Arrangements are being made to secure art exhibits, pictures, statuary, etc., of unusual merit.

Engagements have already been entered into with leading manufacturers, which ensure an unusual exhibition of notable inventions, mining and other industrial machinery in actual operation, and a complete display of the finished products of our California workshops.

A **Grand Orchestra** of skilled musicians, including many specialists and solo performers from the East and Europe, giving Grand Concerts each afternoon and evening under the direction of the celebrate **Frederick N. Innes**, has been contracted for at great expense, and will make the coming Fair memorable in the musical annals of the State.

For space or any further information, apply at the **office of the Institute, No. 31 Post Street, S. F.**

FACTS

About the Manufacture and Relative Value of Roofing Plates, and about the Laying of a Good Roof.

MANUFACTURE.—Roofing Plates, which are made of either steel or iron, are coated with a mixture of lead and tin, by two methods. The original method was by dipping the crude iron or steel plates into a mixture of tin and lead and allowing the sheets to absorb all the metal coating that was possible, and it is by the same process that the "Gilbertson's Old Method" is made to-day. The other process, by which the majority of Roofing Plates are made, is known as the "Patent Roller Process," by which the plates are put into a bath of tin and lead, and are passed through rolls, the pressure of which leaves on the iron or steel a thickness of coating that determines the value of the Roofing Plate. These rolls can be so adjusted as to leave a good amount of coating on the plate, such as the "Camaret" has, or an ordinary coating, or a very scant one. Hence the *only actual difference* between the "Camaret" and the "Gilbertson's Old Method" is that the latter plate has the heavier coating of metal.

Misleading Terms.—There are at the present time certain brands of Roofing Plates in the market, styled "Double-Coated," "Re-Dipped," "Double-Dipped," etc., etc., all of which terms are, however, *incorrect and misleading*, as it is *impossible* for any plate to take more metal than adheres to it by the first dipping, if left in the bath of tin and lead a requisite length of time, and no plate can have its coating increased in thickness by being re-dipped.

Assorting.—The value of a plate does not entirely depend upon the material and coating, but upon the care used in assorting, or picking out the defective sheets from the good ones. There arise in the manufacture of all Roofing Plates, imperfect sheets, such as sheets with blisters, or with broken corners, etc., which are called "Wasters." These are packed by themselves, the IC plates being marked "ICW" and the IX plates "IXW." The perfect plates are designated by the manufacturers as "Primes," while the imperfect sheets are called "Wasters," and the latter are sold at considerably less than the Prime Plates.

Sizes.—There are two sizes of Roofing Plates made, 28″x20″ and 14″x20″. The larger size is mostly used, from the fact that it requires less seams on the roof, and consequently cheapens the cost of putting on. There is a size 10″x20″, now used for gutters and leader pipe.

Thicknesses.—There are only two thicknesses of Roofing Plates made,—IC or No. 29 gauge, which represents in weight 8 ounces to the square foot, and IX or No. 27 gauge, which equals in weight 10 ounces to the square foot.

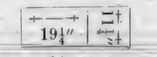
The IC plates are used to a far greater extent than the IX, from the fact that they are less expensive. For the very best roofs, however, IX Plates are preferable, the extra thickness being worth more than the extra cost.

Weights.—The old standard net weight per box IC 14x20 Roofing Plates was 112 lbs.—1 lb. per sheet—but this became reduced by competition and the desire for cheapness to 108 lbs., which is to-day the standard net weight. Indeed some tin plates are being brought out weighing very little more than 95 lbs. per box.

The standard weight of IX 14x20 Roofing Plates is 28 lbs. over that of IC 14x20, and 20x28 plates of course weigh just twice as much as 14x20.

Stamping.—Every sheet of the "Gilbertson's Old Method" and "Camaret" is now being stamped, not only with the name of the brand, but also the thickness—IC or IX; and as a further protection for these plates, every box of both brands contains a slip bearing our guarantee and the name of the assorter.

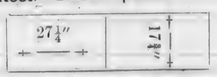
Laying the Roof.—14″x20″ plates. Many claim that a better roof can be made of 14x20 tin than 20x28. The cost of laying a roof of the smaller size will amount to 25 to 30 per cent. more than the cost of 20x28 size, owing to the greater number of seams, and hence more tin, solder, cleats, and work are necessary in laying. Locality has much to do with use of the two different sizes. The 14x20 tin can be laid in two ways. The most desirable way (and that which makes the best roof) is by laying the sheets the 14-inch way, thus:



In order to lay the tin this way more cleats are of course necessary than by laying the sheets of 14x20 the 20-inch way, as well as more solder, nails and labor.

The above represents the net surface when laid the 14-inch way.

Laying the Roof.—20″x28″ plates.



The above represents the net surface when laid the 20-inch way.

If two roofers figure to lay a roof of 20x28, and one lays it the 20-inch way, he cannot lay it as cheaply as the one who would lay it the 28 inch way, but at the same time he *can* make the *better roof*.

Advantages of Standing Seams.—Standing seams allow a greater amount of expansion and contraction than the flat seams, as the flat seams being soldered, make the entire roof practically a solid sheet.

For a steep roof the tin should be put on with a standing groove and with the cross seams put together with a double lock. A cheaper way is to double lock the seams and put white lead into the joints instead of soldering; but we would recommend that the cross seams be locked and well soldered.

Soldering.—We recommend the use of resin only as a flux in soldering, although some roofers use diluted chloride of zinc. "Half and Half" Solder (a mixture of half tin and half lead) is the mixture most suitable for roofing purposes.

Painting the Roof.—An excellent paint for the purpose is composed of 10 lbs. Venetian Red, 1 lb. Red Lead, 1 gallon Pure Linseed Oil.

The substitution of benzine or fish oils for the pure linseed oil should not be allowed.

The roof will last longer and be less liable to rust if painted on the under surface before laying. It is a good plan to put one or two layers of felt paper under the tin to serve as a cushion for same, and to deaden the noise made by the rain falling on the tin.

A year after the first coating the roof should be painted again, and then a good roof will only require painting once in four years.

A roof of first-class material well soldered and properly laid should last forty years.

Suggestions to Those Specifying Tin Roofing.—In the light of the facts herein stated, we would suggest to architects and others desiring the very best quality of tin roofing that when they specify "Gilbertson's Old Method," or "Camaret" guaranteed brands, they should insert the full name of the brand in the specification and should require that every sheet be stamped not only with the name of the brand but also the thickness IC or IX.

TO PREVENT SCREWS FROM RUSTING.—It is well known that iron screws are very liable to rust, more especially when they are placed in damp situations. When they are employed to join parts of machinery, they often become so tightly fixed that they can only be withdrawn with considerable trouble, a fracture sometimes resulting. In order to avoid this inconvenience, screws are generally oiled before being put in their places, but this is found to be insufficient. According to the *Moniteur Industrielle*, mixture of oil and graphite will effectually prevent screws becoming fixed, and, moreover, protect them for years against rust. The mixture facilitates tightening up, is an excellent lubricant, and reduces the friction of the screw in its socket.

CONTRACTORS, ATTENTION!

For $5.00 we will insert your business card for one year, and send you this Journal free.

The "Universal Tinker and Amateur's Assistant."

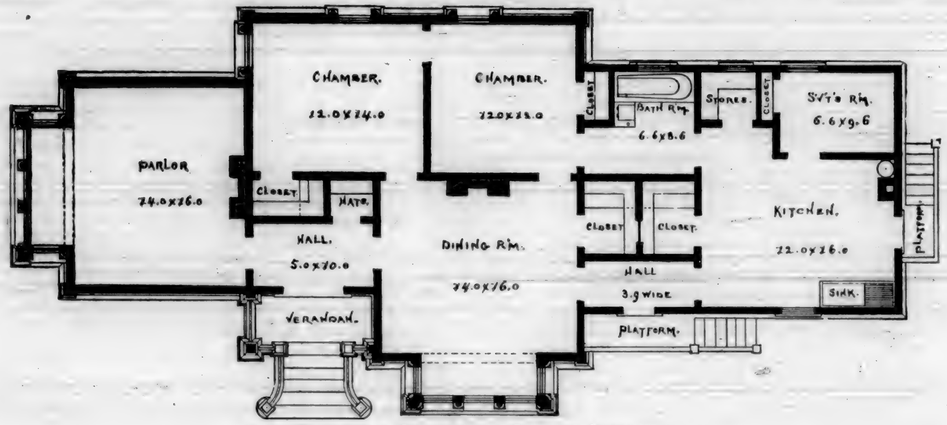
THIS is the title of a new monthly journal to be issued about the 1st of July, 1887.

The new journal is not intended to take the place of the valuable juvenile papers or magazines that are now so popular among our young folks; it is rather intended for young men and women than for boys and children. It will not be a "story-teller" unless the story told has a mechanical or scientific application. It will not be a "picture book," yet it will be illustrated with diagrams, designs and working drawings, and a sprinkling of illustrations of new tools, new amateur machines, new and old devices for doing work, and engravings of finished amateur effort.

The *Universal Tinker* will not confine itself to constructive work, but will take up every subject that may be brought before it and that may be dealt with from an amateur's standpoint.

It is intended at first to make it a sixteen-page journal, but may be enlarged or reduced as circumstances may warrant. The price will be $1.00 per year, payable in advance, but if at the end of the year we are encouraged to enlarge or further improve the *Universal Tinker* we shall increase the price to two or three dollars a year.

Any further information will be cheerfully furnished by addressing the proprietors, Hodgson & Bertrand, 294 Broadway, New York City, N. Y.



PLAN FOR A COMFORTABLE COUNTRY DWELLING

Plan for a Comfortable Country Dwelling.

THE above plan is very complete in all those little details that go to make a home in the country truly pleasant. Access to all the rooms is very conveniently arranged. The parlor is situated away from the living portion of the house. Every room is abundantly supplied with windows and closet room. The kitchen and its apartments will recommend themselves to the consideration of every thrifty housewife. Sizes of all the rooms are very distinctly marked.

Suggestions to Country Builders.

CHAS. HARDY, in the *National Builder*, says: Travel and intimate observation in the States of Illinois and Missouri reveal the fact that very few carpenters and contractors have made much pecuniary headway. Indeed it would hardly be erroneous to state that for the amount of business done few branches of trade have less profit to show.

The cause of this is probably to be found in the fact that, although nominally wages appear to be satisfactory, yet the average reduced by the inevitable interruption to work that the winter season brings with it, during which any small surplus is consumed. Contracts too, are of short duration, and especially in the smaller cities the interval between two contracts is a long one. A system of letting contracts by bids or competition, however fair it may be in theory, still works very unjustly where many of the bidders make no accurate, thorough and itemized estimate. It is common, extremely common, to hear a country bidder say that his employes have earned more than himself on a job, or had he to pay wages he would have been money out of pocket at its completion; and that to avoid this, he had worked it out himself alone, at a remuneration which left him only starvation wages or even worse. This is of course not intentional.

Very few indeed have any system which enables them to see day by day what is the result that a given job is showing. At the best this is discovered at the end of the season. It is no wonder that they underestimate, for underestimation is the natural consequence of overeagerness to obtain a contract, unchecked by a thorough and accurate fore-estimate of the result.

Underestimating means working for nothing and forcing others to do the same; it means impoverishment and poor work. The contractor has himself and his family to maintain, and the temptation is great to get out by doing poor work. I would suggest that every contractor purchase an account book large enough to enter, line by line, upon a single page every item of his estimate, giving quantity, price and labor for each item. Let him leave opposite to this page a blank page, on which he may enter on the corresponding line opposite the actual amount purchased, and the actual amount paid, together with the actual amount of labor expended upon the item, and he will thus be able to see the result of his contract.

Were such a system adopted it would never be abandoned. An estimate, if clear and explicit, would be gone over twenty times, with the result that the contractor would become expert in estimating, and a mistake once made would never be repeated.

There is an advantage in taking the items in a certain order and preserving that order. It is impossible to exaggerate the good effects of a system which enables the tradesman to know day by day exactly how he stands.

Every contractor has an interest in his competitor's knowing how to estimate correctly. It does not need many underestimators to ruin a business for a season.

Carpenters are far too apt to imagine that all that is wanted to make a successful contractor is to be a good mechanic. This is a great mistake. The country contractor should be a good business man, and have a constant clear insight into his business. His business is not like that of a merchant where he is constantly selling the same articles in small quantities at a steady profit to the same customers. With the contractor each new contract is on a new basis, with a new customer in one large amount, composed of varying quantities, at various prices; and it is evident that it must require vastly more care and forethought to conduct his business successfully than one that is steadier. He is also entitled to a profit upon the labor he employs and pays for. He should also estimate the risk of damage to the building while in course of construction.

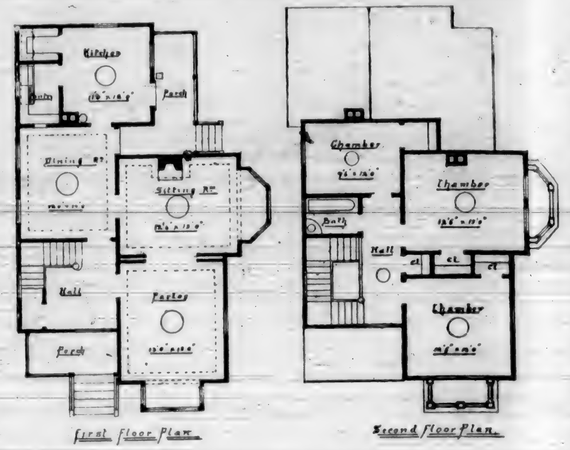
Prudence and wise precaution are not a waste of time and trouble, and if not exercised when called for, the consequence will assuredly have to be borne in loss and anxiety.

A COAT of coach varnish will keep sap from striking through painted work.

CONTRACTORS, ATTENTION!

For $5 00 we will insert your business card for one year, and send you this Journal free.

ELEVATION.



A Country or Village Residence.

THE above engravings represent the floor plan and perspective view of a country or village residence, also suitable for the city, are beautiful in design, and illustrate the advantages and necessity of employing an architect, by their well-proportioned, neat and graceful elevations, and compact, convenient, and well-arranged plans.

This building was erected in Santa Cruz, Cal., furnishing a home for one of its most prominent citizens. In reality the building has a pleasing, graceful appearance, so desirable in villages or country homes. As you approach the building the heavy, projecting cornices and gables, with neat brackets, fancy shingling, and ornamental finials; the bay-windows with chamfered pilasters and carved brackets, surmounted by graceful and spacious balconies; the large porch with turned columns and balusters, and the front door with raised panels and ornamental glass transoms, etc., cause you to stop and admire the architecture before you enter. Upon entering the building you find yourself in a large hall with a beautiful flight of platform stairs leading to the second story, and inclosed by black walnut newels, railings, and balusters. On the right is a door communicating with the parlor, and in front, one with the dining-room. The parlor and sitting-room are separated by large, paneled, sliding doors, which can be thrown open, making a very large and beautiful apartment. In the center of the ceiling of the rooms are decorated center-pieces, and the parlor, sitting, and dining-rooms have moulded cornices of plaster of Paris.

The kitchen is provided with a large pantry, in which is a slide to pass dishes, food, etc., into the dining-room; it also has a large closet with shelves and drawers for linen, towels, etc.

The rear porch is inclosed by a neat railing, and for convenience a slop hopper is placed near the kitchen door.

This design is a most desirable one for any family wishing the conveniences and pleasures of a model home. Any information desired will be promptly forwarded by addressing David Salfield, architect, 216 Kearny Street, San Francisco, Cal.

Black Walnut.

BLACK walnut has been extensively used, the New York *Herald* remarks, in making furniture for nearly fifty years. The demand for it, however, is on the increase. The forests of the North have been pretty well cleared out, and now the Southerners are looking forward to a chance in the market. Tennessee and Arkansas lead the van. Black walnut timber has been cut in almost incredible quantities in both these States, and land-owners have reaped a rich harvest. Next comes the States further south. They have immense tracts of timber-land covered, not only with the walnut tree, but also with the best woods required in carriage building. It is suggested by the New Orleans *Picayune* that the time is not far distant when Northern capital will be invested in manufactories on the edge of Southern forests and the banks of Southern streams. To which the *Herald* replies: "Our neighbor may rest assured that if there is money in it Northern cash will meet Southern enterprise half way."—*Scientific American.*

AN exchange refers to it as a singular fact that bricklaying is one of the parts of skilled labor that invention has never interfered with. Bricks are laid one by one to-day as they were in Egypt and Babylon four thousand years ago. It might also have added that bricks are put into the hat in about the same way as in the time of Noah.

NEVER paint a kitchen floor—oil and stain it.

WHITE marble mantels are again coming into favor.

THE pressure of wind on a slanting roof is equal to twenty pounds to a square foot.

WHITE paint, white furniture, curtains, white walls, and white woodwork is the latest agony.

AN inch of well-haired mortar between floors will be found to effectually deafen them against sound.

TIN roofs should always be painted on the under side with mineral paint and be laid in single sheets, flat lock.

NEWLY plastered walls and newly laid shingles should not be painted for six months. Shrinkage will then be over.

SINKS for kitchens are now made of iron enameled, porcelain, soap-stone and crockery-ware; 20x40 is the best size.

CEMENT concrete four inches thick troweled down and finished with a coat of Portland cement makes the best cellar bottom.

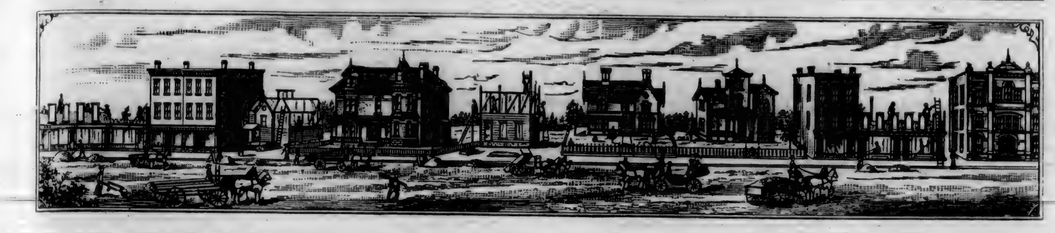
THE cause of many incipient fires is the faulty construction of chimney flues. Always see that they are thoroughly plastered inside.

THERE is no absolute need of painting zinc work, for exposing it to the atmosphere has the effect of coating it with a thick film of oxide which protects it from the future action of the air as effectually as paint.

A MIXTURE of cork, silica, and lime is coming into use in Germany as a building material. It has the advantage of keeping out heat and cold, and is also claimed to be an excellent preventive of dampness and deadener of sound. It is substantial, light, and durable, and seems to be especially adapted for ceiling and wall lining.

ARTISTIC TILES AND MANTELS.

ONE of the most artistic displays in Tiling, Mantels, Brass goods, etc., can be found in the rooms of E. A. Pattison & Co., 308 Stockton St., San Francisco. The design in tiling entitled "Cupid among the Roses," is worthy of particular mention. This firm is the sole Pacific Coast Agent for the Perth Amboy Terra Cotta Co. A large and well selected line of wooden and iron mantels is kept constantly on hand, and the prices are such as to command the attention of those about building. The floors of Messrs. Pattison & Co's warerooms are covered with Tile and Parquette flooring of the most beautiful and artistic designs, and should be examined before purchases are made elsewhere. Special personal attention is given to furnishing designs and estimates for all work connected with the tasteful arrangement of everything connected with Mantels and Tiling. This firm also makes a specialty of stained glass. Write or call for information as per address mentioned.



COUNTRY
BUILDING INTELLIGENCE

In this and succeeding issues we intend to devote considerable space to information in connection with buildings, from every portion of the coast.

Only reliable news will be found in this column. Our custom has been for the past eight years, to furnish only data which could be relied upon. We will not publish rumors of "THIS AND THAT IS GOING ON" unless we are reasonably assured that such is truly the case. In all cases we will file our authority for any statements made in this column. No doubt mistakes will sometimes occur, but these we intend to be a rare exception to our rule of reliable news.

We desire the co-operation of country editors and mechanics to this department of this journal. By spreading the news of building engagement in your part of the country, you enhance the value of your section by proclaiming it a go-ahead community.

Architects should also notify us of "plans to figure on;" we do not charge anything for the insertion of such notices. Remember this journal is in the EIGHTH YEAR of its existence, and is the only journal published this side of the Rocky Mountains in the interest of Architects, Contractors, and Material Men.

Alameda.

William Neal is building two neat cottages on the corner of Clinton Avenue and Oak Street. They will contain four and five rooms respectively, and will cost about $1,500 each.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

A small cottage has been erected on Clinton Avenue, near Oak Street by J. H. Young. He intends enlarging it in a few weeks.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Fresno.

J. L. Smith, the contractor, is building a very neat and attractive family residence for himself, on the extreme northern portion of I Street. The main building is 17x28, with a front extension 12x10, two stories in height. The estimated cost is $1,250.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Webster Brothers, of the City Drug Store, have decided to build a one-story brick building immediately south of the buildings recently completed by J. M. Braly, on I Street. It will front twenty-two feet on I Street, and be eighty-five feet deep, and will be fitted up in first-class shape.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

A. Wilheimer has made arrangements to erect a brick building opposite the old city hall building, on I Street. It will be 22x85 feet in size, one story, and will have a fine plate glass front.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Geo. L. Bradley has purchased the lots formerly occupied by the dwelling of R. H. Fleming, on I Street, and will erect a substantial brick building thereon.

Steel Square Problems, for $1.00.
Workshop Companion, for 35c.

In addition to the above the following parties will build: S. H. Williams, C. L. Purring, C. H. Sweet, Wm. Faymonville, Mrs. Bedford, and others.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Kingsburg.

Mr. Landrum Smith will commence building in May.

Grimshaw on Saws, for $4.00.
Mechanics' Geometry, for $4.00.

Modesto.

In a few weeks Messrs. Wood & Turner will erect a commodious building.

Artistic Homes, for $3.50.
Modern House Painting, for $5.00.

The Modesto Bank has decided to build a fine two-story brick building.

Cutting Tools, for $1.50.
Cummings' Details, for $5.00.

Mrs. Parker is about to build a fine dwelling.

Cutting Tools, for $1.50.
Home Hand-Book, for $10.00.

Oregon Items.

It is probable that another immense warehouse and dock will be built on the river front between the Albina sawmill and the O. R. & N. docks this summer.

Practical Perspective, for $5.00.
Woodwards' Country Homes, for $1.50.

Merges & Vosper have let the contract to Buxton & Sparks for construction of two cottages on Russell Street near the corner of Kirby.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

Charles Schmid, of Portland, is having a two-story frame store built on the east side of Helm Street, just south of the Tivoli saloon. F. Miller is the contractor.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

Artistic Homes, for $3.50.
Modern House Painting, for $5.00.

The old central school building on the southeastern corner of Sixth and Alder Streets, Portland, will be remodeled, at a cost of $3,000, as a hotel.

Plaster, How to Make It, for $1.00.
Shavings and Sawdust, for $1.50.

John M. Pittenger, of Albina, will build a fine residence.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

Work on the new paper mill at La Camas has been commenced, a force of men now clearing away the debris of the old mill.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Wm. M. Wisdom, of Portland, has purchased a piece of ground in the Belmont Park at Mount Tabor, and he will erect a dwelling-house thereon. Others contemplate making similar purchase and improvement.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

The Orphan's Aid Society of Salem intends to build a home for children in that city. It will cost about $15,000, and be modeled after that of Portland.

Artistic Homes, for $3.50.
Modern House Painting, for $5.00.

The women of the Portland church congregations have raised about $1,000 for the new Y. M. C. A. building.

Practical Perspective, for $5.00.
Woodward's Country Homes, for $1.50.

A new Catholic school is to be built in Pendleton.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

Bids have been received for construction of W. S. Ladd's four-story brick, in Portland, on the southeast corner of Front and Morrison Streets. The entire cost will be $60,000.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

Dr. S. E. Josephi intends to build a private sanitarium in Portland costing about $10,000.

Every Man His Own Mechanic, for $3.50.
Tredgold's Carpentry, for $7.50.

N. K. West is having a two story brick store erected on the corner of Fourth and N Streets, Portland.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Buxton & Sparks have commenced construction of two frame cottages on the northeast corner of Russell and Borthwick Streets, for Merges & Vosper, of Hillsboro, Oregon. Mr. Merges will also build, in a short time, a handsome residence.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

Petaluma.

Capt. John Henry is building a warehouse.

American House Carpenter, $5.00.
Cutting Tools, for $2.00.

San Jose.

One mile from town, two-story frame with barn. Owner, R. Wiltz; architect, Theodore Lenzen; contractor, J. D. Stewart; cost, $5,000.

