says the engineers have declared that the scheme is feasible.

The chief engineer is Captain R. D. Evans of the United States Navy, who is practically at the head of the Light-House Board. He is recognized both in this country and abroad as one of the ablest of engineers in deep-sea construction and has a very high reputation in Government circles. Associated with him is J. C. McGuire, who has charge of the steel construction in Government buildings, and who is just now in charge of the new Appraiser's stores building in West street. Captain Howard Patterson, formerly of the United States Navy, formerly Professor of Naval Science in Brown's College, and who was admiral of the Haytian navy, is another of the engineers.

The engineers, it is said, have agreed to put down the foundations under a forfeit of \$1,000,000. This convinced those who hesitated about putting money into the scheme. The structure will rest upon cylinders. Atlantis will include a number of structures, of which but one will be built this year. It will be a great pavilion, constructed in the form of a square, two stories high in the main and three in the towers, and will rest upon large iron cylinders, filled and sunk in Portland cement.

The main floor will be thirty feet above the water, and the Roman order of architecture will predominate.

The edifice will be built entirely of steel, iron, glass and tiles, thus making it entirely fire-proof. Within will be a grand amphitheatre. It is calculated that the lower floor will accommodate 10,000 people, while the gallery will hold 7,000 more. There is also provision for a spacious esplanade or roof garden, seating 3,000. There will be 120 large rooms for hotel accommodation, a cafe, restaurant, billiard-room and all accessories of that sort. Then there is the anglers' pavilion, which ought to increase the popularity, because the structure will be located in the midst of the fishing grounds.

The promoters of the enterprise say that it offers all the advantages of a sea voyage without the discomforts of seasickness. It is promised that it will be within two hours sail of this city.

Mr. Coen expects that the building will be opened before the summer is over.

BUSINESS MOSAICS.

The San Francisco Repository of Studebaker Bros., is located at the corner of Market and Tenth streets, and is one of the finest and most extensive carriage repositories in America, or, for that matter, in Europe; it has a 90-foot frontage on Market street and 145-foot frontage on Tenth street, has five floors the full size of the building devoted to salesrooms for Carriages, Buggies, Carts, Spring, Farm and Team Wagons, also Harness of every kind and price, Robes, Blankets, Whips and Stable Supplies. In addition to their repository they have extensive warehouses near the depots on the railroad tracts, having 75-foot frontage and running through an entire block. Vehicles are shipped from their factories in their own cars and never break bulk until unloaded at their warehouses. Almost any kind of vehicle or harness known to the trade can be had at the San Francisco Repository of Studebaker Bros. Mfg. Co.

Mr. E. E. Ames, well known as one of our leading and prominent citizens, has been manager of the San Francisco Branch for over twenty years. With the Studebaker Wagons and Carriages he has built up the most extensive business of any house on the Pacific Coast.

She—"Cease your flattery, sir, or I shall put my hands over my ears." He (wishing to pay her a compliment)—Impossible! your hands are too small for that."—*Le Petit*.

The McMillan Sash Balance and Lock is an article which commands the attention of every one interested in having a reliable and perfect attachment that will allow you to easily work the window without fear of breaking the sash cord or slamming of windows and at the same time feel secure that the windows are fastened when ventilation is desired. Advantages claimed for the McMillan Sash Balance and Lock, are that you can take out the sash to clean the glass by locking and throwing back the left wheel (when two locks are used) and taking off left hand strip. You can lock either sash at any point, open any distance, to ventilate, or



SASH BALANCE.

tightly shut together. It will not allow the sash to rattle with the wind. It balances the sash perfectly by a coiled flat spring inside the wheel. It cannot be picked as there is no way to reach it from the outside. It cannot be broken by any pry placed under the sash, as other locks can.

It can be put into old houses as well as new, and at a very small cost for labor. No boxing necessary, therefore no place left through which cold air can rush in as in the case with ropes and weights. For durability it surpasses anything in the sash balance line, being made of best metal and sheet steel. The rack in sash is made of sheet steel and will last as long as the house stands.

The balance is hidden, therefore no cords or ribbons are

exposed to view. The balance is made to carry windows from three to five hundred pounds. The World's Fair Medal was awarded by the Columbian Exposition, Chicago.

The Common Sense Bead Fastener is also an indispensable attachment where it is desired to remove the windows at any time without injuring window casing or stop bead.

Smith & Young of San Francisco and Los Angeles are General Agents for the McMillan Sash Balance and Lock combined as well as the Common Sense Bead Fastener and on application will send price list and other information relative to the same.

She—"I beg your pardon, monsieur, for having trodden on your toe." He—"Don't mention it, mam'selle; it is I who ask pardon for having a toe."—*Tid-Bits*.

If you are about to paint your house and want it well done, you must use good materials, do this and you will not be troubled with cracks and blisters and all the evils that follow when poor materials are used; this being granted all you have to do to obtain what you desire in this line is to call upon W. P. Fuller & Co. manufacturers of Phoenix Pure Paint, this article is made of white lead, zinc, oxide and linseed oil, thoroughly mixed by heavy machinery and is sure to give satisfaction to all concerned.

Their new wall finish is a splendid thing for the good housewife, as it is claimed to be a washable water color that petrifies on the wall and will not crack or chip off. What more can be asked of a wall finish?

Bradford—"Binks and his wife make a good match." Robinson—"Yes; he's a stick and she the brimstone."—*Harlem Life*.

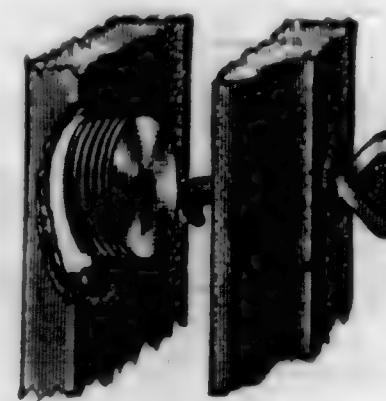
We furnish with this issue a half-tone of Edw. B. Hindes & Co's. beautiful exhibit, located in the SE corner gallery of the Manufactures and Liberal Arts building. On entering, to the left is shown their Rolling Wood Partitions for Churches, Sunday School Rooms, etc.; next a Self Coiling Noiseless, Burglar and Fire-proof Corrugated Steel Shutter.

The next opening contains one of the Modern Venetian Blinds, of which they are the only manufacturers on the Pacific Coast. The next two windows are devoted to their justly celebrated Hill's Patent Inside Sliding Blinds, in Hard Woods and White Cedar. The last window to the right shows the Hill Patent Sliding Fly Screen, acknowledged to be the most perfect screen in use, covering either top or bottom sash and can be instantly removed to clean windows or when not needed. The architecture and finish of this exhibit is conceded to be among the finest making it one of the most attractive features of the Midwinter Fair.

The main office and factory of this firm is at 411 Mission street, San Francisco.

Farmer Squashead (observing a metropolitan daily on the counter of the village store)—"What! Aint that air paper busted up yet? Why, I quit taking it fifteen years ago."—*Time*.

Union Pressed Brick and Terra Cotta Co.—We cannot find the space in these pages for an enumeration of the various kinds of pressed, moulded and ornamental brick to say nothing of the varieties of Architectural Terra Cotta and fire-proofing, paving tile, etc., but if you send for a catalogue to their main office, SE corner Bush and Sansome streets you can find out all about it.



BEAD FASTENER.

CITY BUILDING NEWS.

Army near Folsom. To build; owner, P. Leo Bruener; architect, R. A. Van de Pavert; contractor, Robert Trast; signed, May 23; filed, May 24; cost \$23,350.

Baker near Bush. To build; owner, T. Randall; architect, R. H. White; day work; cost \$3500.

Baker near Bush. Painting; owner, T. Randall; architect, R. H. White; contractor, J. F. Sullivan; cost \$330.

