

of architecture. The great dome is a striking feature of the building, it will be 101 feet 6 inches in diameter and 90 feet high from the ground to the "lantern." The cost will not exceed \$70,000 and will doubtless make an attractive feature of the Fair.

SECOND AWARDS.

THE proposed Mechanical Arts Building for the California Midwinter International Exposition, submitted by Edmund Kollofrath, architect, 58 Flood Bldg., and awarded second prize.

The building is of the oriental style and measures 275x175 feet with a boiler house annex, 25x60 and covers about 50,000 square feet, being the third largest in size.

There are three entrances, the main entrance in centre of building and two side entrances.

The entire building, except boiler house annex is to be constructed of wood the latter to be brick.

The main entrance is the principal feature and is covered by a large dome. The skylight on the roof is forty feet wide and running the entire length of the building. All the outside finish to be wood and staff painted in proper colors.

The gallery inside is about thirty-seven feet wide extending all around the four sides of building with two grand staircases at both side entrances and large offices, lavatories, etc. The estimate cost of building is about \$75,000.

Mr. Kollofrath is also preparing elaborate plans for all the buildings of the "Vienna Prater" which will be one of the main features of the fair, it will cover about 72,000 square feet.

THE second premium design for the Agriculture and Horticultural Building of the Midwinter Exposition, illustrated in our present number, is the conception of Rowell & Benson, architects.

The drawing was submitted under the *nom de plume* of "Alhambra", and presents a building 300 feet long and 125 feet wide, designed after the Moorish type of architecture, the intricacies of ornamentation admissible in this style being concentrated around the entrances and especially the main entrance which it was intended to embellish in the ornate treatment of color and ornament distinctive of this style.

The roof is entirely of glass supported by a graceful system of iron trusses.

An open roof garden and promenade over-looking the grounds, extends along the front and is accessible from level of second story. The building complete would cost \$69,600.

MR. Pelton has selected the Greek style as appropriate for the Fine Arts Building. While the various Oriental styles are eminently appropriate for those buildings which are to be built simply for this occasion, he questions the introduction into this building, of the gay treatment required in Oriental detail.

The permanency of this building, in fact, has been of the first consideration, in character, treatment of detail and construction. He proposes that the walls of the building shall be of brick, seventeen inches thick, with foundations of twenty-one inches thickness. The exterior and the interior surfaces of the walls, to be covered with the Fitzgerald wall finish or other material equally as good. The roof gallery

construction and floors, to be of wood and to be protected with fire-proof material as per sample, wherever practicable. All mouldings, projections, decorative treatment, shall be done in Portland Cement, or other durable material. For the interior wood work he proposes to use native redwood and spruce. This building when completed would cost the sum of \$35,000.

A design for Trinity School, San Francisco, is by Wm. Curlett, architect.

AN INVALID'S ROOM.

EVERY large family would be the gainer by having a special room in case of sickness. Just how and where this should be situated depends altogether on circumstances. If it is a large family with plenty of means, it is recommended that the room should be in the top of the house and in the southeast corner, with large windows, a pleasant outlook and an abundance of sunlight and air. Every necessary appliance should be at hand. Water and drainage are among the most important. One country family, where modern sanitary ideas are very well carried out, has a room built at the top of the house with the effect of a large square tower. This room has a register-pipe, a water tank and a drainage pipe, which is connected with an independent cess-pool far out of reach of the yard or garden, and itself with drainage into porous subsoil. Any illness that seems at all obscure is a signal for removing the patient to the tower chamber, which is voted the most delightful room in the house. A force-pump supplies an abundance of water. There are a bath-tub, closets and all the requirements of the invalid's apartment. This tower, being practically a fourth story of the house, has been arranged with a lift, operated by strong pulleys and heavy weights. There are four pulleys, one on each corner of the box, which is in dumb-waiter fashion. If the care-taker is a heavy person, there are extra weights to attend, and there is also a cord and a tackle-pulley from the middle of the box to a strong cross-beam in the roof and a corresponding one below. By this means the speed and lifting capacity of the appliance are easily controlled. The cost of the thing is a mere trifle compared with its convenience; and as in one corner of the box there is a rack for a tray, it is easy to do all the necessary running up and down-stairs.

A well-adjusted bell from the sick-room to the sitting-room below has a cord with-in reach of the sick person's hand. This room is available not only for the actual sick, but for the weary one who wants to get away from noise, and who goes up, fastens her jaunting car and locks her door with a sense of comparative security from interruption. It is not only the invalid's room, but in days of health the restful annex for several members of a large and busy household.—N. Y. Ledger.

The ancient Hammond house, at Marblehead, Mass., is being torn down and some of its spruce timbers, which have been protected from rain and wind for over two hundred years, are being largely sought after by violin makers to use in the manufacture of their instruments.—*Architecture and Building*.

NOTICE OF MEETINGS.

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

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

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.

GEO. P. LOW, Pres. C. O. POOLE, Vice-Pres.
 MAX CASPARI, Sec. H. T. BESTOR, Treas.

NEW CITY HALL TOWER.

THE following is the report made by the San Francisco Chapter A. I. A. on the proposed Tower for the New City Hall, designed by Augustus Laver and submitted by him some years ago to the then City Hall Commissioners. In view of the fact that the subject matter is again occupying the attention of the Commissioners and the public, we believe the report will be of interest:

FIRST—They consider that the design submitted by Mr. Laver for the New City Hall Tower is in itself well adapted in its external architectural features, to complete and adorn the building to which it is to be added. The height—which has been more or less called in question, is considerable—but is not, in the opinion of the Committee, in excess of the proportions permissible in so vast a structure as that to which it is to be applied. On the contrary, in view of the enormous frontage and other dimensions of the New City Hall, it would be difficult to fix an assignable limit, beyond which it would not be possible to harmonize and proportion a structure of this description under given conditions.

They find also, that the mansard roof, so called, in both the modified as well as the complete example exhibited in the drawings submitted to the Committee, while serving to fill up and prepare the structure for the reception of the tower, is by no means indispensable—at the same time it establishes the fact—that should additional space be at any time required, the same may be obtained by its addition, with advantage, whenever deemed desirable.

They find, however, upon examination of the internal structure of the proposed tower, that on account of the position and nature of the bearings available, it will be necessary to construct it in iron instead of the solid material composing the walls of the complete portions of the building. They also find that in order to perfectly adapt the designs submitted by Mr. Laver, to the existing structure some additions to or modifications of the plans submitted to the Committee, seem necessary; but these considering the comparatively and necessarily immature condition of the drawings, are probably intended by Mr. Laver in the final execution of the work when determined on. In the mean time your Committee with this proviso, beg to suggest that in their opinion, to secure the entire stability of the superstructure, the iron beams forming the foundations of the whole should be extended under the projections at the angles of the tower, no provisions for that purpose appearing on the drawings as submitted to the Committee. They also think that a broad sill plate composed of wrought iron beams and top and bottom plates should be placed on the circular brick wall surrounding the great circular hall under the tower. This

would serve to equalize and distribute all unequal strains and bearings and rectify any possible defects in the foundations of this part of the building. The Committee deem this provision absolutely necessary, for though the construction of the tower (which is of wrought iron, steel and sheet metal) is of the slightest practical description, the weight of the whole tower will be in the neighborhood of three thousand tons. But dead weight alone is not the only consideration since the variable strains caused by windage will be very considerable under even ordinary circumstances, and there are times when, at such a height, the velocity of the wind will mean several hundred tons added to the ordinary weights at different points of the circle.

SECOND—For the above reasons, while the committee have full confidence in the ability of Mr. Laver to carry to completion the excellent design proposed by him in as satisfactory and substantial a manner as is possible under the circumstances and with the materials at his command, they feel compelled to say in view of the various objections which may be urged against the erection of any structure of the sort proposed, that they believe some such type as that adopted by the First Commissioners, would be found on the whole more suitable for the purpose than the new and loftier design, though in the nature of thing, less imposing in appearance and less in proportion to the size and importance of the building. The difficulty and expense of keeping such a structure in repair and proof against the destructive effects of climate and season, is a powerful argument, though one of an economical rather than artistic nature, in favor of reducing as much as possible the area and especially the height of the exposed surfaces. And here your Committee would suggest that instead of employing materials such as galvanized iron or steel in the external casing of the tower, which would need the preservation applications of some sort of paint, and would lead, as before stated, to endless repairs, they are of opinion that the use of copper though of greater prime cost, would in the end prove of much more economical and of vastly greater architectural value, as it is a material beautiful and artistic in its application and effect and eminently durable and in every way admirably adapted to the work proposed.

THIRD—This brings your Committee to their last and final position—while they fully concede the many points of artistic merit as a whole, of both designs exhibited in Architect Laver's projects for the proposed tower of the New City Hall, and while they are quite ready to admit the possibility of their construction with safety and substantiability compatible with materials of such a perishable nature as those rendered necessary by the adoption of the peculiar method of construction hitherto submitted, they are not so ready to admit the advisability of such a course; and in view of the conditions existing in the present building—consisting as they do—of a great circular chamber some eighty feet in diameter, surrounded by a massive brick wall, and including a circular peristyle of columns some sixty feet in diameter from centers, they believe that the possibility exists of erecting a perfect unique structure in the form of a circular tower, or dome tower which would offer features superior to any square structure yet proposed—and that before either of the designs now before the Commissioners are finally decided upon, Mr. Laver should be requested to furnish, as an alternative, such a design—homogeneous in material with the existing building and equal to it in durability, and as free from necessity for endless protection and renovation.

Such a structure, we believe, would not only redound to

the credit of all concerned in its production, but would ultimately be found to be of great economical advantage to the city generally.

It would be of a height proportioned to its possible diameter and would compensate in dignity of material for comparative lack in magnitude, though a tower or dome of more than ninety feet in outside diameter, is one out of which it would seem that a very grand and imposing structure could surely be evolved. All of which should be left with confidence to the well known genius and artistic ability of the Architect of the building.

NOTICE TO ARCHITECTS.

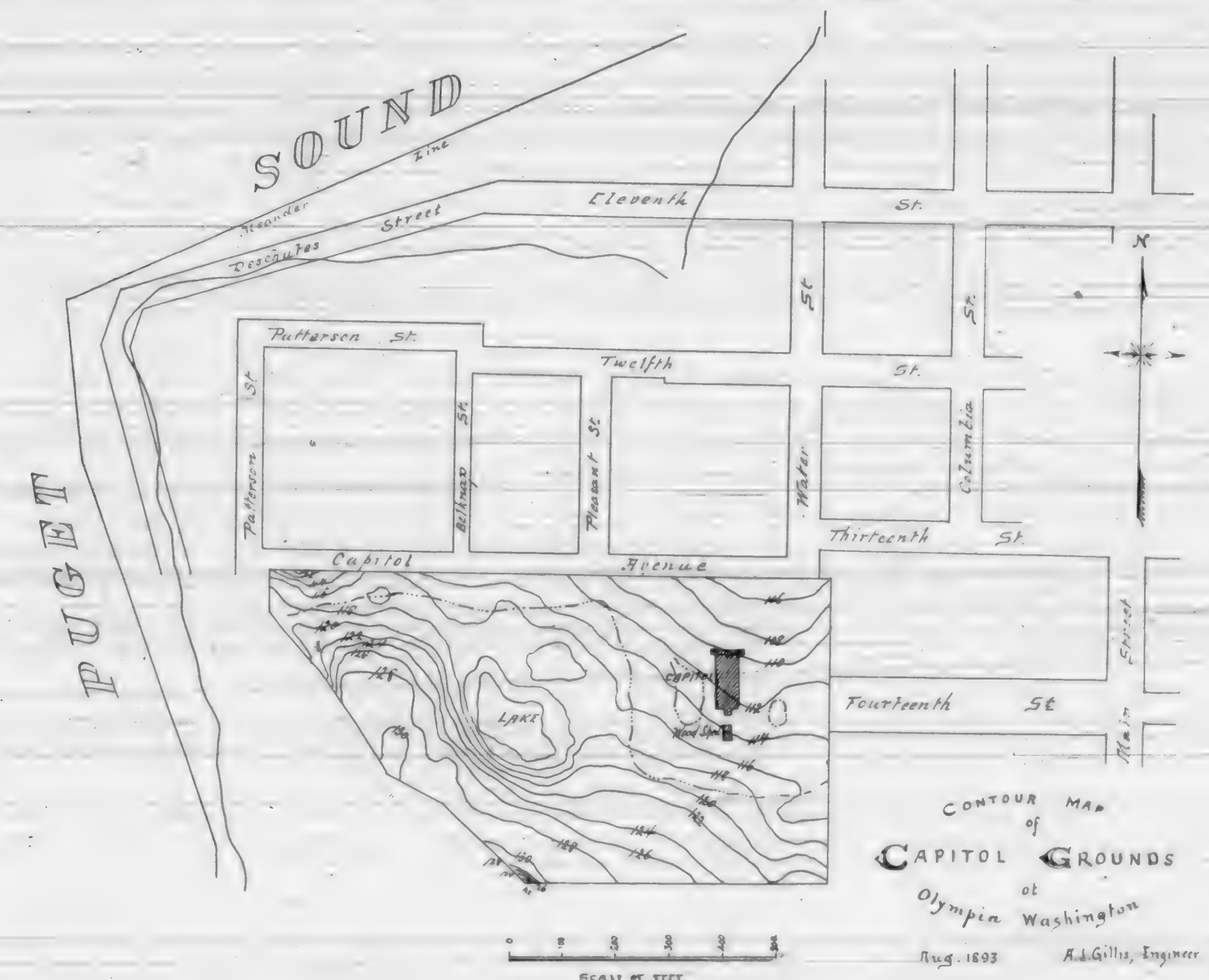
OLYMPIA, WASH., AUGUST 24, 1893.

PLANS and designs for a State Capitol building will be received until 2 P. M. on the fourteenth day of Decem-

the expenditure permitted by the act authorizing the building of the State Capitol is limited to \$1,000,000, architects must confine their designs to this amount, avoiding extreme or superfluous ornaments. The Commissioners prefer appropriate proportions and solidity of design, but provision must be made for the several departments and the various state officers specified in the schedule herewith.

Ample provision must be made for heating by steam apparatus, ventilating by approved methods, and lighting by gas and electricity, the building to consist of a basement and three stories.

The schedule appended sets forth the various state officers, and departments for the accommodation of the executive, legislative and judicial bodies, and provisions must be made for all these officers in the most appropriate parts of the building, and for all other uses of a modern capitol building. The arrangement of the various rooms and departments is



EXPLANATORY:

The datum to which these contours are referred, is the city base, or practically, high tide of Puget Sound. From the West boundary the ground falls abruptly to the Sound, from the North it slopes gently to 12th street and then drops suddenly. Fourteenth street from Main to the grounds will require to be graded and this with the earth from the foundation will probably bring the whole ground to an elevation of about 115. South of the long dotted line and inside the dotted rings, is a fine growth of young firs 60 to 100 feet high. The lake can be made an ornament to the grounds or can be drained and filled. The site is a commanding one, but the views to the North and the East are especially fine; and a "front" in each of these directions would probably be about the right thing to build.

ber, 1893, at the office of the state Capitol Commission, in the city of Olympia, State of Washington.

Following is the invitation extended to architects to submit competitive designs:

A map of the grounds, which appears in this issue, shows the location of the present capitol which is to be removed. It also shows the contours of the ground. The new building is to be placed in the most slightly portion, and the Commission desires the suggestions and judgment of the competing architects on this subject.

The principal material to be of stone, for walls, with brick for backing and interior walls, where not objectionable, and the building to be as nearly fire-proof as practicable. As

left to the judgment of the competing architects.

The following rules are to be observed by architects proposing to submit designs for competition:

First—The drawings are to be made to the scale of sixteen feet to the inch, and to consist of four elevations, one section, and one perspective drawing.

Second—No colors are to be used on the drawings except to designate material on plans and sections.

Third—The building must be as nearly fire-proof as practicable.

The following premiums are offered:

First—The employment of the architect submitting the plan and design accepted by the Commission, as the architect

of the building.

Second—One thousand five hundred (\$1,500).

Third—One thousand dollars (\$1,000).

Fourth—Five hundred dollars (\$500).

Provided that no architect shall be paid more than one premium, and all of which designs are to be considered the property of the state.

A brief typewritten description may accompany drawings, calling attention to points of special importance.

No plans or papers submitted are to have upon them any mark by which they can be known, but there shall be sent enclosed with them a sealed letter addressed in typewriting to the Governor, who is chairman of the Board, giving the author's name and address. This letter will not be opened until the award shall have been made. The drawings and papers will be known by numbers corresponding with numbers given to the letters.

Following is a list of the various state officers: Governor, Lieutenant Governor, Secretary of State, Treasurer, Auditor, Attorney General, Superintendent of Public Instruction, Commissioner of Public Lands, State Land Commissioners (four), State Printer, State Librarian and Adjutant General.

A senate chamber (maximum number, 50), house of representatives (maximum number, 100), together with necessary committee rooms, will constitute the legislative department.

The judicial department consists of a Supreme Court of five members and Clerk of the Supreme Court.

In addition to the offices provided for the above named officers, there should be rooms of convenient sizes for clerks, and also vaults, wash and cloak rooms and closets.

The arrangement of rooms and location in the building, size, etc., are left to the judgment and intelligence of the competing architects.

The commission reserves the right to reject any and all plans and designs, and to readvertise for the submission of further plans and designs.

J. W. McGRAW, Chairman,
L. R. GRIMES,
J. N. GLOVER,
JOHN McREAVY,
EDMUND RICE,
Commissioners.



THE LUMBERMAN'S ACTUARY by John W. Barry. The very book that every contractor needs—here we find tables in a compact form just suitable for the pocket, showing at a glance the amount of any number of feet between two feet and 25,000 feet at any price between \$6 and \$50 per thousand feet, thus at \$6, \$6.50, \$6.75, \$7 and so on to \$50, also showing the feet in any number of pieces between one and 1,000 pieces for any thickness as inch and one-quarter, etc., up to 24 inches.

Price \$2.50 per copy net, address, John W. Barry, Fairbury, Nebraska.

HOW TO FRAME A HOUSE or Baloon and Roof Framing by Owen B. Maginnis. Published by the author, 356 West 124th street, New York, price one dollar. Intended as an indispensable book for carpenters, builders, foremen, journeymen, etc. Illustrated and explained by over thirty engravings of Houses and Roofs.

LIPPINCOTT'S MAGAZINE for September contains the complete novel called "A Bachelor's Bridal" by Mrs. H. Lovett Cameron. It tells of an unconventional and ill-starred marriage and its tragic consequences. Mr. and Mrs. Dickens will be read with interest by all lovers of Boz.

HICKS' BUILDERS' GUIDE.—Comprising an easy system of estimating material and labor for carpenters, contractors and builders, by I. P. Hicks, illustrated by numerous engravings of original drawings. David Williams publishers, 96-102 Read street, New York.

This handy little volume cannot but prove useful to the class intended, and leaves no excuse for the contractor to leave anything out of his estimate, if he consults its pages.

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.

PERFORMANCE OF CONTRACTS.—In an action by a contractor for constructing a building, the owner cannot set-off damages for his failure to complete the building within the time prescribed by the contract, where each failure was due solely to his own negligence. *White v. Fresno Nat. Bank.* Supreme Court of Cal. 32 Pac. Rep. 979. 44.

LIABILITY OF EMPLOYER.—If an employee is injured by reason of the negligence of the foreman or superintendent in charge of the work, he can only recover against the employer when the foreman or superintendent was negligent in performing the duties which the law imposes on the master personally, and cannot recover if the superintendent was merely negligent in the performance of such work as properly pertains to a servant. *Stockmeyer v. Reed.* Circuit Court D. Ind. 55 Fed. Rep. 259. 69.

FORECLOSURE OF MECHANICS' LIENS.—The fact that a state statute gives an action at law to enforce a mechanics' lien will not deprive the Federal courts of jurisdiction to enforce such liens by bill in equity, for the question whether legal or equitable remedies shall be adopted by the Federal courts is determined not by the state practice or legislation, but by the nature of the case and the foreclosure of a mechanics' lien is essentially an equitable proceeding. *Sheffield v. Furnace Co. v. Whiterow,* 13 Supreme Court Rep. 937. 78.

RIGHT OF ADJOINING OWNERS TO LATERAL SUPPORT.—The statute which provides that each coterminus owner is entitled to the lateral and adjacent support which his land receives from the adjoining land, subject to the right of the adjoining owner to make excavations for construction on using ordinary care to sustain the land of the other, and giving previous notice of his intention, is merely declaratory of the common law; and while a coterminus owner has the right to the support of his soil in its natural state by that of his neighbor, such right does not extend to the support of any additional weight or structure he may place thereon. *Sullivan v. Zeiner,* Supreme Court of Cal. 33 Pac. Rep. 209. 97.

BREACH OF BUILDING CONTRACT.—Where the contract provided that the contractor should erect a building before a certain date for a specified price, to be paid in four installments, each payment to be made when certain work had been performed, and that if the contractor failed to furnish at any time sufficient material or workman, the owner after three days' notice might proceed with the work and deduct the expense from the contract price. The fact that the contractor was dilatory in the work from the beginning did not entitle the owner to refuse to pay the second installment when the same was fully earned, and afterwards terminate

the contract as for a breach thereof by the contractor. Where the owner had acquiesced in such delay up to the time when such installment became due.

Smith v. Corn. Common Pleas of N. Y. city and county, 23 N. Y. Supp. 326. 136.

LIABILITY OF CARRIERS OF PASSENGERS IN ELEVATORS.—A landlord who runs an elevator for the use of his tenants and their visitors thereby becomes a common carrier, and is charged with the highest degree of care which human foresight can suggest, both as to the machinery and conduct of his servants; and an instruction that he owes to persons thus put completely under his control, the highest degree of care consistent with the possibility of injury, while unfortunate in the choice of words, does not misstate the law, and, being explained by the context, is no ground for reversal. A person who undertakes to run an elevator to carry passengers who intrust themselves entirely to his care and control, is charged with the duty of providing experienced and skillful servants for that work; and that standard of due care for an elevator man is that care which may reasonably be expected of an elevator man of skill and experience.

Marker v. Mitchell. Circuit Court S. D. Ohio 56 Fed. Rep. 637. 158.

VALIDITY OF LIEN ON PORTION OF BUILDING.—A building contract provided for adding to an old building on part of a lot, and the erection of a new building on the other part. Mechanics' liens were filed for the construction of the addition to the building situated on that portion of the lot covered by the old building. The complaint in an action to foreclose such liens alleged that the contractor agreed to provide all the materials, and change into a two-story building the one-story building then on the premises

described. Such allegations were not denied. The findings supported the allegations, and the judgment followed the findings. The judgment was not up to the objection that it was invalid because the liens were filed on a portion of the building only. The fact that the notice of liens described the building as situated on a certain number of feet of a certain lot, while the complaint describes it as situated on the entire lot, causes no variance and is immaterial. *Brunner v. Marks,* Supreme Court of Cal. 33 Pac. Rep. 265. 177.

WHO MAY CLAIM MECHANICS' LIENS.—Where the statute provides that mechanics' material men, contractors, sub-contractors, etc., shall have a lien upon the property upon which they have bestowed labor or furnished materials for the value thereof, and that in case of a contract for the work between the owner and his contractor, the lien shall extend to the whole contract price. All such contracts must be in writing when the amount to be paid thereunder exceeds one dollar, and must be recorded. Otherwise they are wholly void and no recovery can be made thereon by either party thereto. In such case the labor done and materials furnished by all persons aforesaid except the contractor, shall be deemed to have been done and furnished at the personal instance of the owner, and they shall have a lien therefor. A contractor who fails to record his contract, where the agreed sum to be paid exceeds \$1,000, can have no lien. In such case the contractor cannot claim a lien under the first part of the section on the ground that, his contract being void, he may recover on an implied contract for the services and materials furnished; since, though under the common law, he may be entitled to recover on an implied contract, he cannot have a lien, as the lien is created by the statute solely, and the statute must be complied with. *Spinley v. Griffith,* Supreme Court of Cal. 32 Pac. Rep. 974. 232.

BUSINESS MOSAICS.

Wire Glass.—Nothing on the market so completely fills the bill, and supplies a long felt want as wire glass for skylights, vaults, etc. What is wire glass some may inquire? It is a sheet of glass having embedded in its centre a sheet of wire netting of any required size of mesh. Manufactured by the American Wire Glass Manuf. Co., Tacony, Philadelphia and for sale in this city by Jas. A. Maguire, 130 Sansome street.

"What kind of a roof is that?" she asked looking up at a mansard roof.

"Oh! that is a roof that takes 'man's hard' earnings to build," he replied.

F. H. Rosenbaum & Co.—We take pleasure in calling attention to the splendid collection of Mirrors of their own manufacture, both quicksilver and patent back. To those in want of plate and window glass we advise a call should be made at 567 Market street, opp. Sansome.

"I love to see the dear little lambs capering about in the spring."

"So do I; though they taste better when the capers are on the lamb."—*Truth.*

George Goodman.—If you have a sidewalk or garden walk, made by the above named gentlemen, you can say of it what the late Bishop Brooks said of the baby, "that is a sidewalk," 307 Montgomery street is the headquarters of Artificial Stone.

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

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

Western Iron Works, 123 and 125 Beale street are still on hand to supply architects, contractors and others with wrought iron and steel building work of all kinds and dimension desired, also sole manufacturers of Champion Wheelbarrows. See advertisement upon first page.

Snooper.—"Don't you think we ought to have free baths?"

SKIDMORE.—Free baths are not sufficient, sir. What is needed is compulsory baths.—*Brooklyn Life.*

The Bostwick Fire-Proof Steel Lath.—We have had occasion several times before, to call the attention of the Architects and Contractors, in these columns, especially in our own growing city, San Francisco, of the very many excellent qualities of the Bostwick Fire-Proof Steel Lath.

This Lath is the recognized, standard metal lath on the Pacific Coast; and more yards have been sold in San Francisco and Los Angeles, in the past two years than any other metal lath on the market. It is Stiff, Ridged, Smoke, Fire, Rat and Bed Bug Proof, and is the most economical in plaster, making a perfect double tie or clinch around the loops on back of lath. Reference can be made to many of our large buildings in this city, and many of the large office and apartment buildings in Chicago, St. Louis, Boston and New York. This lath is adapted to the use of any kind of mortar or patent hard plaster, and where other metal laths, require two tons to the one hundred yards, the "Bostwick" will do the same work with only half, there being no waste at all, showing its superiority over wire, etc.

Architects, Contractors and any one who contemplates building, will consult their interests by calling on Messrs. Smith & Young at 727 Market street, who are the State agents for this lath, and they will furnish any information needed; or to the Bostwick Steel Lath Co., Niles, Ohio.

CITY BUILDING NEWS.

Boyce near Point Lobos Ave. To build; owner, Rost Bunhart; contractor, H. V. Acker; signed, Aug. 28; filed, Aug. 30; cost \$3,000.

Broderick near Ridley. Alterations; owner, John Caley; architect, Robert Ewing; contractors, Henry C. Robinson and Wm. J. Gillespie; signed, Aug. 10; filed, Aug. 16; cost \$2,710.

Broderick near California. To build; owner, Mrs. C. Harker; architect, S. A. Batchler; contractor, T. R. Bassett; signed, Aug. 23; filed, Sept. 1; cost \$1,000.

Broadway near Steiner. To build; owner, Martin Van Buren Watson; architect, J. H. Mathison; contractor, A. Jackson; signed, Aug. 21; filed, Aug. 23; cost \$2,700.

Bryant Ave. near 25th street. To build; owner, John P. Farrell; contractor, John Keney; signed, Aug. 28; filed, Aug. 30; cost \$1,250.

Bryant between 2d and 3d Sts. Alterations; owner, Thomas Gilson; architects, Shea & Shea; contractor, James E. McConahey; signed, Aug. 23; filed, Sept. 1; cost \$1,375.

California near Franklin. To build; owner, Henrietta Zeller; architect, Clinton Day; contractor, C. Chisholm; signed, Aug. 10; filed, Aug. 12; cost \$15,662.

California near Drumm. To building; owner, Luning Company; architects, Coxhead & Coxhead; contractors, Pacific Patent Plaster Co.; signed, Sept. 6; filed, Sept. 8; cost \$5,800.

Day and Sanchez. To build; owners, Michael & Margaret Tiernan; architect, Chas. I. Havens; contractor, M. Loftus; signed, Aug. 25; filed, Aug. 25; cost \$2,220.

East and Filbert. Four two-story frame buildings covered with sheet iron lathing and cement; owners, Luning Co.; architect, A. C. Hussey; contractors, Gallagher & Milburn; signed, Aug. 25; filed, Aug. 25; cost \$10,800.

Eighth near Natoma. Carpenter work, etc.; owner, S. H. Williams; architects, Hochholzer & McHenry; contractor, I. P. Shepard; signed, Aug. 31; filed, Sept. 1; cost \$2,200.

Eighth near Natoma. Brick work; owner, S. H. Williams; architects, Hochholzer & McHenry; contractor, James O'Sullivan; signed, Aug. 31; filed, Sept. 1; cost \$2,467.50.

Eighth near Minna. Brick work and excavation; owner, Isabella T. Barto; architects, Hochholzer & McHenry; contractor, James O'Sullivan; signed, Aug. 31; filed, Sept. 1; cost \$2,432.50.

Eighth near Minna. Carpenter, plumbing, plastering, etc., except brick and iron; owner, Isabella T. Barto; architects, Hochholzer & McHenry; contractor, J. E. Mooney; signed, Sept. 11; filed, Sept. 11; cost \$3,270.

Eureka near 20th. To build; owners, Geo. and Jennie Colter; architect, W. H. Wharf; contractors, Sandy & Gillogley; signed, Aug. 12; filed, Aug. 16; cost \$1,500.

Fifth Ave. near D. Two-story frame; owner, Julia Herzog; architect, C. M. Rousseau; contractor, L. B. Schmid; signed, Aug. 23; filed, Aug. 24; cost \$2,320.

Florida and 21st. One-story frame; owner, F. Lassere; architect, Chas. M. Rousseau; contractor, David Emerson; signed, Sept. 6; filed, Sept. 7; cost \$1,800.

Front near Pine. Repairs; owner, Estate of Ralph W. Kerkham; architect, Chas. W. Geddes; contractor, Geo. R. Lang; signed, Sept. 6; filed, Sept. 7; cost \$2,250.

Fulton near Octavia. Three-story and basement; owner, Bernhard Bernhard; architect, E. J. Vogel; contractor, F. V. Steinman; signed, Aug. 25; filed, Aug. 28; cost \$5,675.

Fulton near Octavia. Concrete steps, etc.; owner, Bernhard Bernhard; architect, Edward J. Vogel; contractor, T. E. Keough; signed, Aug. 25; filed, Aug. 26; cost \$1,210.

Fulton near Octavia. Plumbing; owner, Bernhard Bernhard; architect, E. J. Vogel; contractors, Wilson & Wilson; signed, Aug. 25; filed, Aug. 26; cost \$1,150.

Goettlinger near Wayland. One-story cottage; owner, Mrs. M. F. O'Connor; contractor, H. Lehouse; signed, Aug. 5; filed, Aug. 14; cost \$950.

