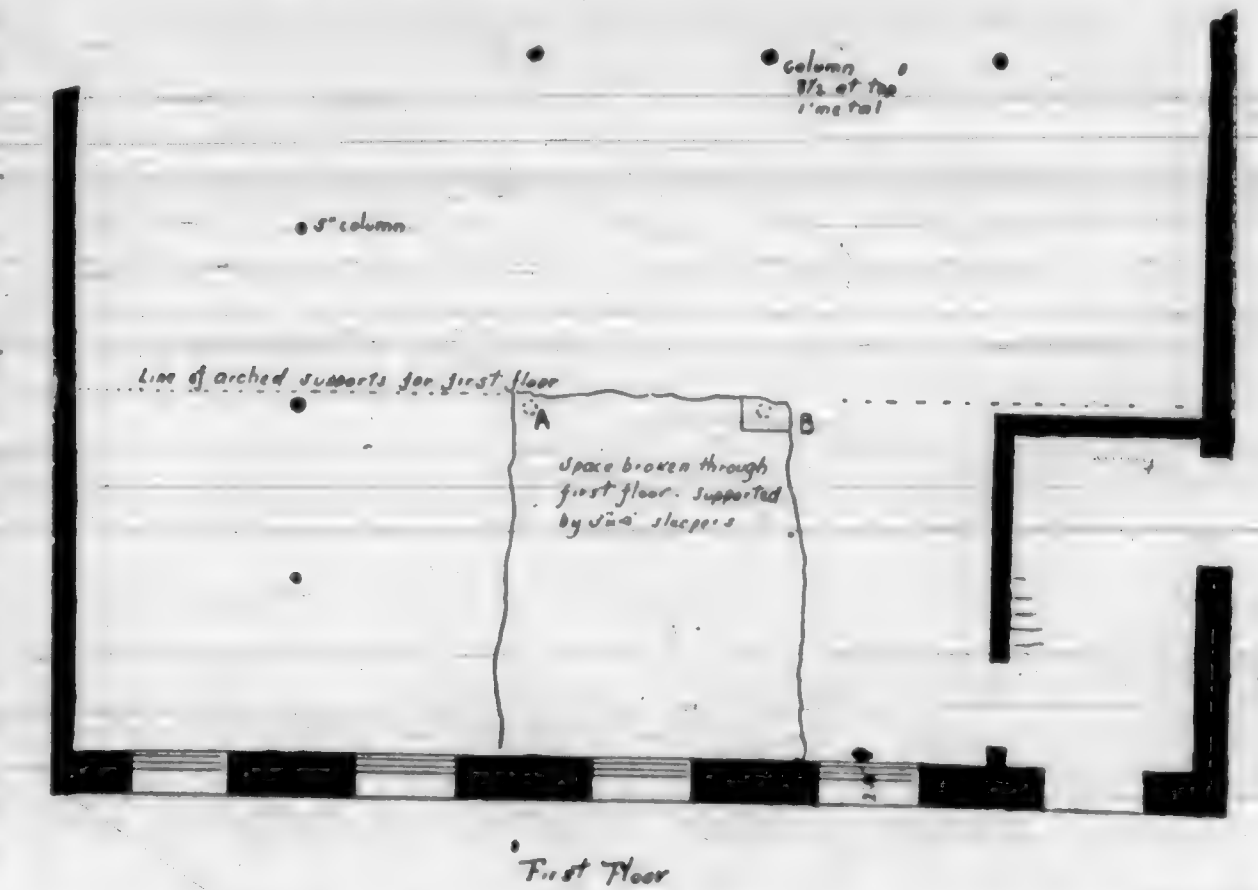


hand. Each pier had, at a low estimate, 51,000 pounds resting on it when the earth was taken from beneath, leaving a bond of about three feet of brickwork to support this great weight above. Curiously, this method was successful until they came to the last column. This pier had a wall bonding into it only on one side, hence they were depending on the strength of a brick corbel with only the counterbalancing weight of three feet in height to support 51,000 pounds. They (we might say miraculously) accomplished this feat at B, but at A, the last pier, what might have been considered inevitable, happened. The brick corbelling and the little support which was obtained from the earth, a mixture of sandy clay, gave way and the columns and superstructure which they supported collapsed. It does not seem to have occurred to the contractor or any of his supervisors to have shored up the story above. The ease and slight cost of such shoring the cross-beams by temporary support one would think would have commended itself to the most obtuse as well as the most penurious person, whether it was a Department Chief or a contractor. It appears from the assertions of those who made estimates on the job, that no specifications, drawings, or directions were given for the work. The party in charge of the building said that no specifications were needed, all they wanted was that the dirt should be dug from beneath the walls, and the space bricked-up. That was the quality of expert direction as to how the work should be done. The supervision consisted in Colonel Ains-

mon way of letting-out contracts for the War Department, and the Supply Division or Quartermaster's Department which has charge, of course, know little if anything about how the work should be done, hence they depend on the contractors. This is a sorry confession from the Department which has the whole Engineer Corps of the United States Army at its

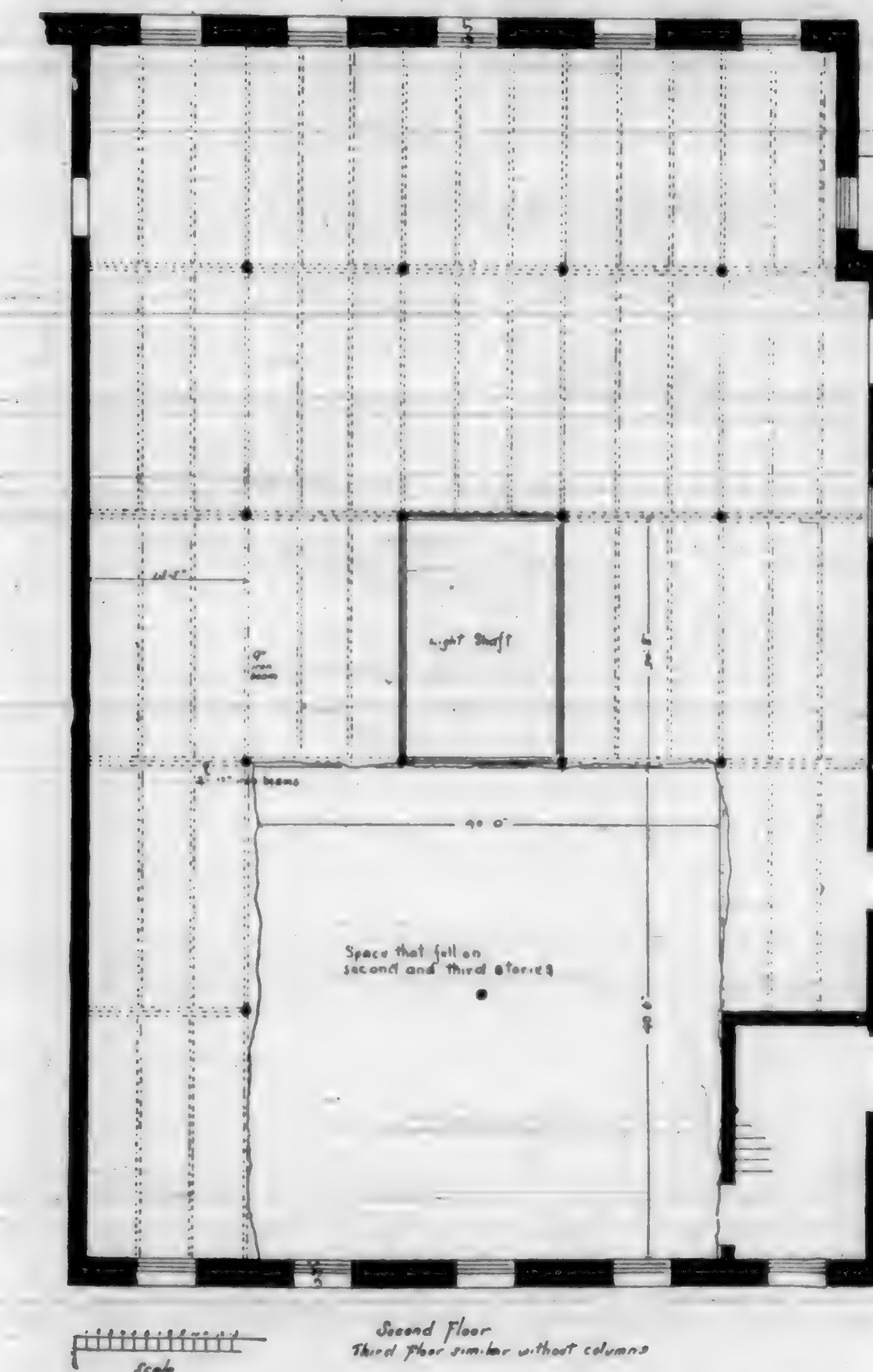


command. To what better use could the engineers be put in times of peace than computing the weights and size of shores to resist them, and specifying the necessary precautions that should be taken in such cases as this? It seems as though such trifling affairs are not worthy the attention of even a lieutenant in the Engineer Corps.

It is a serious question to decide which party is the most to blame, the contractor, Dant, who should at least have known a little about relieving the piers from the weight above underpinning them, or the army officer, Dr. Ainsworth, who should have obtained expert advice and supervision.

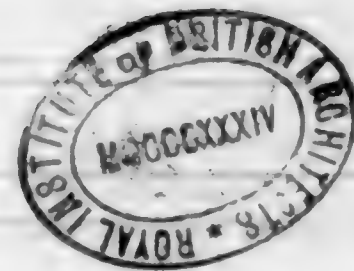
The coroner's inquest and the Board of Inquiry, consisting of General Casey, General Batchelder and Major N. Davis, will investigate and probably place the responsibility where it properly belongs. Several questions have arisen in reference to this accident. The building has been condemned by reports of the Surgeon-General Barnes, in 1881, and Representative Shellabarger, in 1883. These reports have naturally been talked over and magnified by the clerks. They seem to bear principally upon the bad light, lack of ventilation and the first floor having no cellar, so it was not considered healthful; and further, that the roof was not fire-proof and the valuable collections of the Medical Museum were, therefore, in an unsafe building. The walls seem to be strong. The floor beams are lighter than would be used in ordinary practice, being 9" for a span of a little over twenty feet. Beams about four feet four inches on centres. This would be safe, but would give more deflection than would be considered agreeable. The collapse evidently did not occur from the condition of the building, as many suppose. The daily papers and the clerks make quite a point of the floor (which was temporarily supported by the sleepers and roped off while the excavation was going on) shaking when walked upon, but of course this had no bearing upon the accident. It was simply carelessness in preparation for doing and supervising the excavating and underpinning of the new work that was the immediate cause of the failure.

The accident also brings forward prominently the notoriously unhealthy and reported unsafe condition of the Government Printing-office as well as other make-shift buildings which the Government occupies in this city, and again calls attention to the fact that many such buildings are overloaded, and an entire lack of knowledge as to what the floors were intended to carry. All such buildings should have their capacity computed and posted on every floor, as the documents and other matter which the Government stores away, increasing daily, are a menace to the stability of the buildings and the life of their occupants.—*The American Architect and Building News.*



worth (medical Colonel), Chief of Division, the man who attends the boiler (dubbed engineer) and the contractor for the brickwork examining the work daily and asserting that everything was all right. Dr. Ainsworth and Captain Thorpe, who let-out the contract, assert that this is a com-

The contractor making the above statement declined to bid, and hence, presumably, the crude specification and drawings (which I have seen since writing the letter) which are stated to have been prepared, "not by a regular architect or builder," but by a "steam engineer"; i.e., the man who attended to the boiler for the heating-apparatus. The estimates and contract were made on such an indifferent basis as this.



NOTICE OF MEETINGS.

SAN FRANCISCO CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS, meets second Friday of each month at 408 California street.
 GEO. H. SANDERS, Pres. W. J. CUTLER, 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. CHARLES D. MARX, Vice-Pres.
 OTTO VON GELDERN, Sec. GEO. F. SCHILD, 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.

A special meeting of the members of the San Francisco Chapter A. I. A. was held July 7th in reference to the buildings for the proposed Mid-Winter Exposition viewed from an architectural standpoint.

It was the general opinion that the best results could be obtained by following the method so successful in producing suitable designs for good execution at the World's Fair at Chicago, viz: by appointing a supervising architect for the entire work, and an individual architect for each building—a committee was appointed to present to the Executive Committee of the Mid-Winter Exposition resolutions embodying these suggestions.

The regular monthly meeting of the Chapter, held on the evening of the 14th, approved the action taken by the members at the special meeting. A committee consisting of Messrs. Bestor,

Curtis and Kollofrath was appointed to consider the advisability of holding an architectural exhibit in connection with the Mid-Winter Fair and report at next meeting. An amendment to the By-Laws was proposed to be voted on at next meeting.



We have received from the author James R. Willett, Esq., a copy of his address on HEATING AND VENTILATION OF RESIDENCES, delivered to the Engineering Society of the University of Illinois, March 23, 1893, confining himself to its practical application in order to show the way in which a person engaged in such business may prepare designs for excavation. It cannot fail of being useful to the class for whom intended, as well as of interest to the general reader.

The first number of a monthly journal called "ORNAMENTAL IRON," devoted to industrial art, has just been received, certainly the publishers have reason to congratulate themselves upon having produced a gem. The illustrations are truly works of art applied to every day use.

Published by The Winslow Bros. Co., office 761 Rooking, Chicago, Ill. Subscription price per year \$2.00.

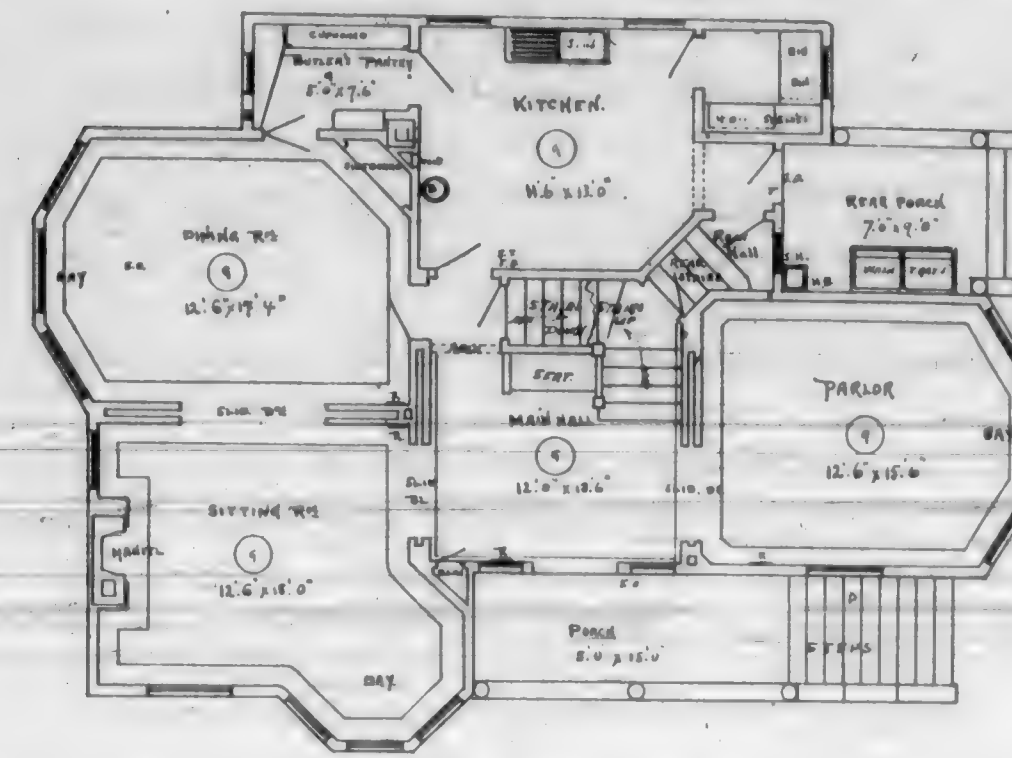
The circular of the SCHOOL OF ARCHITECTURE of the University of Pennsylvania, just received, is a very attractive four-page leaflet, in two colors, describing in brief and comprehensive form the advantages offered by that institution, its faculty, course of instruction and equipment. Full information will be sent upon application to the Dean of the College Department.



RESIDENCE IN SAUSALITO, W. H. LILLIE, ARCHITECT.

The June number of PAINTING AND DECORATING contains a paper on glass embossing, by Arthur Segmour Jennings. The regular departments contain much to interest the carriage painter, paper hanger and all branches of the trade. One dollar a year seems a small price to pay for so excellent a magazine. Published by the House Painting and Decorating Publishing Co., Philadelphia.

We are indebted to THE WINSLOW BROS. CO. of Chicago, for a handsome collection of photographs of ornamental iron. This new photogravure edition of their catalogue for the year 1893 is certainly a very creditable specimen of the printers art, but cannot fail of being of great use to the architect and contractor who are about to order work of this kind. A long list of buildings that have been supplied with this class of work by this firm, being in many cases illustrated by engravings, gives the reader an opportunity to judge of the effect produced, which in some instances is really very fine. Mr. P. H. Jackson & Co., of 228 and 230 First street, this city, are the agents.



FIRST FLOOR PLAN W. H. LILLIE, ARCHITECT.

LEGAL DECISIONS.

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

CONSTRUCTION OF LAWS IN REGARD TO MECHANICS' LIENS.—Under the provision of the Laws of Ky. that persons furnishing labor or materials for the construction of railroads and other public improvements, by contract express or implied, with the owners thereof, or by a subcontract thereunder, shall have a lien thereon for the price of such labor and materials, does not embrace one who furnishes such labor and materials under a contract with a subcontractor.

Cent. Trust Co. v. R. N. I. & B. R. Co. Circuit Court D. Ky. 54 Fed. Rep. 723. 74.

NEGLIGENCE OF INDEPENDENT CONTRACTORS.—Where a contractor agreed to furnish all materials for the construction of piers, for a railroad bridge across a river, the materials to be subject to the inspection and approval of the engineer of the railroad, and to construct the piers according to certain plans and specifications under the continuing inspection and subject to the approval of the engineer, he was an independent contractor and as such liable for the injuries to third persons, resulting from his negligence in the performance of the work.

Casment v. Brown, 13 Supreme Court Reporter 672. 86.

EFFECT UPON MECHANICS' LIEN OF FAILURE TO RECORD CONTRACT.—Where the constitution provides that mechanics, material men, etc., shall have a lien on the property on which they have labored or furnished material, and the statutes provide that all contracts between the owner and contractor for work, where the amount exceeds \$1,000, shall be in writing and recorded before the work is begun, otherwise the contract to be void, and no recovery to be had thereon by either party thereto; that the labor done and materials furnished by all persons except the contractor shall be deemed to have been done at the instance of the owner, and they shall have a lien for the value thereof, a contractor who has failed to record his contract for work, where the amount to be paid therefor is over \$1,000, is not entitled to a lien.

Morris v. Wilson, Supreme Court of Cal. 32 Pac. Rep. 801. 131.

ASSIGNMENT OF RIGHT TO MECHANICS' LIEN.—Where the statute provides that all persons and laborers of every class, performing labor upon, or furnishing materials to be used in the construction of a building, may have a lien thereon for such services or materials; and also provides that such persons shall themselves file a claim for record, stating the character of the labor or materials which they themselves furnished for the building, the right to assert such a lien is a personal right, for the laborer's own protection, and cannot be assigned.

Mills vs. LaVerne Land Co., Supreme Court of Cal. Feb. 1, 1893, 32 Pac. Rep. 169. 90.

WHERE BUILDING IS NEGLIGENTLY CONSTRUCTED.—In an action on a contract for the erection of a house, the owner pleaded a set-off for failure to build the same in a workmanlike manner, his evidence showed that the floors were not level, that the windows were not vertical, not at equal heights from the floor, though intended to be on the same level; that they had embrasures above them; that bricks were put in the outer wall that had to be removed; and that one room had so many holes in the wall that daylight could be seen at seventeen different places. The contractor's evidence was that the house was constructed according to the local

custom, but did not greatly qualify the facts shown by the owner. If a man contracts to build a house in a workmanlike manner, that means a house built in a workmanlike manner, constructed according to the customs and usages of the section of the country in which the contract is made, but a custom which justified the erection of a house in the manner shown by this owner, is unreasonable. Anderson v. Whittaker, Supreme Court of Alabama, 11 So. Rep. 919. 185.

SEMI-ANNUAL SUMMARY OF BUILDING OPERATIONS.

The first six months of this year has shown a slight increase in comparison with the first six months of 1892, both in the number of buildings and total cost.

FOR FIRST SIX MONTHS.—1893.

