

The California Architect and Building News.

OFFICE, 408 CALIFORNIA STREET,

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

VOL. XVIII.

INDEX.

1897

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VOLUME XVIII.

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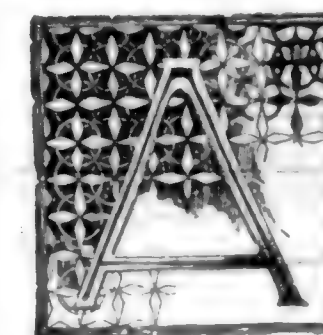
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OLIVER EVERETT, Secretary.

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6 inch.....	9.00	24.00	45.00	78.00
7 inch.....	10.50	28.00	52.50	91.00
8 inch.....	12.00	32.00	60.00	104.00
9 inch.....	13.50	36.00	67.50	117.00
10 inch.....	15.00	40.00	75.00	130.00
11 inch.....	16.50	44.00	82.50	143.00
12 inch.....	18.00	48.00	90.00	156.00
13 inch.....	19.50	52.00	97.50	169.00
14 inch.....	21.00	56.00	105.00	182.00
15 inch.....	22.50	60.00	112.50	195.00
16 inch.....	24.00	64.00	120.00	208.00
17 inch.....	25.50	68.00	127.50	221.00
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Since 1896 has past nothing more need be said of it here except that amidst the numerous failures and tragedies the CALIFORNIA ARCHITECT AND BUILDING NEWS still stands.

During the year it has advocated various improvements in our social arrangements, which advocacy we are glad to see has generally been received with favor; in some cases leading to practical results; in others simply laying the foundation for a public opinion.

The following are some of the subjects which have been ventilated in this paper in its last volume and their present status:

Our endeavors for obtaining a decent law providing for a method of obtaining architectural service for public work will, we hope, be crowned with success in the session of the present Legislature, having received the valuable aid of the San Francisco Chapter of the American Institute of Architects.

Our efforts made in conjunction with Regent Reinstein's—again with the valuable assistance of the San Francisco Chapter of the American Institute of Architects—to obtain a plan for a comprehensive arrangement of buildings for the California State University have eventuated in the offer of Mrs. Hearst to set aside sufficient money for the purpose of getting the result of the labors of the foremost talent of the country in evolving a suitable plan therefor.

We are also glad to note the stand made by our Supervisors against the erection of inordinately tall buildings, in-weighed against in our Journal.

Our strenuous efforts to obtain a Post-Office for San

Francisco has not resulted in any thing further than a statement that the working drawings are about finished—that is something however.

Another of our proteges, the Torren's system of transferring title to real estate will be brought up in this Legislature—result uncertain.

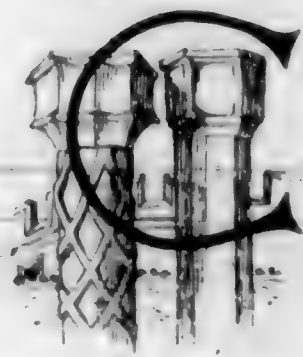
Our opposition to the proposed new Charter for San Francisco has fortunately been justified by the vote of the people and we feel encouraged to hope that another attempt will be carried out more on the lines outlined in our April number.

The last Grand Jury has urged the necessity of Fire Escapes on our School Houses and other public buildings, and we hope practical effect will be given to their recommendations before long. This is another of our fads.

We are also glad that ordinances have been passed in San Francisco and other chief cities of the State for the purpose of putting a stop to the criminal act of placing any articles on the sidewalk as may cause damage to life or limb, and to health, a result of the movement inaugurated by us in our last volume.

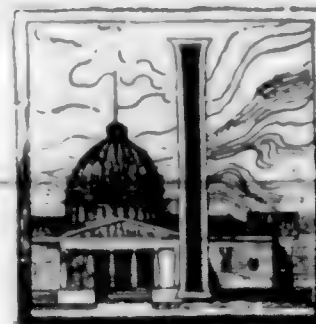
So altogether we may feel encouraged and will keep on in 1897 pointing out what we think wrong and what we think right.

Our series of articles on the Housing of people of small incomes will be continued during this year—forming valuable contributions to Urban Science and worthy the serious attention of all public bodies, and we intend to keep up the present standard of the journal, if not to improve thereon, which latter we shall certainly do if encouragement enough is given.



ONSIDERABLE agitation is now going on in regard to the proper position of a Pest House or Hospital for contagious diseases, the presence of which in our midst is unfortunately a necessity from our present imperfect knowledge and carrying out of the Laws of Hygiene.

Without doubt a position in the centre of a town and particularly when placed in the way of the prevailing winds, blowing over it into the most inhabited part of the City and causing the sewerage therefrom to pass through the same before it can be got rid of is bad. When said city is placed on a peninsula like San Francisco the problem is easy to solve; place the Pest House near the edge of the water on the lee side and in a place where residences are likely to be few. A place like the top of Telegraph Hill seems to answer all purposes, its height allows any germs in the air to be blown into the bay—it can be drained directly into the intercepting sewer—and no habitations are close or likely to be close. To get there an elevator can be built on the steep side, or a cable car run as there used to be. We hope that the citizens will insist upon such a locality as the one mentioned being chosen.



IN re-introducing into the New York legislature what is called the Pavey Bill for regulating the heights of buildings in New York city, a curious oversight has been made.

The Bill provides that no building shall be erected of greater height above the curb level than fifteen times the square root of the width of the street, but neglects to say what denomination that width shall be taken in; whether feet, inches, yards, or miles, and it makes quite a difference in the height of a building, according to what denomination is taken, e.g., if feet is meant, then for a street one hundred feet wide we have the square root of one hundred which is ten, multiplied by fifteen which makes the height allowed one hundred and fifty feet. If we take the dimension in yards, we have the square root of thirty-three which is 5.745 which multiplied fifteen times equals eighty-six yards or 258 feet.

So if we take the width in decimals of a mile we obtain by the same calculation a pigmy building.

Although the ordinary public would consider that feet are meant, there is no telling what the lawyers and judges would hold if the matter was brought into Court by someone wishing to erect a building higher than implied in the Act, for the ways of such are like the ways of Providence, past finding out.

TO PROTECT WORKMEN.

NEW YORK'S NEW HUMANE BUILDING BUILDING LAW.

SOME curiosity has been expressed as to the exact wording of the building law enacted by the New York Legislature last June relating to the protection of lives and

limbs of workmen on buildings in course of erection. The law follows:

SECTION 1. It shall be the duty of all contractors and owners when constructing buildings in any of the cities in the State of New York, where the plans and specifications require the floors to be arched, between the beams thereof, or where the said floors or filling in between floors shall be of fireproof or brick work, to complete the said flooring or filling in as the building progresses to not less than within three tiers of beams below that on which the iron work is being erected.

SEC. 2. It shall be the duty of all contractors for the carpenter work of buildings, in the course of construction, in any of the cities of the State of New York, where the plans and specifications do not require the filling in between the beams of floors to be of brick or fireproof work, to lay the under flooring thereof as the building progresses on each story to not less than within two stories below the one to which the said building has been erected. Where double floors are not used, the contractor shall be required to keep planked over the floor two stories below the one on which the work is being carried on.

SEC. 3. It shall be the duty of all contractors for iron or steel work of buildings in the course of construction or the owners thereof, in cases where the floor beams are of iron or steel, to thoroughly plank over the entire tier of iron or steel beams on which the structural iron or steel work is being erected, except such spaces as may be reasonably required for proper construction of said iron or steel work, and for the raising or lowering of materials used or to be used in the construction of the said building, or such places as may be designated by the plans and specifications for stairways and elevator shafts.

SEC. 4. The chief officer, in any city, charged with the enforcement of the building laws of such city, is hereby charged with enforcing the provisions of this act.

SEC. 5. Any violation of the provisions of this act shall be a misdemeanor and on conviction shall be punishable by a fine, for each violation thereof, of not less than \$25 nor more than \$200.

SEC. 6. This act shall take effect immediately.

—National Real Estate Guide.

FROM THE THIRD BIENNIAL REPORT OF STATE MINERALOGIST—STRUCTURAL MATERIAL.

BASALT

NAPA COUNTY

Columnar Basalt occurs in Clark's Canon, 12 miles W. of Napa, on the land of Charles Clark, of Napa.

Columnar Porphyry is found on the eastern slope of Mount Helena, 6 miles W. of Kellogg. Columns, 3" to 5" diameter, are found, 4' to 6' long. The rock is hard and brittle and of a gray color, and stained.

CEMENT

SAN BERNARDINO COUNTY

California Portland Cement Works—See our XIIth Report, p. 380. These are ¼ mile W. of Colton, at 1,000' elevation. The limestone used in the manufacture of the cement is

quarried from a hill situated immediately back of the works. The quarry is connected with the manufacturing plant by an inclined tramway about 1,000' long, and rising 600' to near the summit of the hill. The plant, consisting of four Griffin mills, two revolving oil-burning furnaces of the Durée type, and all the other necessary pulverizing and conveying machinery, etc., is located at the side of the Southern Pacific R. R. The limestone, said to be almost pure, is mixed with a certain proportion of clay and fluor-spar from the Castle Dome mines in Arizona, pulverized and roasted at an intense heat. A semi-clay-like mass, or "clinker," is the result. This is cooled and re-ground, and sacked for shipment. A very complete laboratory and testing-room is connected with the establishment. Seventy-five men are employed. The capacity of the works is said to be 200 bbls. per day. California Portland Cement Co., of Los Angeles, owner; F. N. Spear, of Colton, superintendent.

SOLANO COUNTY

Benicia Works—See our XIIth Report, p. 380. Idle. J. G. Johnson and James Clyne, of Benicia, owners.

CLAY, BRICKS, POTTERY, ETC.

ALAMEDA COUNTY

California Pottery and Terra Cotta Co.—See our XIIth Report, p. 381. Its works are on Twelfth street, in East Oakland. There are two kilns, 18' and 16' in diameter, fired with wood. Sewer and chimney pipe, flower-pots, vases, tiles, fire-bricks, stove linings, etc., are manufactured. The clay used is obtained from Carbondale, Amador County. Eleven men are employed in the works. S. W. Winsor, of Oakland, manager.

N. Clark & Sons' Pottery.—See our XIIth Report, p. 381. It is in the City of Alameda, and consists of eleven kilns—two 25' in diameter, eight 20', and one still smaller. A Whitacre machine for making pressed bricks is being erected. The company manufacture vast quantities of vitrified sewer and water pipe, chimney pipe and tops, fire-proofing, etc. The clays are principally obtained from Carbondale, Amador County. N. Clark, President; George A. Clark, of No. 13 Spear street San Francisco, secretary.

Oakland Ari Pottery.—It is on Twelfth street, between Twenty-second and Twenty-third avenues, Oakland. There are three kilns—one 20' and two 18' in diameter. All sorts of ornamental vases, flower-pots, chimney pipes and tops, standard sewer-pipe, ornamental tiling, water-coolers, and general terra cotta wares are manufactured. The clays used are principally obtained near Carbondale, Amador County. Twenty-nine men are employed. James Miller, of No. 1125 E. Twelfth street, Oakland, proprietor.

Remillard Brick Co.'s Works.—See our XIIth Report, p. 381. They are on the S. P. R. R., 1½ miles N. E. of Pleasanton. There are two sixteen-compartment Hoffman kilns of 20,000 daily capacity each. But one kiln is now in operation. Only common bricks are made. They are made from a superficial deposit of sandy loam, 25' thick, which is near the kilns. Sixty men are employed during summer. P. H. Lamoureux, of Oakland, secretary; E. R. Sinard, of Pleasanton, superintendent.

AMADOR COUNTY

In the vicinity of Carbondale are large and numerous deposits of clay of superior quality, and also of sand. In these

deposits large excavations have been made at many points and the material shipped to potteries and pressed-brick works throughout the State, large quantities going to Alameda, San Jose, Sacramento and even as far as Los Angeles. The total annual shipment of clay alone from Carbondale is about 16,000 tons. Sand, up to the present time, has been shipped in limited quantities to iron foundries, where it is used in molding. This branch of the industry will doubtless grow into greater proportions as the peculiar fitness of this sand for the purpose becomes better known.

Carbondale Pottery—These works are at May P. O., 1 mile from Carbondale Station. There is but one furnace, and this is fired intermittently. Drain-pipe, terra-cotta chimney tops and pipes, fire-bricks, and a line of stoneware, jugs, jars, etc., are the principal articles manufactured here. Fred Hammer, of May P. O., owner.

N. Clark & Sons' Clay-pits.—These are scattered within a radius of 3 miles of Carbondale Station. They are worked constantly, except during the rainy season. To provide the necessary supply during the winter months, several thousand tons are mined and placed under cover during summer. N. Clark & Sons, of Alameda, owners.

Heath & Smith's Clay-pits.—They are in the vicinity of Carbondale, and supply large quantities of clay, of which there are several qualities, to potteries and terra cotta works throughout the State. During the summer months 4,000 tons will be housed for shipment during winter, when the rains make it impossible to dig or ship the clay from the pits. Heath & Smith, of May P. O., owners.

BUTTE COUNTY

Walker's, W. A. Brickyards.—They are 3 miles S. E. of Chico, and supply the local markets at Biggs and Gridley. A superficial deposit of sandy loam, 3' to 6' thick, lying between the surface soil and underlying sand, is used successfully. Where hardpan occurs beneath the loam, as in the case in many places, it is said to contain too little sand to make good bricks.