Howard bet. 20th and 21st. Alterations; owner, Mme. T. Cielchus; architect, Emile Deplere; contractors, Schutt & Kreeker; signed, Aug. 21; filed, Aug. 22; cost \$1,375.

Hyde near Geary. Three-story frame; owner, I. Label; architects, Kenitzer & Barth; contractor, J. W. Hansbrough; signed, Aug. 31; filed, Sept. 1; cost \$5,541.

Jewett near 6th. A church; owners, The Swedish Evangelical Mission Church; architect, S. Babson; contractors, G. Patterson & S. Persson; signed, Aug. 10; filed, Aug. 16; cost \$9,135.

Jersey near Castro. Two-story tenement; owner, Jens R. Jorgensen; contractor, Casper Zwierlein; signed, Sept. 4; filed, Sept. 4; cost \$3,400.

Julian Ave. near Fifteenth. Brick work, etc.; owner, Simon Fitzpatrick; architect, J. Y. Ayers; contractors, Frank Schadt & J. C. F. Corbett; signed, Sept. 4; filed, Sept. 5; cost \$1,670.

Kearny bet. Pine and California. Side walks and vaults; owners, Hyman Bros.; architects, Wright & Sanders; contractors, Worrell & Miller; signed, June 28; filed, Aug. 15; cost \$1,320.

Lyon near Turk. Two-story frame; owner, P. J. Shea; architects, Shea & Shea; contractor, A. Stevens; signed, Aug. 21; filed, Aug. 23; cost \$2,968.

Mason near Eddy. Painting; owner, S. Silverberg; architects, Salfeld & Kohlberg; contractor, Jos. Stetzen; signed, Aug. 15; filed, Sept. 7; cost \$1,075.

Mason near Eddy. Wood work, iron lathing and plastering; owner, S. Silverberg; architects, Salfeld & Kohlberg; contractors, Pacific Patent Plaster Co.; signed, Aug. 18; filed, Sept. 7; cost \$3,000.

Octavia bet. Broadway and Vallejo. Alterations and additions; one-story cottage; owner, H. S. Stafford; contractor, Edward Mooney; signed, Aug. 28; filed, Aug. 28; cost \$2,250.

Page near Schroder. Two-story frame; owner, Maria C. Droger; architect, E. Burns; contractor, I. G. Adams; signed, Aug. 29; filed, Aug. 29; cost \$7,283.

Pixley near Fillmore. To build; owner, Lewis Rapp; architect, Wm. Schrof; contractor, Albert Norton; signed, Aug. 19; filed, Sept. 6; cost \$1,200.

Post and Leavenworth. Excavation; owners, S. F. Vercin Association; architects, Salfeld & Kohlberg; contractors, James O'Brien; signed, Aug. 24; filed, Sept. 7; cost \$940.

Post and Powell. Concrete foundations, etc.; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, Geo. Goodman; signed, Aug. 24; filed, Aug. 31; cost \$4,432.

Post near Powell. Grading, trenching, etc.; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, F. H. Norton & A. J. Meadows; signed, Aug. 16; filed, Aug. 28; cost \$3,000.

Post street No. 609. Sidewalk lights, brick, etc.; owner, Marten O'Day; architect, Chas. I. Havens; contractor, R. Ringrose; cost \$597.

Post and Montgomery. Granite stone work; owner, Union Trust Co.; architect, Clinton Day; contractors, Raymond Granite Co.; signed, Aug. 23; filed, Aug. 28; cost \$36,500.

Post and Montgomery. Pumping, fencing, etc.; owners, Union Trust Co.; architect, Clinton Day; contractor, John McCarthy; signed, Aug. 23; filed, Aug. 28; cost \$50.

Precita Ave. near Mission. To build; owner, P. J. Silk; architects, Martens & Coffey; contractor, M. Loftus; signed, Sept. 2; filed, Sept. 5; cost \$3,500.

Sacramento near Drum. Excavation, asphaltum work, etc.; owner, Henry Pierce; architect, Clinton Day; contractors, Gray Bros.; signed, Aug. 14; filed, Aug. 16; cost \$1,035.

San Carlos Ave. near 18th. Alterations; owner, Hannah Huntmann; architect, M. J. Welsh; contractor, James McConahey; signed, Aug. 12; filed, Aug. 12; cost \$2,075.

Seventeenth and Douglass. Two-story frame; owner, C. Seelling; architect, F. P. Robin; contractor, F. Schaant; signed, Aug. 24; filed, Aug. 24; cost \$3,929.

Sutter street No. 912. Alterations and additions; owner, Theo. P. Schaller; architect, Fred. P. Rabin; signed, Sept. 8; filed, Sept. 8; cost \$1,725.

Thirtieth near Sanchez. Carpenter work for two-story frame; owners, W. F. Gelmann and wife; architect, N. A. Comstock; contractors, Gallagher & Milburn; signed, June 7; filed, Aug. 16; cost \$1,725.

Twenty-first near Dolores. Two-story frame; owner, A. McNab; contractor, C. T. Emmons; signed, Aug. 24; filed, Aug. 26; cost \$2,800.

Union near Taylor. Carpenter and mill work, electric and marble work, etc.; owner, Anna A. Martens; architects, Salfeld & Kohlberg; contractor, G. Forber; signed, Sept. 7; filed, Sept. 8; cost \$5,000.

Union near Taylor. Brick work, mantels, excavation; owner, Anna A. Martens; architects, Salfeld & Kohlberg; contractor, H. H. Larsen; signed, Sept. 7; filed, Sept. 8; cost \$490 and \$14 per M for foundation wall.

Union near Taylor. Plumbing and gas fixtures; owner, Anna A. Martens; architects, Salfeld & Kohlberg; contractor, H. Williamson; signed, Sept. 7; filed, Sept. 8; cost \$1,094.

ALAMEDA COUNTY.

Clinton Ave near Walnut. Brickwork, carpenter work, etc.; owner, Grace M. Davis; architects, C. H. Koster & Son; signed, Aug. 24; filed, Aug. 25; cost \$2,332.

Eighteenth and 10th Ave. Oakland. Carpenter work painting, etc.; owner, Jas. Preshe; architect, I. C. & E. A. Mathews; contractors, Leiter & Prugh; signed, Aug. 17; filed, Aug. 18; cost \$3,887.

Essex street near Ashbury station, Berkeley. Cottage; owner, W. C. Bissell; architect, J. Conant; contractor, W. Bissell; cost \$1,700.

East Oakland, lot 16. To build; owner, Peter Rueck; architect, N. A. Ment; contractors, W. H. Stevens & E. Woods; signed, Sept. 4; filed, Sept. 7; cost \$1,574.

Fruitvale Ave. bet. Hopkins street and Chicago Ave., Brooklyn. To build; owner, Geo. J. Haus; architect, Hugo W. Stouch; contractor, H. A. Klyce; signed, Aug. 19; filed, Aug. 28; cost \$1,985.

Jersey near Castro. Two-story building; owner, J. R. Jorgensen; contractor, C. Zwierlein; signed, Sept. 4; filed, Sept. 4; cost \$3,400.

Myrtle near 10th, Oakland. To build; owner, Claus H. Kuchs; architect, Chas. Mau; contractor, C. C. Durkee; signed, Aug. 17; filed, Aug. 21; cost \$3,914.

Oakland, block 283, lots 19, 20 and 21. To build; owner, James E. Johnson; architects, Cunningham Bros.; contractor, C. W. Bolles; signed, Aug. 26; filed, Aug. 28; cost \$3,900.

Shell Mound Park tract, Oakland. Pile-driving, carpenter work, etc., to shoot-in hall; owner, Capt. L. Liebe; architect, H. Geilfuss; signed, Aug. 26; filed, Aug. 28; cost \$1,420.

Strip of land by country road, Irvington to Centerville. Carpenter work, etc.; owner, D. E. Groverne; architect, A. L. Tundero; contractor, M. H. Lewis; signed, Aug. 15; filed, Aug. 23; cost \$1,880.

Twelfth and Washington, Oakland. Lathing and plastering; owner, Henry Sol and Fred Kahn; architect, W. J. Mathews; contractors, Geo. P. & J. T. Smith; signed, Sept. 2; filed, Sept. 4; cost \$2,000.

Washington, San Arnigos Vineyard. Frame winery; owner, E. P. Werner and E. A. Gear; architects, Percy & Hamilton; contractor, Chas. Riedel; signed, Aug. 17; filed, Aug. 17; cost \$1,450.

The California Architect and Building News.

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OFFICE, 408 CALIFORNIA STREET,

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

VOLUME XIV.

OCTOBER 20th, 1893.

NUMBER 10.

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

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

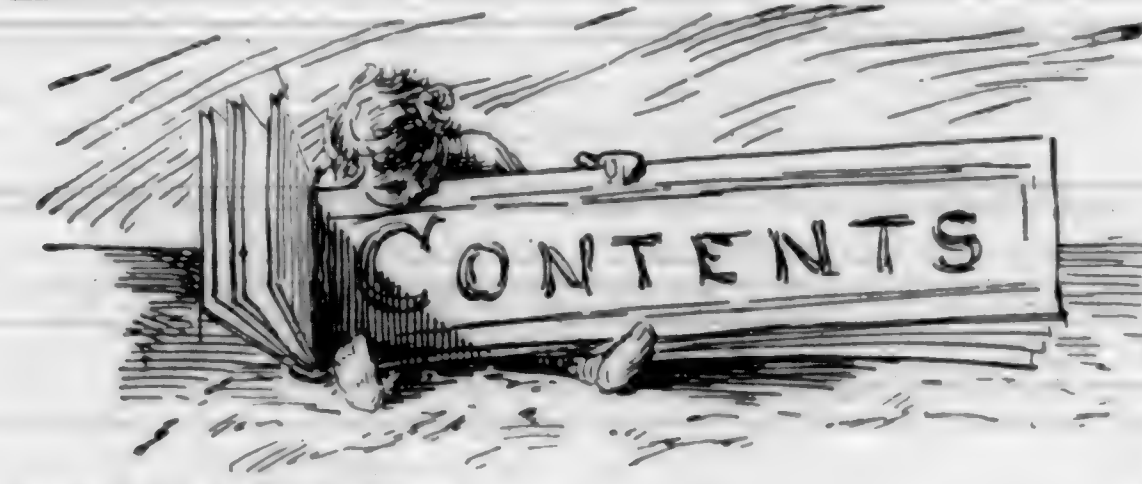
SUBSCRIPTION TO THE JOURNAL, \$3.00 PER YEAR IN ADVANCE.

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

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

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

ADVERTISING RATES:				
Space	1 Month	3 Months	6 Months	12 Months
1 inch.....	\$ 1.50	\$ 4.00	\$ 7.50	\$ 13.00
2 inch.....	3.00	8.00	15.00	26.00
3 inch.....	4.50	12.00	22.50	39.00
4 inch.....	6.00	16.00	30.00	52.00
5 inch.....	7.50	20.00	37.50	65.00
6 inch.....	9.00	24.00	45.00	78.00
7 inch.....	10.50	28.00	52.50	91.00
8 inch.....	12.00	32.00	60.00	104.00
9 inch.....	13.50	36.00	67.50	117.00
10 inch.....	15.00	40.00	75.00	130.00
11 inch.....	16.50	44.00	82.50	143.00
12 inch.....	18.00	48.00	90.00	156.00



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

THE Commissioners who have charge of Golden Gate Park deserve much credit for the manner in which they have endeavored to make the quarters devoted to the Children's Playground, enjoyable to the younger generation.

The many attractions that are there especially provided for the young folks, and meant for their exclusive use and enjoyment, furnish them with an infinite amount of innocent amusement and harmless recreation, and merit the thanks of the citizens at large as well as of the parents in particular.

To keep the minds of the children busy, and their bodies actively engaged in lively sport, is to lay the foundation of an active and virtuous citizen. A sound mind and a healthy body are of the most vital importance to the rising generation and should be the birthright of every human being; to keep these gifts of nature in proper condition is the duty of, should be the pride of both parent and citizen.

It is as vitally important as the education of the youth, which it is conceded to be the duty of the Municipality to provide for. Seldom, however, is adequate provision made for the employment of children's time outside of school hours, and we believe that in this connection, more consideration should be bestowed on suitable methods of providing proper grounds to be used for the recreation and amusement of the children, where they could pursue their games without interruption, and free from the charge of being an annoyance to their elders.

For this purpose we would advocate the establishment of public play grounds and gymnasias in the city itself, even should it be necessary to convert some of the present parks and squares to this use.

This would be particularly beneficial in the more crowded portions of the city, where the children are forced to play in

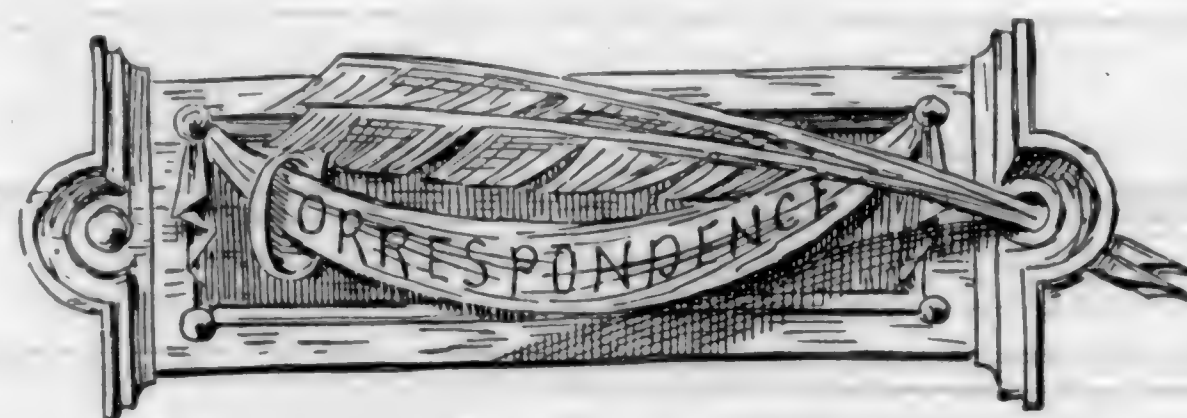
the streets, to the annoyance of the public, and danger to themselves; or in cramped back yards and alleys, too restricted for the purpose.

In this respect the country bred youth has a material advantage over the children of the city.

The importance of keeping the child properly occupied in mind and body, can hardly be overestimated. Give a child no way of employing his surplus energies, and they will be turned to mischief. If the youth has no legitimate sport to occupy his time, he will the easier drift into vice, as the old saying is still true:

"Satan finds some mischief still for idle hands to do."

THE buildings that are illustrated in last month's issue, as designed to house the exhibits of the Minwinter Fair, are now rapidly assuming form and shape in Golden Gate Park. Towers are seen rising above the tops of the surrounding trees, and the contractors state that the vast buildings will positively be completed in time to have the exposition open on the first day of the coming year.



THE INCONGRUITY OF MANY MODERN COUNTRY PUBLIC INSTITUTIONS.

ONE of the greatest faults of those having in charge the erection of public buildings and institutions situated in the country amongst large and extensive surroundings, is their failure to duly appreciate the proper relation of buildings to surroundings and their relative effects upon each other.

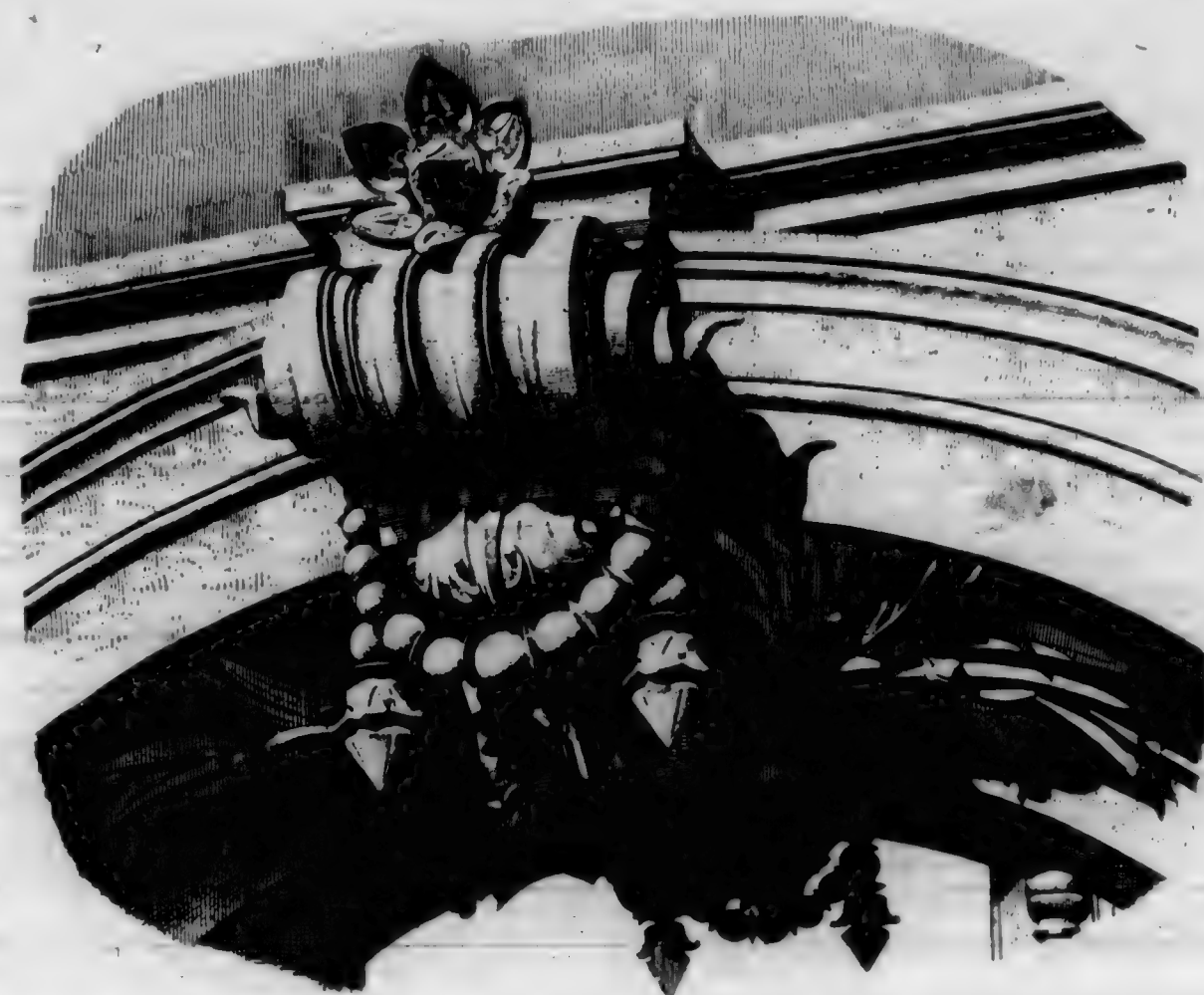
These facts were very forcibly called to my attention not long ago, in one of our interior counties, where I saw a four story administration building with towers, crowning the summit of a hill, and giving me the effect of confinedness and misplacedness and the impression that "land must be very valuable in the vicinity, to necessitate the huddling together in one tall mass, of buildings that could have been spread over more ground to better advantage, though they were really situated in the middle of an extensive domain.

These remarks are made for the purpose of calling attention to the fact, in the hope that repetitions of these errors may be avoided in the buildings to be erected in the near future under similar conditions, and which appear to have been designed on the same lines. I hope my remarks may be the means of preventing such incongruities being repeated.

I have left out in this squib the practical and economical objections to high buildings which are intended for the use of old, invalided or young people, such as the requiring of elevators and such like, and have confined myself simply to the æsthetic phase of the question which alone is sufficient to condemn it, when such buildings are placed in the midst of extensive grounds.

Yours,

STROLLER.



SONNET.

Chicago! Teeming centre of the land,
Thy western land from which thou hast up-sprung,
Strong limb'd, full breasted, comely fresh and young
Tall and majestic, thou a queen doth stand!
The nations hither, gather in a band,
Viewing in wonder the jewels thou hast strung;
In stately splendour see their shadows flung
O'er lake and lagoon, in blanch'd beauty grand.
What priceless gems hast gathered in thy hand!
Pearls of sentiment, and flashing diamonds bright,
Radiant with rays of intellectual light:
But higher, holier still the world's demand
Doth sound the trump of Truth in search of Right
Piercing the dense, dark clouds of Theologic-Night!
Sept. 1893. S.

COMPETITIVE DESIGN FOR THE NEW CAPITOL BUILDING AT OLYMPIA, WASHINGTON.

THE *Pacific Builder* has the following to say in reference to the call for competitive designs for the new Capital building at Olympia, Washington, which we published in full last month.

Competitive designs are now called for from the architects of the country for the proposed new Capitol building for the State of Washington at Olympia. In the call issued it is stated that the architect whose design is accepted will be retained as the architect on the building, but the commission also reserves the right to reject any and all plans and designs. Provision is also made for a "consolation stipend" for the architect whose designs are given second, third and fourth places in the sums of \$1,500, \$1,000 and \$500 respectively. From a statement made by one of the officials of the Capitol commission and published elsewhere in this issue it will be seen that the board expect, at the same time, that over one hundred competitive sets of plans will be submitted. Over four hundred contour maps of the site for the proposed building have already been applied for, it is said by architects throughout the country. The plans are to consist of four elevations, plan of each story, one sectional and one perspective drawing, and the building is to be modern throughout. To prepare creditable drawings for a building of this character would probably require the services of one man constantly for thirty days. No doubt many competitors will spend the greater part of a couple of months in preparing, altering and elaborating their designs. Estimating at one hundred designs submitted and thirty days for each

design we see that the competition will represent three thousand days' work of one architect, or a period of nearly nine years including Sundays. Estimating the value of an architect's services at the rate of ten dollars per day, certainly not an unreasonable compensation for one capable of designing a building of this character, we find that the value of the actual work services to be rendered by the architects in such a competition is \$30,000. To this amount must be added the necessary expenses of making the drawings, in material, etc., and as the majority of the competitors will consider it necessary to attend the meeting of the commissioners when the award is made to explain their drawings if called upon, a personal expense must be incurred which, all included, will probably not average less than fifty dollars each, which add \$5,000 to the general bill, making a sum total of \$35,000. For this great service from the architects of the country what is to be paid? They are conditionally promised \$3,000 in cash. This is practically all, for the architect whose design is accepted, if any be so fortunate, so far from having earned anything in the competition shall only have demonstrated his fitness, in the opinion of the judges, to perform the work required and the matter of employment and pay for his services will still remain to be agreed upon. Beyond this cash consideration and the hope of employment there is but one incentive to induce architects to compete and that is the ambition to excel. To bring out the abilities and possibilities of the young architect especially such competitions may be considered opportunities. To accomplish this, however, the competition must be conducted with technical skill and the awards made on the honest, absolute merits of the drawings. Since therefore the architects of the country are expected to contribute over \$30,000 in cash and services to this Capitol building it might be well to enquire what are the prospects for an honest and intelligent award. Who constitutes the Board of Capitol Commissioners of the State of Washington? Is it composed of architects, engineers or builders in whole or part? So far as we can ascertain not one member of the board has enjoyed the slightest technical education. Moreover, although explicit requests have been made of the Board to induce them to employ an expert to assist in adjudging the plans, they have persistently avoided anything calculated to favor the impression that they would do so. Here will be one hundred different sets of plans, each set composed of several drawings. It will be necessary for the judges to understand the exact relation which the different drawings of each set bear to one another. To understand the floor plans with relation to the elevations and sectional drawings and judge whether they are accurately and correctly represented. To pass upon the merits of the planning as well as to judge of the difficult problems of lighting, heating and ventilation. Then also to compare the different sets of plans one with another and to judge and weigh the relative points of merit to a nicety. Is it probable that five ordinary business men, however disinterested, will be found competent to pass upon these points? The possibility, we might say the probability, therefore, confronts the architects that the best design may not be selected by the commissioners. Moreover, as the terms of the "Notice to Architects" will show the proposition of rejecting all designs submitted has been fully considered. At Ellensburg, Wash., designs of the best architects in the country were rejected by the board of regents of the State Normal school and the job was given to a local mill-man. At Pullman the extensive building for the college was given to a contractor to plan. It is possible that the Governor and his Capitol Commission may not follow the policy adopted by the other boards in charge of building, appointed by him, even though he is known to have endorsed their actions. But how are the architects who are expected to contribute \$30,000 in money and services in this competition to fore-know? They can only judge the future by the past. Relying on that past as a guide we should say that unless the Capitol commission gives timely assurance that the services of competent and reliable experts will be employed as judges in this competition it will be a matter of profound surprise if a design from a single able and prominent architect in the country will be found among the hundred or more which may be submitted in the competition.

HOW UNCLE SAM'S BUILDINGS ARE DESIGNED.

THE following extracts from a paper read by Jeremiah O'Rourke, Supervising Architect of the Treasury Department, to the World's Congress of Architects at Chicago, will give a good idea of the way our public buildings are designed, and the amount it costs to design them:

ORGANIZATION OF THE SUPERVISING ARCHITECT'S OFFICE.

At the beginning of the administration of President Franklin Pierce, in 1853, the Government owned twenty-three completed and occupied buildings, and appropriation had been made for fifteen new buildings. The construction of these buildings was intrusted to the Treasury Department, well nigh everything, except the amount of appropriation, being left to the discretion of the then Secretary of the Treasury, Mr. Guthrie of Kentucky, who was in full accord with the new movement. No method or system had been devised nor means provided for the performance of the duties. Architect A. B. Young had just satisfactorily completed the erection of the Boston Custom-house and, with a view to develop the growing branch, Mr. Guthrie tendered him, all he could, a \$1,500 clerkship in his Department. Simultaneously, with a view to an efficient management, he obtained from the Secretary of war the detail of Captain A. H. Bowman of the United States Engineers, and placed him in charge of the construction of these buildings. Though Captain Bowman was nominally Mr. Young's superior, both acted for eight years as colleagues and in full harmony—a duarchy at the head of a bureau existing without authority of law, but strong as the offspring of necessity. Carefully compiled regulations for the design and construction and the repair and preservation of all public buildings under the Department was draughted, accepted by the Secretary, and promulgated. These rules were gradually perfected so as to form the foundation of the complicated, but strong and efficient organization of the Supervising Architect's Office as it exists to-day.

The extent of the business of the Supervising Architect's Office will be appreciated when it is stated that during the last fiscal year ending June 30, 1893, there was expended for sites, construction and repair of buildings \$6,741,286.11, and that the contract obligations amounted at the end of the year to \$2,834,308.02.

In the transaction of the business there are employed at the central office 145 persons (fifty of whom are females), and 180 persons as superintendents, clerks, foremen, etc., on the various buildings in course of erection throughout the country, from Alaska to Florida and from the Atlantic to the Pacific Ocean.

A large volume of administrative work is charged upon the office by reason of its facilities as a distinctive part of the machinery of the Treasury Department. Permanent and complete records are necessary, the details of the variety of work must be systematically executed in accordance with well considered rules, in order to maintain correct and harmonious business relations with the other executive offices of the Government.

The office force is organized in ten (10) divisions, with a chief at the head of each, all reporting direct to the Supervising Architect, or to his Assistant and Chief Clerk, who acts as Supervising Architect during his absence. These divisions are:

1. Engineering and Draughting Division.
2. Law and Contract Division.
3. Construction Division.
4. Computing Division.
5. Repairs and Preservation of Public Buildings Division.
6. Accounts Division.
7. Tracing Division.
8. Records and Files Division.
9. Copyists' Division.
10. Photograph Division.

The titles of the divisions indicate generally the character

and range of their duties, and but few explanations are required.

The Engineering and Drafting Division is charged with the making of all designs, plans and detail-drawings required for all the buildings erected, and with the correspondence relating thereto.

It usually employs the services of fifty (50) to sixty (60) expert draughtsmen, including specialists for steel and iron construction, heating and ventilating, and elevator and machinery work.

The draughtsmen are classified and arranged according to their special qualifications, so as to obtain the best results. The draughting-room, which is of large dimensions and well lighted, is supplied with all the best appliances required for a complete architectural and constructive-engineering office.

The salaries range from three to eight dollars per day. The office-hours are from nine to four, with time for lunch. Each draughtsman is allowed, in common with all the employees of the office, thirty days' vacation, with pay, and, in case of sickness, sixty days each year.

The other nine divisions work in harmony with the Draughting and Engineering Division, each through its chief

each building ranges from thirty (30) to two hundred and twenty-five (225) sheets, and the average number of sets of scale-drawings required for estimates on each building is thirty (30) sets, exclusive of complete, full-sized working-drawings, which are always furnished after the contracts are awarded.

At the appointed time, the obtained proposals are publicly opened by the Supervising Architect, his assistant and chief clerk, and the chief of the Computing Division. A full record of the bids is kept and transmitted to the Secretary of the Treasury, with a recommendation to award the contract of the lowest responsible bidder.

On the approval of the Secretary, the successful bidder is notified, the contracts and bonds (five sets) are prepared in the Law and Contract Division and transmitted to the contractor. The contract having been signed, bond executed and vouched for by one of the designated Government officials, is returned to the Department, examined and passed upon by the Solicitor of the Treasury, and, unless there is some irregularity, work is started.

The contract contains generally a clause stating the time agreed upon for completing the work, and a *per diem* forfeit for failure to complete within the specified time.



HOTEL BUILDING OF DR. G. H. JACKSON, WOODLAND, CAL., WOOD, LOVELL & CLAPLIN, ARCHITECTS.

reporting direct to the Supervising Architect, the whole forming probably the largest and best equipped architectural office in the United States, perhaps in the world.

METHOD OF PROCEDURE IN PREPARING PLANS AND AWARDING CONTRACTS.

Before any money can be expended on a new public building, the Supervising Architect is required by law to make sketch-plans and estimates of cost, both of which must have the approval of the Secretary of the Treasury, the Postmaster-general and the Secretary of the Interior. The estimates of cost must be, in each case, within the limit of the appropriation made by Congress.

The approval having been obtained, the sketch-plans are returned to the Draughting Division for the preparation of scale working-drawings, which are made to show in full and minute detail all parts of the construction and finish of the building, both external and internal. These are passed through the Tracers' Division to the photographer for copying, and simultaneously to the Computers' Division for detail office-estimates of cost and advertisement for bids, thirty days being the usual time allowed to bidders.

An unusually large number of plans and copies of the plans and specifications of each building are required for circulation among prospective bidders, to whom, on application, they are sent by mail.

It is found that the number of scale-drawings required for

METHOD OF PROCEDURE IN THE ERECTION OF BUILDINGS.

On the award of the contract, a "Superintendent of Construction" is appointed, and, according to the size and importance of the building, he is allowed a clerk and one or more foremen and watchmen to assist him in the performance of his duties.

The soil under the foundation has generally been previously tested by excavation, boring or other reliable method, and unless unexpected impediments are encountered, the work progresses regularly, the "Superintendent of Construction" reporting by mail or telegraph to the Supervising Architect, monthly and whenever necessary, up to time of completion.

At intervals during erection and before final acceptance, each building is visited, examined, controlled and reported upon by "Inspectors of Public Buildings," all working under specific written instructions from the Supervising Architect's Office, and reporting thereto in writing and in detail up to the completion of the contracts.