Broderick near Fulton. To build; owner, Henry Dederky, Jr.; architect, Chas. M. Rousseau; contractor, Philip Rive; signed, May 22; filed, May 23; cost \$2500.

Buchanan and Sacramento. Carpenter work; owner, M. Hyman; architects, Percy & Hamilton; contractor, T. M. McLachlan; signed, May 24; filed, May 25; cost \$14,900.

California near Jones. Interior finish, stairs, hardware and glazing; owner, George Whittell; architects, Townsend & Wynken; contractors, W. T. Getch & Bros.; signed, May 14; filed, May 22; cost \$8500.

California near Laguna. To build; owner, R. J. Wilson; architect, Walter J. Mathews; contractor, S. J. Johnson; signed, May 23; filed, May 24; cost \$13,470.

California near Laguna. Stone work; owner, R. J. Wilson; architect, Walter J. Mathews; contractors, S. J. Johnson; signed, May 23; filed, May 24; cost \$2350.

City Hall Ave. Excavation and concrete work on City Hall; owner, Frank Happersberger; architect, Clinton Day; contractor, Thos. E. Keough; signed, May 26; filed, May 28; cost \$1050.

Day near Church. To build; owner, Wm. Edwards; contractors, A. Hanson & J. Sandeen; signed, May 18; filed, May 19; cost \$1675.

Denver near Falcon. To build; owner, John Fies; architect, J. T. Kidd; contractors, Hood & Watson; signed, May 9; filed, May 12; cost \$2700.

Diamond and Collingswood. To build; owner, Frank A. Meyers; contractor, H. R. Abrahamson; signed, April 14; filed, April 19; cost \$1555.

Diamond and Collingswood. To build; owner, J. H. Colman; contractor, H. R. Abrahamson; cost \$1555.

Eddy near Hyde. Additions and alterations; owners, Louis Cranz & wife; architects, Martens & Coffey; contractor, D. G. Chisholm; signed, May 25; filed, May 26; cost \$4320.

Eighth Ave. near California. To build; owner, Annie E. Hall; architect, Clyde Corrigan; contractor, J. E. Eastman; signed, May 23; filed, May 24; cost \$2150.

Ellis near Mason. Plumbing; owner, Maurice Casey; architect, Henry A. Schultz; contractor, H. Muddern; signed, May 7; filed, May 15; cost \$6425.

Ellis near Mason. Tin, iron and painting; owner, Maurice Casey; architect, Henry A. Schultz; contractor, William Cronan; signed, May 1; filed, May 15; cost \$2425.

Ellis near Mason. Cast iron work and painting; owner, Maurice Casey; architect, H. A. Schultz; contractor, Joshua Hendy Machine works; signed, May 1; filed, May 15; cost \$1765.

Ellis near Mason. Wrought iron, steel work, painting and fire-escapes; owner, Maurice Casey; architect, H. A. Schultz; contractor, Judson Manufacturing Co.; signed, May 1; filed, May 17; cost \$3770.

Eight Ave. near Clement. Frame cottage; owners, Marshall Newman and wife; architects, Kenitzer & Barth; contractors, Peterson & Olson; signed, May 18; filed, May 19; cost \$1350.

Eleventh Ave. near J. To build; owners, W. H. and Kate Jones; contractor, G. Larson; signed, May 7; filed, May 22; cost \$1433.

Fell near Scott. To build; owner, C. J. Kaighin; contractors, Patterson & Person; signed, May 17; filed, May 18; cost \$5500.

Folsom near 25th. To build; owner, Mary Sparks; architect, John T. Hogan; contractor, James A. McDonald; signed, May 18; filed, May 21; cost \$2400.

Folsom bet. 3d and 4th. Raising and moving; owner, T. J. Hund; architects, De Ross & Co.; contractor, F. V. Steirman; signed, May 14; filed, May 16; cost \$3535.

Fifteenth near Noe. To build; owner, Delia Ryan; architect, T. J. Welsh; contractor, A. Hawkins; signed, May 10; filed, May 12; cost \$3500.

Fulton near Lyon. To build; owner, James Reaney; architect, E. A. Hermann; contractors, Peterson & Olson; signed, May 22; filed, May 23; cost \$1600.

Fulton near Devisadero. To build; owner, Moses A. Epshtain; contractor, W. W. Rednall; signed, May 25; filed, May 25; cost \$4450.

Golden Gate Ave. near Devisadero. To build; owner, John Traynor; architects, Laver & Mullany; contractor, James Cochran; cost \$5250.

Harrison near Fourth. To paint Whittier School; owner, Board of Education; architect, Chas. I. Havens; contractors, The Painters Protective League of S. F.; signed, May 24; filed, May 26; cost \$1200.

Hayes near Polk. To build and alterations to one-story building; owner, Rose V. Jessop; architect, R. H. White; contractor, John Furness; signed, May 19; filed, May 23; cost \$7800.

Howard near 17th. Alterations and additions; owners, J. L. Fallon and Della Fallon; architect, Chas. J. I. Devlin; contractor, Jas. J. O'Brien; signed, May 19; filed, May 19; cost \$2190.

Hyde near Bush. Carpenter work to six flats; owner, Samuel Foster; architects, Smith & Freeman; contractor, S. H. Kent; signed, May 17; filed, May 26; cost \$14,446.

Hyde near Bush. Plumbing; owner, Samuel Foster; architects, Smith & Freeman; contractors, Shepard Bros.; signed, May 17; filed, May 26; cost \$2370.

Market near 5th. Plumbing, etc.; owner, Emma Spreckles; architects, Reid Bros.; contractor, W. F. Wilson; signed, May 8; filed, May 26; cost \$20,250.

Market near 5th. Certain branches of work; owner, Emma Spreckles; architects, Reid Bros.; contractors, G. Dillon and J. W. Hansbrough; cost \$41,744.

Market near 5th. Lathing and plastering; owner, Emma Spreckles; architects, Reid Bros.; contractor, Thos. Mannix; cost \$5920.

Market near 5th. Store front; owner, Emma Spreckles; architects, Reid Bros.; contractor, D. McPhee; cost \$13,300.

Mason and California. Mark Hopkins Institute of Art, to paint, tint and burn off old paint; owner, S. F. Art Assn.; contractor, P. N. Kuss; signed, May 21; filed, May 22; cost \$1400.

Oak near Webster. Plumbing; owner, Edmund Schuntenbus; architects, Salfeld & Kohlberg; contractors, Koch & Grimes; signed, May 9; filed, May 12; cost \$900.

Oak near Webster. Moving and underpinning; owner, Edmund Schuntenbus; architects, Salfeld & Kohlberg; contractor, H. Behrens; signed, May 9; filed, May 12; cost \$1264.

O'Farrell near Franklin. Carpenter work and tin beams; owner, The Deutsche Evang. Lutheran Church; architect, H. Geiffuss; contractor, F. Klatt; signed, April 27; filed, May 15; cost \$19,540.

O'Farrell near Franklin. Plastering, etc.; owner, The Deutsche Evang. Church; architect, H. Geiffuss; contractor, Chas. Dunlap; signed, April 27; filed, May 11; cost \$2090.

O'Farrell near Franklin. Brick and stone work; owner, The Deutsche Evang. Church; architect, H. Geiffuss; contractor, Adam Beck; signed, April 27; filed, May 11; cost \$16,927.

O'Farrell near Franklin. Artificial stone work; owner, The Deutsche Evang. Lutheran Church; architect, H. Geiffuss; contractors, Camp & Carillon; signed, April 27; filed, May 11; cost \$1149.

O'Farrell near Franklin. Heating appliances; owner, The Deutsche Evang. Church; architect, H. Geiffuss; contractors, Ford Bros.; signed, April 27; filed, May 11; cost \$1061.

O'Farrell near Franklin. Painting; owner, The Deutsche Evang. Church; contractor, August Fick; signed, April 27; filed, May 11; cost \$1264.