1893	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value	No. of Buildings	No. of Contracts	Alterations & Additions Value	No. of Buildings	No. of Contracts	Total Value
Jan'y	3	7	\$ 70,770	27	35	\$ 113,888	2	5	\$ 7,040	32	47	\$ 230,708
Feb'y	3	3	\$ 22,400	40	47	\$ 202,447	18	25	\$ 61,032	50	67	\$ 288,809
March	9	9	\$ 280,438	48	55	\$ 277,324	18	29	\$ 280,221	65	81	\$ 848,002
April	17	17	\$ 120,738	57	67	\$ 251,827	12	18	\$ 41,067	70	83	\$ 430,267
May	1	2	\$ 15,930	65	77	\$ 280,129	10	11	\$ 20,409	81	90	\$ 316,488
June	7	11	\$ 78,347	60	73	\$ 332,827	8	11	\$ 18,850	75	95	\$ 480,024
Total	24	49	\$ 614,518	297	354	\$ 1,408,541	68	100	\$ 425,230	208	245	\$ 2,524,498

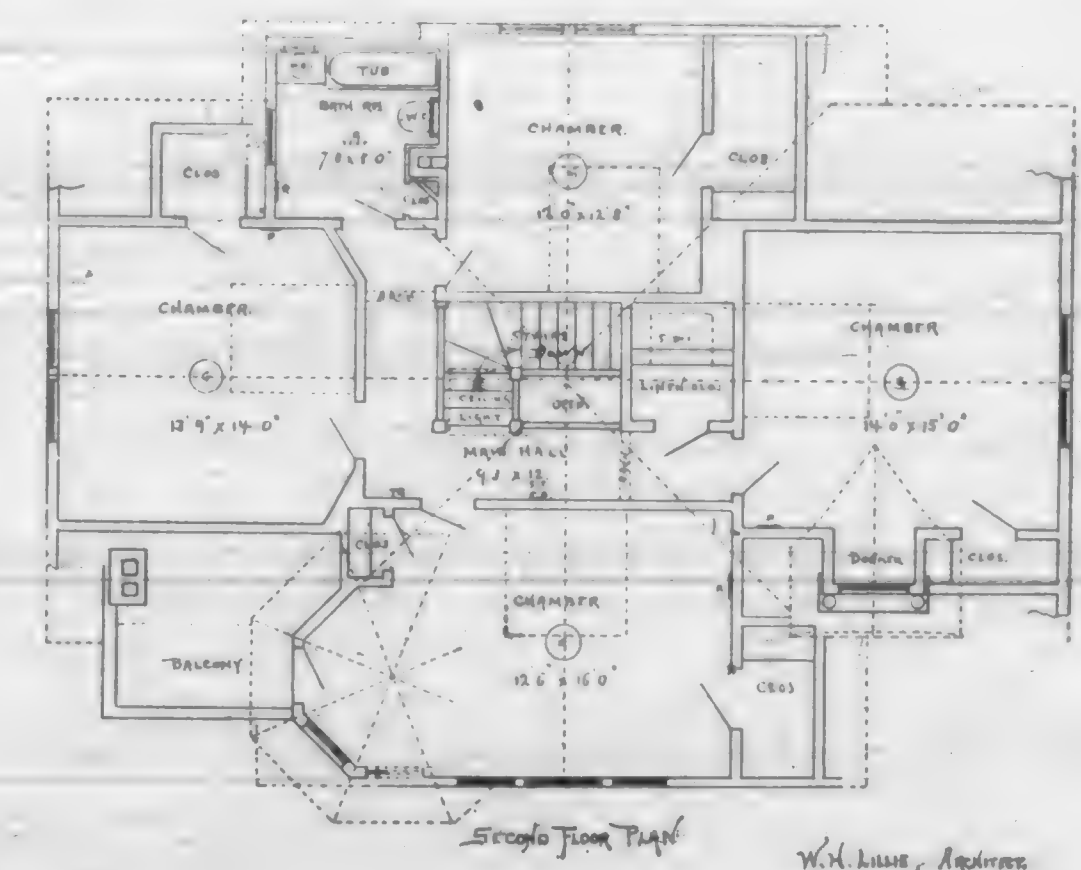
To this amount should be added the further estimated sum of \$500,000 where no contracts have been filed, which would increase the sum total to \$3,024,498.

FOR FIRST SIX MONTHS.—1892.

1892	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value	No. of Buildings	No. of Contracts	Alterations & Additions Value	No. of Buildings	No. of Contracts	Total Value
Jan'y	1	14	\$ 101,872	22	33	\$ 210,865	4	4	\$ 7,872	27	51	\$ 330,409
Feb'y	3	8	\$ 116,310	28	50	\$ 279,149	7	8	\$ 24,818	34	60	\$ 430,277
March	2	2	\$ 72,471	30	38	\$ 173,071	5	7	\$ 14,498	37	81	\$ 262,030
April	4	4	\$ 335,358	46	64	\$ 240,772	5	9	\$ 20,880	55	91	\$ 386,901
May	1	17	\$ 137,715	46	52	\$ 271,200	4	5	\$ 21,475	58	74	\$ 480,880
June	8	9	\$ 139,022	39	54	\$ 222,110	13	13	\$ 51,291	55	70	\$ 412,421
Total	16	78	\$ 902,749	211	250	\$ 1,308,967	38	48	\$ 140,780	205	241	\$ 2,442,496

The business of the first six months for several years is shown by the following table.

1885—754 contracts.....	value, \$4,267,375
1886—670	2,486,633
1887—516	3,269,914
1888—437	2,719,820
1889—546	3,910,600
1890—556	3,793,858
1891—583	3,916,973
1892—411	2,942,496
1893—475	3,024,498



SECOND FLOOR PLAN W. H. LILLIE, ARCHITECT.

CHICAGO ARCHITECTURE.

NO other American city can claim such a record, and it is not the least glory of the whole that the artistic results are as satisfactory as they are characteristic. Granted that the bad buildings of the city out-number the good, the latter are already so numerous and are so entirely part and parcel of Chicago as really to represent its present architectural spirit. And this spirit is thoroughly business-like, thoroughly comprehensive of the complicated problems which hedge in and bind the architect at every turn. Chicago buildings are not palaces, they are not highly ornamental edifices, they are not wonders of decorative skill nor miracles of gingerbread appendages. They are calm business structures, designed for business, used for business and admirable because the business motive is so evident. If they are plain it is because there is reason for the plainness, not because their architects cannot design good ornament nor because decorative structures are not appreciated. They must be judged

for what they are, not what they are not nor what they might have been. Those who want palaces for their places of business should not find fault with the people of Chicago because they are wiser and reserve their palatial work for palatial structures or some public building like the Auditorium. The buildings of Chicago form one of the most distinctive and remarkable and successful products of American architecture, and it will be a decided step in advance when we in the East learn to appreciate them better and take them as models for similar structures for ourselves.

At last America has buildings worth going a thousand miles to see, and the traveler who sets forth from New York on his first Western tour will find in the buildings of Chicago some examples of a new form of architecture, a more sensible and more business-like treatment than he will find at home. The least impressive of the lessons he takes away with him will not be the one he gains from the study of Chicago's new buildings.—*Lippincott's*.

Rub a creaking hinge with a very soft lead pencil.



STUDY FOR COMPLETION OF
NEW CITY HALL
SAN FRANCISCO CAL.
ARCHITECT FRANK J. RICE

COMPLETION OF
NEW CITY HALL
SAN FRANCISCO CAL.
ARCHITECT FRANK J. RICE

BUSINESS MOSAICS.

The present utilitarian age is one of continuous advancement in the perfection of improved methods of construction, and the scientific specialist is always on the *qui vive* to discover more economical processes for applying the materials placed at his disposal by arts and sciences of advancing civilization. Numerous examples of the application of these remarks can be found, and to call attention to a notable instance of securing greater strength by the combination of two materials, is the object of this writing.

As the gothic architects of the middle ages studied the thrusts of arches till they had ascertained the least weight required to establish an equilibrium of force and the best possible way of disposing of that weight, and out of the results of their studies reared those wonderful cathedrals that now remain as enduring monuments of the skill and knowledge of their designers, so with a similar purpose, the constructors of the present generation are studying to arrive at the simplest and most economical processes for disposing of the more numerous and varied materials at their command, and on pages v, vi and vii of this issue of the CALIFORNIA ARCHITECT, is a detailed description of the methods now perfected and employed by Mr. P. H. Jackson, for combining the great compressive strength of concrete, with the great tensile strength of iron, thus neutralizing the

comparatively weak tensile strength of the concrete, and enabling the construction of sidewalk arches, roofs of vaults and fire-proof floors, etc., without the use of the customary steel supporting beams and girders, thus effecting a very material saving in the amount of money required, and resulting in material savings to the property owner, that are more eloquent and speak in louder tones than the language of the most gifted orator.

This saving in cost, which has been secured without lessening the strength of his constructions, enables Mr. Jackson to increase his already extensive business in the face of all competition, and the experience gained during his long connection with the department of public works in New York city, showed him how to practically apply the successful solution of problems and achieve the remarkable results that have sprung from his studies.

In this connection the reader should carefully peruse the scientific analysis of the principles that underlie this construction, which were fully discussed in a paper by Calvin Brown, C. E., published in the June number of this journal.

Mr. Brown enjoys a deservedly high reputation in the scientific world; and the ability and skill displayed in designing and building the immense dry docks of the United States Government at Mare Island, made him one of the

best of recognized authorities. In whatever concerns the use of concrete and cement, his opinion can be relied on absolutely, and no more interesting reading can be had by architects and builders than lucid explanations of the principles that have been so successfully applied by Mr. Jackson.

We predict that the use of this method of employing concrete and iron will enter more largely into the construction of the future, not only for the heavier and more substantial buildings suitable for mercantile purposes, but with the object of making the residences of the future more substantial, more enduring and more in keeping with the progressive spirit of the age. It rests with the progressive architect when designing the structures to be erected under his supervision, to take advantage of the opportunities thus presented and introduce into his specifications the result of Mr. Jackson's latest thought.

Verdant Visitor—"What's all the fuss about? Accident happened? BROKER—"The cordage trust has gone to pieces, shares have fallen from 75 to 16. VERDANT VISITOR—"I am not surprised at all. No wonder there is no demand for cordage when the electric chair has been substituted for the rope."

Antinomian is said to offer a complete protection against Dry Rot, Fungi, Mildew, etc., it can be applied like white wash with a brush; is odorless and non-volatile, it has the recommendation of many architects in the old countries. If half that is claimed for this wonderful chemical with a still more wonderful name o-dinitrokresolkaum is true, it is well worthy the attention of architects and engineers. For further information apply to W. H. Schieffelin & Co., New York city.

"The servant you have now seems very nice and quiet."
"Oh, yes: she doesn't even disturb the dust when cleaning up a room."—*Chicago Tribune*.

Model Art Glass Works.—Notwithstanding a conflagration on the second of May last, nearly destroying Mr. Wm. Schroeder's works at 29½ Fremont street, thanks to the energy of the latter gentleman, they were soon rebuilt. A company was then incorporated of which the following are the directors:—Wm. Schroeder, President; Edward Lemme, Vice-President; Henry J. Breuer, Secretary; Wm. Buttner, Superintendent; Wm. J. Breuer, Director.

Mr. Wm. Schroeder continues the management of the works. When such an establishment is at hand no excuse can be given to send for such work abroad.



San Francisco Slate Co., whose office is in the Mills building, have furnished us the illustrated account of the quarries of their company, which appears in this number of our paper. It will be found of much interest; and as for the quality of the slate, parties interested have only to call at the office where full particulars and information will be given. Take the elevator and go to 10th story, rooms 4 and 5.

The attention of our readers is called to an interesting illustrated article in this number of our journal under the title of California Slate Company of this city, having an office in Mills building, are introducing to notice an article of slate said to be equal in quality to any found in the market; it is taken from a quarry described as being 2000 feet wide and 1600 feet high from the bed of the American river and very likely as deep below the bed.

CITY BUILDING NEWS.

Belvedere bet. Waller and Frederick. Plumbing five houses; owners, Smith, Coop and Hinkle; architect, Ed. Burns; contractor, Geo. Humphreys; signed, June 27; filed, June 27; cost \$1,375.

Broderick near California. Two story frame; owner, Paul Agman; architects, Percy & Hamilton; contractor, F. W. Kern; signed, June 14; filed, June 15; cost \$3,490.

Bush near Powell. Painting; owner, Mrs. L. M. Bigelow; architect, J. C. Newson; contractors, A. Gradin & Co.; signed, June 15; filed, June 17; cost \$975.

Bush near Powell. Mill work; owner, Mrs. L. M. Bigelow; architect, J. C. Newson; contractor, C. M. Depew; signed, June 14; filed, June 17; cost \$3,500.

Bush near Powell. Plastering four 2-story frames; owner, W. A. Van Dervort; architect, J. C. Newson; contractor, G. W. Glosser; signed, June 18; filed, June 26; cost \$1,775.

Bush near Powell. Four 2-story frames; owner, Mrs. L. M. Bigelow; architect, J. C. Newson; contractor, W. A. Van Dervort; signed, June 16; filed, June 16; cost \$15,900.

Bush near Powell. Plumbing four 2-story frames; owner, Mrs. L. M. Bigelow; architect, J. C. Newson; contractor, H. Williamson; signed, June 13; filed, June 13; cost \$2,400.

Carl and Stanyan. Painting; owner, Thomas Lundy; architect, T. J. Welsh; contractor, M. J. Donovan; signed, May 28; filed, June 27; cost \$1,285.

Carl and Stanyan. Two-story frame; owner, H. Johnson; architect, J. W. Werschling; contractor, L. F. Fletcher; signed, July 3; filed, July 3; cost \$1,800.

Central Ave. near Washington. School building; owner, Edward B. Spalding; architect, Wm. Carlett; contractor, Jos. Norris; signed, June 28; filed, July 1; cost \$8,425.

Clarence Place and Townsend. To construct concrete tunnel; owners, Edison Light and Power Co.; architect, Chief Engineer employed by owner; contractor, W. J. Holmes; signed, June 3; filed, June 3; cost \$19,500.

Commercial and Battery. Repairs to brick building; owner, Henry Kane; architect, M. J. Lyon; contractors, M. Fennell & Son; signed, May 31; filed, June 15; cost \$4,500.

Eighth Ave. near Point Lobos. A cottage; owner, A. E. Lowry; contractor, Thos. Ridout; signed, June 6; filed, June 10; cost \$1,750.

Ellis near Mason. Interior wood finish and mill work; owner, Y. M. C. A.; architect, A. Page Brown; contractors, Burnham, Standford & Co.; signed, June 9; filed, June 10; cost \$13,900.

Ellis and Webster. Alterations; owner, J. F. Ross; contractors, Cook & Patterson; signed, June 14; filed, June 14; cost \$1,610.

Filbert near Jones. Three-story frame; owner, J. J. Howser; architects, John & Balezynski; contractor, Emil Hoelle; signed, June 24; filed, June 24; cost \$3,750.

First near Natoma. A four-story brick; owner, Pacific Metal Works; contractors, Smilie Bros.; cost \$20,000.

Folsom and Treat Ave. To build; owners, R. W. Lahaney and wife; architect, D. J. Ellis; contractors, J. P. Rines & Son; signed, June 20; filed, June 20; cost \$700.

Folsom street. A cottage; owner, Chas. Hankel; contractors, Koenig Bros.; signed, June 15; filed, June 28; cost \$1,600.

Fourteenth Ave. and L. Alterations; owner, Board of Education; architect, J. C. Havens; contractor, Robert Currie; signed, June 7; filed, June 10; cost \$377.

Francisco near Powell. Excavating and brick work; owner, J. Schweitzer; architect, H. Geiffuss; contractor, J. O. Sullivan; signed, June 30; filed, July 3; cost \$4,225.

Franklin and Hickory Ave. Three-story frame; Mrs. C. M. Berger; architect, Oliver Everett; contractor, Jos. McLean; signed, June 12; filed, June 13; cost \$6,000.

Golden Gate Ave. near Lyon. One story frame; owner, A. F. Morton; architect, J. B. La Rimer; contractor, Todd Boone; signed, June 19; filed, June 19; cost \$2,305.

Green near Scott. Two-story frame; owner, Carrie L. Lawler; architect, Fuller Chaffin; contractor, A. C. Soule; signed, June 23; filed, June 27; cost \$3,500.

Harrison bet. 7th and 8th. Tinning and roofing; owner, Timothy Hopkins; contractor, Forrester Cornee Works; signed, June 12; filed, June 14; cost \$9,678.

Hoffman near Alvarado. To build; owner, G. B. Lang; contractors, Soule Bros. signed, June 5; filed, June 12; cost \$1,800.

Hyde and California. Carpenter, plastering and stair work; owner, Fred Katz; architect, A. C. Lutgens; contractor, F. V. Steinmann; signed, July 1; filed, July 5; cost \$12,000.

Jackson near Devisadero. Plumbing 3-story frame; owner, Chas. I. Wingert; architect, A. C. Lutgens; contractor, W. F. Wilson; signed, June 14; filed, June 17; cost \$1,084.

Lafayette near Minna. To build; owner, E. Lauthier; architects, Townsend & Wyneken; contractor, J. A. McDonald; signed, June 6; filed, June 12; cost \$1,705.

Liberty near Church. A 1-story frame; owner, E. J. Malloy; contractor, Daniel Einstein; signed, June 18; filed, June 20; cost \$1,714.

Lyons near Page. Alterations; owner, Kate Johnson; contractor, F. V. Acker; signed, June 13; filed, June 13; cost \$1,725.

Market near City Hall Ave. Two-story brick; owner, L. H. Seymore; architects, Shea & Shea; contractors, M. Fennell & Son; signed, June 3; filed, June 10; cost \$6,255.

Market near City Hall Ave. One-story brick; owner, Henry Schmiedell; architects, Mathison & Howard; contractor, R. Ringrose; signed, June 14; filed, June 16; cost \$4,165.

Merritt bet. Denver and Hattie. Two-story frame; owner, Edward McBride; contractor, R. O. Davis; signed, June 21; filed, June 22; cost \$2,650.

Minnesota near Butte. A two-story frame; owner, Jas. Flanagan; contractor, Ed. Mooney; signed, June 7; filed, June 10; cost \$2,673.

Mission near 30th. To build; owner, Gottlieb Arnold; contractor, H. K. Schmuckert; signed, June 6; filed, June 12; cost \$3,400.

Mission near 5th. Elevator; owner, Emma Lohr; architect, Chas. Geddes; contractors, Wm. H. Birch & Co.; signed, June 27; filed, July 1; cost \$1,755.

Oak near Buchanan. Additions and alterations; owner, Robert Taylor; architect, Edward J. Vogel; contractor, Robert Currie; signed, July 1; filed, July 3; cost \$1,620.

Octavia near Grove. Plumbing two buildings; owner, P. L. McCure; architects, Pissis & Moore; contractor, E. Moenning; signed, May 12; filed, May 25; cost \$2,150.

Octavia near Grove. Painting; owner, P. L. McCure; architects, Pissis & Moore; contractors, Smith & Daley; signed, May 12; filed, June 23; cost \$1,100.

O'Farrell and Bayley Place. Iron work and tiling 6-story brick; owner, B. Curtaz; architects, John & Balezynski; contractor, Western Iron work; signed, June 17; filed, June 19; cost \$10,523.

O'Farrell and Bayley Place. To build; owner, Benjamin Curtaz; architects, John & Balezynski; contractor, Adam Miller; signed, July 3; filed, July 3; cost \$27,500.

Parker and Henderson Ave. A four-story building; owner, Albert Meyer; contractor, G. G. Gillespie; signed, June 8; filed, June 10; cost \$3,250.

Pennsylvania Ave. near Sierra. A cottage; owner, Wm. L. Nolan; contractor, T. E. Mitchell; signed, June 12; filed, June 12; cost \$1,880.

Pierce near Oak. To build; owner, Mary G. Murasky; architects, Martens & Coffey; contractor, J. O'Brien; signed, May 16; filed, May 17; cost \$3,400.

Pine street No. 2016. Alterations, etc.; owner, Mrs. M. E. Pleasant; contractor, S. C. Murray & Co.; signed, June 8; filed, June 8; cost \$3,135.

Plymouth and Lagamore. Additions, owner, P. Pellegrini; architect, L. Morrison; contractors, Morrison & Cook; signed, June 21; filed, June 27; cost \$1,330.

Sacramento and Central Ave. Sundry mill work; contractors, N. Parish & Co.; signed, May 12; filed, May 27; cost \$1,307.

Sacramento near Polk. Carpenter and plumbing; owner, J. Cazour; architects, Townsend & Wyneken; contractor, Robert Trist; signed, June 8; filed, June 12; cost \$2,463.

Sacramento near Spruce. To build; owner, C. P. Fonda; contractor, Phillip Rive; signed, June 12; filed, June 13; cost \$2,500.

San Jose Ave. near 26th. All work to build six flats; owner, E. A. Culling; contractor, Jas. Norris; signed, June 10; filed, June 14; cost \$5,985.

Seventh near Bryant. Carpenter, mill and mason work; owner, Hayfield & Helling; architects, Townsend & Wyneken; contractors, Brodt & Bateman; signed, June 8; filed, June 9; cost \$13,000.

Seventh near Harrison. Two-story frame; owner, Patrick Quinn; contractor, C. A. Henderlong; signed, June 24; filed, June 26; cost \$2,325.

