SEMI-ANNUAL SUMMARY OF BUILDING OPERATIONS.

THE first six months of this year has shown a decrease in value in comparison with the first six months of 1893, though an increase in the number of buildings.

FOR FIRST SIX MONTHS.—1894.

1894	Brick Buildings No. of	Brick Contracts No. of	Brick Building Value	Frame Buildings No. of	Frame Contracts No. of	Frame Building Value.	Alterations & Addit'ns No. of Buildings	Alterations & Addit'ns No. of Contracts	Alterations & Addit'ns Value.	Total No. of Buildings	Total No. of Contracts	Total Value.
Jan'ry...	1	5	$ 64,867	27	37	$ 124,620	19	29	$ 46,046	47	71	$ 235,533
Feb'ry...	2	6	30,436	22	31	96,975	7	12	17,452	31	49	150,863
March...	1	3	11,225	56	60	395,470	14	17	34,591	71	80	441,286
April.....	7	15	165,437	121	144	289,214	16	21	33,604	144	180	488,255
May.....	5	12	126,691	35	46	199,653	16	16	50,281	56	74	376,625
June.....	7	11	74,704	40	46	152,092	13	13	39,166	60	70	266,962
Total	23	52	$ 479,360	301	364	$1,258,924	85	108	$221,140	409	524	$1,959,424

To this amount should be added the further estimated sum of $500,000 where no contracts have been filed, which would increase the sum total to $2,459,424.

FOR FIRST SIX MONTHS.—1893.

1893	Brick Buildings No. of	Brick Contracts No. of	Brick Building Value	Frame Buildings No. of	Frame Contracts No. of	Frame Building Value.	Alterations & Addit'ns No. of Buildings	Alterations & Addit'ns No. of Contracts	Alterations & Addit'ns Value.	Total No. of Buildings	Total No. of Contracts	Total Value.
Jan'ry...	3	7	$ 70,770	27	35	$ 143,988	2	5	$ 6,040	32	47	$ 220,798
Feb'ry..	1	3	22,400	40	47	202,447	18	25	64,052	59	67	288,899
March...	5	9	240,458	48	55	277,323	18	30	280,221	65	93	848,002
April....	7	17	24,793	57	67	251,827	12	18	41,667	76	83	420,287
May.....	1	2	15,950	65	77	280,129	10	11	20,420	81	90	316,488
June.....	7	11	78,347	60	73	332,827	8	11	18,850	75	95	430,024
Total	24	49	$ 614,518	297	354	$1,498,541	68	109	$425,239	298	475	$2,524,498

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

1885—754	contracts	value,	$4,267,375
886—670	"	"	2,486,633
1887—516	"	"	3,269,914
1888—437	"	"	2,719,820
1889—546	"	"	3,910,600
1890—556	"	"	3,793,858
1891—583	"	"	3,916,973
1892—411	"	"	2,942,496
1893—475	"	"	3,024,498
1894—524	"	"	2,456,424

THE TOWER OF THE PHILADELPHIA CITY BUILDING.

ACCORDING to the Philadelphia *Press*, there are signs of movement in the tower of the Philadelphia City Building, and work has been suspended on the upper portion until the substructure can be strengthened. It will be remembered that this tower was originally intended to be the highest structure in the world. Since the design was made, however, its proposed height has been far surpassed by the Eiffel Tower, and, when the building is completed, it will probably hold only the third or fourth rank among high structures. However, a tower five hundred feet high is, in any case, a rather serious matter of construction, and it is not surprising that difficulities have been encountered. According to Mr. Powell, the newly-appointed architect of the building, who seems to have been the first to discover the movement, and point out the true cause, the foundation and first story of the tower were well built, of perhaps sufficient thickness, with brickwork in cement. Above the first story, for some unexplained reason, the walls, although about six feet thick, were built, for several stories, with lime mortar, with a facing of marble ashlar, twelve inches thick. Above the fifth story, the builder seems to have recovered his senses, or the architect to have realized what was going on, for henceforth the brickwork was laid in cement. As the weight on the masonry increased, the natural result took place. The walls of the first story and basement, being laid in cement, kept their place, Mr. Powell having found no trace of settlement subsequent to the hardening of the cement. Where the brickwork was laid in lime, however, there has, of course, been no hardening. The mortar in the interior of the walls is still soft, and the compression of the joints, added to the shrinkage from evaporation, has not only caused serious settlement, but by bringing the pressure on the thin, but almost incompressible marble ashlar, has crushed and split this to a rather alarming extent. Mr. Powell has arranged to fill up some of the arches in the lower part of the tower, and in other ways distribute and equalize the weights, and, as we gather from the newspaper account, to reinforce the masonry in lime with proper brickwork in cement; and it is much to be hoped that his efforts to stop further mischief will be successful. It will be remembered that considerable repairs on the lower portions of this tower had to be carried out nearly ten years ago, owing to carelessness of very similar character on the part of workmen or architect. At that time a considerable portion of carved and polished stonework had to be replaced because it had been cracked and crushed through the unequal settlement between the brick filling and the facing, the joints of the latter not having been laid slack enough to allow for the greater compressibility of the brickwork filling. Accidents of this kind are not so uncommon that their causes and remedies are not known to every one, and yet there are architects and workmen whose love for a close, neat joint in stonework is such, that they make use of it at the risk of having to make costly repairs later, such as these at Philadelphia or those demanded by a similar mishap at the Statehouse at Hartford.—*The American Architect and Building News.*

DISINFECTION OF SEWAGE BY MEANS OF LIME.

THE practical employment of lime for the disinfection of sewage, as recommended by Pfuhl, is as follows: In order to render free from danger fresh sewage that may contain the organisms of typhoid fever or Asiatic cholera, it is necessary that lime be added to the sewage in the proportion of, at least, one to one thousand. In this proportion, disinfection is complete in from one hour to one hour and a half. It is necessary that during the addition of the lime the sewage be kept in motion, so that there will be a homogeneous distribution of the lime throughout it, for it has been shown by experiment that in sewage not so stirred, lime may be added often to an extent of three to one thousand, and yet living typhoid bacilli may be detected after two hours, a condition evidently due to the restriction of the activity of the lime, to and immediately about the point in the still sewage at which it was deposited. In practice, it is further to be observed that the disinfectant activity of the lime is frequently interfered with through the presence of precipitating substances, such, for example, as the salts of sulphuric acid. It is also necessary that the lime should be of the best quality and freshly burned, so that in calculating the amount necessary for a given volume of sewage, only pure calcium hydrate will come into the computation.—*Internation Medical Magazine.*

JUDGE—"Well, doctor, what is the condition of the burglar's victim?" DOCTOR—"One of his wounds is absolutely fatal, but the other two are not dangerous and can be healed."—*Fliegende Blatter.*

NOTICE OF MEETINGS.

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

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

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

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

THE regular monthly meeting of the San Franciso Chapter of the American Institute of Architects was held on the afternoon of Friday, July 13th, at the Mark Hopkins Institute of Art.

The ballots on the application of Mr. W. J. Lyon, for fellow membership in the Chapter were opened, and declared Mr. Lyons duly elected.

The principal topic of discussion was the proposition under consideration by the New York Chapter, on the advisability of modifying the schedule of charges as formulated by the Institute, as far as the same has reference to preliminary studies and competitive work.

The Chapter was of the opinion that the proposed changes were perfectly proper, and voted to endorse the recommendations of the New York Chapter.

THE DECLINE IN PRICE OF ELECTRICAL EQUIPMENTS.

IN commenting on the business situation and the decline in prices of electrical apparatus, the *Electrical Review* says: "Six years ago the price for a complete equipment for a trolley car, including two motors, was about $4,500. This price held for a year and a half and then dropped to $3,850, $3,500, and $3,300, until two years ago it was about $2,850. One year ago $2,000 was the price of the same equipment, greatly improved in quality and efficiency, while to-day the average price is between $1,000 and $1,200. We have been told of an electric railway manager who desired quite recently to purchase an equipment for a single car. He wrote to seven manufacturing companies, and immediately was called upon by seven salesmen, all of whom had paid traveling expenses to try for the order. The prices quoted ranged from $1,500 to $640. The manager bought the $640 apparatus. Here we have a decrease in actual selling prices from $4,500 in 1888 to $640 in 1894, a period of six years. In 1888 there were seven electric railways in the United States. In January, 1890, there were 162 electric railways in operation and in process of construction. In January, 1891, this number has grown to 281, while to-day there are probably over 500 cities in the United States equipped with electric roads, many of them of great mileage, as in Boston, Brooklyn, St. Paul, Minneapolis and Cincinnati.

"This marked reduction in the price of railway apparatus during the short period of six years is due largely to competition between manufacturing companies, but chiefly to a reduction in the cost of manufacture, accompanied by an increase in the quality of the product. The margin of profit on the equipment mentioned at $4,500, in 1888, was not as large as it was on a better equipment at $2,850, in 1892, owing to the reduction in the cost of the manufacture. While prices have been fearfully cut during the last year by all the manufacturing companies, partly due to intense competition and partly to the business depression, we do not believe that any company can make and sell a satisfactory car equipment for $640 and clear a profit on it."

LIGHTNING STRIKES A CHICAGO "SKYSCRAPER."

LIGHTNING struck the Teutonic Building, corner of Fifth avenue and Washington street, at noon of June 15th. The larger portion of the north finial of the balustrade on the Fifth avenue side was nearly split in two, a part falling to the pavement below and the remainder scattering over the roof and the court of the building. That part which traversed the distance of ten stories to the pavement fell among the passing pedestrians and, together with the shock of the storm, produced a panic. No one was injured, though several had narrow escapes.

A COUNTRY RESIDENCE.

The tenants of the big building from the tenth to the sixth floor felt the shock severely. In some of the rooms a panic ensued. Ex-Coroner Hertz, Colonel Moore, J. C. Saterlee and others, keenly sensitive to the shock and blinded by the brilliancy of the flash, fled into the hallway, where they were confronted by a fantastic display in the building's court, which seemed to form a center for the electric current in its efforts to reach the ground.

The Teutonic is the first of the "skyscrapers" to be struck by lightning. It is a steel structure from the basement to the roof. A close examination of the point of contact and the immediate surroundings, together with the fact that the electric-light plugs were blown out in the basement, suggests the conclusion that the electric current, after demolishing the terra-cotta covering of the finial, came in contact with the steel rod which supported the demolished finial, and by it was communicated to the steel structure itself, thus making a conductor for the electric current from the roof to the basement.—*Examiner*.

CASTLES IN THE AIR.

THE urban architects of the United States are interchanging views on the tendancy towards Tower of Babel architecture in our cities, and we are gratified to note that there is a unanimity of sentiment against the many-storied, steel-framed structures. But there is a diversity of opinion as to the best means of successfully opposing this tendency. While some think that drastic legislation should be properly interposed, says the *Architectural and Building Monthly*, others believe that moral suasion and public sentiment will prove sufficient checks. While we hold that the fewer legal restrictions upon any art or industry the better, yet when cupidity tempts a real estate owner to double or treble the capacity of a hundred-thousand-dollar building lot we have but little confidence in the potency of public sentiment as a deterrent. The "public-be-damned" policy has to be put down by other forces than moral suasion, and there are sufficient grounds on the score of sanitation, public comfort and convenience to warrant the interference of the strong hand of the law. Let there be, then, a limit put to the height to which city buildings may be carried, and let it be done before new cities are superposed upon the old ones. A few years more and the remedy may come too late.

LEGAL DECISIONS.

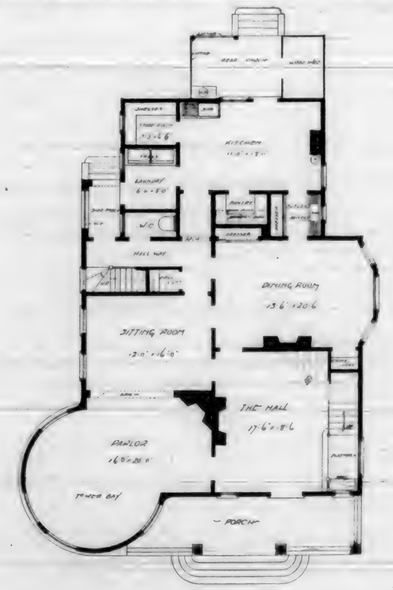
From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

RIGHT OF CONTINUING PARTNER TO LIEN.—Under laws 1886, which requires that the statute relating to mechanics' liens shall be construed literally and in futherance of the remedy, members of a firm who requires the interest of his partner may have a lien for materials furnished by the firm.

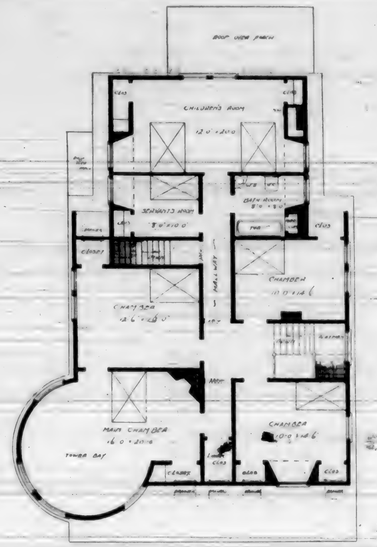
Ogden v. Alexander, Court of Appeals of New York, 35 N. E. Rep. 638. 52.

ACTION BY SUBCONTRACTOR TO FORECLOSE LIEN.—In an action by a subcontractor to enforce a mechanics' lien, it appeared that the contractor abandoned the contract, and forfeited the final payment, unless the owner waived the forfeiture, under the terms of his contract, and elected to complete the work, at the contractor's expense. The owner, in his lifetime, and his heirs, after his death completed the building, and asserted no claim of forfeiture. The subcontractor could enforce his lien on the surplus of the final payment over and above the cost of the completion. The fact that the owner did not give the contractor three days' notice of his election to complete the building, as provided by the contract, does not exclusively show that he did not so elect, where, when, the contractor abandoned the work, he made a general assignment to the owner, and neither such subcontractor, nor any one claiming under him, is asserting any need of such notice.

Ogden v. Alexander, Court of Appeals of New York, 35 N. E. Rep. 638. 160.



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

RIGHT TO MECHANICS' LIEN.—One who furnishes material and labor for the erection of structures on the property of a mining corporation, pursuant to a contract made in the company's name, by its authorized agent, is entitled to a mechanics' lien, notwithstanding the existence of an agreement, not known to him, whereby the agent was to have possession of the property, and make the improvements on his own sole credit.

Mammoth Min. Co. v. Sale Lake Foundry & Mach. Co., Supreme Court of the United Seates, 14 Su. Ct. Rep. 384

TRUST FOR PREFERENCE OF CREDITORS.—Where a debtor, for the purpose of securing certain debts, conveys in trust property less in value than the amount of such debts, a provision in the trust deed authorizing the trustee to sell at either public or private sale, and to employ clerks and attorneys to assist and advise him, will not affect the validity of the trust deed as to secured creditors, since they could not be injured by it. A provision in the trust deed for the benefit of creditors, directing payment of a stated sum to an attorney for services in drawing the deed and the execution of the trust is valid unless such sum is unreasonable in amount.

Butler v. Sanger, Court of Civil Appeals of Texas, 23 S. W. Rep. 487. 118.

INSURANCE CLAIM AS TO OCCUPANCY OF BUILDING.—Where a policy of insurance provided that it should be void if the premises became vacant or unoccupied without the written consent of the company should be indorsed. The tenant occupying the insured building partially moved out the day before the fire, leaving in the building a portion of his furniture. The premises were not vacant or unoccupied, within the meaning of the policy.

Liverpool & London & Globe Ins. Co. v. Buckstaff, Supreme Court of Nebraska, 56 N. W. Rep. 695. 72.

MECHANIC'S LIEN ON LEASEHOLD INTEREST.—A mechanic's lien for materials furnished and work done upon a leased building under a contract with the lessee extends only to the leasehold interest.

Z. C. Niles & Co. of Seattle v. Gordou, Supreme Court of Wash. 36 Pac. Rep. 266. 30.

BOOKS AND PERIODICALS.

PLUMMER'S REFERENCE MAP of the city and county of San Francisco, is a map up to date and well worthy of the prize that has been bestowed upon it by those who are competent to judge of its value. Not only a correct outline of the water front is given showing the different sections of the sea wall, and other important points of interest to those who empty steamboats, or are otherwise interested in the bay, but the addition of about 250 streets, avenues, alleys and places make it a map for all. To those who wish to keep up with the times and know about the city they live in we should say get this map at once. Mr. Plummer will be happy to receive orders at his office, 408 California street.

LIPPINCOTT'S for July has one of Captain Charles King's charming Army stories as the complete novel; and is as usual full of good things that will well repay perusal.

CLAY WORKER. Indianapolis, Ind. The June number of this excellent magazine has an illustrated article entitled "The Beginning of a National Ceramic Art in America" showing the great advancement that has been made in this country in that art, since the first rude attempts of the manufacturer to compete in that line.

The people of the coast have reason to congratulate themselves that the clay workers of this coast have made great progress in the development in the useful manufacture of architectural appliances from clay, as was shown in the exhibits at the Midwinter Fair.

PAPER AND PRESS. The Arts Printorial, illustrated. Published by W. M. Patton, Philadelphia, Pa. An interesting article "The Government Printing Office," will well repay a careful reading, and probably astonish those outside the trade by the enormous increase of business in this office from its commencement March 4, 1789 until the present time.

THE PHOTOGRAPHIC TIMES. Published at 423 Broome street, New York. The delayed mails from the east are now being promptly delivered, and among the large accumulation of exchanges we notice several numbers of the ever welcome *Photographic Times* the July number contains a charming view of "An English Country Lane." The seven ages of man, illustrated by photograph, is extremely funny.

THE AMERICAN AND BUILDING NEWS, contains an article very severe upon the recent strikes, that have unfortunately prevaded of late all over the country; the editor appears to look upon only one side of the question, and forgets that the constant comtempt of the law shown by many of the great companies for years past, have educated their employees to the same way of thinking. This unfortunate strike only required the display of a little common sense on the part of the managers to have been stopped at once. In place of that the men were excited to madness for the very purpose of having the troops called into the field.