Wonders of Art, for $1.25.
Limes, Cements, and Mortars, for $4.00.

On First Street. Mr. Farrington is adding $3,000 in improvements on his brick building. Theodore Lenzen, architect.

Album of Mantels, for $8.00.
History of Architecture, for $15.00.

Mr. Kelly is building a frame cottage. Cost, $2,500. Theodore Lenzen, architect.

Practical Perspective, for $5.00.
Woodward's Country Homes, for $1.50.

G. J. Koenig is building a $2,500 house. Theodore Lenzen, architect.

Hand Railing and Stair Casing, for $1.50.
for Drawing Carpenters, for $1.75.

J. W. Lyndon, Los Gatos, Queen Anne cottage. $8,000. G. W. Page, architect.

Shavings and Sawdust, for $1.50.
American Cottage Building, for $3.50.

Mr. Johnson, East San Jose. $1,700 cottage. Jacob Lenzen & Son, architects.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

Mrs. Winchester, Los Gatos Road, Eastlake house, $2,400. Robert Summers, builder.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

E. O. Smith, Eastlake house on First Street, $8,000.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

C. J. Martin, extensive improvements on Hamer House.

Album of Mantels, for $8.00.
Architects' Companion, for $2.50.

Snook Hotel, Southern Pacific depot, $4,000, Russel Bros., builders.

Woodward's Farm Homes, for $1.00
Woodward's Graperies, for $1.00.

L. A. Booksin, Willows, $2,000 cottage. Mr. Garratt, builder.

Grimshaw on Saws, for $4.00.
Mechanics' Geometry, for $4.00.

M. Zarcone, $1,800 cottage on Sixth Street, G. N. Hensley builder.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

C. C. Smith, St. John Street, between Eleventh and Twelfth, two houses costing $1,300 each.

People's Cyclopedia (three large volumes,) for $20.00.

Theo. Lenzen has made plans for a $6,000 house on the Alameda, and a $3,000 house on Lenzen Avenue, for Mr. Myers.

Plaster, How to Make it, for $1.00.
Shavings and Sawdust, for $1.50.

The Fredericksburg Brewing Company will make extensive improvements the coming summer, the cost amounting to about $40,000.

Artisan, for $5.00.
Builders' Guide, for $2.00.

Theo. Lenzen has made plans for the Bank of Gilroy building, to be commenced within the next few days.

Builders' Construction (three volumes, very fine), for $14.00.

Bids will be received in a few days for building the Congregational church on Third and San Antonio Streets, to cost about $6,000. The plans were drawn by G. W. Page.

Drawing for Bricklayers, for $1.50.
Drawing for Cabinet Makers, for $1.50.

Auzerais House, additions; architect, Theodore Lenzen. Cost, $1,600.

Santa Rosa.

A fine building will be erected under the supervision of James E. Wolfe, architect, for Mr. Barnett.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

Miscellaneous.

The Southern Pacific proposes to build a mammoth hotel near the Seal Rocks after the fashion of the Del Monte at Monterey.

Steel Square Problems, for $1.00.
Workshop Companion, for 35c.

There are now thirty-three hotels building in Los Angeles County, ranging in price from $30,000 to $600,000.

Artisan, for $5.00.
Builders' Guide, for $2.00.

Helena, Montana, is having a boom. Buildings are being put up on every hand, and thousands of dollars invested.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

The Tacoma Warehouse Company intends building a wharf and large warehouse.

Hand Railing and Stair Casing, for $1.50.
Drawing for Carpenters, for $1.75.

R. P. Hastings will build in Green Valley, Cal.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

S. E. Holden will erect a large brick building in Napa.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

The gas company in Santa Rosa are adding large improvements to their works.

Drawing for Stone Masons, for $1.50.
Building Construction, for $1.25.

G. M. Haller will erect a row of stores in Seattle.

Practical Perspective, for $5.00.
Drawing for Carpenters, for $1.75.

In Ventura, L. J. Rose has let the contract for a $60,000 hotel building to Mr. D. Perry, of San Francisco.

Ruskin's Works (four volumes), for $6.00.
Industrial Drawing for Carpenters, for $2.00.

In this city a new story is talked of on the Merchants' Exchange.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

A large building will be erected on Folsom and Twenty-sixth Streets for a Polytechnic School.

Album of Mantels, for $8.00.
History of Architecture, for $15.00.

In Pasadena, C. H. Richardson is building a $7,000 residence.

Cutting Tools, for $2.00.
Cumming's Details, for $5.00.

SAN FRANCISCO BUILDING NEWS.

B

Broadway, bet. Van Ness Avenue and Franklin. Frame school building.
O.—P. Birmingham.
A.—T. J. Welsh.
C.—Bateman Bros.
$20,000.

Broderick and Washington. Two-story frame
O.—C. E. Hempel.
C.—C. S. Waterbury.
$5,000.

Bush, bet. Powell and Mason. Additions.
O.—G. Hageman.
A.—B. E. Henriksen.
C.—Moore Bros.
$3,000.

C

Clipper, near Noe. Frame dwelling.
O.—Mrs. A. Kepfler.
C.—G. Houston.
$1,400.

California, cor. Pierce. Five two-story frames.
O.—James Whartenby.
A.—Moore & Schulze.
C.—R. Smilie.
$25,000.

California, bet. Kearny and Montgomery. Four-story brick.
O.—Abby M. Parrott.
A.—Pissis & Moore.
Masons—Riley & Loane.
Carpenter—W. M. Fletcher.
$75,000.

Clementina, bet. Fourth and Fifth. Two-story frame.
O.—Alex Donaldson.
A.—M. J. Welsh.
C.—J. J. Dunn.
$3,500.

D

Devisadero, near Geary. Two-story frame.
O.—J. F. McComic.
$4,500.

Dolores, near Twenty-eighth. Two-story frame.
O.—Flanagan.
$3,000.

Dolores, near Twenty-sixth. Two one-story frames.
O.—R. Bergfeld.
$4,000.

Dolores, near Twenty-ninth. Two-story frame.
O.—R. Bergfeld.
$3,000.

Devisadero, near California. Two two-story frames.
O.—Duncan.
A.—W. F. Smith.
C.—J. V. Hussey.
$7,000.

Devisadero, near Eddy. One three-story frame and two two-story frames.
O.—J. W. McDonald.
A.—T. J. Welsh.
$12,000.

E

Eddy, cor. Glasgow. Additions.
$500.

Ellis, bet. Taylor and Jones. Two story frame.
O.—A. Smith.
A.—H. D. Mitchell.
$7,000.

F

Fifth, cor. Bluxome. One-story brick building.
O.—F. L. Whitney.
C.—Mahoney Bros.
$5,000.

Folsom, bet. Fourth and Fifth. Three-story brick building.
O.—A. Field.
A.—J. E. Wolfe.
Mason—E. R. Shain.
Carpenter—Moore Bros.
$40,000.

Fourth, near Louise. Additions.
$500.

Fell, near Fillmore. Frame building.
O.—H. S. Murphy.
A.—M. Balczynski.
C.—R. O. Chandler.
$5,500.

Fillmore, bet. Fell and Oak. Two-story frame.
O.—J. Flood.
A.—T. J. Welsh.
C.—J W. Smith.
$8,000.

C

Green, near Buchanan. Two-story frame.
O.—J. Hulacher.
C.—A. P. Payson.
$4,500.

Green, near Laguna. One-story frame.
$1,200.

Geary, bet. Jones and Leavenworth. One two-story and one three-story frame.
O.—A. Koenig.
A.—P. R. Schmidt.
C.—R. Smilie.
$46,000.

Green, near Buchanan. One-story frame.
O.—Wm. Reston.
A.—Miller & Armitage.
C.—C. Christie.
$1,800.

Golden Gate Avenue and Webster. Two two-story frames.
O.—E. C. Querel.
A.—T. J. Welsh.
C.—S. S. Greene.
$13,000.

Golden Gate Avenue, cor. Broderick. Two-story frame.
O.—J. W. Keer.
A.—Percy & Hamilton.
C.—Ingerson & Gore.
$6,000.

Grove, bet. Broderick and Baker. Two-story frame.
O.—McGraugh.
$4,000.

H

Howard, bet. Fourth and Fifth. Three-story frame.
O.—Ellen McKerman.
A.—J. I. Clark.
C.—J. G. Adams.
$12,000.

Hayes and Baker. Two-story, attic and basement.
O.—F. Heyward.
A.—C. I. Havens.
C.—Mahoney Bros.
$20,000.

Hayes and Devisadero. Two-story frame.
O.—Miss E. W. Luecke.
A.—Moore & Schulz.
C.—J. T. Grant.
$5,000.

Harrison, bet. Ninth and Tenth. Two two-story frames.
O.—Anna Mangles.
A.—M. P. Schetzel.
C.—B. Dryer.
$6,500.

Hyde, bet. Post & Sutter. Three-story frame.
O.—Mrs. Conolin.
A.—M. Balczynski.
C.—R. O. Chandler.
$7,000.

Howard, near Twenty-fourth. Two two-story frames.
O.—Margaret P. Jennings.
C.—George Neuston.
$4,500.

Haight, bet. Steinar and Pierce. Two-story frame.
O.—P. Laherty.
Cost, $6,000.

J

Jackson, near Franklin. Additions.
O.—J. D Fry.
A.—Copeland & Banks.
Day Work.
$1,500.

Jackson, near Devisadero. Two-story frame.
O.—A. S. Brackett.
C.—Wilson & Son.
$5,000.

K

King, near Third. Brick building.
O.—A. Hayward.
A.—Percy & Hamilton.
Mason—J. McCarthy.
Carpenter—C. W. Kinsman.
$12,000.

M

Montgomery and California. Alterations and additions.
O.—Mrs. A. M. Parrott.
A.—Pissis & Moore.
C.—Mahoney Bros.
$15,000.

McAllister, near Lyon. Two-story frame.
O.—Thos. McDonough.
A.—W. C Hoagland.
C.—J. F. Easley.
$3,800.

Montgomery Avenue, bet. Filbert and Greenwich. Two-story frame.
O.—M. Sichel.
A.—P. R. Schmidt.
C.—P. Griffin.
$7,500.

Montgomery Avenue, near Union. Two-story frame.
O.—J. M. Orjubin.
A.—Miller & Armitage.
C.—L. Neissman.
$7,500.

Market, near Ninth. Two-story frame.
O.—T. Henwright.
C.—Burns.
$3,000.

Mission, near Eleventh. Additions.
O.—Mrs. M. Frederick.
A.—P. R. Schmidt.
$2,100.

Market, near Fifth. Three-story brick.
O.—E. J. Baldwin.
A.—A. A. Bennett.
$75,000.

Market and Jones. Additions.
O.—Murphy estate.
A.—T. J. Welsh.
Carpenter—J. L. Binet.
$60,000.

O

Oak, bet. Lyon and Scott. One-story frame.
O.—M. Windmuller.
A.—P. R. Schmidt.
C.—T. Knorpf.
$2,800.

Oak, near Buchanan. Two-story frame.
O.—Mrs. Marshall.
C.—C. M. Saulsbury.
$4,000.

P

Page and Devisadero. Two-story frame.
O.—Sweet.
A.—J. Newsom.
$5,000.

S

Seventh and Harrison. Two-story frame.
O.—Wm. Wehmoller,
C.—G. Houston.
$2,800.

San Jose Avenue and Twenty-fifth. Addition.
$1,000.

Seventh and Minna. Four-story frame.
O.—L. A. Meissnor.
A.—John & Zimmerman.
Mason—Hock.
Carpenter—Miller.
$14,000.

Scott, bet. Washington and Jackson. Two-story frame.
O.—F. C. Tallot.
A.—C. I. Havens.
C.—Gray & Stover.
$8,000.

Scott, near Page. Two-story ra me
J.—J. mes Hess.
A.—H. Geilfuss.
C—H. J. Weiss.
$12,000.

Sacramento, bet. Jones and Leavenworth. One-story frame.
O.—McDonald.
Day Work.
$3,000.

T

Tehama, bet. Fourth and Fifth. Four two-story frames.
O.—Ellen McKernan.
A.—J. J. Clark.
C.—J. G. Adams.
$6,000.

Tennessee, bet. Solano and Mariposa. Five one-story frames.
O.—Mr. Reece.
$6,000.

Twenty-fourth and Church. Two-story frame.
O.—W. C. Thompson.
A.—C. V. Pierce.
C.—Hawks & Bray.
$2,500.

Tenth, near Market. One-story frame.
O.—Christensen & Lord.
$1,000.

Twelfth Avenue and Clement. Frame dwelling.
O.—Mrs. Whiteside.
C.—Thompson.
$2,000.

Twenty-sixth, near San Jose Avenue. Two-story frame.
O.—Fisher.
C.—Mead.
$1,500.

Twenty-sixth, near San Jose Avenue. Additions.
$500.

Twenty-first, near Capp. Two-story frame.
O.—A. A. Hole.
A.—H. Geilfuss.
C.—H. J. Weiss.
$3,000.

U

Union and Polk. Two-story frame.
O.—Mr. Cummerton.
C.—Ellis.
$3,500.

Union, near Buchanan. One-story frame.
O.—J. W. Cudworth.
Day Work.
$1,600.

V

Valencia, bet. Herman and Ridley. Two-story frame.
O.—T. J. Bass.
A.—A. J. Barnett.
C.—A. Jackson.
$2,500.

Valencia and Willow. Two two-story frames.
O.—Joseph Moore.
A.—C. I. Havens.
C.—Doyle & Son.
$7,000.

Van Ness, bet. Turk and Eddy. Two-story frame.
O.—E. W. Joy.
A.—A. J. Barnell.
C.—A. Miller.
$7,000.

W

Washington, near Mason. Three-story brick.
O.—Powell Street Railroad Co.
C.—C. Green.
$25,000.

Y

York, bet. Twenty-fourth and Twenty-fifth. Two-story frame.
O.—C. Shoeppe.
A.—Salfield & Kohlberg.
C.—A. Klann.
$3,300.

New Books Just Received.

ARCHITECTURAL STUDIES, PART VI., contains twelve designs for houses, costing from $500 to $2,500, shown on a large scale, giving perspectives, elevations, and plans, with which are given specifications, bills of materials, and estimate of cost. Price, $1.00.

SAME AS ABOVE, PART VII. Twelve plates, giving designs for interior wood-work and fittings for moderate cost houses, with full working details. Price, $1.00.

MODERN ARCHITECTURAL DESIGNS AND DETAILS. A few copies remain of this really good work. Price, $10.00.

DETAIL COTTAGE AND CONSTRUCTIVE ARCHITECTURE. Similar to the above in general design.

LEFFELL'S HOUSE PLANS. $3.00 post-paid.

SCIENCE OF CARPENTRY MADE EASY. Price, $5.00.

MECHANIC'S GEOMETRY, or the Science of Framing by the use of Card-board Models. $5.00.

We will send the CALIFORNIA ARCHITECT for one year, *free*, to purchasers of either of the latter two works.

THE AURORA, a family magazine. Printed by Bacon & Co., San Francisco. With no "continued stories," clear type, exceptionally good reading matter, the *Aurora* recommends itself as an interesting family magazine. The price, for such first class matter, is exceptionally low, being but $1.50 per year. The San Francisco News Co. is the general agent, to whom orders can be addressed.

CORRUGATED iron conductor pipes are better than tin. In the first place they will expand when filled with ice, without bursting, and in the second place outlast tin.

CONTRACTORS, ATTENTION!

For $5.00 we will insert your business card for one year, and send you this Journal, free.

A Famous Property to be Sold.

THE West Point Foundry has been posted for sale at the Real Estate Exchange. This property is situated at Cold Spring, Putnam County, in this State, and comprises forty acres of land with several acres of buildings.

The foundry was established in 1819, and has been in constant operation ever since. In 1820, orders were received for cannon for the United States Government, and a lot of thirty-two pounders, round shot, smooth bore, were turned out, which were considered great guns in those days. All the celebrated "Parrott" guns, which played so important a part in settling the contest for the Union during the civil war, were made in this establishment.

The latest and most pretentious work undertaken was the finishing of two eight-inch rifled steel guns, being of the very few of the largest calibre of that description as yet made in the United States.

At present there are but two other gun-making establishments in this country, one at South Boston and the other at Washington; the West Point foundry, however, is the largest and most completely equipped of the three.

The property was located at Cold Spring before the advent of steam or the railroad, on account of the superior water power (twenty-eight feet fall), and also with a view to increased safety on account of the distance from the coast. It has grown to its present proportions gradually; latterly steam power has been supplied, and now the largest castings used for any purpose are being turned out for contractors all over the country.—*Real Estate Bulletin, N. Y.*

A Cozy Home.

THIS is the title of a new work by Frank L. Smith. It contains full plans and elevations for 10 houses ranging in cost from $1,500 to $5,000. The general character of the work may be told by its full title, viz., "A Cozy Home, How It Was Built, A Discussion of Its Design, and the Methods and Materials Employed in Its Construction." From the title one would infer that but one plan was given; but the author embraces 10 complete plans, with practical suggestions on each.

We have received a large consignment of the above work, and will forward a copy to any address upon receipt of the price, TWENTY-FIVE CENTS.

STRONG DAMP-PROOF GLUES.—For a strong glue which will hold in a damp place the following recipe, says an excellent authority, works well. Glue prepared in this way will hold leather belts in damp cellars, wheel pits and similar situations.

Take of the best and strongest glue enough to make a pint when melted. Soak this until soft. Pour off the water as in ordinary glue-making, and add a little water if the glue is likely to be too thick. When melted add three tablespoonfuls of boiled linseed oil. Stir frequently and keep up the heat till the oil disappears, which may take the whole day and perhaps more. If necessary add water to make up for that loss by evaporation. When no more oil is seen a tablespoonful of whiting is added and thoroughly incorporated with the glue.

Prepared in this way the glue is stronger than that made in the ordinary way and resists dampness far better.

THE British Consul at Swatow, who forwarded thirteen parcels containing samples of tools in common use by Chinese carpenters, and soon to be exhibited before the manufacturers and artisans of Sheffield, says he has always noticed in the Chinese carpenter's tool-box at least one, if not more, old European plan-irons or chisels, in many instances worn down a third of their original length. This seems to him to indicate a preference for European steel, and that were tools made of such steel, obtainable at anything like the market rate of Chinese tools, a large trade might be the consequence, for the carpenter plays a very important part in Chinese house-building. Fine finish and polish were quite unnecessary, the only requirements being durability and cheapness.

A YOUNG mechanic wants to know how to tell whether butts are for left or right-hand doors. Lay the butts on the bench or table with the knuckle-joint toward the right hand. If they are open at the top they are right hand; if open at the bottom, they are left hand. A door that opens away from you to the right, is called a right-hand door. If it opens away from you to the left, is is called a left-hand door.

SPIRITS of turpentine will remove unpleasant odors from the hands when all other deodorants fail.

Master Plumbers' Association.

Howard Building, S. W. Cor. Stockton & O'Farrell Sts., S. F., Cal.

MEMBERS.

BUSH & MALLETT	34 Geary Street
BUSH, D.	316 Sutter Street
BUTTERWORTH, J. B.	1809 Polk Street
CONNOR, J. H.	528 Third Street
DANIEL, WM. L.	234 Post Street
DOHERTY, JOHN	349 Kearny Street
DOWNES, CHAS.	41 Second Street
DUFFY BROS.	120 Sutter Street
ENRIGHT, WM. & CO.	39 Sutter Street
FIRMIN, JNO. L. E.	Cor. Thirtieth and Bartlett Streets
FRITZ & KEAN	130 Geary Street
GRAY, JNO. T.	230 Sutter Street
HUFFSCHMIDT BROS.	637 Clay Street
HOBRO, W. D.	728 Washington Street
REILLEY, C. J.	214 Montgomery Avenue
SHEPARD BROS.	526 California Street
SWEENEY & KEARNS	623 California Street
VANCE, R. A.	623 Geary Street
WELCH, J. D.	Cor. Tyler and Fillmore Streets
WILSON, WM. F.	25 Stockton Street
WILLIAMSON, H.	329 Sutter Street

RETAIL PRICE LIST OF LUMBER.

PINE, FIR, AND SPRUCE.

	Per M ft.
Rough Pine, merchantable to 40 ft. inclusive	$20 00
" " " 41 to 50 " "	21 00
" " " 51 to 60 " "	22 00
" " " 61 to 70 " "	23 00
" " " 1x3 and 1x4, Fencing	21 00
" " 1x3, 1x4, and 1x6, Fencing, odd lengths	19 00
" " second quality	16 00
" " selected	24 00
" " clear except for Flooring	29 00
" " " Flooring less than Dressed Flooring	1 00
Fire Wood	9 00
Dressed Pine, Flooring, 1x6, No. 1	32 00
" " " other sizes, No. 1	34 00
" " " all " No. 2	27 00
" " Stepping, No. 1	40 00
" " " No. 2	30 00
Ship Timber and Plank, rough, selected,	25 00
" " " selected, planed, 1 side	27 00
" " " " " 2 " average, 40 ft.	29 50
" " " " " 3 "	32 00
" " " " " 4 "	34 00
Deck Plank, rough	29 50
" " dressed average 35 ft	34 00
Pickets, rough, B. M.	19 00
Furring, 1x2, per lineal ft.	0½
Lath, 1½ 4 ft., per M.	3 50
" 1½ 4 ft., "	4 00
Rough dunnage, delivered, per M.	20 00
Spruce dressed shelving, to 14 inches, per M.	35 00
" " ½ inch " " "	35 00
" " wider, per M.	40 00

REDWOOD.

	Per M ft.
Rough Redwood, merchantable	$20 00
" " second quality	16 00
" " selected	24 00
" " clear	33 00
Dressed " common surface	22 00
" " ½-inch surface	28 50
" " No. 1	33 00
" " No. 2	26 00
" " T. & G., 1x6, 12 ft. and over, No. 1	30 00
" " " other sizes, No. 1	30 00
" " " 7 to 11 No. 1	26 00
" " " under 7 No. 1	23 00
" " Rustic, No. 1	33 00
" " " No. 2	28 00
" " T. & G. beaded, 12 ft. and over, No. 1	33 00
" " " " other sizes No. 1	33 00
" " " " 7 to 11, No. 1	26 00
" " " " under 7, No. 1	23 00
" " Siding, ½ inch	23 50
Pickets (fancy), 4 feet, B. M.	25 00
" (rough pointed) "	17 00
" (" square) "	15 00
Battens, ½x3, per lineal ft.	0½
Shingles, per M.	2 00
" fancy, per M.	3 75
Posts, split	13
Shakes, split, per M.	9 00
" sawed "	11 00

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

VOLUME VIII. ENTERED AT POST-OFFICE, SAN FRANCISCO, AS SECOND-CLASS MAIL MATTER. ESTABLISHED JANUARY, 1879. NUMBER 6.

THE

California Architect & Building News.

Established January, 1879.

The official organ of the San Francisco Chapter American Institute of Architects. Published by the SAN FRANCISCO ARCHITECTURAL PUBLISHING CO. No. 240 MONTGOMERY STREET, Rooms 11, 12, 13.

Terms per annum - - - - $2.00 in advance.

Published on the 15th of each Month.

When money is sent for subscriptions, the receipt of a copy of this Journal is an acknowledgment that it has been received. Unless requested we do not send receipts.

SAN FRANCISCO, CAL., JUNE 15, 1887.

The Amended Mechanics' Lien Law.

IN the April number of this journal, taking our cue from statements published by our daily contemporaries, that among the bills *not signed* by the governor was the amendments to the Mechanics' Lien Law, our views of the matter from that standpoint were plainly expressed, and, although in error as to the main fact, the spirit of the article was and is pertinent, as far as setting forth the views of ninety-five per cent of all those interested, and the monstrous defects of the law then and now are concerned—were misled to the conclusion that the amendments had been consigned to a silent repose for at least two years, by reason of the governor failing to approve. We now find in the recently published statute book, containing the enactments of the late Legislature, a series of attempted amendments approved by His Excellency, which to some extent amends, and in others confuses badly, so much so that one of the ablest of the legal profession remarked to us, "I have made the lien law of California a study, and had gained, as I supposed, a fair interpretation and understanding of its intricacies, but now I must admit that I am all at sea, not feeling assured of anything under the law; and further, if subjected to a strict legal analysis before an intelligent court of competent jurisdiction, I am satisfied that it would be so thoroughly shattered and divested of practical force and effect that what remained would be of service only as waste paper."

The attempt to amend—make better—is a very defective piece of legislative work, in that it fails to remedy numerous glaring defects, which have caused much annoyance, inconvenience, and trouble in building circles, and drawn curses loud and long from thousands who have experienced the hardships imposed by some of the unreasonable provisions.