Seventh near Bryant. Painting and graining; owners, F. Heydenfeldt and Z. O. Helling; architects, Townsend & Wyneken; contractor, Wm. R. Eaton; signed, June 28; filed, July 5; cost \$1,058.

Seventh near Bryant. Plumbing; owners, F. Heydenfeldt and Z. O. Helling; architects, Townsend & Wyneken; contractor, G. C. Sweeney; signed, June 29; filed, July 5; cost \$1,225.

Sickles near Sears. To build; owner, G. A. Gunning; architect, D. M. Duell; contractors, Bates & Deuel; signed, June 26; filed, June 28; cost \$1,100.

Steiner near Ellis. Raising, moving, etc.; owner, F. Knoppacker; architect, A. C. Lutgens; contractor, James Geary; signed, June 28; filed, July 5; cost \$1,375.

Tenth Ave. A cottage; owner, Chas. Boehringer; architects, John & Balezynski; contractor, Emil Hoelle; signed, June 14; filed, June 16; cost \$2,010.

Washington and Devisadero. All work except plumbing; owner, Estate of F. Merrifield; architect, E. R. Swain; contractor, J. T. Logan; signed, June 6; filed, June 8; cost \$3,123.

Washington and Devisadero. Plumbing; owner, Estate of F. Merrifield; architect, E. R. Swain; contractor, J. T. Logan; signed, June 6; filed, June 8; cost \$405.

Washington near Walnut. To build; owner, Lillian E. Suydam; architect, Chas. I. Haven; contractor, Jas. McLean; signed, June 21; filed, June 22; cost \$5,470.

Washington near Jones. Plumbing; owner, Mrs. M. Wolf; architects, Pissis & Moore; contractor, R. A. Vance; signed, June 21; filed, June 24; cost \$1,475.

Washington near Buchanan. Alterations; owner, John A. Wright; architects, Percy & Hamilton; contractor, F. W. Kern; signed, June 20; filed, June 27; cost \$3,380.

York and 24th. Two-story frame; owner, Adam Herman; contractor, H. P. Conrady; signed, June 13; filed, June 13; cost \$4,650.

ALAMEDA COUNTY.

Adeline near 5th, Oakland. Cottage; owner, M. Studevski; contractor, A. J. Wood; signed, June 1; filed, June 5; cost \$1,287.

Blake near Grant Ave. A cottage; owner, F. W. Bauer; contractor, J. J. Rose; signed, May 27; filed, May 27; cost \$1,585.

Brush near 23d, Oakland. To build; owner, C. Moran; architect, E. J. McManus; contractor, C. S. Barnard; signed, June 21; filed, June 25; cost \$1,651.

Colway near LeConte Ave., Berkeley. Two-story frame; owner, R. H. Wetmore, Jr.; architect, R. H. Wetmore, Jr.; contractor, J. F. Meyers; signed, June 20; filed, June 23; cost \$2,155.

Eighth and Filbert, Oakland. Two-story frame; owner, M. J. & F. Tushard; architects, W. T. Veitch & Bro.; contractor, A. E. Fake; signed, June 26; filed, June 27; cost \$500.

Everett and Central Ave. Two-story frame; owner, E. Z. Garett; architect, G. A. Bordwell; contractor, D. S. Brehant; signed, June 28; filed, June 29; cost \$2,275.

Filbert near 14th, Oakland. Alterations and additions; owner, M. E. Coggan; architect, H. Burns; contractors, Gardner & Heyden; signed, June 7; filed, June 21; cost \$1,250.

Filbert near 24th, Oakland. One-story frame; owner, M. Meyers; contractor, P. J. Brophy; signed, June 18; filed, June 28; cost \$2,035.

Filbert near Encinal, Oakland. To build; owner, G. E. Randolph; architect, H. F. H. Brown; contractor, A. E. Fake; signed, June 26; filed, June 27; cost \$1,835.

Fruitvale lot 16th. One-story frame; owner, C. T. Slamborg; architect, W. M. Campbell; contractor, A. E. Fake; signed, June 22; filed, June 27; cost \$1,390.

Fourteenth near 26th, E. Oakland. To build; owner, J. Anderson; architect, C. L. Corregan; contractor, C. C. Burke; signed, June 7; filed, June 9; cost \$2,120.

Haight near 7th, Alameda. To build; owner, A. E. Hoffman; contractor, A. R. Denke; signed, June 23; filed, June 24; cost \$1,600.

Lot 10 block E. L. V., Oakland. Two-story frame; owner, W. W. Garthwaite; architect, J. C. Newson; contractor, T. G. Krownick; signed, June 19; filed, June 28; cost \$3,642.

Park near Lincoln Ave. Addition to Pacific Hotel; owner, M. Debrat; architect, J. Lath; contractors, Ryus & Underwood; signed, June 16; filed, June 21; cost \$1,400.

Rose and Shattuck, Berkeley. To cottages; owners, W. F. & H. Lingaid; architect, Geo. A. Emburg; contractors, Ryus & Underwood; signed, June 19; filed, June 21; cost \$2,058.

Santa Clara Ave. Two-story frame building; owner, J. M. Raun; contractor, A. W. Cornelius; signed, May 25; filed, June 1; cost \$4,000.

Seventh street. Two-story frame, including fourteen stores; owner, J. Bruguiere; architects, Smith & Freeman; contractors, Hebert & McLeod; signed, May 28; filed, June 8; cost \$29,500.

Santa Clara Ave. One-story frame; owner, A. M. Jenkins; contractor, A. R. Denke; signed, June 14; filed, June 14; cost \$2,284.

San Antonio Ave. near Union. To build; owner, L. Raschen; architect, N. P. Fisher; contractors, D. Straub & Son; signed, May 27; filed, June 1; cost \$3,200.

Second Division street. Carpenter work; owner, Joe Arenat; architect, W. Veitch; contractor, J. F. Meyers; signed, June 21; filed, June 21; cost \$3,750.

Sonol. To build; owner, J. E. McElrath; architect, H. Wharton; contractors, Weber & Rohler; signed, June 2; filed, June 2; cost \$3,350.

Third near Cypress, Oakland. One-story frame; owner, J. Milley; architect, H. Geiffuss; contractors, Weber & Kohler; signed, June 2; filed, June 2; cost \$2,222.

Twelfth and Washington Ave., Oakland. Carpenter work; owners, H. S. and F. Kahn; architect, W. J. Mathews; contractors, Price & Rush; signed, June 5; filed, June 12; cost \$9,355.

Webster and Haight. Two-story frame; owner, Mrs. J. Schmitt; contractor, A. R. Denke; signed, June 12; filed, June 12; cost \$6,250.

The California Architect and Building News.

Copyrighted 1893, by the California Architectural Publishing Company.

OFFICE, 408 CALIFORNIA STREET,

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

VOLUME XIV.

AUGUST 20th, 1893.

NUMBER 8.

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

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

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

ESTABLISHED 1870.

INCORPORATED 1890.

NOW IN THE FOURTEENTH YEAR.

W. J. CUTHBERTSON, President.

OLIVER EVERETT, Secretary.

Remittances should be in the form of postal orders, payable to THE CALIFORNIA ARCHITECTURAL PUBLISHING COMPANY, and all communications addressed to the office of the Company, 408 California Street, San Francisco, Cal.

ADVERTISING RATES:

Space	1 Month.	3 Months.	6 Months.	12 Months.
1 inch.....	\$ 1.50	\$ 4.00	\$ 7.50	\$ 13.00
3 inch.....	4.00	10.00	18.00	35.00
6 inch.....	7.50	18.00	32.00	60.00
1 Column.....	12.50	35.00	65.00	125.00
1/2 Page.....	20.00	57.50	105.00	200.00
1 Page.....	40.00	110.00	200.00	350.00



Index to Advertisers.....	VI
A Perfect Electrical Installation.....	86
Fighting Fire with Gases.....	87
The Re-Inforcement of Concrete by Twisted Iron for Fire-proof Floors.....	88
Sculptors of the World's Fair.....	89
The Cogswell Fountain in Boston.....	89
Illustrations.....	90
Death of Col. R. T. Auchmuty.....	90
Notes and Comments.....	91
Correspondence.....	91
Designs Accepted for Mid-Winter Fair.....	91
Tenders to be Received.....	91
Notices of Meetings.....	92
Books and Periodicals.....	92
Legal Decisions.....	93
House on a Tree.....	94
A Rapid Underground Transit.....	94
Business Mosaics.....	93
Building News.....	95

THIS journal is prepared to take charge of rendering perspective drawings in pen and ink or color. Charges will depend on size and kind of drawing wanted.

Upon receipt of plan and elevations, with a description of what is wanted, we will submit our estimates for the performance of the work.

IN another column will be found an interesting talk, delivered by invitation of the San Francisco Chapter of the American Institute of Architects, by Mr. G. Morin Goustiaux, on the present status of architects and architecture in France. In some particulars the practice of the profession there has certain advantages over the customs in vogue in this country; notable in regard to the honesty of both patron and architect in the manner of conducting and judging competitions.

In this country we regret to have to say, the majority of building committees endeavor to secure gratis, the best ideas of the profession, by dangling a hook seldom baited with anything more substantial than contingent promises. If cash prizes are offered, they are usually inadequate to properly compensate an architect for a serious study of the problem, and are often tied up with the condition that the premiated designs shall belong to the committee. As long as this method succeeds, it will be useless for architects to hope for a better.

On the other hand the architect who enters a competition, usually does so with the expectation or at least the hope of securing by personal means enough influence to secure a decision of the committee favorable to himself, irrespective of the merits of his design. Thus the cause of progress in architecture is seriously retarded, and instead of architects striving to arrive at the best possible solution of the problem submitted to them, they are too apt to slight the design, and trust to personal considerations for achieving success.

Another advantage the competing architects enjoy in France, is the fact that the awards of prizes are made on the recommendations of a jury of experts. Who would think of electing a doctor to the Supreme Bench, or consulting a

lawyer in case of sickness? yet the parallel holds good in a majority of cases here, as it is the exception rather than the rule when a building committee considers it necessary or advisable to secure professional advice on the merit of plans submitted.

THE City Trustees of Alameda deserve great credit for the model advertisement for Competition Drawings for their proposed New City Hall, the conditions of which were arranged with great fairness. The result has been that they have received the largest number of well thought-out plans and from the largest proportion of standard architects of any competition that has been held of late.

The competitors generally have also reciprocated, as almost without exception no attempt has been made by them to obtain any undue advantage over their fellows by going beyond the size and quality of the Drawings laid down in the Conditions.

A reception was tendered by the San Francisco Chapter of the American Institute of Architects to Mr. G. Morin Goustiaux, on the evening of Friday, July 28th.

Mr. Goustiaux was delegated by the city of Paris as its representative at the World's Columbian Exposition, and previous to returning to France, passed some few weeks in this city.

Mr. Goustiaux, who is a native Californian, renewed old acquaintances in the Chapter and made new ones, and entertained and instructed his professional brethren by a detailed description of the conditions under which architects and architecture flourish in France.

He described the requirements and examinations necessary to enter the *Ecole des Beaux Arts* and the difficulties to be overcome by the students before graduating, when they are entitled to a diploma, issued by the Government, and the option of entering the public service.

The requirements are severe, and a bright young man is doing well if he secures his diploma at the end of six or seven years—about twelve each year reach their goal; seldom at less than thirty years of age; should they chose to enter the public service, they first take the position of *Conducteur* of work, are afterwards promoted to that of *sub-inspecteur*, then to be *inspecteur*, and finally at the age of forty to forty-five years of age to the position of Architect, and are then given charge of such repair work as may have to be done.

For important works there is a corps of ten to fifteen architects under the direction of the *Inspecteur General* of Paris.

In competitions for public improvements the committee of awards is composed of a certain number chosen by the competitors themselves, a representation from the *Societe Centrale* (the principal architectural association of France) and a special commission of prominent architects. The method employed to arrive at a decision is first to reject all designs that do not conform to the programme, then to reject those that are seriously defective in any important particular, and continue this process of elimination till the number of designs that remain are reduced to the number of prizes offered—and these are then classified in their order of merit; and to the credit of the committee, Mr. Goustiaux states that their decision is almost universally acknowledged among the competitors as being just.

In regard to Architectural Societies there are three—the most important being the *Societe Centrale*, with branches in

other departments of the country. This society is very exclusive, and very difficult to enter. No contractor, nor any one who has ever been a contractor is eligible—a certain standard of work must have been executed by the applicant. The customs of the profession as determined by this society are taken as precedents by the courts, and judges frequently refer to the society for information as to the customs, and govern their decisions according thereto—the schedule of material and prices fixed by this society are authoritative.

These is a smaller society consisting of *architects diplomés* and a third society to which architects and builders are admitted indiscriminately.

Important public works over 500,000 francs in value is usually decided by competition, the competition being confined to Frenchmen.

A vote of thanks was tendered Mr. Goustiaux for his pleasant talk and the meeting adjourned with mutual good wishes.



A PERFECT ELECTRIC INSTALLATION.

IF any doubt existed as to the advisability of placing the details of electric wiring under the charge of an independent electrical expert, that doubt will be eradicated upon reference to the San Francisco building of the Mutual Life Insurance Company of New York, of which Mr. Clinton Day is architect and of which a full page illustration was presented in the June number of the CALIFORNIA ARCHITECT AND BUILDING NEWS. As most of our readers are aware, this building is a thoroughly modern fire-proof structure of steel, terra-cotta and pressed brick, nine stories in height. No more difficult construction in which to place electric wiring exists, yet the electric work therein installed is a marvel of simplicity and perfection.

The experiences which have been had with the electrical work of other buildings of similar construction in various portions of the country was taken advantage of in designing this installation. Its main features resemble closely those of the incandescent wiring of the Mills buildings, San Francisco, yet the wiring of the Mutual Life building may be considered as the perfection of the idea carried out in the first named structure. In the Mills building, for instance specific provision is made for electric light conductors only. All other wiring such as telephone, district telegraph, time service or bill circuits, are placed together in a recess on top of the incandescent ways, while in the Mutual Life building a separate recess or groove or tube is provided for each distinct class of wiring.

Throughout the whole system, the inviolable idea which

has been carried out in that all wiring shall be concealed and hence unobtrusive, yet always accessible.

The wiring usually placed in a large modern office building may be divided into two general classes, namely: electric lighting circuits and signal circuits. It is important for several electrical reasons, chief among which are that immunity from fire and reliability are effected, that the wires of these two classes of circuits be kept distinct from each other. From a mechanical standpoint, running separate ways for distinct classes of circuits is necessary to facilitate handling and what is sometimes equally important it keeps concerns from interfering with wires of other and perhaps rival companies. In the Mutual Life building it was found that the best service would be attended by dividing the circuits into four groups; electric lighting, telephone, bells, and district telegraph and clock wiring. These circuits run to each room of the building; every foot of wire is concealed, every foot is accessible and moreover any wiring may be carried from any room in the building to any other room on any floor without breaking plaster or without exposing the conductors in any way. It is difficult to conceive anything more perfect.

From the engine room in the basement is run an electric riser-way which continues in a straight line to the top floor paralleling the elevator shafts. In this riser-way are run all the electric circuits of the building. The telephone circuits, for instance, come into the building from the under-ground cables, the cable being continued through the basement and up the electric shaft to the fourth floor where it terminates in two twenty-five pair cable heads, and whence the telephone circuits are distributed to the various rooms as will be described. Similarly, the under-ground incandescent service of the Edison Light and Power Company is brought into the basement and connected up to a simple marble switch-board. From this switch-board independent circuits are run to each floor and each hallway in the building. Throughout the entire structure, with the single exception of in the corridor moldings, the insulating tubing of the Interior Conduit and Insulation Company is used. Separate tubes are run through the riser-way from the switch-board to each floor and each hallway for the incandescent system while special tubes are similarly run for containing the signal wires.

In the lavatory of each floor is a cabinet which opens directly into the electric shaft and in which is placed the plug switches and cut-outs for each particular floor. About each hall is placed molding run in line with the casings of the doors and windows and capped and finished in oak to match. The molding is in two parts, capping and backing, the latter containing five grooves, two for electric light wires, one for telephone wires, one for district telegraph and clock wires and one for bell wires, and each room is supplied with a separate tube from each groove. The room cut out is set in flush with the backing of the molding so that the grooves of the cut out and molding are in line. From the cut out conduit tubing is carried down to the room switch, thence to the fixture. A valuable innovation will here be noted. No safety devices are used in the fixture. Each fixture circuit is contained in an independent conduit tubing carried through a switch from a separate cut out in the molding to the fixture direct. Both the fixture and circuit are protected by the safety cut out in the molding, hence if the fuse blows it may be replaced in the hall without inconvenience to the tenant or sometimes without even entering the room affected. The cappings of the moldings are all secured with

screws and although it extends entirely around the halls it is neither conspicuous nor a disfigurement in any way.

In each room, the electrical service is confined to two polished oak service blocks. The smaller, placed near the door contains the electric light switch and a push button which may be connected with any part of the building at any time. To the larger service block, also of polished oak 14x16 inches, is brought the messenger circuits of the Postal and Western Union Telegraph companies and the San Francisco District and American District telegraph companies respectively, while but a few inches away and at the proper height is a conduit tubing leading to the telephone groove in the corridor molding so that the tenant may have a telephone placed without disfigurement whenever desired. In order that the idea of accessibility of all circuits should be carried out, not an inch of wire of any description, nor even a fish string, was placed in any tube until after the tubing was set in place, and not an inch of electric light wire was inserted in the tubing until after the plastering was finished. All the incandescent circuits in the building are of the well known Grimshaw White Core insulation. Flush, push wall switches of the Cutter Specialty Company, Philadelphia, are used throughout while the hall circuits are controlled by the S-C flush key switches of the same company. In these the janitor alone holds the key by means of which the switch may be operated.

The entire electrical work was installed by the San Francisco office of the General Electric Company under the electrical expertship of Mr. Geo. P. Low.



FIGHTING FIRE WITH GASES.

AN interesting experiment in fighting fires was tried at Salem, Mass., last week, and it appeared to be successful. All the apparatus used in the experiment was a sheet-iron cylinder about three inches in diameter and sixteen inches in length. This cylinder was charged with gases and chemicals sufficient to throw a stream half the size of an ordinary lead pencil about twelve feet continuously for five or six minutes. After the cylinder had been charged a box eight feet long and four feet high by four feet wide was obtained, and the inside smeared with tar. Then, to add to the inflammable quality of the material, a half-gallon of kerosene oil was sprinkled upon it and the whole thing set on fire. The heat created by the fire was intense, and those who were witnessing the experiment had grave doubts as to the success. After the fire had burned the boards nearly half through, the contents of the little can were turned on and in less than a minute the flames were extinguished. The test was certainly a severe one. The inventor of this extinguisher thinks that in time he will be able to perfect a device for fighting large fires, and that eventually gases will take the place of water entirely in the fire departments.—*Fire and Water.*

THE RE-INFORCEMENT OF CONCRETE BEAMS BY TWISTED IRON FOR FIRE-PROOF FLOORS.

THE reference made in the May number of the CALIFORNIA ARCHITECT to the use of Twisted Iron incorporated in Concrete, has called out some inquiries as to the nature and extent of the tests so far applied to this mode of construction. Though first introduced upon this Coast but little has been published here respecting this new departure in fire-proof building.