A WANING FASHION.

ONE of the strangest vagaries of public taste is that which a few years ago brought yellow pine into prominence as a finish wood says *Hardwood*. A passing fancy was artfully and artificially developed into a craze, the effects of which have not yet entirely disappeared, there being still a few misguided architects and builders who insist, in season and out of it, that yellow pine is both suitable and desirable for all kinds of inside trim, from parlor to kitchen. The producers and handlers of the wood have done what they could to corrupt the public taste in this regard, and their efforts have been supported by the papers which draw a large share of their revenue from the yellow pine interest. They have sought to make people believe—and have met with no little success in the effort—that the red and yellow streaks, varied sometimes with crooks and curls, which are distinctively characteristic of the wood, are really beautiful, and that nothing more pleasing or satisfying to a refined taste is to be had in a low priced finishing wood. They admit that cherry and mahogany, and possibly quartered oak, are finer woods, but they urge their greater cost, and still maintain that after all yellow pine is as durable and nearly as handsome as any of its rivals. No doubt by continually preaching this artistic heresy they have come to believe in it themselves, but happily the taste of wood users is drawing away from the unsightly yellow pine, and is developing a greater appreciation of the quieter and handsomer native woods, any one of which for beauty and real excellence as a material for trim is so far its superior as to be beyond comparison.

It is not denied that yellow pine is a valuable timber. For nearly all structural purposes it is admirable, rivaling even oak in strength and stiffness. It makes a capital building material, and properly sawed, a fairly good flooring, but its merits are exhausted before we reach those which belong to a desirable finish wood, for which one of the leading requirements is beauty of color and grain. This yellow pine does not possess, the extravagant claims of its friends to the contrary notwithstanding, and for this reason it has no place in the exposed work of any building in which an effort is made to secure an artistic and handsome finish.

THE GOLDEN CHAMBER OF CONSTANTINOPLE.

ACCORDING to Bishop Liutprand, of Cremona, says the *Scottish Review*, the Golden Chamber was the most splendid part of the whole palace. If Justin rebuilt it, Theophilus and Constantine VII. did much for its decoration. Theophilus made a silver table "for the accommodation of the guests and the adornment of the palace," in which so many foreigners and courtiers feasted with the emperor. A great chandelier hung from the centre of the hall over the table.

The famous golden tree, so often mentioned in accounts of the palace, was constructed by Theophilus. "Birds sitting on the branches sung by some mechanism, the air being supplied by concealed passages." The walls were ornamented with mirrors and colored tiles, "affording the more pleasure to the guests owing to the delicious nature of the viands." Besides making the silver doors (into the Tripeton) Constantine VII. ornamented the walls and ceiling of the Chrysotriklinos with flowers and leaves, framed in silver circles.

In the Golden Chamber the most striking object must have been the Pentapyrgion, of which, unluckily, no accurate description has survived. It was "a magnificent structure of wood, covered with gold. Within and without it was hung a great variety of decorations, golden ornaments and the imperial robes." At the feast of Easter it was the custom that a small table should be placed for the emperor in the Pentapyrgion, while the foreign ambassadors whom he invited dined at the golden table below him. Thus it would seem to have been a sort of throne arranged for the purposes of a dining hall.

BUSINESS MOSAICS.

San Francisco Plating Works 653-655 Mission street, E. G. Denniston, proprietor. These well known and long established works, are always prepared to do any kind of gold, silver, nickel and copper plating. Metal goods of every description plated. Particular attention given to copper plating of architectural iron and steel work.

Little Daughter—"This book says that in Norway a girl has to make a whole lot of linen before she can get married." Mother—"Yes, it's the custom there." Little Daughter—"I'm glad I'm an American. Here we only have to learn to typewrite."—*Smith' Good News.*

Joseph Budde Manufacturer of Sanitary Appliances. Medals and diplomas awarded at the State Fair at Sacramento, Cal., in 1888 and 1889 for the popular Golden Gate patent water closet, speak for themselves. The best award of honor is perhaps the unaminous approval of those who have been fortunate enough to have their houses supplied with his appliances. The man that would find fault with what he can select from Mr. Budde's varied stock would indeed be hard to please.

"The landlord has put up the rent on the family that have the second flat." "Is there anything wrong with them?" "He thinks so they have never complained about anything."—*Chicago Inter-Ocean.*

Mr. George Goodman the patentee and manufacturer of artificial stone in all its branches can be found at his office in the Nevada Block, 307 Montgomery street; he makes a specialty of side walks and garden walks—but anything in his line is sure to be well done for the man takes a pride in his work, as well as knowing how to do a good job and is therefore entitled to his name of "Goodman."

Watts—"Do you always agree with your wife when she makes an assertion?" Potts—"Of course I don't. Do you suppose I want the poor woman to have no amusement at all?"—*Indianapolis Journal.*

The Western Iron Works.—Notwithstanding the dull times and general stagnation of business the above named firm moves on in the even tenor of a well regulated concern, and continue to furnish iron and steel building work; they are also the sole manufacturers of the Champion Steel Wheelbarrow against this, thank Heaven, there has been no strike, so it will doubtless continue to run.

"Then, when you have finished your lecture," said the professor of elocution and deportment to young Dulle, "bow gracefully and leave the platform on tiptoe." "Why on tiptoe?" queried Dulle. "So as not to wake the audience," replied the professor.—*Pearson's Weekly.*

The J. L. Mott Iron Works continue in the good work of manufacturing, contriving and improving all the various articles for making home a healthy place—all will agree that without good plumbing no home is what it should be. If you want your wife to be able to say "Well after all there is no place like home for solid comfort," you must be careful to see that your house is well provided for in regard to good plumbing. The deserved reputation of the J. L. Mott Co. known all over the United States is a warrant that you get what you pay for when this firm supply the goods. Mr. James their agent has his office in the Flood Building.

San Francisco Slate Co.—We have before now had occasion to call the attention of our readers to the excellent quality of the slate furnished by the above company. At the present time when discord between labor and capital is making such disturbance in our community, and shutting off all communication with the east it is well to make up our minds to encourage home industry and show the world we are in a great measure independent of the outside world, and can furnish supplies of the first quality in building materials, by encouraging home industry to the fullest extent should be the aim of all those who have the welfare of this coast in consideration. Information about their slate and quarries may be had at the rooms of the company, 4 and 5, tenth floor, Mills Building.

Teacher (in mineralogy class)—"Johnie, give me the name of the largest known diamond?" Johnie—"The ace."—*Tit-Bits.*

Phoenix Pure Paint—If you want facts about paints you should call upon W. P. Fuller & Co. who manufacture Phoenix Pure Paint, and who will give you all the reasons why their paint is considered the best, made of pure materials and finely ground and thoroughly mixed with heavy machinery are good reasons why their manufactured paint should stand A. No. 1.

"Has that horse a pedigree?" asked the tourist. "Nope," replied the honest farmer; "nothin' but the heaves."—*Washington Star.*

San Francisco Gas Light Co.—People who predicted a few years ago that gas had seen its day, when the electric light began to be talked about, reckoned without their host. The important fact that gas was an excellent substitute for coal in cooking was in a great measure over looked. Now when we find the body of the house before a neatly constructed gas stove with shining pans and kettles, making a pleasure of cooking instead of the slavery of the coal stove with its heat and ashes, dust and dirt, all that is changed. Those who have been deterred from the use of gas for this purpose by the bugbear that gas costs so much, will find if they make the experiment that gas does not cost so much.

She—"And so they were married! Was it a case of love at first sight?" He—"I imagine not. The first time he saw her she was riding a bicycle.—*Life.*"

Something new and useful.—Dixon's Waterproof Graphite Grease and Graphite Lubricants, manufactured only by Joseph Dixon Crucible Co., Jersey City, N. J. A table giving the results of experiments made at the Brooklyn Navy Yard by Robert Grimshaw, M. E., in collaboration with John A. Bell of the Eqipment Bureau U. S. Navy, clearly shows the advantage in the use of this Lubricant.

Miss Paddington—"Do you believe in love at first sight?" Mr. Linton—"Oh, no! It's impossible to be perfectly sure that a girl is rich."—*Boston Life.*

Mann's Patent Chimneys endorsed by the Board of Supervisors and recommended for general use by architects, fire wardens and insurance companies as the most complete and safest in the market. Can be found at 306 Sutter street bet. Grant Ave. and Stockton Sts. Messrs. Schuster Bros. agents, they are also sole agents for the Pacific Coast for the Celebrated Richmond Ranges, hot air furnaces and radiators. See their advertisement on page ii of this journal.

CITY BUILDING NEWS.

Army bet. Guerrero and San Jose. All work except brick and plumbing; owner, F. Kaufmann; architects, Townsend & Wyneken; contractor, F. V. Archer; signed, June 2; filed, June 2; cost $6700.

Army bet. Guerrero and San Jose. Plumbing; owner, F. Kaufmann; architects, Townsend & Wyneken; contractor, Nanon & Gordon; signed, May 19; filed, June 2; cost $1350.

Ashbury near Waller. To build; owner, Bedella Boyd; contractors, Jno. Sath and J. B. Cogswell; signed, June 16; filed, June 16; cost $3175.

Bartlett near 21st. Alterations and additions, except plumbing; owner, A. E. Patridge; architects, Townsend & Wyneken; contractor, M. C. Lynch; signed, May 31; filed, June 2; cost $5095.

Brannan and Fourth. Grading and concrete work for a church; owner, D. Neugent; architect, John J. Clark; contractors, Flinn & Tracy; signed, June 1; filed, June 2; cost $2,000.

Broadway near Scott. To build; owner, M. E. Fitzhugh; architect, Reid Bros.; contractor, B. O. Johnson & P. G. MacIntzer; signed, June 19; filed, June 23; cost $3600.

Bryant near Butte. Two-story frame; owner, B. Hardy; contractors, Genscrowsky & Kolbe; signed, June 26; filed, June 26; cost $2300.

California near Octavia. Alterations and additions; owner, Winson Brown; architect, W. J. Mathews; contractor, Concannon & Shay; signed, June 9; filed, June 14; cost $1570.

California near Broderick. To build; owner, Adolph Rapp; architect, Emil John; contractors, Lorenzen & Trevier; signed, June 9; filed, June 11; cost $3680.

Clay near Leavenworth. To build; owner, I. L. Hoffmann; architect, Chas. R. Wilson; contractor, F. V. Steinman; signed, June 15; filed, June 20; cost $6650.

Clay near Franklin. To build; owner, J. W. Edwards; architect, W. H. Lillie; contractor, F. G. Kronnick; signed, June 23; filed, June 23; cost $4700.

Clay near Franklin. Plumbing; owner, J. W. Edwards; architect, W. H. Lillie; contractor, H. Williamson; cost $1700.

Douglass from Ocean House Road. To build; owner, Frank Dummell; contractor, Robert Trost; signed, June 6; filed, June 8; cost $1513.

Eighth Ave. near California. To build; owner, William Royal; architect, C. S. Corrigan; contractor, C. Lansen; signed, June 12; filed, June 13; cost $1550.

Florida near Solano. Carpenter, plumbing, etc.; owner, H. Throde; architects, Martens & Coffey; contractor, F. M. Schwubler; signed, May 29; filed, May 31; cost $7250.

Florida near Solano. Excavation, stone and brick work; owner, H. Throde; architects, Martens & Coffey; contractor, J. O'Sullivan; signed, May 29; filed, May 31; cost $5843.

Fifth and Clara. To build; owner, W. N. Weeks; architects, Shea & Shea; contractor, James Cochran; signed, June 9; filed, June 27; cost $3618.

Fulton near Baker. To build; owner, Peter Garrity; architect, Edward Burns; contractor, Edward Mooney; signed, May 28; filed, May 29; cost $4600.

Grove near Broderick. To build; owners, John Peters and wife; architects, Smith & Freeman; contractors, Henry Whittle & F. Smith; signed, June 1; filed, June 3; cost $13,754.

"H" and 12th Ave. To build; owner, Mary V. Foley; architect, D. Foley; contractor, H. Behrens; signed, June 20; filed, June 22; cost $1550.

Hampshire near 19th. To build; owner, Patrick Dempsey; contractor, H. P. Conrady; signed, June 9; filed, June 11; cost $2700.

Henry near Castro. To build; owner, G. Carle; architect, H. Hess; contractor, C. Schwefzer; signed, June 12; filed, June 13; cost $1850.

Lake and Lake. To build; owner, L. W. Darbee; architect, Wm. F. Lee; contractors, R. A. William & Co.; signed, June 23; filed, June 23; cost $2100.

Leavenworth and Post. Mantels; owner, S. F. Verein Assn.; architects, Salfield & Kohlberg; contractors, Fink & Schindler; signed, June 15; filed, June 29; cost $1500.

Leavenworth near Clay. Grading; owner, I. S. Hoffmann; architect, C. B. Wilson; contractor, A. E. Buckman; signed, June 18; filed, June 14; cost $1800.

Linden near Octavia. Alterations, etc.; owner, G. H. Rudolph; contractor, U. G. Heath; signed, May 31; filed, June 3; cost $482.

Market near 5th. Granite work; owner, A. M. Parrott; architects, Pissis & Moore; contractor, Raymond Granite Co.; signed, June 14; filed, June 14; cost $21,405.

Market near 8th. Concrete and artificial stone; owner, L. W. Moffatt Ex. of Geo. Moffatt; architect, Chas. R. Wilson; contractor, W. F. Ambrose; signed, May 31; filed, June 15; cost $4,320.

Market near 15th. To build; owner, Charles E. Hanlon; architect, T. P. Ross; contractor, Geo. Connon; signed, May 28; filed, May 31; cost $4816.

Market near 5th. Brick and concrete; owner, Mrs. Emma Spreckles; architects, Reid Bros.; contractor, Crawford Ferries; signed, May 14; filed, June 3; cos $19,012.

Market near Eighth. Underpinning and repairing brick building; owner, Levi Strouse; architect, Chas. R. Wilson; contractors, Richardson & Gale; signed, June 8; filed, June 9; cost $1500.

Market near 5th. Elevator, etc.; owner, F. Gutzhow; architect, Edmund Kollofrath; contractor, T. Hammond; signed, June 13; filed, June 13; cost $4950.

Mason near Jackson. To build; owner, St. Johannes Church by Trustees; contractor, Henry T. Griet; signed, June 1; filed, June 5; cose $1050.

Minerva near Plymouth. To build; owner, Board of Education; architect, Chas. I. Haven; contractor, Morrison Cook; signed, June 7; filed, June 7; cost $3355.

Morton between Dupont and Stockton. To build; owner, Jules Einden; architect, Emile Depierre; contractor, Jean Salanare; cost $2300.

Neynda near Rhode Island. Carpenter and brick work; owner, Thomas C. Van Bibber; architect, Wm. H. Wharff; contractor, Geo. O. Dean; signed, May 29; filed, May 31; cost $1570.

Ninth near Howard. Carpenter work on three stores; owner, F. B. Wilde; architects, Smith & Freeman; signed, June 14; filed, June 18; cost $2400.

Ninth Ave. near California. To build; owner, C. E. Carbly; architect, Edward Burns; contractor, Geo. S. Paff; signed, June 26; filed, June 26; cost $3200.

Oak near Buchanan. To build; owner, H. Beckery; architect, H. S. Munson; contractor, F. H. Wheeler; signed, June 6; filed, June 8; cost $4,200.

Outside land block 29. Grading and filling; owner, La Societe Francaise de Bianfanssance Mutual; architect, Emile Depierre; contractor, E. F. Dennison; signed, June 18; filed, June 18; cost $1200.

Pacific near Dupont. To build brick building; owner, Paolo Arata; architect, Emile Depierre; contractor, P. A. Antonelli; signed, June 18; filed, June 19; cost $8650.

Pacific near Dupont. Brickwork and grading; owner, Paolo Arata; architect, Emile Depierre; contractor, P. A. Antonelli; signed, June 20; filed, June 21; cost $4800.

Pacific Ave. near Devisadero. Plumbing, sewerage and gas fitting; owner, Annie Meyer; architect, E. A. Hermann; contractor, H. Williamson; signed, May 29; filed, June 1; cost $2325.

Page near Broderick. Additions; owner, the Board of Education; architect, Chas. I. Haven; contractors, R. Doyle & Son; signed, June 7; filed, June 7; cost $5979.

Penna Ave. near Sierra. To build; owner, Thomas Hart; architect, Jas. Glackin; contractor, John Kennedy; signed, June 4; filed, June 5; cost $1065.

Pine near Scott. To add a story; owner, Board of Education; architect, C. I. Haven; contractors, R. Doyle & Son; signed, June 7; filed, June 7; cost $7498.

Post street No. 109. To build; owner, E. Preston; architect, Wm. Corbett; contractor, C. W. Kinsman; signed, June 6; filed, June 13; cost $3140.

Post and Powell. Mantel, grates and hearth work; owner, A. M. Parrott; architects, Pissis & Moor; contractors, Ruffino & Bianchi; signed, April 14; filed, April 14; cost $2557.50.

Sacramento near Pierce. Plumbing; owner, G. E. Bacon; architect, J. J. Manseau; contractor, W. R. Smith & Co.; signed, May 26; filed, June 5; cost $1400.

Sacramento near Pierce. Plastering; owner, G. E. Bacon; architect, J. J. Manseau; contractors, W. R. Smith & Co.; signed, May 26; filed, June 5; cost $1400.

Seventeenth near Serpentine. To build; owners, E. Perry & wife; contractor, J. J. Kolbe; signed, June 5; filed, June 6; cost $1980.

Steiner bet. Fell and Hayes; To build; owner, F. Marx; architect, M. J. Lyon; contractor, E. McWest; signed, May 21; filed, June 6; cost $3275.

Steiner bet. Fell and Hayes. To build; owner, F. Marx; architect, M. J. Lyon; contractor, E. McWest; signed, May 21; filed, June 9; cost $3300.

Steiner and Hayes. To build; owner, T. A. McCormick; architect, T. P. Rabin; contractors, E. S. Slack & F. Corbett; signed, June 21; filed, June 22; cost $3400.