The amendments as passed will be found in full in another part of this issue. *Reputed owner* is generally introduced for *owner*, as found in previous law, to avoid mistake in the identity of the responsible contracting party. Section 1,183 is also amended in reference to filing contracts to read. "*Said contract, or a* MEMORANDUM *thereof, setting forth the names of all the parties to the contract, a description of the property to be effected thereby, together with a statement of the general character of the work to be done, the total amount to be paid thereunder, and the amounts of all partial payments, together with the times when such payments shall be due and payable,*" shall, "*before the work is commenced, be filed,*" etc., and, unless so filed, they "*shall be wholly void, and no recovery shall be had thereon by either party thereto.*"

We repeat that the proposition just quoted is infamous, in that it works hardships, inconvenience, and annoyance, and may be utilized to bad purposes and results. It is a legal means whereby one or more designing men may cheat and rob innocent persons. It is a legal trap in which persons not well informed as to the law—and thousands there are who are not—may be caught and fleeced, while no good purpose is served by the filing process. It is, beyond all question, special legislation, in that it applies to and affects specially building contracts, and no others, and as such is unconstitutional and illegal, while its monstrousness is severely aggravating, in so far as it dictates to contracting parties that an obligation entered into by and between them shall be and become void unless conforming to a notion conceived in and emanating from the brains of one or more fanatics who imagined it necessary for their purposes, and hunted up a funny idea, which, by personal effort and influence, they managed to push through the Legislature, and have made into a law, for the purpose of controlling the actions of thousands, nine-tenths of whom utterly disapprove the measure. Legislation which seeks to vitiate the solemn obligations of contract, other than for fraud, is a step in advance of reason and right between man and man.

The amendment which now makes it necessary to file the whole contract, *or a memorandum of its contents*, changes the filing feature some, and will perhaps puzzle those of our Superior Judges who have enunciated the doctrine that the specifications are and must be considered under the former law as a part of the contract itself. Will they now hold that the memorandum is virtually the contract, and that the specifications also attach thereto? The law as amended reads, Such contracts "*shall be subscribed by the parties thereto;*" and this is followed by, "*or a memorandum thereof,*" and shall be filed, but no provision is made as to or by whom the filing is to be done, nor as to whether at all, or by whom the memorandum is to be signed. The facts to be set forth in the memorandum are defined, but nothing in words appears as to the signing. Section 1184 is also amended, but still retains that most silly, inconvenient, and unbusiness-like provision "that twenty-five per cent of contract amount shall remain unpaid for at least thirty-five days after the final completion of contract, while another section provides that sub-contractors, material men, etc., shall have but thirty days within which to file their liens; consequently, those who have claims for work done or materials furnished must either resort to the actual filing of a lien within "thirty days," or lose all security in the building for and upon which they have performed labor or furnished materials. If they fail to do this, then they are entirely at the mercy of the contractor, who, if not honest and able to meet his obligations, can, if so disposed, devise means which will give his creditors no better, at best, than a judgment of legal process. Common sense and fairness would have suggested that the advantage of the five days' time should be in favor of the right to lien, the twenty-five per cent retained to be due and payable in twenty-five days, or the time to be made equal in both cases. Cases are on record where "smart Alicks" have waited until the last moment, and when too late for other creditors to prepare and file liens, the sly ones have secured to themselves the material defects of the law, and filed claims for the full amount due them, although the balance of contract money has not been sufficient to pay more than seventy-five per cent of the total sum of indebtedness. It is all right and proper that every creditor should save himself from loss, when he can do so with equal justice to all other parties similarly situated, but when established law provides the strategy by which the shrewd, cunning, and unscrupulous may gain advantages, and beat the trusting and unsuspecting, such laws must be considered as more infamous than just.

Our readers, however, will be able, by comparing the amendments with previous law, to judge of present merits, if any there are to be found in the Mechanics' Lien Law, as it is and will be for the next two years.

An Act to amend sections 1883, 1884, 1887, 1191, and to repeal section 1203 of an Act of the Legislature of the State of California, entitled, "An Act to establish a Code of Civil Procedure," approved March 11, 1872, all relating to Liens of Mechanics and others. [Approved March 15, 1887.]

The people of the State of California, represented in Senate and Assembly, do enact as follows:—

SECTION 1. Section 1183 of the Code of Civil Procedure is amended so as to read as follows:—

Lien upon property upon which they have bestowed labor.

SEC. 1183. Mechanics, material men, contractors, sub-contractors, artisans, architects, machinists, builders, miners, and all persons and laborers of every class, performing labor upon or furnishing materials to be used in the construction, alteration, addition to, or repair, either in whole or in part, of any building, wharf, bridge, ditch, flume, aqueduct, tunnel, fence, machinery, railroad, wagon road, or other structure, shall have a lien upon the property upon which they have bestowed labor, or furnished materials, for the value of such labor done and materials furnished, whether at the instance of the owner or any other person acting by his authority, or under him as contractor or otherwise; and any person who performs labor in any mining claim or claims, has a lien upon the same, and the works owned and used by the owners for reducing the ores from such mining claim or claims, for the work or labor done, or materials furnished by each respectively, whether done or furnished at the instance of the owner of the building or other improvement, or his agent; and every contractor, sub-contractor, architect, builder, or other person, having charge of any mining, or of the construction, alteration, addition to, or repair, either in whole or in part, of any building or other improvement as aforesaid, shall be held to be the agent of the owner for the purpose of this chapter. In case of a contract for the work, between the reputed owner and his contractor, the lien shall extend to the entire contract price, and such contract shall operate as a lien in favor of all persons, except the contractor, to the extent of the whole contract price; and after all such liens are satisfied, then as a lien for any balance of the contract price in favor of the contractor. All such contracts shall be in writing when the amount agreed to be paid thereunder exceeds one thousand dollars, and shall be subscribed by the parties thereto, and the said contract, or a memorandum thereof, setting forth the names of all the parties to the contract, a description of the property to be affected thereby, together with a statement of the general character of the work to be done, the total amount to be paid thereunder, and the amounts of all partial payments, together with the times when such payments shall be due and payable, shall, before the work is commenced, be filed in the office of the County Recorder of the county, or city and county, where the property is situated, who shall receive one dollar for such filing; otherwise, they shall be wholly void and no recovery shall be had thereon by either party thereto; and 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 for the value thereof.

Contracts shall be in writing.

SEC. 2. Section 1184 of the Code of Civil Procedure is hereby amended so as to read as follows:—

Contract price payable in installments.

SEC. 1184. No part of the contract price shall, by the terms of any such contract, be made payable, nor shall the same or any part thereof be paid in advance of the commencement of the work, but the contract price shall, by the terms of the contract, be made payable in installments at specified times after the commencement of the work, or on the completion of specified portions of the work, or on the completion of the whole work; *provided*, that at least 25 per cent of the whole contract price shall be made payable at least thirty-five days after the final completion of the contract. No payment made prior to the time when the same is due, under the terms and conditions of the contract, shall be valid for the purpose of defeating, diminishing, or discharging any lien in favor of any person, except the contractor, but as to such liens, such payments shall be deemed as if not made, and shall be applicable to such liens, notwithstanding that the contractor to whom it was paid may therefore abandon his contract, or be or become indebted to the reputed owner in any amount for damages or otherwise, for non-performance of his contract or otherwise. As to all liens, except that of the contractor, the whole contract price shall be payable in money, and shall not be diminished by any prior or subsequent indebtedness, offset, or counterclaim, in favor of the reputed owner and against the contractor; no alteration of any such contract shall affect any lien acquired under the provisions of this chapter. In case such contracts and alterations thereof do not conform substantially to the provisions of this section, the labor done and materials furnished by all persons except the contractor shall be deemed to have been done and furnished at the personal instance and request of the person who contracted with the contractor, and they shall have a lien for the value thereof. Any of the persons mentioned in section 1183, except the contractor, may at any time give to the reputed owner a written notice that they have performed labor or furnished materials, or both, to the contractor, or other person acting by authority of the reputed owner, or that they have agreed to do so, stating, in general terms, the kind of labor and materials, and the name of the person to or for whom the same was done or furnished, or both, and the amount in value, as near as may be, of that already done or furnished, or both, and of the whole agreed to be done or furnished, or both. Such notice may be given by delivering the same to the reputed owner personally, or by leaving it at his residence or place of business, with some person in charge, or by delivering it to his architects, or by leaving it at their residence or place of business, with some person in charge, or by posting it in a conspicuous place upon the mining claim or improvement. No such notice shall be invalid by reason of any defect of form, provided it is sufficient to inform the reputed owner of the substantial matters herein provided for, or to put him upon inquiry as to such matters. Upon such notice being given, it shall be the duty of the person who contracted with the contractor to, and he shall, withhold from his contractor, or from any other person acting under such reputed owner, and to whom by said notice the said labor or materials, or both, have been furnished, or agreed to be furnished, sufficient money due, or that may become due to such contractor, or other person, to answer such claim and any lien that may be filed therefor for record under this chapter, including counsel fees not exceeding one hundred dollars in each case, besides reasonable costs provided for in this chapter.

Proviso.

Written notice of labor performed.

Notice, how delivered.

SEC. 3. Section 1187 of the Code of Civil Procedure is amended so as to read as follows:—

Time and place of filing claim.

SEC. 1187. Every original contractor, within sixty days after the completion of his contract, and every person, save the original contractor, claiming the benefit of this chapter, must within thirty days after the completion of any building, improvement, or structure, or after the completion of the alteration, addition to, or repair thereof, or the performance of any labor in a mining claim, file for record with the County Recorder of the county in which such property, or some part thereof, is situated, a claim containing a statement of his demand, after deducting all just credits and offsets, with the name of the owner or reputed owner, if known, and also the name of the person by whom he was employed, or to whom he furnished the materials, with a statement of the terms, time given, and conditions of his contract, and also a description of the property to be charged with the lien, sufficient for identification, which claim must be verified by the oath of himself, or of some other person; any trivial imperfection in the said work, or in the construction of any building, improvement, or structure, or of the alteration, addition to, or repair thereof, shall not be deemed such a lack of completion as to prevent the filing of any lien; and in case of contracts, the occupation or use of the building, improvement, or structure, by the owner, or his representative, or the acceptance by said owner or his agent of said building, improvement, or structure, shall be deemed conclusive evidence of completion; and cessation from labor thirty days upon any unfinished contract, or upon any unfinished building, improvement, or structure, or the alteration, addition to, or repair thereof, shall be deemed equivalent to completion thereof for all the purposes of this chapter.

Description of property.

SEC. 4. Section 1191 of the Code of Civil Procedure is hereby amended so as to read as follows:—

Lien upon lot for improving.

SEC. 1191. Any person who, at the request of the reputed owner of any lot in any incorporated city or town, grades, fills in, or otherwise improves the same, or the street or sidewalk in front of or adjoining the same, or constructs any areas, or vaults, or cellars, or rooms, under said sidewalks, or makes any improvements in connection therewith, has a lien upon said lot for his work done and materials furnished.

SEC. 5. Section 1203 of the Code of Civil Procedure is hereby repealed.

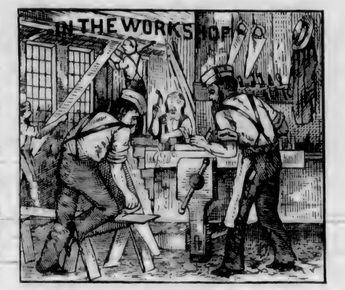
SEC. 6. This Act shall take effect and be in force from and after its passage.

ESSENTIALS OF PERSPECTIVE.

By L. W. MILLER. Price, $1.50. The newest as well as one of the best of the books on the subject.

ASKED, ANSWERED, and COMMUNICATED.

☞ Architects, Contractors, Carpenters, and mechanics generally are respectfully requested to furnish us items of interest for this column. We will gladly answer any and all questions pertaining to the architectural and building interests. If illustrations are necessary to explain your ideas, send us a sketch of them, and we will make the cuts. We especially invite suggestions from apprentices and young mechanics.



Not Enough Draughtsmen.

SEVERAL times, in the columns of this journal, we have called attention to the scarcity of draughtsmen. And although several promptly answered our appeals, the demand is now greater than at any previous time. From ten different towns and cities, and from numerous offices in this city, comes the demand for first-class draughtsmen, and there are none to fill the places. We can immediately place several in good positions, if they will send us their address, and state their qualifications. Wages will vary from $18 to $25 per week, according to ability.

Wrong Statements Corrected.

IN the May issue of the *Carpenter*, the following statement appears:—

CALIFORNIA.

"Stay away from the Pacific Coast. The cheap railroad fares have flooded every town with hordes of idle labor willing to work for even a dollar a day. Wages flat and work scarce.

ALAMEDA.—Moderate; $2.50 to $3. 9 hours.
SAN FRANCISCO.—Overstocked; $2.50 to $3. 9 hours.
SAN RAFAEL.—Middling; $2.25 to $3. 9 hours.
OAKLAND.—Dull; $2 to $3. 9 hours a day.
LOS ANGELES.—Fair; $2.50 to $3. 9 hours.
PASADENA.—Medium; $2.50 to $3. 9 hours.
SAN DIEGO.—Middling; $2.25 to $3. 9 hours.
SANTA BARBARA.—Dull; $2.40 to $3.
SAN BERNARDINO.—Quiet; $2.00 to $3.00."

In several places in the same issue, attention is called to the remarkable dullness in building circles, and the low prevailing wages received by mechanics. We do not know the source from whence the *Carpenter* gets its information, but we emphatically protest against any journal printing news and disseminating the same as gospel truths, without first receiving the most unqualified assurances from *different* sources, that the statements made are correct. We have frequently noticed, in trade journals, that the opinion of one man is given as the sentiment of the entire community, and should his feelings be warped by presumed bad treatment of any of his workmen companions, the neighborhood is to be condemned and written down, because the one man hath so ordained.

San Francisco is not "overstocked" with carpenters willing to work for "$2.50 to $3.00 per day of nine hours." *Carpenters* are generally well employed, and the ruling rate of wages is $3.50 per day, and no *carpenter* will work under that rate. Unfortunately, we have an army of floor-layers, piece-workers, etc., who will take anything they can get at any price; but, in behalf of the CARPENTERS of the Pacific Coast, we protest against placing such scabs in the same category as mechanics.

San Rafael is but a small country town of not over 3,000 inhabitants, but we venture to say, without fear of contradiction, that there is not a *carpenter* working in or around the town, who receives but $2.25 a day, as per clipping prices.

We think if the San Bernardino *carpenters* could get hold of the informant who quotes their wages at $2.00 per day, there would be little left of him to write future articles. And so with the whole list; there is not a fair statement in any case, of either amount of work, or wages.

In this city building is very brisk, as our regular monthly statements will prove. In Oakland more work than usual is going on, and much more to follow. Los Angeles and San Diego are reveling in present activities and future engagements. In fact, all over the State there is more work being done in the building line than for many years past for similar periods. The ruling wages for *carpenters* is $3.50 per day, with a reduction for piece-workers and apprentices.

To the honor of California *carpenters*, it may be said that sooner than work at their trade for less than mechanic's wages, they would stow their tools in the basement, and go to the harvest field, or other honest employment, at $40 per month and board.

WHY DOES VARNISH CRACK?—How many paintings and how much decorative coloring is spoilt by cracking of the varnish. Much of this is due to poor mastic varnish. Good varnish on good color coats will not give any signs of cracking, until, by repeated varnishings, it has accumulated a thick coating of brittle, inelastic gum. On the principle that it takes two to make a quarrel, two or more coats of varnish must be given before this trouble makes itself manifest. As in all drying concretion occurs, one cause of cracking is putting on one coat before another is perfectly dry. To reduce the risk of cracking to a minimum, where varnish is to be applied as a finish, all coatings should have oil in their composition, and yet be mixed to dry flat, and they should be applied very evenly and thinly, even if this necessitates an extra job.

Varnish colors may be painted on the glass of inside of window to imitate stained glass. Some very brilliant colors may thus be obtained.

THE production of cut nails in the United States in 1886, is the greatest in the history of the country, being 8,160,963 kegs, as against 6,696,815 kegs in 1885.

Cutting Rafters.

I HAVE a rule for cutting rafters one-third pitch which may interest the readers of *Carpentry and Building*. Suppose the building to be 18 feet wide. I take half the width of the building, which in this case is 9 feet. I multiply by $2\frac{1}{2}$, and call the answer inches, giving in this case $22\frac{1}{2}$ inches, or 1 foot $10\frac{1}{2}$ inches. I add this to half the width of the building, which gives the length of the rafter 10 feet $10\frac{1}{2}$ inches. Since this overruns, say $\frac{1}{16}$ inch to the foot, it would make this measurement $\frac{9}{16}$ inch too long. Call this $\frac{1}{2}$ inch, which leaves the rafter 10 feet 10 inches in length. The figures I would make in a problem of this kind would be as follows:—

18	9
$4\frac{1}{2}$	1 $\quad 10\frac{1}{2}$
$22\frac{1}{2}$	10 ft. 10 ins.

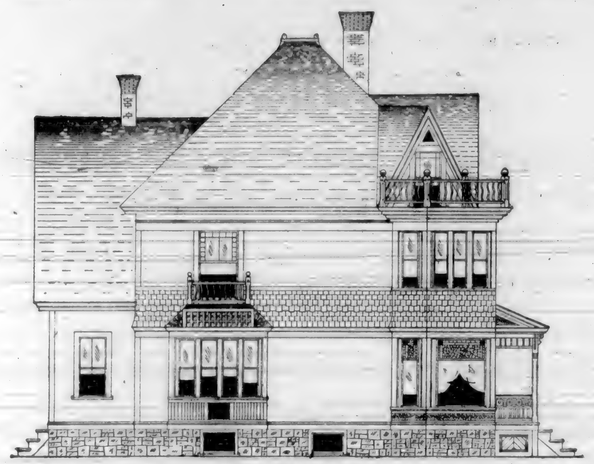
The matter of subtracting the $\frac{1}{2}$ inch excessive length in this case, alluded to above, would be done in the head. I shall be glad to know what the readers of the paper think of this method.—*S. J. P., in Carpentry and Building.*

Characteristic of a Good Floor.

ONE of our contemporaries in specifying the features of a good floor arranges the specification in the following form:—

A good floor should be
A test of the builder's skill;
Of thoroughly seasoned lumber;
Without creaking boards;
Without splintering edges;
Without gaping joints;
Without curling section;
Flat as a table-top;
Rigid and smooth;
Almost imperceptibly jointed;
Undisturbed when laid;
Laid on straight-edged joists;
Without heading joints;
Laid without showing nails;
Of edge-nailed boards;
Laid on a bed-floor.
A good floor is a rarety.

THE Supreme Court of Vermont has announced its decision in the famous case of the Ryegote stonecutters' conspiracy, growing out of the attempt of the workmen to prevent the employment of other workmen, and to deter them from working by denouncing them as "scabs," and threatening to make them publicly odious as such. The decision of the Supreme Court is that a conspiracy among workmen to prevent others from working or from being hired is a crime at common law, and punishable under the statutes of Vermont.



SIDE ELEVATION.

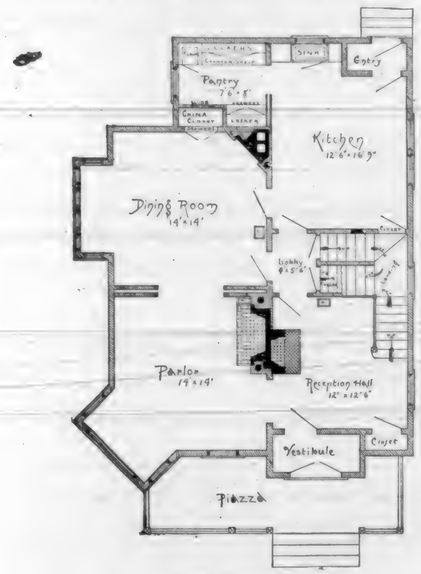
FRONT ELEVATION.

A Cozy Home; How It Was Built.

FRANK L. SMITH, ARCHITECT.

THE suburban cottage and its construction have become of prime interest to a large class of people at the present day. Being of comparatively small cost, and lending itself to varied and attractive design, a man of quite limited means may aspire to the ownership of a cozy home, where he can put into execution the ideas he may have fostered for a long time as to what a house and its furnishings should be. He studies the many architectural publications, and sees many designs that please him in some respects, and many more that he has no use for whatever. Turning from one to the other, not finding just what he wants, he despairs of obtaining a ready-made plan. The chances of his doing so are about even with his getting a ready-made coat that will be a perfect fit. He may find something that will answer, but falls far short of what he wants.

The average man who is to build a low-cost dwelling does not seek or employ an architect's services, for the reason that he believes he can put the money to better use in the finishings of the house, and the inevitable result is that he is not satisfied. One forgotten thing after another will crop up, and a change is made here, and a change there; and finally, after nearly endless worry, he enters a completed house that is not what he wanted, and that has overrun his estimate. He resolves to build again as soon as he can dispose of his first venture, and a second time will profit by his previous experience. But the building of one house is not sufficient to enable a man to steer clear of the many pitfalls in house building, and the only satisfactory and economical way is to employ an architect in the beginning.



FIRST FLOOR PLAN.

Make up your mind what you wish to have and to spend, and if the two do not agree, either take what your money will buy, or do not build. Employ an architect in whom you have confidence, and do not be in a hurry. Carefully study the sketches he will make for you, have everything arranged beforehand and reduced to writing, and there is no reason why your house should cost you a cent beyond the estimate, or cause you more anxiety than getting a new suit of clothes.

* * * * * * * * * * *

A client of mine came in the office and said, "I want a snug, cozy home. I have not a great amount at my disposal, but that little I want spent judiciously. I do not want an inch of room wasted. There must be three rooms upon the first floor, with a large entrance or reception hall, easy flight of stairs, dining-room and parlor communicating with sliding doors, one fire-place at least, large kitchen, with ample pantry accommodations, and back stairs, bay-window in dining-room, and corner bay-window in parlor. On second floor there must be four chambers, ample closets, bath-room, and access to the attic, though latter is not to be finished. All rooms are to be accessible from a common hall, and the whole to be quiet, and yet attractive in appearance. Now can I get such a house built for $3,000?"

Here was a client whose requirements were modest, and whose wants are similar to those of one-half the people who build houses. In a short time I had prepared the plans illustrating this article. The house was commenced, and in three months ready for occupancy. Everything having been fully determined upon in the beginning, the owner had but few suggestions to make as the work progressed, and his dreams were unclouded by visions of "extra" bills, that too often prove the bugbear of building operations.

* * * * * * * * * * *

Are you not in need of an architect's services? If you intend to build a house, you certainly are. But I hear you say that your friends and neighbors have built houses time and again, and that they managed to get along without an architect, and consequently have saved money.

It certainly is true that the large majority of dwelling-houses are built without the services of an architect; yet it does not follow that such services are not beneficial, and even necessary.

When you have a case at law, you do not appear before the justice in your own behalf, but rather place your interests in the hands of an able advocate. When your child is ill, you do not go at once to the apothecary; but, instead, you call the family physician, and let him first prescribe.

The architect stands to his client very much in the light of both attorney and physician. He makes a "diagnosis" of your case, after a careful investigation; prescribes in the shape of

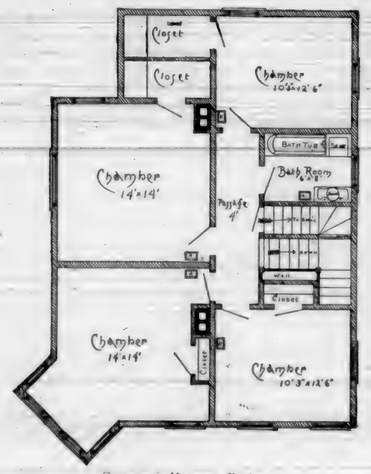
plans and specifications; sends you to the carpenter, who compounds the prescription. He draws up the legal papers, audits the accounts, and, in the end, assures you that you have been fairly dealt with, and have received what you have paid for.

An architect is not necessarily a builder, any more than a physician is an apothecary; nor is the carpenter necessarily an architect, any more than the apothecary is a physician.

The architect can save you money. He discovers your wants, your likes, and your dislikes. He reduces them to a tangible form; he draws up the specifications so minutely that every variety of material and labor is distinctly set forth as to its quality and kind.

When completed, plans and specifications are presented to a builder for an estimate. He knows exactly what is expected of him. There is no chance for controversy or quibble; all has been settled by the owner through his architect. In consequence, if several contractors estimate upon the building, it is known that their figures are all upon the same basis.