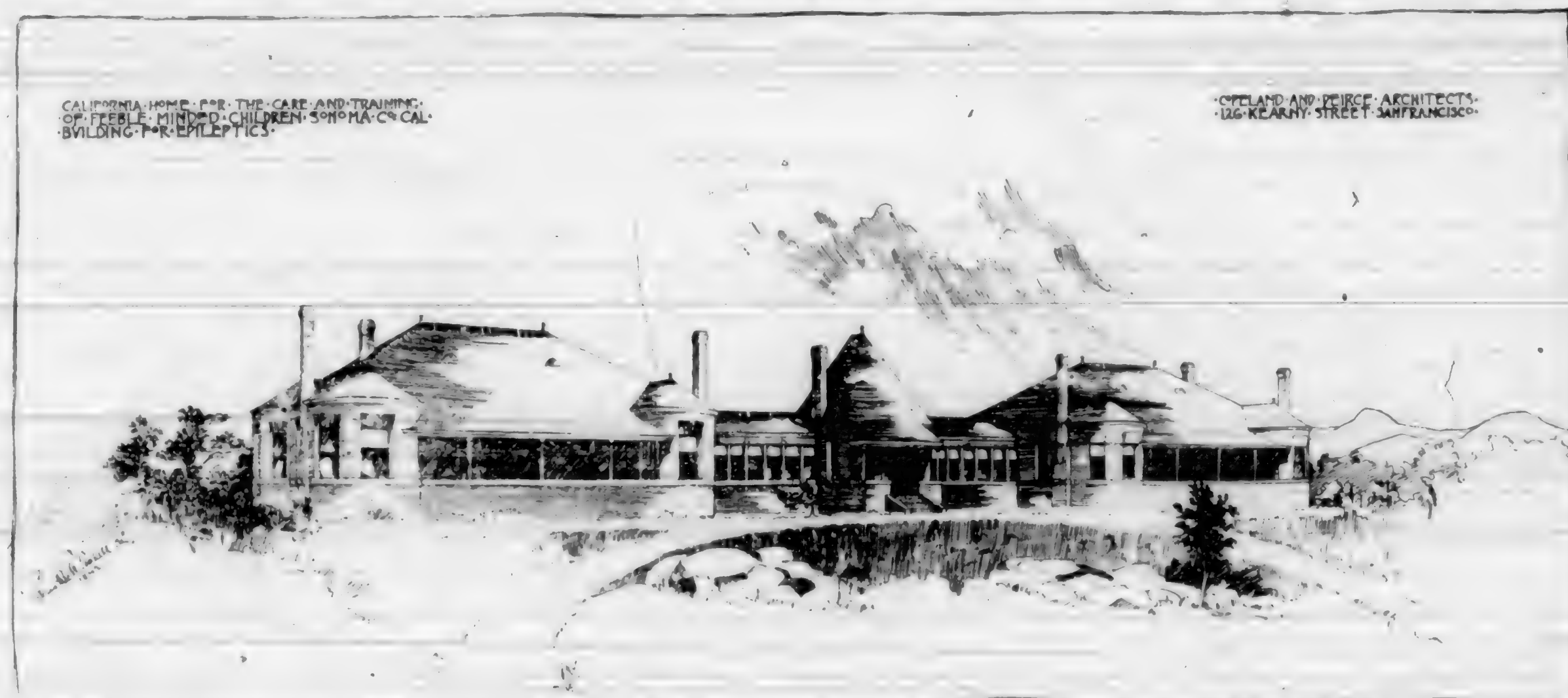
The Museum at the Stanford University was not the first structure where this method was employed, but the concrete beams supporting the heavy dome, have the longest span yet produced, forty-five feet. Another notable example is the California Academy of Sciences on Market street, where five floors covering an area of 50,000 square feet are so constructed. The span ranges as high as thirty feet, and there is also a projection of three feet of concrete over the central area, supporting an iron railing at the outer edge, and a walk for visitors. The floors were estimated to carry with

been concentrated at a single point by the employment of nuts and washers. By twisting the iron before it is imbedded in the concrete the strain is diffused equally through the length of the bar, while it is firmly held at all points by the enveloping mass.

An incidental advantage of the twisting is that thereby all imperfectly laminated iron is at once detected, and the defect exposed, ensuring the employment in practical use of only a high quality of iron.

In the more common forms of construction the major element has been the iron beam, whose lower cord was exposed, necessitating additional protection below against the action of heat. By substituting the concrete beam as the chief factor, the iron used is so incorporated within the body of the stone as to be amply protected without extra cost. Moreover the iron girder is an expensive form, while the very simplest and cheapest is the flat or square bar.

The claim that cold twisting actually adds to the strength of the bar, rests upon somewhat exhaustive experiments conducted by Lieutenant F. P. Gilmore, U. S. N. (Government Inspector of Iron and Steel for war vessels under con-



safety 250 pounds per square foot. One section, 15x22, was tested with a uniform load of 415 pounds per square feet, and the load was left on one month. The architects reported the extreme deflection at the center as only one-eighth of an inch. Contractors and workmen were distrustful at first, but their confidence became unbounded before the completion of the work. The saving over the usual mode is estimated at fifty cents per square foot.

Touching the weight of these floors, as compared with iron girders and hollow tiles, the first impression that the concrete must necessarily be much heavier, is found incorrect. For when the span is of usual length, and the required strength of moderate limit, the weight per square foot is less with the new construction. For example: with spans of fifteen to twenty feet, and a safe load of seventy-five pounds per square foot, the saving in weight is about forty per cent over iron girders and hollow tiles. With a load of 125 pounds it is some twenty per cent.

This economy is doubtless due to the fact that the bond between the twisted iron and the enveloping concrete is so perfect and continuous as to give the effect of a homogeneous beam, and that the tensile strength of the iron bar is utilized.

Ordinarily in the use of iron with concrete the strain has

struction at San Francisco) and by the College of Mechanics of the University of California at Berkeley, also at the celebrated Low Moor Iron Works, England.

Lieutenant Gilmore found that common commercial iron $\frac{3}{4}$ inch square, being given $1\frac{1}{2}$ twists per lineal foot gained seventeen per cent in tensile strength; given $3\frac{3}{4}$ twists, twenty per cent, and six twists gained twenty-four per cent.

The best Norway Iron given six twists per foot, gained from fifty to fifty-three per cent in tensile strength.

Similar experiments at the Low Moor Iron Works with $\frac{3}{4}$ inch round iron, showed twenty-two per cent gain for $1\frac{1}{2}$ twists per foot; thirty-six per cent with $2\frac{1}{4}$, and forty-one with three twists, which was as far as the experiments noted were carried.

The latter experiments conducted by the University of California gave similar results, with one important fact ascertained, namely: that a suitable interval between the twisting and the testing gave a much greater gain. Three-quarter inch iron turned down to $\frac{5}{8}$ was given six twists per lineal foot. Twisted while hot there was a small loss in tensile strength. Twisted cold and tested immediately, the gain ranged from thirty-three to forty-three per cent. Twisted cold and allowed to remain five days and then tested, the increase in tensile strength of the same quality

of iron was from forty-seven to fifty-nine per cent, or an average of fifty-three per cent.

It would seem that advantage might be taken of this important augmentation of tensile strength in many places. Bridge builders, as well as workers in concrete, would do well to inform themselves fully upon this claim.

SCULPTORS OF THE WORLD'S FAIR.

By J. H. GEST.

WHATEVER may be the success of the World's Columbian Exposition as an exhibition of the liberal and mechanical arts, or of natural products, it has achieved in one respect a result that could not reasonably have been expected, and certainly could not have been foreseen in its actual magnitude. In 1889 France presented to the world an architectural and artistic spectacle unapproached by former exhibitions, and until within a few months past the last French exhibition remained the ideal in the public mind. Almost no one had thought of an American exhibition which in the architectural beauty of its buildings, and especially in their sculptural decoration, should in any way rival Paris of 1889.

Conceding the ability of our architects to carry out their part of the task, where were the sculptors capable of acceptably decorating the buildings? To do this work required not only one man, or a half-dozen men, but a score or more of trained sculptors supported by a corps of personal assistants, and a small army of subordinate modelers and molders. They must be men fertile in the invention of a kind of ornament for which comparatively little use has hitherto been found in this country—not men capable of modeling merely detached statues, but able also to do it in harmony with architectural surroundings. This aspect of the sculptor's art is almost entirely unknown to the Americans as a people, who for want of knowledge have really no conception of its uses and its value in civic and national life. Even those of us who have occasionally the good fortune to travel in Europe, and who bring back in memory, and in photographic scrap-books, impressions of the architectural and sculptural interest of European towns large and small—even they drop back into the practical course of the overpowering commercial and mechanical movements peculiar to our civilization, and ere long become content with the bald surroundings of brick and stone amidst which the large percentage of our population live and labor. If even these favored few do not sufficiently value the presence of beauty of sculptural form as a leaven in the hard commonplace of our cities, how can the less fortunate, to whom this beauty is as unknown as though it had no existence?

It may be asked: What is the value, to a civilization like ours, of the esthetic expressions in form which are the products of the sculptor's art? Some years ago esthetics seemed entirely apart from the proper course of our lives. The usefulness of art was practically unknown, and even recreation was indulged in either under compulsion or with an unhealthy excitement. It is now generally admitted that of all the means of mental recreation none are so nearly inexhaustible as art, and in none can the restful influence be so ever-present. This is acknowledged in our strenuous efforts to introduce beauty into the most humble of the industrial arts, which is the marked characteristic of our industrial advance since 1876. All of this reaches the homes of the people and introduces an esthetic leavening of growing force. Art museums and galleries of paintings and sculpture are carrying the movement forward on a higher plane. But we have just begun to appreciate the fact that buildings, public and private, should themselves teach the value of beauty of proportion, of mass, of form in outline and surface, and even of color. Here the sculptor's work joins that of the engineer, architect and builder. When the capitalist has employed the engineer to plan his enterprise, the architect

to give his building not only adaptability to its use but also a character that shall be its entity as compared with others, then steps in the sculptor to ornament, until the whole shall possess not only utility but a beauty which shall make acceptable and perhaps emphasize that very utility. The finished work is thus by its attractiveness made even more efficient for the purpose for which it was intended. Other things being equal, the increased rental of the building will pay the interest on the cost of the sculpture. And the city with fine public squares, artistically dressed with statuary in appropriate architectural settings, will thrive as compared with the rectangular, monotonous, bald, utilitarian town, provided the location and other commercial conditions be not too unfavorable. Further, this ornamentation of a city stimulates its pride—a force constantly active in advancing a community. The streets should, so far as public and private enterprise can make them, be as popular museums full of object lessons that will tend to make good citizens. One of those lessons is the evidence of thrift given by the bustling crowd, another is the stability of buildings, but still another should be the appropriateness and the architectural and sculptural beauty of these same buildings. All this provision for his enjoyment of life tends to add something to the capacity of the citizen for activity.

There is no doubt as to the impression that will be made upon thousands of visitors to Chicago this year. The beauty of grand buildings harmoniously grouped in Jackson Park, the charm of decorative sculpture, the richness of public places and avenues abounding with statuary, create an unsuppressable longing that something of this, apparently so permanent, yet really so temporary, may remain as a lasting impression upon our people. While not attempting to distribute the credit for the beauty of these buildings and grounds, we may well recall that, when the use of Jackson Park—then largely swamp-land—was under discussion, it was Frederick Law Olmstead, the landscape architect, who conceived the plan of dredging lagoons and canals to secure sufficient earth for fills upon which to place the buildings, thus meeting the practical demands of the occasion, and providing the opportunity for artistic effects of land and water. Then followed the grouping of the buildings, of which much was prompted by Mr. Root, though conferences among the chosen architects led to the arrangement finally worked out, and to the adoption of the prevailing style of classic architecture. Coming to the sculptural ornamentation of the buildings and grounds, we should probably find Augustus St. Gaudens the dominant power, though his own work is limited to the gilded "Diana" on the main dome of the Agriculture building, whither it was removed from the tower of the Madison Square Garden, New York. These names, coupled with that of D. H. Burnham, the director of works, are those one hears from all who speak of the enterprise.—*The Engineering Magazine.*

THE COGSWELL FOUNTAIN IN BOSTON.

IT will be remembered, says the *American Architect*, that a few years ago, a certain Dr. Cogswell, of San Francisco, we believe, made to the City Government of Boston, as he already had to other municipal bodies, a proposition to erect on the Common, and present to the city, a fountain, consisting of a bronze figure, sheltered under a classical pavilion of granite, and furnished with an appropriate pedestal and inscriptions. No conditions were annexed to the offer, and the gift was accepted, and the fountain and pavilion duly erected on the Common. The site assigned to it was not a happy one, and the structure itself, although tolerably well executed, did not please the educated taste of the citizens, while, the name of the donor being rather conspicuously displayed on it, an idea became current that it was intended as an advertisement of the donor's business. However that may have been, the popular dislike to the affair became so marked that, after four or five years, the City Government appropriated money to have it removed.



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.

VESTA DEL MAR—to be erected corner Jones and California streets, an apartment house of 250 rooms, arranged in thirty suits. To be strictly fire-proof. Material, light press brick and terra cotta. Cost \$320,000. Reid Bros., architects.

THE proposed building for the San Francisco *Examiner* is by Willis Polk, architect.

SKETCH of stable for A. B. Spreckles is by C. I. Havens, Architect.

DEATH OF COLONEL R. T. AUCHMUTY.

EVERY architect, and every one who has the good of his fellow citizens at heart, must mourn the loss of Colonel R. T. Auchmuty, who died at Lenox, in consequence of an amputation made necessary by a painful disease of the leg, from which he had long suffered. Colonel Auchmuty was a grandson of one of the first rectors of Trinity Church in New York, and was throughout his life identified with that church and with the charitable and religious undertakings connected with it. He served in the army during the Civil War retiring with the rank of colonel. He was educated to the profession of architecture, and was for some time a partner of James Renwick, the architect of Grace Church, but, being possessed of an independent fortune, and finding ways in which he could be of more use to his fellow men than in the practice of his profession, he came of late years to devote himself entirely to his various charitable works, of which the greatest was that of the establishment of the New York Trade Schools. From the time of his first acquaintance, through his professional work, with mechanics of the old and new schools, Colonel Auchmuty had observed the unfavorable effect upon the younger men of the limitation or abandonment of the old apprenticeship system, and the substitution, for the instruction and control of the masters, of the tyranny of trade-unions. In New York, as in other large cities, the unions are almost completely under the control of foreigners, who favor their compatriots, to the exclusion of the native-born, and Colonel Auchmuty found his young fellow-countrymen not only shut out of employment in New York, to make room for foreigners, but prevented from learning a trade which they might practice elsewhere, by the limitation of the number of apprentices in the shops, rigorously enforced by the unions, and the absence of any other provision for training them. Finding that the same difficulty had been met abroad by the establishment of schools, under Government patronage, for teaching the manual arts, Colonel Auchmuty determined to see whether something similar could not be done in this country by

private effort, and, securing a small building in New York, he employed instructors and opened a school where young men could be taught carpentry, masonry and house-painting. The school was not free, a small tuition-fee being charged, and there was every year a deficit to be met, which Colonel Auchmuty and his wife paid. The first year the school was small, but it grew rapidly. Not only was practical workmanship thoroughly taught, but theoretical instruction was given in the properties of materials and elementary statics, and drawing was taught to all the pupils. Very soon, the school increased so much that it was necessary to erect new buildings, which were constructed by the pupils. New courses were added, and the school now has about six hundred pupils, of the best type of American adolescence. It is hardly necessary to say that an institution which taught young men to work and think excited from the first the hatred of the organizations which look upon anarchists as the true labor-reformers, and the walking-delegates tried open violence, as well as their arts of secret terrorism, to destroy the schools. Finding that the schools could not be closed by these means, they closed the shops against the graduates of the schools, ordering every shop "struck" that employed one of them. Colonel Auchmuty met this step by resuming his old profession, and making plans for a considerable number of buildings, which were carried out by the school graduates. After this, the labor organizations, finding that they had aroused a public feeling which it was advisable to allow to subside, ceased active hostility, and the relations between them and the trade schools, though far from cordial, are not now belligerent. On being attacked by the ailment which finally caused his death, Colonel Auchmuty was obliged to leave the work of managing his schools mainly to others, greatly to his regret, but, as he himself said, this has proved a certain advantage, as their continuance is in that way better assured, so far as the system of instruction is concerned, while they were recently firmly established financially, by the generous endowment of half a million dollars, presented them by Mr. J. Pierpont Morgan. Before his death, Colonel Auchmuty, with his wife, added one hundred and sixty thousand dollars to the endowment, this being outside of the seventy thousand dollars which they had already devoted to the schools.—*The American Architect and Building News.*

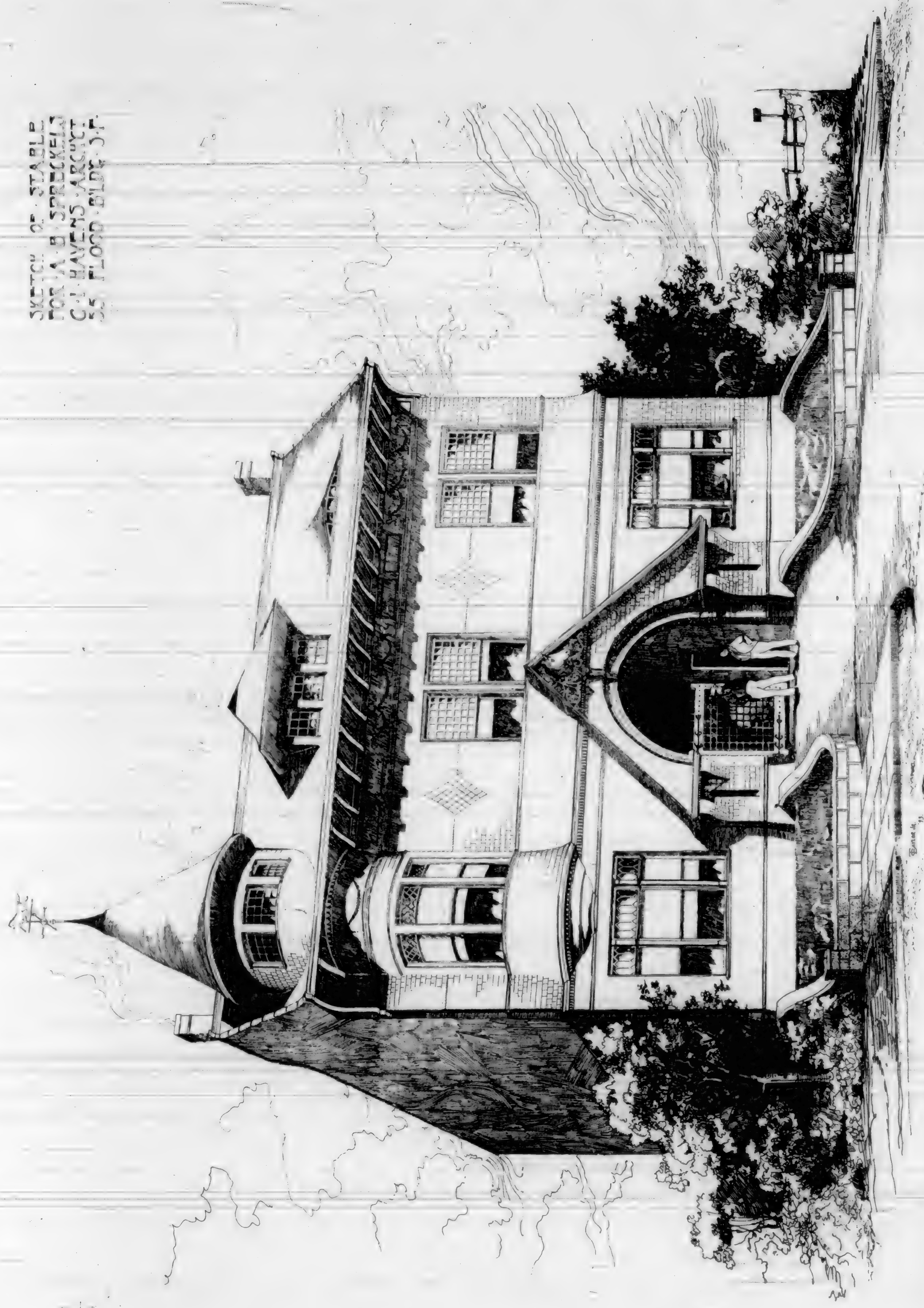


Clinton Day, Architect, has removed his office to the fine new building SE corner California and Sansome Sts.

Mr. Geo. P. Low, Electrical expert for the Pacific Insurance Union and who is well known to architects, left for an extended business trip east on August 10th. While absent will attend the meeting of the Underwriters' International Electric Association, of which committee he is a member. Mr. Low will also sit as delegate to the World's Electrical Congress to be held in Chicago beginning August 21st.

The first building erected by the London Council with their own men and without the intervention of a contractor has been brought to a successful issue. The new school building at Crossness was advertised in the usual way and the lowest tender obtained for a contractor was \$10,940. The estimate of the Council's architect was \$8,440 and the work was actually executed for the sum of \$8,310. The example, however, is on too small a scale to prove anything very much at present in regard to the superiority of this system of doing work.