Pacific Ave. near Devisadero. Excavation, concrete, etc.; owner, Annie Meyer; architect, E. A. Hermann; contractor, Carl Greise; signed, May 25; filed, May 26; cost \$1822.50.

Postland and Montgomery. Elevator; owners, Masonic Hall Association; architects, Kenitzer & Barth; contractor, John Hammond; signed, May 4; filed, May 10; cost \$6875.

Ridley and Scott. To build; owner, B. Tenderlein; contractor, A. De Fair; signed, May 10; filed, May 11; cost \$7000.

Seventeenth near Dolores. To build; owner, Eugene Kelly; architect, Oliver Everett; contractor, Ralph Carey; signed, May 22; filed, May 24; cost \$2244.

Sutter street, 1525. Alterations and additions; owner, Mrs. H. Hug; architect, Edmund Kollofrath; contractor, John Furness; signed, May 15; filed, May 16; cost \$3922.

Twenty-fourth and Guerrero. Two-story frame and three-story frame; owner, C. Branagan; architects, Martens & Coffey; contractors, Ackerson & Paterson; signed, May 14; filed, May 14; cost \$10,425.

Union and Jasper. To build; owner, G. Rocca; architects, Townsend & Wynken; contractor, G. Masoletti; signed, May 5; filed, May 10; cost \$2385.

Union near Laguna. Carpenter work; owner, Jno. M. Allyne and W. H. White; architect, Chas. Geddes; contractor, Jas. McLean; signed, May 25; filed, May 28; cost \$6925.

Union near Laguna. Plastering and brickwork; owner, John Allyne and W. H. White; architect, Chas. Geddes; contractor, H. H. Larsen; signed, May 25; filed, May 28; cost \$1184.

Utah and Santa Clara. Alterations and additions; owner, Michael Fogarty; architect, Jas. P. Brady; contractor, Thomas F. Mitchell; signed, May 10; filed, May 11; cost \$1400.

Valencia and Quinn. Excavation, brickwork; owner, Sarah B. Melone; architect, Clinton Day; contractor, G. Cannon; signed, May 25; filed, May 25; cost \$395.50.

Washington bet. Powell and Mason. To erect two three-story frames; owner, M. Ghisla; architect, Emile Depliere; contractor, P. A. Antonelli; signed, May 14; filed, May 15; cost \$9000.

Washington and Laurel. Two semi-detached frame buildings; owner, John Dempster McKee; architect, W. H. Little; contractor, R. P. Hurlbut; signed, May 17; filed, May 19; cost \$10,612.

Washington near Locust. To build; owner, Chas. Clark; contractor, Casper Zwierlein; signed, May 23; filed, May 23; cost \$7140.

Webster and Pine. Two-story frame except plumbing; owner, Jacob Claus; architect, Wm. H. Wharf; contractor, Jacob Schafer; signed, May 23; filed, May 28; cost \$1137.50.

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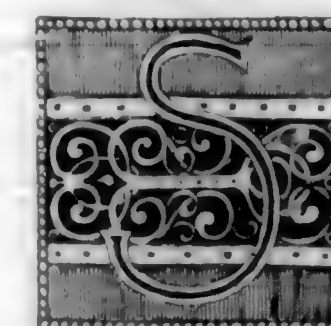
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W. J. CUTHBERTSON, President. OLIVER EVERETT, Secretary.

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5 inch.....	7.50	20.00	37.50	65.00
6 inch.....	9.00	24.00	45.00	78.00
7 inch.....	10.50	28.00	52.50	91.00
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SINCE our last issue the all absorbing topic of discussion throughout the length and breadth of the United States, is the present struggle for supremacy between organized labor and organized capital. Deplorable as are the immediate results of this bitter fight, yet we look for good as its ultimate result.

If the present struggle shall awaken society to a realization of the gravity of the present situation, and the absolute necessity of devising laws to establish a just equilibrium between the conflicting demands of Capital and Labor, the price the country is now paying will not be too much for the lesson.

It is doubtful, however, if that point has yet been reached. The absolute necessity of finding a just and equitable solution of the problem, is not yet realized by the public or its government. The law has very properly put down the lawless element, when it reached the point of violence and disorder. The true aim of government, however, should be to find means of preventing the cause of violence and disorder, and it will probably take more serious uprisings to bring this truth home to the people.

But as all progress in human affairs is achieved solely by and through strife, the desired improvement can only be ex-

pected to come through this means. To improve the condition of the people of France, humanity waded through the blood and horrors of the revolution. To solve the problems of the present age, may take equally as deplorable means. How disastrous the temporary results may be, only the future can determine.

If capital endeavors to push a temporary advantage to such a point as will drive defeated labor to desperation, or should labor become so exacting as to demand more than its just share of the benefits of production, the solution of the question will become infinitely more difficult. But it is not unreasonable to hope that progress is being made to a solution that will result in ultimate benefit to the growth and prosperity of this American government, and American people.

Possibly the material struggles could be averted, and peace attained at less cost, if the disputants would be content to substitute reason for brute force, and a christian spirit of conciliation in place of the arbitrary use of power and the threats and intimidating methods now employed.

A peaceful result, however, is too much to expect at the present stage of human progress, and it is extremely doubtful if vital questions will ever be solved without an appeal to force and violence.

ON THE USE OF COLOR IN ARCHITECTURAL DESIGN.*

BY H. LANGFORD WARREN.



It is hardly beyond the truth to say that, so far as the exterior of buildings is concerned, there has been until recently no use of color in architectural design since the close of the sixteenth century in Italy. And even now, though some attention has of late been given to this subject, both here and in Europe, which has produced some successful color design, the most striking fact with regard to our use of color in architecture is probably our timidity. This modest caution in the first unwonted essays at color treatment after so long disuse is certainly wise and right, since too great boldness in this matter is more likely to lead to failure than success. But the possibilities of the use of color in architectural exteriors and the right treatment of it certainly demand more serious consideration than they have generally received. To treat the exterior of a building in a single material and in absolute monotone is doubtless the safest procedure, and is vastly preferable to an ambitious but faulty color scheme, but it is clearly to give up one important source of beauty in architectural design.

Ruskin, in a characteristic passage in his "Seven Lamps of Architecture," thus expresses his opinion on the subject: "I do not," he says, "feel able to speak with any confidence respecting the touching of sculpture with color. I would only note one point, that sculpture is the representation of an idea, while architecture is itself a real thing. The idea may, as I think, be left colorless and colored by the beholder's mind; but a reality ought to have reality in all its attributes; its color should be as fixed as its form. I cannot, therefore, consider architecture as in anywise perfect without color."

In this opinion most architects nowadays will probably concur, though monotone is still largely the rule in the exteriors of our buildings, and there are not wanting those who maintain that it is the ideal and the only dignified treatment. Such a view, however, receives but little support from the authority of the past. Most ancient buildings, it is true, are of one color in their present condition, and our architectural ideals are doubtless largely formed by the noble buildings of the past as we have seen them; yet we know that when their builders left them most of them were glowing with color.

To recall briefly the history of the color treatment of buildings will show the extent to which color has been employed in architecture.

The columns and walls of the Egyptian temples were covered with rich color decoration which, in most instances, still remains to this day. The capitals, which borrowed their form from the lotus flower or bud, were painted in red and green and white, with ornaments closely imitated from the same plant. The shafts were similarly decorated in color or with hieroglyphics incised and painted. If most of this color is to be found in the interior of the temples, it is because the architecture itself was mainly internal. But little external architectural effect was sought in Egyptian temples until a comparatively late date, except about the entrances, and these were always decorated with color.