Payments on account, based on quantities and value of the work actually incorporated into the building, are made monthly, retaining ten per centum of the estimated value until completion and final acceptance of the work.

It may be stated in conclusion, and in justice to the Supervising Architect's Office, that while it may be admitted that the work turned out by this office might, and doubtless will,

be improved, still a just comparison and analysis would seem to indicate that, all things considered, it will compare favorably in design, arrangement, construction and cost with similar works erected by either States, municipalities or private enterprise.

It may be proper also to state, with reference to the amount paid by the Government for the professional services rendered by the Supervising Architect's Office, that the records of the office show that the amount paid for said services never exceeds five per cent on the cost of the buildings erected, although the usual proportion of such services are of a character which usually commands, in private practice, a much higher professional fee.

The Supervising Architect himself, for professional services which, in private practice, would easily net \$100,000 a year, receives the munificent salary of \$4,500, with strictly limited traveling expenses.

LACK OF BUSINESS ENTERPRISE.

THE Board of Manufacturers and Employers of California, have issued for distribution an able address by Henry L. Davis, their president, calling on all retailers to patronize California industries.

The *Herald of Trade* has the following in connection

ments so they will be a novelty each week and cause readers to look for each number of the trade journal to see what will be the next new advertising scheme. And it has been found to pay.

But, aside from the advantage to advertisers directly, the sustaining of a trade journal should be a matter of pride, for there is no commercial city but boasts of trade organs, and our city should not be behind the age. This is the age of newspaper education. A person that does not keep abreast of the times by closely reading the daily press for current news is considered a back number, and a trader or person in any branch of trade who does not read his trade journal is left in the race for wealth. Not only does the successful business man read and digest everything published concerning his special branch of trade, but he gives attention to what is said regarding other branches. He also looks over the advertisements of competitors in the jobbing, importing or manufacturing business to see what they are offering for sale, or if in the retail business he scans the advertisements to see if there is any specialty offering which can be made a good advertising card, or else to see if there are any special drives by which he can secure bargains. These facts are so apparent to the wide-awake and progressive merchants that they do not require enlarging.



MAUSOLEUM, HOME OF PEACE CEMETERY, R. H. WHITE, ARCHITECT.

therewith, showing how these home-made goods should be brought to the attention of the people. Times have changed and so have business methods and to be successful one must keep abreast of progress of the times.

Let the Rip Van Winkles of trade go into a modern store and they will recognize progress. Stores better arranged, good kept more neatly and in better order; large capacious sample-rooms, with the samples so arranged as to be pleasing to the eye and handy for inspection, with other improvements which mark the progressive merchant. Nor is this all. The man of success nowadays uses the trade journal, for in it he recognizes the medium that reaches hundreds of merchants each week. He also knows that a trade journal is closely scanned by progressive dealers, and therefore in it an attractive, catching advertisement, changed often in its make up, does more good than price-lists, circulars, or other makeshifts can possibly do. Continuous advertising in a catching way will draw trade. This is the history of every successful firm. Do the manufacturers of this city follow such a course? Then why do they complain of business passing by them? Take up Eastern trade journals and we find them full of attractive advertisements; with constant changes in their makeup. The more successful firms give steady employment to one person to get up their advertise-

MEETING OF THE LADIES' COUNCIL.

THE late meeting of the Ladies' Council at the Metropolitan Temple is a move worthy of consideration. The question discussed is without doubt one of the most important with which we of the end of the nineteenth century have to grapple and deal with. The subject was handled in good shape by the speakers of the evening. The following resolution was adopted and deserves the serious consideration of our municipal authorities:

WHEREAS—Municipal sanitation is known to be an essential condition of civilized life and progress; and whereas the city of San Francisco is a reproach to our country and a blot on Western civilization in the criminal inferiority and deficiency of her sanitary condition, this condition menacing the lives of her citizens and retarding immigration and all material prosperity, be it

Resolved:—That we, citizens of San Francisco, in mass meeting assembled, hereby demand of our city government the absolute enforcement of existing sanitary laws and such further enactments as shall raise the standard of sanitation in San Francisco to an equality with the foremost cities of the world.

ANNUAL MEETING.

THE annual meeting of the stockholders of the California Architectural Publishing Company, will be held in the office of the company, 408 California street, San Francisco, Cal., on Tuesday the 7th day of November, 1893, at 1 P. M.



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.

THE Oregonian building in Portland, Oregon, is by Reid Bros., architects of this city.

THE cottage illustrated in this number is by J. C. Newson, architect, it has a foundation of klinker brick with a frame work of Oregon pine filled in with a gray cement and covered with cedar shingles.

THE ESCHENHEIMER TOWER.

BY MISS LANDIS.

IN Frankfort on the Main, where the Eschenheimer Land- ing and the Bockheimer Anlagen meet, stands the old and interesting Eschenheimer Tower. It is a part of the remains of the old fortifications of the city, built in the years from 1400 to 1428 and is forty-eight meters in height, with five small towers around the centre one and four corner towers.

On the tenth of June, 1874, lightning struck the weather signal (a flag) tearing it down. The saying runs that a number nine was shot in the flag by Hans Winkelsee, a poacher, who saved his life and gained freedom in this way, through his skill. When the flag fell down in 1874, it was found that instead of nine holes, there were only six in the flag. The tower was renovated in 1874, but the beautiful ivy climbing its walls is several centuries old.

By a mistake of the draughtsman the illustration was printed the "Hamburg Tower."

TWO VIEWS—WHICH?

ON the one hand it is claimed by the fire extinguishing experts that English and in fact European apparatus for fire extinguishment are obsolete and old fashioned as compared with the modern inventions and general excellence of our American outfits and brigades, as evidenced by the recent walk-over which our crack Kansas City team had in competition with the teams of the United Kingdom at the competitive fire drill in England. On the other, it is learned that over there they do not bother so much about putting out fires, for they do not have many, and each is generally isolated, and even if it burns itself out in the building where it started, there is not much danger of its spreading to great proportions. Hence they can afford to be satisfied with rather inferior machines and much smaller fire departments, sustained at a very much less annual cost than ours. Here we do the reverse. We spend enormous sums annually for insurance and in keeping up finely disciplined fire departments, equipped with all the latest improved engines and apparatus. Now which is the best and most economical in

the long run? We take desperate chances on fires and their extinguishment and save money in construction. It is not merely the frame structures that are dangerous, as the Boston, Chicago, Milwaukee and other great conflagrations easily show. A large part of our brick buildings are "Jerry built," and are mere shells concealing a mass of timber adjusted to create a most satisfactory bonfire. Of the two systems we must admit that we rather incline to the English, and it is only a matter of time how soon this view will be generally recognized. In fact, for the past two decades we have partially learned the lesson, and as the various modern stone, brick and tile structures are brought to the front, there is cheaper and better material, more scientific construction and more honest building resulting in greatly lessening the percentage of fire traps over the entire country.—*The Southern Architect.*

QUEER RESIDENCE IN ARIZONA.

ARIZONA is plentifully sprinkled with the ruins of strange habitations. Most of them are constructed of concrete or adobe, and the mystery about them is the identity of the people who designed them. How they could be built is not a matter of conjecture, as the materials are close at hand. But there is one ruin, still in good state of preservation, which is a mystery, no matter in what light it is considered. It is in the Huachuca mountains, not far from the military reservation, in a northeasterly direction. Nothing is known of its origin, and the wonderful part is the material of which it is constructed. It is about 200 miles from the ocean and surrounded on all sides by hills of sand and rocks covered with cacti. There is no water for miles except the excuses for rivers that run during the rainy season. There is not even the suggestion of water, and yet the house is built of seashells laid in a sort of cement. Where the shells were obtained is a mystery that may never be solved. It does not seem possible that the builder of the house would carry the material over hundreds of miles of desert when there were plenty of rocks near by that would answer the purpose just as well even if they were not so unique. The house is built in the shape of the straw huts of the Papago Indians and is about the same size. There is room inside for five or six persons, but at present nobody occupies it, except, perhaps, some prospector who uses it for a temporary shelter in cold weather. There are a dozen varieties of shells to be found in the walls, and one over the door is of extraordinary size. The age of the building will never be known, but there is little doubt that it is old as the oldest in the territory.—*The Builders' Gazette.*

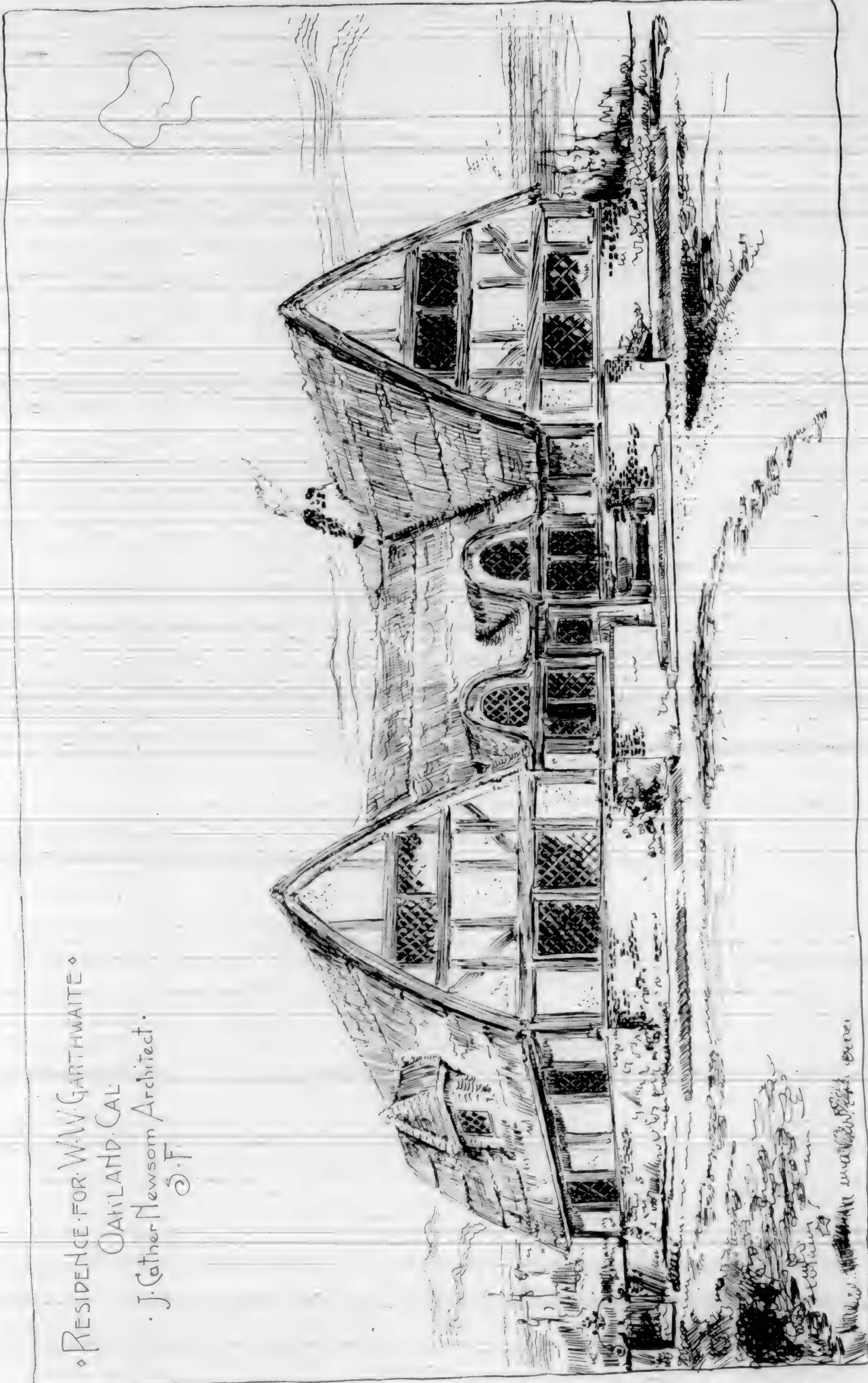


By an oversight in our last issue we failed to give due credit to the *Transactions of the Technical Society*, from which publication we took the article by Marsden Manson, on the healthfulness of California homes.

What the Sacramento *Record Union* thinks of the CALIFORNIA ARCHITECT—The *California Architect* for September (San Francisco) is a special number, giving very handsome full-page outline pictures of the Midwinter Fair buildings from the accepted designs of the architects. There is a very interesting paper also by Marsden Manson, C. E., on "California Homes—Are They as Healthful as They Should Be?" Other valuable papers appear also, making the number one of high value.



◊ RESIDENCE FOR W. W. GARTHWAITE ◊
 OAKLAND, CAL.
 J. Gather Newsom Architect.
 O.F.

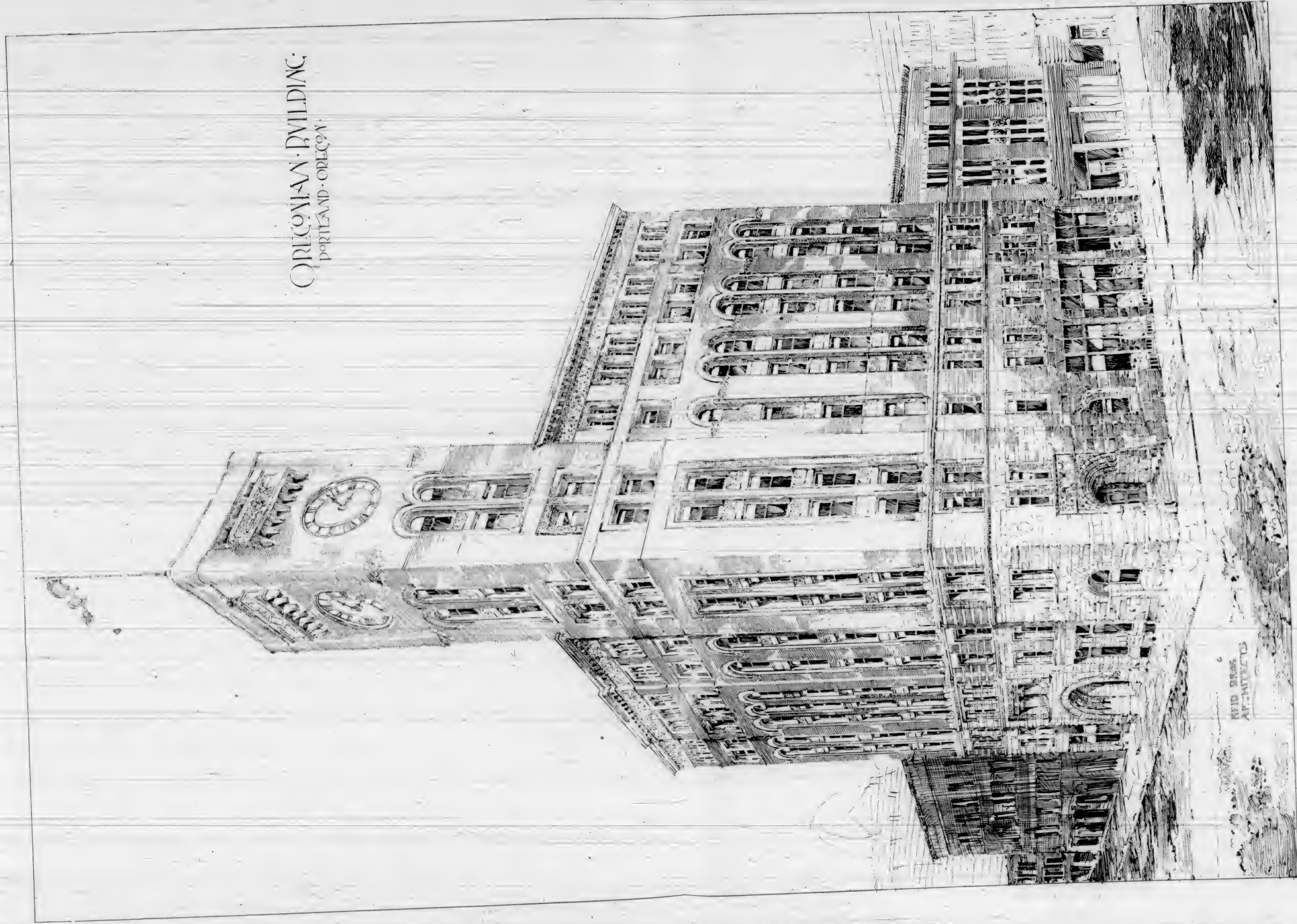


CALIFORNIA ARCHITECT & BUILDING NEWS
 SAN FRANCISCO.

BRITTON & REY PHOTO LITH.

VOL. XIV No. 10 OCTOBER 1893.





OREGONIAN BUILDING
PORTLAND, OREGON



— To Miss Landis —



— Old Watch Tower at Mamburg —

THE UNIFORM CONTRACT.

INDICATIONS from various sources point to the fact that the manner of adoption and recommendation of the use of the Uniform Contract by the American Institute of Architects and the National Association of Builders is not generally understood among either architects or builders. The architects are apparently the less well informed of the two, which is doubtless due to the fact that the use of the form has not been urged upon its members by the American Institute with the same persistence that has been displayed by the National Association of Builders.

A recent example of the lack of comprehension of the situation is indicated by the opinion of an architect practicing in a prominent New England city, who questioned the authenticity of the revised form of the Uniform Contract, and stated that the revision had rendered the form unfit for contract purposes. This case is a slightly exaggerated example of others of a similar character. All action with regard to the Uniform Contract has been taken by regularly

considering all the suggestions for the improvement of the form which had been presented since its adoption, and so make such changes in it as experience in its use indicated as advisable. The result of this meeting was a careful and thorough revision of the form which has made its wording more simple and direct; shorter by five hundred words; and generally improved it over the original form. One feature of the new form which has caused some comment is that the words "contractor" and "owner" are printed in the singular without space for the addition of the plural; but the form definitely states that whatever is the style of name of the contractor or owner, whether an individual, a company, or neuter, for the purposes of the contract they shall be termed "contractor" or "owner". In printing the word "architects" in the plural, it was deemed easier to draw a pen through the s where the singular was needed than to write the letter where the plural was required.

The Uniform Contract as revised by the joint committee was adopted and recommended for use by the National Association of Builders at its last convention, as was stated in these columns at the time; and the official action of the



FROM THE THEATRE OF MONTE CARLO, CHAS. GARNIER, ARCHITECT.

appointed committees from the two organizations mentioned, acting in conjunction, with full power to create and amend a Uniform Contract, which should be adopted and recommended for use by the organizations in question. The first joint committee included representatives from the then existing Western Association of Architects, but this organization having become absorbed into the American Institute of Architects, the present sponsors for the contract are the American Institute and the National Association of Builders, the two representative bodies in the United States. It was deemed necessary that the joint committee should be given full power, for the reason that if each sub-committee were compelled to report back to its parent body before final action on the contract could be taken, the differences of opinion on the part of individual members of the two organizations would occasion such lengthy discussion, and so many amendments and recommendations, that united action would have been practically impossible. Each organization, therefore, selected a committee composed of its most able members, to which was delegated full power to prepare a Uniform Contract for adoption and to amend the same whenever amendment should be considered necessary. The form originally prepared by the first joint committee and adopted by the two parent bodies existed without revision for about five years, none of the changes to the form submitted during that time being considered sufficiently important to warrant a revision. In October, 1892, the joint committee met for the purpose of

American Institute of Architects is indicated by the adoption at its recent convention, of the report of its Committee on Uniform Contract, which is as follows:

"Your Committee on Uniform Contract begs leave to report that the last meeting of the joint committee of the American Institute of Architects and of the National Association of Builders was held in the office of Messrs. Adler & Sullivan (Chicago), October 19, 1892.

"At that time numerous communications were read in which suggestions were made as to changes in the form. In accordance therewith several important changes were made. The form was considerably shortened—about 500 words having been eliminated. The paragraphs were rearranged, grouping the requirements of either party of themselves, and in both cases the singular number being substituted for the plural. Attention was called to the omission of the clause referring to the penalty for non-completion of work at the specified time. So many conflicting views were presented regarding this portion of the form that it was deemed best to omit it, leaving it to the judgment of the parties in interest to draft such a clause as they should agree upon.

"Your committee suggests that, for the information of the institute, the secretary be requested to cause to be printed such information as will be of value, in circular form, and mail from time to time to each member. This circular to contain information not only as to the revision of the form, but the name of publishers, price, etc."—*Carpentry and Building*.

NOTICE OF MEETINGS.

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

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

CALIFORNIA ELECTRICAL SOCIETY, meets the first and third Monday evenings of each month at the Academy of Sciences Building.

GEO. P. LOW, Pres. C. O. POOLE, Vice-Pres.
 MAX CASPARI, Sec. H. T. BESTOR, Treas.

MUNICIPAL WISDOM.

AN amusing account of the experience of a town in Northern Ontario is given by the *Canadian Architect*. It seems that the municipal fathers, having been intrusted with the arrangements for erecting a town hall to cost about \$20,000, began their deliberations by the sage resolution not to employ an architect. Their first step was to call on one of their local carpenters and ask him to prepare rough designs. After these were procured they finally instructed one of their builders to prepare the plans for the building. These on examination proved far from having that architectural effect which was expected on the part of the people or the council and were rejected, when, as a last step, an architect was called, the council and the people having learned by the course of experience through which they had gone that an architect was necessary if their \$20,000 town hall was to be either suitable to their wants or presentable in appearance.



NOTES ON BUILDING CONSTRUCTION arranged to meet the requirements of the syllabus of the science and art department of the committee of Council on Education, South Kensington, Part IV. Calculations for dwelling structures, Course for Honours. London, Longmans, Green & Co., New York, 15 East 16th street. For sale by Osborn & Alexander, 401 Market street. Price \$4.00.

GOthic ARCHITECTURE by Edward Corroyer, architect to the French Government and Inspector of Diocesan Edifices. Edited by Walter Armstrong with two hundred and thirty-six illustrations. This work as we



Cottage at Reynolds
 W. J. Cuthbertson
 Architect.

FRENCH HOSPITAL CONTRACTS.

CONTRACTS for the construction of the new French Hospital were filed in the Recorder's office. They represent a contemplated expenditure of over \$131,000. The amount of the various contracts is as follows: Gray Bros., concrete work, \$25,885; Warrell & Miller, brick work, \$47,539; Alexander L. Campbell, carpenter work, \$45,500; S. Ickelheimer & Bros., plumbing, \$9,110; J. F. Sullivan, painting, \$3,675; Lat. E. Allen, electric fittings, \$375.

The new hospital is to be erected on block 279 of outside lands, bounded by Fifth, Sixth and Point Lobos avenues and by A street.

TENDERS TO BE RECEIVED.

Treasury Department, Office Supervising Architect, Washington, D. C., September, 28th, 1893. Sealed proposals will be received at this office until 2 o'clock P. M. on the 2d day of November, 1893, and opened immediately thereafter, for all the labor and materials required for the interior finish, plumbing and gas piping for the U. S. Post Office, etc., building at San Jose, California, in accordance with drawings and specification, copies of which may be had on application at this office or the office of the Superintendent at San Jose, California. No convict labor nor any product of convict labor will be allowed in this work.

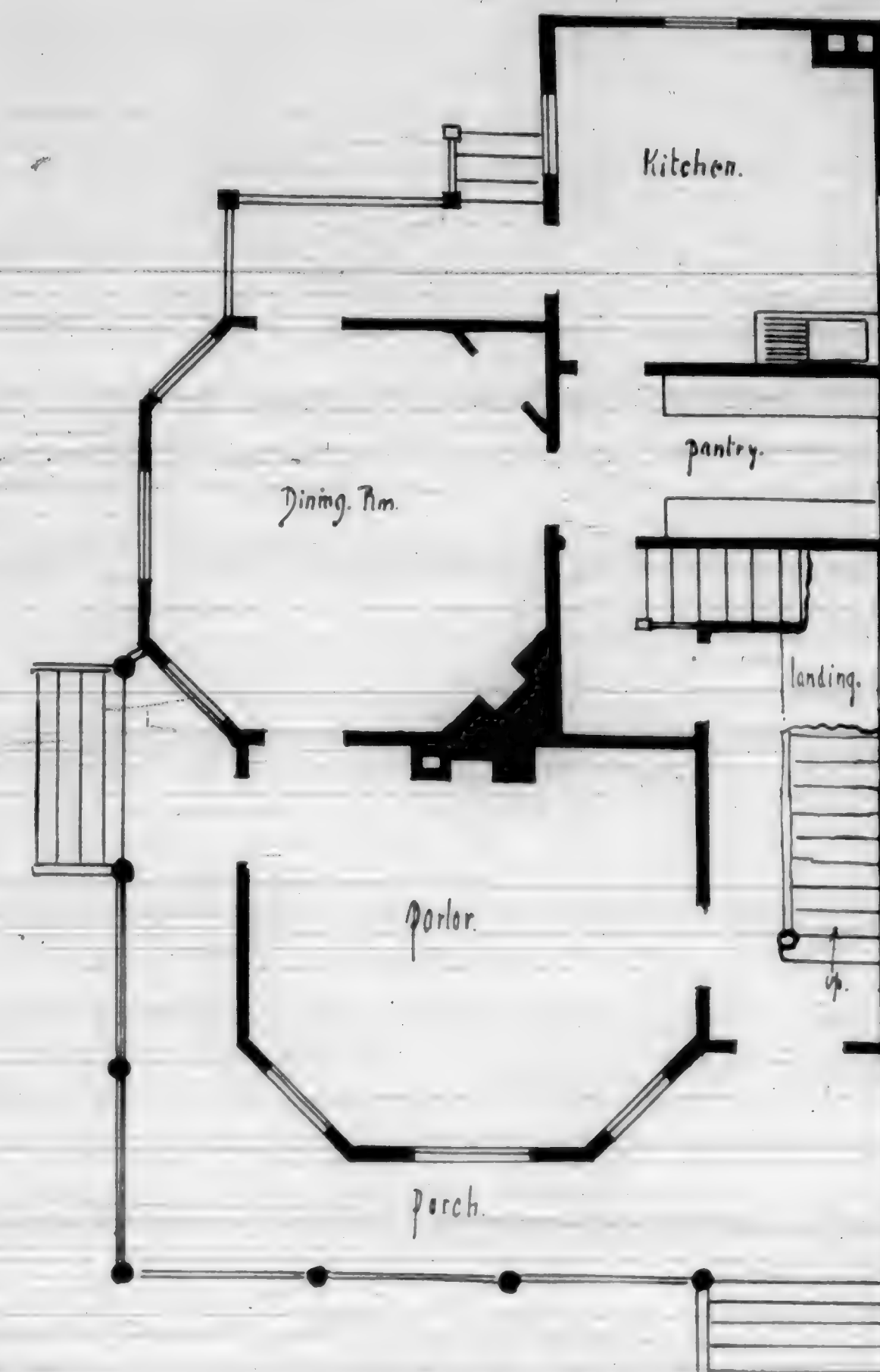
Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid, should it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes sealed and marked, "Proposal for Interior Finish, Plumbing and Gas Piping for the U. S. Post Office, etc., building, at San Jose, California," and addressed to Jeremiah O'Rourke, Supervising Architect.

learn by the preface was translated under the supervision of the editor by Miss Florence Simmond, and presents a value as a picture of Gothic development, even if the reader does not agree with all Mons. Corroyer views and claims. Published in New York by Macmillan & Co.; for sale by Osborn & Alexander, 401 Market street. Price \$2.00.

ELECTRIC LIGHTING SPECIFICATIONS for the use of Engineers and Architects by E. A. Merrill, published by W. J. Johnston, New York, for sale by Osborn & Alexander, price \$1.50.

In this age of electricity the architect cannot be to careful to inform himself thoroughly, as to the requirements of a safe plant, when introducing electric lights in buildings. This book certainly will be of use for that purpose.

ARCHITECTURAL SKETCHES by F. W. Beall. The introduction of the author may furnish a hint to other architects who desire to advertise in a pleasing and picturesque manner, a number of miscellaneous examples taken from the author's practice are given, with a slight sketch and suggestions between the illustrations of what changes might be made, the cost, etc. Mr. Beall is an architect in the city of New York, office 318 Broadway.



FIRST FLOOR PLAN.

LEGAL DECISIONS.

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

PROPOSALS FOR BIDS FOR WORK.—Where, by statute, public officers are required to advertise for bids for the performance of certain public work, and to give the contract to the lowest bidder, the person whose bid is lowest is entitled to the contract, and can enforce his rights by mandamus, or by action against the officers for specific performance, or perhaps for damages. This is upon the principle that a tender and acceptance constitute an agreement, and it was held, that where bids were called for, for the performance of certain work according to certain specifications, the work to be given to the lowest bidder, that the lowest bidder for the work, even though his bid was informal, amounted to a tender on his part, and an acceptance on the part of the owner, which made a complete and binding contract, and its provisions were enforced against him.

And though nothing is said in the call for bids as to whether the work shall be given to the lowest bidder, yet, if such is the custom and common understanding, the lowest bidder has a right to treat his bid as accepted, unless it is expressly rejected. But if by the terms of the call for bids a written contract is to be entered into and signed by the parties, after acceptance, the contract is not complete until this is done, and it seems that either party may withdraw before this is done. In fact, if anything is left open to be done before the agreement is complete, either party may renege. In order to make the bid and acceptance a complete contract, nothing must be left to be done by the parties. When a call for a bid for work refers to a certain plan and specification, the plans and specifications are treated as incorporated into, and forming a part of the contract, as well as all other matters referred to in the call. And where compensation is to be made out of a particular fund, no claim can be made except against that fund.

When, however, the law does not require the work to be given to the lowest bidder, and the call for bids does not state that the work will be so given, or when any discretion is vested in the contracting board, the lowest bidder cannot enforce his claim. The same is true in the case of an individual advertising for bids for the doing of certain work, unless he expressly states in the call that the work shall be given to the lowest bidder, or there is some custom regulating the matter, he is at liberty to accept any bid which he deems most advantageous, whether it is the lowest or not. 458.