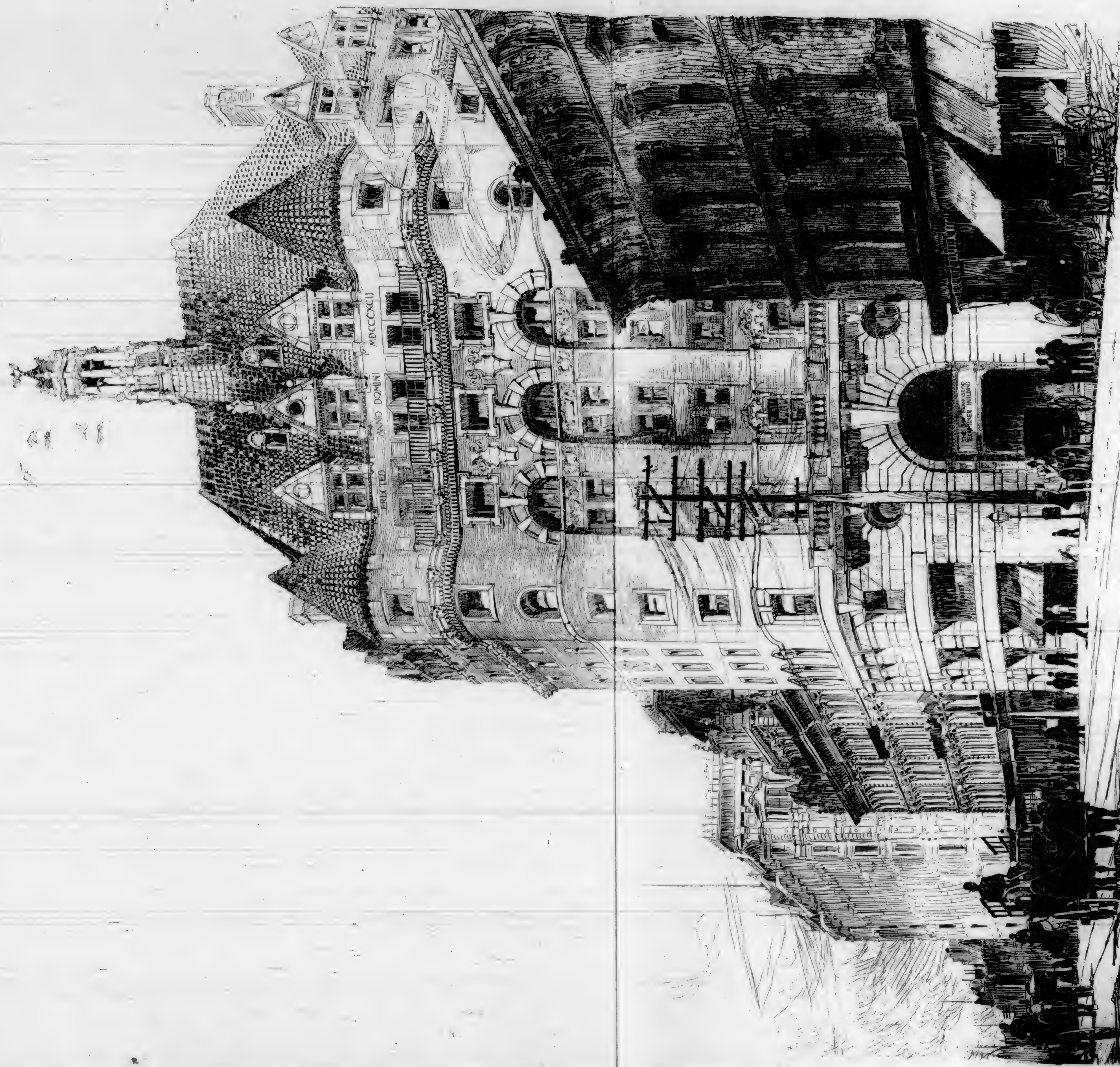
SKETCH OF STABLE
FOR J. B. SPRICKLE
CH. HAVENS ARCHT.
35 FLOOD BLVD. S.F.



CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO LITH.

VOL. XIV No 8 AUGUST 1893.

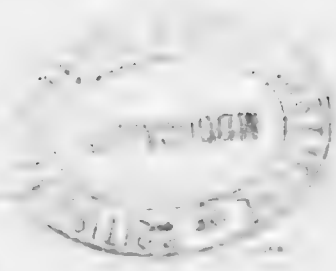


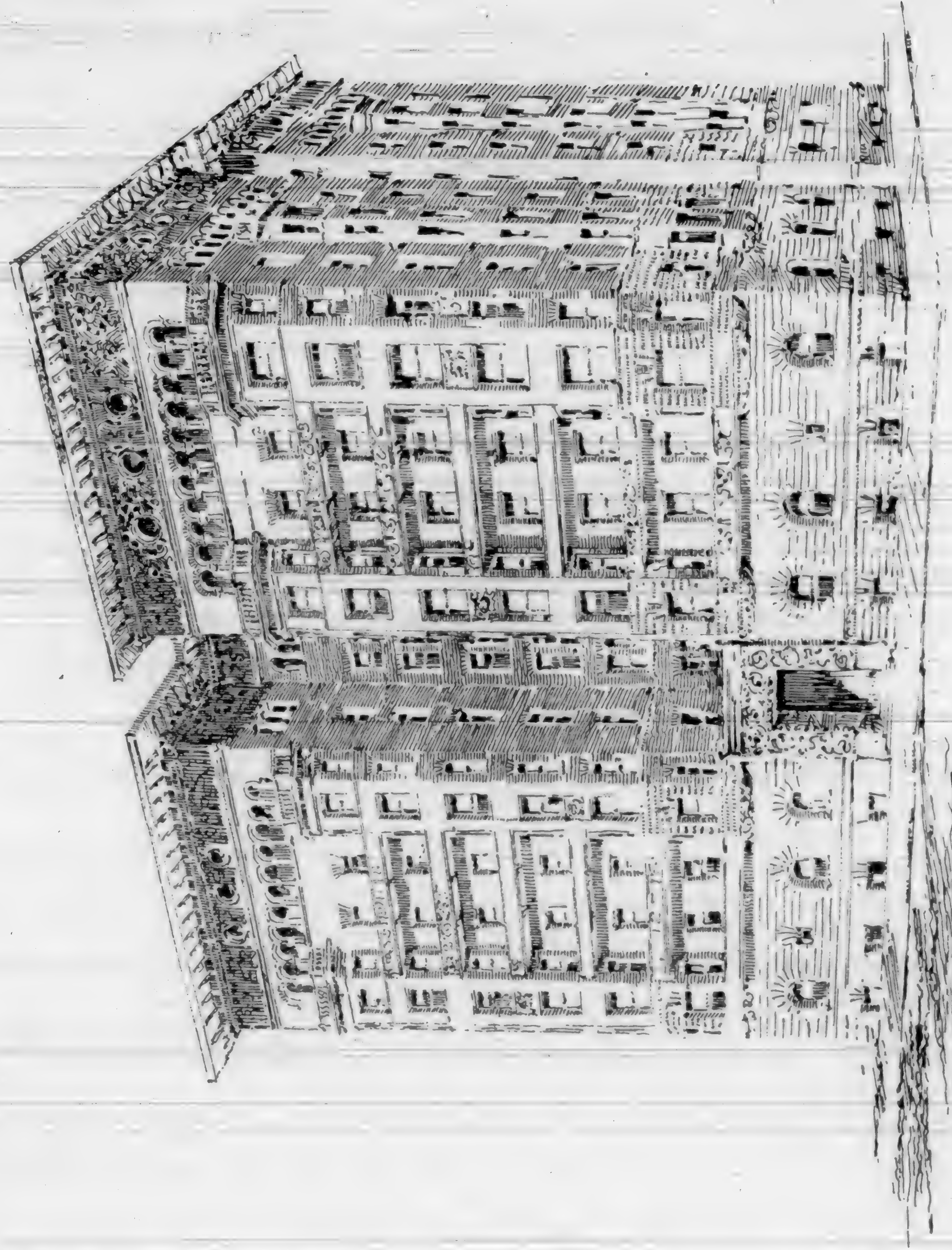
PROPOSED BUILDING FOR THE SAN FRANCISCO "EXAMINER," NEWSPAPER.
MR. WILLIS POLK, ARCHITECT.

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO LITH.

VOL. XIV No 8 AUGUST 1893.





REID BROS. ARCHTS
MILLS BUILDING

SKETCH FOR THE
VISTA DEL MAR.

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO LITH.

VOL. XIV. No. 8 AUGUST 1893.



To the Editor of the California Architect:

At a time when so much use is made of the Photographic method in the reproduction of drawings and the preparation of plates for the press, a glance backward may not be uninteresting in tracing the development of this process to its present state of perfection. To Mr. Joseph Dixon of Salem, Mass., the founder of the Joseph Dixon Crucible Co. of New Jersey City, N. Y., belongs the credit of this invention. His first experiments in this line were made at Salem, and so successful was he in reproducing a bank note that the bank officials declared it a genuine bill. Mr.

society, the process was announced as a recent English discovery; but Mr. Edward Everett of Boston, then United States Minister to the Court of St. James, at once claimed the invention as having been made in this country by Mr. Dixon; as positive evidence to this fact he showed the reproduction of a Latin manuscript with his own autograph and date, thus establishing the claim without a shadow of a doubt.

A. H. E.

DESIGNS ACCEPTED FOR MID-WINTER FAIR.

THE executive committee of the California Mid-Winter Exposition, has made the following choice of designs for the exhibition buildings:

Manufacturers and Liberal Arts, the plans of A. Page Brown. Mechanical Arts—Edward R. Swain. Agricultural and Horticultural—Samuel Newsom. Fine Arts—



Peabody, of the same place, when shown this result, was so convinced of the danger of this discovery, if the process became generally known, and fearing it might be applied for fraudulent purposes, he induced Mr. Dixon to go before the Massachusetts Legislature for the purpose of having a law passed that all bank notes should be printed in colors to prevent reproduction by the photographic process.

Mr. Dixon appeared before a committee of the Legislature, who evidently did not favor the measure; the chairman after hearing Mr. Dixon, remarked: "Well, Mr. Dixon, you tell us that no one but yourself and Mr. Peabody know of this process?" "Certainly," replied the inventor. "Then sir we shall look to you and Mr. Peabody if any counterfeit bills appear."

This naturally angered Mr. Dixon and he resolved to publish the process and accordingly prepared an article for the *Boston Daily Advertiser*. On his way to the office he met a gentleman in Park street and informed him of his purpose. The gentleman said: "Mr. Dixon, you are naturally angry now, give me the manuscript, if you want it to-morrow after thinking the matter over, I will return it at your request."

Mr. Dixon told the writer of this article of the incident and added, "I never called for it and the manuscript may be in his keeping now."

Some years after this event, at a meeting of some scientific

C. C. McDougal. The decision has yet to be made in regard to the Administration Building.

Ground will be broken on Thursday, August 24th, and the energy displayed and the enormous amount of preliminary work already accomplished afford the most satisfactory evidence that the great project will be made a great success. It only remains for the public at large to say how great a success.

TENDERS TO BE RECEIVED.

Treasury Department, Office Supervising Architect, Washington, D. C., July 25th, 1893. Sealed proposals will be received at this office until 2 o'clock p. m. on the 30th day of August, 1893, and opened immediately thereafter, for all the labor and materials required to put in place a complete Heating and Ventilating Apparatus in the U. S. Post Office, etc., Building at Sacramento, Cal., in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at Sacramento, Cal. No convict labor nor the use of any product of convict labor will be allowed in this work.

Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid, if it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes sealed and marked, "Proposal for Heating and Ventilating Apparatus at the U. S. Post Office, etc., Building, Sacramento, Cal.," and addressed to

Jeremiah O'Rourke,
Supervising Architect.

NOTICE OF MEETINGS.

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

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
 C. E. GRUNSKY, Pres. CHARLES D. MARY, Vice-Pres.
 OTTO VON GELDERN, Sec. GEO. F. SCHILD, 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.

THE regular monthly meeting of the chapter was held on Friday evening, August 11th. The nomination of officers was postponed till next meeting.

The following communication was received from the Architectural Association of Southern California, and a committee of three, consisting of Messrs. Babson, Bestor and Curtis was appointed to confer with the committee from the Southern Association:

LOS ANGELES, CAL., July 26, 1893.
 TO THE SAN FRANCISCO CHAPTER
 AMERICAN INSTITUTE OF ARCHITECTS,
 MR. OLIVER EVERETT, SECRETARY.

Dear Sir:—At a meeting of the Architectural Association of Southern California, held on the fifth day of July, it was resolved that a committee be appointed to confer with your association with a view of securing, should it meet its approval, the incorporation in the by-laws of both societies, rules governing the submission of drawings in competition for public and private works, in order that there may be uniformity of practice by architects throughout the State.

It is certain that the manner in which architectural competitions are generally conducted, securing as they do to public committees and too often to private individuals, elaborated drawings from architects of acknowledged ability, utterly without compensation, is one of the most serious evils with which we have to contend, having a tendency to cheapen all architectural services in public estimation.

Believing that concerted action by our respective associations, making it imperative on members to refuse submission of drawings except under the rules common to both will greatly advance the practice of our profession, we respectfully request you to submit this communication to the Chapter at the earliest convenient opportunity.

T. A. EISEN,
 A. WACKERBARTH, } Committee.
 A. B. BENTON.

"What's the matter, old man?" "Oh, I've just had a quarrel with my wife." "Well, forget and forgive." "I never can forgive her. You see I was in the wrong." "Then, in that case, demand an apology."—*Brooklyn Life*.



MODERN HOUSES—A new publication by J. Cather Newsom, architect, show a variety of modern residences designed with special reference to the requirements of California. The selections embraces a great variety of styles from the plainest to the most elaborate finish, and the different arrangements shown on the plans, will be of interest to those intending to build. Price \$2.50, for sale by Osborn & Alexander.



\$1800 COTTAGE.

THE STUDIO, an illustrated magazine of fine and applied art. Published at 16 Henrietta St., Convent Garden, London.

This charming and truly artistic magazine cannot fail to please the art student as well as all lovers of the beautiful. The opening article in the July number entitled "Artistic Gardens in Japan" by Charles Holme, will be found very interesting, and illustrated with some charming bits of landscape. The "Leek Embroidery Society" will interest the ladies; while "The Art Magazines of America" will please the general reader.

THE PHOTOGRAPHIC TIMES—This excellent journal devoted to the art, science and advancement of Photography, comes to hand for July, under the heading of "Convention Number" with a charming portrait of H. R. H. the Princess Eulalia, said to be the best photographic portrait which her Royal Highness has had made in this country. The July issue is a double number containing twenty-four pages, but hereafter the regular issue will be increased by just one-third the present number of pages, and will contain sixteen pages instead of twelve.

EXTENT OF RECOVERY ON MECHANICS' LIEN.—In an action to foreclose a mechanics' lien it appeared that both parties had abandoned the contract when the house was partly built, and before the contractor had been paid anything, and that thereupon the owner had torn down the building and rebuilt it, using the same materials. The contractor was entitled to a lien for the value of the materials furnished by him, less the cost of tearing down the building.
 Charlton v. Scoville, Supreme Court of N. Y. 22 N. Y. Supp. 863. 76.

ABANDONMENT OF CONTRACT.—Where a building contract provided that if the contractors should fail to perform the contract in any particular, and the architect should so specify, the owner might give them three days' notice to perform, and in case of their refusal to do so within that time, the owner might terminate the contract. The architect having certified that the work was not being done according to the contract, the owner notified the contractors to remove their labor and materials, and to provide such materials as were called for in the specifications, and at the same time notifying them that he should terminate the contract, and taking from them the plans and specifications, the owner thereby abandoned the contract.
 Charlton v. Scoville, Supreme Court of N. Y. 22 N. Y. Supp. 884. 127.

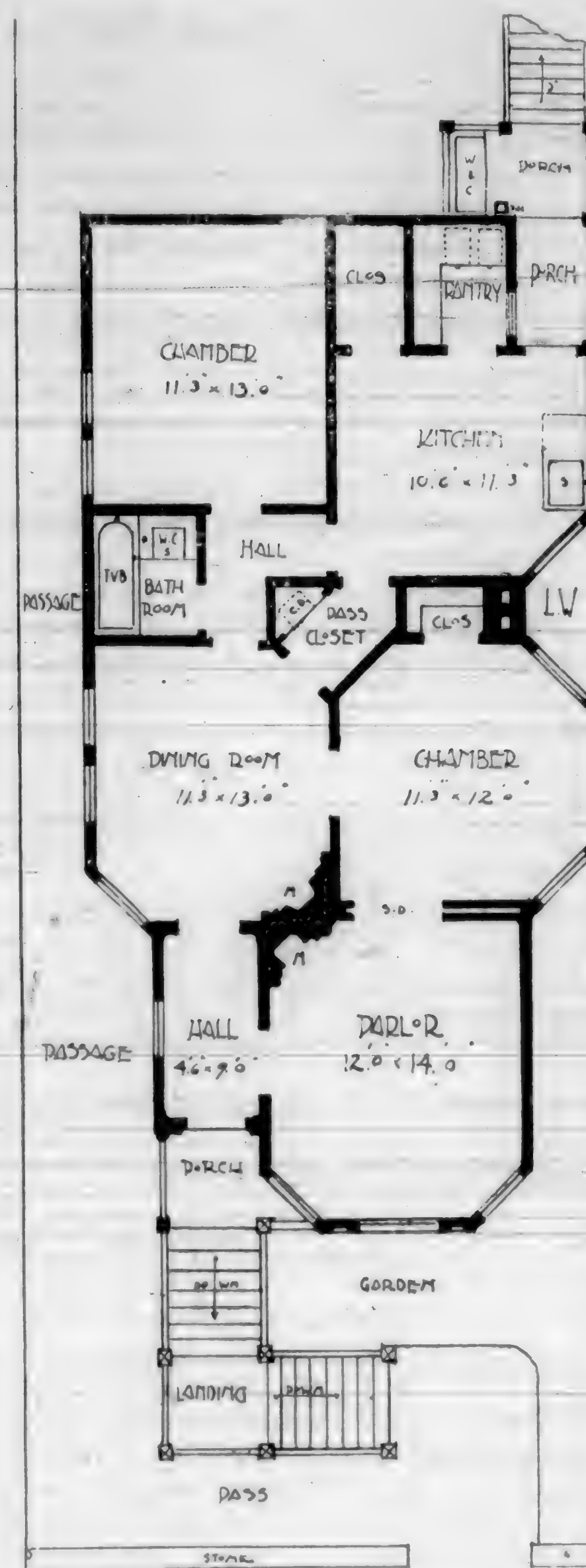
PARTY WALL AGREEMENT.—The easement of an adjoining lot owner created by a party wall agreement ceases when the wall becomes unfit either from age or accident. The provision in a party wall agreement that the rights of the parties shall continue so long as the wall shall stand, does not mean so long as any portion of the wall shall remain itself, but so long as the wall shall remain fit for use as a party wall, and therefore it does not violate a provision in the agreement that no perpetual right or easement shall be thereby acquired.
 Odd Fellow's Assn. v. Hegels, Supreme Court of Ore. 32 Pac. Rep. 679. 97.

ACCEPTING NOTE NOT A WAIVER OF MECHANICS' LIEN.—Where an agreement that where the work is properly done and the materials furnished, the owners were to give a note at three months from the date thereof, on the 20th of January the work was completed, and accepted by the owners. On the 12th of January they gave their note for a part of the contract, and on the 21st of January, another note for the balance due. The acceptance of the owner's note for materials furnished by the material man is not a waiver of his lien.
 Jones v. Morris, Supreme Court of N. Y. 22 N. Y. Supp. 53. 92.

MECHANICS' LIEN ON LAND UNDER CONTRACT OF SALE.—Where a contractor repaired a house at the request of an intending purchaser, who as the contractor knew, had only an oral contract or an option to purchase, and he was not misled by the owner, who did nothing to prevent the intending purchaser from acquiring title under his contract, he cannot claim a lien on the property as against the owner. He could acquire nothing by the foreclosure of his lien, except the right to be subrogated to the privilege to purchase the property, and they could not obtain that relief until he had tendered the amount which he was bound to pay to establish his right.
 Thomas v. Ellison, Supreme Court of Ark. 22 S. W. Rep. 95. 111.

MECHANICS' LIEN ON BUILDING ON LEASED GROUND.—Where a lease of land contains no permission or provision giving the lessee, the right to construct any building or to put any machinery on the land, the land cannot be held for a mechanics' lien for a building erected by the lessee on the ground that the owner consented to its construction, since he was not in possession of the premises, and had no power either to dissent from or consent to such construction. The fact that the owner participated slightly in the construction of the building is not proof of such consent, when it appears that he was acting as agent of the company which had leased the land.
 Havens v. West Side Elec. L. & P. Co. Supreme Court of N. Y. 20 N. Y. Sup. 764. 108.

VIOLATION OF BUILDING RESTRICTIONS.—A clause in a deed of a lot prohibiting the erection thereon of any buildings other than dwellings with necessary out-buildings, such dwelling to cost not less than \$2000, is violated by placing a tent on the lot, costing less than that sum, and used by the grantee and his family in the summer time as a dwelling, though they do not sleep therein. Since no dwelling house was erected on the lot by the grantee, a stable placed thereon cannot be placed thereon as a necessary out-building.
 Blackmore v. Stanley, Supreme Court of Mass. 33 N. E. Rep. 689. (92.)



PLAN OF \$1800 COTTAGE.

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.

MODIFICATION OF BUILDING CONTRACT.—Where one contracts to complete a house, ready for occupancy, within sixty days, according to plans which do not require the finishing of the second story and putting on the last coat of paint, the effect of a subsequent contract made after the sixty days have expired, to do the additional work, for an extra payment, is to waive the original stipulation to complete the work at a certain time, and substitute a stipulation for completion within a reasonable time.
 Cornish v. Suydam, Supreme Court of Ala. 13 Sup. Ct. Rep. 148. 80.

DECISION OF ARCHITECT IN BUILDING CONTRACT.—Where a building contract provides that the work shall be done to the satisfaction of the architect, and that any dispute as to extra claims shall be referred to him, and that his decision shall be final, it is error, in an action by the builder on the contract, to refer to the jury such questions as to extra work and the performance of the contract, in the absence of evidence of fraud, or if the question of fraud is not submitted to the jury.
 Guthat v. Gow, Supreme Court of Mich. 55 N. W. Rep. 442. 82.