CONTRA COSTA COUNTY

Mount Diablo Pottery and Paving Brick Co.'s Works.—They have been recently established on the railway, ¼ mile W. of Antioch. The company will manufacture paving and pressed bricks, terra cotta, fire-proofing, sewer-pipe, flower-pots, roofing-tiles, etc. The clays used are from stratified beds in the foothill, S. and W. of the pottery, and, so far as they have been tested, are said to be satisfactory. E. T. Maple, of Antioch, superintendent.

KERN COUNTY

The Bakersfield Patent Brick Co. of Bakersfield made about 600,000 bricks during 1895.

LOS ANGELES COUNTY

The manufacture of bricks and terra-cotta ware has been greatly stimulated by the use of oil as fuel, and by the increased demand for structural material. The Pliocene formations around Los Angeles afford an inexhaustible supply of clay suitable for brick, and for mixing with other clays in the manufacture of terra-cotta ware.

Berg & Layne's Brickyard.—It is at Los Angeles. An open kiln, fired by wood, is used, with a capacity of 8,000 bricks a day. Output for 1895, 1,500,000 bricks. Ten men

are employed. Berg & Loyne, of No. 125 W. Second street, owners.

California Sewer-Pipe Co.'s Brickyard.—It is at Vernon, 1 mile S. of Los Angeles. There are three down-draught kilns—one of 20' and two of 28' diameter—in which oil for fuel is used. Sewer-pipe, water-pipe, flue-lining, fire-bricks, drain-tiles, etc., are manufactured. The clay is obtained from near Elsinore, Riverside County. Twenty-six men are employed. California Sewer-Pipe Co., owner; T. M. Riley, of No. 649 S. Broadway, manager.

Capitol Steam Brick Works.—Located at Los Angeles. An open kiln, fired by wood, coal and oil, is used. Its capacity is 40,000 bricks a day. Forty men are employed. E. Simons, of No. 125 W. Second street, owner.

City Brick Co.—See our XIIth Report, p. 381. Its yard is located in Los Angeles, and employs an open kiln, fired with wood. Its capacity is 38,000 bricks a day. Thirty-five men are employed. A. A. Hubbert, of No. 125 W. Second street, manager.

Davin's Brickyard.—It is in Los Angeles, and uses an open kiln, fired with wood. Its capacity is 12,000 bricks a day. Twelve men are employed. P. Davin, corner Saratoga and Brooklyn streets, Boyle Heights, owner.

Eureka Brick Co.—Its open kiln is located at Los Angeles and heated with oil. Its capacity is 18,000 bricks a day. Fifteen men are employed. W. R. Gleason, of No. 127 W. Second street, superintendent.

To be continued.

HARD-EARNED WAGES.

An old church in Belgium decided to repair its properties, and employed an artist to touch up a large painting. Upon presenting his bill, the committee in charge refused payment unless the details were specified, whereupon he presented the items as follows:

For correcting the Ten Commandments.....	\$ 5.12
Embellishing Pontius Pilate and putting new ribbons on his bonnet.....	3.02
Putting new tail on the rooster of St. Peter and mending his comb.....	2.20
Replumbing and gilding left wing of guardian angel.....	5.18
Washing the servant of the high Priest and putting carmine on his cheeks.....	5.02
Renewing Heaven, adjusting the stars and cleaning up the moon.....	7.14
Touching up purgatory and restoring lost souls.....	3.06
Brightning up the flames of hell, putting new tail on the devil, mending his left hoof, and doing several odd jobs for the damned.....	7.17
Rebordering the robes of Herod and adjusting his wig.....	4.00
Taking the spots off the son of Tobias.....	1.30
Cleaning Baalam's ass and putting one shoe on him.....	1.70
Putting earrings in Sarah's ears.....	1.71
Putting a new stone in David's sling, enlarging the head of Goliath, and extending Saul's legs.....	6.13
Decorating Noah's Ark and putting a new head on Shem.....	4.31
Mending the shirt of the Prodigal son and cleaning his ear.....	3.39

\$60.45

PRISON BARS TO BE WATER PIPES.

ARCHITECT SHEA HAS A NOVEL PLAN FOR THE HALL OF JUSTICE.

FRANK T. SHEA, the architect of the Hall of Justice, the corner-stone of which was laid on Saturday, will submit to the Board of Supervisors a device for a City Prison to be continued in the building that in point of novelty and usefulness will outrank anything of the kind in the United States. If Mr. Shea's plan be adopted the escape of prisoners will be rendered impossible in the future.

He proposes to construct the cells in the prison of steel pipes, to be filled with water at a high pressure. At the desk of the sergeant in charge of the prison will be a gauge similar to a steam gauge on a boiler, by which the exact pressure of the water will be registered. If a prisoner should attempt to cut his way out of the prison by filling one of the steel bars a stream of water would escape as soon as he filed through the pipe. Simultaneously with the escape of the water an electric bell on the gauge at the sergeant's desk would ring and the indicator would show the number of the cell where the prisoner was trying to escape.

So far as Mr. Shea knows, a device similar to the one proposed by him has never been used in a prison in the United States or elsewhere. He believes that if the plan were given apractical trial, jail deliveries in this city would never be heard of again.

Mr. Shea has also prepared a system of electrical devices that will remove the necessity of having "trusties" in the prison. By pressing a button at his desk the sergeant will be able to open the door of any cell in the prison. The prisoner desired may then step out into the corridor, after which the sergeant may press another button and close the door. The door separating the corridor from the sergeant's office may afterward be opened in the same manner and the prisoner allowed to walk to the desk.

The value of the device lies in the fact that "trusties" are always a source of more or less annoyance in every prison. In many instances jail deliveries have been traced to men who were given the liberty of the prison in order that they might do odd chores about the place.

Whether or not the plans of the Hall of Justice can be changed at this late day to permit of a trial of the devices suggested by Mr. Shea is a question. Mayor Sutro contends the law specifically prohibits the changing of plans for a public building after they shall have been once agreed upon. By others it is contended that the Board of Supervisors has power to authorize a change in the plans where the public good is at stake. The alterations suggested by Architect Shea would not involve the expenditure of any more money for the building, inasmuch as the increased cost of the prison could be saved somewhat else. At any rate Mr. Shea will suggest to the Board of Supervisors the modifications he has in mind with regard to the prison and it is believed that the plans will be adopted.

Mr. Shea wrote into the Patent Office to ascertain if application had ever been made for a patent on a prison cell constructed of steel pipes filled with water, and was informed that no application of the kind had ever been made. He will apply for a patent on the invention.—*Examiner.*

Now is the time to subscribe for the CALIFORNIA ARCHITECT AND BUILDING NEWS.

CALIFORNIA ROADS.

THE California Bureau of Highways has given to the Governor a report of its labors. It closes with this recommendation:

The adoption of the plan proposed, and the inauguration of the system recommended, together with the minor recommendations, would make the Golden State the ideal highway community of the world.

Let the good work go on. The Legislature is about to convene. A great opportunity lies before it, for it has the united support of the people and of the press, and there is no subject now committed to our law-makers from which California can hope for so much immediate advantage and lasting good as from wise laws now enacted which will result in the construction of a complete system of well built highways throughout the State. The movement has gained an impetus which needs but to be wisely directed to accomplish this.

And in the years to come, when the results of their efforts shall be fully seen and appreciated, it will be found that those who are now giving their time and their energies to this movement for good roads, which is extending throughout the entire nation, will have "builded better than they knew."

CALIFORNIA HAS MORE TO GAIN THAN ANY OTHER STATE FROM GOOD ROADS.

In the marvelous diversity of her products, and the mildness of her climate, California has more to offer as an inducement to rural settlement than any other State, and hence she has more to gain from good roads. For good roads bring in their wake everything which will attract industrious men from the occupations of the cities and from other States and other countries to go out upon the lands of California and till them and build up homes upon them. And in settlement of fertile, but now largely unoccupied lands, must we look for the future growth and permanent prosperity of the State. And wherever such men can gather as they will, in thickly settled rural communities, with easy means of access to near-by towns and interior cities, the problem of labor for manufacturing will be solved. And in its solution, and in the upbuilding of local manufacturing industries to supply the home markets thus created by a thickly settled rural population, lies the true key to the solution of many of the problems of transportation and distribution which are perplexing the California producer of to-day.

Good roads will stimulate the subdivision of large holdings, will give increased value to small farms, thus made more easily accessible to neighbors, towns and market, will promote rural settlement by making life in the country more attractive than city life to the most intelligent classes, and will enable our rural people to maintain the very highest standards of mental and educational acquirement and social life. For rural life in California, even to him who has only a cottage home in the midst of a small farm well tilled, affords the fullest scope for all the refinements of life, and can furnish more daily comforts, and be set amidst more beautiful surroundings, than the most lavish expenditure of wealth can give in countries less favored by nature.—*California Advocate.*

WIRE BUILDINGS FOR TELEPHONES.

BY HERBERT LAWS WEBB.

EVERY large office building that is put up to-day should be fully wired for telephone service. Telephone communication is almost as much of a business necessity to-day as ink and paper and no modern building can be quite modern, and thoroughly up to date, in which provision is not made for supplying telephone communication to every room. At present, it is true, it is rather the exception to find an office building properly wired throughout for telephone connections, but in a few years the exceptions will be those that are not so wired. The demand for telephone service of all kinds is increasing so rapidly that owners of buildings cannot afford to expose their tenants to the delays and inconveniences incident to running wires through large buildings every time a new telephone service is required. A well designed substantial system of telephone wiring is therefore a necessity in the modern office building, in the modern hotel, in the modern factory and even in the modern club or large residence. The architect who would keep abreast with the requirements of the day cannot afford to neglect this.

There are three requisites that a system of interior wiring should fulfill. These are: 1, that the wires should be suitable for telephone working; 2, that they should be accessible to allow of additions, withdrawals or repairs; 3, that they should all terminate at one central point.

The requirements of clause 1 are not difficult to meet. They demand that every circuit shall be metallic and that the two sides of the circuit shall be twisted together with not less than four twists to the foot. This arrangement of the circuit tends to neutralize the disturbing effects of currents that may be circulating in neighboring wires. As to the size of wire, No. 10 B. & S., insulated to 3-32ds with a good quality of water proof compound is sufficiently substantial. But let it be a good quality; beware of cheap insulated wire, for it is the dearest in the end. It is a good plan to have the two wires of the twisted pair of different colors so that they may be readily distinguished at the ends without the delay of testing out.

Clause 2 means, of course, that the wires should be run in conduits or tubing. The area of inflexible and inaccessible systems of wiring has passed. Every kind of wiring that is done on a large scale should be arranged so that the wires can readily be got at for inspection or repairs, readily withdrawn or added to without disturbing walls, partitions or flooring. Such accessibility and flexibility can only be secured by the use of conduit tubing.

The concentration of all the different circuits at one point is a sufficiently obvious necessity to need no elaboration. The wires should all be taken to a terminal or cross-connecting board by means of which connection may readily be made with the trunk lines from the telephone exchange. The cross-connecting board will also serve to connect together circuits from different rooms in the event of permanent communication being required between officers in the same building.

A complete system of telephone wiring laid out in accordance with the general requisites outlined above is a very important and valuable adjunct to the modern office building.—*Architects' Electrical Bulletin.*



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.

PLANS and perspective drawing of competitive design for State Capitol of Montana, Albert Sutton, architect.



LIPPINCOTT'S Magazine for January, 1897, contains among other interesting articles a capital story called "Stockings Full of Money." This is a well written novel, and very cleverly contrives to keep the reader wondering how it ends and who is guilty.

Among our exchanges THE BUILDER, published in Boston at 85 Water street, is always most welcome, as this journal devoted to the interests of architecture in materials of clay is sure to contain something of use to architects, illustrated in a manner that does credit to the publishers. The prospectus of this journal for 1897 announces the leading articles for the year, as well as the writers who will contribute during the year.

NOTICE OF MEETINGS.

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

SOUTHERN CALIFORNIA CHAPTER AMERICAN INSTITUTE OF ARCHITECTS, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
OCTAVIUS MORGAN, Pres. A. M. EDELMAN, Vice-Pres.
ARTHUR B. BENTON, Sec. AUGUST WACKERBARTH, Treas.

TECHNICAL SOCIETY OF THE PACIFIC COAST, meets first Friday of each month at Academy of Sciences Building.
GEO. W. DICKIE, Pres. W. G. CURTIS, Vice-Pres.
OTTO VON GELDERN, Sec. EDWARD T. SCHILD, Treas.

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

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

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

SAN FRANCISCO CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

THE REGULAR monthly meeting of the Chapter was held on January 8, 1897.

The principal business was the discussion of a bill to regulate the practice of architecture in the State of California. Mr. B. E. Henriksen was appointed a committee of one with power to act, to present a bill on similar lines to the one defeated two years ago.

The following is the text of the bill introduced into the Legislature by Mr. Pendleton on January 16, 1895 and amended in Assembly, under special instructions, March 2, 1895 and further amended in Assembly February 2, 1895:

AN ACT TO REGULATE THE PRACTICE OF ARCHITECTURE.