Tenth near Folsom. Frescoing a church; owner, Rev. P. Scanlon; contractors, Rusch & Walker; signed, June 8; filed, June 11; cost $2400.

Tehama near 5th. Carpenter work, etc.; owner, L. Silverstone; architects, Salfield & Kohlberg; signed, June 14; filed, June 20; cost $3875.

Union and Laguna. Plumbing, etc.; owner, T. W. Allyne & W. H. White, architect, Charles Geddes; contractor, R. A. Vance; signed, May 26; filed, June 5; cost $1649.

Union near Laguna. Plastering, etc.; owners, T. W. Allyne & W. H. White; architect, Chas. Geddes; contractor, W. C. Watson; signed, May 24; filed, June 5; cost $1150.

Vallejo near Stockton. To build; owners, D. and Emma Stang; architect, Julius E. Krafft; contractor, F. W. Kern; signed, June 18; filed, June 19; cost $1820.

Valencia near Quinn. Alterations and additions; owner, Sarah B. Melone; architect, Clinton Day; contractors, Connon & Thompson; signed June 27; filed, June 28; cost $2670.

Washington and Laurel. Plumbing, etc.; owner, John Dempter McKee; architect, W. H. Lillie; contractor, W. H. Tobin; signed, May 31; filed, June 1; cost $1500.

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AS the usual dullness in business still continues the ways of the drummer are as hard as ever. This dullness has affected also the building trades for the last two years, and will continue to do so for the balance of this year. Next year a revival will take place if we may judge from the prior history of the world and by analogy. The commercial or distributing system under which we are working, and under which the civilized world has been working ever since history commenced requires these depressions and reactions to take place; and they will keep on taking place and with increased virulence for the simple reason that science of distribution has not kept pace with the science of production. With our wonderful scientific discoveries and machinery and mechanical power we can easily produce by using all available human labor working the ordinary number of hours per day enough products to fill the consumption of the civilized world of ten years in three.

Now while these are facts it is a self-evident proposition that humans are working too hard; and until they confine their working hours to four hours per day they will have to bear the hardships now scattered upon them. By doing this by distributing their labor throughout the ten years and all working instead of concentrating their efforts into five years and then laying off for the other five as they now are practically doing and being hard up and many starving for those five, people will be able to live well right along and not over work themselves at one time and go round with their hands in their pockets at another.

This unscientific way of production is well illustrated by the progress of the northern towns of this coast. Portland, Tacoma, Seattle, all concentrated their buildings in five years what ought to have been distributed over ten years at least so now they lie dormant.

No apology is needed in bringing attention to this in a professional journal as architects and the building trades are as much affected as any by this evil.

Let the law making powers of our boasted civilization, find and apply the remedy or remedies for such a deplorable condition of human affairs and general plenty and contentment will reign; and instead of longing for destruction to take place so as to provide work, we shall all strive to conserve all our wealth as there will be nothing gained by destroying it.

LAVER VS. CITY HALL COMMISSIONERS.

SOME fine legal points have been lately raised in regard to the matter of the completion of the New City Hall.

Architect Laver, the designer of the original plans for the building, has lately filed a suit asking the courts to restrain the commissioners from carrying out their designs for crowning the unfinished rotunda with a dome, instead of the square clock tower designed by Mr. Laver.

By the courtesy of Mr. Laver we are enabled to publish the full text of his complaint against the New City Hall Commissioners in this matter.

FIRST—That said Plaintiff now is, and for many years prior hereto, has been a tax payer in said City and County of San Francisco, State of California, having real property during all of said time listed upon the assessment roll of said City and County and duly assessed therein:

SECOND—That said Defendants, L. R. Ellert, William Broderick, and H. T. Creswell are now and for more than one year last past have been the duly and legally constituted, qualified, and acting members of said Board of New City Commissioners, in said City and County of San Francisco.

THIRD—That heretofore, to wit: On or about the first day of April, 1870, the Legislature of the State of California duly past an Act, entitled, "An Act to Provide for the Erection of City Hall in the City and County of San Francisco," and said Act was approved by the then Governor of said State on the fourth day of April, 1870. That under and in accordance with the provisions of said Act, said Governor appointed P. H. Cannavan, J. G. Eastland and Charles McLane as Commissioners of said City Hall provided to be elected by said Act, who immediately thereafter, duly qualified as such Commissioners by taking the required oaths and giving the required bonds, and organizing as required by said act "The Board of City Hall Commissioners" in said City and County of San Francisco.

FOURTH—That on or about the eleventh day of February, 1871, said Board duly adopted complete designs and plans as prepared and presented to said Board by the firm of Fuller, Laver & Co. for said City Hall, which said designs and plans are now on file in the office of the architect of said building. That no other and different plans for said building were ever adopted by said Board. That according to the said designs and plans there was to be built upon the Southern middle portion of said City Hall and as a part thereof a Square Clock Tower of the height of about four hundred and fifth-three (453) feet.

FIFTH—That on the twenty-fourth day of March, 1876, the Legislature of said State of California duly past an Act, entitled, "An act to Provide for the Construction of the Building in the City and County of San Francisco, known as the New City Hall" and by the provisions thereof, the then Mayor, City and County Attorney, and Auditor of said City and County of San Francisco, were authorized and empowered to act as a "Board of New City Hall Commissioners" for the said City and County of San Francisco.

SIXTH—That immediately after said twenty-fourth day of March, 1876, said Mayor, said City and County Attorney, and said Auditor duly qualified as such Commissioners as required by said last mentioned Act, and proceeded to, and did duly organize said Board of New City Hall Commissioners and they and their successors in office ever since have constituted and now do constitute "The Board of New City Hall Commissioners" of said City and County of San Francisco. That said last mentioned Board, as directed by the provisions of said Act of March 24th, 1876, on or about the first day of April, 1876, took possession and control of all the plans, specifications and designs of every description and kind of said building, which has been adopted as aforesaid, and which were then in the possession of the Board of Supervisors of said City and County of San Francisco, and ever since and now have the same in their possession and under their control.

SEVENTH—That under and by virtue of the provisions contained in last aforesaid Act of the Legislature of said State of California, said Board of New City Hall Commissioners were authorized, empowered, and directed to proceed with the construction and completion of said New City Hall according to the plans theretofore adopted on said eleventh day of February, 1871, for said building, to wit: the said plans of said Fuller, Laver & Co.

EIGHTH—That on or about the fifth day of May, 1894, said Board of New City Hall Commissioners entered into a written contract with the firm of O'Connell & Lewis for the erection and construction of a dome of the height of two hundred and fifty feet, upon said City Hall in the place and stead of said clock tower as indicated and provided for by the designs and plans of said building theretofore adopted as aforesaid. That the plans and designs according to which said Board of New City Hall Commissioners have contracted as aforesaid with the said firm of O'Connell & Lewis to construct said dome are entirely different from the said adopted plans of the said Tower. That said Plaintiff is informed and believes and therefore alleges that said Dome, if constructed in accordence with the terms, conditions, specifications and plans contained in said contract will cost over fifty thousand (50000) dollars more than said Tower would have cost, if built according to the plans adopted as aforesaid, and said Dome will materially detract from the architectural beauty of the said building. That said contract is wholly illegal and unauthorized and will if carried out and completed work irreparable injury to the Plaintiff.

NINTH—That said last mentioned Board of New City Hall Commissioners have, prior to the commencement of this action by resolution passed at a meeting of said Board, resolved to pay to said firm of O'Connell & Lewis the sum of $5250.62, as part payment for work performed and materials furnished under said contract, and said last mentioned Board threatens and will if not restrained by order of this Court allow the said claim and direct the Auditor of said City and County of San Francisco, to audit the same, and further proceed to have said Dome completed as provided by said contract.

TENTH—That all money agreed to be paid to said firm of O'Connell & Lewis under said contract for the construction of said Dome, will be paid out of the New City Hall fund in the hands of the Treasurer of the said City and County of San Francisco, and said fund is a part of the municipal taxes collected from the tax payers of said City and County.

WHEREFORE, SAID PLAINTIFF PRAYS:

FIRST—That said Defendants by order of said Court be perpetually enjoined and restrained from allowing said claim of O'Connell & Lewis for said sum of $5250.62.

SECOND—That said Defendants by order of said Court be perpetually restrained from proceeding in the construction and completion of said Dome under said contract, as alleged herein.

THIRD—That said contract and all proceedings of said Board of New City Hall Commissioners in relation thereto, be decreed illegal and void and for such other and equitable relief as to the Court may seem just.

GALE & PEERY AND J. F. FLEMING,
Attorneys for Plaintiff.

The lawyers representing the City Hall Commissioners demurred to the complaint and Judge Slack has sustained the demurrer.

The question raised by the demurrer was whether the board has power under the act of March 24, 1876, to change the plans adopted so as to construct a tower and dome 150 feet high instead of a tower 250 feet in height.

In his decision Judge Slack says that the act of April 4, 1870, provides that the Commissioners shall adopt plans for the erection of a new city hall, the object being to provide a permanent building which in their judgment would be sufficient and suitable to accommodate the different departments of the city government.

Under this act Judge Slack holds that the adoption of plans for the erection of such a building as specified is confined to the judgment of the Commissioners. It is neither expressly nor impliedly contemplates that plans once adopted cannot be changed, and if during the course of construction the plans adopted were deemed unsuitable to the purpose of the commission they might in the exercise of their judgement change them.

When the act of March 24, 1876, provided for the creation of a Board of New City Hall Commissioners to take charge of the premises and proceed with the construction of the building "according to the plans heretofore accepted" or contemplated there was no change in the intent of the law. In considering the question upon which the complaint is based, "What was contemplated?" the answer is, "A permanent building sufficient and suitable to provide rooms for the departments of the city government."

If the present board, maintains Judge Slack, must proceed as contemplated it must furnish what the statute ordered and if charges are deemed neeessary the board has power to make them.

For these reasons the demurrer was sustained and Laver was allowed ten day in which to amend his complaint.

THE NEW GOVERNMENT ARCHITECTURE BILL.

IN the House of Representatives on June 16, 1894, Mr. McKaig introduced the following bill: (H. R. 7470) "To provide for the securing of plans and for the erection of the public buildings of the United States," which was referred to the Committee on Public Buildings and Grounds and ordered to be printed.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President, by and with the advice and consent of the Senate, shall appoint a commission on public architecture consisting of three architects of high scientific and artistic attainment and large practical experience, and two officers of the Engineer Corps of the United States Army. If necessary, a separate appointment of any or of all three members of the commission who are architects may be made for each building under consideration, and members of the commission for one building may act upon other buildings. That the commission under the general direction of the Secretary of the Treasury shall discharge all the administrative duties relating to the procuring of designs and the appointing of architects for all buildings hereafter erected by the Government of the United States.

SEC. 2. That the Secretary of the Treasury shall be the president of the commission ex-officio, and the Supervising Architect of the Treasury Department shall be a member of the commission ex-officio. In the absence of the president of the commission one of the members shall be elected as chairman by ballot, and he shall preside at the meetings and perform such other duties as the rules of the commission may prescribe: and the Supervising Architect of the Treasury shall act as secretary of the commission.

SEC 3. That the Secretary of the Treasury shall convene the commission whenever in his judgment the exigencies of the service require it.

SEC. 4. That the commission shall adopt rules and regulations governing competition in the procuring of designs, and for the government of its meetings and the general performance of its duties. The members of the commission shall be paid their actual expenses and subsistence and a per diem allowance of ten dollars while actually engaged in the performance of their official duties, but no per diem allowance or salary shall be allowed to any civil or military officer on account of his being employed on the commission, but his actual traveling expenses and subsistence shall be paid while engaged thereon.

SEC. 5. That in case the limit of cost provided by law is one hundred thousand dollars or over, the commission shall select by ballot, for each building, five architects to prepare designs in competition; in case the limit of cost is less than one hundred thousand dollars, the commission may, in its discretion, select by ballot an architect without competition. No architect shall be eligible for entering as a competitor, or for appointment, who has not had at least ten years' experience as an architect-in-chief, and unless he can satisfy the commission, through work already done by him, or otherwise, that he is competent to take charge of the economical construction of the building. The commission shall cause to be made and issued to competing architects surveys, schedules of requirements for the building, limitations of cost, and all facts which might control or influence the character of the required design. The commission shall specify the number and character of the drawings required, and fix a definite time for their completion. The Secretary of the Treasury, upon the recommendation of the commission, shall pay to each unsuccessful competitor, to reimburse him for expenses incurred in preparing the competitive drawings, the following amounts: For designs for buildings to cost not more than one hundred and fifty thousand dollars, the sum of one hundred and fifty dollars, and for each and every one hundred thousand dollars of the limit of cost of the building above that amount, the additional sum of one hundred dollars; but in no case shall more than one thousand dollars be paid to any unsuccessful competitor.

SEC. 6. That the commis ion shall reject and return to the author any drawings which have failed to exactly comply with the requirements and regulations adopted by the commission for the competition, and no compensation for their preparation shall be paid, and the author thereof shall be debarred from all further participation in the competition. The commission shall carefully examine the drawings of each competitor in competition and shall select one design as the design of the proposed building, and shall recommend its author as the architect for that building and return forthwith all other drawings to their authors. The Secretary of the Treasury shall thereupon appoint the architect so recommended and he shall perform all the customary duties performed by an architect in private practice, namely: The making of all preliminary sketches, the modification of his design to meet possible requirements of the commission, the preparation of a set of general working drawings to procure estimates; the preparation of a set of general details on a larger scale, a set of full-size drawings for moulded, carved or ornamental work, and a set of all other original drawings and specifications required by the commission. He shall

supervise the construction of the building, and no payment shall be made to any contractor until the certificate of the architect has been received by the Secretary of the Treasury that the work has been executed in conformity with the contract. He shall file a complete set of the construction drawings in the Treasury Department, from which all duplicates shall be made, which duplicates shall be paid for out of the appropriation for the building. The architect shall be paid for his services a fee of five per centum upon the total cost of the work and the usual traveling expenses. The expenses of the commission and the fees of the architect shall be paid by the Secretary of the Treasury out of the appropriation for the building in the erection of which they were incurred.

SEC. 7. That the Secretary of the Treasury, upon the recommendation of the commission, shall authorize the architect to employ a competent clerk of the works, at a salary to be established by the commission, and he shall be paid for his services out of the appropriation for the building.

SEC. 8. That the Supervising Architect of the Treasury Department, under the direction of the Secretary of the Treasury, shall be the representative of the Government in all matters connected with the erection and completion of public buildings and the payment therefor. He shall receive proposals for the work and, with the approval of the architect of the building, he shall award the contracts therefore. He shall perform all other duties that now pertain to his office except such duties as are vested by this act in the architect of the building.

SEC. 9. That all acts and parts of acts inconsistent with this act are hereby repealed.—*The Inland Architect and News Record.*

ACOUSTICS IN ARCHITECTURE.

BY ALEX. F. OAKEY.

THE published contributions to the discussion of Acoustics in Architecture have not been hitherto sufficiently definite to establish even the basis for an exact science.

I would not underrate the labors of Mr. Scott Russell, Mr. T. Rodger Smith, M. Lachez, M. Savart and others; but it must be admitted that the contributions of these gentlemen are tentative and almost altogether analytic in method: attempts to account for success or failure by application of known acoustic phenomena to the conditions of existing auditoriums. In these attempts much valuable data in measurement and description of auditoriums has been accumulated, but the reasons alleged for success or failure in particular instances have been nullified by inconsistencies, made apparent by conditions in other instances.

Physicians will tell us that the essential step in medical treatment is a correct diagnosis, that it is futile to treat a patient for a paralysis superinduced by inflammatory rheumatism, when the real trouble is a little brain tumor on a nerve center near the fissure of Rolando. Intuitive perception may suggest lines of inquiry, but it is only by the most minute synthetic process that any reliable base can be established. The more we learn the more vague become the dividing lines between the sciences, until we are forced to realize with a sigh, that the thorough understanding of anything involves at least a general understanding of almost everything else.

With this conviction I undertook the study of the human ear, the human voice, the construction of musical instruments and of harmony, in the hope that such knowledge as I had already acquired, as an architect, of the nature of materials, of heating and ventilation, and other familiar matters, might, so supplemented, enable me to form a practical theory, and I have not been disappointed. Without the application of facts and deductions never sought for our uses, by such men as Professor Von Helmholtz, Professor Haweis, Dr. Mackenzie and many more, we would have to admit that the acoustics of halls and theaters are, as stated by a prominent actor and playwright, "notoriously and confessedly a matter of accident." This is the prevailing belief, even among architects, and few of them have made any serious attempt to remove the stigma. In explaining my own efforts to this end I would ask your indulgence for any seeming dogmatism, as we lack time for the arguments and reasoning that warrant my conclusions, but I shall make no assertion that you cannot verify at the cost of following carefully the line of inquiry I shall briefly describe.

It should be noted that an auditorium that is practically all that could be desired for speaking is not always acoustically satisfactory for music, as for instance, the lecture hall of the University of London; while an auditorium that is acoustically satisfactory for music is always satisfactory for speaking, like the little Chamber-Music Hall, in Leipsig. Hence only the musical requirements concern us, and these are not satisfied by mere hearing, in the sense that one may hear what occurs on the opposite side of a street, however exactly one may catch the least word of a conversation. The music lover must be physically in vibratory sympathy with the rendering. The capacity for this varies greatly, but for our purposes we choose a musically supersensitive mortal blessed, of course, with the positive ear. Let us examine this marvelous organ. It will repay our study, for it includes the most perfect music hall imaginable, in which the whole symphony of life is always and forever performing. This symphony, for the modern city denizen, is so horribly dissonant that if he is not rendered partially deaf his ear becomes jaded, like a hack horse, and is no longer capable of the finer sensibility. There is an analogy worth noting here: that a fine violin, constantly excited by the scraping of a mere fiddler, loses tone, and must be nursed and trained by a master to its natural responsiveness; and we shall have occasion to refer to this fact when discussing the properties of materials in their bearing upon our results.