A HOUSE ON A TREE.

ABOUT sixty miles from the mouth of the Escondido is situated one of the most curious habitations in the world. It is a house built on the top of an enormous lignum vitæ tree. It is the home of Captain Henry Wildersen; a former Louisiana planter, who selected this remote and isolated habitation as his home several years ago. The tree is nearly six feet in diameter, and grows on a bluff overlooking the Rama River, a branch of the Escondido. At about fifty feet from the ground a platform about thirty feet square has been built, supported by diagonal braces, and this serves as the foundation of a rather pretty cottage painted white, with green shutters, and boasting a veranda in front and an observatory above the roof. The diagonal braces are boxed in, and in the inverted pyramid thus formed is the kitchen and storerooms. The upper story is nicely furnished. Access from the ground is gained by means of an elevator resembling a "dumb-waiter," so balanced that a person can easily raise himself by pulling on a rope.—*Philadelphia Ledger*.

A RAPID UNDERGROUND TRANSIT.

MESSRS. Walker & Kimball, of Boston, have made a valuable suggestion for a rapid-transit sub-way for that city. They have, perhaps first among those who have treated the subject, fully adopted the system of underground travel, and propose to excavate the whole width of Tremont street, covering the excavation with concrete vaulting, decorated on the underside with white glazed tiles. In the middle of the space would be two tracts for express trains, sunk below the general level, and the tracts for accommodation trains would run on each side, while a wide platform would occupy the space between the accommodation tracts and the fronts of the buildings on each side, the basements of the stores being fitted up for retail trade, and opening on the platforms, these constituting a continuous sidewalk. The scheme resembles that of the Arcade Company for a Broadway road; but with several improvements, both in construction and arrangement. Messrs. Walker & Kimball provide access to their express tracts by tunnels under the accommodation tracts, and stairways up to the stations, bridges being thrown across the express tracts, to provide communication between the upward and downward accommodation tracts. Of course, the whole structure would be brilliantly lighted by electricity, and those who have seen a modern first-class underground establishment, such, for instance, as the Subterranean Cafe in the Equitable Building in New York, will not need to be told how attractive it may be made.—*American Architect and Building News*.

BUSINESS MOSAICS.

Architects should not forget to specify the "Josson" and "North" brands of Portland Cements in their specifications for brick or concrete work. Every barrel guaranteed by the importers of it, Grace & Co., 203 California street.

Dissensions and bickering may occasionally occur within the Board of Lady Managers, though individually they are agreeable to a man.—*World's Fair Puck*.

Contractors will do well to call on the Pacific Coast Door Co. of 808 Bryant street near Fifth, for estimates for doors, windows and blinds. They also give particular attention to estimates on special work of all kinds. Do not forget them.

Husband—I think I shall go out and catch a few fish for our dinner to-morrow.

WIFE—No, Edwin, we must economize. Buy them of the regular dealer.—*Detroit Tribune*.

For flats there is nothing handier for the opening and closing of the front door than the Rischmuller Door Opener and Closer. Price \$15.00. All orders promptly attended to by Geo. Rischmuller, 934B Capp street this city.

When in need of Artistic Metal Work go to the San Francisco Novelty and Plating Works, corner of First and Mission streets, who make a specialty of this branch of their business, also gas and electric fixtures at manufacturers' prices. Gold, Silver and Nickel Plating of every description.

"Your picture of Columbus is anachronistic. You represent him as smoking when tobacco was not used."

"That's all right. He's smoking a cigarette.—*Detroit Free Press*.

We take pleasure in calling the attentions of Architects and Engineers to the very latest Patent Combination Architects' Level and Transit. This instrument is not only a great improvement over many now in use but also appears to be all that is required. It is made in the most substantial manner and a credit to the manufacturers, Messrs. Keuffel & Esser Company, for whom H. S. Crocker Co., 215-217-219 Bush street, are the agents.

The breaking weight of one foot of cast iron one inch square is 5781 pounds; the breaking weight of a piece of hickory of the same dimensions is 270 pounds.

We call attention to an advertisement in this paper of Mr. Albert Hansen, successor to M. & A. Hanson, who retired after a business career of seventeen years. The Pacific Planing Mill, Berry street near Sixth, is too well known in this vicinity to need any commendation from us, and we trust Mr. Albert Hansen will find plenty of new friends to add to the number of those of the old firm.

"Miss BLEECKER (describing a fire)—"The building was completely gutted."

MISS EMERSON (of Boston)—"Yes, thoroughly entrained."

Every building of any importance needs a fire hose reel for its protection. The Chapman Improved Fire Hose Reel is conceded to be one of the most simple, practical and efficient apparatus of its kind, and many a large building has been saved from destruction by the foresight of its owner in placing one or more of these reels in a building. Every machine is guaranteed by the maker, R. S. Chapman, 14 and 16 Front street.

One of the lost arts is the manufacture of malleable glass.

There is nothing so convincing as facts that are proved by experience. At the paper mills East Walpole, Mass., where "Neponset" is made, the red rope fabric can be seen in liberal use, testifying the confidence of the makers in their product, and exemplifying the ability of the fabric to demonstrate its own value. Not only is this fabric used in the protected methods recommended in architects' specifications, but without even the protection of a coat of paint it can be seen where it has been for years doing duty in the place of clapboards and shingles, exposed to the elements on the outsides of buildings used as storehouses and offices,

with perfect security to the merchandise and furniture, and entire comfort to the occupants within.

Dimmick & Low, 221 Front street, are the agents for this city where information will be cheerfully given of the merits of this favorite brand of water proof papers.

The door of the studio was flung open and she dashed wildly into the room, and seizing the unlucky photographer by his few remaining locks, shouted wildly: "How dare you, sir! How dare you insult me!"

"Insult you, madam? I am sure I ———"

"What is the meaning of that then, sir?" and she pointed to the notice on the back of the mount, "The original of this is carefully prepared."

It took him three weary hours to explain, and she left him a sadder and a wiser man.—*Photographic Times*.

Linerusta Walton is being extensively used at the present time in flats for wainscoting and gives to a room a most pleasing effect. For the latest designs go to M. M. Heineman & Co., No. 32½ Fremont street.

Mr. MCSWAT—"Have you packed your trunk yet, Lobelia?"

MRS. MCSWAT—"Not yet."

MR. MCSWAT (looking at his watch)—"Then you haven't any time to lose, the train leaves in exactly thirty-six hours." *Chicago Tribune*.

D. E. Condon, M. E., C. E., A. M. Inst. C. E., Consulting Engineer, 122 Geary street, room 1. Specialties: Accurate Calculations of Stresses and Strains; Safe Strength and Stability of all Structures in Iron, Steel, Masonry and Wood. See advertisement on page xxii.

CITY BUILDING NEWS.

Army near Church. Additions to buildings; owner, Margaret Walsh; contractor, Jas. E. Schulz; signed, July 5; filed, July 6; cost \$1,333.

Barclott Nos. 117 and 119. Two-story frame, four flats; owner, J. W. Popper; contractor, M. Linn; signed, July 8; filed, July 11; cost \$10,000.

Belvedere near Frederick. Frame building; owner, Amelia C. Rodriguez; architects, Pissis & Moore; contractor, Wm. Knowles; signed, July 24; filed, July 28; cost \$2,025.

Broadway near Buchanan. Alterations; owner, Lizzie J. Hemphill; architects, McDougall & Son; contractors, P. J. & M. Brennan; signed, Aug. 8; filed, Aug. 9; cost \$4,910.

Broadway and Mason. To build; owner, Catherine Mayer; architects, John & Balczynski; contractor, Peter Johnson; signed, July 18; filed, July 20; cost \$3,150.

Broadway between Octavia and Laguna. Addition to 2-story and basement; owner, James G. Burnett; architects, Piercy & Hamilton; contractors, C. A. Hooper & Co.; signed, July 27; filed, July 28; cost \$1,175.

Bryant near 28th. Cottage; owner, Josephine A. Wardwell; contractor, W. W. Rednall; signed, July 28; filed, July 29; cost \$1,900.

Capp street. Alterations and additions; owner, Mrs. Annie Smith; contractor, Geo. L. Marshall; signed, July 13; filed, July 15; cost \$895.

California near Jones. Cement work; owner, Geo. Whittell; architects, Coxhead & Coxhead; contractors, Chatain & Gillett; signed, Aug. 3; filed, Aug. 5; cost \$4,490.

California near Webb. Steam heating and ventilation; owner, S. E. Savings Union; architect, Wm. Curlett; contractors, A. Baumsteiger & Co.; signed, July 28; filed, Aug. 2; cost \$5,255.

Carl and Stanyan. To build; owner, H. Johnson; architect, J. B. Wuerschling; contractor, L. F. Fletcher; signed, July 5; filed, July 5; cost \$1,800.

Central Ave. near Washington. To build; owner, E. B. Spaulding; architect, Wm. Curlett; contractor, Jos. Norris; signed, June 28; filed, July 1; cost \$5,425.

Chestnut near Mason. Two-story frame; owner, Wm. Beckman; contractor, A. Guilbert; signed, July 12; filed, July 20; cost \$3,490.

City Hall Ave. Granite work for statuary; owner, Lick Estate; architect, F. Happersberger; contractors, Rocklin Granite Co.; signed, July 11; filed, July 17; cost \$17,025.

Clay near Broadway. All work to build; owner, W. S. Rainey; architect, T. J. Welsh; contractor, H. Jacks; signed, July 14; filed, July 17; cost \$1,910.

Clement near Ninth. To build; owner, Henry Verleger; contractor, Peter Johnson; signed, July 11; filed, July 18; cost \$1,580.

Dupont near Clay. To build; owner, Susan Crooks; architect, Chas. I. Havens; contractor, Jno. Furness; signed, July 6; filed, July 11; cost \$10,880.

Eighteenth near Sanchez. Two-story frame; owner, J. H. Lawson; contractor, Jas. Gabriel; signed, July 5; filed, July 6; cost \$3,200.

Ellis near Mason. Hydraulic elevator; owners, Y. M. C. A.; architect, A. Page Brown; contractor, John Hammond; signed, July 18; filed, July 18; cost \$4,650.

Fairmont near Palmer. A cottage; owner, Catherine Shepston; contractor, J. L. McLaughlin; signed, June 28; filed, June 29; cost \$1,100.

Fell near Laguna. Carpenter work, brick work and painting, etc.; owner, Mrs. Annie Haynes; architect, J. J. Clark; contractor, John G. Adams; signed, July 25; filed, Aug. 1; cost \$5,700.

Fell near Lyons. All excavating; brick work, lathing, plastering, plumbing, etc.; owner, A. B. Spreckles; architect, Chas. I. Haven; contractor, Peter Crichton; signed, July 24; filed, July 27; cost \$13,400.

Fell near Steiner. Grading and building; owner, Wm. Arthur Martin; architect, W. H. Little; contractor, C. P. Moore; signed, July 20; filed, July 28; cost \$4,425.

Filbert and Leavenworth. Three-story frame; owners, A. Glust and wife; architect, J. H. Littlefield; contractor, H. P. Hurlbut; signed, July 15; filed, July 18; cost \$13,462.

Fillmore near Felton. All work to build except brick work, plumbing and painting; owner, D. B. Faktor; architects, Martens & Coffey; contractor, I. Bucher; signed, July 24; filed, Aug. 1; cost \$4,819.

- Fillmore near Fulton. Ex. and brickwork; owner, D. F. Faktor; architects, Martens & Coffey; contractor, J. O. Sullivan; signed, July 23; filed, Aug. 1; cost \$784.
- Fillmore near Fulton. Carpenter, mill and stairwork; owner, A. Jungblut; architects, Martens & Coffey; contractor, J. Bucher; signed, July 24; filed, Aug. 1; cost \$4,787.
- Fillmore near Fulton. Excavations and brickwork; owner, A. Jungblut; architects, Martens & Coffey; contractor, J. O. Sullivan; signed, July 23; filed, Aug. 2; cost \$784.50.
- Fourth street. To build; owner, Ed. Laetler; contractor, Jos. Gabriel; signed, July 18; filed, July 23; cost \$1,500.
- Franklin near Pine. Two-story frame; owner, Chas. Schmitt; architects, Henriksen & Mahoney; contractor, James McLean; signed, July 23; filed, July 26; cost \$8,500.
- Franklin and Pacific. Alterations; owner, Henry Meyer; architect, J. E. Kraft; contractor, Geo. H. Lang; signed, June 18; filed, June 30; cost \$1,482.
- Francisco near Powell. Excavation, concrete and brick; owner, J. Schweitzer; architect, H. Gelfuss; contractor, J. O. Sullivan; signed, June 30; filed, July 5; cost \$1,324.
- Francisco near Powell. Two-story frame, 26 flats; owner, J. Schweitzer; architect, H. Gelfuss; contractor, A. Guilbert; signed, July 18; filed, July 21; cost \$16,500.
- Francisco near Powell. Plumbing two-story frame; owner, J. Schweitzer; architect, H. Gelfuss; contractor, W. J. Weeks; signed, July 18; filed, July 21; cost \$2,105.
- Francisco near Powell. Plastering two-story frame; owner, J. Schweitzer; architect, H. Gelfuss; contractor, Arthur O'Brien; cost \$2,087.
- Francisco near Powell. Painting two-story frame; owner, J. Schweitzer; architect, H. Gelfuss; contractors, J. Quadt & Co.; signed, July 18; filed, July 21; cost \$1,925.
- Golden Gate Ave. near Devisadero. Carpenter work, etc.; owner, John J. McElroy; architect, M. J. Welsh; contractor, Henry Rohling; signed, July 27; filed, Aug. 3; cost \$4,700.
- Golden Gate Ave. near Larkin. Additions; owner, Mrs. Eliza Magnus; architect, J. F. Kenna; contractors, Currie & Loomer; signed, July 28; filed, July 29; cost \$1,450.
- Green near Scott. Grading; owner, Martin O'Connell; contractor, Julian E. Carey; signed, July 24; filed, July 25; cost \$485.
- Hayes near Webster. Alterations and additions; owners, T. & C. Molloy; architect, C. J. I. Devlin; contractor, Daniel Powers; signed, July 5; filed, July 7; cost \$1,451.
- Hyde and California. Plumbing and gas-fitting; owner, F. Katz; architect, A. C. Latgens; contractor, Wm. F. Wilson; signed, July 23; filed, July 31; cost \$1,587.
- Hyde near California. Carpenter and plastering; owner, Fred Katz; architect, A. C. Latgens; contractor, F. V. Steinman; signed, July 1; filed, July 5; cost \$12,000.
- Jackson and Scott. To build; owner, Wm. H. Talbot; architect, Clinton Day; contractor, Peter Orlinton; signed, Aug. 7; filed, Aug. 9; cost \$38,000.
- J. near 8th Ave. All work to build; owner, Mary Free; architect, M. J. Welsh; contractor, James McOmaha; signed, July 20; filed, July 25; cost \$1,700.
- Jones and Filbert. Alterations and additions; owner, Chas. O. Rether; contractor, Geo. Weismann; cost \$5,255.
- Jones near Chestnut. Two-story frame; owner, J. F. Witzel; architect, W. Winterhalter; contractors, Saywell & Mackenzie; signed, July 12; filed, July 13; cost \$2,765.
- Lombard near Jones. Three-story frame; owner, Kate Juhl; architect, R. H. White; contractor, Jas. Campbell; signed, July 19; filed, July 21; cost \$5,000.
- Marine Hospital. Additions; owner, United States; contractors, McLean & McKay; cost \$2,340.
- Market near Church. Two-story and basement; owner, Godfrey Smith; contractors, Patterson & Person; signed, July 31; filed, July 31; cost \$3,685.
- Mason near Eddy. Tinning and iron work; owner, S. Silverberg; architects, Salfeld & Kohlberg; contractor, Jos. F. Forde; signed, Aug. 4; filed, Aug. 9; cost \$1,125.
- Mason near Eddy. Elevator work; owner, S. Silverberg; architects, Salfeld & Kohlberg; contractor, Wm. H. Birch; signed, July 18; filed, Aug. 9; cost \$3,710.
- Mason and Vallejo. Alterations; owners, Francesco Pagano & Cono Sabatino; contractor, Emanuel T. Picapo; signed, July 27; filed, July 31; cost \$1,300.
- Minna between 8th and 7th. Alterations and additions; owner, Mrs. M. Connell; contractor, T. R. Bassett; signed, July 27; filed, July 28; cost \$1,400.
- Minna near 3d. Three-story brick building; owner, Jean Rieu; architect, E. Depierre; contractors, Ewell & Barton; signed, July 8; filed, July 10; cost \$3,925.
- Mission Road. All work to build; owner, Jas. Comosky; architect, Ed. J. Vogel; contractor, J. F. Mullerick; signed, June 28; filed, June 29; cost \$2,290.
- Mission near 5th. An elevator; owner, Emma Lolor; architect, Chas. Geddes; contractors, W. H. Birch & Co.; signed, June 27; filed, July 1; cost \$1,755.
- Natoma near 8th. Three-story frame; owner, Jno. Hurley; contractor, Allen MacDonald; signed, July 6; filed, July 7; cost \$2,280.
- Ninth and Clementina. Carpenter work; owner, E. J. Fotheringham; architect, J. E. Kraft; contractor, C. P. Moore; signed, July 12; filed, July 19; cost \$8,700.
- Ninth and Clementina. Plumbing; owner, E. J. Fotheringham; architect, J. E. Kraft; contractor, H. Williamson; signed, July 12; filed, July 19; cost \$1,150.
- Ninth and Clementina. Brick and stone work; owner, E. J. Fotheringham; architect, J. E. Kraft; contractor, R. Ringose; signed, July 12; filed, July 19; cost \$1,950.
- O'Farrell and Bagley Place. Gas fitting, etc.; owner, Benj. Curtaz; architects, John & Balczynski; contractor, Wm. F. Wilson; signed, July 23; filed, Aug. 5; cost \$5,735.
- O'Farrell near Franklin. To build; owner, Richard Bunton; architects, Shea & Shea; contractor, Duncan G. Chisholm; signed, July 24; filed, July 26; cost \$5,672.
- O'Farrell and Bagley Place. Plastering on six-story brick; owner, Benjamin Curtaz; architects, John & Balczynski; contractor, Chas. Dunlop; signed, July 11; filed, July 13; cost \$3,475.
- O'Farrell and Bagley Place. Carpenter work on six-story brick; owner, Benj. Curtaz; architects, John & Balczynski; contractor, Adam Miller; signed, July 3; filed, July 3; cost \$27,500.
- O'Farrell near Franklin. Excavating and brick work; owner, Richard Bunton; architects, Shea & Shea; contractors, M. Fennell & Son; signed, July 8; filed, July 11; cost \$2,119.
- Pacific near Sansome. To build; owner, Antonio Chichiz; architect, Chas. I. Havens; contractor, John G. Adams; signed, July 28; filed, Aug. 2; cost \$14,450.
- Pine and Broadway. Moving, building and repairs; owner, Lizzie I. Hemphill; architects, McDougall & Son; contractor, Geo. Davis; signed, July 16; filed, July 17; cost \$1,700.
- Post near Lyon. Alterations and additions; owner, G. S. Olsen; contractor, G. G. Gillespie; signed, July 10; filed, July 11; cost \$2,900.
- Ritch and Harrison. Alterations; owner, E. B. Vreeland; architects, Townsend & Wyneken; cost \$6,000.
- Santa Clara near Florida. All work to build; owner, Jno. Hannavan; contractor, F. M. Schweizer; signed, June 23; filed, June 23; cost \$2,230.
- San Jose Road near Onondago Ave. Two-story frame; owner, David Ferullo; architect, Chas. M. Rousseau; contractor, Louis Cereghino; signed, July 24; filed, July 25; cost \$2,534.
- Sanchez and 14th. Three-story frame; owner, Charles F. Selk; architects, Martens & Coffey; contractors, Schutt & Kreckler; signed, Aug. 3; filed, Aug. 4; cost \$4,535.
- Second street. A salt water intake; owner, Edison L. & P. Co.; architect, T. H. MacDonall; contractors, Healy, Tibbets & Co.; signed, July 7; filed, July 19; cost \$7,300.
- Stockton street 119. Building brick house; owner, Stefano Arata; architect, H. Pauls; contractor, J. F. Hills; signed, Aug. 9; filed, Aug. 9; cost \$1,675.
- Turk near Scott. Two-story frame; owner, Jeremiah Manning; contractor, J. J. Manseau; signed, July 18; filed, July 18; cost \$3,600.
- Turk and Larkin. Painting; architects, Coxhead & Coxhead; contractor, James W. Reinfield; signed, Aug. 4; filed, Aug. 8; cost \$1,007.
- Twentieth near Valencia. Two bakers ovens; owners, Frank & Begetta Laub; architects, Martens & Coffey; contractor, Chas. C. Krelling; signed, July 27; filed, Aug. 2; cost \$1,100.
- Twentieth near Valencia. Carpenter, mill and stair work, painting and plumbing; owners, Frank and Brigitta Laub; architects, Martens & Coffey; contractor, F. Weiroth; signed, July 24; filed, July 27; cost \$5,200.
- Twenty-third near Eureka. To build; owner, John Conly; architect, Wm. Mosser; contractor, Wm. Heibing; signed, July 17; filed, Aug. 3; cost \$3,000.
- Twenty-fourth and Mission. Three-story frame; owner, Mrs. Geo. Sweetser; architect, S. Hatfield; contractor, Allen McDonald; signed, July 11; filed, July 15; cost \$3,290.
- Twenty-fifth street 1413. Alterations and additions; owner, Louis Finberg; contractor, H. R. Schmuckert; signed, July 23; filed, Aug. 3; cost \$770.
- Twenty-sixth and Mission. Artificial stone work; owner, Emma L. S. Mangels; architect, H. Gelfuss; contractors, Cump & Curillon; signed, July 5; filed, July 7; cost \$1,100.
- Vallejo near Kearny. Alterations and additions; owner, Thos. Poggie; architect, E. Depierre; contractor, John Dyar; signed, June 28; filed, June 30; cost \$340.
- Waller and Belvedere. Plastering five houses; owners, Cook, Smith & Hinkle; architect, Ed. Burns; contractor, Andrew Flood; signed, July 14; filed, July 14; cost \$1,413.
- Waller near Fulton. All work to build; owner, National Bottling Co.; architects, John & Balczynski; contractor, Chas. Hippely; signed, July 18; filed, July 21; cost \$3,025.
- Waller near Devisadero. Alterations; owner, W. W. Grissim; contractor, John L. Larenzen; signed, July 20; filed, July 21; cost \$2,225.
- Washington near Franklin. To build; owner, A. G. Booth; architects, Smith & Freeman; contractor, L. H. Kent; signed, June 27; filed, June 30; cost \$4,275.