In Greece, the marble of the temples (or the fine stucco which covered walls and columns where a coarser stone was

*Prepared by invitation of the American Institute of Architects, to be read at its annual convention, but by its courtesy made a part of the programme of the Congress of Architects.

all that could be obtained) was regarded as a field for ornamental color treatment. Indeed, the marble seems to have been chiefly prized for its excellent surface for color decoration. The Greek temple did not stand out entirely white against the blue sky, as we are apt to picture it to ourselves but was a glowing mass of color. Since the day of Hittorf's color restorations this is no longer matter for conjecture, but has been clearly proved by the numerous colored fragments and traces of color which have been found. Mr. Edward Robinson has recently fully shown, both by literary evidence and by traces of color which he has found, that even the statues were fully colored in a somewhat conventional manner. The Romans, heirs to the arts of Greece, followed the same methods. The well-known statue of Augustus, for instance, retains such complete traces of color as not only to show that it was entirely painted, but to make on accurate restoration of the color possible. But in the decoration of their buildings the Romans seem to have used applied color much less than the Greeks. Instead of this they obtained their color effect by the use of variegated marbles and precious stones, though applied color was used, especially when expense precluded the use of the more precious materials. The use of applied color in the provincial towns has been made familiar to us by the discovery of Pompeii and Herculaneum. And similar treatment was employed in many buildings of Rome itself; though here in the more important public buildings columns were made of porphyry, verde antique, and rich marbles from the East, and variegated marble was used in slabs as a covering for the walls. Gilding was also lavishly employed in capitals and other members. This method of obtaining color effect by the natural color of rich materials continued in the Byzantine empire, which added to it the use of mosaic. (The marvelous church of St. Mark at Venice is the most familiar and the most beautiful example of this style.) And it continued in Italy through the various styles that followed until the later Renaissance.

The medieval architects of the northwest of Europe did not have these richly colored materials at their command, but they were far from giving up, on that account, the use of color. The very fact of the fairly complete preservation in which the great cathedrals have for the most part come down to us, so far as their general form is concerned, makes especially difficult to us the realization of what their appearance must have been when they still had all their color decoration. But enough traces of color are still clearly visible to show their original condition with tolerable certainty. In a general view, these venerable buildings seem to have no color but the natural gray of the weather-beaten stone—no more variety of tint than can be found in some old cliff of which their walls so much remind us, stained and worn as they are by time and with weeds and brambles growing in their crannies. But if we carefully scrutinize the hollows and protected portions of the carvings, especially in the porches, we shall almost certainly find unmistakable remains of applied pigment. Especially is this the case, for instance—or was before the restorations—in the porches of the cathedral of Amiens, where the pigment used on the molding of carved roses and of the hawthorne in its natural colors could still be plainly seen in places. The most striking and complete example I have seen and noted of medieval color decoration on the exterior of a building is to be found at the Church of St. Martin at Laon, in the central porch of the west front—which dates from the fourteenth century. Enough remains to show that this porch was completely covered with color. The columns and arch moldings were painted in red and yellow chevron stripes and similar patterns, which can be clearly traced. In the tympanum are carved two angels swinging censers on each side of a figure (probably of Christ or the Virgin) which has disappeared and which stood on top of the center mullion of the door. The angels' wings were gilded and their robes were tinted. The background was filled in with other painted angels, and the under side of the tabernacle roofs over the figures in the

porch was painted blue. These colors and other similar remains are quite crude. What the general effect of this treatment must have been in an interior, one gets a clear and undoubtedly substantially correct idea from the restoration of the Sainte Chapelle at Paris, especially in the upper chapel. In the interiors the remains of color are more frequent and in better preservation, as would be expected, and are especially to be noted in the chapels and on tombs and rood-screens. A very interesting and complete example of color applied to interior architecture is to be found in the rich late Romanesque porch now walled up, on the north side of the cathedral of Rheims.

It is clear that one should picture to himself the completed cathedral of Medieval France as richly decorated with color inside, besides the stained glass windows; the color overflowing, as it were, and covering the porches, which were probably entirely covered with rich coloring. Color was, it seems likely, also, more sparingly applied to other portions of the exteriors.

The interiors of the cathedrals of Italy at this time were also fully decorated by applied color, for mosaic, which had been introduced from Byzantium, fell more and more into disuse as fresco painting developed. But in the exteriors, in connection with colored marbles, which, as we have seen, were principally relied on for color, mosaic continued to be used, as in the gorgeous fronts of the cathedrals of Siena and Orvieto. With the coming of the Renaissance mosaic becomes still more unusual. But colored marbles were never used with more delicate taste or more beautiful effect than they were by the architects of the early Renaissance in Italy, and there are few classes of buildings so fruitful of lessons in the right principles of the application of color to buildings. The little Monte di Pietà and the palazzo publico at Brescia, or Fra Giocondo's loggia, at Verona (in which sgraffito is also employed), or the Ca' Dario or Ca' Trevisan, at Venice, may be named as examples of these.

With the further advance of the Renaissance, color gradually disappeared from the exteriors of buildings, first in Rome and Florence, later in Venice, whose delight in color led her; while other cities were already contenting themselves with monotone, to cover even the exteriors of her buildings with paintings by Giorgione, Veronese or Sebastiano del Piombo, the faded remnants of which may still be dimly seen on her walls.

In this rapid survey, no mention has been made of the styles of the East or of the Moors in Europe—styles essentially dependent upon color for their beauty. Attention has been purposely confined to those styles which have been developed in, or have directly influenced, western Europe.

What has been said recalls enough of the history of color in architecture to show clearly that the later, and especially the debased, Renaissance is the only style which, until modern times, has attempted to dispense altogether with color as a means of architectural effect, and that in most styles color has been regarded as of essential importance, the apparent exceptions being due, until the time of the Central Renaissance, to lack of means rather than to preference.

In the face of this unanimity of opinion and of precedent, it would be difficult to argue in favor of a general use of monotone in the exteriors of buildings. The strength of argument lies, however, altogether in favor of the employment of color. But it must be confessed that many of the recent attempts at external color treatment are far from successful. Such use of color is as yet new to us, and it is not matter for surmise that there should be some bungling. Especially to be regretted, for instance, is the placing of color emphasis on the quoine at angles and on window and door jambs. This treatment was first, I believe, brought into prominent use by the late H. H. Richardson, and has since been much imitated; but like most great men it has been Mr. Richardson's fate to find more imitators of his faults than of his good qualities.

In view of the growing desire for color treatment and its difficulty, a statement of the principles which should govern color design in architecture is often asked for.

In the first place, it must be said that there is perhaps no subject more difficult to consider by means of words, inasmuch as almost any color scheme which it is possible to de-

scribe in words can be made harmonious and perhaps beautiful in the hands of a true artist, or may be discordant and ugly, arranged by a person without color sense. The delicate variations and the proportioning of one color to another, which make the difference between beautiful and unpleasant, are too subtle to be described in words. In the next place, while the color sense may undoubtedly be trained and strengthened by proper instruction and by observation and practice, yet it is useless for anyone without that inborn color sense to undertake to have anything to do with it. So that of color more than of any other object to study, the paradox is true that instruction is unnecessary for those that are gifted and useless for those that are not. Finally, while for the reasons above given, dogmatism with regard to color is especially out of place (for a master will upset all rules), yet there is, perhaps, no subject so difficult to treat without dogmatism, since it is too subtle for argument, and conclusions with regard to it are necessarily based on observation and experience, guided by taste and feeling—not by reasoning. So much premised, a few general principles may be stated as marks to shoot at.

The first principle I feel inclined to lay down is that any theory of color design, taken as a guiding rule for practical work, is certain to be fatal to the result. What horrors have not been perpetrated in the name of the old theory of the primary colors—red, blue and yellow, with their secondaries, tertiaries, complementary colors, and what not; a theory which, to be consistent, would have us refuse to see any beauty in the colors of a peacock's tail or a for-get-me-not. But this theory has been exploded. Very true. But as a guide to color design the Jung-Helmholtz theory is not much better. It can to some extent analyze and explain, but it cannot construct. And an artist is not concerned with analysis and explanation, but with creation and enjoyment. Ruskin's theory that the principles upon which nature applies her color must be right, and that therefore color as applied to architecture must not follow constructive lines, because in nature it does not (as in the tiger-skin,) would, logically followed, lead to absurd conclusions.