Where a carpenter receives his orders directly from the owner, in some such a way as this, "Build me a house like Mr. Brown's,



SECOND FLOOR PLAN.

but with such and such changes," there never can be any definite contract, for the changes and alterations, in the way of "extras," amount to a very considerable sum in most cases. Carpenters like these "extras," though they often grumble about them, for they are the fat pickings of the job, and are often a source of more profit than the original contract.

"Extras" are to be rigidly avoided, and it is the duty and province of the architect to so perfect his plans and specifications that none will be necessary. On almost every building erected in such a manner, enough might be saved on the extra work to more than pay for an architect's services.

* * * * * * * * * * *

This article and the illustrations accompanying are from a new work entitled, "A Cozy Home," the price of which is but *twenty-five cents*. We are indebted to the author, Frank L. Smith, architect, for the use of the cuts and the extracts from the book. "A Cozy Home" contains ten full sets of plans, one set of which is here represented complete. To anyone contemplating building, the "Cozy Home" will give many valuable ideas. We have a full supply on hand, and will send a copy, post-paid, upon the receipt of twenty-five cents.

Draughtsmen Wanted.

We have situations for 20 good draughtsmen. Send your address to this office for full particulars. Those wanting places in first-class offices please correspond with us immediately, as the demands are urgent.

Are Advertisements Read?

WE have always taken the ground that advertisements in a trade journal are as much read as the editorial matter itself. In fact, many people subscribe more for the purpose of keeping the run of all the new things connected with the building interests than they do for the "good ideas" contained in the reading columns. Those that study and invent or manufacture superior articles for use in buildings or connected therewith, are sure to let people know of their wares through the columns of the trade journals. The following pithy observations are not original with the editor of this journal, but they will be well worth careful reading:—

The first time a man looks at an advertisement he does not see it.

The second time he does not notice it.

The third time he is dimly conscious of it.

The fourth time he faintly remembers having seen something of the kind before.

The fifth time he half reads it.

The sixth time he turns up his nose at it.

The seventh time he throws the paper down impatiently.

The eighth time he ejaculates, "There's the confounded thing again!"

The ninth time he wonders if there is anything in it.

The tenth time he thinks it might possibly suit somebody else's case.

The eleventh time he thinks he will ask his neighbor if he has tried it, or knows anything about it.

The twelfth time he wonders if the advertiser can make it pay.

The thirteenth time he rather thinks it must be a good thing.

The fourteenth time he happens to think it is just what he wanted.

The fifteenth time he for a long time resolves to try it as soon as he can afford it.

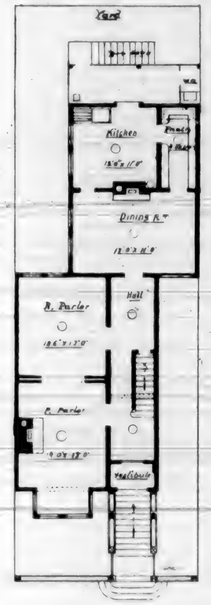
The sixteenth time he examines the address carefully and makes a memorandum of it.

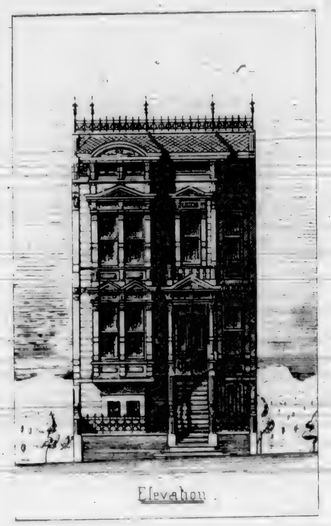
The seventeenth time he is tantalized to think he is hardly able to afford it.

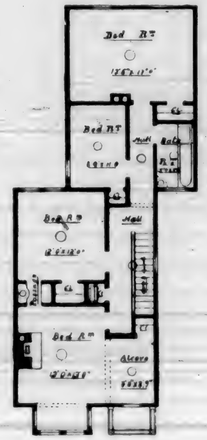
The eighteenth time he sees painfully how much he is in need of that particular article.

The nineteenth time he counts his money to see how much he would have left if he bought it.

The twentieth time he rushes frantically forth and buys it.







A Two-Story City Residence.

IN this design we give the floor plans and geometrical elevation of an eight-room city dwelling. This building has a front of twenty-five feet by a depth of sixty-five feet, including rear porch, and occupies a lot twenty-five feet front by one hundred and twelve feet six inches deep, and contains a basement story under the entire building seven feet six inches high, occupied by a laundry, cellar, and store-rooms. The building is so arranged that the rooms are lighted from each side, as well as from the front and rear. The house is entered through a deep, richly-paneled vestibule, into a wide hall communicating directly with all the rooms, and containing a flight of stairs terminating in the second story hall, with turned black walnut newel-posts at the top and bottom. The two parlors are connected by large sliding doors, nine feet high and six feet six inches wide, and when thrown open make a very large and elegant apartment. The fire-places are finished in best Italian marble, and each has an ash-pit communicating with the cellar. The rear hall in the second story is a continuation of the main hall, separated by an arch. The stairs and halls are lighted by windows three feet wide by two feet high, and glazed with colored glass, with ornamental figure in the center.

The front bedroom has an alcove room separated by an arch, which should be used for a dressing-room. The two front bedrooms have a passage between them, containing a wash-basin with marble top and back. On one end of the rear porch is a water-closet, inclosed with tongued and grooved boards, dressed and painted. A flight of rear stairs, descending from the rear porch, communicates with the rear yard. The well-proportioned bay-window, graceful cornice, iron cresting, portico, balcony, etc., are solidly constructed, and speak for themselves without further comment on the beauty and artistic appearance of the building.

How to Prepare Calcimine.

SOME of our readers may wish to prepare their own calcimine, and we give these rules for the purpose of enabling them to do so:—

Soak one pound of white glue overnight; then dissolve it in boiling water and add twenty pounds of Paris white, diluting with water until the mixture is of the consistency of rich milk. To this any tint can be given that is desired.

Lilac—Add to the calcimine two parts of Prussian blue and one of vermilion, stirring the mixture thoroughly, and taking care to avoid too high a color.

Brown—Burnt umber.

Gray—Raw umber, with a trifling amount of lampblack.

Rose—Three parts of vermilion and one of red lead, added in very small quantities until a delicate shade is produced.

Lavender—Make a light blue and tint it slightly with vermilion.

Straw—Chrome yellow, with a touch of Spanish brown.

Buff—Two parts of spruce, or Indian yellow, and one part of burnt sienna.

Blue—A small quantity of Prussian blue will give a soft azure tint. Dark blue is never desirable.

Delicate tints in the foregoing varieties of colors are always agreeable and tasteful, and so great care must be taken that they are not too vivid. The tints will always appear brighter than in the calcimine pot, and the workman or workwoman must keep this fact in mind when adding the coloring powders. It is a good idea to give the ceiling a calcimine two or three shades lighter than that of the walls, so that it may seem merely a delicate reflection of their deeper tones. The ceiling can be calcimined with the lighter tint, and then more coloring added for the walls.

Origin of Slanting Roofs.

TO find the source from which the European nations have derived the art of building in stone, we must look to the land of the Pharaohs. From Egypt the craft passed to Greece, and from the Greeks it was taken up by the Romans, to be by them disseminated through the north and west of Europe in the process of colonization. The similarity, in regard to the constructive parts of the ancient Greek buildings to some of those found in Egypt of older date, affords strong confirmation of the tradition that the Greeks borrowed the art from the Egyptians. The Greeks, however, in the adopting of it, added a new feature, the pediment, and the reason for this addition is easy to find. Egypt is practically rainless. All the protection from the climate required in a palace or temple in such a country is shelter from the sun by day, and from the cold by night, and for this a flat roof, supported by walls or pillars, with archives, is quite sufficient; but when, as in all European countries, rain has to be taken into account, a slanting roof becomes a necessity. The Greeks, with their eye for symmetry, provided for this by forming the roof with a central ridge, as an obtuse angle, from which it sloped down equally on either side. The triangular space that formed at the end of the building above the architrave was occupied by the pediment, and this part of the façade, which owed its birth to the exigencies of the climate, was thenceforth regarded as so essential to the completeness of the work, that it was said that if a temple were to be erected in the celestial regions, where rain would not be possible, the pediment could not be omitted.—*Popular Science Monthly.*

MODERN HOUSE PAINTING, for $5.00.

San Francisco Chapter of Architects.

THE regular meeting of the Chapter was held on the evening of the 3d inst.—President Pissis presiding. After the reading of the minutes, and routine business was passed, the committee appointed by the Chapter to mature and submit proposed amendments and improvements to the present city ordinances relating to the erection of buildings, made a report which led to a general discussion of the subject matter, ending with instructions to said committee to proceed as rapidly as possible with the work in hand so that the issues upon the many vexing and vexatious questions so frequently arising under the present law might be met, and, if possible on the part of those now exercising arbitrary control of matters, better and more mutual understanding and arrangement between those most interested may be perfected.

The session was unmarred by a single word or occurrence not of the most pleasing and harmonious character, except regrets that every "better architect" in the city did not join in honest efforts to perpetuate an organization founded in good faith, with honest, impersonal purposes for the best good of the entire profession.

City Fire Law Ordinances Declared Invalid.

ACTING Police Judge Page, presiding in Police Court No. 1, on the 9th inst. declared Section 1752, of the peculiarly entitled—"*Order defining the Fire limits and regulating the Construction of Buildings in the City and county of S. F.*," invalid,—peculiar in that the "order" covers a thousand—more or less—distinct questions and issues, mixing up technical fire matters and matters specially architectural, scientific, and mechanical in one common jumble. The decision as understood not only invalidates the section mentioned, but the whole, nearly one hundred sections included in the "order." The "order" in many of its parts bearing upon the construction of buildings, has been a source of great annoyance to competent architects and builders, who have been held under the "order" to requirements of the most unreasonable and unnecessary character, and a great many hitches, stoppages of work from trifling and defenseless causes, arrests, etc., have from time to time occurred.

Under present circumstances, it will be necessary to formulate new ordinances covering the ground made vacant by the decision, or the legal repassage of the "order" as it is, which was declared invalid simply upon the ground of irregular publication.

We will not presume for one moment that the fire department people, who have dictated or influenced the formulation of the "order" set aside, have any other than safety and right purposes in mind, but as there are other than fire department interests involved, there should be easily available measures adopted by which mutually understood conclusions may be reached.

Semi-Annual Building Record.

TO a stranger it would appear at first glance that an unusual number of buildings were in progress of erection, but our semi-annual report does not show a very good comparison with other years.

During the month just ended we report:—

104 frame buildings, value	$477,500
7 brick " "	196,164
26 alterations "	57,550
137	$731,214

For comparison we give the number for each month of present year:—

Jan., 59, value	$650,750
Feb., 48, "	204,450
March, 84, "	353,900
April, 100, "	636,800
May, 88, "	692,800
June, 137, "	731,214
516	$3,269,914

For the similar period in 1886:—

670 buildings, value	$3,486,633

A large decrease is noted in the *number* of new buildings, while there is but little falling off in the *values* of same between the two periods. This shrinkage is principally caused by the

HIGH PRICES OF BUILDING MATERIALS.

In business buildings owners do not so much stand on a difference in price of lumber, etc. But a laboring man can ill afford to pay the difference. One year ago rough lumber could be had for $15 per M. in small quantities, and much less by cargo. Rustic, best quality, $30 per M. To-day the prices are $20 for rough, and $35 for rustic. That these extortionate prices have stopped the erection of small buildings, is fully proven by our building record. Hardware, brick, etc., having been advanced in price as much as the public will stand, and lumber a little more than poor people can afford, we can reasonably expect a falling off in the erection of

AVERAGE COST FRAME BUILDINGS.

We hope the lumbermen will take this fact into consideration, and instead of calling the dealers of that commodity together for the purpose of considering how much they can squeeze out of the dear public, that they will consider that the future advancement of San Francisco is of far more importance than the addition of a few dollars to the coffers of already rich men.

The argument is used that an advance of $5.00 per M. does not effect the value of a small house more than $75 or $100. All right, then, if that is so, let the poor man have the benefit of that same $100; he will beautify the section in which he may build, to that extent, while the rich lumberman will simply place that amount in the bank to lend out at interest when occasion offers. **Let it be distinctly understood that those in moderate circumstances will not build as long as values of building materials are constantly advancing,** and this fact is **thoroughly proven** by the decrease of 154 buildings for the first six months of this year.

Advance in Lumber Rates.

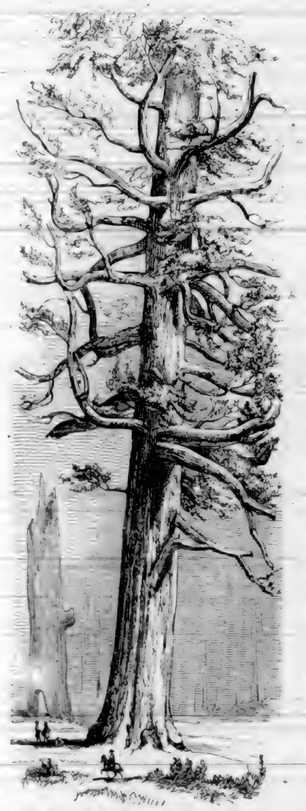
PRICES have again been advanced. In fact, the changes made are so frequent that the Lumber Association merely corrects old lists and mails them to its patrons. It would cost too much to print new circulars every week. The late advances are all made in surfaced lumber. Rustic is now $35 per M., and other kinds in proportion. We hear it rumored that yet another squeeze will be given to the dear public's pocket. Price of lumber and other building materials has been raised so much that an estoppal has been placed on the erection of small buildings. A careful observer cannot but notice the few buildings in course of erection in the outlying districts. Hundreds of small houses would be dotting the blank spaces, if it was not for the greed of the Lumber Association in placing their wares at a figure to compel those in moderate circumstances to forego the building of small tenements, and repairs that are actually needed. Gentlemen of the Lumber Association, is it not about time that you halt in your design to squeeze the dear public, and give the poor residents of the Point Lobos tracts and the Mission a chance to put up a little home? Lumber is fully fifteen per cent too high in the price asked, and this is just enough to debar many from building.

ARTISTIC TILES AND MANTELS.

ONE of the most artistic displays in Tiling, Mantels, Brass goods, etc., can be found in the rooms of E. A. Pattison & Co., 308 Stockton St., San Francisco. The design in tiling entitled "Cupid among the Roses," is worthy of particular mention. This firm is the sole Pacific Coast Agent for the Perth Amboy Terra Cotta Co. A large and well selected line of wooden and iron mantels is kept constantly on hand, and the prices are such as to command the attention of those about building. The floors of Messrs. Pattison & Co's warerooms are covered with Tile and Parquette flooring of the most beautiful and artistic designs, and should be examined before purchases are made elsewhere. Special personal attention is given to furnishing designs and estimates for all work connected with the tasteful arrangement of everything connected with Mantels and Tiling. This firm also makes a specialty of stained glass. Write or call for information as per address mentioned.

"In the Heart of the Sierras"—The Noble Trees of California.

A MERE statement of dimensions and altitudes of the grand trees of California, can give no realizing sense of their idealistic presence and magnitude. It is the grandeur of their exalted individuality and awe-inspiring presence that thrills through the soul, and fills it with profound and speechless surprise and admiration; and not merely of one tree, but of whole visfas formed by their stately trunks. Who, then, by pen or pencil, can picture these as they are seen and felt?



CUT 1. THE GRIZZLY GIANT.

Once fairly within the impressive precincts of the grove of big trees, we are soon brought face to face with one of the oldest, most storm-tossed, and grizzled of this entire family of Brobdingnags. It is called

"THE GRIZZLY GIANT"

(see cut 1), and it looks at you as defiantly as the oldest veteran grizzly bear ever could. By careful measurement, we found its dimensions to be, at the ground, including a jutting spur, ninety-one feet, and three feet six inches above the ground, seventy-four feet six inches Professor Whitney places its circumference, eleven feet from the ground, at sixty-four feet three inches; with its two diameters at base, thirty, and thirty-one feet; and eleven feet above base, twenty feet. . . .

The "Mariposa" is eighty-six feet in circumference at the ground, and seven feet above it, is sixty-six feet. This tree seems to have been badly burned by two consuming fires, at different periods, after each of which the new growth has, visibly, attempted its restoration. . . . The "Workshop" is an immense living giant, with a capacious hollow at its base, which forms a room twelve by sixteen, in which all sorts of little souvenirs are made from broken pieces of the big tree. . . .

The "Haverford" (named after the "Friends" College, Philadelphia), in which sixteen horses have stood at one time, is burned into three compartments; across two of the spurs of which the distance is thirty-five feet; and transversely, thirty-three feet. . . . The "Washington" has a girth of ninety-one feet at the base, is round and very symmetrical. Although burned out somewhat near the ground, the new growth, as usual, is rapidly healing the wounds that fire has made. This is an especially excellent provision of nature for preserving and perpetuating this grand species, when in its prime; inasmuch as while restoring the ravages of the elements by the new growth, a much needed support is added to the abutments, which intercepts and prevents its premature downfall. . . .

The "Ohio" is seventy-six feet in girth at the ground, and six feet above the ground is fifty-five feet. The "U. S. Grant" is sixty-five feet six inches below, and forty five feet above. The "General La Fayette" is thirty feet in diameter, and is situated about thirty yards from the above two. . . .

The "Wawona," the "Tunnel Tree" (see cut 3), through the heart of which a wagon road passes, is not only one of the great attractions of the Big Tree Grove, but may be considered one of the sights of California. At the base this tree is twenty-seven feet in diameter; while the enormous trunk, through which the excavation is made, is in solid heart wood, where the concentric rings, indicating its annual growth, can be readily seen and counted, and its approximate age determined by actual enumeration, and thus satisfactorily settle that interesting fact beyond the least peradventure. The arch, or "tunnel," as it is called, is ten feet in height, by a width of nine feet six inches at the bottom, and six feet six inches at the top. "Driving through a living tree," one would suppose to be as great a feat as Daniel O'Connell's, who boasted that he could "drive a 'coach and four' through any act of Parliament ever made in the British House of Commons!" . . .

The "New York" is one hundred and four feet in circumference, and over three hundred feet in height. The "Ohio" is one hundred and three feet in circumference, and three hundred and eleven feet in height. The "Massachusetts" is ninety-eight feet, with an altitude of three hundred and seven feet. . . .

A few points of interest may be well to notice in regard to the "Mother of the Forest." If cut up into inch boards, it would make five hundred and thirty-seven thousand feet of sound lumber. From the ground to the first branch it is one hundred and thirty-seven feet. Its full height is three hundred and twenty-one feet, with a circumference at the base of ninety feet. One hundred and sixteen feet from base it is thirty-nine feet six inches circumference. The average thickness of bark is eleven inches, although in places it exceeds two feet.

Great as are these majestic proportions, they are eclipsed by those of the "Father of the Forest." This tree, when standing in its primitive majesty, is accredited with exceeding four hundred feet in height, with a circumference at its base of one hundred and ten feet. Now, with its majestic form prone

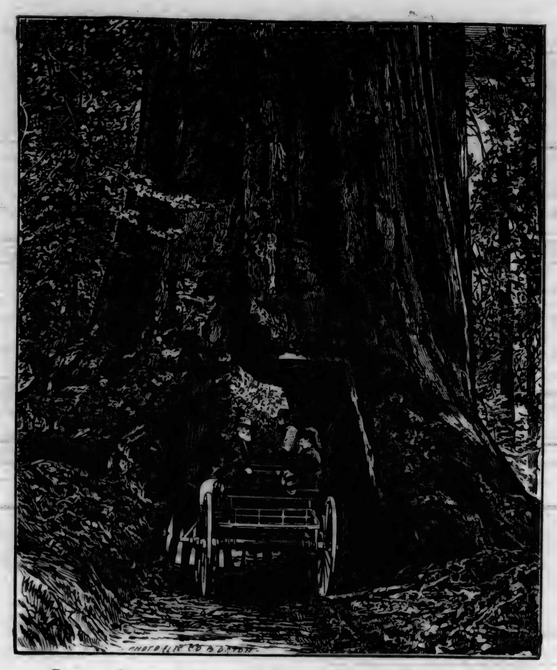
CUT 2. MINER'S CABIN.

to the ground, the following measurements recently taken, proves that he was among the giants of those days, and that "even in death still lives." From the roots, to where the center of the trunk can be reached on horseback, it is ninety feet. The distance that one can ride direct through it on horseback, is eighty-two feet six inches. But no one can approximately realize the immense proportions of this prostrate forest sire, without climbing to its top, and walking down it for its entire length; by this, he will ascertain that it was nearly two hundred feet to the first branch. . . .

"Old Hercules," the largest standing tree in the grove until 1862, then being three hundred and twenty-five feet in height, by ninety-five feet in circumference at the ground; this was blown down by a heavy storm in that year. . . .

Let us take a peep at the original Big Tree stump. It is perfectly smooth, sound, and level. Its diameter across the solid wood after the bark was removed (and which was from fifteen to eighteen inches in thickness), is twenty-five feet, although the tree was cut off six feet above the ground. On July 4, 1854, the writer formed one of a cotillion party of thirty-two persons, dancing upon this stump; in addition to which the musicians and lookers on numbered seventeen, making a total of forty-nine occupants on its surface at one time.

This tree was three hundred and two feet in height, and at the ground ninety-six feet in circumference before it was disturbed. Some sacrilegious vandal removed the bark to the height of thirty feet, and had it transported to England, where it was burnt at the Crystal Palace fire. The next act in this botanical tragedy was the cutting down of the tree in order to accommodate those who wished to carry home specimens of its wood as souvenirs of their visit. But how to do this was the puzzling conundrum. If one could fittingly imagine so ludicrous a sight as a few lilliputian men attempting to *chop* down this Brobdingnaggian giant, his contempt would reach its becoming climax.



CUT 3. DRIVING THROUGH LIVING TREE "WAWONA."

This, therefore was given up as altogether too chimerical and impracticable. Finally the plan was adopted of *boring it off with pump-augers* (see cut 4). This employed five men twenty-two days to accomplish; and after the stem was fairly severed from the stump, the uprightness of its position and breadth of its base, prevented its overthrow; so that two and one-half of the twenty-two days were spent in inserting wedges and driving them into the butt of the tree by logs suspended on ropes, thereby to compel its downfall. While these slow and apparently hopeless attempts were being undertaken, and the workmen had retired for dinner, a gust of wind took hold of its top, and hurled it over without the least seeming effort; its fall causing the earth to tremble as by an earthquake.

The cuts illustrating this article and the description thereof, are taken from a new work, by J. M. Hutchings, entitled, "In the Heart of the Sierras," the Yo Semite Valley, both historical and descriptive; and scenes by the way; Big Tree Groves; the High Sierra, with its magnificent scenery, ancient and modern glaciers, and other objects of interest; with tables of distances and altitudes, maps, etc. Profusely illustrated.

Copies may be had by addressing the Pacific Press Publishing House, Twelfth and Castro Streets, Oakland, Cal., or at the branch office, No. 18 Post Street, this city. Price, in fine English Cloth, embossed in jet and gold, gilt edges, $4.50. Finer bindings furnished if desired.

This work is sold by subscription, and active, energetic agents are wanted in all parts of the world. Address as above, for terms and territory.

TO SOFTEN WROUGHT IRON.—To soften wrought iron, heat until it becomes a low red color, and cool it in soft soap. Re-heat it to a low red as before, and let it cool in lime. It is said that this treatment makes the iron very soft.

PAINTING OF BUILDINGS.—The taste of the ancient Greek was too artistic and complete to allow him to indulge in the vulgar pride of parading the marble of the Parthenon when he could heighten its effects. Color was applied to all those parts which by form or position were protected from the rain. Thus the sculptures on the pediment and frieze were given highly colored backgrounds, and the sculptures themselves were painted. The brush was also employed to adorn the work of the chisel in the echinus or mouldings of the capital, and the walls beneath the colonnade were covered throughout with pictures, on the ground of polished marble, illustrative of the divinity to whom the temple was dedicated.

Measurement of Brickwork and Masonry.

BRICKWORK is measured by either one of four methods, viz.: By the number of bricks it contains; by the number of cubic feet; by the perch of 25 cubic feet; or by the reduced rod consisting of 272 superficial feet and a width of a brick and a half. The first method is most generally employed, and the cubic foot and perch in a few localities. The reduced rod is the method used principally in England.