ALAMEDA COUNTY.

- Alice and 3d, Oakland. Alterations; owner, Mary A. Surryhue; contractor, Chas. Riedel; signed, July 10; filed, July 11; cost \$1,585.
- Bartlett Tract, Alameda. To build; owner, I. L. Van Brunt; contractors, A. W. Pattianni & Co.; signed, July 28; filed, July 31; cost \$2,360.
- Bray Ave. near 19th street, Fruitvale. To build; owner, Seraphie Lampe; architect, Brother Adrison; contractor, T. R. Bapett; signed, July 12; filed, July 14; cost \$12,942.
- Filbert and 32d, Oakland. Cottage; owner, Mrs. F. Jacobs; contractor, P. J. Brophy; signed, Aug. 3; filed, Aug. 3; cost \$1,436.
- Ninth and Jackson, Oakland. To build; owner, Rufus Smith; architect, J. Conant; contractors, Cadwell & Nickerson; signed, July 10; filed, July 11; cost \$4,023.
- North addition to Brooklyn, lot 42 and 53, block 67. To build; owner, C. B. Foote; architect, J. Conant; contractor, A. W. Cornelius; signed, July 7; filed, July 10; cost \$3,057.
- Paru near Clinton Ave., Alameda. To build; owner, P. B. Ladd; contractors, R. & W. H. Weeks; signed, July 12; filed, July 14; cost \$2,718.
- Taylor Ave. and McPherson street, Alameda. To build; owner, Eliz. Rodenbeck; architect, C. S. Shanner; contractor, T. F. Fennell; signed, June 7; filed, July 11; cost \$1,780.
- Villa Lots, Berkeley. Two-story frame; owner, N. L. Freese; contractor, J. W. Budenbecker; signed, July 10; filed, July 11; cost \$2,460.

The California Architect and Building News.

Copyrighted 1893, by the California Architectural Publishing Company.

OFFICE, 408 CALIFORNIA STREET,

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

VOLUME XIV.

SEPTEMBER 20th, 1893.

NUMBER 9.

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

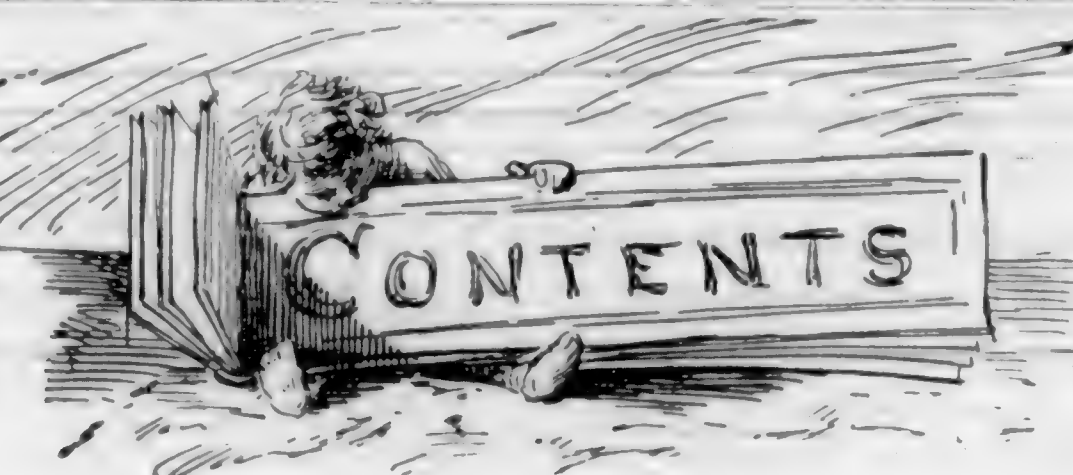
Published on or about the 20th of each month by The California Architectural Publishing Company. The Stockholders being Architects and others interested in the profession.

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

ESTABLISHED 1879. NOW IN THE FOURTEENTH YEAR. INCORPORATED 1889.

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

Remittances should be in the form of postal orders, payable to THE CALIFORNIA ARCHITECTURAL PUBLISHING COMPANY, and all communications addressed to the office of the Company, 408 California Street, San Francisco, Cal.



Index to Advertisers.....	VI
Architects and Their Specifications for the Electric Light Wiring.....	98
The Slate Industry of California.....	99
Are California Homes as Healthful as They Should Be?.....	99, 100, 101, 102
Illustrations.....	102
An Invalid's Room.....	103
Notices of Meetings.....	104
The New City Hall Tower.....	104
Notice to Architects.....	105
Books and Periodicals.....	106
Legal Decisions.....	106
Business Mosaics.....	107
Building News.....	108

MR. H. T. Bestor, one of our most experienced architects is now on his way to visit the World's Fair along with the Veteran Firemen's Association. Mr. Bestor is one of the directors of the CALIFORNIA ARCHITECT AND BUILDING NEWS and has been such since its incorporation four years ago. We wish him *bon voyage* and a safe return.

WE regret to see that no steps are being taken to start work on the new Post Office that San Francisco has so long needed. It is too bad that political influence should hinder the well being and progress of this city. The Post Office is needed and needed badly; the work it will make for idle mechanics is also needed badly, and there exists no valid reason why the two needs should not be satisfied.

If the citizens of this city had enough public spirit to act and act vigorously, when occasion required, and did so, there would not be half so much complaint about hard times. Now is the time to make an energetic protest for this public improvement. Let us knock for recognition; if that hint is not enough, let us kick for it, and kick hard enough to be heard.

THE Board of City Hall Commissioners have re-considered their action in adopting the design of an Octagon tower for the New City Hall, and have accepted a design prepared by their architect, Mr. Frank Shea, which if executed according to the present intention of the Board, will crown the building with a circular dome; as soon as the drawings are finally completed, we will, with the architect's kind permission, publish such of them as will give a clear idea of the solution now arrived at.

In the mean time we publish in another column the report on the vexed and much discussed problem, that was prepared several years ago by the San Francisco Chapter of the American Institute of Architects, at the request of the Commissioners who had charge of the works at that time.

The present state of affairs substantially justifies the conclusions that were reached by the chapter, after a most careful and painstaking study of the problem, and after lapse of

many years and the rejection of many designs, the recommendations that the chapter made have been followed, and we think the public will, when they have the opportunity of judging the completed structure, be satisfied with the decision reached.

In this regard we desire to call the attention of the Commissioners to a suggestion made by Mr. Pissis, one of the committee who prepared the report in question, who pointed out the value of a model, constructed to scale, of the existing portions of the building on which could be illustrated in miniature the effect of any subsequent proposed modification or additions to the buildings, giving opportunities to judge of the effects that would be produced from the various points of view, and enabling a more correct judgment of these effects to be had than could be obtained from any number of perspective drawings, however carefully executed.

Such a model would prove invaluable in case the question of completing the buildings with the mansard roof, shown in architect Laver's original design, should ever be seriously brought up. To satisfactorily solve this question of a mansard roof, will require quite as much study as has been expended on the problem of designing a suitable tower.

WE present our readers this month with the accepted designs for the five principal buildings that will house the California Midwinter International Exposition, to be held in San Francisco, California this coming winter—as well as some that received the second prize.

The idea of having such an institution in the winter season is a novel one, and one of the main purposes of the originators of the project, is to show the world at large that we possess a climate that will admit of such an innovation upon accepted precedents.

The managers of the Exposition have adopted a set of designs that will do us credit, and our architects have shown that they are fully able to meet such an emergency as that requiring the hasty production, on short notice, of creditable sets of plans for a style of buildings with requirements differing entirely from the customary routine of an architect's duties.

The contracts for the two largest buildings have been awarded and work on them will be begun this month.

On the first of next January the Exposition will be opened to the public and California will show what she can do on short notice.

ARCHITECTS AND THEIR SPECIFICATIONS FOR ELECTRIC LIGHT WIRING.

W. E. ALLEN.

THE little importance which Architects attach to the wiring of their buildings for electric lighting, and the loosely gotten up specifications for this class of work, is a matter of regret to every electrical contractor who desires to see the standard of wiring raised to where it should be—as near an ideal system as is possible.

The Pacific Insurance Union, have issued rules which regulate the manner in which work shall be done, also the kind of material to be used, so it is not necessary for the Architect to go into these details, all contractors know that "switches and cut-outs must be double-poled and have in-

combustible bases," they know that the work must be done according to these rules in order to secure the certificate of inspection from the Pacific Insurance Union; yet the general run of specifications are made up of these details, and no attention is paid to what is of paramount importance, and without which, no reliable estimate can be made, that is, an accurate set of plans showing the location of each cut-out cabinet, the circuits running from these to the lamp terminals, the length of each circuit, the size of wire, location of switch out-lets, and the number of lamps to each out-let.

The loss of potential should be figured out in such a manner that the most economical results, in the working of the system may be obtained; this can only be done by one who has, both a theoretical and practical knowledge, of what is required in each individual case. It is impossible to make one set of specifications fit all buildings, as the distribution of losses is entirely different in buildings used for different purposes, a difference of fifty feet in the position of the centre of distribution may entirely alter the location of risers, and may entirely change the cost of the installation several hundred dollars.

Another point of importance which is almost invariably overlooked is the leaving of chases in the walls of brick buildings to carry the wires for floor distribution and for mains; the location of such chases should be carefully considered with reference to lateral openings. Architects leave chases for the plumber and gas-fitter, why not for the electrician? They could be left at a small expense while the walls were being built, but if the contractor has to devote days to drilling brick or stone walls, it necessarily adds considerable to the wiring contractor's bid.

Of no less importance is the position of all out-lets and the number of lights per out-let, since this determines the number of circuits, the length and sizes of tap lines, the method of running the circuits, the number of cut-outs, and the amount of labor involved.

From the foregoing it will be seen that the Architect should make ample provision for the wiring of buildings; we do not think that Architects, as a rule, are sufficiently educated in electrical matters to be able to understandingly make a set of specifications for this class of work and see that they are complied with, he should, therefore, employ some successful engineer to attend to the electrical part of the buildings, this will be much more satisfactory to the electrical contractor, being assured that intelligent provision has been made for his work, he can afford to charge much less for same.

THE SLATE INDUSTRY OF CALIFORNIA.

THE fact that there is a growing demand on the Pacific Coast for Slate Roofing cannot be questioned. In view of this, it is but fair that our journal, published in the interest of the building industry, as well as all materials used in the construction of buildings should at this time present a few facts concerning a material which in the Eastern States as well as Europe is used almost exclusively for covering roofs. Our earliest building on this coast was of such a temporary character that no thought was given to how long the roof covering would last. The cheapest (first cost) most convenient material at hand, would be selected and on it went. In a year or two if the roof leaked on went another, or the old one was patched up to try and outlive another winter. In a few years the roof had cost twice as much as

would have covered it, in the first instance, with a material that nature has given us and which will not wear out for many years. Yet to bring slate from the east meant a very expensive roof, and only a few could afford to use the material. Not so to-day for the opening of the Slate Quarries of El Dorado County in this State, has put the material within the reach of everyone. Again we have entered a new era in the building line. Our architects are being called upon to design structures composed of steel, iron, brick, terra-cotta and stone; and such as will compare with any buildings in the world. This is what is causing a demand for slate. Our architects, if allowed, will have a material on the roof that will be in keeping with the rest of the building. The earliest use of slate for covering roofs (of which we have any record) was in the twelfth century. The Old Castle of North Wales at Carnarvon and Conway, were covered with slate. Also the Castle at Augers, France, built in the vicinity of the slate beds that are now being largely quarried under-ground. When Edward I. visited the copper mines of Drwysyeld in North Wales, he stayed at a house in Nantlle, roofed with slate. On the mountain slopes of North Wales on several of the slate ranges are traces of old workers, and the tracks along which they carried the slate on their own backs, or the backs of their horses, are still discernable and form part of many a mountain path. In an Ode written by a Welsh poet in the year 1570, we find the first mention of the Penrhyn quarries. The Bard Sion Tudor asked the Dean of Bangor for a load of slate from the Caehier quarry. The Aberllefenni quarry is as ancient, for an old timbered house is said to have been covered with slates from the quarry in the days of Queen Elizabeth. About the same time the slates from the De la Bole quarries in Cornwall had attained considerable repute. Carew writing in 1602 describes them as, "in substance thimble, in color faire, in waight light, in lasting strong, and generally carrieth so good regard as (besides the supply for home) great store is yearly conveyed by shipping both to other parts of this realm, and also beyond the sea into Britaine and "Netherlands." Speaking of the same quarry in 1758, Borlase writes that for its lightness and enduring of weather it is generally preferred to any slates in Great Britain. He describes the great quarry as in his time 300 yards long, 100 yards wide, 80 yards deep. It is evident from the size of the quarry that a considerable quantity of slates had at that date been extracted from it.

The growth of the slate trade in Europe within the last twenty-five years has been something enormous, and may be spoken of as one of great prosperity. Limited only by the ability to supply the demand. Merchants there are ready to contract for the whole out-put of good quarries. Aside from this during the year 1892, New York alone exported to the British Isles 2,122,065 roofing slates; notwithstanding the great number of quarries in operation in Wales and the thousands of men employed in the production.

In the United States we have the following states which are producers of slate: Main, Vermont, New York, Ohio, Georgia, Pennsylvania and California. It would take up too great a space to go into details and treat the vast business done in these different states in roofing slate alone. We will however note two as an example. Our Vermont company last year produced 20,152,719 squares and their shipments amounted to 10,299,724 squares. Another company in Pennsylvania shipped from their quarry from eleven to sixteen car loads daily, twenty tons each equal to sixty squares of slate to the car. During the year 1892 the total

tonnage shipped from the counties of Lehigh and Northampton amounted to 172,000 tons of roofing slate, a little less than 9,000 car loads of twenty tons each.

Until a few years ago all the slate used on the Pacific Coast came from the east, to-day the county of El Dorado supplies most of the slate used here (at least in California). In our issue of two months ago we described the quarries of this county which seems to be the only deposit in this state that could be used for roofing; where there is deposits of what is called slate in other counties it is not such as could be used for roofing. The material for this purpose must have good cleavage qualities, or rather be such as will allow of its being split into sheets, however it is not the process we wish to deal with, sufficient it is to say that California produces a slate of such quality and color as will compare with any produced in the world, and the same can be bought for one-half the cost of eastern slate landed here. The fancy colored slate is fast going out of use, the demand being for black slates, and rightly so, for nothing can be more handsomer than a plain black roof, particularly for our modern style of architecture.

A roof strong enough for shingles will hold slate. It is fire-proof, and when laid properly the elements have no apparent effect. It will not absorb water, nor hold snow. There is many instances where slate has been taken from a building on which it has been for seventy-five to a hundred years and re-laid on another.

Assuming the life of the various kinds of roofing to be as described in the following table, it will be seen that while the first cost of slate is somewhat greater than other materials, it has a very great advantage at the out come:

Material	Original Cost per Square or 10 x 10 feet	Life	Average Cost per Annum
Slate	\$10.50 to \$11.00	100 years	10.5-100 or 10.10-100 cents
Tin	8.50 " 9.00	15 "	56.2-3 or more "
Corrugated Iron	8.00 " 8.50	10 "	80 " " "
Shingles	4.00 " 5.00	12 "	33.3-3 " " "
Boards	2.00 " 2.50	8 "	25 " " "

In above estimates we have made no allowance for painting of the tin, iron or shingles, if these materials are not painted regularly and well, they will not last the time given.

To the owner or landlord no portion of a building is so great an expense to keep in repair as the roof, nor so great an annoyance to a tenant as a leaky one. Slate is always sold by the square which is 10x10 feet or 100 superficial feet. Let us have more slate roofs on this coast and the result will be that we shall have fewer fires, cooler houses in summer, warmer in winter, and last but not least, less expense for repairs.

ARE CALIFORNIA HOMES AS HEALTHFUL AS THEY SHOULD BE?

BY MARSDEN MANSON, C. E.; Ph. D., MEM. TECH. SOC.

[Read May 19, 1893.]

THIS question must be answered in the negative, for the prevalence of filth diseases* in city, village and country homes in California, in the presence of natural conditions which are a guarantee of the purest health, forces the conclusion that we are not maintaining the healthful conditions which naturally exist. There is, therefore, every justification for a rigid inquiry into the causes which produce and propagate filth diseases, and the use of plain words in laying

*The writer prefers the term *filth disease* to the more frequently used term *zymotic disease*. The former more plainly expresses the true cause of much sickness, which, when fully appreciated, suggests the proper remedy—cleanliness.

the facts bare. The threatened visitation of that most frightful of all filth diseases, Asiatic cholera, further accentuates the propriety of bringing up the subject of cleanliness—not only as to person—but in the broader and equally important application to water, food, air and surroundings.

The causes and conditions which propagate many filth diseases have been considered so subtle that an investigation of them is oftentimes regarded as super-technical and impracticable until too late, when their track is plainly marked in the health reports and death list. The simple and rigorous methods of analysis which microbiology brings to the aid of chemistry, makes the detection of the cause and course of filth diseases absolutely certain.

The particular microorganisms which produce certain of these diseases are as well known as are the symptoms; they are traced from patient to patient through the water, food, or clothing with a certainty, which if generally known, would make every intelligent human being an expert in sanitation. They are multiplied in favorable places and under favorable conditions with a degree of rapidity which would poison a continent in a few weeks with the developments of a single germ. It is therefore necessary to discuss these facts in plain words, and to bring them not only before the physician and the civil engineer, but to the very children in the school house. The complete following up of the study thus inaugurated involves one of the deepest problems of modern science, namely, how to treat small areas so as to permit them to be densely populated without impairing the natural healthfulness, and even to remove natural conditions inimical to healthful occupation.

All the sewers, all the water works, all the heating and ventilating contrivances ever built, have been attempts, more or less successful, to solve this great problem or to remove the fatal consequences of failing to provide proper sanitation at the outset. It therefore becomes necessary for municipal officers to employ the most honest means and the highest talent in planning and constructing every detail of municipal engineering, and to leave no part to the charge of either the ignorant or the grasping. Such large portions of the population of all cities are either ignorant or unmindful of their surroundings that special efforts must be made to force sanitation upon them; not only for themselves, but for the sake of those who are forced to partake of the consequences of witless or vicious self-neglect.

THE CONDITIONS IN THE COUNTRY.

The duties of the writer have called him to many parts of the State, and the natural conditions have been a matter of close observation and study for many years. It may be said that no filth disease naturally prevails in California, except chills and fever in certain low lands in the great valley, and in similar localities elsewhere. Yet in these localities the disease is easily escaped by avoiding the use of surface water. This fact was first brought to the writer's notice some fifteen years ago by Colonel Mendell of the Engineer Corps, of the U. S. A., and has since been closely followed up and observed in numerous localities.

In traveling through the great valley of California, the close observer is frequently struck with the entire absence of chills and fever in a particular locality of a district over which the disease is generally prevalent, the drainage and surroundings of the escaping locality being frequently worse than the infected neighborhood. The method of ascertaining the conditions is as instructive a way of explaining the facts as any other—After the usual salutations and inquiries as to weather and crops, the subjoined questions and answers follow—

"What kind of water have you?"

"Well water."

"Deep well?"