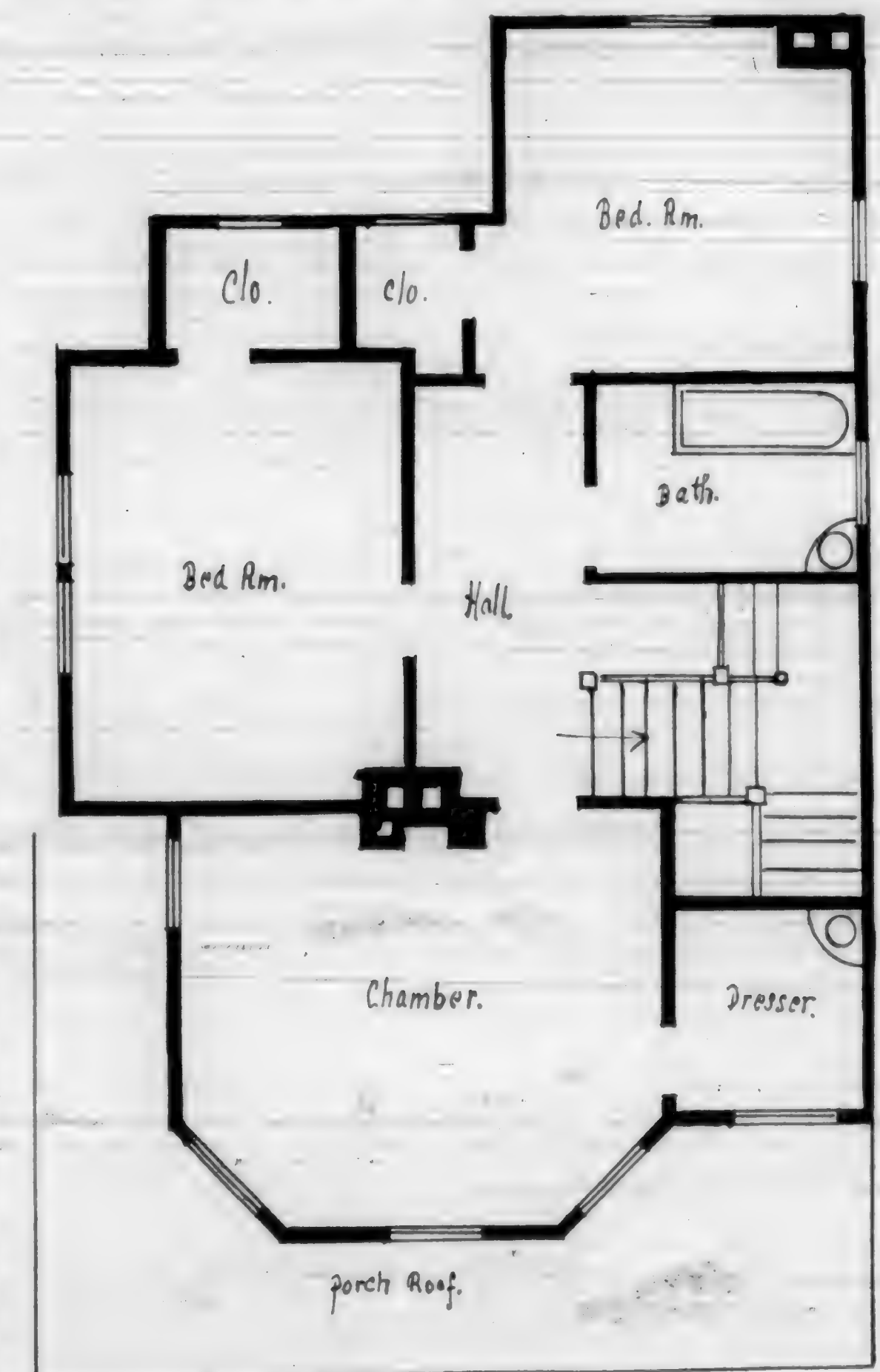
RULE WHEN THE EMPLOYER OWES A DUTY TO SERVANTS OF CONTRACTOR.—Although a contractor is not in general liable to the employees of the contractor for injuries resulting to them while engaged in his work under the control of such contractors, yet if the work is done on his premises he is bound by the same legal obligation that exists as between him and his immediate servants, to keep them in a suitable and safe condition, and is liable to any of the servants of such contractors for injuries resulting to them from defects therein, not under a contract obligation, but arising from the duty he owes to each of the employees, arising out of his obligation to provide such appliances, and this duty extends to keeping the premises upon which the servants of the contractor are at work, in a reasonably safe condition, whether the contract provides therefore or not. 151.

SUBSEQUENT ACTION FOR DAMAGES BY OWNER.—In an action by contractors to enforce a mechanic's lien, the owner is not bound to plead and prove damages sustained by their failure to comply with the contract, and a decree therein is no bar to a subsequent action against them to recover such damages.

Dewsnap v. Davidson, Supreme Court of R. I. 26 At. Rep. 902. 50.

ENTRY OF ADJOINING OWNER TO PRESERVE WALL.—A landlord is not liable to the tenant for damages to the leasehold by a contractor who entered the premises to preserve the walls while excavating on the adjoining lot, merely because the landlord gave the contractor license to so enter, as he was required to do by the statute which requires the adjoining lot owner to preserve the party or other wall when he desires to excavate to the depth of ten feet below the curb.—McKenzie v. Hatton, Supreme Court of N. Y. 24 N. Y. Supp. 88. 84.

AGREEMENT TO PAY SUBCONTRACTORS.—An oral promise by the owner of a building, to pay subcontractors made while the latter are working for the contractors, on condition that they will release their lien, which they do, imposes no legal liability on the part of the owner to such subcontractors, since such agreement is a promise to answer for the debt of another and is within the statute of frauds. Hutton Bros. v. Gordon, Rockland County Court, 23 N. Y. Supp. 770. 63.



SECOND FLOOR PLAN.

THE MINIMUM SIZE OF PIPE SEWERS.

LONG before the construction of the Memphis sewers the question of minimum size for small public pipe sewers was discussed in England. On account of the frequency of stoppages the English custom has been, for at least 15 years, to fix the minimum diameter at 9 inches. In Baldwin Latham's work on "Sanitary Engineering," second edition, 1878, there will be found some information on this subject. The author, in relating the experience gained at Croydon, with about 19 miles of pipe sewers ranging from 4 inches to 18 inches in diameter, states that "between the 27th of March, 1852, and the 28th of November, 1853, a period of 20 months, 60 stoppages took place in the 4-inch sewers, 34 stoppages in the 6-inch sewers, one stoppage in the 8-inch sewers, one stoppage in the 9-inch sewers, one stoppage in the 12-inch sewers, one stoppage in the 15-inch sewers, and two stoppages in the 18-inch sewers. Calculated by the length of sewers of each size in operation in Croydon at the time, the proportion of stoppages to the length of each size of sewer was as follows:

4-inch sewers, one in 106 feet	6-inch "	8-inch "	9-inch "	12-inch "	15-inch "	18-inch "
60	34	1	1	1	1	2
1,807	6,435	14,100	12,117	9,518	758	

The author further states that "the number of stoppages in the 4-inch sewers would have probably been greater, but some of these very small sewers were taken up in the period and replaced by other of larger size. All the stoppages in the 12-inch, 15-inch, and 18-inch pipe sewers occurred from the insufficiency of the strength of the pipes, and their subsequent collapse in the work. The stoppages in the smaller sewers arose from accumulations of such matters as usually enter sewers, such as paper, hair, etc. To such an extent was the small-pipe system carried in these early works at Croydon that in one district a sewer 4-inches diameter was used for the drainage of 16 houses, one 6 inches diameter for the drainage of 137 houses."

Mr. Latham explains these stoppages by the fact that the sewers were partly laid in the subsoil water and imperfectly jointed with clay. Yet similar experience under better conditions and with cement joints has caused most English engineers to adopt 9 inches as the minimum size for public sewers.

It will be noticed what a great difference there is between the 6-inch and 9-inch pipes in this respect.

Your correspondent says: "It may readily be conceded that there is no serious practical reason, aside from cost, why 8-inch pipes may not be used. They will be kept in substantially as good condition as to cleanliness as 6-inch pipe will, and they will of course, perform the same service. They cost for purchase and laying about 50 per cent more."

It is gratifying to read of this "concession," in view of the author's contrary opinion, expressed some years ago; but the implication in his present letter, that while 8-inch pipes are conceded to be as good as 6-inch pipes from a sanitary point of view, that they are unnecessarily large and costly should, I think, still be disputed. The "50 per cent" of additional cost mentioned by him refers to the materials and labor of laying, and really amounts to only from 7 to 9 cents per running foot of sewer—not a serious matter. This additional cost is less than the usual difference between the bids of contractors for building 8-inch pipe sewers; the main cost being for the excavation and the labor of laying, which is practically the same whether the pipes are 6 or 8 inches in diameter. We should ask ourselves whether an 8-inch pipe is worth that additional small cost. Practical engineers generally say yes. They derive this conclusion not from any theoretical argument, but from actual experience for a long time under a variety of conditions. There is no doubt that 6-inch pipes are amply large to carry the ordinary sewage from many blocks of houses. Your correspondent says: "The 6-inch pipes of Memphis * * * never run half full, even in the closely built parts of the city," but, it might be added, more than 100 stoppages per annum have occurred in them. If nothing but sewage entered, this size would be more than sufficient as a minimum; but we have other

matter to contend with which can and does enter through the water-closet traps. A 4-inch trap will pass sticks and other solid matter of a length greater than 6 inches, but rarely greater than 8 inches. When, therefore, a 6-inch pipe has an imperfect or projecting joint, causing such substances to be caught by it, there is a possibility of their assuming such a position across the section that they will catch and hold back paper and other matter which thereby obstructs the flow and facilitates further deposits. In an 8-inch pipe these substances are much less likely to assume such a position, because they are seldom if ever more than 8-inches long and able to be turned over completely during a flush, and thus pass on down the sewer. Herein lies, I think, the main reason why 8-inch pipes, when used as minimum sizes, are so much less frequently obstructed than the smaller ones. The reason given by your correspondent that 8-inch pipes take a longer time to accumulate deposits to the point of obstruction, does not seem to be the true one, for the obstructions are generally found to be formed by a nucleus at a definite point, rather than by a deposit along the line of the sewer excepting where they are caused by a faulty continuation or slope (the size having nothing to do with the formation of deposits), or where the pipes are not regularly or sufficiently flushed.

There is another advantage to be gained in using a diameter of 8 inches as a minimum size. With the same slope it allows the sewage to assume a great velocity during the flushing, and therefore to more effectually scour and clean the pipe. The difference of velocity between the ordinary flow in 6-inch and 8-inch pipes can hardly be noticed, but there is a substantial difference, namely, about 15 per cent in favor of 8-inch pipes when they are made to run at least half full in times of flushing.

While the above results furnish some reasons for the general preference of 8-inch, and in England of 9-inch pipes, as a minimum size for public sewers, we are often justified in using smaller sizes. On steep slopes, for instance, the high velocities are sufficient to minimize the occurrence of obstructions by loosening deposits or changing the position of sticks, etc., that have found lodgment. Therefore 6-inch pipes are more successfully used under such conditions. House drains, feeding the public sewers, can often be safely made even 4 inches in diameter if the usual interior projections at the joints of stone-ware pipes are avoided; for instance, by the use of iron pipe. For the benefit of the public pipe sewers it is desirable to reduce the diameter of house pipes to 6 inches or less, so that the result of carelessness and improper use of the sewerage system will be felt and remedied by the parties committing the act instead of by the public at large.—*Rudolph Hering in The Engineering Record.*

CLEANLINESS BRINGS HEALTH.

RECENTLY we read a very entertaining and instructive article from the New York Times, in which was described the method of cleaning the city of Paris, France. In that beautiful city they do not rely upon the sweeping machine and dump cart for cleansing the city, but they flush the gutters two or three times a day, and do it so thoroughly that the refuse of the streets and avenues is carried into the sewers, and borne away beyond the limits of the city. It is this care of the city that has given Paris such a reputation for cleanliness, beauty and health. It costs the people of that city, on an average, seventy-five cents a year for each inhabitant, to keep the city clean. This in the aggregate, amounts to a large sum, but it is not as much for each one as a bottle of patent medicine would cost. It is not one-half the sum required to pay for one visit of a physician. Paris gains in the health of its citizens many times the cost of cleaning the city.

If the great cities of America would institute similar thorough methods in cleansing their streets and avenues, the average health of our country would be greatly improved. The life of our citizens would be prolonged, and the comforts of life multiplied and intensified. A wise policy for a city administration would be to cleanse the city at any cost. It is just as essential that we should have clean homes and streets, as it is that we should have clean food and clean

water to drink. In fact, without clean homes and clean streets, it is impossible to have clean food, pure air, or pure water.

No better time was ever known for the inauguration of a policy of cleanliness than at the present. The recent ravages of cholera in Europe, and the danger of its entry into this country, have awakened people to the importance of providing against it. They would be willing to assist in carrying out an intelligent cleansing policy, by reason of their anxiety to ward off the disease and turn aside the messenger of death.

It is to be regretted that an appeal to people in behalf of

the common decency of cleanliness is urgently necessary in the closing years of the nineteenth century. Cholera is but one of a great many diseases that dirt and filth and neglect engender. It comes but once or twice in a century, while no city in America is free for one day in the year, from many enteric diseases that carry off many thousands from among our people. Looked at from the sanitarian's point of view, cleanliness is not only next to godliness, but it is godliness; for whatever gives health to the body, gives vigor of intellect and soul, and he who is vigorous in his mind and heart, worships better, lives better, and acts nobler. Let us therefore be clean.—*Sel.*

BUSINESS MOSAICS.

Have you a Burglar Alarm upon your safe? If not call upon C. F. A. Sturts, 126 Kearny street and you will be induced to get one for your safe or vault, but at the same time you will probably be inclined to purchase one for your dwelling house.

Miss Hosmer's statue of Apollo was on a pedestal in a corner when an old lady, Mrs. Raggles by name, paused before it. Finally she exclaimed:

"So that's Apoller, is it? She was assured that it was. 'Supposed to be the handsomest man in the world, you say?' 'Yet.' 'Wal, I've seen Apoller an' I've seen Raggles, an' I say, give me Raggles!'"

Typewriting—If you want typewriting that is typewriting and looks like print, that does not require to be revised and scratched until you wish the typewriter had not been invented, go to room 45, 6th floor of the Mills building where you will find Misses Wilson & Kelly, telephone 5661.

Greek and Roman doors always open outward, and when a man was passing out of a house he knocked on the door so as not to open in the face of a passer-by.

Now that Winter is approaching and the cold weather is coming on we take pleasure in calling the attention of our readers to the Steam, Hot Water and Air Heaters, George H. Tay & Co., 610-620 Battery street, San Francisco. This firm furnishes estimates for heating public buildings and private residences, and will guarantee perfect heating, with unequalled economy of fuel.

Tramp—"Couldn't you give me a few cents ma'am?" **WOMAN**—"What would you do with it? Buy whisky I suppose." **TRAMP**—"No, ma'am, I am collecting money for the Duke of Veragua."—*Judge.*

San Francisco Novelty and Plating works corner of First and Mission streets, manufacturers of artistic metal work. How much the appearance of a bank or office is improved by the judicious use of this style of work may be proved by a visit to any of the various institutions that have of late adapted this style of finish—which adds not only to the looks, but also to the safety and convenience of doing business in such surroundings.

When lumber is in so much demand for the Midwinter Fair we do not know that the San Francisco Lumber Company will thank us for calling attention to their various lumber yards in this city, but to solve any doubt on this point, if you want any lumber call upon J. N. Curtis, Manager, NW corner Pine and Montgomery street.

Cool-Headed citizen—"What are you running for? The dog is going in the opposite direction. Fleeing Citizen (bareheaded and frantic)—"A policeman is shooting at it."—*Chicago Tribune.*

Fitzgerald Prepared Wall Plaster is every day becoming more in demand as its merits become more fully known. The Pacific Patent Plaster Co. will have their hands full to supply orders, 216 Bush street, room 90.

Bacon—"How do you find business?" **Egbers**—"Advertise for it."—*Yonkers Statesmen.*

Those in want of architectural terra-cotta should call upon A. Steiger Sons, 320 Sansome street, room 3. Their factory is in San Jose, Cal., where every thing in this line from hollow tile to common flower pots can be found; the open fire-place with colored brick will be found very inviting some chilly morning—be in time and order before you regret that you are too late.

Hobbs (to friend at Stuffin's quick lunch)—"I say, Nobbs, how's business?" **NOBBS**—"Great! Never saw such a rush. No time to sleep, and way behind on meals. That was day before yesterday's lunch I just finished."—*Life.*

How often do we hear the remark "Oh, but it costs too much too use gas for cooking" this is a great mistake. If you want to be convinced of the fact go to the San Francisco Gas Light Gas Stove department, 226 Post street, and examine their stock of gas cooking and heating stoves, gas ranges and open fires. It saves trouble with dust and ashes, improves your temper and makes cooking a pleasure to the housewife at a less cost than the use of coal.

CITY BUILDING NEWS.

Broadway near Buchanan. Three-story frame addition; owner, Lizzie I. Hemple; architects, B. McDougall & Son; contractors, F. J. & M. Brennan; signed, Oct. 4; filed, Oct. 5; cost \$4,185.

Bush near Larkin. All construction work above the ground floor; owners, Olympic Salt Water Co.; architect, D. Ernest Melliss; contractor, Geo. H. Walker; signed, Sept. 18; filed, Sept. 23; cost \$23,461.

California near 2d Ave. To build; owner, Chas. Kennedy; architect, Jno. B. Wiersching; contractor, Thomas A. Douglass; signed, Sept. 13; filed, Sept. 14; cost \$1885.

California and Jones. Granite work; owner, Geo. Whittell; architects, Coxhead & Coxhead; contractor, Alex. McLennon; signed, Sept. 15; filed, Sept. 19; cost \$3,000.

California and Jones. Alterations and additions; owner, Geo. S. Fife; architect, Clinton Day; contractor, John T. Grant; signed, Oct. 3; filed, Oct. 4; cost \$2,555.

California near Scott. All excavating, concrete work, etc.; owner, N. Cousin; architect, Wm. Mooser; contractor, R. P. Sanchez; signed, Oct. 11; filed, Oct. 11; cost \$4,000.

Capp and Adair. Three-story frame except plumbing and painting; owner, Frances Horn; architect, F. P. Robin; contractor, J. H. Pauls; signed, Sept. 25; filed, Sept. 26; cost \$4,838.

Clara bet. 3d and 4th. Alterations; owner, L. D. McCarthy; architect, H. D. Mitchell; contractor, L. N. Fletcher; signed, Sept. 15; filed, Sept. 16; cost \$1,400.

Clara near Rich. Three-story and basement; owner, T. D. McCarthy; architect, H. D. Mitchell; contractor, L. N. Fletcher; signed, Sept. 30; filed, Sept. 25; cost \$3,340.

D and 8th Ave. To build; owner, F. A. Freese; architect, C. M. Rousseau; contractor, L. B. Schmid; signed, Sept. 18; filed, Sept. 19; cost \$1,950.

D and 8th Ave. To build except plumbing, tinning and gas fitting; owner, George Fisher; architect, Chas. M. Rousseau; contractor, Chas. P. Ralston; signed, Sept. 12; filed, Sept. 13; cost \$800.

Dearborn Place near 17th. To build; owner, Julius Tammeyer; contractor, Jno. H. Pauls; signed, Sept. 23; filed, Sept. 27; cost \$4,400.

Dorland near Sanchez. To build; owner, J. H. Belsir; contractors, J. T. Lorenzen and E. G. Fevrier; signed, Oct. 9; filed, Oct. 10; cost \$4,190.

Dupont bet. Vallejo and Green. Repairing and alterations; owner, Daniel Seales; architects, Townsend & Wyneken; contractor, F. W. Kern; signed, Oct. 5; filed, Oct. 7; cost \$2,265.

Fell near Steiner. To build; owner, Thos. F. Murray; architect, W. H. Little; contractors, White Bros.; signed, Sept. 12; filed, Sept. 13; cost \$3,799.50.

Filbert and Scott. To build; owner, Carlo Casassa; architect, Wm. Mooser; contractors, G. B. Cavagis & L. Oneto; signed, Sept. 5; filed, Sept. 21; cost \$1,700.

Geary and Grant Ave. Painting and decorating; owners, Davis Bros.; contractor, W. G. Roch; signed, Oct. 5; filed, Oct. 10; cost \$2,350.

Geary and Grant Ave. Alterations and repairs; owners, Davis Bros.; contractor, Andrew McElroy; signed, Oct. 5; filed, Oct. 6; cost \$6,100.

Geary and Grant Ave. Alterations; owners, Davis Bros.; contractor, Jas. E. Britt; signed, Oct. 5; filed, Oct. 7; cost \$1,700.

Golden Gate Park Midwinter Fair Grounds. Mechanical Arts building; owner, Executive Committee Midwinter Fair; architect, Edward R. Swain; contractor, R. P. Harlbut; signed, Sept. 20; filed, Sept. 21; cost \$68,973.

Golden Gate Park. Manufactures and Liberal Arts building; owners, Executive Committee Midwinter Fair; architect, A. Page Brown; contractors, Smilie Bros.; signed, Sept. 19; filed, Sept. 21; cost \$107,300.

Golden Gate Park. Horticultural and Agricultural building; owner, Executive Committee Midwinter Fair; architect, Samuel Newsom; contractor, J. W. Wissinger; signed, Sept. 22; filed, Sept. 23; cost \$54,000.

Golden Gate Park. Midwinter Fair Grounds Art building; owner, Executive Committee California Midwinter Fair; architect, C. C. McDougal; contractors, Worrell & Miller; signed, Sept. 27; filed, Sept. 28; cost \$34,890.

Gough and Eddy. Art glass in all windows except basement; owner, St. Pauls German Evangelical Lutheran Church; architect, Julius Kraft; contractors, California Art Glass Bending and Cutting works; signed, Sept. 12; filed, Sept. 16; cost \$1,200.

Great Highway near B. Construction of Superstructures of pumping station all work above grade line of lot; owners, Olympic Salt Water Co.; architect, D. Ernest Melliss; contractor, Geo. H. Walker; signed, Sept. 18; filed, Sept. 23; cost \$8,895.

Hayes near Devisadero. To build; owner, Isadore Fox; contractor, T. C. Cochran; signed, Sept. 11; filed, Sept. 12; cost \$5,700.

Hayes and Lyon. All work except electric work, tinning, plumbing and painting; owner, Ivan V. Yadien; architect, T. J. Welsh; contractor, James E. Mooney; signed, Sept. 28; filed, Sept. 26; cost \$8,210.

Hampshire near 20th. Carpenter work, brick work, painting, plumbing, plaster, etc.; owner, H. Steinhagen; contractor, A. Klahn; signed, Sept. 15; filed, Sept. 16; cost \$2,320.

Hyde and Washington. All work to build; owner, Annie Le Guevee, Guardian of Florence Le Guevee and minors; architect, Edward R. Swain; contractors, F. W. Krelling & Sons; signed, Sept. 28; filed, Sept. 28; cost \$8,250.

Jefferson near Baker. Grading and sewerage building, etc.; owner, Mrs. Emma Haferegger; architect, H. D. Mitchell; contractor, John Miron; signed, Sept. 18; filed, Sept. 20; cost \$3,252.

Julius near Whiting. To build; owner, Mrs. Mary Malloy; architect, B. L. Clinch; contractors, J. F. Heffernan and Antonia Massa; signed, Sept. 7; filed, Sept. 12; cost \$1,500.

Laurel Hill Cemetery. Two-story frame and brick office; owner, Laurel Hill Cemetery Association; architects, Percy & Hamilton; contractor, F. W. Kern; signed, Sept. 20; filed, Sept. 27; cost \$13,063.

Lapidge and 18th. Three-story frame; owners, Mission Turn Verein; architects, Martens & Coffey; contractor, F. Klatt; signed, Oct. 6; filed, Oct. 6; cost \$7,340.

Main near Mission. All work for factory and warehouse; owner, Estate of I. B. Pissis; architects, Pissis & Moore; contractors, Richardson & Gale; signed, Sept. 29; filed, Sept. 30; cost \$8,600.

McAllister near Jones. Alteration and additions; owners, Katherine Adams & Eliza Kibbe; architect, Julius E. Kraft; contractor, S. H. Kent; signed, Sept. 15; filed, Oct. 4; cost \$8,000.

McAllister near Jones. Brickwork and patent chimneys; owners, K. Adams & Eliza Kibbe; architect, Julius E. Kraft; signed, Sept. 5; filed, Oct. 4; cost \$5,500.

McAllister near Jones. Lathing and plastering; owners, Katherine Adams & Eliza Kibbe; architect, J. E. Kraft; contractor, T. Murphy; signed, Sept. 15; filed, Oct. 4; cost \$2,350.

McAllister near Jones. Plumbing, etc.; owners, Katherine Adams and Eliza Kibbe; architect, J. E. Kraft; contractor, Jos. E. Britt; signed, Sept. 15; filed, Oct. 4; cost \$2,483.

Minerva near Plymouth. Excavating, etc., and all work for building; owner, Edward Nessler; contractors, Bates & Deuel; signed, Sept. 18; filed, Sept. 22; cost \$1420.

Ninth and Clementina. Lathing and plastering three-story frame with brick foundation; owner, Executors of Estate of John Frothingham; architect, Julius E. Kraft; contractor, A. Hennie; signed, Sept. 23; filed, Sept. 25; cost \$1,130.

Oak near Devisadero. Alterations and additions; owner, Lilly Schlessinger; contractors, B. McDougall & Son; contractors, Peterson & Olson; signed, Oct. 7; filed, Oct. 9; cost \$4,425.

Page near Webster. Building except brick work; owner, E. A. Hildebrand; architects, Martens & Coffey; contractor, Jos. Bucher; signed, Sept. 26; filed, Sept. 27; cost \$3,800.

Pacific and Central Ave. To build; owner, C. E. Brown; contractor, Philip Rive; signed, Oct. 5; filed, Oct. 6; cost \$3,375.

Post near Powell. Iron work and illuminating tiles; owner, W. T. Coleman; architects, Pissis & Moore; contractors, O'Connell & Lewis; signed, Sept. 21; filed, Oct. 5; cost \$1,450.

Post and Levenworth. Excavating, concrete, etc.; owners, S. F. Verein Assoc.; architects, Salfeld & Kohlburg; contractors, Gray Bros.; signed, Oct. 11; filed, Oct. 11; cost \$2,100.

Powell near Jackson. To build; owners, F. A. and J. Cavagnaro; architects, Henrikson & Mahoney; contractor, Robert Currie; signed, Oct. 8; filed, Oct. 9; cost \$1,825.

Point Lobos Ave. near Collins. To build; owner, Honora Ratledge; architect, M. J. Welsh; contractors, Douglass & O'Conner; signed, Sept. 25; filed, Sept. 27; cost \$2,400.

Pierce near Waller. To build; owner, J. C. Neilsen; architects, Kenitzer & Barth; contractor, J. W. Smith; signed, Sept. 12; filed, Sept. 13; cost \$2,975.

Sacramento near Drumm. To build brick structure; owner, Henry Pierce; architect, Clinton Day; contractor, J. H. Wilson; signed, Oct. 6; filed, Oct. 10; cost \$20,450.

Second street. Foundation to concrete lining of tide water tunnel; owner, Edison Light and Power Co.; architect, T. H. MacDonald; contractors, Healy, Tibbets & Co.; signed, Sept. 30; signed, Sept. 30; cost \$6,270.

Second street. Pile foundation; owners, Edison Light and Power Co.; architect, T. H. MacDonald; contractors, Healy, Tibbets & Co.; signed, Sept. 30; filed, Sept. 30; cost \$5,270.

ALAMEDA COUNTY.

Alameda Land Co. Removing 4,900 yards of earth owner, Alameda Land Co., engineer, Geo. L. Nusbaumer; contractor, E. J. Bates; signed, Sept. 28; filed, Sept. 30; cost \$900.

Central Ave. and Webster. Brick work, carpenter work, etc.; owner, Quincy Chase; architect, J. B. Matheson; contractors, Concannon & Shea; signed, Sept. 8; filed, Sept. 12; cost \$2,325.

Daly Scenic Park Tract, Berkeley. Frame building; owner, Bete Theta Assoc.; contractor, M. Gallagher and M. F. Milburn; signed, Sept. 12; filed, Sept. 14; cost \$7,910.

Daly Scenic Park Tract, lot 15, block 11. Two-story frame; owner, M. Carpenter; contractor, Fred Estey; signed, Sept. 16; filed, Sept. 18; cost \$2,936.

Fasking Park. Excavating, brick, carpenter, plumbing, etc., on church; owner, First Unitarian Society of Alameda; architect, W. J. Mathews; contractor, H. E. Jones; signed, Sept. 22; filed, Sept. 30; cost \$8,430.

Hayes street, San Leandro. Six-room cottage; owner, Mrs. L. Ivey; contractor, I. E. Kent; signed, Sept. 14; filed, Sept. 18; cost \$1,600.

Kings Ave. and Caroline street. Alterations and additions; owner, S. J. Loop; contractor, A. R. Denke; signed, Sept. 2; filed, Sept. 11; cost \$300.

San Lorenzo, on the Perkins tract. One-story frame; owner, E. C. Perkins; architect, Chas. Mau; contractor, R. Albertson; signed, Sept. 6; filed, Sept. 11; cost \$1,892.

Tentonia H'd. Assoc. To build stable; owner, Geo. Whittell; architects, Coxhead & Coxhead; contractor, J. J. Boyle; signed, Sept. 25; filed, Sept. 23; cost \$2,980.

Twelfth and Washington, Oakland. Cement work on two-story brick; owners Henry, Sol and Fred Kahn; architect, W. J. Mathews; contractor, F. W. Wetmore; signed, Sept. 16; filed, Sept. 18; cost \$1,100.

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NUMBER II.

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

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NOW IN THE FOURTEENTH YEAR.

W. J. CUTHBERTSON, President.

OLIVER EVERETT, Secretary.

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

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

WE present to our readers to-day copious extracts from the Progress Report of Engineers in charge to devise and provide a system of sewerage for San Francisco.

This report shows in a graphic and succinct way the gross fraud and incompetence which has characterized the designing and construction of drainage works of this city. The dismissal of the Engineers in charge was in keeping with the discourteous dismissal of the previous Board of Engineers. The whole matter of spending the public and private funds is now turned over to the tender mercies of the politicians who infest the City Hall. We see no reason why a substantial saloon keeper should not be elected City and County Attorney since unprofessional men are elected to carry out the work of Civil Engineers in other departments.

For years the necessity of devising a proper system of sewerage for the city of San Francisco has been apparent to everyone. Time and again has the matter been brought to the attention of the public and the public officials, and the dangers to health and life pointed out in no uncertain terms. Last year it did really seem as if the time of deliverance was approaching; a competent Sewerage Commission was organized, and an efficient band of engineers chosen to investigate the whole subject, and propose a practical solution of the problem. But it was too much to expect that a body independent of political control, could exist in this city. On the farcical plea of pretended economy the Board of Supervisors resolved to dispense with the services of the Sewerage Commission and the Board of Engineers, and once more the health of a great city was left to take such care of itself as it best may.

The time will come, however, when the imperative nature of the needed reforms will be felt in a way to command recognition, and the longer this recognition is delayed, the more disastrous will be the results of delay, and the more expensive the remedy required.

THE favorable progress still continues to be made with the erection of the exhibition buildings designed to house the wonders to be shown at the coming California Midwinter International Exposition. Not only are the main buildings almost all covered in, but the smaller buildings for the different counties and the special features, are well under way. The Firth Wheel, the Cyclorama of the Volcano of Kilauea, the Japanese Village, and the various attractions too numerous to mention in detail at present; but our subscribers may rest assured that at the proper time the CALIFORNIA ARCHITECT will present to its readers in its usual attractive form all the notable features of what bids fair to be a credit to the State, and a great attraction to the visitors from the east and other parts of the world.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

NINTH ANNUAL EXHIBITION.

THE Ninth Annual Exhibition of The Architectural League of New York, will be held at the American Fine Arts Society's Building, 215 West 57th street, New York City; from Monday, December 18th, 1893 to Tuesday, January 9th, 1894, inclusive.

The Exhibition will include: Architectural Designs Embodied in Plans, Elevations and Sections and shown in Perspective; Finished Detailed Working-drawings; Designs for Decoration, Furniture and Allied Work; Cartoons for Stained Glass; Full-size Working-drawings for Ornament, Models of executed or proposed Work; Completed work such as Carvings in Stone or Wood, Bronze, Wrought-Iron, Mosaic, Glass, Textile Fabrics and Furniture; Sketches, Drawings and Paintings of Architectural or Decorative Subjects.