For our present purpose we need not dwell upon the wonders and mysteries of the middle ear and the inner ear, though I would recommend the study if only to convince us that no broadax, happy-go-lucky method of probabilities can possibly serve in ministering to such a delicate constitution. The music hall I referred to is the external auditory canal, whose proportions and parabolic concavities, together with the nature and action of the membranes, present a hall in which any sort of sonorous vibration is sustained, increased or diminished, modified, or totally changed or instantly stopped, without possibility of confusion; and this chamber illustrates the essential principles of a fine violin, which, as you know, is a combination of parabolic reflectors with a common axis, the internal space, being in harmonic proportion, inclosed by different thicknesses and kinds of wood, the shapes and properties of each piece being determined by the nicest acoustic law.

We need not now further discuss the construction of the violin, though its minutest detail is of essential importance to us. I should occupy this convention for a week if I allowed myself anything more than a suggestive outline of various matters involved in the main question. It is important to state, however, that we are now with certainty making violins that lack nothing but age to equal the great Stradivaris, Amatis and Guarnaris. I need hardly say that a concert hall exactly like the auditory canal or the violin would not serve. I am talking of principles that are applicable to an infinite variety of conditions. The audience in the auditory canal is a single listener who never changes his seat and presents no absorbing surface, is contented to remain in darkness, and does not vitiate the air by breathing or perspiring. However, all these considerations have been

carefully weighed and reduced by actual, practical experiment to figures and formulæ, that can be handled and controlled with certainty. One vexing question especially has been eliminated by the introduction of the incandescent electric light. We can now avoid the stratification of the atmosphere into different densities, different degrees of heat and moisture, and, in short, so far as the conditions of the air itself is concerned, we can absolutely reproduce the ideal conditions of homogeneity of the auditory canal.

We know now how to supply oxygen with the due proportion of heat and moisture, and draw off from below, if necessary, in the riser of every seat, the carbonic anhydrate, ammonia, etc., and to give the whole body of air the desired movement toward the audience and upward to our heat vents. The necessity for proportionate measurements of an auditorium, if other evidence than is supplied by the ear and the violin is necessary, may be appreciated from the phenomena of the voice and those of the action of sound waves. If it is admitted that what we are striving for is to achieve such conditions, that what takes place in the auditory canal, in a violin, or in the mouth cavity of a great singer, shall, on a larger scale, take place in our auditoriums, it must also be admitted that the proportionate resistance of the body of air to be set in tremulous action in every direction must be determined with the same nicety that nature has taught us. An examination of Dr. Mackenzie's collection of casts of the mouth cavities of great singers is as suggestive and useful as the other inquiries I have touched upon. These forms, as might be expected, vary greatly, but the same principles of proportion and parabolic curvature prevail; but in these we are dealing with an instrument for producing sonorous vibrations, not an apparatus for measuring them, and it is instructive to note that the contralto or the soprano mouth cavity is distinct from the tenor or the baritone, and from each other, as much so as the length, size and other properities of the respective vocal cords, as also the quality and action of the respective lining membranes.

We must go back to the violin and to practical experiments based upon its functions to determine how and to what extent absorbent surfaces—especially those presented by an audience—interfere with our results; and how this interference shall be controlled and made an essential factor of success, as certainly as the stopping of a string on a fretboard. This has been settled by determining the amount of absorbent material, such as woolen fabric, that can be put into a violin without appreciably muffling the tone; and by corroborating the results of these delicate trials in actual experiments with audiences, curtains and other appliances in various rooms and halls, under various conditions. The results would seem to establish formulæ: That when the cubic space exceeds 325 feet per head, too great resonance need not be feared; on the contrary, every means of increasing resonance must be employed. As the proportionate cubic space is less than the above maximum figure, extremely resonant surfaces for walls and ceiling should be proportionately replaced by less and less resonant surfaces, until the conditions demand hard, non-resonant surfaces such as plaster throughout, when the minimum figure of 180 cubic feet per head is reached.

As to reverberation or echo, all possibility of such disturbance is obviated by the general form of the auditorium, which may be best described by a half-revolution of an obtuse parabola on its axis, the focus being on the floor line behind the last row of seats. You will ask how in the same auditorium the ideal balance of resonance can be preserved between very full, dense audiences and moderate or thin audiences? These varying conditions can be met by the simplest mechanical devices of pedals controlled by the occupation of the seats automatically, so that as the audience fills up the dampers act proportionately on area after area of surface. I am quite aware that the average manager may shrink at the possible expence involved in this, as in other essential precautions But why should we not take seriously the announcements we occasionally see that every precaution has been taken to insure acoustic success? These announcements are like the moral clauses in political platforms—admissions that there are enough intelligent people who think something of the kind should be accomplished to make the verbal concession advisable. As to arrangement of seating there can be no doubt that each row should be at least four inches higher than that in front, but I cannot find evidence to warrant insistance on a greater difference, for in a hall or theatre of approximately good acoustic properties, when the heating and ventilation are properly adjusted, the seats in the galleries are no better than those on the floor.

I will venture the assertion that if we will conscientiously construct a music hall on the principles we have mentioned, and construct our walls and ceiling in panels of wood of varying thickness and quality, the thinner and more easily excited sufaces being furthest from the voice or instrument, we can achieve results that shall insure a refinement of enjoyment hitherto unknown. Referring to the effect of careless, tuneless playing upon a violin, the effect upon a voice of persistently singing out of tune, compared with the effect of the opposite tasteful method, we can easily believe that some acoustic defects in auditoriums may grow worse with time as others may improve. As for remediable measures: Sounding-boards, stretching of wires, etc., we may admit that these and many other more radical prescriptions may be warranted by a correct diagnosis of the disease. I am inclined to think, however, that if the wires have ever done any good it was because accidently, by their varying tension, they supplied in a bungling way a similar apparatus to the rods of Corti of the inner ear, by which the physiologists are not yet agreed that we distinguish the quality of tones by measuring the over-tones. However this may be, of one thing I am certain, that all subdivisions of space, such as that under galleries, must be treated on the same principles as the main auditorium, and with the same nicety as to detail. That it is necessary to construct our ceiling, walls and floor with sufficient space behind, above or below, to insure the action of our resonant panels and that these spaces must not be mere waste spaces, but properly finished chambers, properly dry and ventilated. There are advantages in this from a practical view: that the main construction of the building is a thing apart, our hall is an apparatus, a sort of large ear with its own laws of being within.

We are possessed of the data for a book on the whole subject, a work that shall be exhaustive and final, to which we could turn for facts and formulæ with the same reliance that we use our engineers' pocket books for tests and strains. Such a work would be copiously illustrated and could not be less voluminous than Professor Helmholtz's "Sensations of Tone as a Physiological Basis for the Theory of Music." But where shall we find the devoted spirit who could, if he would, give three years of his life without hope of pecuniary reward, and where is the publisher who will invest the necessary thousands in so unpromising a venture?. In what I have said I have adopted the tone of positive assertion because I most potently believe what I have told you, and am warranted in so believing by the results of practical experiments. I could not in any less compass than a dozen courses of a dozen lectures of an hour or more each, have marshalled and reviewed all the facts, all the details, of investigation and the reasoning based upon these; and I have, therefore, thought best to flatly state my conclusions in the hope that they may excite discussion.—*World's Congress of Architects*

A SAD ACCIDENT ON MOUNT TAMALPAIS.

WM. Curlett, Jr., son of William Curlett, the architect, whose home is in this city, was killed by the accidental discharge of a rifle in the hands of Ralph Prescott.

Prescott is said to be wild with grief over the unfortunate affair, as young Curlett had been his friend for years. We cannot refram from offering our most heart felt sympathy to the family and friends of the young man.

A new law in the State of New York requires that all stone for Municipal and State buildings shall be cut, dressed and carved on the premises where used.

supervise the construction of the building, and no payment shall be made to any contractor until the certificate of the architect has been received by the Secretary of the Treasury that the work has been executed in conformity with the contract. He shall file a complete set of the construction drawings in the Treasury Department, from which all duplicates shall be made, which duplicates shall be paid for out of the appropriation for the building. The architect shall be paid for his services a fee of five per centum upon the total cost of the work and the usual traveling expenses. The expenses of the commission and the fees of the architect shall be paid by the Secretary of the Treasury out of the appropriation for the building in the erection of which they were incurred.

Sec. 7. That the Secretary of the Treasury, upon the recommendation of the commission, shall authorize the architect to employ a competent clerk of the works, at a salary to be established by the commission, and he shall be paid for his services out of the appropriation for the building.

Sec. 8. That the Supervising Architect of the Treasury Department, under the direction of the Secretary of the Treasury, shall be the representative of the Government in all matters connected with the erection and completion of public buildings and the payment therefor. He shall receive proposals for the work and, with the approval of the architect of the building, he shall award the contracts therefore. He shall perform all other duties that now pertain to his office except such duties as are vested by this act in the architect of the building.

Sec. 9. That all acts and parts of acts inconsistent with this act are hereby repealed.—*The Inland Architect and News Record.*

ACOUSTICS IN ARCHITECTURE.

BY ALEX. F. OAKEY.

THE published contributions to the discussion of Acoustics in Architecture have not been hitherto sufficiently definite to establish even the basis for an exact science.

I would not underrate the labors of Mr. Scott Russell, Mr. T. Rodger Smith, M. Lachez, M. Savart and others; but it must be admitted that the contributions of these gentlemen are tentative and almost altogether analytic in method: attempts to account for success or failure by application of known acoustic phenomena to the conditions of existing auditoriums. In these attempts much valuable data in measurement and description of auditoriums has been accumulated, but the reasons alleged for success or failure in particular instances have been nullified by inconsistencies, made apparent by conditions in other instances.

Physicians will tell us that the essential step in medical treatment is a correct diagnosis, that it is futile to treat a patient for a paralysis superinduced by inflammatory rheumatism, when the real trouble is a little brain tumor on a nerve center near the fissure of Rolando. Intuitive perception may suggest lines of inquiry, but it is only by the most minute synthetic process that any reliable base can be established. The more we learn the more vague become the dividing lines between the sciences, until we are forced to realize with a sigh, that the thorough understanding of anything involves at least a general understanding of almost everything else.

With this conviction I undertook the study of the human ear, the human voice, the construction of musical instruments and of harmony, in the hope that such knowledge as I had already acquired, as an architect, of the nature of materials, of heating and ventilation, and other familiar matters, might, so supplemented, enable me to form a practical theory, and I have not been disappointed. Without the application of facts and deductions never sought for our uses, by such men as Professor Von Helmholtz, Professor Haweis, Dr. Mackenzie and many more, we would have to admit that the acoustics of halls and theaters are, as stated by a prominent actor and playwright, "notoriously and confessedly a matter of accident." This is the prevailing belief, even among architects, and few of them have made any serious attempt to remove the stigma. In explaining my own efforts to this end I would ask your indulgence for any seeming dogmatism, as we lack time for the arguments and reasoning that warrant my conclusions, but I shall make no assertion that you cannot verify at the cost of following carefully the line of inquiry I shall briefly describe.

It should be noted that an auditorium that is practically all that could be desired for speaking is not always acoustically satisfactory for music, as for instance, the lecture hall of the University of London; while an auditorium that is acoustically satisfactory for music is always satisfactory for speaking, like the little Chamber-Music Hall, in Leipsig. Hence only the musical requirements concern us, and these are not satisfied by mere hearing, in the sense that one may hear what occurs on the opposite side of a street, however exactly one may catch the least word of a conversation. The music lover must be physically in vibratory sympathy with the rendering. The capacity for this varies greatly, but for our purposes we choose a musically supersensitive mortal blessed, of course, with the positive ear. Let us examine this marvelous organ. It will repay our study, for it includes the most perfect music hall imaginable, in which the whole symphony of life is always and forever performing. This symphony, for the modern city denizen, is so horribly dissonant that if he is not rendered partially deaf his ear becomes jaded, like a hack horse, and is no longer capable of the finer sensibility. There is an analogy worth noting here: that a fine violin, constantly excited by the scraping of a mere fiddler, loses tone, and must be nursed and trained by a master to its natural responsiveness; and we shall have occasion to refer to this fact when discussing the properties of materials in their bearing upon our results.

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We know now how to supply oxygen with the due proportion of heat and moisture, and draw off from below, if necessary, in the riser of every seat, the carbonic anhydrate, ammonia, etc., and to give the whole body of air the desired movement toward the audience and upward to our heat vents. The necessity for proportionate measurements of an auditorium, if other evidence than is supplied by the ear and the violin is necessary, may be appreciated from the phenomena of the voice and those of the action of sound waves. If it is admitted that what we are striving for is to achieve such conditions, that what takes place in the auditory canal, in a violin, or in the mouth cavity of a great singer, shall, on a larger scale, take place in our auditoriums, it must also be admitted that the proportionate resistance of the body of air to be set in tremulous action in every direction must be determined with the same nicety that nature has taught us. An examination of Dr. Mackenzie's collection of casts of the mouth cavities of great singers is as suggestive and useful as the other inquiries I have touched upon. These forms, as might be expected, vary greatly, but the same principles of proportion and parabolic curvature prevail; but in these we are dealing with an instrument for producing sonorous vibrations, not an apparatus for measuring them, and it is instructive to note that the contralto or the soprano mouth cavity is distinct from the tenor or the baritone, and from each other, as much so as the length, size and other properities of the respective vocal cords, as also the quality and action of the respective lining membranes.

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ILLUSTRATIONS.

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.

SCHOOL House at Redwood, Martens & Coffey Architects.

ACCEPTED Design for City Hall, Alameda, Percy & Hamilton, Architects.

DESIGN of the City Hall, Alameda Cal., W. O. Banks, Architect.

PRESENTATION OF THE ROYAL GOLD MEDAL TO SIR FREDERICK LEIGHTON, BART., P. R. A. [H. A.], MONDAY, JUNE 25, 1894.

ADDRESS BY THE PRESIDENT, FRANCIS C. PENROSE, M. A., F. R. S., F. R. A. S., KNIGHTS OF THE ORDER OF THE SAVIOR IN GREECE.

COLLEAGUES AND GENTLEMEN:—

E have before us this evening a grateful task, and one in which I feel it to be a high privilege to take a share, in presenting, in the name of our Most Gracious Patron, Her Majesty the Queen, the Gold Medal to one who has greatly honored us by accepting it at our recommendation. The distinguished President of the Royal Academy is well known to all of us here by his works and by his renown, to many by his friendship, and his genial courtesy to all who have had any intercourse with him.

As it is possible that some one who has not sufficiently followed the considerations which have guided the Institute in this award might ask, Why should a medal intended for the recognition of architectural merit be awarded to a painter? I propose addressing myself briefly to that point by-and-by; but, in the first place, I will endeavor to trace shortly some of the steps by which our distinguished friend has attained the highest eminence in our British world of Art.

Sir Frederic Leighton was born at Scarborough, and his natural inclination towards the graphic arts early declared itself. His father, a physician, though he had other views for his son—intending, it is said, to give him a University education, with a view to his ultimately being called to the Bar—nevertheless encouraged him to make himself acquainted with anatomy, and gave him every facility for the study of art in order that he might be equipped for the profession should he eventually follow it. We early find him, then studying at Rome; and, if I may be allowed a moment's digression, this leads me to reflect that I must occasionally have fallen in with him during the winter and spring months at the Artists' excursion called the Cervara, or on the Pincio or when it was the ambition of the British art students who were there to fall in with John Gibson at his early coffee at the Lepre.

Dr. Leighton became so far a convert to his son's wishes as to consent that the latter's drawings should be submitted to the famous American, Hiram Power—a man not less remarkable for his great skill as a sculptor and his knowledge of art, than for his noble physique, his courteous manners, and his sterling character—and if he decided that there was the true artist's ring about these works, his son should no longer be opposed in following the bent of his inclination. We may, I think, appreciate the pleasure which the good American had in assuring the father that there could be no doubt whatever on the subject. The pithy way in which old Hiram Power gave his verdict is worth recording: "Then you think," said Dr. Leighton, "I ought to let my son be an artist?" to which there came the answer: "You have no choice, sir; Nature has done that already." After this, the youthful painter studied in various European centres, and made himself proficient, not only in the art of the countries in which he sojourned, but also in the languages, as those who have heard his discoursing with foreigners can testify. At Brussels, when eighteen years of age, he produced his first finished picture, "Cimabue finding Giotto in the 'Fields.'" He shortly afterwards showed his sympathy with our profession by a painting of which the subject was the death of Brunellesco. After some residence in Paris, working at the Louvre, he studied at Frankfort under the painter Steinle, to whom he submitted the design of his magnificent picture "The Triumph of Cimabue," which he carried out at Rome. I have heard that during this period Thackeray fell in with him, and prophesied that, although as yet altogether unknown in England, he would become President of the Royal Academy.

The great picture above referred to was sent to England for the Exhibition of 1855, then held in the rooms of the present National Gallery. The seniors here present can remember, and many of the juniors who saw the picture when it was exhibited again at Manchester can well understand, the fervour which was created on all sides by the unexpected appearance of such a work by a man hitherto unknown. The picture was immediately bought by the Queen. But, for the present renouncing what might have seemed a lucrative opportunity for accepting work in London, he returned to his studies, and resided for some years on the Continent, chiefly in Paris, in communication with some of the most distinguished painters of that capital.

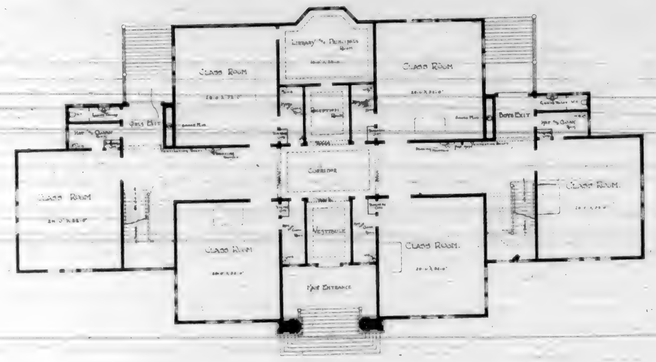
Soon after his return to England, he painted the fine fresco representing "The Five Foolish Virgins," in the church at Lyndhurst, in the New Forest; and in the same material, but more recently, two large fresco paintings at the South Kensington Museum, representing the Industrial Arts applied to Peace and War.