"No, not very, some twenty feet, struck a fair flow at sixteen feet."

"Is the water good?"

"First-rate, soft water, washes easy so the women folks say."

"Any chills and fever?"

"Well, a little now and then towards fall, but we generally go up to the mountains or to the seashore for a time and get over them."

"What causes the chills?"

"Well the air draws in here from the tules and swamps and brings malaria."

Passing on for a mile or less the inquirer reaches a neighbor and asks the same questions of a sturdy citizen whose ruddy youngsters and buxom wife bespeak entire absence from chills. His replies as to water are about as follows—

"Our well is pretty deep, we didn't get much water at the first gravel and had to bore 190 feet (frequently three or four hundred feet) before we got water, but then got a good flow rising nearly to the surface."

"What kind of water?"

"First-rate cool water, but a little hard and mineral like. The women folks have to use soda in washing."

"Any chills and fever?"

"No, not here, but down at neighbor Blank's they have a touch in the fall."

"Why do you escape?"

"Well the air draws in here from the plains and we don't get the miasma from the tules."

These questions the writer has asked dozens of times and found that where chills and fever prevailed, the wells are either shallow, or the surface water is permitted to drain in alongside the well casing and is pumped up with the deep water.*

In country homes, exposed tanks badly cleaned are another source of injurious contamination. Very frequent cases are found of milch cows and stock being watered from a shallow well surrounded by the accumulated filth and manure of years. The milk or flesh of such animals cannot possibly be wholesome.

The City of Stockton affords a very marked example of the effect of the water supply upon chills and fever. In the early history of the city the water was obtained from wells, generally shallow. After the introduction of the water from deep wells, the disease began to disappear, and is now as rare as it was formerly prevalent. A study of the various strata is very instructive in this connection. At from forty to sixty feet a stratum of dense clay occurs, below which the water is drawn from very distant sources; at from fifteen hundred to twenty-six hundred feet the water is hot and charged with light carburetted hydrogen which largely forms the natural gas of the locality.

The disposition of garbage, manure and faecal matter around country homes rarely receives that attention which health necessitates. The dangerous and fetid cesspool is almost universal. It could be easily replaced by the construction of a closet on a well shedded mound and the use of a little dry earth. With ordinary attention this simple expedient makes the surroundings entirely pure and inodorous. Some such simple method should be obligatory in isolated country school houses and hotels.

THE CONDITIONS IN VILLAGES.

The villages and small towns of California where there is a public water supply, are generally furnished from deep wells supplemented by the wells of individuals. These latter are classified as are country wells, and are subject to greater danger of surface contamination from cesspools and garbage heaps. The mountain towns and villages have generally a water supply of great purity. It is in the villages and small towns that the disposition of faecal matter reaches its maximum point of danger to health and life. This fact is distinctly recorded in outbreaks of diphtheria, typhoid, and gastric fevers, and other filth diseases—which diseases could find no lodgment were the naturally healthful conditions maintained by the adoption of proper measures.

The most glaring case of contamination of this character which ever came under the writer's notice was as follows: Some five years since, in looking into the sanitary conditions of a valley town, one family in particular was reported as suffering from a series of filth diseases necessitating expen-

*See "Drinking Water as a Source of Malaria," *The Sanitarian*, August, 1892, Vol. XXIX, page 127.

sive doctor's and druggist's bills and frequent trips to the seashore. The head of the house had been very positive and strong in his condemnation of the healthfulness of the town, and was then absent and his home tenantless. The case was so aggravated that there was justification for a very thorough examination of the premises. The house-drainage was at first looked to. There were no waterclosets, tubs, nor basins, so that danger from this source did not exist. The kitchen sink, receiving all waste water and refuse matter from this source, drained into an open box very much clogged up and full of putrescent matter. This box passed within a few feet of the well casing and was broken so as to permit the drainage to pass to the well; within less than twenty feet of the well was a cesspool with the putrifying faecal matter of years soaking through the soil in all directions.

The strong remarks of the owner as to the town were but feeble expressions compared with a proper condemnation of this individual case. Instructions were left to the effect that if pure water were not supplied, the household could dispense with the doctor and druggist and send for the undertaker. It is needless to state that as soon as the causes and actual conditions were pointed out the matter was promptly remedied. The city of Sacramento is particularly exposed to the pollution of the soil from cesspools. This danger is increased by the drainage of water-closets into the cess-pool, which practice is essentially more dangerous than the simple pit, although both should be avoided.

An illustration of the results of the want of care as to purity of water supply, is very strikingly illustrated in the case of Plymouth, Pa. This town has about eight thousand inhabitants. In the spring of 1885, nearly one person in every six was stricken with typhoid fever, more than ten per cent of the cases being fatal, the deaths being about 130. This outbreak was traced by Dr. Shakespeare to a single case occurring during the winter in the water-shed supplying part of the town. The dejecta of this patient were thrown out upon the snow and upon the occurrence of warm weather the germs found their way into the water supply with the above result. The melting of the snow occurred on the twenty-fifth of March; the disease broke out on the tenth of April, and was confined to that portion of the inhabitants using water from the infected source.* Medical and sanitary journals and reports are full of many similar cases.

In the hotels and public schools in the villages and smaller towns without proper sewerage systems the closets are generally of the most primitive kind, and foul to a nauseating degree. The simple measures suggested for country homes would make a marked difference in the health of those exposed to this source of disease. It must be remembered that where improper methods of disposing of human waste are practiced the ill effects are cumulative and are not eradicated in centuries.

Several of the large towns and cities are supplied with river water taken below sources of deadly contamination and only escape its consequences for a time and probably not to the extent that they imagine. In the event of the occurrence of filth diseases of a virulent type above these towns it is difficult to see how they can escape serious visitations of the disease. At this point it is proper to call attention to the illegality of discharging foul matter into the streams of this State and the lax administration of Section 374 of the Penal Code. It will thus be seen that there are too many instances of either ignorance or carelessness as to the water supply of homes, and it is the duty of every house holder to look carefully to this, the most ready course of filth disease into the system.

THE CONDITION IN THE CITY OF SAN FRANCISCO.

The water supply of San Francisco is obtained from several sources, the major portion coming from sources of undoubted excellence. There are two minor sources whose area by reason of growing population and neglect are rapidly becoming dangerous if not already so.

The catchment area of Mountain Lake and Lobos Creek, embracing some 1500 acres, all within the limits of the City and County, is fast gaining in those conditions which pollute

*Page 3, Textbook of Medicine, Strumpell.—Page 4, Practice of Medicine, Oster.

both the surface and underground drainage. The most glaring of these conditions are:

1. The absence of any sewer system with proper outlet.
2. The existence within its area of a hospital connecting with a sewer without any outfall.
3. The existence of not over clear "dairies."
4. The use of part of the area for cemetery purposes.
5. The dumping of garbage and filth as filling for lots below grade.

The watershed tributary to Lake Merced, some 5,000 acres in extent, is objectionable from the same general causes, although less in degree and extent.

The area tributary to the present Alameda creek source will have to be abandoned in the future for the same cause. All areas from which a municipal water supply is drawn should be kept absolutely free from human habitation, and it would be a wise measure for municipalities in a growing country to acquire catchment areas and afforest them. In this way valuable forest reserves could be made for all time, and the area made as valuable for timber as ordinary farming lands, and by the proper section of the trees to be cut the area made a source of permanent timber supply.

The house tank, when not kept scrupulously clean, is a source of contamination even when pure water is supplied. When not absolutely necessary they should be dispensed with.

Water is the most active disease distributor imaginable, and to paraphrase the very truthful words of a celebrated authority—"No power upon earth could save San Francisco from the scourge of cholera or typhus were a single case to occur or a single infected garment to be washed in one of the watersheds supplying the city with water." The use of a water supply from areas partly within our city limits should be immediately prohibited.

In this connection it may be well to quote from the recent law of the State of New York,* which, in providing for the purity of the water supply of her chief city, conferred upon the Commissioner of Public Works powers possessed only by the most tyrannical governments. Yet these powers were wisely conferred and are being justly and wisely executed; for never can the power of law be more humanely and justly exercised than in the enforcement of those conditions which prevent the introduction and spread of filth diseases. In this remarkable law the Commissioner of Public Works was authorized to enter in upon the lands and homes of persons breaking the imperative laws of cleanliness, and even to burn up and eradicate every vestige of possible contamination. One million five hundred thousand dollars is made available in three equal sums for three years.† Such action is necessary in the face of the fact that during the years 1832, 1848, and 1866, cholera had entered that great mart and paralyzed every industry and brought death and sickness in its most frightful and disgusting forms to her homes.

In 1873, cholera devastated the southern and western portions of the United States, but it gained no foothold in New York by reason of the rigid quarantine measures and excellent control of the imported cases.

DISPOSITION OF GARBAGE AND WASTE.

The degree of carelessness and inattention reached in San Francisco to this important sanitary matter is unequalled in any part of the United States. In this city the matter has long passed the stage of official and criminal neglect, and reached that of civic indifference.

Many lots and streets in the northern part of the city have been filled up with highly putrescent matter which cannot be excavated for foundations, sewers, pipes, or conduits of any kind within the next few centuries without endangering human health and life. In the center of the city, and in a

*AN ACT to provide for the sanitary protection of the sources of water supply for the City of New York. Approved March 23, 1886.

†The New York Academy of Medicine realizing the vast importance of pure water, drafted and presented a bill providing for—

1. A Water Commission, consisting of five members.
2. The Commissioner of Public Works—President.
3. The Commissioner of Public Health—a Physician.
4. A member of the State Board of Health—a Physician.
5. A member selected by the Chamber of Commerce.
6. A member selected by the American Society of Civil Engineers.

This Board appoints a civil engineer who has power to carry out permanent plans, systems and methods for securing pure water. \$50,000 is appropriated for the year 1893, and \$20,000 for each year thereafter.

district which is surrounded on all sides with dwellings or stores and factories, is an area of many acres already piled from ten to twenty feet deep with foul and putrifying garbage. During the prevalence of a west wind this pest breeding spot can be smelled a mile or more from shore. With every south wind its pestilential odors are blown through the heart of the city. Its foul smell can be detected not only along the adjacent low-lying districts, but at elevations 300 or more feet above tide water and a mile and a half way. After a few hours south wind the course of this foul air can readily be traced by dull headaches, and latter by influenza and sorethroats if nothing worse.

From 250 to 300 loads are daily added to this pest heap, which in aggregate is more dangerous than a dozen well-conducted hospitals for pestilential diseases. Indeed when the truth is known, vastly more disease can be traced to these sources than to the hospitals; and in fact they are one of the prime causes making the maintenance of pest houses necessary. We have been recently treated to prolonged and bitter discussions as to where a pesthouse should or should not be located, when in our midst conditions are tolerated which are many fold worse than a pesthouse full of patients, and which may under favorable circumstances make a pest house out of the homes which we have built for ourselves and families, and which repeatedly fill those homes with air too foul to be pleasant and undoubtedly dangerous; and which greatly adds to the danger from the hundreds of local defects in our sewer system. It is not necessary to here anticipate a report now in progress of compilation, but it may be safely said that we are running risks which only our unparalleled natural advantages enable us to do with partial impunity. That we do not entirely escape is known to every citizen, for there is not an intelligent being in this city who cannot recall many preventable deaths. Oft' times, alas, of relatives or friends.

These views are the result of years of observation, and are in harmony with centuries of experience. They may not meet the approbation of those whose interests lie in an easy and profitable disposition of this material, nor of those who desire a cheap filling for valuable tide lots. There are interests at stake in every community which are not in harmony with a proper administration of the law. But it is the imperative duty of every man to see that the true needs of the community are subserved. The hope is therefore expressed that the members and our guests will freely express their observations and views, for "in the multitude of counsellors there is safety."



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.

IN presenting to our readers this month, the accepted designs for the Exposition Buildings of the Midwinter Fair, to be erected in Golden Gate Park, San Francisco, California, we think their importance warrants us in giving a short description of the most striking features of these structures, which present an agreeable variety of well planned buildings, that will effectively display the numerous exhibits that are to interest and entertain our own citizens, and we hope the citizens of other countries as well.

THE largest of the buildings is that to be devoted to Manufactures and Liberal Arts and was designed by A. Page Brown. It covers over 100,000 square feet of surface and is nearly 500 feet long. The exterior covering is to be "staff" treated to represent marble. The style of the building is Moorish and the prominence given to the entrances relieves the building from what otherwise would be a monotonous repetition of arches supported by twin columns. Four corner towers, richly and elaborately decorated, support domed roofs which it is the intention to cover with tiles. An interior gallery thirty-five feet wide extends around all four sides, and allows the visitor to survey the panorama spread before him below. Five flights of broad steps lead to these galleries, affording ample means of communication. The building is divided longitudinally into a nave with two side aisles, the nave being lighted by a clerestory. The cost will be \$100,000.

THE Administration Building was the last to be given out but it is one of the most important as it will be the business building, it is also by A. Page Brown. This structure is Oriental in outline, and in the detail of its ornamentation the Central Indian and Siamese are tastefully combined. The cost will be about \$25,000.

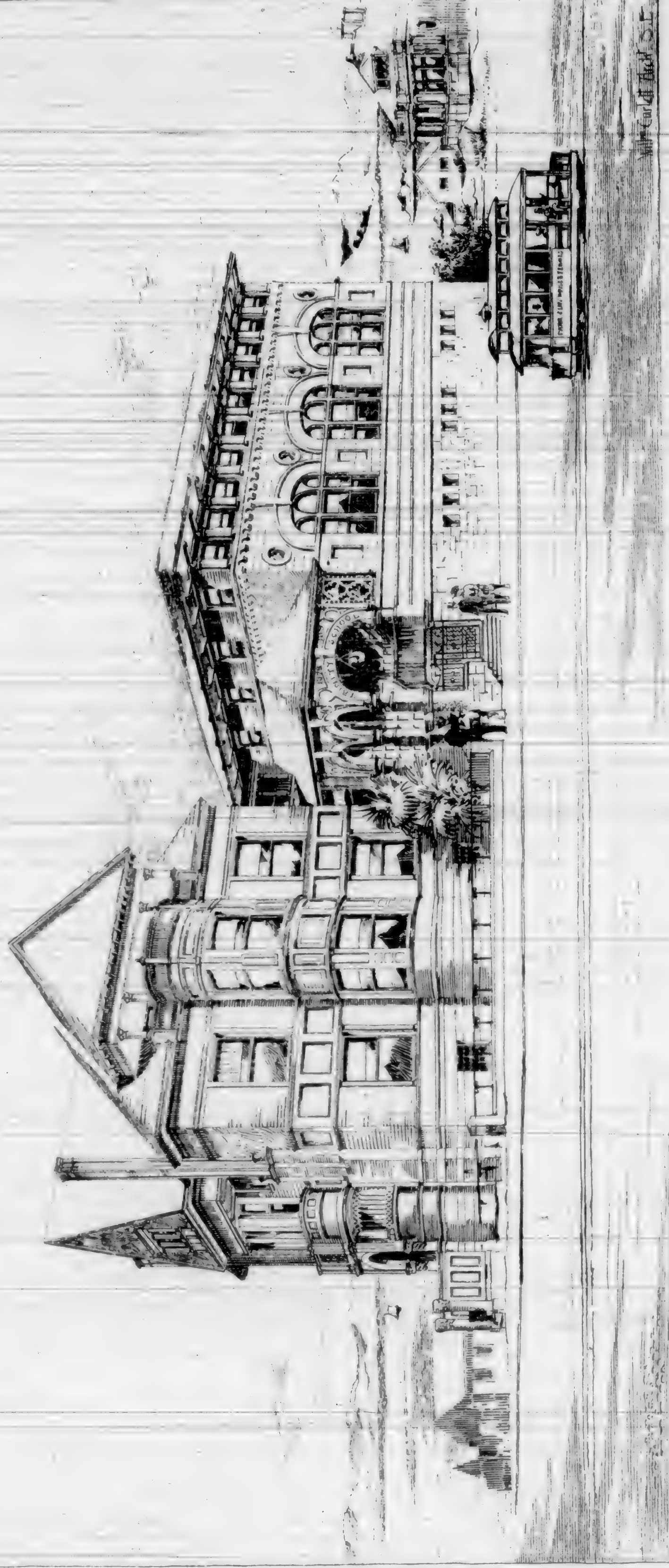
THE building next in importance to that of Manufactures is the Mechanical Arts Building designed by Ewd. R. Swain, who derived his inspiration from the architecture of the Orient. Mr. Swain has, like Mr. Brown, made the main entrance the most prominent feature, and its massiveness is well relieved by the two delicate minarets that flank it. Color is to be lavishly introduced to heighten the effects, and we think the completed building will be second to none. The towers at the corners are provided with balconies that will allow the visitors to enjoy a general view of the grounds and obtain a more striking idea of their extent than could be obtained from a lower point of view. The estimated cost is about \$65,000.

MR. C. C. McDougall's design for the Fine Arts building, was the one accepted by the Committee. In style Egyptian and in plan simple, it presents an imposing effect; the building is a rectangle, 136 feet by 72 feet. It is the only building designed to be a permanent structure, and is to be of brick, cemented, with ornamentation carved. The approach is to be flanked with sphinxes, and by setting the building back some 50 feet from the main driveway, an effective entrance is secured—the peculiar details of the Egyptian ornamentation have been carefully followed, and the lotus crowned columns and battered walls of the portico give the characteristic effect of Egyptian Architecture. The interior of the vestibule is to be a striking feature of the building. It will rise through two stories and the roof representing the "stepped" construction of the pyramid wall, through colored glass cast a soft light to the gallery. The estimated cost is \$45,000.

FOR the Agricultural and Horticultural Building, Samuel Newsom has undoubtedly taken for the foundation of his work the Mission building, making free use of his own ideas to adapt it to all the requirements to which the building is designed and cannot be considered a servile copy of any order



DESIGN FOR TRINITY SCHOOL.
SAN FRANCISCO, Cal.

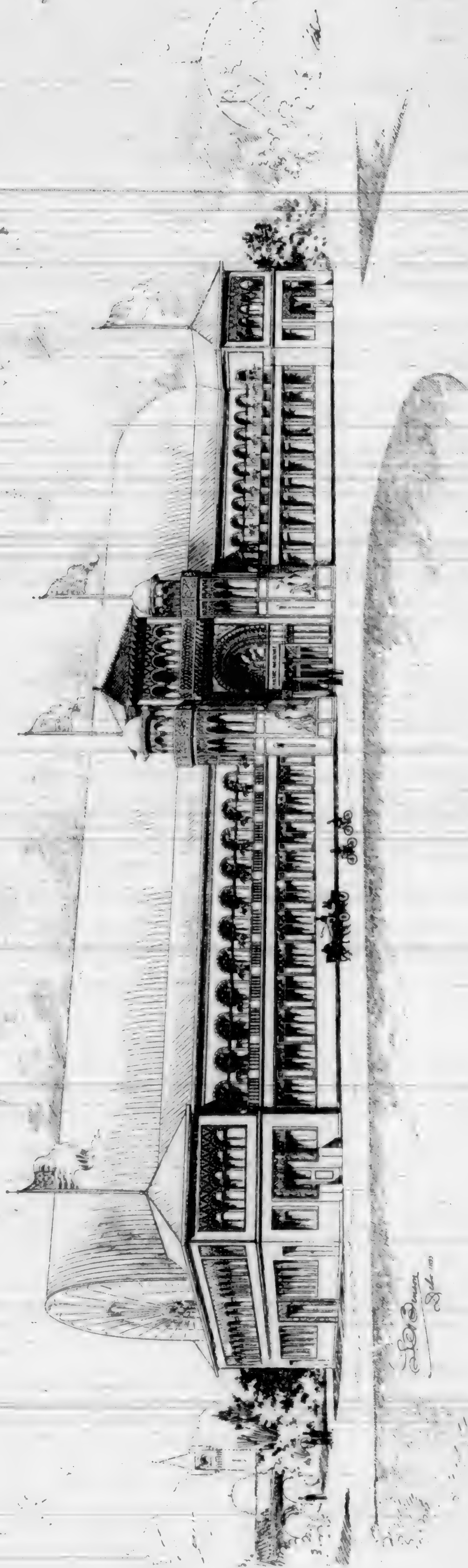


CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO LITH.

VOL. XIV No 9 SEPTEMBER 1893.

COMPETITIVE DESIGN OF AGRICULTURAL
AND HORTICULTURAL BUILDING FOR THE
MIDWINTER FAIR SAN FRANCISCO CALIF.
AWARDED SECOND PRIZE.



ROWELL & BENSON
ARCHITECTS

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & NEW PHOTO LITH.

VOL. XIV No. 9 SEPTEMBER 1893.



ACCEPTED DESIGN FOR THE
ADMINISTRATION BUILDING.
CALIFORNIA MIDWINTER INTERNATIONAL EXPOSITION
A. PAGE BROWN, ARCHITECT.

CALIFORNIA ARCHITECT AND BUILDING NEWS.
SAN FRANCISCO.

VOL. XIV. No. 9. SEPTEMBER 1893.