Photographs will be admitted only when they serve to elucidate an accepted exhibit. It is especially requested, that all perspective drawings of architectural subjects shall be accompanied by plans drawn to a small scale.

Exhibits will be received at the Fine Arts Society's Building on and after Wednesday, December 6th; none can be received after Tuesday, December 12th.

The League will collect and return, free of charge to exhibitors, in New York City, Philadelphia and Boston, all exhibits that have been properly entered; all others must be delivered at the Fine Arts Society's Building, carriage prepaid and ready for exhibition.

The private view for Exhibitors, the Press and Members of the Architectural League will be given on Friday, December 15th, from 10 A. M., to 4 P. M.

Collections will be made as follows: In New York City on Thursday, Friday and Saturday December 7th, 8th and 9th, by W. S. Budworth & Son, No 1 West 14th street.

In Boston, on Wednesday and Thursday, December 6th and 7th, by Williams & Everett, 190 Boylston street.

In Philadelphia, on Wednesday and Thursday, December 6th and 7th, by Isaiah Price, 10 South 18th street.

The enclosed blank must be filled out and sent to the Secretary before November 24th. No work will be sent for unless the entry for it has been received by the Secretary, Mr. Charles I. Berg, No. 10 West 23d street.

All exhibits must be properly labelled.

Drawings must be either framed or mounted.

Exhibits of non-resident members are to be sent to a consignee in New York, who will deliver them at the Fine Arts Society's Building, and return them to the exhibitor at the close of the Exhibition.

The names of such consignee are: William S. Budworth & Son, No. 1 West 14th street; Thomas A. Wilmurt, 54 East 13th street; F. Harrison Mills, 147 East 23d street.

The Committee on Exhibitions will be the jury for the selection and arrangement of all exhibits.

For the Committee on Exhibitions: William B. Tuthill, Chairman Sub-Committee on Architecture.

Committee on Exhibitions: George B. Post, Chairman

Ex-Officio; Warren R. Briggs, Ex-Officio; Frank A. Wright, Ex-Officio.

Sub-Committee on Architecture: George Keister, Bruce Price, William B. Tuthill, Chairman.

Sub-Committee on Decoration: D. C. French; Will H. Low, F. S. Lamb, Chairman.



REPORT OF THE ENGINEERS IN CHARGE TO DEVISE AND PROVIDE A SYSTEM OF SEWERAGE.

SAN FRANCISCO, JULY 15, 1893.

To the Honorable, the Board of Supervisors
of the City and County of San Francisco—

GENTLEMEN: We submit herewith a progress report covering the work done by the board of engineers as finally organized on August 27, 1892, under Resolution No. 6612 (Third Series), and that of the Engineers in charge to devise and provide a system of sewerage, appointed by Resolution 8294 (Third Series), together with a careful compilation of official street grades in the form of a supplement. * * *

THE PRESENT SITUATION.

Immediately upon final organization of the Board of Engineers, the investigation of the condition of the sewers now in use in San Francisco was commenced and records were searched to supplement the results of this investigation in order to make this data, which is essential as a basis for the work of the Board, available in a comprehensive and readily accessible form. Entering upon this work of collecting and compiling data with reference to the character and condition of sewers now in use, it was at once found that the records could not be relied on to disclose the size or character of the sewer in any particular street. The information concerning sewer gradients was, we may say, entirely lacking, and the information concerning depths of sewers below street grade was so fragmentary and in such unsatisfactory form as to be of no value whatsoever. Moreover, it was at once found that specifications for sewer constructions were, and had been, general in character, with no special requirements to fit particular cases, except for a few sewers that were constructed for districts and according to plans specially ordered to be prepared for such districts; that the specifications, whether of the general or of a specific character, were not closely adhered to, and were often grossly violated, and that no record was preserved showing what was actually

done and to what extent a deviation from plans and specifications had (whether rightfully or not) been permitted by the authorities in charge of sewer construction.

It has heretofore been generally required in the specifications that pipe sewers shall have "openings twenty-five feet apart, sufficiently large to receive a six-inch pipe." As the subdivision of street frontage in the residence portion of the city is generally into twenty-five foot lots, it is evident that this requirement is intended to insure available openings for house connections twenty-five feet apart on each side of every pipe sewer. Yet, within a year, sewers have been constructed under these specifications with less than one-tenth of the required number of Ys for house connections in place, and others have been accepted as properly constructed although the openings required were put upon alternate sides of the sewer, making those upon either side fifty feet apart. In no case however, not even when the specifications were strictly complied with, has a record of the position of the Ys been preserved, and the lack of information as to position of openings for house connections is so indefinite that it has long been customary to disregard their existence entirely and to make house connections by breaking through the sides of the sewers wherever convenient. Under such circumstances it is not surprising that the necessity for the number of openings prescribed by ordinance and required by specifications is not recognized by contractors, and that believing the Ys useless, as many as possible are omitted.

The general specifications as handed down by one set of officers to the next during many administrations require that "steps must be placed in each manhole, formed of half-inch iron set well into the brickwork, etc.," yet for years past the manholes have been constructed without steps.

These and other deviations from specifications are and have been very common in connection with sewer construction in San Francisco, and it is pertinent to inquire why they are possible.

No comprehensive sewer and drainage system for San Francisco has ever been made the guide in the matter of sewer construction. We are at this late date charged with devising one. But even if one had been designed, modifications of detail due to the extension of streets, changes of street grades and other unforeseen conditions would have to be made from time to time.

The duty of preparing the plans and specifications for sewers required from time to time falls to the City and County Surveyor. He prescribes gradients and exercises control over line and grade. The supervision of construction, however falls to the Superintendent of Streets, whose department is required to compel strict compliance with specifications.

Sewers are constructed either by public or private contract. In case of sewer construction by public contract, all proceedings, the calling of bids, the awarding of the contract and the execution of the work are in direct charge of the city officers.

In the case of sewer construction by private contract, the planning and supervising of the work are in charge of city officials, but the authorities are not concerned in the award of the contract, except that before any private sewer construction can be undertaken, a permit for the work must be secured from the Superintendent of Streets.

Whether done by public or private contract, the work is to conform to requirements prescribed by ordinance and specifications, and it is the duty of the Superintendent of Streets to know that there are no deviations from such requirements. Whether constructed by public or private contract, all sewers in streets that have been finally accepted as improved streets must be maintained and kept in repair at public expense.

The original cost of sewers falls upon the property benefited in proportion to amount of benefit and in proportion to street frontage. In the case of all local sewers, the first cost falls on the property fronting upon the streets sewer.

Although it would appear that by reason of being required to furnish plans and specifications for each sewer constructed,

the City and County Surveyor is interested in knowing that the plans are carried out and that the specifications are complied with, it seems to have become a well established custom for that office to participate in ordinary sewer work only to the extent of giving the contractor line and grade for his work, and of certifying to the fact that the sewer at its manholes, when completed, has a depth below street grade as named in the certificate then issued.

The City and County Surveyor charges fees prescribed by ordinance for his services, and as he personally bears all the expenses of surveys it is natural to suppose that he will endeavor to keep his expenses as low as possible. It is not surprising, then, that when information in his office justifies such a course, he issues diagrams to the contractor with instructions to conform to street curbs for line and grade, or to place the sewer at "10 feet below street grades if connections will allow," furnishing reference points in the latter case from which a skillful contractor establishes his own grade line.

This system of issuing indefinite, unintelligible instructions to contractors, and for the guidance of superintendents of streets, prevails to-day, but it is not of recent origin; it has been in vogue throughout many administrations and has led to innumerable defects in construction that will entail great expense to correct.

To the engineering profession the explanation is due in this connection that the office of City and County Surveyor is an elective one, that party politics can be relied on in San Francisco no more than elsewhere to consider qualifications for office a prerequisite to election, and that the responsibility for all sewer work has fallen partly upon the Surveyor and partly upon the Superintendent of Streets. Without such explanation it would indeed be difficult to account for the persistent lack of endeavor to effect a reform. The system of municipal administration is at fault, more than the individual officers, and better results will be difficult of attainment until the construction of sewers receives intelligent and honest engineering direction and supervision. In this connection Hon. William Alvord, Mayor of San Francisco, in his address when retiring from office, says: "If the offices of Superintendent of Streets and Surveyor were united, and the Surveyor allowed the same executive aids which the Superintendent now has, receiving only a salary for his duties, it would be possible to prosecute such works as the opening, grading, paving and sewerage of streets according to a comprehensive scientific method and at greatly reduced cost to property holders, who are now assessed doubly and trebly by reason of the many mistakes made in detached improvements. The want of able scientific direction in this department is more especially evident in the matter of sewerage. At present short, isolated sewers are often constructed, without outlet and without reference to ultimate connection with the mains forming part of a well studied, comprehensive system, because such a system has not been commenced or planned."

So lax has been the system of administration in this direction that it is safe to say that superintendents of streets have, more frequently than even the several City and County surveyors, been permitted to prescribe the character and size of sewers to be constructed. The work of sewer construction has moreover been carried forward piecemeal, generally a block or a crossing, rarely a few blocks at a time, according to the temper and inclination of the property holders.

The general specifications for sewer construction being the supposed basis of sewer work, and there being no comprehensive scheme of drainage to adhere to, it has been perfectly natural for the official in direct charge of sewer maintenance and sewer cleaning to insist upon carrying out his views, even in the matter of determining what kind of a sewer should be constructed in any block or in any street crossing, though in fact the only qualification that could be claimed as justifying the assuming of such a responsibility was practical experience in street matters, and the intelligence and common sense supposed to be a part of the stock in trade of every city official.

Only when it seemed advisable to carry out sewer construction as a work of benefit to a district, in which case the City and County Surveyor has had an opportunity of mak-

ing a special charge for plans and specifications, does he seem to have been consulted as to general requirements, and not alone as to line and grade.

Very soon after the organization of the Board of Engineers, whose successors we are, the following letter was sent to the Hon. Board of Supervisors:

To the Honorable Board of Supervisors
of the City and County of San Francisco—

GENTLEMEN: At the outset of our investigation we find that a practice has long been prevalent of constructing brick sewer crossings where none are necessary, and of making many lateral sewers of much larger dimensions than actually required.

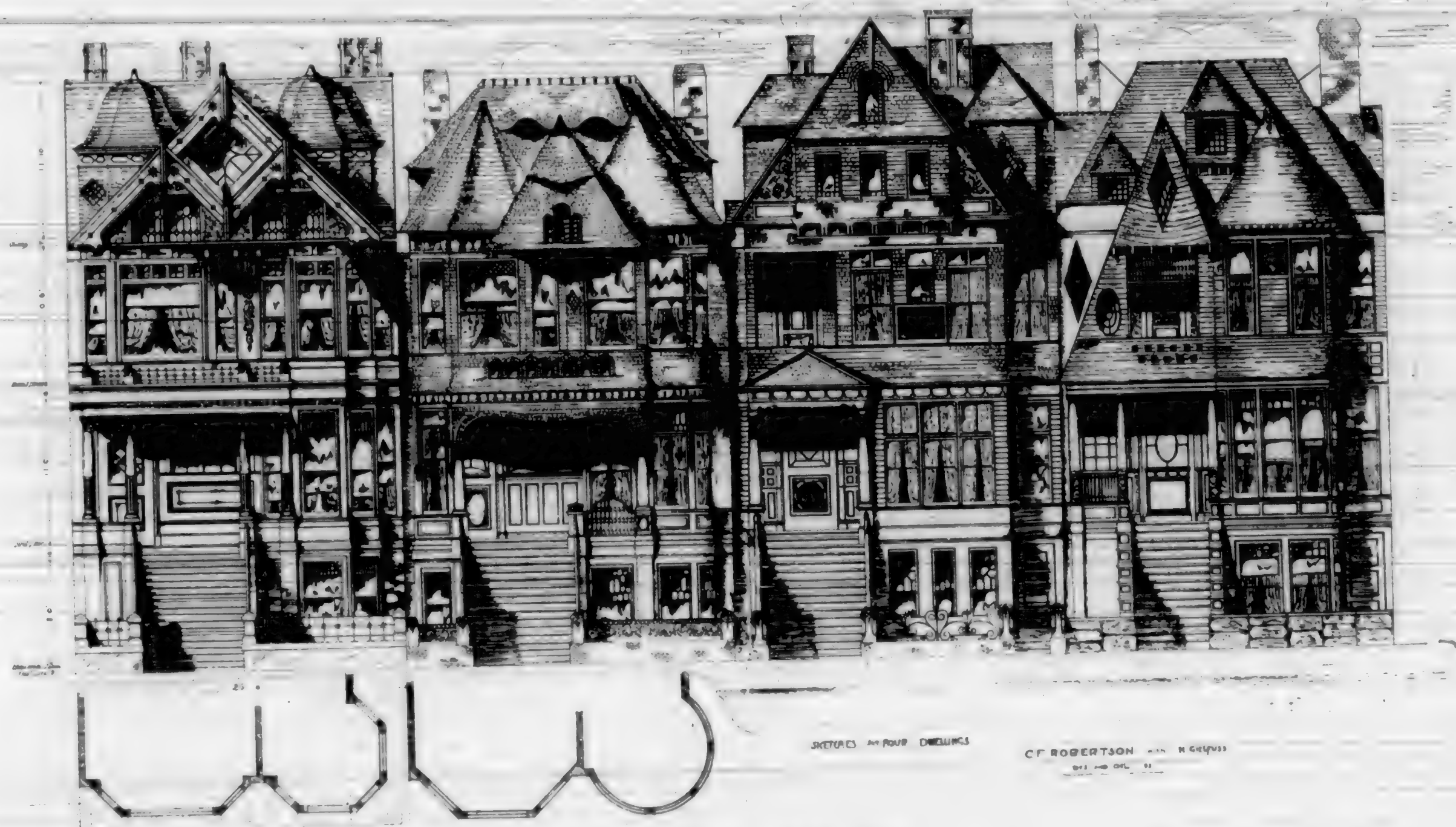
Lateral sewers of excessive size are not only more costly in construction and maintenance than properly proportioned sewers would be, but are detrimental to health by reason of the difficulty of properly flushing them.

"FURTHER RESOLVED, That the City Surveyor be and is hereby requested to consult with the said Board of Engineers in the preparation of specifications for sewer work, so that the same may be constructed in a manner to harmonize with the plans to be hereafter adopted to provide for a proper system of sewerage."

The letter above quoted is self-explanatory.

The absurd practice of constructing large brick sewers in street crossings has extended into all parts of the city. As a result of this practice and the construction of sewers in detached sections, a block or a crossing at a time, several distinctive types of sewer crossings have resulted which it will be necessary to describe somewhat in detail.

In the first place, all sewers in level street crossings are level from end to end, or very nearly level, no matter at what gradients the respective streets approach the crossing. This is a fruitful source of trouble, because at the points where gradients suddenly change regular flow is interfered



ROW OF CITY DWELLINGS.

Should your Honorable Board so desire, this Board will be pleased to advise in these matters and to pass on any project, plans or specifications which may be referred to us, to the end that more systematic and economical work may be at once inaugurated.

The suggestion contained in the letter was at once acted upon, and a resolution was passed containing the following:

RESOLUTION NO. 7481 (THIRD SERIES.)

"RESOLVED, That the Superintendent of Streets be and is hereby requested, before recommending the construction of sewers to this Board, to first submit the proposed sewer work and the location of same to the Board of Engineers appointed to devise and provide a system of sewerage, for their opinion and approval:

"FIRST—As to the necessity of the proposed sewer.

"SECOND—As to the required inside diameter or other dimensions of the sewer, its grade and required depth.

"THIRD—As to the material to be used in constructing the sewer.

with; deposits result in the level stretches, which often remain for long periods, and sometimes can only be entirely removed by flushing, and immediately after removal begin to reaccumulate. This applies to intersecting brick sewers as well as the intersecting pipe sewers when no brick sewer intervenes between them and the manhole at the center of the street crossing.

SUPPLEMENTAL REPORT IN COMPLIANCE WITH RESOLUTION NO. 9157, (THIRD SERIES.)

ABOLISHING THE OFFICE OF ENGINEERS IN CHARGE TO DEVISE AND PROVIDE A SYSTEM OF SEWERAGE AND TERMINATING THE WORK.

SAN FRANCISCO, CAL., SEPTEMBER 30th, 1893.

To the Honorable Board of Supervisors

City and County of San Francisco—

GENTLEMEN: Complying with instructions contained in Resolution No. 9157 (Third Series) which provides that this

November 1893.]

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

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Department be abolished from and after September 30th, 1893, and that the "Board of Engineers are hereby required to turn over and file in the office of this Board all maps, books, data, etc., with a full report on or before said date," we have turned over to you all maps, books, papers, furniture, material and other property under our control as per inventory hereunto attached, and hold the receipt of your clerk for the same.

In our Progress Report, submitted under date of July 15th, we have clearly set forth the defects of the present system of administrative and executive control of public works in this city, with special reference to sewers, and have cited a sufficient number of instances of evils resulting from divided official responsibility, faulty design, carelessness, ignorance and fraud, to convince every intelligent citizen of the need of a better system of planning, directing and managing public works as well as of the need of a comprehensive system of sewerage, which has long been recognized and is daily increasing. To this Progress Report we have but little to add.

In a reply to a communication from Wm. Broderick, Auditor, at the close of the last fiscal year, copies of which were sent to his Honor, L. R. Ellert, the Mayor, and to the chairman of the Finance Committee, we call attention to the urgent necessity for abating many of the serious nuisances created in different parts of the city by defects in the sewers for which the city is responsible and recommending that \$100,000.00 be made available to be extended under our supervision, for work planned by us for the protection of the health of the people.

For the prosecution of the work with which we were specially charged, the devising of a system of sewerage, we requested that \$20,000.00 be made available, and also emphasized the necessity of making surveys to serve as a basis for establishing grades throughout those portions of the city where not already established, and of correcting grades where a revision was essential.

It was considered impossible to comply with these recommendations although the urgency of them was not questioned. In their stead the sum of \$40,000.00 was set apart to be expended for modifications of the flow of sewage and the expenses of this office. We thought we had reason to expect more in view of the importance of our work, its recognized necessity, and the fact that we had turned into the general fund an unexpended balance of \$17,238.48 at the end of the last fiscal year, which had not been expended because it would not have been to the best interests of our work to use it, as explained in our Progress Report. We received no intimation as to the apportionment which we were to make of the \$40,000.00 set apart for our use, but the necessities were such in some portions of the city, where there have been annually recurring outflows of sewage from the sewers into the streets, yards, cellars and even houses, notably in the low portions of Eleventh Ward, that we are impelled to plan corrective works and suggest remedial measures as outlined in our two reports dated September 7th, 1893.

The plans and specifications for these works are now on file among the papers turned over to you by us. They do not by any means cover all the work which we had intended to recommend as necessary to correct the most glaring of that class of present evils whose existence is chargeable to a bad administrative system and the negligence, incompetence or corruption of representatives of the city. But these improvements are the most important and would if carried out have involved an expenditure estimated by us at \$27,000.00, being as great an amount as we thought ourselves justified in expending out of our limited appropriation.

They were not planned as a part of any proposed comprehensive system, but are intended to make efficient some of the principal existing sewers. Had a greater fund been made available for such corrective work, we should have suggested among many minor changes the improvement of Fell street sewer on Fourteenth street between Church and Dolores, where its grade needs correction; a change in

Seventh street sewer where at Townsend street, the extension toward Channel street was this year constructed twenty inches higher than the bottom of the old sewer north of Townsend street, and to this extent permits the accumulation of filth, and is an obstruction to the flow of sewage down Seventh street; a correction of grade in Sixteenth street sewer near Folsom street where there is a slope the wrong way; some corrective work near Pacific and Davis streets where the continuity of the Pacific street sewer is interrupted by a sudden rise of two and one half feet; besides the improvement of scores of sewer crossings in all parts of the city.

The necessity for the immediate carrying out of some corrective work was forced upon our notice in making a study of the character, condition and serviceability of the existing



—Tower of San Miguel,—
—Saragossa, Spain—

sewers, and we have recommended some of this necessary work, believing ourselves authorized to act in such matters at least in an advisory and supervising capacity by the resolution under which we were appointed and which directs us "to devise and provide a system of sewerage for this City and County."

As explained in our Progress Report it is essential that the system should be planned with due regard to the probable growth of the city, so that without reconstruction of main lines the system can be adapted to further requirements.

Although we are not now prepared to fully endorse any project we feel it our duty to submit at this time a brief outline of some of the measures which we believe will have to be intelligently and honestly carried out before this community will have received from the proper authorities that relief which it is of right entitled to demand.



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.

THE Court House at Glen Ellen is by John M. Curtis, architect of this city.

A Competitive design for the addition to the Alameda Court House is by J. W. Cuthbertson, architect.

R. H. White has an illustration of his residence of which he is the architect.

RESIDENCE of C. L. Ruggles at Stockton, Cal., is by Architect George Rushforth of that city.

THE CEMENTING OF STEAM PIPE JOINTS.

THE German technical papers are remarkable for the practical receipts which they contain; not that our own journals do not contain practical receipts, but because those in the German papers, instead of being copied from ancient receipt-books or concocted at random, usually bears the name of some well-known scientific man, and are based on reasoning as well as experience. One of these receipts, by Herr K. Keyfar, is copied in the *Bautechnische Zeitschrift*, and is worth remembering by architects, as well as by steam-fitters and plumbers. As is well known, the cement used for making tight the joints of steam-pipes and other ironwork exposed to heat and pressure is a pinkish putty, now commonly made with a mixture of white and red lead, although it is not long since pure red lead was supposed to be the only proper material. This lead-putty is, however, according to Herr Feyfar, often carelessly and ignorantly made, so that it fails, sometimes to a dangerous extent, to do what is required of it. Properly, the cement for putting together steam-pipes should be made with equal parts of pure red and white lead, thoroughly mixed and well kneaded with pure linseed oil, which has been rendered drying by boiling with ten per cent of red lead. Workmen in steam-fitting shops do not know much about the properties of oils, and often mix their putty with raw linseed oil or grease, or even kerosene. It is hardly necessary to say that coal-oil is soon volatilized by the heat, leaving the white and red lead in the form of power. Grease is not much better, and raw linseed oil hardens slowly, and should not be employed. Where the materials are suitable the putty sets quickly, and becomes so hard that it can with difficulty be cut with a chisel. The mixture of red and white lead has certain advantages over either separately, which should be understood. Red lead alone gives a hard and quick-setting cement, but the red-lead putty is not very plastic, and does not cling well to the surfaces of the iron. White lead alone makes a plastic and adherent putty, but while red lead gives up a part of its

oxygen to the oil, so that a red-lead putty hardens all through, white lead does not yield oxygen, and a mass of white-lead putty hardens only on the surface, remaining for a long time soft in the interior. A mixture of the two substances combines the advantages of both. In kneading the putty, care should be taken not to allow iron filings or bits of dust to get into it. Where the joint is not to be exposed to heat, chalk may be added to the putty in quantities equal to that of the white lead. If the drying must be hastened, a little brown oxide of manganese, very finely ground, will help it. For hot joints, finely ground graphite, in quantity equal to the white lead, may be added, but the granite cement does not set so quickly as the lead alone. The surfaces to be joined should be even, as left by the turning-lathe or planer, but the putty will not stick well to a polished surface. Where the putty alone must support a severe pressure, as in the case of a flange-joint in a steam-pipe, it is best to strengthen it by inserting in the joint a piece of paper or felt, covered with putty on both sides, and if the joints are very rough, as in the case of flanges which have not been turned or planed, it may be best to mix some threads of hemp or flax with the putty, but care should be taken not to use too much. Where the joint is exposed to great heat, no combustible substance, such as flax or hemp, is suitable, and the best way is to cut out a piece of wire gauze, spread it thickly over with putty, and lay in the joint. It is sometimes necessary to make steam-tight joints in such a manner that they can be readily taken apart and replaced, as in the case of the man-hole of a boiler or the head of a cylinder. For making these joints the lead-putty is unsuitable, as it becomes too hard to be easily removed, and it is best to employ felt or soft paper, soaked with boiled linseed oil. If possible, sheets of such paper should be previously prepared by soaking with the oil and drying, and, when used, they should be cut to the proper shape, covered on both sides with boiled oil and laid in the joint.—*American Architect and Building News*.

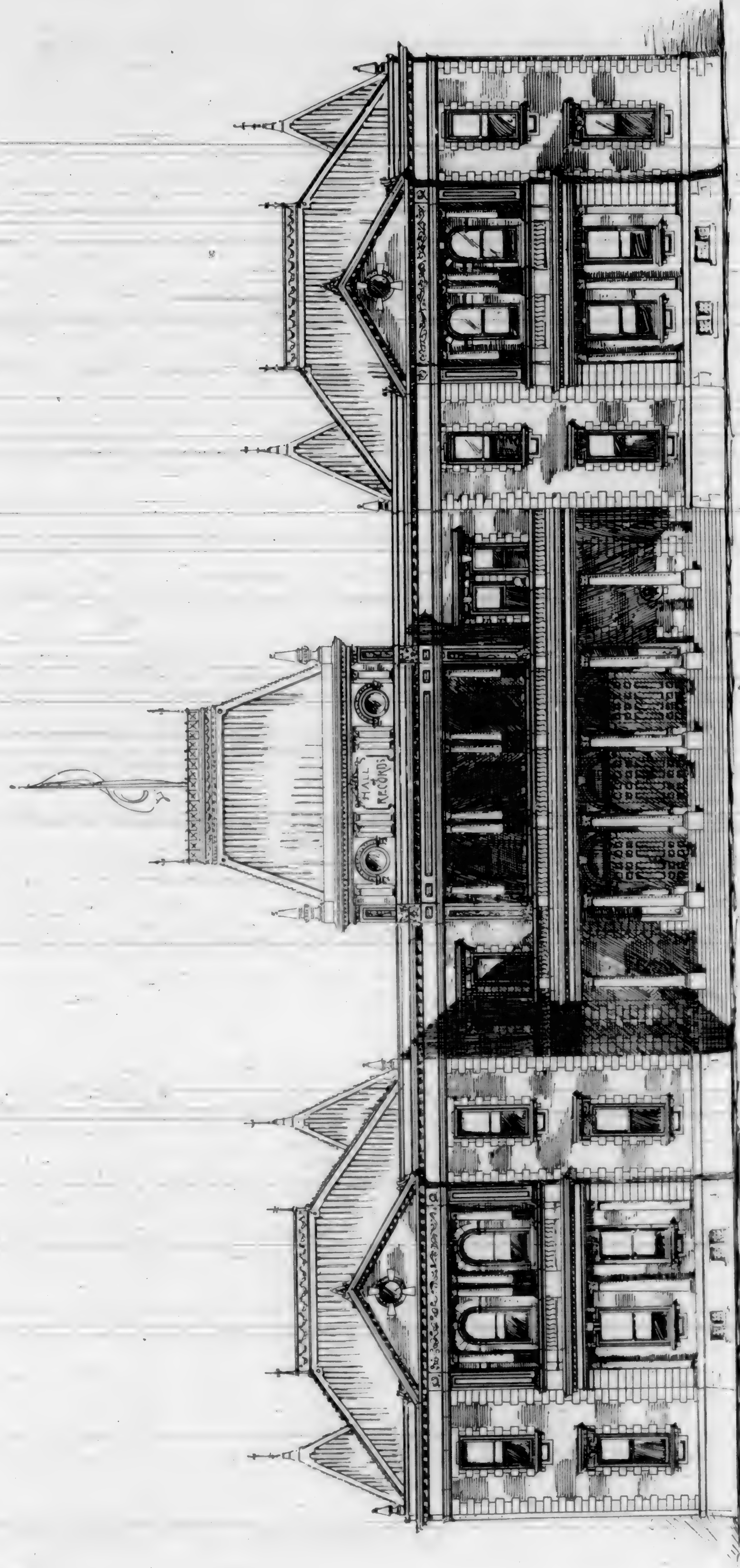
CLAY EMBANKMENTS.

THE support of embankments, where clay forms a considerable part of the material, is a kind of mystery to the unskilled owner and builder of such embankments. In Marine County, opposite this city, for example, there are clay strata all over the slopes, and slides thus caused can be seen on every hand, so the conclusion is that clay will not stand as an embankment unless held by bulkheads of masonry or wood. The fact is, however, that clay stands very well at an angle of 45 degrees, or 1 to 1, if it is drained; but runs like mortar at 16 degrees, or 3 to 1, if saturated. It is all a question of water. No other material is so much affected by saturation. It is at the same time the best and worst material for an embankment. A range of 16 to 45 degrees between drained and undrained embankments is phenomenal. Clay embankments require drains to be placed at frequent intervals, and should have laths of wood, straw or other substance laid in, to form leading channels or perforations connecting to the drains.—*Industry*.

DRUIDIC STONES.