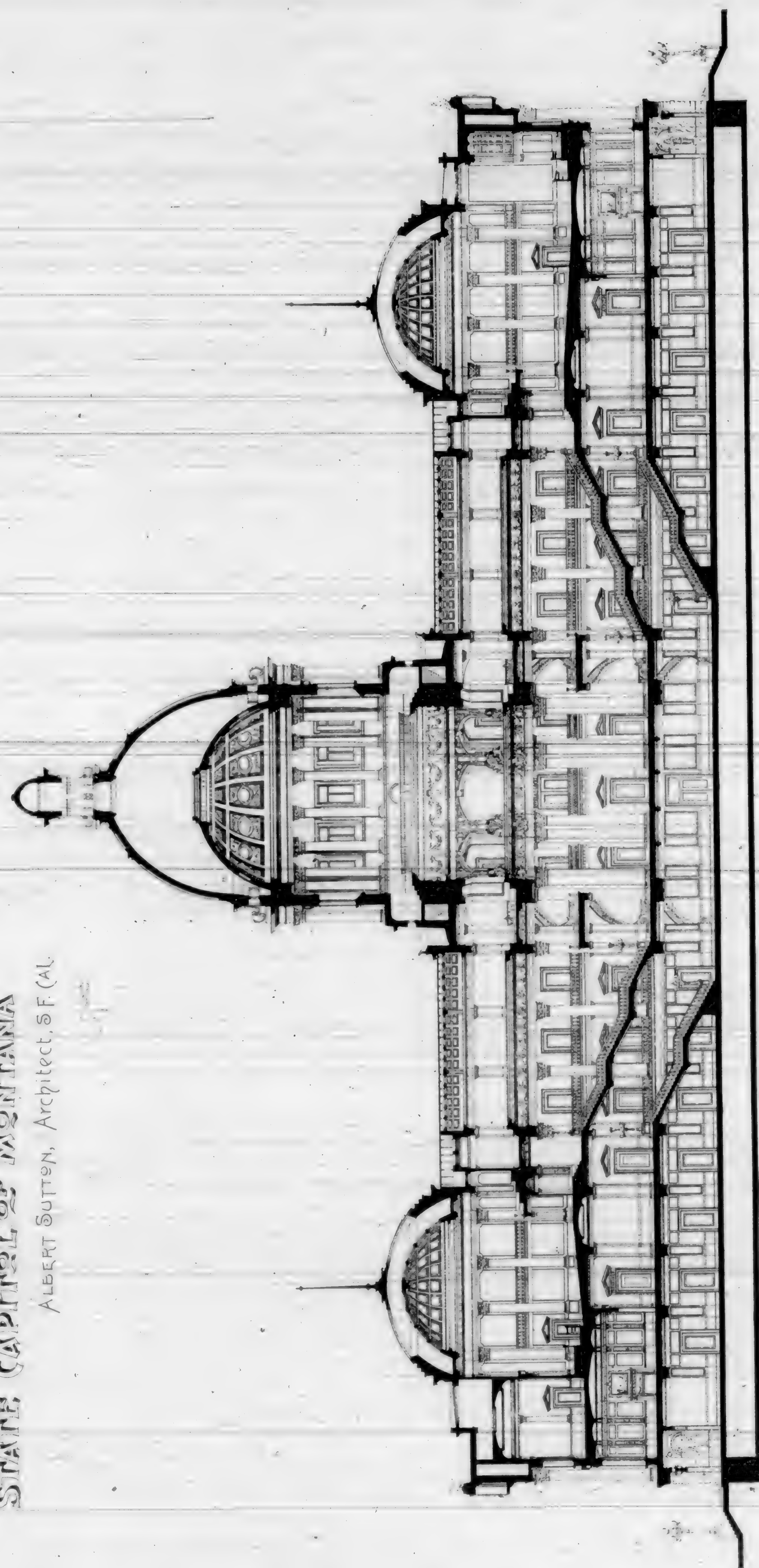
THE PEOPLE OF THE STATE OF CALIFORNIA, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

SECTION 1. Within sixty day from and after the passage of this Act, the Governor of the State shall appoint ten persons, which persons so appointed shall constitute a Board, which Board shall be known and designated as the State Board of Architecture.

Five members of said Board of Architecture shall be residents of the Northern United States Judicial District of California, and shall constitute the Northern District Board for the examination of applicants for license to practice architecture in this State. And five members of said Board shall be appointed from the Southern United States Judicial District of California, and shall constitute the Southern District Board for the examination of applicants for license to practice architecture in this State.

The districts shall be the same as the Northern and

COMPETITIVE DESIGN FOR
STATE CAPITOL OF MONTANA
 ALBERT SUTTON, Architect. S.F. CAL.



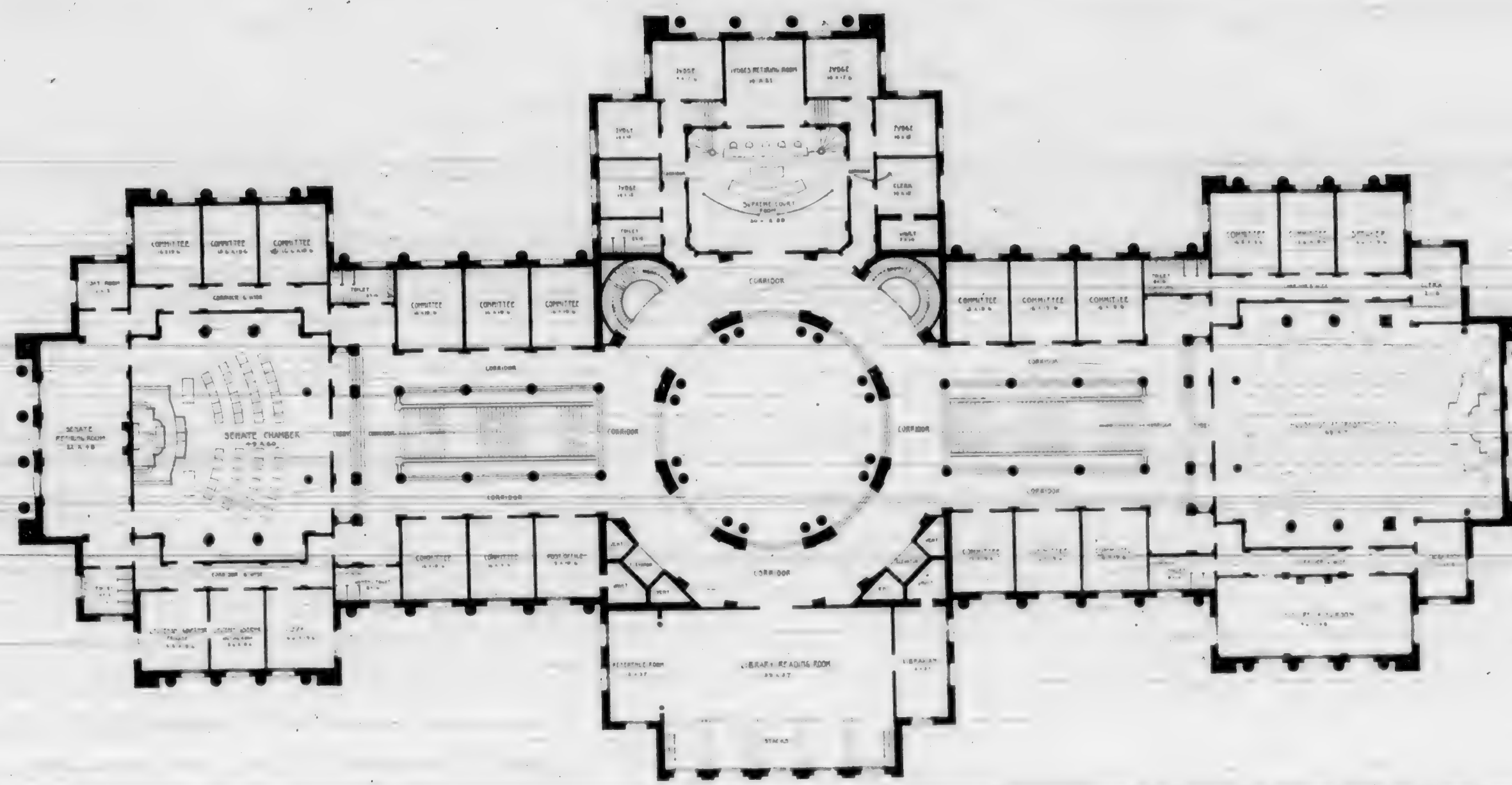
LONGITUDINAL SECTION.

CALIFORNIA ARCHITECT & BUILDING NEWS
 SAN FRANCISCO.

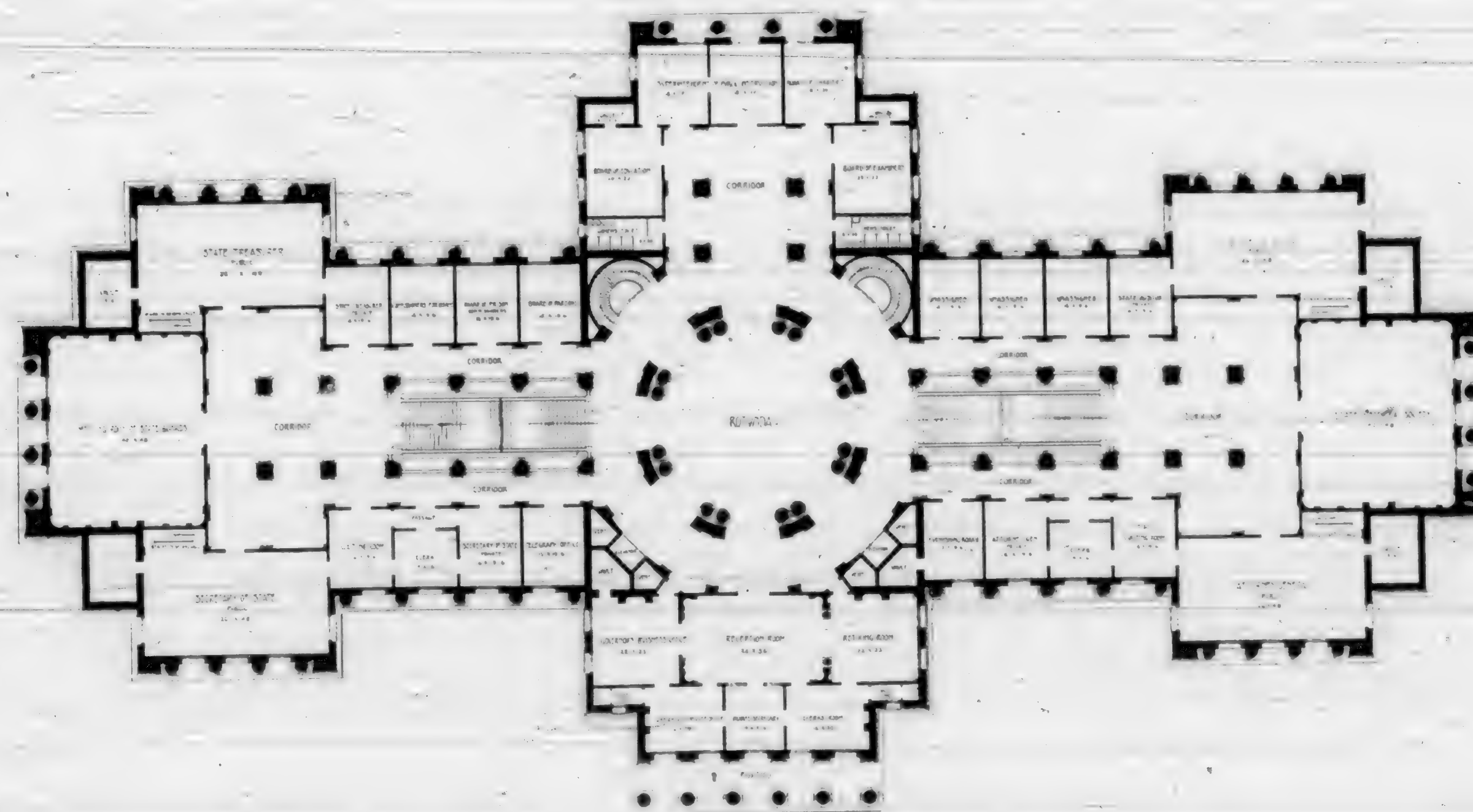
BRITTON & REY, PHOTO-LITH.

VOL. XVIII, No. 1, JANUARY 1897.

COMPETITIVE DESIGN FOR
STATE CAPITOL OF MONTANA
 ALBERT SUTTON, Architect. S.F. CAL.



SECOND FLOOR PLAN



FIRST FLOOR PLAN

CALIFORNIA ARCHITECT & BUILDING NEWS
 SAN FRANCISCO.

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PERSPECTIVE SKETCH.

Southern United States Judicial Districts of this State at the time of the passage of this Act.

Said State Board of Architecture shall be appointed by the Governor, as follows: Three members shall be appointed from the members in good standing of the San Francisco Chapter of the American Institute of Architects, (or some similar institute or association of architects), two of whom shall be designated to hold office for two years. Three members shall be appointed from the members of the Southern California Chapter of the American Institute of Architects, (or some similar institute or association of architects), two of whom shall be designated to hold office for two years. One member shall be appointed from the faculty of the Berkeley University, one member shall be appointed from the teachers of the State Normal School at Los Angeles, and two members, one of whom shall be a resident of the northern district and one a resident of the southern district, who shall be lawyers in good standing, and who shall have been in practice for not less than five years.

Each person so appointed shall hold office for four years, unless so designated to hold office for two years. And thereafter, upon the expiration of the term of office of the persons so appointed, the Governor of the State shall appoint a successor or successors to such outgoing person or persons whose term of office shall have expired, to hold office for four years; *provided*, that the membership of the State Boards of Architecture shall be composed as herein set forth.

Each member shall hold over after the expiration of his term of office until his successor shall have been duly appointed and qualified.