It is, however, impossible, in the space here available, to enumerate anything like a list even of his principal paintings.

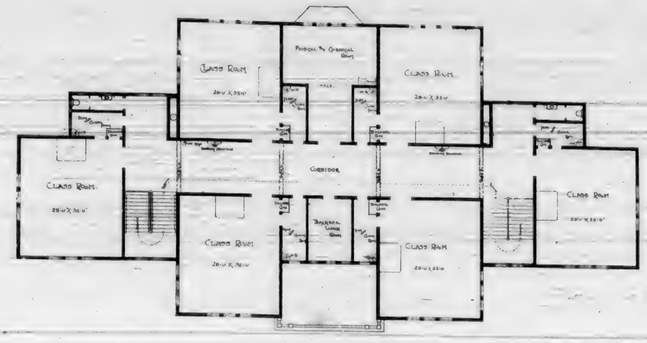
"The Power of Music" was exhibited in 1856. The great classical subject of "Hercules Wrestling with Death for the Body of Alcestis" must be specially mentioned, for it called forth the praise of his friend Browning in the poem called "Balaustion's Adventure":

> I know, too, a great Kaunian painter, strong
> As Herakles, though rosy with a robe
> Of grace that softens down the sinewy strength,
> And he has made a picture of it all.

More lately we have seen the fine, pathetic picture of Andromache, *dejectan conjuge tanto*, in her captivity. In 1881 the merited compliment was paid him in the request from Italy that he should contribute his portrait to the gallery of di-



First Story Plan.

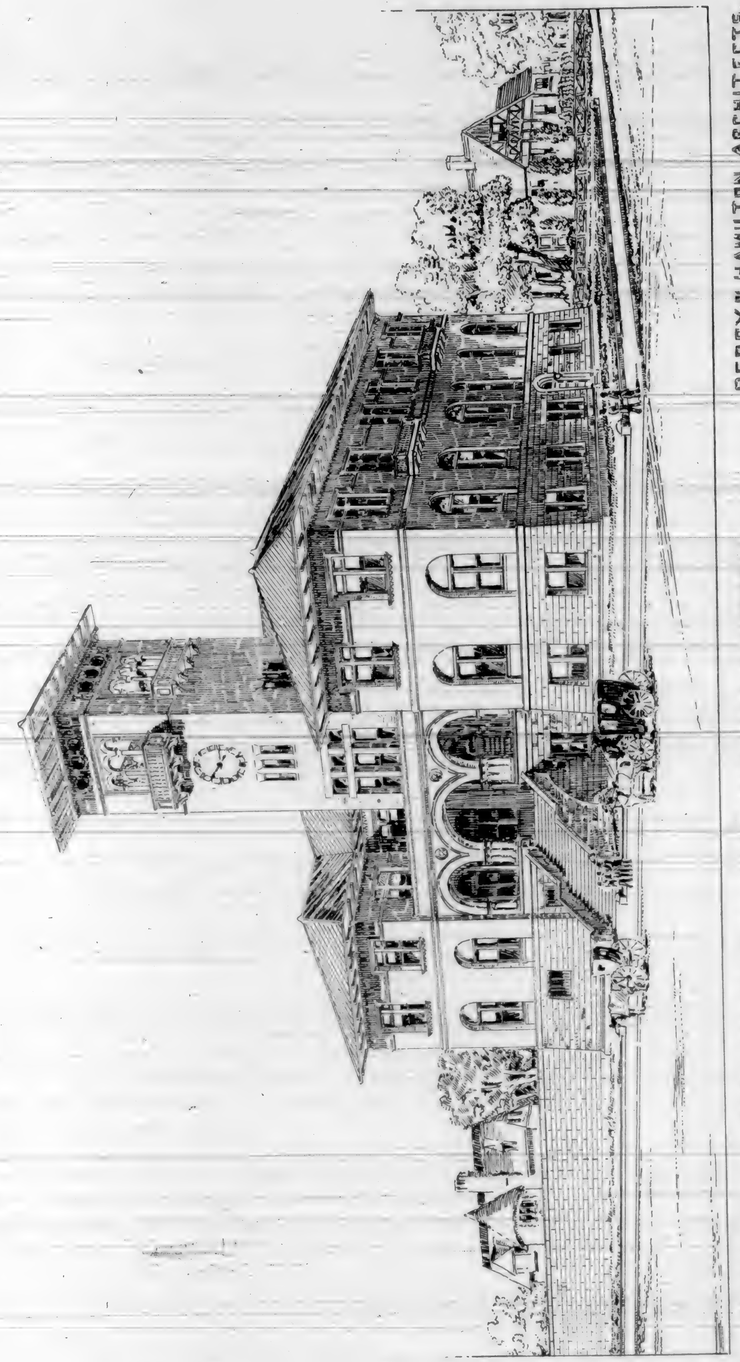


Second Story Plan.

Redwood City School House

Martens & Coffey. Archts
Rm 18 Academy of Sciences Bldg.
San Francisco, Cala.

Britton & Rey Photo Lith.



ACCEPTED · DESIGN · FOR · CITY · HALL · BUILDING · ALAMEDA · CALIFORNIA.

PERCY & HAMILTON ARCHITECTS.

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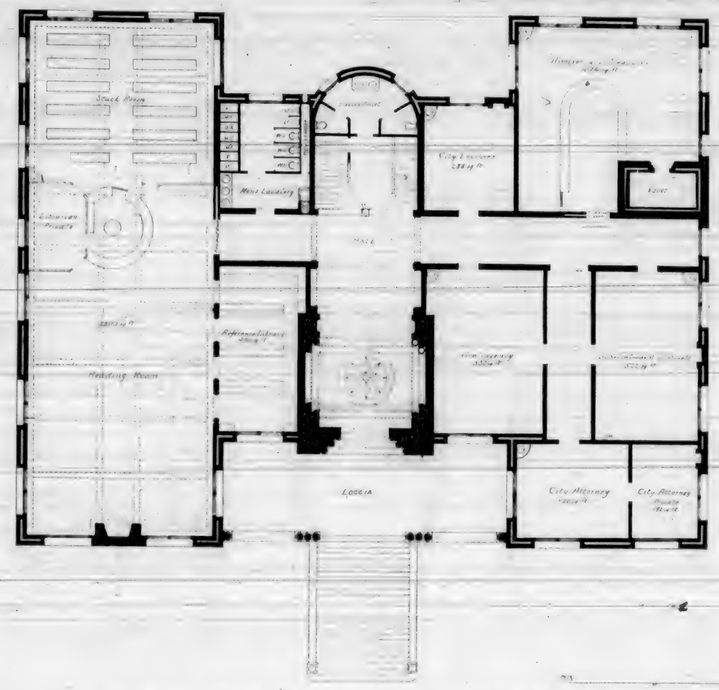
tinguished painters in the Uffizi at Florence.*

Thus far we have followed his career as a painter; but, not content with the triumphs of his brush, he has invaded the sculptor's domain. In 1877 we admired the fine group of the "Athlete Struggling with a Python," and in 1886 his bronze statute of the "Sluggard." I shall presently have to speak of his potential claim to graduate in architecture.

I necessarily omit much. Of him it can without exaggeration be said, *Nihil tetigit quod non ornavit*. Up to 1883 he had for many years, as their Colonel, led the Artists' Corps of Volunteers. His eloquence in presiding at the Royal Academy Dinners is the theme of all. The social side of his character is equally admirable, and many are those who can bear witness to generous actions on his part, both in purse and kind sympathy.

But Sir Frederic Leighton is very much more than a painter. He is the only President of the Royal Academy, from the time of its first foundation, of whom it can with certainty be said that he has evinced a thorough knowledge of all the great Arts, and who is practically great as a painter, a sculptor, an orator, and a writer.

The greatest master in Art since the days of Pericles is reported to have said, "I know but of one Art." There have been but few who could justly adopt those words, but but one of those few is Sir Frederic Leighton. Similar to its tripartite analogy in Nature, where length, breadth and thickness form one space, so architecture, sculpture and painting are one in Art; the practice is different, but the principles, whenever excellence is touched, are found to be the same in each branch. You know Sir Frederic Leighton's



ACCEPTED DESIGN FOR THE ALAMEDA COUNTY COURT HOUSE.
FIRST FLOOR PLAN. PERCY & HAMILTON, ARCHITECTS.

I do not suppose there is anyone in this room who questions that the Institute has been thoroughly right in making the award of this medal which we have the happiness of bringing to its consummation to-night; but, as I said before, in case there should somewhere be a doubter, I will make a few remarks on that head. Had Sir Frederic Leighton no other claims upon us than the noble architectonic works that have often been products of his hand, works many of them in oil and fresco, executed for the embellishment of public and private buildings, the Institute would have a perfectly good answer to give. The late Prince Consort thus defined the ruling principle—namely, that the appropriation of the Gold Medal should be left an open question to be raised according to circumstances in each year, and to be applied as the Council might periodically feel to be the best for the general interests of the profession. The Institute would therefore be justified in awarding the medal to an artist of high distinction either as a painter or sculptor.

* The dates of the principal steps of Sir Frederic Leighton's advancement are these:—Associate of the Royal Academy, 1864; Royal Academician, 1869; President, 1878. In the last-named year he was knighted, and in 1886 created a Baronet. In France he is an Associe Etranger of the Institut (Academie des Beaux-Arts) and a Commander of the Legion d'Honneur. In Germany the rare distinction of Frederick the Great's "*Ordre pour le Merite*" has been conferred on him—an honor accorded to very few.

high achievement in sculpture. In architecture there is the clearest evidence of what I have called his potential merit had he had occasion to practice in our special branch.

In biennial Addresses to the Students of the Royal Academy, particularly in the years 1889, 1891, and 1893, we find criticism of the highest value clothed in beautiful language on the Spanish, French and German Schools of Mediæval Architecture. Not mere sketches and generalizations, but dealing with the subject in an exhaustive manner.

Our ex-President has most happily and justly eulogised these addresses, saying in his discourse to students at the beginning of this year that they demonstrate in regard to architecture that their writer possesses an intelligent and a critical grasp of the subject second to no modern author. To few indeed is it given to combine with wide historical research and keen critical acumen the indescribable charm of composing poetry in prose. Let me command to your thoughtful attention the study of these singularly learned and graceful discourses.

That an artist of such refinement would also be in sympathy with the spirit of classical architecture will not be doubted. I had myself frequent opportunities of bearing witness to his appreciation of the elements of beauty in the

works of the Greeks at meetings of the Publication Committee of the Society of Dilettanti; but I wish particularly to call your attention to the masterly summaries of the characteristics of Mediæval architecture as practised by the leading races of Continental Europe in the Academy lectures before referred to. The whole series is full of practical teaching in clear and incisive language: but as in this address limitation is necessary, I will confine myself almost entirely to what is said on the evolution of Gothic architecture from its source at Saint-Denis. After a short discussion of the earlier manner of vaulting from the Roman type, in which stability for the wagon vault was sought in the resistance of solid masses of brick and concrete work, we read:—

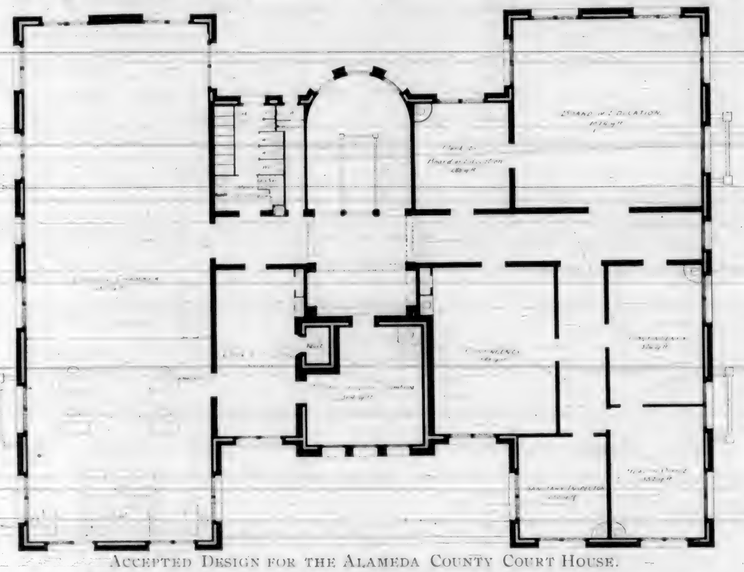
"The substitution of the principle of a balance of active forces to this principle of inert resistance is probably the greatest revolution ever introduced in the science of building: we have here the generative principle of Gothic architecture, its essence and its life. How this revolution was brought about I can of course only indicate to you in summary outline. Let us first note in passing that the presence of a pointed arch, except as a structural form, does not constitute Gothic architecture. Isolated radiating pointed arches have been built in ages and countries in which the Gothic style was not dreamt of; a building might be Gothic in structure and principle without showing a point opening anywhere: it is through the roof, not through the window, that the formative Gothic idea entered."

Then after describing various expedients for securing stability, including the important step taken at Vezelay, where intersecting vaults, but without ribs, were substituted for the continuous wagon-head—an advance, but not yet satisfactory—we read: "A few years later, in the early middle of the twelfth century, a Benedictine monk, feeble of frame, but of a lofty spirit, sugar, the great Abbot of Saint-Denis—who has no sculptors, by the bye, this special claim, that he boldly withstood the bitter denunciations launched by St. Bernard against the sculptural decoration of churches—began the erection of a church in which the tentative groupings, at which I have hinted, gave place to the systematic and logical application of a new and fruitful conception—the idea of stability based on the balance of active forces, expressed in a self-sustaining combination of upright supports and vaulting ribs, with detached buttresses bringing their action to bear exactly on the points at which the trust of the vaults is gathered up."

The address concludes: "Is there any lesson that we may draw from this hurried survey of artistic evolution amont the French? I have dwelt with emphasis on the genius o their Mediæval builders; do I advocate—the young architects for whom I nave mainly spoken to-night may ask—d I advocate the adoption of Gothic forms for the purposes o our own lives? I have spoken to little effect if my answe can be doubtful. Artistic forms are the vesture of ideas and the expression of mental conditions; the ideas and mental conditions of our day are widely removed from those of the Middle Ages; the modern mind cannot with fitness put on the garb which was moulded on the mind of a day long past. But if we may not fitly adopt those forms, we cannot too reverently note the spirit which presided over their development, for a like spirit brought to bear on other material and under other conditions may yet bear new and noble fruit. And the characteristics of that spirit are—a masculine independence, a tenacious grasp of central principles, a fearless sincerity in expression, a scorn of shams and trust on truth."

In Sir Frederic's address for last year we find admirable criticisms on the German Mediæval architecture; praise where due is given to the German Romanesque, and afterwards the reflection, which appears to me perfectly just, that the Germans as a race were never in unison with Ogival architecture; and in respect to their great achievement—Cologne Cathedral—though not withholding praise, he observes, as I think most truly: "We feel that we are in the presence and under the spell of a powerful will, grasping serenely and solving with unfailing and intellectual resource a scientific problem; we bow accordingly before a triumph of skill and volition, we are not, as it seems to me, thrilled by the kindling touch of genius."

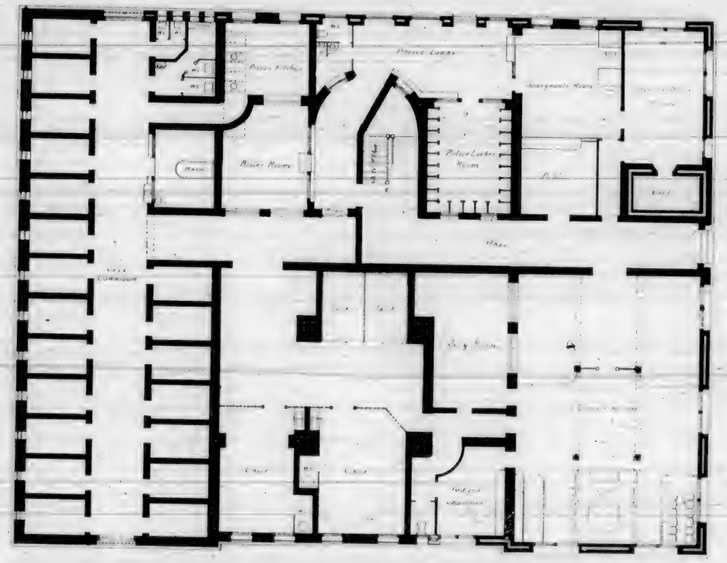
To the pictorial works by Sir Frederic Leighton in connection with architecture already named may be added paintings for the ceilings of a house at New York, of which our Gold Medalist, Mr. Richard M. Hunt, was architect, as well as several of the same character in London. But I must specially mention one work combining architecture in the solid with which he has had much to do. I allude to the removal of Alfred Stevens' monument from the south chapel in St. Paul's to the nave for which it was originally designed, which was done entirely under his inspiration and in no small degree at his expense. I feel sure that there can be no need for me to dilate further on what seems to require no argument in justification of the action of our ex-President and of the Council, and of the Institute which has ratified their action in awarding this medal, especially when, to the great advantage of the Institute, Sir Frederic Leighton's acceptance of its sheds lustre on the roll of Gold Medalists, so well begun with the loved and honored name of Professor Cockerell; and it must be obvious to all of us that the whole profession gains from the fact that the chief representative of Art in its three branches in this country thereby shows how much he is in sympathy with Architecture.—*Journal of the British Institute of British Architects.*



Accepted Design for the Alameda County Court House.
Plan of Basement. Percy & Hamilton, Architects.

Grimes—"Did you get ahead in that poker game last night." Wierdek—"Guess so. I had a head this morning when I woke up."—*Truth.*

Willie—"Come mamma, let's go over and see the monkeys. Mamma (who has the children out for an airing)—No, let,s go home and see papa.—*Chronicle.*



Accepted Design for the Alameda County Court House.
Second Floor Plan. Percy & Hamilton, Architects.