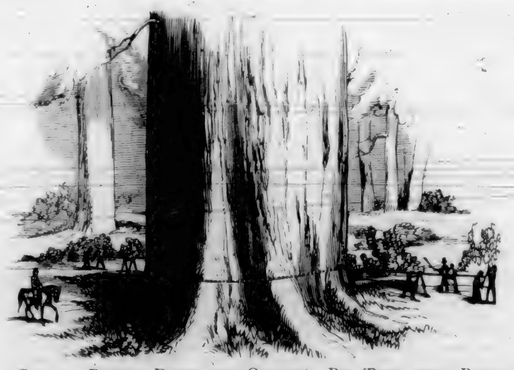
To ascertain the number of bricks contained in a wall: First find the superficial area, then multiply by $7\frac{1}{2}$ (the number of bricks in one foot of brickwork four inches thick), and then multiply by the number of half bricks in the thickness of the wall. Example: How many bricks does a wall 12 ft. × 20 ft. and 2 bricks thick contain? Answer, 7,200, viz.: $12 \times 20 = 240 \times 7\frac{1}{2} = 1{,}800 \times 4 = 7{,}200$.

Ashlar masonry, or that which is dressed on either face, bed, or side joints, is measured by the cubic foot; rubble masonry, sometimes in the same way, but usually by the perch of 25 cubic feet.—*Scientific American.*

Saw-Dust Ornaments; How Made.

A MOULD, or die, which has the design to be produced artistically engraved and sunk in it, is covered with thin strips of chemically prepared veneer of any desired kind of wood, and a material previously prepared, consisting chiefly of sawdust, is fed on the top of the veneer; the mould is then closed and heated, and afterward subjected to a hydraulic pressure of some tons to the square inch. The article to be produced is then taken from the mould in a semi-shaped state, inspected, recovered with veneer as often as may be found necessary, and after five or six minutes a panel, or frieze, is produced equaling in artistic effect handiwork that has taken very many days to produce. These panels have a fine surface and show up the grain of the wood well; they can also be sawed, planed, or bored like ordinary wood."

PRESERVATION OF PENCIL AND CHARCOAL DRAWINGS.—Pencil drawings may be fixed by immersing them in weak skim-milk, or coating over them, rapidly, a solution on the drawing side, of two ounces of best alcohol, in which four grains of camphor have been dissolved. An ounce of shellac dissolved in half a pint of alcohol, applied lightly with a brush, will serve to fix charcoal drawings.



CUT 4. BORING DOWN THE ORIGINAL BIG TREE WITH PUMP-AUGERS.

Furnishing of Plans by Architectural Journal.

NATURALLY, subscribers to an architectural journal expect to find elevations and plans of different kinds of buildings in each issue, together with information in regard to the same. But we do not conceive it to be the duty or place of the editor to advertise that plans, etc., to suit various tastes will be furnished to anyone inquiring for same.

It is with pride that we can refer to the back issues of the CALIFORNIA ARCHITECT in this regard. During the eight years of its existence, with but two or three exceptions where individualities were distinctly shown, no plan or set of plans has been credited to the editor of this journal. It has been his aim simply to give the various designs shown as examples of California architecture, keeping his own name out of sight completely. Credit, however, in every case, has been given to those who have furnished plans or other illustrations, and letters received in regard to same, were forwarded immediately to the proper parties. The following extract will serve to show how this subject is regarded elsewhere:—

"*Should any of our readers desire to procure plans and specifications for building, whether churches, schools, dwellings, stores, carriage houses, homes, etc.; or if they desire plans made for alterati ns, enlargements, or additions of any kind, to existing buildings; erection of porches, bay windows, extensions, wings, etc., they are reminded that all business of the kind will receive prompt attention at this office on very moderate terms. Address* ——."

The journal from which the above is taken is not by any means the only one that is quietly but surely "cutting up into small slices" the architectural profession. Rumor has it that an architectural journal that has received all sorts of benefits and advantages from the profession in substantial form, and by being recommended to advertisers as the *only* journal representing the profession, etc., etc., and therefore the proper one to advertise in, makes it a business to run opposition to the very men who made and continue to support it, by furnishing drawings, specifications etc., etc., "*on very moderate terms*" very likely. This is another example of the "peculiarities of gratitude," doubtless the "moderate terms" prove quite effective, and while the regular practitioner may by these terms be enabled to "take a rest," young draftsmen will have excellent opportunities to pick up a few ideas and a few dollars; so, after all, everything may be for the best.

New Books Just Received.

AMERICAN STAIR BUILDER. New edition of 1887. By Lucius D. Gould. Price, $2.50. One of the best works on the subject of stair building.

MODERN COTTAGES. By J. H. Kirby. Just issued. Price, $1.50.

PICTURESQUE CALIFORNIA HOME, NO. 2. The great success attending the sale of the first volume, prompted the authors to issue the second one. The cuts in No. 2 are entirely new. Mailed to any address, either No. 1 or No. 2, for $3.50 each.

ESSENTIALS OF PERSPECTIVE. By L. W. Miller. Price, $1.50. The newest as well as one of the best of the books on the subject.

IMPROVED PLUMBING APPLIANCES. By J. Pickering. Putman, architect. 94 illustrations. Price, $1.50. A perfectly new work just received and too late for further notice in this issue.

DIRECTORY OF ARCHITECTS. Fourth edition. Price, $1.00.

MODERN ARCHITECTURAL DESIGNS AND DETAILS. A few copies remain of this really good work. Price, $10.00.

DETAIL COTTAGE AND CONSTRUCTIVE ARCHITECTURE. Similar to the above in general design.

LEFFELL'S HOUSE PLANS. $3.00, post-paid.

SCIENCE OF CARPENTRY MADE EASY. Price, $5.00.

MECHANIC'S GEOMETRY, or the Science of Framing by the use of Card-board Models. $5.00.

Master Plumbers' Association.

Howard Building, S. W. Cor. Stockton & O'Farrell Sts., S. F., Cal.

MEMBERS.

BUSH & MALLETT	34 Geary Street
BUSH, D.	316 Sutter Street
BUTTERWORTH, J. B.	1809 Polk Street
CONNOR, J. H.	528 Third Street
DANIEL, WM. L.	234 Post Street
DOHERTY, JOHN	349 Kearny Street
DOWNES, CHAS.	41 Second Street
DUFFY BROS.	120 Sutter Street
ENRIGHT, WM. & CO.	39 Sutter Street
FIRMIN, JNO. L. E.	Cor. Thirtieth and Bartlett Streets
FRITZ & KEAN	130 Geary Street
GRAY, JNO. T.	230 Sutter Street
HUFFSCHMIDT BROS.	637 Clay Street
HOBRO, W. D.	728 Washington Street
REILLEY, C. J.	214 Montgomery Avenue
SHEPARD BROS.	526 California Street
SWEENEY & KEARNS	623 California Street
VANCE, R. A.	623 Geary Street
WELCH, J. D.	Cor. Tyler and Fillmore Streets
WILSON, WM. F.	25 Stockton Street
WILLIAMSON, H.	329 Sutter Street

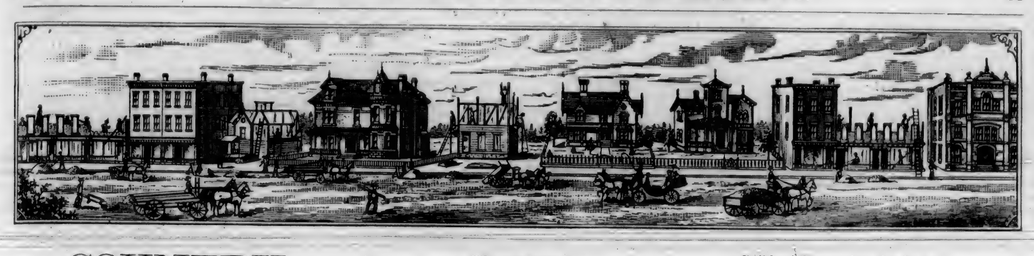
RETAIL PRICE LIST OF LUMBER.

PINE, FIR, AND SPRUCE.

	Per M ft.
Rough Pine, merchantable to 40 ft. inclusive	$20 00
" " " 41 to 50 " "	21 00
" " " 51 to 60 " "	22 00
" " " 61 to 70 " "	23 00
" " " 1x3 and 1x4, Fencing	21 00
" " 1x3, 1x4, and 1x6, Fencing, odd lengths	19 00
" " second quality	16 00
" " selected	24 00
" " c ear except for Flooring	31 00
" " " Flooring less than Dressed Flooring	1 00
Fire Wood	9 00
Dressed Pine, Flooring, 1x6, No. 1	32 50
" " " other sizes, No. 1	35 00
" " " all " No. 2	27 00
" " Stepping, No. 1	42 50
" " " No. 2	30 00
Ship Timber and Plank, rough, selected,	25 00
" " " selected, planed, 1 side	27 00
" " " " " 2 " average, 40 ft.	29 50
" " " " " 3 "	32 00
" " " " " 4 "	34 00
Deck Plank, rough	35 00
" " dressed average 35 ft	40 00
Pickets, rough, B. M.	19 00
Furring, 1x2, per lineal ft.	01
Lath, 1½ 4 ft., per M	3 50
" 1½ 4 ft., "	4 00
Rough dunnage, delivered, per M	20 00
Spruce dressed shelving, to 14 inches, per M	37 50
" " ½ inch " " "	37 50
" " wider, per M	42 50

REDWOOD.

	Per M ft.
Rough Redwood, merchantable.	$20 00
" " second quality	16 00
" " selected	24 00
" " clear	35 00
Dressed " common surface	22 00
" " ½-inch surface	30 00
" " No. 1	35 00
" " No. 2	28 00
" " T. & G., 1x6, 12 ft. and over, No. 1	33 00
" " " other sizes, No. 1	35 00
" " " 7 to 11 No. 1	26 00
" " " under 7 No. 1	23 00
" " Rustic, No. 1	35 00
" " " No. 2	30 00
" " T. & G. beaded, 12 ft. and over, No. 1	35 00
" " " " other sizes No. 1	35 00
" " " " 7 to 11, No. 1	26 00
" " " " under 7, No. 1	23 00
" " Siding, ½ inch	23 50
Pickets (fancy), 4 feet, B. M	25 00
" (rough pointed) "	17 00
" (" square) "	15 00
Battens, ½x3, per lineal ft.	02½
Shingles, per M	2 00
" fancy, per M	3 75
Posts, split	13
Shakes, split, per M	9 00
" sawed "	11 00



COUNTRY BUILDING INTELLIGENCE

In this and succeeding issues we intend to devote considerable space to information in connection with buildings, from every portion of the coast.

Only reliable news will be found in this column. Our custom has been for the past eight years, to furnish only data which could be relied upon. We will not publish rumors of "THIS AND THAT IS GOING ON" unless we are reasonably assured that such is truly the case. In all cases we will file our authority for any statements made in this column. No doubt mistakes will sometimes occur, but these we intend to be a rare exception to our rule of reliable news.

We desire the co-operation of country editors and mechanics to this department of this journal. By spreading the news of building engagement in your part of the country, you enhance the value of your section by proclaiming it a go-ahead community.

Architects should also notify us of "plans to figure on;" we do not charge anything for the insertion of such notices. Remember this journal is in the EIGHTH YEAR of its existence, and is the only journal published this side of the Rocky Mountains in the interest of Architects, Contractors, and Material Men.

Alameda.

San Antonio Avenue. W. H. Wharff has prepared plans for a $3,500 house for Paul Bunker.

Azusa.

Three-story frame hotel. Owner, Land and Water Co.; architect, T. Golding; contractor, day work. Cost, $12,000.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

Beaumont.

Three-story frame. Owner, Southern Cal. Investment Co.; architect, J. L. Frank; contractors, H. J. Dego and J. M. Forquer. Cost, $25,000.

Shavings and Sawdust, for $1.50.
American Cottage Building, for $3.50.

Burbank.

One-story frame. Owner, L. Burbank; contractor, M. E. Mather. Cost, $1,800.

Hand Railing and Stair Casing, for $1.50.
Drawing for Carpenters, for $1.75.

Two-story hotel. Owner, Dr. Burbank; contractor, D. Scammon. Cost, $20,000.

Artisan, for $5.00.
Builders' Guide, for $2.00.

Two-story frame. Owner, T. W. T. Richards; contractor, M. E. Mather. Cost, 3,000.

Claremont.

Two-story and attic frame hotel. Owner, Pacific Land and Improvement Co.; architects, Caukin & Haas; contract not let. Cost, $20,000.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Covina.

Methodist Church. Architects, Strange & Gottschalk. Day work. Cost, $7,000.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

Cucamonga.

Two-story frame hotel. Owner, J. C. Lynch; architect, Chas. W. Davis; contractors, Mills, Fisher & Co. Cost, $9,375.

American House Carpenter, $5.00.
Cutting Tools, for $2.00.

East Los Angeles.

Two-story frame cottage. Owner, C. F. Harris; architects, Costerisan & Merithew; contractor, H. Rheya. Cost, $5,000.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

One-story frame. Owner, M. Sommerfield; architect, A. M. Edelman. Cost, $3,300.

Wonders of Art, for $1.25.
Limes, Cements, and Mortars, for $4.00.

Etiwanda.

One-story brick. Owner, trustees of school district; architect, E. Newcomer; contractor, Samuel Lefler. Cost, $3,750.

Album of Mantels, for $8.00.
History of Architecture, for $15.00.

Hollister.

C. N. Hawkins is erecting a dwelling from plans prepared by Theodore Lenzen. Cost, $2,000.

Mural Painting (new), for $3.00.
Home Hand-Book, for $10.00.

Los Angeles.

Alterations. Owner, Dora Jones; architects, Kysor, Morgan & Walls; contractors, Hargett & Ball. Cost, $25,000.

Cutting Tools, for $2.00.
Cumming's Details, for $5.00.

Two-story frame. Owner, J. R. Boal; architect, Newsom; contractor, day work. Cost, $6,000.

Album of Mantels, for $8.00.
History of Architecture, for $15.00.

Not let. Tabernacle for Hope Street M. E. Church, granite and frame, copper and tile roof. Architects, Caukin & Haas.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Two-story frame residence. Owner, Percy Wilson; architects, Strange & Gottschalk; contractor, Useb Petro. Cost $4,000.

Ruskin's Works (four volumes), for $6.00.
Industrial Drawing for Carpenters, for $2.00.

One and one-half-story frame cottage. Owner, F. H. Rhodes; architects, Costerisan & Merithew; contractor, Ed. Harrington. Cost, $2,500.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

Two-story frame residence. Owners, C. Worth. Architects, Strange & Gottschalk; contractor, C. Wilson. Cost, $2,950.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Three-story brick block. Owners, Kysor, Morgan & Walls; contractors, O'Shea & Bell. Cost, $45,000.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

One and a half-story frame cottage. Owner John Best; architects, Costerisan & Merithew Cost, $2,800.

Practical Perspective, for $5.00.
Drawing for Carpenters, for $1.75.

Four-story brick. Owners, Pres. College Committee. Architect, Newsom; contractor, J. Rebman. Cost, $17,000.

Drawing for Stone Masons, for $1.50.
Building Construction, for $1.25.

Alterations and additions, three-story brick building. Owners, Baker and Hellman; architect, Kysor, Morgan & Walls; contractors, O'Shea & E. F. Collins. Cost, $26,000.

Hand Railing and Stair Casing, for $1.50.
Drawing for Carpenters, for $1.75.

One-story frame cottage, brick. Owner, Electric South side track; architects, Strange & Gottschalk; contractor, C. F. Warren. Cost, $6,400.

Artisan, for $5.00.
Builders' Guide, for $2.00.

Three-story brick building. Owners, Patton & Widney; architects, Kysor, Morgan & Walls; contractors, F. E. Green & Haskell. Cost, $35,000.

Steel Square Problems, for $1.00.
Workshop Companion, for 35c.

Four-story Fort Street bank, brick. Owner, L. A. Imp. Co.; architect, Newsom; contractor, J. Rebman. Cost, $80,000.

Drawing for Bricklayers, for $1.50.
Drawing for Cabinet Makers, for $1.50.

One-story double frame. Owner, W. Barnard; architect, Newsom; contractor, J. Rebman. Cost, $5,500.

Builders' Construction (three volumes, very fine), for $14.00.

Twenty-five one-story frame cottages. Owner, Electric Homestead Association; architects, Strange & Gottschalk; contractors, Wyatt Bros. Cost, $15,150.

Plaster, How to Make it, for $1.00.
Shavings and Sawdust, for $1.50.

Three-story brick block. Owner, F. M. Hellman; architects, Kysor, Morgan & Walls. Cost, iron work, $5,200; grading, $1,400.

People's Cyclopedia (three large volumes), for $20.00.

Owner, S. B. Zwynne; architect, Costerisan & Merithew; contractor, W. A. Vernon. Cost, $2,300.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

Two-story frame. Owner, Judge Bicknell. Day work. Cost, $15,000.

Grimshaw on Saws, for $4.00.
Mechanics' Geometry, for $4.00.

Two-story frame residence, brick. Owner, Dr. Owens; architects, Strange & Gottschalk. Day work. Cost, $4,000.

Woodward's Farm Homes, for $1.00
Woodward's Graperies, for $1.00.

Two-story frame. Owner, H. Jevne. Day work. Cost, $12,000.

Album of Mantels, for $8.00.
Architects' Companion, for $2.50.

Three-story brick. Owner, Mr. Mappa; architect, A. M. Edelman; contractor, J. E. Wood. Cost, $23,000.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Remodel First National Bank. Architects, Caukin & Haas; contract not let. Cost, $30,000.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

Magnolia.

Two-story frame hotel. Owner, Dr. Bedford; contractor, J. Gerry. Cost, $20,000.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Two-story brick. Owner, Dr. Bedford; contractor, J. Rebman. Cost, 28,000.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Monrovia.

Two-story frame. Owner, E. W. Little; contractor, Zimmerman & Blair. Cost, $5,000.

Architecture and Building, $3.50.
American Cottage Building, for $3.50.

Two-story bank and stores, brick. Owner, F. M. Myers; architects, Caukin & Haas; contract not let. Cost, $10,000.

Painter, Gilder, and Varnisher, for $1.50.
Architects' Companion, for $2.50.

Two-story frame. Owner, E. F. Spence; contractor, J. Rebman. Cost, $10,000.

Limes, Cements, and Mortars, for $4.00.
Wonders of Art, for $1.25.

Two-story frame. Owner, C. Z. Culver; architect, Newsom; day work. Cost, $5,000.

Napa.

One-story frame. Owner, T. C. Grant; architect and builder, W. H. Wharff. Cost, $4,500.

Ontario.

Two-story bank and stores, brick. Architects, Caukin & Haas. Cost, $20,000.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

Orange.

Two-story frame hotel. Owner, C. Z. Culver. Day work. Cost, $20,000.

Album of Mantels, for $8.00.
History of Architecture, for $15.

Portland, Or.

Dr. Josephi will erect a private sanitarium to cost about $6,000.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Redlands.

One-story frame. Owner, Trinity Church; architect, Frank Crocker; contractors, Newell & Paine. Cost, $2,647.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Sacramento.

The Capital Hotel will be enlarged under the direction of Architect Goodrich.

Practical Perspective, for $5.00.
Woodward's Country Homes, for $1.50.

Salem, Or.

A new wing will be added to the State Insane Asylum. Cost, about $90,000.

Steel Square Problems, for $1.00.
Workshop Companion, for 35c.

San Bernardino.

Two-story brick. Owner, Christian Kurtz; architects, Jones & Palmer; contractor, Ernest Vieweger. Cost, $7,500.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

Two-story brick. Owner, Richard Stewart; architects, Jones & Palmer; contractors, Burt & Porter. Cost, $3,425.

Ruskin's Works (four volumes), for $6.00.
Industrial Drawing for Carpenters, for $2.00.

Two-story brick. Owner, Richard Stewart; architects, Jones & Palmer; contractors, Sims, Anderson, Baker & Co. Cost, $2,210.

Every Man His Own Mechanic, for $3.50.
Tredgold's Carpentry, for $7.50.

Two-story brick. Owner, Richard Stewart; architects, Jones & Palmer; contractors, Driver, Burt & Goodall. Cost, $6,250.

Plaster, How to Make It, for $1.00
Shavings and Sawdust, for $1.50.

San Jose.

Cottage on Fourth Street, near Julian. Owner, Mr. Stern; architect, Theodore Lenzen; contractor, P. R. Wells. Cost, $1,300.

Architecture and Building, for $3.50.
American Cottage Building, for $3.50.

Cottage for James Wood. Architect, Theodore Lenzen; contractor, W. S. Bowles. Cost, $1,700.

Plaster, How to Make It, for $1.00.
Shavings and Sawdust, for $1.50.

G. N. Schafer is erecting a $3,000 dwelling on Stockton Avenue. Theodore Lenzen, architect.

Manual for Furniture Men, for $1.00.
Common-Sense Church Architecture, for $1.00.

G. W. Page is the architect of the new Congregational $6,000 church.

Artisan, for $5.00.
Builders' Guide, for $2.00.

Santa Ana.

Two-story frame school. Architects, Kysor, Morgan & Walls; contractor, Drips. Cost, $19,000.

Artistic Homes, for $3.50
Modern House Painting, for $5.00.

Sierra Madre.

Two-story frame hotel. Owner, Dr. Pinney; day work. Cost, $12,000.

Practical Perspective, for $3.00.
Woodward's Country Homes, for $1.50.

Miscellaneous.

ALAMEDA.—School and hall for Catholic Church. Figures now being received. John J. Clark, architect.

ST. HELENA.—New college and church. Plans now ready for figures. John J. Clark, architect.

OAKLAND.—Contract labor for brick work, $42,000. Remillard & Co. John J. Clark, architect; St. Mary's College, owners.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Work has commenced on the proposed extension of the Court House buildings in Suisun.

Grimshaw on Saws, for $4.00.
Mechanics' Geometry, for $4.00.

Work has commenced on the Catholic Church in Benicia. It will cost about $25,000.

Artistic Homes, for $3.50.
Modern House Painting, for $5.00.

Work has commenced on the brick foundation for J. J. Post's residence on the corner of Fifth and Columbia Streets, Seattle. The main building will be 51½x31½ feet. Otto Ranke has the contract for the brick work.

Cutting Tools, for $1.50.
Cummings' Details, for $5.00.

Contract has been let for a 900-foot wharf in Tacoma.

Cutting Tools, for $1.50.
Home Hand-Book, for $10.00.

A $4,000 brick store is being built on Pacific Street, Tacoma, by C. Uzaforage.

Practical Perspective, for $5.00.
Woodwards' Country Homes, for $1.50.

A country hotel is being erected at Warm Springs Station (C. P. R. R.) for H. Pohlmann. Theodore Lenzen, architect. Cost, $3,000.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

Under the supervision of Captain Powell, plans are being prepared here for order light station at Cape Meares. This station will be located just south of the entrance to Tillamook Bay. It will cost about $60,000.

Practical Perspective, for $5.00.
Woodward's Country Homes, for $1.50.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

Riverside citizens have subscribed $66,700 toward two railroads for the valley.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

The foundation for a Catholic Church has been laid in Lathrop. The structure, when completed, will cost $1,500.

Artistic Homes, for $3.50.
Modern House Painting, for $5.00.

The corner-stone of the First Presbyterian Church, on the northwest corner of Tenth and Alder Streets, Portland, Or., has been laid. The church will cost about $100,000 when finished.

Plaster, How to Make It, for $1.00.
Shavings and Sawdust, for $1.50.

A contract has been let by Toklas & Singerman for construction of a four-story brick store in Seattle on the corner of Front and Columbia Streets. It will cost $75,000 when completed.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

It is rumored that the S. P. Company will build a new bridge across the Pajaro River at Watsonville. It is expected that work will commence in about two weeks.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

A large hotel and sanitarium is to be built at Altadena, north of Pasadena.

Artistic Homes, for $3.50.
Modern House Painting, for $5.00.

A $1,000 church is to built by the Presbyterians of Gervais, Or.

Practical Perspective, for $5.00.
Woodward's Country Homes, for $1.50.

The Methodists intend to build a $30,000 church in Seattle this summer.

Science of Carpentry, for $4.00.
Universal Assistant, for $2.50.

About $2,000 has been raised for a church edifice in Paradise Valley.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

C. C. Powning will erect a fine brick building in Reno, Nev.

SAN FRANCISCO BUILDING NEWS.

B

Baker, nr. Sutter. Two-story frame.
C.—Roettger.
O.—J. Gleason.
$3,200.

Brannan, nr. Fifth. Additions.
$500.

Belcher, nr. Ridley. Two two-story frames.
O.—G. W. Moore.
A.—G. W. Wright.
$14,000.

Belcher, nr. Fourteenth. One-story frame.
O.—R. T. Barry.
C.—D. Perry.
$1,500.