Any vacancy occurring in the membership of the Board shall be filled by the Governor of the State for the unexpired term, in like manner.

The members of the Board shall serve without compensation from the State.

The expenses of said Board shall be paid out of the fees collected from applicants for licenses.

SEC. 2. The members of the State Board of Architecture shall, before entering upon the discharge of the duties of their office, take and file with the Secretary of State the constitutional oath of office.

The said State Board of Architecture shall, within thirty days from and after their appointment, meet and elect from their number a President and a Vice-President, one of whom shall be a resident of the northern district, and one a resident of the southern district, and two Secretaries, one from each district. The Secretaries shall also act as Treasurers. The person receiving the highest number of votes shall be Secretary, and the person receiving the next highest number of votes (shall be) Assistant Secretary. Said person shall hold office for two years, or until their successors shall have been duly elected and qualified.

SEC. 3. The Board may adopt rules and regulations for the government of its proceedings not inconsistent with this Act.

The State Board shall adopt a seal for its own use, and one for each of the District Boards. The seal used by the Northern District Board shall have the words "Northern District" inscribed thereon, and the one for the southern district shall have the words "Southern District" inscribed thereon, and the Secretary and Assistant Secretary shall have charge, care and custody thereof.

The Secretary shall keep a correct record of all the pro-

ceedings of the Board, which shall be open to public examination at all times. Six members shall constitute a quorum for the transaction of the business of the State Board of Architecture, and three members shall constitute a quorum for the District Boards for the transaction of business.

Special meetings of the State Board of Architecture shall be called by the Secretary upon the written request of four of its members, and by giving twenty days' written notice of such meeting, and the time and place at which such meeting is to be held, to each member of the Board.

The District Board shall call special meetings upon the written request of two of its members made to the Secretary, and upon five days' written notice to each member of such District Board.

Within thirty days from and after the date of their appointment, the State Board shall meet to organize, elect officers as in this Act provided for, and formulate and adopt a code of rules and regulations for its government in the examination of applicants for license to practice architecture in this State, and such other rules and regulations as may be necessary and proper, not inconsistent with this Act.

The Board may from time to time repeal or modify its rules and regulations, not inconsistent with this Act.

The State Board shall meet annually, on the second Tuesday in April, for the purpose of transacting such business as may lawfully come before it, not inconsistent with this Act.

The District Boards shall hold their regular meetings for the examination of applicants for license to practice architecture, on the last Tuesday of January, April, July and October of each year.

The Board of the Northern District shall meet in San Francisco, and the Board of the Southern District shall meet in Los Angeles, and at such other times and places as they may elect, to examine applicants for licenses.

Any person shall be entitled to an examination for a license to practice architecture upon a payment to the District Board, when he make application, a fee of fifteen dollars which fee shall be retained by the Board; should the applicant pass a satisfactory examination by said District Board, the Secretary shall, upon the payment to him of further fee of five dollars, issue to the applicant a certificate, signed by the President and Secretary, sealed with the seal of the District Board, and directed to the Secretary of State, setting forth the fact that the person therein named has passed a satisfactory examination, and that such person is entitled to a license to practice architecture in this State, in accordance with the provisions of this Act; and upon the payment to the Secretary of State of a fee of five dollars, the Secretary shall at once issue to the person therein named a license to practice architecture in this State, in accordance with the provisions of this Act, which license shall contain the full name of the applicant, his birthplace and age, together with the name of the District Board issuing the certificate, and the date of issuance thereof.

All papers received by the Secretary of State on application for license, shall be kept on file in his office, and a proper index and record thereof shall be kept by him.

SEC. 4. Any architect in good standing, who shall show to the satisfaction of the District Board of the district in which such architect may reside, that he was engaged exclusively in the practice of the profession of architecture on the date of the passage of this Act, shall be granted a certificate without passing an examination, on the payment to

the District Board of a fee of five dollars; *provided*, such application shall be made within six months from and after the passage of this Act.

Said certificate shall set forth the fact that the person to whom the same was issued was practicing architecture in this State at the time of the passage of this Act, and that the person therein named is entitled to a license to practice architecture without having passed an examination by the District Board; and the Secretary of the State shall, upon the payment to him of a fee of five dollars, issue to the person named therein a license to practice architecture in this State, in accordance with the provisions of this Act.

Each licensed architect shall have his license recorded in the office of the County Recorder in each and every county in this State in which the holder thereof shall practice, and he shall pay to the Recorder the same fee as is charged for the recording of deeds. A failure to have his (license) so recorded shall be deemed sufficient cause for revocation of such license.

SEC. 5. Six months after the passage of this Act, it shall be unlawful, and it shall be a misdemeanor, punishable by fine of not less than fifty dollars, nor more than five hundred dollars, for any person to practice architecture without a license in this State, or to advertise, or put out any sign or card, or other device which might indicate to the public that he was an architect; *provided*, that nothing in this Act shall prevent any person from making plans for his own buildings, nor furnishing plans or other data for buildings for other persons; (*provided*, that nothing in this Act shall prevent the recovery of any fee or compensation by an architect residing out of the State of California, whose plans and specifications shall be accepted for a building or other structure within this State.)

Architects' licenses issued in accordance with the provisions of this Act shall remain in full force until revoked for cause, as hereinafter provided for in this Act.

A license may be revoked for dishonest practices, or for gross incompetency in the practice of the profession, which questions shall be determined by the District Board of the district in which the person whose license is called in question shall reside or shall be doing business; and upon a full investigation of the charges by the District Board, an opportunity having been given the accused to be heard in his own defense or by counsel, and upon the verdict of at least four members of the District Board, the Board may issue its certificate to the Secretary of State revoking the license of the person accused; and the Secretary of State shall thereupon cancel such license. And on the cancellation of such license it shall be the duty of the Secretary of the District Board to give notice of such cancellation to the County Recorder of each county in this State, whereupon the Recorder shall mark the license recorded in his office "Canceled." After the expiration of six months, the person whose license was revoked may have a new license issued to him by the Secretary of State, upon the certificate of the District Board by which the license was revoked.

Every licensed architect shall have a seal, the impression of which must contain the name of the architect, his place of business, and the words "licensed architect," with which he may stamp all plans and papers prepared by him.

This Act shall take effect from and after its passage.

Now is the time to Subscribe for the CALIFORNIA ARCHITECT AND BUILDING NEWS—\$3.00 per year.

ANNUAL SUMMARY OF BUILDING OPERATIONS.

IN the following table we present the number and value of buildings erected in San Francisco during the past year.

FOR FIRST SIX MONTHS.—1896.

1896	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
January	11	11	\$ 40,743	34	40	\$ 177,389	13	13	\$ 33,153	52	64	\$ 251,265
February	7	7	251,223	56	60	130,778	13	13	25,005	71	80	408,506
March	6	6	38,082	57	63	215,372	6	6	13,500	65	75	266,054
April	32	40	691,417	108	120	365,687	28	28	60,796	168	197	1,120,900
May	14	14	235,642	30	36	146,732	39	39	24,047	71	89	406,441
June	16	19	221,234	33	103	160,234	17	17	70,800	130	139	745,338
Total	53	106	\$1,482,041	378	422	\$1,406,192	116	116	\$157,991	517	644	\$3,136,324

FOR SECOND SIX MONTHS.—1896.

1896	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
July	7	11	\$ 291,063	36	41	\$ 118,795	10	10	\$ 13,364	53	64	\$ 423,222
Aug.	11	19	310,139	40	47	160,055	10	10	22,862	61	78	493,046
Sept.	3	8	35,476	46	54	141,209	16	16	53,394	65	78	230,079
Oct.	4	14	398,657	40	48	186,785	10	10	14,890	54	72	560,072
Nov.	16	12	172,334	35	39	144,359	9	9	20,941	60	51	343,534
Dec.	2	2	6,461	51	40	123,799	2	2	7,045	40	32	157,308
Total	43	66	\$1,214,333	248	260	\$834,582	57	57	\$139,236	333	373	\$2,287,151
Grand Total	96	172	\$2,696,374	626	682	\$2,240,774	173	173	\$297,227	850	1017	\$5,423,475

To this amount has been added the further estimated sum of \$300,000 where costs have not been given, which would make the total for the last six months, \$2,587,151, and the total for the year \$6,223,375.

We give the total values and numbers from 1880 so that our readers may make a comparison:

1880—	397 engagements, value.....	\$1,754,435
1881—	533 " " " " " " " " " " " "	3,790,732
1882—	783 " " " " " " " " " " " "	3,096,212
1883—	803 " " " " " " " " " " " "	5,261,689
1884—	1,127 " " " " " " " " " " " "	6,202,807
1885—	1,457 " " " " " " " " " " " "	7,043,999
1886—	1,148 " " " " " " " " " " " "	6,401,669
1887—	1,093 " " " " " " " " " " " "	6,605,054
1888—	891 " " " " " " " " " " " "	6,244,220
1889—	1,081 " " " " " " " " " " " "	7,500,000
1890—	1,037 " " " " " " " " " " " "	7,095,013
1891—	1,162 " " " " " " " " " " " "	6,946,056
1892—	920 " " " " " " " " " " " "	5,856,341
1893—	905 " " " " " " " " " " " "	3,962,532
1894—	947 " " " " " " " " " " " "	4,529,839
1895—	1,086 " " " " " " " " " " " "	5,199,235
1896—	880 " " " " " " " " " " " "	6,223,375

THE PREVENTION OF PREMATURE BURIAL.

PSYCHICAL Science has proven that the spirit may leave the body for a while, may seek to return to it, and sometimes succeed in its endeavors. This being the case it is our duty to take such care of a vacant body that if the spirit which occupied it makes an effort to return, it shall find it figuratively swept and garnered, that is, shall not find it in a box six feet below the level of the ground or in any other horrible place. Either this should be done, or

the body so destroyed that the spirit will find it impossible to occupy it again.

In plain words arrangements should be made in view of the many cases of premature burial to have a building in every community erected for the special purpose of receiving and holding bodies until they show decided absence of any spiritual presence by their decay, after which any disposition may be made of them that their relatives may see fit.

This building should consist of a large room or hall, situated preferably in one of the cemeteries, built by the municipality, in which the coffins of dead people should be placed and numbered. The top of the caskets should be thin glass so that when decomposition sets in it may be seen, and so that, in the event of any of the bodies being revived, they might see the glorious light once more and feel safe. The building to have a skylight or other good light and at night to be thoroughly lighted with electricity.

The cushions on which the bodies rest to be connected by electric wires to bells with an annunciator so that at any movement of a body, the attendant, one of whom would be constantly on the watch, would be immediately notified thereof.

If the newly returned spirit should have sense enough to see where it is, by a slight rap it could break the thin glass and thus get fresh air to breathe.

Those persons who expressed such a desire could have their body made unsuitable for further occupation by an authorized physician—and thus obviate the necessity of having their bodies laid up in the above reception hall and prevent overcrowding the same.

STROLLER.



RECOMMENDATION MADE BY GRAND JURY IN REGARD TO ARCHITECTURAL MATTERS:—Concerning the public schools of San Francisco the report says:

"We would recommend that suitable fire escapes be attached to all public school buildings, and that one be attached to each side of the building. Our children are housed in large frame structures, three, four and five stories high, and while it is true they have what is termed a fire drill, yet it is our opinion that should a fire occur they would become panic-stricken and many be killed or wounded."

The report recommends the establishment of a builders' bureau to be placed in charge of a competent builder or architect, whose sole duty will be to overlook all plans and specifications of new building, improvements or repairs. It is also recommended that the fire alarm station be removed from Chinatown and placed in the dome of the new City Hall. The report finds that some of the theatres are poorly protected from fire. The suggestion is made that a detail of three or four firemen be kept on duty during the progress of each entertainment. The men could be behind the scenes. This report is signed by E. B. Farnsworth, Chairman; W. L. Asbe and D. B. Factor.

The Committee on Health Department and Hospitals in its

report scores the management of the City and County Hospital. It says:

"We have visited the City and County Hospital on several occasions, and must say that the sewerage system and the plumbing and ventilating of the different wards and corridors are a disgrace to the city, and should be immediately remedied. We find that there are over three hundred patients and over eighty paid employees, besides four internes and eight rated ward tenders, who receive no pay."

AS LUMBER can be bought at most any price, the combine being broken, we still continue the old lumber price list as a comparison can be drawn by buyers. Now is the time to build.

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.

APPORTIONMENT OF INDEBTEDNESS FOR BUILDING LIENS.—Where building material has been ordered for the construction of several houses on a certain tract of land, which, before all of the material has been delivered, or a lien filed, is subdivided according to the number of houses, the lien must be apportioned and charged pro rata against the houses.

Blanchard v. Fried, Sup. Ct. Ill., 44 Northeastern Rep. 880.

LIABILITY OF OWNER OF ELEVATOR.—The duty of those operating a passenger elevator is the same as that of a common carrier, to exercise the highest degree of care for the safety of passengers, or those about to become such; and it is negligence to allow the doorway to an elevator shaft, opening into a hallway in an office building in a city, to remain open and unguarded.

So. B. & L. Ass'n Lawson, Sup. Ct. Tenn., 37 Southwestern Rep. 86.

WHEN ARCHITECT IS NOT ENTITLED TO FEES.—An architect employed to prepare plans and specifications for a building, and furnish an estimate of the probable cost, is not, upon submitting the same, entitled to his fees, unless the building can be erected at a cost reasonably approximating that stated in such estimate.