BOOKS AND PERIODICALS.

THE ARCHITECTS' DIRECTORY for 1894. This valuable reference book to the architectural profession has just appeared from the press of Wm. T. Comstock. It is put up in convenient shape and bound in red boards with gilt stamp, making quite a striking appearance. The work bears marks of very careful preparation and aims to give, classified by States and towns, all the architects in practice in the United States and Canada. In giving architects' names the membership in the architectural societies is indicated by figures in brackets following each name; (1) indicating membership in the American Institute of Architects; (2) the Architectural League of New York; (35) Royal Canadian Academician. This will be found a valuable feature, not only interesting to architects, but to those following up the work of associated architects. The influence of architectural associations in raising the standard of architecture in this country is well known, and this feature of the Directory will be regarded important.

The work is well made up, clearly printed and of convenient size, and will be found of great value to architects and the building trades. The price is one dollar.

THE BUILDERS' PROGRESS and PACIFIC ARCHITECT.—This is the title of a new paper published every Saturday by P. J. Donohue at 309 California street. Its mission is to gather from every quarter such news as will most interest interestrthosc who are about to build, a directory of architects on the Pacific Coast, with a list of contractors and material men together with other matter useful to all to those interested in building, and want to know where to lay their hands upon what they want for that purpose. We hope that the publisher may receive all the encouragement he wants in placing his new venture before the public.

The convention number of the PHOTOGRAPHIC TIMES for July 20th, arrived at hand too late for a notice in our last number. Though much was promised for the convention number, none need be disappointed in what proves to be a great success; with "The Old Fashioned Girl" with her spinning wheel for a commencement, to the end of the number the illustrations are life like and striking. The Hand Camera in the Streets by Walter D. Welford give many hints of what the camera is capable of in the way of

street views is well illustrated by the two pictures entitled "An Interesting Moment" and "Shopping on a Wet Day."

The work, however, must be seen and read to be fully appreciated.

"WORKING-CLASS SETTLEMENTS IN MULHOUSE AND MILAN" is an article giving an account of the great success of what we should call building associations, though having a much more comprehensive plan of operations, than our building associations and according to the account given have proved very successful; the author calls the *Societe Industrielle* "a sort of Royal Institution and philanthropic society rolled into one." Resulting in good house, cheap rents with comfort and happiness to all. What more can be asked for?

THE FORTNIGHTLY REVIEW for July 1894, is of unusual interest; one article "A Lesson from Chicago" should be read by all who have a love for our American Navy. This article though addressed to British readers is very complimentary to the ships built for Our Navy.

LIPPINCOTTS' MAGAZINE for August, 1894, comes to hand with a novel call "Sweetheart Manette," by Maurice Thompson; while Louise Stockton's tale "A Mess of Pottage" is concluded, "Uncared for Cats" as well "Feminine Phases" are both full of fun and humor, while "Washington Before the War" by Mrs. M. E. W. Sherwood supplies many interesting reminiscences of that interesting period.

CORRESPONDENCE SCHOOL OF MECHANICS. It has become a common thing to have schools established for instructing by correspondence, we have received a little leaflet from "The Colliery Engineer Co." Scranton Pa., containing extracts from letters from students who have taken a course in "The Correspondence School of Mechanics" all appear to be much pleased with the progress made in the department selected for study and offer many reasons why they could not avail themselves of any other method of instruction.

PACIFIC MEDICAL JOURNAL for August 1894, published from 603 Sutter street, Winslow Anderson, M. D., editor and publisher. This is a handsome magazine, well printed on good paper; we should judge it must be of interest to the medical profession as every thing relating to good health is of interest to the public at large we trust the circulation of this magazine may continue to be everything that the publishers may desire. An interesting article entitled "Some Things Noticed on a Trip to the Eastern States" cannot fail of having many readers both of the professional and non-professional class.

NOTICE OF MEETINGS.

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

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

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

LEGAL DECISIONS.

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

MONEY PAID FOR ANOTHER'S USE.—Where a contractor on a building abandons the work, leaving the workmen unpaid, and the owner tells the contractor's bondsmen that there is enough money coming on the contract to complete the building, and directs him to pay the workmen, so that the work shall go on, and says that he will refund the money so paid as for money paid to and for his use.

Dibble v. Demattos, Supreme Court of Washington, 36 Pac. Rep. 485. 79.

RIGHT OF MORTGAGEE TO BUILDING REMOVED FROM MORTGAGED LOT.—Where the owner of a lot and building thereon, mortgaged the same the mortgager subsequently sold the said premises subject to such mortgage. Afterwards, the purchaser, without the knowledge or consent of the mortgagee, removed the building to another lot, owned by his wife. Neither the severance of the building nor its annexation to another lot destroyed the right of his mortgagee to enforce his claim against it, the lot mortgaged being first exhausted. After its removal to her lot, the wife made certain additions to and improvements upon the building. The improvements and additions so made in this case, did not destroy the identity of the mortgaged building, or defeat the mortgagee's right to subject it to the payment of so much of his mortgage debt as remained unpaid after exhausting the mortgaged lot.

Dakota Loan & Trust Co. v. Parmelee, Supreme Court of South Dakota, 58 N. Y. Rep. 811. 143.

WHERE AN EMPLOYE IS VICE PRINCIPAL.—One employed by the architect of a building to construct the scaffolds upon which the bricklayers and hod carries shall work is, in the construction thereof, a vice principal, and not a fellow servant of a hod carrier.

McNamara v. MacDonough, Supreme Court of California, 36 Pac. Rep. 941. 44.

EFFECT OF ALTERATIONS AND ADDITIONS IN BUILDING CONTRACT.—When additions are made to a house in course of erection, which a contract has agreed to build for a certain sum, the original contract still exists so far as it can be traced, and the excess is to be paid for according to its reasonable value; and it is only where the charges have been so great that it is impossible to follow the original contract, that it will be deemed wholly adandoned, so that the contractor can recover on a basis of value. When such contract is shown to have existed, the burden is upon the party claiming its abandonment to prove the same.

Hood v. Smiley, Supreme Court of Wyoming, 36 Pac. Rep. 856, 112.

WHAT CONSTITUTES FELLOW SERVANT.—Where a foreman in erecting a scaffold, builds it in a negligent manner, and an employe under him is injured by such defective scaffold, the foreman is a fellow servant and the master is not liable.

Noyes v. Wood, Supreme Court of California, 36 Pac. Rep. 766. 38.

EFFECT OF ABANDONMENT BY CONTRACTOR.—A building contract provided that the last installment of the price should be paid when the building was completely finished and accepted, and that no payment should be made until the contractor should procure from the county clerk a certificate that "no liens or claims have been recorded or filed against said premises or building, which are then unsatisfied of record." Where the work was abandoned by the contractor, and finished by the owners, an assignee of the final payment to become due the contractor could not recover without producing such certificate.

Bates v. Trustees of Masonic Hall and Asylum Fund, Supreme Court, Special Term, Oneida County, 27 N. Y. Supp. 951. 97.

WHAT CONSTITUTES USE OF PARTY WALLS IN COMMON.—Where a wooden warehouse is framed against a brick wall, built one half on each lot, though no joists or other timbers are let into the wall, yet, if the ends of the sides and the roof are attached thereto in a permanent manner, and the wall used as one side of the enclosure, there is a use in common which entitles the owner of the wall to recover from his neighbor for his use, and half the value of such party wall.

Deere Wells & Co. v. Weir Shugart Co., Supreme Court of Iowa, 59 N. W. Rep. 255. 85.

BUSINESS MOSAICS.

Schenck's Swinging Hose Reel for Mills, Factories, Hotels and Public Buildings. This reel has many advantages for inside protection, from the fact it is simple, safe and reliable in construction, and always ready for use, having packing boxes that never leak. Sold only with the hose the couplings and hose pipe complete, it is fully guaranteed. Reduce your insurance by having the best protection. W. T. Y. Schenck, 593 Mission near Second.

Boston Street Car Conductor.—"How old are you my little girl?" LITTLE GIRL—"If the corporation doesn't object I prefer to pay full fare and keep my own statistics."—*Chicago Standard.*

Mantels, Grates and Tiles.—No matter how well your house may be built, if you have not proper heating apparatus you will never be satisfied with it, therefore if you are wise you will call upon W. W. Montague & Co., before giving your orders in this line. This house has establishments in San Jose and Los Angeles in addition to their headquarters in this city. Your wants will be well supplied either with artistic work in bronze, or the common every day out-fit for the kitchen, all good of its kind. See advertisement in this journal.

Friend—"Now that you have made millions, what will you do?" OLD BULLION—"I shall retire, and amuse myself telling people what a burden wealth is, and how happy I was when I was poor."—*N. Y. Weekly.*

P. H. Jackson & Co., manufacturers of structural iron and steel works for buildings, sidewalk lights, and sky lights, etc. If you want to improve some dark corner of your building or have a cosy bright room, made of what is now a dark vault under the sidewalk, call upon these gentlemen and they will show you how it can be done, and what is more, do it in such good shape, that you will thank your stars that you thought of going to their place of business 228 and 230 First street, San Francisco, Cal.

Hotel CLERK—"The old gentlemen in No. 201 says that his room is full of steam from the laundry." PROPRIETOR—"All right. Charge him $1 50 for a Turkish bath."—*N. Y. World.*

The attention of architects and those contemplating to build are called to the advertisement of "The J. L. Mott Iron Works" in this edition. This concern manufacture a large number of different articles of fine sanitary goods for fine residences, as also large buildings, factories, school houses, etc., which are not excelled by any manufacturers in the world. Their Pacific Coast Representative, M. S. James, has on hand all the catalogues and will be pleased to furnish same to any one desiring them, and will give all necessary information that may be desired.

Portland Cements.—This might be called the "Age of Cement" if we judge by the quantity of cement in use in this city, and upon the whole coast in fact, while every day shows an increase in the demand of this article. A word to the wise is enough, therefore we says "Josson" and "North" can always be had by leaving an order with J. W. Grace & Co., 203 California street, San Francisco.

Practical ÆSTHETICS—FRIEND—"Why do you have all your ceilings and walls finished in crimson?" MRS. SUBURB (of New Jersey)—"That's so we can slap mosquitoes without making a splotch."—*N. Y. Weekly.*

Architectural Terra-Cotta.—Messrs. A. Steiger Sons, manufacturers of architectural terra cotta, having their works at San Jose, California, can supply all orders in the way of hollow tile, flue linings, colored bricks, vases, and fire bricks and an almost endless list of terra cotta work that the architects want for safety and adornment. Their office in this city is at 320 Sansome street, room 3, telephone 5253.

"Have you been playing the races?" "No," replied the rejected looking man. "The races have been playing me."—*Washington Starr.*

Fitzgerald Prepared Wall Plaster—We have had occasion before now to call attention to the merits of Fitzgerald Wall Plaster, the steady increase of its use since it was first introduced upon the market, is conclusive that it has come to stay, if you want to know about it call upon the Pacific Patent Plaster Co., 216 Bush street, San Francisco, room 90 Telephone Building, telephone 638.

The SARCASTIC BARNSTORMER (after the bombardment from the gallery)—"I have eggs enough now, thank you. Will no one send up an accompaning ham?" THE GALLERY—"Its on the stage now!"—*Chicago Record.*

Smith & Young, office 723 Market street, San Francisco, 230 South Spring street, Los Angeles. These gentlemen supply almost every thing required in building, from blue prints and paper for making them, to wood carvings; as well as wood ornaments, pressed, Bostwick Steel Lath, painted or unpainted, mineral wool, painted as well as mortar stains, but the list is too long for this notice. See their advertisement on page ix this journal.

"My sympathies," said the effervesing young woman, "are altogether with the dear Japanese." "So are your hired girl's," said the matron. "She believes all china should be eternally smashed."—*Detroit Free Press.*

San Joaquin Brick Co.—This company's works are situated in Stockton, Cal.; the manufacture of fresh water brick is carried on extensively at that point, their San Francisco yard is on Berry street between 6th and 7th, San Francisco; F. W. Muller, President; C. Horton, Secretary; E. H. Burrell, Agent, 408 California street, room 16.

CITY BUILDING NEWS.

Alvarado, lot 21, Heyman Tract. To build; owner, Thos. J. Hume; contractors, H. Plant & W. H. Davis; signed, July 18; filed, July 23; cost $1480.

Beale and Howard. One story brick; owner, W. F. Whittier; architects, Percy & Hamilton; contractor, R. Ringrose; signed, July 10; filed, July 10; cost $7964.

Butte and Texas. To build; owner, Jno. F. Danielson; contractors, Peterson & Person; signed, July 6; filed, July 7; cost $2340.

California and Laguna. Alterations and additions; owner, E. W. Hopkins; architect, Clinton Day; contractor, C. Chisholm; signed, June 26; filed, July 10; cost $2805.

Cole and Page. To build; owner, Frank Dickson; architects, Wright & Sanders; contractor, James Geary; signed, July 2; filed, July 16; cost $4025.

Clipp r near Noe. To build; owner, C. H. Wescott; contractors, J. W. Mullin and J. H. Rothgeber; signed, June 29; filed, July 20; cost $1500.

Clay near Cherry. To build; owners, L. H. Nagel and wife; architect, W. H. Lillie; contractor, W. H. Kennedy; signed, July 20; filed, July 21; cost $1600.

Cole near Carl. Two-story frame; owner, Minna Stettin; architect, Emile John; contractors, Schutt & Kraecker; signed, July 12; filed, July 26; cost $3000.

Dolores near 24th. Moving and additions, etc.; owner, J. B. Davis; architect, J. C. Newsom; contractor, B. B. Williams; signed, July 14; filed, July 24; cost $1691.

Engine House No. 4. Alterations, etc.; owner, City and County of San Francisco; contractor, J. B. Burk; cost $2450.

Engine House No. 5. Alterations, etc.; owner, City and County of San Francisco; contractor, Alex L. Campbell; cost $2193.

Engine House No. 12. Alterations, etc.; owner, City and County of San Francisco; contractor, Alex. L. Campbell; cost $1526.

Engine House No. 13. Alterations, etc.; owner, City and County of San Francisco; contractor, Alex. L. Campbell; cost $1277.

Engine House No. 7. A brick building; owner, City and County of San Francisco contractor, James Campbell; cost $8590.

Engine House No. 26. A brick building; owner, City and county of San Francisco; contractor, Jas. Campbell; cost $9985.

Eight Ave. near California. To build; owner, A. Seip; architect, A. J. Barnett; contractor, A. L. Jackson; signed, July 30; filed, July 30; cost $1574.

Fell near Fillmore. Plumbing two-story frame; owner, A. C. Freese and wife; architect, T. J. Welsch; contractor, J. E. Britt; signed, July 11; filed, July 14; cost $1220.

Fell near Fillmore. Carpenter work; owners, A. C. Freese and wife; architect, T. J. Welsh; contractors, G. Petersen & A. Olson; signed, July 11; filed, July 14; cost $8750.

Fulton near Lott. To build; owner, M. A. Martin; contractor, A. Winberg; signed, July 23; filed, July 23; cost $2700.

Fillmore near Pine. To build; owner, John Hughes; architect, Chas. I. Havens; contractor, Brennan Bros.; signed, June 28; filed, June 28; cost $12,618.

Fifth near Clara. Second story addition; owner, Geo. Alpers; architect, Jno. J. Clark; contractor, H. Barn; signed, July 31; filed, Aug. 1; cost $1000.

Glover near Leavenworth. Alterations; owner, A. Stanner; contractor, H. S. Grieb; signed, July 28; filed, July 30; cost $1050.

Green near Dupont. To build; owner, Joseph Recca; architect, T. J. Welsh; contractor, G. Masoletti; signed, July 24; filed, July 26. cost $2000.

Guerrero near 25th. To build; owner, W. J. Handy; architect, A. C. Lutgens; contractor, Joseph Kemp; signed, July 21; filed, July 24; cost $3480.

Harrison near Caroline. To build; owner, J. H. Hudges; architect, A. C. Lutgens; contractor, H. Munster; signed, July 9; filed, July 9; cost $1755.

Hampshire near 22d. Alterations and additions; owner, Margaret Gallagher; contractor, Victor Godin; signed, June 14; filed, July 14; cost $980.

Hayes near Buchanan. To build; owner, Godfrey Smith; contractors, Peterson & Person; signed, June 29; filed, June 30; cost $1110.

Isis near 18th. To build; owner, Claus Wohltmann; contractor, R. B. Hicks; signed, July 2; filed July 5; cost $2450.

Jackson near Scott. Brick work; owner, A. K. Gibbs; contractors, McGowan & Butler; signed, June 27; filed, July 10; cost $1575.50.

Jackson near Scott. Granite work; owner, A. K. Gibbs; contractor, James Roe; signed, June 28; filed, July 11; cost $1020.

Jackson near Scott. Plumbing; owner, A. K. Gibbs; contractors, Duffey Bros.; signed, June 29; filed July 11; cost $2830.

Jackson near Scott. Cut stone work; owner, A. K. Gibbs; contractor, Jno. D. Metgilvray; signed, June 29; filed, July 11; cost $5637.

Jackson near Scott. Roof tiling; owner, A. K. Gibbs; contractors, Gladding, McBean & Co.; signed, June 26; filed, July 12; cost $2450.

Jackson near Scott. Glass and carpenter work; owner, A. K. Gibbs; contractors, Wm. Knowles & Geo. Reichley; signed, July 11; filed, July 13; cost $4541.

Juri and San Jose Ave. To build; owner, Louis Juri; architect, John I. Kidd; contractor, Chas. M Depew; signed, July 14; filed, July 16; cost $4580.

Kentucky near Sierra Nevada. To build; owner, P. O'Farrell; architect, J. E. Wolf; contractor, C. J. Autwiler; signed, July 13; filed, Aug. 4; cost $1987.50.

Larkin near Pine. Two separate tenements; owner, C. S. Blair; contractor, Wm. Plant; signed, July 24; filed, July 24; cost $3061.

Market near Geary. Repairs of the Golden Rule Bazaar; owners, Davis Bros.; contractor, Geo. H. Walker; signed, June 29; filed, July 2; cost $3800.