Bluxome, cor. Fifth. Additional story.
O.—E. Buckler.
$1,200.

Brannan, nr. Fifth. Two-story frame.
O.—E. Stoetzer.
A.—H. Geilfuss.
C.—L. D. Frichette.
$2,000.

Bush, nr. Taylor. Two-story frame.
O.—Mrs. M. E. Cusheon.
A. and B.—W. H. Wharff.
$6,000.

Bush, cor. Steiner. Interior fittings.
O.—J. Cuff.
A.—T. J. Welch.
C.—Mahoney Bros.
$4,500.

Bryant, bet. First and Second. Alterations to brick building.
O.—Lachman & Jacobi.
A.—P. R. Schmidt.
C.—Mahoney Bros.
$15,000.

Broderick, nr. Hayes. One-story frame.
O.—George Wittman.
A.—Townsend & Wyneken.
C.—N. B. Ritchie.
$1,500.

C

California, nr. Baker. One-story frame.
O.—Mulvy.
C.—Walker.
$2,500.

California, nr. Laguna. Two-story and attic frame.
O.—C. F. Doe.
A.—Curlett & Cuthbertson.
C.—A. Jackson.
$18,000.

Capp, cor. Twenty-second and Twenty-third. Two-story frame.
O.—Mrs. J. F. Harris.
A.—A. J. Barnett.
C.—O. E. White.
$6,500.

California, nr. Baker. Remodeling.
O.—J. McGinn.
$1,700.

Chestnut, bet. Powell and Mason. Brick Building.
O.—Scheutzen & Co.
A.—Winterhalter.
C.—J. Haaf.
$14,000.

California, bet. Scott and Devisadero. Two-story frame.
O.—J. Dupuy.
A.—W. Mooser.
C.—J. B. Gonyeau.
$7,500.

California, cor. Laguna. Two-story and basement frame.
O.—C. F. Doe.
A.—Curlett & Cuthbertson.
C.—A. Jackson.
$20,000.

Church, cor. Twenty-ninth. Two-story frame.
O.—Henry Beuttner.
A.—Warren.
C.—Mitchell & Son.
$4,800.

D

Dolores, cor. Twenty-ninth. Frame building.
O.—J. Carstensen.
A.—Salfield & Kohlberg.
C.—B. Dryer.
$5,500.

Devisadero, bet. Post and Geary. Two-story frame.
O.—J. F. McCormick.
A.—B. E. Henriksen.
C.—J. C. Weir.
$2,500.

Davis, cor. Sacramento. Preliminary contract.
O.—Mrs. A. M. Parrott.
A.—Pissis & Moore.
C.—American Bridge Building Co.
$10,164.

E

Eddy, bet. Laguna and Buchanan. Three-story frame.
O.—O. H. Marx.
A.—H. D. Mitchell.
Day work.
$7,000.

Ellis, bet. Jones and Leavenworth. One-story frame.
O. and B.—Smith.
$4,000.

Elgin Park, nr. Ridley. One-story and basement frame.
O.—F. Bowers.
$2,500.

Eddy, bet. Steiner and Fillmore. Two-story frame.
O.—Annie Gill.
A.—M. Balcynski
C.—C. E. Dunshee.
$3,700.

F

Fifth, cor. Brannan. One-story frame.
O.—W. T. Garratt.
$4,000.

Fourth, nr. Channell. Frame Warehouse.
O.—S. P. R. R.
$3,000.

Fourth, nr. Channel. One-story frame.
O.—Wesson.
$800.

Fifteenth, bet. Noe and Castro. Two-story frame.
O.—G. R. Starr.
$2,500.

Fillmore, nr. Hyde. Two two-story frames.
O.—Mrs. Platt.
$4,000.

Filbert, bet. Hyde and Larkin. Alterations.
O.—J. Moeller.
A.—H. Geilfuss.
C.—F. Klatt.
$3,200.

Fell, nr. Buchannan. Two-story frame.
O.—J. Heilfron.
A.—H. Geilfuss
O.—J. Blake.
$5,000.

Folsom, cor. Twenty-fourth. Two-story frame.
O.—L. Bogald.
A.—C. I. Havens.
C.—F. W. Kern.
$3,200.

Fifteenth, nr. Noe. Two-story frame and stable.
O.—Geo. Starr.
A.—Dam roger.
C.—A. Klahn.
$3,500.

Folsom, bet. Third and Fourth. Alterations.
O.—Duchen & Lasalle.
A.—M. J. Welsh.
C.—R. Linnott.
$1,800.

Franklin, cor. Linden. Two two-story frames.
O.—Jane James.
C.—Chas. Jones.
$6,500.

Fillmore, nr. Fulton. Additions.
O.—Chas. Becker.
A.—John & Zimmerman.
C.—W. Pluns.
$2,000.

Folsom, cor. Tenth. Frame buildings.
O.—Mrs. C. H. Rogers.
A.—T. J. Welsh.
C.—W. P. Clark.
$12,000.

Franklin, cor. Linden Avenue. Two two-story frames.
O.—Mrs. J. James.
A.—S. and J. Newsom.
C.—C. L. B. Jones.
$5,500.

Folsom, cor. Twenty-fourth. Two-story frame.
O.—L. Bagaler.
A.—C. I. Havens.
C.—F. W. Kern.
$3,000.

G

Gough, cor. Pine. Additions.
O.—Raphael.
$800.

Gough, cor. Oak. Three two-story frames.
O.—George Raphael.
A.—Macy & Jordan.
C.—N. R. Ellis.
$14,000.

Grove, bet. Gough and Octavia. Two-story frame.
O.—G. Hoffman.
A.—W. Winterhalter.
C.—L. Weisman.
$3,700.

H

Howard, cor. Spear. One-story frame.
O.—White Bros.
$3,000.

Haight, nr. Scott. Two-story frame.
O.—M. McCarthy.
A.—M. J. Welch.
C.—T. Sullivan.
$3,500.

Harrison, bet. Second and Third. Two-story frame.
O.—J. R. Watson.
A.—Macy & Jordan.
C.—O. E. White.
$10,000.

Hayes, nr. Baker. Three-story frame.
O.—A. Goehring.
A.—John & Zimmerman.
C.—W. Pluns.
$8,000.

Henry, bet. Noe and Castro. Two-story frame.
O.—G. B. Bellett.
$2,100.

Hill, nr. Valencia. Two-story frame.
O.—Mrs. C. Weglehner.
C.—F. W. Kern.
$3,500.

Howard, bet. Seventh and Eighth. Two-story frame.
O.—J. Clancy.
A.—H. D. Mitchell.
C.—C. A. Flood.
$6,000.

Hyde, cor. Union. Additions.
$700.

Hayes, bet. Scott and Devisadero. Two-story frame.
O.—Wm. Sulberg.
C.—G. G. Gillespie.
$3,000.

Howard, cor. Lafayette. Three-story frame.
O.—Maurice Sheehan.
A.—C. I. Havens.
C.—Doyle & Son.
$10,000.

Herman, bet. Valencia and West Mission. Two-story frame.
O.—Market Street R. R. Co.
$3,000.

Harrison, nr. Sixteenth. Three one-story frames.
O.—John Center.
Day work.
$3,000.

Harrison, cor. Seventeenth. Additions.
$600.

Hayes, cor. Webster. Two-story frame.
O.—A. Hughes.
A.—Clark.
C.—H. Kennan.
$4,000.

Howard, bet. Eleventh and Twelfth. Three-story frame.
O.—W. A. Frederick.
A.—C. I. Havens.
C.—Doyle & Son.
$8,000.

Hyde, nr. Jackson. Two-story frame.
O.—W. Vellguth.
A.—J. J. Newsom.
C.—Wissinger & Co.
$5,000.

Hill, nr. Valencia. Alterations.
O.—Caroline Weglehner.
A.—H. Geilfuss.
C.—F. W. Kern.
$3,250.

Haight, nr. Broderick. Two-story frame.
O.—J. Hughes.
A.—J. J. Clark.
C.—H. Keenan
$4,000.

Hayes, nr. Baker. Two-story frame.
O.—A. Goehring.
A.—John & Zimmerman.
C.—W. Pluns.
$6,500.

I

Illinois, nr. Napa. Two-story frame.
O. and B.—John White.
$1,800.

K

Kentucky, nr. Napa. Two-story frame.
O.—Ovicomi
$2,000.

L

Larkin, cor. Union. Two-story frame
O.—Mrs. Hynes.
C.—J. Adams.
$2,400.

Larkin, nr. Broadway. One-story frame.
$1,500.

Leavenworth, bet. Clay and Washington. Two-story frame.
O.—Anna V. Daniels.
A.—Pissis & Moore.
C.—Moore Bros.
$5,000.

Leavenworth, nr. Pine. Two-story frame.
O.—T. J. Shackelford.
A.—J. M. Curtis.
C.—Moore Bros.
$4,000.

Lombard, bet. Powell and Mason. Two-story frame.
O.—J. B. Metzler.
A.—J. J. Zimmerman.
C.—B. Dryer
$2,700.

Leavenworth, bet. Pine and California. Two story frame.
O.—Schackelford.
A.—J. M. Curtis.
$4.000.

Lombard, bet. Powell and Mason. One-story frame.
O.—Chas. Metzler.
A.—John & Zimmerman.
C.—B. Dryer.
$3,000.

M

Market, cor. City Hall Avenue. Three-story brick building.
O.—George T. Marye.
A.—W. F. Smith.
Mason—[illegible].
Carpenter—S. H. Kent.
$20,000.

Mission, bet. Eighteenth and Nineteenth. Three-story frame.
O.—F. Eidenger.
A.—Miller & Armitage.
C.—F. V. Steinman.
$6,800.

Market, cor. Tenth. Three-story brick.
O.—Mrs. Hopkins.
A.—Moore & Shultz.
$125,000.

Mason, nr. Filbert. Two-story frame.
O.—Corrigan
C.—Gilbert.
$2,500.

Masonic Cemetery.
O.—E. J. Baldwin.
A.—Pissis & Moore.
C.—Redman & McLennan.
$7,000.

Mission, nr. Twentieth. Additions.
$700.

Mission, bet. Third and Fourth. Four-story brick and basement.
O.—J. C. Roberts.
A.—C. Kenitzer.
C.—C. Chisholm.
$15,000.

Minna, nr. Ninth. Two-story frame.
O.—Mrs. Corrigan.
A.—J. J. Clark.
Day work.
$2,700.

Mission Road. Two-story frame.
O.—C. B. Rodgers.
A.—J. J. Clark.
C.—Doyle & Son.
$4,500.

Magdalen Asylum. Remodeling.
A.—J. J. Clark.
Day work.

Mission, bet. Eighteenth and Nineteenth. Three-story frame.
O.—E. Eidenger.
A.—Miller & Armitage.
C.—J. O. Steinman.
$5,000.

O

Octavia, bet. Ellis and Eddy. Five two-story frames.
O.—Estate of W. Sharon.
A.—J. P. Gaynor.
C.—A. Miller.
$40,000.

P

Pacific, bet. Gough and Octavia. Two-story frame.
O.—L. Emanuel.
A.—S. and J. C. Newsom.
C.—J. H. McKay.
$7,500.

Pine, cor. Sansome. Alterations.
O.—Dr. Ryar.
$6,000.

Page, cor. Broderick. Two-story frame.
O.—Fred. Plageman.
A.—John & Zimmerman.
C.—Theodore Van Borstel
$12,000.

Post, nr. Lyon. Additions.
$700.

Pine, cor. Jones. Improvements.
$1,000.

Paraguay, nr. Railroad Ave. Additions.
O.—C. G. Meyer.
A.—John & Zimmerman.
C.—F. Bohnenberg.
$1,000.

Post, bet. Powell and Mason. Two-story frame.
O.—Chas. Brenig.
A.—W. Mooser.
C.—A. Jackson.
$5,000.

P[illegible], nr. Baker. Two-story frame.
O.—L. Feder.
A.—McDougall & Son.
C.—Townsend & Co.
$4,800.

S

Seventeenth, bet. Valencia and Guerrero. Two-story frame.
O.—Mrs. M. Huant.
A.—John & Zimmerman.
C.—J. Klein.
$4,500.

Sheridan, bet. Ninth and Tenth. Two-story frame.
O.—James Lonergan.
C.—P. Lynch.
$2,500.

Sutter, bet. Jones and Leavenworth. Two two-story frames.
O.—Mrs. H. Toy.
A.—P. R. Schmidt.
C.—S. H. Kent.
$8,500.

Steiner, cor. Jackson. Two-story frame.
O.—M. J. Balfe.
A.—Curlett & Cuthbertson.
C.—W. Linden.
$8,000.

Sansome, nr. Jackson. Additions.
O.—J. G. Kittle.
A.—Percy & Hamilton.
C.—George Richardson.
$3,500.

Sansome, cor. Sacramento. Additions.
$1,500.

Spear, bet. Market and Mission. Two story brick.
O.—Capt. Hartshorn.
A.—Percy & Hamilton.
C.—J. McCarthy.
$10,000.

Sixteenth, cor. Mission. Alterations.
$800.

Sutter, bet. Baker and Lyon. Alterations.
O.—Hazelbrush.
C.—Weinohl.
$800.

Stockton, nr. O'Farrell. Repairs.
$600.

Sixteenth, bet. Church and Sanchez. Two-story frame.
O.—Emina A. Hunter.
A.—Reed.
C.—S. D. Matthews.
$3,600.

Steiner, cor. Jackson. Two-story frame.
O.—M. J. Balfe.
A.—Curlett & Cuthbertson.
C.—W. Linden.
$8,500.

Sutter, nr. Webster. Two-story frame.
O.—W. H. Kane.
A.—J. T. Kidd.
C.—W. Harmon.
$5,000.

Scott, nr. Washington. Two-story frame stable.
O.—F. C. Talbot.
A.—C. I. Havens.
C.—Gray & Stover.
$1,800.

T

Thirteenth Avenue, nr. N. Frame dwelling and stable.
O.—J. Betzold.
A.—M. Balcynski.
C.—B. F. Ellis.
$3,200.

Turk, bet. Laguna and Buchanan. Two-story frame.
O.—Dr. Kleinburg.
A.—J. E. Voekel.
C.—J. K. McKay.
$6,000.

Twenty-sixth, cor. Serpentine Ave. Two frame buildings.
O.—J. Fitzgerald.
$3,000.

Twenty-ninth, nr. Church. One-story frame.
O.—J. L. Lyomon.
C.—S. F. Daniels.
$1,000.

Twenty-fourth, cor. Church. Two-story frame.
O.—Nicholas Thompson.
C.—G. E. Houkes.
$4,000.

Twenty-first, cor. Vicksburg. Two-story frame.
O.—John Foster.
C.—W. P. Ruggles.
$3,500.

Twenty-ninth, cor. Church. Two-story frame.
O.—H. Buttner.
A.—R. Warren
C.—F. Mitchell.
$3,500.

V

Vallejo, nr. Laguna. Two-story frame.
O.—Mrs. S. M. Huntington,
A. and C.—W. H. Wharff.
$3,600.

Virginia Avenue, cor. Mission Road. Two-story frame.
O.—P. B. Rogers.
A.—J. J. Clark.
C.—Doyle & Son.
$4,500.

Van Ness, cor. Ellis. Additions.
O.—D. Hunter.
$700.

Valencia, bet. Twentieth and Twenty-first. Additions.
$500.

Valencia, bet. Twenty-second and Twenty-third. Two two-story frames.
O.—Joseph Moore.
A.—C. I. Havens.
C.—F. W. Kern.
$6,500.

Van Ness Avenue, cor. California. Conservatory.
O.—Sloss.
$500.

W

Waller, cor. Webster. Two two-story frames.
O.—J. Williamson.
A.—C. V. Pierce.
C.—Kincaid & Thompson.
$6,000.

Washington, bet. Fillmore and Steiner. Two-story frame.
O.—F. F. Laplace.
A.—Huerne & Everett.
C.—F. Buckley.
$5,500.

CARPENTRY MADE EASY.

By Wm. E. Bell, a practical mechanic, who fully appreciates, from personal experience, that there are many things perplexing to understand and difficult to do until they are fully explained and tested. It is designed to make the science and art of carpentry clear and comparatively easy to all who require information on the subject. Price, $5.00 by express, prepaid.

HOWARD CHALLEN, Publisher,
150 NASSAU STREET, NEW YORK.

THE CALIFORNIA ARCHITECT AND BUILDING NEWS.

VOLUME VIII. ENTERED AT POST-OFFICE, SAN FRANCISCO, AS SECOND-CLASS MAIL MATTER. ESTABLISHED JANUARY, 1879. NUMBER 7.

THE
California Architect & Building News.

Established January, 1879.

The official organ of the San Francisco Chapter American Institute of Architects. Published by the SAN FRANCISCO ARCHITECTURAL PUBLISHING CO. No. 240 MONTGOMERY STREET, Rooms 11, 12, 13.

Terms per annum - - - - $2.00 in advance.

Published on the 15th of each Month.

When money is sent for subscriptions, the receipt of a copy of this Journal is an acknowledgment that it has been received. Unless requested we do not send receipts.

OUR ADVERTISING RATES.

Front Cover, Outside, Each Insertion	Per Square $	2.50
Back Cover, Outside, Each Insertion	do.	2.00
Page Preceding Reading Matter	do.	1.75
Page Following Reading Matter	do.	1.50
Inside Pages	do.	1.00
Full Page Inside	One Insertion	40.00

Each Subsequent Insertion according to Agreement.

A Square is One Inch In Depth By Width of Single Column.

Advertisements alone inserted that refer to materials used in the construction and Furnishing of houses, and to matters and trades belonging to the building interest.

No Others Received.

SAN FRANCISCO, CAL., JULY 15, 1887.

The Fire Ordinances.

IN view of the fact that Acting Police Judge Page has declared order No. 1752, comprising all ordinances relating to fire matters and building construction, invalid, a general meeting of the architects in San Francisco was called and a representative number assembled on the 17th of June last to take the situation into consideration—there being no difference of opinion among the members of the profession that the order named was, and as re-enacted is, defective and insufficient. A free discussion of the subject matter was entered into, resulting in the appointment of a committee of three to prepare a petition to the Board of Supervisors asking that action be deferred in the re-passage of the order until amendatory suggestion could be prepared—it being declared invalid simply upon the technical ground of insufficient publication and requiring only proper re-publication to render it again effective.

The committee performed the duty assigned them, and although the time for completing their work was exceedingly limited, thirty-six of the most prominent architects readily appended their signatures to the petition, which was duly presented to the Board and referred without producing the result desired.

The reason for this was, as expressed by His Honor the Mayor and members of the Board, that unless the invalid order was repassed the city might be without any fire law. That while the invalidation restored the ordinance operating prior to the passage of 1752, it was not an assured fact that it would stand the scrutiny and assault of some shrewd limb of the law, who might seek and find fatal defects therein, resulting in like fate that befell order 1752; consequently, for the city's protection and safety, it became necessary to re-enact the invalid order with all its deficiencies and defects until a better could be provided. The assurance was also given that whenever a more practical form of Fire and Building Ordinance should be presented, the Board would give it attention and careful consideration, and if found to be an improvement upon the present, it would be passed.

This places the whole matter in the hands of the architects, builders, and others most directly interested to formulate a code of *Building Ordinances* that will meet every requirement of the fire department and the entire building fraternity, not including those features which may be more specially denominated *Fire Ordinances*, relating to destructive agencies, etc.

There is no disposition expressed on the part of either the architects or builders in San Francisco to antagonize the fire wardens, or the chief or members of the fire department, but there is an earnest wish that an ordinance may soon be perfected, relieved of all those features which in the past have caused annoyances, vexations, arrests, etc., for causes which if placed within the arbitration of a board of impartial, competent referees, would be given consideration according to merit, and adjusted upon equitable basis, instead of—as in the present ordinance—the same rule applying in all cases, while in fact scarcely any two are relatively equal. But if anything is to be effected in the matter, the architects or builders, jointly or severally, must take the initiative, and proceed as best judgment and experience may suggest.

Perfect Ventilation and Pure Air Essential to Human Life and Health.

THIS no intelligent person will question. It is a fact so universally understood that argument in its support is wholly unnecessary; still, while its vital importance is universally admitted, and its factorship in the healthfulness of mankind recognized, a strange degree of apathy, except in words, exists in the practical application of the means best calculated to secure this highly essential provision of the great Creator, who, in his creation of our earth, not only fixed the great sources of light in the firmament, but also surrounded the planet upon which we dwell with the prerequisite to health—pure air. As is well known, its entire absence produces death, and human life and health, in large degree, are affected by the free or restricted use of this health-giving agency.

All this being well understood, tens of thousands have employed their genius, talents, and both mechanical and scientific skill in discovering and devising the most perfect and practical method of utilizing this indispensable element in dwellings, churches, school-houses, theaters, and places where people dwell or assemble in large numbers for purposes of worship or pleasure, and as a result numerous devices have been worked out and applied that in part, at least, have produced the object sought, while but few of the inexpensive kind have gained a perpetuity beyond occasional use.

Hence it is with pleasure that we notice the invention of our fellow-townsman, Mr. P. Abrahamson, who has perfected a ventilator that must supersede all others in its simplicity, completeness, and practicability. The array of testimonials from those who have used them should be sufficient to satisfy the most scrupulous as to its effectiveness, giving, as it does, an abundant supply of fresh air without a particle of draft. It is practical for all purposes of ventilation, from the sick room to the largest structures in which people live or assemble.

Building Summary.

For the first time this year, our monthly report is larger than its predecessor in 1886. Values of reported improvements to date are far ahead of last year to similar period. During the month there have been commenced of building improvements,

70	frame buildings, value	$648,700
2	brick " "	52,500
20	alterations "	50,500
92		$751,700

The high prices of building materials is materially affecting the construction of small houses.

Price of Lumber Again Advanced.

ANOTHER dollar has been added to the price of lumber, thus making rough lumber $21 per M; rustic, $36 per M, and other kinds in proportion. Our list will be found corrected so as to correspond with latest quotations.

We sincerely hope that the "raise" will come to a halt very soon. Lumber is now 75 per cent greater in price than it was a short time ago. We repeat again that the erection of small buildings has been practically stopped on account of the exorbitant price of materials.

Wood Mantels.

THE firm of L. and E. Emmanuel is one of our largest manufacturers of wood mantels. In a conversation with these practical men the following points were brought out:—

"The old mantels in England were made of wood. It took America a long time to discover, however, that grave-yard material is not exactly the thing to incase fire-places. Why mantels made out of marble slabs should have been introduced, it is difficult in the light of present tastes to understand. They are cold and gloomy. There is a home look about a wooden mantel that is an incentive to proper home conduct. We are not prepared to say that marble mantels have caused unpleasantness that has led to divorce, but it would not be surprising to learn that they had. Pleasant surroundings lead to contentment and happiness. No one will dispute the influence of flowers, happily chosen wall decorations and works of art. White marble slabs in our parlors and drawing-rooms do not inspire the sympathetic side of human nature. The feeling is to get away from them, and there should be nothing in a home which the inmates should want to get away from. There is nothing inviting about such mantels. They are repellent. They are going fast, and let us hope that no vitiated taste will whirl them into fashion again."

Mechanics' Liens.

THE laws of nearly all the States and Territories provide for the securing and collection of builders' and mechanics' liens upon property for which materials have been furnished, or on which labor has been performed. The following is a synopsis of the general laws relating to these liens:—

A lien is lost by the voluntary surrender of the property to the owner or his agent. There is no common law lien without possession. It is a right created by law in favor of the tavern-keepers, livery-men, pasturers, carriers and mechanics. It may be created by contract between the parties, as in a lease.

Whatever is affixed to land belongs to the owner of the land, except in a few cases. Hence, carpenters who built houses on the land of others had no lien. But as the principle is just, and the practice beneficial, States have, by law, given builders and persons who furnish material a lien on the land and building, if claimed within a limited time. Under this kind of mechanics' lien, no possession is required. The right to pay the charge and take the property is a right of redemption which is lost by a public sale of the property. The surplus, if any, is paid to the owner.

Liens by State law are generally foreclosed in a court upon a petition for that purpose. By its decree the property is sold and the proceeds divided according to the rights of the parties.