In this case, the architect has estimated that the building would cost about \$4,000, but when bids were obtained it was found that it would cost over \$7,000, and the other party refused to go ahead with the building, and also to pay the architect any commission, claiming that he was induced solely by the estimates of the architect to have the plans drawn.

Feltham v. Sharp, Sup. Ct. Ga., 25 Southeastern Rep. 619.

WHEN LANDLORD IS LIABLE FOR TEARING DOWN ADJOINING BUILDING.—Where a landlord, who owned another building adjoining that occupied by his tenant, the two being constructed together, tore such building down, rendering the leased building unsafe, and then procured its condemnation and destruction by

the city authorities, such acts constituted an eviction, for which the tenant may recover damages, and the landlord cannot avail himself of the action of the city authorities as a defense.
Siber v. Larkin, Sup. Ct. Wis., 68 Northwestern Rep. 406.

DISCLOSURE OF INTEREST TO BUILD BY ARCHITECT.—An architect employed to furnish plans for the erection of a building, occupied by tenants, is not liable to the owner by disclosure of intended erection of new buildings, the architect having neither contracted, nor been requested, to keep such fact a secret, for the loss of rent caused by the vacation of the premises by the tenants.
Havens v. Donohue, Sup. Ct. Cal., 43 Pacific Reporter, 963.

CONTRACTOR CAN RECOVER THOUGH BUILDING DESTROYED BY FIRE.—A contractor for the carpenter work in a building in the course of erection is entitled to recover from the owner the value of the materials used and the work done by him, where the building was destroyed by fire before the contract was completed; but he is not entitled to recover for the value of materials which he had procured to use in the house, but which had not actually been used at the time of the fire.

Hayes v. Cross, Sup. Ct. App. Div., 40 N. Y. Supp. Rep. 1098.

HYDRAULIC POWER FOR CITY SUPPLY.

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the city authorities, such acts constituted an eviction, for which the tenant may recover damages, and the landlord cannot avail himself of the action of the city authorities as a defense.

Silber v. Larkin, Sup. Ct. Wis., 68 Northwestern Rep. 406.

DISCLOSURE OF INTEREST TO BUILD BY ARCHITECT.—An architect employed to furnish plans for the erection of a building, occupied by tenants, is not liable to the owner by disclosure of intended erection of the new buildings, the architect having neither contracted, nor been requested, to keep such fact a secret, for the loss of rent caused by the vacation of the premises by the tenants.

Havens v. Donohue, Sup. Ct. Cal., 43 Pacific Reporter, 963.

CONTRACTOR CAN RECOVER THOUGH BUILDING DESTROYED BY FIRE.—A contractor for the carpenter work in a building in the course of erection is entitled to recover from the owner the value of the materials used and the work done by him, where the building was destroyed by fire before the contract was completed; but he is not entitled to recover for the value of materials which he had procured to use in the house, but which had not actually been used at the time of the fire.

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The Model Window Hinge Company, the owners of this valuable patent, have obtained patents for the United States and Canada, and are now getting their patents in European countries and Australia.

This appliance has been placed on a great many buildings in San Francisco, Oakland, Portland, Tacoma, Fresno, San Jose and elsewhere and has met with the hearty approval and indorsement of all who have used it, including many of the leading architects of this city.

The following diplomas and special awards have been received by the Model Window Hinge Company, as evidence of the meritorious qualities possessed by this hinge:

Twenty-eighth Exposition Mechanics' Institute, San Francisco, Cal., 1895. Highest Award. The Oakland Exposition, Oakland, Cal., 1895. Gold Medal. The Oakland Exposition, Oakland, Cal., 1896. Diploma. Twentieth Industrial Exposition Mechanics' Institute, [Home Products Exhibition] San Francisco, Cal., 1896. Diploma. Special Mention.

A few of the residences and prominent buildings in which

the Model Window Hinge has been placed are: The Chronicle Building, A. B. McCreary's Building, 310 Pine street; second story Girl's High School; City and County Att'y Creswell's office, City Hall; J. Faulkner, 1217 Sutter street; A. P. Black, Asst. Pros. Att'y 1316 Green St.; Cerf Weyl, 1219 Sutter St.; J. M. Young, 220 Kearny St.; Geo. Cohn, 264 Battery street; L. H. Moise, Fulton near Fillmore; H. B. Russ, 14 Columbia Square; Mrs. J. Barron, 822 Broadway; John Yule, East Oakland; Chas. Parcels, Webster street, Oakland; William J. Kitto, 690 31st street, Oakland; Liverpool, London & Globe Building, Liederdorff and California Sts.; Kohler Building, Jones and Sutter Sts.; City Hall, San Jose; Court House, Fresno; J. Weyl, 224 Kearny street, San Francisco.

Experienced mechanics are employed by the company to fit its appliance on buildings, and the work is done with neatness and dispatch, and without disturbing the usual routine of the household or the office. One set of the hinges is sufficient for the entire building, thus materially lessening the expense of adopting the hinge.

A sample window can be seen in operation in the office of the company, Mills Building, floor 7, room 5.

CITY BUILDING NEWS.

Belvedere near Fredrick. To build; owner, Otto T. Hildebrecht; architect, F. P. Rabin; contractor, D. Currie; cost \$2354.

Bryant and Solano. Two-story frame; owner, Richard Schmutzhaus; architects, Martens & Coffey; contractors, Franz & Burmeister; signed, Dec. 23; filed, Dec. 23; cost \$5368.

Clay near Baker. Excavations, cement work, etc., for three-story frame; owner, F. F. Leitz; architect, C. A. Meussdorffer; contractor, R. H. Stettin; cost \$1165. Plumbing, contractor, H. Williamson; cost \$890. Carpenter work, A. Olson; cost \$893. Brick and iron work; contractors, T. Hock & Son; cost \$650.

Eighteenth and Dolores. Excavating, etc.; owner, Board of Education; architect, C. I. Havens; contractor, Rae Building Co.; signed, Dec. 31; filed, Jan. 2; cost \$123,908. Plumbing, contractor, T. C. Sweeney; cost \$1,033.50. Heating; contractor, W. Morgan & Co.; cost \$4406.

Eighteenth and Dolores. Hills' Patent Blinds for three-story brick; owner, Board of Education; architect, Chas. I. Havens; contractor, Edward B. Hinds; cost \$2000.

Fair Oaks and 25th. To build; owner, John W. Smith; architects, Martens & Coffey; contractor, Wm. J. B. Warner; cost \$3030.

Franklin and Washington. Alterations and additions; owner, Louis Cohen & Son; architects, Salfield & Kohlberg; contractor, H. Behrens; cost \$1000.

Freelon near 4th. Two-story frame; owner, J. F. Dorland; contractor, A. Petry; signed, Dec. 22; cost \$2100.

Fremont near Howard. Excavation and brick work for two-story brick; owner, Alexander P. Christie; architect, David C. Coleman; contractor, Matt V. Brady; cost \$1507.50.

Gilbert near Brannan. To build; owner, Con. Sweeney; architect, A. J. Barnett; contractor, Ed. Mooney; signed, Jan. 12; filed, Jan. 13; cost \$1650.

Jackson near Fillmore. Excavation, etc., for two-story frame; owner, Mrs. Beha Levy; architect, M. J. Lyon; contractor, John Furness; cost \$6450.

Lyon near McAllister. Two-story frame; owner, M. Meyer; contractors, T. & W. H. Kinread; cost \$1230.

Pacific Ave. and Pierce. Two-story frame; owner, Samuel B. Welsh; architect, E. A. Mathews; contractors, Lieter & Prugh; cost \$6038.

Park Road near Frederick. Two-story frame; owner, Richard Spreckels; architect, Edward J. Vogel; contractors, White Bros.; signed, Dec. 21; filed, Dec. 23; cost \$6530.

Pierre near McAllister. Two-story frame; owner, L. Frielander; contractor, W. H. & T. Kinread; cost \$1027.

Pine near Buchanan. Two-story frame; owners, G. H. and Mary G. Brown; Brown; architects, Townsend & Wyneken; contractors, Holm & Sheibly; signed, Dec. 30; filed, Dec. 31; cost \$1807.

Pine near Buchanan. Alterations and additions; owner, J. O'Leary; architects, Townsend & Wyneken; contractor, Q. Powers; cost \$1445.

Pine and Laguna. Alterations and additions; owner, Jane Burkhead; architects, Cahill & Condon; contractors, Knox & Cook; cost \$2500.

Russ near Folsom. Alterations and additions; owner, H. Marks; architects, Salfield & Kohlberg; contractor, H. Behrens; cost \$1070.

Sacramento near Steiner. Two-story frame; owner, A. Morris; architect, F. B. Wood; contractor, Jas. H. Burke; signed, Dec. 31; filed, Dec. 31; cost \$3450.

Sixth near Channel. Two-story frame and lumber sheds; owner, Pacific Lumber Co.; days' work; cost \$2000.

Twelfth Ave. near California. Cottage; owner, A. Vogel; architect, A. Vogel; contractor, A. McLaughlin; cost \$1200.

Twenty-second near York. Two-story frame, six flats; owner, Wm. Torjet; contractor, Wm. Helbing; cost \$4725.

Union near Scott. Two-story frame, owner, J. W. Valentine; architect, Edgar A. Mathews; contractor, Andrew T. Ruch; cost \$3068.

Van Ness Ave. and Clay. Plate glass; owner, Claus Spreckels; architects, Reid Bros.; contractor, W. P. Fuller & Co.; signed, Nov. 19; filed, Dec. 31; cost \$1800.

Washington near Leavenworth. Alterations, etc.; owner, Mary A. Banyon; architect, W. O. Banks; contractor, Geo. H. Walker; cost \$2020.

Sausalito

Additions to three cottages. Owner, Mrs. L. Miller; architect, W. J. Cuthbertson; contractor, Jno. Mason; signed, Jan. 12; cost \$1348.

The California Architect and Building News.

OFFICE, 408 CALIFORNIA STREET,

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

VOLUME XVIII.

FEBRUARY 20th, 1897.

NUMBER 2

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 EIGHTEENTH YEAR. INCORPORATED 1880.

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1 Column.....	12.50	35.00	65.00	125.00
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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.



HERE is a bill pending before the Legislature making it obligatory to provide definite plans for proposed bridges, in order to enable all bidders to estimate on the same plans and specifications.

This is a great improvement on the old method where the authorities require bidders to furnish their own plans, and as a consequence the contractor who furnished flimsiest and cheapest design, usually secured the contract. But there is no reason why the plans for public buildings required by the counties should not come under the same or a similar law, and we again call the attention of our law makers to the draft of a bill published in our December number outlining a method of obtaining plans for State buildings, and suggest to them that such provisions be adopted into the County Government Act, putting bridges under the caption of Engineering work, and buildings under the head of Architectural works.

FROM THE THIRD BIENNIAL REPORT OF STATE MINERALOGIST—STRUCTURAL MATERIAL.

CONTINUED FROM LAST NUMBER.

Forrester's Brickyard.—It is in Los Angeles, and uses an open kiln, fired with wood, coal and oil. Its capacity is 8,000 bricks a day. Six men are employed. C. Forrester, of No. 125 W. Second street, owner.

Gamble's Brickyard.—It is at Garvanza. An open kiln, fired with wood, is used. Its capacity is 8,000 bricks a day. Eight men are employed. J. M. Gamble, of Garvanza, owner.

Houlahan & Griffith's Yard.—It is at Inglewood. They employ two Boenehke continuous kilns, fired with oil and coal. Capacity, 12,000,000 bricks a year. Sixty men are employed. Houlahan & Griffith, of No. 208 Stinson Block, owners.

Jensen's Brickyard.—It is in Los Angeles, and uses open

kilns, fired with wood. Capacity, 38,000 bricks a day. Thirty men are employed. H. Jensen, of No. 130 W. Second street, owner.

Joyce's Brickyard.—Located at Los Angeles. A continuous kiln, fired with coal, is used. Capacity 24,000 bricks a day. Thirty men are employed. T. F. Joyce, of No. 125 W. Second street, owner.

Karr, Frampton & Co's Brickyard.—It is at Los Angeles. Uses an open kiln, fired with oil. Capacity, 16,000 bricks a day. Eighteen men are employed. Karr Frampton & Co., of No. 125 W. Second street, owners.

Los Angeles Pressed Brick and Terra Cotta Co's Works.—They are located at Los Angeles. Employ five down-draught kilns, fired with an oil "distillate" of 24° B. Twenty men are employed. Company's office, No. 119 S. Broadway. L. F. Miller, superintendent.

Monarch Brick Co's Yard.—It is at Los Angeles. Uses open kilns, fired with wood and oil. Capacity 34,000 bricks a day. Thirty men are employed. Whitman & Workman, of No. 127 W. Second street, owners.

Pay Brickyard.—It is at Los Angeles, and uses open kilns, fired with wood. Capacity, 18,000 bricks a day. Twenty men are employed. C. Pay, corner of Mott and Seventh streets, Boyle Heights, owner.

Pearson & Anderson's Brickyard.—It is at Los Angeles. Uses an open kiln, fired with wood and coal. Capacity, 8,000 bricks a day. Eight men are employed. C. Schroder, of Pico Heights, owner.

Simon's Brickyard.—It is at Los Angeles. A Hoffman continuous kiln, fired with coal-slack and wood, is used. Capacity, 25,000 bricks a day. Thirty men are employed. R. Simons, of E. Seventh street, near Boyle Avenue, owner.