Furthermore, the different styles demand different color treatment, so that general principles are the more difficult to lay down.

In approaching the study of color, let us then clear the ground by getting rid of all theory at the outset, and let us follow our sense of what is beautiful.

In what has been said above it is not meant to imply that nothing is to be learned from nature for our color treatment of architecture. A few broad principles we may perhaps glean from her, but our lessons will be for the most part in learning what is beautiful, rather than by opportunity for deducing recipes or theories. The English architect, E. L. Garbett, in his little book on design, mentions one of the few general principles it may be safe to deduce. "In nature," he says, "sameness of coloring is the rule, variety the exception; the former being found in all large or grand objects and broad surfaces, and the latter only in small and scattered organisms." A general law is no doubt here pointed out—by "sameness of coloring" Garbett cannot, of course, mean absolute sameness, but the sameness of a green tree where the whole is green, but there is great variety of green in the individual leaves; or of a gray cliff, where the whole is of one prevailing color, but with much variety of shade and tint within certain limits. But the principles here indicated in so far as valuable as guides in color design, are so not because we find them in nature, but because we see by observation that they apply also to art. A small building may, if you please, be a glowing mass of color; but a large one, all of vivid and varied color would be tiresome; to have dignity and impressiveness it must have one dominant prevailing tone. This may be seen by comparing two such buildings as the quomos of Florence and of Pisa. The Pisan color is much pleasanter and gives greater dignity of effect on account of its broader massing. The building is mainly of one color (white marble, now a rich gold with age), with mosaic patterns of various marbles in tympana and spandrels, while the cathedral of Florence is checkered all over with colored marbles—dark green, white and reddish brown. The dominant color must be selected with the greatest

care with regard to the surroundings of the building and the colors of adjacent objects, of whatever kind, with which it will come in contrast. This is a point too often not enough considered in the choice of building material. But this dominant color will not be of absolutely uniform tint. If there is to be any beauty of color there must be some variety, as in the leaves of a green tree where light and shade add to the variety of local color, or in a cliff, or mountain side, or pebbly beach. If stone is used, the different blocks will not be accurately matched in shade, but will be so placed as to make slight contrasts in tint between the different blocks. If the structure is brick, the brick will not be culled, but used with all the accidental variety the kiln affords. No surface could well be uglier than the respectable brownstone front, or the wall of culled red pressed brick. Indeed, it is strange how, when traveling in Europe, we can admire the variety of color in old brick and stone walls, and tile roofs, and then when we return home continue to build with the utmost monotony of tone our great mechanical skill can attain, and proceed to wonder why our wall surfaces are lacking in beauty. The dominant shade may be further varied by delicate contrasts of other material in friezes or spandrels, as is so beautifully done in the cathedral of Pisa or the palazzo municipale at Brescia already referred to.

If vivid color is to form a part of the scheme, it should be mainly confined to the recesses of loggias and porches, and should be focused at some one point—for instance about the entrance—which should form the key and climax of the whole design. But the mistake is often made of supposing when color treatment is mentioned that vivid color is necessarily intended. Every building necessarily has its color, whether vivid or subdued, greatly varied or largely in monotone, and this color should receive careful study and consideration, and should not be left to be decided by accident, or by the whimsies of inconsiderate building committees. Indeed, the whole design should from the outset be made with a certain material and a certain color treatment in view. The fact that the color scheme may seriously affect the apparent proportions of the building is often overlooked.

Whether the color of a building should be natural or applied, will necessarily depend largely on circumstance and on climatic considerations. The climate, indeed, and the kind of light it brings with it, is of the utmost importance as a determining influence in the color scheme. In our climate there can be no doubt that we should depend for our color largely on the natural colors of materials. Applied color and rich decoration being confined to porches and loggias, as has been so effectively and for the most part so beautifully done at the World's Fair buildings.

Another principle too often overlooked is that, as Ruskin has pointed out, a certain mystery is necessary to perfect beauty and delightfulness of color. There must be constant change. The eye must be continually confused. Anything like mechanical regularity inevitably injures the effect. Thus, in using stones of different colors in the decoration of a building in bands or patterns, one color should be allowed to run over somewhat into another. In decorating a wall with bands of color—say, red and white marble, for instance—let occasional white stones find their way into the red bands and occasional red stones into the white. In the same way in using diaper patterns, let the pattern be broken by allowing the ground color to run into the bands—that is, let the bands occasionally disappear. This treatment will often be noticed in old English and Dutch brick diapers, and can be seen in the front of the Ducal Palace at Venice. Or if bright colored stones are used between the brackets of a cornice over a dull colored wall, as at the palazzo pubblico at Perugia, let some of the spaces between the brackets be filled with the wall color. In all these cases care must be taken not to lose the pattern; the eye must always unconsciously complete it.

Another principle seems to be that the contrast between two colors, used in anything like equal quantities, and either in large masses or pervading a whole design, must never be great. They must harmonize, as dull red and brown, greenish or purplish blue and gray. The vivid and strongly contrasting colors must only be used in small points to give value to the whole composition, and on the judicious use of

these small points of bright color will depend the brilliancy and beauty of the whole. A single point of color may change a whole color scheme—may ruin it or may give it just what it lacked. Thus, a point of light red may make a gray wall look blue by contrast, or it may make a brownish gray look red by sympathy. The effect of the stronger colors in changing the apparent color of duller hues placed near them is a matter always to be carefully considered, and is one of the things which makes color composition so difficult if not guided by that unerring instinct we speak of as "a strong color sense."

The marking of jambstones and quoins has already been spoken of as a thing to be avoided. Jambes and corners are essentially part of the wall, and should not receive a different color treatment. In general, the common practice with us of making the trimmings uniformly of one color and the rest of the work uniformly another is rarely effective and is generally a thoughtless or indolent subterfuge to avoid the serious study of color treatment, or to disguise inability to handle it. There can be no such rule-of-thumb for arranging the color of a building. It must always be a matter of feeling, and of separate feeling in each case; but feeling always, rather than thought. Good color can never be worked out like a mathematical problem.

Of late the perfecting of enameling of terra cotta and the richness of color obtainable in blocks of all sizes in this material opens a new and rich field for color design. But it comes with danger in one hand, though with promise in the other, and its rich possibilities will need to be used with reserve and caution if they are to lead to success.

The safe rule is, if you are a colorist, use color freely—indeed, you cannot help doing so when opportunity occurs; if you are not, have as little to do with it as may be.—*World's Congress of Architects.*



CHICAGO, June 19, 1894.

To the Editor of the California Architect and Building News:

DEAR SIR:—In the several articles lately appearing in your columns respecting the fire resisting qualities of concrete, I have noticed no allusion to the tests carried out by Professor Bauschinger of Munich which were published in this country some years ago. They were instituted I believe by the government, for the purpose of ascertaining the pre-resisting qualities of iron, stone, brickwork and concrete, and resulted in concrete standing out pre-eminent from them all in this respect.

Sometime ago a nitro benzine factory near Lyons, France, the walls of which were of concrete, took fire. The fire was of such a destructive character that the machinery was partly melted and the only effect on the walls, was to partly vitrify their inner surface.

At a fire at one of the government shops at Benicia some time back. I examined the ruins, and whilst the granite and freestone trimmings had suffered severely, the artificial stone window head made of Portland Cement Concrete, were but slightly injured although they had stood the brunt of the fire; the bricks about them were badly injured.