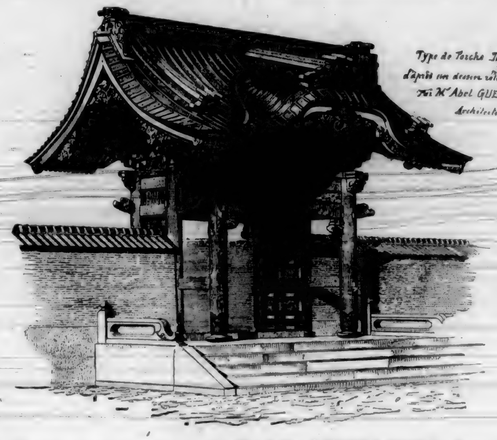
Liens may, in certain States, be enforced against vessels and wharves as well as buildings, for construction, alteration, or repairs. In most States, while the same general principle is maintained, the modes of procedure vary.

A workman desiring the protection of the law for the security of his wages, may draw up a paper, addressed to the county clerk of the county where the work was done, filled up in a manner similar to the following form, setting forth all the circumstances of the work done, his bargain with the contractor, the failure to receive his pay, and his fears that he will lose all if his lien is not made. This paper, sworn to before a justice or notary public as true, is filed in the county clerk's office and becomes a cloud upon the building, which the owner is only too glad, frequently, to remove by paying the debt himself and taking it out of the contractor's bill. In either event the owner or contractor must pay the debt if it is an honest one.

NOTICE TO THE COUNTY CLERK.

To Philip Best, clerk of the city and county of New York, in the State of New York—

SIR: Please to take notice that I, James Van Horn, residing at No. 45 Conkling Avenue, in the city of New York, in said county, have claim against William Y. Heath, owner (or only contractor, as the case may be)



of a new two-story brick dwelling-house, amounting to Nineteen Hundred and Sixty-two Dollars and forty cents, now due to me, and that the claim is made for and on account of brick furnished and labor done before the whole work on said building was completed, and which labor and materials were done and furnished within three months of the date of this notice; and that such work and brick were done and furnished in pursuance of a contract for twenty thousand serviceable brick and the mason work of putting up the outer walls of said new building, between the undersigned and the said William Y. Heath, which building is situated on lot ——, in block ——, in Westel's Addition to the city of New York, on the west side of Salina Avenue, and is known as No. 432 of said avenue. The following is a diagram of said premises:

[*Insert diagram.*]

And that I have and claim a lien upon said dwelling house and the appurtenances and lot on which the same stands, pursuant to the provisions of an Act of the Legislature of the State of New York, entitled, "An Act to secure the payment of mechanics, laborers, and persons furnishing material toward the erection, altering, or repairing of buildings in the city of New York," passed, —— 18—, and of the Acts amending the same.

JAMES VAN HORN.

New York, December 1, 1882.

James Van Horn, being duly sworn, says that he is the claimant mentioned in the foregoing notice of lien; that he has read the said notice, and knows the contents; and that the same is true to his own knowledge, except as to the matters therein stated on information and belief, and as to those matters he believes it to be true. JAMES VAN HORN.

Sworn before me this first day of December, A. D. 1882.

J. L. LESLIE, *Police Justice.*

The lien laws of certain States provide that any person who shall either labor himself, or furnish laborers or materials for constructing, altering, or repairing any building, shall have a lien therefor upon such building and the specific lot or tract of land on which it is located; but a suit to enforce payment of said claim must begin within six months from the time the last payment therefor is due. Landlords, also, may enforce a lien for arrears of rent upon all crops of their tenants, whether growing or matured.—*Hill's National Builder.*

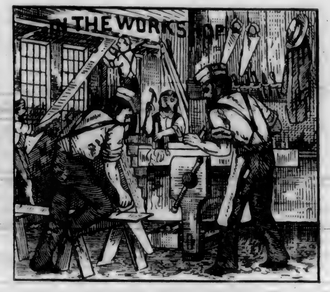
A REMARKABLE TREE.—A Nevada paper describes a remarkable kind of wood which is said to grow there. The trees do not grow large, a tree with a trunk about a foot in diameter being much above the average. When dry the wood is about as hard as boxwood, and being of a very fine grain, might, no doubt, be used for the same purposes. It is of a rich red color and very heavy. When well seasoned it would be a fine material for the wood carver. In the early days it was used for making boxes, for shafting, and in a few instances for shoes and dies in quartz batteries. Used as a fuel it creates an intense heat. It burns with a blaze as long as ordinary wood would last, and is then found—almost unchanged in form—converted into charcoal that lasts twice as long as ordinary wood. For fuel, a cord of it brings the same price as a ton of coal. Unfortunately it burns out stoves faster than any kind of coal.

DRAUGHTSMEN SCARCE.

Still the demand for draughtsmen is unabated, and many architects are really pressed for help. We can readily place twenty first-class draughtsmen in good positions. Any information will be furnished upon application to this office, either in person or by letter.

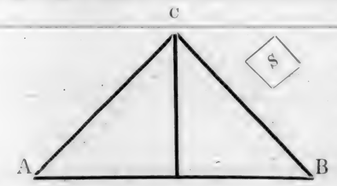
ASKED, ANSWERED, and COMMUNICATED.

☞ Architects, Contractors, Carpenters, and mechanics generally are respectfully requested to furnish us items of interest for this column. We will gladly answer any and all questions pertaining to the architectural and building interests. If illustrations are necessary to explain your ideas, send us a sketch of them, and we will make the cuts. We especially invite suggestions from apprentices and young mechanics.



Two Steel Square Problems.

TO DETERMINE by the steel square the result of any number, for example—6 multiplied by the sin 45°: Take 6 on both blade and tongue, and mark the line AC = BC = 6. Then CD drawn to the middle of AB = 6x sin 45°. Sin 45° = 0 70711.



STEEL SQUARE PROBLEM.

Problem.—Referring to any rectangular frame-work which slopes alike on all four sides. *Given*—The rise and seat of the corner-posts. *Required*—The cuts for the ends of the corner-posts, the blade of the bevel to be applied to the two faces adjoining to the ridge-line.

By the Steel Square.—On the blade take the rise. On the tongue take the seat x sin 45°. Mark along the tongue. The angle made by the tongue and the line is the proper bevel.

Problem.—Given—The run and rise of a common roof. We wish to place upon it a perpendicular square pipe to stand upon the roof diamond-shaped, thus: (S). *Required*—The cuts for the bottom end of the pipe; the blade of the bevel to be applied to the two faces adjoining the lowermost vertical edge.

By the Steel Square.—On the blade take the run of the roof. On the tongue take the rise x sin 45°. Mark along the tongue. The angle made by the tongue and the line is the proper bevel.

If the bevel is applied to mark the end of the higher half of the pipe, we have only to reverse the direction of the stock of the bevel so as to mark an obtuse angle.

These two problems are very much alike. Their demonstration is a good study in solid geometry.—*Fred Lascy, in Builder and Wood Worker.*

To remove paint and putty from window glass put sufficient saleratus into hot water to make a strong solution, and with this saturate the paint or putty which adheres to the glass. Let it remain until nearly dry, then rub off with a woolen cloth.

Architectural Pupilage.

MR. WILLIAM WOODWARD, an English architect, gives a father the following advice concerning instruction for a son who expects to become an architect:—

1. Do not think that he is in a fair way of doing justice to himself, or to his master, by confining his studies to the office hours. Home studies, schools of art, and the other accessible fields of morning and evening architectural education, are absolutely necessary.

2. Do not think that your son has acquired much more than the rudiments of his business at the end of three or five years of pupilage, or that the architect with whom you have placed him will be able to inject into him the knowledge which his master has taken thirty years of practice to acquire.

3. At the end of his three or five years of pupilage, put him into another architect's office for, say, another five years, as an improver. This will enlarge his mind, and get him out of a few awkward grooves into which he slipped in the first office; or, better still, if within your power, let him commence practice on property which is entirely your own.

4. Unless you have friends who will secure him employment at the end of his educational career, settle the largest annuity upon him; he will require it.

5. There are abundantly ample (perhaps too many) sources of architectural knowledge open to your son; the rest is in his own hands.

A PRACTICAL HINT.—This was the way a country blacksmith was seen removing that portion of the ax handle from the ax that remained in the eye, the break being close to the iron. The wood could not be driven out, and as nails had been driven in at the end, it could not be bored out. He drove the bit, or sharp edge, into moist earth, and built a fire around the projecting part. The wood was soon charred so that it was easily removed. The moist earth so protected the tempered part of the ax that it sustained no injury.

FOR glue to be properly effective it requires to penetrate the pores of the wood, and the more a body of glue penetrates the wood the more substantial the joint will remain. Glues that take the longest to dry are to be preferred to those that dry quickly, the slow-drying glues being always the strongest, other things being equal. For general use no method gives such good results as the following: Break the glue up small, put into an iron kettle, cover the glue with water and allow it to soak twelve hours; after soaking boil until done. Then pour it into an air-tight box; leave the cover off until cold, then cover up tight. As glue is required, cut out a portion and melt in the usual way. Expose no more of the made glue to the atmosphere for any length of time than is necessary, as the atmosphere is very destructive to made glue. Never heat made glue in a pot that is subjected to the direct heat of the fire or a lamp. All such methods of heating glue cannot be condemned in terms too severe. Do not use thick glue for joints or veneering. In all cases work it well into the wood in a similar manner to what painters do with paint. Glue both surfaces of your work, excepting in case of veneering. Never glue upon hot wood, or use hot cauls to veneer with, as the hot wood will absorb all the water in the glue too suddenly, and leave only a very little residue, with no adhesive power in it.

THE DAM AT SAN MATEO.—A remarkable dam is about to be constructed by a water company at the San Mateo Cañon, four miles from San Mateo, Cal., in order to form a reservoir. The cañon is very narrow and steep, and 15 feet below the bottom is a solid rock on which the foundation of the dam will rest. The structure will be 170 feet high, 175 feet wide at base, 20 feet at the top, and 700 feet in length. It will be the largest stone dam ever known to have been built. The dike will have a curvature of eighty feet, and the convex side will be upstream. The material will be a new sort of concrete composed of stones. The walls will be perfectly smooth. The reservoir that will be formed by it and the adjacent hills will be about eight miles in length and 150 feet deep in the deepest places. Its capacity will be about 32,000,000,000 gallons. The water will be conveyed by tunnels to the city of San Francisco.

PAINT on the walls of a kitchen is much better than kalsomine or whitewash. Any woman who can whitewash can paint her own kitchen. The wall needs first to be washed with soapsuds, then covered with a coat of dissolved glue; this must be allowed to dry thoroughly, and then covered with paint. A broad flat brush does the work quickly.

IN times now long past, flooring strips were supposed to be thoroughly seasoned before they were put down, but now the tree that stands in the forest to-day may form the floor that is laid a week or ten days hence.

WHEN cleaning a stove, if a small quantity of sugar is put into the stove blacking it will not burn off so quickly.

A PORTABLE SAW MILL.

THE above engraving represents a familiar scene to those who have watched the gradual clearing of our forests. In certain localities the timber, from a distance, looks like an immense forest, capable of yielding millions of feet of lumber; but, upon close inspection, the area is very limited that will furnish material for first-class lumber. Again, there are regions that seem to require just so much lumber. The portable mill shown in cut is especially adapted to just such places. Easily moved from place to place, and with a cutting capacity of many thousands of feet per day, the mill recommends itself to the consideration of those who are endeavoring to build up new towns. Full particulars can be obtained by addressing the J. I. Case Co., Racine, Wis.

The Essentials of Perspective.

A New Work, by L. W. MILLER.

THE aim of the book is to simplify and make real the basic laws underlying the draughtsman's art, in the hope that correct habits of thought and expression will aid in developing an art that will be symmetrical and harmonious, and not disfigured by the errors too often noticed in the work of our artists.

The point of view throughout is that of the artist rather than the merely scientific theorist, and the result is a thoroughly practical and simple text-book free from all unessential or theoretical discussion.

The style is clear, direct, and practical, and its instructions are happily supplemented by the numerous drawings which the author informs us "are the same that he has used for many years in teaching perspective from the blackboard." They therefore have the merit of practically illustrating the fundamental principles of the science, and are purposely made free from burdensome details in order that the applications made may be apparent at a glance.

PRICE, $1.50.

We will send a copy, post-paid, to any address upon receipt of the publisher's price, one dollar and fifty cents.

Agreeable Colors.

THE most agreeable colors are those difficult to name which seem to tremble on the verge of another color. Both white and black are, in nearly every case, enriched and improvised by judicious tempering with other colors. Thus white will be improved with a dash of yellow or red for warmth, blue or green for coldness, so that a green tinted white will look best in a pattern where there is much Indian red, and a pinky white may be opposed to much blue or gray. Black is always improved by the addition of a little blue, in which we follow nature, who rarely employs black unmixed with other color. Black is, after all, a relative color, requiring contrast to advantageously set it off. Under certain circumstances, where it would have a harsh or unpleasant effect, burnt umber may be made to stand for it. It is noticeable that emerald green, so beautiful in itself, regarded as a color, is terribly self-assertive.—*Painters' Magazine.*

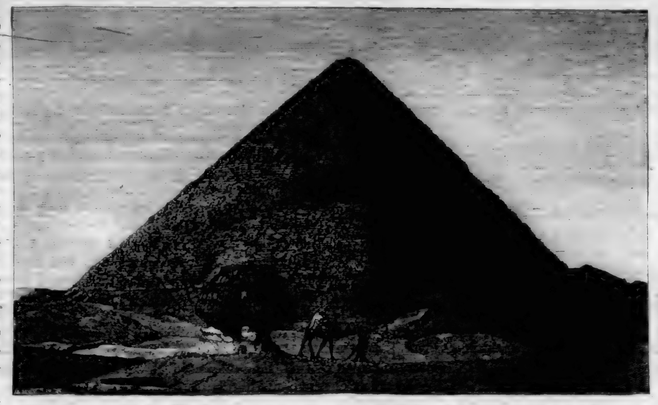
The Pyramids of Ghizeh.

UPON the western banks of the Nile, within a few miles of the renowned city of Cairo, are to be seen the wonderful tombs of Egyptian kings, the pyramids.

Although there are many such structures scattered over the sands of the desert, the three pyramids at Ghizeh command our attention as the most remarkable evidence of mechanical skill and constructive genius of all ancient works. The largest pyramid, as shown by our illustration, stands upon the rock plateau of the Nile, a few hundred feet from its banks, and is the grandest edifice—if it may be so termed—ever erected under the Egyptian monarchs.

The largest, or the Pyramid of Cheops, was 480 feet high, and its base is a square measuring 764 feet, and covers an area of about thirteen acres. It is constructed of an almost solid pile of stone masonry, consisting of about two hundred courses, each gradually receding back of the other until the top is reached, which originally was a point, but is now a platform thirty-two feet square.

It is believed that these pyramids were covered with an outer casing of stone or marble. The great pyramid, however, was covered with syenite, red granite, brought from a quarry situated near Syene, nearly 500 miles from Ghizeh. Many remains of this ancient covering are to be found at the base of this pyramid, while a portion of it still remains in place. The theory that these stupendous structures were erected for the purpose of kingly tombs, is evinced from the fact that part way up the side upon the north face is to be found a small opening, that originally was sealed up and covered over, probably for ages. Connecting this entrance were long, narrow passages, terminating in small sepulchral chambers, that originally contained the mummy case of the dead. These have long since been removed by relic hunters and explorers.



Pyramid of Cheops and the Sphinx, Remarkable as a Work of Masonry and Sculpture.

The four faces, or sides, of the pyramids are directed to the four cardinal points of the compass, proving that the ancients were acquainted with the laws that govern modern science.

One of the wonderful features of these grand structures, from a mechanical point of view, is the large size of some of the stones used. They gradually vary from the largest at the bottom, from six feet square by sixteen feet long, to three feet by eight feet, the platform at the top being formed of nine large stones, each weighing a ton. When we contemplate the complicated machinery required to raise these blocks to a height of five hundred feet, we are nonplussed; but when we realize that many of these massive blocks, weighing from ten to thirty tons, were brought from four to five hundred miles, we are amazed at the resource, genius, and constructive ability of that singular and remarkable race of people, the ancient Egyptians.

THE SPHINX—THE GIGANTIC MONUMENT OF ANTIQUITY—A REMINISCENCE OF EGYPT.

A few years ago the editor of this journal terminated a long and interesting tour of Egypt at Cairo, within the shadow of the prehistoric pyramids, and surrounded by the mighty relics of the Egyptian dynasties. Standing on the banks of the historical Nile, and looking out upon that almost unknown sea, the great desert, whose rolling sands have for ages buried many gigantic works of the ancients, our attention is arrested by those huge piles of masonry, which serve as tombs for numberless dead, and which we have learned to call the Pyramids of Ghizeh. Within three hundred paces of these colossal ruins stands the most striking object to be found in Egypt.

As if keeping sentinel over the downfall of a mighty people, guarding the sacred relics from the hand of the modern vandal, the Sphinx, that colossus of monolithic structures, raises its head above the ever-drifting, restless sands. Its face turned toward the east—staring into vacancy and the events of centuries—gigantic, majestic, awe-inspiring, it has witnessed the flight of time for nearly seven thousand years, witnessed the birth and fall of dynasties, the rise and decline of empires, the origin and destiny of Republics.

The archæologist, who wanders amongst the ruins of ancient Egypt, soon learns that upon that ancient highway, the Nile, are to be found the stupendous and gigantic structures that seem to have exhausted all human resources and rules of mechanics; the lofty walls and monolithic columns of Carnak and Luxor, the colossal statues of Memnon and Rameses, the Caryatidic Temple of Ipsambool, all strike the beholder with a profound awe and reverence, not only for the mighty works themselves, but the resources and deeds of a powerful and potent people.

The Sphinx, in comparison with the great stone structures of Egypt, stands pre-eminently the grandest work of time. Of an uncertain era, yet belonging to prehistoric ages, its workmanship bears witness to a period of educated art that even the lapse of ages, and the hand of time, have not obliterated.

It has generally been supposed that the Sphinx was a stone image entire, partaking of the head and shoulders of a man, and the breast and body of an animal, as many of the Sphinxes of Thebes and Carnak were formed, but recent excavations have dispelled the idea. It was demonstrated by Caviglia, in 1816, that the Sphinx of Ghizeh was shaped from a spur of solid rock, and that instead of being a body formed from the rock itself, it is little more than a gigantic head, 172 feet long and 56 feet high. The length is derived from what would seem to be the rear end of the spur or rock to the nose. The height is from the neck to the top of the head.

The rock in front of the figure or breast was removed by the ancient builders to a depth of fifty feet below the neck, or level of the sand on the pyramidal plateau, near which the Sphinx stands.

Caviglia found, upon removing the sand which had for ages accumulated about the breast of the figure, that two thousand three hundred years ago there existed a small nave or temple, built in front of the breast. This chapel was formed of three tablets, dedicated by the Egyptian monarchs, Thothenes III. and Rameses II., to their deity, the sun, of which the Sphinx was the emblem. These tablets formed the three sides of the temple, the fourth being composed of doors, on either side of which were recumbent lions, as if guarding the entrance. Opposite the doorway was placed a miniature altar, supported between the fore-paws of a lion. This is believed to be of Roman origin. In 1869 another effort was made to excavate the statue that had become buried to the neck by the ever-drifting sand, when it was found that surrounding the Sphinx, nearly circular in form, was a flight of stone steps descending from the surrounding plateau to the temple before spoken of, and it is now believed that the statue stands in the midst of a circular basin of stone, hollowed out of the solid rock, and that the Sphinx was left in the center, while the surrounding rock was excavated. The rock from which the figure is cut is the common granite to be found on the Nile, and from which much of the work is constructed that lines the banks.

Upon examination it will be found that the Sphinx has been repaired by the introduction of blocks of red syenite or granite, but this work is generally supposed to be of Roman origin. Much of the stone used for this purpose seems to have been

DESIGN FOR A SUBURBAN RESIDENCE TO BE BUILT OF STONE.

brought from the neighboring temple of Khafra, which was constructed of red syenite.

We note that at present renewed efforts are being made under the supervision of Messrs. Maspero and Grebaut, the noted engineers, to excavate the figure. Already the level of the platform temple and steps has been reached, after a continued labor of fifteen months, and it is expected that the excavations will be so far continued that we shall know more of the origin and purpose of this gigantic sentinel of the desert.—*Hill's National Builder.*

Working Without Thinking.

THE practice is too common for the mechanic to work without thinking. Having learned a trade he goes through a daily routine, which is so familiar that he could almost do it with his eyes closed, or in the dark. The part he has to do probably has little or no variety in it, and he settles down to the conclusion that there is no avenue open to him for advancement. He works like an inanimate machine, which, when the power is on whirs away day in and day out, until it is worn out, and unfit for further duty.

The unthinking workman does not closely observe even his own field of operation, and therefore never suggests any improvement in methods or material. A worker in woods, of this type, never stops to inquire from whence his supply of wood is obtained; when is the best time to cut timber, the better method of seasoning it, its extreme strength and durability; nothing is thought of beyond the mere fact that it is to be worked up into wheels, bodies, buildings, etc., as the case may be. Should anyone put the question to him covering either of the above, he would very likely give the curt reply that he had not time to bother his brains with such things, as they would be of no value to him.

The above model will serve for mechanics of every kind. It is a fact that some of the most valuable improvements have been thought out by men who worked at an entirely different branch from that to which the improvement pertained. In the carriage line the body-maker has invented a new kind of spring, axle, or something else. The blacksmith may have studied out an improvement on the sewing machine; the painter, a new tap and joints, and the trimmer has brought to light a patent priming or filler for woods. One's own trade seems to warp the mind, and from its monotony cause a lack of interest therein, beyond a desire to push it through and get done with it.

Now, if the skilled workman would take greater pride in his calling, and endeavor to master its every feature by long and arduous study, there would soon be wonderful advancement in the mechanic arts.—*Painters' Magazine.*

Harvey's Hot Water System of Heating.

THE difficulty of obtaining a uniform distribution of heat in buildings warmed by hot-air furnaces is well-known, and this difficulty has been met and overcome by an ingenious device consisting of a water-back in the furnace and water radiators in rooms remote from furnace where more heat is desired; this is produced by hot-water circulation, a very superior method of heating all kinds of buildings, especially dwelling-houses. The advantages in the use of this improvement in ordinary hot-air furnaces will be readily seen and appreciated by anyone familiar with furnace and hot-water heat. The hot-water circulation begins as soon as the furnace fire is started and the heat of the radiators increases and diminishes with the heat of the furnace and continues long after the furnace fire is out. Just here is where the economy comes in, and it is one of the principal advantages that this combination possesses over that of the combination hot-air and steam furnace where no heat is derived from radiators until steam is made, and should the fire become too low to make steam the radiators get cold.

The Bundy Hot-water Radiator, with vertical tubes and its upper and lower circulating chambers, is perhaps the most efficient, and is pronounced by those who have used it the quickest circulator on the market. It has been extensively used in Canada, England, and the United States for the past three years.

The cost of such an appliance is very moderate.

Its economy is unquestionable.

Its durability is the strongest argument favoring its use.

The comfort afforded and the advantages to health are of the most practical importance.

It is equally adapted to the *small cottage* or the largest residence.

In building a new house a large proportion of the expense of this system can be saved by discarding the extra chimneys and mantels, one chimney being sufficient.

It can readily be introduced into houses already occupied without damage to the walls, furniture, or carpets.

C. D. Harvey not only introduces the Bundy Radiator, but also the Harvey Hot-water Radiator and Furnace, to the attention of those who desire first-class methods of heating houses.

Mr. Harvey has been in this city over TEN YEARS and has introduced his system in over five hundred different houses. Upon application he will furnish a list of testimonials in accordance with the above.

Mr. Harvey can be found at 30 New Montgomery Street, corner Jessie. He has the largest stock, embracing all the latest improvements in the heating line, to be found west of the Mississippi Valley.

The Essentials of Perspective.

BY L. W. MILLER.

I WISH for a moment to consider the principles of perspective as applied to fixing the sizes of the objects represented. In the first place, let it be clearly understood that the only measurements which are of any consequence to the draughtsman are *relative* measurements. As far as the artist is concerned, he never thinks of any others; but architects and others who work from plans and elevations which are drawn to scale, do indeed use the actual measures, because in their case that is the most convenient way, but even then the actual measures become relative as fast as they are applied to the drawing, and these last are the only ones which appear in the result.

The term "drawing to scale," an expression constantly used in connection with the construction of geometrical plans and diagrams, has absolutely no significance when applied to a drawing in perspective. You may draw two or three lines in it by scale if you wish, but all the others will have to be measured by means of these; and even the first two or three may be put in just exactly as well without reference to any scale at all, and indeed much better, as far as producing a good effect is concerned. No one can tell in looking at a perspective drawing whether a building is twenty feet high or fifty feet, except by comparing it with some other object for which we carry a fairly accurate standard in our minds. Steps, for example, are of about the same height for all kinds of buildings and furnish a pretty good standard by which to measure other things; and lamp posts, gateways for foot-paths, etc., serve a similar purpose. The commonest and surest standard of heights is, however, the human figure. The horse answers pretty well, but you are not so sure of him. A pony may easily be mistaken for a horse, but a child will never be mistaken for a man if he has been drawn in any respectable fashion; and so the magnitudes of a picture become intelligible the moment the human figure is introduced.