THE prospects seems to be that our great-grand children will know about the remains of the period known as Druidical, or megalithic, only through books, says *The American Architect and Building News*, for the actual monuments of the period are fast disappearing. The estates containing the principal collections of Druidic stones in Brittany have been bought by the Government, but no provision is made for guarding them, and ignorant and mischievous picnickers who visit them, are allowed to do as they please with them. In England, the great monument of Stonehenge, which, if not so extensive as that of Carnac, is more perfect, is said to be now totally neglected by its owner. A few years ago, a man was detailed to keep order among the visitors, but this guardian is said to have been withdrawn of

COMPETITIVE DESIGN FOR
 ADDITIONS to ALAMEDA RECORD-HALL



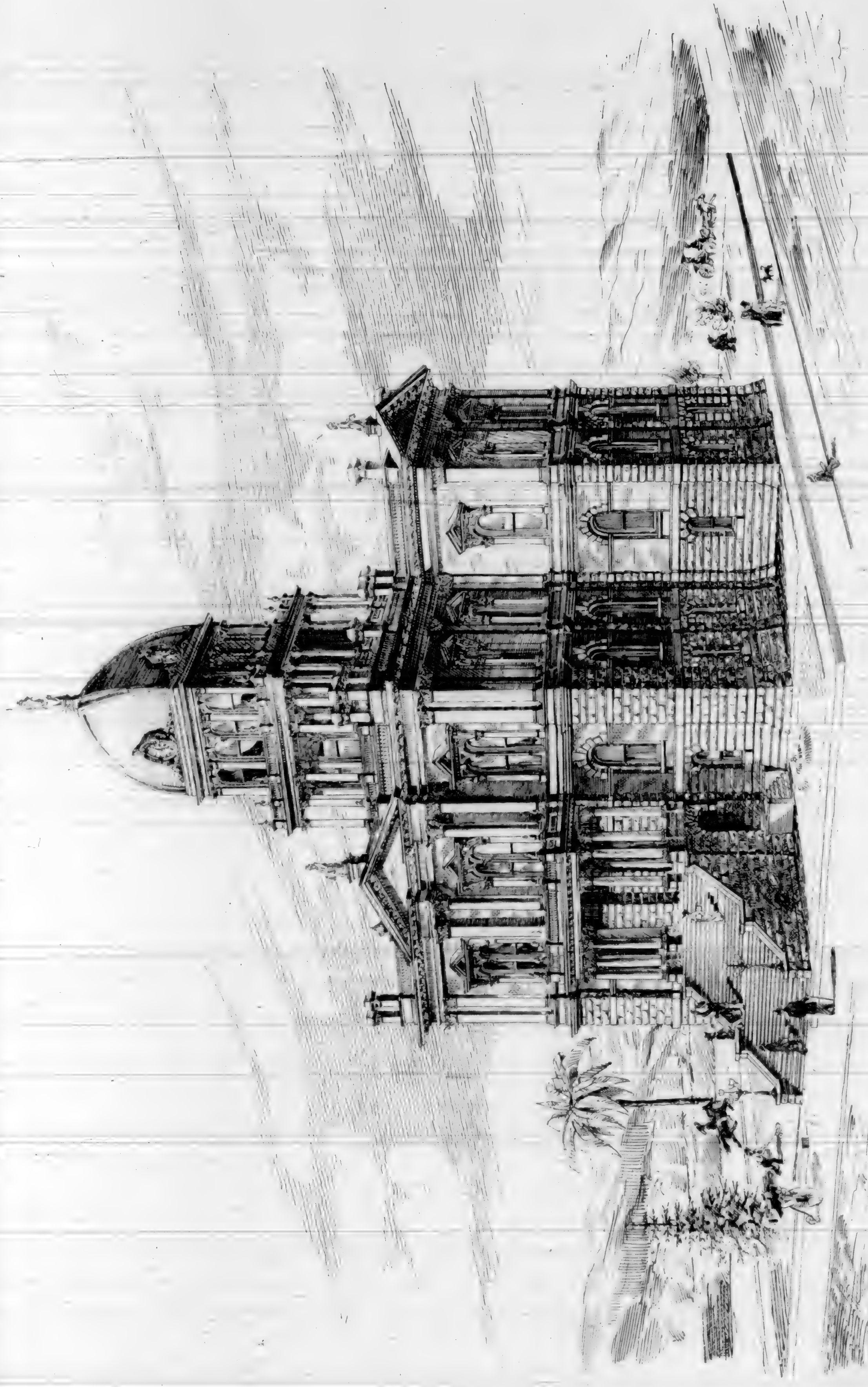
— ELEVATION OF BROADWAY FRONT WITH ADDITIONAL WINGS —

W. L. Cuthbertson, Architect

CALIFORNIA ARCHITECT & BUILDING NEWS
 SAN FRANCISCO

BRITTON & REY PHOTO LITH

VOL. XIV N° II NOVEMBER 1893.



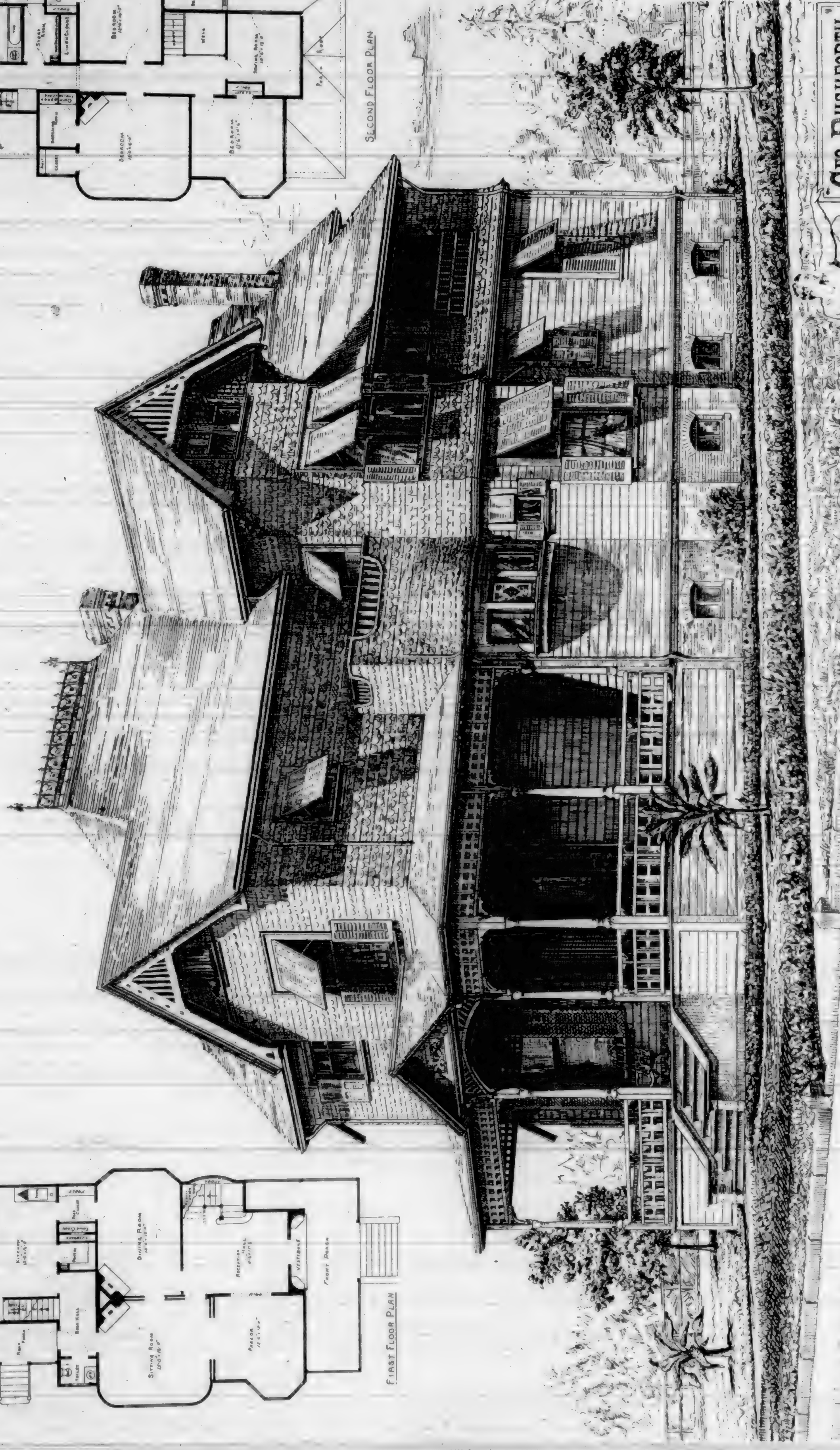
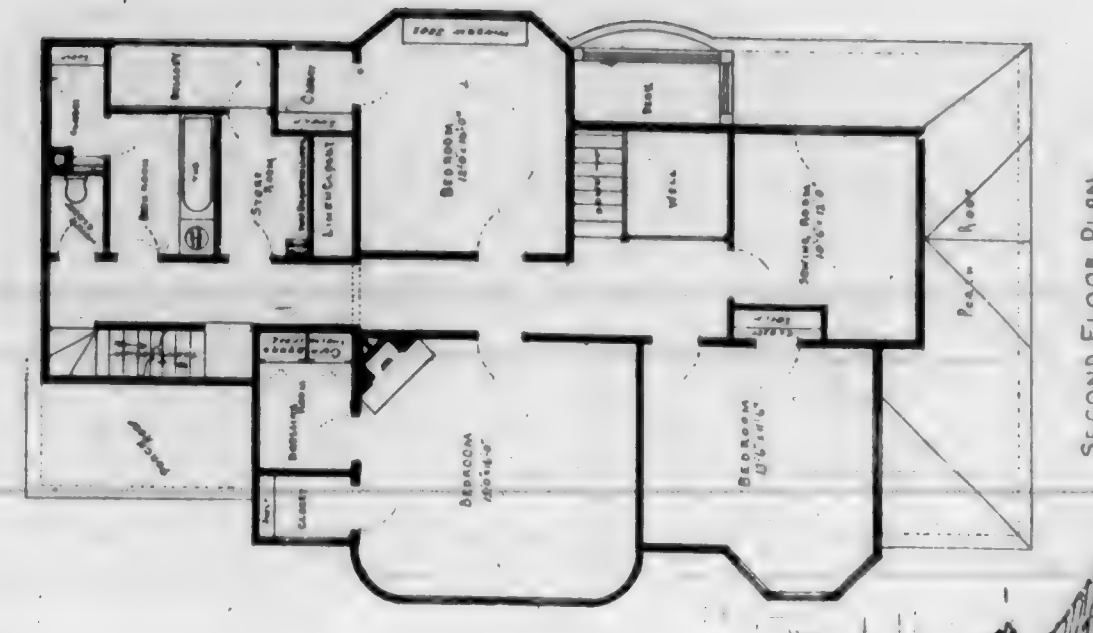
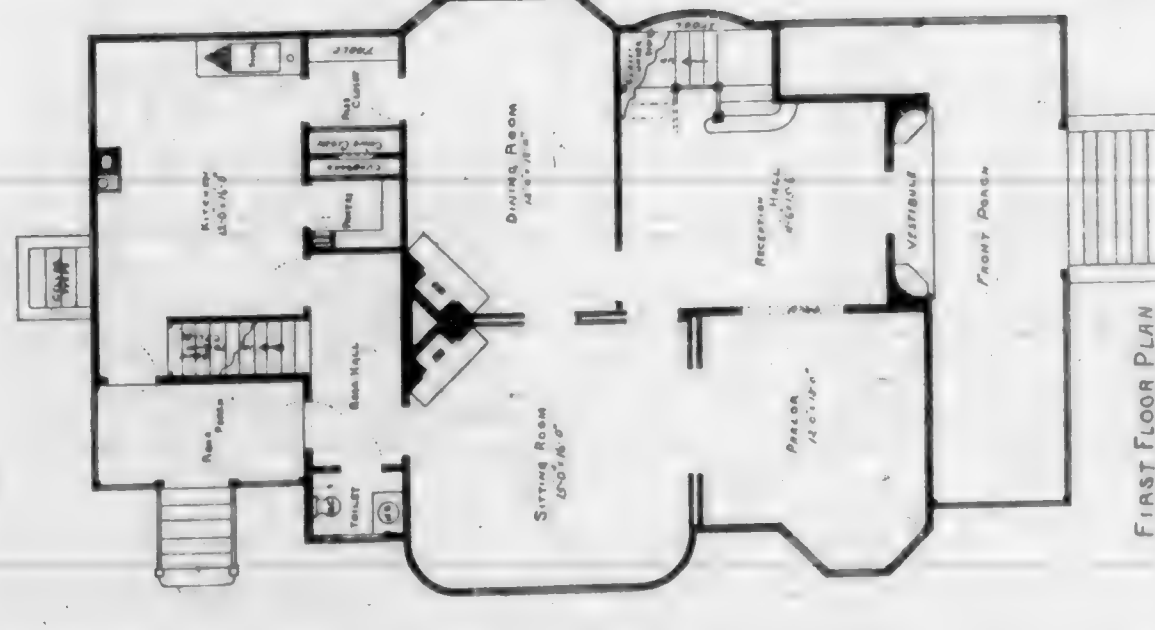
NEW COURT HOUSE, GLENN COUNTY, CAL.
JOHN M. CURTIS, ARCHTCT. 126 KEARNEY ST. S.F.

Board of Supervisors.
H. C. KELLY, Chairman,
D. M. KIRKMAN,
R. B. WOODFORD.
P. R. GARRETT,
F. W. BLISS,
W. H. BART, Chas.

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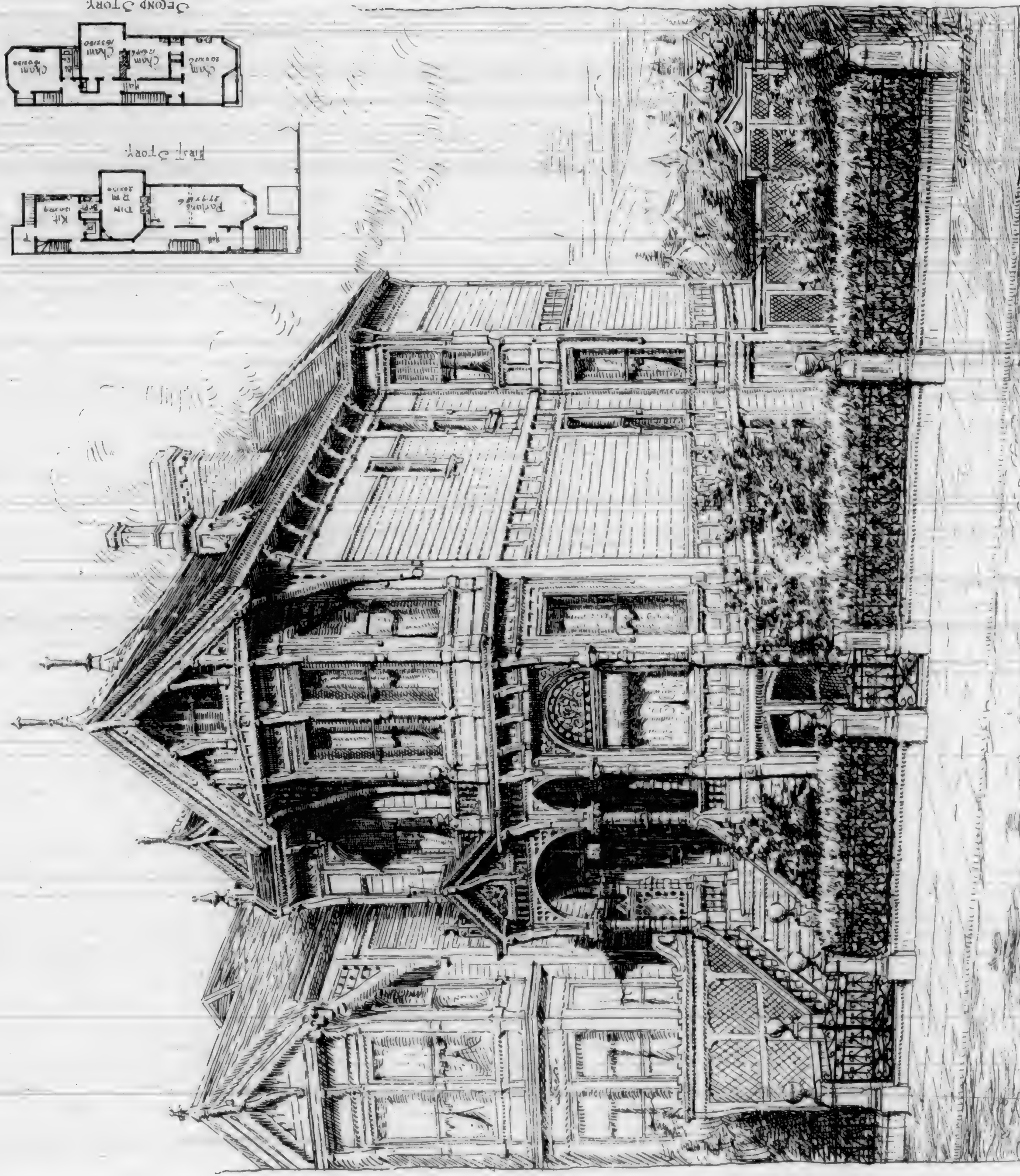


RESIDENCE of C. L. RUGGLES, Esq.
STOCKTON, CAL.

GEO. RUSHFORTH,
ARCHTCT.
STOCKTON, CAL.

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

VOL. XIV No II NOVEMBER 1893.



—R.H. WHITE, ARCHT. SAN FRANCISCO.—

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & PEY PHOTO LITH.

VOL. XIV No. II NOVEMBER 1893.

late, and there is nothing to prevent people from building fires under the granite colonnade if they wish.

If Stonehenge and Carnac are fated to disappear from the earth, at least let some effort be made, before they vanish, to find out something of their real history. It is generally agreed that, far from having been built by the Druids, they existed ages before the rise of the Druidic system, but this conclusion only makes their origin still more obscure. It is said that the huge monoliths of the inner ring at Stonehenge are of a peculiar granite, no quarry of which exists nearer than Africa. If this is true, as we suppose it is, the transportation of these great blocks indicates not only a considerable development of the arts of navigation and mechanics among the people who brought them to England, and set them up many miles from the shore, but a connection, either religious or commercial, between Africa and England, to which recorded history gives no clue whatever. It has been said that monuments of the characteristic megalithic pattern are found not only in England and northern France, the Lyonesse of the legendary period, but in the Southern Lyonesse, of which the city of Lyons was the capital, and from there westward, along the Mediterranean shore, through Spain. It is said, also, that in Spain and western France these monuments, instead of being scattered thickly over an extensive tract, as in the two Lyonesse countries, are found at intervals along a certain route, but not elsewhere, as if the people who built them were, in Spain and Provence, foreigners, passing frequently along an established route, as caravans pass through Africa or Tartary, and erecting the symbols of their religion only along the road which they frequented. No mention is, however, made in history of any race trading over such a route, or of any connection between what seems to have been two great Celtic communities, and still less is any clue given to the connection between these communities and Africa. In fact, there is internal evidence that the trilitha of Stonehenge were placed in position before the pyramids of Egypt were built, and if this evidence can be relied upon, the megalithic monuments belong to a period at least two thousand years anterior to that at which the first glimmerings of European history appears. What manner of men lived in England and France two thousand years before the Trojan war we may well be curious to know, and every indication that can be compared with other indications to throw light upon the question should be studied and recorded without delay.

PAY AS YOU GO.

Our friend and collaborer, Mr. Watson of the *Engineer*, New York, when he is a line short often finishes out with a little proverb, says *Industry*, which if properly expanded would swell up and fill the column. In a late issue we find the following: "Pay as you go; if you can't pay don't go." Here in ten words is the whole scheme of human economics; the secret of failure; the key to dishonesty; and the science of human happiness. If one will stop to consider the share of human wrongs that grow out of "going without pay," what is left will be a beggarly remainder. This motto we suspect is one tacked up behind Mr. Watson's desk, he pays as he goes and makes others do so, but among the great mass of our people in this country how many follow such a rule? To do without what you cannot pay for is the great art of successful life. It is a habit of mind and practice, easy to follow when once commenced, but when the "pay" gets behind the "going," it commonly takes more than a life time to catch up.

CALICHE CEMENT.

CALICHE, the name given by the old Spanish settlers of Arizona to a sort of half rock, half clay material, proves on analysis to be a valuable geological formation and bids fair to enter the commercial arena ere long as a new cement.

The caliche lies upon the surface or very near it. It is often found from six to twenty-five feet in thickness and covers many thousands acres of surface. Whenever found it was until recently considered a decided detriment—it in-

terfered with the cultivation of the soil, was useless for grazing purposes and produced no precious metal. In these three items were found almost the limit of Arizona's supposed resources. But not long since, samples of this peculiar "worthless" clayey rock were sent to competent chemists for analysis, with the result that this much abused caliche was declared by them to contain the proper constituents in the proportions to make the very best Portland cement. In fact the analysis indicated the same constituents in almost the same proportion as in the best English Portland cement. Some of the samples contained about twenty per cent of sand, but it is claimed that much of the material contains no sand and also that the sand can be readily eliminated.

Should the claims as at present made prove practically true the discovery is one of large importance, as the use of Portland cement is constantly and rapidly increasing and forms a large item in our imports. And if the caliche, which is so plentiful and is easily and cheaply obtained will furnish a product approximately equal to English Portland cement, it will prove a mine of wealth to Arizona, to the owners of the caliche beds and to all interested in new construction in the line of buildings, bridges, aqueducts or dams and street improvements. It would soon result in cheapening the article and also—an item of no less importance—diminish our imports of it from foreign countries, adding that much to the country's independence and the nation's wealth.—*Manufacturer and Builder.*

CROIX CATELAN.

PEOPLE who have driven through the Bois de Boulogne will probably remember the "Croix Catelan," which, although not a cross, but a pyramid, is supposed to have been erected about the year 1700 on the site of a memorial cross, dating from the middle of the thirteenth century. What was the person or thing commemorated by the original cross and consequently, who or what it is proper to think of in contemplating its modern substitute, has been much disputed. The favorite legend is that a troubadour, named Arnaud Catelan, loved the princess Marguerite of Provence, and, when she left the South to become the wife of King Louis the Ninth, followed her on foot, carrying with him some verses, and a few faded Provençal flowers, as a wedding gift. When he arrived in Paris, the king and queen had left their castle of the Louvre, and were making a visit to the king's native town of Poissy. The road from Paris to Poissy, though only fifteen or sixteen miles long, lay through the Bois de Boulogne, then called the Forest of La Rouvraye, which was infested with robbers, and the officers, of the castle gave Arnaud an escort, to conduct him safely through the wood. On the way, Catelan, rejoiced at being so near the end of his journey, made a confidant of the captain of his escort, and showed him the little box which, as he said mysteriously, contained treasures to be offered to the queen. The captain apparently thought that the queen had treasures enough, and that this would be an excellent opportunity for enabling her to share some of them with her subjects; so, when they reached the depths of the forest, he and his men fell upon the troubadour and slew him, and gained possession of the precious box. On opening the case, to get out the jewels which he supposed it contained, he was disgusted to find nothing in it but some sentimental verses, and a packet of dry flowers. The verses he threw away at once, but the flowers had an aromatic scent which pleased him, and he kept them to perfume his clothes on state occasions. The corpse of the poet was soon afterwards found in the wood, but there was no clue to his assassins, and a prolonged investigation revealed nothing. One day, however, Queen Marguerite held a reception, and the captain of the escort appeared to pay his respects to his sovereign. As he approached, the queen recognized the fragrance of Provençal flowers, and a suspicion came into her mind. Officers were sent to search his habitation, and more relics of the troubadour were discovered. The captain was seized, with others of the poet's escort, and they were all roasted over a slow fire, while the king and queen had a stone cross set up on the spot where the unfortunate Catelan had met his death.—*The American Architect and Building News.*

late, and there is nothing to prevent people from building fires under the granite colonnade if they wish.

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CALICHE, the name given by the old Spanish settlers of Arizona to a sort of half rock, half clay material, proves on analysis to be a valuable geological formation and bids fair to enter the commercial arena ere long as a new cement.

The caliche lies upon the surface or very near it. It is often found from six to twenty-five feet in thickness and covers many thousands acres of surface. Whenever found it was until recently considered a decided detriment—it in-

terfered with the cultivation of the soil, was useless for grazing purposes and produced no precious metal. In these three items were found almost the limit of Arizona's supposed resources. But not long since, samples of this peculiar "worthless" clayey rock were sent to competent chemists for analysis, with the result that this much abused caliche was declared by them to contain the proper constituents in the proportions to make the very best Portland cement. In fact the analysis indicated the same constituents in almost the same proportion as in the best English Portland cement. Some of the samples contained about twenty per cent of sand, but it is claimed that much of the material contains no sand and also that the sand can be readily eliminated.

Should the claims as at present made prove practically true the discovery is one of large importance, as the use of Portland cement is constantly and rapidly increasing and forms a large item in our imports. And if the caliche, which is so plentiful and is easily and cheaply obtained will furnish a product approximately equal to English Portland cement, it will prove a mine of wealth to Arizona, to the owners of the caliche beds and to all interested in new construction in the line of buildings, bridges, aqueducts or dams and street improvements. It would soon result in cheapening the article and also—an item of no less importance—diminish our imports of it from foreign countries, adding that much to the country's independence and the nation's wealth.—*Manufacturer and Builder.*

CROIX CATELAN.

PEOPLE who have driven through the Bois de Boulogne will probably remember the "Croix Catelan," which, although not a cross, but a pyramid, is supposed to have been erected about the year 1700 on the site of a memorial cross, dating from the middle of the thirteenth century. What was the person or thing commemorated by the original cross and consequently, who or what it is proper to think of in contemplating its modern substitute, has been much disputed. The favorite legend is that a troubadour, named Arnaud Catelan, loved the princess Marguerite of Provence, and, when she left the South to become the wife of King Louis the Ninth, followed her on foot, carrying with him some verses, and a few faded Provençal flowers, as a wedding gift. When he arrived in Paris, the king and queen had left their castle of the Louvre, and were making a visit to the king's native town of Poissy. The road from Paris to Poissy, though only fifteen or sixteen miles long, lay through the Bois de Boulogne, then called the Forest of La Rouvraye, which was infested with robbers, and the officers, of the castle gave Arnaud an escort, to conduct him safely through the wood. On the way, Catelan, rejoiced at being so near the end of his journey, made a confidant of the captain of his escort, and showed him the little box which, as he said mysteriously, contained treasures to be offered to the queen. The captain apparently thought that the queen had treasures enough, and that this would be an excellent opportunity for enabling her to share some of them with her subjects; so, when they reached the depths of the forest, he and his men fell upon the troubadour and slew him, and gained possession of the precious box. On opening the case, to get out the jewels which he supposed it contained, he was disgusted to find nothing in it but some sentimental verses, and a packet of dry flowers. The verses he threw away at once, but the flowers had an aromatic scent which pleased him, and he kept them to perfume his clothes on state occasions. The corpse of the poet was soon afterwards found in the wood, but there was no clue to his assassins, and a prolonged investigation revealed nothing. One day, however, Queen Marguerite held a reception, and the captain of the escort appeared to pay his respects to his sovereign. As he approached, the queen recognized the fragrance of Provençal flowers, and a suspicion came into her mind. Officers were sent to search his habitation, and more relics of the troubadour were discovered. The captain was seized, with others of the poet's escort, and they were all roasted over a slow fire, while the king and queen had a stone cross set up on the spot where the unfortunate Catelan had met his death.—*The American Architect and Building News.*



INTERNATIONAL IRRIGATION CONGRESS.—The official Proceedings of the International Irrigation Congress, held at Los Angeles, California, October 10th to 14th, have just been issued in pamphlet form. The book contains nearly two hundred pages and embraces the Call for the Congress; the Addresses of Welcome; a List of Delegates; Permanent Organization; Address of the President; Formal Opening Address; Resolutions Introduced by Members; Addresses Delivered, (a) by Foreign Delegates, (b) by American Delegates; Principal Discussions; Address to the Country; National Executive Committee; Organization of the Committee and the Plan of Work for the next Congress.

The discussions cover a wide range of topics on irrigation subjects and the book contains matter of deep interest to all the citizens of the arid States. The proceedings are published by the Los Angeles Chamber of Commerce and extra copies can be secured by sending six five cent stamps, to cover cost of printing and postage, to Fred. L. Allen, Secretary International Irrigation Congress, Los Angeles, California.

MANUAL OF MODERN SURVEYING INSTRUMENTS and their uses, containing useful information for the civil engineer and surveyor, together with a catalogue and price list of scientific instruments, particularly those of the civil engineer and surveyor, made by The A. Lietz Co., 422 Sacramento street. Price fifty cents. This handsome manual well printed and illustrated should be in the hands of every civil engineer.

A. A. GRIFFING IRON COMPANY'S CATALOGUE has been received, it contains a fine line of steam and hot water heating apparatus. The well known Bundy Radiators are manufactured by this firm. Architects, steam fitters and engineers are invited to apply for copies of this work, which are distributed free to parties interested in the above subjects. Address 15 Dey street, New York.

REPORT OF THE PARK COMMISSIONERS. The twenty-second annual report for the year ending June 30th, 1893, is at hand, thanks to the kindness of Mr. W. W. Stow, Chairman of the Board of Park Commissioners.

Never since the commencement of work upon the Park has so much been done as in the last year, in the way of im-

provements of an interesting nature—what with the lake, the waterfall and bridges, to say nothing of the general improvement along the whole line, it must be confessed that the present Commissioners have the knack of making a little money go a long way.

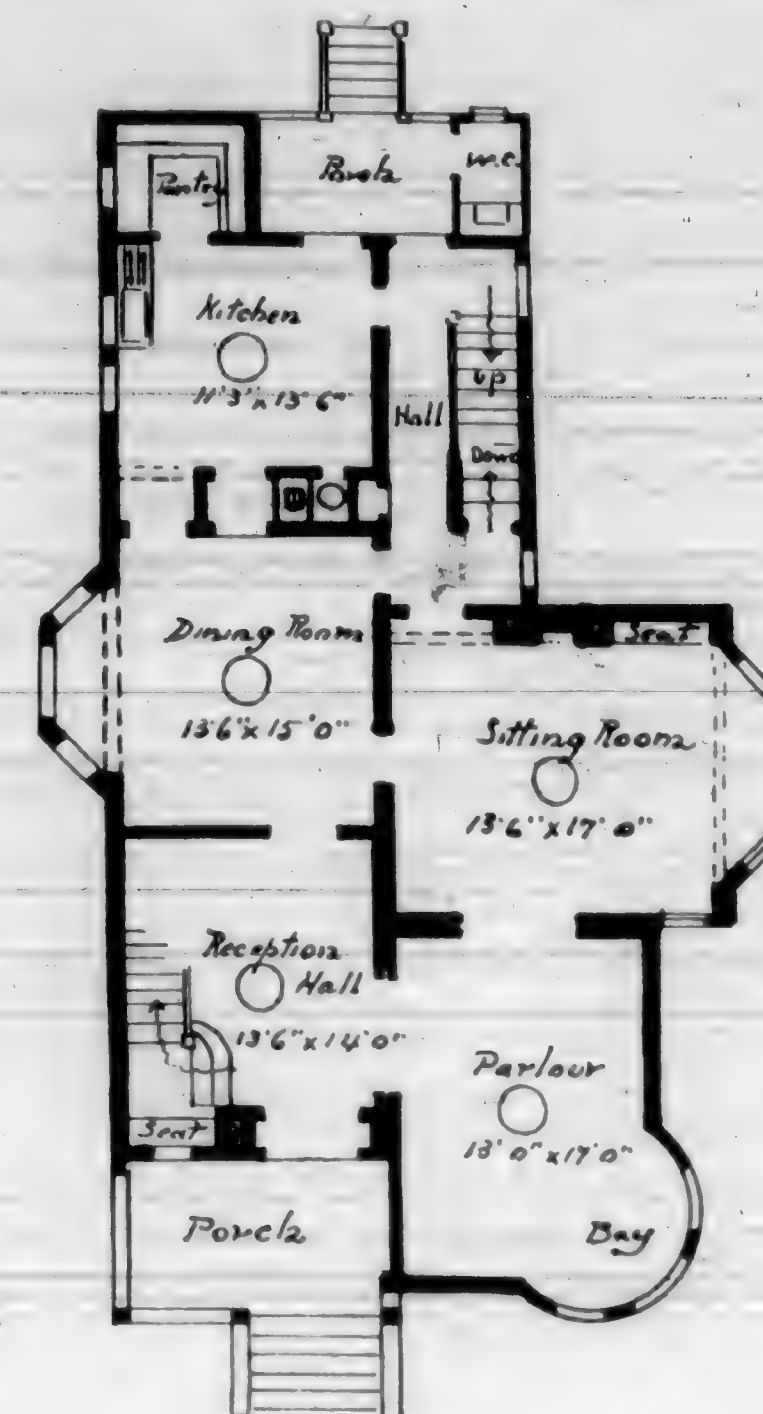
LIPPINCOTT'S MAGAZINE for November, 1893. The complete novel in the November number of Lippincott's is "An Unsatisfactory Lover," by Mrs. Hungerford. It tells in charming manner of an inauspicious wooing and an interrupted courtship, which ends well after all.

THE PHOTOGRAPHIC TIMES announces a Christmas number that will surpass any thing it has yet attempted. The list of the articles that will appear, promises a great diversity of interesting matter, that will be duly enjoyed by both professional and amateur.