Take any face brick made on the Pacific Coast, heat it to redness and plunge it into cold water and it will go to pieces. Firebrick even, often suffers under such a test.

With due care in the selection of the aggregates Portland Cement Concrete, will withstand fire better than any of our ordinary building materials. Yours Respectfully,

ERNEST L. RANSOME.

QUALITIES OF BUILDING STONE.*



THE qualities necessary to the best possible building stone are: Workability, durability and beauty. It must also be cheap.

Workability includes in its meaning accessibility, a ready yielding to quarrying operations, the absence of refractory qualities under the hammer and chisel, and a texture and grain that will hold decorative finish.

Stone that cannot be quarried readily has the disadvantage of great cost to begin with. If the "raw material" is expensive, the finished product must be costly. On the other hand, if nature has so deposited her stores that the stone is easily taken from the quarry, still, if the material is refractory in the final cutting and finishing, no matter what may be its other qualities, it cannot be a very cheap material for the builder, as it will demand an over amount of expense and delay in preparation. Still less will it be desirable if it obstinately refuses to hold finish or decoration. Stone that comes from the quarry soft and yet somewhat tough, but hardening after a time, has the finest quality of workability. This renders it easy to quarry, very responsive to the tools of the cutter, and capable of taking easily and holding permanently the finish and decorative designs of the architect's specifications. It must be kept in mind, however, in examining stone, that if it comes from the quarry wet, and for that reason easily workable, it may again take up water after drying, which would be most objectionable; but if in the process of drying in the first place it passes through a chemical change which will render it ever afterward impervious to water, the quality is just what could be wished for in this regard. Usually an examination of the out-cropping surfaces of the stone in place will give a safe knowledge of its value as regards workability. Next after the character of the stone regard must be had touching the conditions of its deposit. Too much overlying matter, whether stone or earth, will usually make the quarry work very heavy and expensive. This overlying matter, technically called "stripping," is, as a rule, quite worthless, and must be entirely removed before the stone can be worked with steam channellers or other quarrying appliances, hence the necessity of a careful examination to determine its nature and extend in each case before opening a quarry.

Durability, as applied to building stone, includes every quality tending to make the material lasting and unchangeable after it is laid in a structure. These qualities are many and often seemingly conflicting in their nature. Hardness, elasticity, tensile strength, power to resist the greatest crushing force, imperviousness to water and invulnerability to the attacks of air and its corrosive and disintegrative burdens are some of the qualities, but not all. Evenness and homogeneity of composition, unity of substance, so to speak, and the power to resist extremes of heat and cold are quite as necessary. It will be seen at once that chemical analysis must be relied on to insure the best knowledge of some of these requirements. Some otherwise good and durable limestones will become corroded and discolored and have their integrity destroyed by the effect of sulphurous smoke from the burning of impure coals; others will be injuriously affected by the action of rain-water, and still others by the oxidizing power of the air. Some sandstones bear too much iron in their composition; others lack sufficient cohesion of

the particles, whilst others yet are clayey or unequal in grain or texture. Every test of practical science should be given to stone before it is used in any building intended to be a permanent structure. As a rule, if the outcroppings ledges are found to be infiltrated with water, which makes the outer surface constantly damp, the stone will not be good, for this would indicate that it would take up too much moisture in the wall. Still, it is often the case that an apparently over-hydrous stone will dry out permanently after it is quarried and cut. Many of the sandstones, notably the better qualities of conglomerate, are of this character, and so soft when first taken out that they may be cut to any rough shape with a common ax or hatchet, but hardening after a few day's exposure so that water will not affect them.

The elasticity of stone may be tested by sawing it into long, slender strips, say two inches square and three feet long, when, if it be quite perceptibly flexible, its elasticity is good. If such a bar be suspended so as to hang free by a string and is struck a light blow with a hammer, its evenness and solidity of fiber will be attested by a clear, sweet metallic note, not unlike that of a fine bell, or that of a well tempered steel bar. As a rule the best stone will break with a direct line of fracture; but it may be conchoidal or otherwise indirect and still be unobjectionable. Parallel lines of cleavage or of stratification are always favorable indications where other features are promising.

Resistance to crushing weight may be pretty safely inferred from solidity of texture and evenness of grain; but it is always necessary before a final acceptance to submit the material to the severest tests of an apparatus for that purpose. This will be described in the proper place.

In examining sandstone, with a view to building purposes, the outcropping, if there be any, should be carefully scanned with a view to discovering what effect long exposure to the atmosphere and the rigors of winter may have had upon it. If the stone has "weathered" badly this will be shown by one or another sign of disintegration or demolition and a talus of fragments and sand will be found formed at or near the base of the outcropping cliff. Often the substance of the rock will show unmistakable evidence of inequalities of structural composition, such as horizontal cavities caused by the weathering out of seams or streaks that, on account of bearing too much iron, have oxidized and crumble away. Such stone, if used in a building, would prove worthless and, therefore, dangerous. It is often the case, as I have observed during a long experience in civil engineering, that public bridges erected by counties are rendered unsafe by having their piers and abutments constructed of this kind of stone, and that, too, in places where most excellent material lay near at hand, and which a little knowledge of the nature of stone would have pointed out to the superintendent. Too frequently it happens that appearances of the most untrustworthy kind are relied upon where an ignorant person is set to do work which ought to be in charge of a skilled and well-informed engineer.

In judging of the probable durability of limestone, before subjecting it to any test of science, the same observations should be made as in the case of sandstone, with a view to ascertaining its weathering qualities. Any unequal discoloration of the face of the exposed ledge should be scrutinized carefully. Usually these are caused by the presence of iron in the composition of the rock. But limestones are much more injuriously affected by hidden faults of composition than are sandstones, and for this reason they demand a much more careful examination before any extensive quarries are opened. It is often the case that iron in limestone will do no more than discolor the outer surface on exposure to the action of air and rain-water; but even this is a serious defect when the stone is to be used in any structure wherein beauty is a chief object. For the rough masonry of

*From 17th Indiana Geol. Report.

ordinary bridges, and for the hidden foundations of buildings, a cheap and durable stone is what is most wanted, and in these discoloration is not a fatal fault.

Beauty, when applied to any building material, includes all the good qualities already enumerated with the added value of a pleasing color, or combination of colors and a general effectiveness of appearance when the structure in which it is used has been completed. The variegated granites undoubtedly are the most beautiful of all building materials. Next to granite the red and brown sandstones are most pleasing to the eye, but the white, gray and blue limestones are very effective, and they have the advantage over granite in that they work much more easily in ornamentation, while they take figures in relief with far more clearness of outline than do the sandstones as a rule. Architects have long since discovered the pleasing effects to be produced by using different kinds of stones in the same building, placing each where its particular qualities will best serve the general motive of the design. As a rule, all else being equal, the stone which holds its native color best will be most beautiful in a building, and of the stones which change color, that will be most desirable which changes least and evenly. Some of the gray sandstones, however, change color unevenly and give a striking and oftentimes picturesque cloudiness to the surface, which adds to its effectiveness of color in a wall. The nearly white limestones that take on by exposure a dark cream-brown hue, if they do not contain too much magnesia, hold that tint very well and are quite beautiful. As a rule the presence of many large animal remains in a stone is objectionable on account of the tendency of such a composition to crumble; but where fossiliferous rock is durable it will usually be found very beautiful when cut, the organic remains bossing it over with variegations that greatly heighten its appearance. Stone which contains large fossils is not, however, the best for receiving raised ornamentations, such as figures in relief, no matter how durable and beautiful it may be, for the animal form will interfere with nicety of cutting and polish, as well as with the regularity of the figures. Fossils will usually be found harder than the matrix in which they are set, but this not always the case, for quite often the form is that of a hollow cast or impress, filled in with material which crumbles easily. As a rule fossils, though very hard, are but loosely set in sandstone, and often they are very large and rough forms of plants, extremely silicious and refractory. Blocks containing these are to be avoided as probably worthless for building purposes, however valuable and interesting they may be from a scientific point of view.