Two kinds of measurements are employed in making pictures. The first enables us to determine the apparent size of an object with reference to some very obvious dimension—its height, for instance; the other relates to the foreshortening of objects, and to fixing distances between them, along lines which run to a vanishing point.

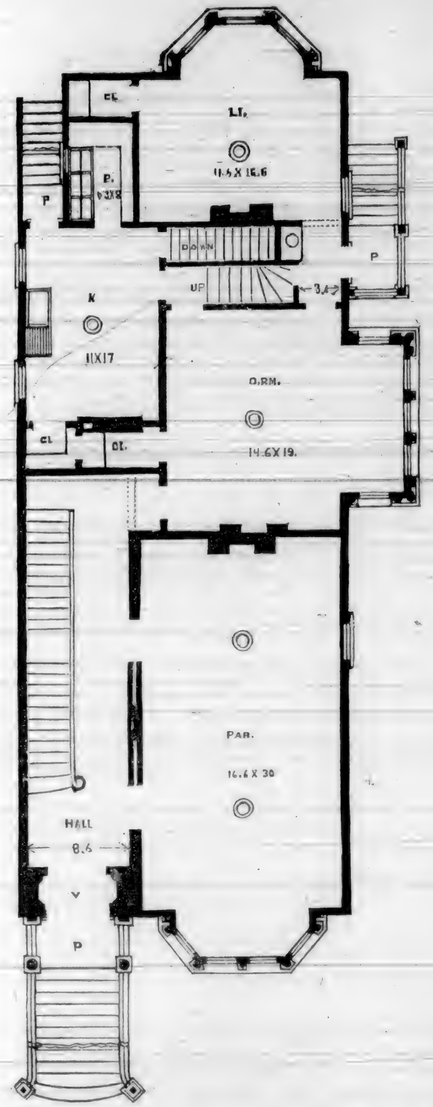
Look at the small engraving at top of page. It is quite a different, and a very much easier, matter to determine how high one driver's head ought to be, as compared with the other's, than it would be to measure the distance between the two. Now the length of the house might be compared with that of another one which was known to stand parallel with it—supposing such an one had appeared in the picture—by just such a process as that employed to determine the relative heights of the two men; but the width of the end of the house—which, as you see, faces the road—would have to be determined by the same method as that which would be employed to measure the distance between the carts.

The same is manifestly true of the spacing of the posts in the fence, or of the widths of the windows, and, generally, of all distances which one has occasion to measure along lines, which are said to "run into the picture," because they go to a vanishing point.

* * * * * * *

MEASUREMENTS BY MEANS OF TRIANGLES.

If the method of measuring by means of diagonals of squares is not applicable to every case that can possibly arise in the course of a draughtsman's practice, another and more general



statement of what really amounts to the same principle, will be found to be so; and as the greater includes the less, this other method might have been described in the first place, and all that has been said about diagonals omitted; if the method explained had not been not only simpler, and for that reason more convenient whenever it was applicable (and it almost always is, as artists use perspective) but being somewhat easier to understand, its discussion beforehand serves a very good purpose.

If in measuring the windows in a previous study it had also been necessary or desirable to determine the exact length of the house itself, the reader will see that we have not yet learned enough about perspective to do it; there is a way, however, of fixing such measures.

The width of each window and the length of the house itself in our large sketch shown were fixed in this way—at least they might have been so determined, if the drawing had been made to measure instead of being sketched on the spot.

The line to be measured is, in this case, the ground line of the front of the house. Let us measure its length first and attend to the windows afterwards. We have seen that any measures we may have occasion to use must be set off, if we are to be sure of them, on some line that is parallel to the picture plane, and that such a line is always parallel to the horizon of the plane in which it lies; that is, it is always parallel to the original or actual horizon when drawn on level surfaces and always vertical or upright when drawn on vertical surfaces, and so on. Our observations at the screen taught us that long ago. Such a line is drawn, then, in such a position as to have one point in common with the line to be measured. Theoretically, this may be wherever you please, but in practice it will usually be most convenient to draw this imaginary line through the nearest end of the line to be measured. As it is never used for any other purpose, it may be called the "line of measures."

The point which was called the vanishing point of diagonals in preceding figures, has been called the vanishing point of the base of the triangle in our large engraving (see the little diagram in the corner).

This name is a good one, because it does not allow the student to forget the real significance of the point, something which pupils find it very easy to do; but it is too long, and we shall have to call the point simply "measuring point"—only do not forget that it always *is* the vanishing point of the base of an isosceles triangle, otherwise it would not be of the slightest use as a measuring point. If your picture necessitates the establishing of many measurements, you have to regard it as in good part covered with pictures of isosceles triangles the bases of which all vanish at one or other of these points.

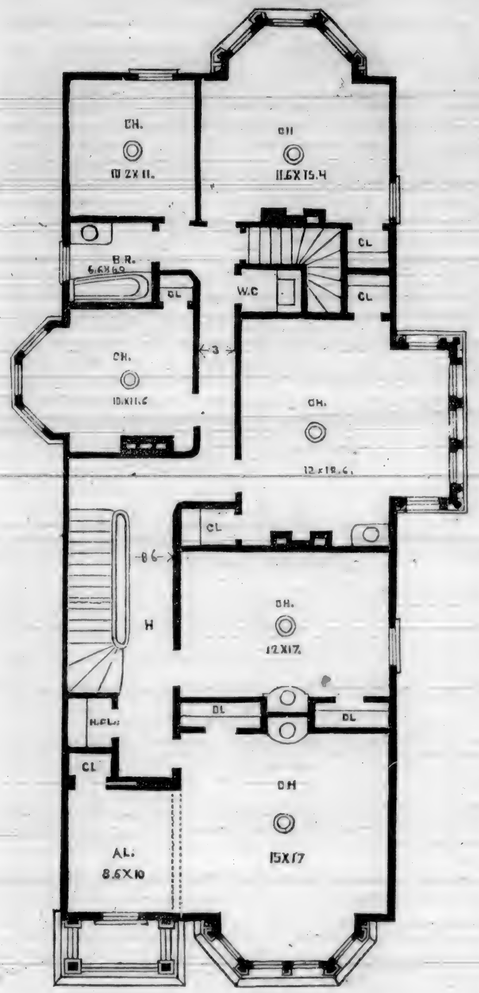
The above is taken from a new work (by publisher's permission) entitled, "The Essentials of Perspective." We have carefully read the book and can confidentially recommend the same to anyone desiring to become proficient in perspective drawing.

Boys as Inventors.

SOME of the most important inventions have been the work of mere boys. The invention of the valve motion to the steam engine was made by a boy. Watt left the engine in a very incomplete condition, from the fact that he had no way to open or close the valves, except by means of levers operated by the hand. He set up a large engine at one of the mines, and a boy was hired to work these valve levers. Although this was not hard work, yet it required his constant attention. As he was working these levers he saw that parts of the engine moved in the right direction, and at the exact time that he had to open or close the valves. He procured a long, strong cord, and made one end fasten to the proper part of the engine, and the other end to the valve lever. Then he had the perfect satisfaction of seeing the engine move off with regularity of motion. A short time after, the foreman came around and saw the boy playing marbles at the door. Looking at the engine he soon saw the ingenuity of the boy, and also the advantages of so great an invention. Mr. Watt then carried out the boy's inventive genius in a practical form, and made the steam engine a perfect automatic-working machine. The power loom is the invention of a farmer boy who had never seen or heard of such a thing. He cut one out with a knife, and after he had got it all done, he with great enthusiasm showed it to his father, who at once kicked it to pieces, saying that he would have no boy about him who would spend his time on such foolish things. The boy was afterward apprenticed to a blacksmith, and he soon found that his new master was kind and took a lively interest in him. He made a loom of what was left of the one his father had broken up, which he showed to his master. The blacksmith saw that he had no common boy for an apprentice, and that the invention was a very valuable one. He immediately had a loom constructed under the supervision of the boy. It worked to their perfect satisfaction, and so the blacksmith furnished the means to manufacture the looms, the boy to receive one-half the profits. In about a year the blacksmith wrote to the boy's father that he should visit him and bring with him a wealthy gentleman, who was the inventor of the celebrated power loom. You may be able to judge of the astonishment of the old man when his son was presented as the inventor, who told him the loom was the same as the model he (the father) had kicked to pieces but a year before.

Cyrus H. McCormick was not twenty-two years old when he produced the first practical reaper the world ever saw. Numerous other instances where boys produced valuable inventions might be cited.

IN building book-cases, there should be a half-inch space between the shelf and the wall—dust can then be easily brushed back, falling to the bottom.



Useful Hints Relating to House Building.

IN building a house for myself, to cost about $5,000, what are the special points which I must watch—points which may be overlooked by the architect or contractor, because, perhaps, not properly in their province, or because the owner should himself know them? I have never yet built a house, and am, in consequence, wholly inexperienced—an easy prey to imposition and mistakes.

The writer having had some experience in building houses as an owner, and paid somewhat dearly for it, proposes in this article to indicate some of the points desired.

In the first place, be most careful in the choice of your lot. Do not allow the cost per foot to be the most important element in your decision. A low-priced lot in the beginning may be the dearest in the end; that is, if it is chosen simply because it is low in price. Avail yourself as much as possible of the benefit of others' improvements. If there are desirable residences adjacent to the lot of your choice, the value of yours will be assured at the outset. Remember that you are about to put a certain sum of money upon whatever lot you select, and that a badly located lot will decrease the value of this; while, on the contrary, a good lot will enhance the value. Many have suffered disappointment, and actual loss, by an error of judgment in this regard. Your choice will make the difference between a good asset and a poor one.

Having chosen well to this point, see to it in the second place that the lot can be easily drained. To this end, it is not necessary that the ground should be high, but rather that it have a slope in some direction; otherwise, owing to the soakage into the ground of the surface water, which ought to run off, your cellar may be damp or wet at times. A dry cellar is of the utmost importance, and this is one of the ways to secure it.

Another point to be considered in your choice should be the exposure it would give your house. By this we mean the way it should front. A wise decision here will conduce greatly to the comfort and health of your family. The writer's experience is that the best frontage or facing for a house is a little west of south. This, more than any other, opens up the rooms to the sun in the winter and to the southwesterly breezes in the summer, thus making the house warm, healthy, and cheerful in the former, and cool and delightful in the latter, as the prevailing winds during the summer are from the southwest. At the same time, they carry away from the house the odors and heat of the kitchen; and during the winter the living part of the house is protected from the cold northerly blast.

A good size for the lot for a house to cost about $5,000 is 60x 150 feet. If a stable in the rear is needed, the lot should not be less than 175 feet deep.

The next subject to be settled upon is the plan and specifications for such a house as your limit of cost will cover. This is a most difficult undertaking, and often ends in disappointment, usually because too much is expected for a given sum of money.

If style of interior and exterior is required, the size must be curtailed. If the rooms must be spacious and numerous, then the style and finish must be plain and unpretentious, both within and without. Of one thing be assured—everything cannot be obtained for $5,000 at the present cost of labor and materials.

This point fully understood, the writer has found that the quickest and best way to get the plan desired is to look at houses already built in the immediate or adjacent towns, which approximate to the cost named. Among the many which are now to be seen in all our suburban towns, there will be no difficulty in finding a house which will entirely satisfy the requirements. No mistake can then be made in the cost, for the builder himself is near at hand to duplicate for you, for a definite sum, the house you may select.

Disappointment in architectural effect will not happen, because you can see beforehand what an appearance the finished house will present.

It is better far to go to an architect with ideas well defined of what is wanted, and to ask of him to add to these his own taste and skill, than to go (as many do) with nothing settled in the mind but the cost, and to require of him to produce something entirely original in design and finish. His effort to fill such an order is generally a failure, not from any want of skill on his part, but rather because of his inability to grasp the intangible and indefinite ideas which may be in the mind of another. He must have some standard to work up to besides simply the cost.

If the architect succeeds in his effort as to the plan, you may consider you have made a fortunate beginning.

The specifications come next. As for these, let them be most carefully drawn, leaving nothing open, indefinitely or obscurely stated. Have them so drawn that they cover everything you want; otherwise you will have extras, which are always very costly.

It is a remarkable fact that anything taken from the specifications, after the contract has been signed, you can get no allowance for, but anything added to them greatly increases the cost. Why this should be so, only the contractor can tell you, and he generally will not. Hence, you must plan beforehand so as to avoid them, or, in the pithy words of the late Rev. Henry Ward Beecher, "First think out your work, and then work out your thoughts." This applies pre-eminently to building operations.—*Scientific American.*

THE AMERICAN CONTRACTOR

THE principal object of this publication is to furnish information, IN ADVANCE OF CONTRACTS, to architects, builders, contractors, and all those directly interested in furnishing materials of all kinds for buildings, bridges, plumbing work, machinery, and the thousand and one trades that are benefited by all kinds of building improvements. One great feature of this journal is the furnishing of special information to its yearly subscribers, having a special system of its own in this regard. It is published by B. Edwards, Chicago, and the subscription for the weekly edition is $5.00 per year. Subscriptions may be left at this office or sent direct to Mr. Edwards.

The Top of the Redwood Tree.

FROM time to time we have given engravings showing the stumps, thickness of bark, etc., of our great redwood trees. The above cut shows the top of one of our large trees and is a faithful representation of the average tree. No grander sight can be seen in nature than a grove of these magnificent trees, with their tops waving in the air at a height of—in cases—over four hundred feet.

ART SCHOOL—PAINTING—CRAYON.

Mr W. E. Rollins, formerly teacher of the drawing class in the art school, has opened a studio in the Washington Block, corner Montgomery Avenue and Washington Streets. We can cordially recommend this gentleman to those desiring to become proficient in either painting, or the skillful transferring of natural objects to the canvas by the use of the crayon. Mr. Rollins is a strict disciplinarian, and this feature is one of the most important necessary to a pupil's thorough advancement, as it enables him to become identified with the preceptor's ideas, and thereby in after years reproduce with a master hand the various objects in nature.

PICTURESQUE CALIFORNIA HOME, NO. 2. The great success attending the sale of the first volume, prompted the authors to issue the second one. The cuts in No. 2 are entirely new. Mailed to any address, either No. 1 or No. 2, for $3.50 each.

Master Plumbers' Association.

Howard Building, S. W. Cor. Stockton & O'Farrell Sts., S. F., Cal.

MEMBERS.

BUSH & MALLETT	34 Geary Street
BUSH, D.	316 Sutter Street
BUTTERWORTH, J. B.	1809 Polk Street
CONNOR, J. H.	528 Third Street
DANIEL, WM. L.	234 Post Street
DOHERTY, JOHN	349 Kearny Street
DOWNES, CHAS.	41 Second Street
DUFFY BROS.	120 Sutter Street
ENRIGHT, WM. & CO.	39 Sutter Street
FIRMIN, JNO. L. E.	Cor. Thirtieth and Bartlett Streets
FRITZ & KEAN	130 Geary Street
GRAY, JNO. T.	230 Sutter Street
HUFFSCHMIDT BROS.	637 Clay Street
HOBRO, W. D.	728 Washington Street
REILLEY, C. J.	214 Montgomery Avenue
SHEPARD BROS.	526 California Street
SWEENEY & KEARNS	623 California Street
VANCE, R. A.	623 Geary Street
WELCH, J. D.	Cor. Tyler and Fillmore Streets
WILSON, WM. F.	25 Stockton Street
WILLIAMSON, H.	329 Sutter Street

RETAIL PRICE LIST OF LUMBER.

PINE, FIR, AND SPRUCE.

	Per M ft.
Rough Pine, merchantable to 40 ft. inclusive	$21 00
" " " 41 to 50 " "	22 00
" " " 51 to 60 " "	23 00
" " " 61 to 70 " "	24 00
" " " 1x3 and 1x4, Fencing	22 00
" " 1x3, 1x4, and 1x6, Fencing, odd l ngths	20 00
" " second quality	17 00
" " selected	25 00
" " c ear except for Flooring	32 00
" " " Flooring less than Dressed Flooring	1 00
Fire Wood	9 00
Dressed Pine, Flooring, 1x6, No. 1	33 50
" " " other sizes, No. 1	36 00
" " " all " No. 2	28 00
" " Stepping, No. 1	43 50
" " " No. 2	31 00
Ship Timber and Plank, rough, selected,	26 00
" " " selected, planed, 1 side	28 00
" " " " " 2 " average, 40 ft.	30 50
" " " " " 3 "	33 00
" " " " " 4 "	35 00
Deck Plank, rough	35 00
" " dressed average 35 ft	41 00
Pickets, rough, B. M.	20 00
Furring, 1x2, per lineal ft.	01
Lath, 1½ 4 ft., per M	3 50
" 1½ 4 ft., "	4 00
Rough dunnage, delivered, per M	20 00
Spruce dressed shelving, to 14 inches, per M	38 50
" " ½ inch " " "	38 50
" " wider, per M	43 50

REDWOOD.

	Per M ft.
Rough Redwood, merchantable	$21 00
" " second quality	17 00
" " selected	25 00
" " clear	36 00
Dressed " common surface	23 00
" " ½-inch surface	31 00
" " No. 1	36 00
" " No. 2	29 00
" " T. & G., 1x6, 12 ft. and over, No. 1	34 00
" " " other sizes, No. 1	36 00
" " " 7 to 11 No. 1	27 00
" " " under 7 No. 1	24 00
" " Rustic, No. 1	36 00
" " " No. 2	31 00
" " T. & G. beaded, 12 ft. and over, No. 1	36 00
" " " " other sizes No. 1	36 00
" " " " 7 to 11, No. 1	27 00
" " " " under 7, No. 1	24 00
" " Siding, ½ inch	24 50
Pickets (fancy), 4 feet, B. M.	25 00
" (rough pointed) "	17 00
" (" square) "	15 00
Pattens, ½x3, per lineal ft.	0¾
Shingles, per M	2 00
" fancy, per M	3 75
Posts, split	13
Shakes, split, per M	9 00
" sawed "	11 00

COUNTRY BUILDING INTELLIGENCE

In this and succeeding issues we intend to devote considerable space to information in connection with buildings, from every portion of the coast.

Only reliable news will be found in this column. Our custom has been for the past eight years, to furnish only data which could be relied upon. We will not publish rumors of "THIS AND THAT IS GOING ON" unless we are reasonably assured that such is truly the case. In all cases we will file our authority for any statements made in this column. No doubt mistakes will sometimes occur, but these we intend to be a rare exception to our rule of reliable news.

We desire the co-operation of country editors and mechanics to this department of this journal. By spreading the news of building engagement in your part of the country, you enhance the value of your section by proclaiming it a go-ahead community.

Architects should also notify us of "plans to figure on;" we do not charge anything for the insertion of such notices. Remember this journal is in the EIGHTH YEAR of its existence, and is the only journal published this side of the Rocky Mountains in the interest of Architects, Contractors, and Material Men.

Astoria.

Geo. Flavel will erect a brick building.

Album of Mantels, for $8.00.
Architects' Companion, for $2.50.

Burbank.

One and a half story frame cottage. Owner, W. H. Gancher; architects, Curlett, Eisen & Cuthbertson; contractor, E. Lane. Cost, $3,000.

Manual for Furniture Men, for $1.00.
Common-Sense Church Architecture, for $1.00.

Two one-story frame cottages. Owner, W. H. Gancher; architects, Curlett, Eisen & Cuthbertson; contractor, E. Lane. Cost, $1,600 each.

Every Man His Own Mechanic, for $3.50.
Tredgold's Carpentry, for $7.50.

East Los Angeles.

Two-story frame residence. Owner, Dr. S. G. Newton; architect, John C. Pelton, Jr.; contractor, V. Gifford. Cost, $3,000.

Artisan, for $5.00.
Builders' Guide, for $2.00.

Two-story frame residence. Owner, Mrs. Dr. Griffin; architect, John C. Pelton, Jr.; contractor, Van R. Liddell. Cost, $7,000.

One and a half story frame cottage. Owner, Miss M. H. Chapman; architect, John C. Pelton, Jr.; contractor, V. Gifford. Cost, $2,500.

Woodward's Farm Homes, for $1.00.
Woodward's Graperies, for $1.00.

Fresno.

D. D. Hudson will build a $4,000 residence.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Haywards.

Two-story frame. Owners, Chisholm & Ferrell; contractors, Whitehill & Matthews. Cost, $3,000.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

One-story frame. Owner, M. Knox; contractor, Flick. Cost, $3,000.

Steel Square Problems, for $1.00.
Workshop Companion, for 35c.

Two-story frame. Owner, Heatherington; contractor, Flick. Cost, $2,000.

Practical Perspective, for $5.00.
Woodward's Country Homes, for $1.50.

One-story frame. Owner, Geo. Prouse. Cost, $1,000.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Two-story frame. Owner, Alex Allen; cost, $2,500; contractor, Collins Harr.

Building Superintendence, for $3.00.
American Cottage Homes, for $3.00.

Parsonage Congregational Church. Cost, $2,000.

Album of Mantels, for $8.00.
History of Architecture, for $15.

Two-story frame. Owner, Chlotts; contractor, Dahl; architect, Matthews. Cost, $4,000.

American House Carpenter, for $5.00.
Cutting Tools, for $2.00.

One-story frame. Owner, A. C. Bloomer. Cost, $2,000.

Lumberman's Hand-Book, for $2.00.
Practical Geometry, for $1.00.

Hollywood.

Three-story hotel. Owner, O. C. Weyse; architect, John Hall. Cost, $75,000.

Drawing for Bricklayers, for $1.50.
Drawing for Cabinet Makers, for $1.50.

Los Angeles.

Stable, 48x100 feet. Owner, Olive Street R. R. Co.; contractor, A. F. Mackay. Cost, $4,000.

Architecture and Building, for $3.50.
American Cottage Building, for $3.50.

Two-story frame residence. Owner, Jas. M. Damron; architects, Glover & Thompson; contractors, Zeller & Britton. Cost, $4,000.

Plaster, How to Make It, for $1.00.
Shavings and Sawdust, for $1.50.

Two two-story frame residences. Owner, J. K. Skinner; architect, C. H. Brown; contractor, A. F. Mackay. Cost, $5,000 each.

Every Man His Own Mechanic, for $3.50.
Tredgold's Carpentry, for $7.50.

Two-story frame residence block. Owner, Herm. J. Baer; architect, John C. Pelton, Jr.; contractor, V. Gifford. Cost, $11,000.

Woodwards' Country Homes, for $1.50.
Practical Perspective, for $5.00.

Two-story frame block. Owner, M. Schwenz; architect, R. H. Dorn & Son. Cost, $3,800.

Woodward's Country Homes, for $1.50.
Science of Carpentry, for $4.00.

Two-story frame residence. Owner, J. M. Riley; architects, Costerisan & Merithew; contractor, day work. Cost, $10,000.

Universal Assistant, for $2.50.
Practical Perspective, for $5.00.

Three-story hotel. Owner, John Eberle; architect, John Hall. Cost, $15,000.

Cutting Tools, for $1.50.
Home Hand-Book, for $10.00.

One-story frame cottage. Owner, Mrs. Foggarty; architects, Costerisan & Merithew; contractor, J. W. Wilson. Cost, $1,700.

Cutting Tools, for $1.50.
Cummings' Details, for $5.00.

Two one-story brick warehouses. Owner, W. W. Montague & Co.; architects, Curlett, Eisen & Cuthbertson; contractor, W. W. Fletcher. Cost, $6,000 each.

Artistic Homes, for $3.50.
Modern House Painting, for $5.00.

Two-story frame residence. Owner, M. Aguierra; contractor, A. F. Mackay. Cost, $3,000.

Grimshaw on Saws, for $4.00.
Mechanics' Geometry, for $4.00.

One-story frame cottage. Owner, A. A. Eckstrom; architect, J. W. Forsyth; contractor, T. M. Plotts. Cost, $2,100.

Builders' Companion, for $1.50.
Builders' Work, for $5.00.

Two-story frame residence. Owner, S. B. Olmstead; architect, John C. Pelton, Jr.; contractor, N. Gifford. Cost, $3,600.

Practical Perspective, for $3.00.
Woodward's Country Homes, for $1.50.

Three-story brick block. Owner, A. B. Miller; architect, W. R. Norton; contractor, L. D. Griswold. Cost, $5,500.

Artistic Homes, for $3.50.
Modern House Painting, for $5 00.