MARIN COUNTY

There are three large brick plants in this county, all within a few miles of San Rafael, and accessible to tidewater. They were fully described in our XIIth Report, p. 382, and are as follows: The *Fortin Brick Co.*, the *Patent Brick Co.*, and the *Remillard Brick Co.*

MONO COUNTY

Gorman's Deposit.—It is 1 mile S. E. of Bodie, and is very extensive, proven by a 190' tunnel and various cross-cuts. It is hard and soft in places, of many colors, and estimated to be 60' to 80' thick. Locally used for brick. Hugh Gorman, of Bodie, owner.

PLACER COUNTY

Gladding, McBean & Co's Potteries.—See our IXth and XIIth Reports, pp. 297 and 382. They are at Lincoln, at 170' elevation. All sorts of architectural terra cotta, vitrified sewer-pipe, 3" to 30" in diameter, vases, flower-pots, hollow tile, fire-proofing, pressed and fire brick, etc., are made. The works consist of a 150 H. P. engine and 4 boilers; 16 down-draught kilns; the necessary mixing, grinding, and pugging mills, etc.; and a Boyd's brick-press, for manufacturing pressed brick in the semi-dry way, has been recently added and is in successful operation; 80 tons pressure is said to be applied on each brick. A large quantity of fuel is required. The supply of wood is decreasing, and is being

replaced by oil under the boilers and coal in the kilns. The clays (kaolin) used are principally obtained from two large pits at the eastern end of a low ridge 1 mile N. of the pottery. The following section is shown in the southern pit:

Soil.....	1'
Volcanic breccia.....	12'
Light, sandy clay.....	8'
Fine sand.....	4'
Sandy yellow clay.....	7'
Sandy clay with gravel.....	6'

The following section is in the northern pit:

Soil, etc.....	2'
Volcanic breccia.....	10'
Fire-clay (for fire-proofing, etc.).....	10'
Pipe-clay (for sewer-pipe, etc.).....	6'
Fine white terra cotta clay.....	20'

The clay is excavated in the northern pit to a depth where water interferences. The extent of the deposit is unknown. A hole 60' deep, bored in the bottom of the pit, is said not to have reached the bottom of the clay, and it is said to underlie the town of Lincoln, where it has been penetrated by wells. One hundred and fifty-six men are employed. J. R. Chambers, of San Francisco, secretary; A. J. Gladding, of Lincoln, superintendent.

RIVERSIDE COUNTY

Elsinore Coal and Clay Co's Works.—They are 6 miles W. of Elsinore at 1,200' elevation. The several pits are near the Elsinore (*Chaney*) coal mine. About 5,000 tons of clay have been shipped to manufacturing establishments. Should the Southern California R. R. extend its tracks to this locality the industry is likely to become one of importance. D. W. McCrea, of Elsinore, superintendent.

McKnight's Clay Works.—It is 4 miles S. W. of South Riverside, at 1,200' elevation. The clay is of the indurated variety, and occurs as a bed in the Tertiary rocks, having a dip conformable to the sandstone. The clay-pits near Elsinore and in Temecula Canon are mostly Quaternary deposits. The clay is shipped to the pipe-works at South Riverside and to the terra cotta works at Los Angeles. The output at present is 200 tons per month. J. H. McKnight, of South Riverside, owner.

Pacific Clay Manufacturing Co's Works.—They are in Temescal Canon, 12 M. east of South Riverside. Several pits are opened in this locality and the clay shipped by waggon to South Riverside, where the pipe-works of the company are located. M. Findlay, of South Riverside, superintendent.

SACRAMENTO COUNTY

Capital Sewer-Pipe Works.—See our Xth Report, p. 509. They are in the eastern part of the City of Sacramento. They consist of two down-draught kilns, 18' to 20' in diameter, and a Vaughn sewer-pipe press, of 600 to 1,800 pieces daily capacity, depending upon the size of pipe. The clay used is obtained near Carbondale. Nine men are employed, George Muddox, of Sacramento, owner and manager.

Fountain Bros' Brickyard.—See our Xth Report, p. 508. It is in the southern part of the City of Sacramento. A superficial deposit of loam, clay and sandy clay, 6' thick is

used for making bricks. It varies in character from loam at the top, through clay, to sandy clay at the bottom, which, by thoroughly mixing, forms good material for bricks. About 1,000,000 bricks are burned annually in common kilns. Ten men are employed when working. W. A. Fountain, of Sacramento, manager.

Kreuzberger & Harvie's (Ryan) Brickyard.—It is near Fountain Bros' yard, in the southern part of the City of Sacramento. Dark sandy loam, 6' to 10' thick, is used; 200,000 bricks are burned per month, or 2,000,000 per annum, in common kilns. Twenty-four men are employed. N. Harvie, of Sacramento, manager.

Sacramento Transportation Co's Brickyard.—See our Xth and XIIth Reports, pp. 506 and 383. It is at Riverside, on the Sacramento River, 5 miles below the City of Sacramento. The works consist of five brick-machines of 30,000 daily capacity each; two sixteen-compartment Hoffman kilns of 50,000 daily capacity each; a dredger for excavating, and a railroad for transporting the clay from the pits to the works. A 12' superficial deposit of loam, clay, and sandy clay is used. It is partially mixed by the steam shovel which fills the pits in the lowlands. The demand for bricks now being limited, the works are run intermittently. When running full-handed 160 men are employed, principally Chinese. Frank Dwyer, of Sacramento, secretary; J. O'Neil, of Sacramento, superintendent.

SAN JOAQUIN COUNTY

The agricultural industries are most important, and, with this fact in view, the Stanislaus and San Joaquin Water Co. developed their irrigation canals during the summer of 1895. Manufacturing industries about Stockton, where shipping facilities are good, are also very important sources of revenue. The natural economic mineral resources at present developed consist principally of the well-known natural gas at Stockton, manganese in the western foothills, and brick-clays near the San Joaquin River. A good supply of water may be had from wells, 80' to 150' deep, in most parts of the valley lands, and flowing wells are obtained throughout the central part of the valley at about 1,000' in depth.

Fine, earthy clay occurs in places in the San Joaquin Valley, which, if properly selected, is suitable for making bricks. A number of clay beds suitable for bricks, etc., have been penetrated by wells in Stockton and vicinity, but their depth has prevented their exploitation.

San Joaquin Brick Co's (San Joaquin Improvement Co's) Yard.—See our XIIth and XIth Reports, pp. 561 and 394. It is on the San Joaquin River, 5 miles S. W. of Stockton. The material used is a superficial deposit of fine, earthy clay, which contains enough iron to color the bricks bright red. The clay is mined by dredging; the bricks are made in a Pott's machine of 40,000 daily capacity, and burned in a fourteen-chamber Hoffman kiln of 18,000 daily capacity; coal is used for fuel. Fifteen to forty men are employed. C. Horton of Stockton, secretary; F. W. Muller, of Stockton, superintendent.

Stockton Terra Cotta Co's Pottery.—See our XIth Report, p. 394. It is at Stockton. Terra cotta, sewer-pipe, etc., are manufactured. The clay used is mined at Valley Springs, Calaveras County. Idle. W. C. Morgan, of Stockton, superintendent.

SAN LOUIS OBISPO COUNTY

Al Louis' Brickyard.—It is 1 mile W. of San Luis Obispo, at about 300' altitude. Superficial loam is used; the bricks

are made by hand, and burned in common kilns. About 800,000 are made per annum for the local demand. Eight Chinese are employed.

SANTA CLARA COUNTY

Dreischmyer's, H., Brickyard.—It is on Coyote Creek, in the suburbs of San Jose. Common stock and pressed bricks are made from a superficial deposit of sandy clay, and burned in a Hoffman kiln; 1,250,000 bricks were burned in the summer of 1895, and 25 men were employed.

Peterson's Brickyard.—It is on the S. P. R. R., in the southern part of San Jose. Common and pressed bricks are from a superficial deposit of sandy clay, 25' thick, on Coyote Creek, 1 mile E. of the yard. Two patent kilns are used. About 300,000 pressed and 3,000,000 common bricks are made annually. Fifty-five men are employed in summer. T. W. Peterson, of San Jose, manager.

Remillard Brick Co's Yard.—It is on the east side of Coyote Creek, in the southeastern part of San Jose. Common stock and pressed bricks are made. The company owns 170 acres, on which is a heavy superficial deposit of clay suitable for making bricks. A Hoffman kiln is used. The clay is hoisted from the pit by steamer-power and transported in side dumping cars to the yards. The works were in operation four months in 1895, and 60 men were employed. C. Sunard, of San Jose, superintendent.

San Jose Brick Co's Yard.—This company have two Hoffman kilns on the Narrow-Gauge Railroad, 1 mile W. of San Jose. A total of about 12,000,000 common and pressed bricks are produced annually. One hundred and fifty men are employed in summer and thirty in winter. J. M. O'Keefe, of San Jose, superintendent.

SANTA CRUZ COUNTY

There is a great variety of clays in this county that have only been tested in a few cases, and but little is known of their general utility. A large percentage of them are indurated, and occur in the form of argillaceous or clay shales. From their light color and general appearance they are locally known as "chalk rock," but are by no means a chalk. They occur in the hills and bluffs about Santa Cruz and elsewhere in the foothills facing the coast. Satisfactory experiments have been made with an indurated clay occurring in large masses, though undeveloped, on the *Hodge ranch*, 1½ miles S. W. of Glenwood, and near the railway. See our Xth and XIIth Reports, pp. 623 and 383.

McCabe Brickyard.—It is situated on the San Lorenzo River, about 1 mile N. of Santa Cruz. Three kilns were burned in the summer of 1895, producing about 422,000 bricks, principally used in the construction of the new courthouse in Santa Cruz. The clay is 15' to 20' thick, overlies a bed of sand, and consists of the disintegrated mass of granite rocks and shales transported from above by water. Just sufficient iron is contained to give the bricks a bright red color. R. M. McCabe, owner; A. G. Bowman, of Santa Cruz, superintendent.

Hihn's, F. A., Brickyard.—See our XIIth Report, p. 383. It is on San Lorenzo Creek, near Felton. Seventy-five thousand bricks were burned in 1895.

SHASTA COUNTY

Holt & Gregg.—This firm has brickyards located at Anderson and Redding. At the Anderson yard, situated 2

miles N. of town, a 30,000 per day brick-molding machine is to put up. The past season, 400,000 bricks were burned. Melded and stock bricks are made by the firm, which employs in the busy season as many as 250 men; 30 men are at work at present. Holt & Gregg, of Red Bluff, Tehama County, owners.

SOLANO COUNTY

McKenzy & Reid's Pottery.—It is located in the town of Benicia, and only stove linings are manufactured. The clay worked is obtained principally from Ione, and a small quantity from Hoyt's farm, 1 mile N. of Goodyear's Station. The pottery is run intermittently, and 6 men are employed. J. McKenzy and M. Reid, of Benicia, owners.

Napa.—Clay of good quality and in large quantities exists, but is not utilized at present.

Union Pressed Brick and Terra Cotta Co.'s Works.—These extensive works are at Vallejo. There are four terra cotta and two brick kilns, with ample shed room. Idle. J. W. Pew, of No. 310 Pine street, San Francisco, secretary.

Vallejo Hydraulic Pressed Brick Co.'s Works.—They are 1 mile N. of Vallejo. They consist of a large Hoffman kiln, hydraulic pressed brick machine, steam engine, boiler, etc. Pressed brick were made from the clay shales obtained at the works. Idle. California Bank, of San Francisco, owner.

TULARE COUNTY

At Visalia are two brickyards, owned by T. B. Craycroft and George Ballu, of Visalia. Their combined capacity is about 1,000,000 bricks per year.

To be continued.



To the Editor of the California Architect and Building News.

DEAR SIR:—I have not met yet with any rule for the proportion of Risers to Treads of Stairs which seems to be satisfactory generally.

One rule says that the sum of the Riser and Tread should equal 17½" for what reason it does not say.

Another rule starts at a proportion of Tread to Riser of 12" to 5½" and then goes on for every increase of 1" Tread a decrease of ½" Riser.

A third rule says Riser=66 divided by Tread, so that 12" Tread=5½" Riser and 9" Tread=7½" Riser.

For purposes of comparison I give the three tables—all in inches:

	No. 1	No. 2	No. 3
TREAD 9 inches	RISER 8½ inches	7 inches	7½ inches
" 10 "	7½ "	6½ "	6 2-5 "
" 11 "	6½ "	6 "	6 "
" 12 "	5½ "	5½ "	5½ "

By this it shows they all agree only upon the Riser for a 12" Tread—which forms the start from which they im-

mediately diverge. Number 1 and number 2 stepping along in arithmetical progression, number 1 quicker than number 2, while number 3 goes at a hybrid geometric gait.

The third idea seems the most scientific, for as the steepness of the hill increases, the labor of going up increases in increasing Ratios, or with the same power the shortness of the step increases in a like ratio.

The practice in California is to make the steps a little longer than indicated by 12 to 5, for 12" Tread—possibly because the legs of Westerners are longer than others. The formula—Riser=66 divided by Tread would be nearer to these ideas—this would give the following table reduced to eighths:

Tread 8 inches	Riser 8 5/8 inches
" 9 "	7 5/8 "
" 10 "	6 7/8 "
" 11 "	6 1/4 "
" 12 "	5 3/4 "
" 12 "	5 1/4 "

Would be glad to hear how this accords with practice of others.

Yours,

STROLLER.

To the Editor of the California Architect and Building News.