Market near 8th. Brick work; owner, Geo. Moffatt by Ext.; architect, C. R. Wilson; contractor, Robt. Boyd; signed, June 5; filed, July 5; cost $5475.

Market near 8th. Carpenter work; owner, Geo. Moffatt Ex.; architect, Chas. R. Wilson; contractor, James J. O'Brien; signed, June 5; filed, July 5; cost $9850.

Market near 8th. Iron work; owner, Geo. Moffatt Ex.; architect, C. R. Wilson; contractor, H. Ralston; signed, June 5; filed, July 5; cost $2315.

Market near 5th. Sand stone work for 4, 5, 6 and 7 stories; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, J. D. McGilvay; signed, June 8; filed, July 26; cost $53,645.

Market near 5th. Sandstone work, 1, 2, 4 stories; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, J. D. McGilvray; signed, June 6; filed, 6; cost $51,355.

Ninth Ave. near California. To build; owner, Ella A. McNear; architect, F. E. McNear; contractor, Geo; L. Paff; signed, July 13; filed, July 16; cost $2900.

Nineteenth near Noe. Two flats; owner, Jos. H. Robinson; architect, A. W. McQueen; contractor, Jos. Drolette; signed, July 20; filed, July 25; cost $3000.

No location given. To build; owner, Wm. Muller; architect, T. J. Welsh; contractor, A. Hawkins; signed, Aug. 1; filed, Aug. 6; cost $6300.

No location given. To build; owner, J. Jacobs; contractor, I. H. Pauls; signed, July 16; filed, July 26; cost $8940.

O'Farrell near Mason. To build; owners, Annie Martin, J. C. & J. H. McGovern and M. McG. Riddell; contractor, Wm. Little; signed, July 16; filed, Aug. 1; cost $6250.

Pine and Mason. Altering stable; owner, S. F. Art Association; architect, A. Page Brown; contractor, I. R. Wilcox; cost $7000.

Pine near Larkin. To build; owners, Japanese M. E. Church; contractor, J. S. W. Sounders; signed, July 27; filed, July 31; cost $6475.

Pleasant near Jones. Two flats; owner, Julia Jones; architect, W. H. Lillie; contractor, W. H. Wiekersham; signed, July 24; filed, July 25; cost $3084.

Polk near Filbert. To build; owner, D. Depaoli; contractor, J. L. McLaughlin; filed, July 28; cost $1230.

Powell near Greenwich. To build; owners, Sarah J. and H. Harris; architect W. H. Armitage; contractors, Stoker & Bunce; signed, July 24; filed, July 31 cost $3500.

Point Lobos Ave. bet 5th and 6th Aves. Concrete and stone, etc.; owners, French Hospital Association; architect, Emile Deplerre; contractor, A. Warner; signed, July 24; filed, July 31; cost $1885.

Sacramento and Laurel. Five frame buildings; owner, Chas. Clarke; contractor, Casper Zwierlein; signed, July 25; filed, July 26; cost $7917.

Sacramento near Baker. Heating and ventilating; owners, California State Hospital; architects, Wright & Sanders; contractors, A. Baumsteiger & Co.; signed, July 24; filed, July 31; cost $4750.

Sacramento near Baker. To build; owner, California State Womans Hospital; architects, Wright & Sanders; contractor, James Geary; signed, June 28; filed, July 5; cost $14,300.

Second Ave. near Pt. Lobos Ave. To build; owner, Mary Dunphy; architect, W. H. Wharff; contractor, F. W. Maurice; signed, June 30; filed, June 30; cost $1460.

Stockton near Pacific. To build; owner, S. Granucci; architect, Chas. R. Wilson contractor, J. J. O'Brien; signed, June 29; filed, June 30; cost $5350.

Sixth near Berry. Refrigerating room etc.; owner, The Pabst Brewing Co. of Milwaukee; architect, H. Geilfuss; contractors, Schutt & Kraeker; signed, July 3; filed, July 5; cost $2676.

Shotwell near 28th; All work; owner, Jno. F. Schomer; architects, Martens & Coffey; contractor, J. Bucher; signed, July 11; filed, July 12; cost $2675.

Seventh and Jessie. Brick building and alterations; owner, Jeremiah Noonan; architect, A. J. Barnett; contractor, J. A. McNeil; signed, July 19; filed, July 21; cost $5000.

Sharon near 16th. Carpenter, paint, mill, etc.; owner, Alexander Black; architect, J. T. Kidd; contractor, Geo. Welsmann; signed, July 12; filed, July 23; cost $1025.

Taylor near Filbert. Three-story frame; owner, John McFadden; architect, Chas. M. Rousseau; contractor, Jas. Glackin; signed, July 18; filed, July 19; cost $4480.

Truck House No. 2. Alterations, etc.; owner, City and County of San Francisco; contractor, A. McElroy; cost $1976.

Twelfth Ave. near Clement. Frame Cottage; owner, Robt. Hazelett; architects Shea & Shea; signed, July 19; filed, July 23; cost $1775.

Washington street. Work on Gymnasium; owner, E. B. Spalding; architect Wm. Curlett; contractor, P. Rive; signed, July 20; filed, July 24; cost $1275.

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ARCHITECTS are as a class the worst protected people in the community. Their genius and ability is considered fair game by the majority of the people with whom they come in contact. This is not always the result of total depravity, but simply from a want of thought and a forgetfulness of the Golden Rule, and very often from a want of explicit explanation on the part of the architect of his position. In fact the architects themselves, instead of the public, are most to blame for this state of affairs. Let every architect insist on a written contract before doing any work, and refuse to do any work for nothing, except in a case of charity, and the matter is at once clinched. Verbal orders are always liable to misconstruction.

In architecture, unlike most businesses, there is no visible object by which people who wish a design may judge whether the result of an architect's labor will suit or not. When a person buys furniture, a garment, or a ready-made house, he has something tangible from which to select. You will find generally that a purchaser will visit several shops to see where he may be best suited. Now this idea he carries into the realm of architecture and when he wants to build something and get plans therefor, he considers that sundry different ideas should be presented to him by sundry different architects for his inspection in the same manner as a tradesman exhibits the articles he has for sale—forgetting that the tradesman has already his wares in stock—and all that he loses, if not bought from, is his time in showing the goods, which, to be sure, is bad enough. But the case of an architect is entirely different, he has to set to work and make these several sketch plans out of his brain, and paper and pencil—and these, if rejected are useless to him afterwards, while in the first case if a visitor does not buy from a tradesman he still has the article left for sale to somebody else.

This idea of the general public, the architect has to combat in nearly all cases, and it is very difficult to make a person believe that he ought to pay for something he has no use for and rejected; and here is where a protective society for architects would come in, to disseminate counter ideas to the generally received one, to discountenance any architect who seeks to gain an advantage over his fellows by encouraging this idea, and if after a client has been previously informed of the necessity of returning some collateral for the labor of preparing sketches for his choice, he should refuse

to do justice in the premises, to follow him with the Arm of the Law to see that he does.

This co-operation is more important among architects than others for the very reason that the opportunity of defrauding them of their just dues is greater than in the generality of business.

In Europe and in the East there exists societies for the mutual protection of their members from the rapacity of unjust people by means of helping each other in legal fights to maintain their rights, and if such were established here and a few of these fights gained, it will come to be understood that the work of an architect has some value, even if not used, and that consultations with architects are always of value to the consultor in adding to his stock of knowledge, although of no immediate practical benefit, and consultors will be more willing to pay for the time of the consultees.

THE idea that a complete building can be formed from the combination of the designs of two different architects, especially when of two different schools, although prevalent among the uninitiated, is altogether against the opinion of those who know whereof they speak—and it is against the canons of good taste in all the senses of the word to tag on an entirely different feature to a conception worked out on different lines. In general a private owner sees this and keeps within the bounds of ordinary circumspection; but public buildings seem fair game for all manner of experiments and incongruities. Pity it is so, but so it seems to be.

A THREATENED OUTRAGE.

APPARENTLY our Postoffice site job is going to be capped by the construction of an architectural monstrosity, says the *Examiner*. The Supervising Architect of the Treasury refuses to allow the public to see the plans for the new building upon which millions are to be expended by the taxpayers of the country, on the ground that there would be criticisms which would make trouble by necessitating changes. Of course that means that the plans are not fit to bear public inspection.

We have feared this from the start, and we expressed are fears some months ago. The office of the Supervising Architect of the Treasury is a machine-shop, in which designs are ground out like boards from a sawmill. The Supervising Architect himself, by the very conditions of his service, is necessarily incompetent. The character of the his work moves every intelligent architect in the country to language unfit for publication. His Government building at the World's Fair was one of the two great blemishes of the exhibition, the other being the remaining conspicuous example of political architecture—the monstrosity erected by the State of Illinois. Recognizing the deficiencies of his office in artistic matters, Congress passed a law authorizing the Government to avail itself of private talent in the construction of important public buildings. This law was nullified by the Treasury Department, which insulted the architects who had made the World's Fair a vision of beauty, and expressed its complete satisfaction with the work of its official design factory. Consequently the country is doomed to go on paying the price of palaces for the contempt of the artistic world until Congress takes more peremptory action.

Such action should certainly be insisted upon in the San Francisco case. We have waited long enough for our Postoffice to be able to wait a little longer. For a building that is to be one of the chief architectural monuments of the city we have a right to demand a decent design, and if the official Architect Laureate of the Treasury cannot give it to us, as he probable cannot, we have a right to get it outside. Congress should make an appropriation for the building at its nxet session, and should insert a proviso requiring the work of preparing plans to be thrown open to the qualified architects of the country. It is the duty of our delegation to keep up a disturbance until this is accomplished.

SIXTH ANNUAL COMPETITION FOR THE ROBERT CLARK TESTIMONIAL.

UNDER THE AUSPICES OF THE CHICAGO ARCHITECTURAL SKETCH CLUB OF CHICAGO.

CONDITIONS—The competition is open to architectural draughtsmen under thirty years of age, residents of the United States, and not practicing architects.

The author of each design must execute all drawings without assistance, and non-adherence to these conditions will cause the rejection of the design or designs in question.

The awards will be made by the Adjudicating Committee on the "Robert Clark Testimonial" competition, and are—

First Prize—Gold Medal. Second Prize—Silver Medal Third Prize—Bronze Medal.

Those designs receiving Honorable Mention will receive special Bronze Medals.

The prize drawings are to become the property of the Chicago Architectural Sketch Club.

PROGRAMME.

A design for the facade of an "Art Club" House in a Classic or Cenaissance style, the building to be situated on a residence boulevard.

The building shall be 80 feet in width, situated on a lot 100 feet in width and at a distance of 25 feet from the inside line of the sidewalk. The lot is not situated on a corner, and little or no attention is to be paid to the sides of the building, beyond indicating the proper return of the corhice, etc., in the respective.

The rooms which require expression and which take their light from this front are—

FIRST STORY—An entrance located in the centre and a single room on either side, to be used as Reception and Reading Rooms.

SECOND STORY—A large Banquet Hall located in the centre, and a small unimportant room on either side, which can be lighted from the front or from the sides at the discretion of the competitor.

THIRD STORY—The third story is devoted to bed-rooms, to be arranged at will.

The drawings required are an elevation, at a scale of ¼ of an inch to a foot, rendered in line with pen and ink without shadows or other embellishments, and a perspective rendered at will. They are to be mounted upon stretchers of heavy card-board 29x40 inches, and must be marked with a device or nom de plume. An envelope marked in a similar manner, and containing the name and full address of the author, with place and date of birth, must accompany each design.

Drawings must be delivered to John Robert Dillon, Secretary, Chicago Architectural Sketch Club, at the Club House, 274 Michigan Ave., Chicago, on or before Thursday, November 15th, 1894, charges to be prepaid. All drawings not receiving prizes will be returned at the expense of the contributor.

The Adjudicating Committee on the "Robert Clark Testimonial": W. B. WUNDIE, Chairman. FRANK L. WRIGHT. IRVING K. POUND.

IMPORTANCE OF SLOW BURNING CONSTRUCTION FOR BUILDINGS.

THE August number of the *Engineering Magazine* contains an excellent article by Mr. Edward Atkinson, on the enormous losses by fire, the results of ignorance, stupidity and neglect. He says:

There are no more perfect examples of the art of combustible architecture than are to be found in most of the hospitals, asylums, college buildings and school houses. He has been called upon to inspect more dangerous and unsuitable buildings than some of the larger hospitals, especially one for the insane, which he was once asked to protect as far as he could. The power of invention had been exhausted in making that building unsafe and unfit for its use, and that has been the common rule rather than the exception down to a very recent period. He does not insist upon an absolute fireproof construction of all buildings, as that would be impracticable, owing to the heavy costs; but he strongly advocates a better use of ordinary building materials, whereby the fire cannot so rapidly spread, thus giving time for extinguishment.

For instance, wherever the mill floor, suitably constructed of three inch planks, grooved and splined, covered with one inch top boarding, laid on timbers eight or ten feet on centers, has been made continuous—that is to say, without any break for belt holes, open elevators, or open stairways—it has never been burned through by fire upon the floor or by fire passing through the floor above, except in one instance, and that was a warehouse where a pile of jute bales took fire in a place where it could not be reached. The firemen then put water through the hole from open butts and drowned it out. Fires on such mill floors have been held, not only in the building, but in the room where they originated.

Again, iron posts have been crippled or sprung by heat a great many times at an early period in a fire. A wooden post of suitable size has never burned off until other parts of the building were already destroyed. They have in one instance resisted for hours fire which destroyed granite posts near them by reducing them to sand—the granite measuring 12x12 inches. In this instance oak posts were put in between the original posts of granite to bear an added weight of machinery. When the fire came, the oak sustained the whole load.

To repeat, the mill floor properly constructed and rightly guarded has sufficed to hold fires not only in the building but in the room in which they have originated, until the mill fire department or the public fire department could extinguish the fire. The wooden mill post of suitable size will last longer than the floor. The mill floor possesses this very great advantage over the ordinary joisted floor: fires may be readily swept away between the timbers either by sprinklers or by water from hose pipes; while in the joisted floor or floor laid over plank on edge 18 inches to 24 inches apart on centers, the fire will burn on one side of the joist or plank while the water is playing on the other side.

WHAT MILL CONSTRUCTION IS.

I. Mill construction consists in so disposing the timber and plank in heavy solid masses as to expose the smallest number of corners or ignitable projections to fire, to the end also that when fire occurs it may be most readily reached by water from sprinklers or hose.

II. It consists in separating every floor from every other floor by incombustible stops—by automatic hatchways, by increasing stairways either in brick or other incombustible partitions—to the end that a fire shall be retarded in passing from floor to floor to the utmost that is consistent with the use of wood or any material in construction that is not absolutely fireproof.

III. It consists in guarding the ceilings over all specially hazardous stock or processes with plastering laid on wire lath or upon dovetailed lath or by plaster board of a suitable kind, following the lines of the ceiling and of the timbers without any interspaces between the plastering and the wood; or else in protecting ceilings over hazardous places with tin or other suitable metal, but not with zinc.

IV. It consists not only in so constructing the mill, workshop, or warehouse that fire shall pass as slowly as possible from one part of the building to another, but also in providing all suitable safeguards against fire.

V. It consists in laying the top floor and the outer boarding of the roof over mortar, plaster board, or some other fire retardent between it and the plank, where the maximum of safety is to be attained.

WHAT MILL CONSTRUCTION IS NOT.

I. Mill construction does not consist in disposing a given quantity of materials so that the whole interior of a building becomes a series of wooden cells; being filled with concealed spaces, either directly connected each with the other or by cracks through which fire may freely pass where it cannot be reached by water. That is the common practice now named "combustible architecture."

II. It does not consist in an open timber construction of floors and roof resembling mill construction, but of light and insufficient size in timbers and thin planks, without fire stops or fire guards from floor to floor.

III. It does not consist in connecting floor with floor by combustible wooden stairways incased in wood.

IV. It does not consist in putting in very numerous divisions or partitions of light wood.

V. It does not consist in sheathing brick walls with wood, especially when the wood is set off from the wall by furring, even if there are stops behind the furring.

VI. It does not consist in permitting the use of varnish upon wood work over which a fire will pass with the speed of a race horse.

VII. It does not consist in leaving windows exposed to adjacent buildings unguarded by fire shutters.

VIII. It does not consist in permitting the storage of very combustible goods without protecting the ceilings with solid plastering, plaster board, or metal.

IX. It does not consist in leaving even the best constructed building in which dangerous occupations are followed without automatic sprinklers and without a complete and adequate equipment of pumps, pipes and hydrants.

X. It does not consist in using any more wood in finishing the building after the floors and roof are laid than is absolutely necessary, there being now many safe methods available at low cost for finishing walls and constructing partitions with slow burning or incombustible material.

The importance of these suggestions will be understood if we reflect for a moment upon the vast aggregate of property values annually destroyed by fire. Mr. Atkinson says:

The waste of property by fire is increasing year by year, in undue proportion to the increase of property at risk. Last year's ash heap in the United States has been computed in excess of $150,000,000. In order to ascertain the true measure of the fire tax we must add to this some $60,000,000 to $70,000,000 as the cost of sustaining insur-

ance companies, by which a part of the loss is distributed throughout the cummunity. To this again must be added the cost of sustaining fire departments, which came to $25,0000,000 some years ago, when I first investigated this subject. Thus the measure of this fire tax in the past year cannot have been less than $250,000,000. That is the penalty which we pay for ignorance, stupidity, carelessness and crime, for which the responsibility must be distributed mainly among owners of buildings, though shared in part by occupants, architects and builders.

THE GODWIN BURSARY REPORT, 1893.

MR. Banister F. Fletcher's Report as Holder of the Godwin Bursary* for 1893.

SECTION I. briefly recounts the preliminaries in regard to the question of site, and the composition and functions of the Commission appointed to carry out the general arrangements of the Exhibition, and goes on to tell how the boundless marshy waste chosen for the site, consisting of a succession of low sand dunes situate on the shore of an inland sea, was turned to the best and most effective use by the eminent "landscape architect," Mr. Olmstead, to whom was entrusted the laying-out of the grounds. In an interview with Mr. Olmstead the author gained much information about this part of the undertaking, which is duly retailed in the Report.