RESIDENCE OF MR. WM. FROHLING, SAN JOSE, ARCHITECT W. D. VAN SICLIN.

THE DISPOSAL OF HOUSEHOLD WASTES.—We have here in small compass and at small cost a work by William Paul Gerhard C. E., Consulting Engineer for Sanitary Works, New York, valuable alike to the engineer, and householder, in fact to everyone interested in the promotion of good health and cleanliness; written in so unpretentious a style and devoid of technicalities that cannot fail to impress the reader that the author understands what he wants to say and knows how to say it in a few words and right to the point—the title page may be given as a sample of what the book is. "A discussion of the best methods of treatment of the sewage of Farm Houses, Isolated Country Houses, Suburban Dwellings, houses in villages and smaller towns, and of large institutions, such as hospitals, asylums, hotels, prisons, colleges, etc., and of the modes of removal and disposal of garbage, ashes and other solid house refuse." Published by D. Van Nostrand Co., New York, for sale by Osborn & Alexander, price fifty cents.



FIRST FLOOR PLAN.

LEGAL DECISIONS.

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

OPENINGS FOR WINDOWS IN PARTY WALLS.—The owner of land, in building a party wall, partly on his own land, and partly on that of an adjoining owner, has no right, against objections of the adjoining owner, to leave openings for windows therein, to be used until such time as the adjoining owner shall build.

Normile v. Gill, Supreme Judicial Court of Mass. 34 N. E. Rep. 543. 51.

MECHANICS' LIENS ON BUILDING LOTS.—Under the statute giving a mechanics' lien to any person who shall perform labor in altering or repairing any building or building lot, a lien may be had on building lots for grading. A suit to enforce a lien may be maintained though an action is pending for the claim, for which the lien was filed, and for damages for breach of the contract under which the services were rendered.

Raven v. Smith, Supreme Court of N. Y. 24 N. Y. Supp. 601.

LIABILITY OF OWNER FOR NEGLIGENCE OF CONTRACTOR.—Where the owner of premises, whose duty it is to keep the same in repair, contracts with a third person to make the necessary repairs, and he fails to make them, the owner is liable for injuries resulting from the defective condition of the premises, though such third person was an independent contractor.

Brennan v. Ellis, Supreme Court of N. Y. 24 N. Y. Supp. 426. 58.

INTERPRETATION OF CONTRACT.—Where a contractor proposes to contractors to excavate a trench of certain dimensions, under water for a specified sum, the material dredged to be deposited in shore so as not to interfere with said trench, and the latter simply accept the offer, it is not the duty of the contractors to furnish such shore as a place of deposit, and the sub-contractor is not justified in abandoning the contract because the shore inspector prevented him from depositing such material thereon.

Cronin v. Tebo, Supreme Court of N. Y. 24 N. Y. Supp. 644. 82.

PAYMENT OF BUILDING EXPENSES ON ARCHITECT'S CERTIFICATE.—A provision in a building contract for the payment of the builder only on certificates of the architects that payments are due, will not prevent recovery by the builder, when he has fully performed the contract, and the architects refuse their certificates without sufficient cause.

Van Keuren v. Miller, Supreme Court of N. Y. 24 N. Y. Supp. 580. 51.

ENFORCEMENT OF MECHANICS' LIEN IN EQUITY.—The code of 1886, providing that a mechanics' lien may be enforced by bill in equity if the amount involved exceeds \$100, is not in conflict with the act giving the circuit court jurisdiction of action to enforce liens of that amount, as there is no inconsistency in giving a remedy in law and one in equity; and the former section is not affected by a section of the latter act, providing for the repeal of all laws in conflict with its provisions.

Colby v. M. E. Church, Supreme Court of Alameda, 13 So. Rep. 515. 90.

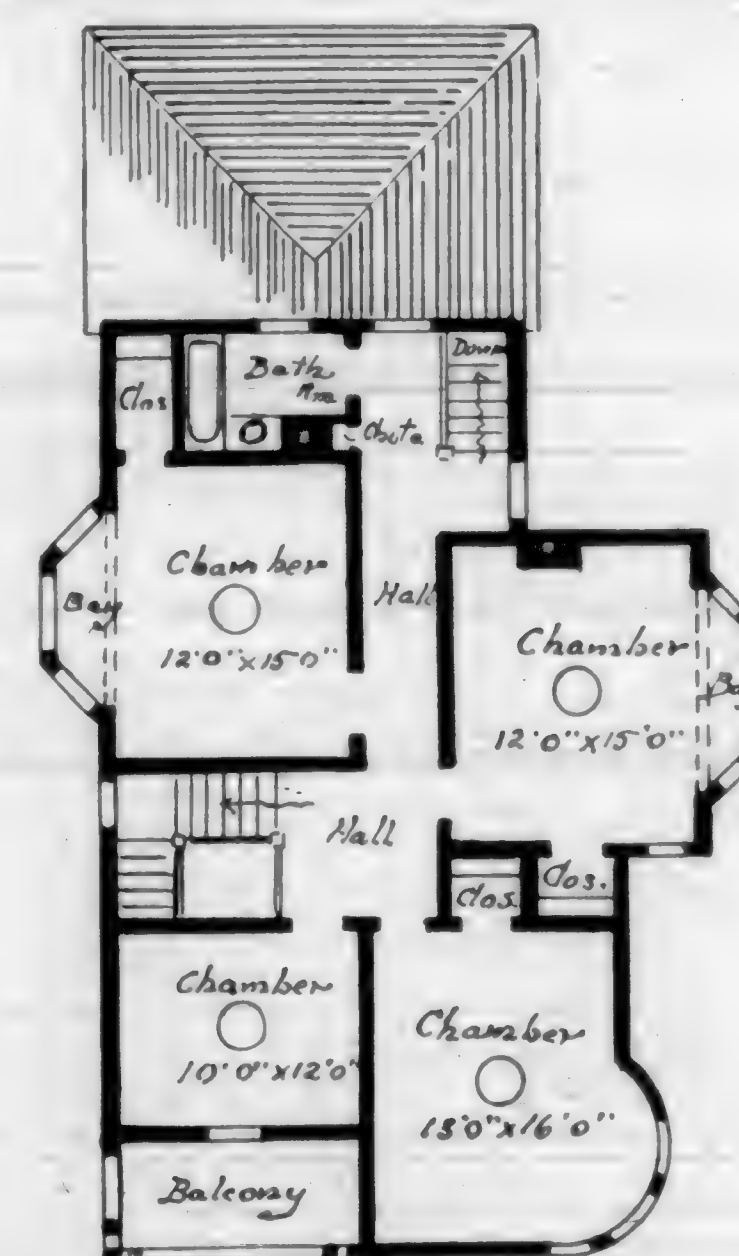
MECHANICS' LIENS ON HOMESTEAD.—A purchase by a married woman, with the proceeds of the sale of her former homestead, of an unimproved lot, with the avowed purpose of making it the homestead of herself and husband, followed immediately with a contract with a builder for the erection of a dwelling house thereon, is sufficient to constitute the same a homestead; and a material man, who, with knowledge of these facts, furnishes lumber under a verbal contract, to be used in the erection of the dwelling, acquires no lien on the property superior to the homestead exemption.

Cameron v. Gebhard, Supreme Court of Texas, 22 S. W. Rep. 1033. 103.

RIGHTS OF SURETY ON CONTRACTS WHEN ABANDONED BY CONTRACTOR.—Where the surety of a contractor completes the building pursuant to the contract, after abandonment thereof by the contractor, he is entitled to recover from the owner the amount of the contract price, less the amount paid the contractor prior to the abandonment. Where the owner of the building failed to declare the contract forfeited, on its abandonment by the contractor, but permitted the surety to complete the building pursuant to the contract, the surety is entitled to costs in an action against the owner to recover a balance due thereon.

Board of Education of Waterford v. First Nat. Bank of Richfield Springs, Supreme Court of N. Y. 24 N. Y. Supp. 392. 99.

ARCHITECTS CANNOT RECOVER FOR PLANS ACCOMPANYING BIDS.—The mere fact that valuable services are rendered does not raise a liability on the part of him for whom they were rendered, even though at his request, if the circumstances are such as to rebut the inference that compensation was expected to be received or paid; therefore, when the service is performed out of motives of kindness, or in the expectation of a possible benefit to result to the person performing it, in the absence of an express contract, no implied contract can be raised. In the case of architects putting in bids for the construction of buildings, or of engineers for the construction of bridges or other works, and including plans and specifications, unless the parties calling for bids expressly agree to pay for such plans and estimates there can be no contract or promise to pay for them implied, for there is nothing in the circumstances that show that pay was expected to be received or given, except through the possible benefit to the parties performing the service in the acceptance of their bids. Such services are regarded as purely voluntary and gratuitous, unless the plans furnished are made use of, in which event, from their adoption or use, a promise to pay their value would be implied, unless it was provided in the call for bids that such plans or parts of plans might be used gratuitously. 238.



SECOND FLOOR PLAN.

NOTICE OF MEETINGS.

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

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

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

GRAPHITE—ITS USES AND DURABILITY AS A PAINT.

AN address by John A. Walker, Vice-President of the Joseph Dixon Crucible Co., delivered before the convention of the Master Painters' Association, held July 12th and 13th at Jersey City, N. J.:

Mr. President and Gentlemen of the Master Painters' Association of New Jersey: I appreciate the honor of this occasion, and have some deference in speaking, as I do at this time, on the subject of paint, after the mode of bringing coals to Newcastle. Possibly every one of you, if you are worthy of the title of master painters, know as much about the subject as I do. Graphite paint is about thirty years old. About thirty years ago graphite was found by some prospectors in the rocks of Ticonderoga, near Lake George. At that time there was formed the agreement of the Graphite Company, and this company was formed exclusively and specifically for the purpose, at that time, of making graphite paint, and this was about twenty-eight or thirty years ago. I saw, two weeks ago, on a visit to Ticonderoga, a piece of machinery lying there that had been painted twenty-three years ago with some paint in an off-hand way, and, except for abrasion made by rubbing against another piece of machinery, to all observation the result of the paint was just as good as it was a dozen years ago.

In the early days, while making their experiments there, certain roofs were painted in the village of Ticonderoga, and observation of the roofs shows they are intact to-day.

Graphite itself is one of the forms of carbon. Charcoal is another carbon form, and the diamond is still another. Graphite has a large number of peculiar qualities. In the first place the graphite itself will stand any change of temperature: it doesn't make any difference how cold the cold is or how hot the heat, the flake of carbon is inert, and suffers no change at either extreme of the temperature. And again, it is indestructible and inert, so that the strongest acids have no effect on it. You can put a piece of graphite in any dilute acid, and after awhile remove it, and you will find no harm has taken place. It is there in its original form, and has not given up any of its properties. The entire piece has remained intact and impervious to that powerful and destructive solution. Made up in this way it has proved to be one of the most valuable of the recent additions to the lines of pigments. It is found in a good many quarters of the globe. The most productive deposits are in the island of Ceylon. The graphite that comes from there is almost all foliated graphite; the flakes come in a granulated form, and these two specimens are the forms of the element as it comes from the island. The largest quantity of graphite used comes

from that island. Next in rank as to source of production come Ticonderoga. There is a third source of graphite in the kingdom of Bavaria, in Germany, where a large quantity of amorphous graphite is found mixed with clay and other kinds of minerals, and so intimately mingled that it cannot be separated. The Ticonderoga quartz interposes no difficulty in this respect.

Outside of these three places, graphite is found in Canada; but these deposits have not, or, at least, not very largely, been developed or explored, so no considerable output has come from that territory yet. All over the South specimens have been found, but none of these occurrences have proven to have merchantable value. Nine-tenths of all these that have come, so far have been of the amorphous form, in which the impurities could not be separated, so that the debris and graphite have to be ground down together, giving uncertain results.

It occurred to the people who had charge at Ticonderoga to work that material up into a paint; but other ideas took up the company's time, and this became a tradition, and that branch of the business was not followed out. Later on, within the last ten years, the graphite paint has been largely manufactured. It has been made a specialty, and its manufacture has been made the subject of careful study. The paint, so far as experience and knowledge of the manufacture goes, has been very useful as applied to roofs, to all classes of bridges, smoke-stacks, boiler fronts, gas holders, machinery in sugar and paper factories, where acids are used in the work. The graphite has proved to be the best anti-acid pigment that could be placed on them, and so on through the line of outdoor iron-work and electric-light poles; and shingle roofs, some remarkable results have been ascertained. Some years ago a Boston and Colorado smelting company, with their works at Argo, in the neighborhood of Eldorado, had their large plant, which was a quarter of a mile long, covered with a corrugated iron roof, and five hundred fires were blazing away within. As the acid rose, the roof was affected, and it was not a great while before it became honeycombed, and it meant protection or a new roof. These people saw some account of the graphite paint and its characteristics in that direction, and they wrote on the subject, received the information desired, and had the roofs painted with graphite paint. Since then those roofs have remained intact, and the only thing that has happened to them in the last fifteen years has been a new coat of paint. The graphite paint was successful in defending the before-victorious attack of the acid fumes. If I recollect, at the convention at Harrisburg last year some statements were made by a man there who had taken observations of roofs, oil-painted, that lasted six to eight years without rusting, and another made a statement of a roof that lasted from ten to twelve years without rusting. Of course we all know that linseed oil is presumably the best vehicle with which to convey the pigment. There may be something better in the future, but up to date the linseed oil is the best vehicle. Mineral oxides, and that class of pigments, are ground down to a powder and deposit themselves on a surface; graphite preserves its flaky character in powder form, so that by the overlapping of these a very thorough covering of the surfaces to be protected is assured. There are a good many qualities to the paint that appear in an off-hand way. Concerning the durability of graphite, there are innumerable testimonials on record in its favor. There is, to my knowledge, a boiler front which was painted in 1885, on Thanksgiving afternoon, and it has not since been repainted, and is in good condition. I remarked to the attendant, or stoker, that the front looked as if it had been repainted recently, but he answered that nothing was done to it since 1885, and he had kept a waste rag, and when the paint got dull he would rub it up with black lead and some oil. The high quality of the paint is shown by its ability to stand the wear and tear of a boiler front, and remain thus, after the lapse of eight years, almost as good as it was the first year.

This is about the sum and substance of graphite paint. There is no doubt it will figure more prominently in the future than it has in the past. One of the handicaps it must bear is the color. Of course, being made of a black pigment, its colors are largely somber. When it comes in its natural

form it has a tinge of a natural slate. It can be covered with other materials so that it will become a jet black. Experiments have been recently made by which, by blending other materials, light green and dark green are added to the color; also dark brown and dark red, which will be very likely to produce a good effect.

With one little incident I will close. Some three years ago the iron for the elevated road was made at the Pencoyd Iron Works. The iron for the whole structure was brought to Jersey City and lay there. The work was commenced, and in two months the structure was completed; but six months elapsed before they commenced to operate the road. It had been painted with a mineral paint, and was rusty from top to bottom, and it was necessary to take the rust off. You could pull it off in scales. This work was hurriedly put through

by the painters, and the result was when the north and south tracks were up a year they were both painted with graphite paint. With the engineer, Mr. Brooks, I walked the track down to the train shed, and there was not a place on the one side of the track where one could put a knife blade, whereas, on the other side, where it had been painted and not carefully scraped off, and not carefully prepared, the painting was more or less imperfect, and there were large pieces and flakes that came off. The engineer and I went up and down the track, and saw the paint on one side and the blisters on the other side, and he was frank enough to admit that the difficulty lay, not in the paint, but in the application of the paint. The paint as it stood on the south tract stands there to-day, a living evidence of the durability of graphite.—*Manufacturer and Builder.*

BUSINESS MOSAICS.

Among the awards of the World's Fair at Chicago none were more appropriate and deserved, than that to The Bostwick Steel Lath Company of Niles, Ohio, who were awarded the only medal and diploma for Fire-Proof Steel Lath—this lath is too well known to the architects of this coast to need any endorsement of ours, but it is handy to know that Smith & Young, 727 Market street are the agents for the Bostwick Steel Lath Company.

Mr. Flipp—"We haven't see so much of you since your return from the seaside." Miss Dipp—"Oh, wait until the opera season opens; you'll see quite as much of me then—perhaps more."—*Town Topics.*

Joseph Budde should not be overlooked when hunting for Sanitary Appliances that are sure to give satisfaction. Householders should not forget the fact that they encourage home industry, at the same time derive the benefit of having a healthy house, with no bad air, when the popular Golden Gate Patent Water Closet is used. A word to the wise is enough.

Farmer's Boy—"There's goin' to be a minstrel show in Pinkington next week. Can I—"

Old Hayseed—"Gee whittaker. It ain't a month sence you went to the top of the hill to see the 'clipse of the moon. D'ye wanter be always on the go?"—*Puck.*

Light Gray Granite in all forms from the Eureka Granite Works in Rocklin, Placer Co., Cal., can be ordered from the agent, E. H. Burrell, 408 California St., room 16—this granite is so well known and like good wine requires no bush.

Young Husband—"Humph! Muddy coffey again, I see." Young wife—"Yes; and if you were half the man I thought you were, you would make the city authorities clean the reservoir."—*New York Weekly.*

Coppieters & Mockel, manufacturers of Art Metal novelties in wrought iron, copper and brass, those who intend to prepare a handsome display of their goods in honor of our coming Midwinter Fair, cannot do better than give them a call and order their show windows put in good shape. You will find the works at 23 Jessie street, San Francisco.

Antinonmin—This useful substance is bound to become in favor with the architects on this coast, as it has already, with many architects and builders in the east, as well as in Europe—a preventative of mildew, a preservative of timber, and what the good housekeeper will consider a boon—sure death for fleas. A full description of this new substance will be forwarded on application to W. H. Schieffelin & Co., New York.

Amelia—"Swear not by the moon, the inconstant moon." Augustus—"Then what shall I swear by?" "Swear by that which you hold invaluable; something which is dearer to you than all things else; something that you cannot live without." "Then, Amelia, I love you! I swear it by my salary."—*New York Weekly.*

California Fire Apparatus Works—If you want to reduce your insurance, have packing boxes that never leak and always ready for duty under full pressure of water, call upon W. T. V. Schenck, 222 and 224 Market street and examine Schenck's Swinging Hose Reel, sold only with the hose, the couplings and hose pipe complete and fully guaranteed.

Tommy (reading)—Here's somthing about a new organ with a hundred stops. Do all organs have stops, papa? Papa—"Yes, my son, with one exception—your dear mother's organ of speech?"

An exchange editorially endorses in the following words the Pullman Sash Balance—"The product is all and more than is claimed for it. It is mechanically perfect and accomplishes the desired result in every particular. It is correct in theory and admirable in practical use, satisfactorily fulfilling every demand and requirement. In all respect it is beyond criticism in point of workmanship, superiority of finish, ease of operation, and last but not least, highest durability."

While the Pullman Sash Balance is daily growing in favor with our builders in this vicinity, which fact is proved by the number of jobbing houses in this city that supply the demand, it is pleasing to call attention to the opinion of our eastern friends, to a contrivance that has found such favor with our own people.

CITY BUILDING NEWS.

Belvedere near Waller. To build; owner, Mrs. A. L. Ryder; contractors, White Bros.; signed, Nov. 1; filed, Nov. 1; cost \$3,000.

Block bounded by Point Lobos, 5th and 6th avenues and A street. Carpenter, mill work, etc.; owners, La Societe de Benefaisance Mutuelle; architects, Mosser & Goustaux; contractor, Alex. L. Campbell; signed, Oct. 17; filed, Oct. 18; cost \$15,500.

Block bounded by Point Lobos, 5th and 6th avenues and A street. Painting; owners, La Societe de Benefaisance Mutuelle; architects, Mosser & Goustaux; contractor, J. F. Sullivan; signed, Oct. 17; filed, Oct. 18; cost \$3,075.

Block bounded by Point Lobos, 5th and 6th avenues and A street. Electric bells, etc.; owners, La Societe de Benefaisance Mutuelle; architects, Mosser & Goustaux; contractor, Lat. E. Allen; signed, Oct. 17; filed, Oct. 18; cost \$3,575.

Block bounded by Point Lobos, 5th and 6th avenues and A street. Plumbing, gas fitting, tiling, masonry, sewers and sewerage; owners, La Societe de Benefaisance Mutuelle; architects, Mosser & Goustaux; contractors, Worrell & Miller; signed, Oct. 17; filed, Oct. 18; cost \$47,030.

Block bounded by Point Lobos, 5th and 6th avenues and A street. Brick work, cement, plastering and cast iron work; owners, La Societe de Benefaisance Mutuelle; architects, Mosser & Goustaux; contractors, Worrell & Miller; signed, Oct. 17; filed, Oct. 18; cost \$47,030.

Block bounded by Point Lobos, 5th and 6th avenues and A street. Excavating, concrete, artificial stone work and cementing; owners, La Societe de Benefaisance Mutuelle; architects, Mosser & Goustaux; contractors, Worrell & Miller; signed, Oct. 17; filed, Oct. 18; cost \$25,350.

Brannan near 24th. Excavating, concrete, etc., and alterations; owner, Del Monte Milling Co.; contractor, Casper Zwierlein; signed, Oct. 21; filed, Oct. 27; cost \$1,575.

Bush and Larkin. Plumbing, etc.; owners, Olympic Salt Water Co.; architect, D. Ernest Melliss; engineer, contractors, Duffy Bros.; signed, Oct. 20; filed, Oct. 20; cost \$0,300.

Bush and Gough. Marble work; owners, Trinity Church; architect, A. Page Brown; contractors, W. W. Montague & Co.; signed, Oct. 27; filed, Oct. 31st; cost \$3,000.

Bush and Gough. Pews, etc.; owner, Trinity Church; architect, A. Page Brown; contractors, Fink & Schindler; signed, Oct. 27; filed, Oct. 31; cost \$4,500.

California near Drum. Concrete, marble and iron work; owner, Luning Co.; architects, Coxhead & Coxhead; contractors, Rudino & Bianchi; signed, Oct. 5; filed, Oct. 18; cost \$271,500.

Capp near 23d. All excavation and work to build; owner, F. Gries; architects, Martens & Coffey; contractors, Schutt & Kreeker; signed, Oct. 16; filed, Oct. 17; cost \$4,000.

Capp near 23d. All work to build; owner, John Fitzgerald; architect, M. J. Welsh; contractors, R. Doyle & Son; signed, Oct. 23; filed, Oct. 24; cost \$3,370.

Clement near 6th Ave. One-story frame; owner, Floyd J. Myard; architect, James Mix; contractor, Robert Murray; signed, Oct. 27; filed, Oct. 28; cost \$1,190.

Eighteenth and Castro. To build, except painting and gas-fitting; owner, C. Rousseau; architect, Emil John; contractor, W. A. Muller; signed, Oct. 26; filed, Nov. 1; cost \$3,825.

Fell near Steiner. To build; owner, Nathan Cohn; architects, Pissis & Moore; contractors, Roundtree Bros.; signed, Oct. 26; filed, Oct. 31; cost \$3,474.

Fifth Ave. near Fulton. Two-story frame; owner, Mary Rakoman; contractors, Home Building Co.; signed, Oct. 20; filed, Oct. 23; cost \$2,500.

Fifteenth near Howard. To build; owner, F. N. Neavol; architect, Chas. M. Rousseau; contractor, Geo. R. Breese; signed, Oct. 20; filed, Oct. 23; cost \$975.

Fourth near Folsom. Excavating and building; owner, John Demartini; architect, Wm. Mosser; contractor, John J. Dunn; signed, Oct. 11; filed, Oct. 13; cost \$5,000.

Folsom near 22d. Two-story frame engine house; architects, Henriksen & Mahoney; contractors, R. Doyle & Son; signed, Oct. 4; filed, Oct. 20; cost \$2,410.

Folsom near 13th. Alterations and additions; owner, James O. Manion; architects, Shen & Shea; contractors, Condon Bros.; signed, Oct. 30; filed, Nov. 1; cost \$1,920.

Florida near 25th. Additions and alterations; owner, Edward Fenneseey; architect, T. J. Welsh; contractors, Wm. Schaffeld & Son; signed, Nov. 3; filed, Nov. 9; cost \$1,247.

Golden Gate Park. To build; owners, Chinese Midwinter Fair Co.; architects, Martens & Coffey; contractor, R. M. Murry; signed, Nov. 4; filed, Nov. 10; cost \$12,800.

Golden Gate Park. Administration building; owner, Ex. Com. Cal. Midwinter Fair; architect, A. Page Brown; contractor, A. P. Antonelli; signed, Oct. 18; filed, Oct. 23; cost \$30,474.

Golden Gate Park. Chocolate Cafe; owner, Johnson, Lock Mercantile Co.; architect, Samuel Newson; contractor, Richmond Simon; signed, Oct. 24; filed, Oct. 28; cost \$2,700.

Gough and Vallejo. Painting; owner, L. P. Barnard; contractor, W. R. Eaton; signed, Oct. 19; filed, Oct. 23; cost \$1,150.

Guerrero near 19th. Two-story frame and one-story frame stable; owners, Thomas and Alice Flinn; architect, Chas. J. I. Devlin; contractor, R. O. Davis; signed, Oct. 10; filed, Oct. 12; cost \$2,250.

Hattle bet. 17th and 18th. Raising a one-story cottage to make two-story flats; owner, Margaret O'Conner; contractors, Douglass & O'Conner; signed, Oct. 26; filed, Oct. 27; cost \$1,150.

Hayes near Webster. To build; owners, Otto and Emily Friendlander; architect, H. Gl. Fuss; contractors, Schutt & Kreeker; signed, Oct. 17; filed, Oct. 17; cost \$6,200.

Hayes and Lyon. Plumbing and gas service, etc.; owner, I. V. Tadich; architect, T. J. Welsh; contractor, G. C. Sweeney; signed, Oct. 14; filed, Oct. 20; cost \$1,088.

Kentucky bet. Solano and Butte. Carpenter work, plumbing, painting, etc.; owner, Matthew Lanner; contractor, Edward Mooney; signed, Oct. 16; filed, Nov. 1; cost \$2,565.

Lott near McAllister. Two-story frame; owner, Mary I. Coddington; contractor, W. W. Rednell; signed, Oct. 20; filed, Oct. 20; cost \$3,500.

McAllister near Jones. Brick and iron work; owners, Katherine Adam and Eliza Kibbe; architect, Julius E. Kraft; contractor, D. J. Brennan; signed, Sept. 15; filed, Oct. 16; cost \$5,500.

McAllister near Jones. Painting, graining, varnishing and finishing two-story brick; owners, Katherine Adam and Eliza Kibbe; architect, Julius Kraft; contractor, J. H. Kille; signed, Oct. 18; filed, Oct. 21; cost \$1,100.

McAllister near Jones. Lathing and plastering; owners, K. A. and E. Kibbe; architect, Julius Kraft; contractor, T. Murphy; signed, Sept. 15; filed, Oct. 16; cost \$2,550.

McAllister near Jones. Plumbing, etc.; owners, K. A. and E. Kibbe; architect, Julius Kraft; contractor, Jas. E. Britt; signed, Sept. 15; filed, Oct. 18; cost \$2,483.

Mason near O'Farrell. To build; owner, Marten O'Dea; architect, Chas. I. Havens; contractor, John Furness; signed, Nov. 8; filed, Nov. 8; cost \$6,700.

Oak near Devisadero. To build; owners, City and County of S. F.; architects, Henriksen & Mahoney; contractors, D. Doyle & Son; signed, Oct. 4; filed, Oct. 20; cost \$5,465.

O'Farrell near Webster. Three-story frame; owner, Solomon Michael; architect, A. J. Barnett; contractors, Peterson & Olson; signed, Oct. 18; filed, Oct. 19; cost \$5,000.

O'Farrell near Octavia. Masonry, etc.; owner, Geo. Haas; architect, J. H. Littlefield; contractor, Jos. Kennedy; signed, Nov. 3; filed, Nov. 7; cost \$7,233.

O'Farrell near Octavia. Sewerage, etc.; owner, Geo. Haas; architect, J. H. Littlefield; contractor, G. C. Sweeney; signed, Nov. 6; filed, Nov. 7; cost \$1,079.

O'Farrell near Octavia. Painting, etc.; owner, Geo. Haas; architect, J. H. Littlefield; contractor, Gus. N. Daniels; signed, Nov. 6; filed, Nov. 7; cost \$3,144.

O'Farrell near Octavia. Artificial stone; owner, Geo. Haas; architect, J. H. Littlefield; contractor, F. W. Schallike; signed, Nov. 6; filed, Nov. 7; cost \$4,000.

Page near Cole. One-story frame with brick foundation; owner, J. F. Sarber; architect, W. H. Little; contractor, R. M. Murray; signed, Oct. 12; filed, Oct. 13; cost \$1,035.

Pacific Rolling Mills. Owner, Pacific Rolling Mill Co.; architect, Patrick Noble; contractors, Healy, Tibbitts & Co.; signed, Oct. 25; filed, Nov. 3; cost \$6,75 for each pile driven.

Post and Leavenworth. Brickwork, etc.; owners, San Francisco Verein Ass. architects, Salfeld & Kohlberg; contractor, Adam Beck; signed, Nov. 7; filed, Nov. 9; cost \$18,706.

Post and Powell. Carpenter work, etc.; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, F. W. Kern; signed, Oct. 26; filed, Nov. 1; cost \$31,500.

Post and Powell. Cast iron work; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, O'Connell & Lewis; signed, Oct. 27; filed, Nov. 1; cost \$8,500.

Post near Stockton. Brick building; owner, V. Menesine; architect, Chas. R. Wilson; contractors, Leibert & Hoffman; signed, Nov. 1; filed, Nov. 4; cost \$5,819.

Post near Stockton. Excavation, etc.; owner, V. Menesine; architect, Chas. R. Wilson; contractor, W. T. Ambrose; signed, Oct. 13; filed, Oct. 17; cost \$1,720.

Post and Powell. Grading and trenching; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, J. L. Rauer; signed, Oct. 20; filed, Oct. 20; cost \$1,275.

Strawberry Hill in Golden Gate Park. One-story and attic boat house; owners, Golden Gate Park Commissioners; contractor, Geo. H. Walker; signed, Oct. 10; filed, Oct. 14; cost \$39,444.

Twenty-third near Hampshire. Four two-story frames; owner, Peter Kelly; architect, Wm. H. Arnitage; contractor, Geo. Weissmann; signed, Oct. 26; filed, Oct. 28; cost \$5,100.

Union bet. Octavia and Laguna. Two-story frame, alterations; owner, F. G. Bagiolupe; or T. N. G. Bagiolupe; architects, Chas. Beasley and Son; contractor, Devoto & Sunder; signed, Oct. 3; filed, Oct. 13; cost \$4,400.

Washington near Baker. Two-story frame engine house; owner, City and County of S. F.; architects, Henriksen & Mahoney; contractor, W. S. Wickersham; signed, Oct. 4; filed, Oct. 25; cost \$4,880.

Webster near Pine. Carpenter, etc.; owner, Jacob Clauss; architect, Wm. H. Wharf; contractors, Brobeck & Hickox; signed, Nov. 7; filed, Nov. 7; cost \$1,851.

The California Architect and Building News.

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SAN FRANCISCO, CAL. U. S. A.

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DECEMBER 20th, 1893.