DEAR SIR:—The use of slate for roofing purposes is a subject that should engross more of the attention of our architects, contractors and builders. Some of the first named, for some reason known only to themselves, but which is directly contrary to the ultimate interests of those for whom they plan structures, seem to invariably make their specifications exclude the use of slate for roofing or when the owner insists upon slate being used, these architects will manage by some means to have the eastern product provided. The latter action is quite as grievous as it can be. For here in our own State, within one hundred and fifty miles of San Francisco, there are inexhaustible beds of slate, of the finest quality. In color it is a beautiful blue black, flawless in every respect and of a most enduring character. This material can be shipped anywhere on this coast and delivered at a cost not greater than eastern or foreign slate, and in some respects for even less, when its superiority as a natural product is taken into consideration.

There is a certain sense of injustice to our own people manifested in these matters, and while every one is ready to cry for the protection of home industries, in the matter mentioned there seems to be a lack of home patronage. This is strikingly wrong regarding public structures where the strictest economy in the long run should prevail and the money of the people put to the best uses.

When the late Page Brown prepared his plans for the new Union Ferry Depot in San Francisco, he represented that a slate roof would be too heavy, and instead recommended the use of corrugated iron. Aside from the fact that the heavy iron frame is amply strong to sustain the weight of a slate roof, the idea of covering such a structure with unsightly corrugated iron ought to have been sufficient to reject his ideas. If this material is used the otherwise attractive building will have a cheap and unfinished appearance. This is not the only objection, for owing to its close contiguity to the water and its exposure at all times to the general humidity, the natural corrosion will be very rapid. In order to partly obviate this difficulty and protect the property, it will require painting every year at considerable

expense, and at the end of a decade its service will have ended and a new roof be required to replace it. If slate was used instead, all these objectionable features would be removed; the structure would have the finished appearance it should possess, without any resemblance to a shed; it would never require painting and would last the life of the building itself. It is not even yet too late to remedy this glaring defect and a great advantage to the state in the way of economy would be gained if the plans were changed and an additional appropriation made to effect such a desirable object.

The contemplated roof for the City Hall is to be a combination of corrugated iron and concrete—a heavy cumbersome material not nearly so enduring as slate, and in the end ever so much more expensive. The proposed roof for the New Municipal Building on Kearny and Washington streets is to be of tar, felt, gravel, etc., something that will require frequent expense for repairs.

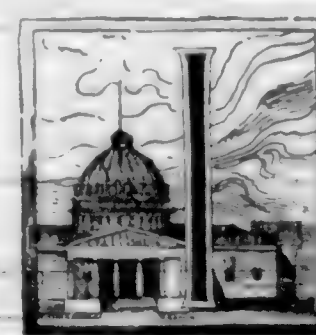
In contrast to these plans of the state and city compare the action of the Federal Government and its long row of recently erected new brick barracks at the Presidio, all covered with slate.

SLATE ROOFER.

HOUSING OF PEOPLE OF SMALL INCOMES.

No. 6.

BUILDING REGULATIONS CONTINUED.



IN GLANCING over the Building Regulations—very often called by the narrower name of Fire Ordinances—of some of the large cities of the world including the City of San Francisco, we shall arrange the subject under three divisions, viz.: 1st Those regulations pertaining chiefly to the proper construction of building. 2d Those appertaining to the arrangement of building hygienically. 3rd Plumbing regulations.

FIRST—Pertaining chiefly to the proper construction of building:

In Paris the height of buildings bordering on public streets is determined by the width of the streets, and is measured from the sidewalk to the highest point of the front. The height cannot exceed 12 meters (39.37 feet) for streets 7.80 meters (25.59 feet) wide, 15 meters (49.21 feet) for streets from 7.80 to 9.74 meters (25.59 to 31.96 feet) wide, 18 meters (59.05 feet) for streets from 9.74 to 20 meters (31.96 to 65.62 feet) wide, and 20 meters (65.62 feet) wide. Buildings in any case may not comprise more than seven stories, not including the ground floor. The ground floor story must not be less than 2.280 meters (9.19 feet) in height. The height of the other stories and the basement must not be less than 2.60 meters (8.53 feet). In case of attics it is sufficient if the highest part is 5.60 meters (8.53 feet) in height. Courts of buildings not more than 18 meters (59.05 feet) high must have a surface of not less than 30 square meters (322.92 square feet) with an average width of not less than 5 meters (16.40 feet).

In Berlin no more than five stories will be permitted in buildings intended for permanent occupancy by human beings, and the flooring of the top story must never exceed a height of 17.50 meters (57.41 feet) above the sidewalk.

The proposed New York rule is given in our December journal.

In San Francisco on all streets 100 feet and more in width no building shall be constructed exceeding 125 feet in height. On all streets less than 100 feet in width no building shall be constructed exceeding 100 feet in height.

This is altogether too liberal and some more general law should be adopted, such as that of London where no building shall be higher than the width of the street.

In most cities regulations are made establishing a building line for residence parts of the city where the houses have front gardens; this prevents a selfish owner from building in front of his neighbor and should be ordained.

In the San Francisco Ordinance the smallest space allowed between bay windows is specially stated but not space allowed between bay windows or projections and adjoining property. The rule in Berlin is that all projecting constructions extending more than 30 centimeters (11.81 inches) beyond the building line must be kept separated from neighboring properties by a distance equal to at least one and one-half times the distance of the projection.

In the same way provision should be made for thickness of external walls when cut up by many openings. In Manchester whenever openings in external walls in any of the stories are greater than one-half of the whole extent of the vertical face, piers of brickwork or other fireproof supports must be so disposed as to carry the superstructure. Piers of this kind must also be placed at the corner or angle of any street on which the building abuts. Openings in party walls are forbidden.

2d. In the matter of those regulations for the treatment of building hygienically—the following are a few of the points requiring consideration:

No street to be less width than forty feet.

No cellar to be used for any other purpose than for storage.

Back to back houses to be prohibited.

In Manchester when the floor of the lowest story of a dwelling house is below the level of the adjoining ground which is immediately in contact this story must be inclosed with double walls having an intervening cavity extending 6 inches above the surface of the ground, being at least 2½ inches wide and properly ventilated. If the cavity is filled with asphalt it need only be 1 inch wide. The parts of this double wall must be properly tied together with iron, vitrified stoneware, or other suitable material, inserted at distances apart not exceeding 3 feet horizontally and 18 inches vertically. There must be also a damp course of sheet lead, asphalt, slates, or other impervious material at the base of such wall, and likewise at the top of the cavity. The aggregate thickness of the two parts of the double wall, exclusive of the cavity, must be throughout not less than the minimum thickness prescribed for a wall of the same height and length, and belonging to the same class of buildings as that to which the double walls belong.

The yards or open spaces in Manchester, in connection with dwelling houses, to the extent of 150 square feet, must be properly paved with durable and impervious pavement, laid closely and evenly and sloped to a channel leading to a trapped gully grating so as to carry off all rain and waste water. This pavement is to be so arranged that it shall adjoin the external wall in the rear or at the side of the house, and where practicable it shall extend throughout a distance of 10 feet from said wall.

Fronts of buildings in Paris must always be kept in good

condition. They must be scraped, repainted, or washed at least once in every ten years, under penalty of a fine not exceeding 100 francs (\$19.30).

In stables, in Berlin, the floor must be covered with an impermeable material. Sufficient and appropriate receptacles for the reception of stable manure must be provided at a proper distance from the stable. No stable will be permitted to have any openings facing a public street.

In the construction of tenement houses not more than 78 per cent of the ground of the lot shall be covered.

The regulations of New York governing the Lighting and ventilation of dwellings are as follows:

VENTILATION OF ROOMS

Every habitable room must have at least one window opening directly upon the street or yard, or upon a court or light shaft.

LIGHT AND AIR SHAFTS

Except as hereinafter otherwise prescribed, every light and air shaft for habitable rooms must be at least 12 square feet in area for a three-story house, 16 square feet in area for a four-story house, and 20 square feet in area for a five-story house; and in every case not less than 2 feet wide in the clear. Shafts or courts between two houses and common to both, must be of double this area, and not less than 4 feet wide. But in houses where there are five interior rooms in a line on a floor, the area of shafts must be 50 per cent greater than above prescribed; and where there are six interior rooms in a line on a floor, the area of each shaft must be at least 100 per cent greater than the minimum above prescribed.

And in every tenement house with apartments on five or more floors, and having more than twelve rooms on a floor, to be erected on an ordinary city lot, except a corner lot, the courts to light and ventilate interior rooms must have an area of at least 265 feet; and where there are twelve rooms on a floor, the area of such courts must be not less than 215 square feet.

WINDOWS

The windows of habitable rooms which open on shafts or courts must be hung with weights so as to slide vertically, each window to be not less than 12 square feet in area.

VENTILATION OF WATER-CLOSET COMPARTMENTS

Water-closets shall not be ventilated by a shaft which ventilates habitable rooms; and where they do not open otherwise to the external air, they must be ventilated by means of a separate shaft, not less than 3 square feet in area, to extend above the roof, and arranged for the admission of light and air at the top in like manner as the shafts for rooms.

WATER-CLOSETS ETC.

No privy vault or cesspool shall be allowed, if water-closets can be connected with the street sewer. At least one water-closet shall be provided for each two families. The

general privy accommodation shall not be placed in the cellar.

YARDS AREAS, ETC.

Yards, areas, cellars, and light courts shall be properly graded and drained and flagged or concreted.

ALTERATIONS AND ADDITIONS

No alteration in the light and ventilation of the premises for which this permit is granted shall be made, except upon the express written approval of the superintendent of buildings; nor shall any additional structure be erected upon the lot except upon such approval and a special permit.

3rd. Plumbing Regulations—In New York these are put in force by the Department of Buildings where they properly belong and not to the Department of Health.

No tenement house can be erected until the plans for light and ventilation have been approved, nor can the plumbing and drainage of any building be executed until the plans have been approved by the department. The specifications for plumbing and drainage are exceedingly minute.

SPECIFICATIONS FOR PLUMBING AND DRAINAGE

GENERAL DIRECTIONS

It is expressly understood that these specifications and the drawings submitted herewith to the department of buildings for approval constitute together, as approved by said superintendent of buildings, the plans for the plumbing and drainage of the buildings herein described; and in respect to all work not covered thereby the plumber is to be governed by the rules and regulations as to plumbing and drainage established by the superintendent of buildings.

The plumber will furnish all materials and perform all labor requisite and necessary for putting up and completing all the plumbing work in a good and thoroughly workmanlike manner, according to the plans therefor as approved by the superintendent of buildings.

All material will be of good quality and free from defects.

The diameter of pipes herein specified are inside diameters.

The — will properly close all openings in floors and ceilings about lines of drain and vent pipe, so as to prevent the passage of foul odors from one floor to another along said line of pipe.

The plumber will send notice to the superintendent of buildings when the work will begin, and also at various times during the progress of said work before any part of it is permanently covered.

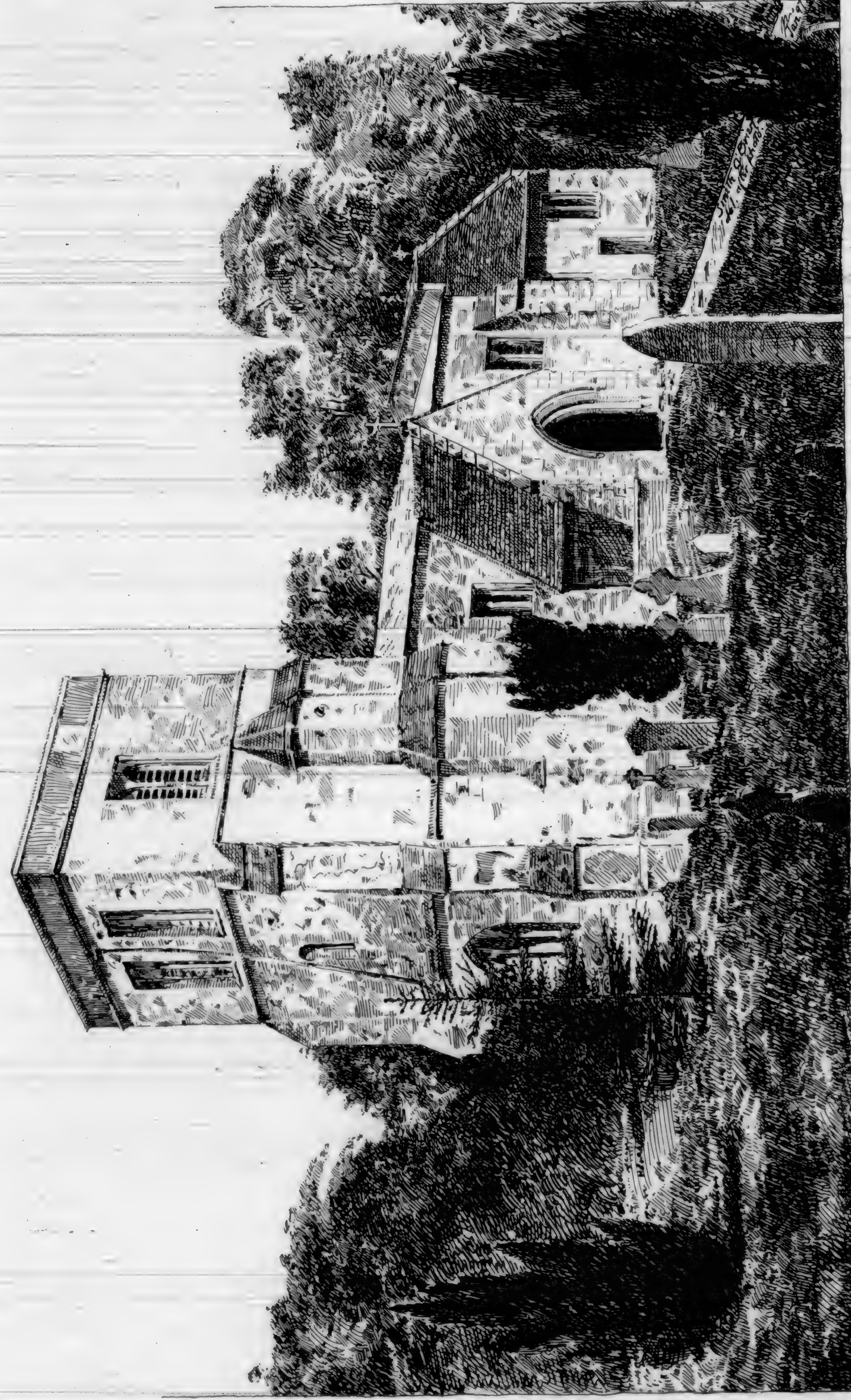
The plumber will properly protect all pipes and fixtures as soon as set, and close all pipe openings so as to prevent obstruction and damage.