Many very beautiful stones that are not durable when exposed to the weather are very valuable for the inside finishing of buildings, where they will last for ages, holding the finest tints of their coloring without perceptible change.

From what has been said above it will be seen that every owner of stone beds should, before going to the expense of opening quarries, have his rock beds examined by an expert, whose report should show all the defects as well as all the good qualities of the material. Usually this can be done without any delay of labor or money, for the experienced geologist or engineer can quickly discover from the stone and its surroundings the nature of the deposit, and very simple chemical and mechanical tests will settle the question of strength and durability. There are beds of magnificent building stone lying undeveloped in many places, simply for the reason that the owners are not aware of the treasure they possess. In other places quarries are being industriously worked and the stone used in the erection of costly buildings, where in fact the material is wholly unfit for use on account of its lack of durability. I have examined many extensive structures whose stone was fast crumbling away. True, a few years will not show much decay, but in the long future the result will certainly be disastrous. The constant action of the atmosphere, the expansion and contraction consequent upon extremes of heat and cold, and the disintegrating effect of rain-water slowly but surely tell upon the integrity of the exposed parts.—*Maurice Thompson in Stone.*

So great is the echo in one of the rooms of the Pantheon that the striking together of the palms of the hands is said to make a noise equal to that of a 12-pound cannon.



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.

BUILDING for Mrs. A. M. Parrott, Market street, San Francisco, Pissis & Moore, architects.

STUDY for Railroad Station, by T. O'Connor '94.

A Cottage at Stockton for J. B. Paris, Esq., W. W. Oates, architect.

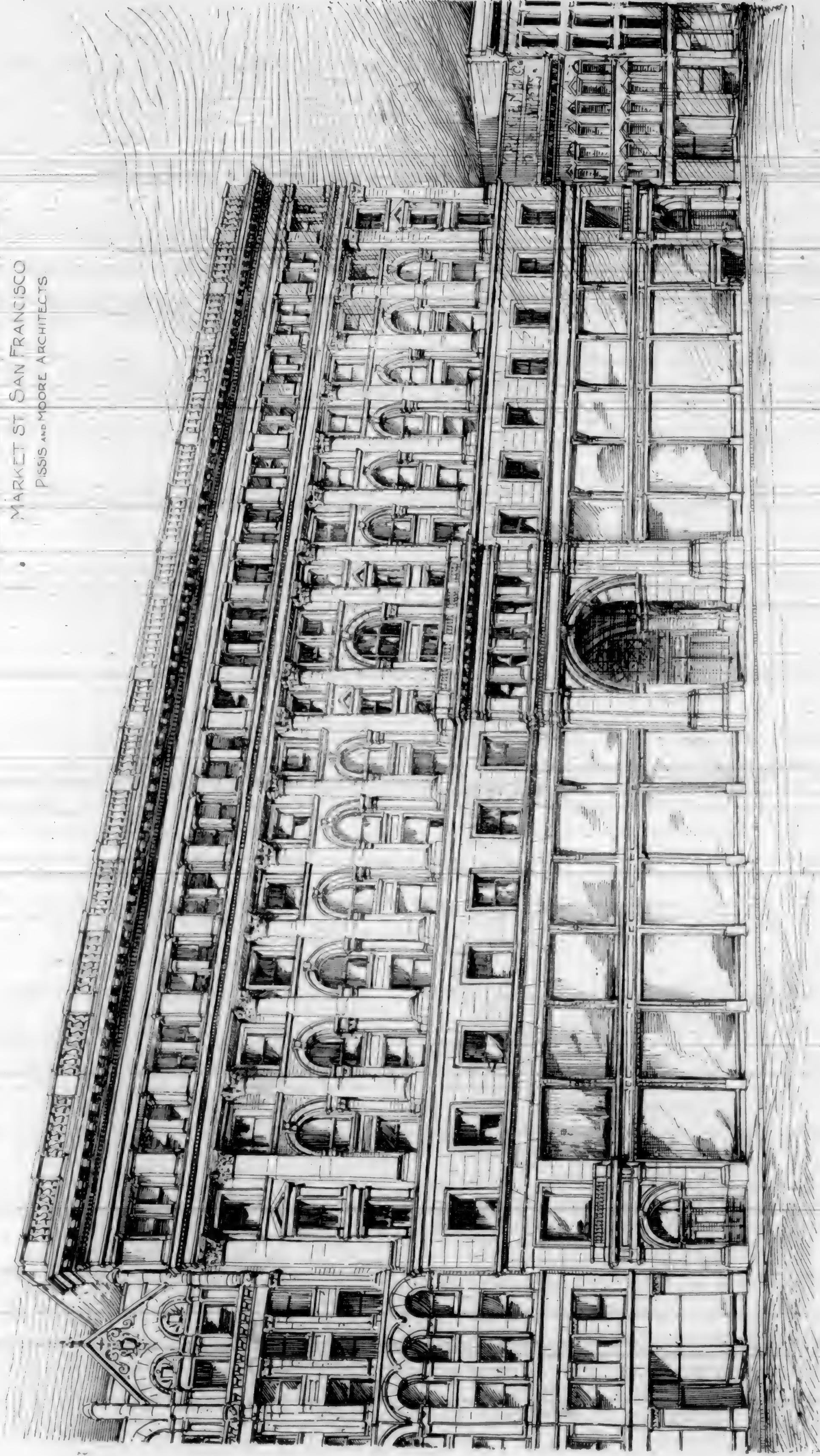
Scheme for a Spanish Chateau, Spanish Renaissance style with interior garden court, is by T. O'Connor.

CO-OPERATIVE BUILDINGS.

SOME years ago we discussed in these columns the advisability of a method of building to do away with the kitchen and many of the disadvantages of housekeeping, says *Architecture and Building*. The idea then started seems to be about to become an established fact, and the professors of the Chicago University will adopt, it is said, the scheme as elaborated by Mrs. Mary Coleman Stuckert for the erection of a model home settlement in that charming section of Chicago known as Hyde Park. Within a block of land forty-four houses of pressed brick and stone, tastefully constructed and varied, are to be erected. These houses may be of several stories, but none are to be over two rooms deep in order that they shall have essential light and air. In the centre of the flat is to be a large two-story building. Under this roof will be gathered the kitchen, laundry, cold storage plant and the machinery for heating and lighting. In the second story of this building are to be a kindergarten, library and a hall for amusements. The different houses are each to be connected with the central building by telephones and an electric conduit. The latter is to convey hampers for the meals to and from the kitchen. These hampers will be constructed of some non-conductive material in order that they will retain the heat. In the same hampers the dishes will be returned to the kitchen to be washed. There will also, however, be a central dining hall for those who wish or where large dinners may be given.

That the idea is considered feasible is proved by the action of the Illinois Chapter of the American Institute of Architects, who have invited Mrs. Stuckert to address them on the subject on July 2d. As Chicago may be considered the first to utilize the "skyscrapers," it appears that she is to be also the pioneer of another type of building enterprise which is likely to prove popular. We noticed a real estate paper claims that Mrs. Stuckert proposes to carry out an idea originated by them a few months ago, but Mrs. Stuckert is said to have spent several years in perfecting her scheme, which as we before stated, is an elaboration of our views published some years ago.