The question of procuring designs for the great buildings was a problem not a little difficult of solution, and many any various were the suggestions offered. At length a Council of Architects was decided upon, who sinking personal idiosyncrasies, agreed to work together for the benefit of the whole scheme. It was fortunate, remarks the author, that at the head of this Council was placed by mutual consent Mr. Richard Morris Hunt (*Royal Gold Medallist* 1893), who is looked up to as the Nestor of the architectural profession in the States, and who exercised a controlling influence over the other members of the Council; and more fortunate still that the architects of the buildings surrounding the great court were all pupils or direct followers of Mr. Hunt. Mr. Post and Mr. Van Brunt were pupils; Messrs. Howe, Peabody and Stearns had been pupils of Mr. Van Brunt; and Mr. McKim, by his training at the Ecole-des-Beaux-Arts, was of the same school of thought and design. Harmony was thus assured, with a result the more satisfactory to architects because it led to what was practically an exhibition of architecture. True, the expression of American life in the art was not to be found, but this can be forgiven in the face of the object-lesson afforded of the accepted canons of architectural art with respect to proportion, and its union with sculpture and painting, and those points which are apt to be overlooked in a new country. Nevertheless, the reproduction of these great classic designs all over the country for town-halls, museums and the like is strongly deprecated; it is sufficient that American architects, who are already advancing so rapidly along certain new lines of departure, should profit by the lessons such designs teach, without lavishly copying the forms. Otherwise a great "classic revival" will result, and stay for a prolonged period the true progress of art in America. Section I. concludes with a tabular statement showing the extent of area covered, and statistics as to the number of exhibitors, attendance, receipts, cost, etc., of all the principal exhibitions since that held in London in 1851.

SECTION II., The Great Buildings, commences with a list of the principal buildings, and gives the area occupied, cost, dimensions, and names of the architects who designed and superintended their construction. The largest of all, the Manufactures Building, measured 1,687 by 787 feet, and cost £200,000; the most expensive, costing £240,000 with the annex, being the Machinery Hall, the dimensions of which were 846 by 492 feet. A few features common to all the buildings may usefully be noted.

The enclosing walls were built of a framework of wood, properly braced, and sheathed on front and back with boarding laid diagonally, to which was fixed the exterior facing of "staff"—a material the composition and mode of preparation of which are given in the Report. All the statuary and ornamentation, such as caps, pilasters, etc., were formed of this material, which can be sawn, planed and tongued like wood, and if painted, and the weather kept from penetrating behind the face, will last, it is said, as long as wood. Mr. Fletcher gives as well the recipe for making the paint used on the exterior of the buildings. This consisis of varying proportions of rice-flour, bicarbonate of soda, linseed oil, water, and table salt; and besides being considerably cheaper is much more satisfactory than ordinary oil-paint for brick, cement or plaster.

The foundations of the buildings were constructed entirely of plank. The load on the soil for spread foundations was 2,500 lbs. per square foot, and a maximum load of fifteen tons per pile where piling was used. As the soil was almost entirely sand, and the subsoil either clay or sand, the spread foundations were put right on top of the sand. The main floors of all the buildings, except the Machinery Hall and the Mines Building, were figured for 200 lbs. per square foot. The Machinery Hall was figured for 250 lbs., and the Mines Building for 150 lbs. The galleries were figured for 80 lbs. per square foot, except those used for restaurants, which were figured for 100 lbs. The roof trusses were figured for 40 lbs. per horizontal foot, or 25 lbs. vertical load and 30 lbs. wind pressure. Purlins and jack rafters were figured for 30 lbs. per horizontal foot. The unite and fibre strains were as follows:—

Tension: steel 20,000 lbs., iron 11,000 lbs. per square inch.
Compression: steel 15,000 lbs., iron 10,000 lbs., reduced by formula, per square inch.
25,000 lbs. fibre strain was allowed in steel pins, and 20,000 lbs. in iron pins.
Steel pins, bearing, 20,000 lbs., iron 15,000 lbs.
Steel rivets, 20,000 lbs. bearing, 10,000 lbs. shear.
Iron rivets, 15,000 lbs. bearing, 7,500 lbs. shear.
Wood, fibre strain, white pine, 1,200 lbs. maximum.
Bearing perpendicular to fibre, 300 lbs.; shear with grain 100 lbs.; maximum bearing at end of timber 800 lbs.; tension 800 lbs. to 1,000 lbs.

The wooden framework was a novel construction never before attempted on so large a scale; and it is interesting to note the methods employed to keep within the architectural lines of the design all the constructive necessities. The upright posts as a rule were six inches by six inches, braced with cross-bracing and nailed with round nails of great holding power, put up without any framing out of stock sizes of lumber. Stock sizes were used so that the framework might be sold as salvage at the close of the Exhibition. This box construction was then sheathed with rough boarding laid diagonally, and the "staff" nailed to the sheathing. Where extra strength was required the framing was double sheathed, on the inside as well as the outside, the sheathing being reversed for extra strength. In the case of height exceeding a certain length, horizontal ties were added, and from this platform the framing started afresh. The sheathing was well nailed to each stud-post, and at least one half of the boards were continuous over plate, and everywhere broke joint. Plates 30 feet long or under were made in pieces in one length, plates over that length being formed of two or three pieces breaking joint, at least 10 feet apart, spiked with ten spikes per running foot. Sheathing on all plates was on two sides diagonally in opposite directions nailed with ten nails per running foot. Rain water pipes were of corrugated iron.

From an architectural point of view the Agricultural

* The Godwin Bursary, consisting of a Silver Medal and £40, was founded for the promotion of the study of works of Modern Architecture Abroad, and is awarded to any member of the profession who shall submit the best selection of practical working drawings, or other evidence of special practical knowledge, and testimonials. The holder of the Bursary is required to spend not less than five weeks abroad, in Europe or America, to study, examine, and report on some of the best specimens of modern planning and modes of construction, drainage, water-supply, ventilation, and other sanitary arrangements to be found in the place he undertakes to visit. Within a given time he must furnish the Council with an illustrated memoir descriptive of the same.

† Mr. Fletcher left England for New York on the 17th of May, 1893, and visited Brooklyn, Philadelphia, Baltimore, Washington, Chicago, where he spent five weeks, Niagara, Montreal, Boston, and back to New York, returning to England in the middle of August.

Building was the finest, owing to the union of architecture with painting and sculpture. The latter was most unsparingly applied, and might be considered almost a dream in "staff," presenting a composition which, owing to the expense, it would be impossible to render in any lasting material.

From a constructional point of view, the steel centilever trusses of the great nave and aisles of the Mines Building by Mr. S. S. Beman were exceedingly interesting and novel. The central space to be roofed was 630 feet long and 230 feet wide, with an extreme height of 100 feet at the centre, and 47 feet at the sides. Steel cantilever roof trusses, supported on steel stancheons, were placed 64 feet 5½ inches apart longitudinally, with a span of 115 feet, and aisles on either side of 57 feet 6 inches span. The total area, therefore, of 630 feet by 230 feet was carried on sixteen supporting stanchions.

As a color scheme the Transportation Building was probably more important than any erected in recent years, from the simple fact that it was designed from the commencement for color treatment. Mr. Sullivan, one of the architects responsible for the building, is an enthusiastic botanist, and all his system of sculptured as well as color work is derived from a study of practical botany.

The method of designing the sculpture on the Fisheries Building is interesting. A full-size drawer was first made of old Romanesque capitals, and this was taken to the sculptor's studio, and there worked over with representations of animals real or mythological, such as frogs, reptiles, various kinds of fish, dolphins, etc., The outline of the old cap was retained, and the detail filled in with various things connected with the sea. A variety of caps was thus produced, which could be easily cast in "staff" and duplicated throughout the building.

SECTION III. The States Buildings.—The pages comprising this section are devoted to the more important buildings erected at the expense of the different States of the Union. In regard to methods of construction there was nothing very novel to report, and in general the buildings were treated without any regard to each other or to grouping, their design being determined by associations connected with the founding and historical development of each State, thus affording opportunity of introducing many interesting features. Many of the buildings ranked highly as designs, and all were interesting as illustrative of the manners and resources of the various States, and the enormous and varied wealth of the country in building materials.

SECTION IV. The Constructive Exhibits.—In this section a short account is given of the more noteworthy exhibits connected with methods of construction, and of materials such as building stone, bricks, tiles, etc. The fireproof partition walls formed of hollow tiles varying in thickness from two to six inches, now so general in the States, are a great improvement on the old 6-inch lath-and-plaster partitions ordinarily used in England. The skin of the tiles is half an inch in thickness, and is left rough on the face for receiving the plaster. The tiles are laid one over the other to break joint, and are further secured longitudinally by iron clips, wood bricks being set in the vertical and horizontal joints to affording nailing surface for the architraves, wainscoting, etc. The hollow tiles allow the introduction of flues for ventilating, heating, etc., and gas and gas-pipes, electric wires, etc. Outer walls are also constructed of these tiles.

Steel is used largely for constructive purposes, and some novel exhibits were shown in the way of steel roofing and steel ceilings and wainscoting. The roofing is prepared in sheets and painted with graphite paint. It costs 14*s* per hundred square feet, and 20*s* for laying. The thin plates of steel used for ceilings are designed to supercede ordinary plaster ceilings; they can be pressed out to any pattern, and it is claimed for them that they are fire-and-water proof, permanent, will not skrink, burn, warp, crack, or fall like plaster. They can be applied over old plaster ceilings. For rough wear in large halls or schools the steel wainscoting would be of service. The Ransome concrete inventions formed an important exhibit; they are applicable to various constructions, especially for floors and foundations, allowing of the distribution of a great weight over a large area without sacrifice of height. An explanation of the principles which guided the inventor is given in the Report.

SECTION V. The Sanitary Exhibits.—The various forms of drain traps and w.-c. apparatus exhibited are described in this section, and attention drawn to anything novel in their application. The ambitious scheme formulated for the Hygiene and Sanitation Bureau by Dr. Brewer, the Superintendent of this department, unfortunately fell through from want of support by the Exhibition authorities; hence the opportunity was lost of making the department, what it might and should have been, the most complete of its kind. Dr. Brewer's original proposals were for a most comprehensive scheme, the details of which are set out in a prospectus inserted in the Report.

SECTION VI. Heating and Ventilation.—Some interesting and useful notes are given in this section culled from a pamphlet on the Heating and Ventilation of Residences, by Mr. James R. Willett, being an address delivered by him to the Engineering Society of the Illinois University. The work has since been presented to the Library by Mr. Fletcher, who states that the information contained therein, based as it is upon the practical experience of a practising architect, will be found very useful. With regard to the methods of ventilation adopted in the States, the disc fans seem to be most favored, and it is surprising they should be so little known in England. Several kinds were exhibited, the chief advantages consisting in the quantity of air set in motion, the small power required to work the apparatus, the adjustibility of the blades, its easy removal to any part of the room, and its noiselessness.

SECTION VII. The Institute of Building Arts.—This is a permanent exhibition in the city of Chicago of every class of building materials, systematically arranged, and under the care of a responsible curator. The Institution is under the control of the Illinois chapter of the Institute of Architects, and bears the same relation to the constructive arts generally as the Parkes Museum does to sanitation and hygiene. Anything new in methods of construction or materials is here exhibited, with incalculable advantage to architect, client and builder, who may compare and select at will. Such an institution, suggests Mr. Fletcher, started under the auspices of the R. I. B. A., under the control say, of the Practice Committee, would be of the greatest service to the profession in England. Under proper management and under one roof all new methods could be judged by periodical visits, saving much time and trouble in single investigations. The income of the institution under notice is derived from a nominal annual charge for exhibit space, amounting to five dollars per superficial foot per annum. The institution is free to the public, and information given gratuitously; materials are tested free of charge, and lectures delivered on special subjects connected with the exhibition. That the institution is popular may be judged from the fact that it is visited on an average by over 1,500 persons monthly.

SECTION VIII., IX., X. Specifications and Contract Drawings of Buildings.—Through the courtesy of Mr. D. H. Burnham, the chief of Construction to the Exhibition, Mr. Fletcher was able to include in his Report a selection of the specifications prepared for the erection or completion of the various portions of different buildings in the grounds.—*Journal of the Royal Institute of British Architects.*

A DEMAND FOR A TELEPHONE.

"DOWN in Texas," says an electrical salesman, in *Electrical Review*, "I think there is a good demand for a telephone that can talk over 100 miles of barbed wire fence. On the ranches cowboys are kept 'riding the fence,' that is, riding up and down a section of barbed wire fence, inspecting it and keeping it in order. Many ranches are twenty, thirty and fifty miles square, and if a serious break in a fence is found, the cowboy must ride back to the ranch to report. Now if a good telephone could be provided for each section it would save all that riding. The staples holding the two top wires to the posts could be removed, insulators put in their places and a man would have a complete metallic telephone circuit around his ranch."

ILLUSTRATIONS.

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.

COMPETITIVE design for a State Capitol building to be erected in the city of Olympia, State of Washington, Copeland & Pierce and W. O. Banks, associated architects, San Francisco.

RAG Pickers Alley, Chinatown, San Francisco, by C. D. Mitchell.

OAKLAND High School, second mention, J. C. Newsom, Architect. Rejected on account of cost.

CORRESPONDENCE

To the Editor of the California Architect and Building News.

DEAR SIR:—In a recent issue of your paper we notice in Mr. Ernest L. Ransome's letter of June 19, 1894, the following paragraph:

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

Replying to this we would say that within a month we have made very thorough tests of our face or pressed and fire brick.

The most thorough test made was of two buff pressed brick. Each of these were heated to a red heat five separate times, and after each heat they were put into cold water and remained there until perfectly cool.

With the exception of a slight discoloration, these brick are in just as good condition as they were before they were subjected to this test. We have also made similar tests of our fire brick and they have not gone to pieces as Mr. Ramsome predicted they would. The brick that we subjected to these tests are now in our office on exhibition and can be seen by anybody interested in such matters.

Yours respectfully,

GLADDING, MCBEAN & CO.

NOTICE—PLANS AND SPECIFICATIONS FOR A SCHOOL-HOUSE.

By order of the Board of Trustees of Santa Cruz School District, Santa Cruz County, State of California, notice is hereby given that plans and specifications in detail will be received up to 12 o'clock noon of Saturday, August 25, 1894, at the City Clerk's office in the City Hall of the City of Santa Cruz, for a new schoolhouse to be erected and built upon the school lot situated on the south west corner of Walnut and California streets in said city of Santa Cruz, County and State aforesaid. Said schoolhouse to be a two-story frame building, with basement; the main building to contain eight school rooms of about the usual size, together with laboratory and necessary cloak and teachers' rooms, and proper provisions for ventilation and heating.

The cost of said building shall not exceed twenty thousand dollars, the amount authorized by law and said Board for the construction thereof. Said Board will pay for the plans accepted for said building the sum of five dollars.

O. J. LINCOLN,
Clerk of Board of Trustees of Santa Cruz School District.

SAN JOSE, CAL., AUG. 24, 1894.

The California Architect and Building News,

GENTLEMEN:—A few days ago I sent you a copy of the *Santa Cruz Sentinel* with an advertisement for Plans and Specifications, at the same time I wrote to O. J. Lincoln, Clerk of Board of School Trustees, and asked him if the amount, five dollars for Plans and Specifications, was not a mistake.

Enclosed you will find his reply which will no doubt be of interest to architects and especially to members of the American Institute of Architects who are fighting for the advancement of our profession and fair competitions. If the law says that Plans and Specifications shall be advertised for, it certainly means that the city shall be benefited by competition, and not to give the work to the man who has the best pull or influence with the board; although the architect selected may be a very competent man, there may be better and if so this is the reason the law call for a competition to give the city the benefit of the best. Again, if they had wished to patronize Local Architects, it could have been so stated in the advertisement, and still be legal.

But when any person or public body advertises for architects services and puts a value of five dollars for the same, it certainly lowers the dignity of the profession in the eyes of the public, as many people would understand the advertisement literally.

Hoping that you can give this matter space in you paper as I should like to hear from yourselves and other architects who may be interested. Yours respectfully,

J. FAIRLEY WIELAND.

SANTA CRUZ, CAL., AUG. 24, 1894.

J. F. Wieland, Esq., San Jose, Cal.

DEAR SIR:—Yours received, the advertisement is all right, it was not intended for competition, the Trustees had decided what they wanted and put it into the hands of local architects to be worked up, but a useless law makes it necessary to squander a little coin in advertising.

Very truly yours,

O. J. LINCOLN.

NOTICE TO ARCHITECTS.

Design for a building suitable for a boathouse, clubhouse and gymnasium, to cost no more than $2,500, will be received at the office of J. E. Budd, 226 new Yo Semite block, Stockton, Cal., up to September 15, 1894. For particulars see Gus. G. Grant, Secretary, at the obovr office.

GUS. G. GRANT, Secretary. JOHN E. BUDD, President.

To the California Architect and Building News.

GENTLEMEN:—I cut the above advertisement out of the *Stockton Evening Mail*, it is such a "curiosity" I could not refrain from sending it to you, it is the most *modern* and *improved insult* to the professional architect which I have seen. Yet I cannot believe that the brother of "Jim Budd" would intentionally be the author of such an offense, to a profession every wit equal to his own, by compiling the above "demand" for designs for an Athletic Club House to cost

MDCCCXXXIV

The Oakland High School ...

Second Mention.

J. Cather Newsom Archt. Room 21 Academy of Sciences Bldg. San Francisco.

Hog Dickers Alley Chinatown San Francisco

COMPETITIVE · DESIGN · FOR · A · STATE · CAPITOL · BUILDING · TO · BE · ERECTED · IN · THE · CITY · OF · OLYMPIA ·

STATE · OF · WASHINGTON ·

COPELAND and PEIRCE · ASSOCIATED ARCHITECTS ·
W·D·BANKS · · SAN FRANCISCO · CAL ·

PERSPECTIVE · VIEW ·

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