The — will do all the excavating and refilling required for the proper carrying out of these specifications, except as such work is herein otherwise specially provided for.

The plumber will obtain and pay for all necessary permits, and comply with all corporation laws relating to the subject-matter of these specifications.

After the completion of the work under the plans and specifications, and before its final acceptance, the plumber must obtain the certificate of the superintendent of buildings

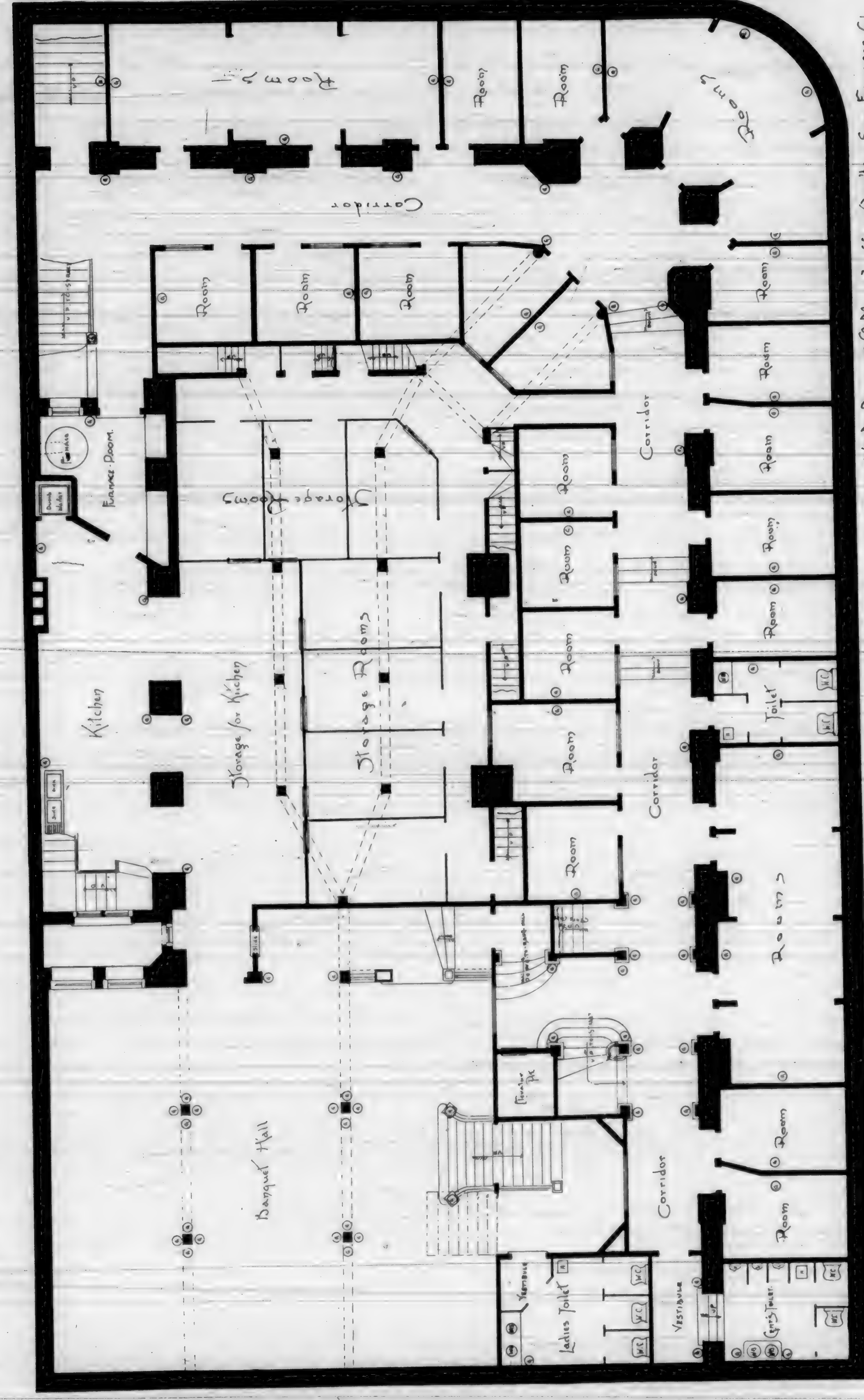
ST. GILES, CHEDDINGTON,
KENT, ENGLAND.



CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO

BRITTON & REY, PHOTO LITH.

VOL. XVIII No 2 FEBRUARY 1897



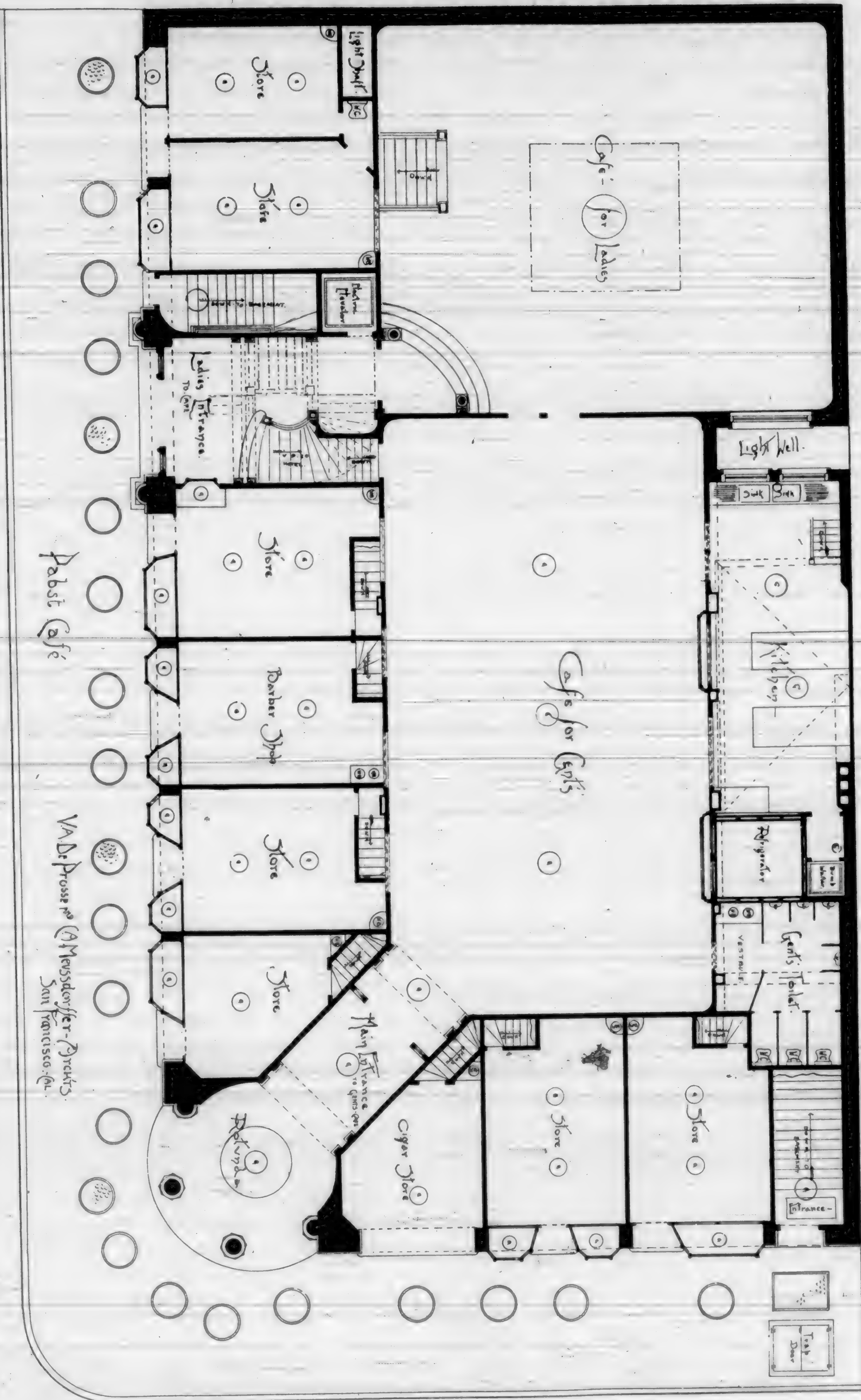
Basement Floor Plan.

V. A. De Prose & Co. Messidorfer-Ortels, San Francisco Cal.

CALIFORNIA ARCHITECT & BUILDING NEWS
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First Floor

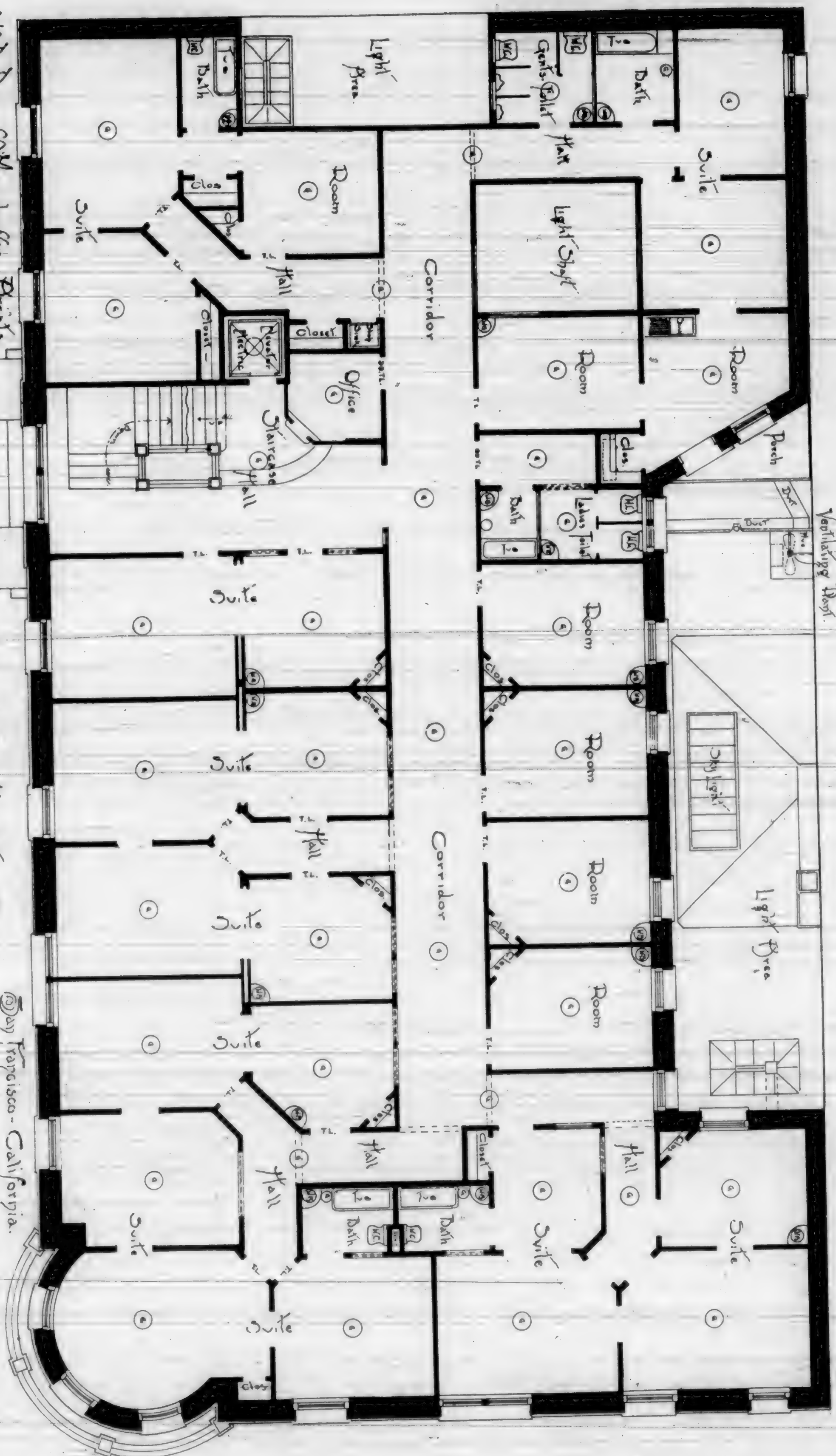
1000 Broadway - San Francisco

First Floor Plan

BRITTON & REY, PHOTOGRAPH

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Ventilating Shaft

Light Free

1000 Broadway - San Francisco

Second - Third & Fourth Story Plans

San Francisco - California

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