BUILDING FOR MRS. A. M. PARROTT
MARKET ST. SAN FRANCISCO
PSSS AND MOORE ARCHTCTS

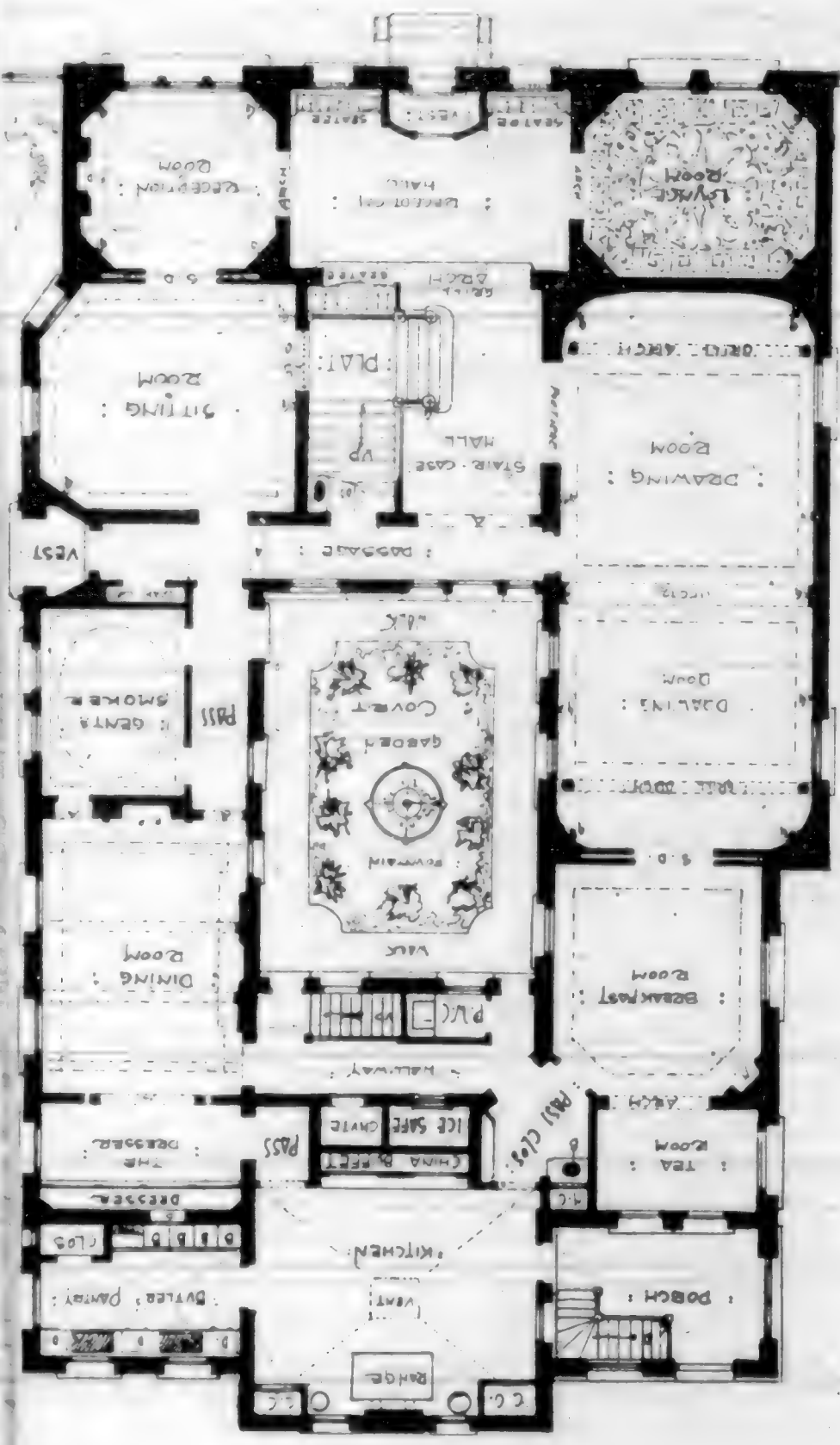


CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

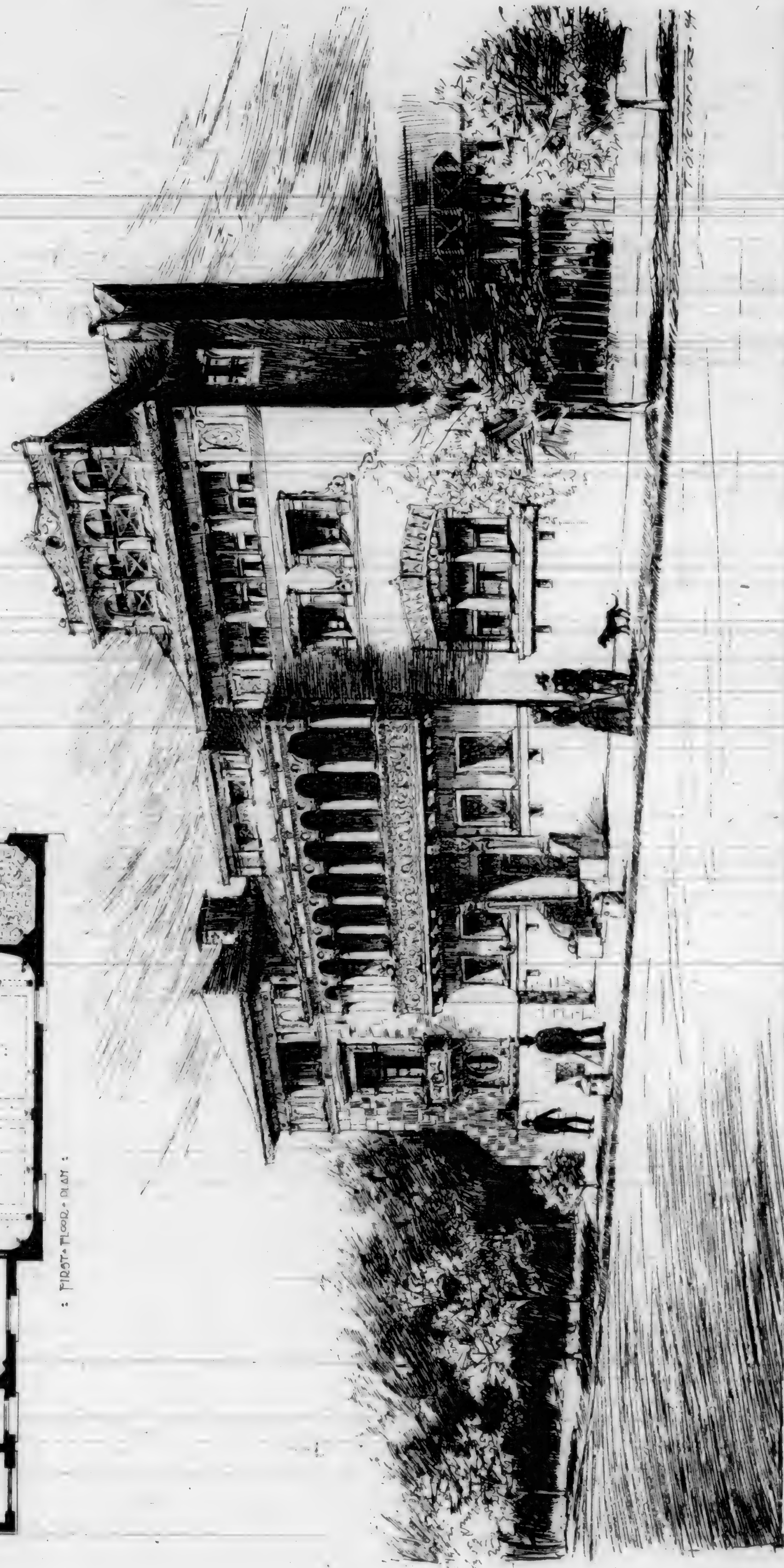
BRITTON & REY PHOTO LITH.

VOL. XV NO. 7 JULY 1894.





STUDY FOR A CHATEAU :
SPANISH RENAISSANCE :
T. E. O'CONNOR DEL. & DES.



A COTTAGE AT STOCKTON
FOR J. B. PARIS ESQ.
W. W. OATES, ARCHITECT.