NUMBER 12.

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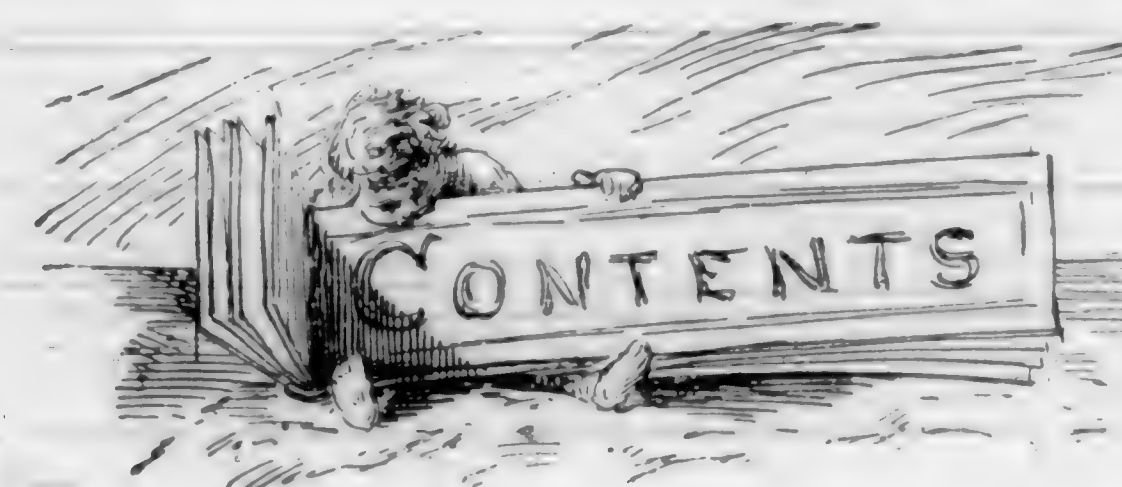
ESTABLISHED 1879. INCORPORATED 1880.
NOW IN THE FOURTEENTH YEAR.

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

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4 inch.....	12 50	35 00	65 00	125 00
1/2 Page.....	20 00	57 50	105 00	200 00
1 Page.....	40 00	110 00	200 00	350 00



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

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

SINCE work was begun in September on the exhibition buildings for the California Midwinter Fair, up to the date of this writing, there has not been more than two or three days when the weather interfered with the progress of the work, on the contrary the clerk of the weather has been very favorably disposed, and has granted every requirement to the busy workers, who are now completing a veritable city where naught but barren sand hills existed three months ago.

THE ever recurring troubles of the unemployed are again claiming the attention of the public, not only in this State, but through the entire country and Europe. The distress is general and widespread, without taking into consideration the tramp, and the discontented element that continually looks for work without the desire to find it.

Governments that boast of their advanced state of civilization, and yet have provided no means for the suppression of the tramp nuisance, and no remedy for the voluntary or involuntary idleness of its destitute citizens, both evils that threaten to become menacing dangers to the peaceful existence of society, have certainly failed to satisfactorily solve one of the most important questions they were organized to deal with; for the existence of masses of idle discontented human beings, is a continual threat to the peace and quiet of the social fabric. Society as it becomes more complex, presents ever increasing difficulties to the unemployed to secure remunerative employment. The continuous struggle that exists between the majority of employers and the majority of employees, has a tendency to reduce wages in times of depression, without a correspondingly great tendency to increase them in times of plenty.

Now it is self evident that a danger to society becomes apparent when the rate of wages falls to the point where

they are too small to supply the necessities of life; and also self evident that in a well regulated social state there should be no valid excuse for idleness and destitution; when the oppression of the upper classes becomes to severe to be borne, the masses overturn the existing state, and seek to inaugurate a better; but they fail from ignorance, where their rulers failed from greed. Before the case comes to this crisis; it is well to look into the matter, and endeavor to find a satisfactory solution of the problem.

In studying the question these two facts are brought to the attention of the student with great distinctness.

FIRST—There is a certain amount of idle labor that seeks employment.

SECOND—There is ever an immense amount of work that needs to be done to satisfy the wants and increase the ease, comfort and enjoyment of society, both individually and collectively.

As long as these two conditions exist (and they always will exist) it simply remains to find the most advantageous way of making them neutralize each other. As long as the efforts of individuals are sufficient for the accomplishment of this object, well and good; when individual efforts becomes insufficient, it is time the collective efforts of the individual, that is to say the government, should step in and by appropriate legislation supply the deficiency. How this may best be accomplished is not an easy question to satisfactorily answer; we shall make some suggestions in a future article.

THE Executive Committee of the American Forestry Association, report that the work of the association is at last beginning to be effective.

Not only has the policy of reserving public timber land for forestry purposes, established by the last Administration, been recognized by the present Administration—in reserving some 4,500,000 acres more (the Cascade Range and Ashland Timber Reserves in Oregon), making the total acreage in forest reservations nearly 18,000,000—but there is ground for hope that some rational legislation for protecting and utilizing these reserves may be enacted, thanks to the warm interest and energetic work of the Hon. Thos. C. McRae, of Arkansas, Chairman of Public Lands Committee.

BEQUESTS FOR A HOSPITAL.

A notable instance of private generosity for philanthropic purposes is brought to light by the filing for probate the will of the late Mrs. Kate Johnson.

The full third of her estate, the entire amount allowed by law for charitable purposes, has been bequeathed for the erection, endowment and maintenance of a free hospital for all sick women and children, without regard to religion, nationality or color.

In the petition for the probate of the will the value of the estate is given nominally as \$1,000,000, and its income at \$4,500 per month, but the real value will probably approximate \$2,000,000, so the one-third bequeathed to the free hospital will not fall far short of \$700,000.

The clause in the will having particular reference to the proposed hospital is as follows:

I give devise and bequeath to Archbishop Patrick W. Riordan of San Francisco, California, all my pictures and valuable bibelots; also all that certain real property situate in the city and county of San Francisco, state of California, and described as follows, to wit: Horner's addition blocks numbered 173 and 174, bounded on the north by Twenty-ninth street, on the east by Castro street, on the south by

Thirtieth street and on the west by Diamond street; also, my new warehouse known and designated as the Gibraltar Warehouse and the lot on which the same is situated at the southeast corner of Sansome and Filbert streets; also, such a sum of money as will, with the real and personal property aforesaid, comprise one-third of my entire estate; all of the same to be held in trust by him to and for the uses, intents and purposes following, that is to say:

THE FOUNDING OF THE HOSPITAL.

It being my desire to found and endow a free hospital to be located in said city and county of San Francisco; all said money and property is to be by said trustees paid, conveyed and delivered over to a corporation to be hereafter formed by a society to be composed of the Roman Catholic Archbishop of San Francisco and R. C. Tobin, Dr. C. F. Buckley, Dr. W. S. Thorn and Dr. Luke Robinson, or the survivors of them, and such other persons as they or their survivors and successors, in their discretion, shall elect to fill vacancies in said society; said corporation to be formed under the laws of the State of California; the name of said corporation to be Mary's Help Hospital; the purposes for which such corporation shall be formed to be to receive endowments and acquire property for and establish, erect, maintain and conduct a free hospital for all sick women and children of the poor, without regard to religion, nationality or color, excepting such as the officers of the hospital consider dangerous to other inmates; such hospital to be conducted by the Roman Catholic Sisters of St. Vincent de Paul, commonly called the Sisters of Charity, under the direction of the Board of Directors of said corporation.

The place where the principal business of said corporation shall be transacted shall be the city and county of San Francisco, State of California, and the number of its Directors shall be five; and I direct the said trustee, Archbishop Patrick W. Riordan, to pay, convey and deliver over to such corporation when so formed all of the money, property and estate aforesaid. It is my wish that the Roman Catholic Archbishop of San Francisco be a member of said society and ex-officio one of the Board of Directors of said corporation, and that the others of such Directors shall at all times consist of one business man and three physicians, and that the medical staff of the hospital shall have the right to give clinical instruction in the hospital to students, and graduates of medicine.

THE CITY HALL TOWER.

THE above question will be settled at last by the adoption of a design for a dome surrounded by tiers of colonnades.

Mr. Frank Shea, the architect of the Board of New City Hall Commissioners has prepared the preliminary drawings and the specifications for the completion of the central feature that is to crown the front of this edifice and in submitting them to the Board made the following statements:

"The specifications of the copper, cement and interior decoration work have not yet been prepared, as I thought it wise to defer their compilation, because many months will elapse before the work will be required. The general plan of construction of the dome consists of a complete frame of metal, commencing at a line on top of the present circular brick wall and interior columns. The entire upright frame, except that portion resting upon interior columns, will be encased in brick and terra cotta walls cemented on the outside, in order that the character of the work of the present building may be maintained. The dome will be covered with copper. The specifications have been prepared separately, so as to permit the receiving of bids, or estimates, upon the work in part or as a whole, and the time set for completion of all the contracts is July 28, 1894.

"I have spared neither time nor labor in the study of the construction of the dome, and I feel confident that in the plans presented the best results possible from a practical and esthetic point of view have been attained, and that, when

completed, the New City Hall will be surrounded by a dome in perfect harmony with the great building at its base.

"I have estimated the entire cost at \$300,000. It will take twelve months to complete the dome with due haste. The work will give immediate employment in the shops, yards and on the ground proper to 600 men, and continual employment to at least 350 workmen."

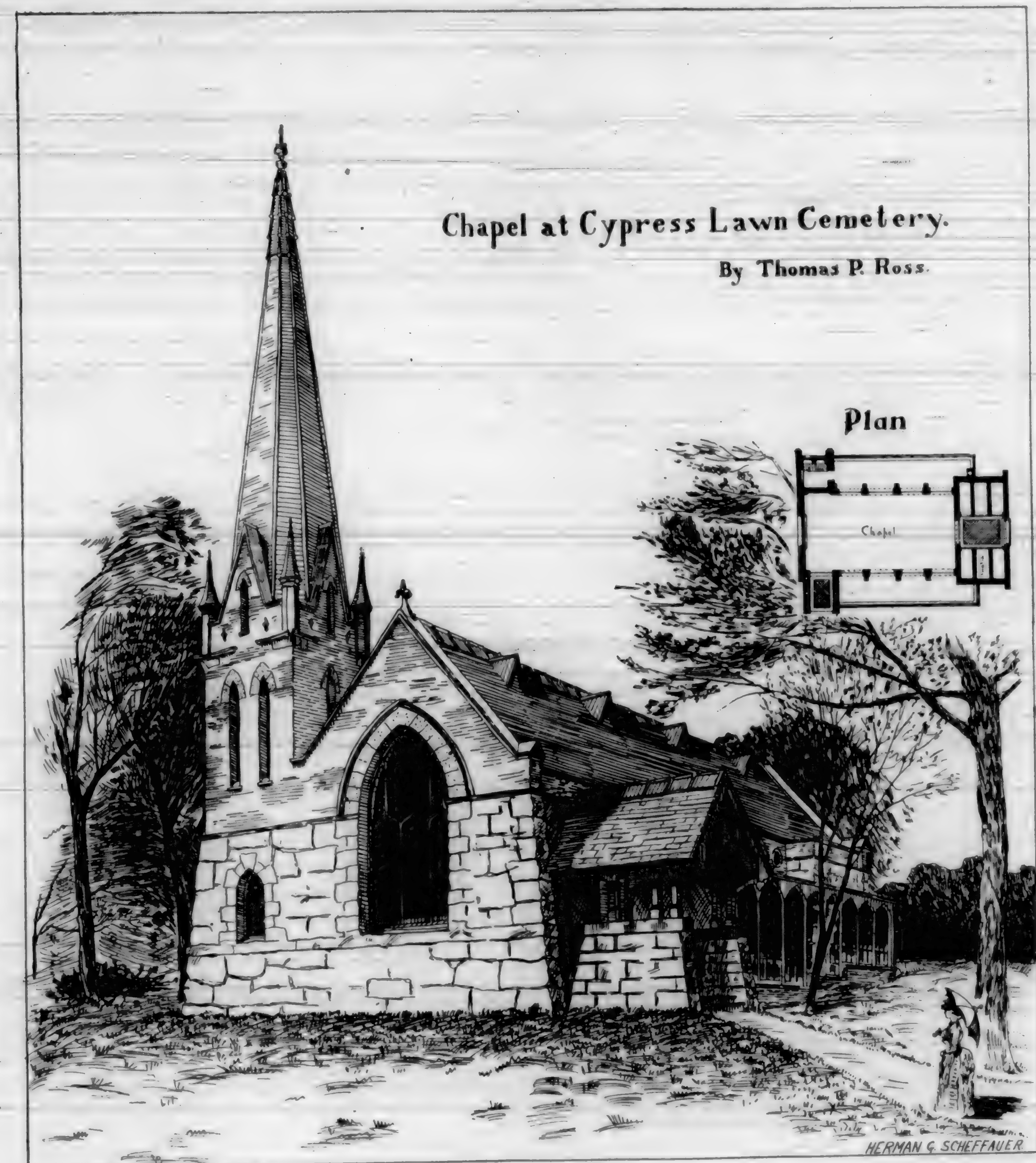
The plans have been examined by the Board and accepted and now all that remains is to take bids and start the work immediately.

it was then my privilege to deliver was Progress, and from that standpoint I noticed some subjects of professional interest. Progress leads to Attainment, and it is therefore a natural sequence to pass from the means to the end, and from the higher platform to review some points that may be supposed to interest the architect, and less directly the public.

No one who regards life as a serious reality fails to set up some goal, in the attainment of which life is passed. The

Chapel at Cypress Lawn Cemetery.

By Thomas P. Ross.



THE OPENING ADDRESS TO THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

DELIVERED BY THE PRESIDENT, J. MACVICAR ANDERSON, AT THE FIRST GENERAL MEETING, MONDAY, 6th NOVEMBER 1893.

COLLEAGUES AND GENTLEMEN:

THOSE of you who were good enough to honor me with your presence at the opening Meeting of last session may remember that the keynote which pervaded the Address

goals of some wither with possession—the object is too material, attainment too easy. The noblest, as well as the happiest, lives are passed in the pursuit of an ideal, the standard of which is so lofty that it is never fully attained. Point after point may be gained, each one higher than the last; but, as with the Alpine climber, ever in front is displayed the as yet unattained excelsior of excellence, which for the architect is enshrined in Truth and Beauty. And so it comes to pass that in such aspirations the oldest men are still students, because their ideal of excellence is so lofty that

life is too short to attain it. But, just as the highest life is sustained and inspired by Hope, which can alone find full fruition hereafter, so the life of the artist is ennobled by the yearning for the attainment of excellence, which no disappointment can extinguish, and no success can satisfy. This is the Art life worth living.

Architects, however, are sometimes reproached with incapacity because they fail to attain an ideal which the public choose to establish. Such reproach has often been cast at the architects of this century because they have not created



Tower of St. Giles,
Saragossa, Spain.

what is called a new style of architecture. No indication is vouchsafed of what is meant by those words, probably because no reflection has been bestowed on the subject. It is sufficient to censure a body of educated men by accusing them of want of originality, and of slavishly copying the works of others. In order to meet the accusation, it is necessary to apprehend what architecture is. When men began to multiply on the face of the earth, when they had to work, when they founded communities, when they erected buildings to provide for their necessities, and when such buildings were constructed with regard to beauty of form and proportion, architecture was born. Thus, architecture is the product of the necessities of life coupled with the aspiration for the beautiful. The development of this germ has found expression in the buildings, monuments, and shrines of succeed-

ing generations; and what are known as styles of architecture are simply the adaption of this germ to climatic influences and conditions of life in different parts of the world. With the modification of such conditions they become subject to variation. Thus, the architecture of feudal times, when warfare was the rule, not the exception, was characterized by massive solidity, unbroken wall-space, diminutive openings, and bald simplicity. Such characteristics, necessitated by the hardy severity of a warlike age, would obviously be ill adapted to the advanced civilization and luxurious refinement of these days of peace and accumulated wealth; and so solidity gives place to lightness, wall-space to fenestration, simplicity to ornamentation.

If, then, architecture is the outcome of actual conditions of life, it follows that to create a new style is beyond the power of any individual or any body of architects, no matter how bountifully he, or they, may be endowed with the power of original design. Are the conditions of life in our day distinctively different from those which prevailed in the days of our fathers? Our climate, much as it is abused—and, as I think, unjustly—remains much the same. We eat, we drink, we work, we sleep, we marry and are given in marriage, and in all essential conditions we live and die as our ancestors have done before us. Is it, then, reasonable to anticipate the advent of a new architecture? Cause and effect are inseparable. With new conditions of life, a new architecture will be called into existence; but so long as the conditions of national life remain unchanged, it is as absurd as it is illogical to traduce the architects of this age for having failed to attain to the creation of a new style of architecture.

But it is alleged further that our system of education, and, resulting from that, our programmes of examinations, tend to rivet the chains that bind and restrict us to the past; that we inculcate the study of schools of architecture which were called into being by conditions that no longer exist; that we teach forms and proportions defined by masters in such schools, which were beautiful because appropriate to the conditions of life in their day, but which are not appropriate, and therefore not beautiful, now; that we encourage the student to paraphrase Greek, Roman, Romanesque, Gothic, Saracenic, Renaissance, Hindoo, Burmese, Siamese or Chinese art; that historic styles have nothing to do with architecture; that English Composition, Geography, History, Latin, French or German, have no connection with it—in a word, that we look on the essential as unimportant, though most rigorously insisting on what is of no use. Instead of this, we are told that we should inaugurate a system of education and examination that would not disturb the oblivion of the dead past, but that would tend to develop native power by encouraging students to realize the actual requirements of a living age, and to design forms and proportions such as may be best adapted to them; that if we want to test real progress we should see what students can make of a story-post, a cast-iron column, a wrought or cast iron girder; how they can adorn a door or window, or group them; if they can light efficiency or aesthetically when light is only wanted to produce a mental impression; or if they know what forms and proportions are good for sound.

In this and in all such representations there is, no doubt, much that is plausible and calculated to attract and captivate the unthinking; nay, more, there is much in which we cannot but concur. We all desire to encourage and to develop original power. It is inevitable that those who cherish the architecture of a past age to which they are passionately devoted, and which in their judgment is not inapplicable to the wants of the present day, should exercise an influence on their pupils and assistants in the direction of their preference; but it by no means follows that preference for forms or features which a past age admired and practised restricts the development of native power. Is it not apparent that

such representations as I have referred to rest on a fallacy? The inferred assumption is that originality may be the product of education. Now, individuality—that which educes original work, instead of reproducing the work of others—is a natural endowment which education and examination can neither create nor smother. That it is rare is demonstrated by the fact that in Art, as in other callings, the possessor secures a following, and founds a school. The majority of men are only too willing to follow where one master-mind leads. The fact of having studied and been imbued with admiration for proportions and forms which are the legacy of a past generation will not prevent originality from finding expression; nay, it is certain that creative power will in no sense be injured, but rather refined, by the study of beautiful forms and chase proportions attained by past masters of the art, and by the principles on which such forms and proportions were based. If it be true that Latin and History have no connection with Architecture, it is in the same sense true that the dead languages have no connection with the life's work of most of those who are taught them; but experience has proved that such teaching is the best possible mental and educational foundation on which to rear the work of life; and it would be as absurd to banish the teaching of Latin or Greek from our schools, as to exclude a knowledge of Latin, French, German or History from the education of architectural students. The more highly educated our students are—not merely in technical training, but in respect of general attainments and a familiar knowledge of the past—the better will it be for the future of architecture. Sir Joshua Reynolds has well said: "He who is acquainted with the works which have pleased different ages and different countries, and has formed his opinion on them, has more materials, and more means of knowing what is analogous to the mind of man, then he who is conversant only with the works of his own country." In the same relation, the gifted President of the Royal Academy addressed to students words as eloquent as they are true when he asked them "to believe that the gathered experience of past ages is a precious heritage and not an irksome load, and that nothing will better fortify them for future and free development than the reverent and the loving study of the past."

And if it be right that the education of architectural students should be not merely technical but liberal, does it not follow that an examination which is established for the purpose of testing the knowledge which they ought to possess should be co-extensive? The range of subjects embraced in the study of architecture is wide, because there are so many cognate subjects of which it is essential to know something; and, further, because it is desirable that the professor of a Fine Art should not merely be technically an expert, but that he should be also a man of refinement and culture. I have little sympathy, therefore, with the carping criticisms that occasionally reach me respecting the details of our scheme of examinations. The experience which can alone be acquired by time will no doubt lead to the modification of some, or the expansion of other features. No one has been so foolish as to claim perfection for a scheme which is as yet in its infancy. I confess, however, that to my mind the fact that there has been so little to remedy, and that the scheme has already met with so large a measure of success, speaks volumes for the wisdom and the enlightened foresight of the Board of Examiners and of their Chairman. Some of you, indeed, have thought—and I confess to have sympathized with you—that too little prominence has hitherto been attached to the subject of Design; but the Board of Examiners have evinced their desire to meet any legitimate objection by extending, as they have now done, the time to be devoted to this important subject from six hours to two entire days out of the six days to be occupied by the Final Examination, as compared with half a day to be given up to History, Architectural Features, Hygiene, Materials, Construction and Specifications and Professional Practice, respectively, the sixth day being devoted to the Oral Examination. This is a change for the better, which will no doubt be appreciated by students, and which meets with my entire concurrence. I should, however, deplore any undue limitation in our Progressive Examinations in respect of literary or historical subjects, which are not only of vast utility in themselves,

but are essential elements in the equipment of one who aspires to be qualified as an architect to take his place with men of education and learning.

It is alleged, as I have said, that the architects of our day are devoid of originality because they have not created a so-called new style of architecture, and that our system of education and examination is defective because it restricts the encouragement of native power and rivets the chains that bind us to a dead past. Let the tree be judged by its fruit. If these allegations be true, the result would be apparent in the architecture of the day, which should be tame, insipid—a slavish reproduction of dead forms and proportions, devoid alike of interest and of life. Is it so? I am not expressing approval of all contemporary works; but I have no hesitation in asserting that, whatever may be said by adverse critics, our architecture exhibits characteristics the reverse of these.

AT VIRE,
FRANCE.



In point of material, the contrast with the past is striking, whether we like or dislike the free use of terra cotta, marble or faience, that is so much in vogue; while in respect to Design, I challenge any impartial observer to find precedents for many modern buildings, which seem to sparkle with the impress of novelty. To quote illustrations from the works of living architects would be invidious, but many examples will occur to you which exhibit remarkable ability and originality on the part of their authors. I conclude, therefore, that the allegations to which I have referred—although occasionally emanating from those whose position entitles their opinions to respect—are groundless, and are refuted by the attainments of contemporary architects, whose works, whether we admire them or not, are the expression, not of a dead art, but of life and power.—*Journal of the Royal Institute of British Architects.*



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.

THE Bohemian Club Building on the corner of Sutter and Mason streets is by Pissis & Moore, Architects.

A sketch for a tower is by Willis Polk, Architect.

FILMORE street, two dwellings by Martens & Coffey, Architects.

OPENING THE TRADE SCHOOLS.

THE New York Trade School, founded by the late Col. Auchmuty, began its thirteenth season Monday evening at its buildings, First avenue and Sixty-seventh street. The classes in bricklaying, plumbing, carpentry, house painting, stone cutting, fresco painting and blacksmith's work opened at seven o'clock Monday evening, while the class in plastering will not begin till December 11th. The day instruction in plumbing, house and fresco painting, sign painting, bricklaying and carpentry will not begin till January 1st. The course in printing will be started, however, on November 13th.

The school has every reason to feel assured of increased success this year. It is expected by the assistant secretary, H. V. Brill, that there will be fully 550 students in attendance on the various courses, an increase of seventy-five over last year. Mr. Brill said that the increase would be even greater were it not for the effects of the present financial stringency.

As to the courses, there will be no essential changes in the conduct of any of them. The class in plumbing is by far the largest attended, over 200 registering in that alone last year. Mr. Brill expected that the class in printing, which was begun last year, and is consequently the latest addition to the curriculum, would probably show a greater relative increase than any. — *Architecture and Building.*

SPURIOUS HARDWARE.

SOME of the leading hardware merchants of Toronto complain that duplicates of some of the more favored and expensive patterns in American hardware are being manufactured in cast iron in Toronto, and after being plated are placed on the Canadian market, represented to be the genuine article. At first appearance the spurious goods are a good copy of the genuine and can be detected only by very careful examination. To make detection still more difficult, a genuine lock is often used with a counterfeit escutcheon. A close inspection will usually reveal that the counterfeit article, while perhaps identical in color, is slightly smaller in size than the genuine. This is due to shrinkage in casting, in the process of which one of the genuine articles is used as a pattern. The genuine article is made of bronze

metal, which to a considerable extent is impervious to the action of the atmosphere. The imitation is as we have said made of cast iron, and will retain its appearance at the longest only a few months. The importers of expensive American hardware claim that they should not be placed in competition with a spurious article which can be produced at a tithe of the cost of the genuine. If architects are satisfied with cheap goods they are quite willing to compete on that line, but they should not be expected to place a genuine article in competition with one to which the same name and appearance have been given, but which is counterfeit. Architects would do well to enquire into this matter. — *The Canadian Architect and Builder.*

THE FRANKLIN TRADE SCHOOL.

BENJAMIN Franklin, in his will, gave the citizens of Boston, Mass., in 1791 the sum of £1000, which he directed to be loaned in sums at five per cent interest to young married artificers of good character, under the age of twenty-five, who had faithfully served an apprenticeship in that city. Dr. Franklin estimated that the £1000 would increase in 100 years to £131,000, and then the managers of the fund were to lay out in some public work £100,000, the balance continuing on interest for another 100 years. The whole sum will then revert to the people of the city of Boston and the State of Massachusetts. The trustees under the will are the Selectmen (now the Board of Aldermen), united with the ministers of the oldest Episcopal, Congregational and Presbyterian churches in Boston.

The 100 years having expired, a meeting of the Franklin trustees was held on November 10th, to decide on the appropriation of the available money, amounting to some \$415,000. Out of twenty-seven suggestions for its disposition, it was finally decided by vote that the whole amount should be devoted to the purposes of one object, and that object the establishment of a trade school, pure and simple. It was further agreed that the school is to be an independent one, unconnected with the public schools, and that it shall bear the name of the famous donor. This disposition of the fund seems particularly fitting and in harmony with the desire of Dr. Franklin, and the action of the trustees has met with general approval. It is proposed to combine in this school the experience of similar undertakings in the country, and an effort will be made to establish the institution on such lines as will secure the greatest possible benefit to "the young mechanic." It is thought that the New York Trades School, founded and maintained by the late Col. Richard T. Auchmuty, will be the example which will have the greatest weight with the trustees of the Franklin school. Those who are most prominently connected with the educational interests of Boston are wholly in accord with the proposed school, and have commended the movement as certain to fill a need that the city has long felt. The first steps towards the erection of a building for the schools was taken on November 10th, at a meeting of the City Architect, President of School Board, Corporation Counsel and the trustees of the fund. In his last annual report to the trustees the treasurer made the following statement of the condition of the fund February 1, 1893:

Amount of fund February 1, 1892.....	\$398,841.51
Interest accrued during the year.....	15,958.02

Amount February 1, 1893.....	\$414,799.53
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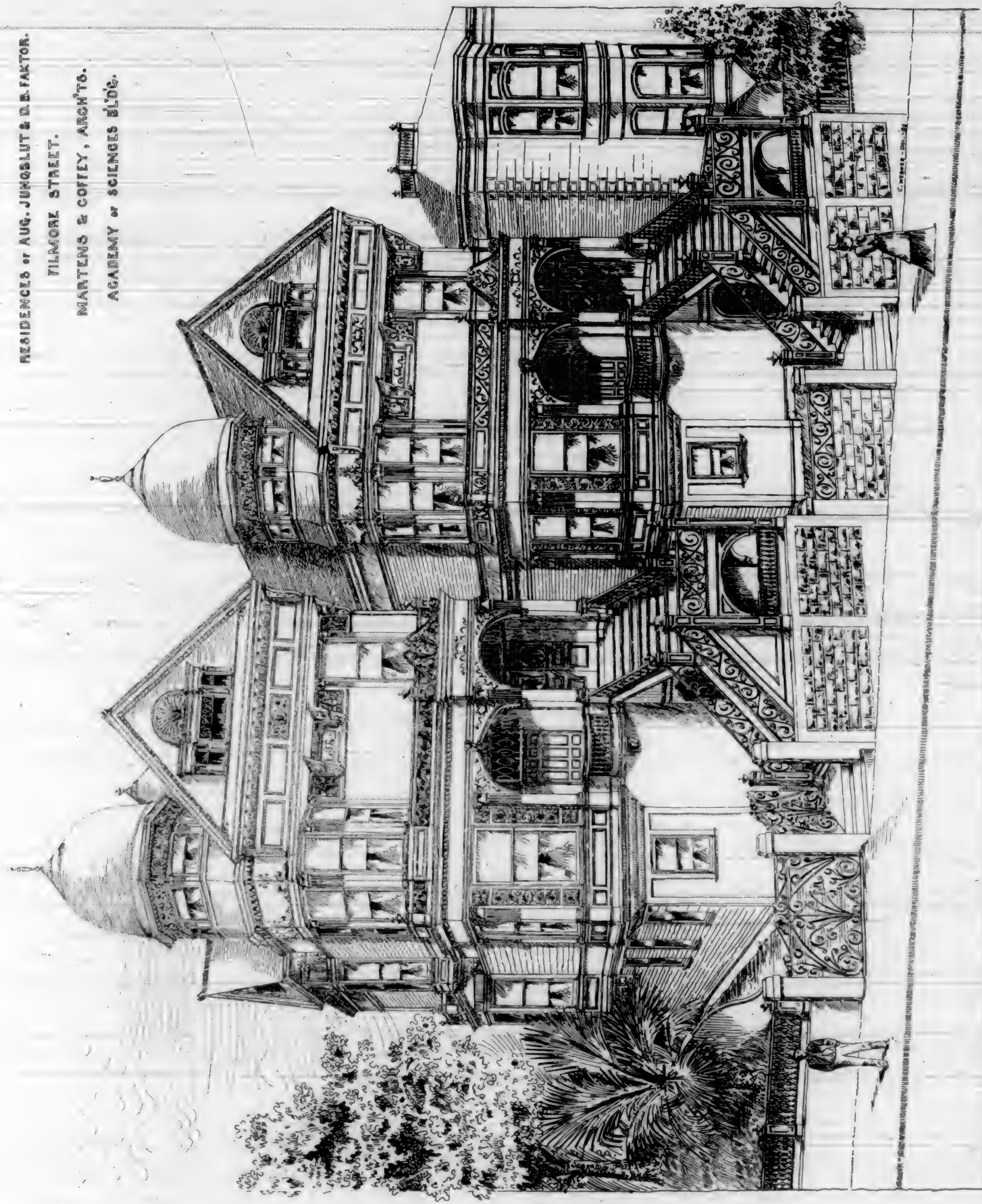
This amount consists of:

Deposits in Massachusetts Hospital Life Insurance Company.....	\$411,100.38
Deposits in Suffolk Savings Bank.....	3,489.02
Cash.....	.13
Balance of bonds, for loans.....	210.00

Total.....	\$414,799.53
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— *Carpentry and Building.*

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